

# ELDORADO VERNACULAR:

## *Barkerville and Its Buildings*

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WOODEN BUILDINGS FROM THE gold rush era can be found from Victoria to Barkerville in British Columbia. Taken as a whole, this built heritage might be described as an “Eldorado Vernacular” – a legacy of a frenetic period of population movement, temporary settlement, and catch-as-catch can building – rather than as a formal architectural tradition.<sup>1</sup> Isolation, the pressing need for shelter, a poorly developed transportation infrastructure, and abundant local forests spawned wooden structures designed for expedient domestic and functional purposes rather than for polite or monumental ends, many of them in “instant towns” such as Barkerville, founded in 1862 and historically the most important surviving gold rush settlement in the province.<sup>2</sup>

As early as 1924, Barkerville and the Cariboo goldfields were designated as a national historic site by the government of Canada. In 1958, a provincial government committed to preserving evidence of the transformative gold rushes that had brought the mainland colony into existence a century before designated a number of historic places significant for their gold rush history, and Barkerville was reborn as a historic town and tourist attraction. In the years that followed, several

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<sup>1</sup> Surviving examples of similar architectural traditions can be found in California (e.g., at Bodie and Columbia) and, dating to the Klondike gold rush, in Dawson City and Skagway.

<sup>2</sup> Standard books of Barkerville history include: Gordon R. Elliott, *Barkerville Quesnel and the Cariboo Gold Rush* (Vancouver: Douglas & McIntyre, 1978 [1958]); Bruce Ramsay, *Barkerville: A Guide in Word and Picture to the Fabulous Gold Camp of the Cariboo* (Vancouver: Mitchell Press, 1961); Fred W. Ludditt, *Barkerville Days* (Vancouver: Mitchell Press, 1969); Richard Thomas Wright, *Barkerville and the Cariboo Goldfields* (Victoria: Heritage House, 2013); and Anne Laing, *The Traveller’s Site Guide to Barkerville Historic Town* (Burnaby: Vanpress, 2009).

Barkerville buildings were preserved and restored, and others were reconstructed from historical photographs. The town site currently includes over one hundred structures and is both a national and provincial historic site,<sup>3</sup> best explored with copies of guidebooks by Anne Laing and Richard Wright in hand.<sup>4</sup> Barkerville's preserved nineteenth-century buildings constitute the most significant example of the "Eldorado Vernacular" in British Columbia, but they have received little sustained scholarly attention.<sup>5</sup> This article examines six of Barkerville's first- and second-generation buildings that exemplify the forms that can be said to constitute the Eldorado Vernacular: log huts, hewn-log buildings, vertical plank structures, balloon frame constructions, Gothic Revival churches, and Chinese timber frame buildings.

Many visitors commented on the log and wooden vernacular structures of the gold districts of British Columbia. For example, in the summer of 1863, William Mark published an account of his travels to the "Cariboo Gold Diggings," containing warnings to prospective gold seekers and glimpses of the emerging "first generation" built environment as it arose in response to the rapid increase in population. Even Victoria had not recovered from the great boom of the summer of 1858. "All round the suburbs are covered with small wooden shanties," Mark wrote, "which are rented by the labouring classes, for which they pay from four to six dollars per month, a many [*sic*] of them are occupied by Indians and Chinamen, and they only have one room, in which they perform all their domestic duties, cooking, washing, eating, and sleeping."<sup>6</sup>

When he arrived in Port Douglas a few days into his journey, Mark described it as "another wooden city among the rocks." And, in Port

<sup>3</sup> The Canadian Register of Historic Places notes that Barkerville was designated a National Historic Site of Canada "because it was the centre of the Cariboo Gold Fields which were the catalyst for economic and political development in BC," and it possesses "significant social value as a place that effectively presents aspects of British Columbia's multi-cultural settlement, and its economic and developmental history." The register also notes that "Barkerville is valued primarily as the most intact example of the types of communities and buildings that were constructed during the Cariboo Gold Rush." Available at <http://www.historicplaces.ca/en/rep-reg/place-lieu.aspx?id=1749>.

<sup>4</sup> Laing, *Traveller's Site Guide*; Wright, *Barkerville and the Cariboo Goldfields*.

<sup>5</sup> Geographer Fred Kniffen and folklorist Henry Glassie justify the study of historical building forms as follows: "If the geography of settlement is ever to reach its full potential as the interpretable record of the historical events and cultural processes imprinted on the land, the components of settlements of all kinds must be systematically reduced to types and quantities before they are set against the revealing vagaries of reality." See Fred Kniffen and Henry Glassie, "Building in Wood in the Eastern US: A Time-Place Perspective," *Geographical Review* 56, 1 (1966): 40-66.

<sup>6</sup> William Mark, *Cariboo, A True and Correct Narrative: Containing an Account of His Travel Over Ten Thousand Miles, by Sea, Rivers, Lakes, and Land to the Cariboo Gold Diggings, British Columbia* (Stockton, CA: M.W. Wright, 1863), 18, 21, 32.

Pemberton, he wrote: "Of all the places I ever saw selected for a town, this beats all; the houses or huts were all built of wood, stuck up here and there among the rocks; there was only one decent house in the lot, which was occupied as a store and grog shop, here you could get what they called a 'Square meal,' for one dollar; ... The log-huts were occupied by the packers and teamsters, two or three cabined together and doing all their own work." The improvised, transient quality of wooden buildings in these settlements was also evident in Quesnelle Forks, where, Mark wrote: "We finally reached Antlers Creek, tired and weary, about four o'clock in the afternoon of the 4th of July, and to a certainty, we found it a rough looking place, log huts, canvass tents, all over the place, ditches, pits, mounds of earth, flumes, trenches, and sluice boxes, pumps, &c., in fact, you hardly knew where to go."

