Housing Transition in Single Industry 'Instant Towns'

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Canada Mortgage and Housing Corporation, the Federal Government's housing agency, is responsible for administering the National Housing Act. This legislation is designed to aid in the improvement of housing and living conditions in Canada. As a result, the Corporation has interests in all aspects of housing and urban growth and development.

Under Part IX of this Act, the Government of Canada provides funds to CMHC to conduct research into the social, economic and technical aspects of housing and related fields, and to undertake the publishing and distribution of the results of this research. CMHC therefore has a statutory responsibility to make widely available, information which may be useful in the improvement of housing and living conditions.

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ABSTRACT

Single-industry communities are a common part of the Canadian rural landscape. In many cases, these communities were developed by a single firm or industry to provide a focal point for local extraction and/or processing operations, as well as to house the needed workforce. Often isolated from other communities, the local housing market is influenced by the health of the resource industry. As a result, changes in the viability of the industry directly affect the local housing market. Restructuring pressures within the resource sector has led to a re-evaluation of the viability of constructing new, and in some cases maintaining old, single-industry communities. This research examines two single-industry “instant towns” in Canada with the purpose of tracking transitions within the local housing market as the economic fortunes of the local industry and community change through time. An understanding of these isolated markets is needed to inform government policy and will be useful to resource companies seeking to evaluate new development costs, to local decision-makers interested in community development, and to households participating in the housing market.

The research is based on a comparative study of Mackenzie and Tumbler Ridge, British Columbia. The scope and objectives of the research are fourfold:

1. To develop an historical and contemporary portrait of the local housing market in these single-industry instant towns.

2. To identify and track the timing of past corporate strategies with respect to the selling off of housing stock to employee residents.

3. To identify the nature and scale of economic benefits or costs which may accrue to households through housing purchase in this type of community context.

4. To identify the nature and scale of economic benefits and costs which may accrue to institutions such as the resource company or Canada Mortgage and Housing Corporation.

The research methodology involves 6 stages. These include a background literature review on previous work on this topic, development of baseline housing data and a local housing history for each community, a review of local housing construction activity, a summary of changing housing investment values, and an analysis of the collected information.

Table of Contents

Abstract
Acknowledgments

Executive Summary..... i

1.0 Introduction..... 1
1.1 Scope and Objectives..... 1
1.2 Report..... 3

2.0 Housing in Single-Industry Towns..... 4
2.1 Planning Resource Towns..... 4
2.2 Single Industry Town Development..... 9
2.3 Housing in Single Industry Towns..... 12
Overview..... 13
Housing Quality..... 14
Housing Provision..... 16
Resident Housing Satisfaction..... 17
Housing and Community Stability..... 18
Alternative Housing Strategies..... 19
Impact of Town Closure on Investments..... 20
2.4 Discussion..... 22

3.0 Case Study Communities..... 24
3.1 Comparative Research..... 24
3.2 Profiles of Mackenzie and Tumbler Ridge..... 25
3.3 Community Population Change..... 31
3.4 Individual/Household Characteristics..... 32
3.5 Income Characteristics..... 40
3.6 Employment Characteristics..... 45
3.7 Discussion..... 49

4.0 Housing Development..... 51
4.1 Overview Profile..... 51
4.1.1 Housing Stock Structure..... 51
4.1.2 Housing and Household Size..... 56
4.1.3 Housing Costs..... 57
4.1.4 Repairs..... 59
4.2 Local Housing History..... 61
4.3 Local Housing Construction Activity..... 67
4.3.1 Building Permit Data Methodology..... 67
4.3.2 Building Permit Data..... 68
4.4 Discussion..... 76

Con't ...

5.0 Housing Investment..... 78
5.1 BC Assessment Authority Methodology..... 78
5.2 Property Assessment Data - Assessed Value of Property..... 79
5.2.1 Assessed Values - Current Dollars..... 80
5.2.2 Assessed Values - Constant Dollars..... 82
5.3 Property Ownership Changes..... 86
5.3.1 General Ownership Description..... 86
5.3.2 Average Number of Owners per Property..... 86
5.3.3 Duration of Property Ownership..... 89
5.4 Property Assessment / Sales Ratio (ASR)..... 91
5.5 Discussion..... 93

6.0 Discussion..... 95

References..... 98

List of Tables

Table 3.1	Population Counts	32
Table 3.2a	Education: Mackenzie	36
Table 3.2b	Education: Tumbler Ridge	37
Table 3.3a	Marital Status: Mackenzie	38
Table 3.3b	Marital Status: Tumbler Ridge	38
Table 3.4a	Family Structure: Mackenzie	40
Table 3.4b	Family Structure: Tumbler Ridge	40
Table 3.5a	Incomes: Mackenzie	41
Table 3.5b	Incomes: Tumbler Ridge	42
Table 3.6a	Income Sources: Mackenzie	43
Table 3.6b	Income Sources: Tumbler Ridge	43
Table 3.7a	Employment Income: Mackenzie	44
Table 3.7b	Employment Income: Tumbler Ridge	45
Table 3.8a	Labour Force Participation Rate: Mackenzie	46
Table 3.8b	Labour Force Participation Rate: Tumbler Ridge	46
Table 3.9	Occupation	47
Table 3.10a	Unemployment Rate: Mackenzie	48
Table 3.10b	Unemployment Rate: Tumbler Ridge	49
Table 4.1	Occupied Private Dwellings	52
Table 4.2a	Housing Type: Mackenzie	53
Table 4.2b	Housing Type: Tumbler Ridge	53
Table 4.3	Housing Tenure	55
Table 4.4	Household Size	56
Table 4.5	Housing Size	57
Table 4.6a	Housing Costs: Mackenzie	58
Table 4.6b	Housing Costs: Tumbler Ridge	58
Table 4.7a	Housing Repair Status: Mackenzie	60
Table 4.7b	Housing Repair Status: Tumbler Ridge	60
Table 4.8	Mackenzie Building Permit Records	68
Table 4.9	Tumbler Ridge Building Permit Records	68
Table 5.1	Average Number of Property Owners Per Property - Community Residential Sample	87
Table 5.2	Distribution of Properties	87
Table 5.3a	Distribution by Number of Properties: Mackenzie	89
Table 5.3b	Distribution by Number of Properties: Tumbler Ridge	90
Table 5.4	Average Assessment Sales Ratios	92
Table 5.5	Average Assessment Sales Ratio For All Years	93

List of Figures and Maps

Figure 2.1 Lucas/Bradbury Model of Community Development 10
Figure 2.2 Indicators of Future Resource Price Movements 12
Figure 2.3 Major Causes of Industrial Town Closures and Cutbacks 21

Figure 3.1 Historical Time-line: Mackenzie 26
Figure 3.2 NE Region Map of Mackenzie and Tumbler Ridge 27
Figure 3.3 Historical Time-line: Tumbler Ridge 29
Figure 3.4a 1976 population pyramid: Mackenzie..... 33
Figure 3.4b 1986 population pyramid: Mackenzie..... 33
Figure 3.4c 1996 population pyramid: Mackenzie..... 33
Figure 3.5a 1986 population pyramid: Tumbler Ridge 34
Figure 3.5b 1996 population pyramid: Tumbler Ridge 34

Figure 4.1 Mobile / Manufactured Housing Lots in Tumbler Ridge 54
Figure 4.2 Housing Time-Line: Mackenzie 61
Figure 4.3 Housing Time-Line: Tumbler Ridge 64
Figure 4.4 Number of Building Permits Issued: Mackenzie - Total Permits 69
Figure 4.5 Number of Building Permits Issued: Mackenzie - Single Family Dwellings 69
Figure 4.6 Number of Building Permits Issued: Mackenzie - 'Other' Residential 71
Figure 4.7 Number of Building Permits Issued: Mackenzie - Renovations 71
Figure 4.8 Number of Building Permits Issued: Tumbler Ridge - Total Permits 73
Figure 4.9 Number of Building Permits Issued: Tumbler Ridge - Single Family Dwellings 73
Figure 4.10 Number of Building Permits Issued: Tumbler Ridge - 'Other' Residential 75
Figure 4.11 Number of Building Permits Issued: Tumbler Ridge - Renovations 75

Figure 5.1 BC Assessment Property Value Analysis: Mackenzie - Land Only 81
Figure 5.2 BC Assessment Property Value Analysis: Mackenzie - Buildings Only 81
Figure 5.3 BC Assessment Property Value Analysis: Mackenzie - Land and Buildings 81
Figure 5.4 BC Assessment Property Value Analysis: Tumbler Ridge - Land Only 83

Con't

Figure 5.5 BC Assessment Property Value Analysis: Tumbler Ridge - Buildings Only 83
Figure 5.6 BC Assessment Property Value Analysis: Tumbler Ridge - Land and Buildings 83
Figure 5.7 Property Value Analysis - 1986 Constant Dollars: Mackenzie, Land and Buildings 85
Figure 5.8 Property Value Analysis - 1986 Constant Dollars: Tumbler Ridge, Land and Buildings 85
Figure 5.9 Ownership Change Information: Mackenzie 88
Figure 5.10 Ownership Change Information: Tumbler Ridge 88

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Housing Transition in Single Industry 'Instant Towns'

EXECUTIVE SUMMARY

Introduction

Single-industry communities are a common part of the Canadian rural landscape. In many cases, these communities were developed by a single firm or industry to provide a focal point for local extraction and/or processing operations, as well as to house the needed workforce. Often isolated from other communities, and from other types of employment and economic opportunities, the local housing market is influenced by the health of the resource industry. As a result, significant changes in the viability of the industry directly affect the local housing market. Restructuring pressures within the resource sector has led to a re-evaluation of the viability of constructing new, and in some cases maintaining old, single-industry communities. This research examines two single-industry "instant towns" in Canada with the purpose of tracking transitions within the local housing market as the economic fortunes of the local industry and community change through time. An understanding of these isolated markets is needed to inform government policy decisions and will be useful to resource companies seeking to evaluate new development costs, to local decision-makers interested in community development, and to households participating in the housing market.

The research is based on a comparative study of two resource-dependent, single-industry, "instant towns" in British Columbia: Mackenzie and Tumbler Ridge. The scope and objectives of the research are fourfold:

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The research methodology involved 6 stages. These included a background literature review on previous work on this topic, development of baseline housing data and a local housing history for each community, a review of local housing construction activity, a summary of changing housing

investment values, and an analysis of the collected information.

Literature

Townsite planning and community development has become increasingly sophisticated in single-industry instant towns along rural Canada's resource frontier. In turn, the provision of affordable, high quality, housing suited to the local environment is increasingly recognized as important. Not only is housing provision a significant cost to resource companies, but once sold to employees it usually becomes their most significant investment. Repeatedly, satisfaction with housing is shown to underpin whether the resource town has a high transiency rate, and whether residents choose to stay and create alternative economic development when resource industries downsize or close.

The transition in "eras" of resource town planning have been marked by a shift from little or no planning to significant site, facility, and community planning efforts. The goal of recent instant town planning exercises such as in Tumbler Ridge has been to create a more "receptive" and sustainable residential environment. Such planning exercises do have a long tradition back to Stein's Kitimat plan from the 1950s. Despite this shift, however, at the start of the 21st century there is still a question as to whether single-industry towns can survive without economic diversification. To this the likely answer is no. Without diversification, the uncertainty created overshadows even the best intended town and community planning efforts and acts as a large factor in local quality of life.

In the review of single-industry community development, it was clear that most such towns follow similar patterns of development. These patterns were described by Lucas and others and have continued over time. Despite the obvious limitations of the Lucas model (even with amendments) created by resource exhaustion or global restructuring, many instant town planning exercises are still premised on a "progressive" path towards a mature and self-sustaining community. The need for diversification is again clear. In turn, the local housing market can be expected to reflect the uncertainty of the resource markets or concern about a town's future. Such indicators of uncertainty should be tracked as part of a method for anticipating change and to prevent crisis. Coping with change during economic downturns or industry restructuring must be central parts of community planning efforts in single-industry resource towns.

As noted, housing is recognized as a critical facet of single-industry resource-dependent towns. Historically, housing in such communities has been characterized as being of generally lower quality. While this has been corrected in recent decades through the National Building Code and other such mechanisms, there is still the problem that little thought has been given to the unique design needs of northern landscapes. Towns continue to struggle with the costs (financial and emotional) of inappropriate house and neighbourhood design in cold regions with significant snowfall and limited winter daylight hours. The insights and examples from a growing literature on winter city and climate sensitive designs should assist in avoiding the mistakes of the past.

Mackenzie and Tumbler Ridge

The socio-economic profile of residents in both Mackenzie and Tumbler Ridge can be said to reflect patterns “typical” of single-industry and resource-dependent towns - including the creation of an atmosphere for young families. This profile is similar despite the later date of incorporation for both at a time when resource town planning had become much more sophisticated.

The population of Mackenzie has been relatively stable over time while the population in Tumbler Ridge went from rapid growth to slow decline as the coal mines restructured. For both towns, however, the structure of that local population has resembled a pattern common in new and expanding communities - namely, that there is a large proportion of young families. This pattern is typical of the early development phases in resource industry towns where young families are recruited and encouraged to settle and become a part of the community. With economic stability, each community may, over time, develop to the point where there is a share of older residents requiring services such as health care, support, and housing facilities. At present, it appears that a relative lack of job opportunities for youth has meant out-migration for work or post-secondary education.

In both Mackenzie and Tumbler Ridge the education trends are consistent with other resource industry communities. In general terms, the foundation is high school graduation followed by training in identified trades or other specialized courses. The increased need for additional training has become more popular as industries have become more competitive and individuals train in order to gain more job security. In terms of marital status, in both Mackenzie and Tumbler Ridge the significant proportion of the population is either married or in a common-law relationship. A major draw encouraging people to move to Mackenzie and Tumbler Ridge is the small town family atmosphere ideal for young people starting their careers.

Mackenzie and Tumbler Ridge also have distinct patterns of income which are closely connected with their role as resource industry communities. Labour force participation is high for men (averaging over 80%) and lower for women (up to 60%). Further, men traditionally hold more full time jobs whereas women hold more part time jobs - which in turn differentially affects earnings potential. In Mackenzie, the 1996 average family income was over $72,000 while in Tumbler Ridge the 1996 average family incomes were $69,000. Such are well above the provincial income average of $56,527.

As resource-dependent towns, the majority of the population in both Mackenzie and Tumbler Ridge receives its income from employment sources. This emphasis on employment in Mackenzie and Tumbler Ridge is seen in the high labour force participation rates for men (about 88 - 89 %). This is explained by the fact that people were recruited to both towns to work in the resource industry and for many of these men, if they are not working in one of the local mills or mines they will leave town in search of work. In contrast, female participation rates were lower. As is found in many other resource-dependent towns there are often fewer work opportunities for women.

Occupational data confirms the concentration upon resource industry activities. In Mackenzie, there are about 3,580 people in the labour force and of those, 43% were employed in manufacturing. This fits with Mackenzie being a forestry processing centre dominated by employment in the local sawmills, planermills, or pulp and paper mills. In Tumbler Ridge the situation is very similar with over 50% of the labour force employed in primary industries (in this case the coal mines). In both Mackenzie and Tumbler Ridge much of the remainder of the population is employed within the different sectors of the economy but most are closely linked to the viability of the resource sector. Therefore, the closure of the mills or mines will affect employees in other occupations besides primary industries.

Housing Development

The review of housing development in Mackenzie and Tumbler Ridge involved three parts. The first was an overview profile of the local housing stock. The second is a descriptive summary of local housing history, while the third was a reconstruction of local house construction activity. The profile of local housing was assembled from Statistics Canada and CMHC data sources as well as local newspaper coverage. To set the baseline data into context, parallel information on the more readily accessible census data is presented for the control community of Prince George.

Profile

There are about 1,900 private dwellings in the community of Mackenzie and about 1,500 in the community of Tumbler Ridge. Since 1991, there have been few physical changes in this housing stock as any local economic growth has been countered by employment losses through industry restructuring and adoption of technology. Generally, the profile of local housing in Mackenzie and Tumbler Ridge suggests that the housing stock shares many of the characteristics of housing across Canada. In both communities, the dominant housing type is the single detached house. This is not surprising because since the Second World War, the detached suburban home has been the prototypical form of housing in Canada.

The structure of housing tenure is, however, rather different between Mackenzie and Tumbler Ridge. “Ownership” is important in resource-dependent communities because it informs us about the level of financial commitment which local residents have in the housing stock. It is also important in how people interpret their overall quality of life as home ownership has become a symbol of social status and can be a significant contributor to self esteem. Further, there is also the issue of perceived control in an individual’s belief that they are in control of significant life events. In Mackenzie, the majority (averaging between 73 and 81 percent) of the housing is owner occupied. The housing tenure structure in Tumbler Ridge has undergone some significant fluctuations and is now quite different from that of Mackenzie. In 1986, shortly after the community’s opening, about 60 percent of Tumbler Ridge’s housing stock was owner occupied. By 1991, this pattern had changed considerably as only about 21 percent of that housing stock was then owner occupied. This transition coincides with uncertainty associated with the 1990-1991 restructuring of the Quintette mine.

Housing costs for Mackenzie and Tumbler Ridge have generally decreased relative to inflation over the years. In Mackenzie, the average gross monthly rent as recorded in the Census has risen from $392 in 1981 to $650 in 1996. But, when we take into account the effects of inflation by using the Canadian Consumer Price Index, the rents in 1981 were about $519(1986 constant dollars) and in 1996 they were about $486(1986 constant dollars). For owner occupied properties, the Census recorded major monthly payments of $453 in 1981 and $753 in 1996. But, when we take into account inflation the costs decreased from about $600(1986 constant dollars) in 1981 to about $564(1986 constant dollars) in 1996. In Tumbler Ridge, the average gross monthly rent in 1986 was $610 while in 1996 it was $660. Adjusted for inflation, these rents were about $807(1986 constant dollars) in 1981 and about $494(1986 constant dollars) in 1996. For owner occupied properties, the Census recorded major monthly payments of $834 in 1986 and $674 in 1996. Even without adjusting for inflation there has been a decrease in costs.

Local Housing History

In Mackenzie, the period from about 1965 to 1980 could be characterized as one of an expanding industrial and housing base. Over this period the bulk of the housing was built and a range of types and options were being added to the local market. Such options included the addition of privately built apartment units and the development of a large lot “rural subdivision” about 6 kms north of town. The year 1976 is a significant one in Mackenzie as it signaled the start of an open housing market as the “buy-back” clauses registered on the titles of the company built homes were expiring. As noted in the literature review, companies often provide financial assistance to employees to assist with home purchases in resource-dependent instant towns. This was done in both towns. With or without the financial assistance, it was also typical for companies to include buy-back agreements when they sold houses to employees. Such a clause was in the interest of the company - as it would allow the company to maintain some control over housing and avoid the costs of property speculation during the first few years of operation and the expected high employee turnover rates over this period.

The period since 1980 has been marked by cycles of economic boom and downturn. The periods from 1981-1986, 1990-1993, and 1996-1999 were marked by economic uncertainty in Mackenzie. Each of these periods were affected by one or more strikes, lockouts, lumber market downturns, or pulp and paper market downturns. During each of these periods many households experienced reduced income levels through layoffs or temporary mill closures/curtailments.

There are some distinct differences between the housing history in Mackenzie and Tumbler Ridge. In Tumbler Ridge, the first years from 1981 to 1983 were marked by a rapid expansion of the civic infrastructure and housing stock. Economic uncertainty since 1984 has affected the local housing market in terms of slow house sales. These pressures are reflected in the 1989 announcements by both Quintette and Bullmoose mines of housing assistance packages for employees.

The 1990 coal price decision against Quintette marked a turning point for housing in Tumbler Ridge. The restructuring of the Quintette mine, the buy-back of employee housing by both Bullmoose and Quintette mines, and the participation of CMHC in the Quintette buy-back process, all transformed the previous homeowner stock to rental stock. The period from 1990 to 1997 was one of uncertainty in Tumbler Ridge. Beyond the points already mentioned, one additional outcome is important. CHMC identified that they have significant mortgage insurance risk in the community. As a result, they have maintained mortgage policies which reflect risk containment measures. The year 1997 marked another potential turning point for Tumbler Ridge. An extension agreement was signed with the Japanese Steel Consortium which will run until 2003. As well, in the fall of 1998 the Bullmoose mine put 22 houses on the market. Over the next two years an additional 26 houses were put on the general market at prices between $23,000 and $28,000.

Housing Construction Activity

The building permit data for Mackenzie generally follows a pattern rather expected in “instant town” locations. A large boom in construction activity occurs during the initial building of the town-site and the industrial and commercial infrastructure. After this initial boom, there is a general tailing-off of construction with only periodic activity. There are noticeable troughs in permit activity around 1977 and 1979. This coincides with the emergence of an “open housing market” in Mackenzie. Many properties built by the forestry firms, and sold only to mill employees, were now released from resale restrictions and available for any purchaser. There is renewed building permit activity with peaks around 1983, 1989, and 1996. While each of these occurs after a period of economic growth in the forest industry, it is notable that each of these peaks is followed by a decrease in activity over a period which coincides with an economic downturn or uncertainty in Mackenzie.

Of interest is that two distinct patterns of renovation permit activity can be noted in Mackenzie. The first concerns additional work done to housing units shortly after the initial construction period of 1970-1972. We can speculate that this might involve standard modifications or design changes to some of the original houses. A second pattern came on-line as the housing aged. Since 1980, there have been three periods of especially high renovation permit activity. In 1983, 1989, and 1996 renovation work reached peaks which coincided with the later stages of an economically prosperous period in Mackenzie.

The building permit data for Tumbler Ridges suggest a very different pattern of housing development than for Mackenzie. A large boom in construction occurs during the initial building of the townsite. During this period much of the industrial and commercial infrastructure was put in place and the initial housing areas were built. After this initial boom, however, there is a sharp reduction in all types of building permits. Part of the explanation is that the Provincial Government directed planning process had the goal of putting into place a “complete” townsite right at the outset. This differs from Mackenzie where additional housing and commercial developments came about over a longer period of time.

Housing Investment

Housing is one of the major investment tools for households. The purchase of a house is one of the largest, if not the largest, single purchases households will make in their lifetimes. As the household ages, the house will also become one of their largest assets. To trace the economic benefits and costs which may accrue to households we drew a sample of 54 residential properties in Mackenzie and 53 properties in Tumbler Ridge. For these properties we followed ownership changes and changing property values over time. The principal data source was BC Assessment Authority records.

Assessed Value of Property

To identify trends in average property assessment values, the analysis included both "current dollar" and "constant (1986) dollar" values. The current year dollar value averages for both the land and buildings can be considered a close estimate of the prevailing market value as BC Assessment works on a market based evaluation system. The Statistics Canada Consumer Price Index was used to convert annual dollar values to 1986 equivalencies.

In Mackenzie, there were notable periods of housing value increases in 1978, 1991, and 1996. In 1978 average assessments increased from approximately $10,000 to over $37,000. Similarly, in 1991, the average assessments increased from approximately $50,000 to just over $69,000. And in 1996, the average land and buildings assessments increased from approximately $98,000 to over $117,000. After reaching a high of $126,700 in average residential assessed value in 1997, that average has decreased slightly to about $116,000 in the 1999 BC Assessment rolls.

When adjusted for inflation, property value assessments in Mackenzie followed two periods of growth. The first is immediately after 1976. As noted earlier, this is when the buy-back clauses on the original housing expired and the Mackenzie housing market became "open". Clearly, there was a sudden market adjustment. The addition of new housing options and market slowdowns through most of the early 1980s explain the stagnation of prices when housing 'lost' value relative to inflation. During the resource boom of the late 1980s and early 1990s, housing in Mackenzie has gained substantially relative to inflation.

The housing value assessments in Tumbler Ridge do not have the periods of increase noted in Mackenzie. Instead, values remained at a relatively steady state between 1984 and 1993. There was a notable decrease in values around 1994, after which another generally steady (though lower) state has existed. When adjusted for inflation, there has been a generally steady loss of value. Early uncertainty about the housing market and mine viability is followed by a large reduction in value after the 1991 restructuring of Quintette. Since that time, property assessment values have remained steady at between $22,000 and $28,000. This is generally the price range that Bullmoose mine has used in its 1998/1999/2000 sell-offs of selected houses.

Property Assessment / Sales Ratio (ASR)

The property ASR is the percentage difference between the price the property was sold for and the price the property was valued at by BC Assessment. For each sale that occurred, the assessed value was divided by the sale price to find the ASR. By calculating the average ASR from all sales for each year, an overall average ASR was found for Mackenzie and Tumbler Ridge. This information tells how the market reacts. For example, an ASR less than one means that the property sold for more than the assessed value. Thus, the market would be going up faster than the assessment value could keep pace. A value equal to one means that the property was sold the same value as it was assessed by BC Assessment. Therefore, the housing market would be considered stable or stagnant. Finally, a value greater than one indicates the property was sold for less than the assessed value and the market is going down faster than the assessed value could track.

By looking at the average assessment sales ratios for each community, the housing markets in Mackenzie and Tumbler Ridge are different. Each experiences the general ebbs and flows of a resource-based economy where economic downturns or upswings affect the local housing market. Over time, Mackenzie records an ASR of about 0.9 while Tumbler Ridge records an ASR of almost 1.5. From 1976, housing in Mackenzie has followed a positive trajectory such that house prices have generally increased just ahead of the BC Assessment Authority's ability to adjust for them. Since 1983, the housing values in Tumbler Ridge have been decreasing at a rate generally faster than the assessed value could track.

In summary, property assessments in Mackenzie averaged about $38,000 in 1978 for non-mobile or apartment properties. By 1998, this had risen to about $118,000. Over the twenty year period this is an increase of 210 percent. When we discount the effects of inflation, the increase is still in the order of 40 percent. In other words, housing investment in Mackenzie has been staying well ahead of inflation. With about 1,300 private dwellings (excluding mobile homes and apartments) this increase in value represents a significant collective economic benefit in the community. For households, this has meant an accumulation of wealth through their investment in the housing stock. The critical issue remains one which all resource-dependent towns confront, whether the local industry will remain viable into the foreseeable future so that some of that wealth accumulation may be recovered when the property is sold.

The Tumbler Ridge summary both reflects and suggests a very different housing market. Since 1983, the housing values in Tumbler Ridge have been decreasing at a rate generally faster than the assessed value could track. Much of that decrease in assessed value has come about over the past 10 years following the buy-back of mining company homes and the subsequent company appeals to the BC Assessment Authority to roll back residential and industrial property assessments in order to lower the firm's property tax bills. Prior to this period, average property assessments hovered at close to the $50,000 to $55,000 level. By 1998/1999, average property assessments now range in the order of $30,000 to $35,000. This represents a decline of about 36 to 40 percent of the property values over the 15 year period. When we account for the effects of

inflation the decrease is larger - in the order of about 60 percent. Bullmoose mine and Quintette (in partnership with CMHC) own most of the housing stock in the community and would bear the brunt of these property value losses. With about 800 private dwellings (excluding mobile homes and apartments) this decrease in value represents a significant collective economic cost in the community. Teck Corporation, the owner of the Bullmoose mine, appears to have become interested of late in “getting out of the housing business” and is absorbing some of these losses as they sell off part of their housing stock investment.

For both Mackenzie and Tumbler Ridge, a critical issue remains one common in resource-dependent towns, whether the local industry will remain viable. For Tumbler Ridge, there are at least two additional issues. The first is if local efforts to keep the mines viable and to diversify the economy are successful, the town will continue to experience the usual boom and bust fluctuations of any industry (be it coal mining, forestry, gas production, or tourism). Second, it is not clear at this time whether Bullmoose will sell off all of its houses or if the Quintette/CMHC houses will be put onto the market at prices comparable to the recent Bullmoose sales.

Since single-industry communities remain an integral part Canada’s rural landscape and resource sector, and since housing remains a critical social and economic issue in these communities, it is important that government policy makers, resource companies, local community development officials, and residents be better informed about the issues involved with this unique housing market. This research project, based on a comparative study of the two resource-dependent, single-industry, “instant towns” of Mackenzie and Tumbler Ridge, is a first step to updating our understanding of these towns and their housing markets. In towns developed by a single firm or industry to provide a focal point for local extraction and/or processing operations, and therefore often isolated from other communities and from other types of employment and economic opportunities, the local housing market is influenced by the health of the resource industry. Restructuring pressures within the resource sector has led to a wide range of changes in such industries and the towns which depend upon them. Given the stress of these pressures and changes, and given the importance of these communities within the Canadian economy, more research on this topic is needed to provide a more firm foundation for future decision-making.

Housing Transition in Single Industry 'Instant Towns'

1.0 Introduction

Single-industry communities are a common part of the Canadian rural landscape. In many cases, these communities were developed by a single firm or industry to provide a focal point for local extraction and/or processing operations, as well as to house the needed workforce. One of the historic strategies in such communities is for the companies to devolve responsibility and ownership of community infrastructure once the industrial base is operational (Lucas, 1971). For households, this often meant they would acquire through purchase a company built home. As a result, most Canadian single-industry “instant towns” have a very unique geography and housing market. Often isolated from other communities, and from other types of employment and economic opportunities, the local housing market is influenced by the health of the resource industry. As a result, significant changes in the viability of the industry directly affect the local housing market.

Restructuring pressures within the resource industry sector has led to a re-evaluation of the viability of constructing new, and in some cases maintaining old, single-industry communities. For new resource developments, an increasingly common strategy is to maintain only a work camp and to fly workers in on short term rotations (Bone, 1992). Within established single-industry communities, individual households endure concerns about the continued viability of the local industry. Closure of the resource industry can lead to a devaluing or collapse of the local housing market.

This research project examines two single-industry “instant towns” in Canada with the purpose of tracking transitions within the local housing market as the economic fortunes of the local industry and community change through time. An understanding of these isolated markets is needed to inform government policy decisions and will be useful to resource companies seeking to evaluate new development costs, to local decision-makers interested in community development, and to households participating in the housing market.

1.1 Scope and Objectives

The research plan is based on a comparative study of two resource-dependent, single-industry, “instant towns” in British Columbia: Mackenzie and Tumbler Ridge. The scope and objectives of the research are fourfold:

1. To develop an historical and contemporary portrait of the local housing market in these single-industry instant towns.

2. To identify and track the timing of past corporate strategies with respect to the selling off of housing stock to employee residents.

3. To identify the nature and scale of economic benefits or costs which may accrue to households through housing purchase in this type of community context.

4. To identify the nature and scale of economic benefits and costs which may accrue to institutions such as the resource company or Canada Mortgage and Housing Corporation.

