The Michelsen Farmstead:

Landscape and Structural History Considerations

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Acknowledgements

Contents

Maps

Illustrations

The Michelsen Farm Site: A Short History of its Development

This brief history of the Michelsen Farm Site has been prepared as a contribution to the on-going refinement of restoration proposals for the Village of Stirling National Historic Site at Stirling, Alberta. As the Michelsen Farm has been identified as an initial priority for development, an understanding of the chronology of the site features is considered to be important background information. Much of the information provided has been derived from oral testimony of persons who had some knowledge or experience of the farmstead. Documentary evidence in the form of working drawings illustrating the original or later adaptations of the buildings are virtually non-existent. The 'as-built' record provided by the consulting architects, *Hirano and Heaton* , have therefore become important source documents. Photographs obtained from local collections have also been an important source for this historical summary, and will continue to be so for future restoration work.

It is hoped that this report will also be useful to those undertaking the on-going interpretive planning for the farm and related sites in the Village of Stirling, and that it will also act as a prod for future research into those many areas of the historical record which have here gone unattended.

I

Stirling in the Context of Mormon Settlement and Architecture

Mormon settlements in Alberta were located in what had been designated as inhospitable lands in the land and resource appraisals prepared by members of the Palliser Expedition of 1857-58. Captain Palliser, in his general report, stated that the savannas and woodlands are succeeded 'on the west by a more or less continuous arid desert, occupying a region on both sides of the Rocky Mountains' but this 'central desert extends however, but a short way into the British territory, forming a triangle, having for its base the 49th parallel from longitude 100 degrees to 114 degrees W., with its apex reaching to the 52nd parallel of latitude.'[1] Dr. James Hector of the expedition, was probably responsible for the idea of a 'triangle." In 1861 he wrote: 'The British portion of the arid country...is a triangular region, its apex reaching to the 52nd parallel while its base, applied along the 49th extends between Longitude 100 degrees and 114 degrees West. It contains, however, many varieties of land, and some limited areas that are really even good; but on the whole, it must be described as deficient in wood, water and grass.'[2] Ranching, according to this account, was the best that could be hoped for in these lands. (Map 1). Only after the Dominion Botanist, John McCoun tabled an influential report in 1879, dealing with his own appraisals of the dry belt, were some of the ideas floated by members of Palliser's expedition and the geologist, Henry Youle Hind, seriously disputed. Thereafter, some of the advantages of agricultural settlement in the southern parts of the territories were more actively promoted.[3] The history of the Village of Stirling was one chapter in this story of changing attitudes towards the agricultural potential of the dry lands. Irrigation was central to that story.

Map 1 A portion of a Palliser Expedition Map showing the designation of 'Arid Plains' in the sector where Stirling would later be located in the lands northeast of the Chief Mountain designation.

Source: *Papers Relative to the Exploration of Captain Palliser.* London: House of Commons. 1859. (James Hector's Map of the Saskatchewan and Rocky Mountains).

3

Map 2   Context of Stirling in the Land Grant Lands of the Alberta Railway
and Coal Company. c. 1900.   After A.A. den Otter, (1975)

Map Showing
IRRIGATED LANDS
of the
CANADIAN NORTH WEST IRRIGATION CO.,
in
SOUTHERN ALBERTA,
CANADA.
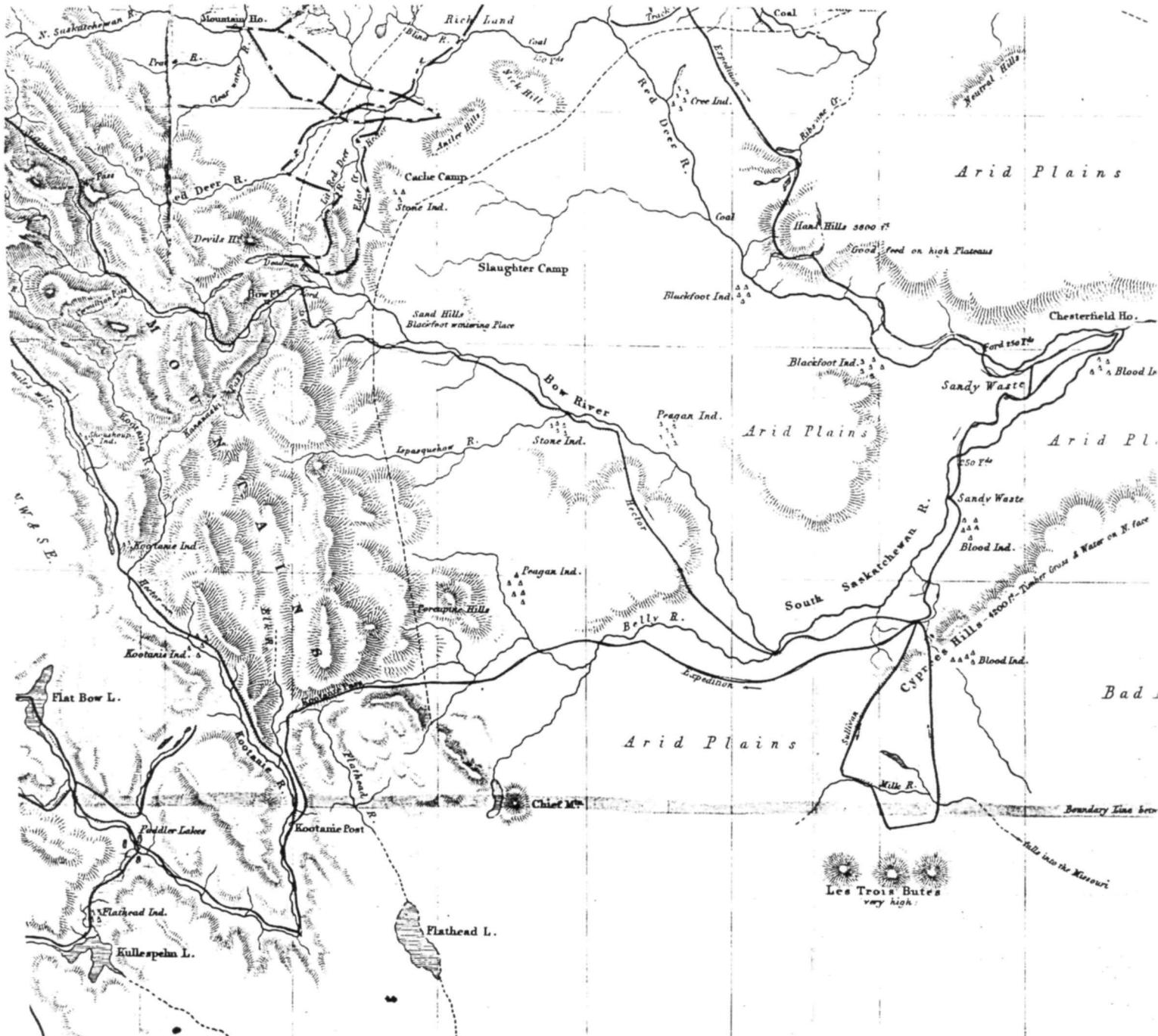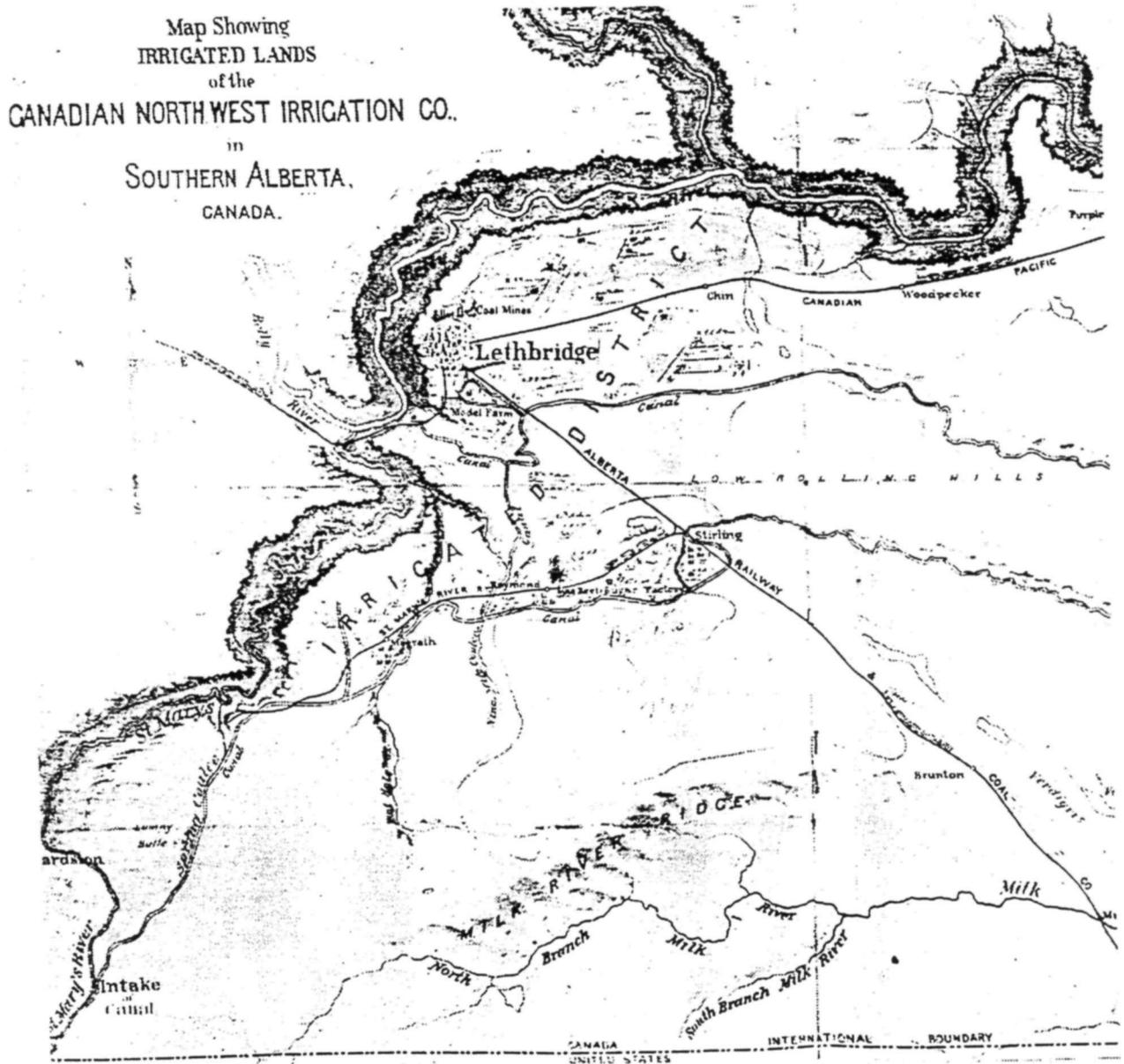
Situated on Section 29, Township 6, Range 19 West of the 4th Meridian, Stirling had its origins as part of a land grant given to the *Alberta Railway and Coal Company*. (Map 2) This land was granted as partial compensation for rail construction between Medicine Hat, Lethbridge and Coutts Alberta, on the American boundary, from where the line continued on to Great Falls, Montana.

