

APPENDIX C: SUMMARY OF ARCHAEOLOGICAL EXCAVATIONS
BAR U RANCH NATIONAL HISTORIC SITE
SLAUGHTER HOUSE, OPERATION 27
1994

MATERIAL CULTURE RESEARCH FILE
ARCHAEOLOGY RESEARCH UNIT
PARKS CANADA, WESTERN REGION

Rod J. Heitzmann
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In the fall of 1994, archaeological excavation were undertaken at select locations of the Slaughterhouse at the Bar U Ranch National Historic Site as part of the historic structures examination. Test units were placed at the exterior south west corner of the building and inside the structure at the unfloored section at the eastern end. In this unfloored section a rough stone and brick chimney had collapsed leaving a pile of rubble and debris.

BACKGROUND

The Slaughterhouse was constructed in the early part of the twentieth century. This structure was built of balloon frame construction. It consists of a single open room with a door at the south east which allowed for human access and had a second door at the north west corner for animal entry.

FOUNDATION INVESTIGATIONS (1670R27A)

Archaeological examination of the south west corner of the structure consists of an L shaped excavation unit. This unit was essentially a 2 x 2 metre square of which the north east quarter was occupied by the building. At the start of the investigation, no sod remained on the surface due to erosion by heavy animal and human trampling. Several animal bones were noted on the surface. The loose medium brown loam (lot 1670R27A1) was removed to the top of an extremely compact medium brown silt (1670R27A2).

This excavation revealed that the Slaughterhouse was constructed upon a foundation of a single layer of loose sandstone flagstones (Figures C1, C2) These stones were generally flat, and were less than 10 cm thick.

In order to investigate sub-soils, the south west quadrant was further excavated to the top of the alluvial gravel at a depth of 50 cm below surface (Figure C3). This indicated interlayered fine medium brown silt and coarse sands. These contained no artifactual materials with the exception of a few small animal bones (carpals/tarpals) in the upper 10 cm.

INTERIOR EXCAVATIONS

Excavation of the non-floored area at the east end of the Slaughterhouse consists of the dismantling of the collapsed chimney pile and excavation of the earthen floor (Figure C4).

The Chimney

The chimney was constructed with a semi-circular hearth out of rough sandstone blocks, occasional bricks and fixed with mortar (Figure C5). The bricks used in the construction appeared to be placed randomly and treated no differently than the sandstone blocks. The back of the chimney was constructed supported by the north wall of the structure and was open to the south. The outside dimension of the chimney are east to west 155 cm, north to south 150 cm. The hearth dimensions are width (east to west) 50 cm, length (north to south) 82 cm. A metal grill or grate (length east-west 53 cm, width north-south 16 cm) was constructed across the centre of the structure. This grate was adapted to this purpose, having been salvage from some unidentified machinery. The fireplace probably vented through a stove pipe as a stove pipe hole was observed in the roof above. This hole is patched over and no stove pipe is currently present. There was ample evidence that this fireplace functioned as an open hearth. The sandstone and brick had been fire reddened, ash and clinker adhered to the metal grate, ash and charcoal fragments were found within the hearth beneath the grate. Lastly, the 2 x 6 upright supporting the north wall of the chimney had been charred and blackened.

Directly to the south of chimney was a rectangular fire box (Figure C6). This box was built out of cast iron fragments salvaged or readapted from a stove. The sides of this fire box were braced by sandstone blocks and soil. It varied in width from 34 to 42 cm apart, with the overall length of the fire box north to south of 103 cm. The fill between the two pieces of stove consists of ash and charcoal. Numerous nails were also found in this ash indicating that sawn wood scraps was burned in this fire box. Immediately adjacent to the exterior sides of the metal the soil has been burned orange indicating that fires between the stove pieces where intense enough to burn the soil. A greater number of artifacts were observed in the ash than in the surround soil. These included nails and spent cartridges.

ARTIFACTS

Bricks

One broken brick recovered was embossed "...EDCLIFF ...COAL CO". This brick was made by the Redcliff Brick and Coal Company Limited. This company began in 1907 as the Redcliff Brick Co. which constructed a modern brick plant in 1908 at Redcliff, Alberta near Medicine Hat. In 1932 the company became the Gunderson Brick & Coal Company which continued to produce bricks until 1949(Manson 1983). Unfortunately no information is available on the specific time span that the company embossed bricks with this label.

Ammunition

A total of 77 spent cartridges were recovered from the chimney debris and the earthen floor in front of the fire box. These included a variety of brass rim fire cartridges: .22 long (n=22), .22 short (n=20), one .22 Extra Long (n=1), .22 Savage High Power (complete n=13, incomplete n=2), .22 Remington High Power (n=1) and a variety of centre fire cartridges as follows: .25-20 (n=10), .25 Remington (n=1), .30-.30 "WFC" Winchester (n=1), .44 "WFC" Winchester (n=1), .32 "S&W" Smith and Wesson revolver (n=1), .38 "S&W" revolver (n=1) and the base of a 12 gauge brass and paper shotgun cartridge. Most of these are relatively light powered cartridges suitable for use at short range on domestic animals. Several cartridges indicate that the Slaughterhouse was in active use prior to the 1930s. The .22 Extra Long cartridge was manufactured between about 1880 and the 1930s when it was replaced by the .22 long rifle (Barnes 1965:274). The .25-20 cartridge was first manufactured in 1882 by Remington (UMC) and manufacturers stopped producing this load in the mid 1930s (Barnes 1965:74); the .25 Remington was introduced in 1906, the .22 Savage High Power cartridge was introduced in 1912 (Barnes 1965). At least two .22 calibre bullets were observed imbedded in the wooden north wall of the butchering pen. The use of light ammunition and the number of cartridges recovered clearly indicates shooting animals was a usual first step to butchering at the Bar U Ranch Slaughterhouse.

