

Chapter III

EXCAVATIONS IN 1989 AND 1990 AT CRESCENT BEACH

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We knew from the past research completed at Crescent Beach that there would be adequate preservation of faunal remains from the Locarno Beach and contingent phases. Since no adequate faunal analysis existed for any mainland or Gulf Island Locarno component (Matson and Coupland 1995; Table 6-1) the faunal remains we recovered at Crescent Beach would help fill in gaps in our knowledge concerning the subsistence base present during a key period in Northwest Coast prehistory, as well as provide information on our specific research questions.

The previous excavations had not only supplied us with a general knowledge of Crescent Beach's cultural chronology but also with information concerning the areas where the different phases were present. We decided the best place for our excavations would be in the vicinity of Percy's original trenches. This is the area that Locarno Beach and adjacent phases were present. We believed that excavating in close proximity to Percy would facilitate the comparison of our data with his, including correlating the stratigraphy (See Figure II-3 for a map of our excavations vis-a-vis Percy's). The ability to closely link our excavations with Percy's was particularly important in that we did not anticipate recovering a large artifact collection and hoped to be able to correlate our stratigraphy with his and thus use his existing collections for the majority of the planned artifact comparisons.

Our 1989 excavations ran for four months, from May through August 1989, with the first two months of excavation conducted by the 1989 University of British Columbia's Archaeology Field School directed by Matson, and two months excavation conducted by a paid crew of nine university students. There was also a public information program running concurrently throughout the four months supported by B.C. Heritage Trust (Holm 1989).

This first season of excavation concentrated on two "Trenches" (Figure II -3 and III-1). The area available for excavation was on the railroad right-of-way between the road bed of Bayview Street and the railroad tracks. Furthermore, we were restricted by Burlington Northern how close to the tracks we could excavate to the west and, on the east, by the large sewer pipe that the reason for Percy's excavation. Therefore, we were narrowly constrained where we could excavate, and the narrow corridor of available intact deposits lay between the trench excavated for the sewer and the limit imposed by the Burlington Northern. Because of the presence of a manhole cover for the sewer we had faith that we knew where the sewer lay, and armed with engineering drawings of the sewer trench, we laid out our excavation units.

We planned a wide area excavation of the midden, following Ham. Ham (1982) had problems in following layers across the full four metre width of his excavation. Therefore, we decided on a narrower area of 2 by 6 metres. The idea was that one side of our excavation would be in the sewer trench, which we would dig out so that we would have a preview of the stratigraphy. With these considerations we laid out two trenches of 2X6 metres, one referred to as the "North" Trench (units A,B,C) and the other as the "South" Trench (units D,E,F) (Figures III-1, 2, -3). The same general excavation procedures were followed in both trenches. All excavation was by natural layers, with thick layers crosscut by 10 cm arbitrary levels. The first and every tenth bucket was kept as a matrix sample, while every fifth bucket was washed through one-eighth inch (3 mm) screen and kept as a "shell" sample. All other material was water screened through

