

**MAPPING AND TESTING PRECONTACT STÓ:LŌ
SETTLEMENTS IN THE FRASER CANYON AND FRASER
VALLEY (2004-2005):**

**Xelhálh (DjRi-14), Eyxel (DiRi-48), Shxw'ow'hamel (DjRi-30),
Qithyil Island (DhRl-15), Sqwa:la (DgRl-6), Th'ewá:lí (DgRl-
17), Sxwóxwiymelh South (DiRj-1), and 'John Mack Slough'
(DhRl-T1)**

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INTRODUCTION

The 'Stó:lō Pithouse Settlement Mapping and Testing Project' is an archaeological research project, one of several major segments of the multi-year, multi-disciplinary 'Fraser Valley Project' previously reported on by Lepofsky, Schaepe, Blake, and Arnold (2003). The objectives of this study, as presented below, derive from the overarching research agenda of the 'Fraser Valley Project' (see Lepofsky et al 2003). Funding for this project was provided through SSHRC grants 410-2003-1525 and 752-2003-2318. This report presents the results of the two seasons of fieldwork (2004 and 2005) carried out for the 'Stó:lō Housepit Settlement Mapping and Testing Project.' Eight archaeological sites were included in this study -- Eyxel (DiRi-48), 'John Mack Slough' (DhRl-T1), Qithyil Island (DhRl-15; also known as the Scowlitz Site), Shxw'ow'hamel (DiRj-30), Sqwa:la (DhRl-6), Sxwóxwiyemelh 'South' (DiRj-1; formerly known as the 'Katz' site), Th'ewá:lí (DgRl-17), and Xelhálh (DjRi-14) (see Figure 1). The sites included in this study are located within Stó:lō Traditional Territory and are associated with the bands of the Stó:lō Tribal Council and Stó:lō Nation, Skwah First Nation, and Chehalis First Nation. Of the eight sites included in this project, seven are located on First Nations 'Indian Reserves' including the Chawathil First Nation, Shxw'ow'hamel First Nation, Scowlitz First Nation, Soowahlie First Nation (each of which is associated with the Stó:lō Tribal Council), Skwah First Nation, and Chehalis First Nation. One site - DiRi-48 (Eyxel) - is located on provincial Crown Land near the town of Hope.

This project was carried out under the terms and conditions of the following permits: Stó:lō Heritage Investigation Permit #2004-28 (applicable to all sites), Chehalis Heritage Investigation Permit #2005-01 (applicable to 'John Mack Slough'), and provincial H.C.A. Heritage Investigation Permit #2004-175 (applicable to DiRi-48). Permissions were sought and received from individual Band Councils for those communities associated with the Stó:lō Tribal Council, as well as from Skwah - under the auspices of the Stó:lō Heritage Investigation Permit. The Stó:lō and provincial permits for this project were acquired and held by David Schaepe. Work carried out at 'John Mack Slough' on the Chehalis Reserve was carried out as an extension of the research directed by Gordon Mohs and carried out by Adrian Sanders and Morgan Ritchie. Fieldwork for this project was carried out mainly between May of 2004 and August of 2005, with a single day of fieldwork in March 2006 focusing on testing and supplementary mapping of Qithyil (DhRl-15) during low-water season. A large number of people from the numerous Stó:lō communities, and the U.B.C. and S.F.U. Archaeological Fieldschools of 2004-05 (see Acknowledgements) participated in this fieldwork and contributed to the success of this project and to the mapping and testing results presented below. All collected and catalogued artifacts are housed in the Stó:lō Nation Material Culture Repository. In respect of Stó:lō cultural protocols established for this project, red ochre ('temelh') was worn by all field crew while working on-site, and a 'burning' ceremony was conducted at the end of each season of the project. Summaries of methods and results for the sites we investigated are presented below.

Copies of this report were distributed to the Stó:lō Tribal Council (including Chawathil, Scowlitz Shxw'ow'hamel, and Soowahlie First Nations), the Stó:lō Nation, the Skwah First Nation, the Chehalis First Nation, the Stó:lō Nation Archives, and the provincial Archaeology Branch - in compliance with all permitting requirements.



Figure 1. Map of the lower Fraser River Watershed - showing the locations of all housepit settlements investigated by the Fraser Valley Project, including those described in this report.

OBJECTIVES

The primary goal of this project is to investigate housepit settlements within the 'Up-River' portion of the Mainland Gulf of Georgia Region from Hatzic Lake to Five Mile Creek in the lower Fraser Canyon. This work will form the core of David Schaepe's Ph.D. dissertation research in the Department of Anthropology, University of British Columbia. One of the basic research questions we are addressing is the spatial and temporal provenience of housepits within the region. Prior to our research, data were not available by which a chronology of housepit features and settlement patterns could be soundly established within the study region. Compounding this data-gap was the relatively 'vague' detail of mapping that existed for most known housepit sites – most existing maps generally lacked the precision necessary to extract valid and reliable information describing housepit features (e.g., dimensions, shape, depth, and total area), and also lacked precise real-world spatial provenience beyond the level of the 'site.' Very few housepits in the region had been tested and there were only a handful of radiocarbon dates establishing the ages of these settlements and their associated features, severely limiting our ability to sort them chronologically.

The specific objectives of this project - focusing on the sites and housepit features selected for this study - aim to contribute new data by: (1) accurately and reliably mapping each site, including all housepits and other visible features; (2) accurately and reliably plot all sites and their features using UTM coordinates; and (3) collect and process radiocarbon samples from selected housepit features at each site in order to estimate their history of occupation.

As mentioned above, this project is one part of the SSHRC-funded multi-year and multi-disciplinary 'Fraser Valley Project' headed by Dana Lepofsky. Michael Blake, David Schaepe, and Sue Formosa formed the core mapping and testing research team, with S. Formosa acting as the primary mapping technician. As described in Lepofsky et al (2003), the broad aim of the Fraser Valley Project is the study of Stó:lō social interaction and group identity in the Fraser Valley. A significant focus of this project, particular to Schaepe's Ph.D. research, is the archaeological investigation of precontact Stó:lō houses and settlements. Research in this area will contribute to a better understanding of village-level organization and changes that occurred in Stó:lō social and economic organization in the late precontact and early European-colonial period. This project coordinates with Stó:lō Nation's and Stó:lo Tribal Council's plans for developing cultural awareness programs and managing Stó:lo heritage on an on-going basis. Data gained in meeting the objectives of the 'Stó:lō Housepit Settlement Mapping and Testing Project' will augment similar data previously collected from select housepit settlements in the initial phase of the larger project carried out in 2002. These data will provide a foundation supporting numerous aspects of household and settlement studies.

RESEARCH PLAN AND METHODS

The research plan for this project is aimed at addressing questions and data-gaps of 'space and time' - as noted above - with regard to the eight housepit settlements selected for inclusion in this study. The selection of sites included in this study was based on a number of factors. One main factor in selection for study was whether or not a site still had pithouses visible on the ground surface. Many previously recorded sites in the region have been destroyed by development activities and are no longer available for mapping and detailed study. Another factor was regional coverage—we wanted to have a sample of sites from all parts of the study region. Most of the well-preserved pithouse village sites in the region are located on designated

Indian Reserves, and so fall within the jurisdiction of individual First Nations, many of whom are members of either Stó:lō Nation or Stó:lō Tribal Council, but also including Chehalis First Nation and Skwah First Nation as independent communities. The sites included in this study represent some of the most intact housepit settlements remaining in the mainland Gulf of Georgia Region (Schaepe 2004, 2005). Results from Schaepe's preliminary analysis of housepit settlements in the region by Schaepe (ibid.) - classified by size, integrity, and location - helped guide to the selection of sites included in this project.

The research plan applied to this project consisted of three basic methodological elements: (1) mapping; (2) evaluative testing; and (3) radiocarbon sampling / dating. These three basic elements of the research plan serve to locate each site and associated housepit feature in space; define the form of each housepit feature at each site; explore the stratigraphic profile / occupational history of selected housepit features; and, potentially, provide an absolute age estimate of each occupation.

A guiding principle of our research was to maximize information gathering while minimizing site disturbance, including minimizing the collection of artifacts and other types of samples that require additional laboratory analysis and/or curation. A 'burning' ceremony was conducted at the end of the project as a means of reconciling our work with the communities - living and ancestral - attached to these sites, per Stó:lō cultural protocol. Summaries of methods and results for the six sites we investigated are presented below.

Mapping

The first part of this research plan is aimed at addressing question of 'space' and entailed (1) clearing brush, (2) using a high precision GPS unit (Leica 1200 GPS; 1200 GPS rover) to establish datum points and mapping stations at each site, in three dimensional space (using UTM Nad 83 coordinates), and (3) using a Leica Total Station (703R or 705R) to establish the 3D provenience of mapping station, ties into existing datum points, reference points, geodetic markers, and to collect topographic data that could be processed and projected as digital maps (surface maps, topographic maps, shaded contour maps, etc.) using Surfer 8.0, and ArcGis. Maps of each site are included in the following section of the report. Feature numbers were newly assigned or otherwise carried forward from existing maps, as required. A centre point for each feature was established. The highly accurate and detailed site and feature maps produced using this method will permit the subsequent analysis of housepit feature form and settlement arrangements (beyond the scope of this report). All mapping data relevant to re-establishing site proveniences and mapping stations are presented in Appendix I - Mapping Data. Detailed descriptions of the mapping methods applied in this study are provided below.

Review of the Mapping Work

Achieving our goal of collecting detailed and comparable map data from settlements and housepit features within at numerous sites throughout the Fraser Valley and lower Fraser Canyon. required collecting precisely georeferenced surface data. A significant challenge that we faced in determining the georeferenced position for these sites was that few were located close to geodetic markers. Much of the initial portion of the 2004 season was occupied with developing a reliable, replicable set of methods for determining true ground coordinates for the site locations with the use of a Garmin GPS Map 60cs handheld GPS unit. This provided an approximate UTM location (often with a +/- 2-3 m horizontal accuracy and +/- 5 m elevation accuracy). Once a site was located 'on the ground', a topographic survey was completed of the

site with the use of a Leica 705R Total Station and prism. The methods for collecting the topographic data were refined over the 2004 season. Five sites -- Th'ewá:lí (DgRl-17), Shxw'ow'hamel (DiRj-30), Sxwóxwiyemelh (DiRj-1), Sqwa:la (DhRl-6), and Xelhálh (DjRi-14) -- were georeferenced and mapped, at least partially. Subsequent to the 2004 field season, the survey data for DiRj-1 and DiRj-30 were corrected using known coordinates and benchmarks provided by CP Rail and CN Rail respectively.

In 2005, with the exception of Sqwa:la, all of the sites surveyed in 2004 were revisited for further survey work and for stratigraphic sampling and carbon collection. The location of all test units and carbon samples was recorded using a Leica 705R Total Station. Th'ewá:lí (DgRl-17) was georeferenced again using the high precision GPS. CN Rail and CP Rail provided information for two known ground points adjacent to their respective tracks for triangulation to a station on Xelhálh (DjRi-14) to georeference the site. The data for Sqwa:la remains uncorrected.

Three sites -- Eyxel (DiRi-48), Qithyil Island (DhRl-15), and 'John Mack Slough' (DhRl-T1)-- were added to the project in 2005. We also mapped a northern extension for the Sxwóxwiyemelh (DiRj-1) site. The topographic survey and stratigraphic testing of these sites were completed simultaneously. A Leica 1200 high precision GPS unit was used to georeference these sites. The post-processing of the DiRi-48 GPS data was completed by David Martens, Instructor in the Department of Geomatics, British Columbia Institute of Technology. The topographic surveys for these new sites were collected in the same manner as for the sites in 2004.

Georeferencing the Sites

All of the sites were without known survey points and only three sites had benchmarks in reasonable proximity. The georeferencing began with a GPS determination of an approximate ground location (+/- 2-3 m) and elevation (+/-5 m). This approximate ground coordinate was assigned to the first station on or near a site. In order to establish orientation, a backsight was located as far away as possible within a relatively clear area (e.g. the backsight for Sxwóxwiyemelh (DiRj-1) (the Katz site) was set up across the Fraser River – approximately 1.2 km away).

A site was walked and features were labeled as an initial process for mapping. A position for a first survey station was selected on or near a site based on proximity to site features or a good range of visibility on the site. Rebar embedded in a concrete pillar was used at the Sxwóxwiyemelh (DiRj-1) Katz, and Sqwa:la (DhRl-6) sites to define a baseline with a known orientation for the sites. Subsequently, it was found that the locations of some of the sites made the use of rebar in concrete an impractical choice (e.g., transporting these in a Zodiac up the Fraser River). Wooden hubs and plastic tent pegs were used for marking stations on the remainder of the 2004 sites. A visit back to the Xelhálh in November 2004 revealed that the wooden hubs would not weather well. From that point, metal stakes or rebar were used to mark stations on sites.

In 2004, the Garmin GPSmap 60cs unit was set up on each station to collect satellite data averaging 100 readings and providing coordinates with +/- 2 m horizontal precision. In 2005, a High Precision Leica GPS 1200 base was set up on each site and provided an autonomous position coordinate to 3 decimal place (mm) accuracy at the beginning of the data collection. Data collection was set for UTM Zone10 Nad83

In both years, elevations were set on the GPS units at approximate *asl* values and corrected later. Benchmarks were in relatively close proximity to the site (within 1 km) for Sqwa:la, Xelhálh, and Soowahlie. The handheld GPS was set at the benchmark and the elevation

change from the benchmark to the site station was used to calculate the approximate elevation for the site.

Once the first station had horizontal and vertical coordinates, the GPS unit was used to establish a backsight to set an orientation for the total station. In 2004, the handheld GPS was taken to a location that was visible from the first station, off the site, and as far as possible (up to 2 km) away in order to increase the precision of the orientation setting for the total station. The Leica 705R Total Station was set up on the first station and assigned the coordinates for the station. The person at the backsight location, held a prism which was sighted by the person on the Total Station. The backsight bearing was calculated using the GPS coordinates for the backsight. The handheld GPS data could not be corrected. Alternative sources for site location had to be used to obtain true ground coordinates for these sites.

In 2005, a GPS Rover was used to determine the coordinates for the backsight. The Rover was set up on a point that was clearly visible from the GPS Base station. Data were collected at the rover for 3 minutes once the error in precision was below 30 mm. A 3D coordinate was output for the backsight location. This coordinate was used to calculate the bearing from the base/first station to the backsight for orienting the total station once it was set up on the first station.

Exceptions to this Process

Handheld GPS readings can be significantly distorted by signal reflection in locations surrounded by tall mountains, buildings, and in some cases, forest cover. Several of the sites we studied were near steep mountains or cliffs, and occasionally were also heavily forested. The Xelháhl site is a case in point. It is located in the Fraser Canyon and closely surrounded by mountains on all sides. GPS readings were significantly off—and usually placed the site in the middle of the Fraser River. In this case we found an existing benchmark at the east end of a railway tunnel near the western edge of the site. This benchmark was used as the backsight for a survey station set up on the site we arbitrarily assigned it a bearing of 270°. This allowed us to proceed with the mapping until we could correct the coordinates using data provided by CN Rail.

The tall trees and the high bluff immediately to the west of the Scowlitz Island site resulted in poor base readings on the site. As a result, the Rovers could not obtain reliable data. To create a backsight, the base station was moved to an alternate location on the island and a second autonomous point was obtained. The detailed topographic survey was completed by setting the total station up on one of the base stations and using the other base station as a backsight. A check shot on the backsight had the same bearing but different coordinates and distance than the original base station autonomous reading for that point. The backsight station was assigned the coordinates obtained by the total station. This station was subsequently used as a station setup for half of the topographic survey for the site. On a subsequent day, a third base station point was established and data was collected from this point for 3 hours. This data will eventually be post-processed in order to make the correction, but this has not yet been carried out.

Topographic Survey of the Sites

Once the total station was set up on each site and its precise 3D coordinates and orientation (set to a known backsight) entered, mapping could begin. Data was captured at regular intervals across the site by sighting on a rod-mounted prism held by a person walking across the site surface. Subsequent stations were set by traverse from the first station. Ideally, the traverse was closed when the survey was completed. Post-processing of the data was

necessary on all of the sites to obtain true ground coordinates at the centimeter level of accuracy. Mapping station locations were set to maximize data collection while minimizing the number of stations required. In most cases, new areas of the site became apparent only as vegetation was cleared; therefore, it was not realistic to strive for a closed traverse before beginning the topographic survey.

It was not initially apparent just how many measurements needed to be collected in order to produce highly detailed and precise topographic and feature maps of each site. However, after mapping one housepit site we soon developed a strategy for effectively and efficiently collecting and recording data to produce the sorts of maps we were after. The first site we surveyed in 2004 was Sqwa:la. It is a small site with only three housepits and two cache pit depressions. Prior to mapping the site we had to clear the brush and other vegetation from the surface in order to expose the features and provide clear sight lines for the total station. Once this was completed for all of the pithouses, the prism person walked the surface, placing the rod on the ground at approximately 50 cm intervals. It required a day our three person crew to set up the base stations, clear the vegetation, and collect the data for the three large housepits. The data were downloaded at the end of the day and processed using Surfer 8.0. The details in the shapes and relationships of the features to one another were very apparent both in the contour map and the surface map. Based on this initial map, we decided that the full site should be mapped to provide perspective for the features, including the nature of the landform on which the pithouses were located. The area of the site immediately surrounding all of the features as well as an adjacent modern cemetery and slough channel edge were surveyed at 1-2 meter intervals. The resulting maps provided accurate data for measurement of the features and revealed that, contrary to our expectations based on earlier sketch maps of the site, the housepit depressions were rectangular and not circular in shape.

We thought that the results of the Sqwa:la map, in particular the perceived rectangular shapes of the housepits, may have resulted from our data collection method—that is, walking the surface of the features in a regular and rectangular grid pattern. In order to counteract this possibility, the next three sites (Sxwóxiwimelh, Shxw'ow'hamel, and Xelhálh) were “walked” (mapped) in a variety of ways to ensure that the rod holders were not selecting points for data collection based on preconceived notions of the shapes of the features. Through trial and error, our mapping methodology was refined in order that we just enough data to make accurate surface models for the sites, while at the same time, avoiding over-sampling and potentially collecting more data points than necessary to create the surface model.

The full surface of a site was walked either in a grid with regular capture intervals between measurements, or in radiating lines extending out from the total station. Housepit depressions were sampled more intensively, with data collections points spaced every 30-50 cm depending on the degree of vertical rise between points. Smaller cultural depressions, such as cache pits were sampled at 20cm intervals. Mounds were sampled around the perimeter then points were collected at approximately 30cm intervals with an additional point or two at the top of the mound. Portions of the site with no visible surface features were sampled at approximately 1-2 m intervals. Any structures – stone walls, cairns – were surveyed as standing structures separate from the topographic survey.

Each time the total station needed to be moved; a new station location was sighted and entered in the total station job as a fixed point. The instrument was moved to the new location and the previous station was used as the backsight to orient the instrument in space at the new location. At the conclusion of the data collection, the traverse was closed by returning from the last station through the other stations to the first station and ensuring that the resultant coordinates for the first station were within 2 cm of the assigned coordinates for that station on all three dimensions. Data collected in 2004 were coded using the following classes: topo

(topography), stn (station), hp (house pit), cd (cultural depression), b (burial). Data collected in 2005 were assigned a database code for feature types and numbers. Although raw data were collected with millimeter-level accuracy, only station points were assigned *mm* level precision. All topographic data were rounded to centimeter-level of precision. ‘Post’ maps showing the locations and distribution of surface points collected at each site are included in Appendix VII.

Exceptions to this Process

In the case of Xelhálh, a second closed traverse was carried from the first closed traverse when another section of the site was identified. This second traverse was closed to the first at STN7. The topographic survey within the second traverse at Xelhálh was done in a unique way. The cliffs surrounding the terraces in this part of the site required the use of the reflectorless mode on the total station. Data were captured by moving the laser across the cliff surfaces from top to bottom in a grid. Top and base points were collected every 2-3 m or where significant changes occurred. One section with overhanging walls created a significant challenge when developing a surface map for the site. Subsequent work on this site should collect “fault line” data for such overhangs to ensure they can be adequately depicted using the available mapping software.

Mapping

The raw total station data were downloaded through Leica Survey Office and the raw Leica 1200GPS data were downloaded through Leica Geo Office. The Garmin GPSmap 60cs data were downloaded through the Garmin Survey program. Post-processing of the GPS data was completed through Leica Geo Office using the Chilliwack, Kelowna, and Vancouver Island base stations to triangulate the Project’s GPS base stations and correct the data collected by the rover units. The raw data collected by total station using the base station’s autonomous position coordinates was corrected with a simple linear transformation. The difference in northing, easting and elevation between the associated base station’s autonomous position and the base station’s true ground position was calculated. These values (positive or negative) were added to the raw data coordinates to obtain the corrected coordinates. For sites where known ground points were used for the post-processing, the ArcMap Spatial Analyst Transform program was used. The type of transformation was determined by the number of known points that could be matched to the site survey stations. Most often, this was an affine transformation.

Surfer 8.0 was used to grid the corrected, cleaned data to make surface and contour maps. A universal krig was used for the gridding method. On sites with significant or sudden elevation change, break line, and fault line data were added to fine tune the kriging. For all sites, the UTM coordinate data needed to be truncated as Surfer could not make a surface using doubles (a number that has more than 7 digits). All map coordinates were truncated to 3-4 integers (depending on whether a 1,000 UTM grid line occurred within the site) and 3 decimal places.

Additional Sites Mapped in the Fraser Valley Project (2004-05)

Two other sites mapped as part of the Stó:lō Pithouse Settlement Mapping and Testing Project -- Welqámex (DiRi-15) and Ts’qó:ls (DiRi-1) -- were surveyed by Anthony Graesch on local grid systems during previous seasons. These sites were georeferenced during the 2005 season and the topographic data from these sites was included in the project data set. As well, topographic data from the Hiquelem site were available to us in partnership with a project directed

by Gordon Mohs for Chehalis First Nation and carried out by Adrian Sanders and Morgan Ritchie (see Lepofsky 2006).

Sites that were mapped and tested as part of the Fraser Valley Project, but beyond the scope of this report, are:

- i) Welqámex (DiRi-15) - detailed site work is available from Anthony Graesch (Graesch 2003, 2006).
- ii) Ts'qó:ls (DiRi-1) - detailed site work is available from Jean Arnold (Arnold and Schaepe 2004; Arnold 2006)
- iii) Hiquelem - detailed site work is available from Dana Lepofsky (Lepofsky 2005).
- iv) Katz (DiRj-1 - north and south) – 2005 Simon Fraser University fieldschool directed by Dana Lepofsky and Michael Lenert (Lepofsky and Lenert 2005, 2006).
- v) McCallum Site (DhRk-2) – 2004 Simon Fraser University fieldschool directed by Dana Lepofsky (Lepofsky et al 2005).

In total, detailed topographic data was obtained from 12 sites within the study region between 2004-2005 (see Figure 1), eight of which are accounted for in this report: 'John Mack Slough' (DhRl-T1), Sqwa:la (DhRl-6), Qithyil Island (DhRl-15), Th'ewá:li (DgRl-17), Eyxel (DiRi-48), Sxwóxwiyemelh 'South'/Katz (DiRj-1), Shxw'ow'hamel (DiRj-30), and Xelhálh (DjRi-14).

Test Excavations: Soil Probes, Auger Tests, and Shovel Tests

The second goal of our research was to determine the age and occupational history of select housepit features within each site. This phase involves preliminary "Evaluative Testing" (Apland and Kenny 1998:12-13) to assess the depth, extent and integrity of housepit deposits. Our testing strategy involved one or more of the following methods: (1) probing with a 2 cm diameter Oakfield soil probe; (2) augering with a 13 cm diameter bucket auger; (3) digging square or rectangular shovel tests (STs) generally measuring 20-25 cm per side; and (4) cleaning fortuitously exposed profiles to expose visible stratigraphy (e.g., DhRl-15 Feature 6 - 'Plankhouse Feature' profile; DgRl-17 'Mound Feature' profile). Where possible, we always used the least obtrusive in order to recover the target data. In some cases, we began our testing with a probe but then found it to be insufficient or ineffective (e.g., blocked by a root or large stone). We then moved to augering or shovel testing. All such test excavations terminated at the C horizon which was culturally sterile – with the exception of a few features, including Feature 13 at Xelhálh, where we encountered apparent floor features and decided to stop excavating to minimize unnecessary impacts. Where possible, we placed tests within the central floor area (generally within a 1 m radius circle) of each feature. This consistency in test placement permits some degree of comparison of patterning of housepit features, particularly hearth location, across the sampled housepits. Our testing method proved effective at exposing carbon-rich hearth deposits associated with floors in many housepits. This allowed us to collect radiocarbon samples that were reliably associated with floors, and in some cases we were able to recover samples from a superimposed sequence of floors in the same house (e.g., DiRj-30-F18-ST4).

The Oakfield Probes allowed us to collect 25 cm-deep core increments. Each 25 cm core increment was removed, described, and photographed before continuing down through the deposits. This continued until we reach the C Horizon. The Oakfield probe provides an exposed 'window' on one side of the coring tube, allowing effective examination, stratigraphic description, and identification and collection of radiocarbon samples from core sample while still contained in the probe. Depths of the core were established for each probe, as it progressed downward, allowing for an accurate accounting of sediment compaction that tended to occur within the core, itself, as a result of pushing the probe into the ground. Photographs and

stratigraphic drawings included the ‘corrected’ depths for each core, based on direct measurements inside the test unit.

Auger and shovel test excavations were carried out stratigraphically when possible.

They were excavated in arbitrary 10 cm levels within strata exceeding 10 cm in thickness. This strategy was more effective for the shovel tests than for the bucket auger tests, because they afforded a better view of the unit’s side walls and base during excavations. Auger tests were usually excavated in 15 cm increments, the length of the auger bore. This precluded examination of layers or Stratigraphic contact zones within the 15 cm span of the auger.

All excavation units were precisely plotted and provided ‘real-world’ three-dimensional provenience (UTM / mASL) from established stations on the site using the Leica Total Station, as noted above. Each test type was differentiated by a code and assigned a unique number which was also recorded on the total station. Shovel tests had the four surface corners surveyed beginning with the test datum. The same sequence was repeated at the base. Auger tests had four surface points taken around the perimeter beginning with a point above the best profile for the test. The same sequence was repeated at the base. Soil probes had a surface point taken. Most of the time, the diameter of the hole created by the soil probe was too small for the prism rod so no reliable basal readings could be taken. The depth of the probe was measured by tape and calculated by subtracting from the surface elevation reading.

Information on the excavations was maintained on excavation and sample forms created for this project (see attached Appendix VI - Excavation Forms). All units were given ‘numbered’ designations (e.g., ST-1) on a site-by-site basis (e.g., DgRI-17-F8-ST-1; DgRI-17-F3-ST-2; DgRI-17-F20-ST-3), progressively increasing by test type throughout the testing program at each site (as opposed to a feature-specific numbering system). Excavation unit locations are provided in the data tables presented in Appendix I - Mapping Data. Elevations were established for the surface and base of each unit; including each corner of the shovel tests. All matrix was screened through a 6 mm (1/8”) mesh size in order to recover all archaeological material. These collections were recorded according to site number, test unit designation, level/stratigraphic layer, and/or depth below ground surface. Artifacts discovered *in situ* were recorded three dimensionally using the total station. Paleobotanical samples were collected when possible, but these collections were limited by the small size of the test excavation units. Paleobotanical analyses were carried out on the soil sample collected from DiRj-30-F12 (see Appendix V - Soil Sample / Botanical Analysis). Profiles from at least one wall per unit were drawn and photographed. A hand-held digital camera was used to take photographs of each excavation unit (overview location) and exposed profiles, including detail profile shots from within each unit (taken by reaching down into and photographing the ‘inside’ of the unit, progressively from the top to bottom, and, when necessary, specific parts of the profile). Plan views were drawn and photographed where features were noted in the base of any excavation unit. Profiles of all the 47 test excavations (17 shovel tests, 12 auger tests, 18 soil probes) carried out for this project are included in Appendix IV. A photo record was maintained for all photographs taken on site. All artifacts recovered from our excavations were collected, catalogued, and described (see Appendix II - Artifact Catalogue), and are currently housed at the Stó:lō Material Culture Repository, except for the one lithic artifact recovered from John Mack Slough (DhRI-T1) which was returned to the Chehalis First Nation for curation.

Radiocarbon Sampling and Dating

Carbon samples were collected from all strata where charcoal could be observed in the coring probes or in the side walls. All radiocarbon samples were identified and marked in-situ

using a metal nail with a labeled tag. Carbon samples thus marked in shovel or auger tests were precisely plotted using the total station. Carbon sample provenience measurements were truncated to *cm* precision. The radiocarbon samples were given field identifications based on Site Number, Feature Number, Test Number, and Carbon Sample number - progressively per *test unit* (as opposed to per feature or site) - for example, DgR1-17-F8-ST2-CS-1, DgR1-17-F8-ST2-CS2; DgR1-17-F3-ST8-CS1, DgR1-17-F3-ST8-CS2. Eyxel was the only exception to this otherwise standard process, where radiocarbon samples (of which six were taken) were numbered sequentially across the site. Samples were photographed *in situ* prior to collection. They were then removed using a metal spoon and stored in a tin-foil 'envelope' placed within a sealed plastic bag - each of which was labeled with the field sample number, date, and provenience. Beta Analytic analyzed the samples using AMS rather than conventional dating because the samples were generally very small. The project sample numbers, Beta sample numbers, and processing results are presented in Appendix III - Radiocarbon Sample Data and Processing Results. All radiocarbon sample locations and results are included in the test excavation profiles in Appendix IV. All unprocessed radiocarbon samples were packaged for storage at the Stó:lō Material Culture Repository.

RESULTS - SETTLEMENT AND HOUSEPIT FEATURE MAPPING AND TESTING

Results from the mapping and testing of the eight Stó:lō settlements included in this project are presented below. Information on each site is presented individually in sections divided into mapping methods and maps (surface and contour maps) and a summary description accounting for the number of housepit features identified at each site, as well as testing (profile figures) and radiocarbon dating results. Housepit feature dimensions presented below are, while relatively accurate, preliminary in nature and will be supplemented with more precise and extensive measurements from the analysis of these data being carried out by Schaepe (forthcoming dissertation). Settlements are presented alphabetically by their Borden number.

‘John Mack Slough’ (DhRI-T1)

Mapping Methods

A survey was conducted at the John Mack Slough (JMS) on the Chehalis Reserve. The true ground coordinates were determined with the use of a Leica 1200 GPS unit at the base station. Four stations were established using a Leica 1200 GPS Rover – STNs 1, 2, 3, and 4. A topographic survey of the river terrace was also completed using the Rover.

All stations were marked by galvanized 12” nails. A Leica 705R total station was set up on STN 1 using its GPS coordinates. A check was made to the Base Station and to STN 2. The total station coordinates for these two stations were used for control settings in completing a topographic survey of the site. Three additional stations were set by total station to complete the site mapping – STNs 5, 6, and 7. A closed traverse was completed from the Base Station through STN6. STN7 was set as a side shot from the Base Station. Sighting back to the Base Station confirmed the location of STN7.

The site features included house depressions, cultural depressions, burial mounds, slough channels, river and slough banks. Points were collected at .5 to 1m intervals within the house depressions and cultural depressions. The burial mounds were surveyed at their perimeter and across the top at 30cm intervals. The surrounding site areas were surveyed at 2m intervals. The majority of the features were surveyed from STN1. STN6 was used for point collection of the main site east of F8. F5 was surveyed from STN5 and F36 was surveyed from STN7. A cursory survey was repeated on the river terrace and carried out in more detail between the river terrace and F36. Approximately 4,480 surface points were collected. All GPS data was post-processed to 2 cm accuracy horizontally and 5 cm vertically. The total station data was transformed to the corrected GPS data by linear transformation. Site surface and contour maps were completed in 2005 showing the features, test units, stations and topography of the site (see Figures 2a-c).

Summary Description

The ‘John Mack Slough’ pithouse village site (DhRI-T1) is located on the Chehalis Indian Reserve, on the west bank of the Harrison River 9 km upstream from its confluence with the Fraser River, and 8 km downstream from the entrance to Harrison Lake. The site is situated in an area that is currently used by the Chehalis community as a boat launch, fishing site, and occasionally as camping and picnic ground. Twelve housepit features are located at this newly documented site, as described below. Two shovel tests were excavated at this site (F2, F5) resulting in the collection of one radiocarbon sample that dated to 470-290 cal BP (F5). This

date directly represents the age of the single floor layer associated with F5 and is also suggested to relatively represent the age of the other housepit features at this settlement - which appear to share a similar profile and manner of construction (i.e., shallow house floor dug into gravel substrate). Dimensions of the housepit features - generally squarish to rectilinear in shape with pronounced rims - range from about 8 m to 11.5 m in length/width. Site features are described in more detail below.

The landform on which the site sits is part of a huge alluvial fan formed by the Chehalis River where it enters the Harrison River. It is cross-cut by many remnant river channels that form sloughs alongside the Harrison, providing flat land that is dry for most of the year but subject to flooding from the spring through the late summer. John Mack Slough forms the northern edge of the site and the Harrison River marks the eastern site boundary.

There are 12 well-preserved housepits visible on the surface and several small earthen mounds that may be mortuary features (though none have yet been tested). Ten of the housepits are tightly clustered in two rows. One row, roughly parallel to the Harrison River, and set back from it by about 80 m contains eight housepits (F1 to F4, F6, F7, F16, and F18). Behind it is another "row" of two housepits, closer to the edge of the slough channel (F14 and F15). Two other housepits are outliers. One of them, F5, is the southernmost housepit at the site and is separated from the others by about 40 m. The other (F36) is on the eastern tip of the site near where John Mack Slough joins the Harrison. It is about 50 m east of the large row of housepits. All but two of the housepits are predominantly square-shaped, have pronounced rims, and flat floors. During times of high water, the floors become flooded as water seeps up through the gravely alluvium, sometime entirely filling many of the housepits with water.

Feature F5 is one of the two largest housepits at the site. It is squarish, measuring about 11 m by 10 m and is 1.1 m deep. As with all the housepits on the site, it was dug below the sandy surface into the hard packed gravel beneath, and that gravel can be seen on the floor of the structure. There is very little cultural material (tools, midden debris, fire-cracked rock) visible on the surface of the structure or immediately surrounding it, so it may not have been occupied for very long. In this respect it, and the other housepits at the site, are similar to those described at Qithyil Island.

Feature F36 is also a large well-defined housepit. It measures 10 m by 9 m and is 1 m deep. Like F5, this housepit is square in outline with clearly defined corners. Both it and F5 are aligned with the Harrison River.

Features F1 to F4 consist of a string of four housepits touching rim to rim. Although they are not in a straight line, they all align to the Harrison River. F1 and F2 are both well-pronounced square-shaped structures and touch corner-to-corner. F1 measures approximately 8 m by 9 m while F2 measures 7 m by 8 m and both are just over 1 m deep. F3 touches corner-to-corner with F2 and is slightly more rounded somewhat smaller than the previous two. It measures 7 m by 7 m and is also 1 m deep. F4 shares a rim with F3 and perhaps there was a passageway between the two pithouses when they were occupied. Otherwise it may be that F4 was built after F3 and it slightly overlaps it. F4 is the most rounded of this sequence of four structures, but still, it is relatively square on its west side while being rounded on its east side. It measures 10 m by 9 m, and 1.2 m deep making it the largest of this small cluster.

F6 is the shallowest structure at the site and less clearly defined than all the others. It is 7 m by 8 m and only about 0.6 m deep. Its northeast and southwest sides are open suggesting it may have had side entrances or is just severely eroded. In either case, it is quite dissimilar from the other housepits on the site. It could have been a different function or from a different time period.

F7, beside F6, is in contrast the largest and best defined structure at the site. It too is square and aligned with the Harrison River. It measures about 11.6 m by 10 m with clear corners

and a large flat central floor surface. It is 1 m deep, but it almost appears to have been formed more by building up a rectangular doughnut-shaped rim rather than digging a deep housepit.

The rim of F7, even more so than the surrounding housepits, stands above the surrounding ground surface, in some places by as much as 0.6 to 0.7 m. This gives the impression that people may have tried to create housepits without digging too deeply into the ground. This makes sense if they were trying to avoid the relatively high water table in this spot—and in fact, may have been a necessity given the possibility of late fall or early spring flooding.

Next to F7 sit F16 and F18, two structures that share a rim. Both are square with the same alignment as F6 and F7. F18, however, was not completely mapped due to the thick vegetation. Although the map of it in Figure 2b shows an undefined NE side, in reality it has a well-formed steep side wall like the rest of the housepits. Future mapping should provide the missing elevations. F16 Measures 8 m by 8 m and is 1 m deep. F18 is also 8 m by 8 m and 1 m deep.

F14 and F15 sit on a slightly raised ridge separated from the previously described structures by a shallow remnant slough channel. F14 is 8 m by 9 m and 1 m deep. F15, located 15 m farther to the east and next to John Mack Slough channel, is about 9 m by 9 m and also 1 m deep. It is somewhat more rounded than F14, but the detailed contour map shows clear corners and the same alignment as the other structures at the site.

We also plotted approximately 16 possible burial mounds and cairns. Some of these are clear and pronounced mound structures (e.g., F19, F20, F23, F24, F32, and F31), while others are much smaller and not nearly as clearly defined (e.g., F21, F22, F12, F13, F9, and others). Without further testing, it will not be possible to determine if these are all mortuary mounds or other features. Some could be tree throws or some other natural phenomenon. Their association with a residential site such as the John Mack Slough site is common throughout our study region and this association increases the likelihood that they are in fact, cultural features as well.

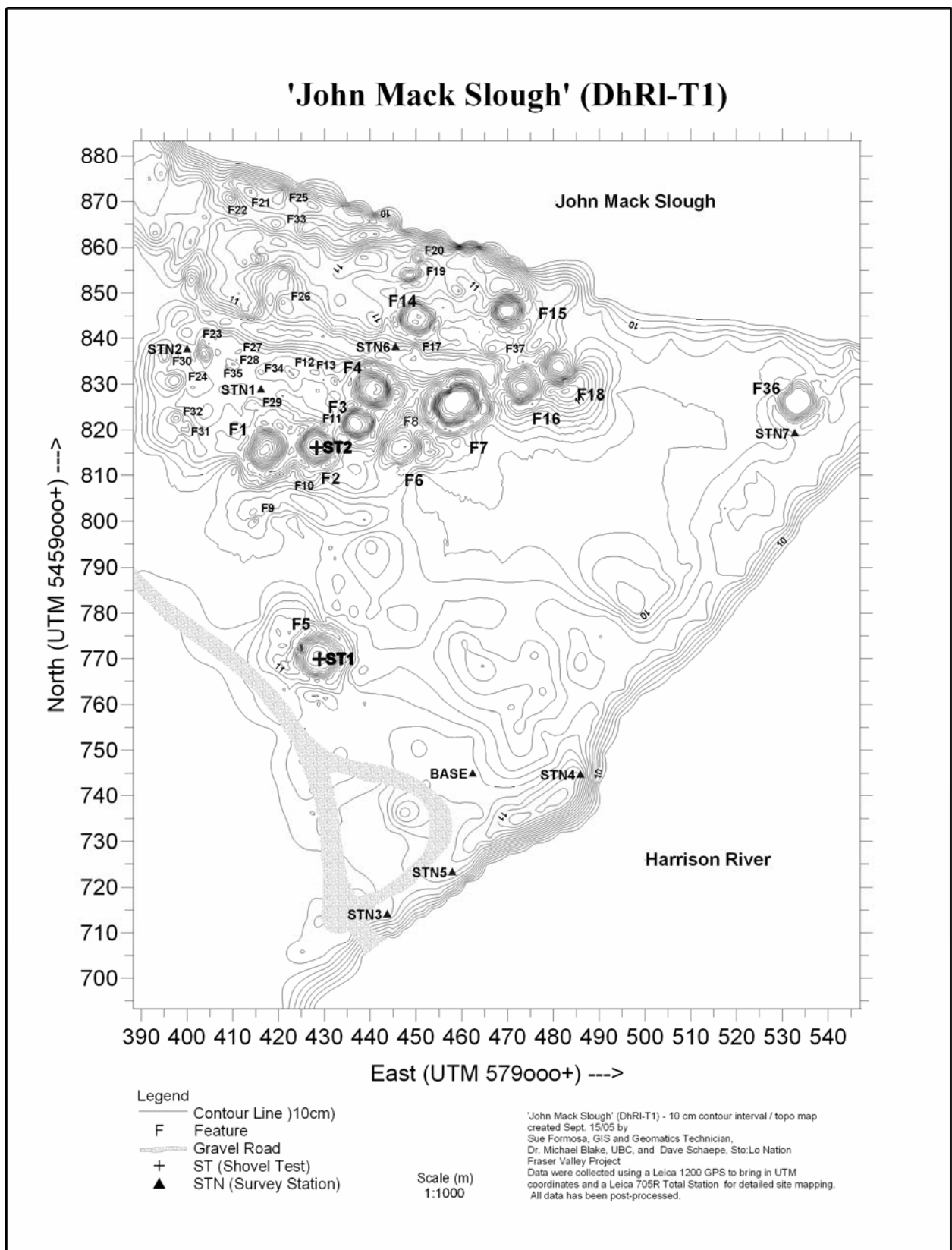


Figure 2a. 'John Mack Slough' (DhRI-T1) contour map (10 cm) with features, mapping station, and test locations.

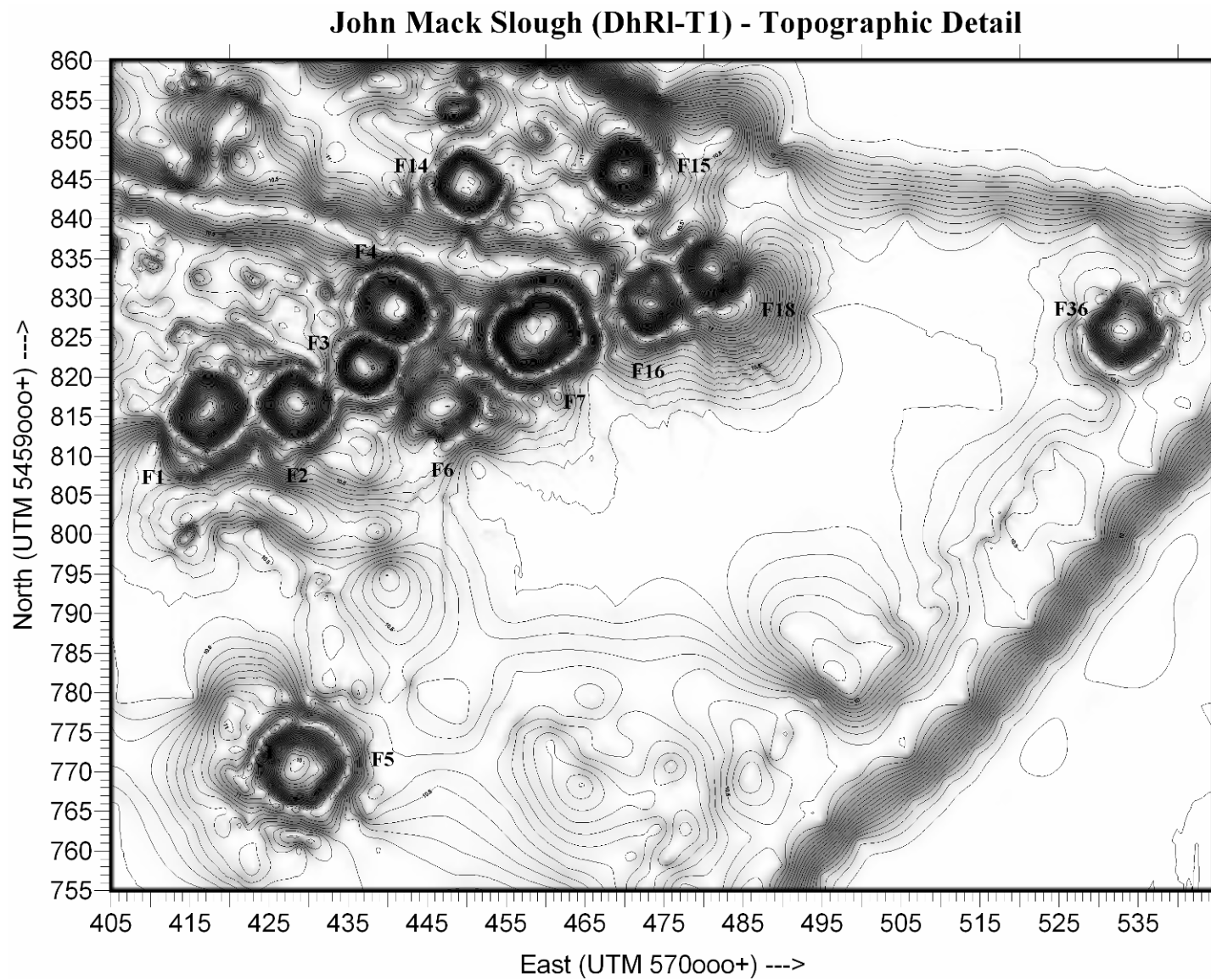


Figure 2b. Detail - 'John Mack Slough' (DhRI-T1) contour/shaded relief map (5 cm contours) with housepit features.

'John Mack Slough' (DhRI-T1)

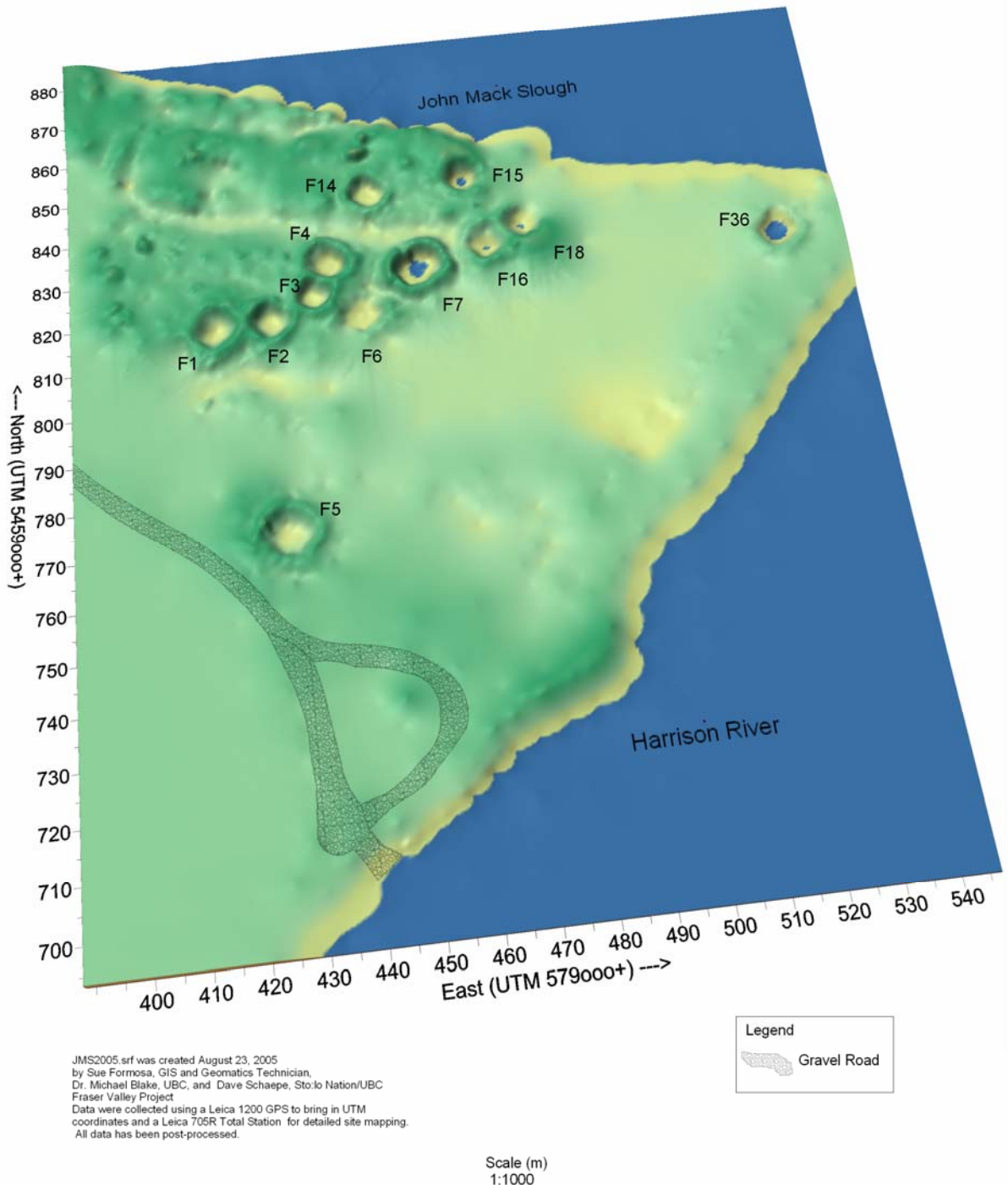


Figure 2c. 'John Mack Slough' (DhRI-T1) surface map with housepit features.

Qithyil Island (DhRI-15)

Mapping Methods

A survey of the site topography and cultural features was completed during the 2005 field season, supplemented with data collected during a single day of testing in March 2006 (during low water, permitting access to the otherwise water-filled housepits and inspection of the eroded riverfront). A high precision GPS unit, a Leica 1200 GPS, was used to bring in true ground coordinates for the site. Base52 was set up on STN1 on the north rim of F3. The coordinates were obtained by using an autonomous position for the base. Despite quite an open site, no rover data could be collected. The GPS unit ran on Base52 for 45 minutes to collect data for post-processing. To create a back sight for survey orientation, the GPS unit was moved to STN2 set on the west rim of F1. The coordinates were again called by autonomous position. Again, the rover could not collect data. The GPS unit ran on Base53 for 30 minutes to collect data for post-processing.

A Leica 705R Total Station was then set up on STN2. The orientation was set to STN1 by using the bearing for Base53-Base52. A mounted prism was used to obtain coordinates for STN1 for the site survey. The north end of the island was mapped by taking points at 2m intervals between features and at .3-.5m intervals within features. House depressions were the cultural features captured in the survey. Survey pins and land erosion monitoring pins set in 1992 were also surveyed in. The island perimeter points and the feature perimeter points were also collected using a Garmin Xtreme hand held GPS unit. After consultation with mapping expert Dave Martens (BCIT), another attempt was made to collect ground data through GPS. Base2 was set from STN1. A third GPS unit setup (Base54) was placed on Base2. Again, the coordinates were called with an autonomous position and data was collected at the base for 3 hours. No rover data collection was attempted. All stations were set using 1m lengths of rebar as markers. All stations were flagged. Approximately 3,080 surface points were collected at the site.

Information on the pre-processed data for the stations is available in the 2005 field notes.

After the 2005 field season, the GPS data was post-processed by Dave Martens, Department of Geomatics, BCIT. In 2006, these data were tied into and corrected based on coordinates established from a station set up on the dike opposite the site (east bank of the Harrison River) for and from which we were able to establish high precision UTM locations and reference points. Site surface and contour maps of the pre-processed data were completed in 2005 showing the features, stations and topography of the site (see Figures 3a-c).

Summary Description

The Qithyil Island settlement site (DhRI-15) is located on a small island near the confluence of the Harrison and Fraser rivers. DhRI-15 is a pithouse village site consisting of four housepit depressions (F1-3, 4) and two other shallow depressions (F5; unnumbered) that may also have been house features or some other form of cultural feature. The housepits are arranged in a linear fashion. In addition, there is a long flat area (F6) that appears to have been a living surface likely associated with a plankhouse. The housepit features at this site represent square and circular shapes and all have well defined rims. The dimensions of these houses range from 11 to 13 m in width/diameter. Six soil probes were dug at this site, from which eight radiocarbon samples were recovered; one of which (F4) was dated to 540-470 cal BP. Of three radiocarbon samples extracted from the exposed profile associated with F6, a date of 700-640 cal

BP was derived from what appears to be the earliest floor layer associated with this feature. Details of this site are provided below.

During the spring when the river level is at its peak, the island is no more than 200 m long and 50 m wide. In the winter when water levels are at their lowest, the narrow channel separating the island from the adjacent shore is dry and it is possible to walk across the gap. The island consists mainly of fine sands and gravels that are continually eroding away, exposing buried features in the profile and washing out hundreds of artifacts, fire-cracked rock, and other cultural remains along the island's east-facing shore. Over the past 15 years we have heard reports that the island was much longer and may have held many more housepit depressions. However, 19th century Reserve boundary surveyors' maps and notes of the island and the earliest airphotos that we have been able to find (from the 1940s) show essentially the same shape and length as the present island.

Sketch maps of the island's cultural features were made in the 1980s and in 1992 a surveying fieldschool class from Fraser Valley College made a more accurate map of the site in conjunction with the first UBC archaeology fieldschool at the Qithyil Site (Scowlitz Site). In 2005 we returned to map the surface features and topography in order to produce a more detailed record of the features so that they could be studied and compared with the other housepit villages that we had mapped in 2004 and 2005. Like several other pithouse villages along the Harrison River (e.g., John Mack Slough), the housepits on Qithyil Island flood during the high water season. The housepits fill with water, in some cases up to a meter in depth. This may reflect a significant change in the water table levels since the time that the houses were occupied - perhaps related environmental changes of the Little Ice Age. Alternatively, though perhaps less likely, it may be that if the houses were only occupied during the winter season when water levels are at their lowest, the ground surface inside the houses dried out sufficiently to make them habitable. In any case, it is likely that the increased humidity meant that any structural support posts would get wet and decay very rapidly—so these structures may not have been occupied very long—perhaps just a few seasons. Judging by the relative lack of artifacts visible on the surfaces in and around the housepits, and the singular 'discrete' or otherwise indistinct house floor layers in these housepits, this last interpretation seems reasonable. Like the John Mack Slough settlement, the occupation of the housepits at this settlement appears to be of fairly discrete and 'limited' length of time.

The four main features visible on the surface are housepits (F1 to F4). Soil probes were placed in each of them and radiocarbon samples recovered.

Starting at the north end of the site F1 is a somewhat irregular square-shaped depression. Its eastern side is indented, possible from post-abandonment erosion. F1 is about 12 m by 12 m and 2.2 m deep. It has very steep sides and a relatively flat floor in the bottom.

F2 sits immediately south of F1. In fact, the southern rim of F1 appears to "push" into F2, suggesting that F2 had been built first and possibly abandoned before F1 was built. F2 is about 10 m by 11 m and approximately 1.5 m deep. Its north-south dimension of 10 m is probably a function of the encroachment of F1's rim towards the south and we suspect that the original N-S dimension of the housepit was also 11 m. Its square shape is somewhat more clearly defined than F1 and shows a N-S orientation that, although similar to F1, is tilted even more towards the west.

F3 sits in the middle of the island, 20 m south of F2. It has a very round shape, particularly on its east side, and is the only one of the four structures that is round. It is about 12 m in diameter and has an approximate depth of 1.9 m.

F4 sits at the south end of the island, 25 m south of F3. F4 has a pronounced square shape with well defined corners. Its dimensions are about 12 m (N-S) by 12 m (E-W) and is approximately 1.5 m deep. Its orientation is almost exactly N-S.

F5 consists of a shallow square-shaped depression just to the north of F4. It is well defined by a 0.7 m high ridge along its west side and a slight, 0.3 m depression in the centre. F5 measures approximately 8 m by 8 m. A soil probe was placed in the centre of this feature.

Farther to the north, occupying the area between F5 and F3 is another shallow depression. This rectangular feature is probably part of the natural ridge that forms the western edge of the site running between F2 and F4 and bounding a long depression or shallow trough that flanks it to the west. We think that the construction of housepit F3 artificially creates the impression that this is a rectangular feature, but at present, we do not think it was intentionally made.

F6 is an approximately 65-70 m long flat area on the western side of the island. Erosion along the river bank has exposed a series of burned floors, hearth features, and midden debris that are visible along almost the entire length of the feature. It is possible that these floors were part of a long plankhouse structure or were formed by a series of season camps along the river's edge, perhaps for fishing. Support for the interpretation of these deposits as associated with a series of superimposed plankhouse floors is supported by the linear and discrete (1-2 cm thick) nature of the cultural strata, with at least three stratified floor layers within an approximate 20 cm thick deposit, extending in an apparent unbroken fashion for the full 65-70 m extent of the 'flat' exposed in the river bank. There are patches of burned-orange matrix with a high density of calcined fish bone visible in the profile and associated with concentrations of fire-cracked rock. A dense scatter of artifacts (ground slate knife fragments, debitage, FCR; also, clay pipe fragments) covers the beach adjacent to the exposed profile and 'flat' - eroded and deposited during seasonal high-water. These deposits are similar to deposits we excavated at DhRI-16, just downriver (Lepofsky et al 2000). We do not yet know how wide this deposit is (i.e., extending westward, away from the river), although judging from the remnant landform and 'flat' surface defined in our surface and topographic maps, F6 may have up to a 15 m wide section remaining intact beyond the river's edge. A series of radiocarbon samples (F6CS3; 2; 1) were taken from an exposed profile (see figure in Appendix IV). The date recovered from this series, as noted above, indicates that F6 preceded the housepits on Qithyil Island. The contact-era artifacts noted from the eroded beach deposit indicate the occupation of the island into early contact-era times -- likely associated with the occupation of F6, continuing after the use of the housepits had ended due to flooding issues.