Faunal Remains

A number of animal bones were found in the excavations at the Slaughterhouse. These are from two main species: cattle (Bos) and pigs (Sus). The majority of these derived from the feet of these animals (phalanges, carpals and metacarpals), with lesser numbers of teeth, mandible and skull fragments. Of the cattle bones, most are from immature animals (less than 1 year old at death) as indicated by unfused epiphyses on phalanges or are from quite old animals (perhaps 6 years plus) as indicated by bony growths and spicules on phalanges. Almost all of the pig bones are from immature animals (generally less than 2 years) as indicated by unfused epiphyses. Two other animal species are also present: two chicken wing bones (someone's lunch?) and one small rodent mandible (Spermophilus richardsonii, Richardson's ground squirrel) (Gilbert 1980:81).

From the above evidence it can be concluded that both cattle and pigs were slaughtered in the Slaughterhouse. For beef, young animals were probably preferred, but on occasion old animals were also culled from the herd for domestic consumption. For pork, young pigs were almost always selected. From the large number of hoof or foot bones recovered in these excavations, these elements were usually removed at the Slaughterhouse. Ole Christensen recalled that skulls and other Slaughterhouse debris was usually hauled to garbage dump north of the Percheron Barn (Interview Sept 1994).

Other Artifacts

A few other artifacts were located in the excavations, or were discovered stuffed in various parts of the building structure during the examination of the building. Of relevance to the functional aspects of the building were 1 piece of binder twine, two short

wooden stakes sharpened at one end probably used in the butchering process, a part of wall hook, and the wooden handle of a curved-bladed skinning knife. Two work gloves were also located. One of these was a left hand glove made of leather with a floral fabric liner, one was a right hand work glove made of leather in "Roper" style with a brass snap closure at the wrist. Also located was a billed cap made of a heavy woven cloth with two copper snaps on the bill. Between two wall studs was a cylindrical paperboard container with a red and silver foil label "Sifto SALT /IO.../2 LBS. NET WHEN PACKED / FREE RUNNING / SIFT SALT LIMITED...SARNIA, ONT. GODERICH, ONT. UNITY. SASK. CALGARY, ALTA.". Stamped on the top of this container was "16". Cylindrical paperboard containers were manufactured at least from 1916 but because of the style of this label, this was manufactured after 1925 (Burns 1989 Figure 5-75 shows a 1925 Sifto Iodine Salt cylinder with a more simple label.)

The bottom half of an alcohol bottle was recovered from between two wall studs. It had a paper label on the front: ...HISKY...*James Munro & Son*...WHINNIE DISTILLER, STRATHS...INVERNESS-SHIRE, SCOTLAND.

On the reverse side a second label reads:

...DEPARTMENT HOUSE...
Copy of Certificate

As various brands of Whisky are from time[to ti]me advertised and sold under the name ..."HOUSE OF LORDS WHISKY" or other..implying that this Whisky is the Scotch ...supplied to the House of Lords. I Hereby Certify /that JAMES MUNRO & SONS, LIMITED, DALWHINNIE, DISTILLERY , STRATHSPEY...ARE HEREBY AUTHORISED PURVEYORS OF SCOTCH WHISKY TO THE HOUSE OF LORDS ...and no Whisky is the GENUINE SCOTCH WHISKY AS SUPPLIES TO THE REFRESH-MENT DEPARTMENT OF THE HOUSE OF LORDS./ unless it bears on each bottle this Certificate/ (signed) William Caston (?). Superintendent of the Refreshment Department of the House of Lords.

This bottle was olive green in colour and manufactured in a turned mold.

ARCHAEOLOGICAL INTERPRETATIONS

In addition to the structural information contained in the Historic Structures Report, the archaeological excavation provide the following specific data:

1. The chimney was constructed and used as an open hearth chimney for a time, probably to heat water for scalding pigs and to provide a source of hot water for cleaning. The circular shape of the chimney and the position of the grill would have permitted the use of circular pot or kettle to heat water.
2. Some time after the initial use of the chimney, there became a need for a different fire configuration. Fragments of a cast iron stove were acquired (scavenged/salvaged) and a rectangular fire box was rigged in front of the chimney. This box was longer than the

chimney and probably permitted the use of larger water heating vessel such as a galvanized water tank.

3. During the time of active use of the Slaughterhouse, a variety of rifles were used to kill the animals. Most of these were light powered rifles that could shoot .22 calibre rim fire, or 25-20 calibre centre fire cartridges. Occasionally other guns were used as well such as the .32 revolver, .38 revolver, .30-30 Winchester or .44 Winchester rifle. For most cattle, a single shot to the head at close range would probably be adequate. Pigs could have been killed by shooting or by cutting of the throat with a sharp knife.

4. Both young cattle and pigs (less than 2 years) were selected for butchering. There is however, ample evidence to indicate that old cattle (probably more than 6 years old) were sometimes butchered as well.

5. Ole Christensen (interview Sept 1994) recalled that in the mid 1940s he used an outside hearth for boiling water. It can be assumed that the stone chimney had been abandoned and collapsed by this time, and no interior heat or water source was used.