With the discovery of significant gold deposits in the Cariboo, a number of mining camps grew up, including Van Winkle, Lightning, Cameronton, Barkerville, and Richfield, and the population of the region soon exceeded five thousand.

Barkerville grew alongside the Barker claims, where William Barker had made a big gold strike in August 1862. Canvas tents and rough log shelters were the first generation of buildings in the mining camp. A watercolour (Figure 1) painted in the summer of 1863 by Frederick Whymper shows this hastily erected accommodation. The array of log houses, sheds, shanties, shacks, lean-tos, and at least two tents substantially mirrored Mark's description of Antler Creek. In this article I offer a preliminary classification and description of the major surviving built forms from this era, setting the scene, so to speak, for several articles elsewhere in this issue and for many surviving photographs.

Gold rush towns were shaped by geography, local materials, and access to sources of gold. In placer districts, their most common form included a single commercial main street as close as possible to the creek, with miners' cabins and tents located haphazardly around the main thoroughfare. Buildings were constructed, quickly and poorly, out of locally available materials, to provide amenities and accommodation for the transient population.<sup>7</sup> Civic pride and permanence were hardly considerations as few inhabitants intended to stay.

When Viscount Milton and Dr. Cheadle were sent out from London in 1863 by the Royal Geographical Society to find the best route to the

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<sup>7</sup> Early miners drew their building materials from the surrounding forest. Around Barkerville the forest consisted of lodgepole pine, Engelmann spruce, subalpine fir, cottonwood, and some western hemlock.

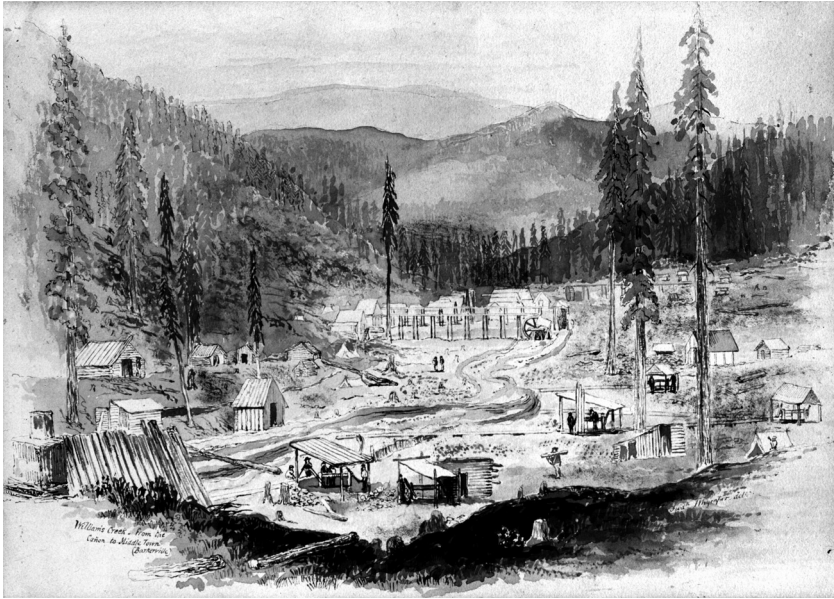


Figure 1. Watercolour by Frederick Whympers, ca. 1863. *Williams Creek from the Canyon to Middle Town (Barkerville)*. Source: British Columbia Archives (BCA) PDR0011.



Figure 2. A miner's cabin at Williams Creek, near Barkerville. Photographed by Frederick Dally, ca. 1867. Source: BCA A-00352.

“gold country,” they described similar rough and simple log structures characteristic of these first-generation gold rush buildings: “A way side house on the road to the mines is merely a rough log hut of a single room; at one end a large open chimney and at the side a bar counter, behind which are shelves with rows of bottles containing the vilest of alcoholic drinks.”<sup>8</sup>

Barkerville Historic Town has preserved a few such “rough log huts” very similar in appearance and construction to “A miner’s cabin at Williams Creek,” photographed by Frederick Dally in 1867 (Figure 2). These single-room cabins were originally built of unpeeled logs, often of different species, laid horizontally atop one another and roughly notched at their ends with either a saddle notch or a wedge-shaped “V,” the simplest forms of notching.<sup>9</sup>

To retain warmth and keep out the elements, the spaces between the horizontal logs of one cabin at Barkerville were chinked with mud, gravel, straw, manure, cloth, stones, and sticks.<sup>10</sup> The roof was constructed with log purlins, laid longitudinally and forming a shallow gable. The roof material consisted of thirty-two-inch (81-centimetre) shakes laid directly onto the beams – leaving most of the shake surface exposed to the weather. Such cabins, like later trappers’ cabins, were the dwellings of men who hoped to strike it rich or who needed temporary accommodation and did not intend to live out their days in them. Built for the moment, they were vulnerable to decay. Those that survive must be maintained on a twenty-year cycle – more frequently than most other forms of construction.

In his study of building with wood in nineteenth-century central Canada, John Rempel describes log construction as one of the “natural solutions to structural problems.” He notes that the characteristic log cabin of pioneer settlements – and this was as true of gold rush camps

<sup>8</sup> W.F. Milton and W.B. Cheadle, *The North-West Passage by Land Being the Narrative of an Expedition from the Atlantic to the Pacific Undertaken with the View of Exploring a Route across the Continent to British Columbia through British Territory by one of the Northern Passes in the Rocky Mountains* (London: Cassell, Petter, and Galpin, 1865), 359.

