The 1974 Katz Salvage Project

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Introduction

The Katz site (DiRj 1), a large pithouse village, is situated on the northern bank of the Fraser River, three miles west of Hope, British Columbia on the eastern portion of Indian Reserve Number 4 (Katz) of the Hope Band. Archaeological work began at DiRj 1 in 1970–71, as a salvage project, when it was revealed that the completion of the Agassiz-Haig link of the Highway 7 would cause the destruction of a major portion of the pithouse village. Preliminary testing of the site began in 1970 and a large scale salvage project was undertaken in 1971. The report on this work was written by Hanson (1973).

During February and March of 1974 salvage archaeology was again undertaken at the Katz site after it was reported to the Archaeological Sites Advisory Board that forthcoming Westcoast Transmission Co. Ltd. pipeline construction would disturb the eastern section of the site. Negotiations with Westcoast Transmission resulted in restricting construction to a 60 ft. wide right-of-way through the site area. This then left two areas in which salvage archaeology was to be undertaken: a 60' x 60' area south of the CPR tracks (Area I) and a 60' x 90' area to the north of the Highway 7, (Area II).

Excavation Procedure

Since the time for field work was quite limited, the primary objective was to adequately test the areas in question. Random sampling and other techniques of salvage archaeology were employed to recover a meaningful sample. In each of the three areas of excavation, a limited universe of the area to be disturbed was defined. Over this a grid was set up and each square of the grid was numbered, after which a 5% and 10% Random Sample was drawn for excavation. This sample was adhered to as closely as possible. If, for instance, a selected pit fell on a large stump, the number was returned to the sample and a new draw was made. When features were discovered, extension pits were put in to further expose them. The random sample for each area will be discussed in later sections.

Excavation was carried out at DiRj 1 in tenth's of feet to record data in a comparable way to previous work done at the site (Hanson 1973). All excavations were tied three-dimensionally to a fixed datum point. Westcoast Transmission provided the use of surveyors to pinpoint excavation areas and datums on our maps. Excavation was carried out by digging in 0.5 foot levels below datum. Soil was removed by careful shovel-shaving of the pits and then sieving through ¼" wire mesh screens. Artifacts, features and stratigraphic contacts were carefully exposed with trowels and other fine excavating equipment. Artifacts found in situ were recorded using three dimensional provenience and placed in separate artifact bags. Level material was collected and recorded on level bags.

The datum point for Areas I and II was the same fixed datum and elevation point used during the 1970–71 excavation. This point is the southeast corner of a concrete support block along the Westcoast Transmission pipeline main line (Fig. 29).

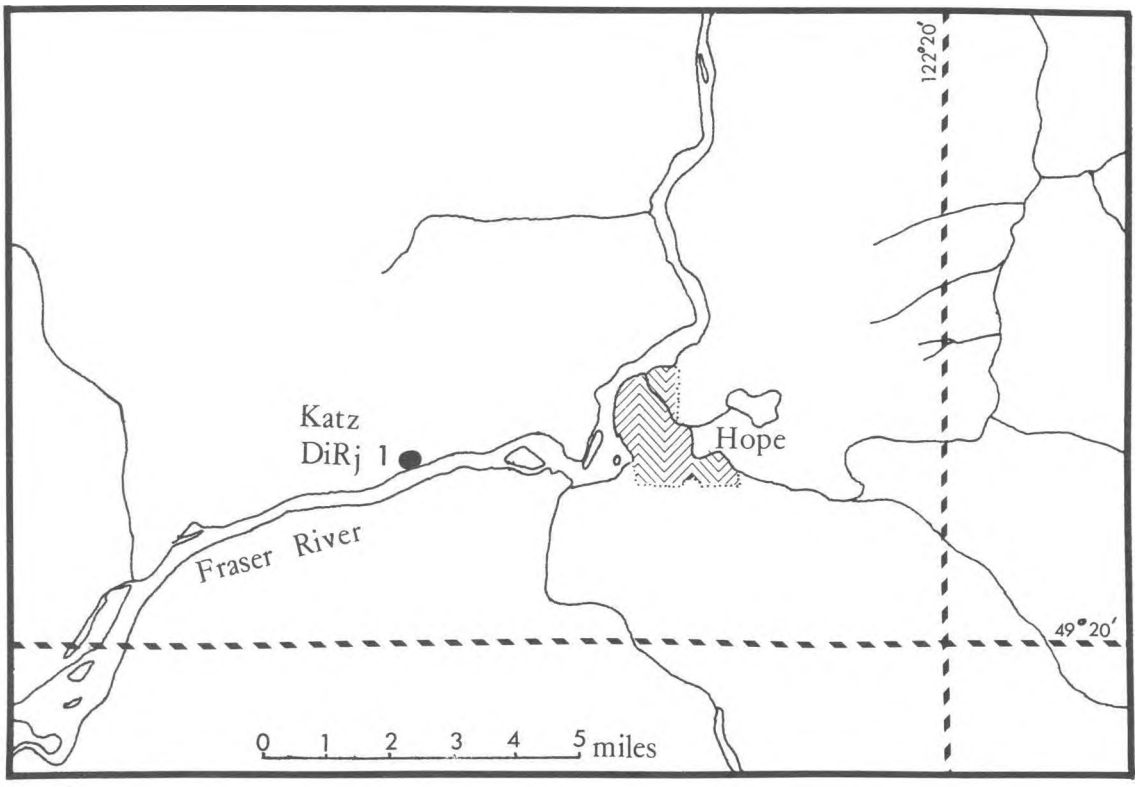


Fig. 28. The locations of DiRj 1 near Hope, B.C.

The Katz Site

Area I of DiRj 1 is bounded on the North side by the present day CPR Tracks and by the Fraser River on the South. The surface of this 60' x 60' area was relatively flat and featureless, with the river bank dropping steeply some 20 feet. Before excavating, it was divided into 144 (5' x 5') pits and a 5% and 10% random drawing was made to define the test sample (Fig. 30). Excavations were then begun on Pits 3,9,106,112 and 130 of the 5% sample. It soon became evident that all of these pits were sterile near the surface. Due to the time limitation the sample was abandoned in favor of testing the extremities of the area for cultural material. Pits 3,9 and 106 were continued and Pit 120 from the 10% sample was begun. All of these pits were then taken to the river cobble level. Pits 106 and 120 reached the cobble level at 13' below surface, revealing no cultural material at all. Pits 3 and 9 encountered the cobble level at 6' below surface. In these two pits considerable cultural material was found among the cobbles.

Pit 87 was excavated to test the possibility that a small depression between Pit 87 and 106 was a cache pit. Excavation did not verify this.