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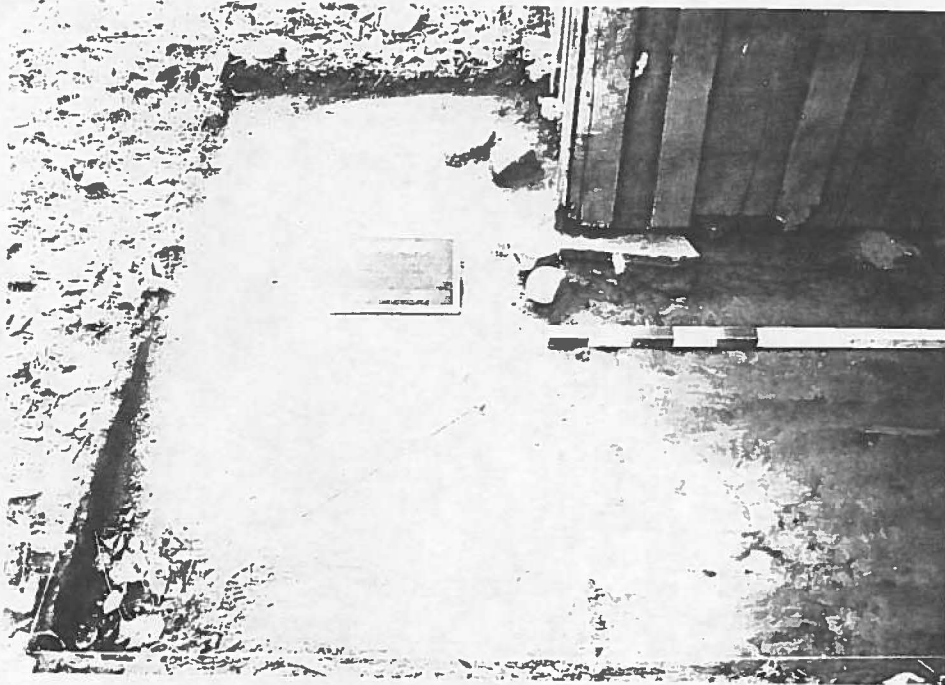


Figure C1. View of the south west corner of the Slaughterhouse showing the sandstone block foundation.(94R-25M-36)

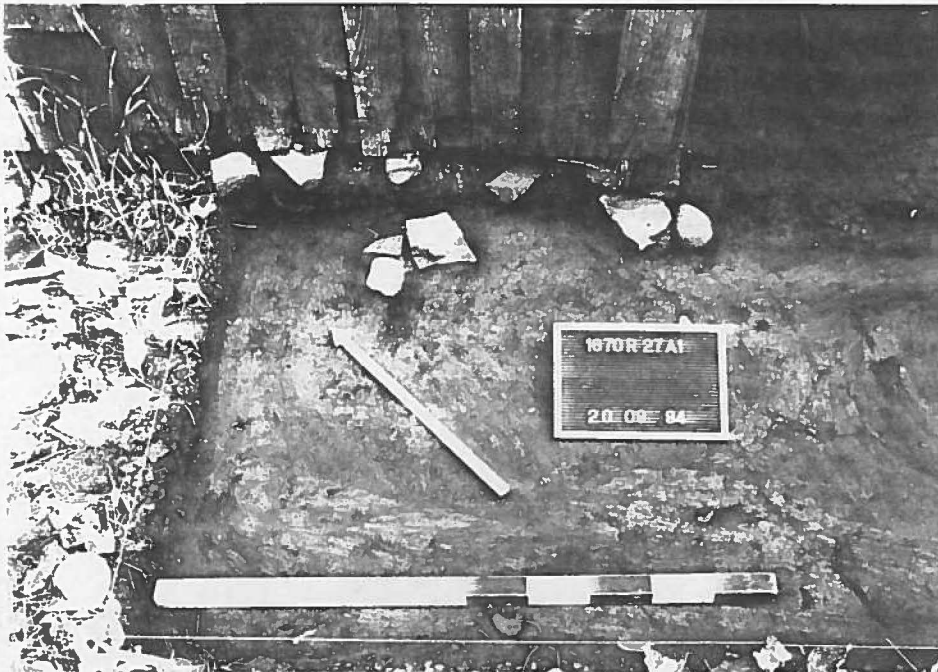


Figure C2 View of the west wall of the Slaughterhouse showing sandstone foundation. (94R-26M-4)