<sup>9</sup> This method of notching logs to form tight connections between right-angled, horizontally laid logs, without pegging or nailing, was widely used in areas where trees grew straight and tall. The well-known notch forms include the saddle-notch, v-notch, diamond notch, full-dovetailing, half-dovetailing, and square notch. The saddle notch is the simplest form: a half circle cut into the top or bottom of a log-in-the-round. This notch is set onto the rounded surface of another log, thus creating a tight fit. The v-notch is created by making two straight cuts in the underside of the log to create an inverse “v” shape, and making two cuts on the bottom log to create a “v” shape. These two “v’s” fit into one another, creating a tight notch. See Jennifer Iredale, “Towards a Framing Morphology for Western Canada – Analysis of Seven Barkerville Buildings,” unpublished manuscript, 1983, 10–12.

<sup>10</sup> Iredale, “Towards a Framing Morphology,” 10.

in the Cariboo, California, or the Yukon as it was in the forest clearings of Canada West discussed by Rempel – was the product of builders who had little sense of architectural tradition or vernacular design: “They were unpretentiously functional and were built with the intention of eventually being abandoned.”<sup>11</sup>

Discussions of the origin of log-building traditions in the west have to acknowledge the “*pièce sur pièce*” French-influenced building tradition characteristic of the fur trading era that preceded the gold rush.<sup>12</sup> Mention must also be made of the log-building traditions introduced by miners/builders with German and Scandinavian backgrounds.<sup>13</sup> Indeed, log cabins were ubiquitous across early British Columbia.<sup>14</sup> One example documented in the Comox Valley on Vancouver Island, where these buildings were known simply as “log and shake cabins,” was rectangular in shape, about seven and a half by four and a half metres, constructed from small logs for the walls, hand-split cedar shakes for the roof, floorboards hewn by broad-axe, a fireplace or a wood stove on one end, a window at the other, and a door on one side. In such dwellings interior furnishings might consist of a table, kitchen pots and pans and utensils hanging from nails in the logs, and perhaps a cupboard and bed in addition to the stove.<sup>15</sup>

Another log building – the simple, hewn-log building – forms a second component of the Eldorado Vernacular in Barkerville. One example is found in “J. Bibby’s Tin Shop” on Barkerville’s main street, moved to this location in 1968. It is believed to have been constructed by Bibby as a warehouse or storage shed, and it was surprisingly well built for such a utilitarian purpose. Constructed of large, uniform logs, broad-axed

<sup>11</sup> John Rempel, *Building with Wood and Other Aspects of Nineteenth-Century Building in Central Canada*, rev. ed. (Toronto: University of Toronto Press, 1980), 34.

<sup>12</sup> “*Pièce sur pièce*” is a form of construction consisting of hewn logs inserted horizontally into grooved posts spaced at intervals along the wall. An adaptation of a northern French construction system introduced to New France, it is found in Hudson’s Bay Company forts across Canada. See Rempel, *Building with Wood*, 14.

<sup>13</sup> Log cabin construction has antecedents in the buildings of German and Scandinavian immigrants to American colonies such as Pennsylvania in the seventeenth century. See Glassie and Kniffen, “Building in Wood,” 59.

<sup>14</sup> Tusa Shea, *From Necessity to Style: A History of Log Buildings in British Columbia, from the Colonial Era to the Present*, BC Heritage Branch, Victoria, 2005. Available at [bcheritage.ca/logbuildings.pdf](http://bcheritage.ca/logbuildings.pdf).

<sup>15</sup> For a detailed description of an 1880s log and shake cabin at Bates Beach, near Comox, see Richard and Alexander Mackie, “Roughing It in the Colonies: An Englishman on Vancouver Island,” *The Beaver* 70, 2 (1990): 6–13. For colonial examples, see also Richard Somerset Mackie, *The Wilderness Profound: Victorian Life on the Gulf of Georgia* (Victoria: Sono Nis Press, 1995), 174 and plates of Carwithen and Gage cabins.

flat on all four faces, and connected with fine dovetail notches, it has a tin roof.

Other noteworthy examples of hewn-log buildings from the Cariboo gold rush include road builder Gustavus Blin Wright's store in Quesnel, built in 1864 and purchased by the Hudson's Bay Company in 1867; and Cottonwood House, a large residence with an imposing hewn-log façade built in by John Ryder and Allen Smith.<sup>16</sup>

Within months of the discovery of gold, Barkerville became more than a collection of log structures. The Cariboo Wagon Road, built between 1862 and 1864 and reaching Barkerville in 1865, allowed sawmill machinery and nails to be brought to the Cariboo district, and sawn lumber buildings gradually superseded early tent and log structures. Photographs taken before the great Barkerville fire of 1868 suggest a growing sense of permanence in the log-and-frame buildings from which businesses served the miners (Figures 3 and 4). These buildings, raised on posts, were situated just above street level, with wooden plank sidewalks along the front, allowing pedestrians to avoid the mud.

In 1863, the Royal Engineers under the direction of Sergeant William McColl and Lance Corporal J. Turnbull surveyed the mining camps scattered along Williams Creek.<sup>17</sup> Where no buildings existed, they plotted a standard 60-by-132-foot (18-by-40-metre) lot on their map – which showed a main street with sixty-one lots and forty buildings.<sup>18</sup>

<sup>16</sup> Glassie and Kniffen, "Building in Wood," 59, trace the origins of North American log construction to Swedish immigrants dating to 1865 on the Delaware; however, the hewn log form corresponds more closely to a German log building tradition also found in Pennsylvania: "Pennsylvania German log work, and subsequent American log work, were characterized by logs notched near the end, a method that eliminated the overhang and produced a box corner. Spaces between the logs were filled – 'chinked' – with clay, stones, poles, or shingles. The logs were usually squared, split and faced, or planked." More research is required to identify the provenance of the hewn log buildings of the Cariboo. Gustavus Blin Wright might have been familiar with the log building forms of his native Vermont or Allen Smith may have had American experience. Alternatively, a hybrid form – a log house made not of rounded logs but hewn ones – may have developed in the Cariboo region adapted from the HBC tradition. Hewn logs were used in the HBC Nanaimo bastion, Fort Langley trade shop, at Fort St. James, and in the cabin at Hat Creek Ranch built by a former HBC Chief Trader Donald McLean. There are a number of hewn-log houses on old ranches in the Cariboo, many of which were owned originally or pre-empted by ex-HBC employees.

