

# ARCHAEOLOGICAL INVESTIGATIONS AT SIWASH BRIDGE – FARV 3

by Karen Brady

## Introduction

In 1999, the Ministry of Highways, Chilcotin Cariboo District, proposed the excavation of two drainage swales and installation of a culvert near Siwash Bridge. Siwash Bridge crosses the Chilko River approximately 19 km southwest of the community of Alexis Creek, on the Chilcotin Plateau (Figure 1). The goals of the project were to redirect seasonal runoff away from the bridge and stabilize a section of the left (north) bank of the Chilko River. Every spring uncontrolled runoff drains over an unstable section of bank, down Newton-Whitwater Road, onto Siwash Bridge, and into the Chilko River. This situation presented a concern to the Department of Fisheries and Oceans, as well as Tsilhqot'in communities who utilize the fishing station located just downstream from the bridge. In order to control the runoff, two drainage swales were proposed for the terrace immediately above the bridge. It was expected that these swales would divert spring runoff over a stable section of bank, downstream of the unstable bank, bridge, and fishing station (Figure 2).

The project was located entirely within the boundaries of a previously recorded site - FaRv 3 - that includes the terrace above the Chilko River as well as the traditional native fishing station at the river's edge (Figure 3). FaRv 3 is a large and extensive site, consisting of three housepit-sized circular depressions, one small circular depression, discontinuous, subsurface cultural deposits, and surface and subsurface lithics. This area is known as gwetsilh in the Tsilhqot'in language, and refers not only to the

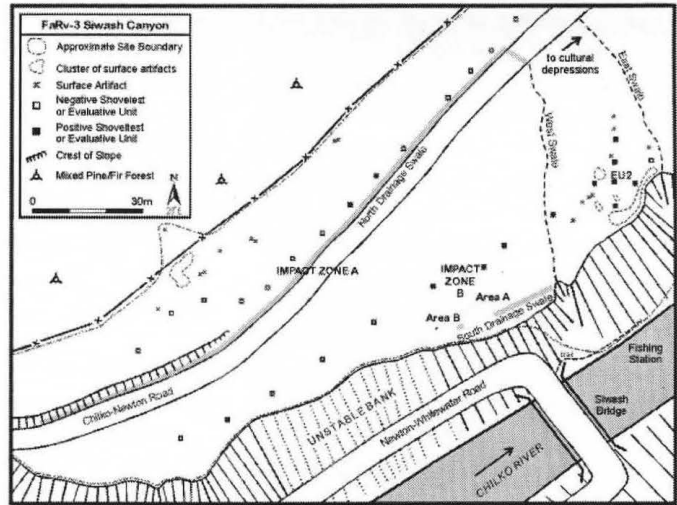


Figure 2. FaRv 3 site map.

project area but also the surrounding area, including the large, flat expanse across the Chilko River (the location of Siwash Gathering - held each year in August). Joe Alphonse and Paul Grinder (Tsilhqot'in National Government) state that gwetsilh was used intermittently throughout the year; late summer for the main salmon runs; in fall and winter for deer hunting; as well as for the winter-run of steelhead. In addition, the project area was considered an ideal place to camp due to its southern exposure and the availability of spring water nearby (northeast of the project area). Tsilhqot'in elders report that fish-drying racks were positioned at the north end of the terrace, near the break-in-slope, which was considered the optimal location for fish drying racks. Don Mitchell (University of Victoria) observed fish-drying racks in approximately this location in 1968, when FaRv 3 was first recorded as an archaeological site.

An archaeological impact assessment (AIA) was completed by Cariboo Heritage in May of 2000 with the assistance of Tl'etinqox'tin and Tsi Del Del (Anaham and Alexis Creek First Nations, respectively) representatives Tory Amut, Margaret Char, Clarence Marianne, Cindy Marianne, and Martina J. William. Based on the results of the AIA, recommendations were made to the Ministry of Highways to manage the direct negative impacts of the development to FaRv 3 and minimize the impacts to the site. In 2001, the Ministry of Highways decided to proceed with the project, and the collection of artifacts within the development area was undertaken in May 2001. The subsequent drainage swale excavation and culvert installation was then monitored by Cariboo Heritage in July 2001 with the assistance of the