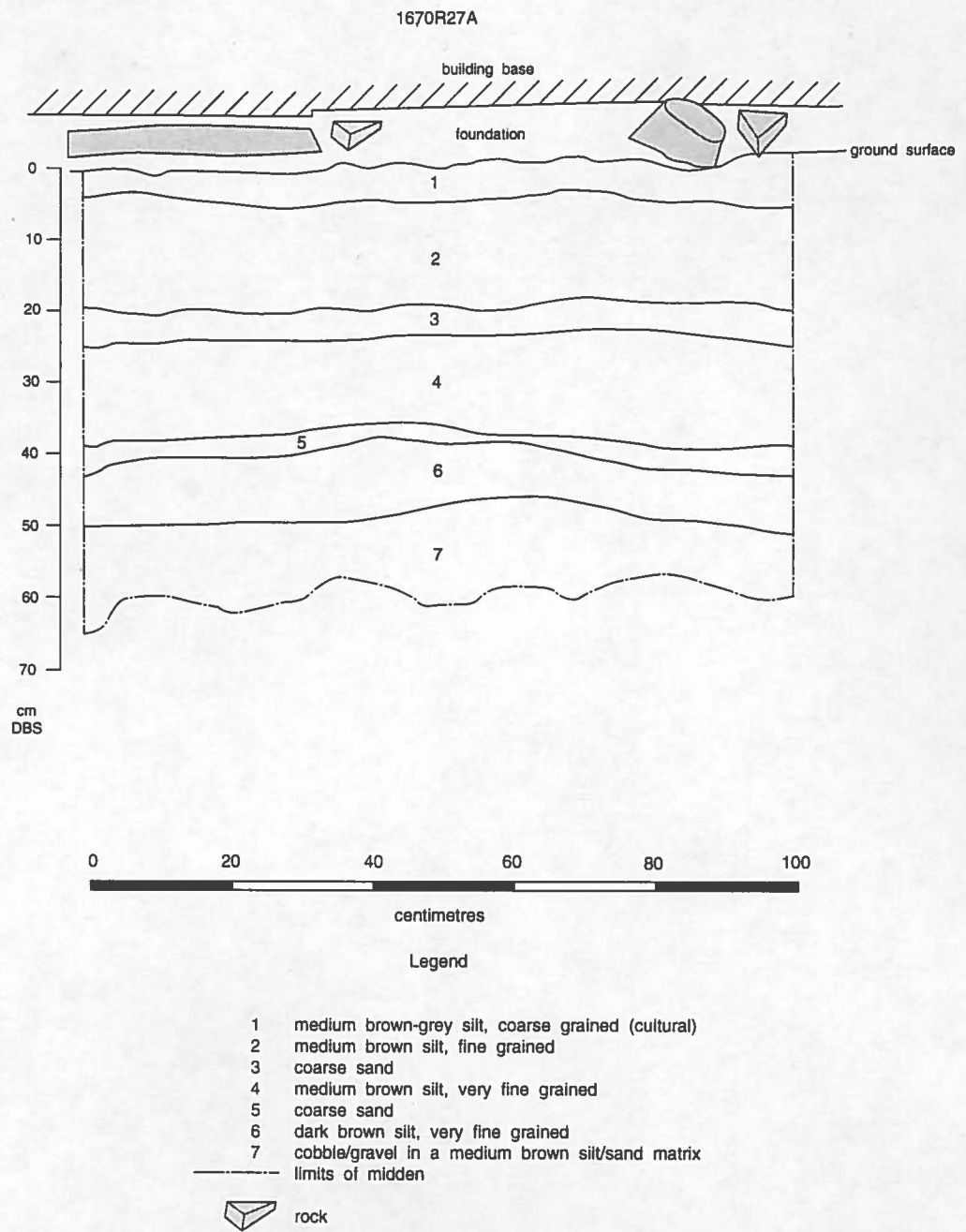


Figure C3. Excavations of the Slaughterhouse 1670R27A, Bar U Ranch N. H. S.



Figure C4. View north of the collapsed chimney and fire box at the start of excavation (170R121M).

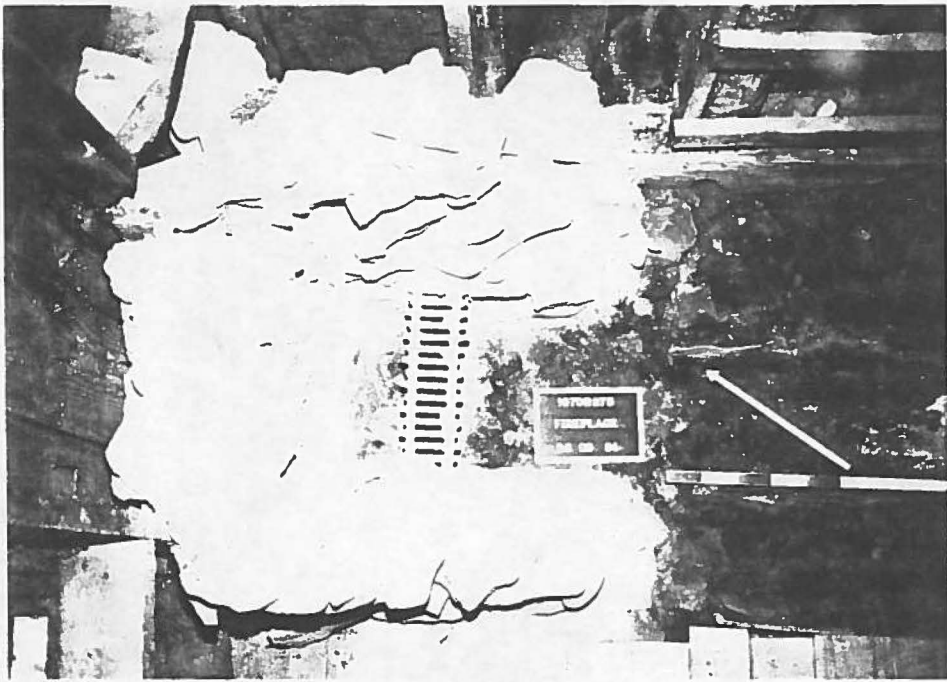


Figure C5. Vertical view of the chimney and grate (1670R136M).