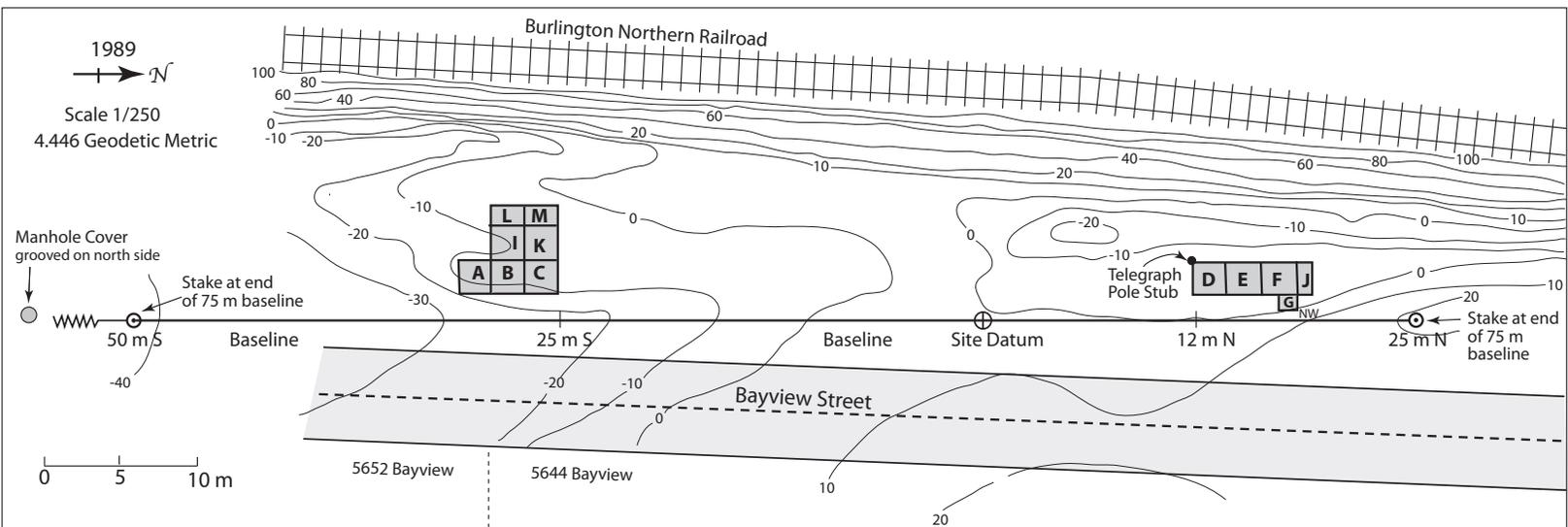
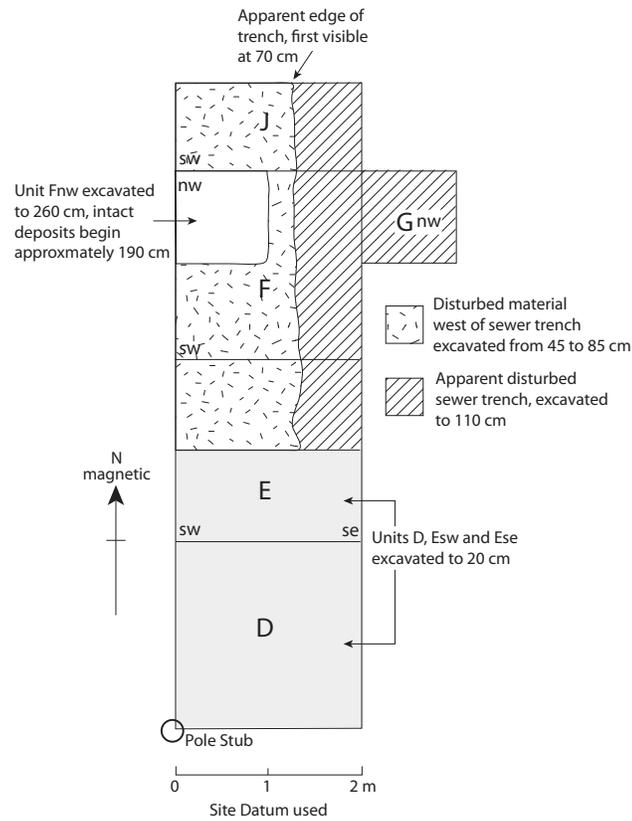
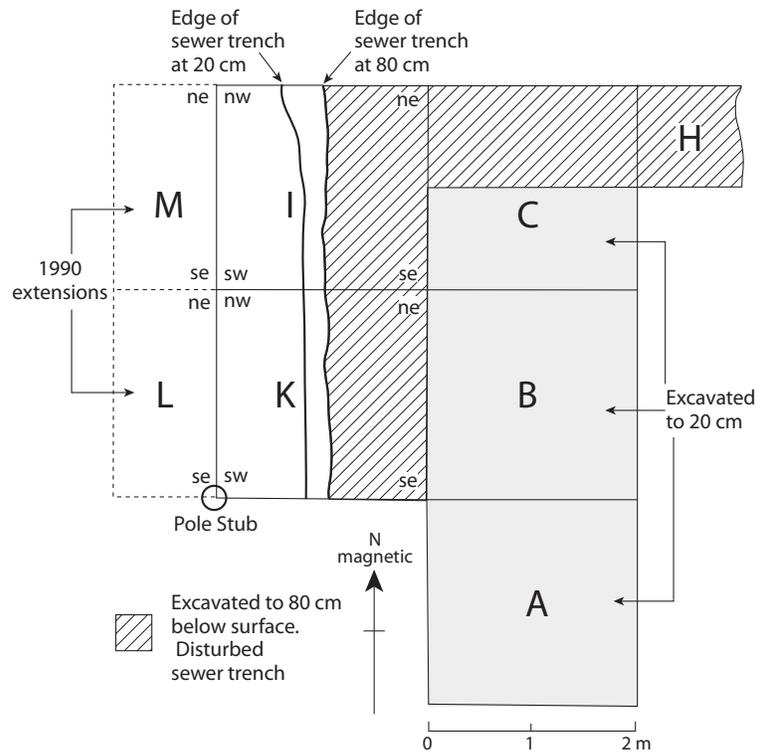