The research methodology involves 6 stages:

1. Background literature review

   The first stage in any project is to search out information and previous research work on the topic. Broad bibliographic and Internet searches were undertaken. While much of the academic literature is readily accessible, the search did focus attention on government and industry publications concerned with housing in single-industry instant towns.

2. Baseline housing data

   A profile of the local housing market in each community was assembled from Provincial Government (property assessment records) and Statistics Canada data sources. For example, the Census includes information on the tenure, age, value, size, and structural type of the housing stock as well as local affordability issues (rent and mortgage payments as percentages of income levels) and level of repairs needed in the housing stock. Property assessment records include details on ownership and market value assessment. The profile we developed is longitudinal which allows us to track changes over time. To set this baseline data into context, key comparative information will be developed for the control community of Prince George. The purpose is to compare fluctuations in the local housing markets against those of a large regional centre with a more diverse economic base.

3. Local housing history

   As part of the research we developed an historical time-line of local housing. Of critical interest is the timing of corporate sell-off of local housing, the linking of such timing to economic cycles, the pace of housing construction in the community, and the cost of housing to purchasers. These housing histories were developed primarily from local histories (which exist in the case of Mackenzie) and government reports (which exist in the case of Tumbler Ridge). They were augmented by a systematic review of local newspapers.

4. Local housing construction activity

   Information on housing construction and renovation activity was collected from local government building permit records. While such data typically undercounts renovation activity, it is useful as a marker of periods of increasing and decreasing housing investment confidence. In this respect, building permit data is used to

help explain shifts in the housing market profile developed in Stage 2 and the pressures of housing ownership transition identified in Stage 3.

5. Housing investment values

Housing is one of the major investment tools for households. This stage of the research traces the economic benefits and costs which may accrue to households through housing purchase. The general design is to draw a sample of 50 residential properties in each community and to trace two issues in particular. The first is ownership changes over time, including the tracking of ownership durations and the frequency of property turnover. The second issue involves the value of property at time of sale-purchase. The principal data source is BC Assessment Authority records (which track ownership changes and sale values). In the case of Tumbler Ridge, an attempt is made to estimate the costs of housing buy-back/rental options using this same data set for the sampled residential properties.

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6. Analysis

The final part of the research involves the analysis and synthesis of the data and discussion of the findings.

1.2 Report

Following this Introduction section, the remainder of the report is organized into five sections. The next section reviews three key sets of literatures important for understanding housing and community development in single-industry communities. These literatures concern: models of single-industry town development, eras of resource town planning, and studies of housing provision. The second substantive section in the report introduces the case study communities of Mackenzie and Tumbler Ridge, as well as the 'comparative case study' methodology. The third substantive section traces the development of the local housing market in each study community while the fourth substantive section traces changes in housing investment through the use of property sales and assessment information. The final section is a discussion of the research findings.

2.0 Housing In Single-Industry Towns

While single-industry instant towns are a common community type across much of rural Canada, comparatively little work has been undertaken on their unique housing market. Surveys of rural housing have often remained, by and large, general (see for example Carter and Shindruk, 1992; Rostum, 1987; and Rowe, 1981). The research work which has been completed on single-industry instant towns does highlight a generally consistent set of themes. Early research by Himelfarb (1977) and Bradbury (Bradbury and St-Martin, 1983; Bradbury and Sendbueler, 1988) suggests that the isolated nature of these communities and their housing markets create especially vulnerable situations. Bradbury traced this vulnerability through the closure of Quebec-Labrador iron-ore mining communities like Schefferville. What happened in these housing markets? How was the transition from company to private ownership of the housing stock accomplished, how did this isolated private housing market function in terms of levels of return on investment, and what was the role of public policy and institutions (such as the mortgage insurance function of CMHC) in situations where the market collapsed and the town was effectively abandoned? This research project seeks to add to the literature on housing transition in Canadian single-industry instant towns.

In this section of the report three general sets of literature are reviewed. The first centres upon an historical summary of successive "eras" in the planning of resource towns in Canada. Of importance here is the evolution of community planning principles and extension of the idea that a functionally and aesthetically planned townsite can assist with resident and worker satisfaction. The second general literature reviewed concerns a broad conceptualization of single-industry community development. Central to this discussion is the conflict between older and newer models of community development. Older models are often predicated on an orderly transition through stages as a community "matured" while newer models employ the argument that a radical economic restructuring of resource industries is fundamentally changing the relationship between resource companies and resource-dependent communities. The final body of literature reviewed in this section concerns the specific issue of housing in resource-dependent towns. Of note in this discussion is that concern over the linkage between economic viability and housing investment risk is longstanding in the Canadian research.

2.1 Planning Resource Towns

There are many different types of resource industry communities, from transient camps for labourers to fully developed permanent communities of up to 25,000 people. As Pribble (1984) argues, the quality and form the community takes will depend on its life span; where a short term community will simply provide the basic requirements, a long term community will ensure a higher quality of housing, facilities and amenities are provided to attract permanent residents and workers.

McCann (1978) argues that resource boom towns were traditionally not planned. Rather, they were simply thrown together out of the need for workers to be accommodated during the various

phases of industrial development. Resource town homes in such cases were monotonous in style, separated into class based neighborhoods, and further divided by ethnic origin and job classifications. Bedics and Doelker (1992) also describe how housing in company towns had traditionally been arranged by job classification, earning potential, skill level, and ethnic origin of company employees. Thus, the higher status workers had more elaborate homes in prestigious parts of town with more amenities, and low status had the opposite.

The planning of isolated resource-dependent towns in Canada has changed considerably since the start of the 20th century. A study by the Canada Employment and Immigration Advisory Council (1987) identified an historic sequence or evolution of resource towns. Chronologically, this sequence has included sleep camps, planned communities, designed communities, fly in / fly out communities, and contemporary (temporary) communities. Two "tensions" run through this sequence - the need to create a liveable environment for the workers and their families and the concomitant need to keep non-production costs as low as possible for the company.

In terms of North American examples of single-industry, or company, towns the oldest models are from the "new industrial towns" of New England. Built during the early 1800s in conjunction with the establishment of a cotton textile manufacturing industry, the towns were located in rural locations close to water power sources. Vance (1966) traces the history of industrial location in relation to the location of the workers. He argues that the "new town" concept was prompted by the realization of the need to house workers close to rural, isolated, industries. The townsite of Waltham lends its name to a set of characteristics typical of these new industrial towns. The "Waltham System" (Vance, 1966) includes the following:

- an independent industrial city,
- the pace and scale of manufacturing activity increased beyond contemporary competitors,
- a "paternalistic" system where workers were recruited and the company had to furnish buildings,
- workers living in "compounds" wherein their housing was segregated by worker skills,
- daily needs were furnished by boarding house operators who were both approved by the company and were charged with imposing morality and discipline,
- the provision of sound and adequate housing rested strongly upon profitably for the firm and fairly uniform employment.

Building upon the idea of an historic sequence of single-industry town types, Roy Bowles (1992) has provided a useful characterization of changing strategies towards Canadian resource town planning. Bowles suggests that the development and management of purpose built single-industry towns has moved through three general eras or stages. In the first stage, common into the 1920s, a process which he describes as "additive planning" was in place. Simply put, additive planning meant that the construction and operation of resource-based company towns was simply "added" to the routine duties of the company managers. In company built and run towns like Anyox BC, the mine supplied not just the work but also owned the houses, ran the

water and sewer systems, paid for the school, and ran the grocery and hardware stores (Loudon, 1992; see also general discussion by Bedics and Doelker (1992). Much of this was of course done with attention to keeping company costs as low as possible. Such "company towns" were a common feature of early resource development along the Canadian resource frontier.

Between the two World Wars, Bowles suggests that a more "holistic" approach to resource town planning developed. The idea was to create self-contained towns with more attention being given to community site planning. This approach drew heavily upon land use planning principles of the period such as a separation of residential from industrial areas, and community design to fit local topography. As Porteous (1987, p.384) suggests, "pre-war bunkhouse 'sleep camps', occupied largely by single males, were replaced by larger villages with a less ill-balanced population". Whether this was a distinct stage or simply a transitional period is open to debate. The greater attention to community design did, however, lead after the 1940s into what Bowles has called "comprehensive planning".

The goal of comprehensive planning in single-industry towns is grounded in efforts to incorporate a broader range of social and economic considerations into community development. Community health, quality of life, and social well-being were now part of the design criteria. Comprehensively planned instant towns were "designed largely to remove companies from town control, to stimulate popular local government organization and thus the provision of urban services and to foster an atmosphere of permanence" (Porteous, 1970, p.318). As noted by McRae (1970), the concept of the pre-planned community was an ideal substitute for traditional company towns as by the early 1950s, expectations of workers had changed due to the need for skilled workers to operate increasingly advanced technology. While the communities of Mackenzie and Tumbler Ridge were developed with these broad comprehensive planning ideas in mind (Gill, 1991; Shera and Gill, 1990), one of the earliest and most prominent examples of the comprehensive planning approach is Kitimat, BC.

The townsite of Kitimat was created in the early 1950s to house the workforce for the Aluminum Company of Canada's (ALCAN) new smelter facility (Robinson, 1962). The townsite was designed by eminent United States land use planner Clarence Stein. Stein's vision for the new community blended the economic needs of the corporation to have a stable labour force with the quality-of-life needs of the families and workers to feel part of a stable, permanent, and welcoming community. As Stein (1952, p.3) argued in the opening to his Kitimat townsite master plan:

> The purpose of Kitimat is the industrial success of the plant. That success will depend on the degree that workers are content, that they like living in Kitimat. Unless the town can attract and hold industrial workers, there will be continuous turnover and difficulty ... . The workers must find Kitimat more than temporarily acceptable. They must be enthusiastic about it as a particularly fine place in which to live and bring up their families. It must become <u>the</u> place they want as homeland, the town they are going to make their own.

Stein designed Kitimat so as to accommodate an eventual population of over 50,000 people and an expanded industrial base. While Kitimat has not achieved a population of more than 14,000, it does have a more diversified and relatively stable economic base which now includes a pulp and paper mill and a methane/ammonia plant in addition to ALCAN's facilities. It was on this new townsite that Stein's "Radburn" style ideas could be writ large:

> the Kitimat plan is designed to meet the needs of young and growing families. Its basic principles have been tried out for many years in the Green Towns, planned for children's safety and for peaceful home life. These communities such as Radburn, Greenbelt, Greenhills, ... are all characterized by their open Greens -- which are public parks and form the central green cores around which flow the life of the neighborhood community. (Stein, 1952, p.4)

Stein incorporated earlier "garden city" concepts (Hall, 1988) into the neighbourhood designs which emphasized the pedestrian, and an intricate system of walkways linking residential areas with schools and with the central shopping area and recreation complex. As described by McCann (1978), Kitimat neighborhoods are self contained in terms of service provision, with residential areas focused upon the school. Streets are laid out so that children can safely walk to school everyday. In addition, there are a variety of housing types to suit the variety of household needs.

Stein understood the value of the Master Plan in town building. As summarized by Pribble (1984, p.10), the "overall goal of a master plan is to provide guidelines for developing an efficient operation and supporting facilities that will provide for an acceptable living environment for the workers and operations personnel". Not only should the master plan provide guidelines for development, it should also forecast such things as family structure, population, and service provision to ensure that community needs are met before residents arrive. In addition to the many types of infrastructure needed, planning for housing is emphasized as most important. Housing types should allow residents choice and should allow for changes in housing preferences as the household itself ages and changes.

While the goals of comprehensive planning centre upon achieving stability, for the industry and the families of workers, their practice has had a rather uncertain result. For example, Hayter (1979) examined the critical issues of labour recruitment and turnover during the start-up phase for a number of new pulp-mill facilities across north-central British Columbia during the early 1970s. Two of the three places which Hayter examined, Kitimat and Mackenzie, were newly planned instant towns. In both places, employees had to be recruited from outside the region. Both mills examined by Hayter experienced significant labour turnover. Within 18 months of start-up the Kitimat mill had lost 55 percent of employees while the Mackenzie mill had lost approximately 31 percent. More recently, Gill (1991, p.179) also highlights how "[t]here are a number of persistent problems which plague resource towns, many related to the high levels of population transience ... which create a high social and economic burden for both the community and the company".

Bates (1983) agreed that a high resident turnover rate is the second greatest (after the economy) obstacle to resource town viability. The high rate of turnover problem is expensive, disruptive, and contributes to community instability. He noted that resident out-migration was caused by dissatisfaction with quality of life. He then identified three main reasons for leaving a community. In order of priority these were 1.) no future in job, 2.) cost of living, and 3.) poor housing conditions. As a result, he argued that housing, which played a role in reasons 2 and 3, was critical and recommended that provincial governments take a more active role in the improvement of resource town housing policies.

Robinson and Fletcher (1977), in a study of six resource towns across Canada, argue that two major factors seriously affect the quality of life for residents in resource towns: anxiety over "temporary" stays in towns, and housing. They suggest that increased government involvement in the pre-planning and design stages of housing provision and community development can address these two factors. In addition, Robinson (1962) argues that people moving to resource frontier towns not only expect high wages, they also expect good housing, school, churches, playgrounds and other facilities commonly found in urban landscapes. With this higher expectation, planners have accommodated by providing curved streets, varied setback lines for more interesting home groupings, and have given careful attention to gardens and landscaping. Written at the end of the 1950s, Robinson suggests that careful attention to planning the details of a community can offset the physical disadvantages of living in an isolated town.

One of the reasons suggested for resident turnover is that earlier planning efforts tended to emphasize the physical layout of the townsites. Anderson (1982) argues that historical and contemporary mining towns have not implemented sufficient planning techniques to enhance the "sybiotic" relations between the residents and town. Historically, resource towns were not planned, and while contemporary resource towns are planned, Anderson comments that emphasis is only placed on physical and land use planning. Beyond the physical infrastructure, more emphasis on supporting community social development and citizen participation is needed if such towns are to be successful. Looking at such places as Kitimat, British Columbia, and Elkford, Ontario, Anderson identifies opportunities for involving residents in planning their own community. This includes attention to "community development" planning where concerns with the material and psycho-physiological welfare of the population can generate "social action" where organizations in a community work together to solve community wide problems. This voluntary involvement of residents is considered crucial.

Stein's earlier interest in creating a livable and sustainable social, as well as economic, town finds support in a recent study by the Canadian Employment and Immigration Advisory Council (1987). Through interview research in seven regions across Canada, the Council found that the longer a single-industry community exists the more entrenched community attachment becomes on the part of residents. One of the dilemmas this attachment can create, however, is complacency and the refusal to acknowledge that potential threats to the community's economic survival exist. The apparent satisfaction with the quality of life, so dependant upon economic security, is quickly shattered when the industry closes its doors. Then all symptoms associated with unemployment and economic despair set in and threaten the very existence of the community. Investment in housing is both a key component of building community attachment and one of the most serious issues which households face should the economic viability of the town be threatened.

2.2 Single-Industry Town Development

The second part of the literature review focuses upon the general topic of community development in single-industry towns. As noted above, since the end of the Second World War considerable attention has been directed at mitigating the negative consequences identified with both isolated living and company domination so commonly referred to in earlier industrial settlements along Canada's "northern resource frontier" (Bedics and Doelker, 1992; Loudon, 1992; Mouat, 1995). One of the key models important in planning new resource instant towns over the past thirty years derives from Lucas' book *Minetown, Milltown, Railtown* (1971). While Lucas' model identifies an orderly transition as a community matures, a more recent literature argues that a radical economic restructuring of resource industries is fundamentally changing the relationship between resource companies and resource-dependent communities, thereby rendering the orderly progression suggested in Lucas' model void.

Much work on the design, planning, and development of single-industry communities in Canada since early 1970 continues to be predicated upon Lucas' model of the growth and development of single-industry towns. The conceptual design and planning of both Mackenzie and Tumbler Ridge follow basic assumptions contained in this model. For example, community planning reports during the early 1980s for the new coal mining town of Tumbler Ridge are replete with overt and implicit reference to Lucas. The goal of social planning and community design work was to move Tumbler Ridge quickly through its transition to "maturity", a stage where stability of labour, a functioning local government, and a dynamic civil society would support a sustainable economy and population (Rabnett and Skaburskis, 1977; Veit, 1978).

While Lucas' *Minetown, Milltown, Railtown* (1971) explored many facets of community life, our interest is with the suggested four stage model of community development. The model is centred upon the changing relationship between employment opportunities, migration patterns, governance, housing, and the increasing maturity (and presumed stability) of such communities over time. It is worth revisiting Lucas' model as many of the expectations it generates continue to drive community development and planning in resource towns.

FIGURE 2.1
LUCAS/ BRADBURY MODEL OF COMMUNITY DEVELOPMENT

TOWN MANAGEMENT	STAGE	DEMOGRAPHIC/ MIGRATION CHARACTERISTICS
company	CONSTRUCTION	high pop. turnover high % young men
	RECRUITMENT	large % young families strong ethnic mix
community	TRANSITION	stable workforce
	MATURITY	lack of job mobility youth out-migration
company (caretaker)	WINDING DOWN (CLOSURE)	job losses out-migration

Source: adapted from Lucas 1971, Bradbury and St-Martin 1983.

Stages 1 and 2 of Lucas' community development model (Figure 2.1) concern the period during which the townsite is being founded and built. These stages are premised on the example of a new resource industry opening in an area where previously no established communities existed. Such is the case for both Mackenzie and Tumbler Ridge where a new townsite was established to service a new regional resource-based industry. During the physical "Construction" of the worksite and the community, as well as during the "Recruitment" of the labour force, the local population is characterized by high levels of turnover and replacement through large in- and out-migration flows. During the Construction stage, there is rapid local population growth and turnover as work-crews involved in building the community move through the various components of the construction project. The local population can be characterized as young and male. During the Recruitment stage there is a replacement of the construction crews with a permanent workforce which will operate the resource industry and associated community facilities. Recruitment of this permanent labour force involves a change to a community of young families establishing themselves and their careers. As illustrated by other studies of resource industry establishment (Hayter, 1979), both in- and out-migration activity remains high during this period. Planning for both community services and facilities concentrates upon the model of young families.

Stages 3 and 4 of Lucas' model involve the growing maturity of the community and the weaning of company support for both civic infrastructure and affairs. In these "Transition" and "'Maturity" stages, the local population and workforce stabilizes as routines and patterns become entrenched. Local residents assume increasing responsibility for the operation of the town. The workforce is

both aging and highly structured into a hierarchy of job classifications. There is little job mobility. The implication is that of low migration activity and community stability. This is certainly the expectation of the planning literature for Tumbler Ridge (Gill, 1990a, 1990b, 1991).

Through to the 1970s, resource-dependent communities in British Columbia developed much as described by Lucas' model. The expansion of resource industries into British Columbia's interior region, especially since the Second World War, and its consolidation under large corporate control since the early 1960s (Farley, 1972; Edgell, 1987; Hak, 1989; Marchak, 1989, 1983; Williston and Keller, 1997), has meant that the past could be characterized by "expanding" employment opportunities.

A central problem with Lucas' general model is that some resource communities face a finite future (non-renewable resources) and most face the on-going uncertainty of global commodity demands and prices. As described by Hayter and Barnes (1997a, p.8), the "perennial problem with single-industry communities is their instability, a result of the very economic nature of the resources on which they depend". As a consequence, other researchers became interested in the future consequences for communities. With respect to communities dependent on non-renewable resources, Himelfarb (1977) and Bradbury (Bradbury and St-Martin, 1983) have suggested that an additional stage needs to be added to Lucas' model. Drawing upon his work in the "iron-ore" communities along the Quebec-Labrador border, Bradbury traced how the curtailment of mine operations can have rapid and catastrophic consequences for both individual households and the community as a whole (See also Bradbury, 1988; Bradbury and Sendbueler, 1988). Job losses, and lack of alternate local employment, can lead to massive out-migration as households search for work. In turn, this means losses of property and commercial investment and, ultimately, the closure of the community as nothing but a "caretaker population" remains. To Lucas' four stage model, Bradbury added "Winding Down" and "Closure".

In addition to the historic cycles of resource boom and bust, the question of economic restructuring is now also important in resource-dependent communities regardless of whether they have a renewable or non-renewable base. In a recent study, Hay (1993) argues that employment curtailments have significant and stressful consequences for both the community as a whole and the individual households which comprise it. While Lucas' model may have described "the sociology of successful mill towns under Fordism, [it] did not anticipate the implications of the global economic change that began sometime during the early 1970s" (Hayter and Barnes, 1997b, p.185).

Drawing upon notions of resource cycles, and prefacing the uncertainty created by economic restructuring, Friedman (1970) suggested a set of indicators for predicting the viability of single-industry resource towns. These indicators are linked to resource markets and price fluctuations. Drawing upon a study of five single-industry towns in Manitoba, Friedman traced market fluctuations over time for each individual product (newsprint, copper, zinc, nickel). Figure 2.2 is a list of indicators suggested for predicting future commodity price movements.

FIGURE 2.2
INDICATORS OF FUTURE RESOURCE PRICE MOVEMENTS

1.) Substitutability by other goods
2.) Market conditions for industries which use the resource as input
3.) Diversity of uses
4.) Diversity of geographical markets
5.) Size of market supplied by each producer and degree of competition
6.) Past price movements
7.) Government policy, particularly in destination countries

Adapted from Friedman (1970)

Beyond Bradbury's early work on the implications of corporate restructuring on resource-dependent communities, recent research in several Canadian pulp and paper industry towns has demonstrated how the transition from a "fordist" to a "flexible" regime of production has substantially altered the nature of work itself (Mackenzie and Norcliffe, 1997). As experienced in the pulp and paper industry, job losses through downsizing, the introduction of new technology, "job flexibility" - where workers now require a greater range of skills especially in such areas as management and computer technology, or the out-sourcing of work to independent contractors have also been accompanied with a re-organization of remaining work positions (Hay, 1993).

Barnes and Hayter (1994) have connected the general restructuring literature with the specific geographic context of British Columbia's coastal forestry communities. Their work highlights the connectivity between the availability of work and local community change and survival (see also Grass and Hayter, 1989; Barnes and Hayter, 1992). In both the Canadian and American (Bonnell *et al.,* 1997) cases, the employment uncertainty which restructuring creates is coupled with environmental questions about timber supply. The impacts on local employment from downsizing or mill closures can be very dramatic, especially in communities where there is limited alternate employment. The net result is that change and uncertainty are now watch-words of resource industries.

In terms of resource town community development, the challenge which the economic restructuring critique makes to Lucas' model is that despite the best attention to "quality-of-life" social planning, economic diversity remains a key to local stability and sustainability. Even the most comprehensively planned communities will suffer economic uncertainty, and a resulting tenuous investment climate, if the local economy remains linked to only one resource.

2.3 Housing In Single-Industry Towns

The topic of housing markets and housing investment in isolated single-industry towns must be interpreted against the backclothe of increasing attention to townsite design and the realities of contemporary economic restructuring within resource industries. Four topics are discussed

below. These are housing quality, housing provision, alternative housing strategies, and questions related to the impact of town closure on investments.

Ennals and Holdsworth (1998) undertook an historical review of housing and the shifts in organization and control of housing, in resource-industry towns. By looking at a range of resource towns on frontier hinterland landscapes, they discuss the changes in worker housing. Shifts in corporate organization and impacts of technology on labour are seen as triggers for change in how workers have been housed.

The first resource-town type discussed by Ennals and Holdsworth (1998) was the "temporary town", where temporary housing structures with no amenities or facilities were owned by the company and rented by the workers. These temporary structures could easily be torn down and moved to another community when the industry and company closed. The dominance of the company was significant with little or no emphasis on the needs of the workers or their families - the temporary camps were only for men.

With technological improvements, more permanent resource-towns developed (Ennals and Holdsworth, 1998). Accommodation changed from the temporary camps to pre-cut single family dwellings and bunkhouses assembled from pattern-book guides. Despite such improvements in the structure of the home, workers were often still grouped together in overcrowded settings. But, this did help form a town atmosphere with simple store front buildings and a common cookhouse.

The unionization of workers in resource towns led employees to fight for better living accommodations (Ennals and Holdsworth, 1998). Factory workers, often women, were the first to be housed in boarding houses with the employer being responsible for ensuring their health and moral well-being. Suburban, family oriented settings reflected the trend to attract the 'family man' into resource town landscapes across Canada. The housing stock included a variety of housing structures to provide for the needs of a variety of workers. Large mobile bunkhouses, one storey gable cottages with trim, single row eight houses, lakeside property and boarding house apartments were all common in resource towns of the late 1800s. The inclusion of women at this time was significant as the resource town landscape had in the past been dominated by men.

In resource towns, while the emphasis has always been towards the importance of the economy, Ennals and Holdsworth (1998) argue that housing environments changed as companies realized the satisfaction of the workers in their home life affected job performance. They suggest that this will be the case as long as resource towns are built in frontier landscapes of Canada.

Overview

Site planning and facilitating home ownership have been dominant themes in resource town development. In his study of two post-World War instant towns in British Columbia, McRae

(1970) argued that pre-planning has been and will continue to be very beneficial in providing for physical amenities. However, there has been a lack of attention to the problems associated with human interaction and it is this human side of community planning which is still in dire need of further development. McRae suggests that a cohesive human community cannot be provided through simple facility and townsite layout planning and that such will continue to fail at satisfying residents. In his study of the two British Columbia communities of Gold River and Mackenzie, McRae found that one of the critical issues of community satisfaction was that of housing.

Concentrating upon Mackenzie, McRae (1970) acknowledged the foresight of locating the industrial plants on the shores of Williston Lake several miles away from the community's residential areas. This eliminated some of the environmental problems such as noise, air, and water pollutants, previously experienced in such residential neighbourhoods. In terms of housing provision, that supplied in Mackenzie provided an excellent standard of shelter, but the price range was far too narrow. The costs of housing are generally the same while the salaries to afford housing vary quite widely. Of note against the context of town design work is that housing developments in Mackenzie were not always situated within walking distance of shopping facilities. This was an especially difficult issue given the severity of Mackenzie's winters. Inattention to these types of problems gives rise to unrest, particularly among women, living in remote areas which in turn have a great effect upon the contentment of the labour force (McRae, 1970).

In terms of home ownership, Robinson (1962) suggests in an argument which has since underscored much of the thinking on post-World War Two resource town housing policy, that the provision of home ownership through company subsidy, buy back plans, providing expert construction advice, and serviced lots, will encourage residents to express greater interest in the community as taxpayers and will promote more responsible behavior in comparison to renters. The encouragement of home ownership is linked by Robinson to a shift away from the traditional company-owned, employee-rented relationship so common in earlier resource towns. That housing operations were becoming a distraction from the company's main business, and the rising costs of owning and building houses, are cited as factors contributing to this shift. Instead, Robinson identifies that the important task of providing housing, and ensuring the satisfaction of workers through home-ownership, is falling more to government involvement. The Canada Mortgage and Housing Corporation (originally the Central Mortgage and Housing Corporation) was empowered under Section 17 of the National Housing Act to "make loans to a company engaged in mining, lumbering, logging or fishing industry, to assist in the construction of low or moderate cost housing projects in areas or localities that are adjacent to or connected with the operations of the borrower" (Robinson, 1962, p.147).

Housing quality

Housing quality has been one of the historic problems in remote resource-dependent company towns (Berry *et al.*, 1975). As a result, there has been on-going interest in the study of housing

materials and construction in northern and remote communities. One report, commissioned by the Canada Mortgage and Housing Corporation, gathered information on housing quality in rural and remote areas from seven regions across seven provinces (IBI Group, 1980). All of the study regions included a variety of remote small communities. The study was to make recommendations as to how housing design and building standards can be improved and evaluated.

Three principal forms of site condition problems were identified in the IBI Group report (1980). The first among these involved building materials problems. This included problems with basements, wood, tiles, door installations, and inadequate heating systems. A second problem area involved the general quality of workmanship. The report noted that in some regions house builders in the hinterland generally had a lower level of technical, organizational, and management skills. Compounding this was that much housing construction occurred in winter conditions making building even more difficult. Finally, a serious condensation problem was noted. This included concealed condensation which can decay framing and insulation, and also surface condensation which can lead to delamination of floors, window-frame deterioration, drywall deterioration, and mould and mildew.

Key recommendations developed from the IBI Group (1980) study included that CMHC should provide additional measures for housing durability, energy performance, and quality. A document with guidelines to encourage higher design and construction standards for all rural and remote housing was suggested, as was a “how-to” manual primarily for use by less experienced builders. These recommendations emerge directly from the building problems identified. While the development of housing in Mackenzie predates this report, housing development in Tumbler Ridge was initiated after the study’s findings were published.

More generally, there is the problem of a lack of fit between housing/community design and the environmental realities of northern places. In a study completed for Tumbler Ridge and the North East BC Coal Project, Veit and Associates (1978) discuss the importance of housing and describe how other studies have shown that northern residents typically live in poor quality housing. The quality of the home design is not only important for women at home and children who spend considerable time indoors particularly in winter months, but it is an important consideration in overall resident satisfaction with local quality of life. The study suggests the provision of special home designs to accommodate for northern environments including such features as short driveways and ‘mud rooms’. (Berry *et al.*, 1975) agree that using housing designs from southern urban landscapes is a problematic model for northern communities. It creates problems for northern residents such as a lack of recreation space for children to play indoors in the winter as children in southern communities can play outside and do not have the same needs as families in the north (Barton, 1999).

Housing Provision

A project by Pinfield and Etherington (1982a) was undertaken in response to resource firm managers voicing complaints about what those managers labeled their most problematic issue; the provision of housing and accommodation for resource sector and service sector employees. In reviewing the problems associated with various housing strategies used by resource firms in Western Canada, the report provides a framework for re-considering housing policy. Factors identified as having the greatest impact on housing policies for resource towns are the size of the community, the age of the resource operation and its associated community, and the degree of isolation from other communities. The older, more isolated a community, the greater the extent to which the resource firm will adopt policies which control the supply, demand, and housing stock in the community.

The costs of housing provision, and associated infrastructure, are one of the principal economic questions in resource town development. A study of single sector communities by the federal Department of Regional Economic Expansion (DREE) (1979) examined the various dimensions of single-industry towns and discussed several different analytical models that could be used to evaluate the costs associated with town development and closure. Beginning with an argument that single-industry towns in Canada continue to be an important part of the settlement system, three models: private accounts, economic accounts, and budgetary accounts, are suggested. Each of these models weigh what are essentially cost/benefit analyses of different aspects of town closure. From the model parameters, three key facets of community infrastructure are defined as critical cost issues. These community infrastructure facets are housing, education, and health care.