The lands granted to the company in the 1880s were conveyed on the usual checkerboard pattern of alternate townships characteristic of other railway land grants in the west. In this semi-arid part of the so-called 'Paliser's Triangle' however, land sales proved to be difficult for the company. (Map 3) It came to the attention of the directors that a number of Mormon settlers were practicing a successful form of irrigation agriculture on land in the vicinity of Cardston, such as at Lee's Creek. Throughout the 1890s, the directors agitated in Ottawa for a revision of the original terms of their land grants with a view to consolidating their holdings in continuous blocks of land which would better allow for the organization of irrigation schemes. The passage of the *North-West Irrigation Act* in 1894, (an initiative of William Pearce in the collaboration of Charles O. Card), helped foster new land holding and water distribution arrangements.[4] Following the coming to power of the new federal Liberal administration of Wilfred Laurier in 1896, the company request for a review of their holdings received more favourable attention from the Minister of the Interior, Clifford Sifton. It then became practical for the company to work out arrangements with the Mormon community and its leaders in The Church of Jesus Christ of Latter-day Saints (LDS) for a systematic colonization scheme which included settlement and the construction of irrigation networks in the country north and east of Cardston. A major contract was signed between the company and the LDS in 1898 which,

Map 3   'Palliser's Triangle' The Prairie Dry Belt.
                After James H.Gray *Men Against the Desert.* (1978).
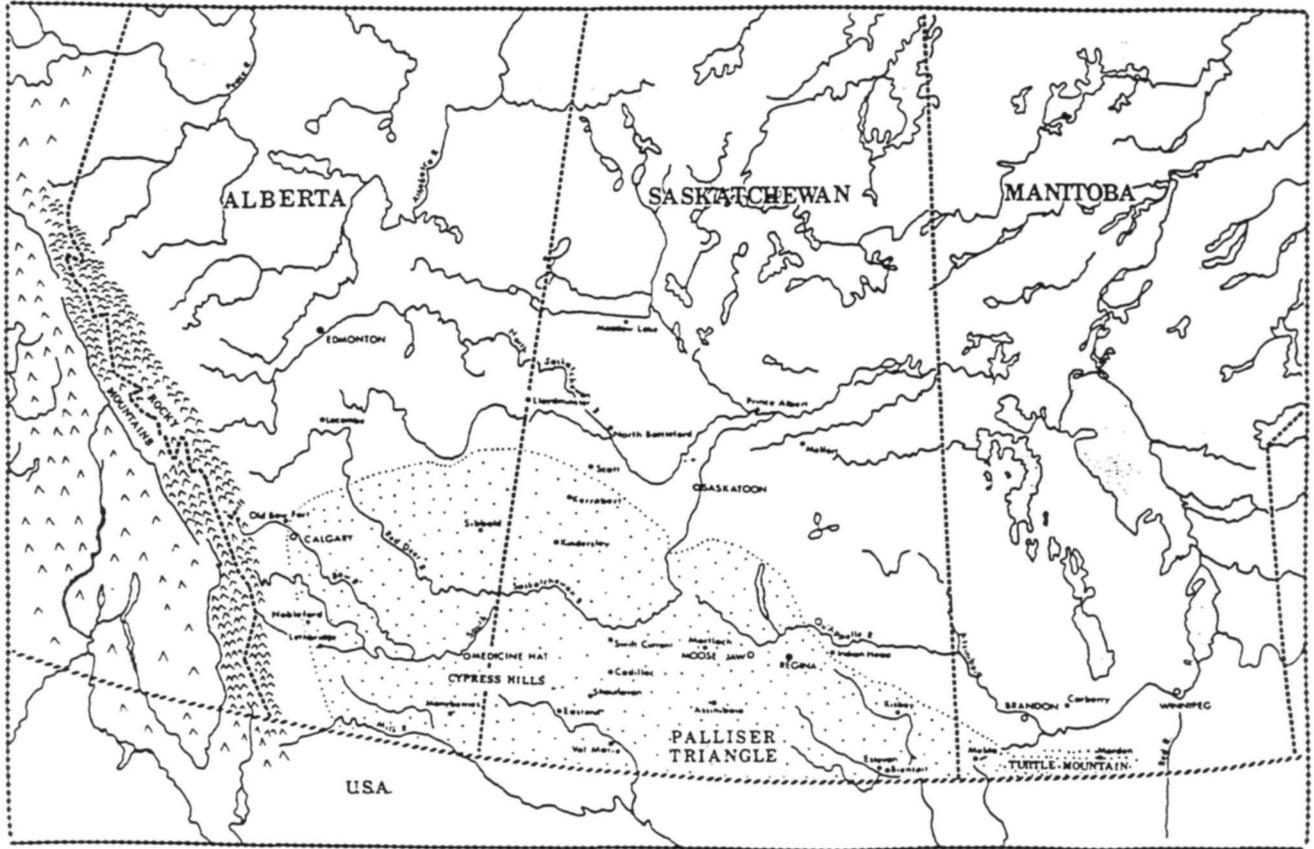
by its terms, helped opened the door to immigrants from Utah as a result of new labour and settlement opportunities in Alberta.[5] On July 27, 1898, the local LDS leader, Charles Ora Card, recorded in his *Diary* that 'I viewed the Land about Stirling with a view of Locating a colony there & thought the best place at Stirling and East of it But will look closer in the future.'[6]

The village of Stirling had its practical beginnings in 1899 when 29 settlers arrived at the Stirling Station (Maybut) just north of the present town, from Richfield, Utah. Part of the background to the appearance of Mormon settlers in Southern Alberta includes the previous experience of a select number of Mormons as railway and canal builders in the District of Alberta as early as 1887.[7] A line of social and economic communication was thus opened up between the Canadian Northwest and Utah. With a developing interest in the sponsorship of agricultural settlement by the Alberta Railway and Coal Company after 1890, Alberta District became attractive to Mormons in the United States for two reasons: first, by 1886, the Mormon community had been experiencing renewed persecution in their Utah enclaves as a result of the influx of mining concerns; and second, by virtue of new American federal legislation of 1882 which had rendered polygamy illegal. Thus, the legacy of the 'Utah War' of 1858-60 finally came to constitutional fruition, as new commercially-motivated outsiders, (or 'Gentiles') claimed a louder voice around Utah's political table.[8] Under these aggravations of the mid-1880s, church leaders, such as John Taylor, reacted favourably to reports concerning settlement opportunities north of the 49th parallel.[9] The timing of the Mormons was good, for it coincided with a rise in interest by Canadian officials and business groups in colonizing the western territories, following the signing of general land treaty arrangements with prairie Native tribes in the mid-1870s, and in the aftermath of the Riel troubles of 1885.

Mormons and the Terms of Settlement in Canada

John Lehr has observed that during the early post-confederation years, the Dominion Land Surveyors of Canada 'did not favour the establishment of nucleated settlement' on the prairies even though other groups, particularly the Mennonites in Manitoba, had experimented with such approaches after 1874.[10] In 1887 the first contingent of Mormon settlers from Utah arrived in southern Alberta and, as a consequence, a new and successful attempt was made to introduce the nucleated settlement idea. According to Lehr, the Mormon approach 'differed from conventional rural nucleated settlement in that farming activity was centred within the village' in such a way that all farm buildings 'were placed on a centrally located village lot.' This central plan has normally been associated with an ideal town planning and land use scheme known as the 'Plat of Zion.' In this scheme, the farms were 'all located within the village, which functioned primarily as an agricultural unit' and not as a 'centre' servicing the surrounding farms.[11]

Social Ideals and the theory of the 'Plat of Zion'

The 'nucleated village' planning approach has by degree, and in modified ways, informed rural Mormon civic community life since the early years of the movement, particularly after the Missouri phase of the early 1830s, where a utopian ideal known as the City of Zion was first articulated.[12] The cartographic equivalent of this ideal city, known as the 'Plat of Zion,' was in many ways an appropriate geographic response to the utopian agricultural and industrial programmes advocated by LDS Church Bishops. This particular landscape vision of economic theocracy sought to promote Mormon collective security by means

of a cooperative ethic, but one in which group action was built on individualistic, (and not strictly agricultural) impulses, as well as on a strong family unit.[13] Keeping in mind that Joseph Smith and many of the other founders of the LDS Church were New Englanders, it may be noted that their ideas on town planning had roots in seaboard traditions, and that there were many early nineteenth century town designs which contained elements of the Plant of Zion ideal.[14]

From the point of view of social cohesion, there was good deal of logic in the nucleated village notion. It allowed for the daily mingling of people and for full participation in community life by reducing the distance between neighbours. This was quite different from the scheme of dispersed family farmsteads generally encouraged by the post-1867 Canadian government and which became characteristic of most rural localities on the prairies.

The 'nucleated' system favoured by Mormons was to be fostered with the aid of an economic theory. The manner in which individual economic rights were to be balanced with communal security and aims was developed by Joseph Smith and others in February of 1831 at Jackson County, Missouri. The relevant documents outline the origins of what became known variously as 'the United Order', the 'Order of Enoch' or the 'Law of Consecration and Stewardship.'[15] At its simplest, the idea was that all property was 'consecrated' to the local Church organization, as represented by the Bishop, and that units were then given back to heads of families in the form of land and goods, according to their need, through deeds of 'stewardship.' It was in part a 'community of goods' but not entirely so. The surplus, in terms of material goods and food stores, were held in a central storehouse for use among the less favoured, for new arrivals, and as a check against short term crises.[16] The physical setting for such general institutions were identified on the 'Plat of Zion' and normally in the centre of the land unit.[17] The Village of Stirling made provision for just such facilities. These

communal aspects were aimed at building up the energies of the Church and its purposes, while the daily personal enterprise aspects of life were to remain in the hands of adherents. According to Arrington 'there was no provision for the minute and intimate regulation of economic activity which prevailed in some contemporary communitarian societies.'[18]

There were difficulties in the early implementation of this programme, both within the community and from the standpoint of the those looking on, either as neighbours or as more distant participants from the wider social and financial community of the United States.[19] Friction tended to mount at the local level with great regularity. From the summer of 1833 until 1847, the Mormons were burned or driven out of a series of communities in the Missouri, Ohio and Illinois country, leading to a decision in 1847 to embark for the relatively unpopulated lands of Utah.[20]

Post-1847 Settlement and the 'Plat of Zion'

Following the assassination in 1844 of the Mormon leader, Joseph Smith, leadership of the LDS fell to Brigham Young. Under his leadership, many of the difficulties of Mormon economic and social organization which had beset the community were addressed, along with the adoption of measures designed to give greater physical protection to the community against outside agitation and persecution.[21] Much that was solid was retained however, based on past experience. During their various migrations between 1833 and 1847, several variants of the 'Plat of Zion' town planning scheme had been adapted to new settlements. The present town plan of Stirling still displays an affinity with the original tenets of the Plat of Zion concept, it is useful to review some of the original ideas.

The first theoretical statement concerning the Plat of Zion was published in 1833 during the Mormon residency at Independence Missouri:[22]

This plot contains one mile square, all the squares of the plat contain ten acres each, being forty rods square. You will observe the lots are laid off alternately in the squares; in one square running from the south and north to the line through the centre of the square; and in the next, the lots run from the east and west to the centre line. Each lot is four perches in front, and twenty back, making one half an acre in each lot, so that no one street will be built on, entirely through the street, but, one square the housed will stand on one street; and the on the next one, another, except the middle range of squares, which runs north and south in which range are the painted squares.

The lots are laid off in these squares north and south, all of them; because these squares are forty perches by sixty, being twenty perches longer than the other, their greatest length being east and west, and by running all these squares, north and south, it makes all the lots in the city, of one size.

Provision for public spaces and works were also provided for in these early statements:23

> The painted squares in the middle are for public buildings. The one without any figures is for storehouses for the bishop, and to be devoted to his use.