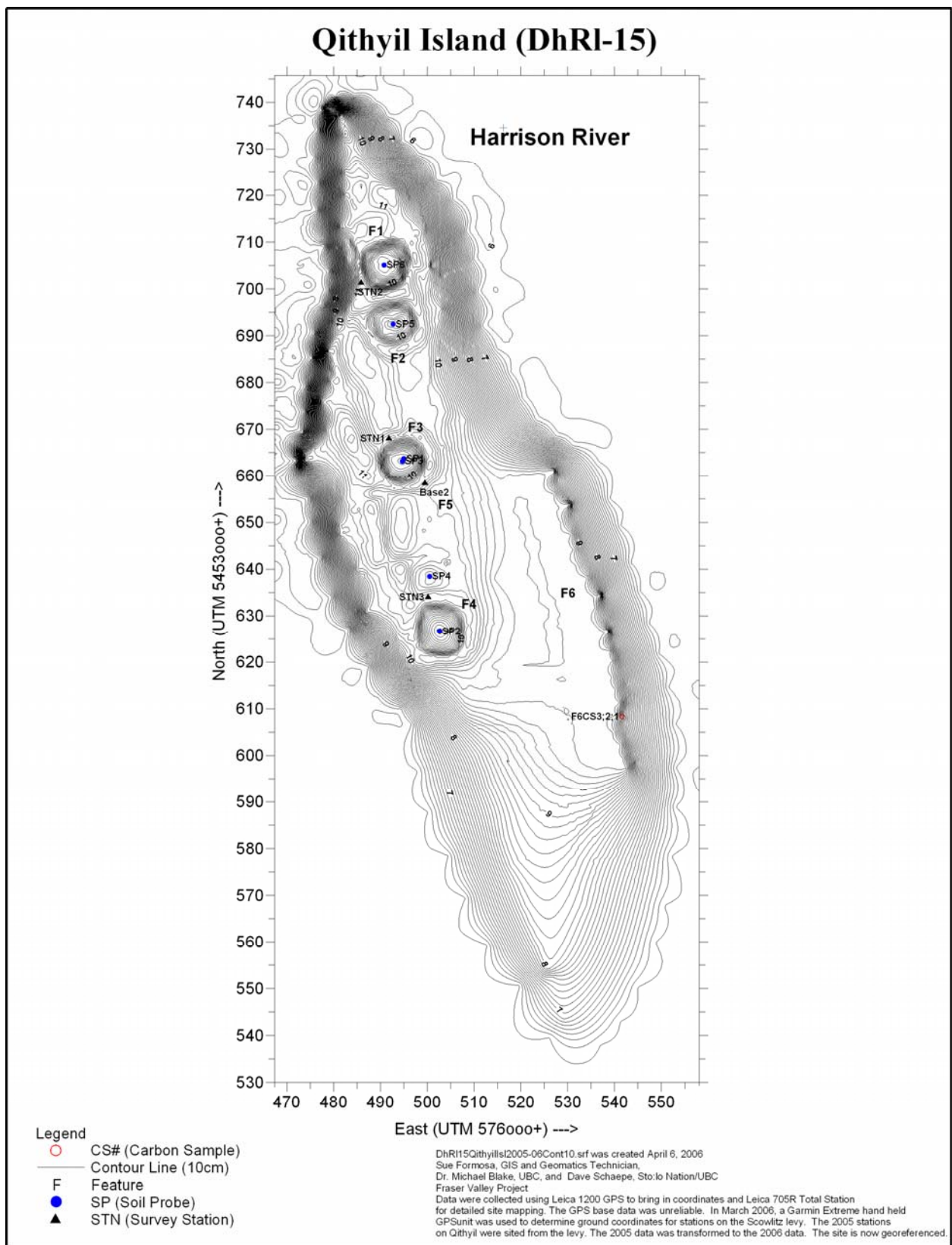
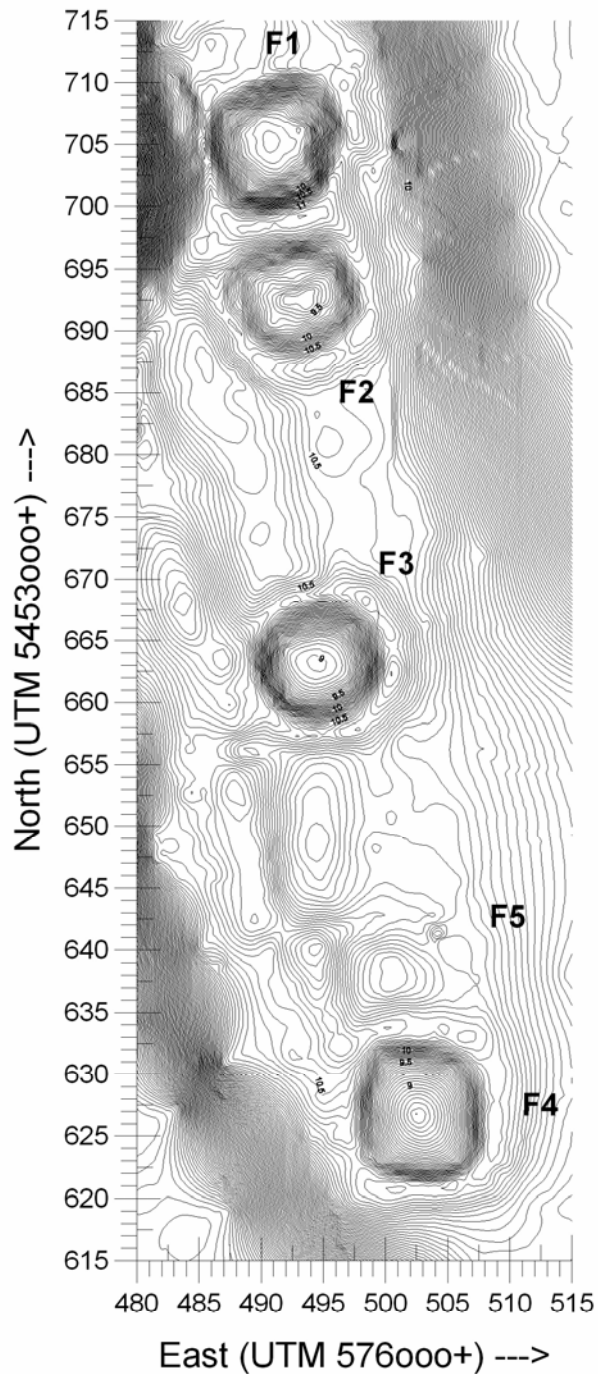


Figure 3a. Qithyil Island (DhRI-15) contour map (10 cm) with mapping stations, tests, and feature locations -- including housepit features (F1-5) and an apparent plankhouse platform (F6).

Qithyil Island Site (DhRI-15) - Detail



Legend

- Contour Line (5 cm)
- F Feature

Qithyil Island (DhRI-15) - 5 cm contours / topo detail
 created July 2006
 David Schaepe, Sto:lo Nation/UBC; Sue Formosa, GIS and Geomatics
 Technician, and Dr. Michael Blake, UBC
 Data were collected using Leica 1200 GPS to bring in coordinates and Leica 705R Total Station
 for detailed site mapping. The GPS base data was unreliable. In March 2006, a Garmin Extreme hand held
 GPSunit was used to determine ground coordinates for stations on the Scowltz levy. The 2005 stations
 on Qithyil were sited from the levy. The 2005 data was transformed to the 2006 data. The site is now georeferenced.

Figure 3b. Detail - Qithyil Island (DhRI-15) contour/shaded relief map (5 cm contours) with housepit features.

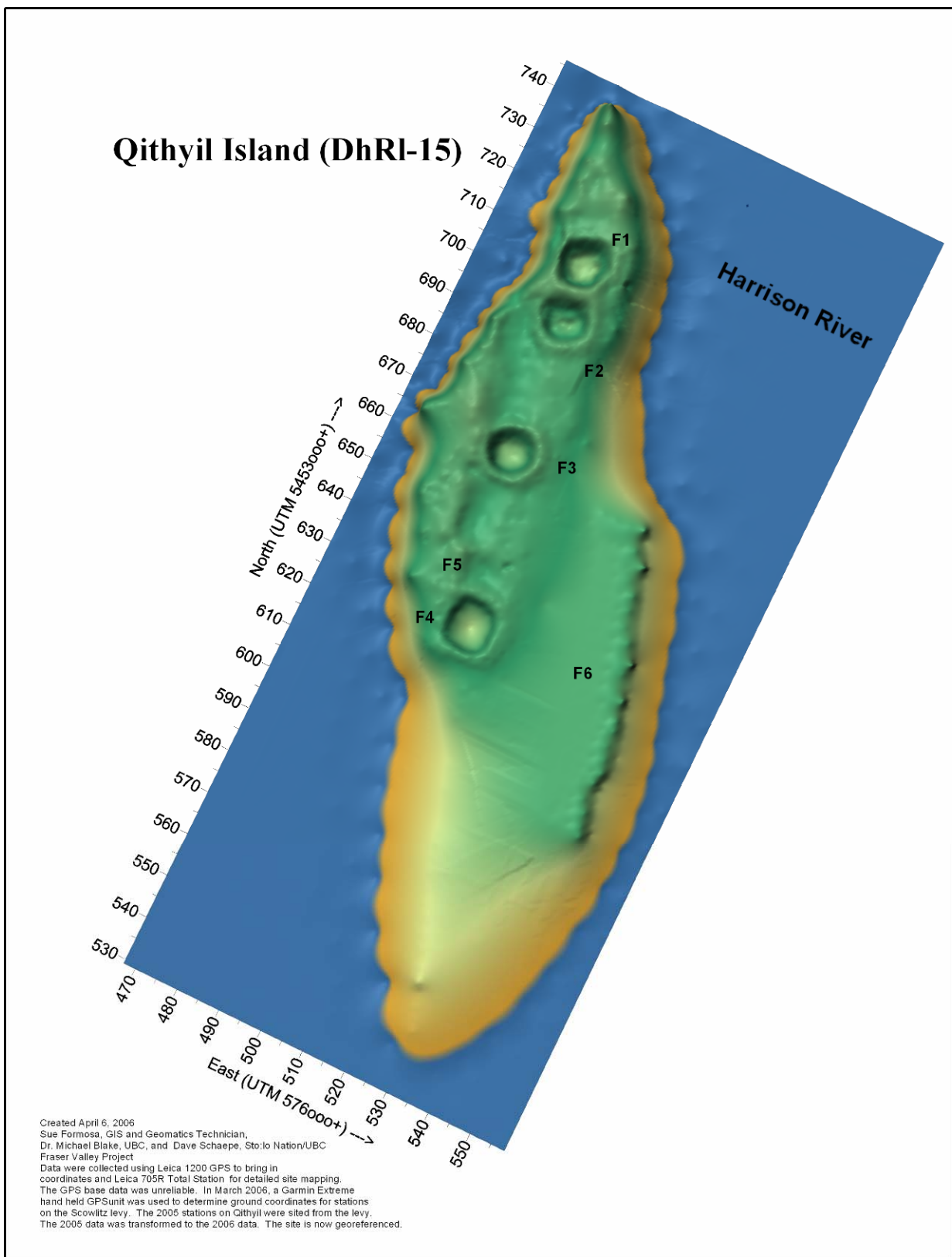


Figure 3c. Qithyil Island (DhRI-15) surface map with housepit features (F1-5) and apparent plankhouse platform (F6).

Sqwa:la (DgRI-6)

Mapping Methods

A site survey was conducted at DhRI-16 in 2004. The first station (STN100) was set on the 'C' in the center of a sewer cap on Brentwood Dr. just east of the north end of the site at the curve by a pillared driveway. A backsight (STN101) was set on the center of a water cap on the east side of Brentwood Dr. at the junction with Quarry Rd, 3m south of a hydro box. A local surveyor provided the UTM coordinates for STN101. A Garmin Xtreme hand held GPS was used to bring in approximate UTM coordinates for STN100. The GPS unit's elevation was set at a benchmark .5km away. The Garmin Xtreme has an accuracy of +/- 5m for ground coordinates, +/- 10m accuracy for elevation, and provides coordinates at the meter level of precision.

A Leica 705R Total Station was set up on STN100. STN101 provided an orientation for the survey at a bearing of 143°11'06" and 208.6m from STN100. The Total Station and a mounted prism were used to carry coordinates and elevations onto the site from STN100 to STN103. The elevation was an assumed value of 11mAMSL at STN100 based on the GPS elevation reading at STN101.

The subsequent stations (STN1-3,105,122,126) were set as side shots from STN103 and confirmed by setup on each of them back to STN103 and one alternate STN. STN103 and STN105 were set with wooden hubs. STN122 and STN126 were set with rebar in a concrete base. These two stations defined north-south baseline for the site. Details on the locations for each hub are in the 2004 Survey field notes.

A detailed topographic survey was accomplished by collecting ground elevations at 2m intervals between features and at .5m intervals immediately around and within features across the complete site. Approximately 1,300 surface points were collected. House depressions, cultural depressions, and a modern cemetery boundary were the cultural features captured with this survey. The slough edge adjacent to the west side of the site was also surveyed. As of December 2005, the data collected has not been corrected to true ground coordinates and all values remain approximations for location and elevation. The dampness at the site will limit the life of the hubs. If further work is anticipated for this site, then STN103 and STN105 should be reset using either rebar or galvanized nails. Site surface and contour maps were completed in 2005 showing the features, stations, and topography of the site (see Figures 4a-c).

Summary Description

The Sqwa:la settlement site (DhRI-6) is located on Skwah First Nation's Skwahla I.R. No. 2 on the southern bank of Hope Slough just west of Mt. Shannon on the north side of Chilliwack. The Skwahla Reserve lands are bounded by Menzies Street, Portage Avenue, and Brentwood Drive. Sqwa:la is a small housepit settlement with three housepit circular to sub-circular features ranging in size from 10-12 m in largest dimension arranged in a linear fashion.

The site is reported in Duff (1952:37) and was first recorded by W.A. Kenyon in 1953. In 1986 and 1987 it was visited by Gordon Mohs and Albert 'Sonny' McHalsie who drew a sketch map of the site and numbered all the main surface features. The village consists of three large housepit depressions (F2, F3, and F4), and two smaller cultural depressions (F5 and F6) which may have been cache pits. F1, which we plotted but did not examine in detail, is a recent cemetery marked with a fence which has fallen into disrepair. The site dimensions, that is the area with visible surface features including the cemetery, covers an area of about 50 m by 60 m. Like Mohs and McHalsie, we think the occupation extends beyond the area of the cultural depressions and we noted large concentrations of fire-cracked rock and black, charcoal-rich soil

in many spots 25 m or more removed from the main features. Kenyon indicates that a plankhouse was associated with this settlement which remains a distinct, though unverified, possibility. Subtle topographic structure representing a flat 'bench' to the north of the pithouses immediately bordering Hope Slough may represent an above ground house feature, although this suggestion remains to be evaluated. Another possibility is that the cemetery area was established within the perimeter of a plankhouse floor following the terminal occupation of the site and the demise of the house feature itself. The three housepit features at the site sit atop a landform raised slightly above the bank of Hope Slough, a side channel of the Fraser River and a main branch of the extensive slough system running through the Central Fraser Valley. The site is accessible by boat from the Fraser River and numerous other slough channels by way of Hope Slough.

No subsurface testing has yet been carried out at the site as permission to do so was not provided by the Skwah First Nation Chief and Council. We are currently unable to date the features or describe the nature of the floor deposits in the housepits. However, we did note that near STN126, for example, there was a thick deposit of fire-cracked rock and cultural deposits. Other spots on the site where trees had toppled over and where soil was exposed also showed similar evidence of cultural occupation. It is likely that this site is part of an extensive occupation along the high ground flanking Hope Slough between Mount Shannon and Little Mountain School. The presence clearly defined housepit features in association with an early contact-era cemetery (c. 19th century) as located on a reserve established in the 1800s strongly implies that this settlement was occupied into the late pre-contact/early post-contact period (c. 18-19th century). The density of cultural material and extent of anthropogenic soils at the site suggest that, like Th'ewá:li, this settlement was subject to intensive and possibly long-term occupation within the last millennium. Testing is required to provide more conclusive evidence describing the occupation of this site.

All of the housepits at the site are essentially round in outline, but F2, located at the east end of the row of housepits has some indications that it may once have been square. It is aligned on the low ridge in such a way that the back side of the depression (that is, the side farthest away from the slough) is parallel to the edge of the ridge. Its dimensions are 11 m (parallel to the ridge) by 10 m (perpendicular to the ridge) and approximately 2 m deep. Its walls are still steep but some erosion has taken place in recent years where a bike trail runs through the structure.

F3 is located 4 m to the west of F2 and sits in the middle of the low ridge. It is very well preserved and has a clearly pronounced rim all round the edge of the house. This structure is almost perfectly round (almost identical to F3 at Qithyil Island). It is 10 m in diameter and approx. 1.6 m deep. The side walls slope smoothly down from the rim to the floor.

F4 sits just off the north edge of the low ridge on which the other two housepits are located. It is rounded, but much like F2, its back edge (away from the slough) is also parallel to the ridge which it abuts. This alignment of the back edge allows one to perceive a slight squaring of the "corners" and gives the impression that it was not intended to be as circular as F3. Its dimensions are 9 m (parallel to the ridge) by 8 m (perpendicular to the ridge) and about 1 m deep.

F5 and F6 are two small cultural depressions, possibly cache pits, located on the rim of F2. F5 is the most clearly defined at 3 m in diameter and 0.45 m deep. Its south facing rim is not as pronounced and opens up to the edge of the low ridge. F6 sits on the NW edge of F2 and is not as well defined, partly because a bike trail ran through it, destroying part of the rim. It may have been 3 m in diameter and about 0.3 m deep before it was disturbed.

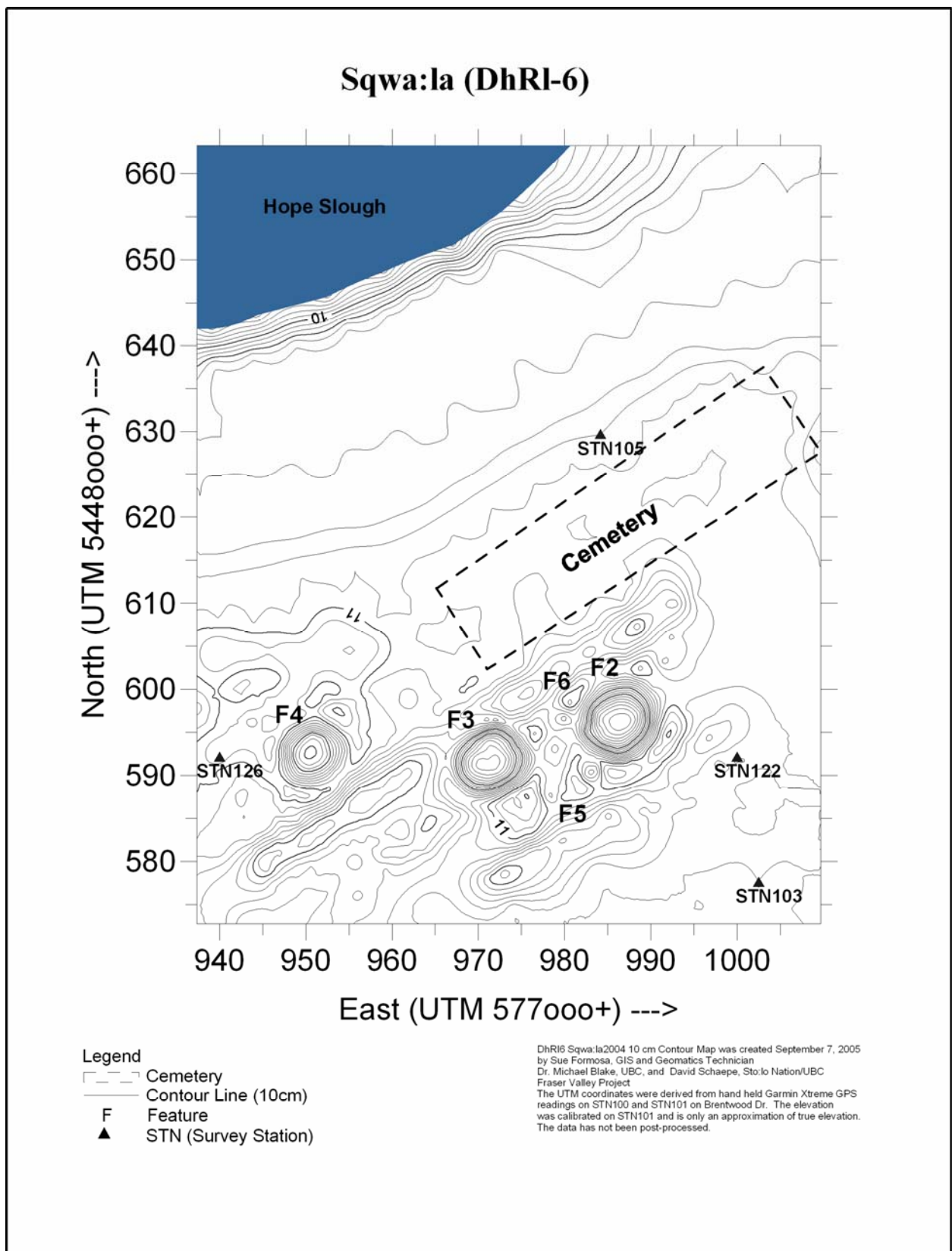


Figure 4a. Sqwa:la (DhRI-6) contour map (10 cm) with mapping station and feature locations.

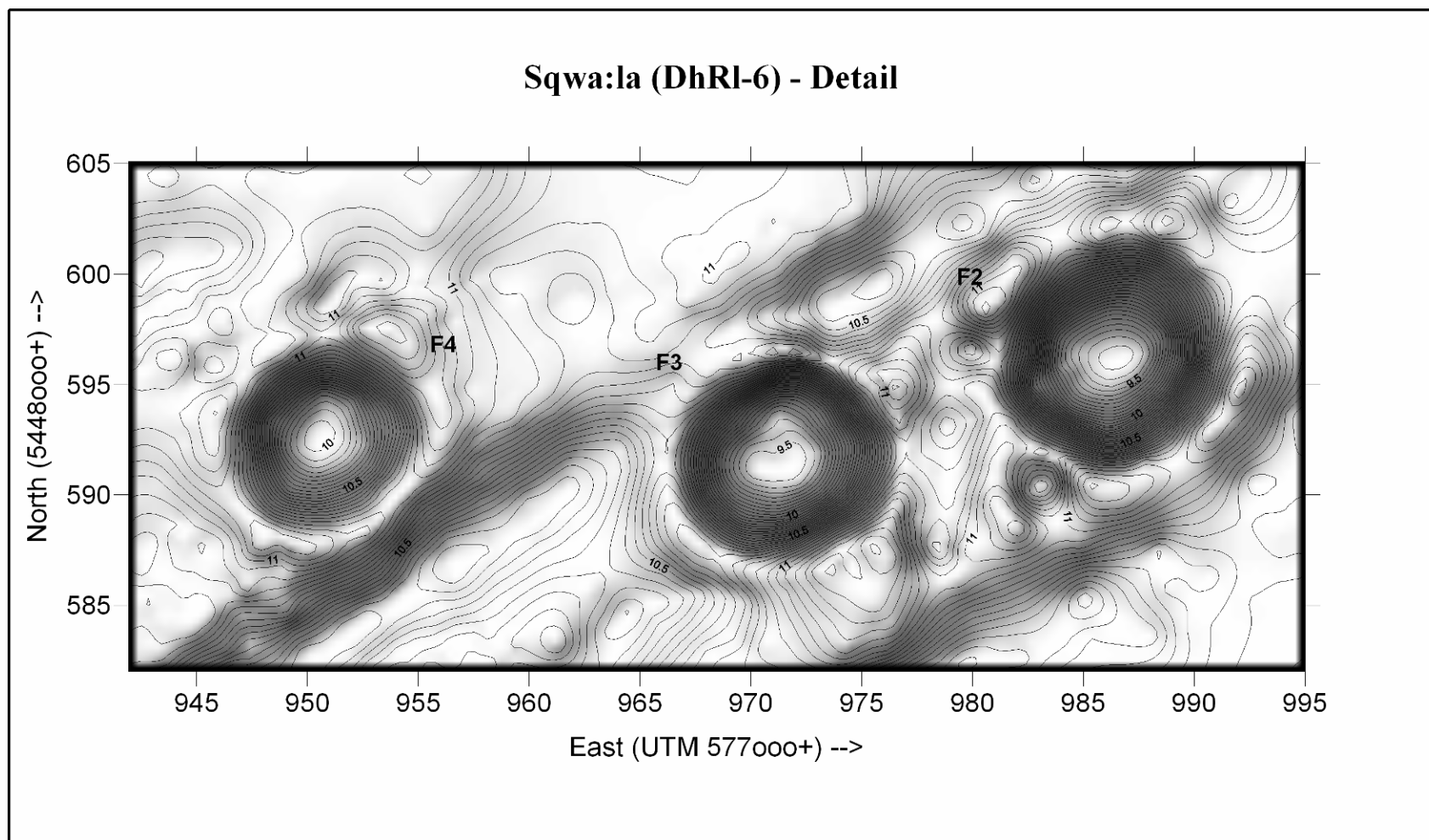


Figure 4b. Detail - Sqwa:la (DhRl-6) contour/shaded relief map (5 cm contours).

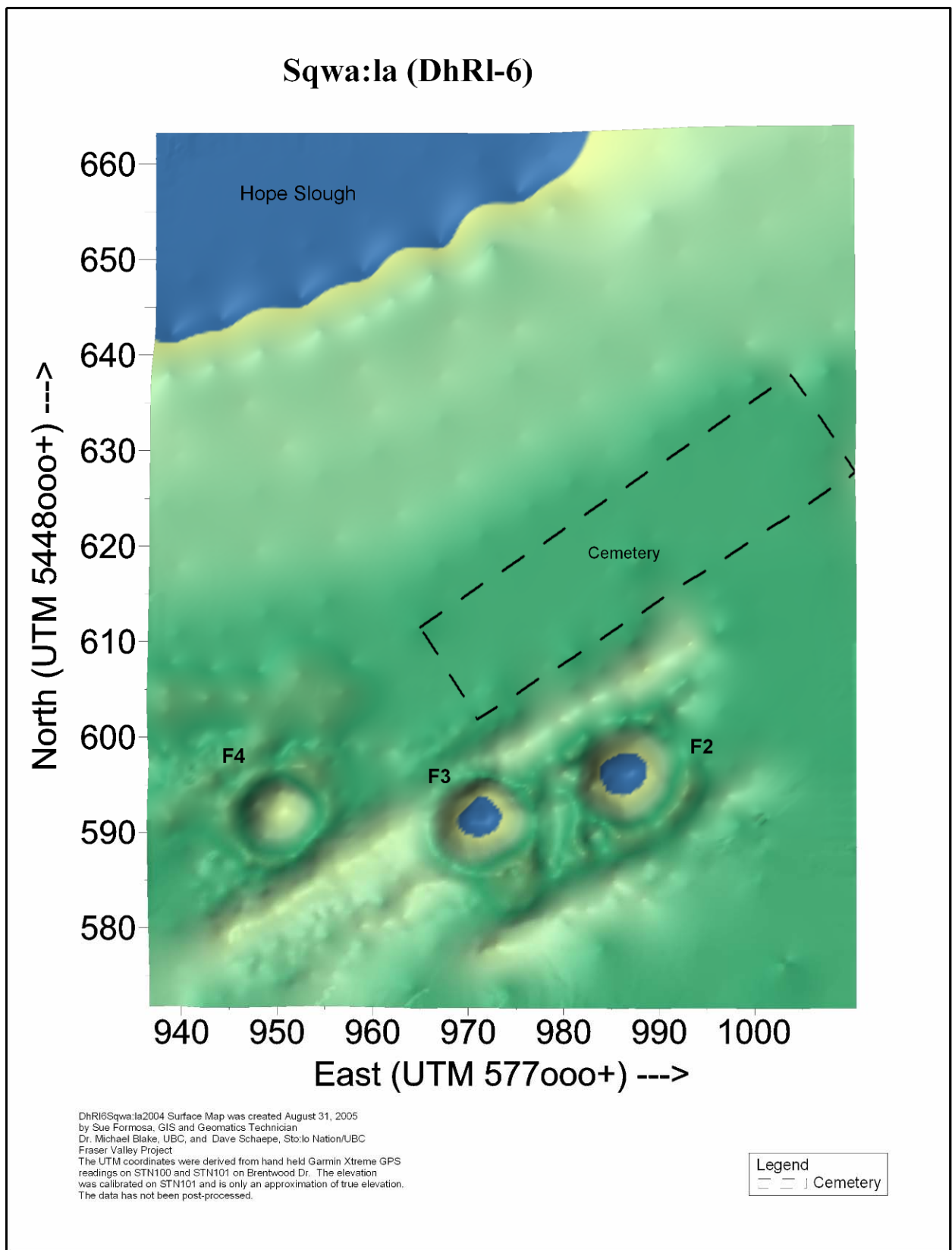


Figure 4c. Sqwa:la (DhRI-6) surface map with housepit features (*note: the blue in F2 and F3 is a factor of surface elevation coloration and does not represent water*).

Th'ewá:lí (DgRI-17)

Mapping Methods

Site surveys were conducted at DgRI-17 in 2002, 2004 and 2005. At the conclusion of the 2005 field season, all 2002 and 2004 data were corrected to the 2005 ground referenced data. In 2002, a local coordinate system was used. Datums 1-7 were set across the site. All datums were set using a yellow tent peg which was 3cm above ground level. A cursory topographic survey was completed as well as detailed surveying for house depressions, burial mounds, the site road, test locations and some cultural depressions. The top terrace and the lowest terrace, beside the modern cemetery, were surveyed.

The 2004 survey focused on collected a detailed topographic survey of the upper and middle terraces north of the site road. Only two of the 2002 survey markers were located in 2004. The survey was begun without any information on the Datum numbering for the 2002 survey. Therefore, the survey was begun with STN1 (subsequently determined to be Datum 1 from 2002). A Garmin Xtreme hand held GPS was used to bring in approximate UTM coordinates for STN1 and STN2, a marker set on the west edge of the gravel road adjacent to the west side of the site. The GPS unit's elevation was set at a benchmark .5km away on the west side of Vedder Crossing Bridge crossing the Chilliwack River. The Garmin Xtreme has an accuracy of +/- 5m for ground coordinates, +/- 10m accuracy for elevation, and provides coordinates at the meter level of precision.

A Leica 705R Total Station was set up on STN1. STN2 provided the orientation for the site survey. STN3 was set on the other 2002 yellow survey peg (subsequently determined to be Datum2 from 2002). STN3 was sighted from STN1 as were STN4, STN6, and STN7. All of these stations were confirmed by sighting back to STN1 and at least one other station. STN5 was set from STN4. STN4 and STN5 were set as wooden hubs. All other 2004 stations were set using 12" galvanized nails. All stations were flagged. The dampness at the site will limit the life of the hubs. If further work is anticipated for this site, then STN4 and STN5 should be reset using either rebar or galvanized nails. Details on the locations for each hub are in the 2002, 2004 and 2005 Survey field notes and in the DgRI17Soow2002_05CorrSTN.xls file.

A detailed topographic survey was accomplished by collecting ground elevations at 2m intervals between features and at .3-.5m intervals immediately around and within features across the complete site. House depressions, cultural depressions, and burial mounds, were captured with this survey. The road surrounding the site and the drop off to Sweltzer Creek were also surveyed. A linear transformation was used to align the 2002 data with the 2004 data as only two common points, STN1/Datum1 and STN3/Datum2, were available for tying the two sets of data together. The ground coordinates and elevations were still only approximations of true ground coordinates and elevations for the site. Contour and surface maps were generated in 2004 to take into the field for further surveying and testing of the site.

Further mapping and testing was completed during the 2005 field season. A high precision GPS unit, a Leica 1200 GPS, was used in the 2005 field season to bring in true ground coordinates for the site. Base 57 was set up on the east side of the site on the east side of the road above Sweltzer Creek. The location of the Base was called using an autonomous position. A rover GPS was used to set a backsight Rov2176 point based on the Base 57 location. The base station was run for 3 hours to enable post-processing of the data to obtain the true ground coordinates and elevation at that location. The rover was used to collect points on the east bank of the site and along the road which runs east of the site. A Leica 705R Total Station was then set up on Base 57. Rov2176 provided the orientation for the survey. Checks were made from Base 57 onto stations set in 2004 - STN1, STN6, and STN5. New UTM coordinates were

obtained for these stations. During the 2005 season, all surveying from the stations used the 2005 UTM coordinates. Two new stations were set in 2005 on the lowest terrace – STN8 and STN9. These were set from STN6. Both were marked by 12” galvanized nails.

The topographic mapping was completed from STN1, STN6, STN8 and STN9 to fill in areas which did not have enough data collected in the previous seasons. Test units and carbon sample were surveyed on the upper terrace and in the lowest terrace, beside the modern cemetery. Burial features, including a burial mound (F25) and a number of burial cairns (e.g., F 33-35), were mapped on the east side of the lowest terrace. In all, between 2002 and 2005, about 6,600 surface points were collected. After the 2005 field season, the GPS data was post-processed by Dave Martens, Department of Geomatics, BCIT. All of the 2005 data was then corrected by linear transformation based on the corrected UTM coordinates and elevation for the Base 57 station. An affine transformation was then used to align the 2002-04 data to the 2005 data. All site data are now in true ground coordinates and AMSL elevations. Site surface and contour maps were completed in 2005 showing the features, test units, stations and topography of the site (see Figures 5a-d). A surface map of F25 is shown in Figure 5e.

Summary Description

The Th’ewá:li (DgRI-17) settlement is located on Soowahlie I.R. 14 of the Soowahlie First Nation. The site is situated on a bedrock outcrop creating a small hill and upland on the north bank of Sweltzer Creek, amidst the surrounding lowland near the confluence of the Sweltzer Creek and Chilliwack River. The site is located 0.75 km from the actual confluence of these two rivers, just upstream from where the Chilliwack River flows into the Fraser River Valley. The hill on which the settlement is situated is backed by the foothills of Vedder Mountain, separated by what used to be a well defined ‘chasm’ or creek bed of sorts that no longer exists. Sweltzer Creek borders the front side of the settlement. A flat and well developed terrace extends southwestward, upstream, from the site. Modern quarry activity immediately behind the site has significantly altered the surrounding landscape, while avoiding the site itself. A modern cemetery borders the site the southwest. The modern Reserve access road runs along and cuts through a portion of the front side of the hill/site - notably ‘bisecting’ F25, an earthen burial mound feature. A quarry ‘haul road’ - built in the late 1980s - connects the access road to the quarry through the southern portion of the site, likely having disturbed some of the site features. The site was initially reported by Duff (1948, 1952), subject to non-scientific excavation of at least two housepit features (F10, F12) in the late 1960s or early 1970s (Wells), and recorded by Schibli (1971). As a preliminary part of the Fraser Valley Project, the site was mapped and tested in 2002 (Lepofsky et al 2002). Mapping and testing in 2004 and 2005, conducted as part of the current project, incorporated and augmented data collected in 2002, including creating a more comprehensive map, providing radiocarbon ages, and expanding the extent of features identified at Th’ewá:li. The feature numbers presented here were reassigned since 2002.

This settlement is comprised of at least 17 housepit features, arranged in a linear, parallel and closely related double row, along the south-eastern (front) edge of the outcrop on which the settlement was constructed - overlooking and at least 10 m to 15 m above Sweltzer Creek. These housepits are relatively consistent in their size and shape - rectilinear depressions ranging from about 8 m to 11 m on a side. Slightly smaller housepits are represented by F15, F7, F16, and F3 measure about 6 m to 9 m on a side.

The elevation of the outcrop itself ranges from about 42 mAsl at its base on the river terrace, to about 52 mAsl at its top. Two level ‘platform’ areas (F17, F20) - thought to be possible plankhouse platforms and floor areas - are located on top of the outcrop, stepping

upward in two distinct levels toward the NE. F20 measures about 34 m x 16 m; F17 measures about 17 m x 17 m. No clear floor strata were identified in the tests of these areas, characterized otherwise by the buildup of uniform cultural deposits.

Two rows of housepits parallel the alignment of these platforms, stepping downward toward the river terrace, the southern portion of which meets up with the level ground of the river terrace. An apparent gap between the higher and lower portions of the double-rowed settlement may be due to the disturbance of the 'haul road' or may represent an actual separation in the settlement lay-out. Numerous other features were identified during our clearing and mapping of the site, including: F25 (earthen burial mound - partly exposed in the road cut); F33, F34, F35 (rock cairns; probable burials in the northern 'floor' area of F20); F26, F27, F28, F29, F30, and F46 (a cluster of small mounds and cairns located in and around the 'floor' area of F17); F33-F37 (a cluster of cairns north of F20); F38 and F39 (rock cairns located on the NE bank of hill/outcrop); F42, F44, F45 (a cluster of small mounds/cairns associated with depression features F18 and F19); F4 (small depression); F41 (small anthropomorphic bench features); F4 (possible mound), and F21 and F22 (anthropomorphic bench feature and house platform).

Testing of F21 and F22 in 2002 revealed a continuous 1 m+ build up of construction debris (angular rocks; FCR) indicating the landform's anthropogenic nature. A significant portion of the surficial topography of the outcrop on which the site is located appears to be, likewise, shaped by anthropogenic 'landscaping' and settlement preparation and development.

F9, F23, and F47 represent possible housepit features badly disturbed by recent land-altering activities. Numerous features at this site remain undocumented, including a number of small pits (20-30 cm diameter) located throughout the surface of F20. Three recent bark-stripped western redcedars are located near F4. The features identified at Th'ewá:lí indicate multiple uses, including as a settlement and cemetery functions, throughout its history.

A total of seven test excavations (2 shovel tests; 5 auger tests) were dug at Th'ewá:lí, in 2005. As a result of these tests, 20 radiocarbon samples were collected, two of which were processed. Radiocarbon analysis provided ages of 1060-930 cal BP (F10) and 1180-970 cal BP (F1) associated with the basal housepit deposits of both features. Test profiles consistently revealed a thick (40-60 cm), generally unstratified accumulation of black, organic, anthropogenic soil - like the 'mat' of charcoal- and FCR-rich soil covering the majority of settlement area; the result of intensive, long-term occupation. FCR concentrations were found to vary, vertically, within each of the excavations - providing a rough indication of possible floor zones and means of differentiating this otherwise very uniform deposit. Clear contact and unconformities between house and the natural (C horizon) sediments into which these housepits were excavated were readily apparent. Both dates derive from the basal housepit occupation deposits immediately overlying C horizon deposits - estimating the age of the initial construction and occupation of those housepits. The Th'ewá:lí settlement appears to have been continuously occupied over the last 1,000 years, right through to the early contact period when the Soowahlie residents were moved into European-style houses as part of the Federal Indian Reserve creation program. Metal objects and other debris from contemporary activities were observed across the site surface and in the upper layers of a number of the tests.

The shapes and arrangement of the housepit features at Th'ewá:lí are intriguing -- generally rectilinear in shape and immediately abutting one another as linear 'row houses,' both side-to-side and front-to-back between the back and front rows of depressions. When envisioning the superstructure(s) of these features, one gets the impression of a 'pueblo'-type, multi-tiered arrangement of houses where the base of the upper row links up with the roof-levels of the lower row. Three tiers of largely continuous row-houses may have existed at Th'ewá:lí, given the possibility of plankhouses situated as the top-most tier.

As at Shxw'ow'hamel, and to some degree at Sxwóxwiymelh, these housepit features lack rims and are surrounded, rather, by relatively flat surfaces. Th'ewá:li is distinct, however, in that housepits in the main body of the settlement (excluding the cluster around F12-F8) are excavated into the hillside, with steep escarpments forming their back-walls, and share side-walls between adjacent housepits. The clear impression gained from these structures - as rows of largely conjoined features - is that they are highly interconnected. The housepits here are interconnected to such an extent that they may represent segments of a larger, encompassing structure within which the depressions are differentiated as 'chambers' - as opposed to individual houses. The 'triad' formed by F12-F10-F8 demonstrates this pattern of interconnected construction most clearly forming, possibly, a single structure with three internal chambers (e.g., family or living quarters) set on the same axis and surrounded by a relatively flat bench. Similar 'triads' or extended arrangements exist at Shxw'ow'hamel and Hiquelem (not reported here). This 'triad' arrangement may represent a pattern not previously recognized in the archaeological investigation of houses in the region - plankhouse-like structures with recessed floors and living quarters. As suggested for the arrangement at Shxw'ow'hamel (DiRj-30), this pattern represents a possible *hybrid* form of house structure incorporating components of both plankhouses and pithouses as they are currently perceived -- as distinct forms of houses -- in the archaeological consciousness of the region. Indications of such structures can be found in the ethnographic literature and oral history of the Stó:lō (e.g., interviews with Bob Joe; Marian Smith fieldnotes) - examination of which is beyond the scope of this report. Further investigation is required to examine this suggestion.

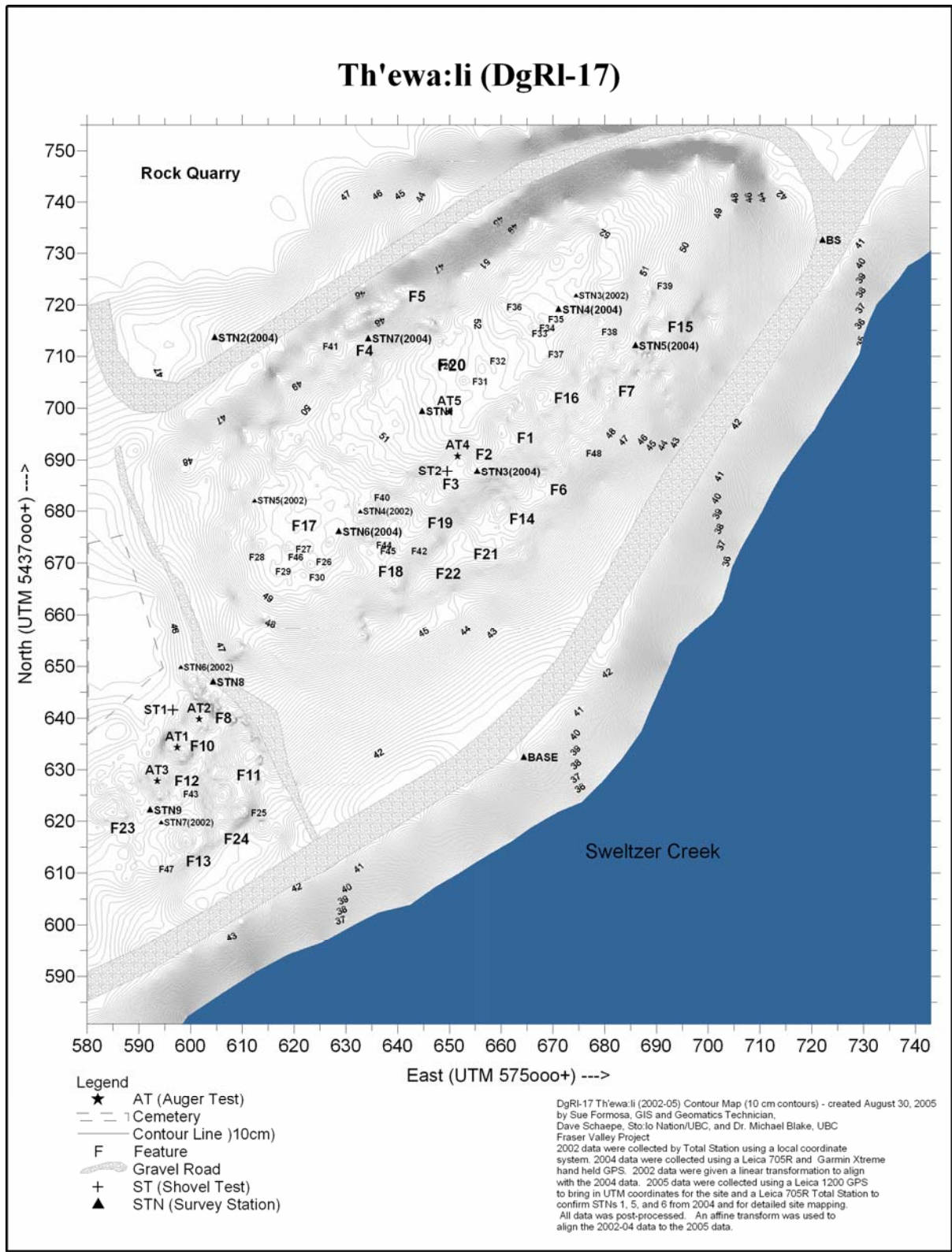


Figure 5a. Th'ewá:li (DgRI-17) contour map (10 cm contours) with tests, mapping stations, and feature locations.

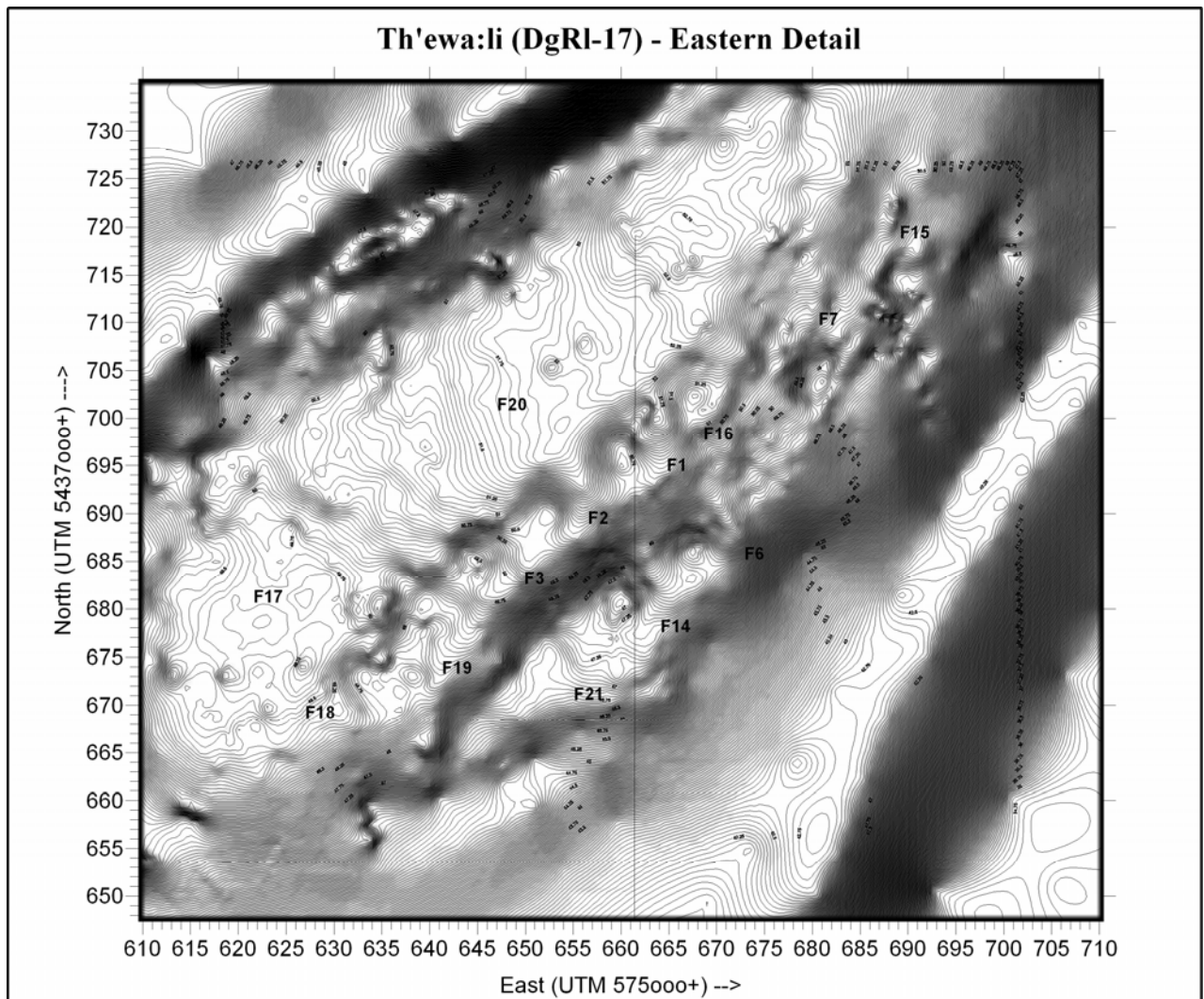


Figure 5b. East Detail - Th'ewa:li (DgRI-17) contour/shaded relief map (5 cm contours) with features.

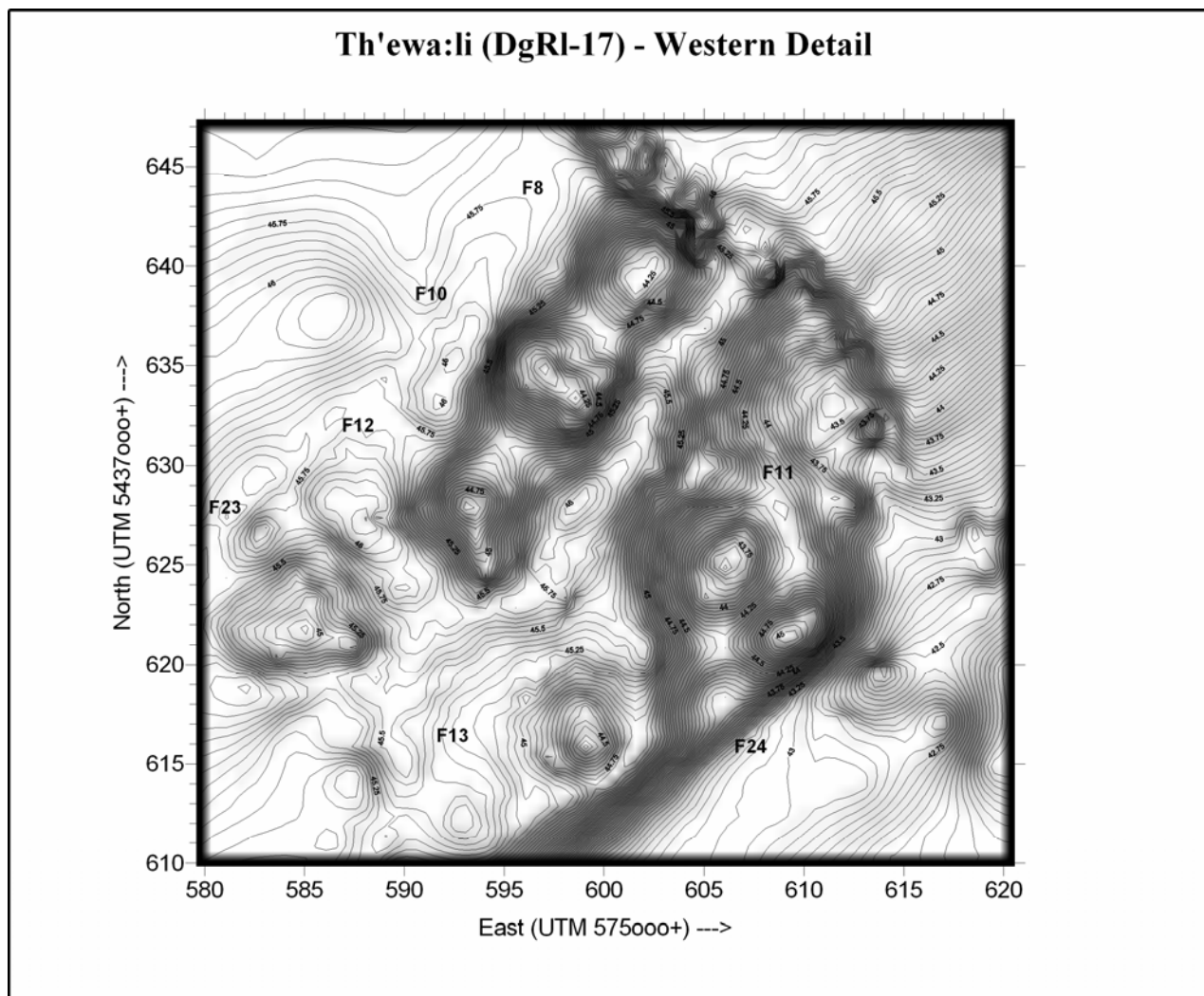


Figure 5c. West Detail - Th'ewa:li (DgRI-17) contour/shaded relief map (5 cm contours) with features

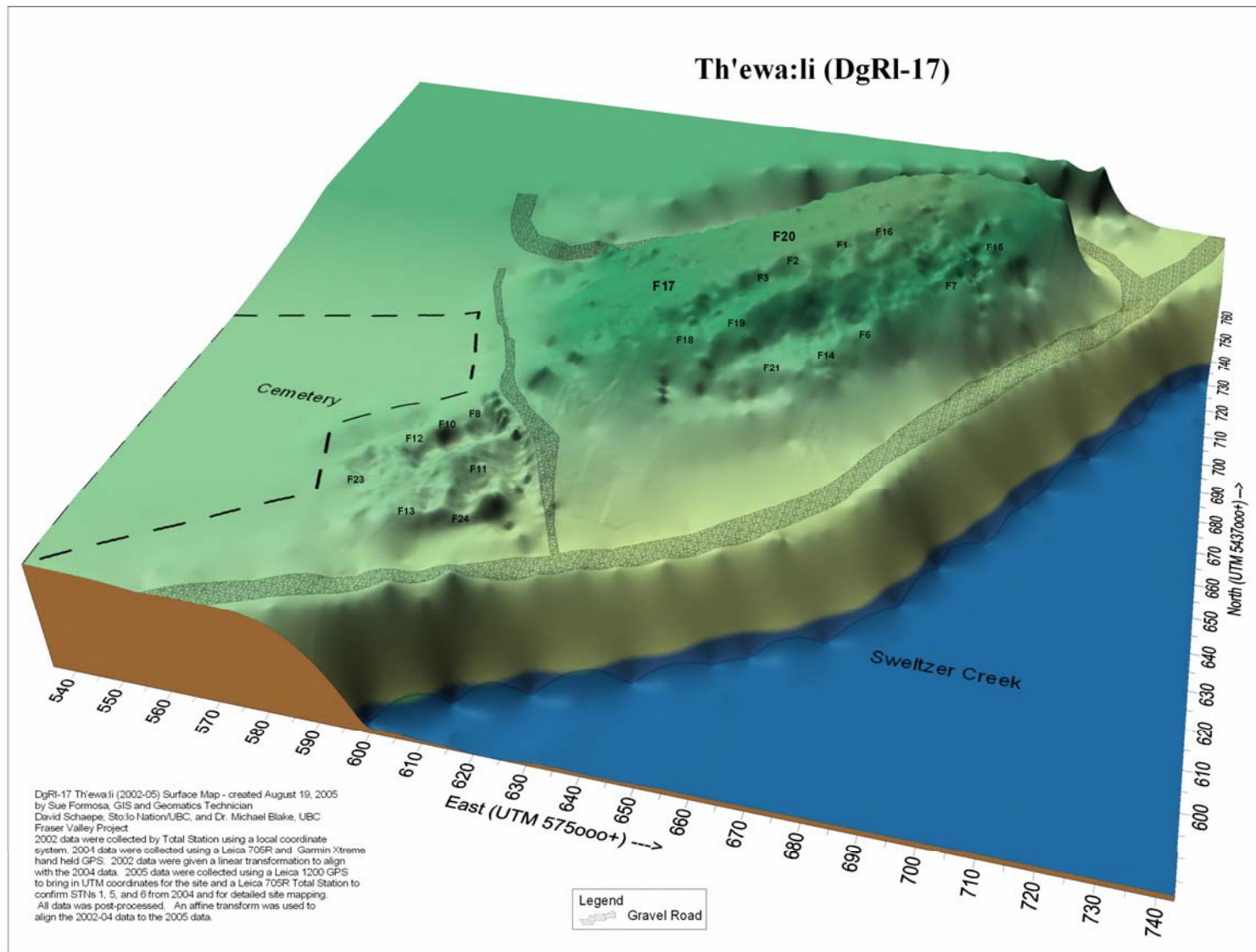


Figure 5d. Th'ewa:li (DgRI-17) surface map with features (note: southeast bank of Sweltzer Creek not shown).

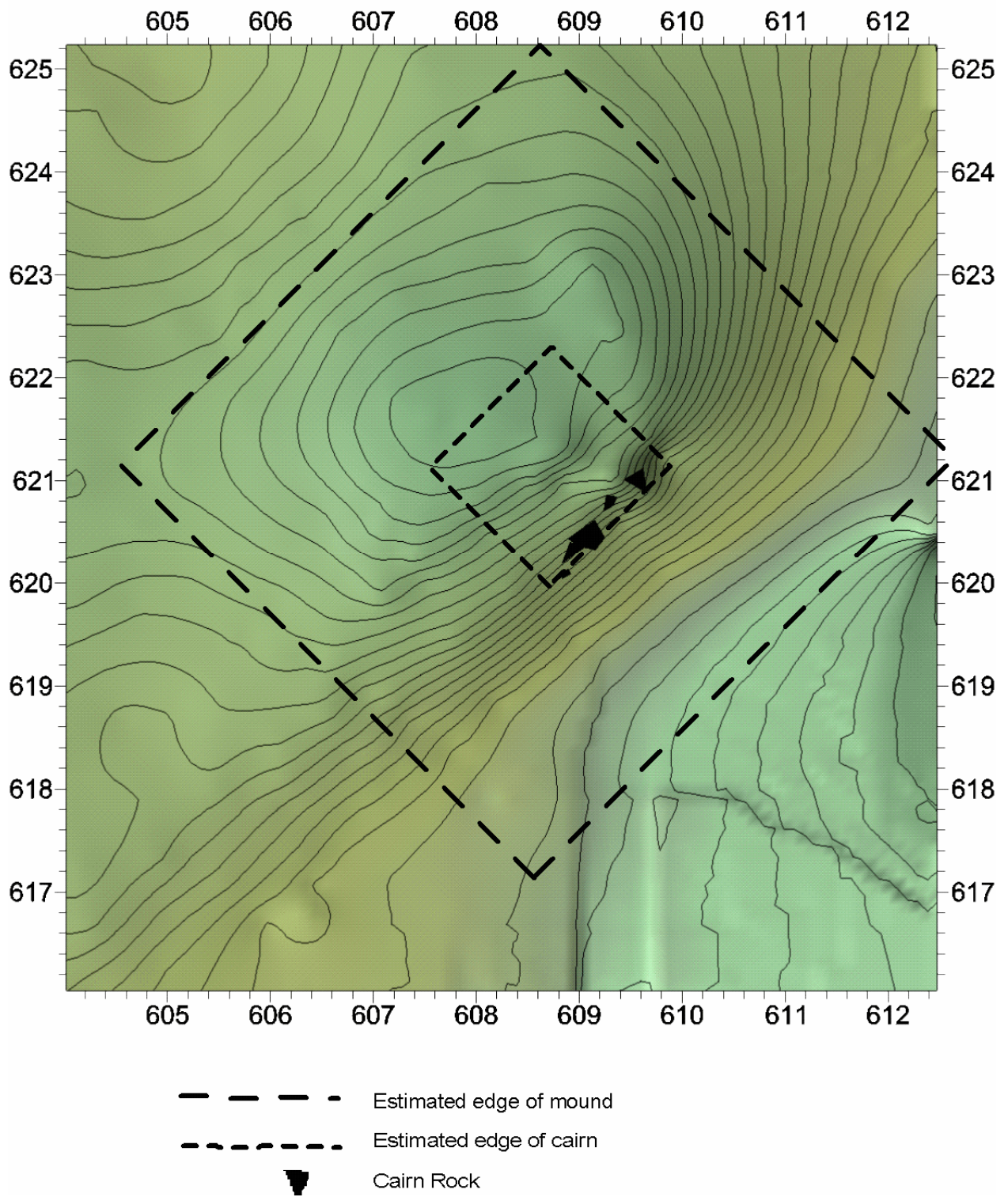


Figure 5e. Surface map of DgRI-17-F25 - earthen mound feature - showing the approximate mound shape, outline, and cairn exposure.