Specifically with respect to housing, the DREE (1979) study notes three issues. The first is that shifts in home ownership are especially significant because they represent a substantial accumulation of private wealth, which stands to be lost in a single-industry community that is declining. The second issue, stemming directly from the first, is that home ownership can be a powerful indicator of local expectations. Few people are likely to buy houses if they expect to stay only for a short time. Declining property values may reflect a loss of confidence in the town's future as may fall-offs in mortgage and home-improvement activity. The third issue is that a rapidly declining community represents a massive waste of social capital: such as unoccupied homes and buildings, unused public utilities, developed but deserted properties, and transportation facilities. All these elements of community infrastructure are underused and, likely deteriorating. As well, there is the loss to each home owner from the deflation triggered by an oversupply of housing. The DREE (1979) report suggests that this loss can be determined by estimating the market value of the home that would have prevailed had there been no disruption and deducting it from that figure of the post-disruption market value. The uncertain question of course is deriving an agreed upon estimate of where the local market would have been under different conditions.

Going beyond questions of economics and affordability, Robinson and Fletcher (1977) suggest that housing design is also an important part of the provision equation. Beginning with an argument that single-industry towns have inherent stability problems due to market fluctuations and recessions, they argue that housing and community design for northern, winter, climates affect resident satisfaction and whether they will stay over the long term.

Resident Housing Satisfaction

Housing satisfaction issues repeatedly have shown up as important in past studies of community development and attachment in isolated resource towns (Berry *et al.*, 1975). For example, in a study of the housing strategies of resource firms, Pinfield and Etherington (1982b) investigated employee attitudes towards jobs, the community, and housing in three different coal mining communities in the East Kootenay region of BC. Beyond personal or non-local family needs, three sets of factors were important in causing employees to leave their job or community: the economy, housing, and local living conditions. Economic factors were central to issues like wages, opportunities for advancement or promotion, and job losses though lay-offs or other events. Housing and local living conditions combined into non-job centred factors affecting stress and satisfaction.

In an earlier study, Tanimura (1972) compared the needs and wants of residents from different communities in Manitoba. For each community, the quality and availability of housing was the most influential parameter governing resident quality of life. While some urban centre communities were studied, of interest here is the questionnaire results from the northern mining town of Thompson. There, residents had fairly low expectations except for the availability of housing. As long as housing was available, Thompson residents were generally satisfied at the utilitarian value of the shelter. Also emphasized was the need for affordable, owner occupied housing with attention to privacy and upkeep (maintenance) issues. The detached single family dwelling was the preferred housing structure.

Building upon work like Tanimura's, Gartrell and Krahn (1983) examined housing supply, housing quality, housing costs and subsidies, residential stability and housing satisfaction in the 'new town' of Fort McMurray Alberta. Their study found that individual characteristics such as gender, marital status, number of children per household, education, or previous experience with resource-dependent communities, played an almost insignificant role in the level of resident housing satisfaction. In addition, they found that housing subsidies, although important in the housing market, did not play a role in improving or making worse resident's housing satisfaction. Rather, the most significant issues affecting overall resident happiness with accommodation were related to housing size, housing design problems, housing tenure, and construction housing quality. Therefore, prefacing the attention to neighbourhood planning in Tumbler Ridge, Gartrell and Krahn recommend that more attention be paid to improving the quality and design of the home and neighborhood. These issues, combined with reasonable housing costs, will make residents want to commit to the community by purchasing the home and staying for longer periods of time.

In an alternate approach to studying housing satisfaction issues, Bates (1983) argued that housing is a prime determinant of the quality of life in resource towns. Extrapolating from this, Bates suggests that housing policies present an effective and efficient means of enhancing labour and community stability by decreasing turnover and increasing overall resident satisfaction with their quality of life. Therefore, he identifies a set of housing policy areas which may ensure that historical problems associated with housing in resource towns are ameliorated. The four main policy areas identified include; availability, affordability, segmented housing market, and housing design. Availability refers to the typical problem of shortage due to supply not keeping up with demand in 'boomtown' settings. Affordability, or the 'affordability gap', refers to cases where mortgage rates/rental rates may be higher than incomes. In this case some form of assistance of subsidy may be called for. In turn, a segmented housing market may create a serious affordability problem for service sector employees who do not earn the higher wages typical of resource jobs.

Finally, housing design must be appropriate to local environmental conditions and lifestyles (ie: family oriented), and include choice in dwelling types and tenure options. In terms of environmental conditions, McCann's (1978) observations from Kitimat are that with industry positioned away from residential areas to reduce environmental, noise, and air pollution, this type of planning helps ameliorate resident quality of life. To this, Robinson and Fletcher (1977) echo earlier comments that housing design, at the least, must account for the large snowfalls so often associated with northern single-industry towns.

Housing and Community Stability

Housing is clearly important in community stability and community development. Investment in places through home purchase especially has an impact upon people's perceptions and outlook. Residential and labour turnover is socially and economically costly to single-industry towns. The length of stay for residents in single-industry towns is often very short and the "highly unstable population is characterized by excessive mobility" (Kuz, 1984, p.6). Kuz (1984) examined the different characteristics associated with people staying longer in resource communities and making them their home as opposed to simply a place to earn high wages short term and then leave. Correlation studies of residents in Thompson, Manitoba, allowed Kuz to suggest differences between "stayers" and "movers". "Stayers" tend to be married, employed in the resource industry, and to own their own home. "Movers", who are in the town for only a short time, tend to be single and are renting accommodation.

Matthiasson (1971) conducted quality of life research in Fort McMurray, Alberta. The purpose of the research was to determine which factors may lead to high rates of turnover within resource industry towns. Based on community interviews, Matthiasson reports that employment opportunities; environmental factors such as wide open spaces away from city life or abundance of wilderness areas; and living conditions such as the availability of good quality, affordable accommodation were the top three reasons for moving to Fort McMurray. The three main reasons listed for leaving the community were: the harsh winter environment, poor living

conditions, and inadequate recreation and leisure services. Matthiasson concludes that accommodation and recreation services significantly affect the quality of life for residents and that attention to these facets can hold people within the community.

In a different context, Taggart (1993) also identifies the critical role of housing, and housing tenure, in community stability and community development. Past studies have shown that high incomes and high levels of education play a significant role in the amount of participation residents have in social organization. In addition, Taggart (1993) shows how involvement also depends on housing tenure. In a study of 435 Ottawa/Carleton region residents, Taggart showed that ownership boosted scores on housing satisfaction, neighborhood life and organizational participation regardless of socio-economic (education and income) status.

Alternative Housing Strategies

The development of housing and resource industries encounters conflicting expectations and imperatives. At its core, this conflict involves the expectations of the workers with respect to housing and living environment versus corporate economic imperatives concerning the costs of building full-service communities. Detomasi (1997) points out that in order for parent companies to attract workers to isolated resource towns they not only have to provide basic services and accommodation, they now must provide an appropriate mix of housing types, a full range of public services and facilities and a strong local economy. This echoes the historical discussion of worker's housing needs and demands by Ennals and Holdsworth (1998). Detomasi states that with the prevailing expectation of workers to live in an urban style environment, the level of satisfaction will not increase unless a full set of such facilities are provided. Residents no longer accept that facilities will be developed over the long term. Without a fully functioning community before residents are needed, it is often difficult to attract workers to isolated places. Besides simply being used to urban living, residents recognize that property and home values can increase once population and demand increases. Therefore, residents understand that the more attractive communities are, the more valuable their investment as home-owners and business owners will be.

On this same theme of fully-serviced urban towns, Himelfarb (1977) describes in detail how one-industry towns in Canada differ from diversified communities. The scope and extent of community infrastructure is one key distinguishing factors. In this Himelfarb describes the major infrastructure within single-industry towns as including recreation and leisure, goods and services, health services, schools, and churches. Such are expensive to provide and choices in resource towns are limited.

As early as 1963, a report by Parker predicted the contemporary dilemma of investment in elaborately planned towns and the uncertainty created by economic restructuring. In a study of mining communities, Parker reviewed the range of housing provision models and planning strategies being employed at the time. From the experiences of communities with these present strategies, he made the argument for an alternative to the instant town design.

Parker (1963) suggested that there were at least two contemporary models of housing provision in Canadian mining communities. The models follow a roughly chronological time frame in terms of introduction into the Canadian scene. The first he labeled “Closed housing / company towns”. In these cases the company provided the entire stock of housing accommodation. The second he labeled “Open housing / company towns” - where, he argues, companies realized that being landlords was bad for labour relations and found investment in housing to be non-productive. As a result, companies gave up their role of housing. By the 1960s, most mining companies chose to follow policies which advocate the sale of company houses and the construction of new housing by private individuals. It was into this type of housing policy community that Bradbury's studies of Schefferville were conducted.

Parker (1963) suggested that there were three planning strategies being employed for new mining communities. These included “Permanent Single Enterprise Communities” where permanent facilities and structures were planned and built according to the most up-to-date planning strategies. Despite the sense of permanence this instilled, many were still ending up as ghost towns. A second strategy focused less on designing an isolated mining town as planning for “Economic Diversification” from the outset. In this case the plan sets a foundation for diversification much as Stein had done with Kitimat. Not only does this imply that diversification is possible, but a flexible and adaptive infrastructure to allow for it is already in place. Finally, Parker suggested a third strategy - planning for the “Multi-Enterprise Community”. Using the mining example, he cited the case where one mining center could be the base to service several mining operations. While still dependent upon a non-renewable resource, there are possibilities for the town to remain viable even when one mine closes.

A central theme grounding Parker’s work, and now echoed in several studies already described here, is that while it may make economic sense for a company to write-off its wasting assets in anticipation of resource exhaustion, residents may have invested in private housing, commercial enterprises, and community facilities so the desertion of the community places large capital losses on the individual. As a result, he argued that non-permanent, or temporary, towns with good-quality infrastructure should replace permanent infrastructure in resource towns. Non-permanent towns would provide communities with a choice to dismantle towns if the company closes or to develop the community if diversification succeeds. While Parker examined mining towns, his findings have broader import.

Impact of Town Closure on Investments

The historic pattern of resource town development and closure is still an issue for single-industry towns in Canada. While there are fewer examples of such town abandonments today, they still occasionally occur. A 1987 study by the Canadian Employment and Immigration Advisory Council suggests that with long term planning and economic diversification, single-industry towns would not decline as rapidly as they have in the past. Through a review of the circumstances and concerns of residents and companies in communities across several regions, the Council report suggests some possible solutions based on government initiatives and the

sharing of “responsibility” for community sustainability.

FIGURE 2.3
MAJOR CAUSES OF INDUSTRIAL TOWN CLOSURES AND CUTBACKS

1.) Exhaustion of resources
2.) Market decline
3.) Competition from other producers
4.) Low profitability
5.) Technological change
6.) Public policy

Adapted from Canadian Employment and Immigration Advisory Council (1987)

The Canadian Employment and Immigration Advisory Council (1987) study suggests that there are six major causes of industrial town closures and cutbacks. These causes are summarized in Figure 2.3. Problems currently faced by single enterprise communities are, to a great extent, the result of many years of affluence enjoyed by most of their base industries. When closure is announced, homeowners are left holding properties that have severely depreciated. Before a town is demolished, more thought should be given to alternative uses for the local infrastructure. Demolishing, the Council argues, is simply a manifestation of bad planning.

Against the history of town closures, the Council (1987) reports that single-industry communities are increasingly assuming responsibility for their own futures. Much of this is concerned with the recent interest in grass-roots Community Economic Development (Bryden, 1994; Galaway and Hudson, 1994; Mitchell and Dahms, 1997; Perry and Lewis, 1994; Shaffer and Summers, 1989). For these communities, however, frustration lies with financial institutions that had supported communities in good times but are first to “pull the plug” when fortunes change.

In working towards local solutions to viability and sustainability issues in single-industry towns, the Canadian Employment and Immigration Advisory Council (1987) suggests a model which recognizes a broader sharing of “responsibilities” for the community. For “Workers”, this responsibility includes that they should save a portion of their high wages for the day when operations cease. They also need to recognize that home ownership in single-industry towns is risky. For “Unions” this responsibility includes that they should ensure that the interests of workers affected by layoffs or closures are reflected in collective agreements. They should also be ready with psychological and relocation support in the case of layoffs or closure. The “Community” should take steps to diversify and to make the community attractive and receptive to other types of economic activities from the beginning. Early development of economic diversity is a far better strategy than waiting until a crisis develops. For “Provincial Governments” this responsibility includes that they should assist with diversification efforts like they assisted with early development stages of community. Finally, for the “Federal Government” this responsibility includes that they should offer preventative rather than post-disaster programs. This may include providing incentives to encourage diversification in single-industry communities or to attract businesses and residents from large cities.

2.4 Discussion

Single-industry instant towns are a common community type within the resource frontier areas of rural Canada. In terms of both townsite planning and community development, the provision of affordable, high quality, housing suited to the local environment is increasingly recognized as important. Not only is housing provision a significant cost to resource companies, but once sold to employees it usually becomes their most significant investment. Repeatedly, satisfaction with housing is shown to underpin whether the resource town has a high transiency rate, and whether residents choose to stay and create alternative economic development when resource industries downsize or close.

The transition in "eras" of resource town planning has been marked by a shift from little or no planning to significant site, facility, and community planning efforts. The goal of recent instant town planning exercises such as in Tumbler Ridge has been to create a more "receptive" and sustainable residential environment. Such planning exercises do have a long pedigree back to Stein's Kitimat plan from the 1950s. Despite this shift, however, at the start of the 21st century there is still a question as to whether single-industry towns can survive without economic diversification. To this the likely answer is no. Without diversification, the uncertainty created overshadows even the best intended town and community planning efforts and acts as a large factor in local quality of life.

In the review of single-industry community development, it was clear that most of these towns follow similar patterns of development. These patterns of construction, recruitment, and transition towards maturity were described by Lucas and others. Despite the obvious limitations of the Lucas model (even with amendments) created by resource exhaustion, and the increasingly complex pressures of change associated with global economic restructuring, many instant town planning exercises are still premised on a "progressive" path towards a mature and self-sustaining community. While the need for local economic diversification is again clear, the local housing market in these types of communities will continue to reflect the uncertainty of resource markets and concerns about a town's future. Such indicators of uncertainty should be tracked as part of a method for anticipating change and to prevent crisis. Coping with change during economic downturns or industry restructuring must now be central parts of community planning efforts in single-industry resource towns.

As noted above, housing is recognized as a critical facet of single-industry resource-dependent towns. Historically, housing in such communities has been characterized as being of generally lower quality. While this has been corrected in recent decades through the National Building Code and other such mechanisms, there is still the problem that little thought has been given to the unique design needs of northern landscapes. Towns continue to struggle with the costs (financial and emotional) of inappropriate house and neighbourhood design in cold regions with significant snowfall and limited winter daylight hours. There is a growing literature on winter city and climate sensitive designs. These insights and examples should assist in identifying issues so preventative measures can be taken to avoid the mistakes of the past.

Mackenzie and Tumbler Ridge illustrate the success of anticipating problems with respect to housing quality. The low level of needed housing repairs (see Chapter 4), suggest that housing quality is much better than was historically reported in resource towns. Town design and planning has also been much better at creating socially cohesive neighbourhoods. Yet, there are still matters which need consideration. These include climate sensitive designs. For example, flat roofs, long driveways, and narrow streets are not amenable to snow clearing while lack of attention to house orientation does not always take advantage of the limited winter sunlight and passive solar heating. While housing satisfaction is improved, there remains the fact that limited economic diversification has occurred and uncertainty about the town's future is raised from time-to-time. This uncertainty will have an impact upon the local housing market and resident investment in that market.

3.0 Case Study Community Research

The research is designed around a comparative case study. Field work was carried out in the northern British Columbia communities of Mackenzie and Tumbler Ridge. The purpose of this section is to provide background information on the development of these two communities. This is important for two reasons. First, the information provides a foundation for the detailed housing analysis which follows in the report. Second, the information will also allow readers to evaluate the degree to which the study results may or may not be comparable to towns with which they are familiar.

3.1 Comparative Research

A comparative research design is used in an effort to avoid locality bounded explanations. Generally, the aim of comparative research is to build a foundation for generalisation which extends beyond conditions found in particular places at particular times. Three benefits of a comparative research design have been suggested (Mikesell, 1960; Bloch, 1953; Fredrickson, 1980; Grew, 1980; Sewell, 1967). The first concerns a greater attention to the delineation of the specific from the general. The second concerns the inherent requirement to make plain the criteria for selection of comparable cases in terms of critical similarities and differences. Finally, while any comparative research design can only examine a limited set of examples, it still provides a wider base of experience from which to interpret and evaluate specific research findings.

The communities of Mackenzie and Tumbler Ridge have several key issues in common. Among these are that they are relatively recent in their creation (both post-World War II), were created especially to develop a local resource, required extensive supporting infrastructure to be put into place, are relatively isolated and are located in northern provincial settings, and have experienced significant fluctuations in resource market demands. Among the differences between the two are that Mackenzie was planned by private enterprise while Tumbler Ridge had significant government involvement, Mackenzie is based around a renewable resource (forestry) while Tumbler Ridge is based upon a non-renewable resource (coal mining) - though each has a resource base estimated to last at least the next 100 years at current extraction rates. One critical difference, and one which allows the research design to go beyond examination of just benefits/costs to homeowners and to look at the role of public policy and institutions, is that while the housing market in Mackenzie has remained private, most houses in Tumbler Ridge were “bought back” during the early 1990s through a plan which involved the mining companies and CMHC.

Beyond these case study communities, the research has broader applicability across Canada. The terminology used to describe such communities may be related to some aspect of its founding forces, including “company towns”, “planned communities”, and “instant towns”. As well, terms which relate to the economic orientation of the local economy include “single-industry” and “resource-dependent”. While the terminology for these types of communities does vary, examples

can be found across the country (Randall and Ironside, 1997; Lucas, 1971; Bowles, 1982; Marchuk, 1983).

3.2 Profiles of Mackenzie and Tumbler Ridge

Mackenzie

The community of Mackenzie is located 200 kms north of Prince George in north-central British Columbia (Figure 3.2). The community was founded in 1966 in conjunction with the massive hydroelectric project which created the Williston Lake reservoir. The Mackenzie townsite was developed to be the processing centre for a regional forest industry. At present, two large sawmills (Finlay Forest Industries/Donohue Inc. and Slocan Forest Products), a pulp mill facility (Fletcher Challenge Canada Ltd.), and a pulp and paper plant (Finlay Forest Industries/Donohue Inc.) provide nearly all basic sector employment. Fletcher Challenge Canada Ltd. alone employs about 20 percent of the local labour force. With a local population in 1996 of approximately 6,000 people, a small support service and local administration economy has also developed.

Mackenzie was planned and developed by the original forest industry company operating in the region (British Columbia Forest Products - BCFP) using new town planning principles. The design problems of transplanting a suburban, southern-Canadian, residential landscape into a northern location is dramatically shown in the National Film Board's (1979) "No Life for a Woman". Locally, this is a controversial film as many long-time residents suggest the film-maker just talked with women who supported her preconceived notions. A local history (Veemes, 1986) written to celebrate Mackenzie's 20th birthday describes this and the other early growing pains of a community being forged.

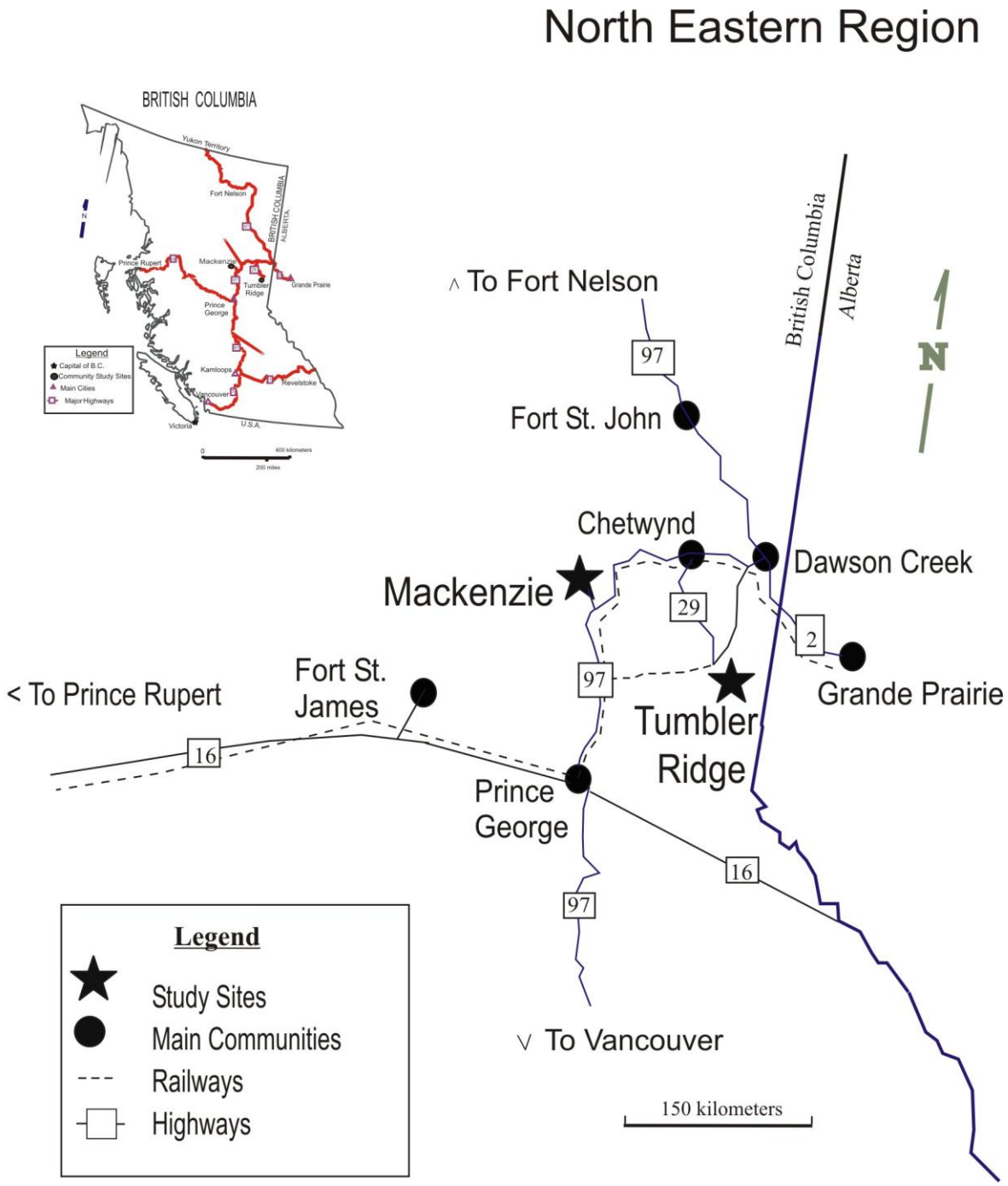
As noted in Figure 3.1, both BCFP and Finlay Forest Industries (FFI) were active in providing housing for local employees. The general pattern of this closed housing market was that only employees could purchase the company built homes. Because of some early uncertainty in the market, not all houses went immediately into the homeownership. Instead, they functioned as rental housing for several years before being sold to the occupants. In the case of these early sales, buy-back agreements were registered on title. These agreements were generally designed to cover situations where employees left the mills. The employee would be required to sell the housing back to the company at a pre-determined price. For the companies this was desired to protect themselves and their employees from housing shortages and early speculation in the market. An additional benefit for the employees is that if the company decided to close the mill, any investment in housing would at least be reimbursed to that pre-determined price level. Most of these buy-back clauses had a "sunset" clause which limited application to a 10 year period. As noted in the time-line, in 1976 the housing sales and purchases in Mackenzie began to function in an open market.

FIGURE 3.1
HISTORICAL TIME-LINE
MACKENZIE

1965	Project initiated - British Columbia Forest Products takes responsibility - initial site clearing.
1966	May - first interim council.
	December - 30 houses, 50 townhouses, 60 families in town.
1967	BCFP opened the first phase of a mobile home park (50 trailers for rent).
	December - hotel/shopping mall complex and an apartment block complete.
1968	Official town opening in July. BCFP builds additional trailer spaces, bunkhouses at mill site closed.
1970	Knor Apartments, privately owned apartment block.
1973	BCFP had developed 640 housing lots, Finlay Forest Industries had developed 130 homes.
1975	June - housing shortage
	July / October - pulp pickets closed down all other mills.
1976	Open housing market in Mackenzie began.
	In total FFI built 150 homes, BCFP built 732 single family dwellings, 62 townhouses.
1978	An eight building, 32 unit, apartment complex built.
1979	Municipality offered 44 Gantahaz Rural Subdivision lots for sale.
1981	July / August - 6 week industry wide strike.
	Drop in lumber market causes mill shutdowns.
1986	July - 350 pulp workers off the job due to province wide strike.
	August - BCFP strike, 570 workers strike bound.
1987	FFI announces $212 million newsprint machine, 90 new jobs in Mackenzie will be created.
1988	June - Fletcher Challenge Canada Limited to take over BCFP.
	Nov. - 350 construction workers upgrade mills; 161 new jobs to be created.
1989	Recent boom still means lack of accommodation.
1990	October - housing starts down, lumber market in a slump, FFI lays off 55 employees.
1991	March - Fletcher Challenge Canada to shut down newsprint mill during slow market.
	September - 3 mills to be shut down for an indefinite period - affects 500 employees.
1992	July - 3 Fletcher Challenge mills shutdown for three weeks - 400 employees affected.
1993	July - Fletcher Challenge announces 15 day kraft pulp shut down due to weak market.
	December - Slocan Forest Products and Donohue Inc. to purchase Finlay Forest Industries.
1994	July / November - PPWC / Fletcher Challenge strike action.
1995	Fletcher Challenge tries to sell its mills in Mackenzie, TimberWest bought 48% of stock.
1996	April / May - layoffs to accommodate significant deterioration in pulp market.
1997	October - TimberWest puts its 48% share of Fletcher Challenge Canada for sale.
1998	Nine month long strike at Fletcher Challenge Canada pulpmill
1999	Donohue Industries completes takeover of Finlay Forest Industries.
2000	Donohue Industries is taken over by Quebec based Abitibi.

Developed from Mackenzie newspapers and local histories (Citizens Committee of Mackenzie, 1974; Veemes, 1986; Williston and Keller, 1997).

FIGURE 3.2



Three “geographies” are important in local economic and community development planning. The first is that there continues to be a heavy employment dependence upon the forest industry. More

than 30 years after development, little economic diversification has occurred. Second, Mackenzie's location about two hours drive north of Prince George generates considerable retail sector leakage. When the town was first built, road access was quite limited. In the 1990s, however, the highway connection with Prince George reinforced the limited economic base of the community. And third, its location about 35 kilometres off the main highway through the region gives little opportunity to take advantage of passing tourist and commercial traffic.

Tumbler Ridge

The community of Tumbler Ridge is British Columbia's newest town, founded in association with the province's last resource development "mega-project". Located in northeastern British Columbia, Tumbler Ridge is on the eastern slope foothills of the Rocky Mountains (Figure 3.2). Knowledge of regional coal resources was well known, but in the mid-1970s world prices prompted a flurry of activity. More than 15 coal claims by a variety of national and multi-national firms were staked in the region surrounding present day Tumbler Ridge (BP Exploration Canada, 1979; Cinnabar Peak Mines, 1981; Denison Mines Limited 1982; Pacific 66, 1978; Petro-Canada, n.d.; Teck Corporation, 1981; Utah Mines, 1976). Out of this resource scramble, two mines, "Bullmoose" (owned by Teck Corporation) and "Quintette" (owned by Denison Mines) proceeded.

In 1976, planning for a new settlement to house the coal mining workforce and their families was initiated. Based on a fifteen year agreement to sell 100 million tons of coal to a consortium of Japanese steel mills for $7.5US billion (Tumbler Ridge Tattler, 31 May 1982), in less than 10 years the town was functioning and residents were moving in (Figure 3.3).The Provincial Government, through the Ministry of Municipal Affairs, managed the planning and development of the community. Extensive efforts were put into the design, layout, and servicing of the townsite. In part, the province took a fairly traditional role in regional economic development by assuming the enormous infrastructure costs of road and rail access to a previously undeveloped area. However, the government went beyond this by actively participating in the planning and development of the Tumbler Ridge townsite. Coordination of town planning was through the provincial Ministry of Municipal Affairs and Housing. This government action provided a focal point for not only the physical design but also the social planning design of the new townsite. The goal was to build upon past experience and avoid some of the difficulties residents and communities had experienced historically.

FIGURE 3.3
Historical Time-line
Tumbler Ridge

1970s 15 coal deposits had been identified and staked.

1981 Representatives of Japanese Steel Industry, Government of Canada, Denison Mines Limited and Teck Corporation sign 15 year supply contract.
Town construction under way.
Price for a standard 60 foot residential lot will be about $23,000.

1982 Royal Bank, first permanent building in Tumbler Ridge, opened.
Denison Mines, Quintette Coal, and Vancouver's Edma Holdings purchase residential lots.
Total of $22,339,308 in building permits issued.
5 houses completed and occupied, and 35-40 houses at construction lock up stage at year's end.
6 apartment blocks at construction lock up stage at year's end.

1983 Rents for a 2 bedroom apartment will be comparable to Dawson Creek at $495.00 a month.
4 apartment blocks, operated by Edma Holdings, began renting in March.
Edma Holdings sells houses on behalf of Quintette for between $70,000 and $80,000.
CMHC is to insure speculative houses built for persons not employed by the mines. Few sold.
Elementary school opened.
First coal train left for Ridley Island.

1984 Japanese Steel Industry now pays $95 per tonne but are asking for a $14 per tonne reduction.
Quintette and Teck prices are now up to a third higher than other Japanese Steel Industry suppliers.
High school completed.

1986 Japanese Steel Industry wants price and volume concessions from all international suppliers.
Sales of new homes built by Quintette going slow. Concern about mine viability.
CMHC has tightened rules for TR by terminating financing for speculative building until inventory of unsold homes is considerably reduced.
BC Assessment Review Board has decided to roll back all property assessments for 1986.

1987 BC Assessment Authority reached agreement with Quintette and Bullmoose to lower 1985-1986 mine assessment (Quintette: $155.8 million to $89.2) (Bullmoose: $69.8 million to $43).
Quintette and Bullmoose appeal assessments again for 1987/1988.
Tumbler Ridge owes Quintette more than $6.5 million, including interest, because of reassessments.