<sup>17</sup> The Columbia Detachment of Royal Engineers was sent from England at the request of Governor Douglas to assist with settlement, development, and security in the mainland colony. Between 1858 and 1863, close to two hundred Royal Engineers led by Colonel Richard Moody surveyed land, laid out towns, settled disputes, diverted rivers, constructed government and church buildings, built portions of the Cariboo Wagon Road, and established the international boundary. See Beth Hill, *Sappers: The Royal Engineers in British Columbia* (Victoria: Horsdal and Schubart, 1987).

<sup>18</sup> "The plans of many early BC towns like Hope, Yale, Lytton, Douglas and Quesnel Forks were laid out by the Royal Engineers ... Despite their brief tenure the impact of the Royal



Figure 3. Main Street, Barkerville, before the fire. Photographed by Frederick Dally, ca. 1868. *Source:* BCA A-05969.



Figure 4. Looking south on Main Street, Barkerville. Photographed by Richard Maynard, ca. 1868. *Source:* BCA F-07769.



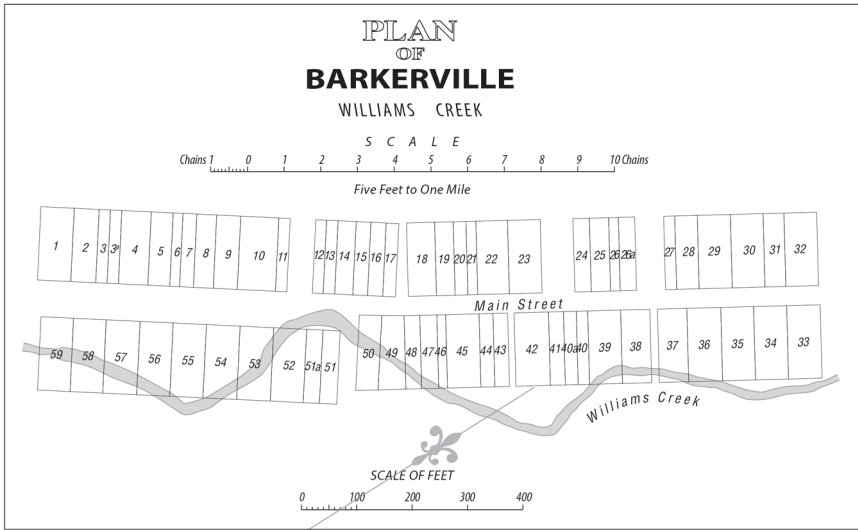


Figure 5. Plan of Barkerville, drawn by James Turnbull of the Royal Engineers, 8 August 1863. The irregular lot widths resulted from the need to tie existing buildings into the survey. Williams Creek was later diverted to the east of town. Map redrawn by Eric Leinberger, Courtesy of Barkerville Historic Town.

Richard Wright, in his book *Barkerville and the Cariboo Goldfields*, notes that, “beyond this survey, town planning was almost non-existent.”<sup>19</sup>

Some of the earliest sawn lumber buildings constructed in Barkerville were of “vertical plank” construction in which the exterior wall structure is of sawn planks aligned vertically. These formed a third element of the Eldorado Vernacular. Recent research indicates that this form of construction was heavily used during the early years of the western North American gold rushes. Peter Schultz and Andrea Morrison identify it as the character-defining element of the restored gold rush mining camp in Bodie State Historic Park in the Sierra Nevada Mountains of California:

Town residents constructed most of the residences remaining in the town site between 1877 and 1900. They used locally cut and milled pine and a variety of vernacular styles. About three-quarters of these

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Engineers was immense. They built the first churches on the mainland based on the style of English country parishes, including New Westminster in 1860, Hope in 1861, and Yale (designed by Wright and Sanders) in 1862.” Donald Luxton, ed. *Building the West: The Early Architecture of British Columbia* (Vancouver: Talonbooks, 2003), 33.

<sup>19</sup> Wright, *Barkerville and the Cariboo Goldfields*, 132.

residences are of vertical plank single-wall construction; the others are of balloon frame construction ... The common occurrence of single-wall construction probably reflects adaptation to Bodie's short boom, transient population, and remote treeless environment: it allowed faster and, because it used less lumber, cheaper construction of buildings.<sup>20</sup>

Similarly, Kate Krafft found that vertical plank construction was more common than previously recognized in early Puget Sound. She challenges the assumption "that with the availability of milled lumber early builders constructed balloon or western platform frame dwellings," arguing that this view "overlooks what was in fact a common nineteenth century construction method known as *vertical plank* or *box (boxed)* [emphasis added] construction." Krafft also found that "vertical plank dwellings are difficult to identify; given that even relatively unaltered examples convey much the same exterior appearance as buildings with stud walls."<sup>21</sup>

Figure 6 shows a fine example of a vertical plank building in Barkerville in 1865. Among other examples surviving today are the Louis Wylde Shoemaker's Shop on Lot 53, the Van Volkenburg cabin (Figure 7), and the Kelly General Store building.<sup>22</sup> All three are constructed with milled planks set vertically and toe nailed or spiked into top and bottom beams. These buildings were built without posts or studs or any kind of interior frame structure. Relatively unusual though this was, it was not unique to Barkerville or the Cariboo.<sup>23</sup> Walls were constructed of three to five layers of one-inch by twelve-inch (2.5 cm by 30.5 cm) planks or sheathing – which provided structural strength – and the exterior sheathing was finished as "board and batten" to provide protection from

<sup>20</sup> Peter Schultz and Andrea Morrison, "Architecture as Material Culture: A Survey of Residential and Commercial Structures in a Western Ghost Town," in *Proceedings of the Society for California Architecture* 9 (2000): 107; and Andrea Morrison, "Structural Failures of Single Wall Construction in a Western Mining Town: Bodie, California" (MA thesis, University of Pennsylvania, 1999), 31–34.