DiRj 1, Area II is situated between the proposed Highway scale site and the already existing Westcoast Transmission pipeline (Fig. 29). The area considered for excavation was a 90' x 60' rectangle running roughly N—S. The surface of the area was relatively flat with a few irregularities, but it was not possible to identify any surface features. The test area was then divided into 216 (5' x 5') pits. A 5% random sample was selected for testing (Fig. 31). Of the 5% sample, three alternative pits were selected when the sample pits had large stumps directly in them. Extension pits were excavated adjoining pits 211, 161, 149 and 115 to further expose features or possible features. To test the maximum possible depth of the cultural deposit, Pits 72 and 30 were taken to the river cobble level, encountered at 7' and 8' respectively. Figure 32 shows the vertical distribu-

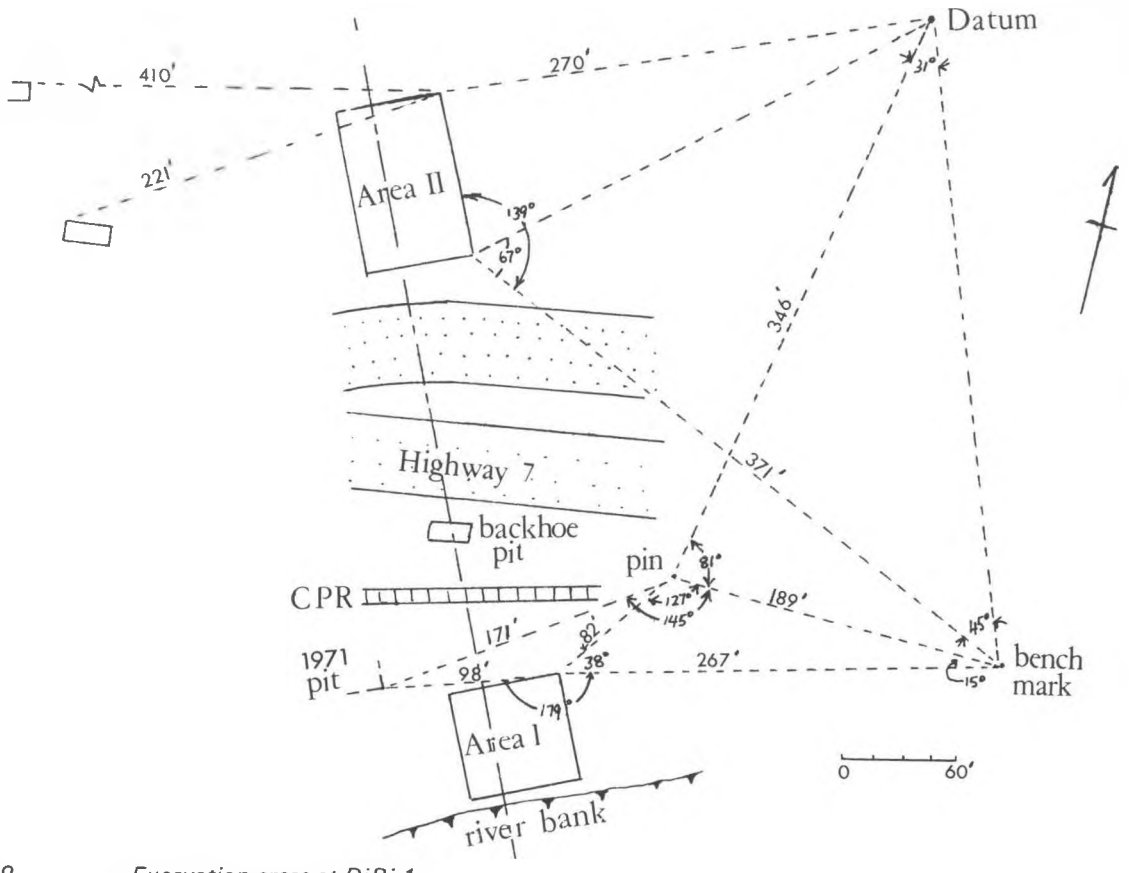


Fig. 29. Excavation areas at DiRj 1.

tion of the cultural material from Area II. Except for Pit 30, which included a very deep cache pit, and Pit 149, in which a burial was found, the maximum extent of the cultural deposits was consistantly between 2.5 and 4 feet below the surface. No cultural material was found in association with the river cobble deposit in Area II.

Stratigraphic zones were basically the same as those described by Hanson (1973:69–74):

Zone A: The Pithouse deposit – which includes all of the geological and cultural materials associated with the construction, occupation and disintegration of the pithouse. The majority of the cultural material recovered by Hanson was in association with the pithouse deposit. (Efforts were primarily concerned with pithouse excavation). A carbon –14 date from the floor ash from Pithouse 1 was 480 ± 90 BC (1–6191).

Zone B: The fluvial deposit – sediments laid down by the Fraser River during the development of the floodplain bank. Cultural material was found to a maximum depth of 2 feet above Zone C and persisted to 6 feet above Zone C. Carbon – 14 dates for the lowermost and uppermost Zone B cultural layers are given as 745 ± 90 (1–6189) and 525 ± 90 BC (1–6190) respectively. Zone B is characterized by hearth features, alignments of cobbles on end and stake mounds.

Zone C: Bottom of former river channel – this zone consists of water worn pebbles which represent the bottom of the old river channel. No cultural material was found in association with Zone C in 1970 – 71.

Although no Zone A was present, this was due to the fact that 1974 work did not involve Pithouse excavation. Zone A was therefore replaced by Zone A', which consists of topsoil and rootmat soil deposits above Zone B.

Artifact distributions with respect to stratigraphy, however, vary greatly between Hanson's (1973) excavation area and Areas I and II of the 1974 Salvage Project. Hanson (1973) found the majority of the artifacts recovered were from his Zone A. Zone B contained cultural materials down to a depth of 1.8 feet above Zone C. In Area I, no artifacts were recovered from Zone A', 2.6% of the artifacts were recovered from Zone B and 97.3% were recovered in direct association with Zone C, the