Figure III-1. Contour map of 1989 and 1990 excavation locations



Plan View 1989, North Trench Excavations

Figure III-2. Plan View North Trench Excavations



Plan View, South Trench Excavations

Figure III-3. Plan View South Trench Excavations

one-eighth inch screen and sorted for lithics, artifacts, and faunal remains. Detailed layer/level notes were kept, contour maps were drawn with each change in stratigraphy and every ten centimetres in the thicker layers. Intact cultural deposits were excavated by quarter units (denoted as sw, se, nw, and ne), so that each 1 x 1m subunit was excavated separately and a complete set of notes and forms kept for each quarter unit. Photographs were taken in both color and black and white.

As we were working in an urban area, we had to face the twin problems of preventing vandalism and the safety problem of open pits in an area where people were used to parking their cars. As per our permit with the municipality of Surrey, the units were framed with heavy timbers, and a system of locking heavy pieces of plywood was developed. This resulted in a structure that one could walk over easily, and that would take a considerable effort to defeat, and provided a source of humor for visiting archaeologists, when we “unlocked” the units. This safety feature was more important in the second season, when greater depths were reached.

Disturbance was universal in the initial units. In the South Trench on June 13, the northwest 1/4 of H was laid out (Figure III-3) in order to give us a greater east/west cross-section across the sewer trench. This unit was abandoned on July 11 at 80cm below datum, still in disturbed deposits. Within the initial North Trench units, midden disturbance was extreme throughout. The field school did not uncover intact deposits through May and June. At this time, on examining the North Trench units and sewer trench engineering plans, it was decided that sewer trench was much wider than the plans showed. Instead of continuing excavating the entire 2X6 metre trench, we concentrated on the 1X1 metre unit Fnw and proceeded to excavate it by 20 cm arbitrary levels as we determined that this ought to be well outside what was planned for the sewer trench. We continued until almost two metres of overburden and disturbed soil matrix was removed (Figure III-2). At approximately 190 cm we encountered our first intact deposits present in the North Trench. Figure III-5 shows a final plan view of the North Trench at the end of the 1989 field season and Figure III-4, after profiling in 1990.

We attempted to excavate the undisturbed strata by natural layers, but this bay mussel dominated deposit was not as well layered as the later deposits in the South Trench. Further inhibiting our ability to distinguish natural layers was the fact that we were digging in a one by one meter unit(Fnw), a classic ‘telephone booth’, with poor lighting. To complicate the excavation even further, within the 70 cm of intact deposit present, two small clay lined depressions as well as an intact burial of a child were encountered (Figure III-8). The burial was left pedestalled, and the excavation of this test pit removed approximately 0.50 cubic metres of undisturbed deposit. Sterile deposits of coarse angular sand were reached at 250 to 270 cm below the surface in the southwest corner of Fnw as shown in Figure III-8.