Eyxel (DiRi-48)

Mapping Methods

A survey of the site topography, features and test units was completed during the 2005 field season. A high precision Leica 1200 GPS unit was used to estimate ground coordinates for the survey stations that we set up near the site. Base 51 was set up on top of the cleared bluff north of the CN rail line west of CN Mile 40.43. The station was an etched “X” on a rock protruding from the bluff surface. The location of the Base was provisionally determined using the uncorrected GPS readings (as discussed below, these readings and all the subsequent mapping measurements were post-processed (i.e., corrected) using data from known base stations in the Fraser Valley and beyond). A rover GPS was used to set a backsight point (Rov211) based on the Base 51 location. The base station was run for 1.5 hours to enable post-processing of the data in order to calculate true ground coordinates and elevation at that location. The rover was also used to collect points on the east bank of the Fraser River just below the site. Due to the forest canopy, no other GPS data could be collected on this site. A Leica 705R Total Station was then set up on Base 51 as STN1. The Rov211 point provided the orientation for the survey. The coordinates and elevation at Base 51 were carried into the site from STN1 to STN2. An additional two stations (STN3 and STN4) were set on the site using STN2. All stations except for Base 51/STN1 were marked by 12 inch galvanized nails and flagged. Details on the locations for each station are in the 2005 Survey field notes.

The site, located on two natural river terraces, was mapped by taking measurements at 2 m intervals outside of features and at .3-.5 m intervals within features. Cultural features included house depressions, a burial mound, and smaller (sub-house sized) depressions. The river edge, rail line, and slope between the site features and the river were also mapped. Test units and carbon sample locations were surveyed. Approximately 1,100 surface points were collected.

After the 2005 field season, the GPS data were post-processed by Dave Martens, Department of Geomatics, BCIT. All of the 2005 data were then corrected by linear transformation based on the corrected UTM coordinates and elevation for the Base 51 station. The archived site data are now in true ground coordinates and AMSL elevations. Site surface and contour maps were completed in 2005 showing the features, test units, stations and topography of the site (see Figures 6a-d).

Summary Description

Eyxel (DiRi-48) consists of four visible house depressions (F1-4) tucked onto a small terrace that sits between 8 and 10 m above the Fraser River’s high water level. The terrace is crescent shaped and backed by a longer linear terrace about 2.5 m farther upslope. This upper terrace may also have been used in the past but it is badly disturbed from the construction and maintenance of the CN Railway line and no evidence of occupation is visible. Eyxel overlooks an excellent fishing spot (related to the late Bobby Peters of Chawathil First Nation) where the river is forced past a bedrock outcrop that causes ideal eddies and back-currents for migrating salmon. It is also directly east of Greenwood Island on which sits the site of Welqámex (DiRi-15), easily accessible by boat from Eyxel across this main navigable waterway of the Fraser River. Both Welqámex and Ts’qó:ls (DiRi-1) (upriver) are visible from the river’s edge at Eyxel.

These housepit features are generally rectilinear in shape, though somewhat indistinct or partly obscured (F3, F4). They are arranged in a slightly curvilinear fashion along the edge of the terrace. Their dimensions range from 6-9 m in length/width. Five tests (3 soil probes; 2

auger tests) were excavated at this site, from which six radiocarbon samples were recovered.

Two samples were processed resulting in radiocarbon dates of 280-170 cal BP (F1) and 550-500 cal BP (F2). More detailed descriptions are provided below.

The house depressions (Features 1 to 4) are aligned side-by-side and touching rim-to-rim along the lower terrace. Feature 3 marks the downriver end of the site and abuts a precipitous drop down to the river's edge. The side of the depression facing the river is open and not bounded by a clear rim—it may never have had one or the rim may have eroded away. It is approximately 8 m in diameter. Feature 2 is somewhat smaller, only about 6 m in diameter and, although its down slope side is also open, has a slight dip in the central floor area. Feature 1, like Feature 3 is also about 8 m in diameter, but unlike the other housepits at the site, it has a clearly defined rim, particularly on the down slope side. Feature 1 is about 1 m deep and although eroded and rounded has a somewhat rectangular outline. Feature 4 marks the upriver end of the site and, like Features 2 and 3, is missing a well defined down slope rim. The river-facing side of the depression appears to be eroding and loose deposits are visible on the slope leading down to the water's edge. Its diameter is approximately 7 m, but this is difficult to estimate because of the gradual slope of the rim and erosion inside the housepit. All of the house features share a well-defined back side (upslope side) delineated by the upper terrace. One imagines that when occupied, the roofs of the houses merged into the back slope and people may have had to gain access through entrances facing the river.

In addition to the housepit features we also mapped four additional features – all of which are located on the front (river-facing) edge of the main terrace just below Features 1 and 2. Features 5 and 6 are small terraces that appear to form level surfaces cut into the slope. They may be cultural, but we are not certain, and noted them because of their proximity to the more pronounced house pit features already discussed and because there are two mound features on them. The two terrace features are between 4 m and 8 m long and about 4 m wide. Our soil probe (SP3) into Feature 5 revealed only about 25 cm of soil buildup on top of rocky deposits and there were no indications of floors or burning. Feature 7, a small mound no more than 30 cm high and about 1.5 m in diameter, sits between the two terraces and helps define their extents. Feature 8 is a 20 cm high stone circle alignment, 1.3 m in diameter.

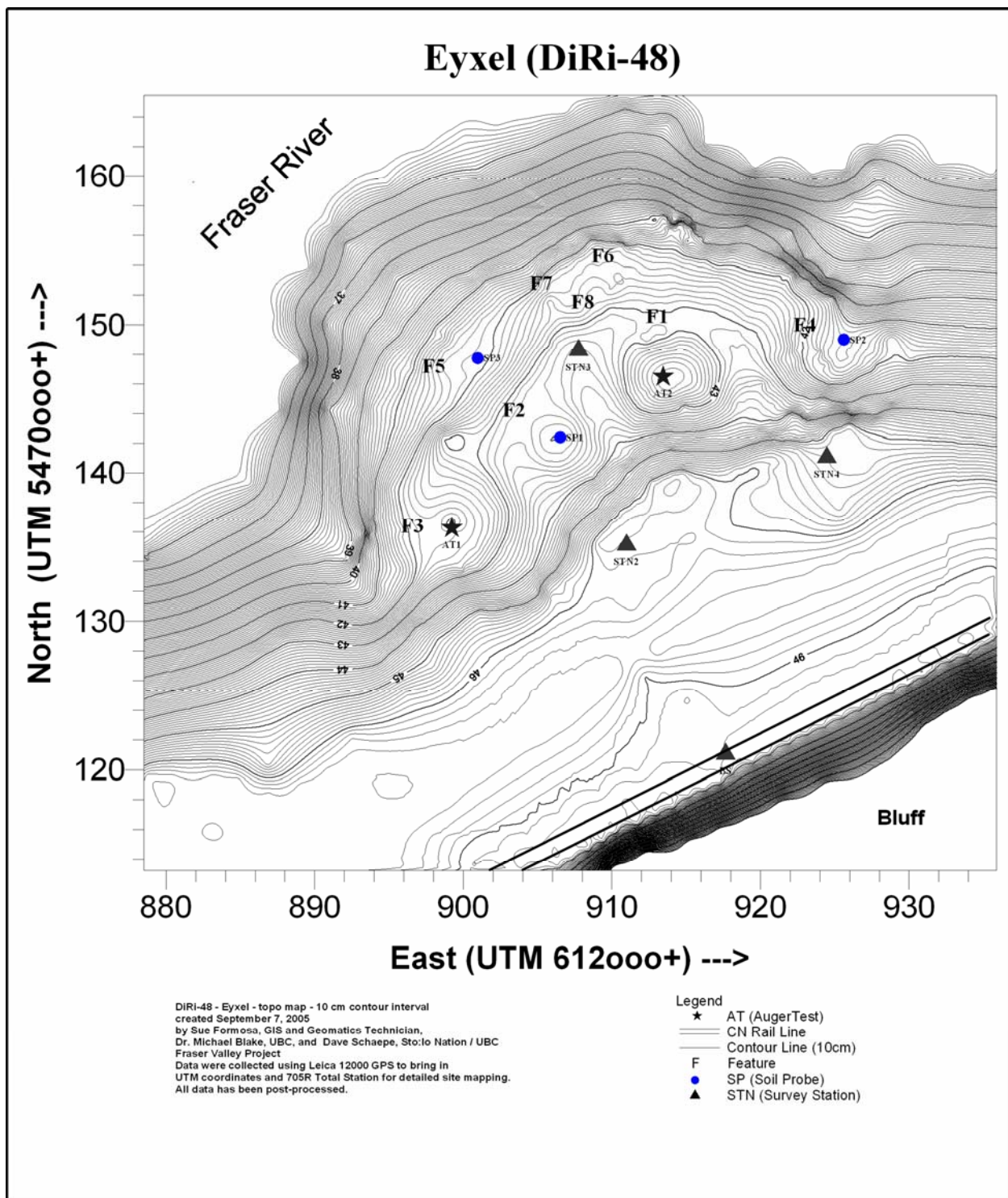


Figure 6a. Eyxel (DiRi 48) contour map (10 cm) with features, mapping station, and test locations.

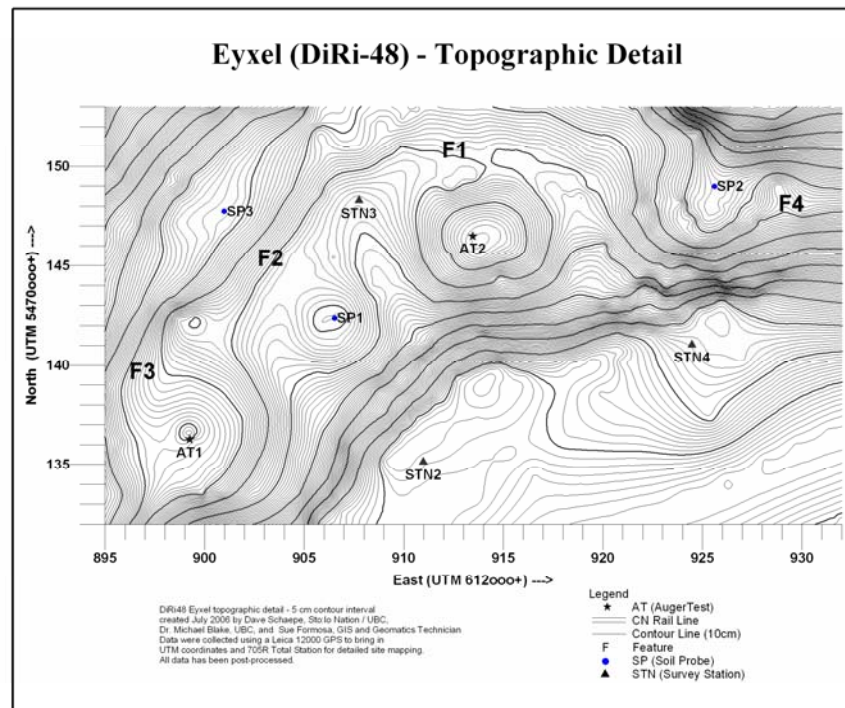


Figure 6b. Detail - Eyxel (DiRi 48) contour map (5 cm) - with housepit features, mapping station, and test locations.

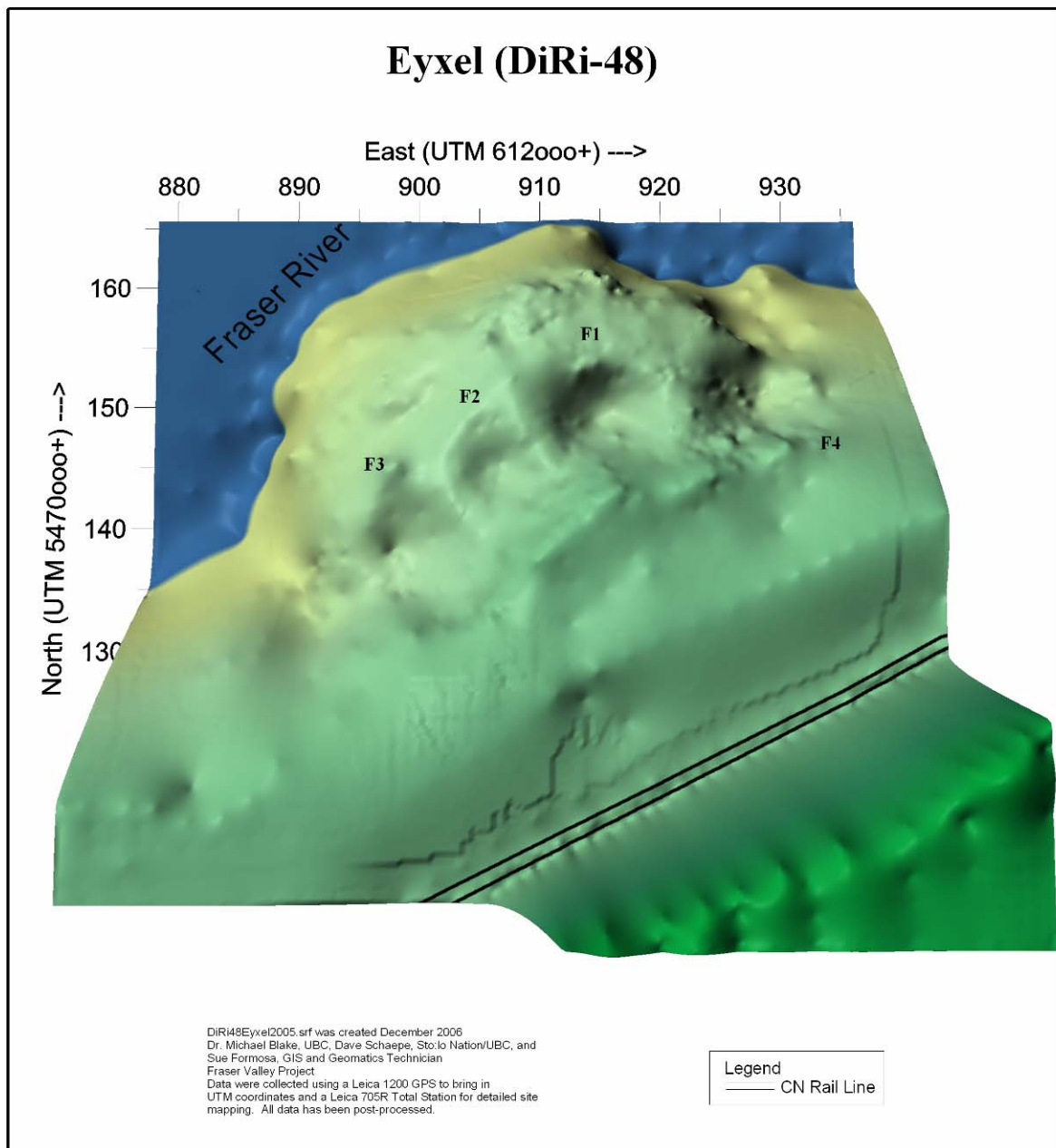


Figure 6c. Eyxel (DiRi 48) surface map with housepit features.

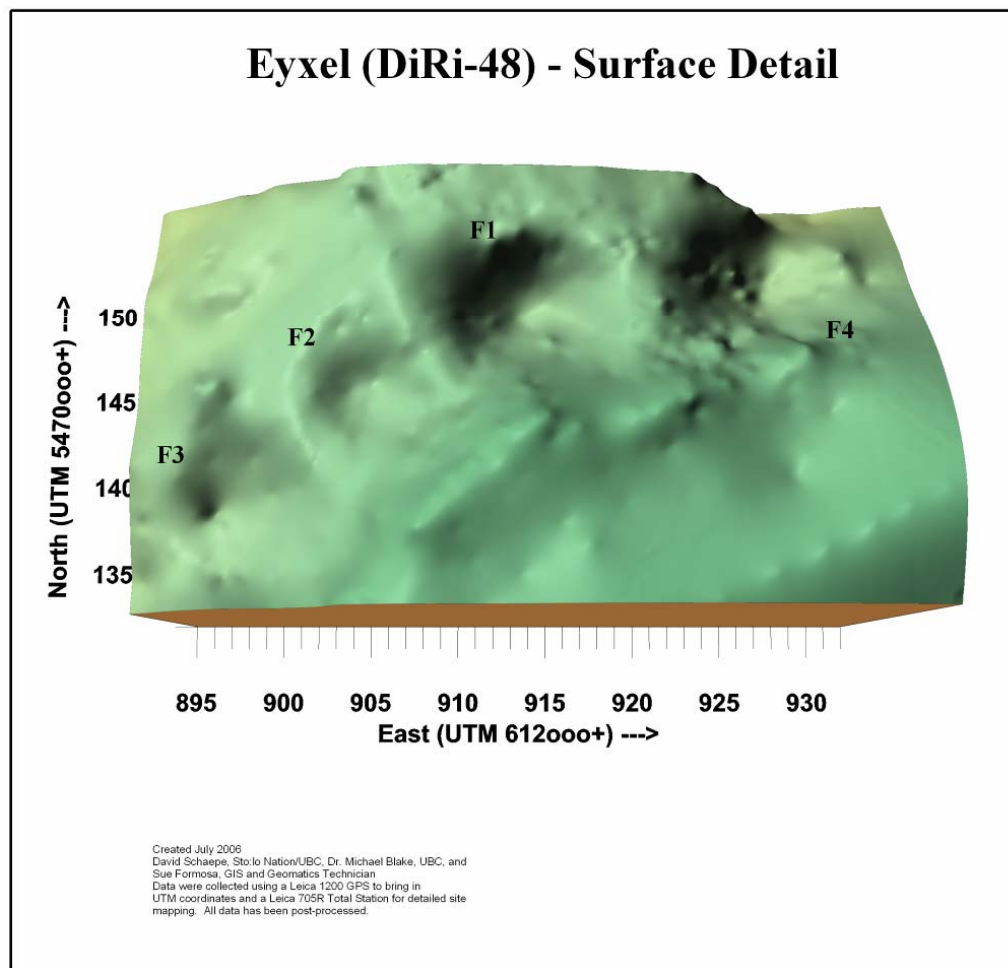


Figure 6d. Detail - Eyxel (DiRi 48) surface map with housepit features.

S̓wó̓w̓iymelh (DiRj-1) - a.k.a. 'Katz'

Mapping Methods

A site survey was conducted on the south portion of S̓wó̓w̓iymelh (DiRj-1) in 2004. A detailed survey of cultural depressions and test units was completed on the south portion in the 2005 field season. A detailed topographic survey was also completed for the north portion of the site during the 2005 field season. The intervening highway, highway pullout, and pipeline right of way and Canadian Pacific Rail Line were also surveyed.

Summer 2004

A Garmin Xtreme hand held GPS was used to bring in approximate UTM coordinates to the site on the first station (STN1). This station was set 5m east of the site trail southwest of F6 and marked by a wooden hub. Using the Garmin Xtreme, a temporary back sight was established on the same easting approximately 260 m across the Fraser River.

A Leica 705R Total Station was set up on STN1 and oriented by the back sight at a bearing of 36°52'12" and 255 m from STN1. The Total Station and a mounted prism were used to carry coordinates and elevations through the site from STN1. The elevation was an assumed value of 100mAMSL at STN1. STN2 was set from STN1. STN3 was set from STN2 to create an east-west baseline for the site. Both baseline stations were marked by rebar mounted in concrete pillars. STN4 and STN6 were set from STN2. STN5 was set from STN4. STN7 was set from STN6. All of these stations were marked with wooden hubs. With the exception of STN5 and STN7, stations were confirmed with readings to two other stations. Details on the locations for each hub are in the 2004 Survey field notes.

A detailed topographic survey was accomplished by collecting ground elevations at 2m intervals between features and at .5m intervals immediately around and within features across the complete site. House depressions and cultural depressions were the cultural features captured with this survey. The dry slough channels running through the site and the river bank on the south side of the site were also surveyed. A single test unit was mapped in F10 (see Lenert and Lepofsky 2005). Approximately 2,460 surface points were collected.

Subsequent to the field season, Canadian Pacific Rail provided coordinates and elevation for a geodetic marker along the track at Katz landing just west of the site. The approximate UTM's for the site survey were transformed using the georeferenced coordinates from the CP point. The correction was minor: approximately (+) 2 m easting and (+).5 m northing. Elevations were adjusted by calculating the elevation difference between the CP points and the site survey points taken on the tracks.

Summer 2005

In the 2005 field season, testing was completed on the south portion of the site. Topographic mapping and testing was also completed on the north portion of the site. The coordinates were carried from STN2 on the south portion of the site to the north portion of the site by a traverse.

South Portion -

A Topcon 718 Total Station was used to set out test units within and on the rims of house depressions. Two different Leica 703R Total Stations were used sequentially for the detailed testing survey of the test units, topographic survey of cultural depressions, and the proveniencing

of carbon samples and artifacts. STN8 and STN9 were set from STN2, established in 2004.

Both of these stations were marked by wooden hubs. The majority of the survey was completed from STN8. STN4 and STN7 were gone in 2005 and STN5 was decaying. The dampness at the site will limit the life of the hubs. If further work is anticipated for this site, then the stations should be reset using either rebar or galvanized nails. STN4 was replaced with STN10 (originally numbered STN8 in 2005 Sxwóxwiyemelh North Site field notes). It was marked with a 12" galvanized nail. All stations were re-flagged in 2005. Details on the stations are available in the 2004 and 2005 total station field notes. Site surface and contour maps were completed in 2005 showing the features, stations, and topography of the south portion of the site (see Figures 7a-d).

North Portion -

A traverse was completed from STN2 on the south portion of the site to STN10→ STN11→ STN12→ STN13 to bring the coordinates into the north portion of the site. STN14 – STN21 were set as needed to move through the site for the topographic survey. All stations were set with 12" galvanized nails. Subsequent to the field season, the stations were renumbered to be continuous with the stations assigned to the south portion of the site. STN10 became STN11 onward to STN21 becoming STN22. The traverse into and through the north portion of the site was not closed due to time constraints. If further work is to be done on the site, then the traverse should be closed at the beginning of that work. Details on the stations are available in the 2005 Sxwóxwiyemelh North field notes.

Summary Description

Description of the features identified mapping of both southern and northern portions of Sxwóxwiyemelh are provided below. A total of between 29-30 housepit features were recorded between both portions of the site, now divided and partly impacted by Highway 7 and the CPR railway. Housepits range in size between 6-12 m in longest dimension with the exception of three questionable features (F26-F28) which are significantly larger (18-20 m). Four radiocarbon dates processed from this site establish two distinct occupations ranging between 2700-2100 cal BP (F6, F9, F10, F15) and 490-290 cal BP (F20) (per Lenert and Lepofsky 2005). More detailed descriptions of the features and dates from this site are provided below. Details on the test units at Sxwóxwiyemelh are described by Mike Lenert and Dana Lepofsky (2005, 2006) (Stó:lō Heritage Investigation Permit #2005-05).

Sxwóxwiyemelh 'South' (DiRj-1) / (Katz) - Description

This site is located on a terrace on the north side of the Fraser River 5 km downstream from (west of) the town of Hope. It is on Chawathil I.R. No. 4, and is bisected by Highway 7 and the Canadian Pacific Railway. The portion of the site that sits between the CPR line and the Fraser River (Sxwóxwiyemelh 'South') is essentially unchanged from its condition in the early 1970s.

Earlier topographic and feature maps of the Katz Site, now renamed Sxwóxwiyemelh ("lots of people died all at once") for its Halq'eméylem place name (McHalsie 2001:150), were made in the late 1940s-50s by Wilson Duff, and in the early 1970s by Charles Borden, Moira Irvine, and Gordon Hanson. It worked well as a guide to the locations of the housepits and a general description of the terrace on which the site lies, but it did not reveal much detail about the shapes, sizes, and orientations of individual features. We wanted to remap the site in order to

collect comparable data to allow inter-site comparisons with the other known pithouse villages in the region and so began a mapping effort in 2004. Excavations carried out in 1970 and 1971 were reported by Gordon Hanson (1973) in his M.A. thesis. Excavations carried out in 2005 were part of the Fraser Valley Project, and are reported by Lenert and Lepofsky (2005, 2006).

The 2004 and 2005 maps allow us to describe in detail the layout of the site and the characteristics of the various features recorded. The most prominent set of features is a straight line of housepits stretching along the river terrace for 110 m. These housepits are set back approximately 20 m to 25 m from the edge of the river bank and run parallel to the river. The line of housepits is actually at least two rows of houses, the first row of which consists of 10 relatively well preserved depressions (F1 to F10). The second row sits just behind the first (away from the river). Only the westernmost four of these housepits (F11 to F14) are still partly visible. Since this second row of houses was covered over by railway construction fill we do not know the total number of housepits that extend to the east nor condition of these buried houses, although they may be well preserved beneath the fill.

We will describe the housepit features starting with F3 marking the eastern end of the site. F3 is, like the second row houses F11 to F14, partly buried by railway construction fill. This means we cannot estimate its dimensions however it was, minimally, 8 m in width and 0.7 m deep. Sitting in front of F3 is a 2 m high mound of earth, 7 m in diameter at the base. It appears to be recently constructed, possibly by the railway for maintenance activities.

F2 is a small depression located only 3 m west of F3. It has an irregular shape—perhaps because of disturbance from the railway. It measures approximately 6 m by 7 m and is 0.6 m deep.

Next to this is F1, perhaps the largest remaining housepit at the site. F1 has a somewhat square outline with its axes aligned to the orientation of the river. It is approximately 10 m on a side, but there is a large indentation on its backside (away from the river) that may be from recent erosion. It is also one of the deepest structures—approx. 1.6 m deep on the front side (and much deeper on the backside where the slope climbs up towards the rail embankment).

Housepits F4, and F6 to F10 are all approximately the same size and, except for F6, all appear to be square in outline with rounded corners. As with F1, the orientation of their axes is aligned with the river. F6 is more rounded in shape than the others. All of these structures are approximately 7 m to 8 m on a side (diameter in the case of F6). They all range between 0.8 m and 1 m deep (measuring from the river side) and somewhat deeper on the upslope side (towards the railway). None of them has pronounced rims, suggesting a very different construction style than the housepits described at sites such as Qithyil Island, Sqwa:la, and John Mack Slough, for example. Based on excavation data from both Hanson's work and the recent work by Lenert, it appears that all of these structures are likely to have been in-filled with water-borne sediments sometime after their abandonment. This must have made the depressions both smaller and shallower.

F5 is the smallest depression in the front row of structures. Due to its small size, the function of structure remains questionable. It may be too small to have been a house, however its placement and arrangement with the other housepits at this settlement support the possibility of F5 being a house feature, albeit the smallest one. Like the other features, it is "squarish" in outline and measures about 6 m on a side. The feature is only about 0.3 m to 0.4 m deep, much shallower than all the larger depressions in the front row. It may have been a storage pit or some other type of structure that has yet to be defined.

Even though Feature F11 to F14 are partially covered by railway construction fill, it is possible to say something about their sizes, if not their shapes. As with the front row housepits, they are all closely spaced—no more than 5 m apart. None of them are likely to have been more

than 8 m across. Their shallowness, ca. 0.6 m deep, is likely a result of erosion and infilling from the railway embankment.

Finally, there are several other features on the site which we will briefly mention but which were not assigned feature numbers. There are several large cultural depressions near the river's edge, directly opposite F8 and F9 (one is aligned with F8 and F14 and the other is aligned with F9 and F13). The first (aligned with F8) is approximately 0.7 m deep and 5 m in diameter. Other similar depressions have been noted on the site during mapping and it is possible that these are storage pits. However, because there has been so much recent disturbance associated with the railway, we are not certain of their function and they would need to be excavated to determine their likely construction history and purpose. The second (aligned with F9) is rectangular, and opens toward the river bank where its south rim is entirely missing. It is 10 m long and 5 m wide. It may be a partially eroded housepit.

Lenert and Lepofsky (2005) recovered three dates from this part of site including 2350-2160 cal BP (F10), and 2320-2050 cal BP (F9), and 2690-2340 cal BP (F6); Hanson (1973) earlier recovered a single date of about 2700-2350 cal BP (F1). These last two older dates overlap with one of two dates recovered from Sxwóxwiymelh 'North'— see below.

Sxwóxwiymelh 'North' - Description

This northern extension of the site is located 50 m north of the Highway 7 right of way and about 100 m to 200 m east of Sxwóxwiymelh 'South.' It appears to be a continuation of the same settlement, following a ridge that was cut through by both the CPR railway and Highway 7. This part of the site has two main sections: the lower section with clearly marked, rather small, housepit depressions (F15 to F23, F29 and F30) and the upper section with very large cultural depressions (F26, F27, and F28). The zone between these two sections of the site was very badly disturbed by excavation of a gas pipeline and it is hard to tell how much of the large depressions in the upper section might be the result of this activity.

Features F15, F16, and F19a and b, are large depressions that compare with those already described for the southern part of the site. They seem to be aligned facing the river and are "squarish"—that is, they have rounded corners and are clearly not circular pithouses with rims in the classic sense. These structures are about 10 m on a side and appear to be dug into the slope. All are fairly shallow: approximately 0.3 to 0.5 m in depth.

Features F17, F18 and F20 to F23 are smaller structures, only about 6 m on a side. They are similar to the smaller housepits at Sxwóxwiymelh 'South', but even smaller and shallower—usually no more than 0.5 m deep.

Features F26 to F28 are irregularly shaped and larger than any other structures at the site. F26 for example, is rectangular, measuring 20 m by 18 m, with its southernmost corner pushed in (perhaps by construction activity in that part of the site). It is up to 1 m deep and has a fairly flat floor. F27 is also rectangular and measures 11 m by 12 m and is approximately 1 m deep. F28 is up to 20 m on a side with an interior depression that is about 10 m across. None of these three large pits have been tested and we do not know if they are the remains of ancient houses or part of the construction activity in the right of way for the gas pipeline. As possible cultural features, it may be that the three large depressions north of the pipeline right-of-way may be partially constructed, incomplete housepit 'developments' associated with the late precontact occupation of the settlement, never actually occupied themselves. More investigation is required regarding the nature of F26-F28 as archaeological or otherwise modern disturbance-related features.

We have two dates for this part of the site (Lenert and Lepofsky 2005). One ranges from 2730-2360 cal BP (F15), similar to two dates from the southern part of the site (F1, F6). The other, recovered from F, is in the 490 to 290 cal BP range - making it the youngest date so far recovered from the site and supportive of the Stó:lō oral history describing a more recent occupation of this settlement terminated by the smallpox epidemic of the late 18th century (“lots of people died all at once”).

Sxwóxwiyemelh 'South' (DiRj-1) - 'Katz'

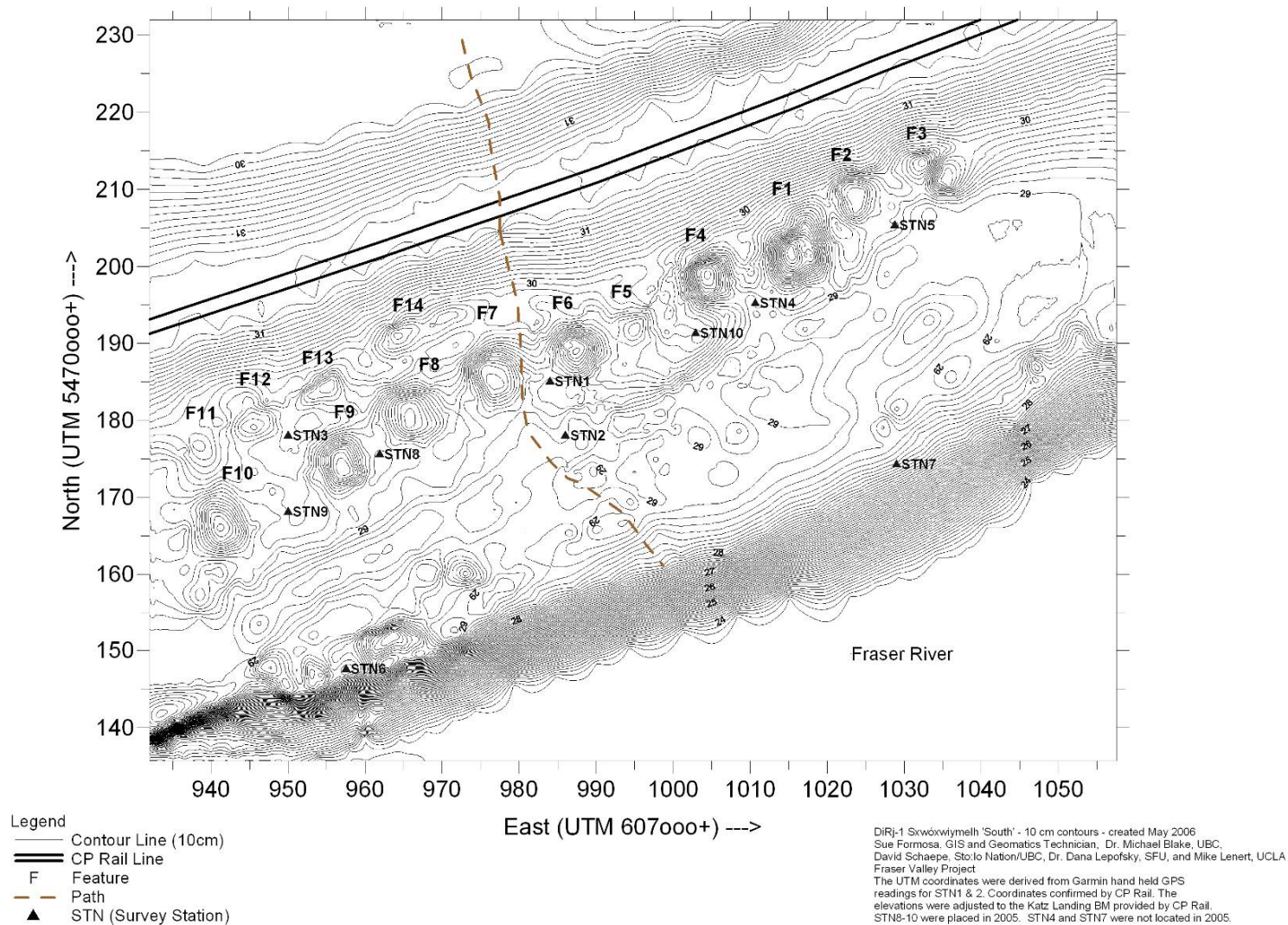
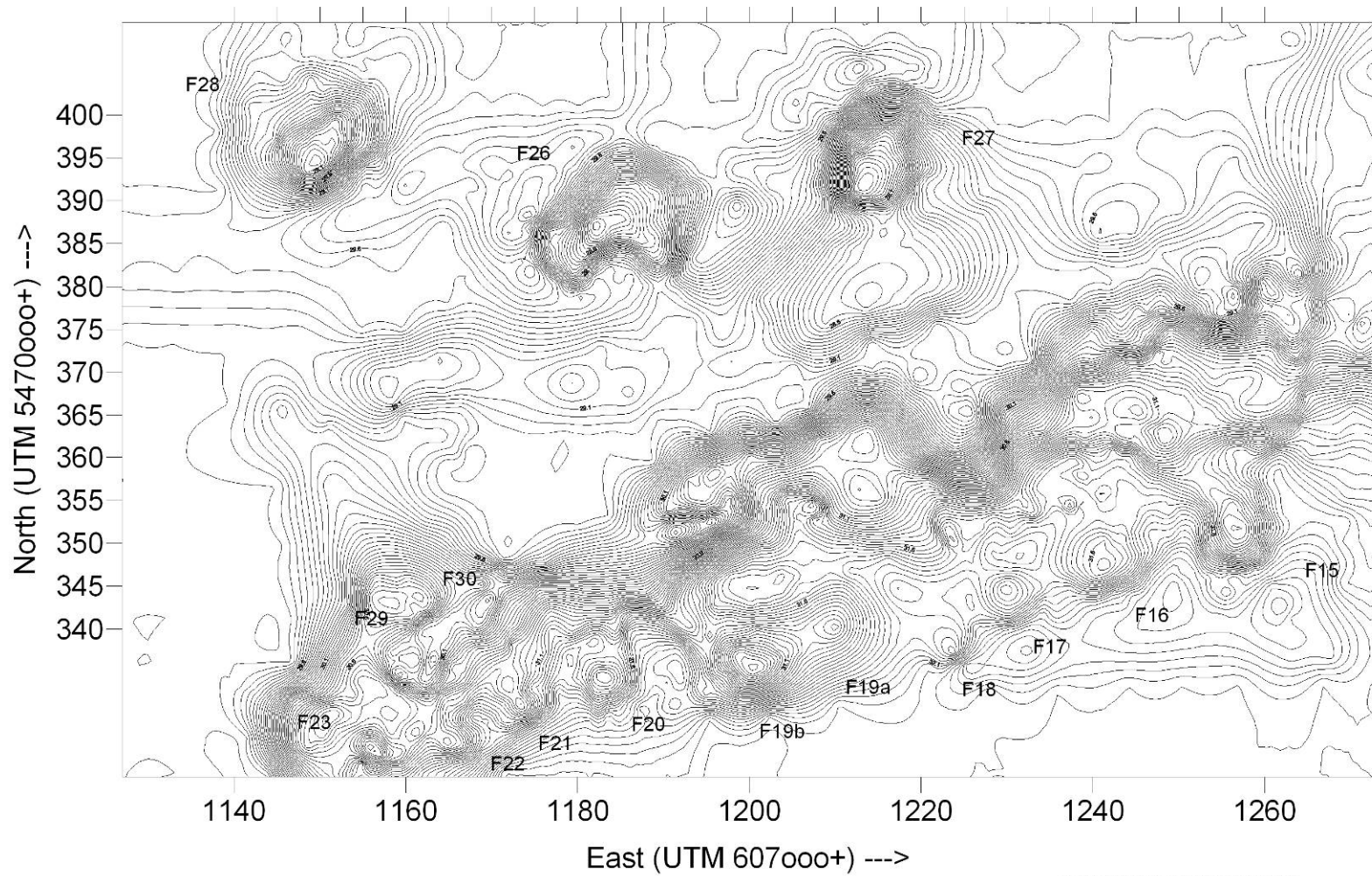


Figure 7a. Sxwóxwiyemelh 'South' contour map (10 cm contours) with features and mapping station locations.

Sxwoxwiymelh 'North' (DiRj-1)



DiRj-1 Sxwoxwiymelh 'North': 10 cm contours - produced July 2005
 by David Schaepe, Stolo Natic/AEC, Sue Portmore, GIS and Geomatics Technician
 Dr. Dana Lepofsky, STL, Mike Lemell, UGA
 Fraser Valley Project

The data was collected using GPS since 2000. The corrected coordinates
 for the DiRj-1 South site were carried into the DiRj-1 North site by traversing
 from North Station 2. The traverse was not closed.

Figure 7b. Sxwóxwiymelh 'North' contour map (10 cm contours) with features.

Sxwoxwiymelh (DiRj-1) - Southern Portion ('Katz')

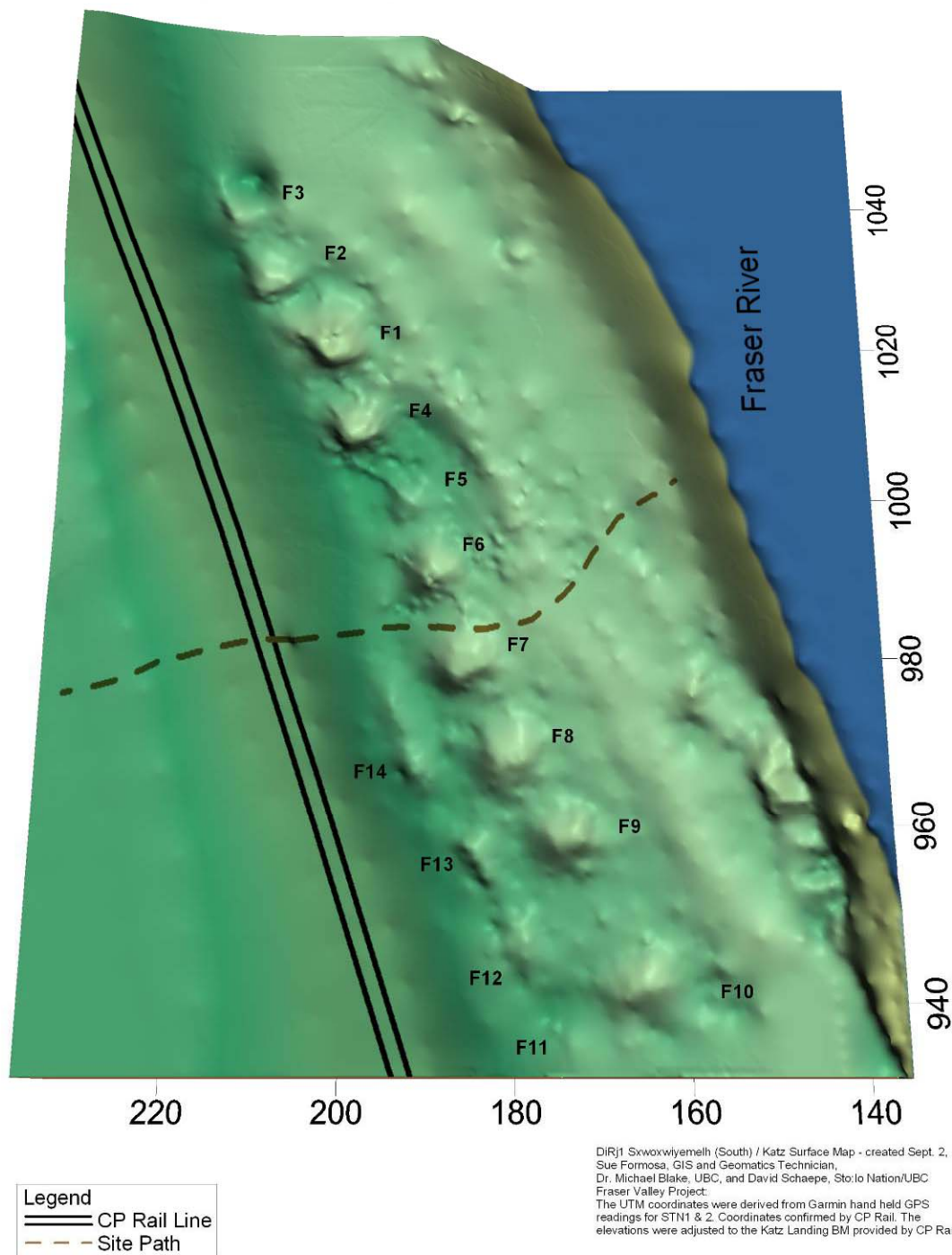


Figure 7c. Sxwóxwiymelh 'South' surface map with housepit features.

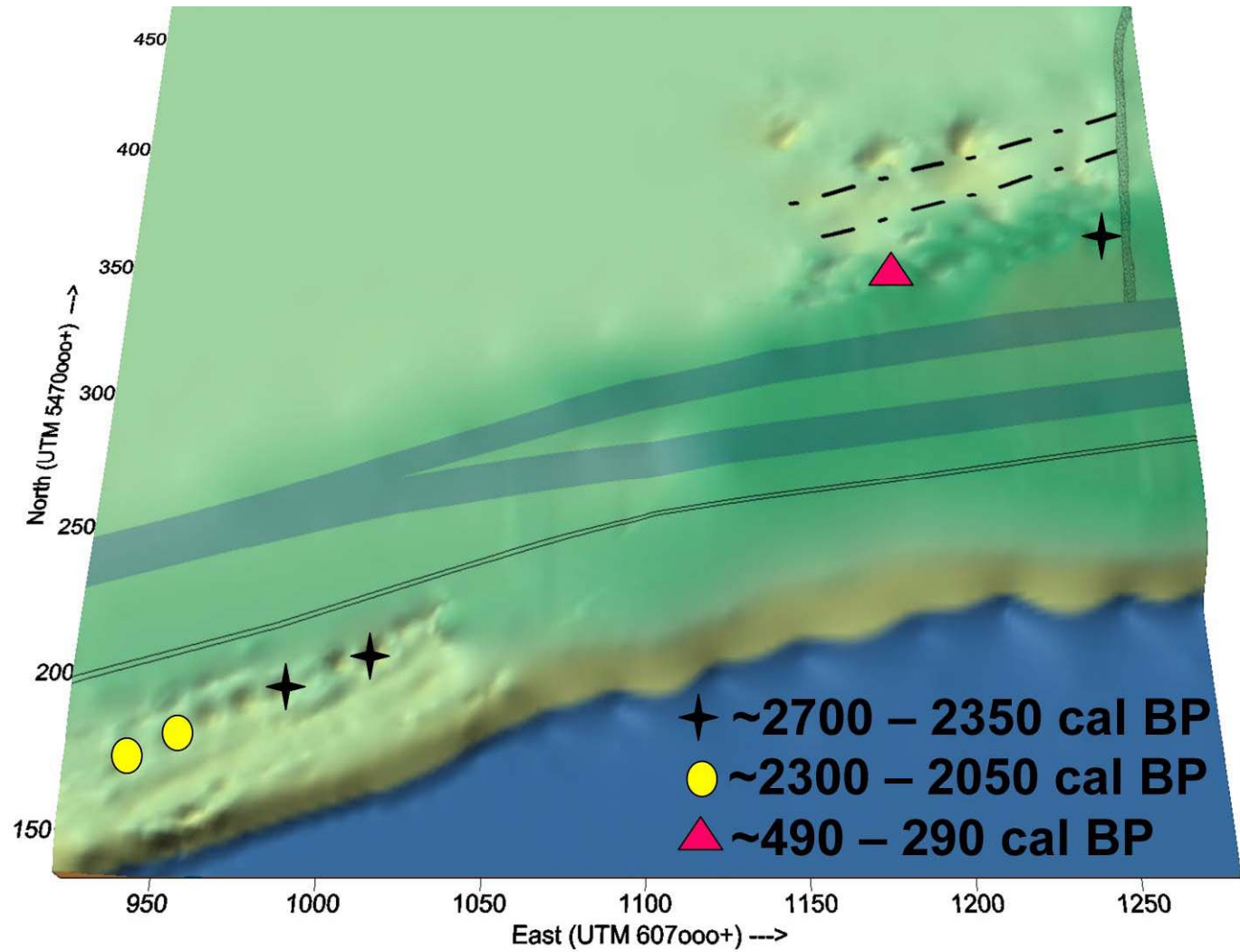


Figure 7d. Composite surface image of Sxwóxiwimelh (DiRj-1) 'South' and 'North' with radiocarbon results - per Lenert and Lepofsky (2005, 2006).

Shxw'ow'hamel (DiRj-30)

Mapping Methods

Site survey was conducted at Dirj-30 in 2004 and 2005. In 2004, the first station (STN1) was set on the pipeline right of way just east of the north end of the site. A backsite (STN2) was set on a pipeline marker 2m north of witness post GPS 61, WC 204114.7, 6.3 M U/S, MAG 42. A Garmin Xtreme hand held GPS was used to bring in approximate UTM coordinates for STN1 and STN2. A Leica 705R Total Station was set up on STN1. STN2 provided an orientation for the survey at a bearing of 36°52'12" and 255m from STN1. The Total Station and a mounted prism were used to carry coordinates and elevations onto the site from STN1. The elevation was an assumed value of 100mAMSL at STN1. The subsequent stations (STN3-9) were set within a traverse as the survey moved through the site from the north to the south. With the exception of STN8, all stations were verified from two other stations. All stations were set using a wooden hub. The hub for STN9 was split during setting and the station point was centered on the remaining hub. Details on the locations for each hub are in the 2004 Survey field notes.

A detailed topographic survey was accomplished by collecting ground elevations at 2m intervals between features and at .5m intervals immediately around and within features across the complete site. House depressions, cultural depressions, and burial mounds were the cultural features captured with this survey. The dry slough channel adjacent to the west side of the site was also surveyed. Approximately 3,475 surface points were collected between 2004 and 2005. Subsequent to the field season, Canadian National Rail provided aerial photographs and contour maps of the area. The approximate UTMs for the site survey were transformed using georectified coordinates from the CN data on the witness post GPS61. The correction was minor: (+) 2m easting and (+).5m northing. Elevations were corrected based on the witness post elevation in the CN data.

In the 2005 field season, testing was completed on the site. A Leica 705R was used for the detailed survey. The stations set in 2004 were used for collecting locations and elevations for the work in test units and for carbon samples. The coordinates and elevation for STN8 were corrected and are shown in the raw data as STN8A. Surface elevations for the soil probes were valid. Any elevations collected at the base of a soil probe were omitted as the prism rod could not be fully extended into the probe hole. The dampness at the site will limit the life of the hubs. If further work is anticipated for this site, then the stations should be reset using either rebar or galvanized nails. Site surface and contour maps were completed in 2005 showing the features, test units, stations and topography of site (see Figures 9a-d).

Site Summary

The archaeological settlement of Shxw'ow'hamel (DiRj-30) is located on the Shxw'ow'hamel Reserve in the Upper Fraser Valley about 13 km southwest of the town of Hope. The site is situated along the banks of two slough channels which drain the mountains backing the site and which form a confluence leading to the Fraser River. The banks of these channels form the front edge of the settlement. As reproduced from our earlier report of work conducted in 2002, "site DiRj-30 was first recorded by Wilson Duff (1949:6-7), who excavated portions of two of the pithouses at the site (F4 and F16). In 1988, the site was revisited by Mohs and McHalsie who created a detailed site plan depicting the reported pithouses. According to Stó:lō oral history, a village with an unknown name was established in the Hunter Creek vicinity in the early post-smallpox period (Keith Carlson, pers. comm., 2002). This village was established in relation to the resettlement of people from a village or villages in the Agassiz area

following the smallpox epidemic of 1782 (ibid.). In addition, in 1962, Stó:lō elder Mrs. August Jim told Oliver Wells (1987:62) that she was born in a pithouse located on the valley bottom between the Fraser River and the mountain backing the lowland landbase at Shxw'ow'hamel in 1871. Mohs (1988 site form) suggests that site DiRj-30 may be this village." As a preliminary part of the Fraser Valley project, the site was revisited, re-mapped, and preliminary testing was carried out in 2002 (Lepofsky, Schaepe, Blake, and Arnold 2002). The map produced that season is reproduced here for comparison sake with the results of the current project (Figure 8). Testing results from that season were inconclusive in determining the age of this settlement and its relationship with the noted oral history, although we found no evidence to suggest this was indeed the post-1782 site. Results from the current project further serve to remove this settlement from consideration as the late-period site in question.

Our work in 2004 and 2005 resulted in the production of an entirely new map utilizing our current methods, showing a clear linear arrangement of housepit features and providing significantly more detailed representations of those features and the surrounding landscape. This comparison points to the significant differences in the outcomes resulting from our two applied mapping methods, affecting the accurate description of house features and settlements.

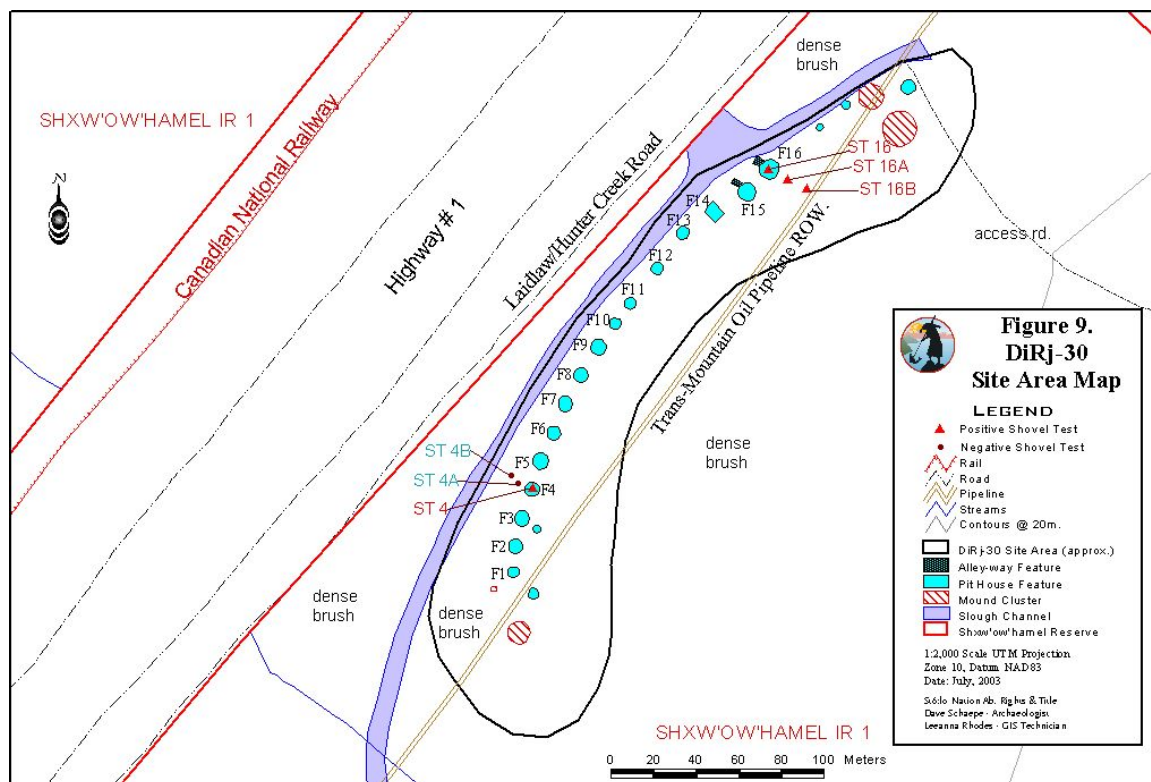


Figure 8. DiRj-30 Site Area Map (per Lepofsky, Schaepe, Blake, and Arnold 2002) - comparative map.

The settlement of Shxw'ow'hamel (DiRj-30) is comprised of 17 housepit features -- possibly 18 (F17 is questionable) -- and numerous mound features (e.g., F1; F19) located both within and around the houses recorded at this site. In contrast to our previous map, the housepits in the village are clearly linear in arrangement, not curvilinear, forming a single row of closely arranged housepits oriented NNE-SSW along the banks of two merging slough channels. A segment of the settlement at the north end appears slightly 'clustered' and out of alignment with

the housepits to the south - the significance of which will be discussed more below. A large cluster of medium sized mounds is located at the northern end of the settlement, beyond F16. The vast majority of mounds remain unidentified with specific feature numbers; a factor of our focus on the housepits.

A total of 11 tests (4 shovel tests; 2 auger tests; 5 soil probes) were excavated in 2005. A total of 31 carbon samples and one soil sample (F12) was collected from these tests. Of these carbon samples, seven were analyzed (with one result thrown out as disturbed; F18) resulting in the following dates for F4, F9, F12, F13, and F18, as arranged chronologically from youngest to oldest: F13 dates to 1480-1470 / 1430-1300 cal BP (initial occupation); F4 dates to 2060-1880 cal BP (terminal occupation); F18 dates to 2120-1900 cal BP (initial occupation); F12 dates to 2120-1900 cal BP (terminal occupation) and 2290-2270 / 2160-1990 cal BP (initial occupation); and F9 dates to 2330-2120 cal BP (initial occupation). These dates overlap with the occupation of a portion of *Sxwóxwiymelh* (DiRj-1), establishing this site - like *Sxwóxwiymelh* - as one of earliest large scale settlements in the Region.

These dates indicate that the majority of this settlement was occupied at the same time -- between 2200-1900 BP -- with the exception of a slightly later (i.e., post 1500 BP) occupation associate with F13, and possibly some of the housepits grouped together at the northern end of the settlement. F13, interestingly, is one of the two largest housepit features (F13; F15) both of which are located in this northern grouping, which is somewhat out of alignment with the row of the features situated south of F13. This apparent 'break' in the temporal, dimensional, and spatial arrangement of houses at *Shxw'ow'hamel* suggests that the grouping of features F13, F14, F15, and F16 may be associated as later occupation of the settlement. The housepit features included in the row containing F12, F11, F21, F10, F9, F8, F7, F6, F18, F5, F4, F3, and F2 are generally similar in size and shape. These features are generally rectangular in form and lack rims. They are generally deep (1 m or more), have small remnant floor areas, and are slightly conical in appearance - likely as a result of side-wall slumping or other possible taphonomic factors affecting their current appearance. They generally range in size from 7 m to 9 m on a side. Though apparently not part of the row, F16 and F14 fall within this range of descriptions. Notable exceptions to this range of dimensions include F21, F8, F7, F18, and F2 which are smaller (5 m to 7 m on a side). F18 is both smaller in size and shallower (0.6 m deep) than the other features. Excavation revealed, however, a well-developed series of house floor layers confirming the feature as a housepit.

In comparison, F13 and F15 are larger, between 9 m and 11 m on a side with F13 appearing less completely rectangular. These too, lack notable rims. Oddly, F15 opens to the adjacent slough channel via a gap in its western wall. This feature of F15 remains unexplained, except perhaps by the possibility that it opens to and connects with an adjacent housepit now largely eroded and blended into the slough channel embankment. Flooding is a factor apparent in the taphonomy of the site as indicated by the accumulation of clayey silts infilling some of the excavated pithouses (e.g., F12; F6). F17 is an irregular depression about 5 m in diameter, and its designation as a house feature remains questionable.

In terms of arrangement, the extensive row of pithouse features *Shxw'ow'hamel* and *Th'ewá:lí* share some similar and intriguing traits (see the *Th'ewá:lí* summary description). At *Shxw'ow'hamel* the features in these 'row house' arrangements are generally rectilinear in shape, set very close together, and separated often by only a low shared berm, many of which are saddle-shaped and semi-open to their adjoining house (i.e., immediately abutting one another). Like at *Th'ewá:lí*, and to some degree at *Sxwóxwiymelh*, these housepit features lack rims and instead are surrounded by relatively flat surfaces. Again, one gets the impression from their arrangement that these structures many have formed a row of largely 'conjoined' houses and is that they were highly interconnected. *Shxw'ow'hamel* seems have row-groups or row-subsets of

between three or more conjoined housepits (e.g., F3-F5 or F3-F6; F7-F9; F10-F11). These housepits are interconnected to such an extent that they may represent segments of a larger, encompassing structure within which the depressions are differentiated as 'chambers' - as opposed to individual houses. These row-groupings, like the 'triad' formed by F12-F10-F8 at Th'ewá:lí, demonstrate a possible pattern of interconnected construction forming a possible single structure with internal chambers (e.g., family or living quarters), set on the same axis, surrounded by a relatively flat bench, and potentially covered by a single superstructure. As mentioned for Th'ewá:lí, this 'conjoined row-house' or 'triad' arrangement may represent a pattern not previously recognized in the archaeological investigation of houses in the region -- i.e., plankhouse-like structures with recessed floors and segmented living quarters (as discussed in more detail in the Th'ewá:lí settlement description). Shxw'ow'hamel (DiRj-30) hold a great deal more potential to investigate early Stó:lō houses, households, and settlements.