<sup>21</sup> "Preservation Special Projects: Krafft on Vertical Plank Construction," 4Culture (blog), 12 February 2014. Available at <http://www.4culture.org/2014/02/preservation-special-projects-krafft-on-vertical-plank-construction/#>.

<sup>22</sup> For all three buildings, see Iredale, "Towards a Framing Morphology," 19–21. The Louis Wylde shop was built in Richfield and was later moved to Barkerville. Because Richfield was untouched by the Barkerville fire of 1868, and saw almost no construction after 1868, it seems likely that the Wylde building predates the 1868 fire, when all but one building burned to the ground. See Wright, *Barkerville and the Cariboo Goldfields*, 198.

<sup>23</sup> These buildings were constructed without a frame – the vertical planks are the structural system – no framing, no diagonal bracing. Scholarly studies on vertical plank construction include Jan Lewandoski, "The Plank Framed House in North Eastern Vermont," *Vermont Historical Society* 53, 2 (1985): 104–21; and Walter R. Nelson "Some Examples of Plank House Construction and Their Origin," *Pioneer American*, 2 (1969): 18–29. See also Rempel, *Building with Wood*, 173–78.

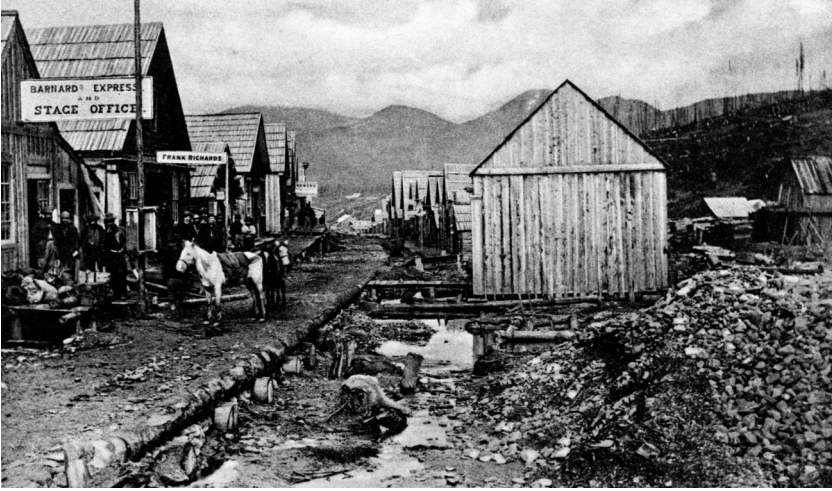


Figure 6. Main street in Barkerville, 1865, showing a vertical plank structure at right. Photographed by Charles Gentile, 1865. *Source*: BCA E-03940.



Figure 7. The Van Volkenburg cabin, during renovations, 1985, showing the vertical plank construction. *Source*: Barkerville Historic Town Photo Collection P2381.



Figure 8. Main street with the Barkerville Hotel (forth from right) under construction and Kelly store completed next to it. Photographed by Louis Blanc, June 1869. *Source:* Barkerville Historic Town Photo Collection P-0719.

the weather. All components were fastened with square nails.<sup>24</sup> Other studies of vertical plank buildings note that this form of construction was often used for cheaper buildings in areas where milled wood was readily and inexpensively available. As well, this building form required little structural expertise and could be constructed by an inexperienced builder. The sheath walls could be prefabricated in sections – easily done by one person working alone – which could then be raised upright by a small crew before being nailed in place to the floorboards and braced until the top plate was in place and reinforced by the rafter system.

<sup>24</sup> Square or cut nails were developed as a result of mechanization of the nail-making process that occurred in the United States and England in the late eighteenth and early nineteenth centuries. Called square nails because of their shape, their ready availability led to the decline of buildings reliant on wooden joints and an increase in balloon framing, which depended on nails as fasteners for structural components.

Vertical plank construction was a good solution in gold-mining camps such as Barkerville – and an obvious choice immediately after the fire of 1868. The Kelly General Store pictured in Louis Blanc’s photograph of the Barkerville streetscape (Figure 8), taken in June 1869, was one of the first buildings constructed after the fire.<sup>25</sup>

When Barkerville was rebuilt after the great fire of 16 September 1868, safety and permanence were of greater concern than they had been before. Joseph Trutch, chief commissioner of lands and works in Victoria, was sent north to survey the site of the rebuilding town. On 11 November 1869, he wrote of the difficulties inherent in surveying and planning in a boom-and-bust mining town:

I have to inform you that when I came here, I found that few if any of the positions occupied by houses corresponded with the official map; and I found that some of the cross streets had been sold to individuals upon which to erect houses ... After the fire of September, 1868, I went to Barkerville to try and rectify the difficulties that existed with respect to the boundaries of the lots but found it impossible to make any measurements correspond with the official map ... After the fire which last year destroyed the entire town, Mr. [Chartres] Brew, without any communication with this office made a complete re-arrangement of the boundary lines of the lots increasing the width of the street and certainly with marked advantage to the appearance of the town and decreased risk from fire.<sup>26</sup>

Photographs from after the fire (Figures 9 and 10) show that the surrounding hillsides had been denuded of trees to supply fuel and building material for the town’s hungry stoves and sawmills as well as for flumes and pit-props in underground tunnels and shafts.