1988 Pricing dispute with Japanese Steel Industry continues. TR coal prices are above the world levels.

1989 Quintette to implement plan to cut housing cost in half. They will now own half of the home and pay half of the mortgages and taxes.
Denison Mines to sell its oil and gas interests to raise $217 million to meet financial obligations.
Two week strike at coal mines.
New housing policy announced by Bullmoose to provide homeowners with a taxable allowance. For a $77,500 house, owned for 5 ½ years, the allowance would be about $550 per month ($325 after taxes).
Apartment and Mobile Home park rents have dropped.

1990 Supreme Court ruling : Quintette must drop coal price by $10.50 per tonne in 1990 and another $2 per tonne over the next 2 quarters. Quintette must reimburse the Japanese Steel Industry over $4.6 million.
Quintette announces temporary and permanent cutbacks, voluntary termination packages to be offered.

BC Rail strike affects community.

1991 Teck will assume management of Quintette.
Quintette laid off 60 staff members, another 340 of 1,450 employees laid off after Teck takeover.
To prevent Quintette's bankruptcy, CMHC extended their agreement on no rent increases. Current mortgage rates average $785 per month while rents average $390. Deficiency must be covered by CMHC.
New terms regarding CMHC guaranteed mortgages in Tumbler Ridge.

1992 Quintette lays off 62 employees.
Teck acquires 50% interest in Quintette from Denison Mines for $5.28 million. Teck's interest eventually reduced to 33% after project lenders are offered 1/3 share.
CMHC advises that TR presents the Mortgage Insurance Fund with a higher than normal risk due to dependence on the mines.
Two apartment blocks were closed down. People move into vacant houses to reduce maintenance costs.

1993 Property Assessments now being done every year. There have been no sales since 1990.
A closed market, most houses were sold back to the mines, must work for mines to qualify to buy home.
CMHC insists on a 25% down payment.
CMHC agreed to help restructuring of mines by acquiring up to 100 company properties.

1994 Sharp decline in residential property values ($78 million to $49 million) due to lack of sales and vacancies in apartment blocks.
Potential home buyers have trouble getting mortgages as CMHC continues to apply risk containment measures in single-industry communities.

1996 Potential home buyers getting a $75 mortgage fee reduction during New Homes month by CMHC.

1997 New contracts with Japanese Steel Mills, calling for a 30% reduction in production at Quintette, gives mines guaranteed production until April 2003.

1998 Local population enumeration identified 2,300 residents.
Fall, Bullmoose puts 15 houses on market for mine employees and 7 houses on general market.

1999 Sept. Bullmoose puts 17 houses on market ($23,480 - $27,500).

2000 Bullmoose puts 9 houses on market (average $25,000).

Developed from Tumbler Ridge newspapers, government reports, and independent studies (Shera and Gill, 1990).

The community opened in 1986. While projections originally suggested population growth could exceed 10,500, the 1991 population was 4,500 and the 1996 population was 3,800. The local economy remains dependent upon the two open pit coal mines, Quintette and Bullmoose, whose markets are exclusively Japanese steel mills. As can be noted in the time-line, there was a degree of local economic uncertainty from the outset. Housing assistance policies were offered from the start. As well, there were the usual buyback and equity protection agreements registered on the titles. By 1989 both Denison and Teck were offering additional assistance packages to

homeowners. The 1990 price ruling against Quintette, and the subsequent moves to prevent its bankruptcy, marked a turning point for the community. Teck assumed management control of the Quintette mine and successive rounds of layoffs reduced the local workforce by more than 30 percent by 1998. Local housing also underwent a radical shift as it reverted from a homeowner to rental market. Both Bullmoose and Quintette mines bought back the housing they had built, with CMHC participating with Quintette in this buyback.

The literature on company/isolated resource single-industry towns is replete with comments about 1) the value of homeownership in creating attachment and community and with 2) the importance of economic diversification. The case of Tumbler Ridge aptly describes the inter-linkage between these two issues. Economic diversification did not get underway and thus the coal contract problems left the economic viability of the town in question. With the near collapse of the Quintette mine and the buy-back of housing, community activists have struggled to address these same two issues. A number of groups are active in grass-roots and sustainable community economic development efforts. Tumbler Ridge faces some difficult challenges to diversification of the local economy. Like Mackenzie, it is not on a “thru” highway, as road access comes via separate spur roads from either Dawson Creek or Chetwynd. Recently established Provincial Parks and Protected Areas offer some tourism possibilities but there is at present a degree of uncertainty. In 1999, a small 15 year timber license was made to a local company (Tumbler Ridge Specialty Wood) to stimulate a forest products value added business. Job estimates range up to 49 jobs (Community Connections, 20 March 1999).

In terms of housing, a number of residents and community leaders have been pressing to have the mines put their houses back on the market and thus let those who are committed to the future of the community demonstrate that commitment through the purchase of a house. In the fall of 1998, the Bullmoose mine put 22 houses on the market, with 15 available to mine employees and 7 available to the public (Prince George Citizen, 10 September 1999, p.5). In the fall of 1999, the Bullmoose mine put an additional 17 houses on the market for between $23,000 and $28,000 (Prince George Citizen, 10 September 1999, p.5), and in January 2000, Bullmoose put an additional 9 houses on the general market at prices between $24,070 and $26,127 (Tumbler Ridge Community Connections, 19 January 2000, p.4). At time of writing, the Quintette CMHC houses have not been put up for sale and housing managers are watching the Bullmoose sales.

3.3 Community Population Change

Statistics Canada data was used to develop basic socio-economic profiles for each community. Following this introduction, three sections review some basic household characteristics, income sources and levels, and community employment characteristics in Mackenzie and Tumbler Ridge.

In Table 3.1, the populations for Mackenzie and Tumbler Ridge are tracked over time. In Mackenzie, the pattern has been one of relatively stable population numbers. While there has

been considerable population turnover through in- and out-migration, the population has varied from about 5,000 people in 1976 to about 6,000 people in 1996.

In Tumbler Ridge, there was rapid early growth (Table 3.1). From 1986 to 1991 the population increased to about 4,500. But with the 1990/1991 events at the Quintette mine and the rounds of layoffs which followed, the population has been decreasing. The Census count for 1996 was 3,800 while a local enumeration conducted in the fall of 1998 put the population at approximately 2,300.

These stable or declining population levels stand in marked contrast to the provincial growth rate of approximately 13 percent from 1991 to 1996. They are also different from the recent (1991 - 1996) 9 percent growth rate for the regional centre of Prince George.

Table 3.1
Population Counts

Date	Mackenzie	Tumbler Ridge	Prince George	BC
1966	-----	-----	24,471	1,873,700
1971	-----	-----	33,100	2,163,910
1976	5,340	-----	59,929	2,392,790
1981	5,890	-----	67,559	2,744,467
1986	5,545	4,390	67,621	2,883,367
1991	5,796	4,586	69,653	3,282,061
1996	5,995	3,800	74,150	3,724,500

Source: Statistics Canada

3.4 Individual / Household Characteristics

To review individual and household characteristics, four census variables are employed. These variables are: age, education, marital status, and family structure.

Age

One of the most effective tools for examining the age structure of a local population is the “population pyramid” (Norton, 1998). A population pyramid involves dissaggregating a population into males and females, and then by age groups or “cohorts”. For each of these cohorts, the proportion of the local population which they comprise is then calculated. These percentages allow for easy comparison between time periods. The standard pattern is to use 5 year age cohorts. The visual pattern created by stacking age cohorts allows ready comparison and interpretation. In the population pyramid figures for Mackenzie and Tumbler Ridge, 5 year age cohorts are use up to the “60 to 64" group - as a result of the very small proportion of residents over age 65, the final cohort is “aged 65 and over”.

Fig. 3.4a

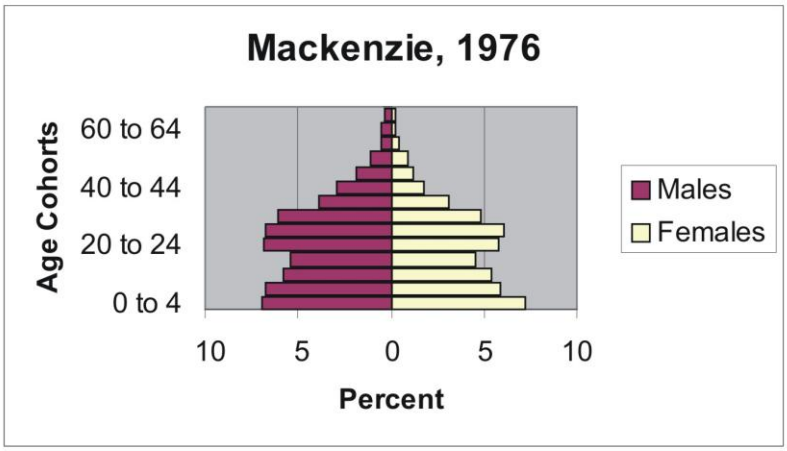


Fig. 3.4b

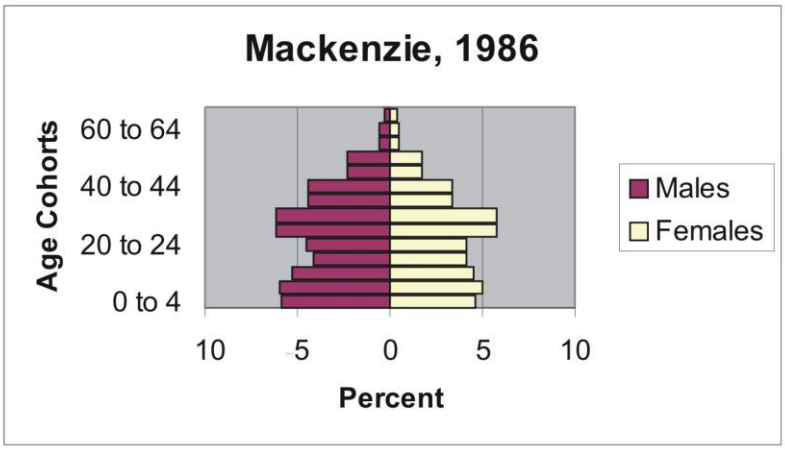


Fig. 3.4c

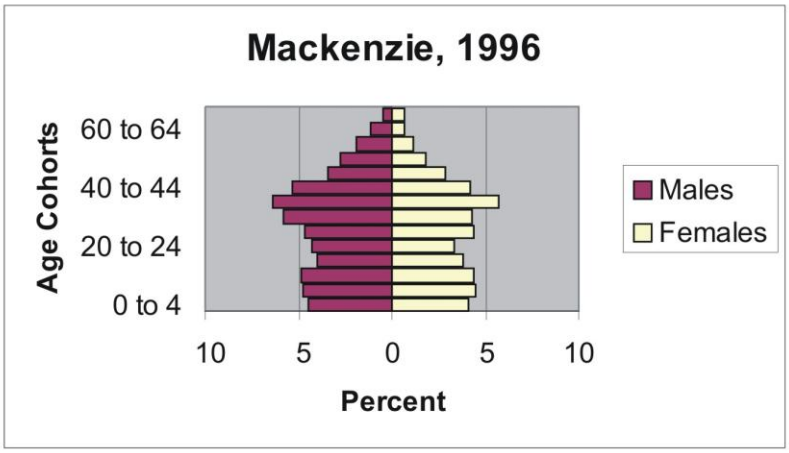


Fig. 3.5a

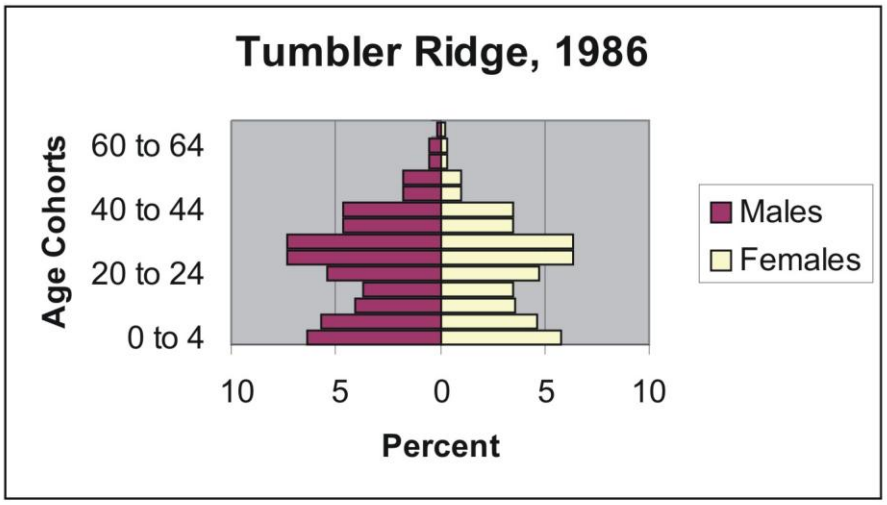
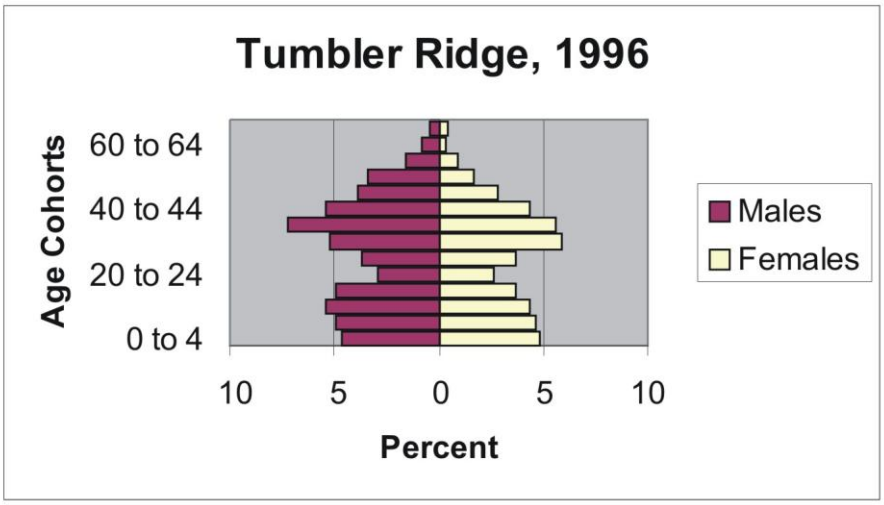


Fig. 3.5b



Mackenzie

Mackenzie's 1976 population pyramid resembles a pattern common in new and expanding communities - namely, that there is a large proportion of young families. As can be seen in Figure 3.4a, there are "bulges", or large shares of the population, in both the 20 to 35 year age groups and in the 0 to 8 year age groups. This type of pattern is typical of the early development phases in resource industry towns where young families are recruited and encouraged to settle and become a part of the community. In these new towns, where people have come to create careers in the expanding workforce, it is not surprising to see a comparatively small percentage of older residents.

The structure of the population in Mackenzie experienced slight changes between 1976 and 1986. Most of these changes are associated with a population "aging in place". As shown in Figure 3.4b, there is still evidence of a strong family structure in the population and there are few people over age 65.

By 1996, the population pyramid for Mackenzie is beginning to look like that for the regional centre of Prince George in that most age cohorts between 0 - 4 and 45 - 50 are generally the same size. While there is still some skewing towards a larger share of the local population aged 40 - 44 (linked with local employment opportunities), we would generally characterize this as moving towards a "stable" pyramid structure. The small growth seen with the older age cohorts means it is quite likely that Mackenzie will soon be required to deal with the needs of a senior's population (health care, support, and housing facilities).

Tumbler Ridge

The population pyramids for Tumbler Ridge show many of the traits seen in Mackenzie - and for both communities, they are following patterns typical of new resource-dependent towns. The 1986 Tumbler Ridge population pyramid clearly shows the predominance of young households starting families. The 25 to 35 year age cohorts and the 0 to 10 year age cohorts are the largest. The opportunities for work by young people building their careers are also clearly shown through the large shares of the population between ages 20 and 45. As noted in Mackenzie, there are relatively few older or retired people - yet this is even more strongly seen in Tumbler Ridge as people over the age of 45 make up only about 8 percent of the population.

The population pyramid for Tumbler Ridge in 1996 shows an "aging in place" of the population. The children are getting older, as represented by the similar sized cohorts in each of the 0 - 4, 5 - 9, 10 - 14, and 15 - 19 age groups. There is some aging further up the pyramid as well. One of the most notable things in the 1996 Tumbler Ridge pyramid is the small shares of the local population between ages 20 and 30. As noted earlier in the literature review, a lack of job opportunities for youth in resource-dependent communities will mean out-migration for work or post-secondary education. This appears to be the case in Tumbler Ridge.

Education

Tables 3.2a and 3.2b contain summaries of the educational attainment for Mackenzie and Tumbler Ridge residents. For the purposes of this variable, Statistics Canada includes only those residents who are aged fifteen years and older. Census information on highest level of schooling "enables federal and provincial agencies to look beyond the present occupations of the labour force to their potential occupations after retraining" (Statistics Canada, 1997, p.99). For our purposes, the education tables provide information as to schooling trends.

In Mackenzie, education trends are consistent with other resource industry communities in British Columbia and elsewhere (Halseth, 1999). In general terms, the foundation is high school graduation followed by training in identified trades or other specialized courses. The increased need for additional training is clear in the way education past high school certificates has become more popular in recent years. This can be understood by the competitive nature of the forestry industry in which trained individuals gain more job security. Therefore, there has been a shift in the proportion of individuals not only completing high school, but also moving on to earn a certificate in a specific trade. Residents in Mackenzie have access to college courses (through the College of New Caledonia) and the University of Northern British Columbia is only two hours away in Prince George.

Table 3.2a
Education
Mackenzie, British Columbia

Date	Pop. 15+	<Gr. 9	9-13 No Cert.	9-13 Cert.	Trade	Other Trade No Cert.	Other Trade Cert.	Univ. No degree	Univ. degree
1976	3,415	330 (9.6%)	1,570 (45.9%)	405 (11.8%)	n/r*	n/r*	n/r*	320 (9.3%)	140 (4.1%)
1981	3,920	305 (7.7%)	1,600 (40.8%)	535 (13.6%)	155 (3.9%)	225 (5.7%)	710 (18.1%)	220 (5.6%)	170 (4.3%)
1986	3,920	380 (10.0%)	1,475 (38.9%)	530 (13.9%)	95 (2.5%)	210 (5.5%)	680 (17.9%)	220 (5.8%)	190 (5.0%)
1991	4.020	225 (5.5%)	1,295 (32.2%)	695 (17.2%)	200 (4.9%)	280 (6.9%)	725 (18.0%)	350 (8.7%)	250 (6.2%)
1996	4,350	250 (5.7%)	1,245 (18.6%)	675 (15.5%)	185 (4.2%)	1,390 (31.9%)	1,130 (25.9%)	345 (7.9%)	260 (5.9%)

Source: Statistics Canada
n/r* data category not recorded in census for that year

Table 3.2b
Education
Tumbler Ridge, British Columbia

Date	Pop. 15+	<Gr. 9	9-13 No Cert.	9-13 Cert.	Trade	Other Trade No Cert.	Other Trade Cert.	Univ. No degree	Univ. degree
1976	-----	-----	-----	-----	-----	-----	-----	-----	-----
1981	-----	-----	-----	-----	-----	-----	-----	-----	-----
1986	3,045	135 (4.4%)	890 (28.9%)	395 (12.9%)	105 (3.5)	895 (29.4%)	200 (6.6%)	220 (7.2%)	200 (6.6)
1991	3,210	120 (3.7%)	835 (26.0%)	450 (14.0%)	200 (6.2%)	230 (7.1%)	875 (27.1%)	310 (9.6%)	185 (5.7%)
1996	2,675	115 (4.2%)	730 (27.2%)	425 (15.8%)	150 (5.6%)	925 (12.1%)	715 (26.7%)	185 (6.9%)	130 (4.8%)

Source: Statistics Canada

Much like Mackenzie, the education trends in Tumbler Ridge reflect the incentive of job security or advancement through specialized trade skills. Specialized training with particular types of equipment or particular types of work activities (such as mine rescue) has increased the participation rate of those earning various types of trades certificates after completing high school. As in Mackenzie, university participation is lower despite the existence of distance education programs in town offered through Northern Lights College.

Educational attainment trends in Mackenzie and Tumbler Ridge can be attributed to the changing pattern of employment requirements in resource industries. Historically, some high school or high school equivalency was the common minimum standard. Today, however, there is an increasing need for additional skills as the restructuring of work now calls for greater interaction with technology and computers. Trade or skills certificates provide opportunities for workers to obtain specialized skills and gain increased job security or advancement to a higher wage grade. Compared to the British Columbia and the Prince George populations, residents in Mackenzie and Tumbler Ridge are more likely to have some type of advanced trades certification and less likely to have completed a university degree. University degree completion in Mackenzie and Tumbler Ridge averages about 5 percent while it is 18 percent in BC and 12 percent in Prince George.

Marital Status

Marital status is an important indicator of the emphasis communities place on social institutions and customs (Statistics Canada, 1997). In addition, “data on marital status, combined with economic and family data, have proved useful in analyzing the economic difficulties” encountered by families (Statistics Canada, 1997, p.91). The data includes only those residents who are aged 15 years or older. When looking at marital status information for Mackenzie and

Tumbler Ridge, similar patterns can be noted in both communities (Table 3.3a and 3.3b).

In Mackenzie, the emphasis throughout the years is on married couples. Between 1976 and 1996 the majority of the population is married. Over time, however, there is an increase in the number of separated and divorced individuals as this population increases significantly from only 40 in 1976 to 495 in 1996. The general pattern of changing family formation and breakup across Canada, and the specific aging of the Mackenzie population, help to explain these trends.

Table 3.3a
Marital Status*
Mackenzie, British Columbia

	Marital Status			
Date	Single	Married	Separated/ Divorced**	Widowed
1976	765	2,570	40	25
1981	955	2,880	60	30
1986	850	2,790	150	40
1991	1,100	2,665	210	45
1996	1,370	2,445	495	45

Source: Statistics Canada
* Includes only residents 15 years and older
** Separated/divorced includes all that are separated but still legally married and those who are legally divorced.

Table 3.3b
Marital Status*
Tumbler Ridge, British Columbia

	Marital Status			
Date	Single	Married	Separated/ Divorced**	Widowed
1976	-----	-----	-----	-----
1981	-----	-----	-----	-----
1986	705	2,250	75	15
1991	910	2,075	200	20
1996	820	1,570	270	30

Source: Statistics Canada
* Includes only residents 15 years and older
** Separated/divorced includes all that are separated but still legally married and those who are legally divorced.

In Tumbler Ridge the marital status information follows the Mackenzie pattern. From 1986

through to 1996, the significant proportion of the population is either married or in a common-law relationship. Like Mackenzie, the number of separated and divorced individuals in Tumbler Ridge has increased between 1986 and 1996. Possible explanations include the aging of the local community and that local trends now reflect what is common across the Canadian population.

A major draw encouraging people to move to Mackenzie and Tumbler Ridge is the small town family atmosphere both towns have to offer. The importance placed on the traditional family structure explains why a significant portion of the population in both towns are married. In Mackenzie and Tumbler Ridge, about 56 and 58 percent respectively of the local population (in 1996) over aged 15 was married. Comparing this to British Columbia (52 percent) and to Prince George (54 percent), the rates are only slightly higher. Secondly, the increased divorced and separation rate seen over time in both communities have explanations noted above. In addition to these it should be added that increased stress attributable to the pressures of layoffs, strike action, job insecurity, and stressful work conditions can foster difficult home and family situations.

Family Structure

Family structure represents the types of families existent within each community. Family structure in Canada has changed dramatically in the past few decades (Statistics Canada, 1997). One of the notable changes has been with regard to lone-parent families. In 1996, approximately 14.5 percent of Census families in Canada were headed by lone-parents. Of these, approximately 83 percent were headed by female lone-parents.

In Mackenzie, husband/wife families have been the dominant family type (Table 3.4a) and there has been very little change in this pattern over time. Lone-parent families accounted for approximately 4 percent of families in Mackenzie in 1976 and approximately 8 percent of families in 1996. Of these lone-parent families - defined as “a mother or a father with no spouse or common-law partner present, living in a dwelling with one or more sons and/or daughters” (Statistics Canada, 1997, p.208) - females dominate as lone-parent family heads. This has changed subtly over time, however, as in 1981 about 30% of lone-parent families were headed by males, whereas in 1996 about 40% of lone-parent families were headed by males.

In Tumbler Ridge the predominance of husband/wife families is much the same as in Mackenzie, with very little change occurring over time (Table 3.4b). Lone-parent families accounted for only about 5 percent of families in Tumbler Ridge in 1986 and approximately 11 percent of families in 1996. The lone-parent family trend in Tumbler Ridge also differs from that of Mackenzie in that a larger share of lone-parent families were always headed by males.

Table 3.4a
Family Structure
Mackenzie, British Columbia

Date	Total	Family Type			
		Husband/Wife	Lone Parents Total	Male Head	Female Head
1976	n=1,265	1,215 (96.1%)	45 (3.6%)	-----	-----
1981	n=1,445	1,365 (95%)	80 (5.5%)	25 (31%)	55 (69%)
1986	n=1,445	1,305 (90.3%)	140 (9.7%)	50 (35.7%)	90 (64.3%)
1991	n=1,555	1,440 (92.6%)	115 (7.4%)	45 (39.1%)	70 (60.9%)
1996	n=1,570	1,445 (92.1%)	125 (7.9%)	50 (40%)	75 (60%)

Source: Statistics Canada

Table 3.4b
Family Structure
Tumbler Ridge, British Columbia

Date	Total	Family Type			
		Husband/Wife	Lone Parents Total	Male Head	Female Head
1976	-----	-----	-----	-----	-----
1981	-----	-----	-----	-----	-----
1986	n=1,115	1,060 (95.1%)	55 (4.9%)	25 (45.4%)	30 (54.5%)
1991	n=1,220	1,135 (93.0%)	85 (7.0%)	35 (41.1%)	50 (58.8%)
1996	n=1,050	930 (88.5%)	120 (11.4%)	50 (41.6%)	70 (58.3%)

Source: Statistics Canada

Compared to the Canadian averages, the family structure of Mackenzie and Tumbler Ridge is more focused upon married/common law couples. In turn, both communities have a smaller proportion of lone-parent families than the Canadian average. A further difference connected with lone-parent families is that about 60 percent are female headed households compared to a Canadian average of just over 80 percent. The British Columbia and Prince George populations mirror the Canadian averages in terms of both married/common law couples and lone-parent families.

3.5 Income Characteristics

Three variables are included in the review of household income characteristics. These variables are: income levels, income sources, and the distribution of employment incomes.

Incomes

By looking at income distributions we can identify a range of community characteristics. These include the relative income levels of the community, the identification of potential inequities which may be occurring between men and women, and the "income status of families, unattached individuals or population in selected regions of the country which can be analyzed in relation to Statistics Canada's low income cut-offs" (LICOs) (Statistics Canada, 1997, p.108). While devised simply as a statistical measurement line, these LICOs have come to represent something akin to a poverty line in Canada (Spector, 1992). Baxter (1995) has summarized the Statistics Canada LICOs in 1994 for communities under 500,000 as ranging from $10,538 for a single individual to $22,841 for a family of five. Mackenzie and Tumbler Ridge have distinct patterns of income which are closely connected with their role as resource industry communities.

In Mackenzie, incomes are generally reported as high (Table 3.5a). In 1996, the average family income in Mackenzie was over $72,000. This is an increase of $12,000 from 1991 (an increase of about 17 percent). This family income level compares very favourably to the provincial family income average of $56,527 (1996 Census). It also compares favourably to the Statistics Canada's low income cut-off (LICO). Comparing male and female income levels, both the average and median income for males is not only higher than that of women, but for all years, income levels for males is at minimum over $15,000 greater than for women. In terms of average incomes, in 1996 women were earning about 45 percent what men were earning. In addition, over the years the gap between male and female median incomes has widened (from $17, 869 in 1986, $32,151 in 1991 to $33,922 in 1996).

Table 3.5a
Incomes
Mackenzie, British Columbia

Date	Males Average Median	Females Average Median	Family Average Median
1976	-----	-----	-----
1981	$22,665 $23,868	$8,070 $6,738	$32,732 $30,949
1986	$32,993 $35,730	$11,056 $7,861	$44,506 $43,256
1991	$42,618 $44,124	$17,858 $11,973	$60,853 $56,352
1996	$45,576 $48,085	$20,499 $14,163	$72,783 $70,082

Source: Statistics Canada

Table 3.5b
Incomes
Tumbler Ridge, British Columbia

Date	Males Average Median	Females Average Median	Family Average Median
1976	-----	-----	-----
1981	-----	-----	-----
1986	$41,886 $43,508	$12,281 $7,035	$55,182 $49,899
1991	$46,556 $49,655	$17,858 $11,973	$66,394 $64,442
1996	$50,188 $53,944	$19,269 $16,021	$69,361 $67,131

Source: Statistics Canada

In Tumbler Ridge, the income situation is quite similar to Mackenzie in that income levels are high in comparison to provincial averages (Table 3.5b). In 1996, average family incomes were $69,000 compared to the provincial average of $56,527. As well, average male and female incomes were $50,000 and $19,000 respectively compared to the provincial averages (for full time workers) of $44,784 and $31,218 respectively. As in Mackenzie, males in Tumbler Ridge earn significantly more than women. In fact, men in Tumbler Ridge earn over $30,000 more than females. This gap has not changed over time.

When looking at family incomes for both communities, they are quite high in comparison to provincial averages. This can be explained by the types of occupations people in Mackenzie and Tumbler Ridge hold. Mill jobs in Mackenzie and mining jobs in Tumbler Ridge are typically high paying. Because the majority of employed persons in both towns work in these areas, average community income levels will inevitably be high. There are some further earnings disparities between men and women. Labour force participation for men averages 80-85% while it is only 55-60% for women. Further, men traditionally hold more full time jobs whereas women hold more part time jobs - which in turn differentially affects earnings potential.

Income Sources

Income source information identifies where individuals or households derive their incomes. This can be an important indicator as to the economy and character of the community. For example, if the majority of a community's income is generated from government transfer payments as

opposed to employment, then it can be said that a large proportion of the population is either retired or below the working age limit. This information can assist in explaining the types of housing, services, and lifestyles found in the community.

In Mackenzie, the majority of the population receives its income from employment sources indicating a high proportion of the population being within working age population (Table 3.6a). Often working age populations are also family oriented - and this is clearly the case in Mackenzie. Through housing, daycare, and educational facilities, Mackenzie thus provides a range of support structures for the children of working parents.