The relationship of the residential lots in the plat to surrounding agricultural lands were described in some detail:

> On the north and south are to laid off the farms for the agriculturalist, and sufficient quantity of land to supply the whole plot; and if it cannot be laid off without going to quite a distance from the city, there must also be some laid off on the east and west

With respect to the lots it was stated that:24

> No one lot, in this city, is to contain more than one house, and to be built twenty-five feet back from the street, leaving a small yard in front, to be planted in a grove, according to the taste of the builder, the rest of the lot for gardens, etc., all of the houses to be built of brick and stone.

This planning ideal, as it was first presented, is illustrated in Map 4 and in modern schematized form in Map 5. In her review of the concept, Elise Corbet noted that in Utah no communities 'conformed strictly to the original plan' and that in general, 'only two characteristics were common to all.' These two aspects were the 'rigid grid pattern oriented to the cardinal points of the compass' along with 'the fact that all were farm villages.'25 The old ideal was adapted in modified form in southern Alberta, as in a number of other localities across the

West. L.A. Rosenvall has remarked that in southern Alberta, the area around Cardston was the one settled first and also 'where settlement patterns adhered most strongly to ideal grid patterns within nucleated villages.' It was here that 'irrigation projects were adapted to regional conditions but based on procedures established in the Great Basin.'[26] At Stirling, these vestiges of the ideal are still well represented and preserved.[27] The pattern of town lots in Stirling and Maybut, as of 1930, is illustrated in Map 6.

In 1989, following the completion of comparative studies on prairie settlement patterns, the village of Stirling 'was identified as the best preserved surviving example of the distinctive settlement pattern associated with Mormon settlement areas in the dry land farming district of Southern Alberta.' The town was subsequently granted recognition as a National Historic site.[28]

Map 4

The 'Plat of Zion' c. 1833.
Source: LDS Church Salt Lake City

Map 5   The Plat of Zion in modern schematic form. LDS Church. Salt Lake City

Map 6   Town Lots in Stirling Village and Maybut in 1930.

<div align="right">After Macintosh. (1934)</div>
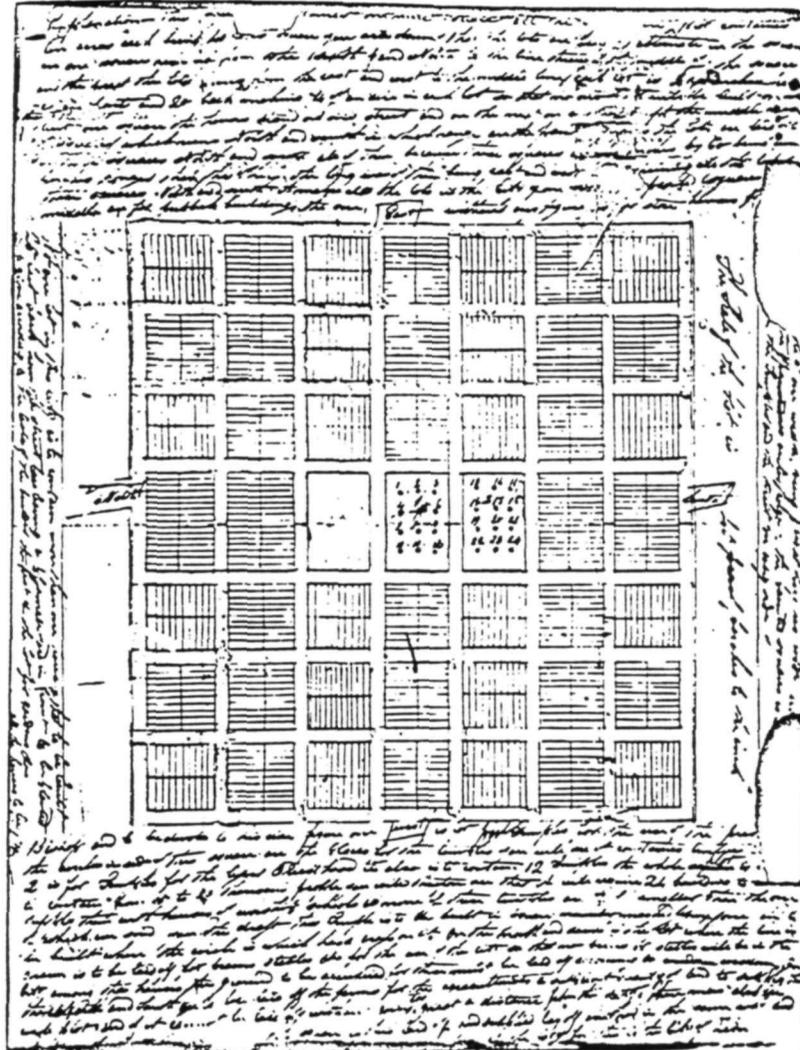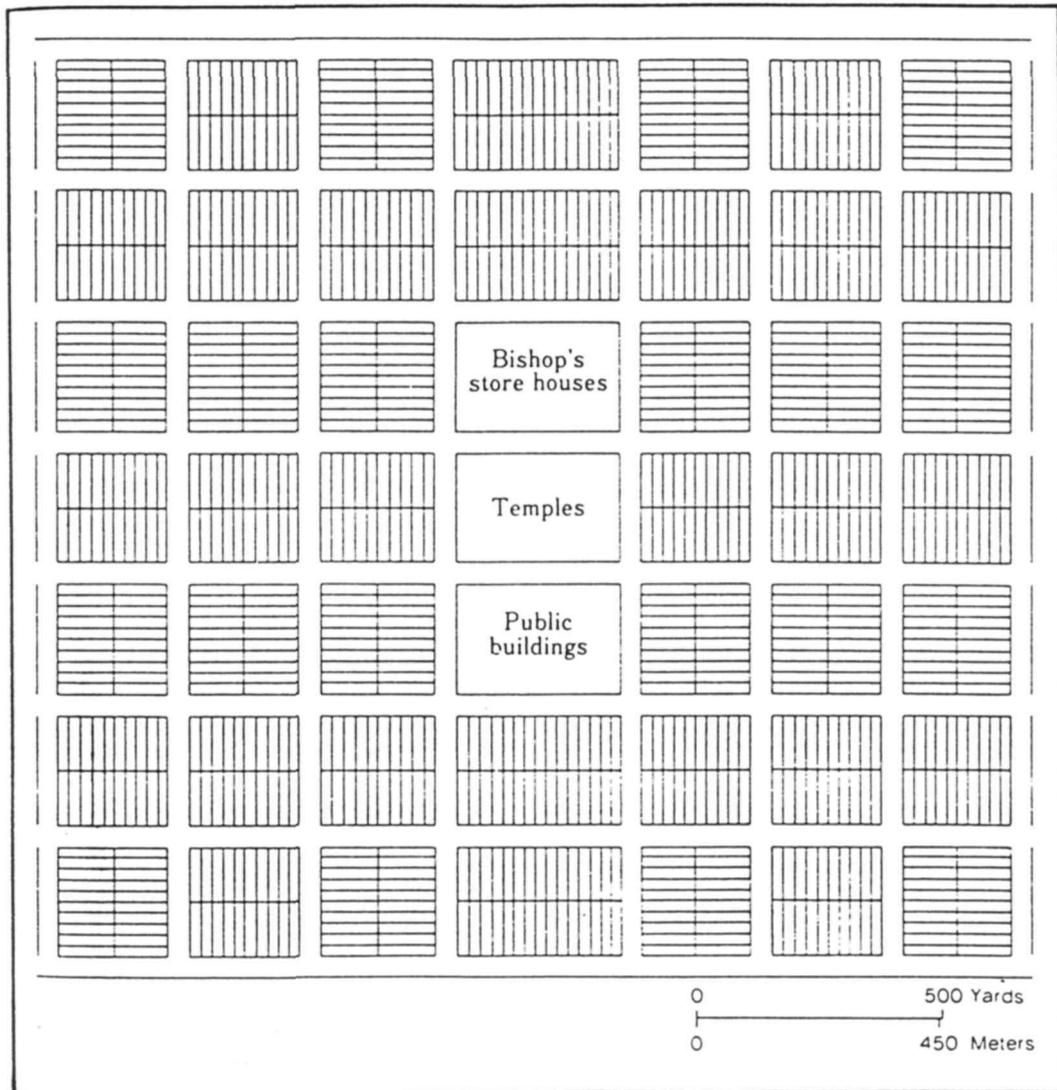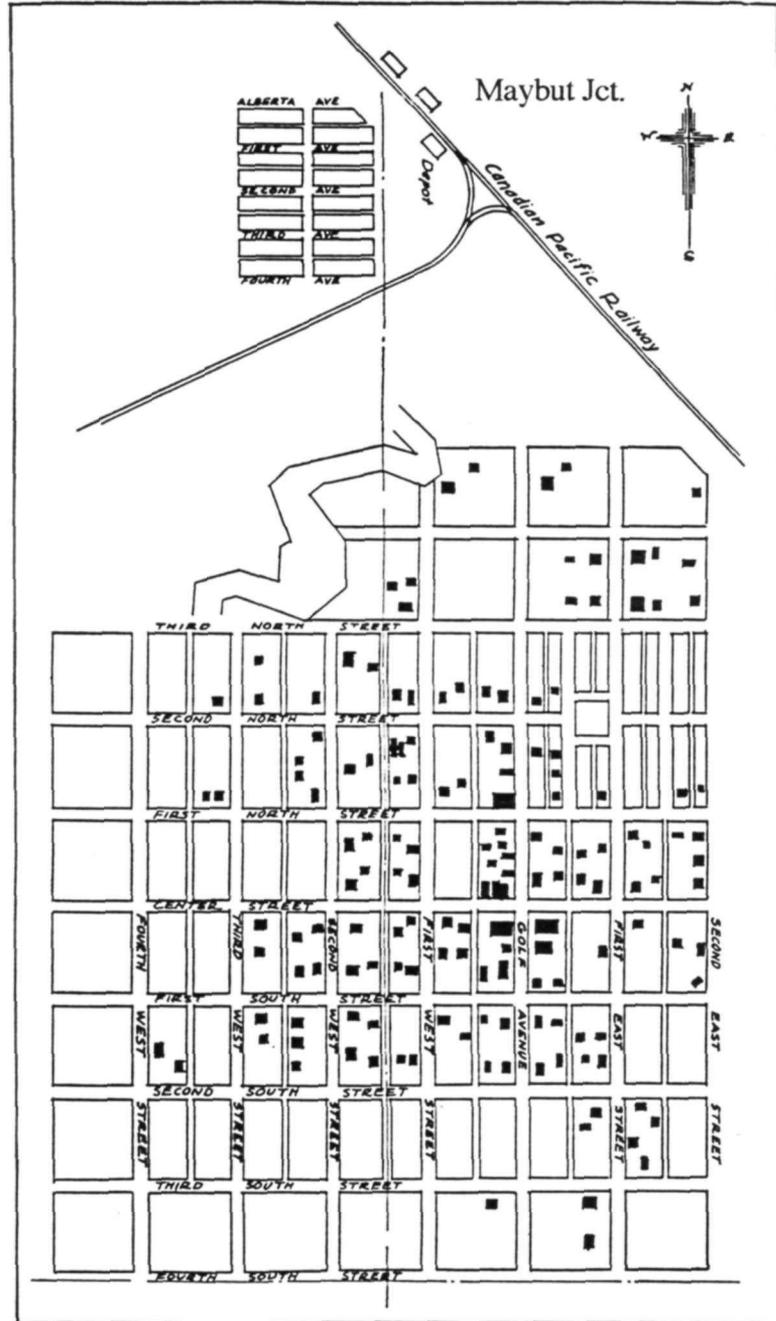
The layout of the Village of Stirling can be compared with the original 'Plat of Zion' concept in the following description, prepared in the course of a survey of the local cultural landscape.[29]

> Stirling comprises a distinctive landscape of grouped farmsteads in a village setting organized into a grid of large square rectangular lots, separated by wide streets. Within each farmstead, buildings are arranged according to convention, as well as to the pragmatic inclinations of the settling family. Typically, the homes face the street, with barns and outbuildings ranged behind. The typical residential farm lot size is 1.25 acres with the typical farmstead block size being 10 acres as prescribed by the 'Plat of Zion' plan.

