EMERGENCY ARCHAEOLOGICAL SURVEY OF THE JgEj-3 SITE, QUAQTAQ, NORTHERN QUEBEC

Report presented to
the Avataq Cultural Institute Inc.

by
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ACKNOWLEDGEMENTS

The present emergency survey was administratively organized by Mr. Charles A. Martijn, Direction régionale du Nouveau-Québec et service aux autochtones, Ministère des Affaires culturelles du Québec, in collaboration with Mr. Johnny Epoo, President of the Avataq Cultural Institute Inc. The work in the field was greatly facilitated by Mr. David Okpik, Director of the Tuvaaluk Landholding Corporation, who kindly allowed us use of his Honda three-wheeler as well as provided valuable discussion concerning the mitigation of further adverse impacts on the JgEj-3 site. Mrs. Maggie Okpik welcomed us into her home and, during our stay in Quaqtaq, accomodated us in a manner typical of her warm hospitality. Ms. Lorraine Brookes, Director of the Makivik Corporation Research Department, and Mr. Bill Kemp, also of Makivik, co-operated in the scheduling and transportation arrangements permitting the survey to be carried out.

The assistance and interest of these individuals in the present project is gratefully acknowledged.

SUMMARY

The present report concerns the emergency survey of the JgEj-3 site, a disturbed Dorset habitation site located in the vicinity of the village of Quaqtaq, northern Quebec. This site consists of ten (10) semi-subterranean dwellings, six (6) identified tent rings and a number of other secondary cultural features. Several of these habitation structures have been partially destroyed by the construction of an access road across the locality and by the exploitation of the site as a borrow-pit. Additionally, two (2) of the semi-subtererranean dwellings have been pillaged.

Field activities focused on the mapping of the site, the surface collecting of disturbed cultural materials, and the photographic documentation of habitation structures and disturbed zones. Data recovery includes approximately 450 lithic specimens and a small faunal collection. Preliminary interpretation of the data collected suggests that the site was occupied on a multi-seasonal basis by numerically-differing Middle Dorset culture groups. Recommendations for the archaeological salvage of the site involving the active participation of the community of Quaqtaq are forwarded.

1.0 CONTEXT OF THE SURVEY

The JgEj-3 site was discovered by the Tuvaaluk Programme in 1977, during a brief archaeological survey of the northeastern shore of Diana Bay, northern Ungava. The site, located in the vicinity of the village of Quaqtaq, was initially reported as comprising nine (9) or ten (10) Dorset semi-subterranean dwellings and at least two (2) cache pits (Plumet, 1977). An undetermined number of tent rings was also suggested by vague alignments of rocks scattered across the site (Badgley, 1977).

Random sampling of several of the semi-subterranean dwellings at this time produced a small lithic collection as well as a number of bone fragments. The soil profiles revealed in the test pits and the preservational state of the dwellings allowed the site to be assessed as undisturbed. As the site appeared to be in no immediate danger of disturbance, no recommandations for further archaeological research at JgEj-3 were forwarded by the Tuvaaluk Programme.

In July, 1984, Mr. Denis Roy of the Ministère des Transports du Québec visited Quaqtaq in order to interview local Inuit residents concerning known archaeological resources in the airport development area of the municipality. During this visit, Mr. Roy carried out a brief visual inspection of JgEj-3 and immediately informed Mr. Charles Martjin, Ministère des Affaires culturelles du Québec, that a considerable portion of the site had been inadvertently destroyed earlier in the summer. This disturbance resulted from the construction of an access road across the site and, additionally, from use of the site as a borrow-pit for gravel materials necessary to the construction of

the road. Extensive pillaging of two (2) of the semi-subterranean dwellings was also noted.

Acting of this information, Mr. Martijn, in collaboration with Mr. Johnny Epoo, President of the Avataq Cultural Institute Inc., rapidly organized an emergency survey of the JgEj-3 site. The firm Amênatech Inc. was subsequently engaged by the Avataq Cultural Institute to carry out the survey.

As Amênatech was then contracted by the Makivik Corporation for the archaeological inventory of the Ivujivik and Salluit airport development areas, arrangements were made with the Corporation in order to accomodate the survey requested. These accomodations, arranged through the offices of Ms. Lorraine Brookes, Director of the Makivik Research Department, and Mr. Bill Kemp, also of Makivik, included logistic support and suggestions for the engagement of an Inuit field assistant. Consequently, the emergency survey of the JgEj-3 site was conducted between August 24-27, 1984, immediately following the completion of the Ivujivik and Salluit archaeological inventories. This survey was carried out by Mr. Ian Badgley, senior archaeologist of Amênatech Inc., and Mr. Juusippi Ilimasaut, of Kangiqsujuaq, currently employed by the Makivik Corporation.