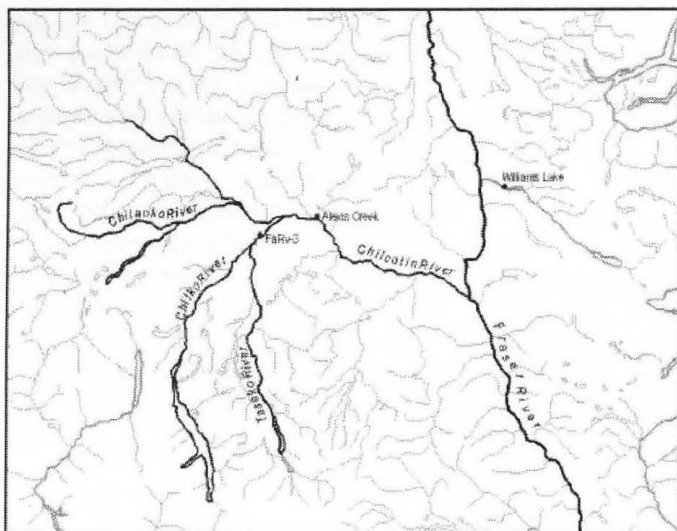


Figure 1. Location of FaRv 3.



Figure 3. Looking southeast across Impact Zone B.

aforementioned Tl'etinqox'tin and Tsi Del Del representatives. Analysis and reporting was completed after each stage of the AIA process. Dave Hall (Arrowstone Archaeological Research and Consulting) undertook a detailed lithic analysis of the material collected during the archaeological monitoring.

A design change introduced during monitoring resulted in the relocation of the south drainage swale approximately 9-15 m south of the location proposed in 1999. Archaeological deposits were encountered during the excavation of the drainage swale in this new location, approximately 15 m west of its starting point (Impact Zone B: Area A). Excavation was halted while the archaeologists assessed the exposed archaeological deposits. In order to determine the horizontal extent of the deposits, an exploratory excavation was undertaken 8-10 m to the west, along the new proposed drainage swale route (Impact Zone B: Area B). Using a hydraulic excavator, the exploratory excavation (which consisted of one scoop of the excavator bucket) also revealed intact archaeological deposits. All excavation was then suspended and the Archaeology Branch was contacted.

In order to address this unexpected impact to FaRv 3, an agreement between the Ministry of Highways and the Archaeology Branch was reached. The agreement consisted of limited data recovery, including provision for

radiocarbon dating, of the exposed archaeological deposits to be funded by the Ministry of Highways. The agreement was deemed satisfactory by the Tl'etinqox-t'in and Tsi Del Del First Nations' representatives on site. The excavation of the south drainage swale remains suspended by the Ministry of Highways until it can be determined if the north drainage swale is adequate in redirecting seasonal runoff. The Ministry plans to monitor future runoffs to determine if this is the case.

### Results

The combined results of the fieldwork at FaRv 3 revealed surface and subsurface stone artifacts and intact cultural deposits consisting of heat-altered sediments, fire-altered rock, charcoal, ash, and a small amount of animal bone fragments. Three hundred and ninety-seven artifacts were recorded during the AIA and 262 artifacts were recorded during the monitoring. Of these, the majority of the artifacts represent the by-product of stone tool manufacture, although a variety of tools were also recovered (Figure 4). These include:

- three partial basalt projectile points (:58, :83, and :500)
- one obsidian microblade (:318)
- one possible basalt microblade (:376)
- three basalt biface fragments (:215, :417, and :368)

The majority of the artifacts are made

primarily from basalt, although artifacts made of black obsidian, tan-coloured chalcedony, and orange-red chert were also recovered. The quality of the basalt is widely variable, ranging from fine-grained vitreous to coarse-grained with numerous crystalline inclusions. One of the projectile points (:500) recovered from FaRv 3 resembles others associated with the Kamloops Horizon (Richards and Rousseau 1987), extending from 200 to 1,200 years BP. The obsidian microblade (:318) found at FaRv 3 represents a specialized type of tool making technology found in the Interior Plateau from some time prior to 8,500 years BP to approximately 3,500 years BP (Donahue 1975; Fladmark 1985), although the time frame for microblade technology in this region is poorly understood (Stryd and Rousseau 1996).