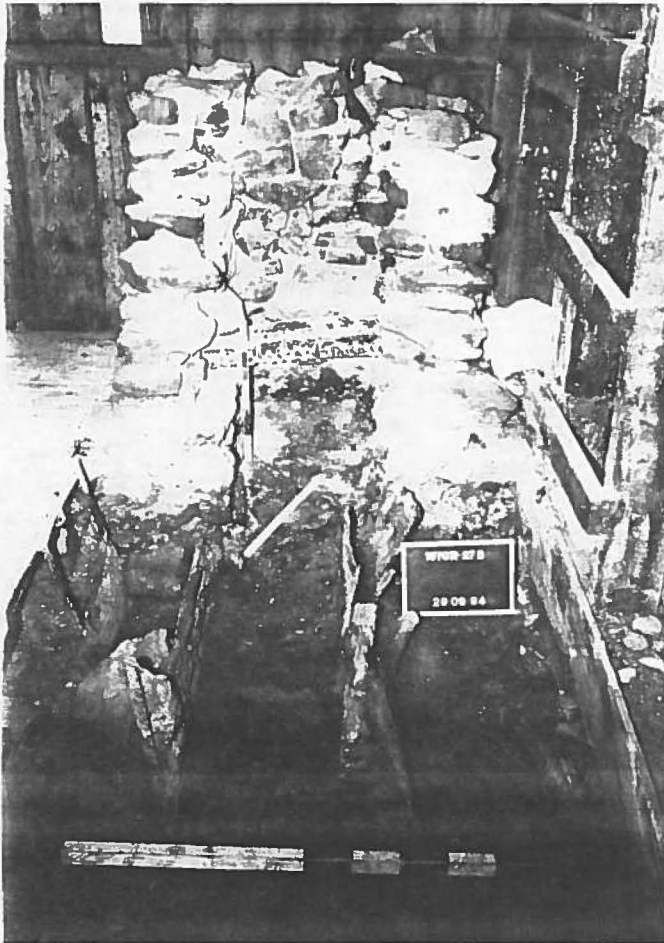


Figure C6. View north of the chimney and fire box at the end of excavation (1670R156M).

APPENDIX A: SUMMARY OF ARCHAEOLOGICAL EXCAVATIONS
BAR U RANCH NATIONAL HISTORIC SITE
PERCHERON BARN OPERATION 29
1994

Rod J. Heitzmann
(March 1995)

In the fall of 1994, additional archaeological excavations were undertaken at select locations along the Percheron Barn as part of the Historic Structures examination. Test units were placed at the north east corner of the courtyard where the east and north wings join, at one of upright post along the west wall of the east wing, and the exterior of the east wall of the east wing (Figure A1).

BACKGROUND

The Percheron Barn is believed to have been constructed about 1910. This structure was constructed along three sides of a square courtyard or corral which was open to the south. Twenty six individual stalls were accessed by doorways facing into the courtyard. By the late 1940s substantial alterations were made to the west wall of the east wing of the Percheron Barn. These resulted in the placement of a series of upright 28 cm diametre posts along the west facade of the east wing. These post supported the roof structure and siding of this wall as part of the adaptation of this wing for grain storage.

WEST WALL, EAST WING UPRIGHT POST(1670R29H)

A 1 x 1 metre unit was excavated at the base of the seventh pole from the north along the east wall. This pole supports the dividing wall between stalls 6 and 7, as well as the west facade of this wing.

Archaeological results

The vertical post was placed in a circular pit approximately 35 cm in diametre and 60 cm deep (Figure A2). The fill of the pit consisted mainly of a coarse gravel and hundreds of 75 mm (2.5 inch) common nails. These nails were probably pulled and discarded during dismantling of the former board and battens siding along this wall, part of replacement with the existing wall facade. The post hole was excavated into an alluvial gravel. Above the gravel, in turn, was a sandy silt, a black soil and finally a 10 to 20 cm layer of organic manure. Immediately north of the post, along the wall were two sandstone blocks. These were supports for the original sill which has been removed.

EAST/NORTH WING JUNCTURE (1670R29J)

A 1 x 1 metre excavation was dug at the junction of the east and north wings inside the courtyard of the building. At the junction of the east and north wings a door along the east wing west wall allowed access stall 9. This was later partially boarded up to allow storage of grain in the building.

Archaeological Results

This unit revealed that a squared log upright post was located at the juncture (Figure A3). This vertical post was set upon a sandstone block which varied in thickness from 8 to 12 cm. This rock was contained within a black clayey soil with small pebble inclusions. Along the base of the north wing wall ran a squared sill log of uncertain thickness. Attached to this sill log was a 2x4 inch stud, part of the frame construction. This wall was covered by board and batten vertical siding (Figure A3, left) and is part of the original construction style described in the Historic Structures Report. The east side of excavation unit was below a lightly framed wall segment that was part of the alterations carried out to adapt this stall for grain storage. At this location, the former stall door opening was infilled with a partial wall constructed of with 2 x 4 inch studs and then covered with vertical and overlapped horizontal 10 inch planks (Figure A3, right).

Soil profiles on the south and west sides of the unit provided a clearly defined depositional sequence (Figure A4). These indicated that the upper 10 to 12 cm of deposition was organic manure. Below this was a light brown clay which may have been deposited as soil surface in the courtyard. At the base of this light brown clay was a thin deposit of fine gravel which did not extend fully to the building walls suggesting this may also have been part of the courtyard base. A brown clay/silt was located below this gravel lens and extended below the sandstone blocks suggesting this was the original soil surface. Two thin black sandy/silt buried soils are separated by brown sand.

EXTERIOR EAST WALL, EAST WING (1670R29K)

A 1 x 1 metre unit was excavated along the exterior of the east wall at a location where the concrete partly collapsed.

Archaeological Results

At this location, the original wall was constructed upon a foundation of river cobbles and sandstone blocks without the use of mortar (Figure A5). At some later date, the bottom of the 2 x 6 framing had become rotted and was sawn away, as indicated by the 2 x 6 inch uprights being sawn away at an angle. The uprights were then sistered to fill the gap to the basal sill and short horizontal blocking installed. At approximately the same time, the gaps between the wall studs were filled with two pours of concrete. The concrete foundation does not extend any deeper than the bottom of the sod layer. Total height of

the concrete is 44 cm of which 38 cm was above the existing ground surface and 6 cm was below it.