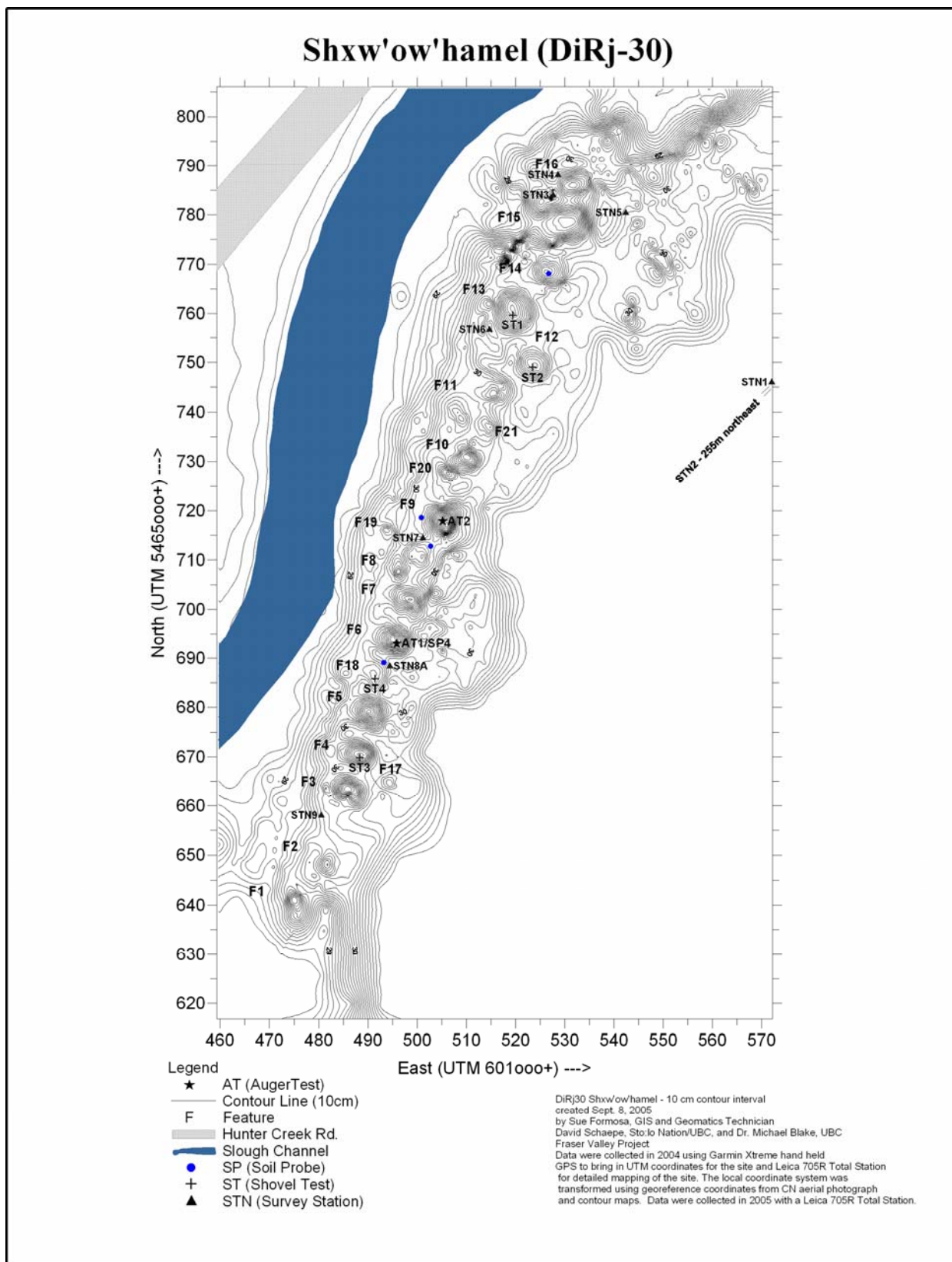


Figure 9a. Shxw'ow'hamel (DiRj-30) contour map (10 cm) with mapping stations, tests, and feature locations.

Shxw'ow'hamel (DiRj-30) - Detail 'A' (Southern Section)

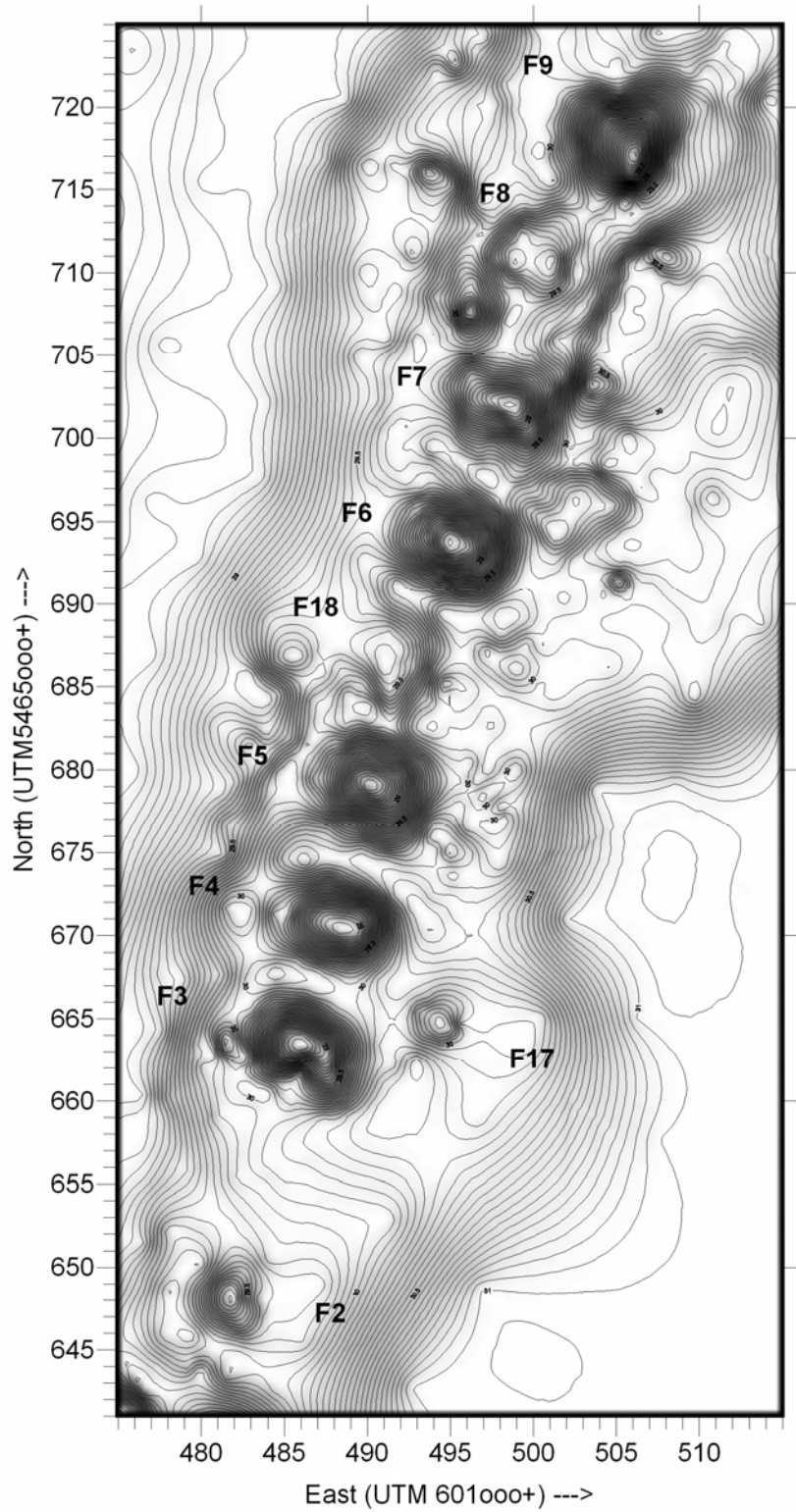


Figure 9b. Shxw'ow'hamel (DiRj-30) - Southern Section Detail - contour/shaded relief map (5 cm contours).

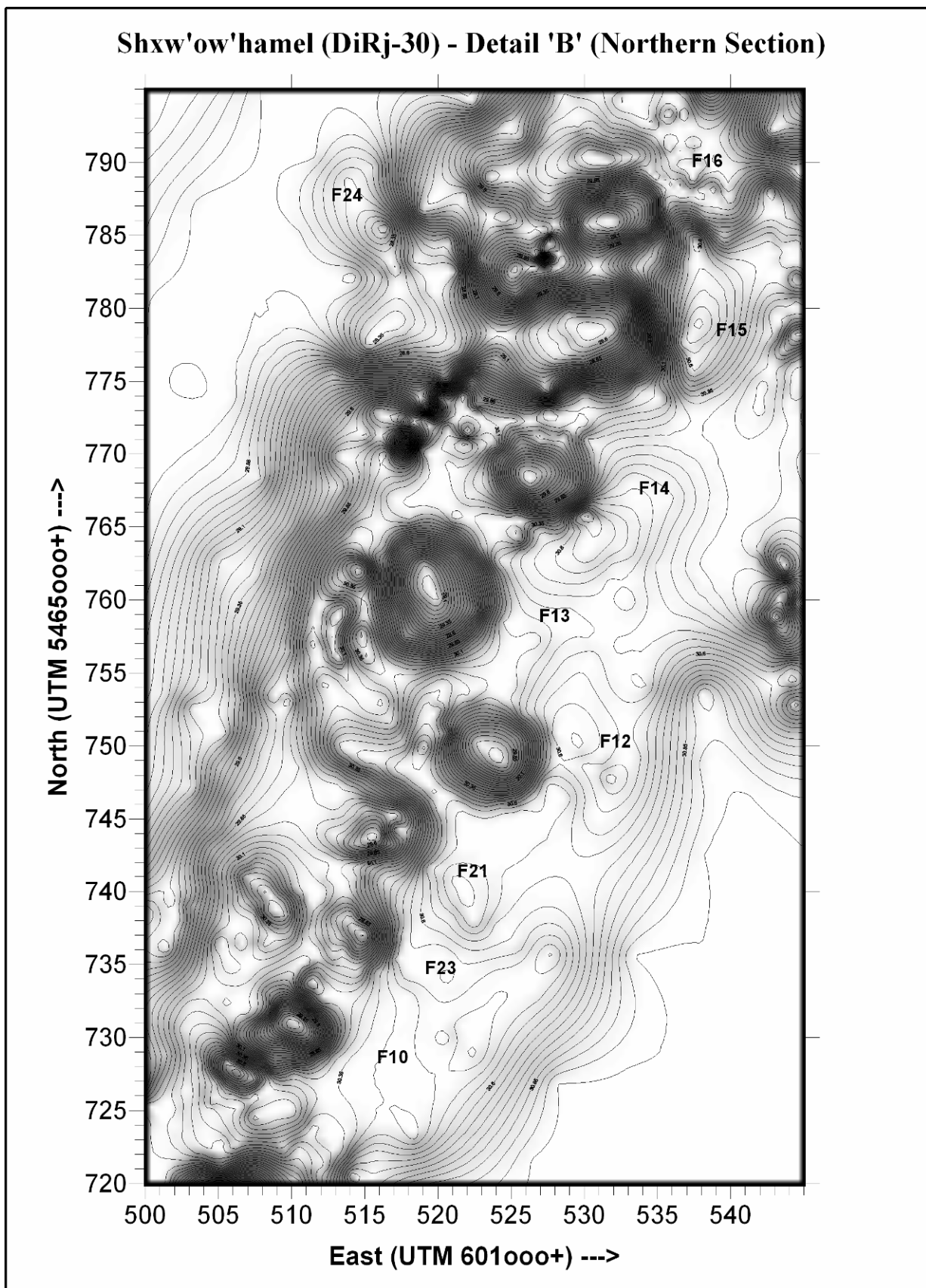
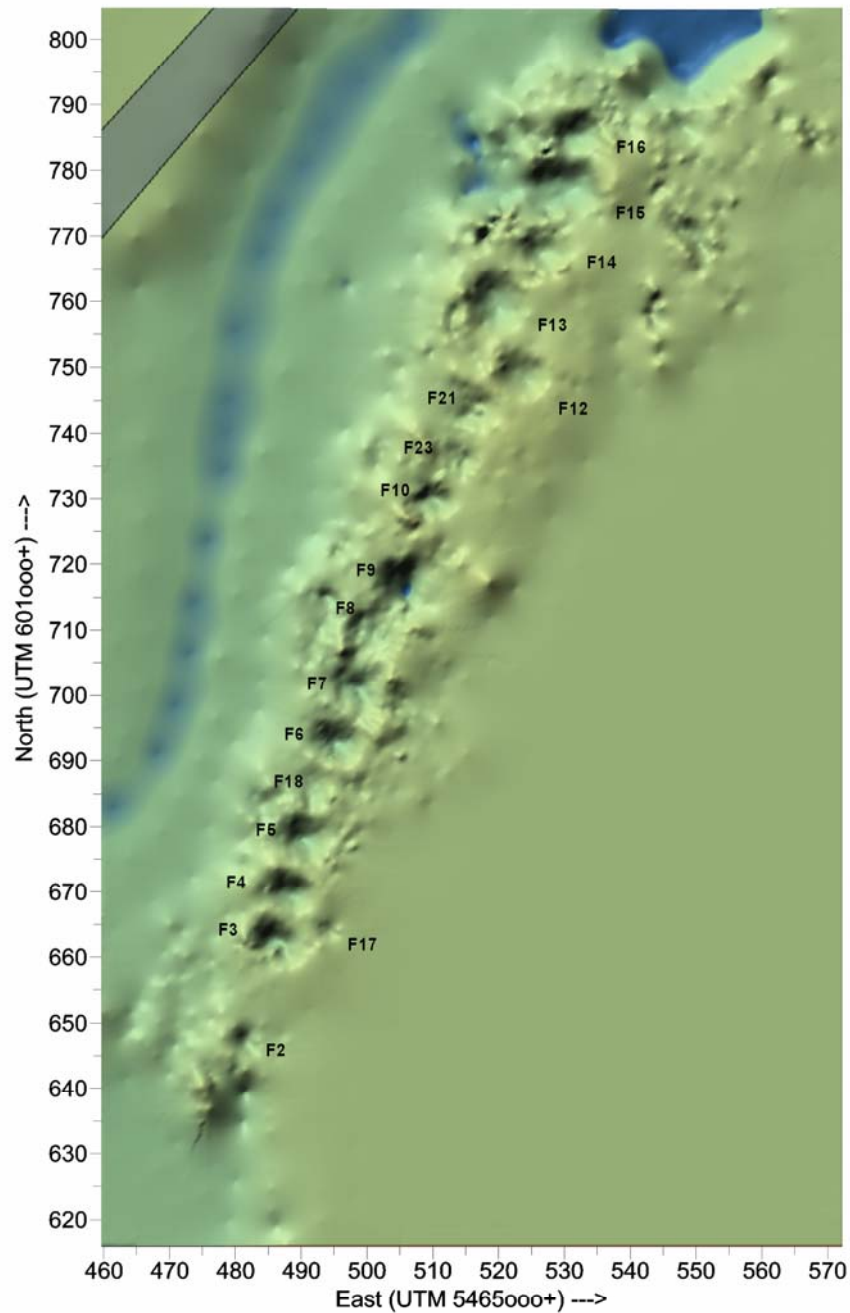


Figure 9c. Shxw'ow'hamel (DiRj-30) - Northern Section Detail - contour/shaded relief map (5 cm contours).

Shxw'ow'hamel (DiRj-30)



DiRj30 Shxw'ow'hamel Surface Map was created August 30, 2005
by Sue Formosa, GIS and Geomatics Technician
David Schaepe, Sto'lo Nation/UBC, and Dr. Michael Blake, UBC
Fraser Valley Project
Data were collected in 2004 using hand held Garmin Xtreme GPS
to bring in UTM coordinates for the site and Leica 705R Total Station
for detailed mapping of the site. The local coordinate system was
transformed using georeference coordinates from CN aerial photograph
and contour maps.

Legend
Hunter Creek Rd

Figure 9d. Shxw'ow'hamel (DiRj-30) surface map with housepit features.

Xelhálh (DjRi-14)

Mapping Methods

Two site surveys were conducted at DjRi-14 in 2004 and an additional site survey and testing survey were completed in 2005.

Summer 2004

The first station (STN1) was set by etching an “X” on a rock 3m north of the CN Rail Line east of the site. A backsight (STN2) was set 2m above a benchmark at east end of the CN tunnel just west of the site and a estimated distance of 322m from STN1. A Garmin Xtreme hand held GPS was used to bring in approximate UTM coordinates for STN1 and STN2. The 1:50,000 underlay map in the Garmin Xtreme indicated that the surrounding mountains were causing multipathing for the GPS readings. As both readings were equally displaced into the Fraser River, it was felt that the bearing between the two points would still be correct despite the displacement. This bearing was used to provide orientation for the survey from STN1.

The elevation was on the benchmark. A Leica 705R Total Station was set up on STN1. The bearing to STN2 was set at $272^{\circ}08'03''$. The reflectorless mode was used to transfer the elevation from the benchmark to STN1. The Total Station and a mounted prism were used to carry coordinates and elevations onto the site from STN1. A secondary backsight, BS, was set on the north rail of the tracks using reflector tape. STN4 was sighted from STN1. Initially stations were set as we moved forward surveying across the site. By the time STN6 had been set, it was apparent that the site was much larger and more complex than initially anticipated.

It was clear that several traverses would be required to adequately survey the site. Therefore, a closed traverse was run from STN4 through STN6, TEMP8, TEMP9, and TEMPA. The closure was +5mmN, +10mmE, -5mmElev. STN6 was used to set STN7, STNB, and STNC as side shots. The survey from STN7 was collected on another Leica 705R from BCIT. STN7 was used to set STND, STNE, and STNF as side shots. A closed traverse was subsequently completed from STN6 to STNB, STNE, STN7, STNF and STND to ensure there was no rotation in these data collected on a second instrument. The closure was +5mmN, -4mmE, 4mmElev. STN4, STN5, STN6, STN7, TEMP8, TEMP9 and TEMPA were all set with wooden hubs. STNB, STNC, STND, STNE, and STNF were all set with 12” galvanized nails.

A detailed topographic site survey was completed for the middle two terraces of the site – from F1 to F32 - by collecting ground elevations at 2m intervals between features and at .5m intervals immediately around and within features across the complete site. House depressions, cultural depressions, burial mounds and cultural terraces were the cultural features captured with this survey. The bluffs, rail line and terrace banks were also surveyed. Subsequent to the field season, Canadian National Rail provided aerial photographs and contour maps of the area. The approximate UTMs for the site survey were given a linear transformed using the coordinates and elevation on the tunnel benchmark. The correction was -30.574mN, +5.623mE, and +31.52mElev. Canadian Pacific Rail was also able to provide a geodetic marker on a culvert just south of its line.

November 2004

An additional two days of surveying was completed, with the Leica 795R Total Station, to complete the detailed topographic surveying on the main terraces as well as setting a station

on the beach (STNG) and a station for sighting to the CP line (STNH) to the known geodetic marker. STNF was used for the majority of the mapping. STND was used to collect the topography of the terrace bank down to the beach on the north side of the site. STNG was set at the east end of the beach. STN4 was then used to set STNH west of F1 and 2 on a lower terrace. From STNH, the lowest three terraces were mapped as well as the road way which had been created for access to the modern cemetery. STN7 was used to set STNI up on the west end of the bluff passage on the east end of the site. A questionable STNJ was set from STNI just at dark. STNG was set with a 12" galvanized nail. STNH and STNI were set with yellow tent pegs. STNJ was set with a tree branch as a temporary marker until confirmation of the coordinates in the 2005 field season.

Summer 2005

An additional week of surveying was used to obtain the detailed topography of the site's upper terraces and rock walls and for surveying the test units and carbon samples collected in this field season. Two Leica 705R Total Stations were used during this round of surveying. One collected the testing locations. The other collected the topography and upper terrace features. The stations set in 2004 were used for collecting locations and elevations for the work in test units and for carbon samples. Surface elevations for the soil probes were valid. Any elevations collected at the base of a soil probe were omitted as the prism rod could not be fully extended into the probe hole.

The topographic survey was started from STN7. STNI was no longer visible at this time of year, therefore the traverse up the bluffs and over to the highest terraces was reset completely. STNK was sighted from STN7 and marked with a 12" galvanized nail at the base of bluffs. A closed traverse was run from STN7 through STNP and back again. STNI was reset from STNK. STNJ was reset and etched into a rock surrounded by boulders in the bluff passageway. The closure on the traverse was 3.5cmN, 1cmE, and 2mmElev. STNL, STNM, STNN, and STNP were all set with 12" galvanized nails. STNO was set with a 1m of rebar. Information on the stations is available in the 2004 and 2005 field notes. The dampness at the site will limit the life of the hubs. If further work is anticipated for this site, then the stations which have hubs should be reset using either rebar or galvanized nails.

A combination of prism and reflectorless modes was used to collect the topography of the upper terraces, rock walls and surrounding bluffs. The 16 terraces and 14 rock walls were all considered to be cultural features. A large Douglas fir stump (sampled for dendrochronological testing) and 5 test units were also mapped. STNH was used to sight to the CP point. This information was used to make the final correction in rotation and coordinates for all data collected during the 2004 and 2005 surveys, amounting to approximately 10,660 surface points. Site surface and contour maps were completed in 2005 showing the features, test units, stations and topography of the site (see Figures 10a-g).

Summary Description

The Xelháłh ('Injured People') settlement site (DjRi-14) is situated on Xelháłh I.R. 3 of the Shxw'ow'hamel First Nation, located at the entrance to the lower Fraser River Canyon about 1.6 km east of the town of Yale, opposite (south of) Lady Franklin Rock. Xelháłh may be the village referred to as the 'Village of the Bad Rock' by Simon Fraser on his journey through the area in 1808 (Lamb 1960). The Stó:lō traditionally recognize this portion of the territory as renown for its exceptional abundance of salmon and the environmental conditions that support its wind-drying for storage. This settlement is one of the largest and most complex in the Gulf of

Georgia Region. Like Th'ewá:lí, Xelhálh is a 'hill-top' settlement, but it is both larger and fortified. The settlement covers an area of 300 m x 150 m on a prominent bedrock outcrop and relict gravel bar and terrace that rises between 30 m (terrace-top) and 60 m (bluff-top) above the Fraser River. This landform is separated from the talus slope and steep rocky bluffs surrounding it by a relict river channel, on which the CN Railway tracks now run. The back side of the terrace is about 10-15 m above the level of the railroad tracks.

The main portion of the settlement area had been sketch-mapped during previous surveys and consists of the housepit features situated on an extensive terrace immediately downriver from Lady Franklin Rock, overlooking Xelhálh Bay. A large bedrock bluff rises up from the east-central part of this terrace, separating the main pithouse settlement area from a series of residential terraces and dry stone walls on top of the bedrock bluff. A slight gap in this bluff provides for passageway between these two distinct portions of the settlement. The bluff-tops themselves are riddled with 'passageways' between bedrock walls and flat terraces. The largest portion of the terrace and wall complex is located on the north side of the bluff, overlooking Lady Franklin Rock. A smaller, yet extensive, portion of the terrace complex lies on the south side of the 'passageway' overlooking the CN train tracks. Our map of the terrace and wall complex remains incomplete, because the terrain's steepness and irregularity poses considerable technical challenges to mapping. In particular, our team was challenged by the overall extent of this settlement area, as well as the vertical relief between the housepit section of the site and the terrace and wall section of the site. Our mapping focused on the housepit and other significant features (including numerous earthen platform features, rock walls, rock-lined platforms, and apparent plankhouse depressions) comprising the Xelhálh settlement. Complete mapping and documentation of this site will require significant work beyond that completed as part of this study in 2004 and 2005.

Largely missing from our mapping are the numerous platform features situated on the face of the bluff overlooking Xelhálh Bay and Lady Franklin Rock, the late 19th-early 20th century cemetery (DjRi-80) and the surrounding area (in which there are numerous mounds and smaller depressions) at the southeastern extent of the main settlement area, abutting the southern portion of the bluff. At least two unique 'rock-lined' housepit features are located on the lower, upriver slopes of the bluff overlooking the bay on the northwestern side of the overall landform (upriver side), with at least three other similar features located in the lowland area immediately north of the overall Xelhálh landform (possibly part of DjRi-22)(Kidd 1968). One of these puzzling features was included in our testing program and is depicted with the photograph of the profile for Soil Probe #1 / F1001.

The complex of rock wall features (free standing, rock-lined terraces, boulder alignments, and rock-filled platforms) at this site is discussed by Schaepe (2006) but remains to be fully documented and mapped. Also, the remains of the recently abandoned salmon dry-rack camp site and dry-rack of Stó:lō community member Sweetie Malloway (from Chilliwack) have not been recorded. Much remains to be done. The work done through this project provides comprehensive mapping of the house and platform features associated with this 'main' body of the settlement, and dating of the origins of the settlement itself -- significant information not before available; a solid foundation for future work.

Keenslyside and Kidd provided the first archaeological record of site in 1963, creating a sketch map of the housepits and some of the other notable depression features comprising the main settlement area of the site, west of the bluff. The site was re-mapped in 1974 by the Hope Archaeology Project, and again revisited by Mohs and Arcas Consulting Archaeologists (Mitchell and Mackie) in 1986 and 1987 as part of the CN Twin Tracking Project, each providing site form updates and improving on the site map. No excavation of the site occurred

prior to the current project. A relatively recent pit in one housepit (F10) indicates that some looting of the site appears to have occurred in the last 50 years.

Our work consisted of mapping the following features at Xelháhl: 14 *housepit features* (F1, F2, F10, F12, F13, F14, F15, F17, F19, F23, F25, F26, F27, and F28); one distinct *plankhouse depression* (F32; with foundation 'sill' rocks in the corners); at least three apparent *plankhouse / structural platforms* (F30 and two unnumbered features - one area backed by a large NE-SW oriented berm immediately northwest of F25 and F 19, and including pit features F21, F22, and F23; the other area immediately SW relative to the other - stepped down slightly - and immediately N of F15; both along the front side of the settlement overlooking the bay); at least three *anthropogenic terraces* at the extreme west end of the terrace, west of F1 and F2, stepping down toward the bay); numerous *rock lined platforms/terraces* (F500-F514 -- an excellent example of which is F509 as shown in the photograph accompanying Shovel Test#8 and Soil Probes 6 and 7; all of which are located in the 'East Area' of the site, on the east side of the bluff complex); *rock walls* (as serve to 'face' F501 east of the 'pass' through the bluff; approximately 3 m high x 10 m across and comprised of numerous coarse of angular boulders); various *pit features* (F9, F11, F16, F21, F22, and F24), including two pit alignments (ca. 1 m diameter) just of east of F1 and F2 and set at a strategic location regarding accessing the settlement - which may represent palisade post-holes (F3-5, F6-8); *mound features* (F31); a *rock-lined cairn* (F14; constructed of a series of rounded boulders in a roughly square configuration surrounding a small mound of mostly earthen matrix, built on top of the rim of housepit F10); and a well defined *pathway*, presumably of post-contact (though Aboriginal) origin, providing access to the cemetery from the western end of the site, coming from the bay. In addition, we identified a number of *rock- or boulder-lined housepit features* as noted above, including F1001.

The arrangement of housepit features in the western portion of this settlement is not readily discernable as a regular pattern, except that the housepits 'back' and 'flank' the area where we suspect there were plankhouses (i.e., behind and to the side of plankhouses that occupied the central portion of the main settlement). The topography of the site is naturally raised throughout that area containing F19, F25, and F23, as well as the plankhouse feature adjacent to this area. The eastern portion of the main settlement area is slightly recessed at the base of the bluff. These topographic differences are thought to be natural, whereas the stepped terraces at the west end of the main settlement area are clearly anthropomorphic.

All the largest of the housepit features (F10, F13, F15, and F25) and a few others (F12, F14, F17, F19, F23) occupy the rear-central portion of the settlement. F12 and F14 represent disturbed housepit features in this part of the settlement. F15 is partly impacted on its north side as a result of the pathway built through the area, leading to the cemetery - apparently post-housepit construction. We surmised that the rock-lined cairn on the rim of F10 likely represents the burial of an individual associated with that pithouse after it was abandoned. Other possible cairns were located on the rims and inside F13 and F15, as well as F19, located at the edge of this grouping. The housepits in this 'central' grouping are generally rectilinear in shape, have rims, and range in size from 12 m to 14 m on a side (F10, F13, F15, and F25) -- some of the largest housepit features in the Region -- and otherwise between 9 m to 11 m in size (F17, F19, F23). At the extreme eastern edge of the main settlement area are a group of housepits including F26, F27, and F28, somewhat curvilinear (F26, F27) to rectilinear (F28) in shape, generally with some form of rim, and ranging in size from 9 m to 11 m. Two housepits (F1 and F2) are clearly isolated from the others at this western extreme of the settlement -- as is notable and will be discussed further below. F2 is indistinct in shape and small (8 m x 8 m) while F1 is more rectilinear and a bit larger (10 m x 10 m). The depths of the housepits were generally around 1.5 m with the larger housepits having depths closer to 2 m.

F1001, a *rock- or boulder-lined housepit* feature identified along the upriver, lowland portion of the site (as noted on the associated profile image) was a clearly rectangular depression recessed about 0.3 to 0.4 m into the ground, measuring 7.3 m x 3.5 m, lined with large boulders and surrounded by a wide (2 m to 3 m) bench. The other rock-lined housepit features identified at the site had similar descriptions.

A total of 18 tests (9 shovel tests, 3 auger tests, 5 soil probes) were excavated at Xelhálh, investigating 10 housepit features, one plankhouse depression, two rock-lined platforms, and one rock-lined housepit. These resulted in the collection of 18 carbon samples, three of which were processed. Radiocarbon dates were established for F13 (430-360 / 330-280 / 180-150 cal BP), F23 (430-380 / 320-270 / 180-150 cal BP), and F28 (440-350 / 330-280 / 170-150 cal BP). In addition, a dendrochronological date of approximately 1780-1790 AD was established from tree ring counts of a large Douglas fir tree-stump directly associated with F508 (rock-lined platform), as shown in the photograph accompanying the profile of that feature. Reserve records indicate that this tree was logged as part of activities carried out around 1971 (this is confirmed by a small 32 ringed tree growing out of the stump). The dendrochronological age established for this stump cross-section was established with this date as a termination of tree growth. The wedge taken from the stump is pictured in Figure 11 records 168 clear annual rings. If we estimate that at least 10 years elapsed between the tree's first growth as a seedling and its ring accumulation at 1 m above the ground, the tree's germination date must be approximately 1793. It may not have begun to grow until several years after the abandonment of the structure.

All of the dates established for this settlement indicate that Xelhálh was developed largely at the same time - during the late precontact period - and also ceased to function as a settlement largely all at once, likely due to the effects of the small-pox epidemic of 1782 AD. Continued use of Xelhálh as a settlement and cemetery into the early post-contact period of the 19th century (with the cemetery used up until the early 1920s - Sonny McHalsie, pers. com., 2005) is supported by the findings of contact-era goods (square metal nails; ceramics). Thus, F2, and likely F1 as well, is clearly separated from the rest of the settlement both spatially and temporally. This western portion of the settlement - located beyond the potential remnants of a protective palisade - represents a later re-occupation of the site following its decimation and collapse from the effects of small-pox near the turn of the 18th century.

Xelhálh, at its zenith during the late precontact period, was certainly one of the most important settlements and centers of interaction among the Stó:lō and represents a level and complexity of settlement development not recognized elsewhere in the Region.

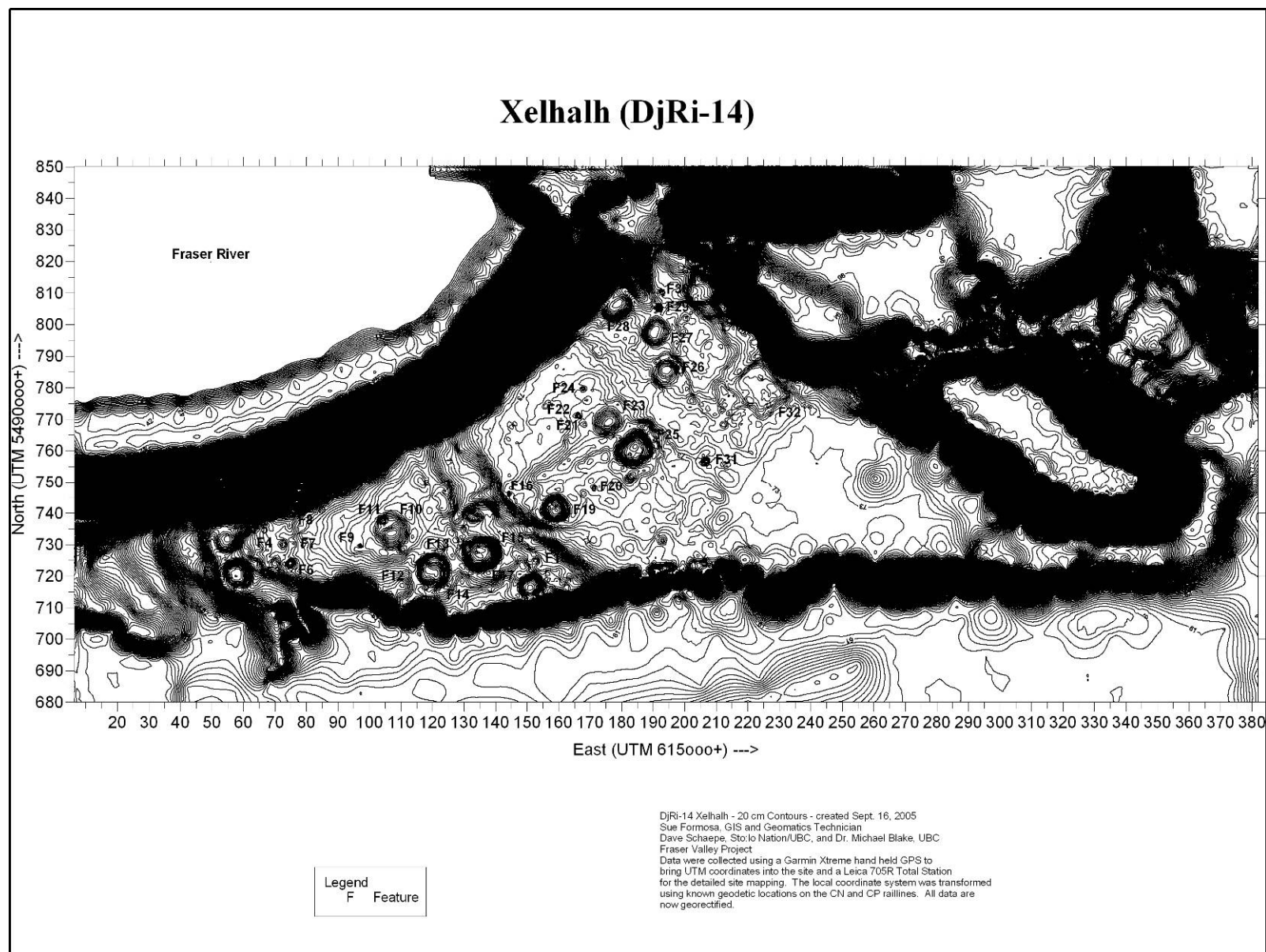


Figure 10a. Xelhálh (DjRi-14) contour map (10 cm contours) with features.

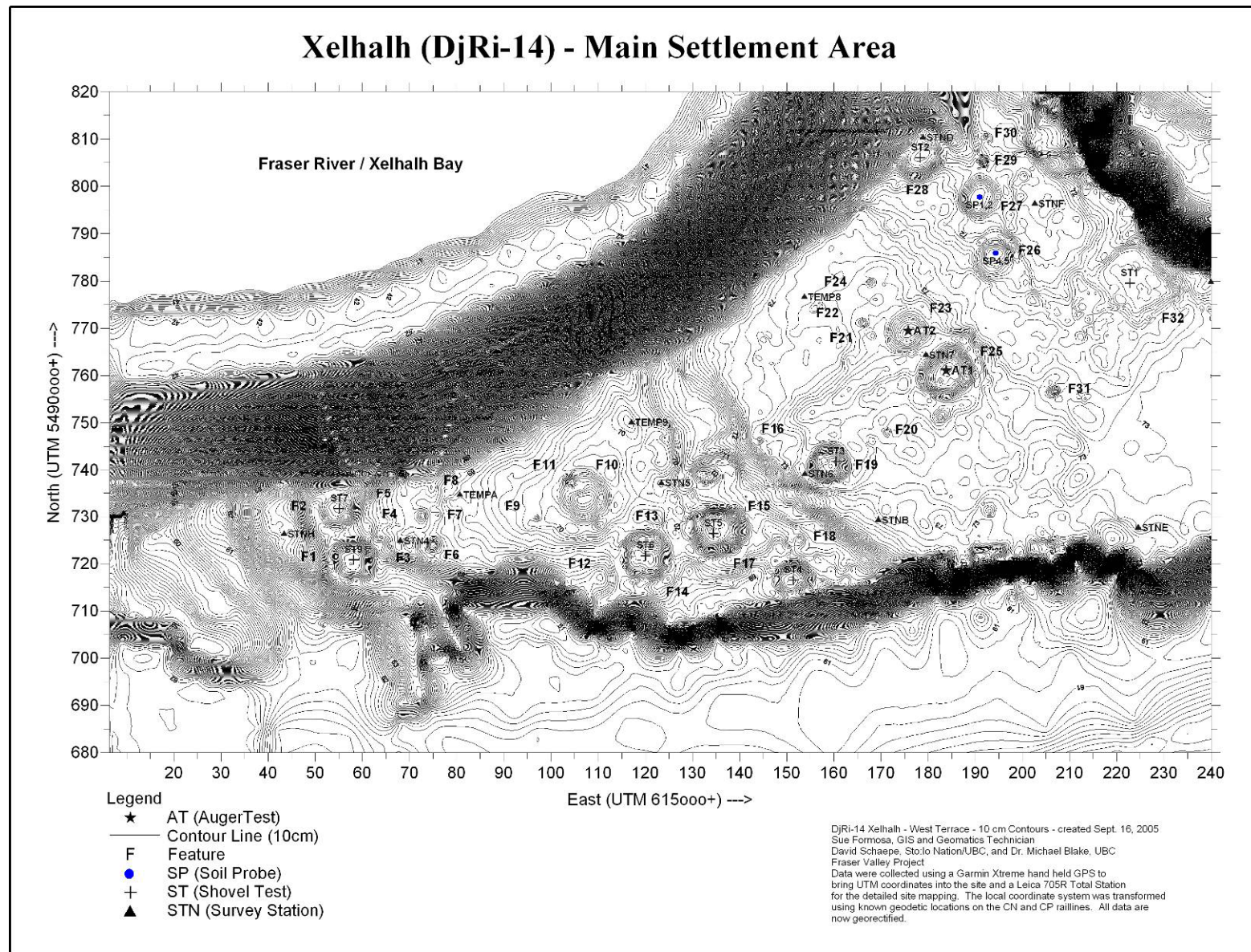


Figure 10b. Xelhalh (DjRi-14) - 'Main Settlement Area' contour map (10 cm contours) with tests, mapping stations, and feature locations.

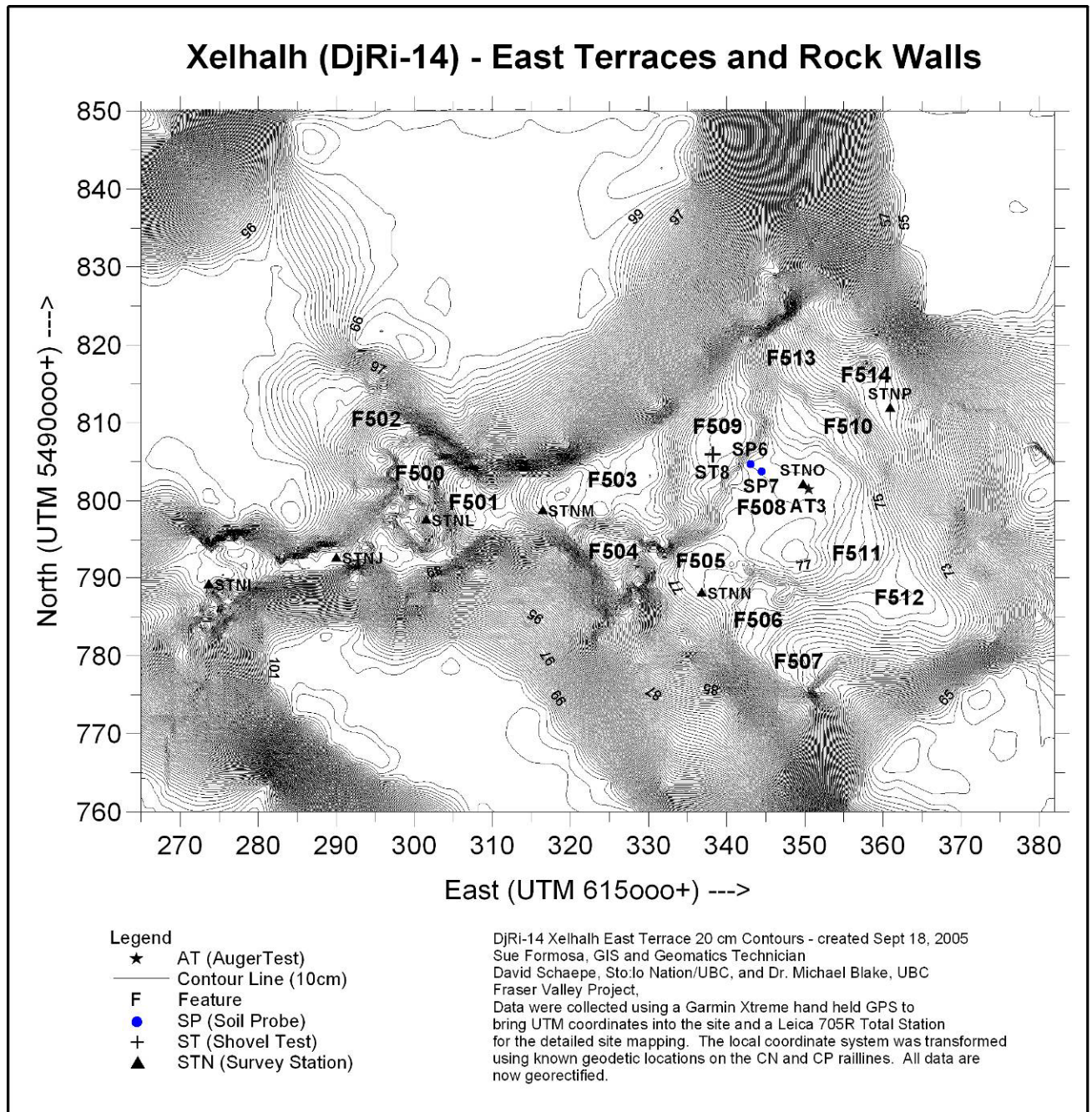


Figure 10c. Xelháalh -‘East Terraces and Rock Walls’ Detail - contour map (10 cm contours) with tests, mapping stations, and feature locations.

Xelhalh (DjRi-14) - Main Settlement Area - Eastern Detail

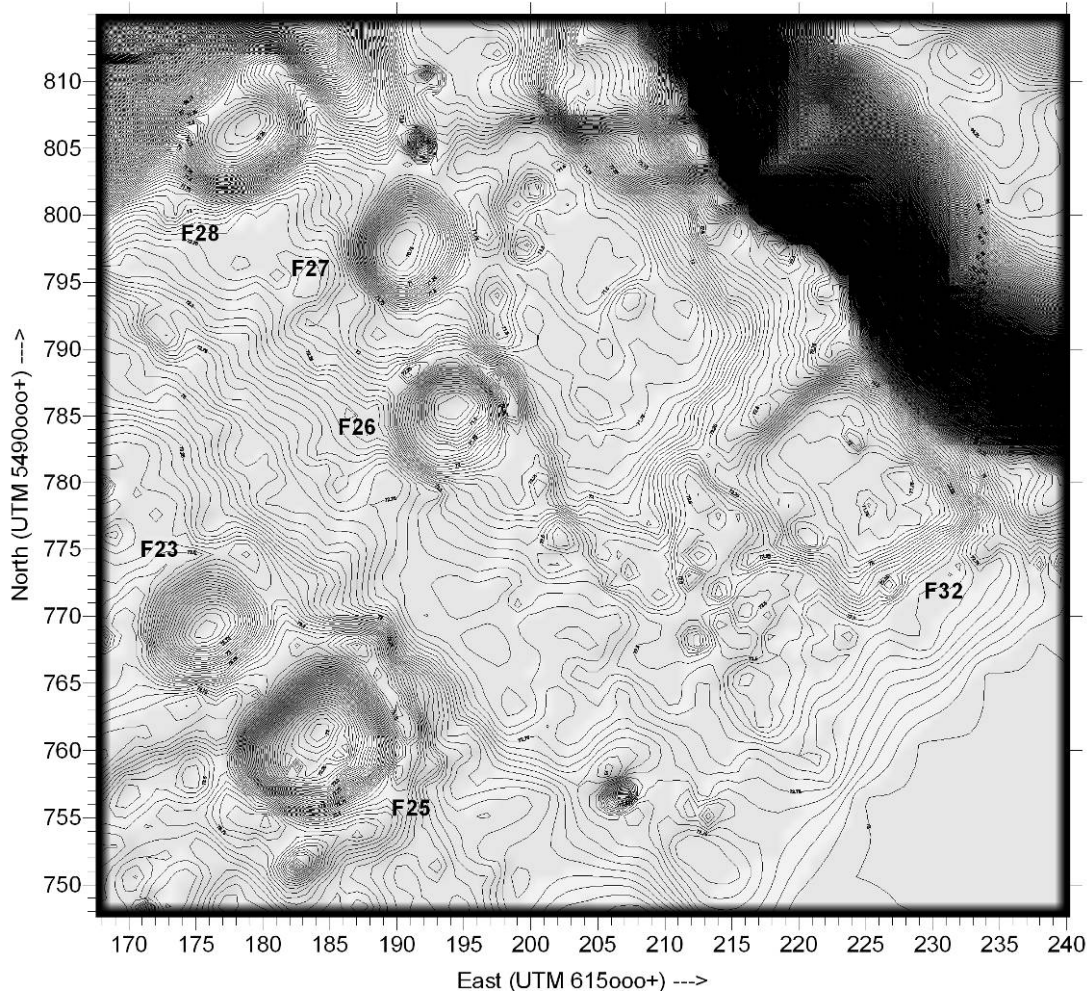


Figure 10d. Xelhálh Detail - 'Main Settlement - Eastern Detail' - shaded relief/contour map (5 cm contours) with features.

Xelhalh (DjRi-14) - Main Settlement Area - Central Detail

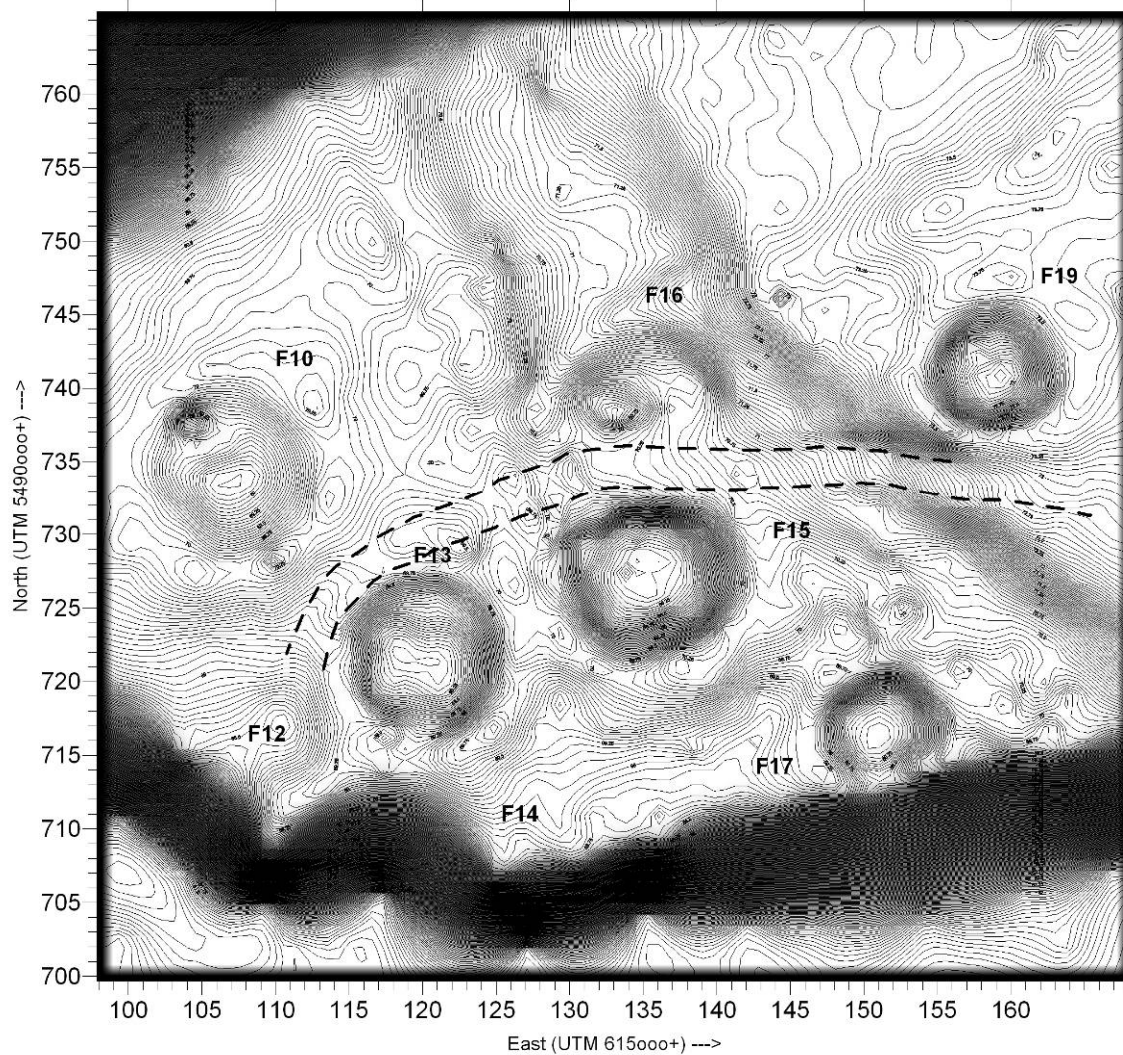


Figure 10e. Xelhálh Detail - 'Main Settlement - Central Detail' - shaded relief/contour map (5 cm contours) with features.

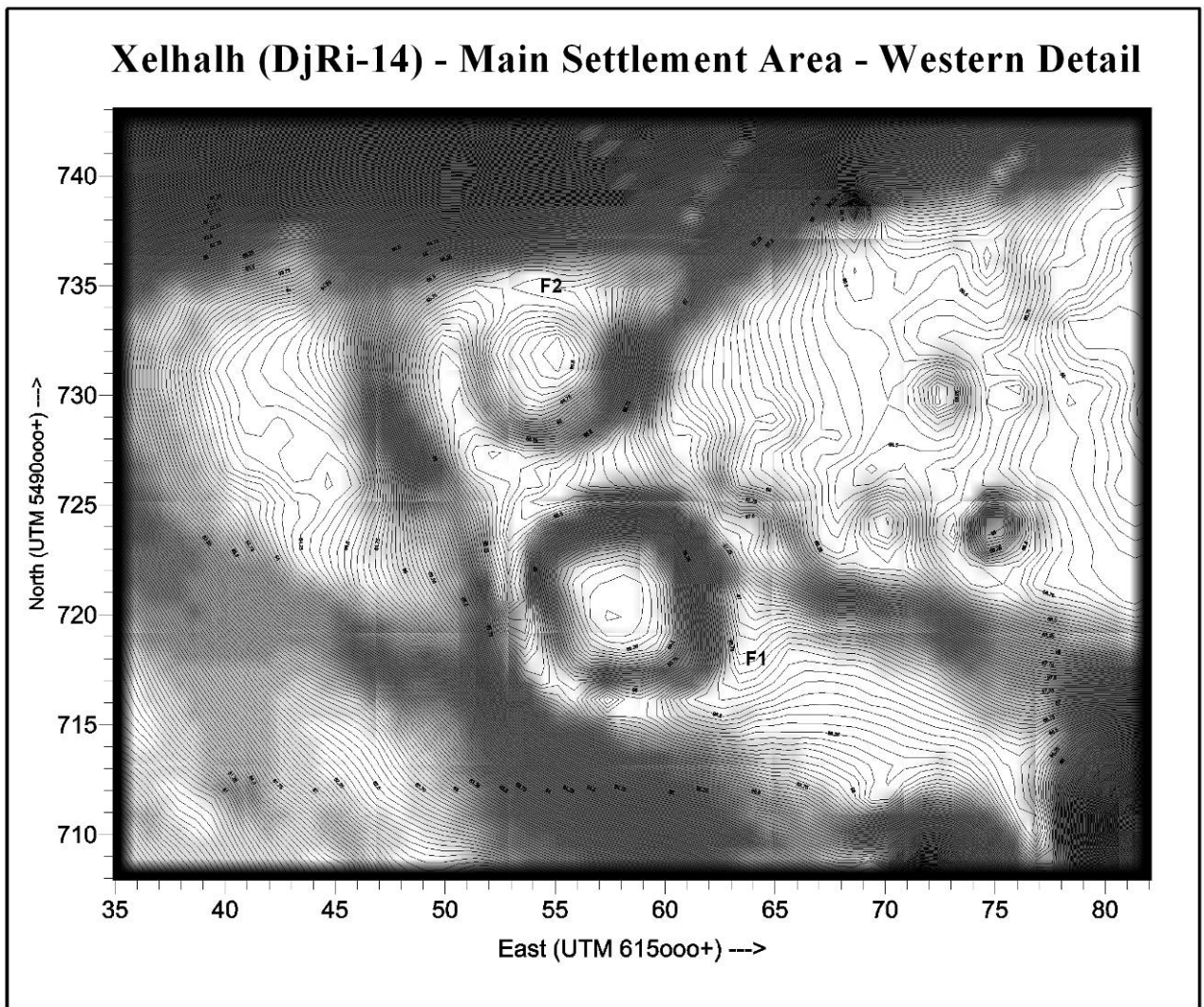


Figure 10f. Xelhálh Detail - 'Main Settlement - Western Detail' - shaded relief/contour map (5 cm contours) with features.

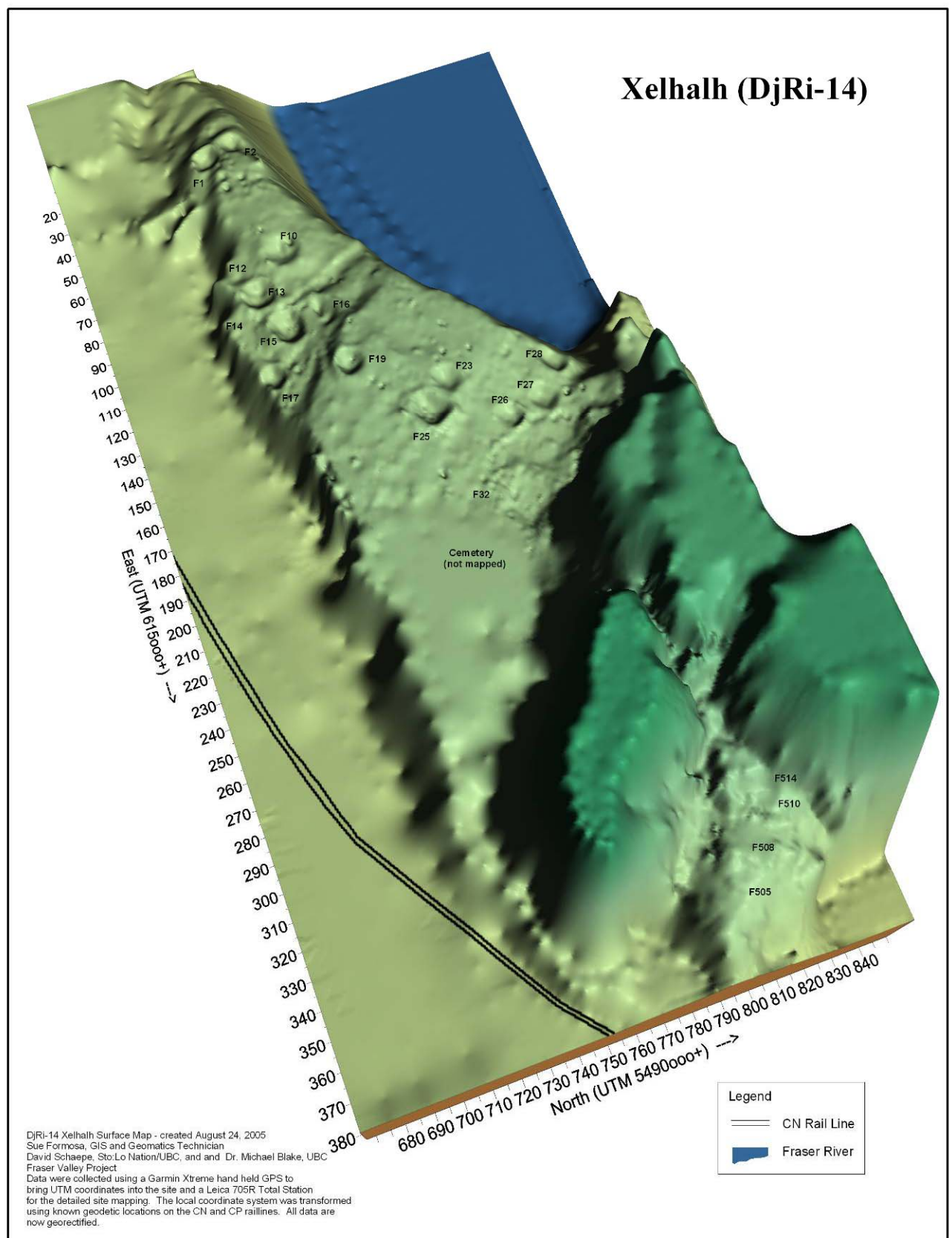


Figure 10g. Xelhálh (DjRi-14) surface map with features.



Figure 11. Sanded 'cookie' sample from Douglas fir stump used for the dendrochronological dating of F508.

RADIOCARBON DATING RESULTS

A total of 17 radiocarbon samples were processed from the total batch of samples (n=84) collected during this project. The following number of samples were processed for each of the following six sites, excluding DiRj-1 (see Lenert and Lepofsky 2005, 2006): John Mack Slough (DhRl-T1) = 1; Qithyl Island (DhRl-15) = 2; Th'ewá:li (DgRl-17) = 2; Eyxel (DiRi-48) = 2; Shxw'ow'hamel (DiRj-30) = 7; and Xelháalh (DjRi-14) = 3. The dates recovered from these site range between approximately 2400 - 150 cal BP, supporting the development of an understanding of over two millennia of housepit construction and community development by the Stó:lō within their territory. None of these sites had any prior radiocarbon data. Results of these analyses are presented as calibrated radiocarbon dates (cal BP) at 1 sigma with a 95% level of probability within each of the site descriptions, presented above, and in spreadsheet in Appendix III. The results of our radiocarbon dating efforts serve to significantly enhance the overall number of radiocarbon dates collected from archaeological sites within the Region, and particularly so for pithouse features and settlements - of which only about six such settlements had related radiocarbon data prior to this study (per Schaepe 2004), thus doubling the prior sample. The locations of all collected and processed samples, with associated radiocarbon ages, are included in each of the excavation profiles in Appendix IV. These results are consolidated and presented in Figures 12 and 13, below (noting that one date from DiRj-30-F18 was rejected as disturbed and therefore not included in the chart).