Table 3.6a
Income Sources
Mackenzie, British Columbia

Date	Employment Income (%)	Government Transfer (%)	Other (%)
1976	-----	-----	-----
1981	-----	-----	-----
1986	93.7	4.6	1.7
1991	93.6	4.1	2.3
1996	93.9	4.4	1.6

Source: Statistics Canada

Table 3.6b
Income Sources
Tumbler Ridge, British Columbia

Date	Employment Income (%)	Government Transfer (%)	Other (%)
1976	-----	-----	-----
1981	-----	-----	-----
1986	94.8	3.4	1.8
1991	95.5	3.0	1.5
1996	93.5	4.1	2.4

Source: Statistics Canada

In Tumbler Ridge the income source situation is identical to Mackenzie (Table 3.6b). Depending upon the date of the Census, between 93 and 96 percent of income is earned from employment. Similar to Mackenzie, this working age community is dominated by the needs of families and children. Single family dwellings and educational facilities for elementary and secondary school

age children are prominent as are ample recreational activities and opportunities for youth and younger children.

Employment Income

Employment income data represents the working age population, 15 years or older, who earn a wage through part time or full time employment (Statistics Canada, 1997, p.108). For this report, employment income will be used to establish trends in the earning potential of full time and part time working men and women (Tables 3.7a and 3.7b). When looking at this information, it can easily be noticed that women in Mackenzie and Tumbler Ridge consistently earn less money than men.

In Mackenzie, there is little change in women's full time or part time salaries when compared as a percentage of men's salaries. In 1981, women working full time earned about 57.5% of what men earned and by 1996 women earned 63.6% of men. Women working part time earned about 39.0% of what men earned in 1981 and about 38.2% of what men earned in 1996. Despite discussion about equal opportunity and gender discrimination, and government policies on pay equity, there is still considerable income disparity in Canada even at a national level.

Table 3.7a
Employment Income
Mackenzie, British Columbia

Date	Full Time/Full Year			Part Time/Part Year		
	Male	Female	% female of male	Male	Female of male	% female
1976	-----	-----	-----	-----	-----	-----
1981	$49,881	$28,665	57.5%	$29,239	$11,271	39.0%
1986	$38,250	$23,726	62.0%	$23,537	$ 6,551	27.8%
1991	$49,881	$28,665	57.4%	$29,239	$11,271	38.5%
1996	$54,500	$34,596	63.5%	$36,352	$13,884	38.2%

Source: Statistics Canada

In Tumbler Ridge, there have been slight increases for both full time and part time employment income for women in comparison to men. Women employed in full time jobs earned 52.6% of men in 1986 and 58.2% of men in 1996. Women employed in part time jobs earned 29.6% of men in 1986 and 30.5% of men in 1996. As in Mackenzie, women in Tumbler Ridge still earn considerably less than men. Compared to the British Columbia population, women in Mackenzie and Tumbler Ridge are doing less well. Across British Columbia, women in full time jobs earned 70% of what men earned in 1996 (this is close to the Canadian average as well) while women employed in part time jobs earned 66% of men in 1996.

Table 3.7b
Employment Income
Tumbler Ridge, British Columbia

Date	Full Time/Full Year			Part Time/Part Year		
	Male	Female	% female of male	Male	Female of male	% female
1976	-----		----- -----		-----	----- -----
1981	-----	-----	-----	-----	-----	-----
1986	$48,312	$27,157	56.2%	$24,815	$ 7,362	29.6%
1991	$53,233	$32,339	60.7%	$25,855	$12,261	47.4%
1996	$58,791	$34,232	58.2%	$32,389	$ 9,897	30.5%

Source: Statistics Canada

Employment income disparities between men and women can be explained by the types of employment in which women and men are involved. In resource industry towns, men typically have a high wage earning potential due to their involvement in unionized, labour intensive jobs such as Mackenzie's mills or Tumbler Ridge's mines. In contrast, women typically have a lower wage earning potential due to their traditional employment in non-unionized, service sector, jobs which pay lower wages. There are exceptions to these stereotypical job placements however. In Tumbler Ridge, for example, the mines actively recruited women as a part of their full time workforce and many women still hold such positions today. Despite this initiative, however, females in Tumbler Ridge are not doing as well relative to males as are their counterparts in Mackenzie, and in both towns, women are doing less well relative to males compared to the provincial average.

3.6 Employment Characteristics

The three variables of labour force participation rates, occupation, and unemployment rates are used to portray employment characteristics in Mackenzie and Tumbler Ridge.

Labour Force Participation Rate

Labour force participation data, for the population 15 years and older, includes the three categories of "employed", "unemployed", and "not in the labour force" (Statistics Canada, 1997, p.103). For Mackenzie and Tumbler Ridge, the percentages of males and females, as well as the total (males plus females) participating in the labour force are recorded (Tables 3.8a and 3.8b).

In Mackenzie, the majority of eligible males are employed in the labour force, a characteristic which does not change much over the years. Male participation rates were 91.8% in 1981 and 89% in 1996. This is explained by the fact that people originally came to Mackenzie to work in the mills and for many of these men, if they are not working in one of the local mills they will

leave town in search of work. In contrast, the female participation rates were lower but have increased over time, at 54.6% in 1981 and 73.9% in 1996. There are a number of explanations for this participation pattern among women. First, it is not uncommon in any community setting for women to choose to stay home and raise the children. This has been especially noted in resource towns when men were employed in high paying jobs and where there are often fewer work opportunities for women (Gill and Smith, 1985; Institute of Local Government, 1953; Mouat, 1995). Over time, more service sector jobs have become available and community services such as formal and informal childcare are also more readily available.

Table 3.8a
Labour Force Participation Rate
Mackenzie, British Columbia

Date/Type	Total	Males	Females
1976	-----	-----	-----
1981	-----	91.8	54.6
1986	73.2	91.9	51.8
1991	67.6	75.6	59.9
1996	82.2	89.0	73.9

Source: Statistics Canada

Table 3.8b
Labour Force Participation Rate
Tumbler Ridge, British Columbia

Date	Total	Males	Females
1976	-----	-----	-----
1981	-----	-----	-----
1986	76.2	94.6	53.7
1991	78.3	90.0	63.3
1996	77.4	88.1	64.9

Source: Statistics Canada

In Tumbler Ridge, the situation is similar to Mackenzie. The participation rate of men is high; 94.6% in 1986 and 88.1% in 1996. Again the prevalence of primary industry employment and the relatively young population suggest that if men are not employed in one of the local mines or support industries, they will leave town in search of work. The participation rate of women is lower than for men in Tumbler Ridge. However, women in Tumbler Ridge participate more than women in Mackenzie. Active recruitment of women by the mining companies and the availability of childcare services since the town's inception may contribute to this difference.

Occupation

Occupational data is one way by which to explore how a local labour force is distributed in jobs. This information helps us identify the character of the community and any significant trends which may be occurring. Table 3.9 is particularly important for Mackenzie and Tumbler Ridge as they are both single-industry towns, which theoretically means that they have one area which employs the majority of workers.

In Mackenzie, there are 3,580 people in the labour force (1996 data). Of those, 43% were employed in manufacturing industries in 1996. This correlates with Mackenzie being a forestry processing centre dominated by employment in the local sawmills, planermills, or pulp and paper mills. The rest of the population is separated into the other different categories. An ongoing problem with occupation data is that it is difficult to see within the different categories. For example, for those in transport and storage occupations, many of the 4.7% (1996) would be directly employed in the forest industry and linked with the Mackenzie mills. These linkages are also affected when one sector of the economy shuts down.

Table 3.9
Occupation, 1996

Occupation Classification	Mackenzie		Tumbler Ridge	
	#	%	#	%
Total Labour Force	3,580	100	2,070	100
Primary Industries	230	6.4	1,150	55.0
Manufacturing	1,565	43.0	30	1.4
Construction	170	4.7	85	4.1
Transportation & Storage	200	5.5	15	0.7
Communication	45	1.2	195	9.4
Wholesale & Retail	310	8.6	45	2.1
Finance, Insur., Real Estate	200	5.5	15	0.7
Business Service	70	1.9	45	2.1
Educational Service	165	4.6	95	4.5
Health & Social Service	190	5.3	105	5.0
Accom./Food/Beverage	240	6.7	245	11.8
Government Service	135	3.7	45	2.1

Source: Statistics Canada

In Tumbler Ridge the situation is very similar. Over 50% of the labour force is employed in primary industries (in this case the coal mines). Much like Mackenzie, the remainder of the population is employed within the different sectors of the economy but most are closely linked to the viability of the mining sector. Therefore, the closure of the mines will affect employees in

other occupations besides primary industries.

Unemployment Rate

The unemployment rate data is similar to the participation rate data in that it is a segment of the labour force population. However, this data involves a percentage calculation of those who are eligible to participate in the labour force by who are not participating (Statistics Canada, 1997, p.103). This category only includes those who are part of the labour force and thereby excludes students, homemakers, retired persons, and those suffering from long-term illness or disability (Statistics Canada, 1997). This information highlights some of the themes already evident in labour force differences between men and women.

In Mackenzie a significant difference occurs between the percentage of men and women who are unemployed (Table 3.10a). Overall, the male unemployment rate is lower than the female unemployment rate. The male unemployment rate has fluctuated between 7 and 10 percent. The cycle of recessions and associated layoffs means there are always periods of higher and lower unemployment. Historically, female unemployment rates are generally much higher than males in Mackenzie. Limited opportunities and limited support services like daycare no doubt play a role in these higher figures. In 1996, however, there was only a 3% difference between men's and women's unemployment rates.

In Tumbler Ridge, disparity continues to exist between the unemployment rates of men and women (Table 3.10b). Males in Tumbler Ridge have a very low unemployment rate, much lower than the female unemployment rate and even lower than the Mackenzie male unemployment rate. In contrast, the female unemployment rate is significantly higher and rarely reaches within 10 percentage points of the male unemployment rate.

Table 3.10a
Unemployment Rate
Mackenzie, British Columbia

Date/Type	Total	Males	Females
1976	-----	6.6	19.2
1981	-----	6.9	15.7
1986	15.5	10.2	25.7
1991	11.0	7.1	17.7
1996	9.4	8.4	11.2

Source: Statistics Canada

Table 3.10b
Unemployment Rate
Tumbler Ridge, British Columbia

Date/Type	Total	Males	Females
1976	-----	-----	-----
1981	-----	-----	-----
1986	9.9	3.5	24.7
1991	6.6	2.8	12.9
1996	4.8	1.5	10.3

Source: Statistics Canada

Unemployment rates for single-industry communities are generally low as people who cannot find a job tend to leave town and move to a location with a more diversified economy. In 1996, Statistics Canada reported the British Columbia unemployment rate at 9.2 percent and the Prince George unemployment rate at 11.7 percent. The unemployment rate in Tumbler Ridge is lower than the provincial or Prince George rates, while Mackenzie's numbers are about par with the provincial rates. While female unemployment rates are quite similar between Mackenzie and Tumbler Ridge, the significant difference in unemployment rates is between males.

3.7 Discussion

The socio-economic profile of residents in both Mackenzie and Tumbler Ridge can be said to reflect patterns "typical" of single-industry and resource-dependent towns. This profile is similar despite the later date of incorporation for both at a time when resource town planning had become much more sophisticated. Many historic problems have largely been addressed and there has been a focus upon creating an atmosphere for young families through the development of recreational facilities and services.

In terms of population, the town of Mackenzie has been relatively stable over time while the population in Tumbler Ridge went from rapid growth to slow decline as the coal mines restructured. For both towns, however, the structure of that local population has resembled a pattern common in new and expanding communities - namely, that there is a large proportion of young families. With economic stability, each community may, over time, develop to the point where there is a share of older residents requiring services such as health care, support, and housing facilities.

In both Mackenzie and Tumbler Ridge the education trends are consistent with other resource industry communities. In general terms, the foundation is high school graduation followed by training in identified trades or other specialized courses - something which has become more urgent as industries increasingly adopt new technologies which require new skills.

In terms of family arrangements, most households in both Mackenzie and Tumbler Ridge are either married or in a common-law relationship. A major draw encouraging people to move to resource-dependent communities is that they provide opportunity for young people starting their careers. Compared to the Canadian averages, the family structure of Mackenzie and Tumbler Ridge is more focused upon married/common law couples. In turn, both communities have a smaller proportion of lone-parent families than the Canadian average.

Mackenzie and Tumbler Ridge have distinct income patterns which are closely connected with their role as resource industry communities. In Mackenzie, the 1996 average family income was over $72,000 while in Tumbler Ridge the 1996 average family incomes were $69,000. Such are well above the provincial income average of $56,527. The far majority this income is from employment sources as government transfers and "other" investment sources such as retirement savings are not presently important. This is explained by the fact that people were recruited to both towns to work in the resource industry. Labour force participation is high for men and lower for women. As is found in many other resource-dependent towns there are often fewer work opportunities for women. Further, men traditionally hold more full time jobs whereas women hold more part time jobs - which in turn differentially affects earnings potential. As a result, such high incomes are not distributed equally across males and females.

Occupational data reflects the resource industry character of the two communities. In Mackenzie, nearly half of those employed are in manufacturing. This fits with Mackenzie being a forestry processing centre dominated by employment in the local sawmills, planermills, or pulp and paper mills. In Tumbler Ridge the situation is very similar with over half of the labour force employed in primary industries (in this case the coal mines). In both towns much of the remainder of the population is employed within the different sectors of the economy but most are closely linked to the viability of the resource sector.

This overview profile of Mackenzie and Tumbler is important as it allows readers to compare how well these examples resemble, or do not resemble, resource-dependent towns with which they are familiar. As has been noted, Mackenzie and Tumbler Ridge share many of the characteristics traditionally associated with resource-dependent communities such as economic dependence upon one sector, high wages, a gender divided employment pattern. Their creation as "instant towns" has also resulted in a population rather more skewed towards the young families recruited to work in the new local industry.

4.0 Housing Development

This section of the report includes information on the development and character of the housing stock in Mackenzie and Tumbler Ridge. It involves three parts. The first is an overview profile of the local housing stock. The second is a descriptive summary of local housing history in Mackenzie and Tumbler Ridge. Of critical interest is the timing of housing 'sell-offs' by the resource companies and the operation of 'buy-back' arrangements. The third part is a

reconstruction of local house construction activity. Three issues are of importance here, including the pace at which the original housing stock was created, the timing of additional housing development, and the emergence of home renovation activity. Collectively, this section provides not only important background information on the structure of the local housing stock, but it also tracks how pressures and changes have differentially affected the housing markets in each community.

4.1 Overview Profile

The profile of local housing in Mackenzie and Tumbler Ridge has been assembled from Statistics Canada and CMHC data sources. It includes information on the tenure, age, value, size, and structural type of the housing stock as well as some local affordability issues and level of repairs needed in the housing stock. The profile is longitudinal and so is able to track changes over time. To set the baseline data into context, parallel information on the more readily accessible census data is presented for the control community of Prince George. The purpose is to compare fluctuations in the local housing market against a larger regional centre with a more diverse economic base.

4.1.1 Housing Stock Structure

In this section, three aspects of the structure of the local housing stock are examined. These include the number of occupied private dwellings in each community, the type of housing which comprises the housing stock (for example: single detached, duplex, etc.), and the structure of housing tenure (renting versus ownership).

In Table 4.1, information on the number of occupied private dwellings in each community is listed. For comparative purposes, information on Prince George and British Columbia is included as well. For Mackenzie, there has been a slow but steady increase in the number of occupied private dwellings over time. Beginning with the 1976 Census when about 1,400 dwellings were recorded to the 1996 Census when about 1,900 dwellings were recorded.

In Tumbler Ridge, the 1986 Census recorded just less than 1,400 occupied private dwellings, a number which increased to about 1,500 by 1991. However, the 1996 Census recorded only 1,240 occupied private dwellings. This outcome is not the result of any demolition of housing units, but rather that there has been an increase in the number of units standing unoccupied and some of the mobile home sites in mobile home parks were empty.

Table 4.1
Occupied Private Dwellings

	1966	1971	1976	1981	1986	1991	1996
Mackenzie	-----	-----	1,455	1,735	1,705	1,845	1,930
Tumbler Ridge	-----	-----	-----	-----	1,370	1,520	1,240
Prince George	5,811	8,633	17,565	21,875	22,700	21,130	26,775
British Columbia	543,075	667,545	828,285	996,641	1,085,600	1,243,895	1,424,640

Source: Statistics Canada

For both Mackenzie and Tumbler Ridge, the slow growth or relatively static pattern of occupied private dwellings is in marked contrast to that seen provincially, or in the nearby regional centre over this same period. Since 1966, or even since 1976, Prince George has seen significant growth in the number of occupied private dwellings. The more diversified local economy and its roles as a regional administrative centre likely account for this growth.

Tables 4.2a and 4.2b include information on the structural type of housing in Mackenzie and Tumbler Ridge. In both communities, the dominant housing type is the single detached house. This is not surprising. Since the end of the Second World War, the detached suburban home has been the prototypical form of housing in Canada (Miron, 1988). A study by Veit and Associates (1978) for the North East BC Coal Project and the early planning of Tumbler Ridge emphasizes that residents are most satisfied with single family dwellings. As Veit and Associates (1978) describe, this type of dwelling is usually the first non-work related question about the community a worker asks when considering moving into town. In addition, they agree with the common conviction that homeowners are more satisfied than tenants (Veit and Associates, 1978).

In Mackenzie, single detached houses comprise about 63 percent of the housing stock. The next largest component (at about 20 percent of the housing stock) involves mobile or manufactured homes. Most of these are situated in mobile home park developments. There are approximately 150 row housing units in the community and there are approximately 200 units within low rise apartment buildings.

In Tumbler Ridge, about two-thirds of the local housing stock is comprised of single detached houses. As in Mackenzie, the next largest component involves mobile or manufactured housing. In Tumbler Ridge, some of these mobile home units are in large mobile home park developments while numbers of others are distributed throughout the community in clusters of small lot properties (Figure 4.1). While Tumbler Ridge also has a number of row and attached (duplex) type housing, the third most prevalent housing type is the four storey low rise apartment building. There are at present five low rise apartment buildings. By the mid-1990s, however, three of these buildings were closed

Table 4.2a
Housing Type
Mackenzie, British Columbia

	Total	Single-Detached	Single-Attached	Apt <5 Stories	Move
1976	1,455	860 (59.1%)	80 (5.4%)	165 (11.4%)	340 (23.4%)
1981	1,730	1,035 (59.7%)	150 (8.6%)	200 (11.5%)	345 (19.9%)
1986	1,705	1,040 (60.0%)	145 (8.0%)	200 (11.7%)	325 (19.1%)
1991	1,845	1,185 (64.0%)	130 (7.0%)	185 (10.0%)	345 (18.0%)
1996	1,930	1,215 (62.9%)	125 (6.4%)	200 (10.3%)	380 (19.6%)

Source: Statistics Canada

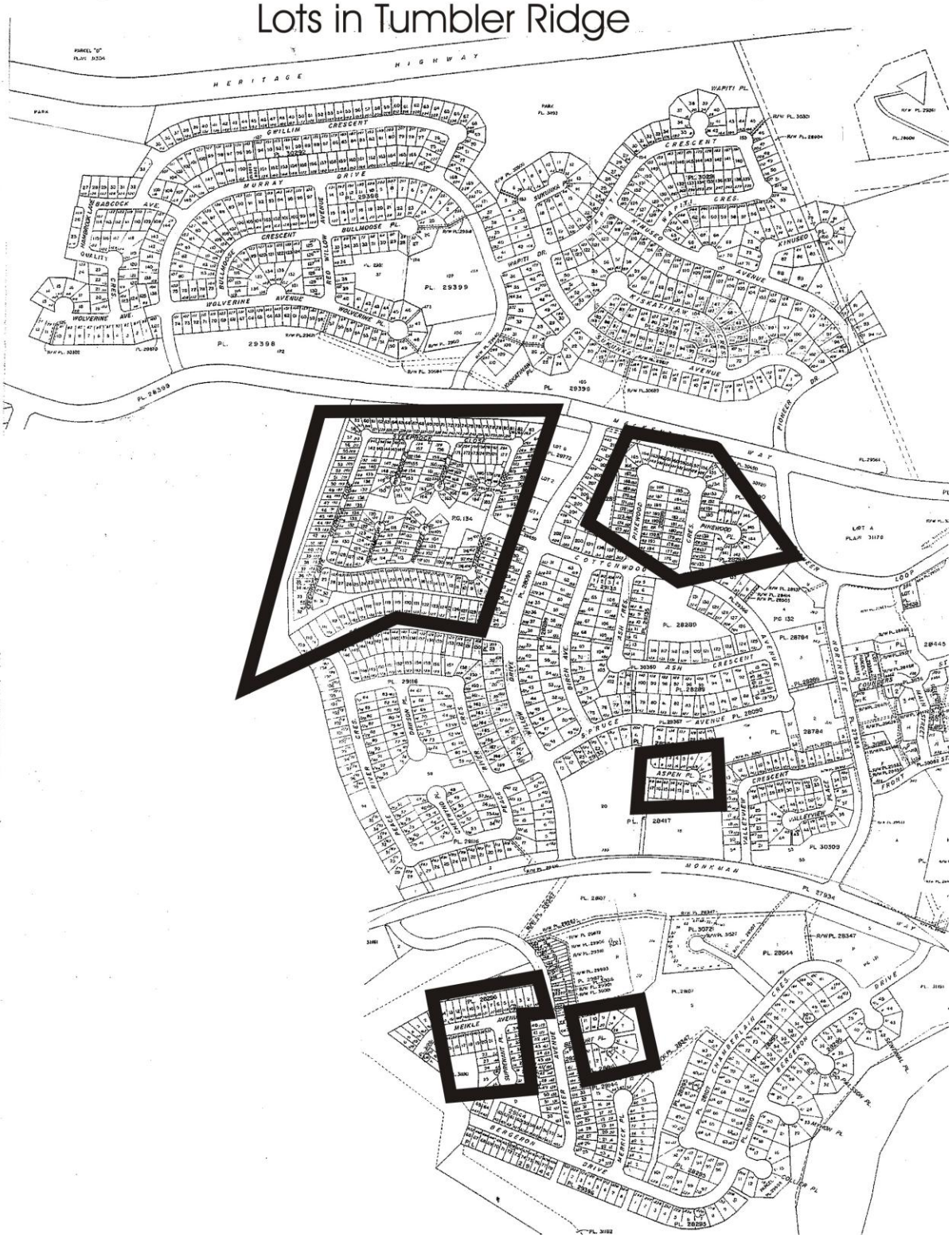
Table 4.2b
Housing Type
Tumbler Ridge, British Columbia

	Total	Single-Detached	Single-Attached	Apt <5 Stories	Move
1986	1,370	880 (64.2%)	none (0%)	none (0%)	105 (7.6%)
1991	1,240	835 (67.3%)	15 (12.0%)	145 (11.6%)	230 (18.5%)
1996	1,240	835 (67.3%)	15 (12.0%)	145 (11.6%)	230 (18.5%)

Source: Statistics Canada

The emphasis upon single-detached housing follows a well established post-WWII pattern in Canada (Miron, 1988). In the northern regional centre of Prince George, about 2/3 of housing is single-detached.

Fig. 4.1:Mobile / Manufactured Housing Lots in Tumbler Ridge



In Table 4.3, the structure of housing tenure for Mackenzie and Tumbler Ridge is shown. Housing Tenure means “ownership status”. The general tenure categories included by Statistics Canada are “Owned”, “Rented” and “Shared”. Over the period for which we have data, no housing units in Mackenzie or Tumbler Ridge were identified as being “Shared”. Tenure information is important because it informs us about the level of financial commitment which local residents have in the housing stock. It is also important in how people interpret their overall quality of life. Rohe and Stegman (1994) argue that homeowners experience higher levels of life satisfaction, self esteem, and perceived control over their lives. As home ownership has become a symbol of social status, it can now be a significant contributor to self esteem along with income, education, occupation, and how people are viewed by others. Perceived control is an individual’s belief that they are in control of significant life events rather than having to rely on the desires of others. In a study focusing on low income people, Rohe and Stegman found that housing tenure and perceived housing condition were significant aspects of improving life satisfaction, perceived control, and self esteem. Levels of home ownership are remarkably consistent across much of Canada. Nationally, about 65 percent of housing is owner occupied while in British Columbia it is also about 65 percent, and in the regional centre of Prince George it is about 69 percent.

Table 4.3
Housing Tenure

Date	Mackenzie		Tumbler Ridge	
	Owned	Rented	Owned	Rented
1976	1,120	335	-----	-----
	77%	23%	-----	-----
1981	1,275	460	-----	-----
	73.5%	26.5%	-----	-----
1986	1,245	460	825	545
	73.1%	26.9%	60.2%	39.8%
1991	1,440	405	325	1,190
	78%	22%	21.5%	78.5%
1996	1,560	370	365	880
	80.8%	19.2%	29.4%`	70.6%

Source: Statistics Canada

In Mackenzie, the majority (averaging between 73 and 81 percent) of the housing is owner occupied. Only about one-quarter of the housing is in the rental market. While there has been some small fluctuations in these numbers over time, the trend remains one of strong home ownership.

The housing tenure structure in Tumbler Ridge has undergone some significant fluctuations and is now quite different from that of Mackenzie. In 1986, shortly after the community's opening, about 60 percent of Tumbler Ridge's housing stock was owner occupied. By 1991, this pattern had changed considerably as only about 21 percent of that housing stock was then owner occupied. This transition coincides with the 1990-1991 restructuring of the Quintette mine and the assumption of mine management by Teck Corporation (which operates the Bullmoose Mine at Tumbler Ridge).

The pattern of a rental market housing stock in Tumbler Ridge continues with the 1996 Census identifying about 30 percent of the housing as owner occupied. What appears to be a small upward shift in the level of home-ownership between 1991 and 1996 can be misleading. Over this period the owner occupied housing remains concentrated in the mobile home sub-market which did not participate in the housing buy-back activity in 1990. The shift instead is accountable by the increase in the number of empty (unoccupied) single detached, row, and apartment housing in the community.

4.1.2 Housing and Household Size

In this section, information on the sizes of the households and the housing units in each community is reviewed. In Table 4.4, household size information corresponding to the average number of persons per household in both Mackenzie and Tumbler Ridge is shown. For both communities, there are about three persons in the average household. This number has decreased slightly for both Mackenzie and Tumbler Ridge, a change commensurate with the general decline in household sizes across Canada since 1970 (Miron, 1988).

Table 4.4
Household Size
Average # Persons per Household

Place/Time	Mackenzie	Tumbler Ridge
1976	-----	-----
1981	3.4	-----
1986	3.2	3.2
1991	3.1	3.0
1996	3.0	3.0

Source: Statistics Canada, calculated by Authors

Information on average house sizes for Mackenzie and Tumbler Ridge is found in Table 4.5. Rather than focussing upon the type of 'square-footage' comparisons commonly found in real estate advertisements, Statistics Canada instead relies upon two measures: the number of rooms and the number of bedrooms in a house.

Table 4.5
Housing Size

Date/Place	Mackenzie # Rooms # Bedrooms	Tumbler Ridge # Rooms # Bedrooms
1996	6.7 3.0	6.5 3.0

Source: Statistics Canada

For both Mackenzie and Tumbler Ridge, the average sizes of the housing stock are virtually identical. Generally, there are about 6.6 rooms per dwelling and 3 bedrooms per dwelling. These generally fit with Canadian national trends.

One of the principal reasons for comparing household and housing sizes is to develop a "crowding" index. Over time, as the average house size in Canada has increased and the average household sizes have decreased, there has been tremendous change in the national crowding index (Miron, 1988). Using information from Tables 4.4 and 4.5, households in both Mackenzie and Tumbler Ridge have about two rooms per person and one bedroom per person available in each dwelling.

4.1.3 Housing Costs

Tables 4.6a and 4.6b contain information on housing costs for Mackenzie and Tumbler Ridge. "Average Gross Rent" refers to the average monthly costs for residents in tenant-occupied dwellings while the "Owners Average Major Payments" refers to the total average monthly payments made by owners to secure shelter (includes mortgage payments as well as services costs such as water, sewer, and utilities). "Rent/Payments Greater Than 30 Percent of Income" refers to the proportion of households who spend more than 30 percent of their average monthly total household income on shelter (Statistics Canada, 1996a, p.146). For both renters and homeowners it is important to recognize that the 30 percent cut-off value is a statistical device for tracking relative changes in affordability over time. In the regional centre of Prince George (1991 Census), average gross rents were about $550 while approximately 33 percent of renters paid more than 30 percent of their monthly income on shelter. For home owners in Prince George, average shelter payments were about $650 while approximately 9 percent paid more than 30 percent of their monthly income for their shelter.

In Mackenzie, the average gross monthly rent as recorded in the Census has risen from $392 in 1981 to $650 in 1996. While this is an increase of nearly 40 percent, when we take into account the effects of inflation the relative level of gross rent has actually decreased. Using the Canadian Consumer Price Index to "equalize" the effects of inflation by transforming all dollar values to a constant base - 1986 is used for this purpose - the rents in 1981 were about $519(1986 constant

dollars) and in 1996 they were about $486(1986 constant dollars). In terms of affordability, there has been some fluctuation. In 1986, 35 percent of renters in Mackenzie reported that their gross monthly rent payments exceeded 30 percent of their average household income. This proportion decreased by 1991 to 17 percent but increased again by 1996 to almost 40 percent. This suggests that incomes and rent levels fluctuate close to the 30 percent cut off level.

Table 4.6a
Housing Costs
Mackenzie, British Columbia

Date	Average Gross Rent	Rent: > 30% of Income*1	Owners Avg. Major Pay	Payments >30% of Income*1
1976	-----	-----	-----	-----
1981	$392.00	-----	$453.00	-----
1986	$454.00	95 (34.5%)	$546.00	65 (6.4%)
1991	$568.00	40 (17.3%)	$622.00	60 (5.2%)
1996	$650.00	80 (38%)	$753.00	75 (6.3%)

Source: Statistics Canada
*1 The number of households who spend more than 30% of their average monthly total household income on shelter costs (Statistics Canada, 1996a).

Table 4.6b
Housing Costs
Tumbler Ridge, British Columbia

Date	Average Gross Rent	Rent: > 30% of Income*1	Owners Avg. Major Pay	Payments >30% of Income*1
1976	-----	-----	-----	-----
1981	-----	-----	-----	-----
1986	$610.00	25 (7.9%)	$834.00	45 (6.5%)
1991	$542.00	50 (5.9%)	$682.00	15 (5.2%)
1996	$660.00	75 (12%)	$674.00	10 (3.1%)

Source: Statistics Canada
*1 The number of households who spend more than 30% of their average monthly total household income on shelter costs (Statistics Canada, 1996a).