It is noted as well that the farmsteads 'follow a similar configuration' in which the farmhouse is 'built 25 feet from the street in the corner of the lot' while the barn and the outbuildings for stock 'are located in another corner.' The 'garden is planted beside the house' while the 'rest of the lot serves as pasture for the animals.'[30] At Stirling, the well known use of Cottonwood trees for shelter belts and lot border definitions in Mormon communities is quite marked.[31] The road allowances are 100 feet in width.

II

Michelsen Farmstead Component

An important component of the historic character of the village is the well-preserved and still-functioning Michelsen farmstead.(Map 7) The title to this piece of land was acquired in 1904 by Andreas Michelsen. Born in Sleth Aarhus County, Denmark in 1857, he moved, with his Danish wife Kirsten Marie Knudsen and his first daughter, to Monroe Utah in 1882.[32] Andreas was presumably the son of Rasmus Michelsen and Karen Marie Michelsen of Aarhus, County Denmark.[33] Andreas Michelsen was assigned from Utah to inspect the new settlements in Alberta in 1900. By 1901, he and his growing family had relocated to Stirling. Seven additional children had been born in Utah. He first lived in a tent between McGrath and Stirling at a place called 'Pot Hole Coulee' and he undertook work of various kinds in his first years in order to build up capital.[34] By 1903, a small house had been built on the future Michelsen homestead property in Block 7 at Stirling.[35] (Plates 1 and 4).

Seasonal Round of farm Activities

Four separate farm units were developed over time by the senior Michelsen and his sons Sirn and Niels. (Map 8). In addition to the main homestead in Stirling in Block 7, there was an irrigated farm south of Stirling; some lands north of Stirling, which included a barn and house; and a homestead near Wrentham. The lands held to the north of Stirling were dry, with a requirement that water be hauled in for the horses. On the irrigated farm south of Stirling, wheat, oats, barley and hay were grown.[36] (Plate 2) The Wrentham property was

Map 7   The Michelsen Farm Site. c. 1935.
After R.M. Graham (1993)

ROOT CELLAR AT NORTH BOUNDARY

WAGON TRACK

PASTURE

CALVING SHED

2nd. FLOOR LOADING DOORS

PIG YARD

CALVES

CORRAL

CHICKEN HOUSE

PIG SHED

BARN

CATTLE CHUTE

FEED PEN

MACHINE SHED

GATE

GRANARY

GATE   GATE   LOADING WINDOW

SIXTH STREET

COAL SHED

FURROWS

GARDEN

CISTERN

FILTER

PASTURE

1902 HOUSE

1912 HOUSE

POPLAR

WILLOWS

CULVERTS

FLOW

SECOND AVENUE
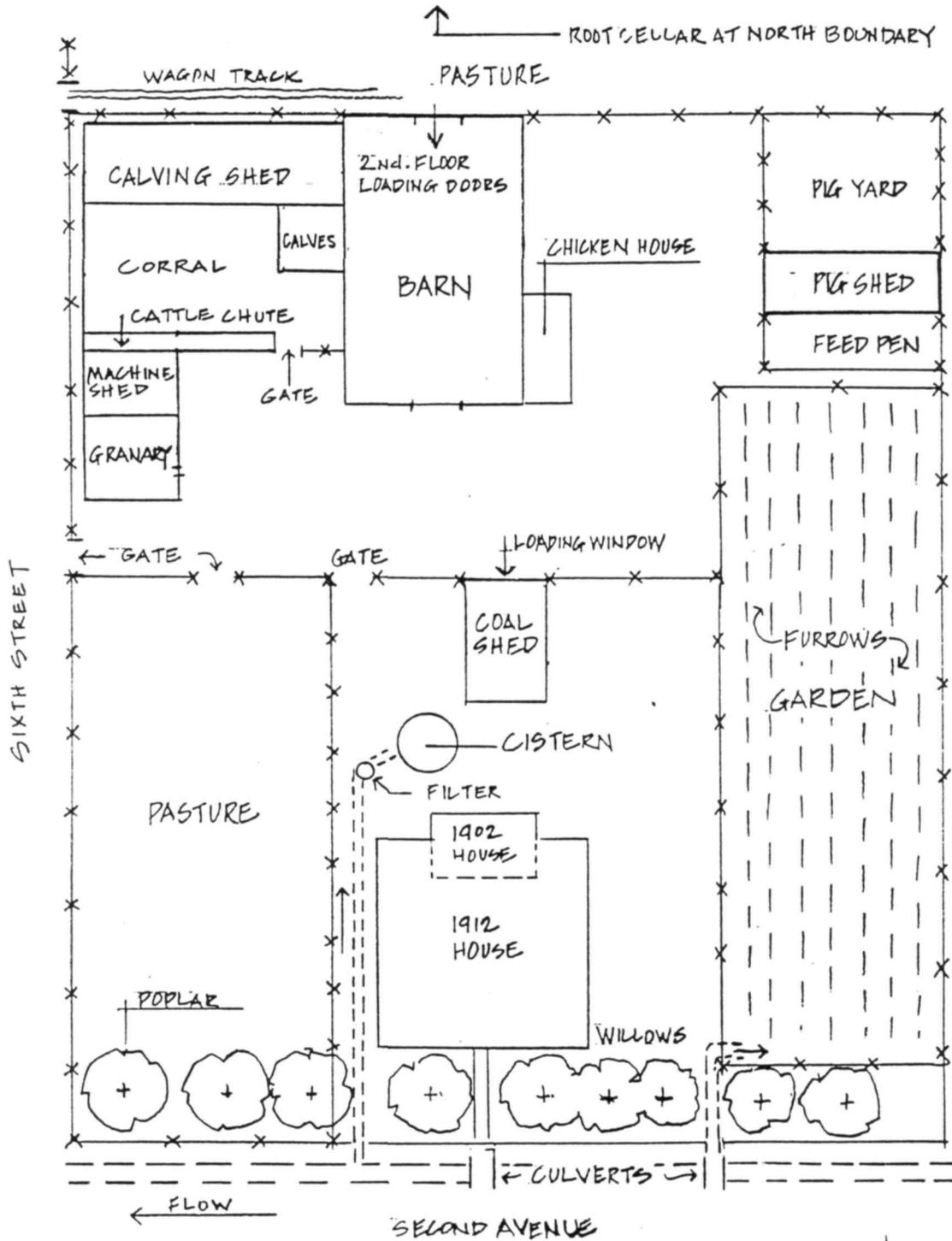
MICHELSEN PROPERTY · Block 7
Site Plan Schematic · Circa 1935
LEGEND: DITCHES ═══ ═══ ═══ FENCE ×—×—×   Not To Scale
R.M. GRAHAM M.L. ARCH. M.C.I.P.
FIGURE 25.

Plate 1   The Michelsen family in front of the house, c. 1917.
Courtesy: Stirling Sunset Society (1981)
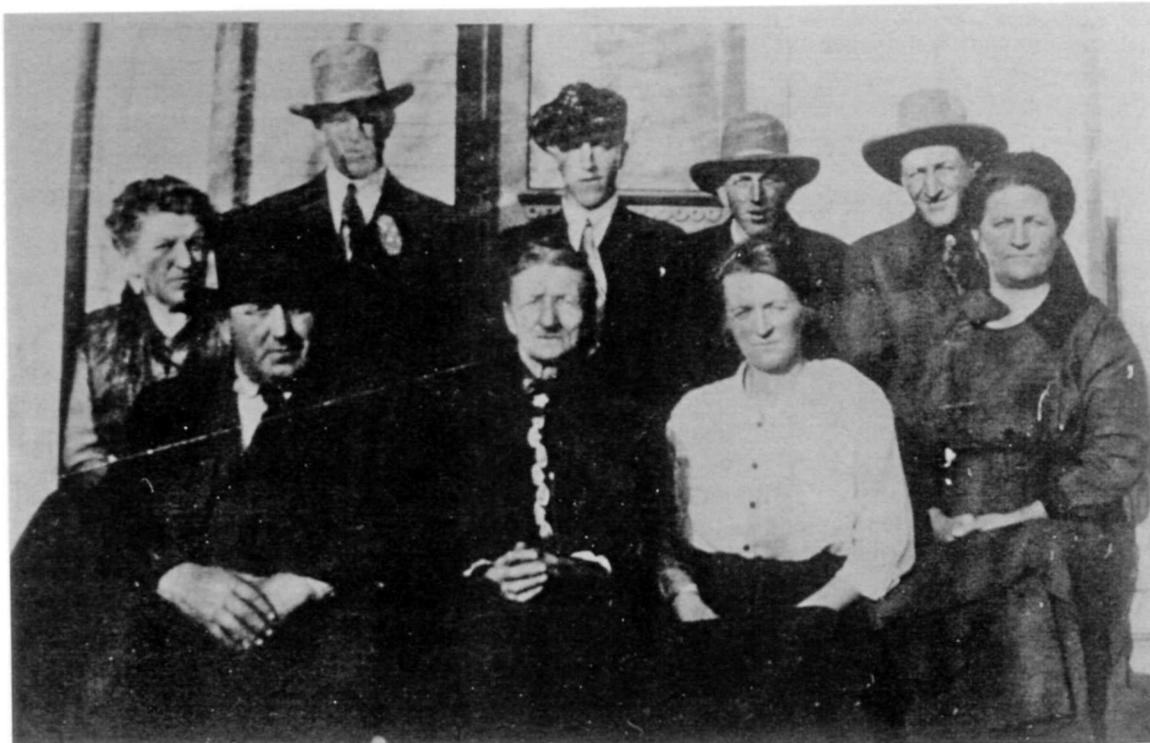
Plate   2   A view of early Stirling. 1900. City of Lethbridge Archives.

developed after 1913 when that community was developed along the new CPR line running east from Stirling towards Manyberries.[37]

The nature of the farm year and the interconnections of the land holdings was recalled by Glen Michelsen as follows.[38]

> Most of the animals were kept on the acreage in Stirling. They had a pond on the property for ducks and geese. They also had a chicken coup. Dad raised his cattle on the pasture near the house. The milk cows were driven to the community pasture during the day. Beef cattle were pastured on the ridge or on the homestead near Wrentham. After the fields were harvested, they pastured the cattle in the fields. They also put up a few hay stacks to feed the cattle during the winter.

The shift from horses to tractor power came only towards the end of the depression years of the 1930s. (Plate 3).