In the South Trench, the original units of A,B,C, turned out to be, not straddling the edge of the sewer trench, but to be within the sewer trench which was much wider here as well as in the North Trench than indicated on the engineering plans (Figure III-3). The fact of disturbance was more obvious than in the North Trench, and a 1x1 metre unit was laid out to the east of unit C (Hnw on Figure III-3). Two more units, I and K, were laid out to the west on July 11, 1989 (Figure III-3) and the edge of the sewer trench was located within them. Unlike the North Trench, intact deposits were located between the sewer trench area and the limits imposed by Burlington Northern relatively close to the surface (Figure III-7).

Once I and K were laid out, excavation in the South trench proceeded at a better rate, because the stratigraphic situation became clear very rapidly. Either intact midden deposits were found just below the surface along the entire face of I and K or disturbed deposits indicating the fill of the sewer trench. Once this edge of the sewer trench was located, we excavated within the sewer trench deposits until a substantial exposure of the interface between the intact and sewer trench deposits were encountered, revealed, profiled and photographed. This excavation procedure allowed us to work from within the sewer trench and ‘peel’

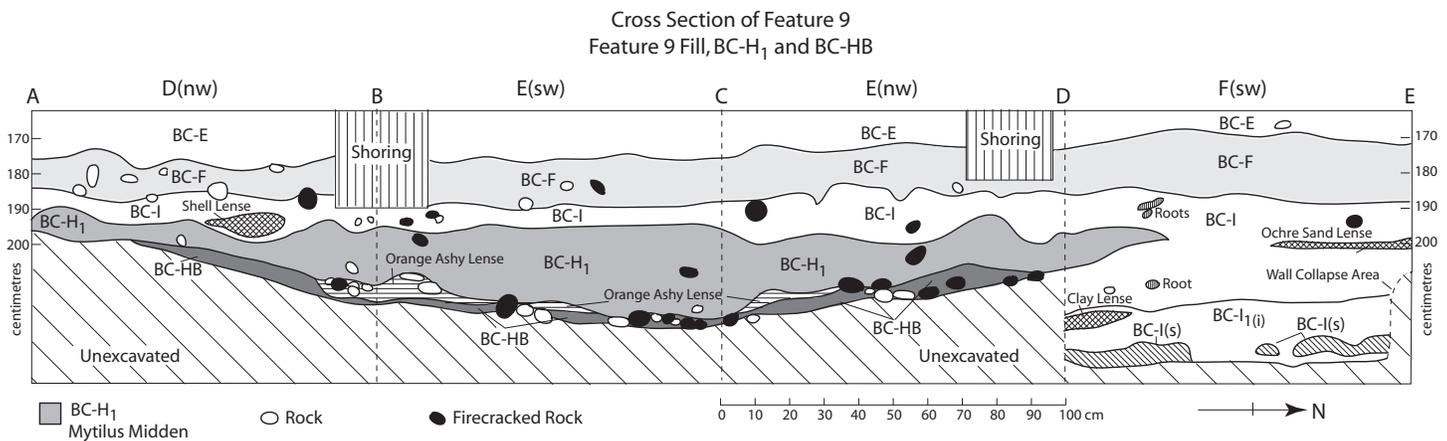


Figure III-4. Stratigraphic profile of west wall of the North Trench, below 160 cm.

back the midden's layers from our exposed section of intact midden which was 4 metres north/south by approximately 80 cm east/west. This midden material (units Inw, Isw, Knw and Ksw) was excavated by natural layers, cross cut by 10 cm arbitrary levels. Natural layers encountered ranged from two cm to about fifteen cm in thickness. Excavations in intact deposits in the South Trench reached 80 cm below the surface by the end of August. About 3.2 cubic metres of intact midden were excavated. The surface most intact layer was denoted C-L0, and the deepest layer reached in 1989 was layer C-R.