The river cobbles and sandstone blocks rested within the upper portion of a dark brown silt and extend from 5 to 26 cm below existing ground surface. Above this is a layer of black organic soil that has accumulated post building construction..

No artifacts were found in this test.

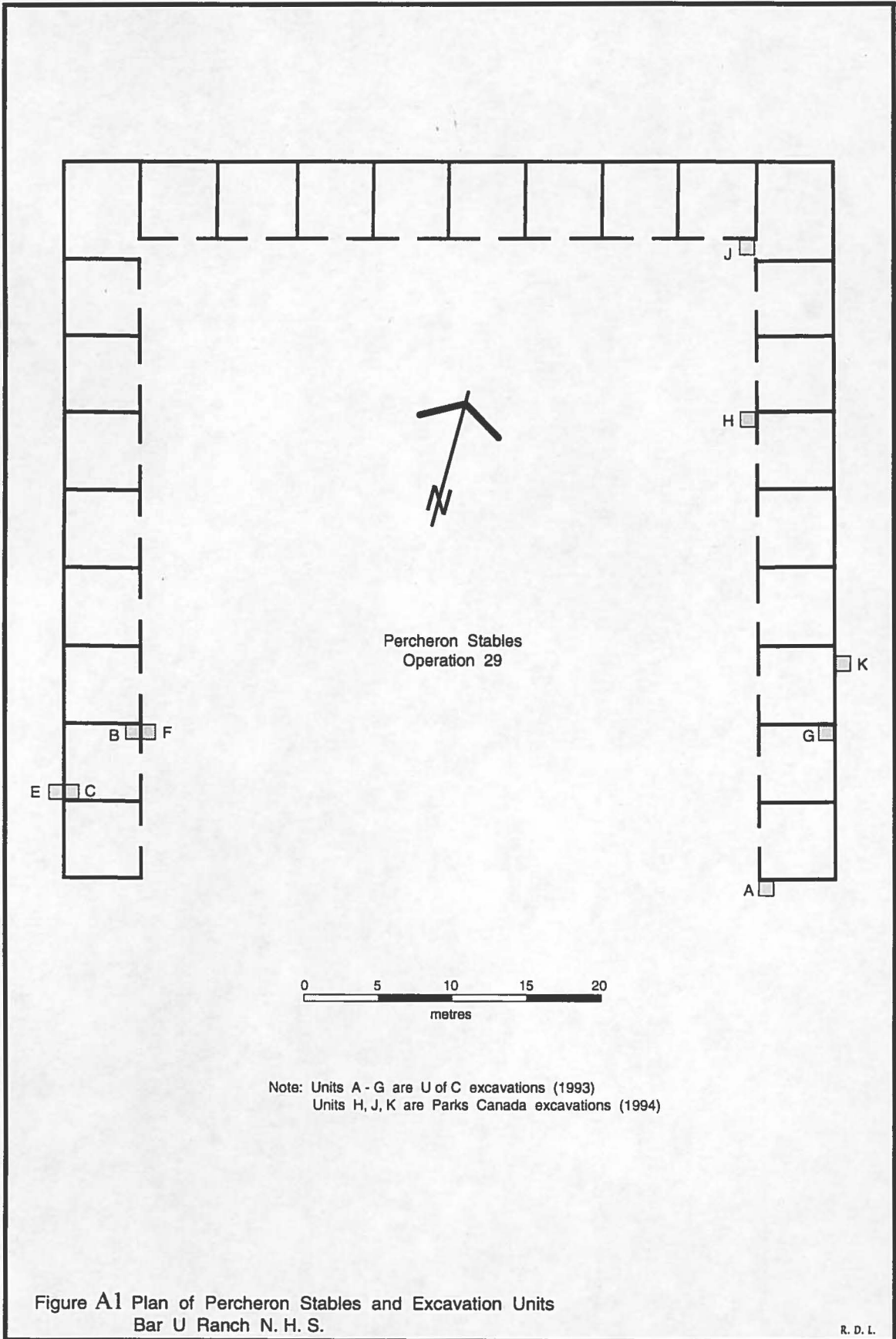
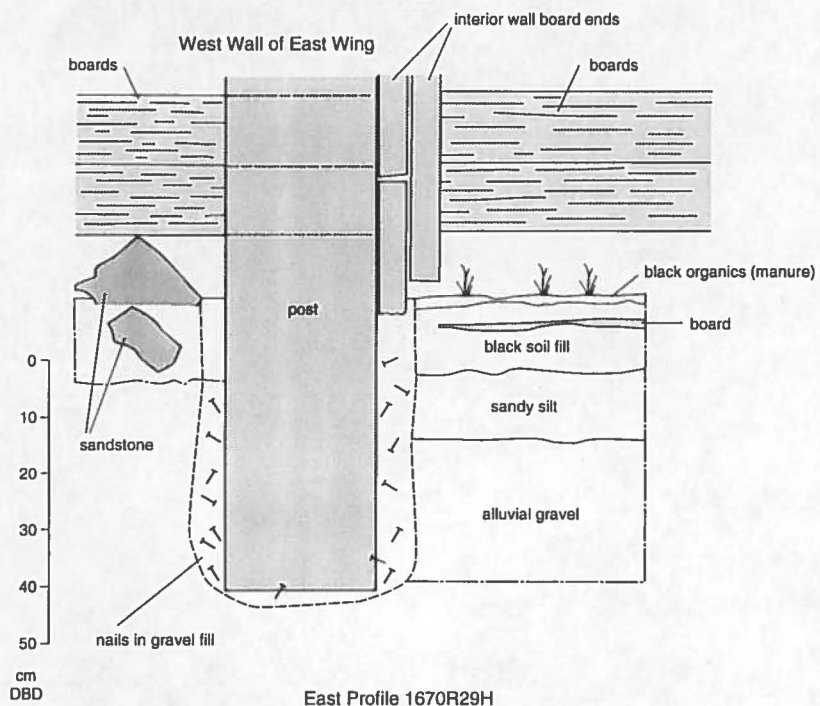
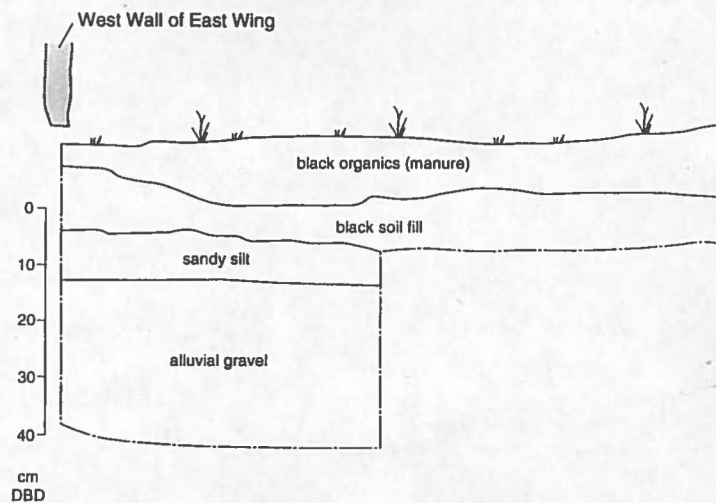