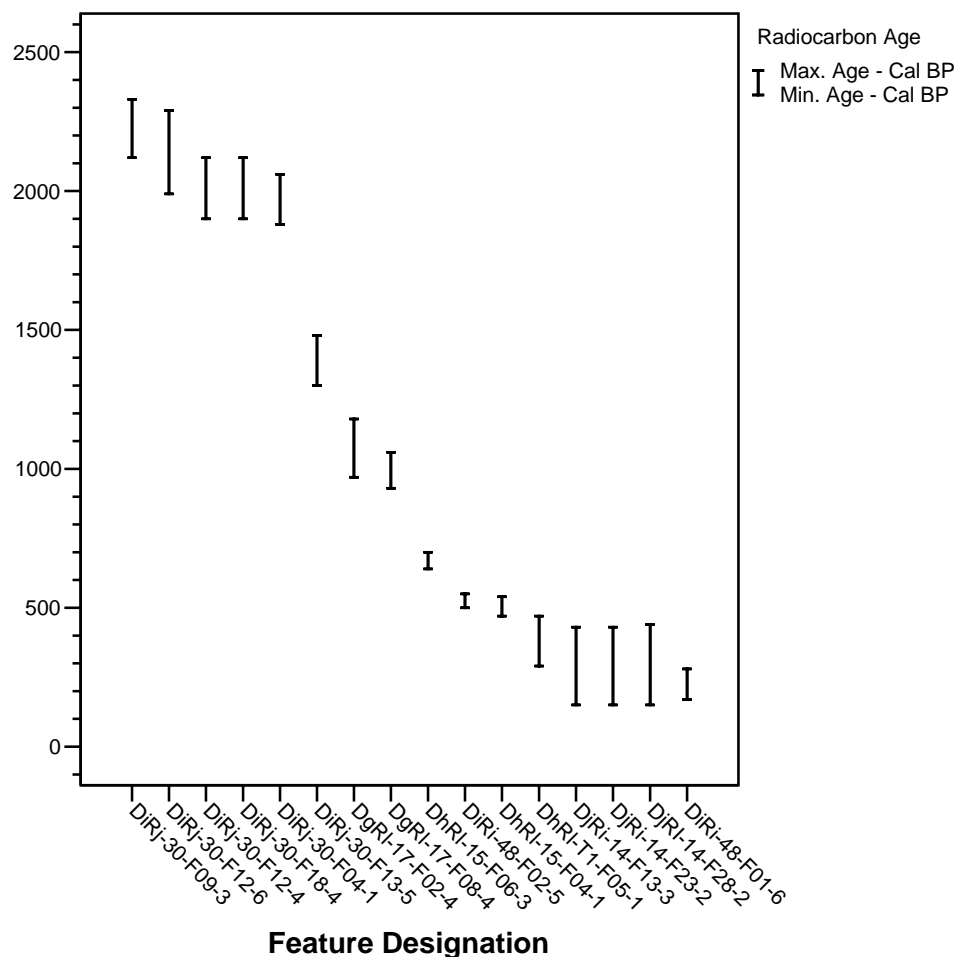


Figure 12. Radiocarbon date results - arranged chronologically.

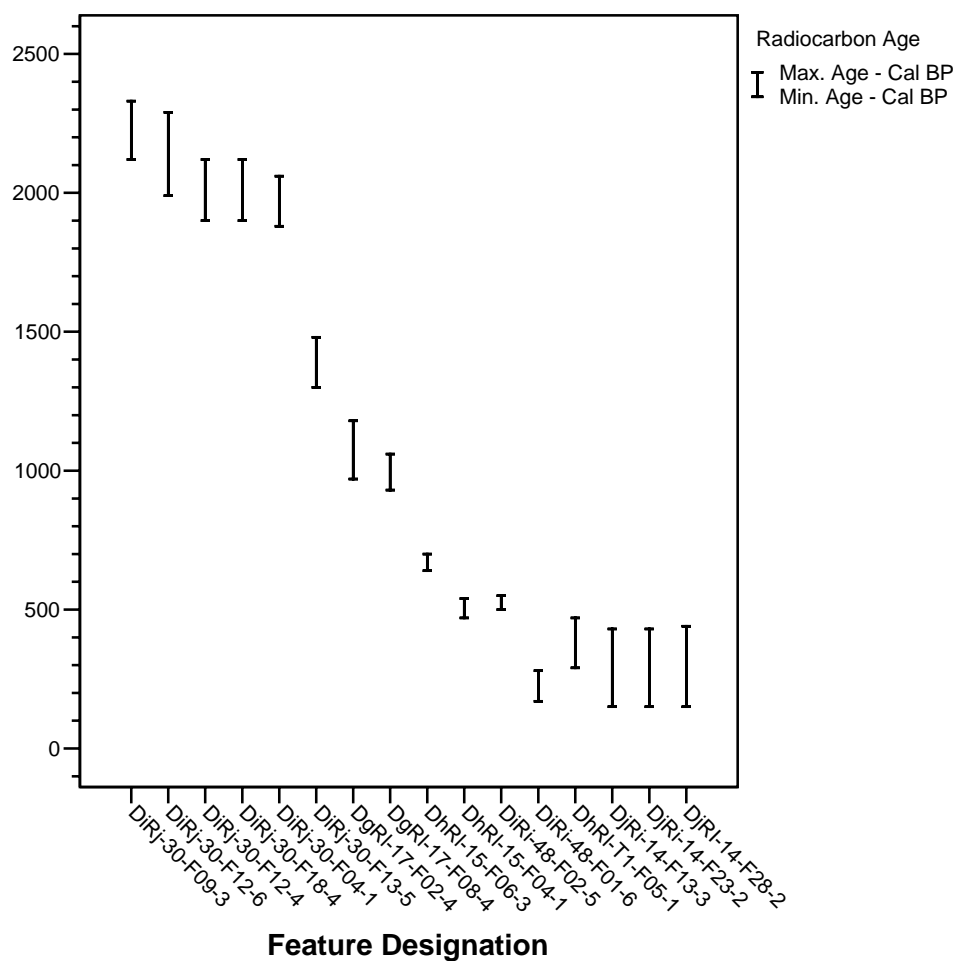


Figure 13. Radiocarbon date results - arranged chronologically by settlement.

SUMMARY AND CONCLUSION

This report presents the result of two years of fieldwork carried out under the title of the ‘Stó:lō Pithouse Settlement Mapping and Testing Project,’ an archaeological research project representing one of several major segments of the multi-year, multi-disciplinary ‘Fraser Valley Project.’ We consider our study to be highly successful in achieving our primary objectives aiming to contribute new data on Stó:lō housepit features and settlements in the mainland Gulf of Georgia Region by: (1) accurately and reliably mapping selected housepit settlement sites, including all housepits and other visible features; (2) plotting all settlement sites and their features using reliable and accurate UTM coordinates; and (3) collecting and processing radiocarbon samples from selected housepit features at each site in order to estimate their history of occupation. The methods we used proved effective at collecting our targeted data, those integral to the accurate definition of housepit features in terms of morphology, chronology, and arrangement within settlements. While effective at extracting targeted archaeological data (e.g., stratigraphic profiles and carbon samples), our methods also significantly minimized site disturbance.

In all, we excavated 47 tests (17 ST, 12 AT, 18 SP); recovered 84 carbon samples from numerous house floor deposits; processed 17 radiocarbon samples (ranging in age from ca. 2300 cal BP to 150 cal BP); mapped 8 settlements; documented at least 73 housepit features, at least 6 plankhouse features, and three rock-lined housepit features; as well as numerous rock-lined platforms and other forms of earthen terrace features - as described in the preceding settlement descriptions.

The mapping results of the Fraser Valley Project, including all 11 documented settlements, represent 10% of the 115 known housepit settlements currently documented in the Region (as of 2006). Our project alone -- documenting eight of these settlements -- accounts for an estimated 7% sample of housepit settlements, and an estimated 12% sample of all recorded housepits in the region (estimated to number about 600). As mentioned above, the radiocarbon results from our project effectively doubled the number of dated housepit settlements in the region, as of 2005. Our collection of currently unprocessed radiocarbon samples provides significant opportunity to further refine our understanding of housepit settlement organization through the potential processing of additional samples. The results of our study are descriptive in nature, with addition analysis and follow-up discussion to be presented in Schaepe’s forthcoming Ph.D. dissertation (Department of Anthropology, UBC).

Overall, this large-scale project achieved results serving to significantly advance and contribute to the study of housepits and settlements in the Stó:lō Territory and mainland Gulf of Georgia Region; not only in the data we collected but *methodologically* in terms of our mapping and testing strategies, and *socially* in terms of our collaborative process and highly integrated approach working with and incorporating FN communities into this project - without whose encouragement, support, and participation this project would not have been possible.

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APPENDIX I - MAPPING DATA: Feature, Test, and Radiocarbon Sample Proveniences

‘John Mack Slough’ (DhRI-T1):

JMS (DhRI-T1) - Feature Center Points

Label	Easting	Northing	Elev
F1	579416.897	5459815.651	9.840
F2	579428.303	5459816.896	9.910
F3	579436.805	5459821.250	9.900
F4	579440.538	5459828.716	9.810
F5	579428.717	5459770.652	9.980
F6	579446.759	5459816.481	9.830
F7	579458.994	5459826.020	9.640
F8	579448.625	5459822.287	10.580
F14	579449.869	5459844.683	9.910
F15	579469.984	5459846.135	9.620
F16	579473.095	5459829.338	9.670
F18	579481.182	5459833.693	9.680
F36	579533.440	5459825.813	9.540

JMS (DhRI-T1) - Test & Carbon Sample Locations

Type	Location	Feature	CorrectedE	CorrectedN	CorrectedElev
ST2	SurfDatum	F2	579428.389	5459816.007	9.952
ST2	Surf	F2	579428.443	5459816.178	9.960
ST2	Surf	F2	579428.247	5459816.267	9.959
ST2	Surf	F2	579428.184	5459816.098	9.964
ST1	SurfDatum	F5	579429.071	5459769.792	10.069
ST1	Surf	F5	579428.861	5459769.700	10.076
ST1	Surf	F5	579428.787	5459769.878	10.047
ST1	Surf	F5	579428.977	5459769.980	10.052
ST1	BaseDatum	F5	579429.044	5459769.796	9.889
ST1	Base	F5	579428.869	5459769.734	9.838
ST1	Base	F5	579428.828	5459769.852	9.884
ST1	Base	F5	579428.945	5459769.917	9.896
CS1	ST1	F5	579428.873	5459769.903	9.926

Qithyil Island (DhRI-15):***Qithyil (DhRI-15) - Feature Center Points***

Feature	CorrectedE	CorrectedN	CorrectedEI
F1	576490.78	5453705.13	8.91
F2	576492.74	5453692.47	9.36
F3	576494.99	5453663.75	9.04
F4	576502.64	5453626.67	8.61
F5	576500.54	5453638.46	10.07
F6	576535.00	543630.00	9.47

Qithyil (DhRI-15) - Test & Carbon Sample Locations

Feature	Test	CS#	CorrectedE	CorrectedN	CorrectedEI
F3	SP1	--	576494.99	5453663.75	9.036
F3	SP3	--	576494.67	5453663.19	8.951
F4	SP2	CS1	576502.64	5453626.67	8.61
F5	SP4	CS1	576500.54	5453638.46	10.069
F2	SP5	CS1	576492.74	5453692.47	9.36
F1	SP6	CS1	576490.78	5453705.13	8.91
F6	--	CS3	576541.68	5453608.23	8.892
F6	--	CS2	576541.53	5453608.15	8.960
F6	--	CS1	576541.59	5453608.12	8.041

Note: - all carbon samples collected from the above soil probes at Qithyil Island have the same E/N as the SP locations; see profiles for depths.

Qithyil (DhRI-15) - Mapping Station Locations

Type	Description	CorrectedE	CorrectedN	CorrectedEI
STN1	same as Base but adjusted coordinates as determined from TS@STN2	576491.80	5453668.02	10.687
STN2	rebar on west rim of F1	576485.81	5453701.28	11.07
STN3	same as Base2 but coordinates determined from TS@STN1	576500.17	5453633.99	10.60
Base2	rebar on north rim of F4	576499.49	5453658.39	10.669

Sqwa:la (DhRI-6):***Sqwa:la (DhRI-6) - Feature Center Points***

Label	Easting	Northing	Elevation
F2	577986.39	5448596.344	9.34
F3	577971.425	5448591.496	9.48
F4	577950.559	5448592.761	9.97
F5	577983.017	5448590.653	10.68
F6	577979.645	5448597.187	10.8

Note: data not corrected.

Sqwa:la (DhRI-6) - Test & Carbon Sample Locations

N/A - no testing conducted; no samples collected.

Sqwa:la (DhRI-6) - Mapping Station Locations

Type	Easting	Northing	Elevation	Description
STN100	578075.000	5448647.000	11.000	bottom of C curve finish in centre of sewer cap on Brentwood Dr, at curve by pillared driveway
STN101	578200.000	5448480.000	10.618	center of water cap. East side of Brentwood Dr. junction with Quarry Rd.approx. 3m south of hydro box
STN103	578002.490	5448577.430	10.898	wooden hubsouth east end of site; bearing is 226.1105 from Stn 100; southeast of CD2
STN105	577984.148	5448629.501	10.803	wooden hub 3m north of north east boundary of cemetary
STN122	577999.997	5448592.002	10.928	cement pillar bearing of 80.3216dms from Stn103; 15.206m from Stn103; 1m nw of large tree
STN126	577939.999	5448591.989	11.187	cement pillar w. of w. boundary of CD4
Local coordinates based on GPS and coords provided by surveyor center of water cap E. side of Brentwood Dr. junction with Quarry Rd. 3m south of hydro box				

Th'ewá:lí (DgRI-17):***Th'ewá:lí (DgRI-17) - Feature Center Points***

Label	Easting	Northing	Elevation
F8	575602.100	5437639.785	44.25
F10	575597.250	5437634.510	44.06
F12	575593.506	5437627.958	44.52
F23	575585.083	5437621.747	44.88
F13	575599.122	5437615.791	44.27
F24	575606.013	5437617.918	43.86
F11	575606.099	5437624.895	43.6
F22	575645.238	5437667.012	46.61
F21	575651.959	5437672.543	46.87
F14	575660.043	5437680.626	46.94
F6	575667.615	5437685.986	47.6
F7	575681.059	5437703.854	48.78
F15	575689.822	5437714.405	48.84
F16	575667.700	5437702.323	51.04
F1	575660.128	5437695.090	50.61
F2	575652.045	5437689.560	50.37
F3	575644.982	5437684.880	49.48
F19	575643.196	5437677.052	49.06
F18	575635.963	5437671.352	48.73
F17	575621.839	5437678.669	49.74
F4	575630.943	5437711.937	48.72
F5	575641.579	5437723.339	48.16

Th'ewá:lí (DgRI-17) - Test Locations

Type	Location	Feature	CorrectedE	CorrectedN	CorrectedElev
AT2	SurfDatum	F8	575601.642	5437639.785	44.232
AT2	Surf	F8	575601.635	5437639.756	44.244
AT2	Surf	F8	575601.459	5437639.775	44.240
AT2	Surf	F8	575601.427	5437639.559	44.242
AT2	Surf	F8	575601.630	5437639.502	44.241
AT2	BaseDatum	F8	575601.585	5437639.717	43.780
AT2	Base	F8	575601.488	5437639.745	43.787
AT2	Base	F8	575601.473	5437639.678	43.801
AT2	Base	F8	575601.568	5437639.662	43.806
AT3	SurfDatum	F12	575593.545	5437627.840	44.610
AT3	Surf	F12	575593.375	5437627.867	44.612
AT3	Surf	F12	575593.361	5437627.671	44.636
AT3	Surf	F12	575593.553	5437627.657	44.620
AT3	BaseDatum	F12	575593.510	5437627.820	44.375
AT3	Base	F12	575593.421	5437627.842	44.345

Type	Location	Feature	CorrectedE	CorrectedN	CorrectedElev
AT3	Base	F12	575593.409	5437627.742	44.365
AT3	Base	F12	575593.497	5437627.710	44.396
ST1	SurfDatum		575596.552	5437641.587	45.733
ST1	Surf		575596.354	5437641.673	45.717
ST1	Surf		575596.224	5437641.417	45.740
ST1	Surf		575596.484	5437641.333	45.714
CS1	ST1		575596.413	5437641.474	45.269
CS3	ST1		575596.460	5437641.465	45.214
ST1	BaseCentre		575596.394	5437641.481	45.152
ST1	Base		575596.408	5437641.547	45.144
ST1	BaseDatum		575596.468	5437641.436	45.152
ST1	Base		575596.325	5437641.431	45.287
ST1	Base		575596.285	5437641.510	45.206
AT2	Base2Datum		575601.504	5437639.703	43.727
AT2	Base2		575601.580	5437639.679	43.720
AT2	Base2		575601.527	5437639.659	43.737
AT2	Base2		575601.490	5437639.703	43.730
AT1	SurfDatum	F10	575597.393	5437634.311	44.107
AT1	BaseDatum	F10	575597.365	5437634.210	43.875
AT1	Surf	F10	575597.461	5437634.216	44.151
AT1	Surf	F10	575597.474	5437634.076	44.131
AT1	Surf	F10	575597.380	5437634.217	44.139
AT1	Base	F10	575597.514	5437634.102	43.914
AT1	Base	F10	575597.429	5437634.156	43.882
AT1	Base	F10	575597.542	5437634.189	43.904
AT5	Surf	F20	575650.274	5437699.311	51.839
AT5	Surf	F20	575650.102	5437699.504	51.851
AT5	SurfDatum	F20	575649.984	5437699.285	51.855
AT5	Surf	F20	575650.171	5437699.179	51.837
CS1	AT5	F20	575650.044	5437699.353	51.565
CS2	AT5	F20	575650.044	5437699.272	51.696
CS3	AT5	F20	575650.059	5437699.268	51.638
AT5	Base	F20	575650.172	5437699.323	51.502
AT5	Base	F20	575650.088	5437699.410	51.545
AT5	BaseDatum	F20	575650.039	5437699.321	51.531
AT5	Base	F20	575650.135	5437699.232	51.556
AT4	Surf	F2	575651.610	5437690.746	50.391
AT4	Surf	F2	575651.766	5437690.590	50.381
AT4	Surf	F2	575651.696	5437690.357	50.345
AT4	Surf	F2	575651.502	5437690.402	50.365
CS1	AT4	F2	575651.638	5437690.524	50.051
AT4	BaseDatum	F2	575651.592	5437690.609	49.796
AT4	Base	F2	575651.644	5437690.504	49.816
AT4	Base	F2	575651.549	5437690.530	49.832
AT4	Base	F2	575651.658	5437690.598	49.817
ST2	Surf	F2	575649.549	5437687.848	50.504
ST2	Surf	F2	575649.313	5437687.686	50.478
ST2	Base	F2	575649.457	5437687.788	49.898
ST2	Base	F2	575649.430	5437687.721	49.913

Type	Location	Feature	CorrectedE	CorrectedN	CorrectedElev
ST2	Base	F2	575649.506	5437687.668	49.911
ST2	Base	F2	575649.551	5437687.729	49.908
ST2	SurfCALC	F2	575649.379	5437687.848	50.483
ST2	SurfCALC	F2	575649.480	5437687.738	50.483

Th'ewá:lí (DgRI-17) - Radiocarbon Samples Locations

Corrected Elev	Type	Location	Feature	Label	CorrectedE	CorrectedN
45.269	CS1	ST1		CS1	575596.413	5437641.474
45.214	CS3	ST1		CS3	575596.460	5437641.465
51.565	CS1	AT5	F20	CS1	575650.044	5437699.353
51.696	CS2	AT5	F20	CS2	575650.044	5437699.272
51.638	CS3	AT5	F20	CS3	575650.059	5437699.268
50.051	CS1	AT4	F2	CS1	575651.638	5437690.524

Th'ewá:lí (DgRI-17) - Mapping Station Locations

Stn Number	Easting	Northing	Elevation	Description
STN1(2002/4)	575644.000	5437695.000	46.700	DATUM1 from 2002(STN1, also used in 2004); yellow tent peg (+5cm)
STN2(2004)	575607.000	5437716.000	41.680	Blue Bennett Disk on n-w side of north road
STN3(2004)	575652.420	5437681.668	45.912	DATUM2 from 2002(STN2, also used in 2004)
STN4(2004)	575673.414	5437709.885	47.899	wooden hub with nail n-e of 3 mounds on e end of upper terrace
STN5(2004)	575686.771	5437700.338	45.114	wooden hub with nail s-e end of terrace between F7 & F15 (among rocks)
STN6(2004)	575624.064	5437674.842	44.901	spike at s-w corner of western plankhouse platform
STN7(2004)	575636.191	5437710.619	44.217	spike on n-w lower terrace 2m s from climbing path on terrace edge
STN3(2002)	575676.539	5437710.387	47.796	at northeast end of site east of burial mound 05 (not found in 2004)
STN4(2002)	575628.873	5437677.957	45.224	on northwest rim of mound 10 on edge of plankhouse floor(not found in 2004)
STN5(2002)	575609.139	5437683.561	44.605	east of mound 14 and mound 15 (not found in 2004)
STN6(2002)	575594.683	5437651.233	41.37	W. of STN5(2002) on W. edge of road cut E. of lower site (not looked for in 2004)
STN7(2002)	575580.359	5437626.848	40.639	north of test shovel pit 08 and west of mound 16 (not looked for in 2004)
SNT8(2005)*	575603.030	5437647.141	23.593	Spike on west side of path between upper and lower sites, east of F8
STN9(2005)*	575590.887	5437622.358	23.176	Spike between F12 and F23 on south rims
BASE*	575663.097	5437632.641	19.179	Spike on south side of gravel road south of site 140' 38"; D-56.4m from Stn6(2004)
BS*	575720.760	5737732.766	17.866	Spike in the N. edge of road on river side at the NE end of site below STN5(2004)
<p>The 2004 stations were derived from hand held GPS on Datum1 from 2002 and on STN2 from 2004. The 2002 data was transformed to the 2004 data.</p> <p>The 2004 stations were assigned before the 2002 data was seen which is why there are duplicate station numbers.</p> <p>* =data not post-processed.</p>				

Eyxel (DiRi-48):***Eyxel (DiRi-48) - Feature Center Points***

Label	Easting	Northing	Elevation
F4	612925.5771	5470148.3581	41.27
F1	612914.0442	5470146.5071	42.14
F2	612909.7727	5470153.3414	43
F3	612906.0708	5470142.378	41.93
F5	612899.2365	5470136.6828	41.93
F6	612899.2365	5470136.6828	42.57

Eyxel (DiRi-48) - Test Locations

Type	Location	Feature	CorrectedE	CorrectedN	Corrected Elev
AT1	SurfDatum	F3	612899.108	5470136.618	42.109
AT1	Surf	F3	612899.140	5470136.349	42.136
AT1	Surf	F3	612899.051	5470136.468	42.128
AT1	Surf	F3	612899.210	5470136.482	42.141
AT1	BaseDatum	F3	612899.130	5470136.558	41.457
AT1	Base	F3	612899.179	5470136.457	41.395
AT1	Base	F3	612899.105	5470136.498	41.409
AT1	Base	F3	612899.185	5470136.498	41.420
CS1	AT1	F3	612899.106	5470136.561	41.697
CS2	AT1	F3	612901.096	5470134.070	42.744
CS3	SP1	F2	612906.493	5470142.376	42.529
CS4	SP1	F2	612906.501	5470142.375	42.508
SP1	Surf	F2	612906.534	5470142.380	42.955
CS5	SP1	F2	612906.502	5470142.370	42.484
CS6	AT2	F1	612914.220	5470146.645	41.950
AT2	SurfDatum	F1	612914.226	5470146.612	42.160
AT2	Surf	F1	612914.088	5470146.617	42.162
AT2	Surf	F1	612914.081	5470146.793	42.184
AT2	Surf	F1	612914.236	5470146.778	42.185
SP2	Surf	F4	612925.603	5470148.991	41.305
SP2	Base+	F4	612925.663	5470148.914	41.100
AT2	Base	F1	612913.972	5470146.318	41.160
SP3	Surf	F5	612900.986	5470147.740	41.965
SP3	Base+	F5	612900.986	5470147.740	41.685

Eyxel (DiRi-48) - Radiocarbon Samples Locations

Type	Location	Feature	Label	CorrectedE	CorrectedN	Corrected Elev
CS1	AT1	F3	CS1	612899.106	5470136.561	41.697
CS2	AT1	F3	CS2	612901.096	5470134.070	42.744
CS3	SP1	F2	CS3	612906.493	5470142.376	42.529
CS4	SP1	F2	CS4	612906.501	5470142.375	42.508
CS5	SP1	F2	SC5	612906.502	5470142.370	42.484
CS6	AT2	F1	CS6	612914.220	5470146.645	

Sxwóxwiyemelh (DiRj-1):***Sxwóxwiyemelh 'South' (DiRj-1) - Feature Center Points***

Label	Easting	Northing	Elev
F1	608015.342	5470201.612	27.440
F2	608023.654	5470208.946	28.620
F3	608032.292	5470213.347	28.780
F4	608004.748	5470198.841	28.050
F5	607994.969	5470191.833	29.220
F6	607987.472	5470188.899	28.190
F7	607976.878	5470184.988	28.160
F8	607965.958	5470180.261	28.270
F9	607956.994	5470173.905	28.100
F10	607941.348	5470166.244	28.170
F11	607938.577	5470176.675	30.050
F12	607945.423	5470178.957	29.070
F13	607955.039	5470184.336	29.110
F14	607964.166	5470190.855	29.280

Sxwóxwiyemelh 'North' (DiRj-1) - Feature, Test & Carbon Samples Locations
 (see Lenert and Lepofsky n.d.)

Sxwóxwiyemelh (DiRj-1) - Mapping Station Locations

Stn	Easting	Northing	Elev.	Description
STN1	607984.000	5470185.000	29.194	wooden hub 4m e. of path parallel with s. boundary of 1st PH w. of path in row 1
STN2	607986.001	5470177.996	28.853	concrete pillar 6m e. of path 1 m ne of tree cluster
STN3	607949.999	5470178.001	29.703	concrete pillar 30m w. of path; 3m ne of w. PH in row 2
STN4	608010.647	5470195.193	29.130	wooden hub w. of s. boundary of PH#1(F1)
STN5	608028.761	5470205.350	29.274	wooden hub 2m s. of s. boundary of PH#3(F3)
STN6	607957.503	5470147.534	29.102	wooden hub 1.5m w of sw corner of square pit on terrace river edge; w. of path
STN7	608029.010	5470174.247	28.263	wooden hub 2m s. of s. boundary of e. PH on terrace river edge; e. of path
STN11	607975.197	5470212.160	30.97	Spike 4m N of RR; 1.5m W of trail into 'Katz' site
STN12	608086.799	5470292.642	31.549	Spike on N side of truck pullout bearing 234.1209 from Stn10; bearing 83.3350 from Stn12
STN13	608263.193	5470312.54	32.514	Spike on S side of truck pullout directly across from Barb's driveway
STN14	608247.745	5470357.086	31.682	Spike on N side of HP1&2; staked with flagging 127cm N
STN15	608267.572	5470398.196	30.023	Spike 120cm from W side of Barb's road at beginning of ROW; flagged on alder 10m SW
STN16	608215.806	5470387.656	28.482	Spike on S rim of HP9; N of path to upper terrace; flagged overhead
STN17	608200.899	5470394.106	29.695	Spike in middle of path between HP9 and 10 just W of NW rim of HP9; flagged on N side of path 205cm NE
STN18	608174.183	5470391.862	29.978	Spike on NW rim of HP10; S side of path to HP11 beside log; flagged overhead 179cm N
STN19	608150.323	5470402.858	29.033	Spike on NW side of HP11; 250cm E of oak; flagged overhead 77cmSE
STN20	608191.547	5470335.595	32.01	Spike between HP 13 & 14 on rise in path; flagged overhead 185cm NE of popular cluster
STN21	608167.991	5470329.767	31.445	Spike between HP12 & 15 on rise; 270cm SW of large maple; flagged overhead
STN22	608205.794	5470352.419	31.642	Spike W of HP8; S side of B1; flagged 270cm W on maple tree
Local coordinate system by GPS; Elev. adjustment approximate from Katz Landing 103 feet at elevation of the rail way tie = 31.394m				

Shxw'ow'hamel (DiRj-30):

Shxw'ow'hamel (DiRj-30) - Feature Center Points

Label	Easting	Northing	Elevation
F1	601475.4	5465641	30.49
F2	601482	5465648	29.23
F3	601486	5465663	28.71
F4	601488.2	5465671	28.88
F5	601490.2	5465679	28.57
F6	601495.2	5465694	28.44
F7	601498.6	5465702	28.69
F8	601496.2	5465708	30.4
F9	601505.4	5465718	28.14
F10	601510.1	5465731	29.12
F11	601508.9	5465739	30.5
F12	601523.9	5465749	29.68
F13	601519.4	5465761	28.97
F14	601526.7	5465768	29.27
F15	601530.3	5465778	28.52
F16	601530.8	5465790	28.86
F17	601494.2	5465665	29.72
F18	601490.9	5465687	29.35
F19	601493.9	5465716	29.03
F20	601506.4	5465728	30.94
F21	601514.7	5465737	29.64

Shxw'ow'hamel (DiRj-30) - Test & Carbon Sample Locations

Type	Location	Feature	CorrectedE	CorrectedN	CorrectedElev
CS1	ST1	F13	601519.349	5465759.635	28.736
ST1	SurfDatum	F13	601519.443	5465759.691	28.985
ST1	Surf	F13	601519.371	5465759.494	28.984
ST1	Surf	F13	601519.157	5465759.572	29.002
ST1	Surf	F13	601519.209	5465759.788	28.993
CS2	ST2	F12	601523.407	5465748.928	29.441
CS2	ST1	F13	601519.198	5465759.595	28.6
CS1	SP1	F14	601526.578	5465768.075	28.93
CS2	SP1	F14	601526.593	5465768.078	28.774
CS3	SP1	F14	601526.589	5465768.094	28.637
SP1	Base	F14	601526.602	5465768.093	28.587

Type	Location	Feature	CorrectedE	CorrectedN	CorrectedElev
SP1	Surf	F14	601526.693	5465768.105	29.352
CS3	ST1	F13	601519.342	5465759.653	28.474
ART	ST2	F12	601523.319	5465748.832	29.362
ST1	BaseDatum	F13	601519.416	5465759.665	28.337
ST1	Base	F13	601519.366	5465759.608	28.326
ST1	Base	F13	601519.241	5465759.614	28.346
ST1	Base	F13	601519.286	5465759.683	28.349
CS4	ST1	F13	601519.256	5465759.732	28.462
CS5	ST1	F13	601519.257	5465759.734	28.44
CS1	ST2	F12	601523.472	5465748.917	29.515
CS3	ST2	F12	601523.541	5465748.682	29.448
CS4	ST2	F12	601523.448	5465748.931	29.3
CS5	ST2	F12	601523.466	5465748.907	29.244
CS6	ST2	F12	601523.45	5465748.919	29.197
ST2	SurfDatum	F12	601523.42	5465749.021	29.717
ST2	Surf	F12	601523.648	5465748.741	29.708
ST2	Surf	F12	601523.447	5465748.566	29.702
ST2	Surf	F12	601523.2	5465748.839	29.706
ST2	BaseDatum	F12	601523.395	5465748.948	29.053
ST2	Base	F12	601523.549	5465748.77	29.033
ST2	Base	F12	601523.443	5465748.65	29.04
ST2	Base	F12	601523.302	5465748.864	29.054
CS1	AT1	F6	601494.938	5465692.934	28.079
AT1	SurfDatum	F6	601495.215	5465693.082	28.529
AT1	Surf	F6	601495.12	5465692.861	28.503
AT1	Surf	F6	601494.862	5465692.91	28.536
AT1	Surf	F6	601494.892	5465693.18	28.521
ST3	SurfDatum	F4	601488.343	5465669.859	28.828
ST3	Surf	F4	601488.255	5465669.725	28.857
ST3	Surf	F4	601488.208	5465669.752	28.9
ST3	Surf	F4	601488.209	5465669.912	28.914
ST3	BaseDatum	F4	601488.291	5465669.794	28.326
ST3	Base	F4	601488.263	5465669.698	28.317
ST3	Base	F4	601488.166	5465669.688	28.356
ST3	Base	F4	601488.22	5465669.871	28.334
ST4	SurfDatum	F18	601491.368	5465685.819	29.41
ST4	Surf	F18	601491.296	5465685.635	29.422
ST4	BaseDatum	F18	601491.336	5465685.817	28.857
ST3	Surf	F4	601488.214	5465669.835	28.92
ST3	Base	F4	601488.213	5465669.789	28.325

Type	Location	Feature	CorrectedE	CorrectedN	CorrectedElev
CS1	ST3	F4	601488.297	5465669.827	28.582
CS2	ST3	F4	601488.262	5465669.874	28.534
ST4	SurfDatum	F18	601491.4	5465685.862	29.402
ST4	Surf	F18	601491.269	5465685.62	29.404
ST4	Surf	F18	601491.082	5465685.718	29.385
ST4	Surf	F18	601491.187	5465685.928	29.395
ST4	BaseDatum	F18	601491.346	5465685.838	28.856
ST4	Base	F18	601491.282	5465685.691	28.864
ST4	Base	F18	601491.145	5465685.758	28.851
ST4	Base	F18	601491.227	5465685.88	28.869
CS1	ST4	F18	601491.285	5465685.672	29.178
CS2	ST4	F18	601491.281	5465685.689	29.104
CS3	ST4	F18	601491.294	5465685.704	29.042
CS4	ST4	F18	601491.342	5465685.786	29.004
AT2	SurfDatum	F9	601504.42	5465717.598	28.797
AT2	Surf	F9	601504.615	5465717.428	28.78
AT2	Surf	F9	601504.534	5465717.343	28.785
AT2	Surf	F9	601504.417	5465717.459	28.794
ART 1	AT2	F9	601504.441	5465717.543	28.573
ART 1	AT2	F9	601504.395	5465717.45	28.578
CS5	ST4	F18	601491.336	5465685.708	29.252
AT1	Surf	F6	601494.918	5465693.169	28.517
AT1	BaseDatum	F6	601494.928	5465693.077	28.672
AT1	Base	F6	601495.163	5465693.046	28.815
AT1	Base	F6	601495.083	5465692.944	28.678
AT1	Base	F6	601494.932	5465692.944	28.686
CS1	AT2	F9	601504.474	5465717.448	28.325
CS2	AT2	F9	601504.462	5465717.545	28.255
CS3	AT2	F9	601504.482	5465717.52	28.201
CS4	AT2	F9	601504.432	5465717.533	28.467
AT2	BaseDatum	F9	601504.485	5465717.612	28.161
AT2	Base	F9	601504.555	5465717.548	28.165
AT2	Base	F9	601504.46	5465717.48	28.15
AT2	Base	F9	601504.409	5465717.525	28.135
SP2	Surf		601500.845	5465718.595	30.082
SP3	Surf		601502.761	5465712.793	29.684
SP4	Surf	AT1	601495.011	5465693.024	27.96
SP5	Surf		601493.248	5465689.079	29.953

Shxw'ow'hamel (DiRj-30) - Mapping Station Locations

Stn ID	Corrected Easting	Corrected Northing	Corrected Elevation	Description
STN1	601572.000	5465746.000	30.188	Wooden hub on the pipeline, 255m south of STN2 at 216.5211.6 dms; east of site
STN2	601725.000	5465950.000	30.189	Wooden hub on the pipeline 2m north of witness post GPS 61, WC 204114.7, 6.3 M U/S, MAG 42
STN3	601527.583	5465783.961	29.347	Wooden hub 59m west of STN1 at 311.1521dms, edge of slough west of CD16 southeast of large tree
STN4	601528.609	5465788.053	29.984	Wooden hub at north end of site among burial mounds, 4.219m from STN3 at 75.5527 dms
STN5	601542.385	5465780.400	30.391	Wooden hub SE of STN3 just south of the three tree cluster on the E side of the site; E of CD16 and CD15
STN6	601514.719	5465756.631	30.478	Wooden hub southwest side CD13
STN7	601501.206	5465714.420	30.068	Wooden hub between CD8 and CD9 on rise in path south of CD9
STN8	601494.418	5465688.373	30.191	Wooden hub at south side of CD6
STN9	601480.567	5465658.100	29.873	Wooden hub between CD2 and CD3 on west side on edge of slough drop
Corrections based on CN Railway data.				

Xelhálh (DjRi-14):**Xelhálh (DjRi-14) - Feature Center Points**

Label	Easting (615 ____)	Northing (5490 ____)	Elev
F1	057.95908	720.294	65.1
F2	055.01508	731.7428	65.45
F3	069.84404	724.0013	67.99
F4	072.56996	729.9983	68.09
F5	068.53558	737.9579	68.89
F6	075.07781	723.7832	67.96
F7	075.95006	730.1073	68.58
F8	074.64166	736.2134	68.27
F9	096.99411	729.5621	69.5
F10	107.1345	733.5965	68.84
F11	104.4086	737.7398	68.8
F12	110.4055	717.0229	68.4
F13	119.6736	721.3844	68.04
F14	136.0291	710.8079	68.67
F15	134.9388	727.0543	68.1
F16	144.3159	746.1356	72.72
F17	151.0761	716.3687	68.06
F18	152.7117	724.8736	69.91
F19	159.2538	740.9019	71.85
F20	171.3569	747.9893	73.19
F21	168.0858	768.4881	73.42
F22	166.1231	771.214	73.02
F23	175.8273	769.0333	72.52
F24	167.6496	779.7188	73
F25	184.3322	761.4008	71.96
F26	194.3635	785.4977	71.32
F27	190.5472	797.4918	70.72
F28	178.7713	806.6508	70.11
F29	191.6376	805.2333	70.75
F30	192.1828	810.5761	71.45
F31	206.6846	756.4941	72.1
F32	223.5852	780.046	71.8

Xelhálh (DjRi-14) - Test & Carbon Sample Locations

Type	Location	Feature	CorrectedE	CorrectedN	CorrectedElev
SP1	Surf	F27	615190.860	5490797.740	70.778
SP2	Surf	F27	615190.974	5490797.776	70.766
CS1	SP1	F27	615190.875	5490797.757	70.469
SP1	Base	F27	615190.888	5490797.784	70.221
SP2	Base	F27	615190.954	5490797.758	70.195
ST2	SurfDatum	F28	615178.302	5490806.059	70.145
ST2	Surf	F28	615178.518	5490805.939	70.142
ST2	Surf	F28	615178.608	5490806.116	70.156

Type	Location	Feature	CorrectedE	CorrectedN	CorrectedElev
ST2	Surf	F28	615178.339	5490806.218	70.153
ST2	BaseDatum	F28	615178.373	5490806.033	69.602
ST2	Base	F28	615178.463	5490805.991	69.604
ST2	Base	F28	615178.537	5490806.096	69.591
ST2	Base	F28	615178.438	5490806.162	69.62
CS1	ST2	F28	615178.430	5490806.209	69.973
CS2	ST2	F28	615178.374	5490806.036	69.808
AT1	SurfDatum	F25	615183.841	5490761.068	72.049
AT1	Surf	F25	615184.048	5490761.043	72.043
AT1	Surf	F25	615184.083	5490761.234	72.052
AT1	Surf	F25	615183.848	5490761.294	72.072
AT1	BaseDatum	F25	615183.918	5490761.098	71.545
AT1	Base	F25	615184.016	5490761.108	71.548
AT1	Base	F25	615183.996	5490761.220	71.593
AT1	Base	F25	615183.903	5490761.209	71.533
CS1	AT1	F25	615183.878	5490761.101	71.849
CS2	AT1	F25	615183.868	5490761.117	71.76
AT2	SurfDatum	F23	615175.737	5490769.498	72.545
AT2	Surf	F23	615175.609	5490769.379	72.553
AT2	Surf	F23	615175.757	5490769.221	72.545
AT2	Surf	F23	615175.905	5490769.325	72.535
SP4	Surf	F26	615194.413	5490785.870	71.311
SP4	Base	F26	615194.349	5490785.831	70.903
SP5	Surf	F26	615194.198	5490785.922	71.313
SP5	Base	F26	615194.164	5490785.916	70.859
CS1	SP5	F26	615194.179	5490785.865	71.091
CS2	SP5	F26	615194.160	5490785.873	70.975
AT2	Base	F23	615175.754	5490769.430	71.931
AT2	Base	F23	615175.687	5490769.368	71.922
AT2	Base	F23	615175.732	5490769.325	71.913
AT2	Base	F23	615175.799	5490769.360	71.925
CS1	AT2	F23	615175.823	5490769.310	72.286
CS2	AT2	F23	615175.702	5490769.311	72.179
CS1	ST1	F32	615222.835	5490779.614	71.694
ST1	SurfDatum	F32	615222.758	5490779.549	71.859
ST1	Surf	F32	615222.917	5490779.702	71.838
ST1	Surf	F32	615223.065	5490779.559	71.857
ST1	Surf	F32	615222.900	5490779.411	71.865
ST1	BaseDatum	F32	615222.798	5490779.542	71.182
ST1	Base	F32	615222.907	5490779.681	71.224
ST1	Base	F32	615223.022	5490779.576	71.208
ST1	Base	F32	615222.920	5490779.450	71.199
ST3	SurfDatum	F19	615160.466	5490741.868	72.044
ST3	Surf	F19	615160.570	5490741.659	72.066
ST3	Surf	F19	615160.322	5490741.585	72.044
ST3	Surf	F19	615160.261	5490741.752	72.036
ST3	BaseDatum	F19	615160.481	5490741.750	71.609
ST3	Base	F19	615160.507	5490741.663	71.623
ST3	Base	F19	615160.425	5490741.622	71.597
ST3	Base	F19	615160.368	5490741.694	71.605

Type	Location	Feature	CorrectedE	CorrectedN	CorrectedElev
ST4	SurfDatum	F17	615151.400	5490716.478	68.093
ST4	Surf	F17	615151.240	5490716.545	68.052
ST4	Surf	F17	615151.230	5490716.338	68.072
ST4	Surf	F17	615151.436	5490716.372	68.073
ST4	BaseDatum	F17	615151.344	5490716.537	67.71
ST4	Base	F17	615151.293	5490716.485	67.741
ST4	Base	F17	615151.285	5490716.416	67.699
ST4	Base	F17	615151.394	5490716.392	67.697
CS1	ST5	F15	615134.538	5490726.314	67.92
CS1	ST6	F13	615120.107	5490721.799	67.9
ST6	SurfDatum	F13	615120.074	5490721.708	68.048
ST6	Surf	F13	615120.107	5490722.037	68.09
ST6	Surf	F13	615120.328	5490722.003	68.049
ST6	Surf	F13	615120.289	5490721.706	68.032
CS1	ST4	F17	615151.238	5490716.392	67.939
ST5	SurfDatum	F15	615134.427	5490726.394	68.113
ST5	Surf	F15	615134.646	5490726.417	68.081
ST5	Surf	F15	615134.676	5490726.208	68.09
ST5	Surf	F15	615134.453	5490726.176	68.12
ST5	BaseDatum	F15	615134.500	5490726.344	67.746
ST5	Base	F15	615134.559	5490726.343	67.748
ST5	Base	F15	615134.593	5490726.225	67.744
ST5	Base	F15	615134.503	5490726.214	67.753
CS2	ST5	F15	615134.446	5490726.295	67.944
CS3	ST5	F15	615134.460	5490726.239	67.915
ST6	BaseDatum	F13	615120.129	5490721.730	67.782
ST6	Base	F13	615120.194	5490721.975	67.814
ST6	Base	F13	615120.291	5490721.950	67.823
ST6	Base	F13	615120.268	5490721.724	67.82
CS2	ST6	F13	615120.281	5490721.768	67.88
CS3	ST6	F13	615120.116	5490721.739	67.812
ST7	SurfDatum	F2	615055.117	5490731.687	65.488
ST7	Surf	F2	615055.124	5490731.404	65.473
ST7	Surf	F2	615054.894	5490731.385	65.47
ST7	Surf	F2	615054.855	5490731.645	65.49
ST7	BaseDatum	F2	615055.097	5490731.616	65.189
ST7	Base	F2	615055.090	5490731.454	65.27
ST7	Base	F2	615054.936	5490731.470	65.214
ST7	Base	F2	615054.911	5490731.625	65.206
STUMP	CENTRE		615351.699	5490796.136	77.78
STUMP	RIM		615351.579	5490796.557	77.833
STUMP	RIM		615351.841	5490795.773	77.742
STUMP	RIM		615352.086	5490796.254	77.778
STUMP	RIM		615351.291	5490795.904	77.816
ST8	SurfDatum	F509	615338.197	5490805.979	78.688
ST8	Surf	F509	615338.217	5490805.795	78.677
ST8	Surf	F509	615338.051	5490805.708	78.702
ST8	Surf	F509	615337.940	5490805.928	78.716
ST8	BaseDatum	F509	615338.069	5490805.904	78.255
ST8	Base	F509	615338.177	5490805.828	78.325

Type	Location	Feature	CorrectedE	CorrectedN	CorrectedElev
ST8	Base	F509	615338.055	5490805.790	78.279
ST8	Base	F509	615338.021	5490805.804	78.287
AT3	SurfDatum	F508	615350.493	5490801.472	76.727
AT3	Surf	F508	615350.585	5490801.582	76.722
AT3	Surf	F508	615350.707	5490801.441	76.713
AT3	Surf	F508	615350.594	5490801.341	76.723
AT3	BaseDatum	F508	615350.526	5490801.431	76.277
AT3	Base	F508	615350.555	5490801.522	76.325
AT3	Base	F508	615350.630	5490801.452	76.375
AT3	Base	F508	615350.547	5490801.373	76.323
SP6	Surf		615343.033	5490804.727	76.924
SP7	Surf		615344.469	5490803.745	76.7
ST9	SurfDatum	F1	615058.111	5490720.844	65.112
ST9	Surf	F1	615058.221	5490720.645	65.091
ST9	Surf	F1	615058.002	5490720.546	65.104
ST9	Surf	F1	615057.901	5490720.727	65.1
ST9	BaseDatum	F1	615058.052	5490720.750	64.809
ST9	Base	F1	615058.061	5490720.614	64.8
ST9	Base	F1	615058.008	5490720.562	64.804
ST9	Base	F1	615058.027	5490720.681	64.81
CS1	ST9	F1	615058.074	5490720.761	64.964

Xelhálh (DjRi-14) - Mapping Station Locations

STN ID	Easting	Northing	Elevation	Description
STN1	615065.623	5490666.426	61.636	stone-283.82m e. of tunnel; 3m n. of n. rr track-marked with an x
STN2	614782.000	5490677.000	64.000	h-transfer program from this height on tunnel at benchmark at 30.480m
STN3	615065.623	5490663.426	62.000	centre of tracks283.82m e. of tunnel
BS	615065.533	5490664.131	62.169	reflector on side of n. rr track 283m e. of tunnel; bearing 182.1444; 2.296m from STN1
STN4	615066.592	5490719.583	68.495	hub with nail (+6.5cm); 3m e of cp by first w. ph s. of STN4; 1.27m n-e of birch
STN5	615121.775	5490730.987	70.217	hub with nail; centre of first terrace; 9cm e of + on tree route; n. of large ph with looter hole inside north rim
STN6	615151.928	5490732.396	73.600	hub with nail (+8cm); w. side of ph; 1.16m n. of fir on w. edge of top terrace
STN7	615177.813	5490756.865	73.768	hub with nail 2.33m s. of stump in ph n of STN7 - station beside 7102-7487 collected; w. of cemetery edge
temp	615159.431	5490740.178	73.721	for stn7 - removed
TEMP8	615152.485	5490769.486	73.170	hub with nail n. side of top terrace 1.47m n. of + on fallen log; 9m s. of cedar tree on terrace edge
TEMP9	615115.653	5490743.839	70.283	hub with nail n. side of terrace 2.17m n. of large fir; n-e of ph with looter hole inside n rim
TEMPA	615079.286	5490729.045	69.188	hub with nail n. side of terrace e. of plankhouse pits; 10m s. of 3 cedars on terrace edge; 1.96m e of east most cp cntr

STN ID	Easting	Northing	Elevation	Description
STNB	615167.279	5490722.245	72.910	spike s. cliffside s-e of STN6; 2.23m s-w of large fir
STNC	615156.798	5490669.660	60.948	spike - 10m n. of railway; 1 m w. of small fir; s. of ph on s. edge of terrace s. of STN5
STND	615178.029	5490802.555	70.620	n-e cliffside - spike 1m e. of fir tree; n-e edge of ph
STNE	615221.918	5490719.706	73.046	s. of cemetery - spike s-e cliffside e. of STNB; 1.57m e. of birch; 1.22m w. of cedar; s. of ph and cemetery
STNF	615201.347	5490788.263	71.547	spike; n-w side of 2nd terrace; 5m w. of boulder marked with +; e of ph; 10m w. of plankhouse
STNG	615139.027	5490839.059	42.023	metal spike with blue and pink flagging; 30cm s. of end of raised log on beach; bearing 313.06185dms from STND
STNH	615042.166	5490721.419	64.370	yellow, plastic peg with blue and pink flagging at edge of middle terrace below PH#1; 1.5m nw of tree beside path; 274.1735dms from STN4
STNI	615271.698	5490779.830	87.251	yellow, plastic peg with blue and pink flagging n. of path parallel to first boulder outcrop above n. boundary of historic cemetery; 76.15176dms from STN7
STNJ	615287.700	5490782.902	89.337	**iffy - needs a recheck next time out; tree stack just e. of entrance to n. upper cliff terrace beside large rock n. of cliff steps by tall wall; 79.0758dms from STNI
STNK	615239.928	5490779.744	73.604	Spike at foot of bluff SE of F32; NE of Cemetery E of path up bluff
STNL	615301.499	5490797.445	88.034	Spike on edge of F500 terrace 4m from steps down bluff side; on rock outcrop
STNM	615316.428	5490798.654	82.156	Spike in path down bluff, N and below tree fall, S of base of F502 and W of F503 terrace
STNN	615336.796	5490787.981	76.303	Spike beside young cedar next to bluff base, S of F504 base; W of F508 terrace
STNO	615349.772	5490801.994	76.732	Rebar on E side of F508 terrace between two young cedar trees; 2m NE of large cedar stump
STNP	615360.943	5490811.803	72.015	Spike at S end of F514 terrace, S of tree centered in terrace
These are adjusted and rotated data based on CN data for tunnel. To be confirmed when CP point shot in 2005 (614767,5491171) 36" culvert approximately 20m w side of tunnel north of Yale				

**APPENDIX II – ARTIFACT CATALOGUE (DhRI-T1; DgRI-17; DiRj-30;
DjRi-14)**

Site	Cat. #	Feat. #	Test #	Depth (cmBS)	Artifact Type	Material	Dimensions (L x W x Th)	Remarks
DgRl-17	18	8	AT2	0-15	bottle glass, green, fragment	glass	5.7 x 4.2 x 0.2	
DgRl-17	19	8	AT2	0-15	flake fragment	chert, red (jasper)	2.5 x 1.7 x 0.15	
DgRl-17	20	8	AT2	27-33	flake / spall	metasediment	4.3 x 5.7 x 0.5	possibly utilized edge
DgRl-17	21	8	AT2	0-33	biface, point, triangular eared / stemmed	chert, gray-brown	2.2 x 1.5 x 0.3	late period point / arrowhead; from sidewall expansion debris
DgRl-17	22	8	AT2	0-33	bottle glass, green, fragment	glass	4.2 x 1.8 x 0.2	
DgRl-17	23	8	AT2	0-33	faunal, humerus/ulna (?), distal fragment, artiodactyl	bone	7.6 x 2.2 x 1.6	
DgRl-17	24	8	AT2	0-33	faunal, carpal/tarsal (?), artiodactyl	bone	3.1 x 2.0 x 1.4	
DgRl-17	25	4	AT4	26-36	flake fragment	dacite	1.3 x 1.2 x 0.1	
DgRl-17	26	10	AT1	0-10	biface, triangular	basalt	4.9 x 2.6 x 0.5	prob. knife; prox/lateral grinding = hafted; cortex on base
DgRl-17	27	10	AT1	0-15	flake fragments	basalt; metasediment	max. 3.7 x 2.5 x 0.2	N=2; basalt, & metasediment
DgRl-17	28	12	AT3	0-19	flake fragments	basalt	max. 2.8 x 2.4 x 0.3	N=2
DgRl-17	29	12	AT3	0-19	glass, clear, fragments	glass, clear	Th = 0.3	N=3
DgRl-17	30	12	AT3	19-28	glass, clear, fragment; tin can fragments	glass, clear; tin	glass Th = 0.3	
DhRl-T1	1	5	ST1	10-20	debitage	dacite	0.5 x 0.3 x 0.3	shatter fragment

Site	Cat. #	Feat. #	Test #	Depth (cmBS)	Artifact Type	Material	Dimensions (L x W x Th)	Remarks
DiRj-30	8	6	AT1	0-19	flake; flake fragment	basalt (flake); dacite	max = 2.2 x 1.9 x 0.3	N=2
DiRj-30	9	6	AT1	19-28	flake fragment	basalt	1.8 x 1.1 x 0.1	
DiRj-30	10	6	AT1	40-50	flake; debitage	basalt (flake); dacite (debitage)	5.2 x 4.7 x 1.1 (flake)	N=3; 1 flake, 2 debitage
DiRj-30	11	6	AT1	50-60	flakes; debitage	basalt (flake); chalcedony (micro-flake); nephrite, slate, basalt (debitage)	2.5 x 3.2 x 1.1 (flake); 0.7 x 0.6 x 0.1 (micro- flake)	N=6; 2 flakes, 4 debitage
DiRj-30	12	6	AT1	n/a	debitage	basalt	(micro)	N=2; from wall clean-up debris
DiRj-30	13	6	AT1	n/a	flake fragment	basalt	1.6 x 0.6 x 0.1	from wall collapse debris
DiRj-30	14	9	AT2	0-25	flake fragment	dacite	5.0 x 2.9 x 1.5	split flake; from wall clean-up debris
DiRj-30	15	9	AT2	20-30	flake fragment	basalt	2.1 x 3.6 x 0.5	medial frag.
DiRj-30	16	9	AT2	22-24	stake (possible)	wood	24.4 x 4.5 (conical; tapering to pointed end)	3-D prov.; removed from NW. wall profile; apparent cut at proximal end
DiRj-30	17	9	AT2	30-40	flake fragments	basalt (x2); dacite (x1)	max = 3.2 x 1.9 x 0.4	N=3
DiRj-30	18	9	AT2	47-55	flake fragments; debitage	basalt (x5); dacite (x1); granitic (x1)	max = 3.1 x 1.7 x 0.6	N=7

Site	Cat. #	Feat. #	Test #	Depth (cmBS)	Artifact Type	Material	Dimensions (L x W x Th)	Remarks
DiRj-30	19	9	AT2	55-65	flake fragments; debitage	basalt	max (flake frags) = 3.1 x 2.8 x 0.6	N=15; 3 flake frags, 12 debitage (small frags)
DiRj-30	20	9	AT2	40-65	flake fragments; debitage	basalt (x4); metasediment (x1)	max (flake frags) = 3.2 x 2.1 x 0.4	N=5; 3 flake frags, 2 debitage (micro); from wall clean-up debris
DiRj-30	21	9	AT2	n/a	utilized flake	dacite	4.1 x 4.3 x 1.3	poss. scraper; uncertain depth (prob. wall clean-up debris)
DiRj-30	21	9	AT2	n/a	flake; flake fragments	basalt (x2); dacite (x1)	max = 2.1 x 1.7 x 0.3	N=3; 1 flake, 2 flake frags; uncertain depth (prob. wall clean-up debris)
DiRj-30	22	12	ST2	0-10	debitage	basalt (x4); metasediment (x3)	avg. = > 1 cm	N=7 debitage
DiRj-30	23	12	ST2	10-20	flake; debitage	basalt (flake); misc. debitage	5.8 x 1.7 x 1.9 (flake); deb. = < 1 cm	N=5; 1 flake, 4 debitage
DiRj-30	24	12	ST2	20-30	flake; flake fragment	metasediment (flake); basalt (flake frag)	3.7 x 4.9 x 0.7 (flake)	N=2; 1 flake, 1 flake frag
DiRj-30	25	12	ST2	30-40	flake fragments; debitage	slate; basalt; metasediment	(see remarks)	N=25; 5 frags > 3 cm, 2 frags b/w 2-3 cm, 3 frags b/w 1-2 cm, 15 frags < 1 cm
DiRj-30	26	12	ST2	35	ground slate knife fragment	slate	3.0 x 4.8 x 0.2	corner fragment; bevelled edge; recovered from profile
DiRj-30	27	12	ST2	40-50	flake fragments; debitage	basalt; metasediment; misc.	(see remarks)	N=12; 3 flakes > 3 cm, 1 flake/2 frags b/w 2-3 cm, 2 frags b/w 1-2 cm, 4 frags < 1 cm

Site	Cat. #	Feat. #	Test #	Depth (cmBS)	Artifact Type	Material	Dimensions (L x W x Th)	Remarks
DiRj-30	28	12	ST2	40-50	ground slate knife fragment	slate	3.9 x 3.6 x 0.2	
DiRj-30	29	12	ST2	50-60	flakes; debitage	basalt; dacite; metasediment	(see remarks)	N=8; 2 flakes (basalt, metasediment) b/w 1-2 cm; 1 debitage b/w 3-4 cm, 5 debitage < 1.5 cm
DiRj-30	30	12	ST2	60-70	flake fragments; debitage	basalt; dacite	(see remarks)	N=6; 2 flake frags b/w 1-2 cm, 4 debitage < 1 cm
DiRj-30	31	12	ST2	0-30	flakes	basalt; dacite	(see remarks)	N=3; 2 flakes b/w 3-4 cm, 1 flake b/w 1-2 cm
DiRj-30	32	13	ST1	0-10	flake fragments	basalt	max = 1.6 x 1.5 x 0.2	N=2
DiRj-30	33	13	ST1	0-10	uniface fragment	misc. granitic (coarse)	9.8 x 4.3 x 0.5	poss. knife fragment (expedient); both lateral edges worked, opposite faces; broken distal end
DiRj-30	34	13	ST1	10-24	flakes; debitage	basalt; dacite; metasediment	(see remarks)	N=6; 2 flakes (basalt) b/w 3-4 cm, 1 flake (metased.) b/w 2-3 cm, 3 debitage (dacite, basalt) < 1.5 cm
DiRj-30	35	13	ST1	24-30	flake; debitage	basalt; metasediment	flake = 2.7 x 2.5 x 0.7 (see remarks)	N=4; 1 flake (basalt), 3 debitage < 2 cm
DiRj-30	36	13	ST1	30-40	flake; debitage	basalt; dacite	flake = 4.6 x 4.2 x 1.5	N=2; 1 flake (basalt), 1 debitage (dacite)
DiRj-30	37	13	ST1	40-50	flake (split)	dacite	4.4 x 2.2 x 0.8	
DiRj-30	38	18	ST4	15-20	debitage	basalt; dacite; metasediment	(see remarks)	N=8; 1 frag. b/w 2-3 cm; 7 frags. < 1 cm
DiRj-30	39	18	ST4	19	core (bi-polar / piece esquillier)	dacite	3.4 x 3.0 x 0.6	from NW corner; 'Artifact 1' in notes

Site	Cat. #	Feat. #	Test #	Depth (cmBS)	Artifact Type	Material	Dimensions (L x W x Th)	Remarks
DiRj-30	40	18	ST4	19	debitage (core shatter)	dacite	4.2 x 3.1 x 1.1	from NW corner; 'Artifact 2' in notes
DiRj-30	41	18	ST4	20-24	flake;debitage	basalt	3.1 x 2.9 x 0.5 (flake)	N=2; 1 flake, 1 debitage
DiRj-30	42	18	ST4	24-34	debitage	misc.	(see remarks)	N=2, micro (< 1 cm)
DiRj-30	43	18	ST4	34-44	flake fragments / debitage	basalt; dacite; chalcedony (x1); quartz (x1)	(see remarks)	N=21; 4 flake frags b/w 1-2 cm, 17 micro-debitage < 1 cm (including 1 quartz, 1 chalcedony)
DiRj-30	44	18	ST4	44-54	flake;debitage	basalt	4.9 x 3.8 x 1.0 (flake)	N=2; 1 flake, 1 micro-debitage
DjRi-14	1	1	ST9	1-3.5	bone fragments (calcined)	bone	n/a	fragmentary; numerous small pieces
DjRi-14	2	1	ST9	3.5-7	bone fragments (calcined)	bone	n/a	fragmentary; 5 small pieces
DjRi-14	3	1	ST9	7	flake	dacite	0.9 x 1.2 x 0.2	apparent pressure flake
DjRi-14	4	1	ST9	7-9.5	melted/vitrified glass	glass	n/a	
DjRi-14	5	1	ST9	10	bone fragment (calcined)	bone	n/a	
DjRi-14	6	1	ST9	10-13.5	square nail, proximal fragment	metal	4.5 cm = min length; head = 0.9 x 0.8 cm width)	broken tip; bent

Site	Cat. #	Feat. #	Test #	Depth (cmBS)	Artifact Type	Material	Dimensions (L x W x Th)	Remarks
DjRi-14	7	1	ST9	10-13.5	ceramic, fragments (plate/bowl?)	ceramic (unclassified)	n/a	N=8 fragments; 2 'rim' sherds, 2 w/obvious glaze one of which has blue and white linear design elements; apparent 'white' wear / porcelain; requires historic analysis & classification
DjRi-14	8	1	ST9	15	flake fragments	misc.	(see remarks)	N=2; b/w 1-2 cm
DjRi-14	9	1	ST9	15	square nail, distal fragments	metal	n/a	N=2; 1 bent
DjRi-14	10	1	ST9	20-32	bone fragments (calcined)	bone	n/a	fragmentary; 2 very small pieces (< 0.5 cm)
DjRi-14	11	1	ST9	20-32	debitage (micro)	slate (?)	< 0.5 cm	N=2; micro-debitage
DjRi-14	12	2	ST7	0-6.5	debitage	misc.	< 1.5 cm	
DjRi-14	13	13	ST6	0-10	debitage	dacite	n/a	long (4.2 cm) narrow (0.3 cm) shatter fragment
DjRi-14	14	13	ST6	10-20	edge & end-battered / abraded pebble fragment	granitic	10 (min.) x 5.2 x 3.2	edge & end battered; apparent abraded worn & slightly polished surface
DjRi-14	15	13	ST6	10-20	core	basalt	4.6 x 8.2 x 3.2	likely exhausted core
DjRi-14	16	15	ST5	?	debitage	basalt	2.8 x 1.8 x 0.8	shatter; unknown depth
DjRi-14	17	17	ST4	18	hammerstone	basalt	13.3 x 3.4 x 1.5	heavily battered/fractured end; pebble
DjRi-14	18	17	ST4	18-29	possible utilized pebble	quartzite (?)	15.0 x 8.0 x 3.4	possible slight edge-battering
DjRi-14	19	32	ST1	7-17	debitage	basalt	< 1.5 cm	N=2
DjRi-14	20	32	ST1	27-37	uniface, spall	quartzite	5.3 x 8.5 x 1.4	
DjRi-14	21	32	ST1	28-31	core, split pebble	basalt / dacite	6.8 x 5.3 x 2.4	

Site	Cat. #	Feat. #	Test #	Depth (cmBS)	Artifact Type	Material	Dimensions (L x W x Th)	Remarks
DjRi-14	22	32	ST1	27-37	flakes; debitage	basalt (?)	(see remarks)	N=7; 2 flakes b/w 3-4 cm, 1 flake b/w 2-3 cm, 1 flake (pressure) < 1 cm; 2 debitage/flake frags. b/w 2-4 cm, 1 debitage < 1 cm
DjRi-14	23	32	ST1	37-47	flakes; debitage	basalt	(see remarks)	N=20; 2 flakes b/w 3-4 cm, 1 flake b/w 2-3 cm, 2 flakes b/w 1-2 cm, 3 flakes < 1 cm, 2 debitage b/w 2-3 cm, 5 debitage b/w 1-2 cm, 5 debitage < 1 cm
DjRi-14	24	32	ST1	47-57	flakes; debitage	basalt; misc. (x1)	(see remarks)	N=7; 1 flake b/w 3-4 cm (misc.), 2 flakes b/w 2-3 cm, 2 debitage b/w 2-3 cm, 1 debitage b/w 1-2 cm, 1 debitage < 1 cm
DjRi-14	25	32	ST1	47-57	core fragment	basalt / dacite (?)	5.1 x 3.1 x 1.5	
DjRi-14	26	32	ST1	57-67	flakes; debitage	basalt / dacite	(see remarks)	N=9; 1 flake (6.9 x 5.6 x 2.3), 2 flakes b/w 3-4 cm, 2 flakes b/w 2-3 cm, 2 flakes < 1.5 cm, 1 debitage b/w 1-2 cm, 1 debitage (spline)
* Dacite = fined grained mafic igneous (basalt-like material); Basalt = med-coarse grained mafic igneous.								