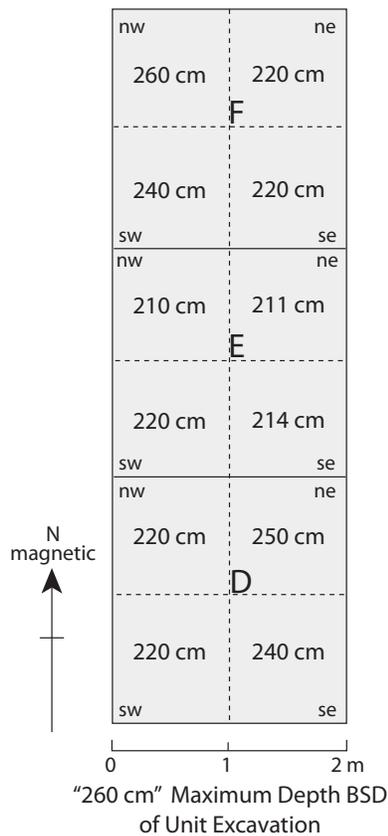
The beginning of the 1990 Crescent Beach field season commenced the first week of July, with a paid crew of eight under the direction of Matson assisted by Grant Beattie. Running concurrently with the paid crew was the University of British Columbia's Field School under the direction of Richard Pearson. The overall direction of the excavation was coordinated by Matson.

The paid crew's first responsibility was the reopening of the South Trench units along with a 4X1 metre extension running directly beside the original units and designated as Units Lse, Lne, Mse, and Mne (Figure III-3). These two expanded units were directly west of the original trench, adjacent to the railway tracks.

The old trench was easily re-established because plastic sheeting had been placed over unexcavated deposits before backfilling in 1989. The crew excavated within the sewer trench deposits down to about the one metre mark, further exposing the interface between the intact and disturbed deposits. Once the interface was exposed to the one metre level, the exposed stratigraphy was profiled and the results compared with the stratigraphic profile produced at the end of the field season in 1989.

Work commenced on the South Trench with little problem. There was an obvious advantage in being able to work from the exposed stratigraphy, although it was surprising in some units how quickly a layer disappeared as one moved away from the interface into the unknown deposits. We excavated using natural layers, starting with those already delineated in the 1989 field season. The number of layers encountered and excavated in 1990 began with C-L0 in the new L and M units and ended with C-Y. The largest new layer encountered was C-R which was almost 25 cm thick in some areas (Figure III-6). The 1990 excavation procedures followed those already established in 1989.

A total of about 15.6 cubic metres of intact midden was excavated in the South Trench during the second year. All units in the South Trench were excavated down to between 110 and 150 cm below the surface including the units comprising sections of the sewer trench. Figure III-6 is a stratigraphic profile of the west wall of units Lse, Lne, Mse, and Mne, along with the north walls of units Inw and Mne, at the end



Plan View 1990, North Trench Excavations

Figure III-5. Plan View North Trench Excavations 1990

of the 1990 field season (see also Figure III-7).

Although there were a number of interesting features excavated from the South Trench, they were all identified as hearths (see Chapter VIII for full details). Two of the most completely represented were features 10 and 13. Feature 10 was uncovered in units Inw and Isw, between 80 and 90 cm below the surface in layer C-S, and was a concentration of burned shell of a very light color surrounded by large cobbles. Feature 13 was encountered in the last few days of excavation and is another large hearth full of fire cracked rock.

The sewer trench was relatively regular in the region of the South Trench, running almost directly magnetic north, through units I and K (Figure III-3). Instead of the circa 1.5 wide trench with vertical walls shown in the engineering drawings, though, it turned out to be at least 3 metres wide at the top with sloping walls (Figure III-6, 7).