For owner occupied properties, the Census recorded major monthly payments of $453 in 1981 and $753 in 1996. Again, while this is an increase of nearly 40 percent, when we take into account inflation the costs decreased slightly. Using the Canadian Consumer Price Index to again equalize for inflation, Mackenzie payments in 1981 were about $600(1986 constant dollars) and in 1996 they were about $564(1986 constant dollars). In terms of affordability, there has been little fluctuation. In 1986, about 6 percent of homeowners reported that their gross monthly payments exceeded 30 percent of their income while in 1991 this number was about 5 percent, and in 1996 it was again about 6 percent.

In Tumbler Ridge, the average gross monthly rent has not changed as much as in Mackenzie. In 1986 the recorded gross monthly rent was $610 while in 1996 it was $660. While this is a small increase, when we take into account inflation it actually represents a sharp relative decrease. Using the Canadian Consumer Price Index, Tumbler Ridge average gross monthly rents in 1981 were about $807(1986 constant dollars) and in 1996 these rents were about $494(1986 constant dollars). While the 1986 rent level is higher than in Mackenzie, the 1996 level is on par with Mackenzie. In terms of affordability, in 1986, only about 8 percent of renters in Tumbler Ridge reported that their gross monthly rent payments exceeded 30 percent of their income. In 1996, however, this proportion had risen to about 12 percent. The loss of some high paying employment by mine workers formerly living in some of the apartments, a larger proportion of the remaining apartment residents working in service sector employment, and a loss of housing costs subsidies by former home owners as the properties were bought back and reverted to rental housing, may explain some of this change despite the relative decrease in rent over time.

For owner occupied properties, the costs and affordability trends in Tumbler Ridge appear to be the opposite from rental trends. The Census recorded major monthly payments of $834 in 1986, with this reducing to $674 in 1996. This is a decrease of almost 20 percent. In terms of affordability, in 1981, about 6 percent of homeowners reported that their gross monthly payments exceeded 30 percent of their income. In 1996, this proportion had decreased to about 3 percent. It must be remembered that much of the owner occupied housing stock now involves only the mobile/manufactured housing and that many of these households have now had nearly 20 years since Tumbler Ridge first opened to pay off mortgages, and thereby decrease their long term housing costs.

4.1.4 Repairs

The final topic included in this profile of the Mackenzie and Tumbler Ridge housing stock concerns the relative quality of that stock. For this topic, the Census records information on the general level of repairs needed to dwelling units. Three categories of repairs are recorded. These include simple “maintenance” work, housing in need of “minor repairs”, and housing in need of “major repairs”.

In Table 4.7a, the housing repair status for units in Mackenzie is listed. In 1981, only 440 residential units were included in the Census and the majority of these reported only minor repairs being needed. However, given that the housing stock would only have been about ten years old at the time, the nearly 20 percent of units for which it was reported that major repairs would be required is perhaps surprising. By 1996, about 2,000 housing units were included in the survey and again, the far majority of these required only general maintenance work or minor repairs. Only about 13 percent of units were reported as in need of major repairs.

Table 4.7a
Housing Repair Status
Mackenzie, British Columbia

Date/Type	Total	Maintenance	Minor Repairs	Major Repairs
1976	-----	-----	-----	-----
1981	440	-----	360	80
1986	n/r*	n/r*	n/r*	n/r*
1991	1,845	1,065	630	150
1996	1,930	910	760	265

Source: Statistics Canada n/r* Data not recorded in census that year.

Table 4.7b
Housing Repair Status
Tumbler Ridge, British Columbia

Date/Type	Total	Maintenance	Minor Repairs	Major Repairs
1976	-----	-----	-----	-----
1981	-----	-----	-----	-----
1986	n/r*	n/r*	n/r*	n/r*
1991	1,515	1,240	240	35
1996	1,240	835	350	55

Source: Statistics Canada n/r* Data not recorded in census that year.

In Table 4.7b, information on housing repair status for units in Tumbler Ridge is listed. In 1991 (the first Census which collected this information while Tumbler Ridge was in existence) only 35 residential units out of about 1,500 reported that major repairs would be required (only 2 percent). This would tend to fit expectations of a quality housing stock that was less than ten years old. Little had changed five years later. In 1996, only 55 of about 1,240 units surveyed were reported as in need of major repair work (about 4 percent). For the far majority of units in Tumbler Ridge, only general maintenance or minor repairs was reported as being required.

One of the general findings of note in this section concerns the relatively good quality of the housing stock. When measured against all housing units included in the survey, only a small proportion of the housing stock in Tumbler Ridge was in need of major repairs. This is notable because one of the often reported characteristics of non-metropolitan and rural housing in Canada is the high proportions in need of repairs.

4.2 Local Housing History

This part includes a descriptive summary of local housing history in Mackenzie and Tumbler Ridge. Of critical interest is the timing of housing 'sell-offs' by the resource companies, the linking of such timing to economic stresses in the industry, and the operation of any 'buy-back' arrangements. The basic data sources for this local housing history is local histories (which exist for Mackenzie) and government reports (which exist for Tumbler Ridge). These were augmented by a systematic review of local newspaper coverage of housing issues in each community. A local newspaper has been functioning almost continuously in each community from inception. As such, it also draws upon the community development time-lines created in Section Two.

FIGURE 4.2
Mackenzie Housing Time-Line

1965	Project initiated.
1966	December - 30 houses, 50 townhouses, 60 families in town.
1967	BCFP opens mobile home park (50 trailers for rent). One apartment block complete.
1968	BCFP builds additional trailer spaces, bunkhouses at mill site closed.
1970	Knor apartments, privately owned apartment block.
1973	BCFP had developed 640 housing lots, Finlay Forest Industries had developed 130 homes.
1975	Housing shortage
1976	Open housing market in Mackenzie began. In total FFI built 150 homes, BCFP built 732 single family dwellings, 62 townhouses.
1978	An eight building, 32 unit, apartment complex built.
1979	Municipality offered 44 Gantahaz Rural Subdivision lots for sale.
1981-1986	Strikes and market slowdowns occur.
1987-1989	Recent boom still means lack of accommodation.
1990-1993	Strikes and market slowdowns occur.
1996-1999	Strikes and market slowdowns occur.

In Mackenzie, the period from about 1965 to 1980 could be characterized as one of an expanding industrial and housing base. Over this period the bulk of the local housing was built and a range of types and options were being added to the local market. Such options included the addition of privately built apartment units and the development of the large lot "rural subdivision" of Gantahaz about 6 kms north of town.

The year 1976 is a significant one in Mackenzie as it signaled the start of an open housing market as the "buy-back" clauses registered on the titles of the company built homes were expiring. As noted in the literature review, companies often provide financial assistance to employees to assist with home purchases in resource-dependent instant towns. In terms of financial assistance, the companies often subsidize costs by providing low interest loans - these would be registered on

the property titles as second and perhaps even third mortgages. For example, a purchaser may secure a mortgage loan through a bank, credit union, trust or mortgage company for the largest share of the property purchase price. The resource company might then enter into a second and/or third mortgage agreement to make up any shortfall in the employees purchase financing. The second or third mortgages would be registered on the property title just like the first mortgage.

A couple of different arrangements appear to have been in operation in the early years of Mackenzie. Early on, in the 1973 -1974 period, there is evidence that BCFP offered substantial second mortgages. For example, a first mortgage may have been secured for approximately 25,000 with a bank or other mortgage institution. The forest company might then enter into a second mortgage agreement for almost up to that same $25,000 level. Later on, the forest companies undertook less significant financial investment in housing. For example, by 1980, FFI provided second mortgages to employees but at a level only approximately 5 to 10 percent of the value of first mortgages. In all cases, the second mortgage would be registered on the property title just like the first mortgage.

In the early years of Mackenzie, the company buy-back clauses were often incorporated into the second mortgage agreements. The gist of the buy-back agreement in Mackenzie typically included clauses such as:

> If during the period of five (5) years from the date hereof [when the mortgage was signed] the Grantee [home buyer] wishes to sell or otherwise dispose of his interest in the said lands or if the Grantee ceases to be employed by the Grantor [the forest company], then the Grantor shall have the right to purchase the property free and clear of all liens, charges and encumbrances... .

Such a clause was in the interest of the company - as it would allow the company to maintain some control over housing and avoid the costs of property speculation during first few years of operation and the expected high employee turnover rates over this period. The detailed provisions of the mortgage included that notice be given in writing and that a series of time limits on notices and responses be required. An additional clause gave some further consideration to the risk that home buyers were taking on with their investment in this new resource-dependent instant town. This additional clause allowed that:

> The Grantee shall have the right at any time within ten (10) years from the date hereof while he [he/she] continues to be the registered owner of the said lands to require the Grantor to purchase said lands free and clear... .

The price element of the buy-back agreement was typically governed by the clause:

> The price to be paid by the Grantor shall be the aggregate of the cash portion of the purchase price paid by the Grantee upon purchase of said lands, the principal portion of payments made by the Grantee under the First Mortgage and any other subsequent

> mortgage, and the increase in value of the said lands resulting from any additions made thereto by the grantee, less the costs of any repairs required other than normal wear and tear, and less any amounts owing on completion date on any liens, charges ... .

Inability to reach an agreed buy-back price would be referred to a specified arbitration process. Interestingly, later agreements limited the amounts to be paid on home improvements such as additions or modifications. Such limitations on recouping possible renovation investments would have been a disincentive to renovation work.

The period since 1980 has been marked by cycles of economic boom and downturn. The periods from 1981-1986, 1990-1993, and 1996-1999 were marked by economic uncertainty in Mackenzie. Each of these periods were affected by one or more strikes, lockouts, lumber market downturns, or pulp and paper market downturns. During each of these periods many households experienced reduced income levels through layoffs or temporary mill closures/curtailments.

FIGURE 4.3
Tumbler Ridge Housing Time-Line

1981	- Town construction under way. - Price of a standard 60 foot wide lot will be about $23,000.
1982	- Total of $22 million in building permits issued. - 5 houses completed and 35-40 houses at construction lock up stage. - 6 apartment blocks at construction lock up stage.
1983	- Apartment rents to be comparable to Dawson Creek. - 4 apartment blocks are ready, began renting in March. - Quintette and Bullmoose mines sell houses to employees for between $70,000 and $80,000. - CMHC to insure speculative houses built for persons not employed by the mines. Only 1 of 8 houses sold this year.
1984 - 1988	- Coal pricing debate - Concern about mine viability. - Sales of new homes going slow. - CMHC tightens rules for speculative building by terminating financing until inventory of unsold homes is reduced. - Mines appeal property assessments on industrial lands to lower tax payments.
1989	- Quintette offers housing plan. They will now own half of the home and pay half of the mortgages and taxes. Existing homeowner equity and buy back provisions will remain. - Bullmoose announces new policy to provide homeowners with a taxable allowance (based on original purchase price and length of time owned). For a $77,500 house, owned for 5 ½ years, the allowance would be about $550 per month ($325 after taxes). - Apartment and Mobile Home park rent have dropped.
1990	- Supreme Court ruled that Quintette must drop their coal price.
1991 - 1993	- Teck assumes management, and later partial ownership, of Quintette. - Employee layoffs at mines. - CMHC agreed to help restructuring of Quintette by acquiring up to 100 company properties and agreeing to no rent increases. Current mortgage rates average $785 per month while rents average $390. Deficiency must be covered by CMHC and the employees. - CMHC advises there are new terms for CMHC guaranteed mortgages as Tumbler Ridge presents the Mortgage Insurance Fund with a higher than normal risk due to dependence on the mines. - Two apartment blocks were closed down. People will move into vacant houses to reduce maintenance costs.
1994 -	- Residential property values decline ($78 million to $49 million) due to lack of sales and vacancies in apartment blocks.
1996	- CMHC continues to apply risk containment measures.
1997	- New contracts with Japanese Steel Mills gives mines guaranteed production until April 2003.
1998	- local population enumeration identified 2,3000 residents - Fall, Bullmoose puts 15 houses on market for mine employees and 7 houses on general market
1999	- Sept. Bullmoose puts 17 houses on market ($23,480 - $27,500)
2000	- Bullmoose puts 9 houses on market (average $25,000)

There are some similarities but also some distinct differences, between the housing history in Mackenzie and Tumbler Ridge. In Tumbler Ridge, the first years from 1981 to 1983 were marked by a rapid expansion of the civic infrastructure and housing stock (Figure 4.3). Economic uncertainty since 1984 has affected the local housing market in several ways. Prior to 1990, sale of homes to non-mine employee residents was slow - a measure of a possible lack of confidence in the market. Over this same period CMHC tightened some aspects of its lending rules for these

speculatively-built homes. The pressures of uncertainty are reflected in the 1989 announcements by both Quintette and Bullmoose mines of housing assistance packages. While there are differences between the packages, each seeks to reduce the housing burden and risk for households - who are all mine employees.

Subsidized housing by the parent-company is a common occurrence in resource towns. Berry *et al.* (1975) describe how subsidies such as maintenance of company-owned buildings, low rents to employees, guaranteeing mortgages, and entering into buy back agreements make housing more affordable for industry employees. However, Berry *et al.* point out that single industry communities, although dominated by industry employees, also must accommodate service sector workers who are not privy to housing subsidies. Thus, housing for some residents may be more difficult to obtain.

Financial assistance to resource company employees and registration of company buy-back agreements was also evident in Tumbler Ridge. In terms of financial assistance, the company offered second and perhaps even third mortgages to employees as assistance in their home purchaser. Typically, second mortgages may have been approximately 30 percent of the value of first mortgages and third mortgages may have been in the order of 3 percent of the value of first mortgages. For example, a first mortgage may have been secured for $52,000 with a bank, trust or mortgage company. The coal mine company might then enter into a second mortgage agreement for about $16,000 and perhaps even a third mortgage agreement for about $2,000. These second and third mortgages were registered on the property title just like the first mortgage.

Also registered on title was an “option to purchase” or a “right of first refusal to purchase”. These agreements are more commonly referred to as buy-back agreements. The gist of the buy-back agreement was to set the terms and conditions under which the employee-home owner would be obligated to offer the property back to the mining company. Typical clauses for the buy-back agreement included:

> If at any time prior to the Termination date of the agreement the owner:
> - ceases to be an employee of the company,
> - ceases to occupy the property as his principal residence,
> - sells, conveys, transfers by way of agreement for sale or otherwise all or any portion of the property,
>
> The company shall have the right at its option to purchase the property [in accordance with detailed provisions] ... .

The detailed provisions included notice in writing and a series of time limits on notices and responses. The price element of the buy-back agreement was typically:

> The purchase price to be paid by the company shall be the aggregate of,
> - the purchase price paid to the company by the owner of the property and any

improvements constructed thereon at the date of the purchase,
- less the costs of repairing any damage to the property, reasonable wear and tear excepted.

Inability to reach an agreed buy-back price would be referred to a specified arbitration process. Interestingly, early agreements included more generous wording with respect to improvements - suggesting that additions or modifications made by the owner over time might also be included but the clause cited above refers only to that on the property at time of purchase. Like in Mackenzie, such limitations on recouping possible renovation investments would have been a disincentive to renovation activity.

The termination date for these buy-back agreements changed during the early years of Tumbler Ridge. During the first years of operation the buy-back agreements had 10 year termination horizons while by the late 1980s these were typically 20 years from the date the agreement was signed. For example, an option to purchase signed in 1984 when an employee bought a company house would expire in 1994. Similarly, an option to purchase signed in 1989 when an employee bought a company house had a termination date of 2009.

The 1990 coal price decision against Quintette marked a turning point for housing in Tumbler Ridge. Within a couple of years significant changes occurred. There were the first of successive rounds of layoffs at the mines. The restructuring of the Quintette mine management and ownership, the buy-back of employee housing by both Bullmoose and Quintette mines, the participation of CMHC in the Quintette buy-back process, all transformed the previous homeowner stock to rental stock.

The period from 1990 to 1997 was one of uncertainty in Tumbler Ridge. Beyond the points already mentioned, one additional outcome is important. CHMC identified that they have significant mortgage insurance risk in the community. As a result, they have maintained mortgage policies which reflect risk containment measures. Without the 25% down payment required for conventional mortgages, mine employees have not been eligible for CMHC mortgage insurance and would need to secure the funds via personal loan or some similar procedure. The result is considerable difficulty in securing a mortgage. As identified in a recent newspaper article, Tumbler Ridge remains within CMHC's "Single Resource Industry Community" category (Tumbler Ridge Community Connections, 29 May 1999, p.14). A total of 12 towns across Canada are included in this category, the characteristics of which are identified by CMHC as small population, limited economic diversity, limited infrastructure, remoteness, volatile market, and extent of exposure. This last item is key for CMHC in that it represents the level of risk CMHC has in the town based on the dollar value of CMHC insured mortgages.

The year 1997 marked another potential turning point for Tumbler Ridge. An extension agreement was signed with the Japanese Steel Consortium which will run until 2003. As well, local residents began to request that the company owned housing be put on the market so people interested in investing in the future of Tumbler Ridge could do so. In the fall of 1998, the

Bullmoose mine put 22 houses on the market, with 15 available to mine employees and 7 available to the public (Prince George Citizen, 10 September 1999, p.5). In the fall of 1999, the Bullmoose mine put an additional 17 houses on the market. According to newspaper coverage, the prices of between $23,000 and $28,000 were about one-third the book value of the properties (Prince George Citizen, 10 September 1999, p.5). And in January 2000, the Bullmoose mine put an additional 9 houses on the general market at prices between $24,070 and $26,127 (Tumbler Ridge Community Connections, 19 January 2000, p.4).

4.3 Local Housing Construction Activity

The third part this background section is a reconstruction of local house construction activity. Three issues are of importance here, including: the pace at which the original housing stock was created, the timing of any other additional extensive housing development, and the emergence of home renovation activity. The base data source is local building permit records. It is understood in the research literature that while local government building permit data undercounts the level of housing renovation activity (Bunting, 1987; Bunting and Kesik-Delfgaauw, 1989), it is useful as a marker of periods of increasing and decreasing housing market confidence. In this respect, building permit data will be used to help explain shifts in the housing market profile. Following a review of the building permit data collection methodology, the patterns of residential construction activity in Mackenzie and Tumbler Ridge are reviewed.

4.3.1 Building Permit Data Methodology

Building permit data is an important source of information on the timing of housing stock construction and the timing of additions within the various housing sub-markets. This gives insight into patterns of residential building over time and distinguishes ebbs and flows of this activity. The building permit database was developed from two basic sources. The first involves the building permit summaries developed by the local government office. Where these were incomplete, the individual building permit records were consulted.

Building permit data for the Mackenzie District Municipality was available by month starting in 1970 and were filed, by year, in the office of the building inspector. Permit information came in three different forms, corresponding generally with the different decades Mackenzie has been in existence. The permit summaries for the 1970s were general and simply listed the total number of building permits issued each month. Specific information on the type of permit issued was not available. This format followed into the 1980s when the records began to include more information on specific permit types. These records grouped permits by type of construction activity. The final type of building permit summaries existed from the late 1980s to the present. This information was general and only exists as a summary of all building permits issued. As a result, building permit details had to be collected from both office summaries and the individual building permit records. Permit information for Mackenzie was collected using the following data collection templates:

Table 4.8
Mackenzie Building Permit Records - Sample data collection template

Type	Number of Permits	Dollar Value of Construction
Residential		
Industrial		
Commercial		
Institutional and Government		
Other		
Total Value of all Permits		

The Tumbler Ridge building permit data was provided by the Tumbler Ridge District Municipality who had, from Tumbler Ridge's inception, collected, recorded and summarized all building permit activity within the community. The information was recorded in a straightforward format which included the following categories:

Table 4.9
Tumbler Ridge Building Permit Records - Sample data collection template

Type	Number of Permits	Dollar Value of Construction	Permit Fees
Residential			
Commercial			
Agricultural			
Institutional			
Industrial			
Improvements, Renovations, and Additions			
Plumbing Permit			
Total Permits			

4.3.2 Building Permit Data

In this discussion of building permit data for Mackenzie and Tumbler Ridge, a four figure set of graphs for each community shows the historical building permit trends. The first figure in each of these sets is a summary of the "Total" number of building permits issued. It should be noted that this will include commercial and industrial, as well as residential, permits. The second figure in each set includes information only about permits issued for new single detached family dwellings. In both Mackenzie and Tumbler Ridge the single detached house is the dominant residential type. The third figure in each set includes information on the number of permits for "Other" types of residential buildings. This includes duplexes, apartment buildings, and mobile homes. It should be noted that the values recorded refer to the number of permits issued and not to the number of dwelling units created (ie: 1 duplex permit creates 2 dwelling units). The final figure in each set includes information on the number of permits issued for residential renovations.

Fig. 4.4

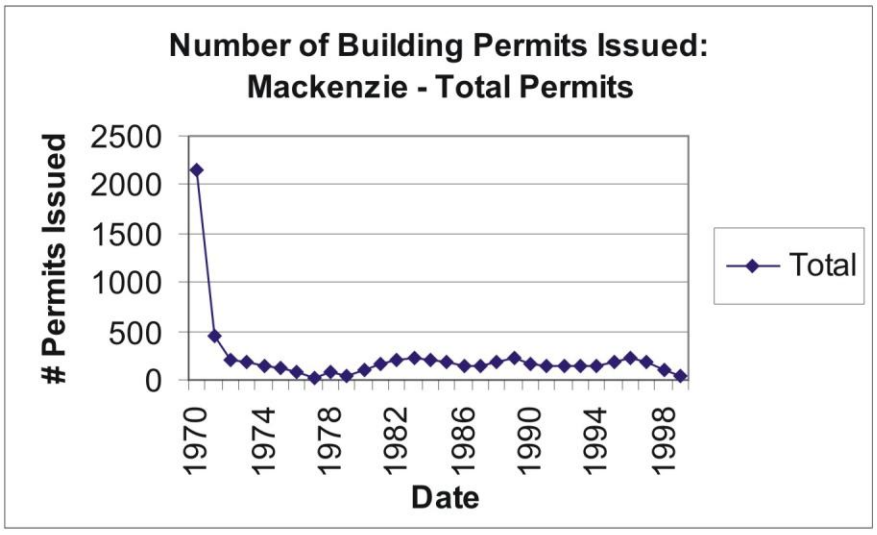
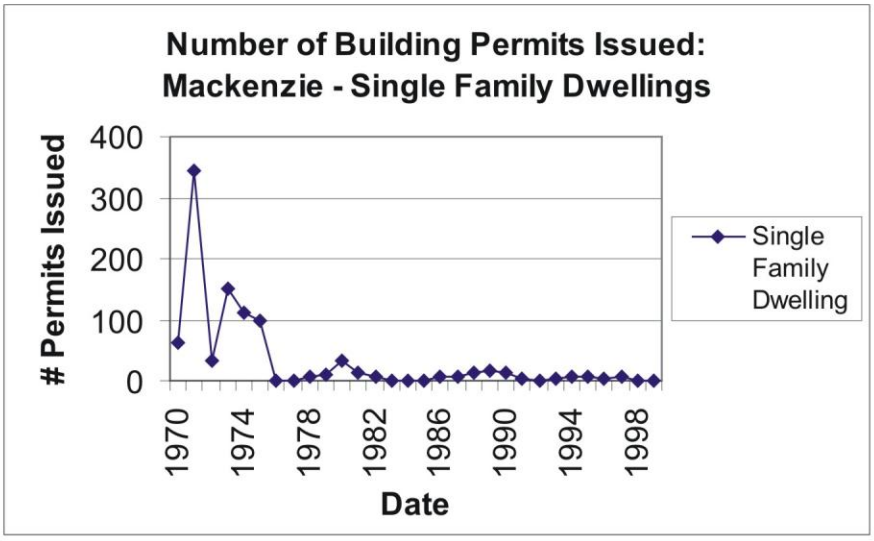

Number of Building Permits Issued:
Mackenzie - Total Permits
Permits Issued
2500
2000
1500
1000
500
0
1970
1974
1978
1982
1986
1990
1994
1998
Date
Total

Fig. 4.5


Number of Building Permits Issued:
Mackenzie - Single Family Dwellings
Permits Issued
400
300
200
100
0
1970
1974
1978
1982
1986
1990
1994
1998
Date
Single Family Dwelling

Mackenzie

The building permit data for Mackenzie is shown in Figures 4.4 though 4.7. Generally, the trends in permit activity follow a pattern rather expected in “instant town” locations. A large boom in construction activity occurs during the initial building of the town-site and the industrial and commercial infrastructure. After this initial boom, there is a general tailing-off of construction with only periodic activity.

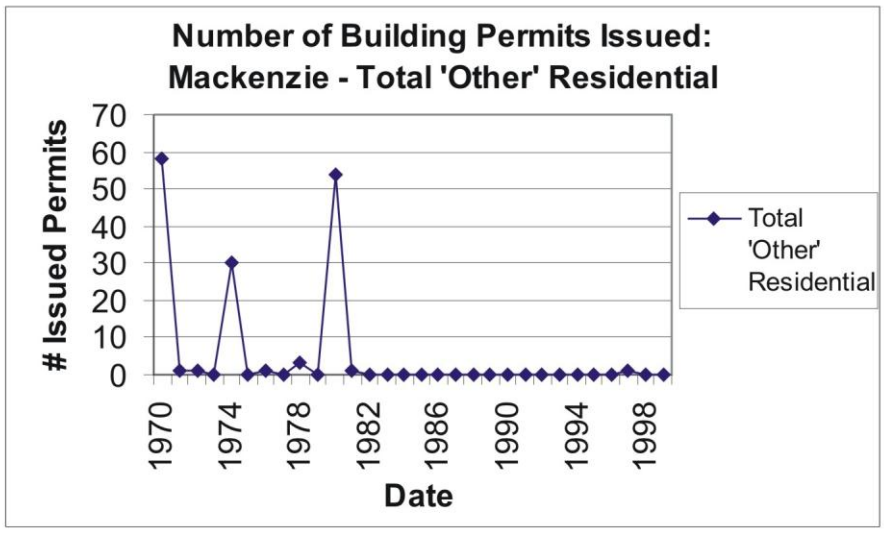
In Figure 4.4, the total number of building permits issued in Mackenzie over time is summarized. Between 1970 and 1972, as the first housing is built for the town workforce and residents, building permit activity reaches its peak. In 1971 alone, a total of 446 permits were issued. From this peak, permit activity slows as the community settles, in terms of Lucas’ (1971) understanding of single-industry town development, into a pattern of routine.

There is a noticeable trough in permit activity around 1977 and 1979. This coincides with the emergence of an “open housing market” in Mackenzie. Many properties built by the forestry firms, and sold only to mill employees, were now released from resale restrictions and available for any purchaser. There is renewed building permit activity with peaks around 1983, 1989, and 1996. While each of these occurs after a period of economic growth in the forest industry, it is notable that each of these peaks is followed by a decrease in activity over a period which coincides with an economic downturn or uncertainty in Mackenzie. The latest decline in permit activity over the past three years is associated with a period of considerable uncertainty across the entire BC forest industry.

In Figure 4.5, the number of building permits issued in Mackenzie for new single family detached residential dwellings is summarized. Following the pattern identified in Figure 4.4, the peak of permit activity for single detached homes is in 1971, with a supplemental period of high permit activity in the 1973-1975 period. It was during this period that the main residential neighbourhoods in Mackenzie were constructed. Subsequent to this initial building period, there have been relatively few new houses added to the local housing stock.

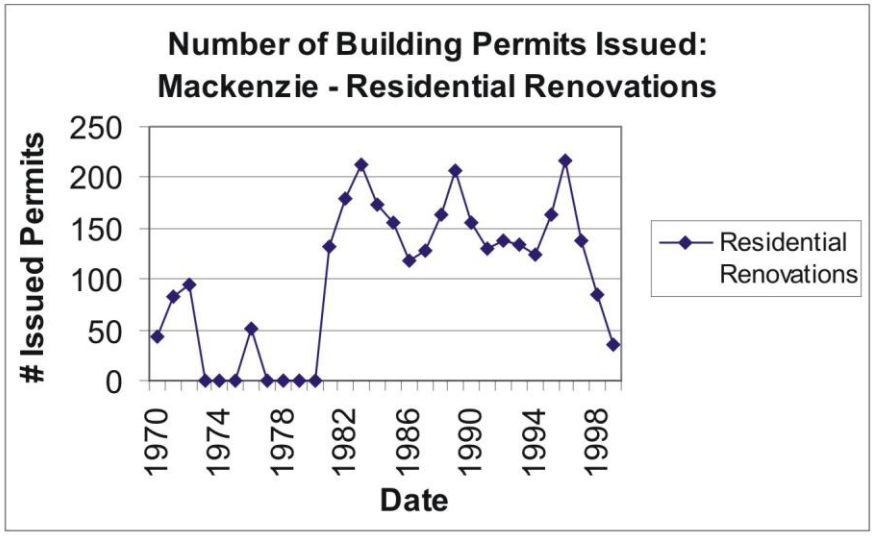
Additional new house construction activity occurred at three points: 1980, 1989, and 1995. Between 1979 and 1981 a total of 56 permits for new single detached dwellings were issued. This period of activity coincided with the opening of 44 residential lots in the Gantahaz rural subdivision north of town. Between 1988 and 1990, a total of 43 permits were issued for new single detached houses over a period which coincides with a local boom resulting from an increased demand for forest products and some significant investments into local industrial plants by both Finlay Forest Industries and Fletcher Challenge Canada (Figure 3.1). There was also additional permit activity between 1994 and 1995.

Fig. 4.6



*'Other'Refers to Two Family, Apartment, and Mobile Home Dwellings

Fig. 4.7



Building permits for other types of residential housing units in Mackenzie occurred primarily at three points (Figure 4.6). In 1970, 58 permits were issued for apartment and/or multi-family residential dwellings. In 1974, a total of 30 permits were issued. Again, these permits were for apartment and/or multi-family residential dwellings such as row houses. At both of these points the permit and construction activity was associated with the initial building of the townsite. In 1980, a total of 54 permits were issued. As at the earlier periods, these permits were for apartment and/or multi-family residential dwellings such as row houses.

In Figure 4.7, the number of building permits for residential renovation activity in Mackenzie is summarized. As noted above, renovation activity is a problematic but valuable variable. It is problematic in that it has been shown to consistently undercount renovation activity. For example, many people undertaking extensive home renovation work will not obtain a building permit from the local government unless they are making a major structural change to the exterior of the unit. Yet, it remains an important housing variable because it reflects levels of confidence in the local housing market. Where homeowners have a lack of confidence in the housing market they are unlikely to put more financial investment into the housing unit for fear they may not recover that capital investment. Conversely, where confidence in the local market is high, re-investment to improve the value and quality of the housing unit also generally increases.