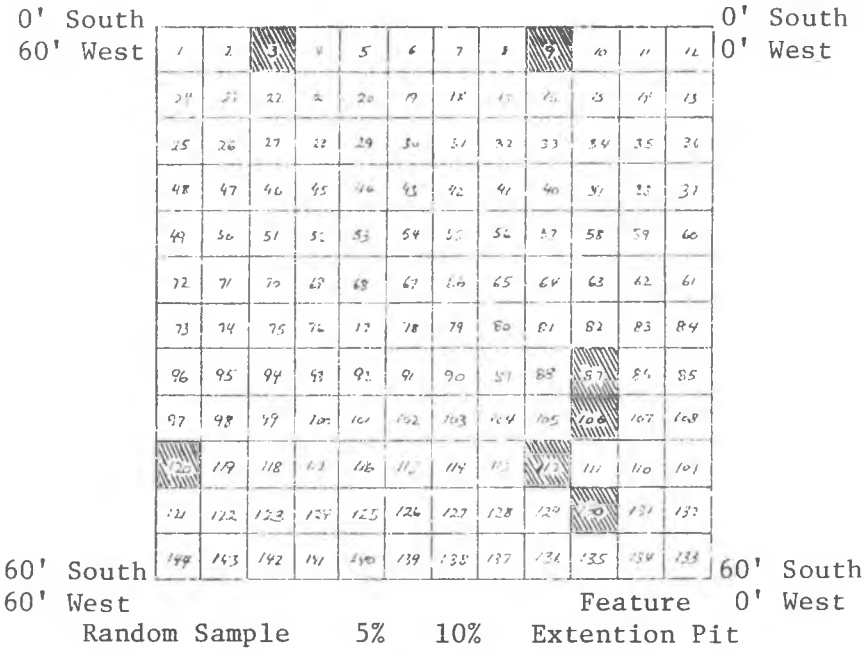


Fig. 30. Grid plan in Area I of site DiRj 1.

Random Sample	5%	10%	Extention Pit
1.	3*	105	85+
2.	112+	120*	
3.	45	26	
4.	9*	124	
5.	24	141	
6.	106*	68	
7.	130+	35	

* excavated to river cobbles
\+ excavation begun but not taken to river cobbles

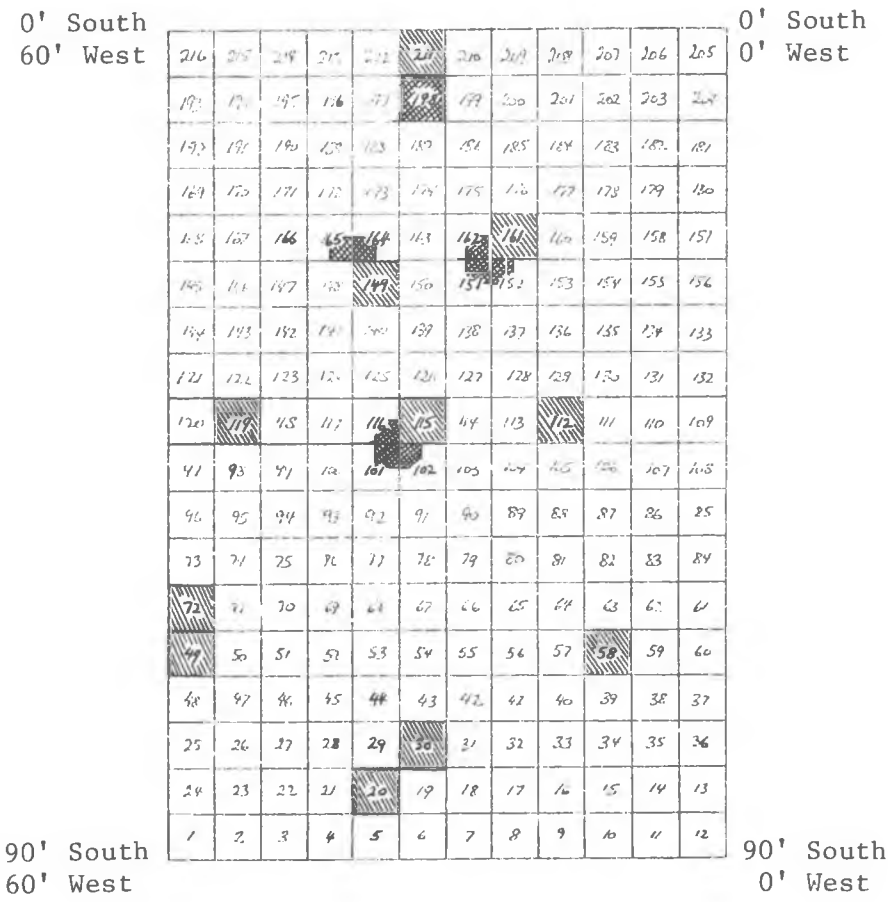
Excavated areas

river cobble level. In Area II artifacts were recovered from Zones A' and B to a maximum depth of 4 feet above the cobble level (Fig. 32). Deeper cultural intrusions were associated with features. No cultural deposits were found in association with Zone C. Representative profiles for Area I and II are shown in Figure 33.

In addition to the two test areas in 1974, observations were made on a Backhoe excavation done by Westcoast Transmission between the Highway and the CPR Tracks (Fig. 29). In this pit, a dark brown cultural deposit at least 4 feet thick could be clearly seen overlying the Zone B sand. This may likely have been a house depression filled in by past railroad and highway construction activities. Later construction activities in Area I removed all of Zones A' and B and extending well into Zone C confirmed the fact that cultural material from Area I was in direct association with river cobbles.

Artifacts and Features

The total sample of artifacts excavated from DiRj 1, Area I (221), and Area II (186), together with those collected from the Backhoe test hole, the beach and the surface in general (49) total 456, excluding utilized flakes. The collection by itself represents a small and comparatively undiagnositc group. It was



Excavated areas

Feature extention pits

Random Sample	5%	Alternative
1.	30*	6
2.	95 (stump)	112+
3.	20+	71
4.	58+	176
5.	161+	4
6.	119+	191
7.	211+	19
8.	15 (stump)	49+
9.	149+	107
10.	72*	175
11.	159 (stump)	115+

*excavated to cobbles
+excavated to sterile

Fig. 31. *Grid Plan in Area II of site DiRj 1.*

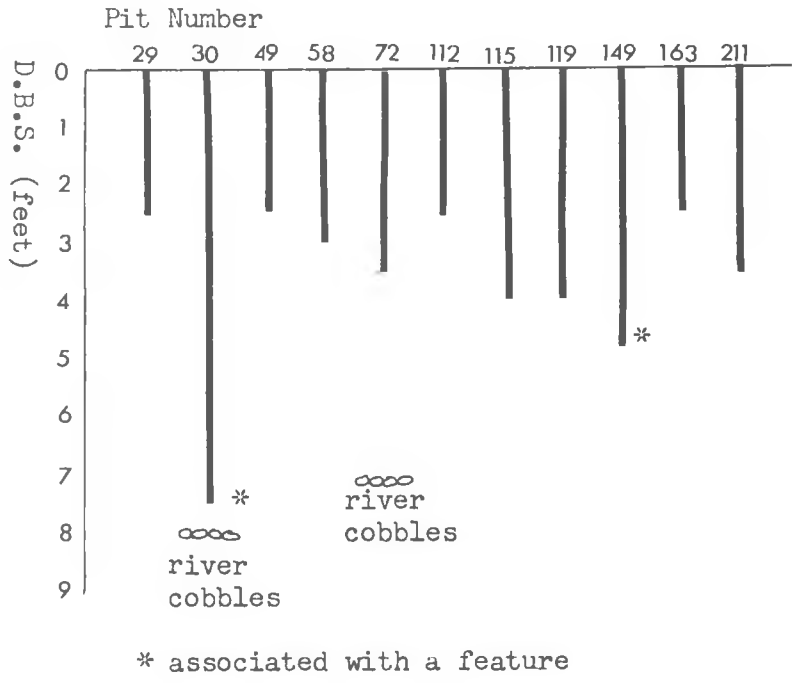


Fig. 32.
Vertical distribution of cultural remains in Area II at DiRj 1.