Plate   3a

Horse Power in use at Stirling.
Hay operations.
Courtesy Roy Michelsen. Lethbridge.
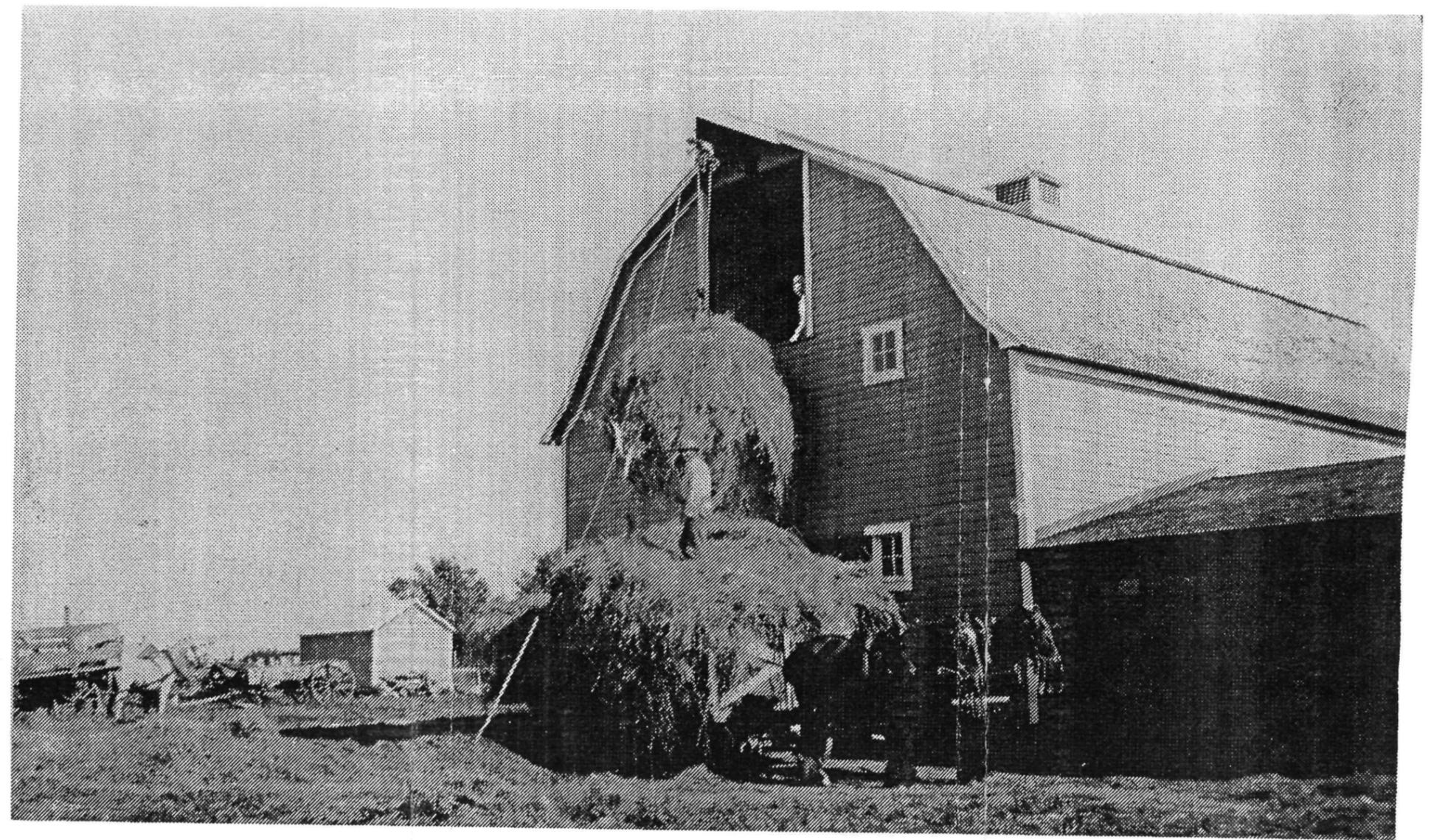
Plate   3b.

Mechanization, 1938
Michelsen farm holdings,.
Courtesy: Helen Hartley
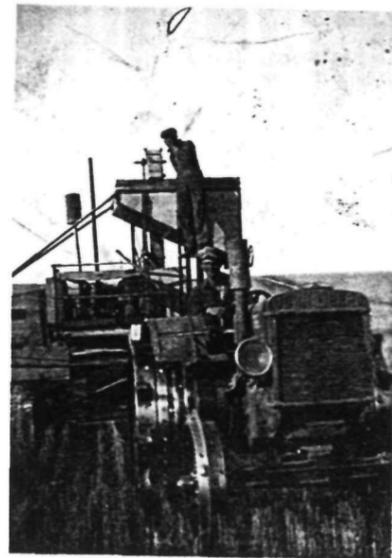
The Evolution of the Michelsen Site and its Buildings

The historic Michelsen farmstead occupies Block 7, Lots 1 to 4, and as a unit it has been a going concern since 1904, when it was acquired by Andreas Michelsen.[39] In 1909 Andreas Michelsen was deeded the property in lot 1 and 2, Block 7 (Plan 752J). This property measured 660 feet by 160 feet. By 1918 he had taken ownership of lots 3 and 4, also in the same block, making for a total area of 660' by 320'.[40] In 1977 the holding was sub-divided into two Lots on a north to south line, so that the Michelsen farm reverted back to the original Lots 1 and 2.

As mentioned earlier, the land currently known as the Michelsen farmstead was not the only land worked by members of the Michelsen family. 'Part of the farm was south of Stirling' and that portion was irrigated. There was also land to the north and a homestead near Wrentham. The 'farm north of Stirling was dry.'[41] To speak of the historic Michelsen farmstead then, is to speak of a series of widely scattered land units. (See Map 8)

Map 8   Distribution of Michelsen farm properties. 1902-1970.

Farm lands north and
south of Stirling Village
2

Michelsen Farmstead
1

Wrentham farm property
3
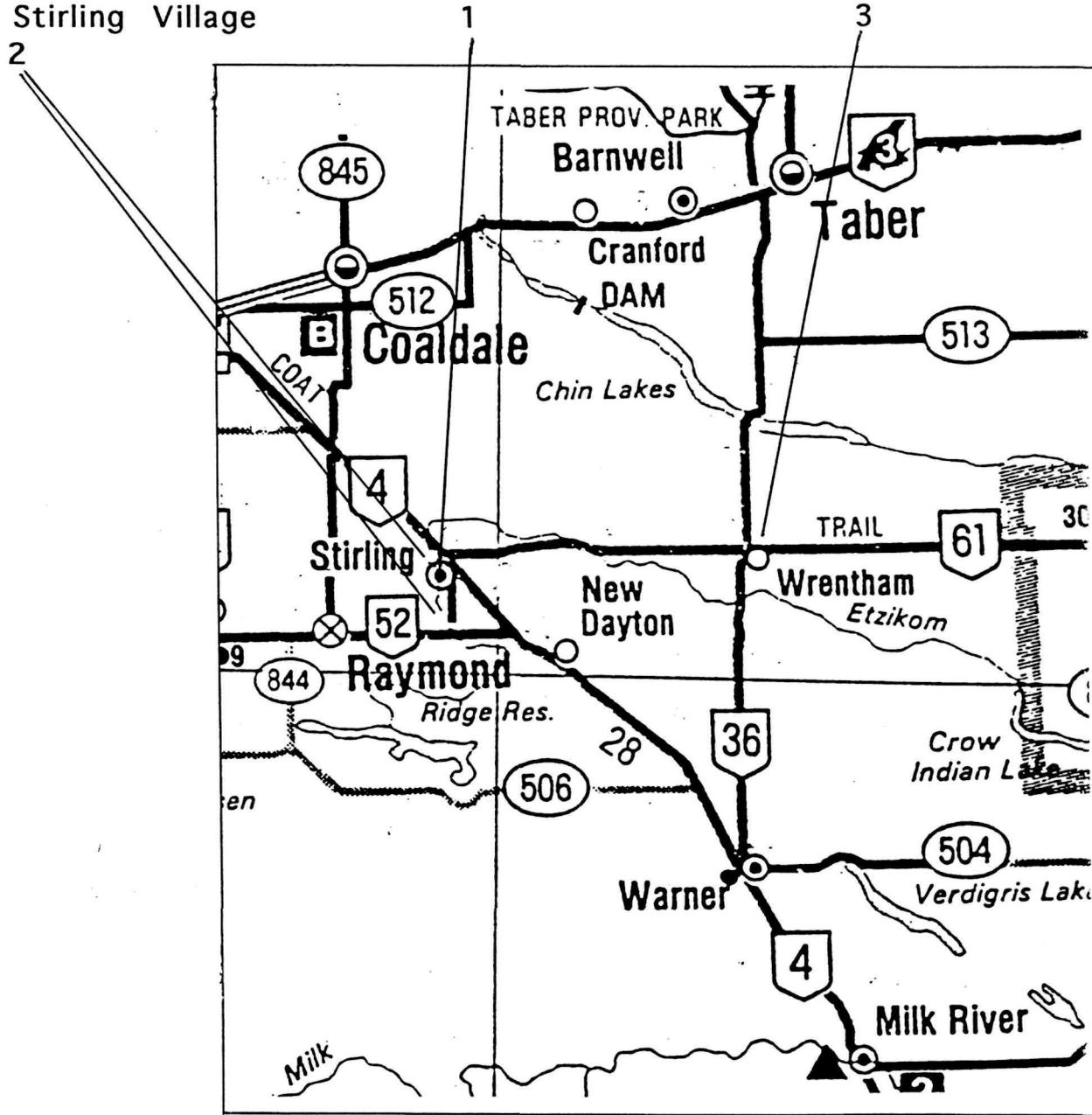
Chronology of Structures: How the Components Developed

In the *Conservation and Presentation Report* prepared for the Village of Stirling National Historic Site, it is stated that the farmstead 'will be preserved in its entirety.'[42] A site plan for the Michelsen farmstead, as it existed in 1935, has been compiled from sources by R.M. Graham.[43] (See Map 7) The following sections outline the currently available details on how the various structures evolved at the Michelsen farmstead. The main elements of the farmstead can be described under the following headings:

1. Farmhouse
2. Coal Shed
3. Barn
4. Granary
5. Calving Shed
6. Machine Shed
7. Corrals and Pens
8. Dugout Storage Cellar
9. Landscape: gardens and trees
10. Cistern and Filter
11. Fences
12. Outhouse
13. Garage

The distribution of these structures, as of 1996, is illustrated in Map 9.

BUILDING CHRONOLOGY

1904 ORIGINAL 2 ROOM HOUSE WAS BUIILT
1905 BARN CONSTRUCTED
1906 GRANARY CONSTRUCTED
1909 PROPERTY DEEDED TO ANDREAS MICHELSEN
(Lot 1 & 2)
1912 GEORGE OLER ADDITION BUILT TO ORIGINAL HOME
CREATING ITS CURRENT CONFIGURATION
1918 PROPERTY DEEDED TO ANDREAS MICHELSEN
(Lot 3 & 4)
1925 CALVING SHED CONSTRUCTED
1930 MACHINE SHED CONSTRUCTED
1940 ELECTRICAL POWER INTRODUCED TO THE HOME
1951 MAIN FLOOR MEMBERS REPLACED
VERANDA DECK BOARDS REPLACED
1955c. HANDRAILS REMOVED AROUND VERANDA
1960c. UPPER FLOOR NORTH WINDOW REPLACED
1960 NORTH DECK ADDED TO EAST DECK, SEPARATING
WALL REMOVED
1970c. MAIN FLOOR EAST SIDE WINDOWS ADDED
1980 GARAGE CONSTRUCTED

NON-TIME SPECIFIC ALTERATIONS:

THREE LAYERS OF ASPHALT ROOF SHINGLES ADDED
TO EXISTING WOOD SHINGLES DURING LIFE OF HOME

KEY PLAN

1ST STREET

MICHELSEN
PROPERTY
SUBDIVIDED 1877

1 : 10000

VILLAGE OF STIRLING

Hirano & Heaton Architects Ltd.
Lethbridge, Alberta

238'-7"

ORIGINAL GARDEN LOCATION
(relocated when trees began to
shade garden)

former pig yard
out building

former
pig shed

former
feed pen

CURRENT GARDEN

gate

COLLAPSED
ROOT CELLAR

COAL SHED
(circa. 1904)

HOUSE

Indian grave
site

PASTURE

gate

water filter

GARAGE
(1980)

27'-8"

former chicken koop

BARN
(circa. 1905)

CALVING SHED
(circa. 1925)

former cattle chute

corral

GRANARY
(circa. 1906)

MACHINE
SHED
(circa. 1930)

gate

PASTURE

HISTORIC COTTONWOOD POPLAR
TREE (BROUGHT FROM UTAH)

ORIGINAL IRRIGATION
DITCH

660'-0"

ROADWAY

SITE PLAN

1 : 300

Map 9   Distribution of Buildings on Michelsen Farmstead Site. 1996.
Hirano & Heaton, Architects Ltd., 1996.