The Barkerville Hotel was the largest and most ornate building erected after the fire, and it exemplifies a fourth component of the Eldorado Vernacular (Figure 11). Designed and constructed by Englishman Johnny Knott, a carpenter familiar with American architectural trends and construction systems, it remains among the largest and most elaborate buildings of the gold rush era in interior British Columbia. Figure 8 shows that, by June 1869, Knott had the roof on but that the walls were

<sup>25</sup> Photographs held at the BC Archives, dating from the spring of 1869, show this building completed. On the interior, the original vertical plank wall is covered in wallpaper and buried under another wall of stud and horizontal board construction; this second wall is covered with 1890s newspapers. Field research found 1873 newspapers under a second layer of floorboards. See Iredale, “Towards a Framing Morphology,” 22–27.

<sup>26</sup> Joseph Trutch, 11 November 1869. Available at <http://bcheritage.ca/cariboo/barker/trutch.htm>.



Figure 9. Barkerville after the fire, looking up the creek. Photographed by Frederick Dally, 17 September 1868. *Source:* BCA A-03750.

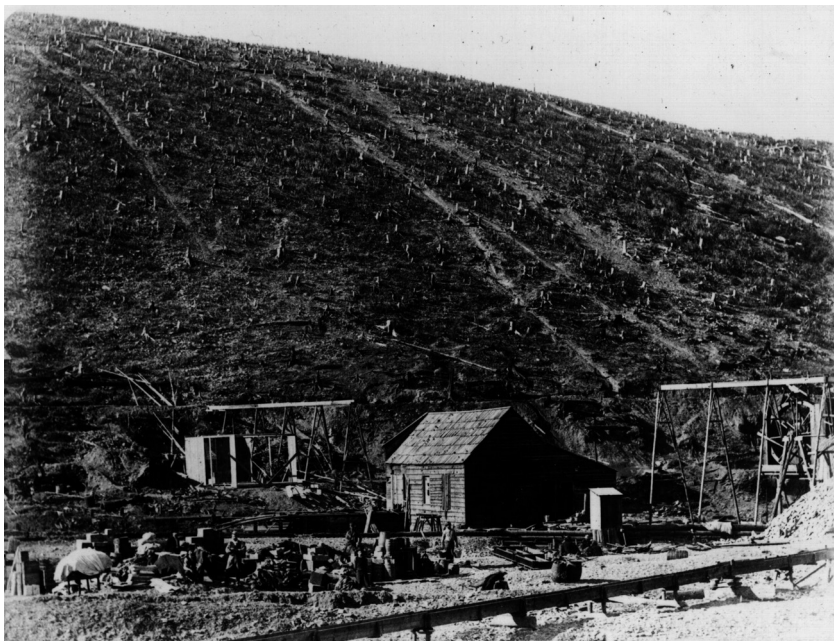


Figure 10. The only house left in Barkerville after the great fire. Some stores, warehouses, a saloon, and various outlying cabins, flumes, and outhouses also survived the fire. Photographed by Frederick Dally, 17 September 1868. *Source:* BCA C-05929.



Figure 11. Outside the Barkerville Hotel, Barkerville, 1894, a fine example of balloon frame building technique. Photographer unknown. Source: BCA A-03765.

not yet clad; by September, the second-storey windows were framed, and by 1870 the building was complete.<sup>27</sup>

Knott may have been familiar with designs from Victorian pattern books, such as those by American taste-setter Andrew Jackson Downing, *Cottage Residences* (1842) and *The Architecture of Country Houses* (1850), which advocate the use of Gothic Revival and Italianate architectural styles.<sup>28</sup> Knott's use of balloon frame construction shows the

<sup>27</sup> For the Barkerville Hotel see Wright, *Barkerville and the Cariboo Goldfields*, 190-91; and Laing, *Traveller's Site Guide*, 40.

<sup>28</sup> Stuart Stark notes that competent builders used pattern books to provide the design and layout for many buildings in nineteenth-century British Columbia: "Many of our most delightful heritage structures owe their designs and layout to pattern books. The rapid growth of settlements required expedient methods of construction, and pattern books arrived at the

influence of American carpentry and construction systems. Developed in Chicago in the 1830s, balloon framing became a popular alternative to post-and-beam construction.<sup>29</sup> Balloon framed walls were built of two-by-four studs, which extended two stories and were nailed onto bottom sill and top plate; exterior siding and interior sheathing were then nailed to the wall to create a rigid structure. Using studs rather than heavier timber posts, this light (or balloon) frame construction allowed a few men with saws, hammers, and nails to erect a building quickly and easily, and it was adopted swiftly once sawn studs and nails were readily available in the western United States and Canada.