The North Trench was reopened by the paid crew who started at the site a few days before the field school. A backhoe operator removed approximately 190 cm of overburden within the boundaries of the 1989 North trench. We knew from the excavation of Unit Fnw in 1989 that the intact deposits were 'capped off' by a thick sterile layer of clay (Figure III-4, Layer BC-F). The backhoe operator excavated to the top half of this clay layer (BC-F) over an area of 2 x 6 metres (Figure III-5). Under the supervision of Grant Beattie, a wooden supports and braces were placed into the two metre deep trench in order to provide adequate shoring support for the trench.

The Field School was responsible for working in the North Trench through the month of July and half way through August. The first task was the reopening of unit Fnw which had been excavated to more than 260 cm in parts and still contained the pedestalled juvenile burial, all of which was located directly

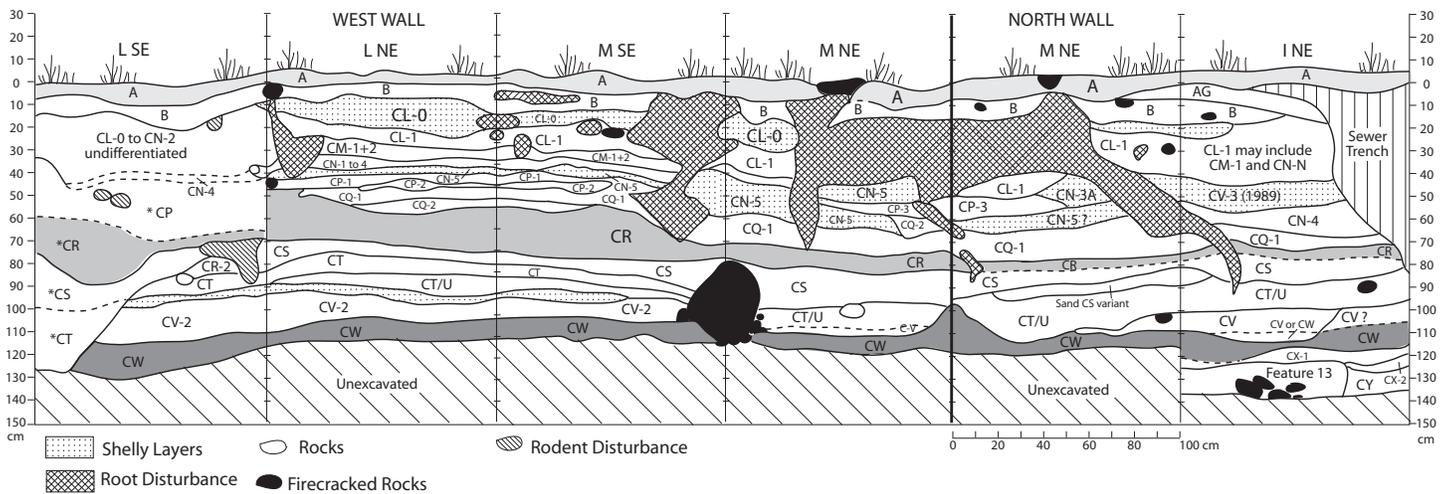


Figure III-6. Stratigraphic profile of west wall of the South Trench, 1990.

underneath a sheet of plastic laid down at the end of the 1989 field season. Once the burial was removed, Fnw could be profiled and information concerning the stratigraphy could be used to excavate the rest of the units. Figure III-7 is a stratigraphic profile of Fnw, north and west walls, at the end of the 1990 field season.

Excavations during 1990 in the North trench concentrated on Fnw, Fsw, Enw, Esw, and Dnw (Figure III-3). There was extensive disturbance in the southern section of the trench in Dsw, and Dse. Dne held the interface between the sewer trench and the intact deposits. Unlike the interface in the South Trench, the north sewer trench interface proved to have a ragged and uneven edge that was a source of some difficulty, but ultimately, we succeeded in locating the edge. It became apparent that the North Trench area had been the location of a large cave-in during the excavation of the sewer trench which explained the wide area of the disturbed area and the lack of intermixture of historic material within the disturbed zone. The edge of



Figure III-7. South Trench, at end of excavation, facing North.