for this reason that preliminary artifact analysis was made in close correlation with Hanson's (1973) work at the site, based on 3184 systematically excavated artifacts. By grouping the artifacts similarly, direct comparisons could then be made between the 1970–71 excavations and the 1974 Salvage Project.

Hanson (1973:106–107) divided the artifacts into:

1) major categories (chipped stones, ground stone, bone etc.)
2) classes (bifaces, chipped stone points, etc.) and
3) groups (various types of chipped stone points etc.)

A similar system as used by Sanger (1970) in his description of artifacts from the Lochnore–Nesikep Location. For the purpose of this report, the artifacts were divided into the major categories and classes, with only a few of the classes being further subdivided into groups. The various descriptions and definitions for these categories, classes and groups are given by Hanson (1973:114–258) and need not be repeated here, the category and class names being largely self-explanatory.

The artifacts recovered from DiRj 1 in 1974 were catalogued by A.S.A.B. and then loaned to me for examination. I then went through the artifacts and catalogue, making amendments where necessary. The result of examining the artifacts is shown in Table 1, the artifact summary sheet. A selection of artifacts are shown in Figures 34–38. The features discovered in 1974 are described in Table 2.

Discussion

It is interesting to note the relationship between cultural deposits and the stratigraphy between the different areas of the Katz site which have now been examined. By examining the varying depths of the cobble level it becomes obvious that the level drops sharply as it nears the present day river bed. Hanson (1973:73) observed that:

> "The depth below surface [to the cobbles] increases in the direction of the river as the bar slopes downward, which indicates that the river has been degrading its bed."

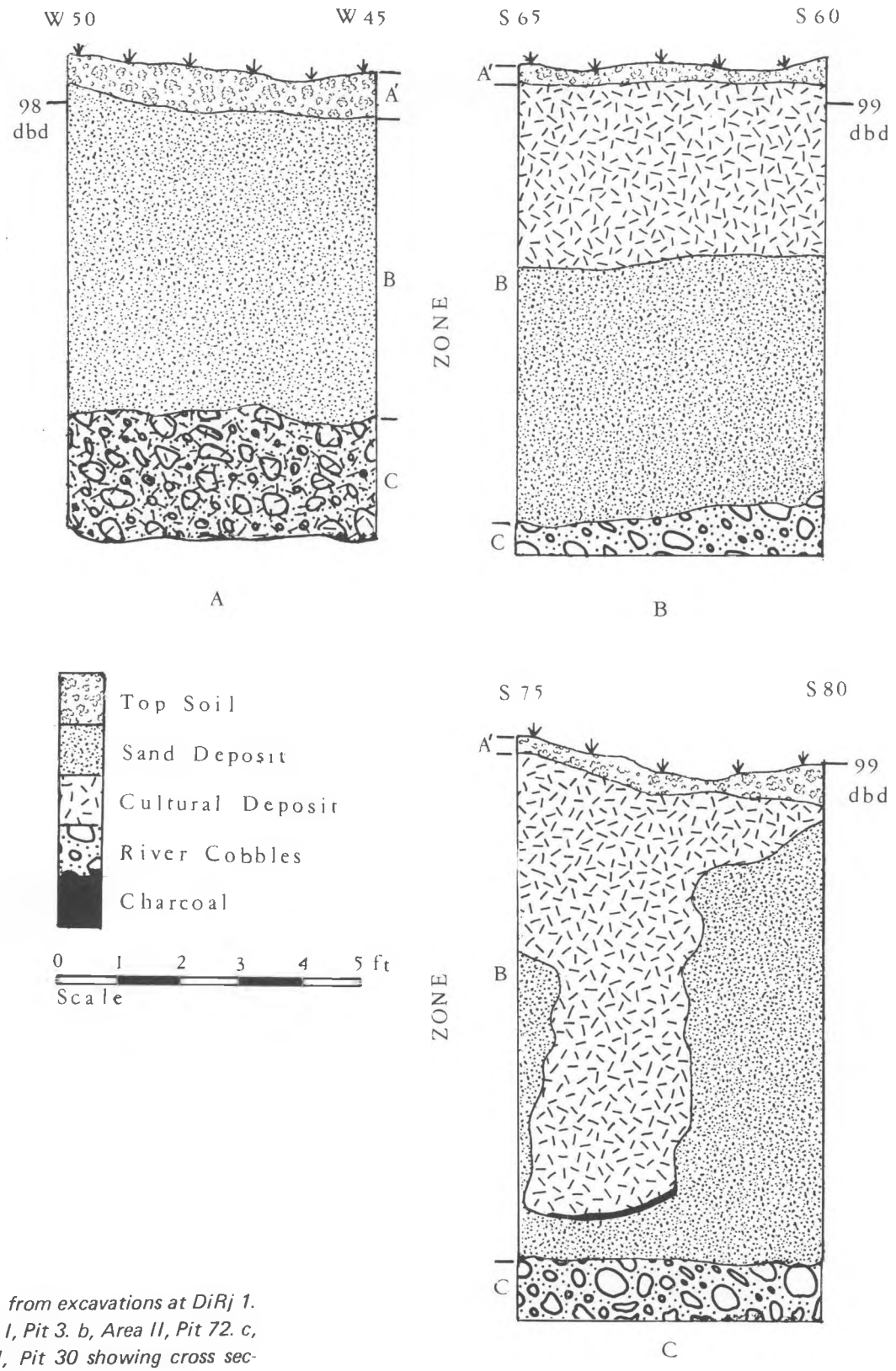


Fig. 33.
Profiles from excavations at DiRj 1. a, Area I, Pit 3. b, Area II, Pit 72. c, Area II, Pit 30 showing cross section of cache pit.