With four-inch by three-inch (10 cm by 7.5 cm) studs, two feet (61 cm) on centre, the Barkerville Hotel shows interesting variation from standard balloon framing with sixteen- to twenty-four-inch spacing. The studs are thirty feet in length, and run the full two-storey height of the exterior walls, where they are notched into a three-inch by four-inch top plate. The rafters also notch into the top plate and line up with the studs. The lumber is not cut to standard dimensions and is either rough-milled or hand-planed. The interior sheathing uses one-inch by six-inch (2.5 cm by 15 cm) tongue-and-groove boards, hand-planed, with a beaded edge. Some of the interior walls are made of single-layer, vertical wooden panels nailed or notched between floor and ceiling. Sound-proofing was consequently very poor between the rooms. Insulation was later added in the exterior walls with a product called "Seafelt,"<sup>30</sup> which consisted of seaweed packed between brown paper. The exterior cladding is five-inch lapped siding. The hotel has a cantilevered balcony extending across the front of the second floor and a small balcony extending from the window

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same time as new technologies such as balloon framing and steam driven power tools." See Stuart Stark in Donald Luxton, ed., *Building the West: The Early Architecture of British Columbia* (Vancouver: Talonbooks, 2003), 56.

<sup>29</sup> Rempel, *Building with Wood*, 122. "Simply put, balloon frames consist of slender lightweight wooden members which are nailed together to form a rigid structure. Boards are subsequently nailed to the frame to cover it. This method is completely different from traditional construction with wood in which heavy timbers are attached to each other by mortise-and-tenon joints. Because of their simplicity and lightness, balloon frames can be raised quickly and easily." See John Veillette and Gary White, *Early Indian Village Churches: Wooden Frontier Architecture in British Columbia* (Vancouver: UBC Press, 1977), 18. See also Paul Sprague, "The Origin of Balloon Framing," *Journal of the Society of Architectural Historians* 40, 4 (1981): 311-19.

<sup>30</sup> "Seafelt" was produced in the 1930s by Guildfords Ltd. in Sable River near Shelbourne, Nova Scotia. "Guildfords crews combed Nova Scotia's beaches for eel-grass, which was stitched together between layers of kraft paper to make Seafelt, one of the first batt insulators for homes. The dried seaweed trapped air between its layers and kept heat from escaping through roofs." See Guildfords Group of Companies, *Our History*, available at <http://www.guildfordsgroup.com/our-history.html>; and Sandy Wyllie-Scheverria and Paul Alan Cox, "Seagrass (*Zostera marina*) Industry of Nova Scotia (1907-1960)," *Economic Botany* 53 (1999): 420.





Figure 12. St. Saviour's Anglican Church. *Source:* BCA F-02310.

on the top floor. Both balconies have decorative woodwork detailing the balustrade, and there is a fanciful eave treatment with decorative brackets under the pitched roof gable,<sup>31</sup> which suggest the influence of the Carpenter Gothic style on the architectural character of the building.

In November 1869, the *Cariboo Sentinel* calls attention to the Anglican Church “now building” in Barkerville “from designs by the Rev. J. Reynard, which are being ably carried out by Messrs. Bruce & Mann.”<sup>32</sup> The newspaper notes that it “promises to be an elegant structure,” in “Early English,” style in which the “architectural effect is attained by due proportion of parts, bold and simple forms, rather than by elaborate ornament ... which in form, if not in material, will remind them [parishioners] of the village churches of the ‘fatherland.’” This marks the fifth element of the Eldorado Vernacular (Figure 12).

<sup>31</sup> Iredale, “Towards a Framing Morphology,” 24–26.

<sup>32</sup> “Church Building,” *Cariboo Sentinel*, 20 November 1869. For the construction and subsequent history of St. Saviour's see Laing, *Traveller's Site Guide*, 18; and Wright, *Barkerville and the Cariboo Goldfields*, 147–50.

St. Saviour's Church is a tall, wooden Gothic Revival building built with balloon frame construction and clad on the exterior in rough-cut board-and-batten and on the interior in a finer board-and-batten finish.<sup>33</sup> Exterior Gothic Revival details are in the decorative scalloped bargeboards framing the roof; a steeply gabled bell tower atop the roof; tall, narrow, arched windows with wide exterior casing; and projecting arched mouldings. The arched Gothic entrance vestry is an attractive addition from the 1930s. Reverend James Reynard's design clearly references English church forms that were also characteristic of other gold rush era churches in British Columbia. Virtually all Anglican Church design in British Columbia at the time was based on the Carpenter Gothic Vernacular, which itself is a North American adaptation of English Gothic Revivalism popularized by English taste setters such as Augustus Pugin, John Ruskin, and William Morris.<sup>34</sup> Located at the end of Barkerville's main street, St. Saviour's creates a significant and attractive visual draw.

The Chee Kung Tong Building in Barkerville (Figure 13) exemplifies a sixth gold rush construction style,<sup>35</sup> particularly associated with the movement of Chinese into the Cariboo, where they arrived at Quesnelle mouth in 1861, Quesnelle Forks and Antler in 1863, Barkerville between 1863 and 1865, and the Stanley area by 1866.<sup>36</sup> Constructed between 1874

<sup>33</sup> Balloon frame construction was commonly employed to construct missionary and pioneer churches in British Columbia. Warren Sommer describes the introduction and advantages of this system: "Of all the technological innovations that influenced everyday North American construction in the nineteenth century, the balloon frame was undoubtedly the more important. The speed and extent of its acceptance were phenomenal. Initially developed in the American Mid-West in the early 1830's, balloon frame construction spread rapidly throughout the continent, supplanting older techniques and eventually reaching Europe and the Antipodes. Without the balloon frame, Chicago, Denver, San Francisco, Vancouver and thousands of western boomtowns would have been built very slowly indeed." Sommer, quoted in John Veillette and Gary White, *Early Indian Village Churches: Wooden Frontier Architecture in British Columbia* (Vancouver: UBC Press, 1977), 18.

<sup>34</sup> Warren Sommer writes that "Gothic revival architecture emerged in the mid-nineteenth century in reaction to neo-classicism. Looking especially to medieval church design, gothic revivalism was adopted by religious reform movements such as the Oxford Movement and promoted and advocated by the Cambridge Camden Society (founded 1839), which laid out guidelines for the architectural design of the parish church that became the blueprint for virtually all late nineteenth century Anglican churches, including those built in British Columbia." Quoted in Veillette and White, *Early Indian Village Churches*, 14.