Figure A1 Plan of Percheron Stables and Excavation Units
Bar U Ranch N. H. S.



East Profile 1670R29H



South Profile 1670R29H

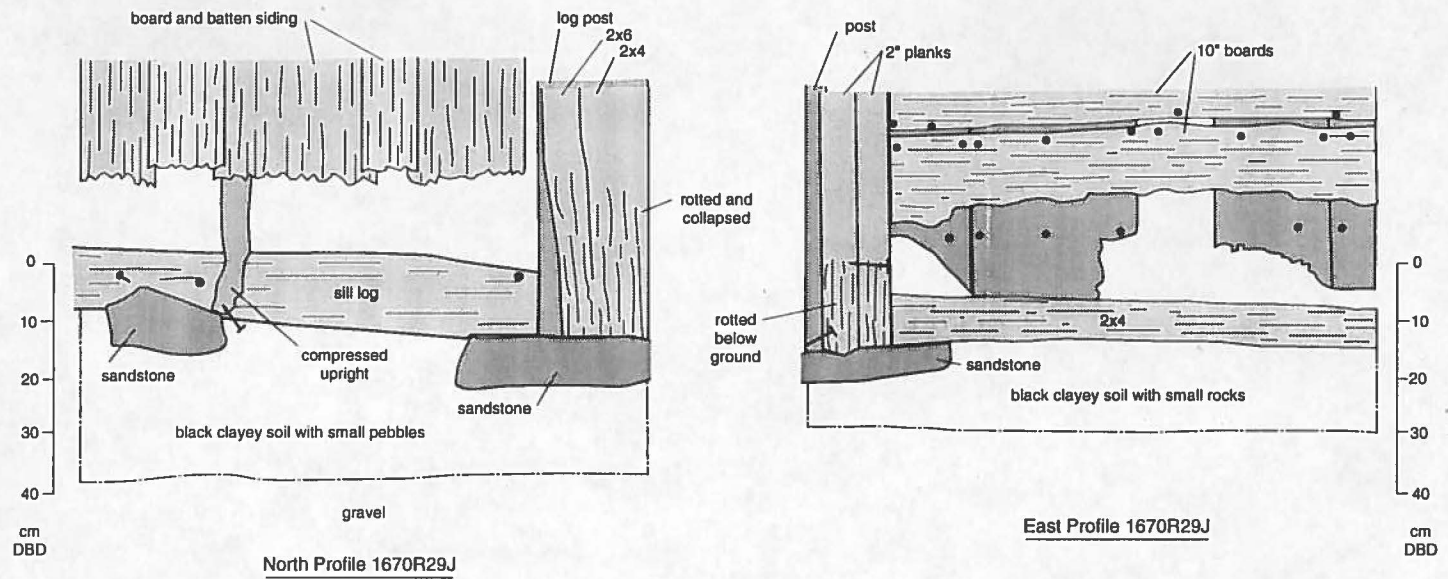


Legend

— limits of excavation

— common nails

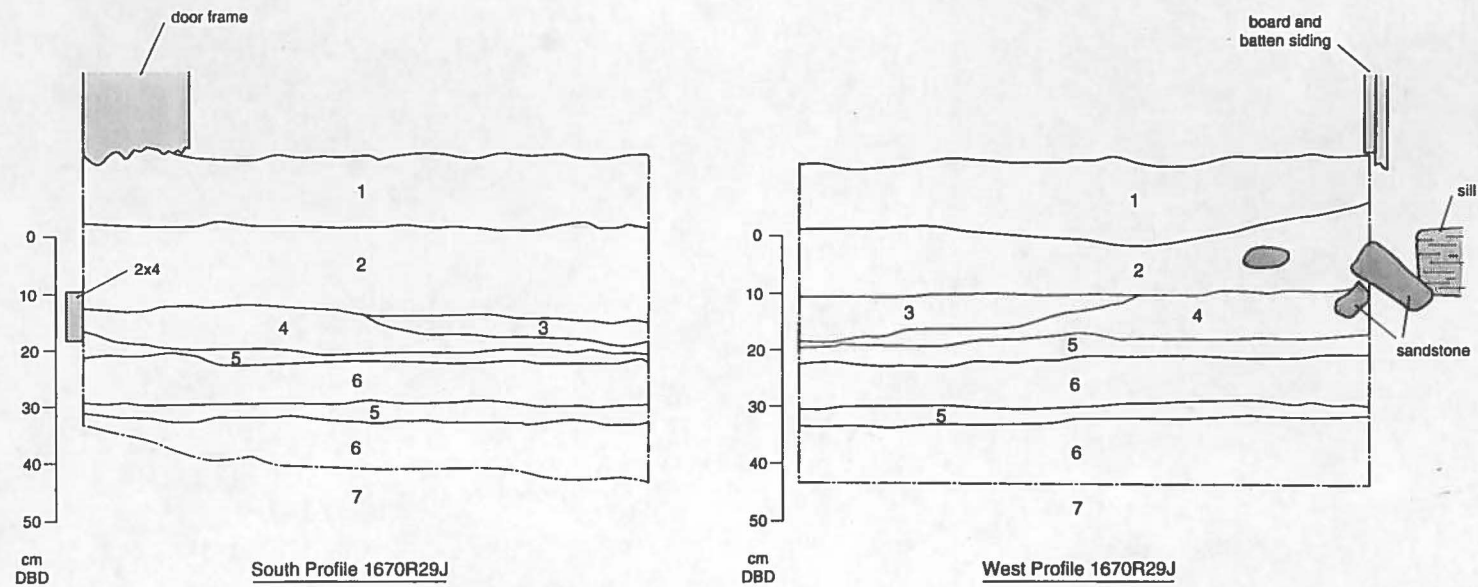
Figure A2 Excavations of the Percheron Barn 1670R29H, Bar U Ranch N. H. S.



- Legend
- limits of excavation
 - • common nails

Figure A3 Excavations of the Percheron Barn 1670R29J, Bar U Ranch N. H. S.

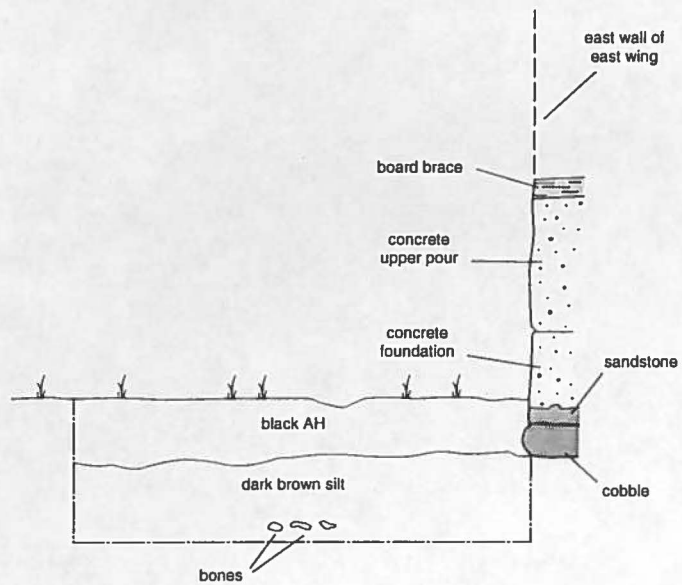