APPENDIX III - RADIOCARBON SAMPLE DATA & ANALYSIS RESULTS

Beta Sample No.	Field Collection Sample No.	Site Name	DBS (cm)	Feature Type	Sample Context	Association	Conv BP	Meas. Radio-carb. Age (BP)	Cal AD (2 sigma 95% prob.)	Cal BP (2 sigma 95% prob.)	Notes
Beta-210181	DhRI-T1-F5-SP1-CS-1	John Mack Slough	14	Housepit	Hearth / House Living Surface	House Floor Zone	300+/- 40	290+/- 40	1480-1660 AD	470-290 BP	Single occupation; shallow housepit floor - well defined stratum; high water table
	DhRI-15-F1-SP6-CS-1	Qithyil Island	17-18	Housepit	House Living Surface	House Floor Zone					Single occupation; thin housepit floor - well define stratum; high water table
	DhRI-15-F2-SP5-CS-1	Qithyil Island	25	Housepit	House Occupation Zone	House Occupation Zone					Single occupation; apparent occupation 'zone' - not well defined stratum; high water table
	DhRI-15-F2-SP5-CS-2	Qithyil Island	77	Housepit	Probably non-cultural	n/a					probable natural origin - embedded in basal sands
Beta-217440	DhRI-15-F4-SP2-CS-1	Qithyil Island	27-28	Housepit	House Living Surface	House Floor Zone	460+/- 40	450+/- 40	1410-1480 AD	540-470 BP	Single occupation; thin housepit floor - well defined stratum; high water table
	DhRI-15-F5-SP4-CS-1	Qithyil Island	39.5-46.5	Housepit	House Occupation Zone	House Occupation Zone					Single occupation; apparent occupation 'zone' - 'broad' stratum; shallow - 'in-filled' depression; high water table

	DhRI-15-F6-CS-1	Qithyil Island	58	Plank-house	House Living Surface	House Floor Zone III (terminal)					Erosional exposure; stratified deposit; upper house floor layer - thin & well-defined stratum
	DhRI-15-F6-CS-2	Qithyil Island	68	Plank-house	House Living Surface	House Floor Zone II (intermediate)					Erosional exposure; stratified deposit; upper house floor layer - thin & well-defined stratum
Beta-217441	DhRI-15-F6-CS-3	Qithyil Island	78	Plank-house	House Living Surface	House Floor Zone I (initial)	720+/- 40	720+/- 40	1250-1300 AD	700-640 BP	Erosional exposure; stratified deposit; upper house floor layer - thin & well-defined stratum
	DgRI-17-F8-AT2-CS-1	Th'ewa:li	20	Housepit	Midden	House Occupation Midden; Internal					Colume sample; unstratified midden matrix; mid-upper house midden deposit; <u>Late Period</u> point associated w/ 0-30 cmBS
	DgRI-17-F8-AT2-CS-2	Th'ewa:li	30	Housepit	Midden	House Occupation Midden; Internal					Colume sample; unstratified midden matrix; mid-lower house middnen deposits; <u>Late Period</u> point (as as above) associated w/ 0-30 cmBS
	DgRI-17-F8-AT2-CS-3	Th'ewa:li	40	Housepit	Midden	House Occupation Midden; Internal					Colume sample; unstratified midden matrix; base of house midden deposits (?)
Beta-210180	DgRI-17-F8-AT2-CS-4	Th'ewa:li	48	Housepit	Midden	House Occupation Midden; Internal; Basal	1070+/- 40	1060+/- 40	890-1020 AD	1060-930 BP	Colume sample; unstratified midden matrix; base of cultural deposits

	DgRI-17-F25-CS-1	Th'ewa:li	n/a	Burial Mound	Construction Fill / Charcoal Lens	Burial Mound					Assoc. w/ mound base; see Burial Mound Profile
	DgRI-17-F25-CS-2	Th'ewa:li	n/a	Burial Mound	Construction Fill	Burial Mound					From lens above CS1; see Burial Mound Profile
	DgRI-17-F20-AT5-CS-1	Th'ewa:li	10	Platform	Midden	Platform Midden; upper					Colum sample; unstratified midden matrix; Plankhouse area?
	DgRI-17-F20-AT5-CS-2	Th'ewa:li	20	Platform	Midden	Platform Midden; middle					Colum sample; unstratified midden matrix; Plankhouse area?
	DgRI-17-F20-AT5-CS-3	Th'ewa:li	28	Platform	Midden	Platform Midden; basal					Colum sample; unstratified midden matrix; Plankhouse area?
	DgRI-17-ST1-CS-1	Th'ewa:li	46	n/a	Midden external to F8	External Midden					ST1 located on outside edge of F8; no feature number assigned; Layer @ 49-54 cmBS
	DgRI-17-ST1-CS-2	Th'ewa:li	46-51	n/a	Midden external to F8	External Midden					ST1 located on outside edge of F8; no feature number assigned; Layer @ 49-54 cmBS
	DgRI-17-ST1-CS-3	Th'ewa:li	48	n/a	Midden external to F8	External Midden					Best sample from ST1; ST1 located on outside edge of F8; no feature number assigned; Layer @ 49-54 cmBS

	DgRI-17-ST1-CS-4	Th'ewa:li	50	n/a	Midden external to F8	External Midden					ST1 located on outside edge of F8; no feature number assigned; Layer @ 49-54 cmBS
	DgRI-17-ST2-CS-1	Th'ewa:li	20	n/a	Midden b/w F2 & F3	External Midden					ST2 located on 'bench' separating F2 and F3; Column sample; unstratified midden matrix
	DgRI-17-ST2-CS-1	Th'ewa:li	40	n/a	Midden b/w F2 & F3	External Midden					ST2 located on 'bench' separating F2 and F3; Column sample; unstratified midden matrix
	DgRI-17-ST2-CS-1	Th'ewa:li	60	n/a	Midden b/w F2 & F3	External Midden					ST2 located on 'bench' separating F2 and F3; Column sample; unstratified midden matrix
	DgRI-17-F2-AT4-CS-1	Th'ewa:li	36	Housepit	Midden	House Occupation Midden; Internal					unstratified midden matrix; located at base of dense FCR-filled matrix (house midden?)
	DgRI-17-F2-AT4-CS-2	Th'ewa:li	19	Housepit	Midden	House Occupation Midden; Internal					Colume sample; unstratified midden matrix ; located at top of dense FCR-filled matrix (house midden?)
	DgRI-17-F2-AT4-CS-3	Th'ewa:li	36	Housepit	Midden	House Occupation Midden; Internal					Colume sample; unstratified midden matrix ; located at base of dense FCR-filled matrix (house midden?)

Beta-210179	DgRI-17-F2-AT4-CS-4	Th'ewa:li	60	Housepit	Midden	House Occupation Midden; Internal	1170+/- 40	1160+/- 40	770-980 AD	1180-970 BP	Colume sample; unstratified midden matrix ; associated with basal cultural deposits
	DiRi-48-F3-AT1-CS-2	Eyxel	23	Housepit	Roof-Fall? / House Living Surface	House Floor Zone II / Roof Fall Zone? (terminal)					NOTE: DiRi-48 carbon samples numbered per site v. per Test / Feature (6 samples taken from site)
	DiRi-48-F3-AT1-CS-1	Eyxel	45	Housepit	Hearth / House Living Surface	House Floor Zone (initial)					NOTE: DiRi-48 carbon samples numbered per site v. per Test / Feature (6 samples taken from site)
	DiRi-48-F2-SP1-CS-3	Eyxel	44	Housepit	Hearth / House Living Surface	House Floor Zone II (terminal)					NOTE: DiRi-48 carbon samples numbered per site v. per Test / Feature (6 samples taken from site)
	DiRi-48-F2-SP1-CS-4	Eyxel	46- 47	Housepit	Hearth / House Living Surface	House Floor Zone II					NOTE: DiRi-48 carbon samples numbered per site v. per Test / Feature (6 samples taken from site)
Beta-210178	DiRi-48-F2-SP1-CS-5	Eyxel	52	Housepit	Hearth / House Living Surface	House Floor Zone I (initial)	510+/- 40	510+/- 40	1400- 1450 AD	550-500 BP	NOTE: DiRi-48 carbon samples numbered per site v. per Test / Feature (6 samples taken from site)
Beta-210177	DiRi-48-F1-AT2-CS-6	Eyxel	21.5	Housepit	Hearth / House Living Surface	House Floor Zone	110+/- 40	150+/- 40	1670- 1780 / 1800- 1950 AD	280-170 / 150-0 BP	NOTE: DiRi-48 carbon samples numbered per site v. per Test / Feature (6 samples taken from site)

	DjRi-14-F1-ST9-CS-1	Xelhalh	13-15	Housepit	House Living Surface	House Floor Zone					Early Contact Period - based on associated artifacts; DO NOT PROCESS C14 Sample
	DjRi-14-F28-ST2-CS-1	Xelhalh	16-17	Housepit	Roof-Fall? / House Living Surface	House Floor Zone II / Roof Fall Zone? (terminal)					
Beta-210176	DjRi-14-F28-ST2-CS-2	Xelhalh	30-31.5	Housepit	House Living Surface	House Floor Zone I (initial)	270+/- 40	270+/- 40	1510-1600 / 1620-1670 / 1780-1800 AD	440-350 / 330-280 / 170-150 BP	
	DjRi-14-F25-AT1-CS-1	Xelhalh	19	Housepit	House Living Surface	House Floor Zone II (terminal)					
	DjRi-14-F25-AT1-CS-2	Xelhalh	35-36	Housepit	Hearth / House Living Surface	House Floor Zone I (initial)					
	DjRi-14-F23-AT2-CS-1	Xelhalh	21-22	Housepit	Roof Fall Zone / House Midden	House Midden (terminal)					
Beta-210175	DjRi-14-F23-AT2-CS-2	Xelhalh	38	Housepit	Hearth / House Living Surface	House Floor Zone I (initial)	250+/- 40	250+/- 40	1520-1580 / 1630-1680 / 1770-1800 / 1940-1950 AD	430-380 / 320-270 / 180-150 BP	

	DjRi-14-F27-SP1-CS-1	Xelhalh	30.5-31.5	Housepit	Hearth / House Living Surface	House Floor Zone I					
	DjRi-14-F26-SP5-CS-1	Xelhalh	21.5-22.5	Housepit	Hearth / House Living Surface	House Floor Zone II (terminal)					
	DjRi-14-F26-SP5-CS-2	Xelhalh	33-33.7	Housepit	Hearth / House Living Surface	House Floor Zone I (initial)					
	DjRi-14-F32-ST1-CS-1	Xelhalh	14	Housepit / Platform	?	?					CS is probably from a pre-housepit/platform occupation midden
	DjRi-14-F17-ST4-CS-1	Xelhalh	12-13.5	Housepit	Hearth / House Living Surface	House Floor Zone I					
	DjRi-14-F15-ST5-CS-2	Xelhalh	15-16	Housepit	Hearth / Roof-Fall? / House Living Surface	House Floor Zone II / Roof Fall Zone? (terminal)					2 cm-wide slanting lense
	DjRi-14-F15-ST5-CS-3	Xelhalh	18.5-21	Housepit	Hearth / House Living Surface	House Floor Zone I (mid)					1 cm-wide slanting lense
	DjRi-14-F15-ST5-CS-1	Xelhalh	19.5-20	Housepit	Hearth / House Living Surface	House Floor Zone I (mid)					Sample taken from charcoal concentration on unit floor (plan); coincident with CS-3

	DjRi-14-F13-ST6-CS-1	Xelhalh	13.5	Housepit	Hearth / Roof-Fall? / House Living Surface	House Floor Zone III / Roof Fall Zone? (terminal)					
	DjRi-14-F13-ST6-CS-2	Xelhalh	16	Housepit	Hearth / House Living Surface	House Floor Zone II (intermediate)					
Beta-210174	DjRi-14-F13-ST6-CS-3	Xelhalh	23-24	Housepit	Hearth / House Living Surface	House Floor Zone I (initial)	260+/-40	270+/-40	1520-1590 / 1620-1670 / 1770-1800 / 1940-1950 AD	430-360 / 330-280 / 180-150 / 10-0 BP	
	DiRj-30-F9-AT2-CS-4	Shxw'ow'hamel	33	Housepit	House Midden / Roof Fall ?	House Occupation/Roof Fall Zone? (terminal)					Sloping deposit
	DiRj-30-F9-AT2-CS-1	Shxw'ow'hamel	47.2	Housepit	House Midden	House Occupation Zone (terminal occupation)					
	DiRj-30-F9-AT2-CS-2	Shxw'ow'hamel	54.2	Housepit	House Midden	House Floor Zone (intermediate)					
Beta-210169	DiRj-30-F9-AT2-CS-3	Shxw'ow'hamel	59.1	Housepit	Hearth / House Living Surface	House Floor Zone I (initial)	2200+/-40	2160+/-40	380-160 BC	2330-2120 BP	

Beta-210172	DiRj-30-F18-ST4-CS-5	Shxw'ow'hamel	17-18	Housepit	Disturbed modern sediments	Disturbed sediments capping house deposits	modern	modern	modern	modern	Possible roof - terminal floor transition (floor capped by roof) = disturbed material per C14 results (!!)
	DiRj-30-F18-ST4-CS-1	Shxw'ow'hamel	23-25	Housepit	House Floor	House Floor Zone III (terminal)					terminal floor - roof fall zone; top of floor / capping of floor
	DiRj-30-F18-ST4-CS-2	Shxw'ow'hamel	29-31	Housepit	Hearth / House Living Surface	House Floor Zone II (intermediate)					
	DiRj-30-F18-ST4-CS-3	Shxw'ow'hamel	35.5-38.5	Housepit	Hearth / House Living Surface	House Floor Zone I (initial - upper)					Upper portion of initial floor zone / hearth - same layer as CS-4
Beta-210173	DiRj-30-F18-ST4-CS-4	Shxw'ow'hamel	38-40	Housepit	Hearth / House Living Surface	House Floor Zone I (initial - lower)	2040+/-40	2050+/-40	160-50 AD	2120-1900 BP	Lower portion of initial floor zone / hearth - same layer as CS-3
	DiRj-30-F6-SP4-CS-1	Shxw'ow'hamel	60-61	Housepit	Hearth / House Living Surface	House Floor Zone II (terminal)					
	DiRj-30-F6-SP4-CS-2	Shxw'ow'hamel	67-68	Housepit	Hearth / House Living Surface	House Floor Zone II (intermediate)					
	DiRj-30-F6-SP4-CS-3	Shxw'ow'hamel	70-71	Housepit	Hearth / House Living Surface	House Floor Zone I (initial)					

	DiRj-30-F6-AT1-CS-1	Shxw'ow'hamel	46	Housepit	Roof Fall Zone	Roof Fall Zone III (terminal)					
	DiRj-30-F14-SP1-CS-1	Shxw'ow'hamel	42-44	Housepit	Hearth / House Living Surface	House Floor Zone II (terminal)					
	DiRj-30-F14-SP1-CS-2	Shxw'ow'hamel	57-59	Housepit	Hearth / House Living Surface	House Floor Zone I (initial)					
	DiRj-30-F14-SP1-CS-3	Shxw'ow'hamel	70	Housepit	Initial occupation / possible pre-housepit occupation	Initial occupation / possible pre-housepit occupation (?)					Associated with possible pre-housepit deposit
	DiRj-30-SP3-CS-1	Shxw'ow'hamel	30	n/a	Bench' area b/w F7 and F9	Midden b/w F7 and F9					Sample taken from probe of 'bench' area between F9 and F7
	DiRj-30-SP2-CS-1	Shxw'ow'hamel	32-33	Bench?	Bench' area outside F9	Midden outside F9 / Bench Surface ?					
Beta-210170	DiRj-30-F4-ST3-CS-1	Shxw'ow'hamel	33-34	Housepit	Hearth / House Living Surface	House Floor Zone II (terminal)	2020+/- 40	1980+/- 40	110 BC - 70 AD	2060-1880 BP	
	DiRj-30-F4-ST3-CS-2	Shxw'ow'hamel	38-39	Housepit	Roof Fall Zone	House Floor Zone I (initial)					
	DiRj-30-F13-ST1-CS-1	Shxw'ow'hamel	24.5	Housepit	Post-housepit midden (?)	Post-housepit midden (?)					

	DiRj-30-F13-ST1-CS-2	Shxw'ow'hamel	33-39	Housepit	Roof Fall Zone	Roof Fall Zone (terminal)					
	DiRj-30-F13-ST1-CS-3	Shxw'ow'hamel	52-53	Housepit	Hearth / House Living Surface	House Floor Zone II (terminal - upper)					
	DiRj-30-F13-ST1-CS-4	Shxw'ow'hamel	53-54	Housepit	Hearth / House Living Surface	House Floor Zone II (terminal)					
Beta-210171	DiRj-30-F13-ST1-CS-5	Shxw'ow'hamel	57-58	Housepit	Hearth / House Living Surface	House Floor Zone I (initial)	1490+/-40	1520+/-40	460-480 / 520-650 AD	1480-1470 / 1430-1300 BP	
	DiRj-30-F12-ST2-CS-1	Shxw'ow'hamel	20-22	Housepit	Roof Fall Zone	Roof Fall Zone III (terminal)					Associated with ash pocket at upper margin of Roof Fall zone
	DiRj-30-F12-ST2-CS-2	Shxw'ow'hamel	29-30	Housepit	Roof Fall Zone	Roof Fall Zone III (terminal)					Associated with silty ash layer - Roof Fall zone; underlying ash pocket; same stratum as DjRi-30-F12-ST2-CS-3
	DiRj-30-F12-ST2-CS-3	Shxw'ow'hamel	26-28	Housepit	Roof Fall Zone	Roof Fall Zone III (terminal)					Associated with silty ash layer - Roof Fall zone; same stratum as DjRi-30-F12-ST2-CS-2
Beta-217438	DiRj-30-F12-ST2-CS-4	Shxw'ow'hamel	44-45	Housepit	Hearth / House Living Surface	House Floor Zone III (terminal)	2050+/-40	2050+/-40	170 BC - 40 AD	2120-1900 BP	

	DiRj-30-F12-ST2-CS-5	Shxw'ow'hamel	48-49	Housepit	Hearth / House Living Surface	House Floor Zone II (intermediate)					
Beta-217439	DiRj-30-F12-ST2-CS-6	Shxw'ow'hamel	53-54	Housepit	Hearth / House Living Surface	House Floor Zone I (initial)	2110+/-40	2110+/-40	340-320 BC / 210-40 BC	2290-2270 BP / 2160-1990 BP	
	<u>WOOD SPECIES (WS) ID</u>										
	DgRl-17-F25-WS-1	Th'ewa:li	n/a	Burial Mound	Construction Fill / Charcoal Lens	Burial Mound					Assoc. w/ CS2; see Burial Mound Profile
	DgRl-17-ST1-WS-1	Th'ewa:li	54	n/a	Midden external to F8	External Midden					ST1 located on outside edge of F8; no feature number assigned; Layer @ 49-54 cmBS
	DjRi-14-F28-ST2-WS-1	Xelhalh	16-17	Housepit	Roof-Fall? / House Living Surface	House Floor Zone II / Roof Fall Zone? (terminal)					Wood Species ID sample associated with DjRi-14-F28-ST2-CS-1

	DjRi-14-F28-ST2-WS-2	Xelhalh	30-31.5	Housepit	House Living Surface	House Floor Zone I (initial); added to F28-CS-2 due to small sample size					Wood Species ID sample associated with DjRi-14-F28-ST2-CS-2
	DjRi-14-F25-AT1-WS-1	Xelhalh	32	Housepit	Hearth / House Living Surface	House Floor Zone I (initial)					Wood Species ID sample associated with DjRi-14-F25-AT1-CS-2
	DjRi-14-F23-AT2-WS-1	Xelhalh	38	Housepit	Hearth / House Living Surface	House Floor Zone I (initial)					Wood Species ID sample associated with DjRi-14-F23-AT2-CS-2
	DjRi-14-F27-SP1-WS-1	Xelhalh	30.5-31.5	Housepit	Hearth / House Living Surface	House Floor Zone I					Wood Species ID sample associated with DjRi-14-F27-SP1-CS-1
	DjRi-14-F17-ST4-WS-1	Xelhalh	12-13.5	Housepit	Hearth / House Living Surface	House Floor Zone I					Wood Species ID sample associated with DjRi-14-F17-ST4-CS-1
	DjRi-14-F15-ST5-WS-2	Xelhalh	15-16	Housepit	Hearth / Roof-Fall? / House Living Surface	House Floor Zone III / Roof Fall Zone? (terminal)					Wood Species ID sample associated with DjRi-14-F15-ST5-CS-2
	DjRi-14-F15-ST5-WS-3	Xelhalh	18.5-21	Housepit	Hearth / House Living Surface	House Floor Zone II (intermediate)					Wood Species ID sample associated with DjRi-14-F15-ST5-CS-3
	DjRi-14-F15-ST5-WS-1	Xelhalh	19.5-20	Housepit	Hearth / House Living Surface	House Floor Zone I (initial)					Wood Species ID sample associated with DjRi-14-F15-ST5-CS-1

	DjRi-14-F13-ST6-WS-1	Xelhalh	13.5	Housepit	Hearth / Roof-Fall? / House Living Surface	House Floor Zone III / Roof Fall Zone? (terminal)					Wood Species ID sample associated with DjRi-14-F13-ST6-CS-1
	DjRi-14-F13-ST6-WS-2	Xelhalh	16	Housepit	Hearth / House Living Surface	House Floor Zone II (intermediate)					Wood Species ID sample associated with DjRi-14-F13-ST6-CS-2
	DiRj-30-F13-WS-1	Shxw'ow'hamel	52	Housepit	Hearth / House Living Surface	House Floor Zone II (terminal - upper)					Wood Species ID sample associated with DjRi-30-F13-ST1-CS-3
	DiRj-30-F12-WS-1	Shxw'ow'hamel	44-45	Housepit	Hearth / House Living Surface	House Floor Zone III (terminal)					Wood Species ID sample associated with DjRi-30-F12-ST2-CS-4
	DiRj-30-F12-WS-2	Shxw'ow'hamel	53-54	Housepit	Hearth / House Living Surface	House Floor Zone I (initial)					Wood Species ID sample associated with DjRi-30-F12-ST2-CS-6
	<u>SOIL (SS)</u>	<u>& BOT. ID</u>									
	DiRj-30-F12-ST2-SS-1	Shxw'ow'hamel	30	Housepit	Roof Fall Zone	Roof Fall Zone III (terminal); small sample					Soil Sample associated with silty ash layer - Roof Fall zone; underlying ash pocket; same stratum as DjRi-30-F12-ST2-CS-2 and C3

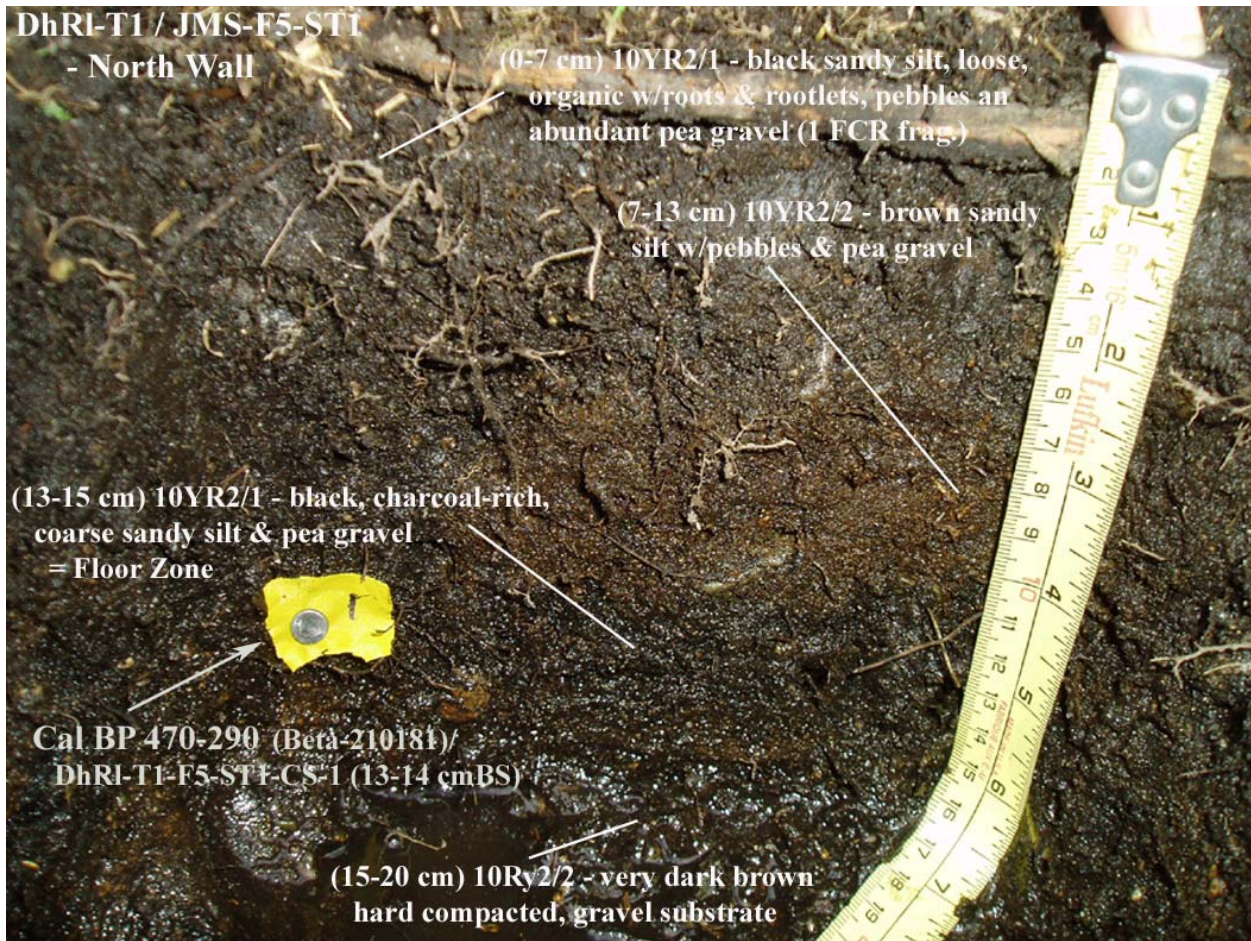
	DiRj-30- F13-ST1- SS-1	Shxw'ow'hamel	52- 54	Housepit	Hearth / House Living Surface	House Floor Zone II (terminal); good size sample					
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APPENDIX IV - TEST UNIT PROFILES - W/ RADIOCARBON SAMPLE LOCATIONS & RESULTS

- DhRI-T1 - 'John Mack Slough'
- DhRI-15 - Qithyil Island
 - DgRI-17 - Th'ewá:li
 - DiRi-48 - Eyxel
- DiRj-30 - Shxw'ow'hamel
 - DiRj-14 - Xelhálh

'John Mack Slough' (DhRI-T1) - Test Unit Profiles

DhRI-T1-F5-ST1

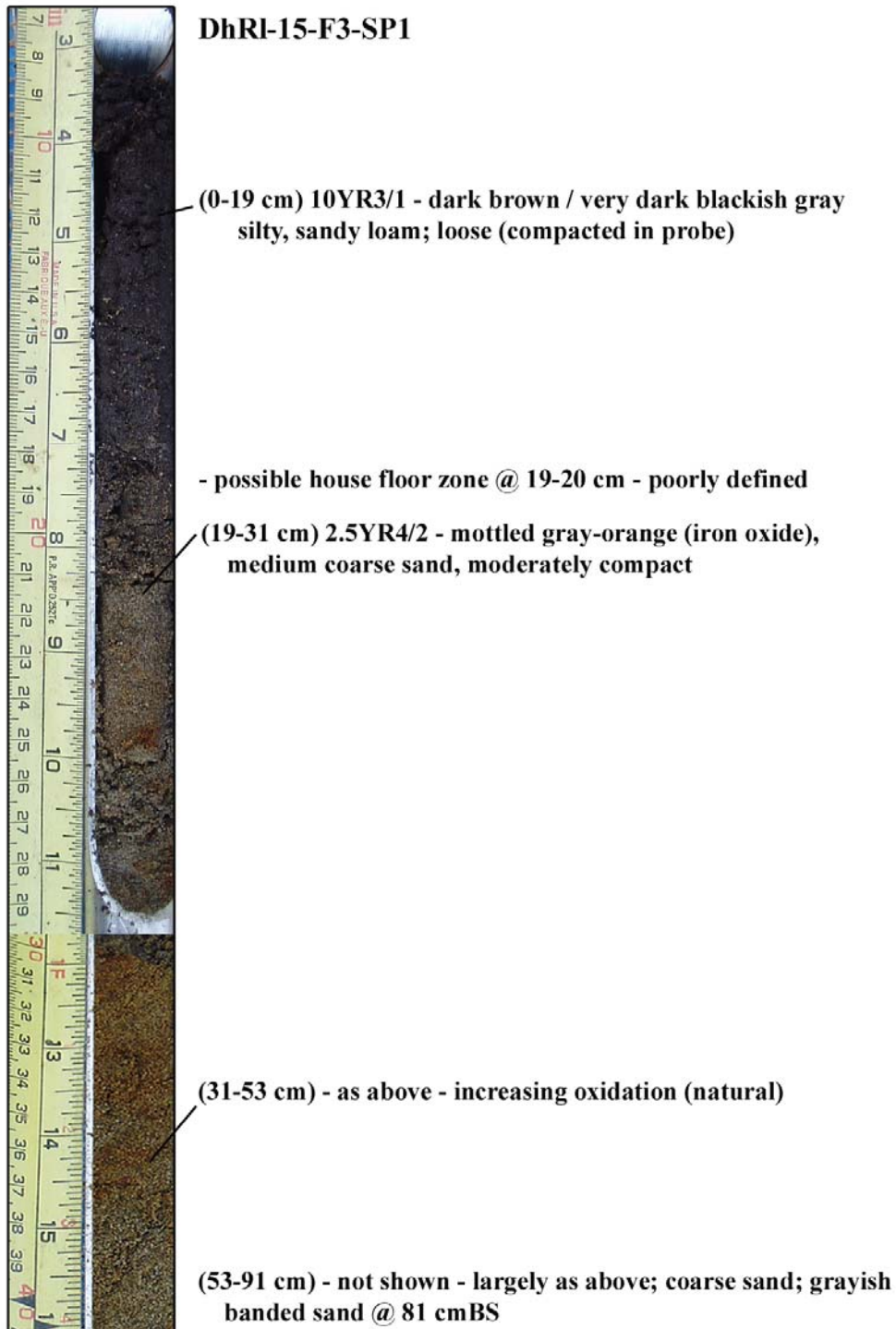


Note: DhRI-T2-F2-ST2 Profile and Basal Substrate measurements for all housepit features

High ground water levels at the site limited excavation to F5 and F2, with visible water in-filling the remaining features. Excavations were attempted but significantly hampered within F2 with profile visibility blocked by the water table beyond 5-8 cmBS. The visible portion of the test unit, and sediments noted below that point, correspond to the description of ST1 (above). Notably, the depth of the very hard compact gravel substrate was confirmed at about 15 cmBS by probing (using a fine metal skewer) F2. Similar probing of the other housepit features at John Mack Slough revealed very similar depths of the gravel substrate (at housepit center) ranging between 15-17 cmBS. The common depth of the basal gravel substrate throughout all the housepit features at this site strongly suggests their common age, as being built at roughly the same time and with only shallow cultural deposits and limited house floor strata. A 'common age' equivalent to the radiocarbon age established for F5 -- Cal BP 470-290 -- is suggested for all the housepit features at this site.

Qithyil Island (DhRI-15) - Test Unit Profiles

DhRI-15-F3-SP1



Note: *DhRI-15-F1-SP3* - essentially the same as described above; w/possible Floor Zone at the transition b/w the loam and sand layers; not well defined.



DhRI-15-F4-SP2

**(0-25 cm) 10YR3/1 - dark brown, sandy loam, loose
(compacted by probe)**

**(25-27 cm) 2.5YR4/1 - dark gray, silty loam
w/charcoal flecks**

**(27-28 cm) 10YR2/1 - black, charcoal-rich sediment
= Floor stratum**

- Cal BP 540-470 (Beta-217440)/DhRI-15-F4-SP2-CS-1

**(28-33+ cm) 2.5YR4/2 - yellow-grayish, coarse sand
- b/w 33-43 cm - becomes very compact & highly oxidized (rust
orange); coarser - progress impeded by extremely compact
basal sands**



DhRI-15-F5-SP4

**(0-25 cm) 10YR2/2 - dark brown clayey silt, loose
- compacted by probe**

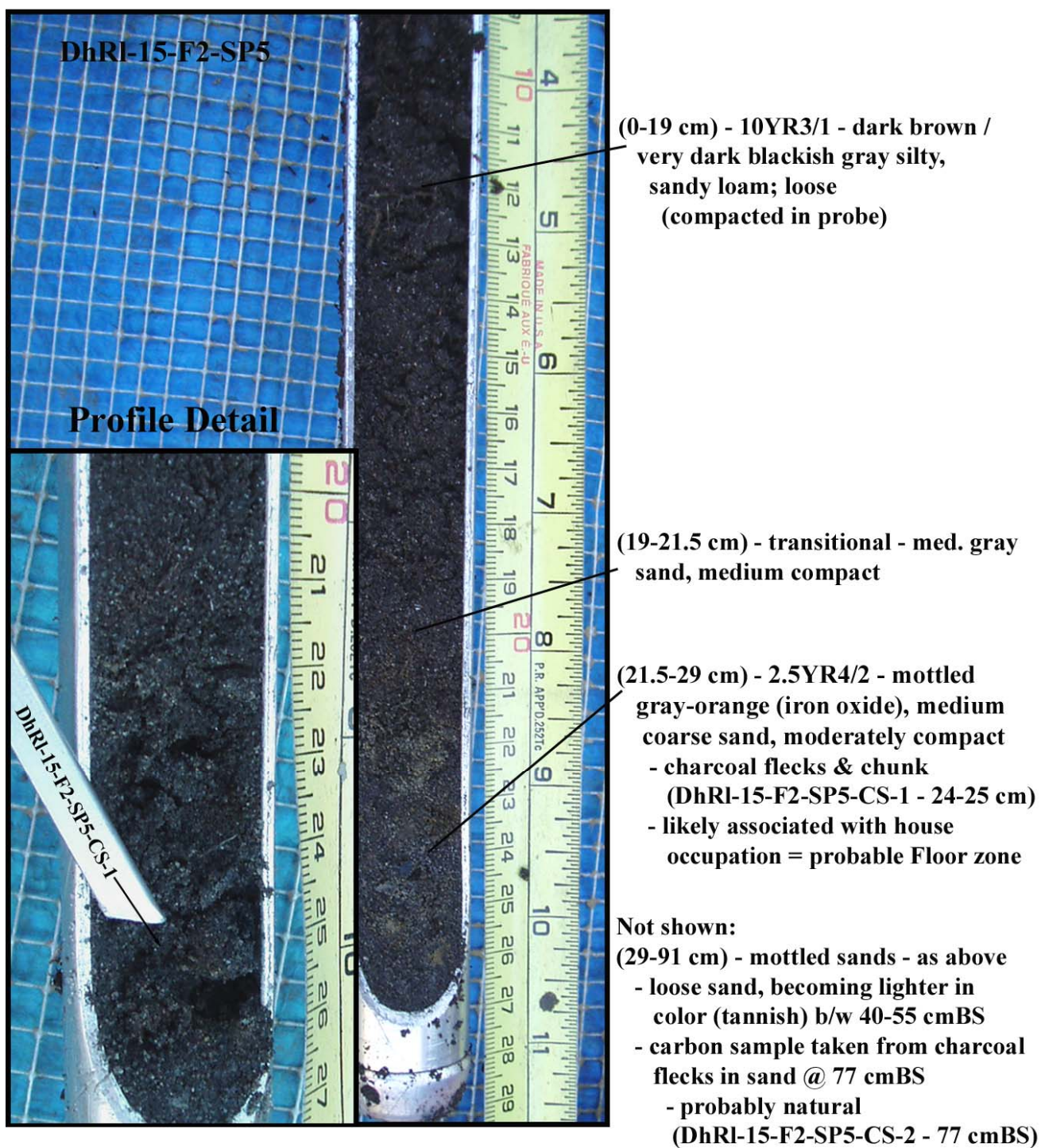
**(25-28 cm) 10YR2/2 - med. brown orange mottled sandy silt,
medium compact**

**(28-39.5 cm) 2.5YR7/1 - gray, slightly orange mottled clay, greasy,
compact**

**(39.5-46.5 cm) 10YR4/3 - dark brown/orange/blackish mottled
sandy silt (becoming sandy silt), organic mix = Floor zone
- possible calcined bone**

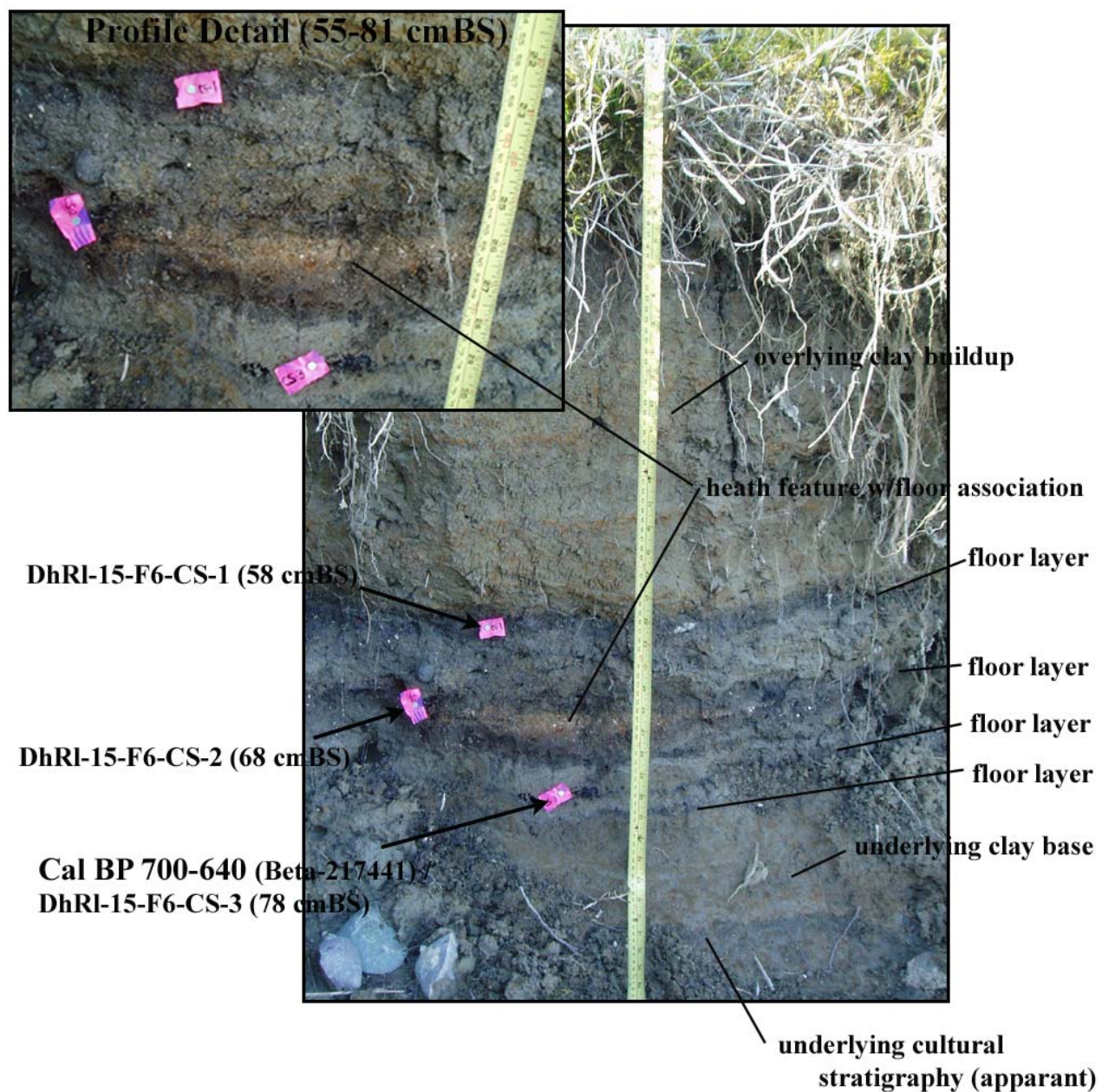
-- DhRI-15-F5-SP4-CS-1 (42-43 cm)

**(46.5-63 cm) 10YR7/1 - gray/orange/blackish mottled,
medium coarse sand, medium compact = basal deposit (as shown)
- hit very compact sand layer at 63 cm**



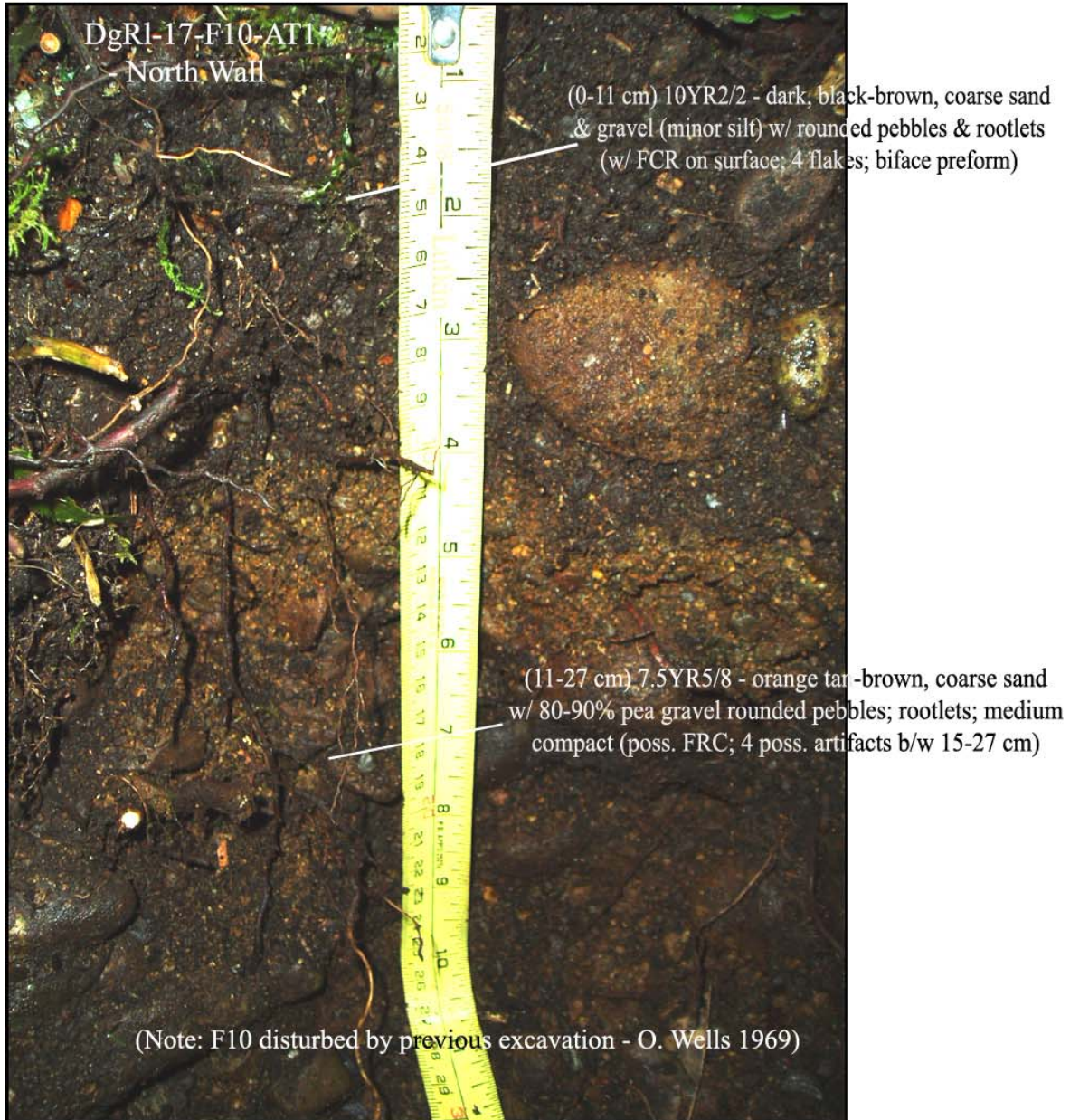
DhRI-15-F6 - Plankhouse feature riverbank exposure - profile

DhRI-15-F6 - Plankhouse feature profile exposure (riverbank)



Th'ewá:lí (DgRI-17) - Test Unit Profiles

DgRI-17-F10-AT1



DgRI-17-F8-AT2

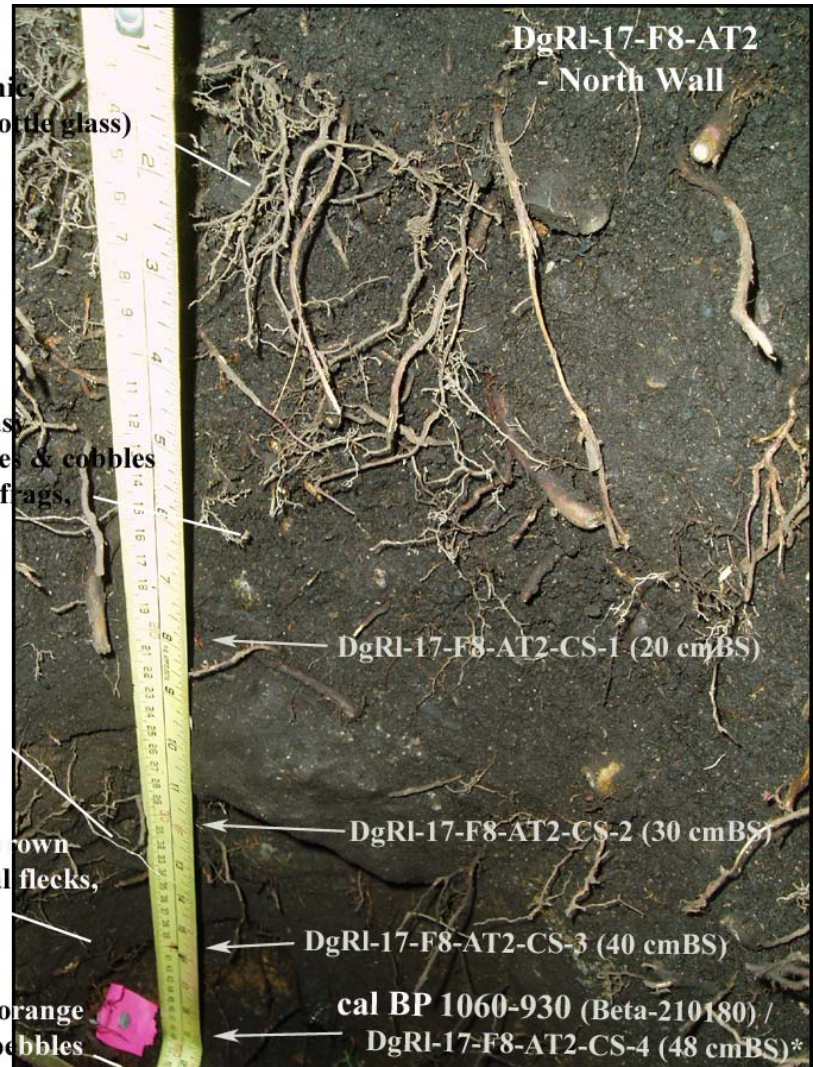
(0-6.5 cm) 7.5YR2/0 - humic/organic
very loose w/rootlets (w/ green bottle glass)

(6.5-33 cm) 7.5YR2/0 - black 'greasy'
organic silt w/gravel, large pebbles & cobbles
(w/ biface point, abundant FRC frags,
flakes, bone frag,)

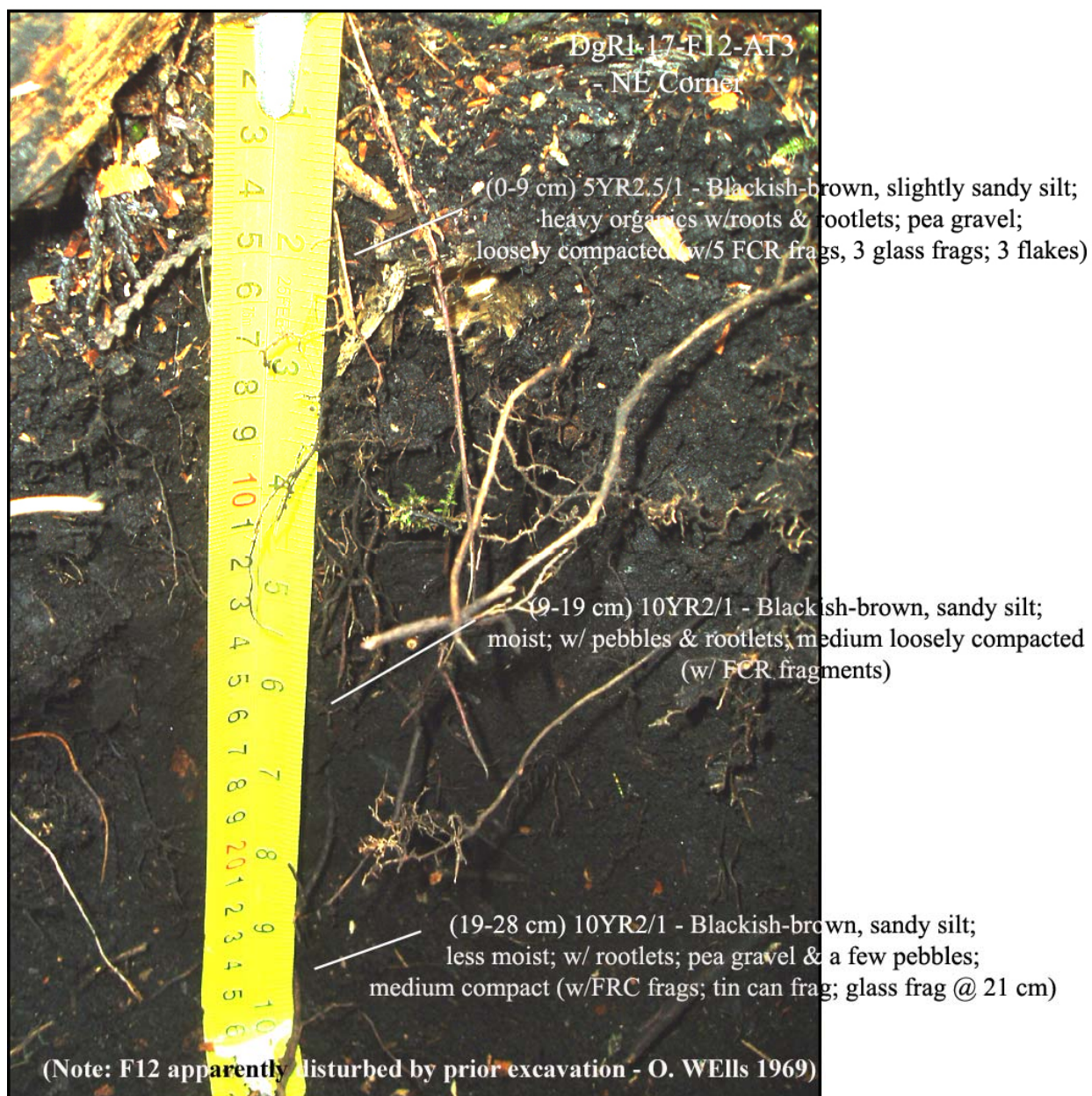
(33-39.5 cm) 7.5YR2/0 - as above;
increasing sand content
(decreasing FCR)

(39.5-48 cm) 5YR2.5/1 - blackish brown
silty sand w/pea gravel (charcoal flecks,
few FCR) = Occupation Zone;
ends abruptly at 48 cm