Two distinct patterns of renovation permit activity can be noted in Figure 4.7. The first concerns additional work done to housing units shortly after the initial construction period of 1970-1972. We can speculate that this might involve standard modifications or design changes to some of the original houses. Such changes typically include the addition of carports/garages/patios or the completion of unfinished basements. A second pattern came on-line as the housing aged. Since 1980, there have been three periods of especially high renovation permit activity. In 1983, 1989, and 1996, a total of 213, 206, and 216 permits respectively were issued for residential renovation work. Each of these periods coincided with the later stages of an economically prosperous period in Mackenzie. The steep drop in renovation permits after each of these points coincides with the onset of a period of uncertainty in the local forest industry.

A further issue in the timing of residential renovation activity concerns the implications of company “buy-back” clauses on house titles. As reported by Pinfield and Etherington (1982a), both BC Forest Products and Finlay Forest Products included in their buy-back clauses notations limiting the value of resident initiated renovation works. For Finlay homes, “reimbursement for home improvements is limited to $3,000” (Pinfield and Etherington, 1982a, p.81). Such limits would be a disincentive to substantial re-investment in the housing. Termination of the buy-back agreements, which in Mackenzie occurred after 10 years (Pinfield and Etherington, 1982a), or the aging of the housing stock would certainly contribute towards an explanation for the sudden increase in renovation permit activity after 1980.

Fig. 4.8

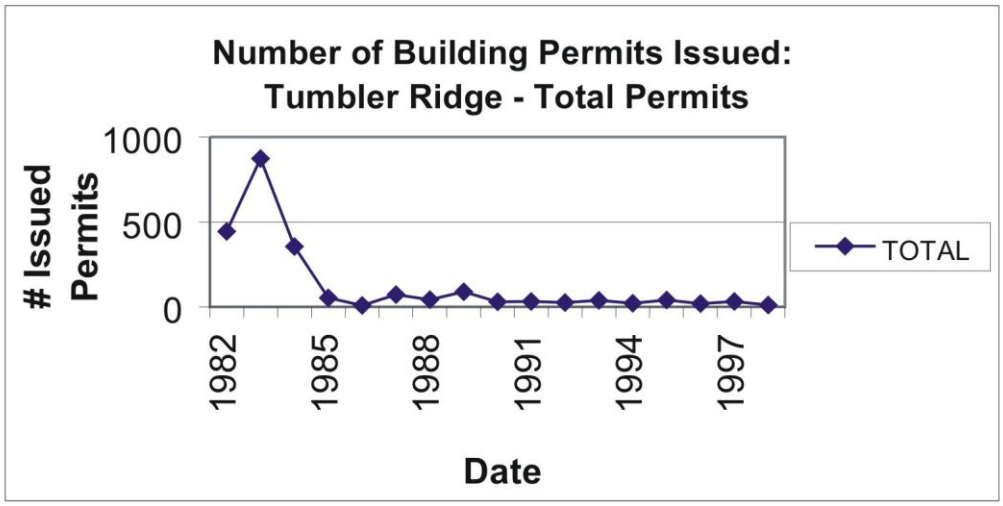
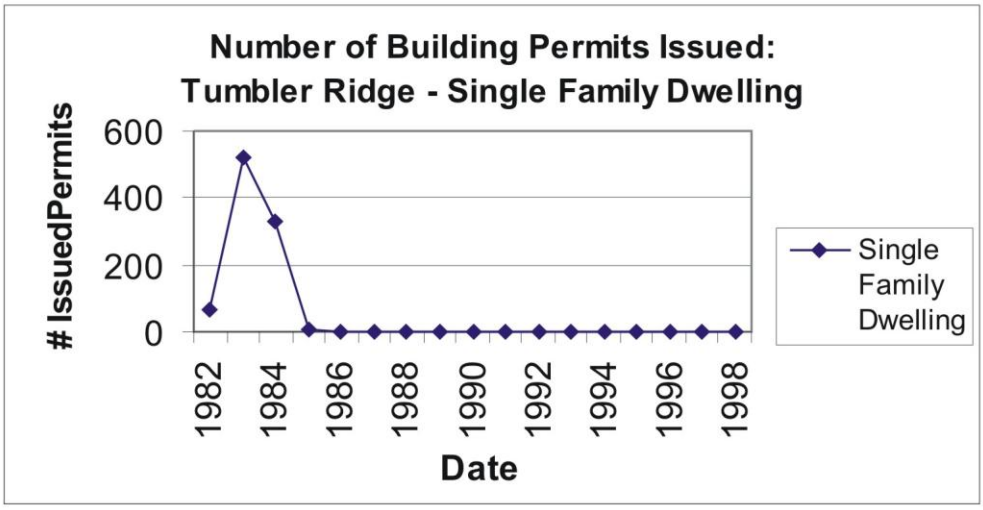

Number of Building Permits Issued:
Tumbler Ridge - Total Permits
Issued Permits
1000
500
0
1982
1985
1988
1991
1994
1997
Date
TOTAL

Fig. 4.9


Number of Building Permits Issued:
Tumbler Ridge - Single Family Dwelling
IssuedPermits
600
400
200
0
1982
1984
1986
1988
1990
1992
1994
1996
1998
Date
Single Family Dwelling

Tumbler Ridge

The building permit data for Tumbler Ridge is shown in Figures 4.8 though 4.11. The trends shown suggest a very different pattern of housing development and market activity than for Mackenzie. As in Mackenzie, a large boom in construction occurs during the initial building of the townsite. During this period much of the industrial and commercial infrastructure was put in place and the initial housing areas were built. After this initial boom, however, there is a sharp reduction in most types of building permit activity.

In Figure 4.8, the total number of building permits issued in Tumbler Ridge over time is summarized. Between 1982 and 1984, total building permit activity reaches its peak. Over this three year period a total of 1,672 permits were issued. From this peak, permit activity slows considerably. There is some additional permit activity notable for the 1987 to 1989 period. Much of this is accounted for by residential renovation permits (see Figure 4.11 below).

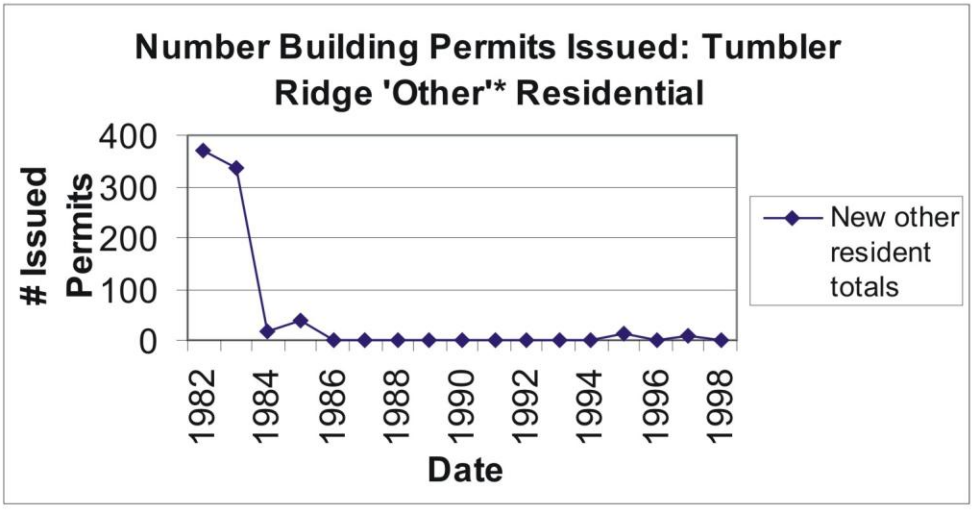
Since 1990, there has been a steady but lower trend in the number of building permits issued by the local government. Details in the building permit statistics reveal that much of this activity is concerned with mobile home permits (a total of 25 permits since 1990), residential renovations (a total of 156 permits since 1990), commercial (a total of 26 permits since 1990), and institutional/government/public (a total of 26 permits since 1990) infrastructure.

In Figure 4.9, the number of building permits issued in Tumbler Ridge for new single family detached residential dwellings is summarized. Following the pattern identified in Figure 4.8, the peak of permit activity for single detached homes is in 1983 and 1984. A total of 915 permits were issued when the bulk of the neighbourhoods in Tumbler Ridge were built. Since the end of 1984, only 7 single detached residential permits were issued.

This pattern differs from the situation in Mackenzie in that additional housing areas did come “on-stream” in that community over time. While part of the explanation is that the economic circumstances of the mines in Tumbler Ridge have been uncertain, an additional explanation is that the provincial government directed planning process had the goal of putting into place a “complete” townsite right at the outset. This differs from Mackenzie where additional housing and commercial developments came about over a longer period of time.

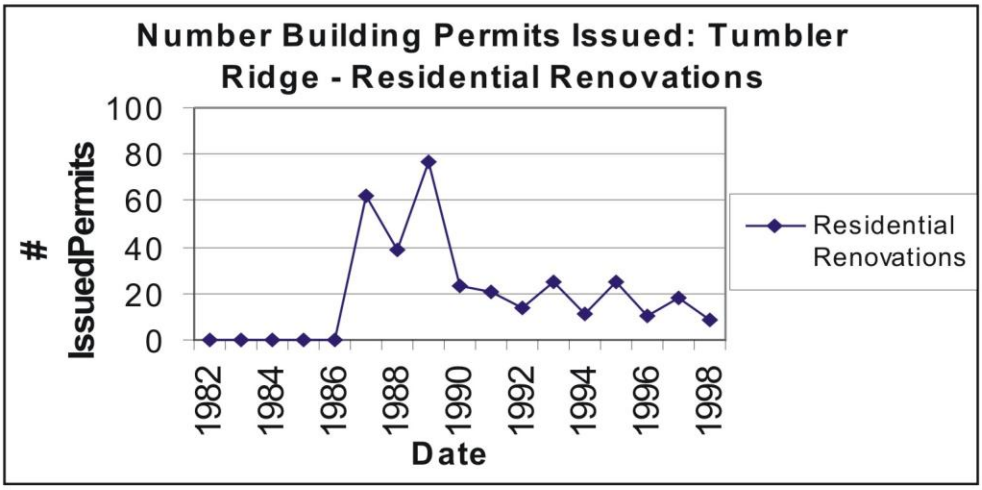
Building permits for other types of residential housing units in Tumbler Ridge also occurred primarily during the first years of the community’s construction (Figure 4.10). In 1982 and 1983, 526 permits were issued for mobile home placements. Over that same two year period 183 permits were issued for new apartment or multi-family residential units (such as row houses).

Fig. 4.10



* 'Other' refers to Two Family, Apartment and Mobile Home Dwellings

Fig. 4.11



In 1984 and 1985, a further 35 permits were issued for mobile home placements. Over that same period an additional 20 permits were issued for new apartment or multi-family residential units (such as row houses). Since that time there have been few building permits for other types of residential units. Of note, in 1995, a total of 11 mobile home placement permits were issued and in 1997, a further 9 mobile home permits were issued.

In Figure 4.11, the number of building permits in Tumbler Ridge for residential renovation activity is summarized. Three distinct periods of renovation activity can be noted. The first concerns the 1982 through to 1987 period when virtually no additional work was done to housing units. This is something of an expected outcome. The housing units in Tumbler Ridge were new and local residents likely felt that the housing was in need of few modifications or changes.

A second period of renovation permit activity involves that which came on-line as the housing aged. This time delay in permit activity follows the general pattern identified for Mackenzie as well. As a reflection of both the fact that the housing was aging, that buy-back clauses acted as a disincentive to renovation work, and that family needs also change over time, the growth of house renovation permits between 1987 and 1989 is not surprising. Over this three year period a total of 178 residential renovations permits were issued.

Since 1989, however, there has been a decline in renovation permit activity. This decline coincides with the 1990 coal pricing decision and the subsequent restructuring of the Quintette mine. Between 1990 and 1995, an average of 20 residential renovation building permits were issued annually. Since 1995 that average has declined to about 12 permits.

In summary, the early development of housing in Tumbler Ridge has stagnated. With the buy-back of most private market housing and uncertainty about coal mine employment, there has been little new housing investment activity. The uncertainty is reflected in both the new construction and residential renovations markets.

4.4 Discussion

The profile of local housing in Mackenzie and Tumbler Ridge suggests some patterns expected in resource-dependent instant towns and many trends common across the Canadian housing market. The history of each community has, however, affected the local housing stock in different ways. With about 1,900 private dwellings in Mackenzie and about 1,500 in Tumbler Ridge, there have been few physical changes in this housing stock since 1991 as any local economic growth has been countered by employment losses through industry restructuring and adoption of technology.

Generally, the profile of local housing in Mackenzie and Tumbler Ridge suggests that the housing stock shares many of the characteristics of housing across Canada. In both communities, the dominant housing type is the single detached house. In each case about 2/3 of housing is single-detached. Home ownership is the preferred tenure option. In Mackenzie, about 80 percent

of housing on average is owner occupied. The tenure structure in Tumbler Ridge has undergone some significant fluctuations and is now quite different from that of Mackenzie. The trend towards high home ownership rates was reversed after the economic uncertainty associated with the 1990-1991 restructuring of the Quintette mine.

In terms of the relative quality of the housing stock, one of the general findings of note in this section concerns the relatively good quality of the housing. This is notable because one of the often reported characteristics of non-metropolitan and rural housing in Canada is the high proportions in need of repairs.

Housing costs for Mackenzie and Tumbler Ridge residents could generally be characterized as becoming “more affordable” over time. While most costs have increased, they have not kept pace with inflation. Despite this trend in dollar costs, more and more households are reporting that they spend more than 30 percent of their income on shelter costs.

The time-line and descriptive summary suggest that the local housing history in Mackenzie and Tumbler Ridge is quite different between the two communities. Both follow somewhat the pattern expected in resource-dependent instant towns and both have been affected by the operation of buy-back provisions attached to properties sold to company employees. The first years of town construction where hectic ones, and since that time any additional development has tended to be linked with periods of positive economic conditions within the resource sector. In Mackenzie, this linkage was quite clear. Building permit activity with peaks around 1983, 1989, and 1996 each occurred after a period of economic growth in the forest industry, and each of these peaks is followed by a decrease in building activity over a period which coincides with an economic downturn or uncertainty in Mackenzie.

The key difference between Mackenzie and Tumbler Ridge is the 1990 coal price decision against Quintette which marked a turning point for housing in Tumbler Ridge. The restructuring of the Quintette mine, the buy-back of employee housing by both Bullmoose and Quintette mines, and the participation of CMHC in the Quintette buy-back process, all transformed the previous homeowner stock to rental stock. It remains to be seen if the sale of approximately 48 Bullmoose mine house back into the private market (at substantially lower prices that they were originally sold for in the early 1980s) will signal a more general return of a private housing market to Tumbler Ridge.

5.0 Housing Investment

This section of the report includes information on housing investment. Data for Mackenzie and Tumbler Ridge is included as is some comparative data for Prince George. The Prince George data is important as it allows us to track changes in regional housing values - and to evaluate what is happening in Mackenzie and Tumbler Ridge against that regional pattern of change. Housing is one of the major investment tools for households (Harris, 1991; Harris and Pratt, 1993). The purchase of a house is one of the largest, if not the largest, single purchases which households will make in their lifetimes. As the households age, the house will also become one of their largest assets. In this section we trace the economic benefits and costs which may accrue to households through housing purchase in single-industry instant towns.

The methodology for this part of the research involves drawing a sample of 54 residential properties in Mackenzie and 53 properties in Tumbler Ridge, and then tracing two issues in particular over time for each of those properties. The first issue concerns ownership and ownership changes over time. This includes the tracking of ownership durations and the frequency of property turnover. While we also wanted to examine alternative tenure strategies (such as operating housing as rental property), the data sources were, unfortunately, not reliable enough on this topic. The second issue involves the changing value of property. The principal data source for both issues is BC Assessment Authority records which track ownership changes, annual property assessments, and property sale values. Again, to set this housing investment information into context, parallel information will be developed for the control community of Prince George.

5.1 BC Assessment Authority Methodology

The Province established the British Columbia Assessment Authority (BC Assessment) as an independent crown corporation in 1974 to carry out the function of real property value assessments. Local governments then use this property assessment information for property taxation purposes. As per the Assessment Authority Act, the purpose of BC Assessment is to "establish and maintain assessments that are uniform in the whole of the province in accordance with the Assessment Act" (BC Assessment, 1996, p.21). While operating at arms length from both the provincial and municipal levels of government, the Authority reports directly to cabinet through the Minister of the department to which it is attached (British Columbia, 1990). Since 1989, responsibility for BC Assessment has been through the various incarnations of the Ministry of Municipal Affairs.

BC Assessment's "primary goal is to produce an assessment roll that captures the actual value of real property" (BC Assessment, 1996, p.6). In other words, these are market based property assessments. This information provides the basis for equitable property tax levels to be set by municipal governments. In addition, BC Assessment provides annual assessment rolls to property owners in order to satisfy their desire to know and understand the values of property. BC Assessment holds records of all property assessments in the form of microfiche so property

owners can track the value of their property over time. For the purposes of this project, BC Assessment offices in Prince George and Dawson Creek were visited to obtain three main types of information:

- basic property value and ownership data,
- property sales information,
- and interviews with local assessors about community housing issues.

The first data collection task was to randomly select a sample of properties from each of the two study communities: Mackenzie (BC Assessment Jurisdiction 335) and Tumbler Ridge (BC Assessment Jurisdiction 343). After the sample properties were chosen, the roll numbers – or identification numbers - for each property as assigned by BC Assessment were noted. Data on actual use, tenure, ownership, and the actual values of the land and buildings for each property were recorded. For the Mackenzie properties, this information was collected from 1976-1999 and for Tumbler Ridge properties, information was collected from 1980-1999. Data was collected from the Authenticated Rolls that are the official rolls annually compiled by BC Assessment after all appeals from property owners have been finalized.

From the BC Assessment data, analysis was completed on the number of owners for each property over time as well as the assessed value of each property over time. In addition, connections were made with historical and contemporary newspaper searches about major events within the study communities (see the community time-lines discussed in Section Two). These newspaper searches were conducted to establish whether major events within each community affected the market activity and values of the sample properties over time.

The second type of data taken from BC Assessment Authority was sales information. BC Assessment records all sales data from every real estate transaction completed on private property. This data was collected for each of the sampled fifty properties in both study sites and the Assessment / Sales Ratio (ASR) was calculated from each sale. The ASR determines the percentage difference between the price the home or property was sold for and the price the home or property was valued at by BC Assessment.

Finally, the third type of information drawn from the BC Assessment Authority offices came from interviews with the appraisers of both Mackenzie and Tumbler Ridge. The purpose was to get their insight into the housing situation in both communities. Both appraisers provided the research team with insight to important local events which greatly assisted the research process. In addition, they both provided the research team with valuable suggestions for evaluating the data.

5.2 Property Assessment Data - Assessed Value of Property

The analysis in this section is drawn from the randomly selected sample of approximately fifty residential properties from each of Mackenzie and Tumbler Ridge. The first part of this section examines trends in average property assessment values by looking at "current dollar" values. In order to control for the effects of inflation over time, the second part of this section re-examines the trends in average property assessment values by looking at "constant (1986) dollar" values. In this case, annual dollar values are converted to 1986 equivalencies by using Statistics Canada Consumer Price Index information (Statistics Canada, 1996b).

5.2.1 Assessed Values - Current dollars

Figures 5.1 through 5.6 show information on the average property value assessments for this sample of properties. In each set, the first figure includes information on only the average assessed value of the land. The second figure in each set includes information for the building/improvements portion. Finally, the third figure includes information on the average assessed values for land and buildings combined. As with the building permit data discussed in Section Four, the BC Assessment housing value data shows two very different housing markets.

Mackenzie

In Figures 5.1, 5.2, and 5.3, the average assessed values for the sample of Mackenzie residential properties are shown. In Figure 5.1, the data represents only the "land" portion of the property value assessment. As can be noted, there has been a steady increase in the values attributed to residential land in the community. Significant growth in that value occurred in 1978, 1991, 1993, and 1996/1997. The most recent data suggests a small downturn in what has otherwise been an upward trending curve.

Figure 5.2 represents current year dollar value averages for the buildings or "improvements" on the property. While the general pattern is similar to that noted for land values alone, growth periods include 1978, 1991, and 1994-1996. Again, the most recent data suggests a small downturn in the general upward trend.

Finally, Figure 5.3 represents current year dollar value averages for both the land and buildings combined. These values might be considered a close estimate of the prevailing market value for the property and house. As a compilation of the data from the previous two figures, growth periods are again notable in 1978, 1991, and 1996. In 1978 average assessments increased from approximately $10,000 to over $37,000. Similarly, in 1991, the average assessments increased from approximately $50,000 to just over $69,000. And in 1996, the average land and buildings property assessments increased from approximately $98,000 to over $117,000. The small downturn in the general upward trend is notable beginning in 1998 and into 1999. After reaching a high of $126,700 in average residential assessed value in 1997, that average had decreased slightly to about $116,000 in the 1999 BC Assessment rolls.

Fig. 5.1

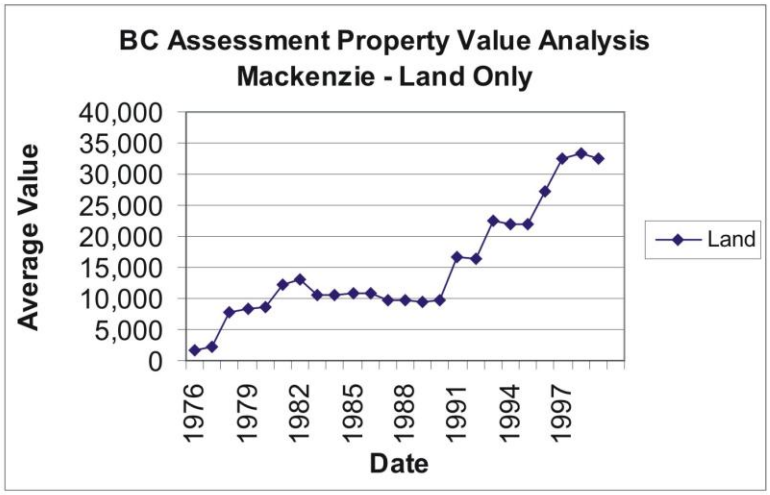


Fig. 5.2

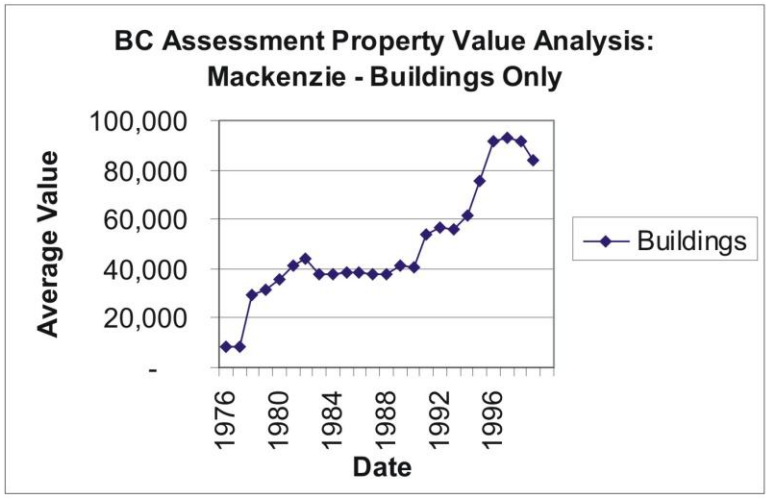
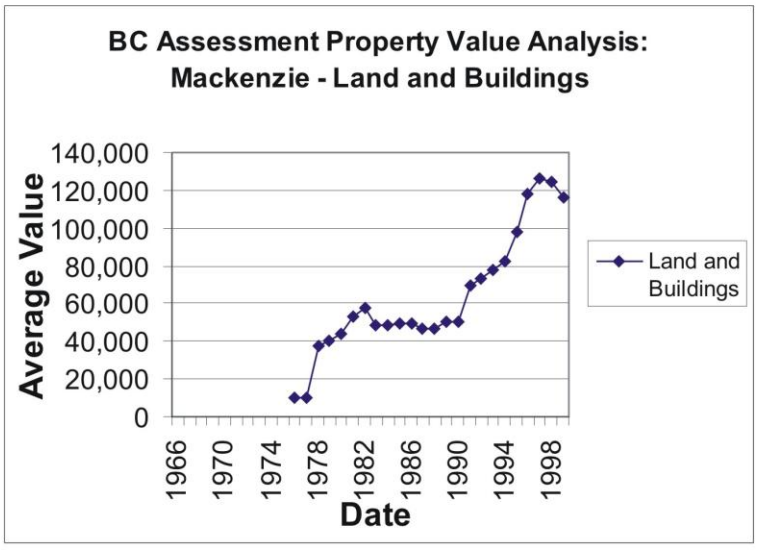


Fig. 5.3



Tumbler Ridge

In Figures 5.4, 5.5, and 5.6, the average assessed values for the sample of Tumbler Ridge residential properties are shown. Unlike Mackenzie, a rather different assessment pattern is noted in Tumbler Ridge. In Figure 5.4, the data for only the "land" portion of the assessments is represented. In this case the pattern is one of a steady downward curve. Steps in this curve occurred in 1986, 1991, 1994, and a small step again in 1999. The downward trend in residential land value assessments has thus far been steady.

Figure 5.5 represents current year dollar value averages for the buildings and improvements on the sample of Tumbler Ridge residential properties. In this case, the pattern is rather different than sketched for land values alone. After a modest start, a product of the fact that not all of the residential buildings were yet completed on our sample properties, average building assessments reached over $35,000 in 1984. This level held relatively steady until about 1994. In 1993, there is an upswing in average assessed values from just over $35,000 to just over $40,000. In 1994, however, this increase was lost as assessed values decreased to just less than 25,000. The restructuring of Quintette mine and high vacancy rates in the apartment buildings are noted in local newspapers as reasons for declining property values. Also important was the mining company appeals to BC Assessment Authority for across-the-board reductions in property assessments - reductions which would have an affect upon the property taxes to be paid. Since 1994, assessed values of the building units has seen little change.

The data represented in Figure 5.6 involves current year dollar value averages for both the land and buildings combined. Given that property values have formed an increasing small share of this total relative to the value of buildings/improvements, the curve in Figure 5.6 resembles that of Figure 5.5 with a generally steady state existing between 1984 and 1993, and another generally steady (though lower) state existing between 1994 and 1998.

In summary, it is relatively easy in Mackenzie to see the ebb and flow of the market while in Tumbler Ridge, a very artificial market appears to be in operation. Rising property values in Mackenzie are linked to periods of relative prosperity, or at least stability, in the forest industry while downturns also closely coincide with economic downturns in the industry or uncertainty in the local community. The continuing uncertainty in the Tumbler Ridge housing market is seen most in the falling land values component of property assessments in that community. In terms of building values, these have been reduced over time but remain higher and more stable than land values.

5.2.2 Assessed Values - Constant dollars

This section of the analysis employs Statistics Canada Consumer Price Index information to follow "value" changes when controlling for the effects of inflation. Figures 5.7 and 5.8 show information on the average land and housing property value assessments for the sampled properties in Mackenzie and Tumbler Ridge. For each figure, "value" data has been calculated in

Fig. 5.4

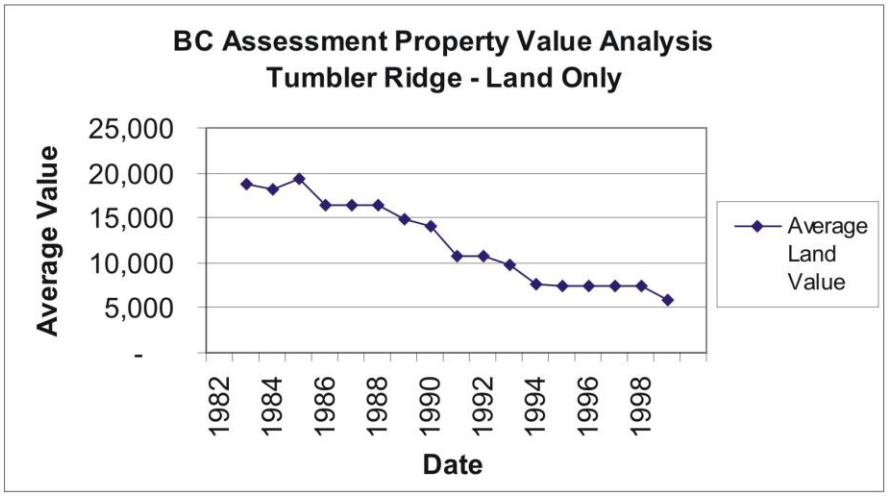


Fig. 5.5

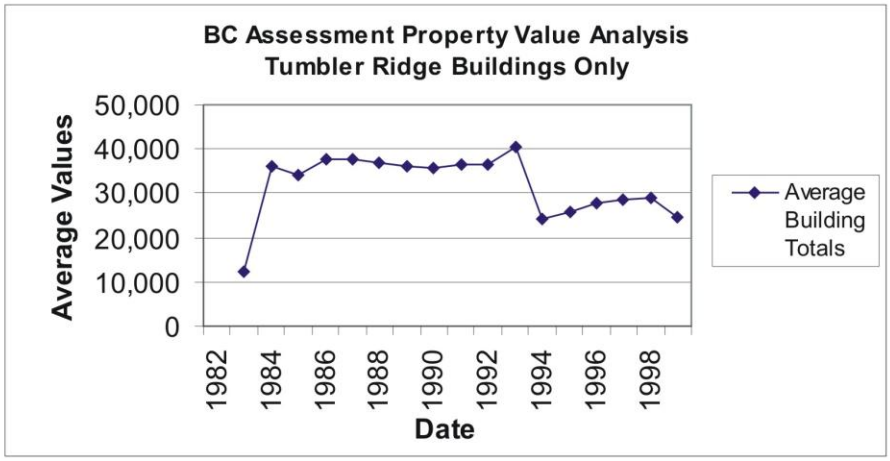
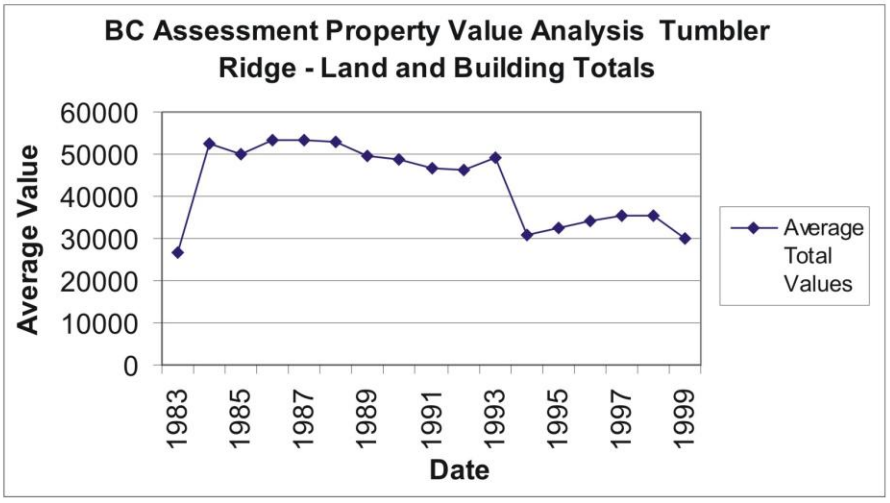


Fig. 5.6



terms of constant 1986 dollars. By setting all dollar values equal to their worth in 1986, we can eliminate the effects of inflation in the evaluation of changes in housing values over time. In these figures, a “flat” line means that housing values were increasing at the rate of inflation. A “falling”/ “rising” line means that housing values were losing / gaining value relative to the rate of inflation. Only figures for the average assessed values for land and buildings combined are included.