R. D. L.



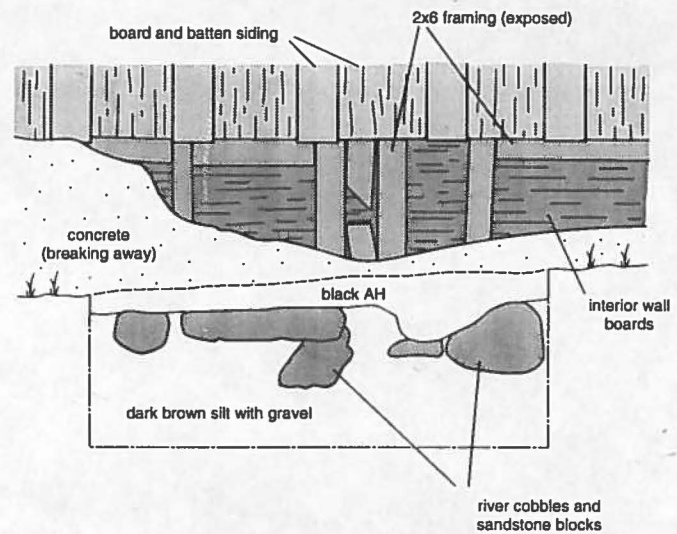
Legend

- 1 organics (manure)
- 2 light brown clay
- 3 fine gravel
- 4 brown clay/silt
- 5 black silty sand
- 6 brown sand
- 7 gravel
- limits of excavation

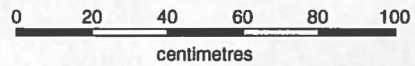
Figure A4 Excavations of the Percheron Barn 1670R29J, Bar U Ranch N. H. S.



South Profile 1670R29K



Sketch of West Wall 1670R29K



Legend

— limits of excavation

Figure A5 Excavations of the Percheron Barn 1670R29K, Bar U Ranch N. H. S.

R. D. L.