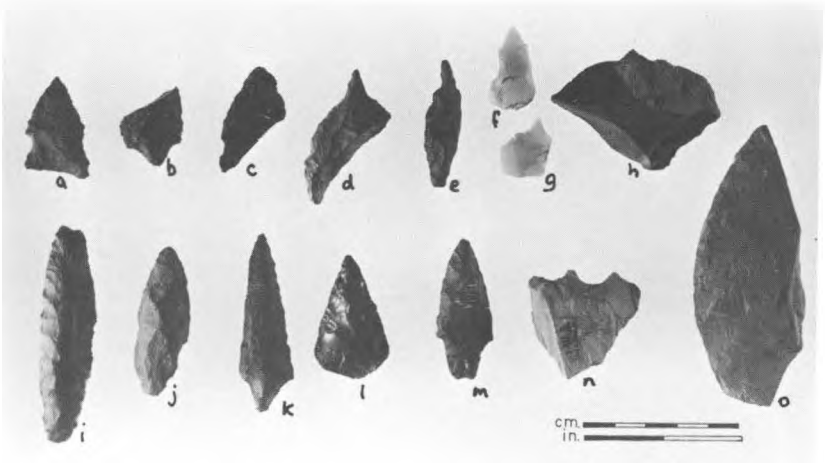


Fig. 34.
a, b, j - m, projectile points; c, i, o, other bifaces; d, e, drills; f — h, n, unifaces. Area I, Zone C: Pit 3, a — f, h. Surface: g, j, o. Area II, Zone A′ — B: Pit 211, i, m; Pit 149, k; Pit 119, l, n.

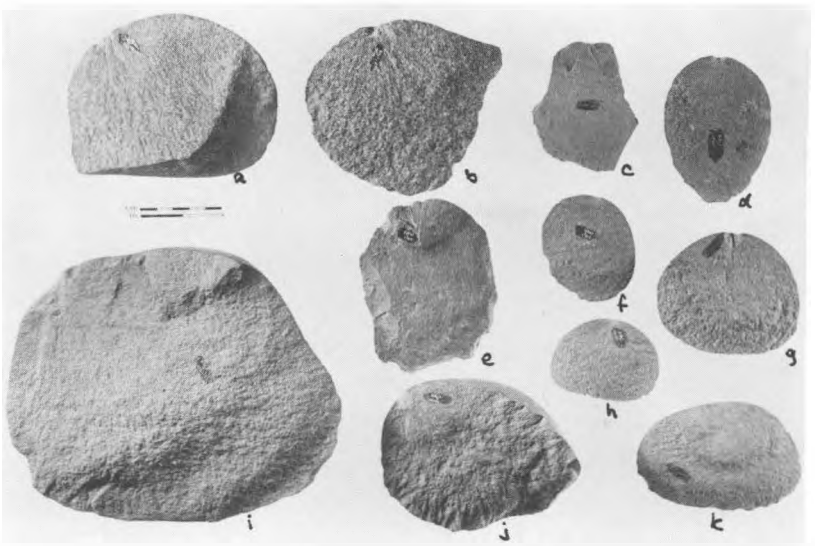


Fig. 35.
Spall tools. Area I, Zone C: Pit 3, a — c, e — f; Pit 9, g — h, j. Area II, Zone A′ — B: Pit 72, i; Pit 49, k. Surface: d.

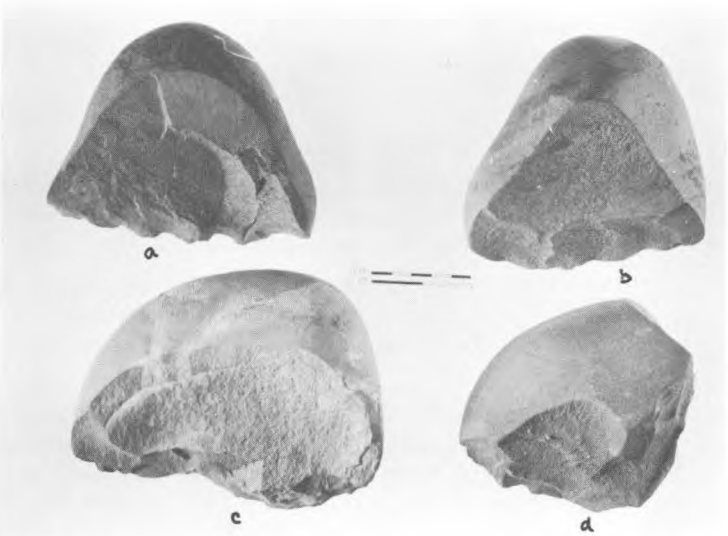


Fig. 36.
Pebble Tools. Surface: a — c. Area II, Zone A′ — B: Pit 149, d.

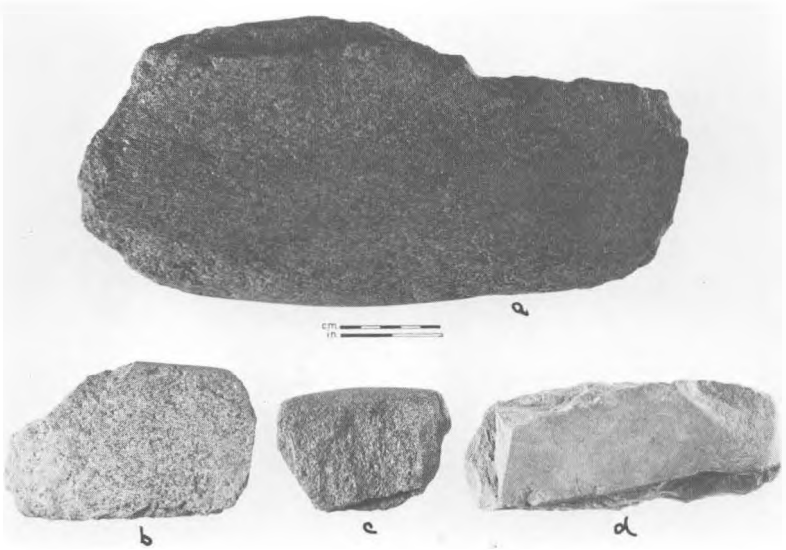


Fig. 37.
a — c, abrasive saws; d, abrasive block; e, sawn nephrite cobble. Area II, Zone A' — B: Pit 30, a — b; Pit 198, d. Surface: c, e.