The animal bone fragments recovered from FaRv 3 (n=248) are primarily small, burnt, and unidentifiable beyond the broad class of mammal (likely large mammal, such as an ungulate). One bird bone fragment and one small fragment of a beaver incisor were also recovered. Beaver are common in this part of the Chilko River and are often inadvertently caught in dipnets while fishing for salmon. Traditionally, beaver were caught and used for their fur, meat, and teeth. Beaver teeth, particularly incisors, were shaped and used as woodworking tools. No fish bones were observed in the faunal assemblage, which is surprising given the proximity of the fishing station. However, fish bones are fragile and often poorly preserved in archaeological deposits; thus, the absence of fish bones may reflect their lack of preservation at the site. Alternatively, it may indicate that fish were processed elsewhere and their remains not introduced into the archaeological deposits at FaRv 3. This latter suggestion is supported by the Tsilhqot'in tradition of discarding fish offal into the river as reported by Tsilhqot'in elder, (late) Dora Grinder, who warned that not adhering to this custom is risky since burning or burying fish remains will attract bears or other scavengers.

Intact cultural deposits were observed in three separate locations at FaRv 3 varying in depth from approximately four to 40 cm below surface. One location

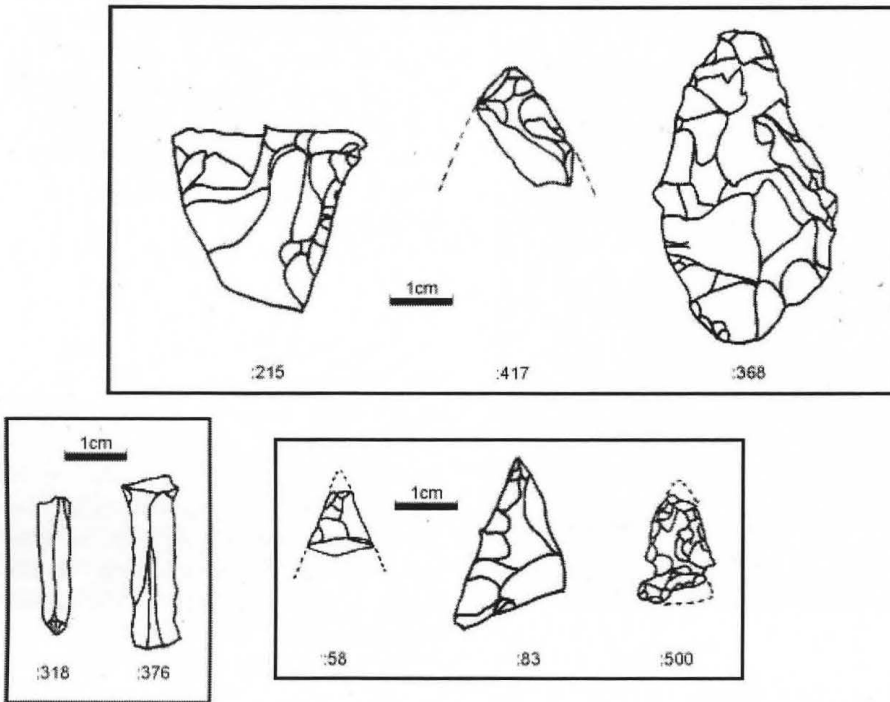


Figure 4. Field sketches of selected artifacts from FaRv 3.

(EU2) was identified during the AIA and two (or one larger) locations (Impact Zone B: Areas A and B) were identified during archaeological monitoring (Figures 5 and 6). The deposits feature well-defined concentrations of charcoal, ash, and heat-altered sediments. Fire-altered rock is abundant. In EU2 a number of small oval cobbles, broken into irregular pieces, were also observed. These are interpreted as discarded boiling stones. During the archaeological monitoring, three radiocarbon samples were collected from intact remnants of the cultural deposits. One sample was collected from Area A and two were collected from Area B. Radiocarbon Sample #3 was collected from Area B and consisted of a large concentration of charcoal found close to several large boulders and cobbles, charcoal-stained sediments, and abundant fire-altered rock. Other than penetration by roots and rootlets, no evidence of contamination was observed at the time of collection. Beta Analytic Inc. analyzed the sample and a date of  $200 \pm 50$  BP (before present, present = 1950) was obtained (Beta 159706,  $\delta^{13}C = -25.0$ ). The date, when calibrated (at two sigmas), indicates that the charcoal sample is likely to fall within one of three possible time ranges: AD 1640-1710; AD 1720-1880; and AD 1910-1950.