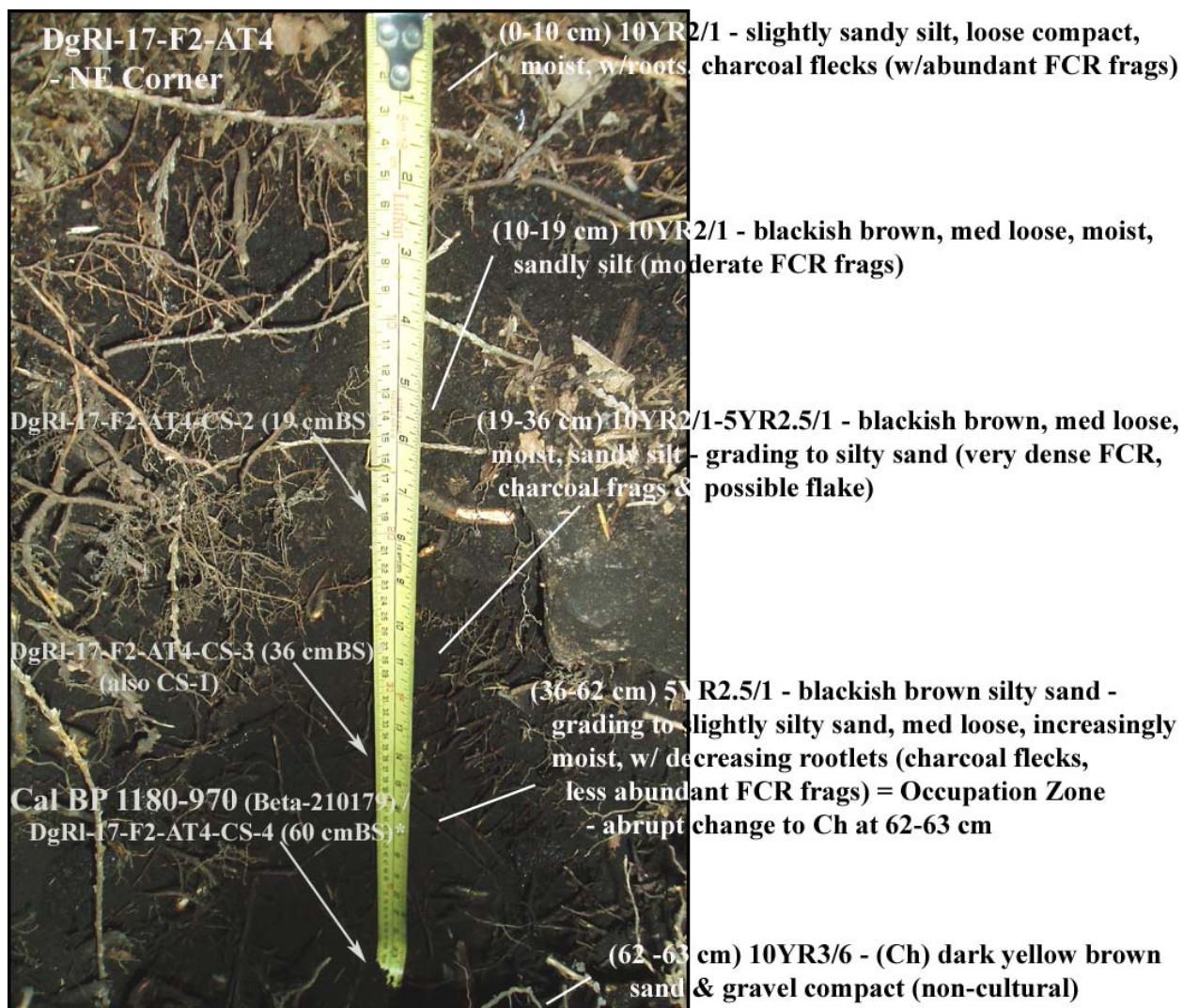
(48-52 cm) 7.5YR5/6 - (Ch) rusty, orange
brown coarse sand, pea gravel, pebbles



DgRI-17-F12-AT3



DgRI-17-F2-AT4

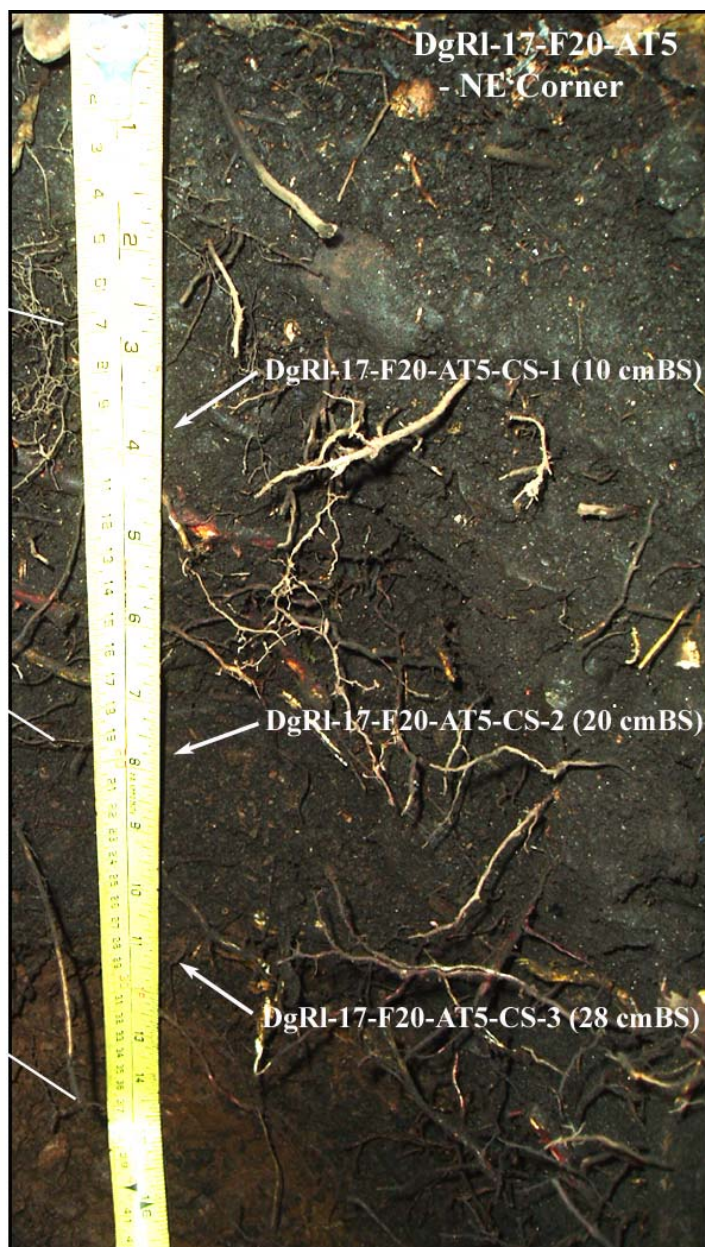


DgRI-17-F20-AT5

**(0-10 cm) 5YR2.5/1 - dark brown silt,
organic material, pea gravel & roots
(moderate FRC frags.)**

**(10-28 cm) 5YR2.5/1 - dark brown silt,
moist (plastic) - (abundant FCR)**

**(28-33 cm) 2.5YR2.5/4 - dark reddish
brown/orange sand w/charcoal flecks
(no FCR) - basal sediment**



DgRI-17-F17-ST1

(0-20 cm) 5YR2.5/1 - blackish brown, slightly sandy silt, organics & roots/rootlets, large pebbles & gravel, loose material (moderate-sparse FCR)

(20-26 cm) 5YR2.5/1 - blackish brown, very gravelly silt, compact w/ few roots or pebbles (moderate-sparse FCR)

(26-41 cm) 5YR2.5/1-10YR2/2 - compact pebble-filled layer with sandy matrix mottled (moderate-sparse FCR)

(41-49 cm) 7.5YR3/4 - compact, brown-orange sandy matrix w/pebbles

(49-54 cm) 10YR3/4 - compact, charcoal-rich very pebble-filled layer, sandy

(54-57 cm) 5YR3/3 - dark yellow-brown sandy matrix, w/angular rocks (sparse FCR)



DgRI-17-ST2



**DgRI-17-ST2
- NE Wall**

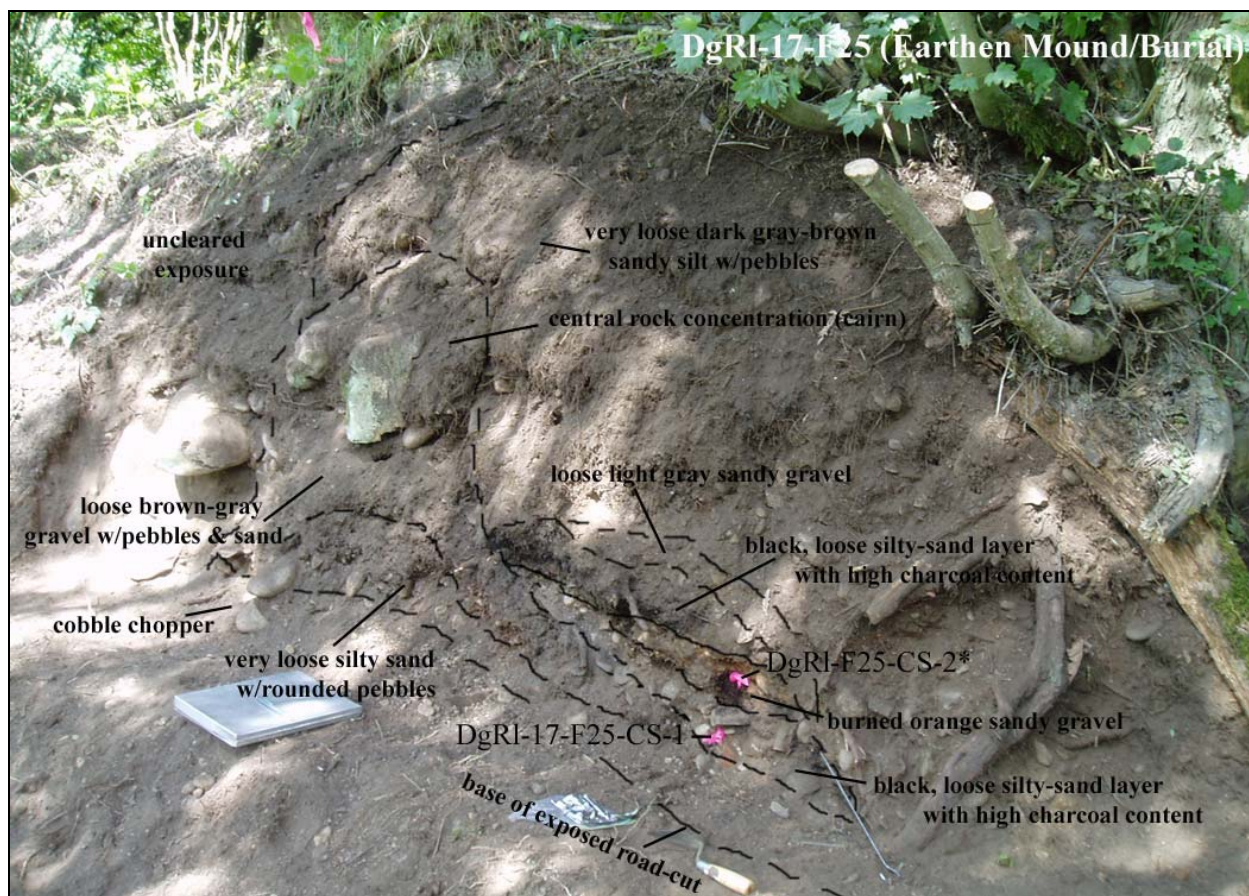
(0-10 cm) 7.5 YR3/2 - dark brown organic sandy silt, w/pea gravel & roots/rootlets, charcoal flecks (dense FCR frags)

(10-48 cm) 5YR2.5/1 - dark brown slightly silty sand, very loose w/ gravel & roots, chracoal flecks (dense FCR frags, 1 flake)

(48-64 cm) 5YR2.5/1 - dark brown very loose sand, some roots, w/ flat & angular rocks near base (dense FCR frags) - progress blocked by large cobble

**Carbon Sample 'Column':
DgRI-17-ST2- CS-1 (20 cm)
DgRI-17-ST2-CS-2 (40 cm)
DgRI-17-ST2-CS-3 (60 cm)**

DgRI-17-F25 - Earthen Burial Mound Roadcut Exposure



Eyxe (DiRi-48) - Test Unit Profiles

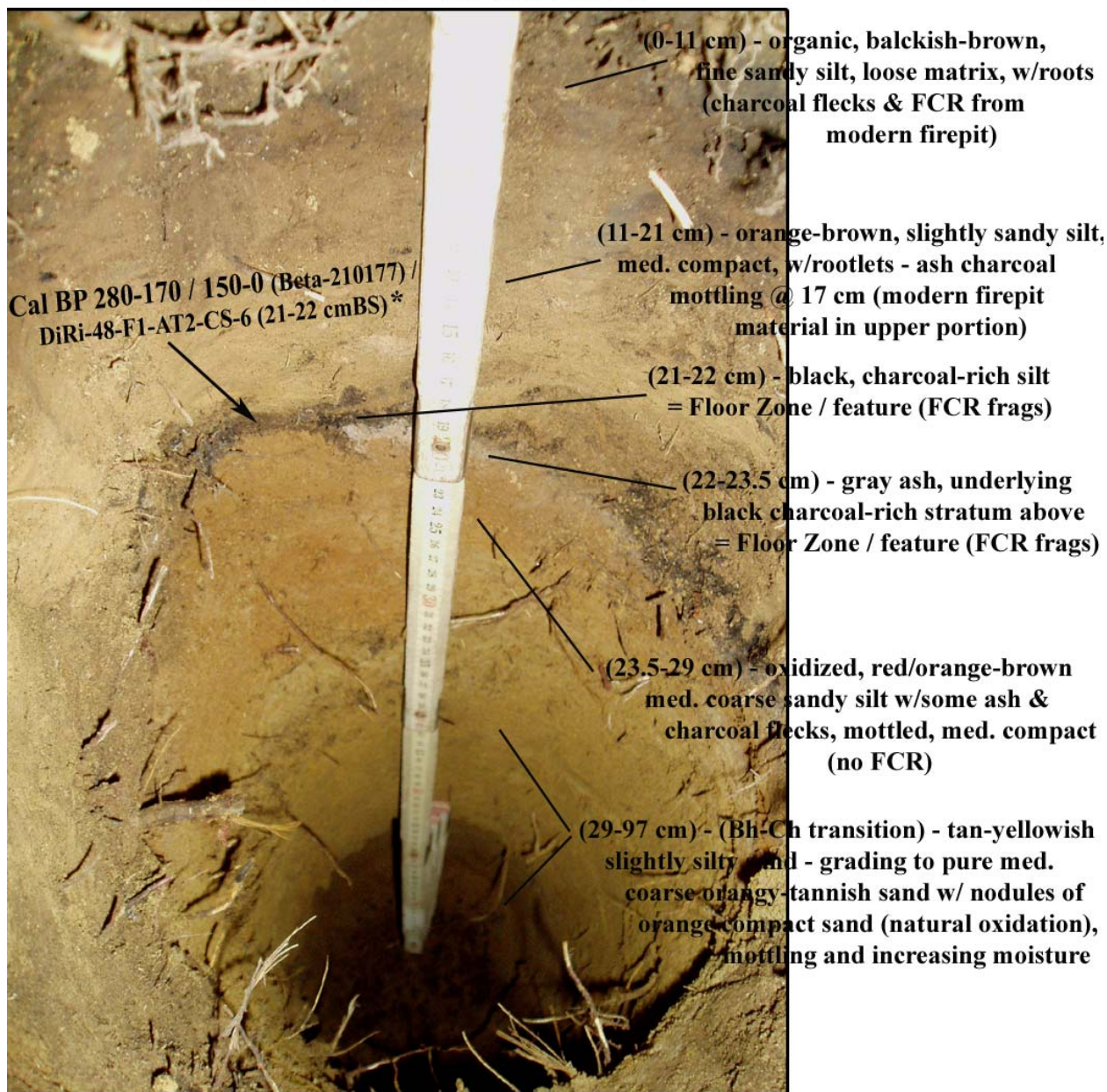
DiRi-48-F3-AT1

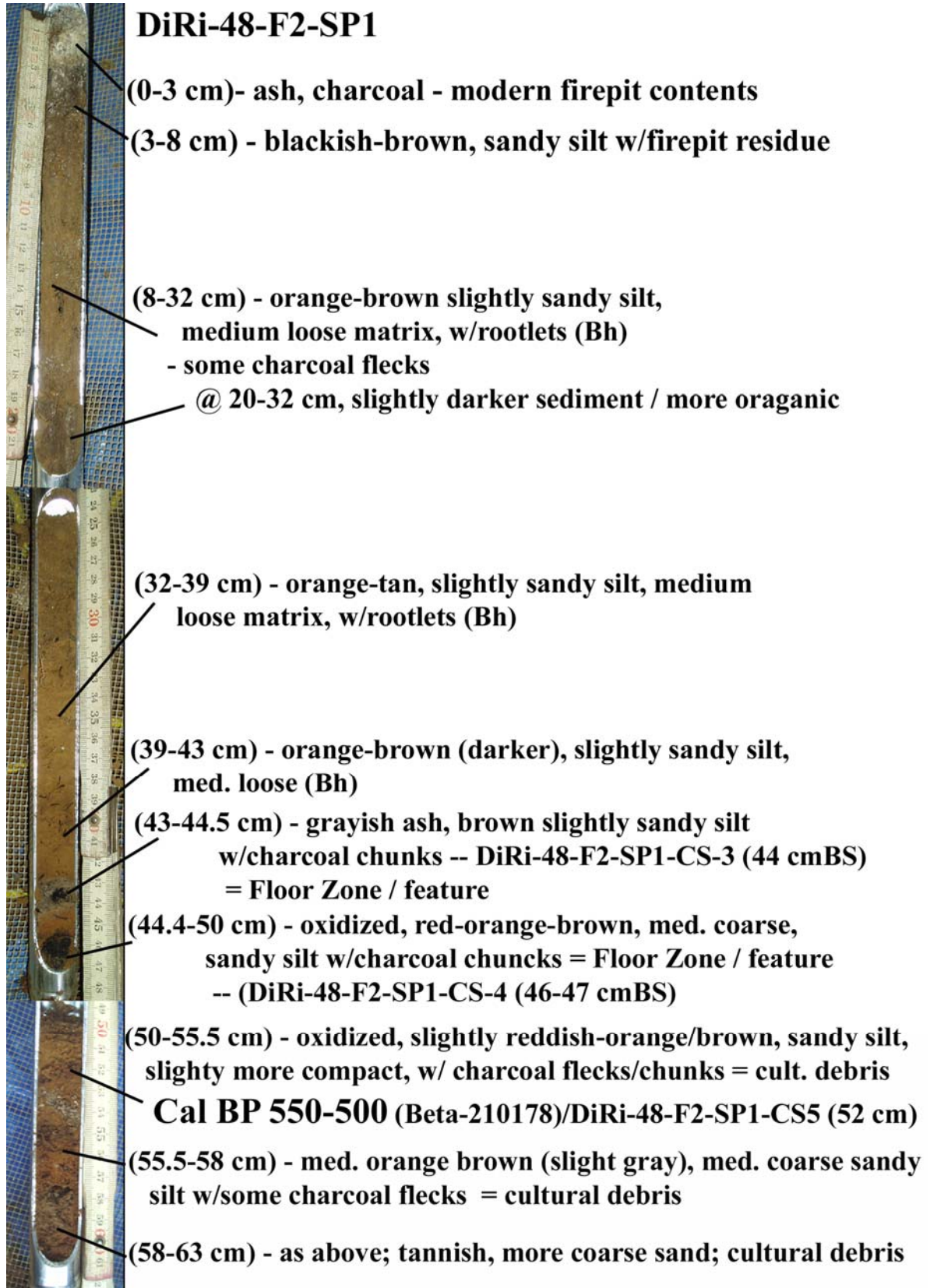
DiRi-48-F3-AT1 - Western Portion



- (0-9 cm) - dark brown, slightly sandy silt, loose matrix w/rootlets (clear glass, FCR from modern campfire)
- (9-21 cm) - orange-brown, sandy silt, med. loose, w/ pea gravel, charcoal flecks (modern FCR)
- (21-27 cm) - mottled, tan-brown/blackish sandy silt w/charcoal flecks (FCR frags)
- (27-34) - orange/yellow-brown, slightly sandy silt (no cultural material)
- (34-41 cm) - grey-brown (ash), silty sand w/charcoal flecks (FCR frags)
- (41-48 cm) - orange-brown (reddish) oxidized, sandy silt w/charcoal flecks (FCR frags)
- (48-52 cm) - orange brown, slightly sandy silt, medium loose w/nodules of hard, light brown silt & occasional charcoal flecks
- (52-56 cm) - brown/orange lenses of slightly sandy silt, w/hard nodules of yellow-brown silt; pea gravel, few charcoal flecks (no FCR)
- (56-61 cm) - yellow-tan, powdery sandy silt, increasing sand content, loose w/nodules of hard yellow-tan fine sand

DiRi-48-F1-AT2 - Western Portion





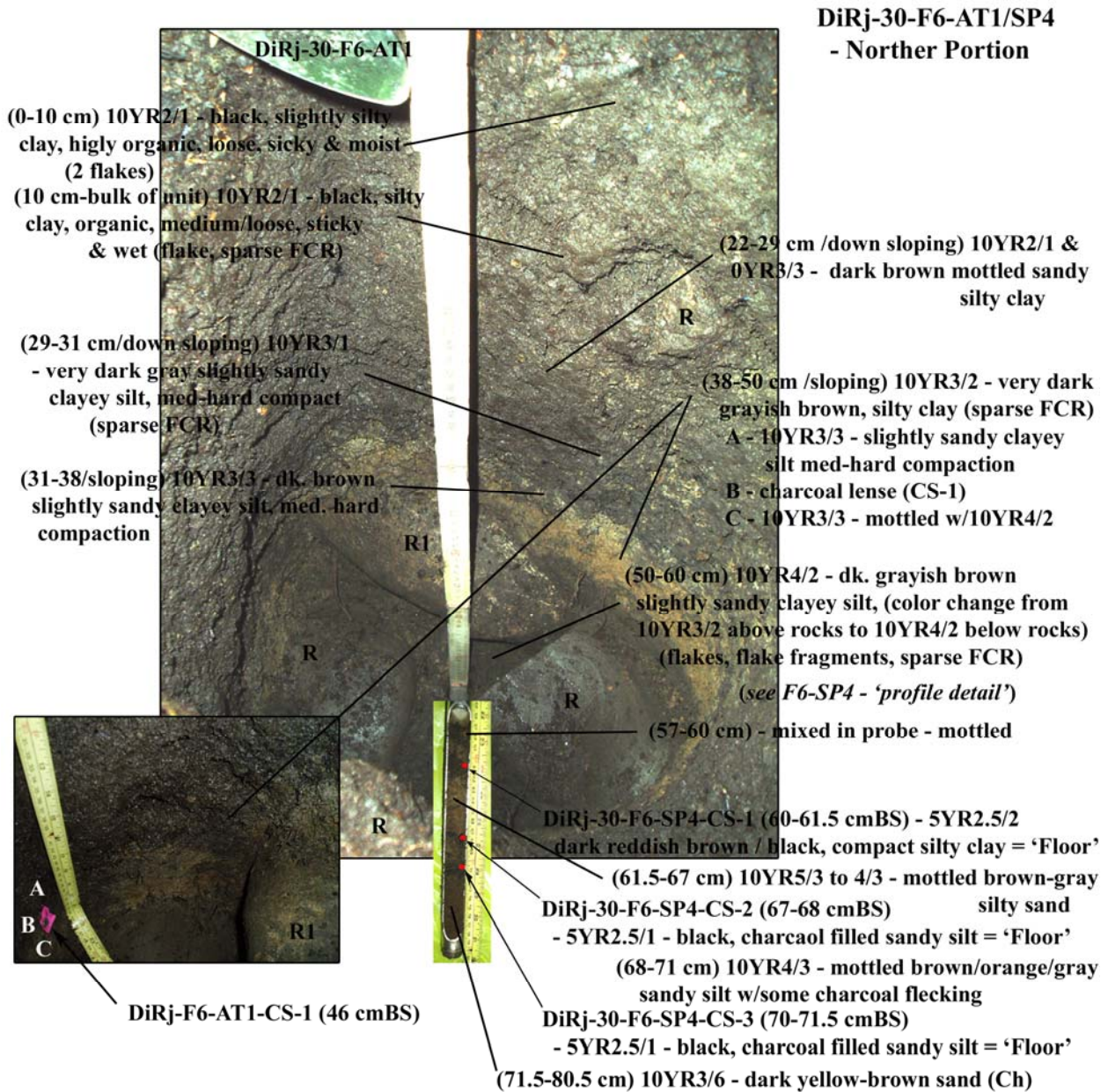
DiRi-48-F4-SP2

(no picture currently available)

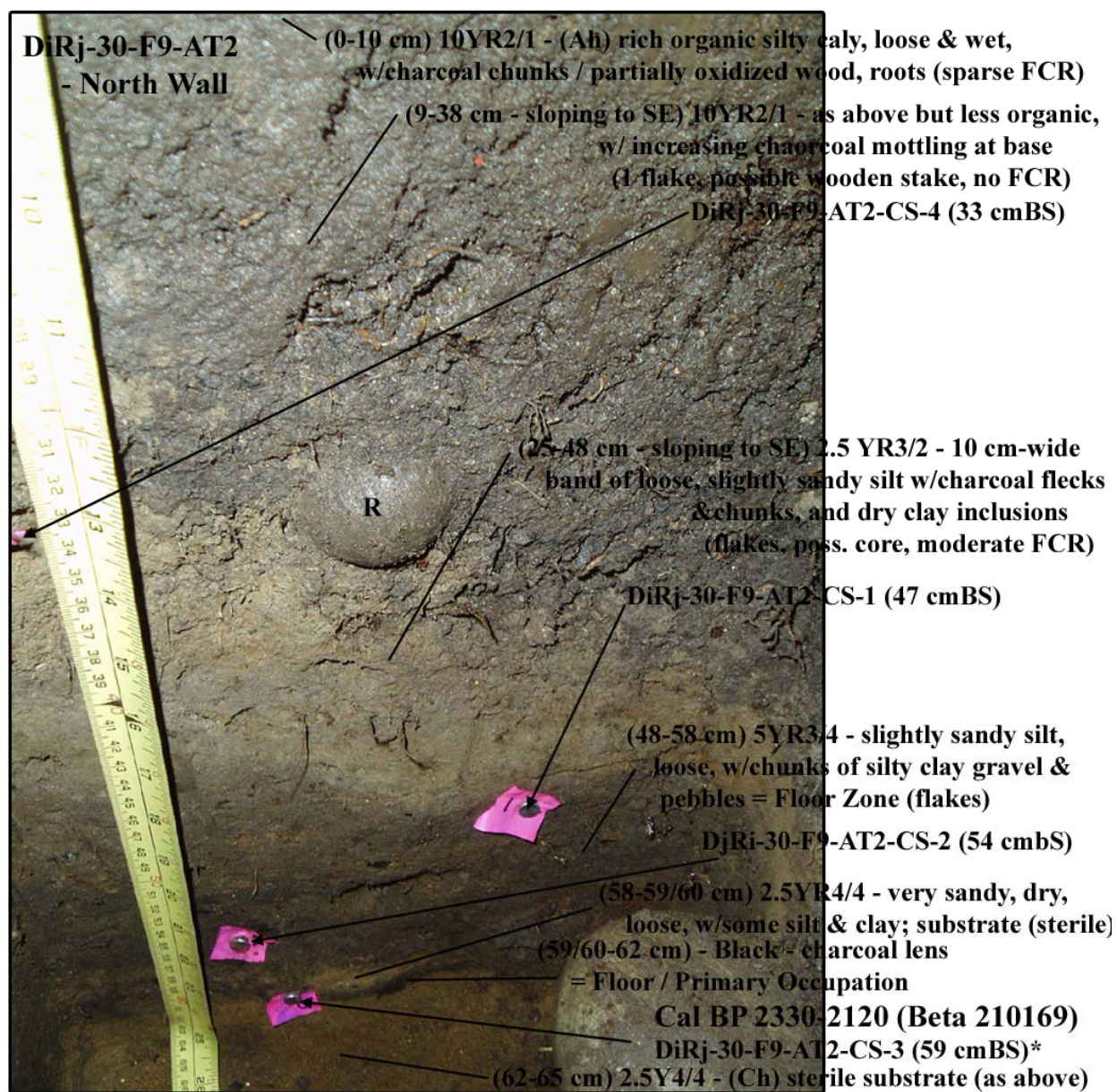
<u>Depth Below Surface (cm)</u>	<u>Description</u>
0-13	very dark brown, humic layer, sandy silt w/loose compaction, w/rootlets; no cultural apparent material
13-22	brown sandy silt, medium loose compaction, few inclusions, some rootlets; no cultural apparent material
22-34	orangey-brown sandy silt, medium loose compaction; no apparent cultural material
34-47	orangey-tan silty sand, medium loose compaction, few inclusions; no apparent cultural material
47-50	orangey-tan silty sand w/charcoal flecks, medium loose compaction; apparent cultural debris (sparse charcoal) - possible occupation zone
50-72	orangey-tan silty sand w/root mottling, medium loose compaction; no apparent cultural material

Shxw'ow'hamel (DiRj-30) - Test Unit Profiles

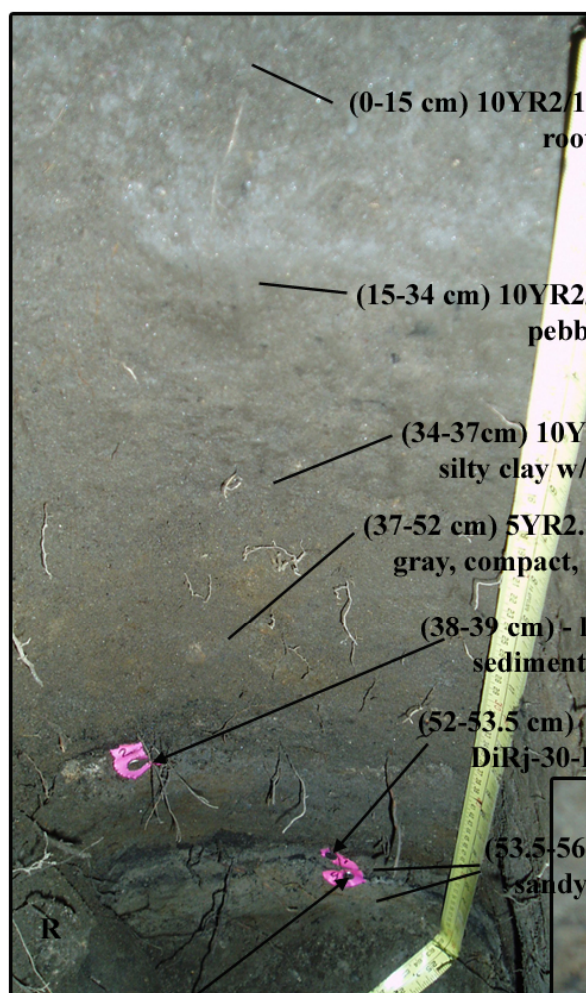
DiRj-30-F6-AT1/SP4



DiRj-30-F9-AT-2



DiRj-30-F13-ST1



DiRj-30-F13-ST1 - West Wall

(0-15 cm) 10YR2/1 - black-dk. brown, med. loose, silty clay w/ pebbles rootlets, and charcoal flecks (sparse-mod. FCR, lithics)

(15-34 cm) 10YR2/2 - dr. brown, med. compact, silty clay, some sand, pebbles, rootlets, and charcoal flecks (mod. FCR, lithics)

DiRj-30-F13-ST1-CS1 (24 cmBS)

(34-37cm) 10YR3/1 - grayish brown, compact, moist, silty clay w/ gravel, charcoal flecks (mod. FCR, lithics)

(37-52 cm) 5YR2.5/2 - dark reddish brown mottled w/ brown & gray, compact, moist, silty clay w/ gravel & charcoal chunks (FCR, lithics)

(38-39 cm) - lense of gray ash, charcoal flecks & dark organic sediment - DiRj-30-F13-ST1-CS-2 (38-39cmBS)

(52-53.5 cm) - black, charcoal rich sediment = Floor
DiRj-30-F13-ST1-CS-3&4 (53-54 cmBS) & Soil Sample

(53.5-56 cm) & (57.5-61 cm) 10YR4/1 - gray slightly sandy clay, compact

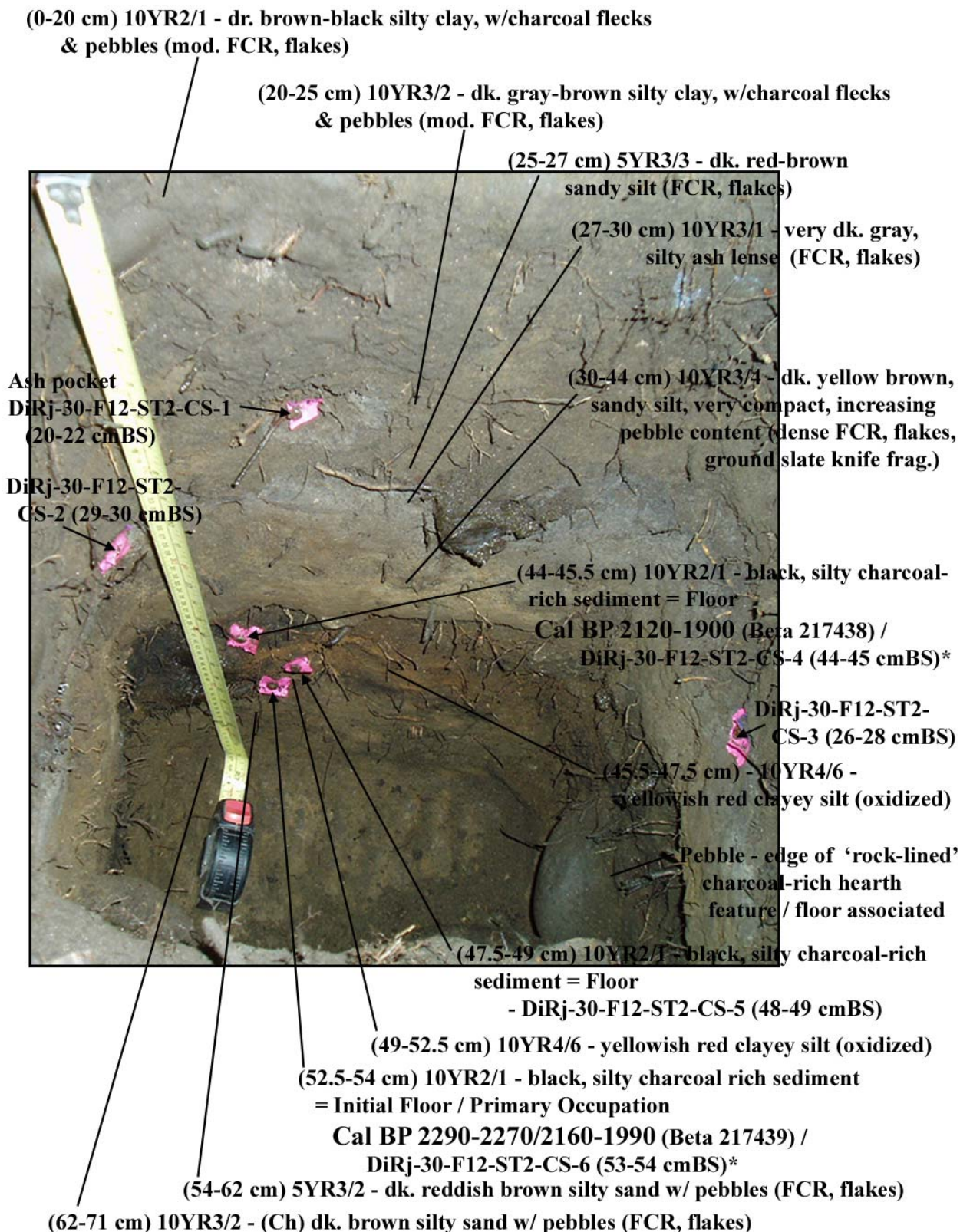
(56-57.5 cm) - black, charcoal rich sediment
= Initial Floor / Primary Occupation

Cal BP 1480-1470 / 1430-1300 (Beta 210171) /
DiRj-3-F13-ST1-CS-5 (57-58 cmBS)*

(61-64 cm) 10YR3/3 - brown-gray w/ orange mottled, med. loose sand (substrate)



DiRj-30-F12-ST2 - North Wall



DiRj-30-F4-ST3

DiRj-30-F4-ST3 - NW Corner

(0-15 cm) 10YR2/1 - (Oh/Ah) very dk. brown/black loam, loose w/organics and roots (sparse FCR)

(32-35 cm) 10YR2/1 - black, charcoal-rich sandy silt, very compact = Floor

Cal BP 2060-1880 (Beta 210470) /

DiRj-30-F4-ST3-CS-1 (33-34 cmBS)*

(15-20 cm) 10YR5/1 - gray/brown, compact, silty clay w/charcoal flecks

(17-23 cm) 10YR5/3 - yellowish-brown, compact silty sandy clay

(23-32 cm) 10YR3/2 very dark gray-brown, very compact sandy clay, w/gravel & pebbles (moderate FCR)

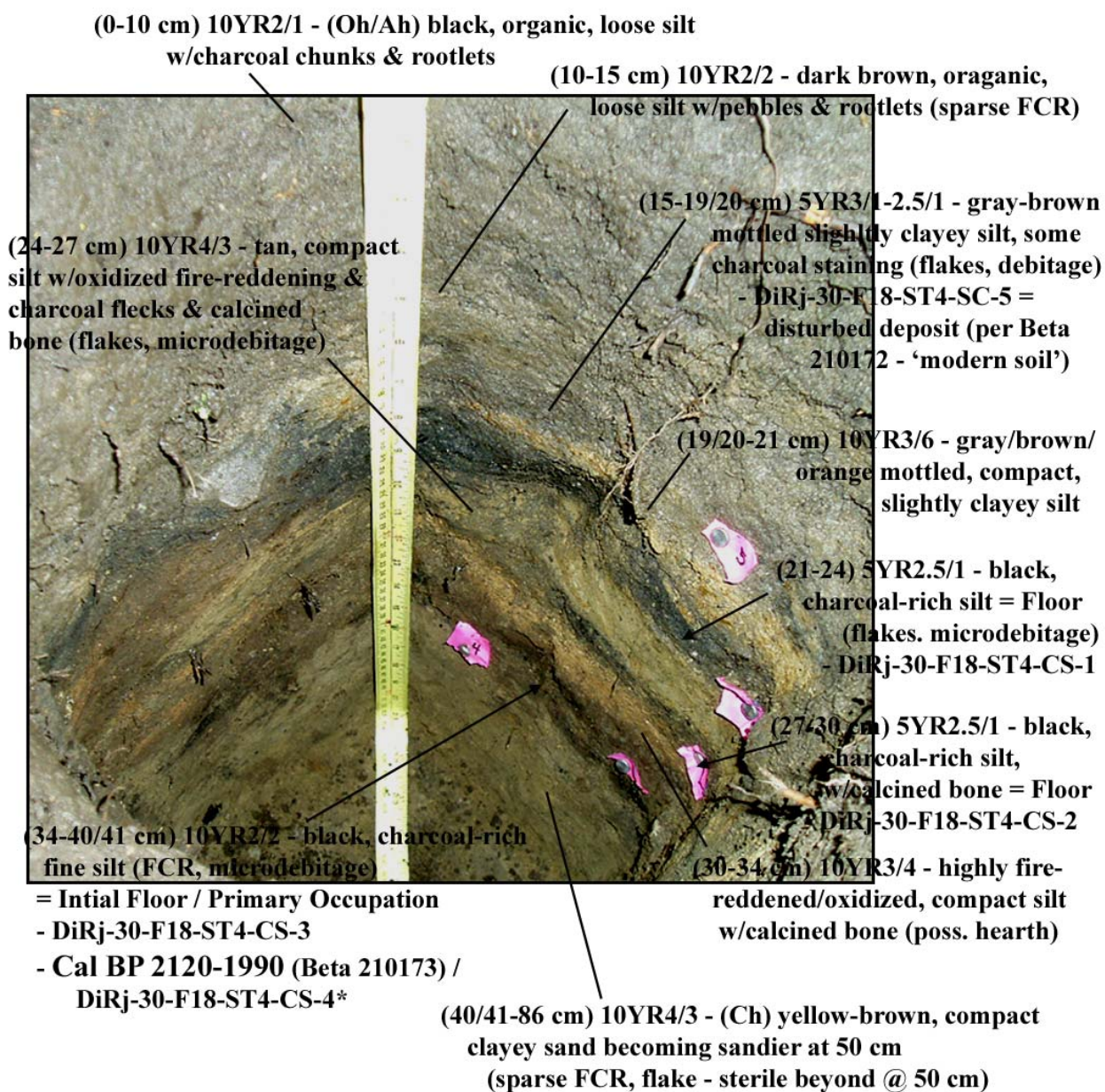
(35-37.5 cm) 10YR4/4 - dk. yellow/orange-red (oxidized) compact sandy silt (FCR)

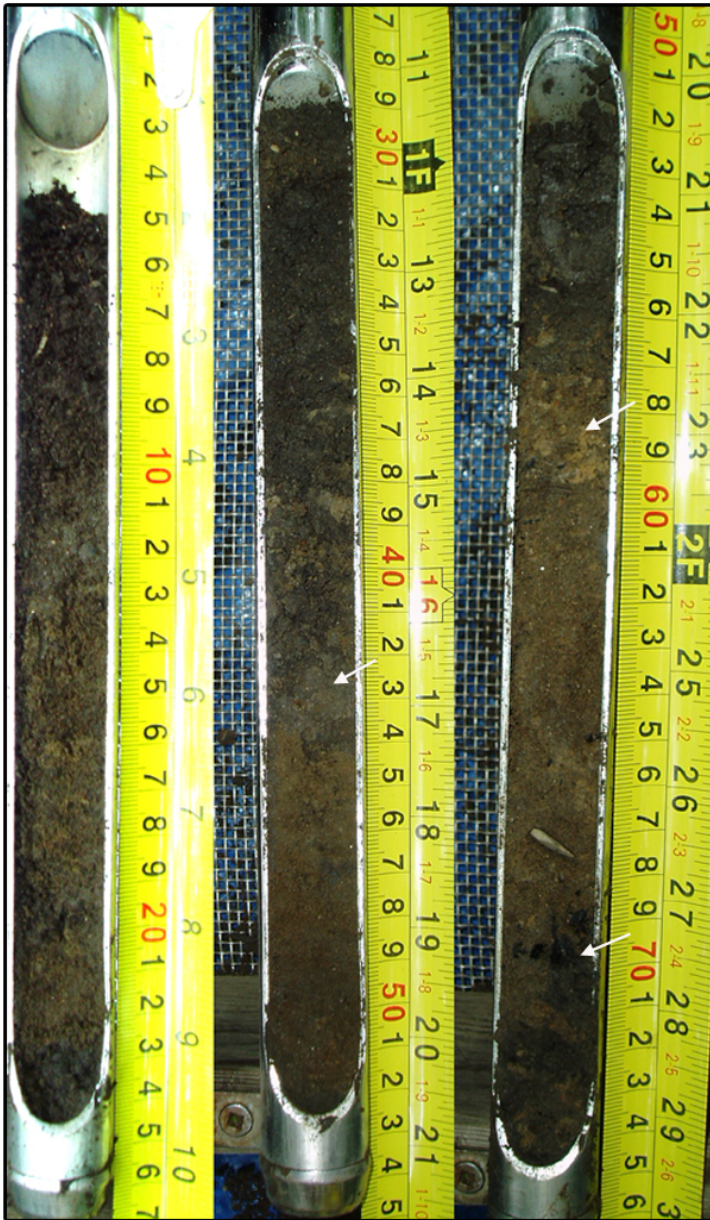
(37.5-40 cm) 10YR2/1 - black, charcoal-rich, very compact sandy silt = Initial Floor / Primary Occupation
DiRj-30-F4-ST3-CS-2 (39-40 cmBS)

(40-60 cm) 10YR3/6 - (Ch) dark yellow brown sand, loose / abrupt transition (sterile substrate)



DiRj-30-F18-ST4 - NE Corner

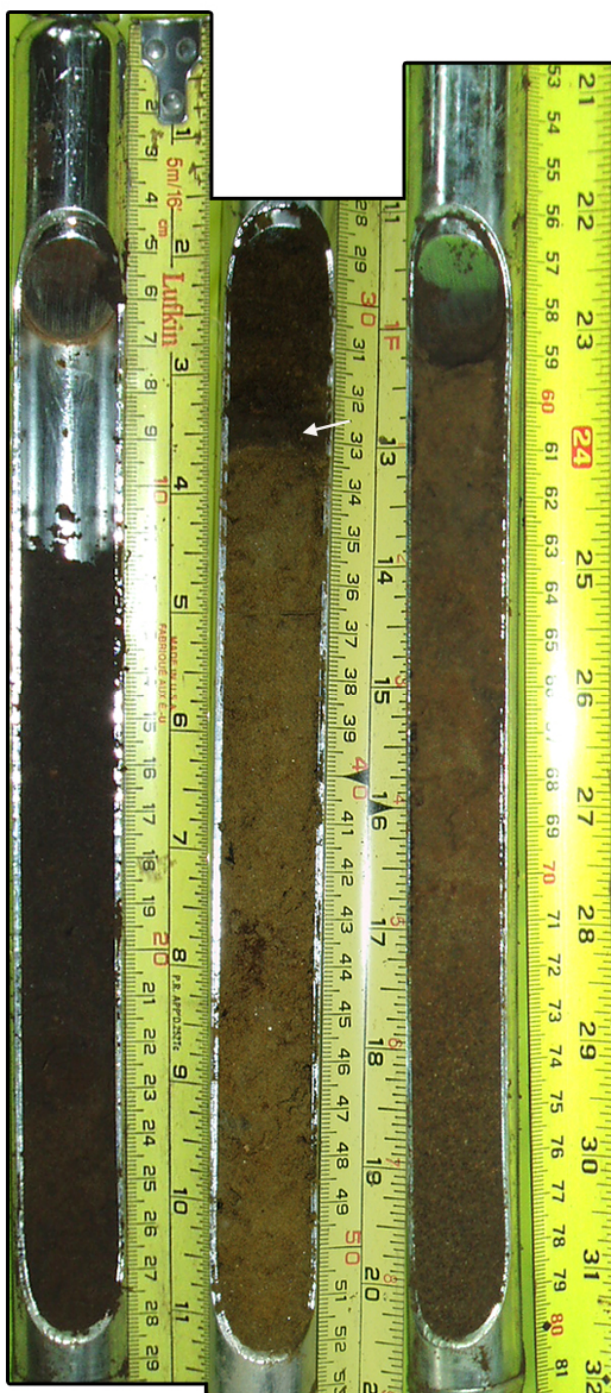




DjRi-30-F14-SP1
Profile Description

- (0-10 cm) - (compressed) - 10YR2/1 - (Oh/Ah)very dk. brown moist silty clay, loose, organic
- (10-22 cm) 10YR2/2 - dk. brown clayey silty sand, med-loose, some mottling & pea gravel
- (22-42 cm) 10YR2/1 - very dk. brown, moist silty clay, med. compact, charcoal flecks
- (42-44 cm) 10YR4/1 - grayish brown, slightly silty clay, very compact, w/ charcoal flecking & ash
- DiRj-30-F14-SP1-CS-1 (42-44 cmBS)
- (44-52 cm) 10YR3/1 - very dk. brown clayey silty sand, med. compact, mottled near top, pea gravel & char. flecks
- (52-57 cm) 10YR3/1 - very dk. gray, slightly silty clay, sticky, med. compact, small charcoal flecks
- (57-59 cm) 10YR5/4 - yellowish brown, slightly silty sand, very compact, w/ charcoal flecking and ash = Poss. Floor
- DiRj-30-F14-SP1-CS-2 (57-59 cmBS)
- (59-70 cm) 10YR3/2 - very dk. grayish brown, slightly clayey silty sand, very compact, charcoal flecking (FCR)
- (70-76 cm) 10YR2/1 & 10YR4/4 - very dk. & yellowish brown mottled clayey (dark) sand (light), w/ charcoal chunks = Poss. Floor Zone
- DiRj-30-F14-SP1-CS-3 (70 cmBS)

DiRj-30-SP2 (F9 exterior)



**DiRj-30-SP2 (outside edge W of F9)
Profile Description**

- (0-@10 cm) 5YR2.5/1 - compaction - (Oh/Ah) black loam, silty clay, organic, loose
- (10-11.5 cm) - transition zone at base of Oh/Ah
- (11.5-32 cm) 5YR3/4 - dark reddish brown sandy silt, med. loose, w/charcoal flecks (FCR) = Midden
- (32-33 cm) 10YR2/2 - very dark brown, silt w/ some clay, very compact, charcoal rich = Extrenal Surface / Midden Base
- DiRj-30-SP2-CS-1 (32-33 cm) - see detail
- (33-38 cm) 5YR3/4 - substrate - dark reddish brown, mottled silty sand, compact (sterile)
- (38-56.5 cm) 10YR3/6 - (Ch) dark yellow-brown silty sand (sterile) - transitions downward:
- (56.5-69.5 cm) 10YR3/4 - dark yellowish brown mottled sandy silt
- (69.5-80 cm) 10YR3/6 - dark yellowish brown sand

Detail



**DiRj-30-SP2-CS-1
(Midden Base)**

DiRj-30-SP3 (b/w F9 & F7)



DiRj-30-SP3 (rim/saddle b/w F9 & F7)

Profile Description

(Note: Probe 1 - 0-28 cm = actual 20 cm deep sample, as effected by 'expansion';
Probe 2 represents near actual depths;

Probe 3 compacted uper 10 cm in probe)

(0-2 cm) 10YR2/2 - (Oh/Ah) very dark brown, oraganic, clayey silt

(2-28.5 cm) 10YR3/6 - dark yellowish-brown sand slightly silty

(28.5-30 cm) 10YR3/2 - very dark grayish brown slightly silty sand, mottled w/charcoal flecks
= probable cultural surface / layer
- DiRj-30-SP3-CS-1 (29-30 cmBS)

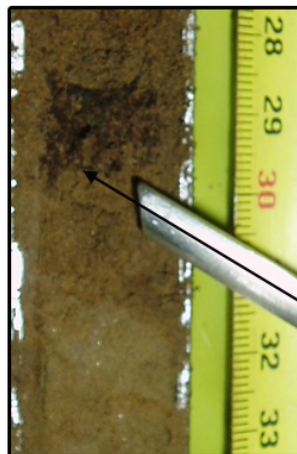
(30-36 cm) 10YR3/6 - dark yellowish brown fine sand, compact

(36-41 cm) 5YR3/2 - dark reddish brown coarse sand, compact

(@ 41-44 cm) 10YR3/6 - dark yellowish brown sandy clayey silt, w/charcoal mottling
= possible cultural surface / layer

(44-48 cm) 10YR3/6 - (Ch) dark yellowish brown, fine sand w/ silt (sterile)

(48-78 cm) 2.5YR4/4 - olive brown fine slightly silty sand (sterile)



Detail
DiRj-30-SP3-CS-1
(29-30 cmBS)

DiRj-30-SP5 (b/w F6 & F18)



DiRj-30-SP5 (saddle/rim b/w F6 & F18)

Profile Description

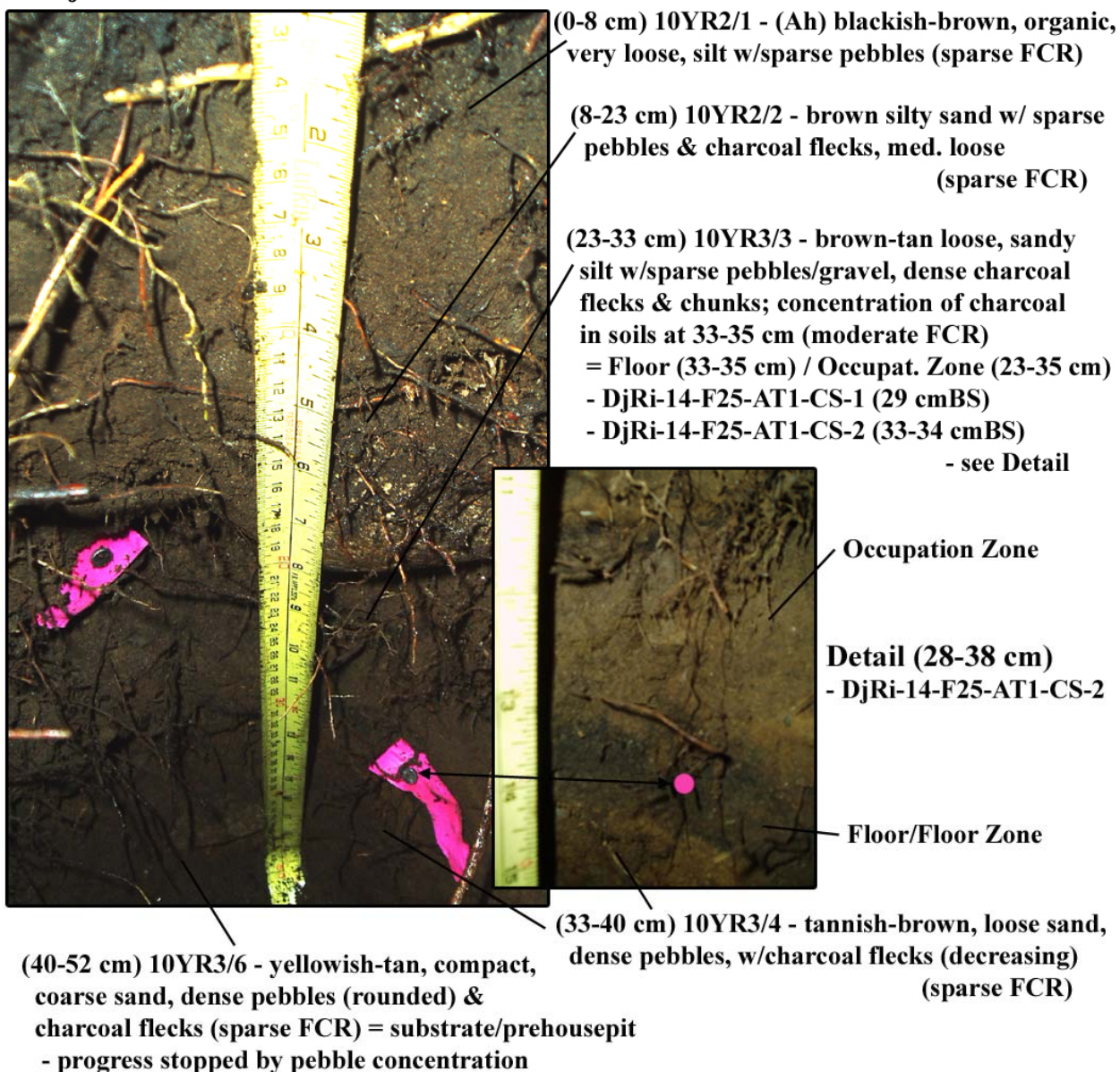
(Note: both Probe 1 and 2 were moderately effected by soil compaction)

- (0-17 cm) - Ah - blackish-brown, loose, organic silty clayey loam**
- (17-18 cm) - blackish-gray layer = midden surface**
- (18-26.5 cm) - mottled gray, orange-brown/tan, sandy silt w/ charcoal flecks = midden**
- (26.5-53 cm) - (Ch transition) light brown-tan, slightly grayish, orange mottled, fine sandy silt, compact w/occasional charcoal flecks (substrate / sterile)**
- (53-61 cm) - gray, slightly orange mottled, fine sand, loose w/occasional charcoal fleckes**
- (61-66 cm) - light brown-tan, slightly grayish mottled, fine sand, medium compact**
- (66-70 cm) - gray, orange-tan mottled, silty clay, medium compact**

Xelhálh (DjRi-14) - Test Unit Profiles

DjRi-14-F25-AT1

DjRi-14-F25-AT1 - North-East Wall



DjRi-14-F23-AT2 - West Wall



(0-10 cm) 1-YR2/2 - (Oh/Ah) - very dark brown, loose. organic, slightly sandy silt w/roots & rootlets

(10-@25 cm) 10YR2/2 - very dark brown, loose slightly sandy silt w/rootlets, charcoal flecks (moderate FCR)

(25-37 cm) 10YR2/2 - very dark brown, med. compact sandy silt w/increasing charcoal, fewer rootlets (mod.-dense FCR)

= Occupation Zone

- DjRi-14-F23-AT2-CS-1 (26 cmBS)

(37-38 cm) 10YR2/2 - black/dk. brown, charcoal rich, med. compact, sandy silt (layer slanting down toward housepit center) (FCR)

= Floor - apparent initial/single occupation

Cal BP 430-380/320-270/180-150 (Beta 210175 / DjRi-14-F23-AT2-CS-2 (38 cmBS)*

- see Detail

Detail (36-41 cm)

- DjRi-14-F23-AT1-CS-2 (38 cmBS)

(38-60 cm) 10YR3/4 - (Bh-Ch) - dark yellowish-brown mottled, sandy silt (increasing sand) w/pebbles & gravel, sparse charcoal flecks (sparse FCR until 50 cm)

**DjRi-14-F508-AT3 - East Wall
(Rock-faced Platform)**



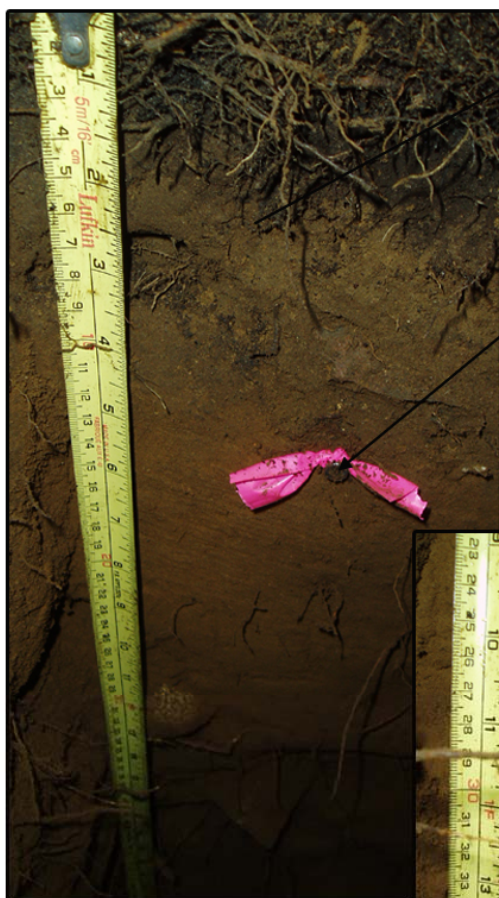
(0-7 cm) 10YR2/2 - (Ah) very dark brown, very loose, sandy silt w/roots/rootlets and organics

(7-42 cm) 10YR2/6-3/4 - (Bh) yellowish-brown grading to dark yellowish-brown (mottled b/w 7-16 cm), loose sandy silt, w/roots & burnt root matter until @ 32 cm, pea gravel throughout w/angular bedrock fragments emerging near base at 36 cm (bedrock encountered at @ 36 cmBS)

[Note: material encountered in the AT appears, in part, to be fill associated with the construction of the platform feature; no occupation surface was identified, indicating that the surface was covered/planked and/or since weathered due to exposure - similar to F509-ST8.]