On the basis of 6 points, where excavations were carried out down to the cobble level, Figure 39 was constructed. It shows the present day roads, railroad tracks and the excavation areas I and II in relation to the projected cobble level. The cobble level clearly takes a sharp drop as it nears the river in Area I, the remaining portion maintaining a relatively stable level. The fact that Pits 3 and 9 in Area I had a very productive cultural deposit in direct association with river cobbles presents an interesting situation. The following evidence suggests that these artifacts and features were laid down in situ:

1. the double hearth feature from Pit 3 found well within the cobble level was intact, complete with quantities of charcoal.
2. the artifacts recovered from Pits 3 and 9 are not water worn as would be expected if they were washed out of the deposit.
3. the location of the cobble depth is at a relatively high point in Pits 3 and 9 as compared to the cobble depth in nearby Pit 106.

To explain the occurrence of cultural material among the cobble level, one is left with several alternatives: 1. the deposit may have been laid down by Zone B "occupants" who visited the river beach and had campfires there. These hearth's were then

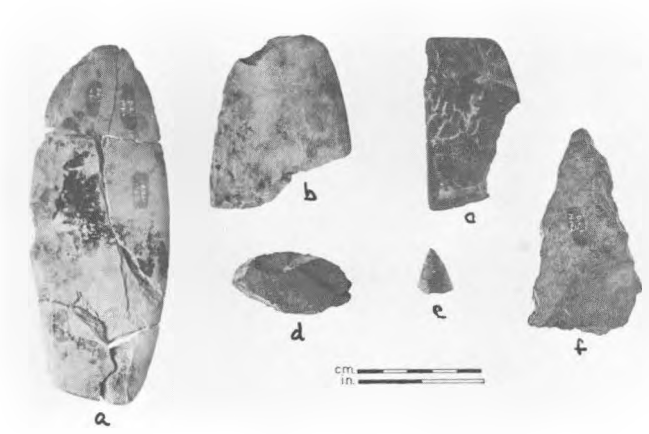


Fig. 38a. *a – c, ground slate knives. d, f, chipped slate objects. e, chipped and ground slate point fragment.*

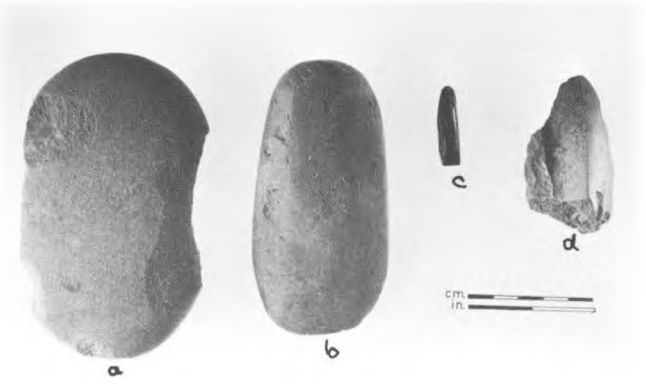


Fig.38b. *a, edge battered cobble. b, adze blade. c, chisel. d, sawn nephrite. Area II, Zone A′ – B: Pit 119, a – b; Pit 49, c; Pit 72, d.*

later covered by waterdeposited rock and sand. It is important to remember that Hanson (1973:260) found cultural material in Zone B to a depth of 1.8 feet above Zone C, not far from the actual cobble level. And 2. the Zone C river cobble deposit may have been laid down before the Zone B deposits. A charcoal sample from Hanson's (1973:260) lowermost cultural layer has been C^{14} dated at 745 ± 90 BC (1–6189). If the above mentioned suggestion were to hold, a C^{14} date for the Zone C hearth would have to yield a date earlier than this. Either of the above suggestions would appear to explain the occurrence of the Zone C cultural deposit. In any case, the artifacts from Zone C do not differ greatly from those of Zone B.

By comparing Area I, II and the Backhoe pit it is clear that site occupancy varied. I would suggest that the main habitation area, as demonstrated by the relative depths of cultural deposits, was in the vicinity of the Backhoe test. Here the Zone A deposit attained the thickness of 4.5 feet with underlying cultural material in Zone B to be observed. Towards Area I to the south and Area II to the north, concentrations of cultural deposits diminish. In Area II the cultural deposit is relatively thinly scattered horizontally and shallow vertically. Cultural material in Area II could relate either to Hanson's (1973) Zone A or B. Area I only had a concentrated deposit in Zone C. This hypothesis is supported by the 1970–71 pithouse excavation which fell to the east, but just north of Area I on a N–S axis.

Area II was interesting because of the various features found there. Pit 30 cut through approximately half of a very deep cache pit. In the cache pit were found various artifacts including 2 sandstone saws and an adze fragment. Other fill included fire broken rock, beach pebbles and flecks of charcoal. The bottom of the cache pit had a thin lining of charcoal. The exact function of the cache pit remains unknown (Fig.33*c*).

Two very badly disintegrated burials were found associated with rock concentrations and charcoal. Some bone fragments are calcined, indicating, together with the charcoal, possible cremations. Identifications of the human remains was made in the field by mem-

Table 1. Artifact frequencies, Katz Site, 1974.

Artifact categories	Area I		Area II	Surface
	Zone A'-B	Zone C	Zone A'-B	
Chipped stone points				
unstemmed			1	1
single shoulder			1	
bilaterally shouldered, contracting stem		2	3	
corner notched		1		1
Bifaces				
leaf shaped			1	
with retouched projections		1		
biface fragments		13	3	1
unformed and miscellaneous bifaces		3	8	1
Unifaces				
with retouched projections		4	1	
with marginal retouch		12	1	
notched		1	1	
unclassified			3	7
unformed		6	16	
Bipolar flaked tools		1	1	
Quartz crystals, tools		6	4	
Cortex spall tools	1	37	39	14
Cortex spall tool fragments	1	15	4	
Cortex spall cores		1	1	
Cores, core fragments and core tools	2	24	17	9
Split cobble tools		1	2	2
Pebble tools	2	1	7	3
Hammerstones		1	2	
Abrasive stones				
saws			2	1
blocks			1	
fragments		1		
Ground slate				
knife, complete or nearly so		3	6	
fragments		60	41	7
points and point fragments			1	
preforms		4	2	
chipped slate			6	
Ground nephrite				
adze, complete			2	
fragments		14	3	1
cut blocks			2	1
Miscellaneous				
ground fragments of other material		2	1	
obsidian		1		
ochre		1	1	
lignite (?) bead			1	
notched pebble net sinker			1	
TOTALS	6	215	186	49

Table 2. Summary of site features.