LEGEND

1 COTTONWOOD
POPLAR
(populus deltoides)

2 POPLAR
(populus)

3 MAPLE
(acer)

4 CEDAR
(cedarus)

5 BLUE SPRUCE
(picea pungens)

6 GREEN SPRUCE
(picea abies)

7 JUNIPER
(juniperus)

8 WILLOW
(salix)

FENCE

Analysis of Structures and Land Features

1.   Michelsen Farm House.

The first part of the extant farm house was built between 1902 and 1904, and consisted of two rooms. Further expansion of the house took place in 1912 when the local builder George Oler expanded the dwelling, incorporating the original two room structure into the back of the house. The house as it looked in the years before 1912 may be viewed in Plate 4. The size of the 1912 house after Mr Oler's expansion, was estimated to be 1077 sq ft.(100 sq m.) and was described as a one and a half storey, three bedroom house.[44] The addition incorporated two front rooms on the south side and a complete second storey. (Plate 5)

The house is of wood frame construction set on 'a shallow concrete foundation.' There remains 'an original dugout partial basement in the north east corner' which was used for cool storage and which 'was later finished with concrete.' As of 1993 it was 'dry and stable.'[45] As a result of regular spring irrigation flooding in the vicinity of the dwelling, the foundations 'settled unevenly' and the 'main floor structure deteriorated.' In 1950 'the main floor wood structure was replaced' and at the same time 'the decorative baseboards were replaced' in a plain 1"x 8" baseboard.[46]

On the exterior, the roof has 'over time had three layers of asphalt shingles added to the original wood shingles.'[47] The original siding 'remains on the south and east side' while 'the west and north sides have been covered with a modern vinyl siding.'[48] In 1951 'the main floor members and the verandah deck boards were replaced due to rot caused by flooding on the property' and eventually 'the handrails were removed around the verandah.'[49] The original verandah was on the east and south sides until 1960 at which time 'the north side extension was built and a north separating wall was removed.'[50] (Plates 6, 7,9)

28

Plate 4 Michelsen Home before expansion. c. 1905-1908.
Courtesy Helen Hartley.

Plate 5 Michelsen Home. 1997. Parks Canada

29

Plate   6   View of the veranda railing and extension. 1960.
                                                        Courtesy Helen Hartley

Plate   7   The veranda railing (still in place in 1970)
                                                        Courtesy Helen Hartley

Other known alterations to the exterior include a c.1960 replacement of the north upper window by 'a poor replica of the original'. In 1970 the main floor east side windows were added 'to what is now used as the bedroom and kitchen.'[51]

Testimony on Structural and Domestic Details.

After Elva Lybbert married Sirn Michelsen in 1935, she moved into the Michelson home where she continued to live until 1994. She made the following observations relevant to the 1930s period.[52] She 'did some redecorating and painting but she didn't want to make it too obvious that the house needed refinishing.' She felt that 'some of the wood varnish was too dark so she painted it a cream colour to lighten up the place.' Other 'changes were made to the house over the years.' The review of the building by consulting architects in 1996 indicated that inside the house, the 'plaster walls and ceilings, wood floors and trim were all originally painted.' The 'main level received some wallpaper and additional painting over the years.' The interior was 'decoratively detailed with routed mouldings and corner blocks on the door frames.'[53] (Plate 8).

About the architect, George Oler, it may be said that he was a 'prominent master carpenter in the community' and that he built many other buildings in the area, many of which are still standing. 'The style of the home is evident in at least three other homes in the Stirling community, with its 'four cross gable roof on a two storey structure.'[54]

Glen Michelsen, recalling his youth on the farm in the 1930s, stated that the Michelsen house 'had four rooms, a front room, two bedrooms and a kitchen. They also had a basement where they kept the food to keep it cool. They also had

Plate   8   Interior of Michelsen Home. 1960. Courtesy Helen Hartley

Plate   9   Detail of front veranda, c. 1964.   Courtesy Helen Hartley

a few bedrooms in the attic. There was no insulation. To keep the house warm, Dad would bank the walls with snow. They had one stove in the kitchen and one in the front room.' There was also 'a bunk house for the boys.'[55]

Melva (Michelsen) Hartley,who lived in the Michelsen home between 1931 and 1933, provided a recollection of the interior in 1996.[56] 'Off the dining room was what they called the parlour. The furniture was just like new. There was also a small kitchen and an upstairs.'[57]

Water and Heat

There was 'no running water' when Elva Michelsen first moved into the house in 1935, but 'they had a coal stove, dishes and a table with a dishpan on it to wash up the dishes.' They 'ate in the dining room which meant a lot of walking back and forth between the kitchen and dining room.' The washing machine 'was kept in the outer lobby.' Water was 'pumped outside and heated up in the kitchen.' Eventually they had a pressure system put in 'to pump water into the lobby and kitchen.' There were 'no fridges back then. They had 'a lined basement to keep the milk and meat cool' along with 'the canned foods.'[58]

Lighting and Electricity

In the early years the family used coal-oil lamps and then switched to electricity following rural extension of service.[59] Elva Michelsen reported that during the depression years 'most of the people in town couldn't pay their electric bills and had their lights turned out. Most went back to kerosene lamps. The lights probably didn't get turned back on again until the 1940s.' Additional renovations took place in 1940 when electrical power was re-introduced.[60]

2. The Coal Shed

This wood frame pitched-roof structure is roughly 10' by 14' and stands behind the house on the north side and abuts the fence which separates the house lot from the farmyard. Built of horizontally placed planks, the building is essentially sound. It was used for coal storage until the coal-burning stove in the house was replaced, presumably around 1940, when electrification was introduced. At that time, the coal shed was converted into a tool shed. It is currently used for storage. It retains much of its earlier rustic character. (Plate 10a). Surviving details include the shingle roof, windows, and the access bay on the north side. Window openings on the west and east sides are still intact along with the wooden front door. The structure had been painted on at least one occasion, showing up as white in the early 1970s. (Plate 10b). It is also clear that at the time of conversion to a tool shed, a stove was probably installed in the structure, as evidenced by a visible chimney in the 1970 photo and the visible roof patch in the 1997 photo.

Plate   10a   The Coal Shed. 1996.   Stirling Conservation Study. 1996

Plate   10b

The Coal Shed. c. 1971.
Courtesy Helen Hartley.

3.   The Barn

This 30 by 50 foot building was built around 1905 by George Oler. It has been described as 'Wisconsin Style' with a gambrel roof and the construction technique is known as 'wood balloon-frame.'[61] The original cupula is not present, but shows up in historic photographs. (Plate 11a) There is physical evidence that the barn was at one time painted grey with white trim.[62]

The barn was used for multiple farm purposes. Hay was kept in the upper loft, conveyed by a derrick mechanism, one version of which is still in place. (Plate 12a). This upper loft with its large supporting beams, also served as a place for social activities on occasion. (Plate 12b)

On the main level a central isle separates stalls on one side for horses and on the other spaces for chickens and hogs. (Plate 13a) On the south end of the barn there is a large central sliding door. (Plate 13b) On the north side there are double doors hinged, and also large upper storey double doors which opened inward for purposes of hoisting in the hay. (Plates 11a and 11b)) The building has fallen into considerable disrepair as of 1996.

Plate   11a   The Michelsen Barn showing the cupula. n.d.
Courtesy: Roy Michelsen. Lethbridge

Plate 11b   The Barn from a similar angle, 1997. Parks Canada

Plate   12a

Hay derrik mechanism in barn.
1997. Parks Canada
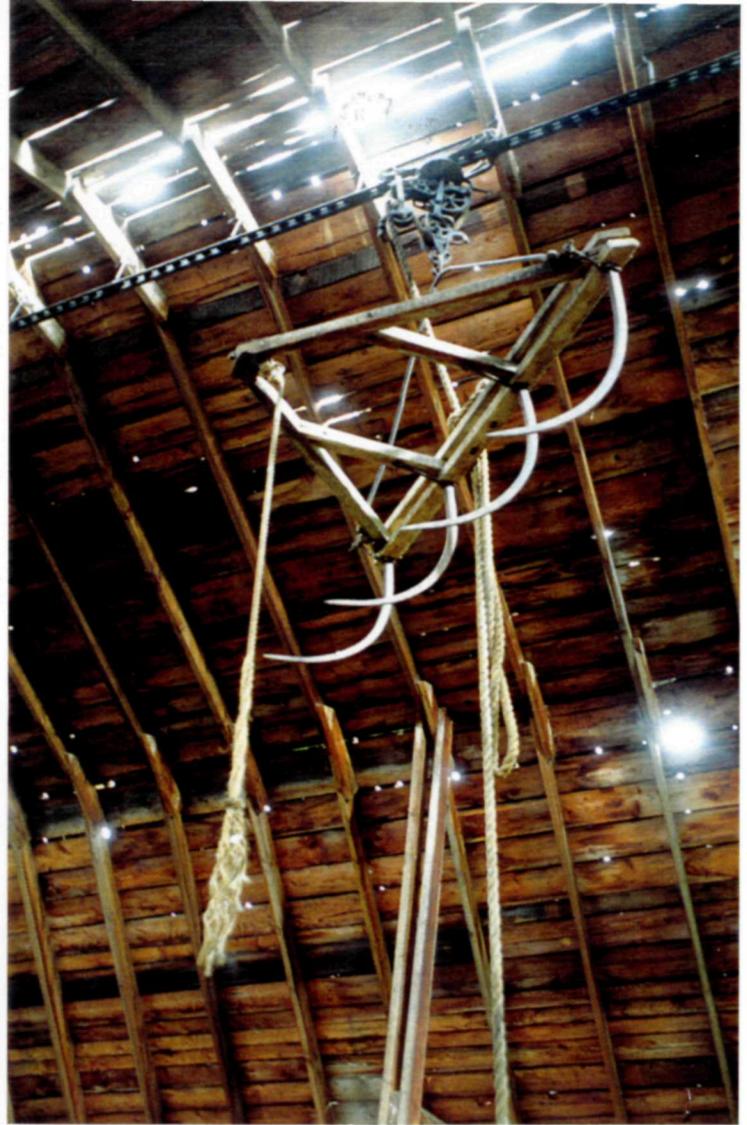
Plate 12b   The upper storey of
the barn with supporting beams.
1997. Parks Canada

Plate   13a   Stalls. Barn Interior. East side. 1997.   Parks Canada

Plate   13b   South Barn Door on Track. 1997. Parks Canada

4.   The Granary

This two storey, gable-roofed structure was built around 1906. The emphasis in construction was on security from rodents and moisture and it 'is framed similar to a conventional grain elevator with solid 2x6 wood members 'on the horizontal, lapped at the corners.'[63]

Structural Details.