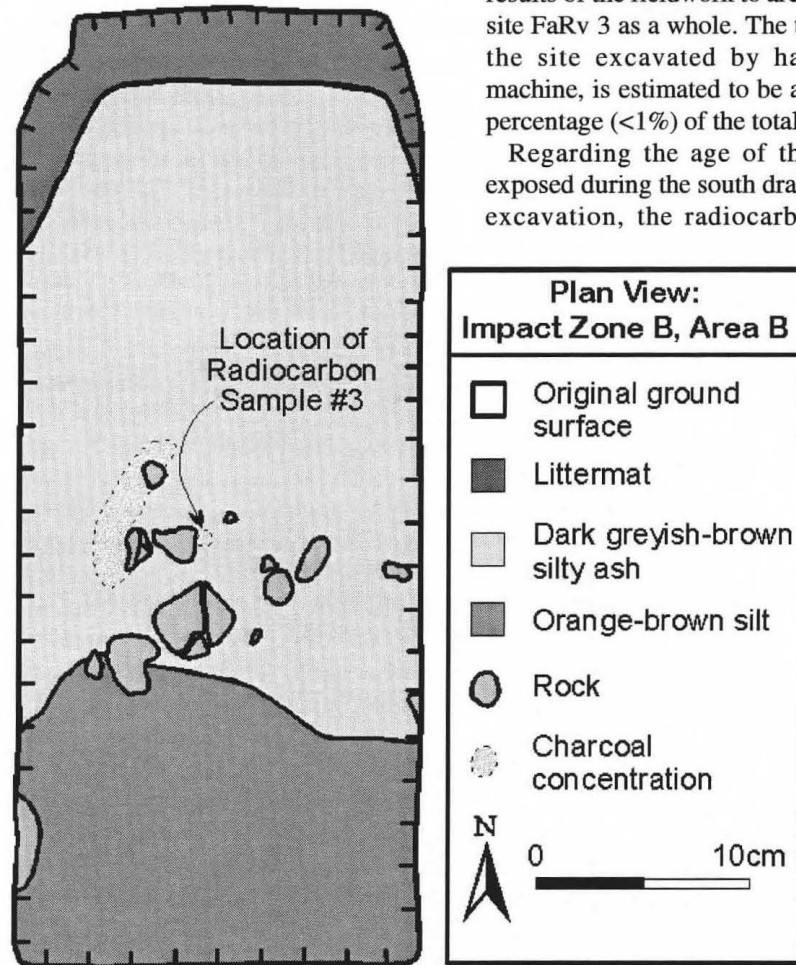


Figure 5. Plan view of Impact Zone B, Area B.

## Discussion

FaRv 3 is a large archaeological site covering an area approximately 12.4 ha in size (620 m NE-SW x 200 m NW-SE). The site features cultural depressions in the form of housepits and cache pits, stone artifacts located on and below the ground surface. Also included within the site boundary is the traditional fishing station located adjacent to Chilko River, at the base of the terrace. The AIA and the archaeological monitoring revealed the presence of intact cultural deposits near the terrace edge in three separate locations. The limited data recovery undertaken at Siwash Bridge, completed as part of the archaeological monitoring, was aimed at answering a few basic questions regarding the nature of the deposits encountered, including the age of the deposits, the traditional activities the deposits represent, and the traditional activities represented by the recovered stone artifacts. Appropriate caution should be employed when applying the results of the fieldwork to archaeological site FaRv 3 as a whole. The total area of the site excavated by hand and/or machine, is estimated to be a very small percentage (<1%) of the total site area.

Regarding the age of the deposits exposed during the south drainage swale excavation, the radiocarbon sample

returned a date of 200±50 BP and it seems most likely to fall within a time range extending from AD 1640 to AD 1880, given the lack of any associated historic-aged material. A partial projectile point, resembling others dating to the period 1,200-200 years BP, was recovered from the same deposits as the radiocarbon sample and consistent with the radiocarbon date. A second projectile point from this time period was also observed on the ground surface, north of Chilko-Newton Road, during the AIA. Although the temporal distribution of microblades on the Chilcotin Plateau is unclear, the recovery of a microblade (or possibly two) suggests a greater antiquity for FaRv 3 than indicated by the projectile points and radiocarbon date. Moreover, it seems unlikely that the use of the site is limited to this later time period, given the proximity of the Chilko River, the configuration of the landform, and extent of traditional use associated with this location.