Feature Number	Type	Excavation Unit	Zone	Dimensions
Area I				
1.	2 hearths	Pit 9	C	3'x5' *
Description: A section of two well defined circular hearths, side by side, formed with large river cobbles set vertically with the tops of the cobbles sloping somewhat outward. Filled with dense charcoal, sand and small river cobbles. No charcoal appeared between the 2 hearths.				
2.	charcoal concentration	Pit 3	C	0.8'x1.4' *
Description: A concentration of charcoal in association with fire cracked rock and fragments of burnt bone.				
Area II				
1.	cache pit	Pit 30	B	see figure
Description: A deep cache pit clearly indicated by soil discoloration. Some artifacts, fire cracked rock, beach pebbles and charcoal flecks were found in the cache pit fill. The very bottom of the cache pit had a thin lining of charcoal. No surface feature indicated the presence of the cache pit. Exact function not determined.				
2.	burial	Pit 149	C	2.2x2.5 *
Description: Bone fragments were found on and among a concentration of rock. The bone was identified to be that of an adult human**. Identifiable fragments included teeth, skull, tibia and phalanges pieces. The bone was badly disintegrated, with the calcined fragments being best preserved. Charcoal and the calcine bone may indicate a cremation. Artifacts associated with the burial include a projectile point, ground slate fragments and a stone bead.				
3.	possible hearth	Pit 161	B	2'x2.5'
Description: A possible hearth feature consisting of charcoal and associated artifacts, detritus and fire cracked rock.				
4.	burial and concentration of rock	Pit 211	B	2.8'x3'
Description: Bone fragments overlying a large concentration of rock. The bone was identified as being that of an adult human**. Identifiable pieces were phalanges, patella and skull fragments. Bone was again badly disintegrated. Charcoal fragments and calcined bone may indicate cremation. The rock concentration consisted of some artifacts, fire cracked rock and beach pebbles in no apparent order. Among the artifacts found in association with the burial was a broken (but complete when pieced together) ground slate knife. A red jasper biface was found near the bottom of the rock concentration.				
5.	circular charcoal stained spot	Pit 119	B	0.2'x0.2'
Description: A small, circular charcoal stained spot with burnt bone fragments in the stained area. A calcined adult human mandibular incisor was among these burnt bone fragments**.				

*indicates the feature was not fully exposed.
**identification of human remains was made in the field by the participating crew members. Preliminary indentification was confirmed by O. Beattie (1974b).

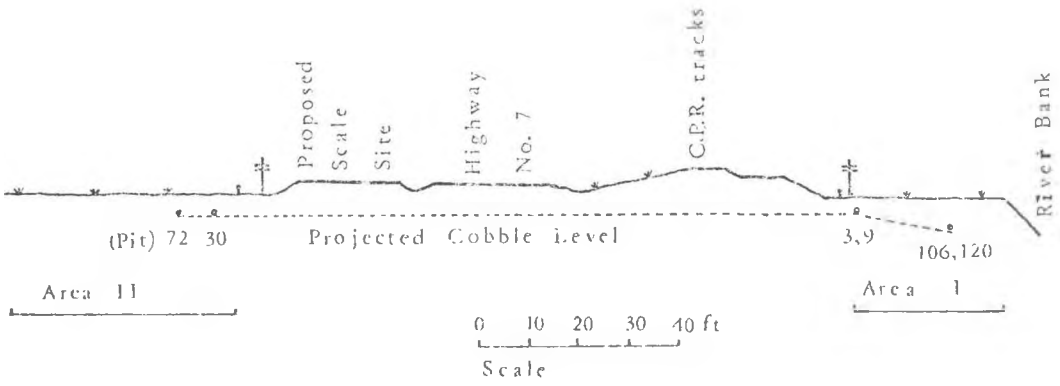


Fig. 39. *This projected river cobble level at DiRj 1 was drawn on the basis of the six points where 1974 excavations exposed the actual cobble level. Note the relatively stable level between Pits 72 and 30, Area II, and Pits 3 and 9, Area I. The cobble level then makes a sharp drop, between Pits 3 and 9 and Pits 106 and 120 in Area I, as it nears the present day river bed.*

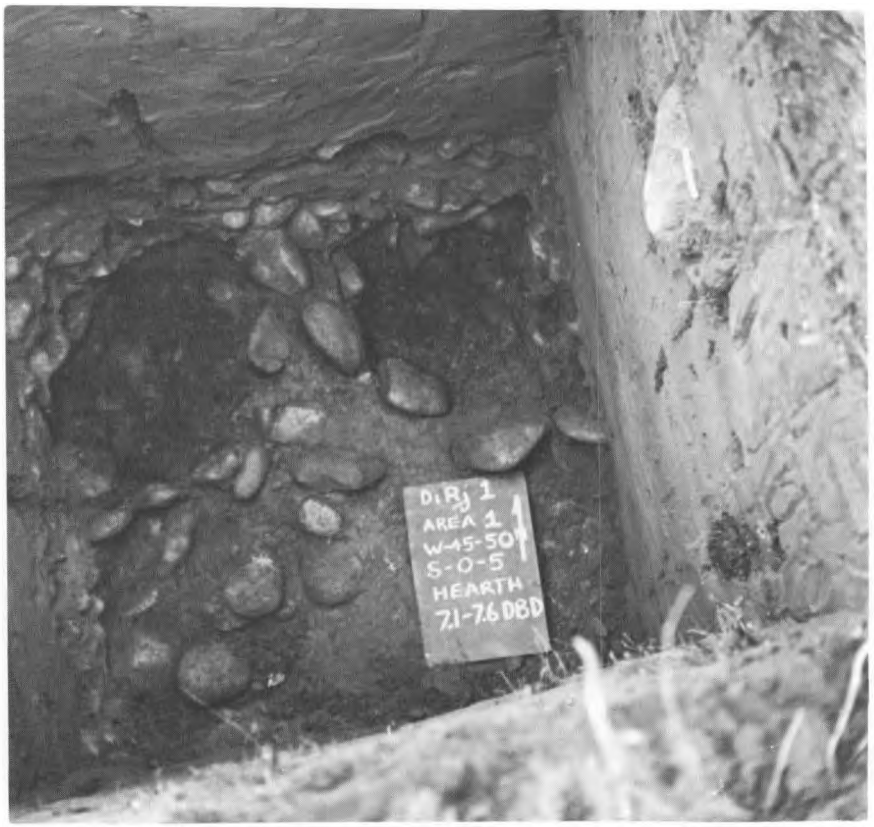


Fig. 40. *Two hearths in river cobble level, Zone C, Area I.*

bers of the salvage crew. This identification was confirmed by O. Beattie (1974b) of Simon Fraser University. Among the artifacts found in association with burial 2 were a chipped stone projectile point, a

lignite (?) bead, and ground slate fragments. The burial remains were found on and among the rock concentration. Among the artifacts in direct association with the burial (Feature 4) were a large, broken ground slate knife, and miscellaneous ground slate fragments. The burial remains were found directly, overlying the rock concentration, not far beneath the surface. At the bottom of this rock concentration a red jasper biface was found (Fig. 41).