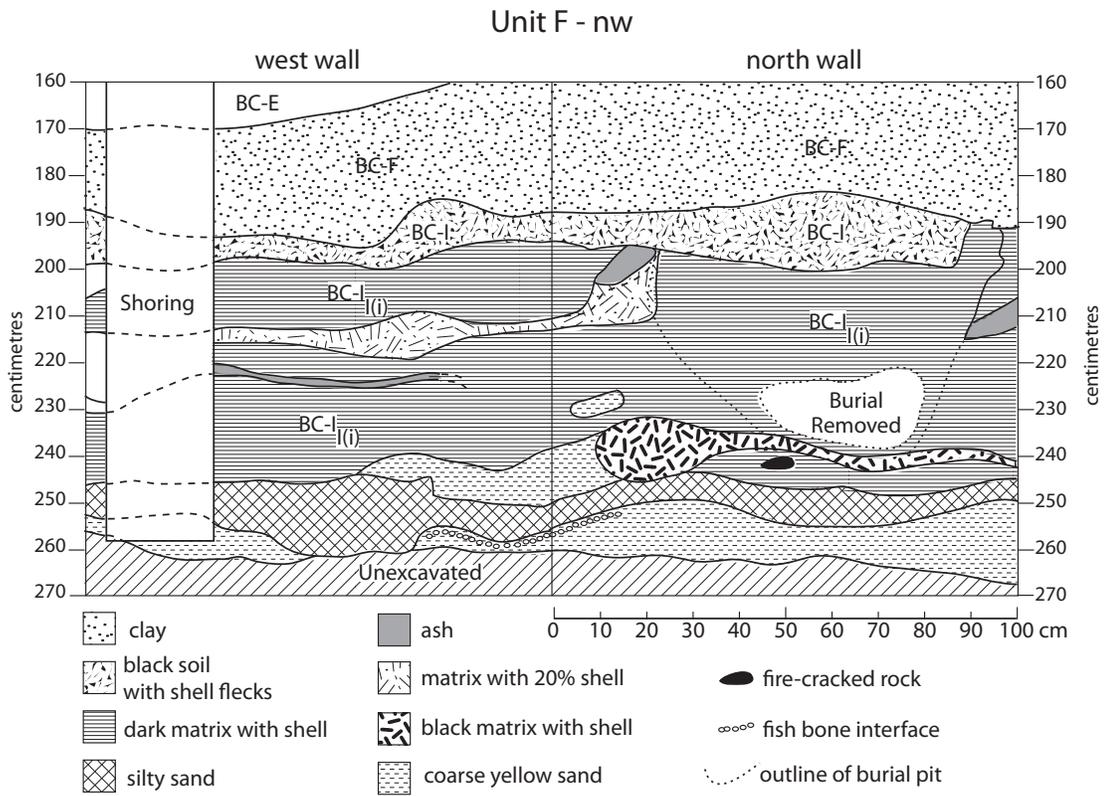


Figure III-8. Stratigraphic profile of Unit Fnw, North and West Walls.

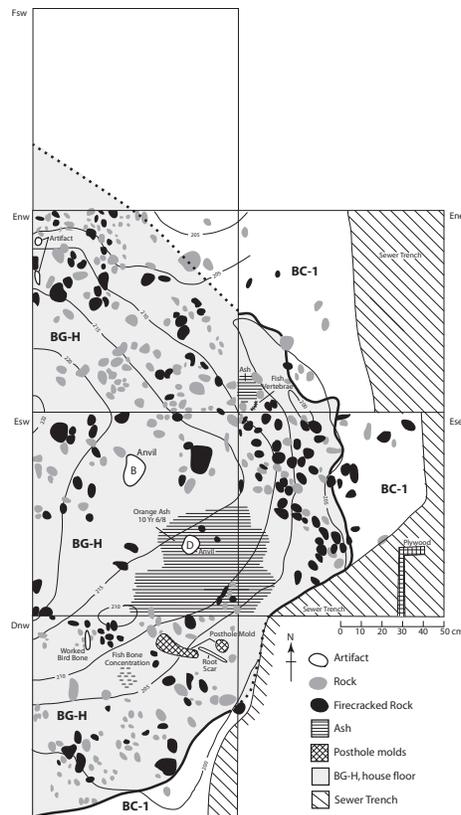


Figure III-9. Plan view of Feature 9, showing contour intervals of the floor of Feature 9.