The archaeological deposits and associated materials observed during the AIA and monitoring represent numerous activities, such as cooking, tool making, and tool maintenance. The deposits feature well-defined concentrations of charcoal, ash, heat-altered sediments, and fire-altered rock. It seems likely that these deposits represent cooking fires (as opposed to drying rack fires) based on the presence of fire-altered rock (indicating a high temperature fire), discarded boiling stones, and small, burnt animal bones. According to Joe Alphonse and Paul Grinder, ungulates, such as deer, were often roasted directly over an open fire and leftovers of the roasted animal were simply tossed into the fire. The

archaeological evidence uncovered in EU2 and in Impact Zone B, Areas A and B is consistent with this traditional method of deer roasting.

It appears that the stone artifacts represent a number of tool making and maintenance events. The detailed lithic analysis revealed a number of knapping events related to the manufacture and maintenance of tools, such as bifaces and scrapers. These types of tools are commonly associated with hunting activities. The absence of tools related to animal or fish butchery, despite the presence of processed mammal bone, may be explained by the desire to keep such valuable tools for future use. Alternatively, it may be that these tools are located elsewhere on the site and were simply not recovered during the fieldwork.

#### Conclusion

The drainage swale excavations and culvert installation at FaRv 3 resulted in the completion of an archaeological impact assessment, systematic data recovery in the form of systematic surface collection, and archaeological monitoring, including limited data recovery because of unexpected project design changes. Negative impacts to the site during the project were minimized and the drainage swale excavation proposed for the terrace edge remains suspended by the Ministry of Highways until it can be determined if the north drainage swale is adequate in redirecting seasonal runoff. As a result of the archaeological fieldwork, a new radiocarbon date for the Chilcotin Plateau was obtained and intact, non-housepit, cultural deposits were identified. Based on the archaeological evidence, as well as traditional use information, these deposits appear to primarily represent deer roasting

features. Other activities are also represented archaeologically at FaRv 3, including other cooking events, and stone tool manufacture and maintenance

#### Credits

Thanks to Joe Alphonse and Paul Grinder at Tsilhqot'in National Government for their support of the archaeological investigations at Siwash Bride and providing the traditional use information incorporated into this article.

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**Karen Brady (Cariboo Heritage Archaeological Consulting Ltd.)** received her BA (Archaeology) from Simon Fraser University and has worked on various archaeological projects throughout BC since that time. The last few years have seen Karen working in the Cariboo-Chilcotin on forestry-based AIAs as well as other CRM projects.

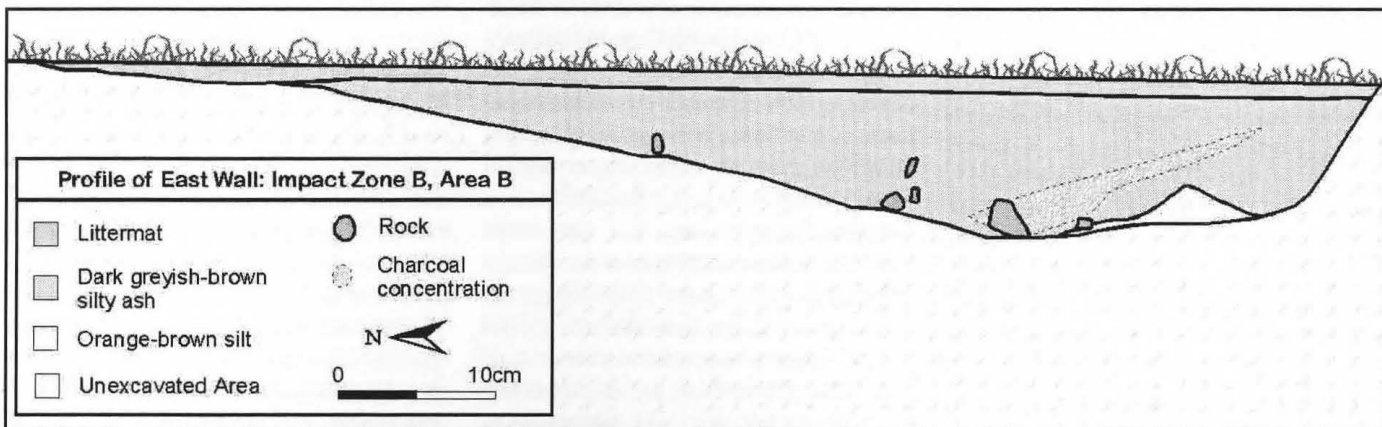


Figure 6. Profile of East Wall, Impact Zone B, Area B.