***Sectioned D-fir stump directly assoc. w/ F508
- dendrochronologically dated to c. 1790 AD**

DjRi-14-F32-ST1 - East Wall

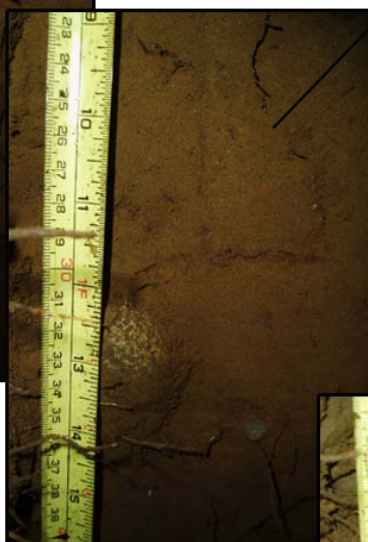


(0-7 cm) 10YR2/1 - (Ah) very dark brown slightly silty sand loosely compacted, roots/rootlets, organics

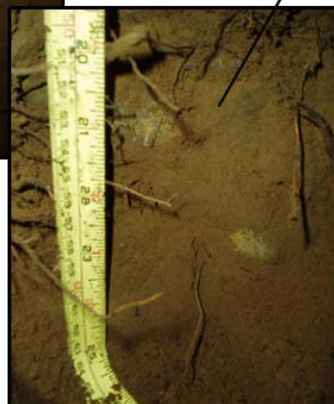
(7-17 cm) 10YR4/6 - (Bh) dark yellow-brown slightly sandy silt, med. compact, pebbles & gravel, roots, charcoal flecks (moderate FCR)

DjRi-14-F32-ST1-CS-1 (14 cmBS)

(17-40 cm) 10YR4/6 - dark yellow-brown, slightly sandy silt, increasing plasticity, med. compact, pebbles & gravel, 3 lg. rocks, charcoal flecks (sparse FCR; flakes - increasing artifact frequency)

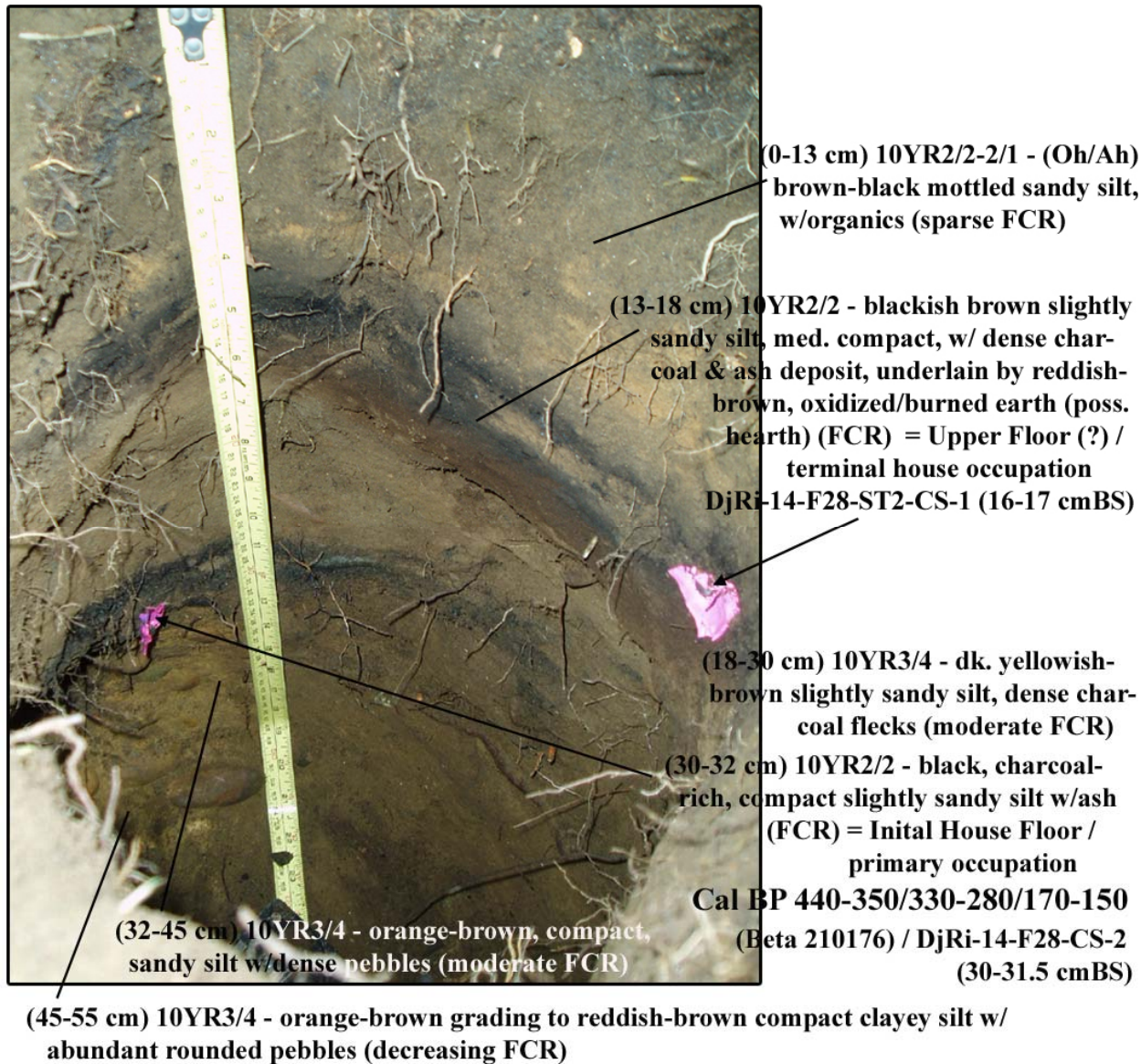


(40-67 cm) 10YR3/6 - dark yellow-brown, slightly clayey sand, med. compact, gravel & cobbles, charcoal flecks, large root @ 61 cm (sparse FCR; moderate artifact content - flakes / debitage)

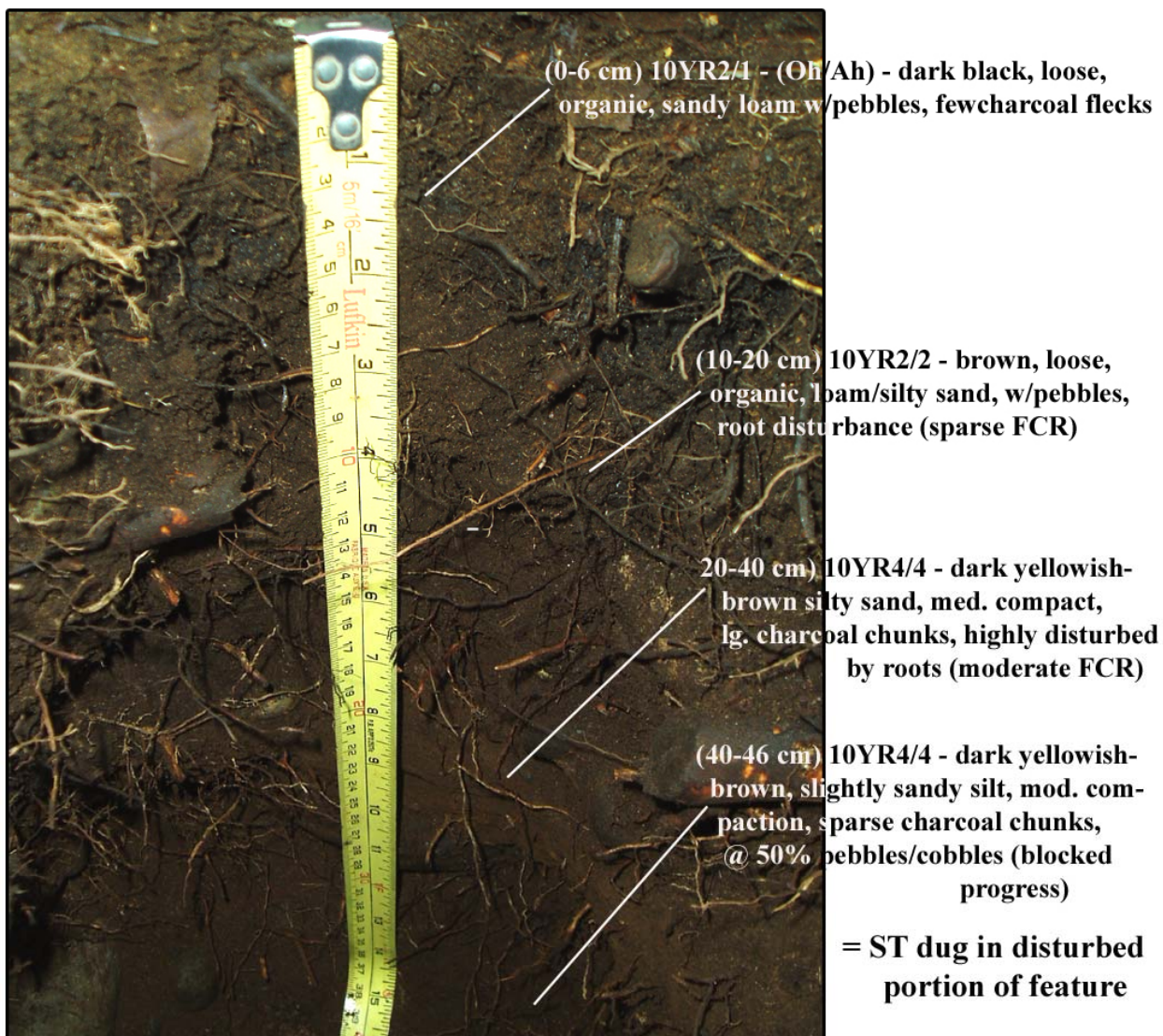


Note: no house-associated strata were identified; artifacts encountered throughout this test unit are apparently associated with a long-term, pre-house occupation of the site.

DjRi-14-F28-ST2 - North Wall (partial West Wall)



DjRi-14-F19-ST3 - North Wall



Note: ST3 was placed on the eastern edge inside the housepit depression due to a large concentraion of cobbles in the houespit center (possible burial cairn)

DjRi-14-F17-ST4

DjRi-14-F17-ST4 - NW Corner



(0-12 cm) 5YR2.5/1 - black, organic, loose, slightly sandy silt w/some charcoal flecks, sparse pebbles, roots/rootlets
(moderate FCR)

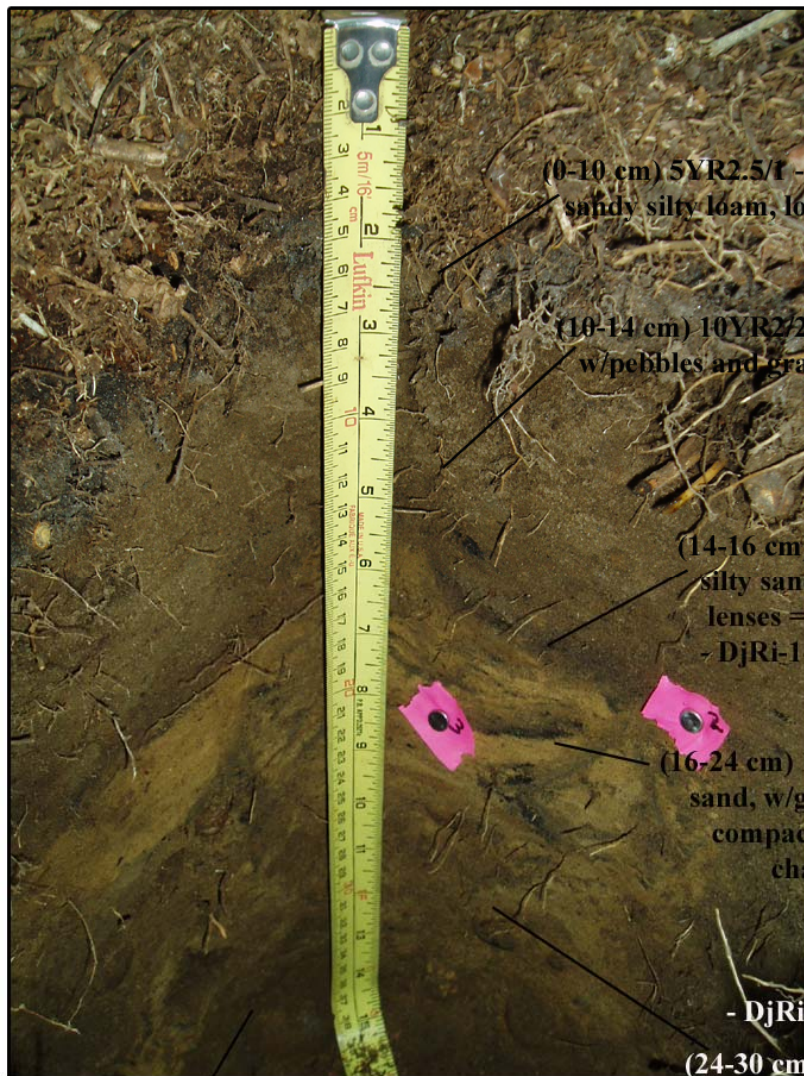
(12-13.5 cm) 5YR5/2 - dark reddish brown, charcoal rich, med. compact, sandy silt (coarser grained than above), w/rootlets = Floor (moderate FCR)
- DjRi-14-F17-ST4-CS-1 (12-13 cmBS)

13.5-18 cm) 7.5 YR4/4 - dark brown silty sand (increasing coarse sand content), loose to medium compaction, few charcoal flecks, @ 20% pebbles (sparse FCR, flake)

(18-29 cm) 7.5YR5/6 - (Ch) yellowish-brown, coarse silt/sand, loose, @ 40% pebbles/cobbles (sterile substrate)

(29-37 cm) 10YR4/6 - dk, yellowish-brown, coarse sand, loose, @ 80% pebbles/cobbles (sterile substrate)

DjRi-14-F15-ST5 - SW Corner



Note: all stata slope upwards to the SW, away from the centre/ towards the housepit edge/rim

(0-10 cm) 5YR2.5/1 - (Oh) very dark brown organic, sandy silty loam, loose, w/ numerous charcoal chunks, highly root disturbed

(10-14 cm) 10YR2/2 - (Ah) very dark brown silty loam, w/ pebbles and gravel, charcoal flecks, mod. root disturbance

(14-16 cm) 10YR2/1 - black, charcoal rich, silty sand, low compactation, w/ charcoal lenses = terminal house occupation - DjRi-14-F15-St5-CS-2 (15-16 cmBS)

(16-24 cm) 10YR2/2 - very dk. brown silty sand, w/ gravel & charcoal flecks, increasing compaction @ 19-20 cmBS assoc. w/ dense charcoal staining (sloping; hearth remodeling?) & areas of oxidation = Floor Zone

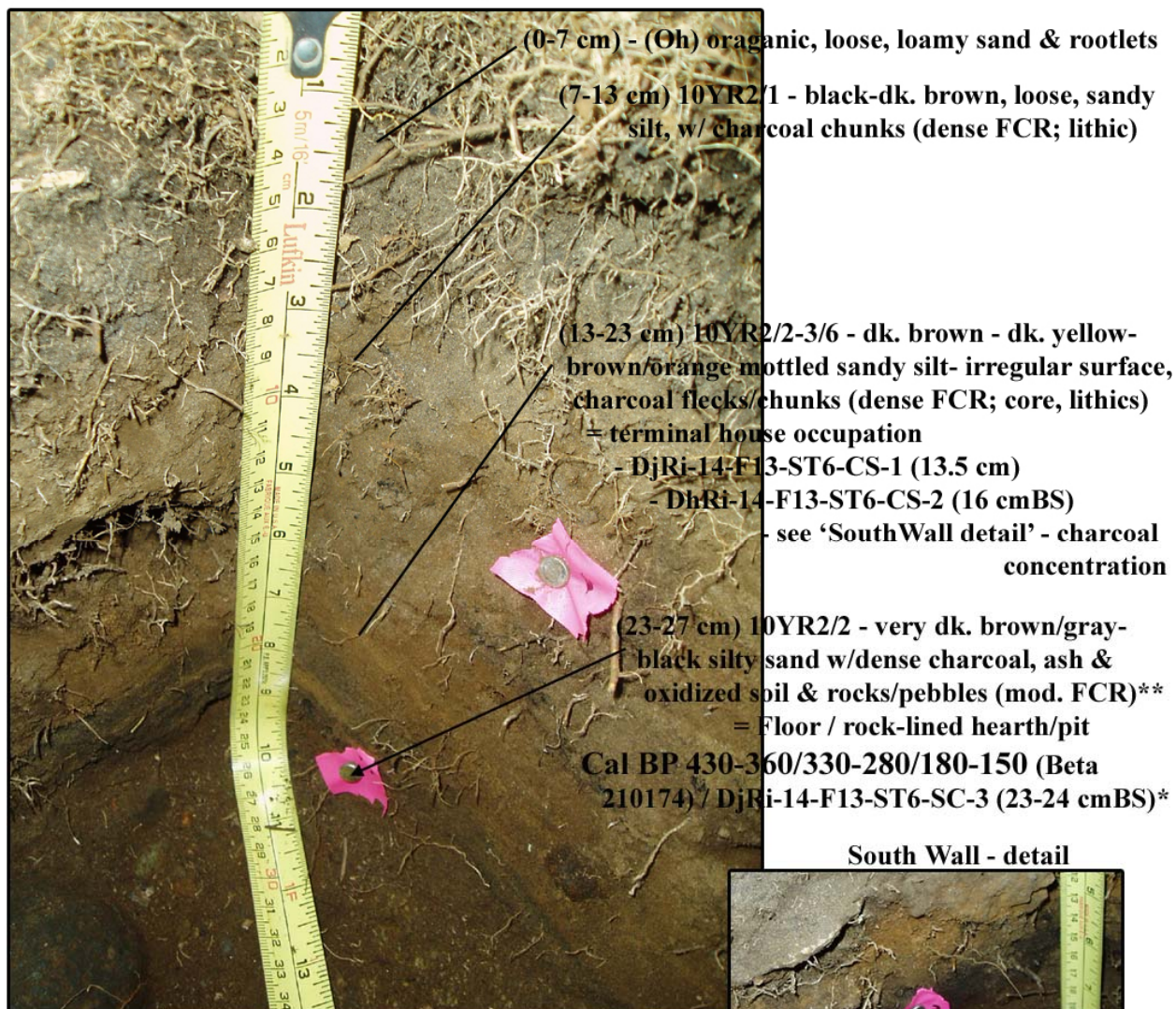
(sparse FCR - on 'floor' - 20cm) - DjRi 14-F15-ST5-CS-3 (18.5-21 cmBS)*

(24-30 cm) 10YR2/2 - very dark brown

(30-37 cm) 10YR4/4 - (Ch) dk. yellowish-brown coarse sand & rnd./sub-ang. pebbles, compact (sterile substrate)

[* CS-1 taken from char. concentration at 19.5-20 cm]

DjRi-14-F13-ST6 - North Wall (partial West Wall)



[** hearth feature and floor lenses slope downward, from S to N, toward the feature center; excavation stopped at the hearth/pit feature, minimizing unnecessary disturbance.]

DjRi-14-F2-ST7 - NW Corner



(0-5 cm) 10YR2/1 - (Oh/Ah) black, organic, loose, sandy silt w/ roots and rootlets

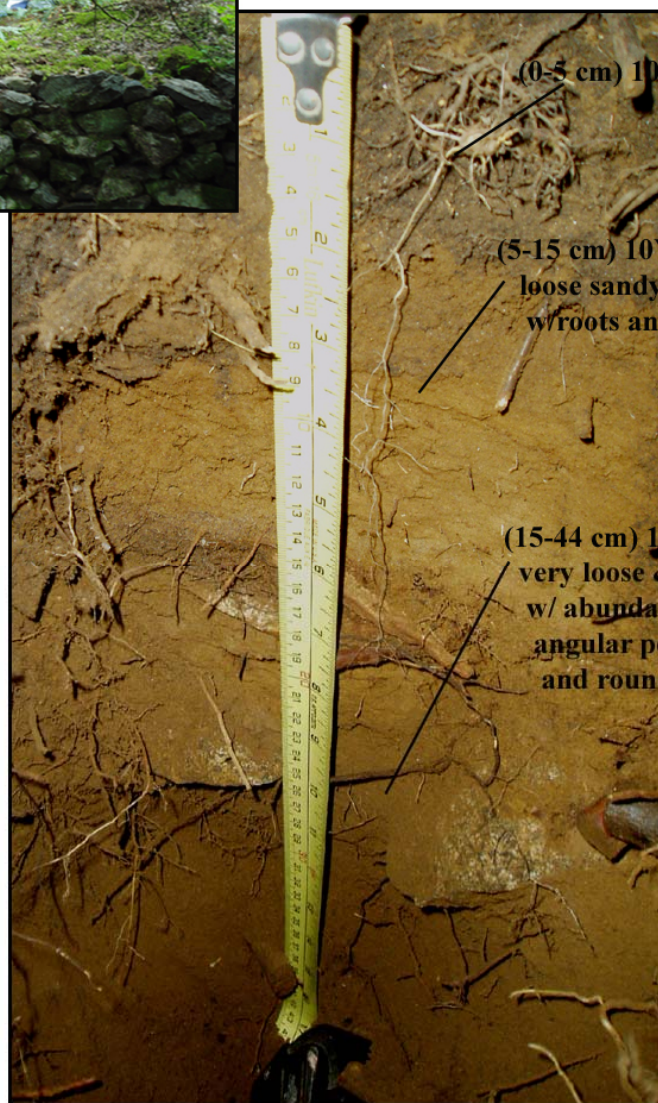
(5-10/16.5 cm) 10YR2/2 - very dk. brown, med. compact sandy silt, charcoal-rich, w/few pebbles (moderate FCR, sparse lithics)

= Floor / Occupation Zone
- most concentrated b/w 5-10 cm;
- transitioning to out of cultural deposit b/w 10-16.5 cm

(16.5-28 cm) 7.5YR3/4 - (Ch) dark brown/yellow-brown, sandy silt, compacted b/w pebbles/cobbles (rounded) (sterile substrate)



DjRi-14-F509-ST8* (Rock-faced Platform) - North Wall



(0-5 cm) 10YR2/1 - (Oh/Ah) - black, organic, loose, silty loam, w/roots

(5-15 cm) 10YR3/4 - dk. yellowish-brown, loose sandy silt, sparse angular pebbles, w/roots and patches of root burn / charcoal

(15-44 cm) 10YR4/4 - dark yellowish-brown, very loose & powdery (dry) sandy silt, w/ abundant clasts (30-50%) - mostly angular pebbles w/some angular cobbles and rounded pebbles, including pea gravel

[Note: the material encountered in this AT appears to represent fill associated with the construction of this platform feature; no occupation surface was identified, indicating that the platform surface may have been covered (planked) or otherwise very thin and eroded with exposure to weathering - similar to F509-AT3.]

[* ST8 replaced SP3 - abandoned due to rocky substrate]

DjRi-14-F1-ST9

DjRi-14-F1-ST9 - East Wall



DjRi-14-F27-SP1 & SP2

DjRi-14-F27-SP1& SP2

Profile Description



SP2

SP1

(10 cm E of SP1 - supplemented description of 0-25 cm in SP1)

- (0-5 cm) 10YR2/2 - (Oh/Ah) very dark brown, organic, very loose silty sand
- (5-25 cm) 10YR2/2 - (Ah/Bh) very dark brown, very loose sandy silt w/sparse charcoal flecks
- (25-29 cm) 2.5YR2.5/4 - dark reddish-brown, very loose slightly sandy silt w/increasing charcoal flecking / oxidized sediment near base = Occupation Zone
- (29-32 cm) 2.5YR/2.5/4 - dark reddish-brown, loose, charcoal rich, (flecks & chunks) slightly sandy silt = Floor / Floor Zone
- DjRi-14-F27-SP1-CS-1 (30.5-31.5 cmBS)
- (32-42 cm) 10YR3/6 - (Bh/Ch) yellowish-brown, very loose, slightly sandy silt (prehousepit substrate)
- (42-50 cm) 7.5YR3/4 - dark brown, very loose, slightly sandy silt w/sparse charcoal flecks
- (50-56 cm) 10YR3/6 - (Ch) yellowish-brown, compact, sand

DjRi-14-F26-SP5

DjRi-14-F26-SP5*

Profile Description

[Note: moderate soil compaction effected the first of these two probes - 0-25 cm]



(0-@6 cm) 10YR2/1 - (Ah/Oh) black, organic, loose, silty loam

(6-@24.5 cm) 10YR3/3 - (Bh) dark brown, loose, silty sand w/ charcoal flecks & charcoal chunk at @ 22 cm; darkens toward base

DjRi-14-F26-SP5-CS-1 (21.5-22.5 cmBS)

(@24.5-33 cm) 10YR3/3-2/1-3/4 - dark brown/black mottled silty sand w/charcoal flecks and stains; some yellow-brown mottling
= Occupation Zone

(33-35 cm) 10YR2/1 - black-blackish-gray, charcoal rich silty sand, w/possible ash and calcined bone; charcoal impregnated 'band' particularly prevalent b/w 33-33.7 cmBS
= Floor / Floor Zone

DjRi-14-F26-SP5-CS-2 (33-33.7 cmBS)

(35-38.5 cm) 10YR3/3-3/4 - dark brown/yellowish/reddish (oxidized) brown silty sand w/charcoal flecking (possibly assoc. w/effects of floor feature/hearth)

(38.5-45 cm) 10YR4/4 - (Bh-Ch) - dark yellowish-brown, med. coarse sandy silt (transitional substrate)_

] * SP5 was placed @ 25 cm W of SP4 (center) in F26 to compensate for the poor results from SP4 (not described)]

DjRi-14-SP6 & SP7 (b/w F508 & F509)



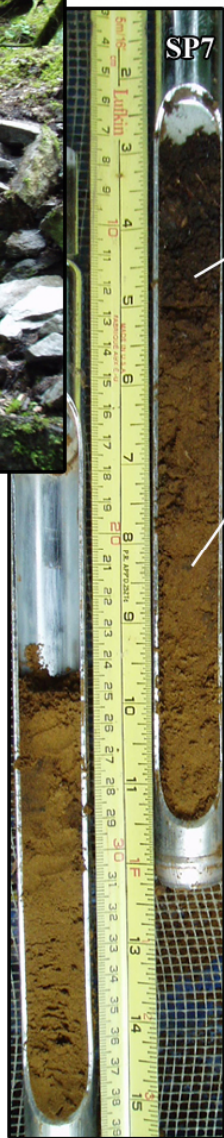
DjRi-14-SP6 & SP7*
- located b/w platform features F508 & F509

[Note: moderate compaction affected the first of these two probes - 0-15 cm]

(0-@10/15 cm) 10YR2.5/1-3/2 - (Ah)
black to dark reddish-brown, organic,
fine grained, silty loam

(@10/15-41 cm) 10YR3/4-3/6 - (Bh/Bh-
Ch transition) dark yellow brown
grading to lighter yellow brown, fine
sandy silt-silty sand - becoming more
compact w/depth (sterile substrate)

**Note: no cultural strata were identified
in either SP6 or SP7; does not appear
to be construction fill = natural soil
profile exterior to F508 and F509.**



[* SP7 - as shown - also represents the profile describing SP6 (not shown)]

DjRi-14-F1001-SP1



**DjRi-14-F1001-SP1*
(Rock-lined Housepit)**

- Note: Soil compacted severely in probe (loose soil)**
- (0-@10/15 cm) 10YR2.5/1 - (Ah) black, organic, loose fine grained, slightly sandy silt; becoming lighter with depth**
 - (10/15-@28 cm) 10YR2/2 - (Ah-Bh) very dark brown, medium compact, fine grained, silty sand**
 - (28-44 cm) 10YR4/8 - dark yellowish-brown, slightly silty sand, medium compact; rock encountered at 36 cm w/angular rock frags. in probe at 44 cm**
 - probing with skewer consistently encountered rocks at b/w 24-28 cm across the house feature interior (i.e., likely talus-filled landform)**

= No apparent/distinct cultural strata.

[*DjRi-14-F1001 is located upriver from the main portion of DjRi-14; @ 85m ESE from the lg. bedrock outcrop on the 'upriver' beach; 32 m SSE from the riverbank to a secondary terrace / F1001; - may be part of DjRi-58.]



Provenience

Sorted by: ne

Layer:

Feat. No.:

Feat. Description:

Flot Sample No. 1

Volume (l): 2.5

Subsample No: _____

Volume (1): _____

164

APPENDIX VI - EXCAVATION & SAMPLE FORMS

Soil Probe (SP) / Auger Test (AT) / Shovel Test (ST) Record

Page ___ of ___

Site No.: _____ Test Designation: _____ Feature No.: _____

Date: _____

Excavators: _____

Provenience (Local Grid ☐ UTM ☐): _____ UTM Datum: NAD 83 ☐ Other _____

Surface: N

Base: N

E

E

El.

(mAsl)

El.

(mAsl)

Auger / Probe Dimensions: Bore Diameter _____ (cm) Bore Depth _____ (cm)

Test Dimensions (m): _____ Test Shape: round / square Screening: N / Y _____ % Mesh
Size _____ (in)

Natural ☐ Arbitrary ☐ _____ cm level

Samples Collected: C14 ☐ Soil ☐ Other

Attached Forms: Profile ☐ C14 Sample ☐ Other _____

Placement / Rational:

Test / Level Descriptions: (observations, interpretations, disturbance, associations, artifacts, features, samples)

Depth (cmBS) Munsell Matrix Description (color, texture, composition, compaction..// cultural?) Artifacts/FCR /
Samples

Summary Notes:

Conclusions (use 'Notes - Continuation Sheet' if necessary):

Sample Types/IDs:

Photo Record (frame designations):

Notes - Continuation Sheet

Site No.: _____ Test Designation: _____ Feature No.: _____

Date: _____

Excavators: _____

Notes: _____

Soil Probe (SP) / Auger Test (AT) / Shovel Test (ST) -- Profile Sheet

Site No.: _____ Test Designation: _____ Feature No.: _____

Date: _____

Excavators: _____

Provenience: Local Grid ☐ UTM ☐ UTM Datum: NAD 83 ☐

Other _____

Surface: N

Base: N

E

E

El. (mAsl)

El. (mAsl)

Profile: (____ wall)

(imprint graph paper here)

Radiocarbon Sample Record

Site No.: _____ Test Designation: _____ C14 Sample

No.: _____

Feature No.: _____ Feature

Type: _____

Complete Sample

Designation: _____

Date: _____

Excavators: _____

Sample Provenience (Local Grid ☐ UTM ☐): UTM Datum: NAD 83 ☐

Other _____

N

E

El. (mAsl)

Description:

Sample Type / Quantity: (wood, shell, bone, charcoal, carbon-rich soil...)

Matrix: (Munsell, color, texture, composition, etc.)

Stratigraphy: (facies, associations)

Collection Rational - Context / Feature Association: (what does this sample date?)

Collection Methods / Packaging:

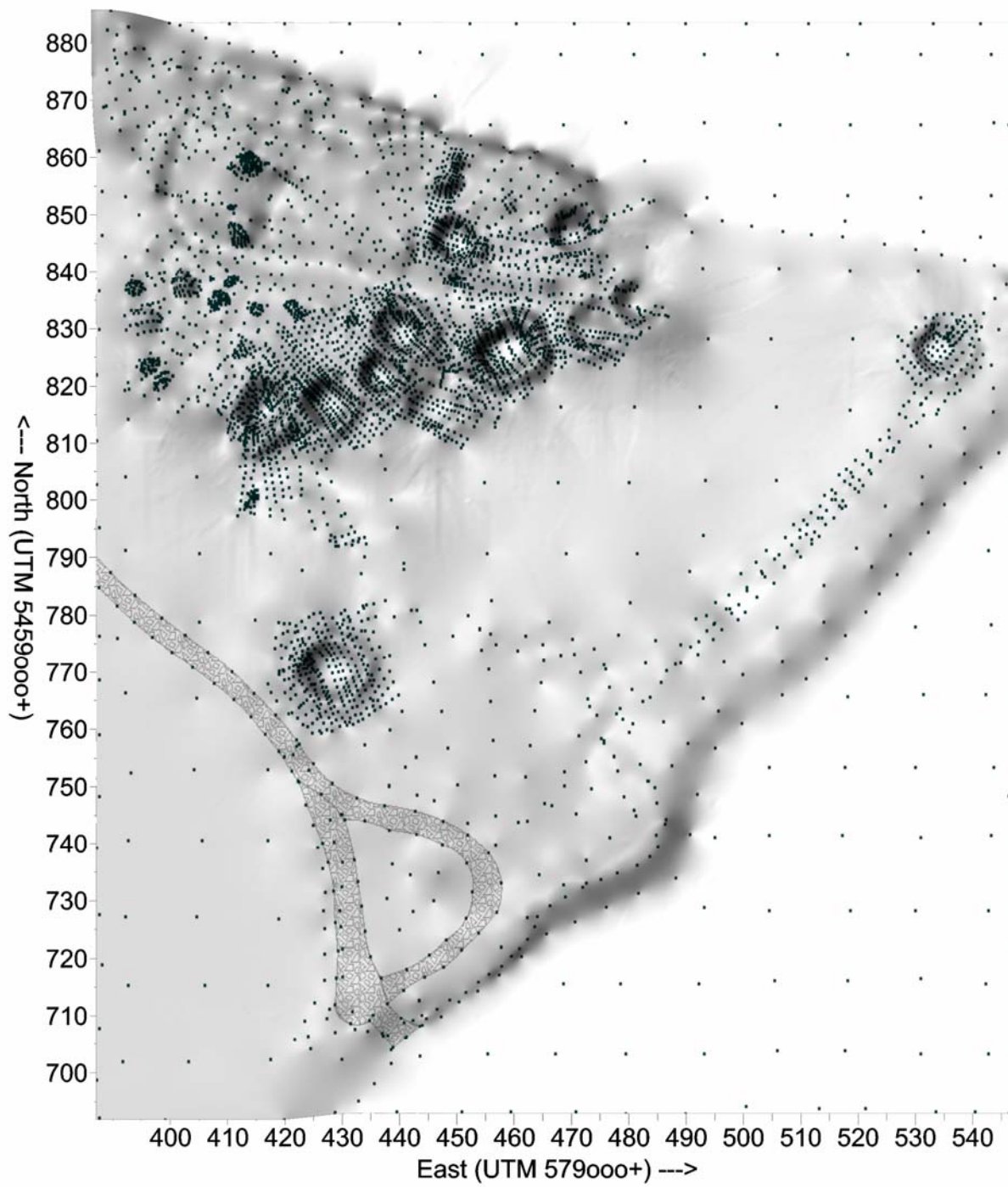
Disturbances / Contamination (?):

Photo Record (frame designations):

APPENDIX VII - SITE 'POST' MAPS WITH SURVEYED SURFACE POINTS

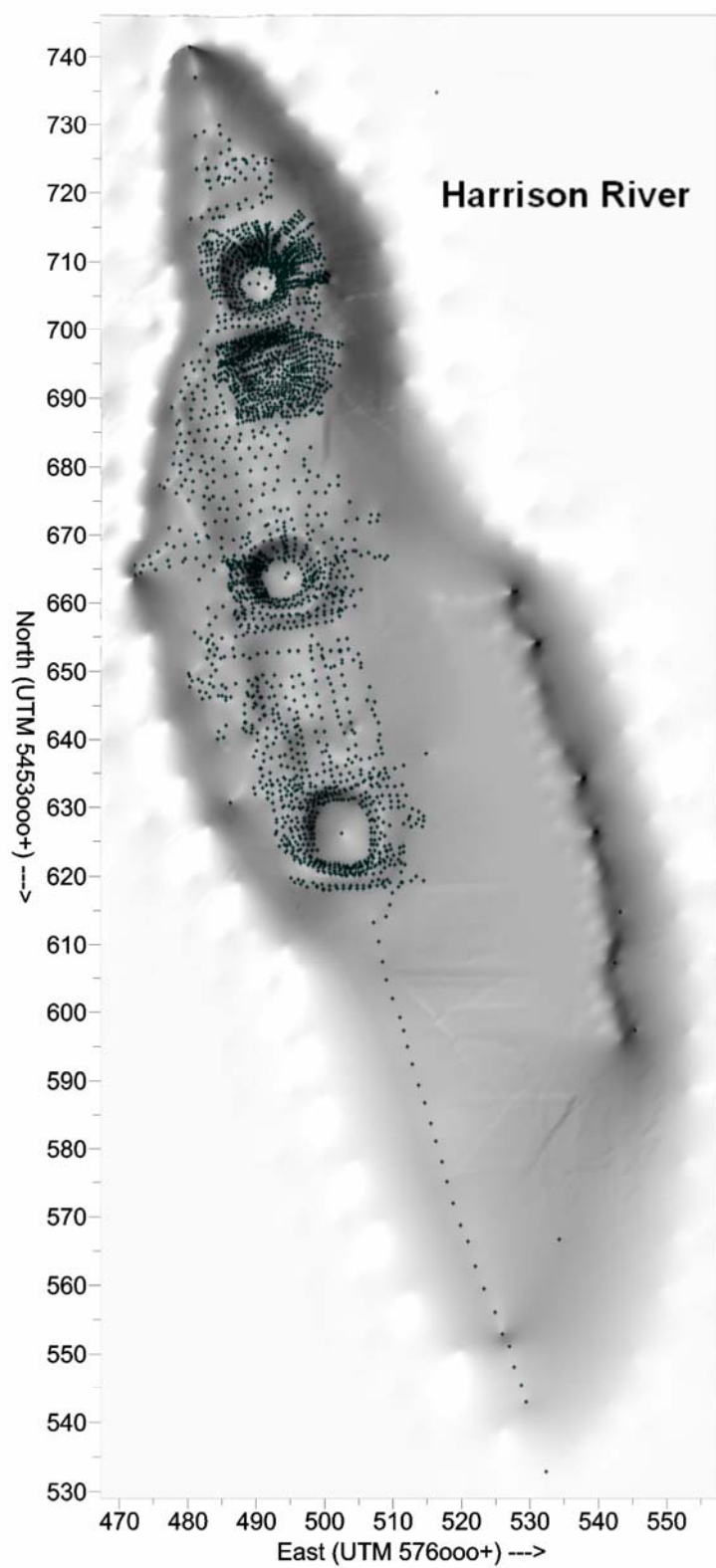
'John Mack Slough' (DhRI-T1) - Post Map

'John Mack Slough' (DhRI-T1) - Post Map

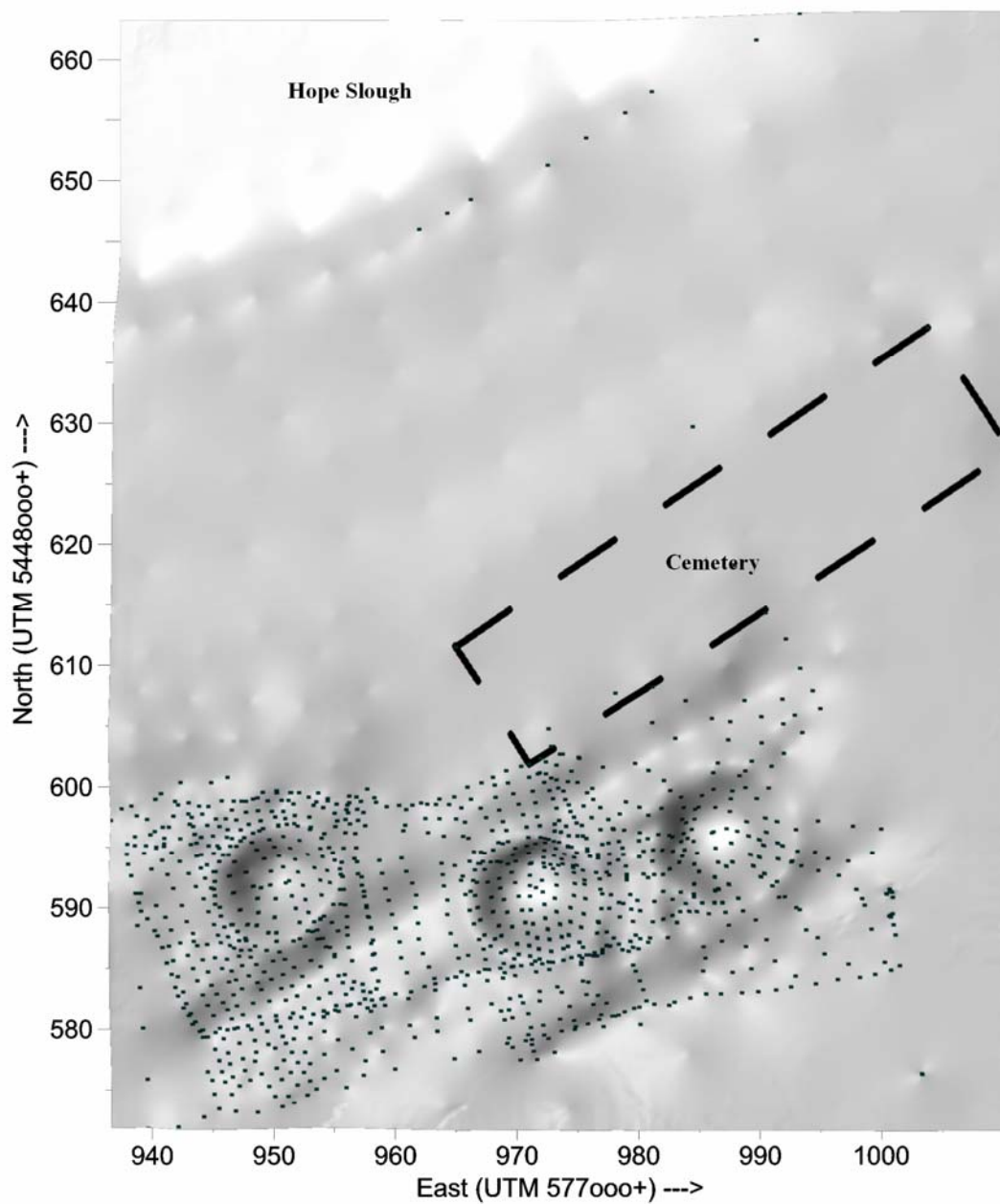


Qithyil Island (DhRI-15) - Post Map

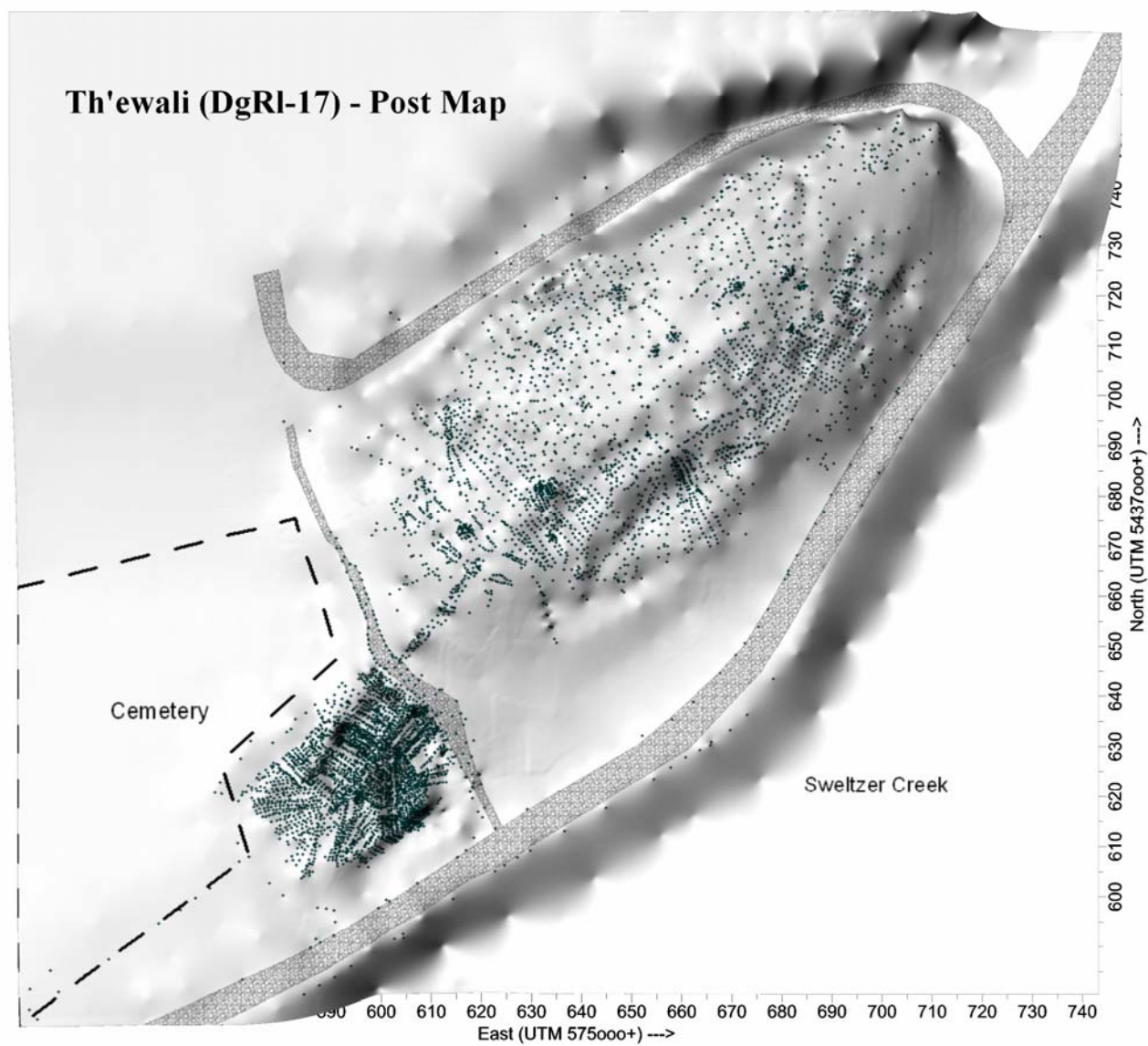
Qithyil Island (DhRI-15) - Post Map



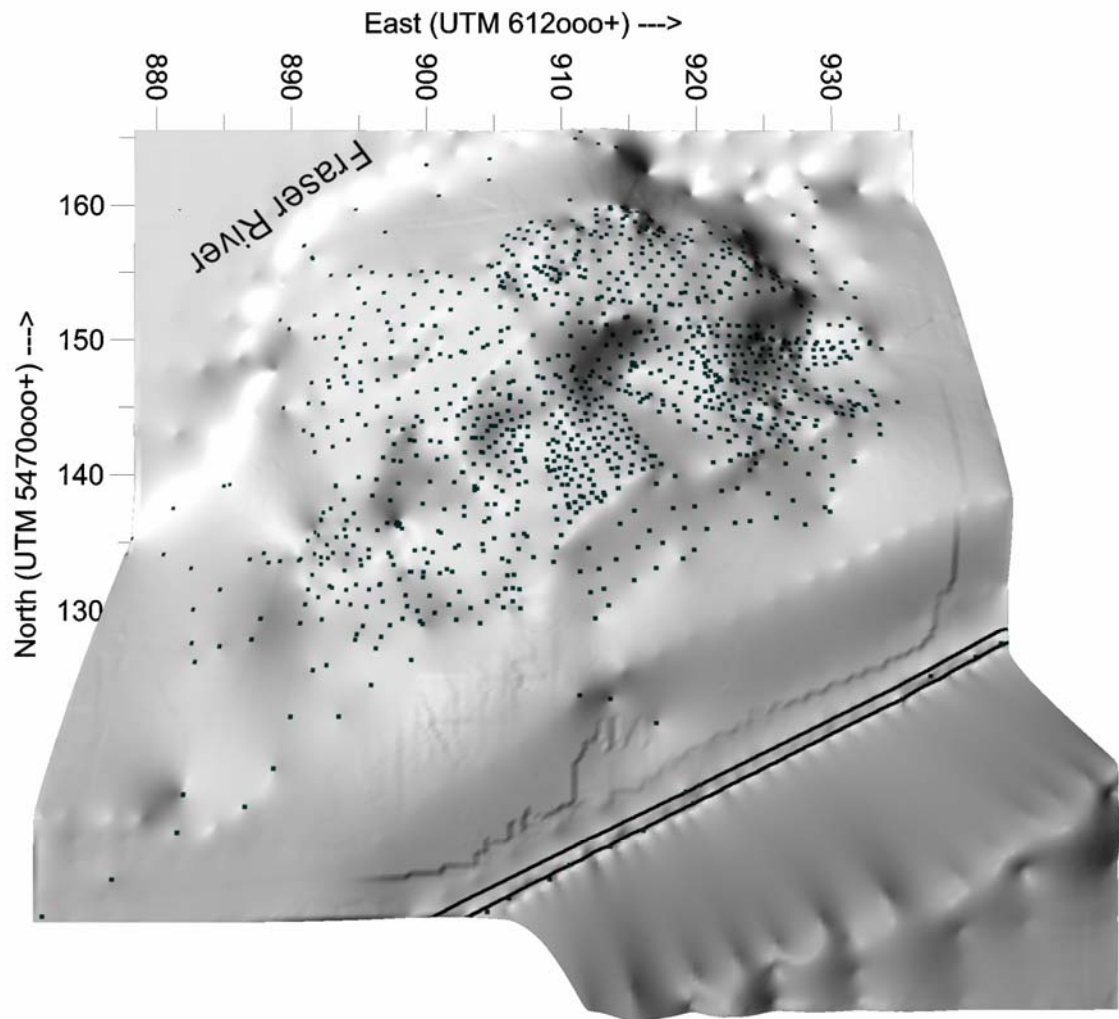
Sqwa:la (DhRI-6) - Post Map

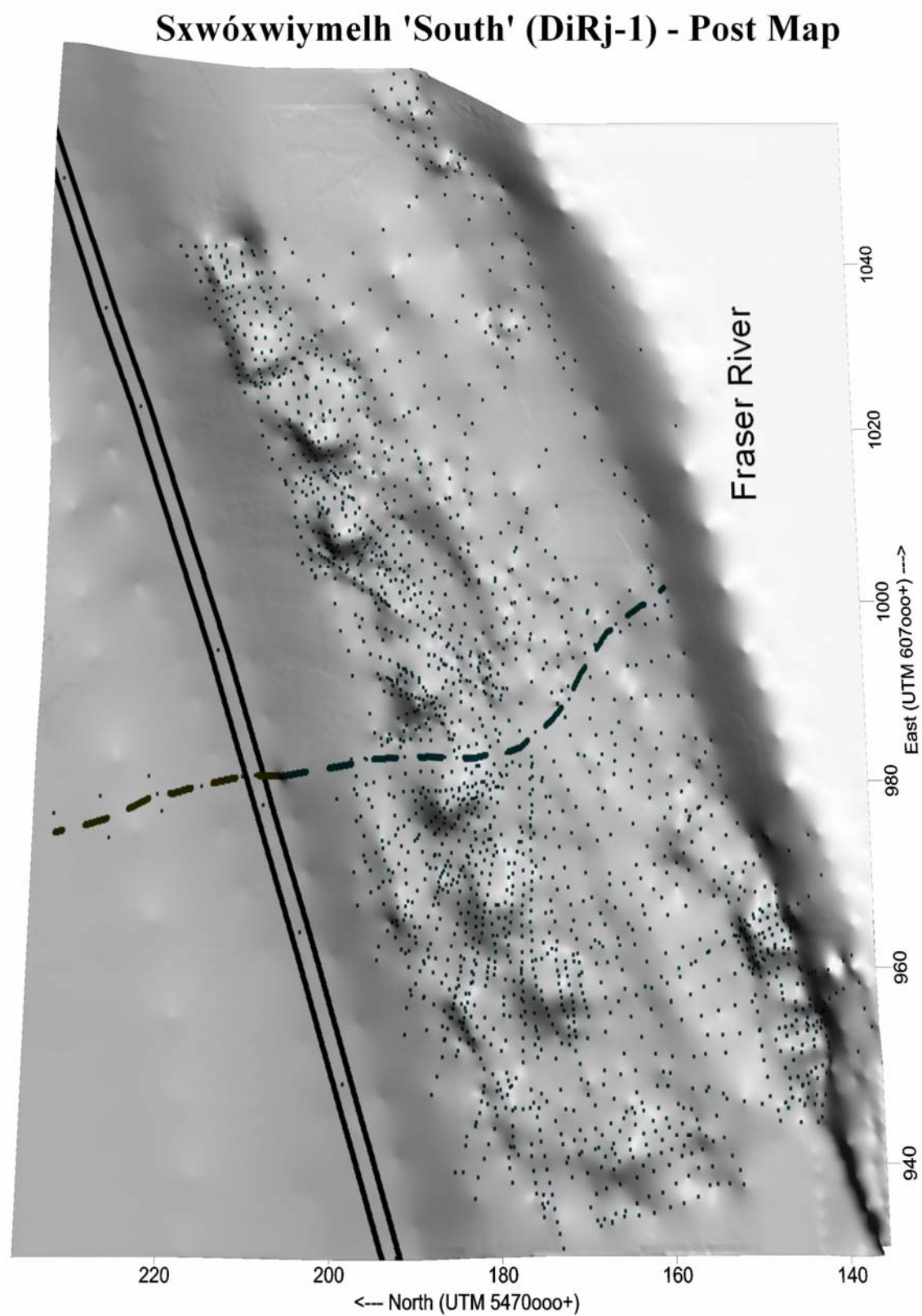


Th'ewá:lí (DgRI-17) - Post Map

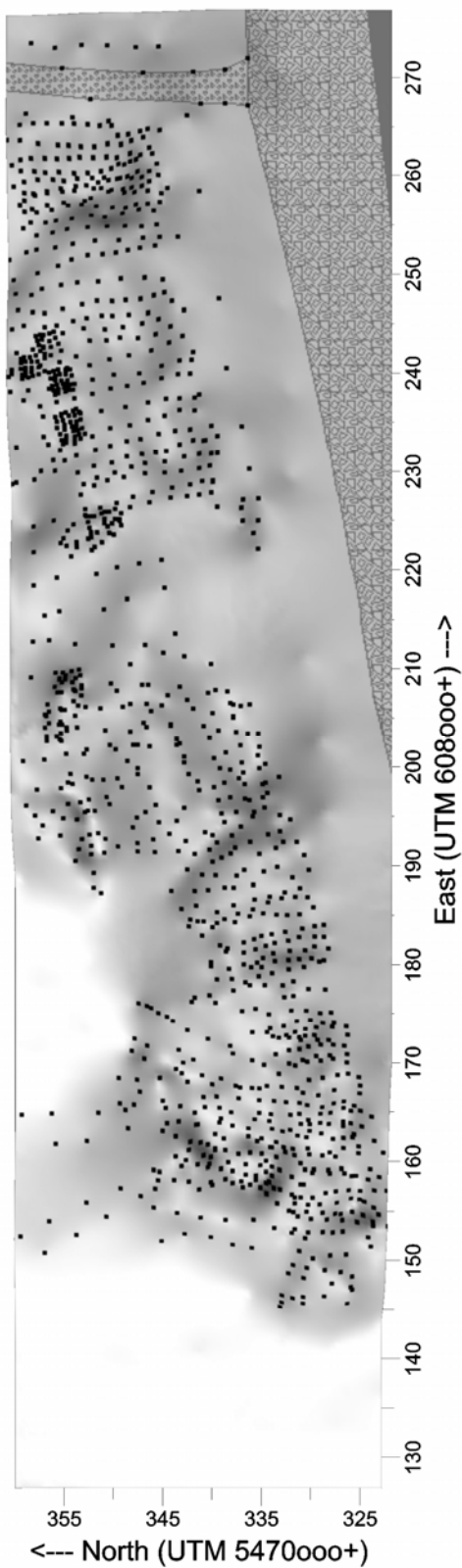


Eyxel (DiRi-48) - Post Map

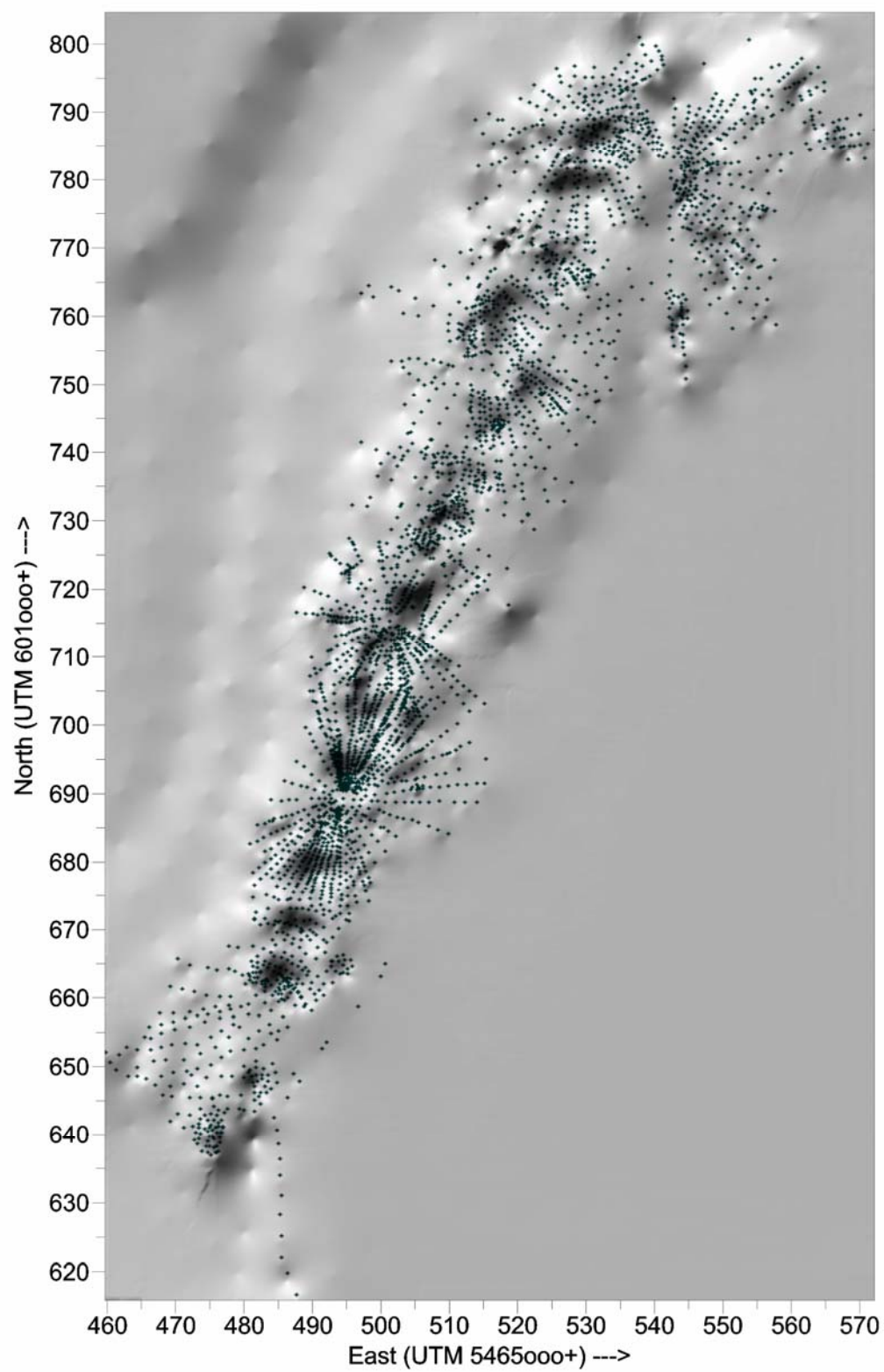




Sxwóxwiymelh 'North' (DiRj-1) - Post Map



Shxw'ow'hamel (DiRj-30) - Post Map



Xelhálh (DjRi-14) - Post Map

Xelhalh Site (DjRi-14) - Post Map