the sewer trench varied significantly according to depth, and seemed to expand far to the west within Unit D. For this reason, Dsw was not excavated extensively, and Units Dne and Dse were found to be almost entirely within the disturbed area at 200cm below datum, complete with a relatively vertical piece of plywood which apparently was used to shore the original sewer trench (Figure III-9)!

The midden deposits were excavated by natural layers and the same procedures were followed as at the south end of the site with all intact material water screened through 3 mm mesh, and the same proportion of buckets and shell samples saved. About 2.5 cubic metres of intact midden were excavated from the North Trench in 1990.

After the field school ended in mid-August, excavation in the North Trench continued with other crew members. The designation of layers in the North Trench in 1990 was much easier than in 1989 as there were definite differences exhibited between the natural layers starting with layer BC-H and ending with BC-K. There was some uniformity within these layers in that crushed mussel shell was the dominant shellfish in all of them. Although sterile was reached in unit Fnw, up to 50 cm of intact midden was left in North Trench Units Dnw, Esw, Enw, Ese, Ene, Fse and Fne at the end of the excavation. Figure III-5 is a plan view map of the North Trench showing maximum depths excavated in all units and the intact/disturbed material interface.

The most interesting feature from the Crescent Beach 1990 field season presented itself in the North trench and has been designated Feature 9 (Figures III-4 and -9). It is a dense, thick mussel shell layer in a semi-circle shape up to 35 cm thick. The complete outline of the feature was not revealed during excavations. On the outer edges of this feature the inside shelly deposits were differentiated from those layers outside it by the presence of both large cobbles and fire cracked rock which was abundant within Feature 9 (Figure III-5). This semi-circle of fire cracked rock (approximately 3.5 to 4.5 metres in diameter) was too large to be a simple hearth, and the orangy yellow ashy deposits present were localized and did not extend across the feature. The cultural layer present on the outside of the feature did not have the intense shelly nature of the inside cultural layer. During the last few days of the field school two of four possible postmolds were discovered, mapped, and excavated. These two postmolds were less than 10 cm in diameter and one was at least 5 cm deep while the other was at least 4 cm deep. One of the postmolds contained dark soil while the other postmold had a lighter and sandier soil matrix.

We believe that Feature 9 is a house floor/living area and it does resemble living floors found and excavated at both the middle component from the Glenrose Cannery site and the early component at the St. Mungo Cannery site (Matson 1976; Ham et al. 1986) but is more similar to small housepits discovered subsequently by Morgan(1999) at Sequim, Washington and elsewhere as described in Chapter VIII. Figure III-9 also illustrates the contours of the floor of Feature 9. Excavation in units Dnw, Esw, Ese, Enw, and Ene ended when Layer BC-Hb was removed. As can be seen from Figure III-8, though there were problems in defining this layer in Unit Ene.

Unit Fsw (Figures III-5 and -8) was the one unit that had substantial layers excavated underneath BC-Hb, up to 240 cm below datum, in addition to Fnw. Units Fse and Fne had lesser amounts of layers underneath BC-Hb excavated as well. Working in the North Trench around the shoring was difficult, and we looked forward to photographs at the end when the shoring was removed. The shoring was removed on the afternoon of Aug. 30, 1990, and that evening a downpour occurred which filled the North Trench with several feet of muddy water, which plastered the walls (Figure III-10). Since arrangements had already been made for backfilling both trenches with a back hoe for later that day, this opportunity for photographs without shoring never occurred.



Figure III-10. North Trench, looking north, after thunderstorm, August 31, 1990.