<sup>35</sup> Canadian Register of Historic Places listing for Chee Kung Tong National Historic Site. Available at <http://www.historicplaces.ca/en/rep-reg/place-lieu.aspx?id=11971&pid=0>. For the Chee Kung Tong Building, see also Laing, *Traveller's Site Guide*, 56; and Wright, *Barkerville and the Cariboo Goldfields*, 175-76.

<sup>36</sup> Ying-ying Chen, "In the Colonies of Tang: Historical Archaeology of Chinese Communities in the North Cariboo District, British Columbia, 1860-1940s" (PhD diss., Simon Fraser University, 2001), 185.



Figure 13. The Chee Kung Tong building in Barkerville, the town's first Chinese Masonic Lodge and an example of Chinese timber frame construction. Photographer unknown, ca. 191?. *Source:* BCA C-09659.

and 1877 for the Hong-men society, which Ying-ying Chen speculates was established in Barkerville on 21 March 1864 by Hung-Shen-gui and his friends,<sup>37</sup> the building was likely built by members of the Tong. Its well thought out and complex system of construction is somewhat unusual for Barkerville. The main building is particularly unusual in its combination of post-and-beam style construction with structural wall sheathing. The timber frame is of two-inch by three-inch posts running two stories and six feet apart. The walls are in-filled with two layers of one-inch by twelve-inch vertical sheathing, and add to the structural strength of the building. Thus, this building is a composite of structural timber framing, with vertical sheathing attached to top and bottom beams by square nails. The foundation is constructed with

<sup>37</sup> Ibid.



Figure 14. Pooley street, Wells, ca. 1935. Barkerville Historic Town Photo Collection, P-1142.

perimeter beams connected by log joists that support the floor and create the structural rigidity for the foundation. The front façade is clad in rough-planed, horizontally lapped siding. The sides and rear of the building are finished in rough-planed, board-and-batten siding, and the side and rear addition are log lean-tos with lapped notching. The Chinese have an ancient tradition of wooden architecture based on load-bearing, timber-framing, and non-load-bearing walls,<sup>38</sup> and so it seems possible that the Chinese builders used timber-framing knowledge from their homeland when they set about constructing the Chee Kung Tong Building. The building plan – with its ceremonial hall on the second floor and its lodgings and kitchen on the first floor – is similar to other Chee Kung Tong buildings in British Columbia, indicating cultural antecedents.<sup>39</sup> This structure has unique, decorative

<sup>38</sup> “A fundamental achievement of Chinese wooden architecture is the load-bearing timber frame, a network of interlocking wooden supports forming the skeleton of the building. This is considered China’s major contribution to worldwide architectural technology ... Unlike western architecture, in ancient Chinese wooden architecture, the wall only defined an enclosure, and did not form a load-bearing element. Buildings in China have been supported by wooden frames for as long as seven millennia.” See Wikipedia, s.v. “Ancient Chinese Wooden Architecture,” last modified 12 February 2014, [http://en.wikipedia.org/wiki/Ancient\\_Chinese\\_wooden\\_architecture](http://en.wikipedia.org/wiki/Ancient_Chinese_wooden_architecture).

<sup>39</sup> Ying-ying Chen, “Building No. 84: A symbol of the Early Chinese Freemasons at Barkerville, British Columbia,” unpublished manuscript prepared for Barkerville Historic Town, Barkerville BC, 1992. .

signboards around the second floor doorway bearing the inscriptions (translated from Chinese): “Outside, nine mountains lie beautifully verdant” and “Inside the temple, three Gods are solemnly seated.”<sup>40</sup>

By the late nineteenth century, a quarter century after the Cariboo gold rush, the energy and investment that created and sustained the town of Barkerville had dissipated. Few first- and second- generation buildings from this era now remain. But the importance of the Eldorado Vernacular can be seen in the town of Wells, just eight kilometres from Barkerville, designed in the 1930s to attract workers to the new Cariboo Gold Quartz Mine (Figure 14). Almost all the commercial buildings in this new company town offered a conscious reference to the nineteenth-century gold rush architecture of Barkerville.<sup>41</sup> And there is perhaps some small, but pleasing, irony in the fact that fine examples of the temporary, improvised structures that constitute the Eldorado Vernacular built for a footloose and transient mining population are now preserved for the foreseeable future in the historic site along the banks of the creek where William Barker made his famous gold strike.

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<sup>40</sup> Larry Peters, “Green Dragons and White Tigers on Gold Mountain” (History 407, UNBC, 1997), speculates that the Chinese in Barkerville practised feng shui – a Chinese philosophical system of harmonizing with the surrounding environment that was used to orient buildings in an auspicious manner. “This translation (of the signboards) places the importance of myth and ancient beliefs of Barkerville’s Chinese into historic context. A connection between the ‘nine mountains’ and the ‘three Gods’ could suggest devotion to either a cult of centrality or the myth of Kowloon or both. Regardless of what is signified, a connection between the signs and the landscape of the Barkerville area is visible. The translation links the belief and importance of the physical and mythological landscape to the three Gods: Lao, Confucius, and Buddha.” Available at <http://www.cariboogoldrush.com/barker/larry.htm>.

<sup>41</sup> Wells Heritage Townsite – Architectural History, <http://bcheritage.ca/drawings/sites/site1/wdescrib.html>. See also Jennifer Iredale. “Wells, BC: A Proposal for Heritage Conservation” (MA thesis, Columbia University, 1984).