The granary portion is a two storey structure with gable roof and second storey doorway, no longer served by an external stairway. (Plate 14a) The lower floor 'is constructed of 2x4 inch boards laid horizontally and overlapping at the corners.' (Plate 14b) The walls are 'supported by 4x4 inch posts at mid-point along either end wall and at about 1/3 distance along front and rear walls.' This main storey is divided 'into a workshop area with a work bench and three storage areas.' The upper storey is of balloon frame construction.[64] Details of the door are visible in Plate 15a and the nature of the removed stairway, as of the 1970s, in Plate 15b. Another aspect of the Granary which is no longer extant is visible in a 1970 photograph showing a covered in access structure on the northeast corner. Adjoining the Machine Shed. (Plate 17b)

Plate 14a   Granary.
1997   Parks Canada

Plate 14b   Granary. Corner
detail of horizontal lapping.
1997. Parks Canada

Plate 15a

Granary c. 1970
Steps to upper door
in place.

Plate 15b Granary. Detail of
upper door.1997. Parks Canada
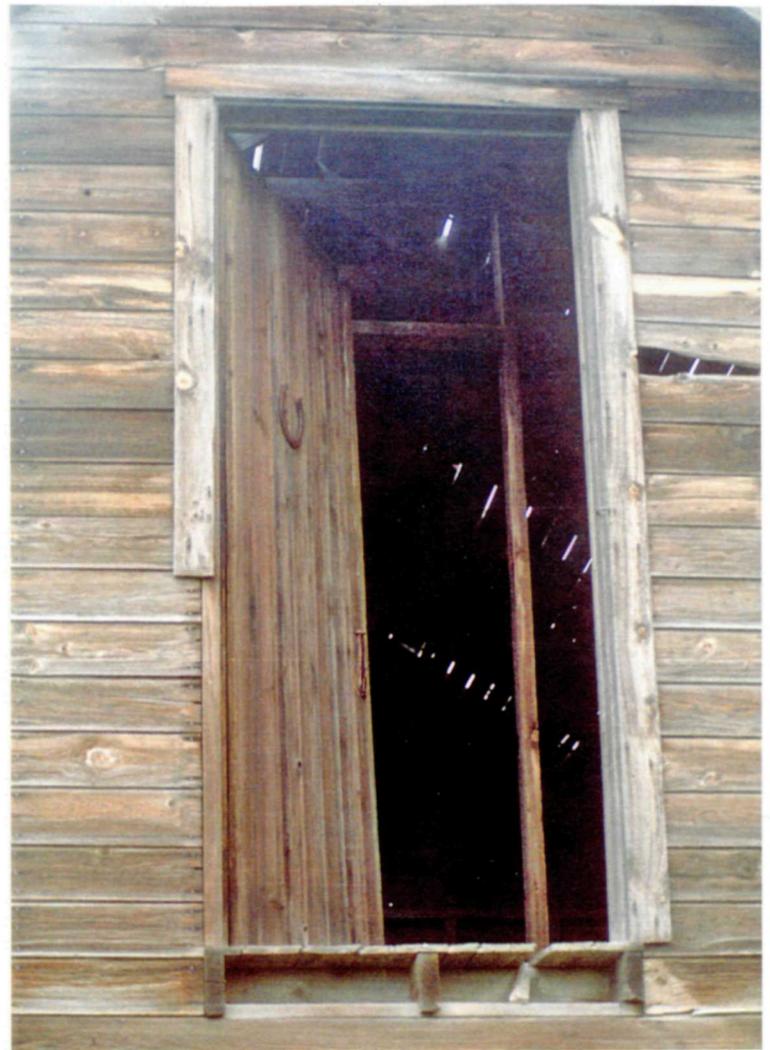
5. Calving Shed

This L-shaped wood frame structure abuts the barn on its northwest corner, and was built in 1925. It is partially open on its southern side.[65] (Plate 16a). The walls are supported by 2x4 vertical beams while the roof is supported by 2x6 beams. (Plate 16b) Details of the fence which used to run south from the Calving Shed to the Machine Shed are visible in a 1971 photograph. (Plate 18a). The assessment undertaken by *Hirano and Heaton* in 1996 suggested that the structure was in relatively poor condition resulting from moisture and chemical erosion from birds.

Plate   16a.   The Calving shed area on the west side of the barn. Parks Canada

Plate   16b.   The Calving shed area, interior structural details. Parks Canada

6. Machine Shed

This is adjacent to the granary and was built in the 1930s to house the tractor and other farm equipment and 'is a simple wood frame structure.'[66] (Plate 17a and 17b)) Today it is essentially a two vehicle garage structure. The complete building was subject to archaeological study in 1997.[67]

Structural Details.[68]

This addition was 'constructed with 2x4 inch framing with 2x6 inch boards used as rafters' for the shed roof. The portion of the building 'has sill plates placed on 10x10 inch concrete pillars at the corners and at irregular spaced distances along the sides.' There were two 'swing doors' with the 'southern door attached to the granary with flat hinges' while the northern door had 'hinges that hung on pintles attached to the central post.' This portion also 'had a single electrical light, connected with knob and tube wiring.'[69] Details of the large swinging doors are visible in a 1970 photograph. (Plate 17b).

Plate 17a The Machine shed viewed from the north-west, between the calving shed and granary. 1997. Parks Canada

Plate 17b The Machine shed, c.1970. Looking from the southeast.
Courtesy: Helen Hartley.

7.   Corral and Pens.

A series of corrals and pens were constructed between 1904 and 1925 in the northeast and northwest corners of the lot. The corral on the west side of the barn, in proximity to the calving shed, is the only distinctive element of these features to survive.[70] Fencing used to run between the Calving Shed and the Granary/Garage building, along the west line. (Plate 18a)

A substantial chicken coop used to adjoin and run east from the south-east corner of the barn. (Plate 18b, 19a) The imprint of the roof and wall lines of the former chicken coop on the east side of the barn are clearly visible in recent photographs. (Plate 19b). The chicken coop as it appeared in the 1950s is illustrated in Plate 19b. The building date of the chicken coop is problematical. A viewing of the site in 1940 (Plate 25) indicates that the coop is not present, suggesting it is a post-1940 addition. There are hints of an open wired-in coop in the 1940 photograph however, in approximately the same location.

A pig shed and pen were located to the east of the barn along the east lot line. This substantial shed with pitched roof probably appears in the left background of Plate 3a.

Plate . 18a   View of the Colt breaking opertation in the coral area on the west
side of the property near the Calving Shed. 1971. Courtesy: Helen Hartley.
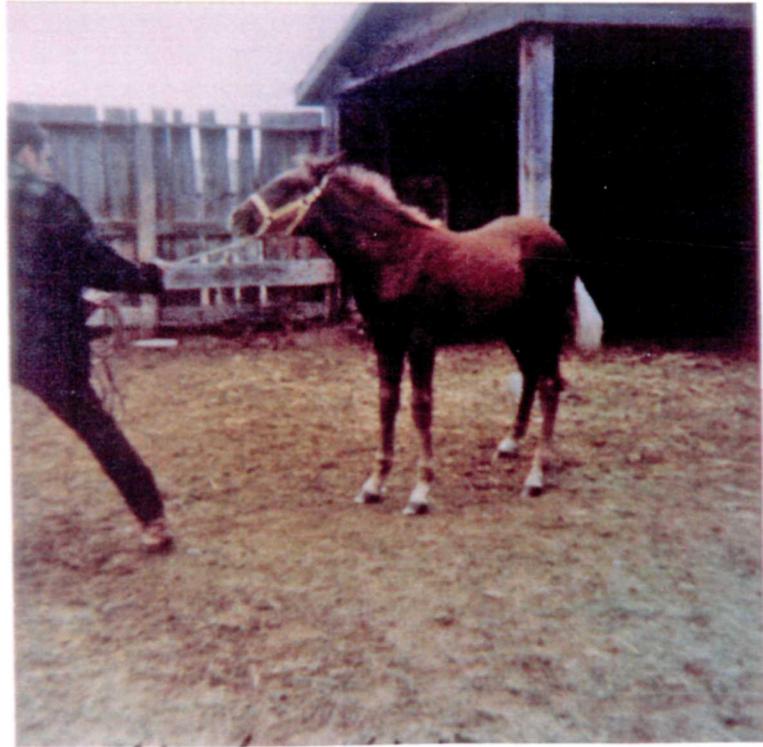
Plate   18b   View on the far right of a portion of the chicken coop running east
        from the Barn. 1971. Courtesy: Helen Hartley.

Plate   19a   The chicken coop running east from the barn. 1940s?

Plate   19b   Imprint of the old chicken coop. 1997.   Parks Canada.

8.   Dugout Storage Cellar (1904-15)

A collapsed earthen storage cellar is located at the northern end of the farm pasture. (Plate 20a) Owing to its great distance from the main farm house Hirano and Heaton considered this location 'curious' until it was determined that 'it was used for annual ice storage for the Michelsen's.'[71] This location placed the structure closer to a natural source of winter ice in a nearby slough. (Plate 20b)

Plate   20a   General setting of the collapsed dugout at the north end of
the Michelsen Farm. 1997.   Parks Canada

Plate   20b   Flooding around Michelsen Farm in the 1960s, viewed from
northwest. This photo shows the natural tendency of water to occupy former
slough area which would have been a source of ice.   Courtesy: Helen Hartley.

9. Landscape Factors

Garden and Trees

The disposition of Mormon pioneers towards the planting of consistent patterns and species of trees and shrubs in their nucleated settlements has already been mentioned. At the Michelsen farmstead, the large Cottonwood poplar in the southwest corner of the property may have been brought to Alberta from Utah.[72] It has been greatly reduced in size. (Plate 21a) Its former mass undoubtedly was induced by the proximity of its root system to the irrigation ditches. The tree as in appeared in the 1970s, including a tree house, may be seen in Plate 21b. Additional plantings exist on the property, including 'a pine shelterbelt along the south side of the farmhouse' and 'a grouping of junipers, poplars, and pine' along the east side of the house.[73] (Plate 22a)

According to Elva Michelsen, 'she planted a spruce tree for each grandchild that came along.'[74] These planting were in the area on the east side of the house. This program of periodic tree planting had an effect on the location of the original vegetable garden which was originally closer to the south boundary of the lot. Hirano and Heaton observed that 'the former vegetable garden' had 'over the years been continually moved north to avoid tree shade.'[75] (Plate 22b)

On the west side of the house there is little remaining of the former trees which used to border the property. (Plate 23a.) This c. 1920 view may be compared with a view taken from the same angle in 1997 in Plate 23b.

Plate 21a   Remnant of Cottonwood
tree planted in southwest corner
of farmstead. 1997.   Parks Canada

Plate 21b   View of the Cottonwood in the early 1970s. Tree-house in place.
Courtesy Helen Hartley

Plate   22a   A view of the mature trees planted on the east side of the house viewed from the northwest. 1997. Parks Canada

Plate   22b   The garden viewed from the north, showing its displacement to the north as a result of tree plantings. 1997. Parks Canada

Plate 23a View of tree line on west side of Michelsen House. c. 1920
Courtesy Helen Hartley.