Mackenzie

Using the Canadian Consumer Price Index, the average land and housing property value assessments for the sampled properties in Mackenzie follows two periods of growth (Figure 5.7). The first is associated with the period immediately after 1976. As noted earlier, this is when the buyback clauses on the original housing expired and the Mackenzie housing market became “open”. Clearly, there was a sudden market adjustment relative to inflation. The addition of new housing options and market slowdowns through most of the early 1980s explain the stagnation of house prices in Figure 5.7. Relative to inflation, housing ‘lost’ value over this period. Since the resource boom of the late 1980s and early 1990s, housing in Mackenzie has gained substantially relative to inflation.

Tumbler Ridge

As noted elsewhere in the discussion, the property value history for Tumbler Ridge is rather different than for Mackenzie. Using the Canadian Consumer Price Index, the average land and housing property value assessments for the sampled properties in Tumbler Ridge identify a generally steady loss of value (Figure 5.8). In the period immediately after the community's founding there was a rapid increase in values relative to inflation. Since that point housing values have, however, been losing value relative to the rate of inflation. Early uncertainty about the housing market and mine viability is followed by s large reduction in value after the 1990 coal pricing decision and the 1991 restructuring of Quintette. Since that time, property assessment values have remained steady at between $22,000 and $28,000. This is generally the price range that Bullmoose mine has used in its 1998/1999/2000 sell-offs of selected houses

Fig. 5.7

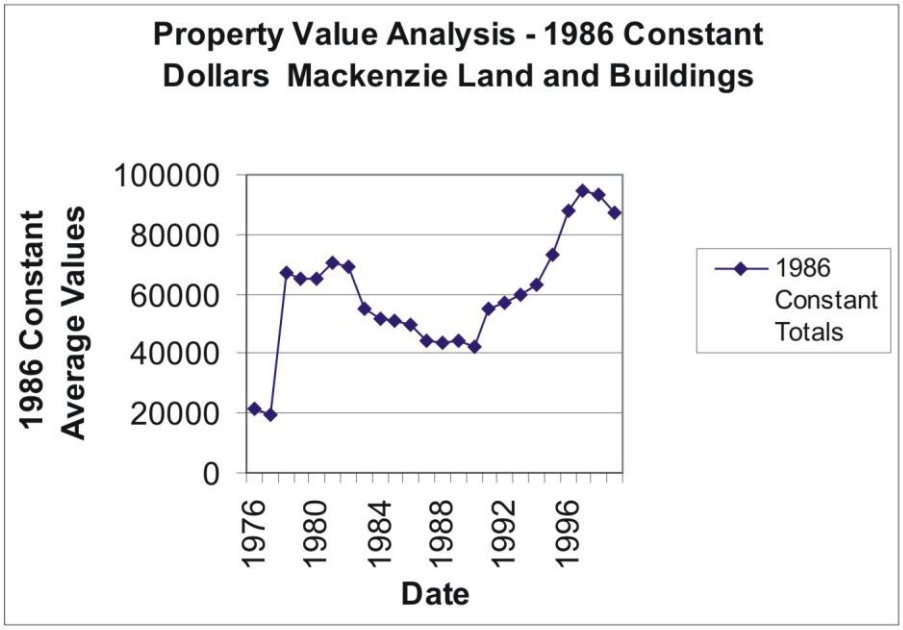
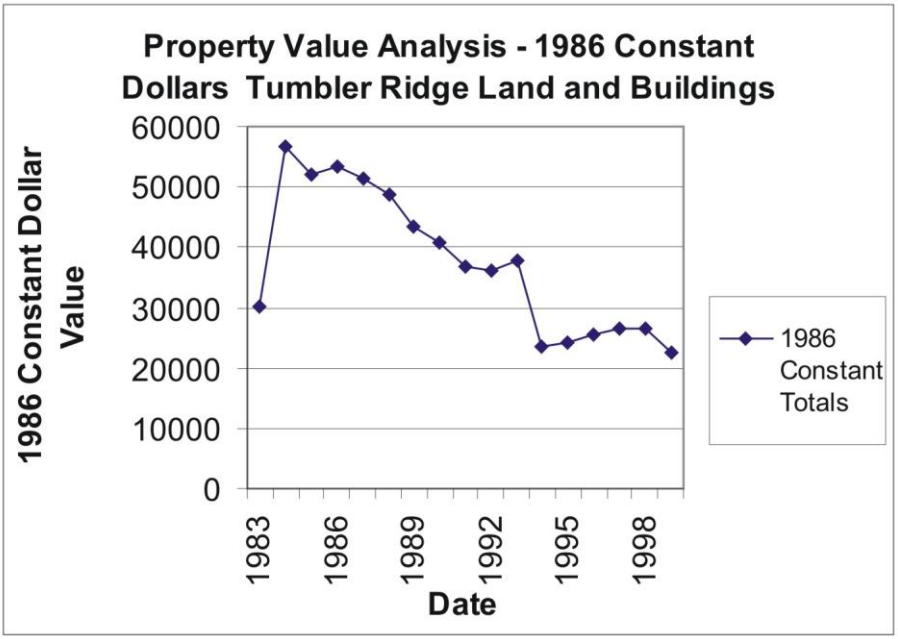

Property Value Analysis - 1986 Constant Dollars Mackenzie Land and Buildings
1986 Constant Average Values
100000
80000
60000
40000
20000
0
1976
1980
1984
1988
1992
1996
Date
1986 Constant Totals

Fig. 5.8


Property Value Analysis - 1986 Constant Dollars Tumbler Ridge Land and Buildings
1986 Constant Dollar Value
60000
50000
40000
30000
20000
10000
0
1983
1986
1989
1992
1995
1998
Date
1986 Constant Totals

5.3 Property Ownership Changes

As in the preceding section, the analysis of property ownership change over time is based on the randomly selected sample of approximately 50 residential properties in Mackenzie and Tumbler Ridge.

5.3.1 General Ownership Description

For our sub-sample, in Mackenzie, most of these properties (92.5 percent) had been active in the private housing market. Sixteen properties (30 percent of sample) were identified as having corporate ownership listed at least once in the past. A further 5 properties (10 percent of sample) were identified as having government agencies or ministries listed at least once as the property owner.

In Tumbler Ridge, 40 of the sample properties (75.5 percent) had been active in the private housing market. Forty-eight properties (90.6 percent of sample) were identified as having corporate ownership listed at least once in the past. A further 16 properties (30 percent of sample) were identified as having government agencies or ministries listed at least once as the property owner.

These samples suggest some patterns and some differences. In terms of patterns, there is company involvement in the provision of housing - usually to their own workforce - in these isolated towns. As well, there is government involvement. This government participation often has much the same motivation - to supply housing to their workers. In Mackenzie and Tumbler Ridge, for example, it is not unusual to find past or present involvement by the Ministry of Education (housing for teachers) and the Crown Corporation BC Rail (housing for employees). While the differences suggest more company involvement in Tumbler Ridge, this is an artifact of the data source which does not go back early enough into Mackenzie's history to trace the involvement of the forestry companies in housing. In both Mackenzie and Tumbler Ridge the resource companies built or controlled the majority of local housing for their employees. Of late, Tumbler Ridge now has most of the local housing stock again under ownership by the resource companies.

5.3.2 Average Number of Owners Per Property

Tables 5.1 and 5.2 include information on the average number of owners identified for our sample of residential properties.

Table 5.1
Average Number of Property Owners
Per Property - Community Residential Sample

Mackenzie	Tumbler Ridge
3.38	3.85
n=54	n=53

Source: compiled by authors from BC Assessment Authority records

Table 5.2
Distribution of Properties

Number of Owners	Mackenzie	Tumbler Ridge
1	11	7
2	5	6
3	13	9
4	13	13
5	6	10
6	4	2
+6	2	6

Source: compiled by authors from BC Assessment Authority records

Mackenzie

In Mackenzie, the sampled properties suggest an average of 3.38 owners each over a 22 year period from 1976 to 1998. When this average is disaggregated by number of owners (Table 5.2), we note about 20 percent of properties continue to be owned today by the same household from 1976. There is also a clustering of properties held by 3 or 4 owners over the time period covered by our records.

Tumbler Ridge

The average number of owners per residential property in Tumbler Ridge is relatively similar to that of Mackenzie, a somewhat surprising finding given the shorter data period for Tumbler Ridge. In Tumbler Ridge, the sampled properties suggest an average of 3.85 owners each for the period from 1983 to 1998. When disaggregated by number of owners (Table 5.2), about 13 percent of properties continue to be owned today by the same household from 1983 and that there is a clustering of properties held by 4 or 5 owners over time.

Fig. 5.9

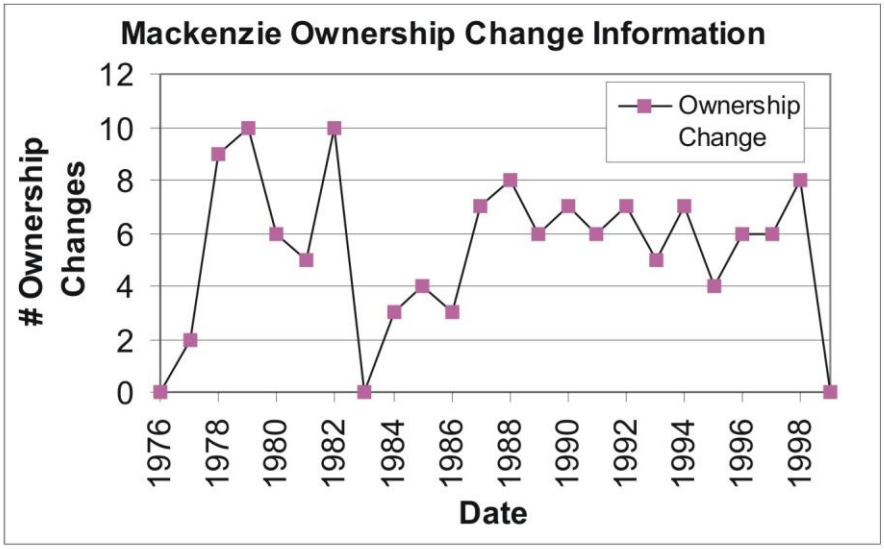
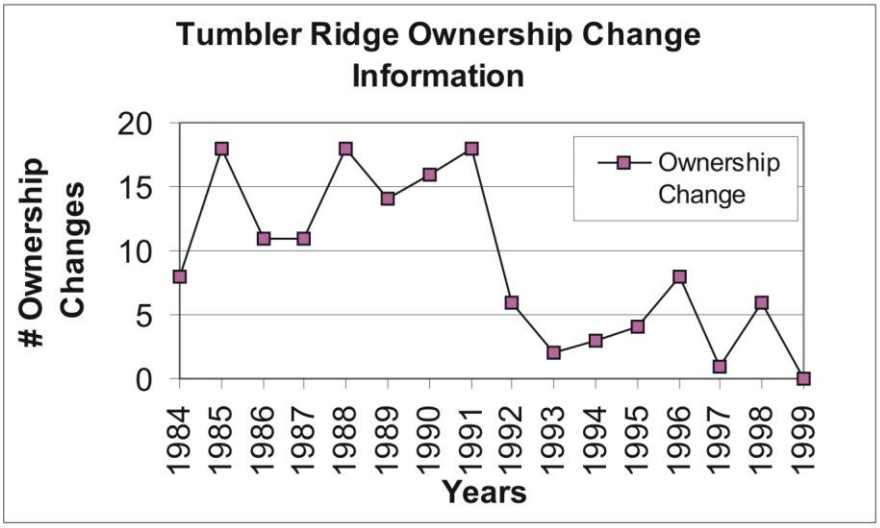


Fig. 5.10



In both Mackenzie and Tumbler Ridge some of the general resource town trends of resident turnover can be seen in the data on number of owners. As well, each community has properties which continue to be owned by the 'original' owner - suggesting that there is some longevity among residents as well as some turnover. Especially notable between the two is the impact of the 1990/91 buy-back of housing by Bullmoose and Quintette/CMHC which increased the "number of owners' data.

The differences in ownership change trends between Mackenzie and Tumbler Ridge are reflected in Figure 5.9 and 5.10. In these figures, the number of ownership changes for the sampled properties is identified per year. In Mackenzie, there are generally 5 to 10 transactions per year with the economic recession periods easily identified by slower housing sales. In Tumbler Ridge, the interruption of the housing market by the 1990/91 buyback of mine employee housing is clear.

5.3.3 Duration of Property Ownership

Tables 5.3a and 5.3b identify the distribution of sampled properties by the duration of property ownership.

Table 5.3a
Distribution by Number of Properties
Mackenzie

Average Number of Years Owned	Total (n=54)	Private (n=50)	Company (n=16)	Government (n=5)
0-2	7	8	5	1
3-5	20	21	5	2
6-10	17	11	4	2
11-20	4	4	2	0
+20	6	6	0	0

Source: compiled by authors from BC Assessment Authority records

Table 5.3b
Distribution by Number of Properties
Tumbler Ridge

Average Number of Years Owned	Total (n=53)	Private (n=40)	Company (n=48)	Government (n=16)
0-2	11	21	8	8
3-5	29	14	25	5
6-10	7	5	11	0
11-20	6	0	4	3
+20	0	0	0	0

Source: compiled by authors from BC Assessment Authority records

Mackenzie

For the entire sample of 54 properties in Mackenzie, most are held for 3 to 10 years by their owners (Table 5.3a). A total of 6 were owned for more than 20 years. In terms of resource company involvement in property ownership, the pattern is generally one of short term holdings. About 1/3 of company owned houses were held for less than 2 years and about ½ were held for less than 5 years. The pattern of government agency involvement in property ownership in Mackenzie is difficult to determine as only 5 houses in our sample had been owned at one time or another by a government agency or Crown corporation.

Tumbler Ridge

The ownership duration pattern for Tumbler Ridge is rather different than that for Mackenzie (Table 5.3b). For the entire sample of 53 properties in Tumbler Ridge, most are held by their owners for less than 5 years. This trend towards short ownership durations is especially noted in the private market owners where the majority held property for 2 years or less. In terms of resource company involvement in property ownership, the pattern is generally one of 3 to 10 year durations. The pattern of government agency involvement in property ownership in Tumbler Ridge involves some short and some long-term durations.

There are two items of note in this ownership duration data comparison between Mackenzie and Tumbler Ridge. The first is that the data source for Mackenzie does not date back to the first housing developments and so more housing was controlled for at least a short period by the resource companies there. The second is that in Tumbler Ridge, the 1990/91 buyback arrangements came close on the development of the local housing market. This slow start to house purchasing and then transition back to the resource companies accounts for the focus on shorter term ownership durations.

5.4 Property Assessment / Sales Ratio (ASR)

The property ASR determines the percentage difference between the price the home or property was sold for and the price the home or property was valued at by BC Assessment. This information is valuable for BC Assessment as it demonstrates how the market reacts. It also tells each appraiser when or if a fair market sale is occurring within the community. For the purposes of this project, the ASR was used to determine the difference between the actual sale price of a home or property within the study communities and the assessed value of that property over time. For both Mackenzie and Tumbler Ridge, the ASR was only calculated for those years in which sales occurred for the sample properties.

In some cases, “non-sales” occurred on properties. Non-sales are defined by BC Assessment as ownership transfer sales which occur without fair value money exchange. Non-sales would include those properties transferred for ‘one dollar’ or some similar type of arrangement. Thus, the value of the non-sales would in no way reflect the assigned values given to properties by BC Assessment. Fair sales, simply termed “sales” by BC Assessment, are those transfers of ownership holding a market equivalent money value. For our purposes, only sales values were used in the calculation of the ASR.

For each sale that occurred, the value of each property as assessed by BC Assessment was divided by each sale price as recorded by BC Assessment in order to find the ASR. By calculating the average ASR from all sales for each year, the overall average sales ratio was found for Mackenzie and Tumbler Ridge. Although there were fair sales, which occurred in Mackenzie before 1976, the ASR could not be calculated as BC Assessment did not begin valuing properties until 1976.

Since sales occur “in” the prevailing market, and BC Assessment re-evaluation of each property occurs approximately every two years, the ASR can be a valuable measure of local market volatility. For example, an ASR less than one means that the house or property sold for more than the assessed value. Thus, the market would be going up faster than the assessment value could keep pace. A value equal to one means that the value the home was sold for was equal to the value as assessed by BC Assessment. Therefore, the housing market would be considered stable or stagnant with very little activity. Finally, a value greater than one indicates the house or property was sold for less than the assessed value. Therefore the market would be going down faster than the assessed value could track.

TABLE 5.4
Average Assessment Sales Ratios

YEAR	MACKENZIE	TUMBLER RIDGE
1976	0.278	N/A
1977	0.268	N/A
1978	0.933	N/A
1979	0.890	N/A
1980	0.767	N/A
1981	0.996	N/A
1982	No Sales Occurred This Year	N/A
1983	0.900	0.616
1984	0.981	0.870
1985	1.122	0.711
1986	0.951	0.778
1987	1.251	1.530
1988	0.897	0.910
1989	0.747	1.535
1990	0.814	1.473
1991	0.978	0.849
1992	0.851	0.903
1993	0.913	0.881
1994	1.005	0.822
1995	0.744	1.600
1996	0.875	No Sales Occurred This Year
1997	1.16	3.008
1998	1.19	2.241

By looking at the Assessment Sales Ratio for both communities over time, we notice some distinct differences and similarities in market fluctuations (Table 5.4). Mackenzie in 1976-77 was a place where the housing market was growing, the community and economy was developing, and essential services were in place to hold residents in town. The transience level of residents subsided and the popularity for purchasing single family dwellings grew. From 1978 to 1984 the housing market in Mackenzie became very stable, with market changes occurring rather gradually. In 1985-1987, coinciding with a drop in price for the lumber market, industry wide shut downs and province wide strikes, the housing market took a downturn. Recovering from 1988 to 1992 Finlay Forest Industries built a new newsprint machine thus creating new jobs and a boom period for the town and housing market. The years 1993-94 brought a stabilization period as the housing market settled after the swell in demand for housing. A slight recovery in the housing market occurred in 1995-96 however layoffs, strike action and significant deterioration in the pulp market in 1997-98 brought the housing market down into a slump.

The housing market in Tumbler Ridge is quite different than in Mackenzie. From 1983-1986 the

housing market was booming in Tumbler Ridge as the community grew and abundant employment opportunities attracted people from all over to live in this new community. The dispute over the price of coal, strike action, and finally the Supreme Court decision forcing Quintette to drop their coal price to the Japanese Steel Industry, affected the housing market in a negative way. The depressed market stabilized from 1991-1994 at which time Teck assumed management of Quintette taking over the interest previously held by Denison Mines. This restructuring plan included CMHC assuming ownership of 100 Quintette homes. Since 1995, layoffs, housing and apartment vacancies, sharp declines in residential property values due to lack of sales, and CMHC's continued application of risk management to its loan portfolio are all contributing factors to the Tumbler Ridge housing market situation.

TABLE 5.5
Average Assessment Sales Ratio For All Years

All Years	MACKENZIE	TUMBLER RIDGE
Average	0.913	1.248

By looking at the average assessment sales ratios for each community, the housing markets in Mackenzie and Tumbler Ridge are rather different (Table 5.5). Each experiences the general ebbs and flows of a resource-based economy. When economic downturns occur such as strikes, layoffs or company takeovers, housing markets also become depressed. When economic upswings occur as technological improvements change market performance or increases in the price for resources mean greater sales, housing markets reflect an upswing. Against this, we have identified some significant differences between the Mackenzie and Tumbler Ridge housing markets. Over time, Mackenzie records an ASR of about 0.9 while Tumbler Ridge records an ASR of almost 1.5. From 1976, housing in Mackenzie has followed a positive trajectory such that house prices have generally increased just ahead of the BC Assessment Authority's ability to adjust for them. Since 1983, the housing values in Tumbler Ridge have been decreasing at a rate generally faster than the assessed value could track.

5.5 Discussion

Perhaps the best place to start a discussion of this section of the report is with the last topic reviewed. The average ASRs for Mackenzie and Tumbler Ridge provide a capsule summary of the housing investment history for the two communities. The open housing market in Mackenzie has been witness to property value increases over time. While these have fluctuated with the boom-bust cycle of the forest industry, the general trend had been for increasing house values. Property assessments in 1978 averaged about $38,000 for non-mobile or apartment properties in Mackenzie. By 1998, this had risen to about $118,000. Over the twenty year period this is an increase of 210 percent. When we discount the effects of inflation and track house values against constant 1986 dollars, the increase is still in the order of 40 percent. Housing investment in Mackenzie has been staying well ahead of inflation. With about 1,300 private dwellings

(excluding mobile homes and apartments) this increase in value represents a significant collective economic benefit in the community of Mackenzie. For households, this has meant an accumulation of wealth through their investment in the housing stock. The critical issue remains one which all resource-dependent towns confront, whether the local industry will remain viable into the foreseeable future so that some of that wealth accumulation may be recovered when the property is sold.

The average ASR value for Tumbler Ridge suggests a very different housing market than in Mackenzie. As noted above, since 1983 the housing values in Tumbler Ridge have been decreasing at a rate generally faster than the assessed value could track. Much of that decrease in assessed value has come about over the past 10 years following the buy-back of mining company homes and the subsequent company appeals the BC Assessment Authority to roll back residential and industrial property assessments in order to lower the firm's property tax bills. Prior to this period, average property assessments hovered at close to the $50 to $55,000 level. While this was up from the initial property assessment levels, it stayed relatively constant from 1984 to 1993. No doubt some of the lingering uncertainty about whether the local industry would remain viable had an impact on the market. Interestingly, the initial years of the housing market in Mackenzie showed a similar conservative price reaction in local housing values.

Following the 1991/1992 buy-back and company restructuring period, property assessments went through a marked decline. From 1994 to 1999, average property assessments ranged in the order of $30 to $35,000. This represents a decline of about 36 to 40 percent of the property values over the 15 year period from the 1984 period when sales and mortgages were first being entered into. When we discount the effects of inflation and track house values against constant 1986 dollars, the decrease is even larger - still in the order of about 60 percent. Bullmoose and Quintette (in partnership with CMHC) own most of the housing stock in the community and would bear the brunt of these property value losses. With about 800 private dwellings (excluding mobile homes and apartments) this decrease in value represents a significant collective economic cost in the community. Bullmoose appears to have become interested of late in “getting out of the housing business” and is absorbing some of these losses as they sell of part of their housing stock investment.

For Tumbler Ridge, the return of a private housing market is being strongly advocated by a number of community development supporters. The sale of some Bullmoose mine houses at prices close to recent assessment levels is seen as a first step towards this private market. There are at least three critical issues facing Tumbler Ridge on this issue. The first is one which all resource-dependent towns confront, whether the local industry will remain viable. There is considerable uncertainty about an answer to this question. Local efforts to keep the mines viable and to diversify the economy are underway. Second, if the first issue can be addressed there will continue to be the usual fluctuations the boom-bust cycle of any industry be it coal mining, forestry, gas production, or tourism. Third, it is not clear at this time whether Bullmoose will sell all of its houses of if the Quintette/CMHC houses will be put onto the market at prices comparable to the recent Bullmoose sales.

6.0 Discussion

Single-industry communities remain an integral part Canada's rural landscape and resource sector. In addition, housing remains a critical social and economic issue in these communities. As a result, it is important that government policy makers, resource companies, local community development officials, and residents be better informed about the issues involved with this unique housing market. This research project, based on a comparative study of the two resource-dependent, single-industry, “instant towns” of Mackenzie and Tumbler Ridge, is a first step to updating our understanding of these towns and their housing markets. In towns developed by a single firm or industry to provide a focal point for local extraction and/or processing operations, and therefore often isolated from other communities and from other types of employment and economic opportunities, the local housing market is influenced by the health of the resource industry.

Restructuring pressures within the resource sector has led to a wide range of changes in such industries and the towns which depend upon them. It has also led to a re-evaluation of the viability of constructing new, and in some cases maintaining old, single-industry communities. For new resource developments, an increasingly common strategy is to maintain only a work camp and to fly workers in on short term rotations. Within established single-industry communities, individual households endure concerns about the continued viability of the local industry. Closure of the resource industry can lead to a devaluing or collapse of the local housing market. Given the stress of these pressures and changes, and given the importance of these communities within the Canadian economy, more research on this topic is needed to provide a foundation for future decision-making.

To begin to build this updated understanding, this research project has examined two single-industry “instant towns” in Canada with the purpose of tracking transitions within the local housing market as the economic fortunes of the local industry and community change through time. This comparative study was designed to explore four general objectives. This discussion section will review these objectives.

The first research objective was to develop an historical and contemporary portrait of the local housing market in these single-industry instant towns. This has proved to be the most important element of the research. While many of the characteristics of the local housing stock are similar between Mackenzie and Tumbler Ridge, and they share many of the basic characteristics found in residential communities across Canada, they are if fact quite different from one another. The foundation of these differences come from the local histories of the communities and the development pathways which the housing market followed. In both, housing sales by resource companies to employees, and the operation of general buy-back clauses, were in effect. These were shown to affect the timing of developments and value changes. However, while Mackenzie proceeded into an open housing market, uncertainty in Tumbler Ridge later resulted in all mine employee housing being bought back by the companies. This has had a significant effect upon the local housing market.

The second research objective was to identify and track the timing of past corporate strategies with respect to the selling off of housing stock to employee residents. This could be easily accomplished from the housing history timelines developed for each community. As suggested in past studies of resource towns, companies are no longer interested in being the “landlord” as well as the employer. In both Mackenzie and Tumbler Ridge, the resource companies built most of the local housing but very quickly (in Tumbler Ridge - immediately) moved to sell this housing to employees. As noted, buy-back clauses registered on title protected the companies from land speculation and potential housing shortages (due to unaffordability) for their employees. These buy-back clauses also provided a short term measure of protection to employees in case the mill/mine should prove not viable. In Mackenzie, these buy-back clauses expired and the town moved towards an open housing market. While boom and bust cycles in the forest industry continue to buffet the local housing market, there has been a generally stable market and property values have remained ahead of inflation. In Tumbler Ridge, however, considerable economic uncertainty led to the companies buying-back the employee housing and converting it to a rental stock. For the one company undergoing economic restructuring, the participation of the federal government (through CMHC) was required to assist with the re-purchase of this housing.

Given the different trajectories of the local housing markets in Mackenzie and Tumbler Ridge, our third objective was to identify the nature and scale of economic benefits or costs which may accrue to households through housing purchase in these resource-dependent instant town contexts. Based upon housing assessments maintained through the BC Assessment Authority, we tracked property values over time. We were also able to track the relationship between property assessment values and the market prices paid for these properties when they would from time to time be sold. In Mackenzie, it is clear that over the long-term housing has increased in value at a rate about 40 percent higher than inflation. A substantial collective benefit to households is derived from this increase in values. Our data in this regard only went back to 1976 - about the time that an open housing market formed in Mackenzie. It may be suggested that the scale of economic benefit to households is higher for those who have owned their property from the mid-1960s. As in any housing market there will be fluctuations from time to time. In resource dependent communities these fluctuations are very closely linked to the performance of the local resource economy and companies. Therefore, while property values have generally been increasing over time, the exact timing of individual purchases and sales will determine the exact economic benefit or loss experienced by individual households.

The situation is rather different in Tumbler Ridge. In 1990/1991, when the companies moved to buy-back all employee housing they did so within the framework of the buy-back agreements registered on the individual property titles. As noted earlier, these agreements specified a re-purchase price. While there is variation by town and resource company, such agreements generally included the original price paid for the property together with some negotiated value for improvements or additions made after the purchase. In the case of Tumbler Ridge, where market prices had remained relatively static, most of the costs of the economic uncertainty were borne by the companies through housing buy-backs. For households, however, there was still an

opportunity for a proportion of loss since static housing values were actually losing value against inflation.

One dilemma this scenario raises is something noted time and again in the literature - that is the issue of housing for non-resource industry households. These would include households moving to the town to work in local government, service sector, and other support employment areas not directly on the resource company payroll. Not only is access to housing limited as companies restrict sales to their employees only, but in the case of property value losses, these households do not have a registered buy-back agreement in place on their titles to fall back on. Losses may be borne directly by these households.

The final research objective was to identify the nature and scale of economic benefits and costs which may accrue to institutions such as the resource companies or to Canada Mortgage and Housing Corporation. As noted in Mackenzie, our data did not go back far enough to evaluate the potential benefits for the resource company. A controversial local history suggests that these may have been substantial, at least for one of the forestry companies involved, but this has not been verified. In Tumbler Ridge, the buy-back and subsequent devaluation of properties is a significant loss. For the Bullmoose mine, their pattern of recent house sell-offs (at $23,000 to $28,000 or approximately half the assessed values from the 1985 to 1990 period) suggests that they are willing to take these losses in order to reduce their landlord role in the community. As yet, while there has been considerable discussion there has been no concrete action with respect to any selling of Quintette/CMHC houses at similar price levels. The differential ability to dispose of assets at a loss no doubt underscores the present situation.

The two resource-dependent, single-industry, “instant towns” of Mackenzie and Tumbler Ridge have been used to highlight some of the issues and pressures in these types of housing markets. While some of these issues and pressures are longstanding concerns in resource-dependent towns, others are exacerbated by contemporary economic restructuring pressures. Through this comparative study it is hoped that readers will be able to identify how closely the examples fit towns with which they are familiar. From this, we hope that it will lead to an updating our understanding of these towns and their housing markets.

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