All of the 456 artifacts recovered from DiRj 1 during the 1974 Salvage Project were made of stone. No bone was found during the excavation other than those from the burials. The total lack of organic artifacts is explained by Hanson (1973:259) as being due to a very high soil acidity. The condition of the in situ burial remains would tend to verify this. The survival of the bone here was largely due to the fact it was calcined. The non-calcined bone from the burials was observable in situ, but disintegrated entirely as it was removed. No new artifact types were found during the 1974 excavations. A percentage comparison is made in Table 3 between artifact categories from Area I, Area II and Zone A and B from the 1970 – 71 excavation (compiled from Hanson 1973:250–258) The Area I and Area II figures are of course based on a much smaller sample size than those from Zone A and Zone B (1970–71 excavations).

The figures on Table 3 show generally comparable assemblages. The consistently most frequent tool types in all areas are spall tool and spall tool fragments, ground slate fragments and cores, core tools and core fragments. Hanson (1973:276) noted that his Zone A artifact assemblage had a much broader range than did those of Zone B. This broader range also occurs in the Area II assemblage as compared to the Area I assemblage. (The "other catagories" percentage on Table 3 shows this.)

Whether this reflects a broader range of activities for Zone A (2,698 artifacts) than for Zone B (486 artifacts) as Hanson (1973:276) suggests, or is merely a result of the sampling procedure, is debatable. Insofar as Area I and Area II are concerned, 221 artifacts are recorded for Area I and 186 for Area II. The relatively equivalent numbers of artifacts from the two areas, with a correspondingly high figure for "other categories", would tend to suggest and support the broader activity range hypothesis for Area II (Zone A' – B) over Area I (Zone C).

Hanson (1973) suggests the Zone B cultural deposits (artifacts and features) indicate some regular utilization of the site. This utilization would have to be seasonal, perhaps summer and fall, as the thick deposit of fluvial sediments in Zone B would indicate regular flooding by the Fraser River. He suggests occupation may have coincided with the annual sockeye salmon run after July 1st and lasted until early fall. The Zone C deposit at Area I, as mentioned earlier, may have been contemporaneous to early Zone B or it may be somewhat earlier. The Zone A pithouse deposit represents a semipermanent habitation site with the earliest date from the bottom of Pithouse 1 set at 480 ± 90 BC (1–6196) (Hanson 1973:267, 276). From the relative stratigraphic position of the Area II deposit, the nature of the deposit and the profile of the cache pit feature extending far into Zone B, one can conclude that the Area II cultural deposit is probably contemporaneous to some timeperiod of DiRj 1 pithouse occupation, after 480 ± 90 BC.

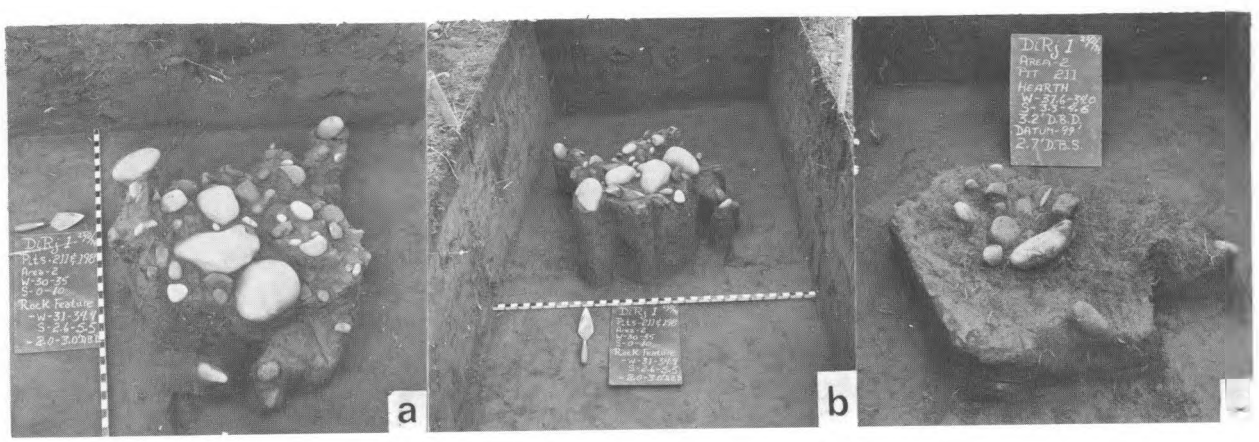


Fig. 41. *Feature 4, Area II, Pit 211. a, b, Two views of top of exposed rock concentration. c, Bottom of rock concentration with jasper biface in situ.*

Table 3. Artifact frequency comparisons.

	Percentage			
	1970-71 Excavations		1974 Excavations	
			Area I	Area II
	Zone A	Zone B	Zone C	Zone A'-B
spall tools + spall tool fragments	31	30	24	23.4
ground slate fragments	16	11	31	30
cores, core tools + core fragments	11.5	28	11	9
abrasives including saws	10	13	0.5	2
formed bifaces	1.9	3	8	6
formed unifaces	2.0	0.6	8.0	3
unformed unifaces	3.7	5	2.8	9
sawn nephrite detritus	4.8	3	6.5	3.7
chipped stone points	2.1	3	1.4	2
other categories	17.0	3.4	6.8	12

Conclusions

The recent Katz Salvage Project has shown that a much broader range of data can be recovered by excavating in the extensive area around known house pit features. While Hanson's (1973) excavations dealt with the recovery of data related to the construction and occupation of two pithouses, the work reported here concentrated on two areas not directly associated with any such features. In Area I, a previously unrecorded Zone C cultural deposit was exposed. Unfortunately, due to construction activities, excavation in this area had to be halted before the cultural deposit could be fully excavated. A more complete and wider exposure of Zone C may have yielded more information on the relative age of the cultural deposit as well as enabling us to possibly define and describe what specific activities were being undertaken. Also, the excavation of all four pits in this area to the cobble level, helped to establish the slope of the presently buried cobbles. In Area II, specific features not directly associated to a house pit, were recorded. Three of five recorded features had associated human remains. Another, a very deep cache pit, was of a type not recorded previously at DiRj 1. The occurrence of these features suggests that this portion of the site was being used for specific purposes. It is not possible at this time to state precisely how these may have related to the actual house pit occupations.

It is clear that much information still exists at DiRj 1. With the results of the pit house excavations by Hanson (1973) and the salvage work reported here, a more systematic and problem-oriented excavation with specific objectives can be outlined, should further work at DiRj 1 be undertaken.

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