Plate 23b View of Michelsen Home from west side and from a similar
angle. 1997. Parks Canada

Irrigation Ditches

Irrigation ditches were the genuine 'life-blood' of the early community of Stirling. The day-to-day means of operation of the ditches may be noticed in Plate 24a. Signs of these former domestic utility ditches can be seen in their relationship with the main feeders which ran parallel to the board sidewalk on the south side of the house. (Plate 24b) The elements of greatest interest to household domestic water system are along the south western corner of the lot at the line where water was fed into the old concrete cistern system, and also on the south-east side where water was tapped for purposes of the garden on the east side of the lot. (See Map 7)

Plate   24a   Man at irrigation ditch   control device. c. 1920.

Plate   24b   Line of trees and their relationship to irrigation ditches on the south street line of the Michelsen Farmstead. Board sidewalk is evident. c. 1971.   Courtesy: Helen Hartley

10. Cistern and Filter.

Provision of a safe domestic water supply was in important consideration given the amount of free standing water in the vicinity of Stirling and the possibility of contamination from farm animals. The working of the cistern system at the farmstead was described by Glen Michelsen in the following way. 'For drinking water, they used a cistern. They filled it a few times during the summer and just before winter. The cistern was filled with water from the ditch. To keep the water clean, they used a filter box full of gravel and sand. For a number of years, the kids used a bucket to get water from the cistern, but eventually they put in a hand pump.'[76]

Elements of the cistern and filter system have been identified behind the house and running along the western wall of the house out to the main lot boundary on the south side. See the foreground of Plate 10a.

11.   Fences

A variety of fence types have come and gone on the property as a whole. The most visible loss is the fence which used to run between the Machine Shed and the Calving area. (Plate 17a and 18a). Another fence line which has evolved through a number of phases is the east to west line separating the house lot from the garden and barn yard. In 1940 this fence was an upright board fence.(Plate 25) while in 1970 it was picket. (Plate 17b). The current fence is of the snow-fence variety. (Plate 22b)

Plate   25   Fence line running east and west between house lot and farm
                     yard. 1940.   Courtesy Helen Hartley

12 Outhouse.

The extant wood, pitched-roof outhouse has not been in use for many years. It would have been relocated on a regular basis. (Plate 26). Of a standard rustic design, it demonstrates in common, many of the construction features of the Coal Shed. (Plate 10a)

Plate 26   The Outhouse.   1997.   Parks Canada.

Plate 27   The Garage, to the right of the house. (Built c. 1980).
                  1997.   Parks Canada.

13. Garage

This single vehicle, wood frame structure is relatively new, dating from c. 1980. 'Its gable roof and modern image does not complement the classical style of the house.'[77] (Plate 27) The main focus of vehicle storage in the period under commemoration was in the 1930 Machine Shed. (Plate 17b).

Endnotes

1. Irene M. Spry, ed. *The Papers of The Palliser Expedition, 1857-1860*. (Toronto: Champlain Society, 1968), p.9

2. James Hector, 'On the Capabilities for Settlement of the Central Part of North America' *Edinburgh New Philosophical Journal*. New Series. XIV (1861), pp. 264-67; cited in Don W. Thompson, *Men and Meridians*, Vol. 1 (Ottawa: Dept. Of Mines and Technical Surveys), p. 214

3. See John Macoun, 'Extract from a Report of Exploration in the North-West Territories.' Canada. Sessional Papers, 1881. Vol. 3 no. 2. Part I. *Report of the Department of the Interior for 1880* ; and John Macoun, *Manitoba and the Great Northwest* (Guelph: World Publishing, 1882), pp. 213-14; and See W.A. Waiser, *The Field Naturalist: John Macoun, the Geological Survey, and Natural Science*. (Toronto: University of Toronto Press, 1989), Chapters 1 and 2.

4. Ian Clarke, 'Irrigation and the Settlement Frontier in Southern Alberta, 1878-1935. *Alberta* 3:(2) (1993), pp. 52-3

5. Stirling Sunset Society, *Stirling, Its Story and People: 1899-1980*. (Calgary: D.W. Friesen, 1981), pp. 1-5. The details of the story are well related in Lawrence B. Lee 'The Mormons Come to Canada, 1887-1902' *Pacific Northwest Qty*. (Jan.1968), 11-22; and in Andrew A. den Otter, *Civilizing the West: The Galts and the Development of Western Canada* (Edmonton: University of Alberta Press, 1982), p. 201 f.

6. *The Diaries of Charles Ora Card: The Canadian Years, 1886-1903*. D.G. Godfrey and B.Y. Card, eds. (Salt Lake City: University of Utah Press, 1993), pp. 466-7

7. See Leonard J. Arrington, 'Historical Roots of the Mormon Settlement in Southern Alberta' in B.Y. Card et al. Eds. *The Mormon Presence in Canada*. (Edmonton: University of Alberta Press, 1990), pp.4-6

8. Robert J. McCue, 'British Columbia and the Mormons in the Nineteenth Century' in B.Y. Card et al., Eds.(1990), pp. 38-9; on the 'Utah War' see Leonard J. Arrington, *The Mormon Experience: A History of the Latter-day Saints.* 2nd ed. (Urbana: University of Illinois Press, 1992), pp. 164-70

9. Arrington (1990), p. 3; and see generally John R Hicken, *Events Leading to the Settlement of the Communities of Cardston, Magrath , Stirling and Raymond, Alberta* M.A. Thesis. (Logan: Utah State University, 1968)

10. John Lehr, 'Mormon Settlement Morphology in Southern Alberta' *Alberta Geographer* 9 (1972), p. 6

11. Ibid.

12. Cf. Lowry. Nelson 'The Mormon Village - A Study in Social Origins' *Proceedings of the Utah Academy of Sciences* , 7 (1930).

13. See Arrington,(1990), pp. 3-18; and Joseph A. Geddes, *The United Order Among the Mormons* (Salt Lake City: Deseret News Press, 1924), p. 88 f.

14. Cf. Glen T. Trewartha, 'Types of Rural Settlement in Colonial America' *Geographical Review* 36 (Oct. 1946), 568-96

15. The earliest known version appears to have been published in *The Evening and Morning Star*, I (July, 1832). See Leonard J Arrington, *Great Basin Kingdom: An Economic History of the Latter-day Saints* (Cambridge: Harvard University Press, 1958), pp. 7, 425-6

16. Arrington, (1958), pp. 6-14

17. John C. Lehr, *Mormon Settlements in Southern Alberta* M.A. Thesis. (Edmonton: University of Alberta, 1971), p. 39 f.

18. Ibid., p. 9

19.Ibid., pp. 11-14

20. For a detailed recounting of the years of persecution from 1833 to 1847 see Leonard J. Arrington, *The Mormon Experience: A History of the Latter-Day Saints.* 2nd ed. (Urbana: University of Illinois Press, 1992), Chapters 3-5.

21. Arrington, (1958), p. 39 f.

22. Joseph A. Geddes, *The United Order Among the Mormons (Missouri Phase): An Unfinished Experiment in Economic Organization* (Salt Lake City. Deseret News Press, 1924), p. 88

23. Ibid.

24. Ibid.

25. Elise A. Corbet, *A Cultural Landscape History of Stirling, Alberta* (Calgary: Parks Canada, 1993), p. 23

26. L.A. Rosenvall, 'The Transfer of Mormon Culture to Alberta' in L.A. Rosenvall and S.M. Evans, eds. *Essays on the Historical Geography of the Canadian West*. (Calgary: University of Calgary Press, 1987), p. 144

27. C.A. Dawson, *Group Settlement: Ethnic Communities in Western Canada. Canadian Frontiers of Settlement, Vol. VII.* (Toronto: MacMillan, 1936), pp. 226-7; Lyle Dick, *A History of Prairie Settlement Patterns: 1870-1930*. Report prepared for the Historic Sites and Monuments Board of Canada.(Ottawa: 1987), p. 139 f.; Lyle Dick and Julie Harris, *Prairie Settlement Patterns: Resource Analysis*. Report prepared for the Historic Sites and Monuments Board of Canada. (Ottawa: 1989), pp. 33-5

28. *Stirling Agricultural Village National Historic Site.* (Calgary: Canadian Heritage. Parks Canada, 1996), p.1

29. Hirano & Heaton Architects Ltd. *Cultural Landscape Survey for the Village of Stirling.* (Lethbridge: March, 1997), p. 41

30. Ibid.

31. On the importance of tree plantings as regular features of Mormon settlements, see Wallace Stegner, *Mormon Country* (New York: Duell, Sloan and Pearce, 1942)

32. The extent of Mormon mission work and migration from Scandinavia has been richly documented in Andrew Jenson, *History of the Scandinavian Mission*. (Salt Lake City: Deseret News Press, 1927). The name Michelsen (and a number of variants) appear in this work on a number of occasions.

33. Ibid., p. 490

34. *Stirling, Its Story and People* (1981), p. 403; Georgia Green Fooks, ed. *Pioneers by Train to Alberta Plains* Vol. 2 (Lethbridge: Alberta Company Daughters of Utah Pioneers, 1995), pp.13-14

35. Block and Lot designations in this report are based on Corbet (1993), P. 85 f. Corbet employed the tax rolls for the Village of Stirling, which commenced in 1903. In addition, that author consulted records in the Calgary Land Titles Office and records of the Old Man River Regional Planning Commission.

36. Glen Michelsen. Interview. Tape 1. Side 1.*Stirling Speaks*. Village of Stirling. (1997)

37. Aphrodite Karamitsanis, *Place Names of Alberta, Vol. 2. Southern Alberta*. (Calgary: University of Calgary Press. Alberta Culture and Multiculturalism. Friends of Geographical Names of Alberta Society. 1992), p. 132

38. Glen Michelsen. (1997)

39. See note 31.

40. Hirano & Heaton Architects Ltd. *Michelsen Farm Conservation Study*. (Lethbridge: Sept. 1996), p.6

41. Glen Michelsen, (1997).

42. Village of Stirling National Historic Site. *Conservation and Presentation Report* (1996), p. 4

43. See Corbet, (1993), p. 71

44. Ibid.

45. Ibid.

46. Hirano and Heaton (1997), p.9

47. Ibid.

48. Hirano and Heaton, (1996), p. 7

49. Hirano and Heaton (1997), p.9. The author's of this report state that the railings were removed in 1955. If so, they were replaced once again, for railings are present in photos from 1960 and 1970. If that is not the case, then the originals must have been removed some time after 1970.

50. Ibid. p.8

51. Ibid. p.9

52. Elva Michelsen, in interview with Valerie Duncan, July 31, 1996. *Stirling Speaks*. Village of Stirling. (1996).

53. Hirano and Heaton (1997), p.9

54. Hirano and Heaton, (1996), p. 16

55. Glen Michelsen (1997).

56. *Stirling: Its Story and People* (1981), p. 313; Melva Hartley to Mark Durtschi, July 30, 1996. *Stirling Speaks.* Village of Stirling (1996).

57. Ibid.

58. Elva Michelsen, (1996).

59. Glen Michelsen. (1997).

60. Hirano and Heaton (1997), p.9

61. Ibid. p.8

62. Hirano and Heaton (1996), p. 8

63. Ibid.

64. Roderick J Heitzmann, *Archaeological Assessment: Restoration of the Michelsen Farmstead, Village of Stirling. Final Report.* Permit 97-040.(Calgary: Parks Canada. Archaeological Services, 1998), p. 3

65. Hirano and Heaton (1997), p. 8

66. Ibid. p.8

67. Heitzmann, (1998).

68. Heintzmann (1998), p. 3

69. Ibid.

70. Ibid.

71. Hirano and Heaton (1997), p. 8

72. Ibid.

73. Ibid.

74. Elva Michelsen (1996)

75. Hirano and Heaton, (1997), p. 8

76. Glen Michelsen, (1997)

77. Ibid.

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