2.0 MANDATE

As specified in the mandate awarded to Aménatech Inc. by the Avataq Cultural Institute, the emergency survey of the JgEj-3 site involved the following:

- determination of the size and limits of the site;
- preparation of a detailled map of the site locating all habitation structures and other definable cultural features as well as disturbed zones;
- photography of all habitation structures in the site;
- surface collection of cultural materials in and surrounding the disturbed zones;
- the preparation of a catalogue of the surface-collected materials;
- consultation with the community of Quaqtaq in order to inform the village of the work carried out and to discuss protective measures and means of sensitizing the local population to the importance of preventing further disturbance to the site;
- preparation of a written report, to be submitted to the Avataq Cultural Institute and the Ministère des Affaires culturelles, including:

  - a description of the physical integrity of the site;
  - a preliminary evaluation of site importance;
  - a photographic appendix of the site;
  - recommendations for the mitigation of further disturbance of the site.

The following report is in conformity with the stipulations of the mandate as conferred.

3.0 SURVEY ACTIVITIES AND TECHNIQUES

3.1 Site Mapping

The site was mapped using a Sokkiska 20C model theodolite, a graduated stadia rod, and a 60-metre survey chain. The theodolite was installed at an arbitrary datum point (designated "PR-1") located in the approximate centre of the site. The instrument was set at a height of 1.56 m above the surface of the datum point, this elevation serving as a "bench mark" for vertical calculations. The altitude of the datum point, established by means of an optical hand-level, is 18.68 m above the high tide line of Diana Bay.

Horizontal degree readings were taken for: 1. all major natural elements bordering on or occurring in the site (i.e., bedrock outcrop contours, boulders, etc.); 2. the peripheries of all identified habitation structures and other cultural features; 3. the limits of the disturbed zones (the road, bulldozed zones and associated gravel piles, for examples). These readings were recorded in relation to magnetic north, the declination of which is equivalent, in the Diana Bay area, to [ ] west of geographic north. The vertical relationships of the dwelling peripheries and interiors as well as those of the bulldozed zones were also noted. Additionally, in order to illustrate the site topography, elevational readings were registered at two-metre intervals along seven (7) radial transects extending from PR-1. All vertical readings were registered in terms of minus values relative to the established bench mark (i.e., the height of the instrument). These values were subsequently converted into sea level elevations correspondent to the altitude of the datum point.

3.2 Surface Collecting

Surface collecting was carried on both during and following the mapping of the site. Collecting activities were concentrated primarily in disturbed areas, particularly along the road, the gravel and sod/soil piles peripheral to the bulldozed zones, and in partially destroyed habitation structures. The remaining undisturbed areas of the site, including structural as well as inter-structural zones, were subjected to a somewhat less intensive visual examination.

All cultural material recovered was collected in the disturbed areas. In view of the disturbed context of this material, no effort was made to record the location of individual artifacts or artifact concentrations. Instead, all lithic specimens gathered were placed in a single surface collection bag; bone fragments collected were separately bagged.

3.3 Site Testing

The clear soil profiles revealed in the bulldozed zones, the considerable number of lithic specimens recovered in the disturbed areas and the readily definable limits of the site innecessitated extensive sampling of the site. However, in order to examine the undisturbed cultural stratigraphy of the site, two (2) test pits were nevertheless excavated.

These test pits, each measuring 50 cm x 50 cm, were excavated in two (2) separate semi-subterranean dwellings. The first of these pits is located in the southeastern section of the

interior of structur F; the second is situated on the southeastern extremity of the raised gravel rim of structure E. Both of the test pits proved negative.

3.4 Site Photography

All habitation structures, exterior cultural features, and disturbed zones in the site were photographically documented in colour and in black and white prints. Soil profiles in the bulldozed zones and in the test pits were similarly photographed. Composites illustrating the extent of the disturbed areas and overall views of the site were taken from elevated bedrock outcrops surrounding the site.

Photographic equipment included a Vivitar 35CA and 35 mm Pentax Spotmatic. The mechanical failure of a third camera did not allow slide documentation of the site.

3.5 Community Consultation

Time limitations prevented the organization of a formal meeting with the Quaqtaq municipal council. However, Mrs. Mary Tukkiapik, the major of the municipality, and several of the council members were contacted and informed of the survey activities and objectives.

Also, Mr. David Okpik, Director of the Tuvaaluk Landholding Corporation, kindly agreed to inform the council of the research undertaken at the site. Lengthy discussions with Mr. Okpik focused on the importance of the site as a cultural heritage resource of direct relevence to the community and on

provisional measures for the appropriate management of this resource. At the request of Mr. Okpik, a brief summary of survey results and preliminary recommendations was deposited with the Tuvaaluk Corporation for community consultation.

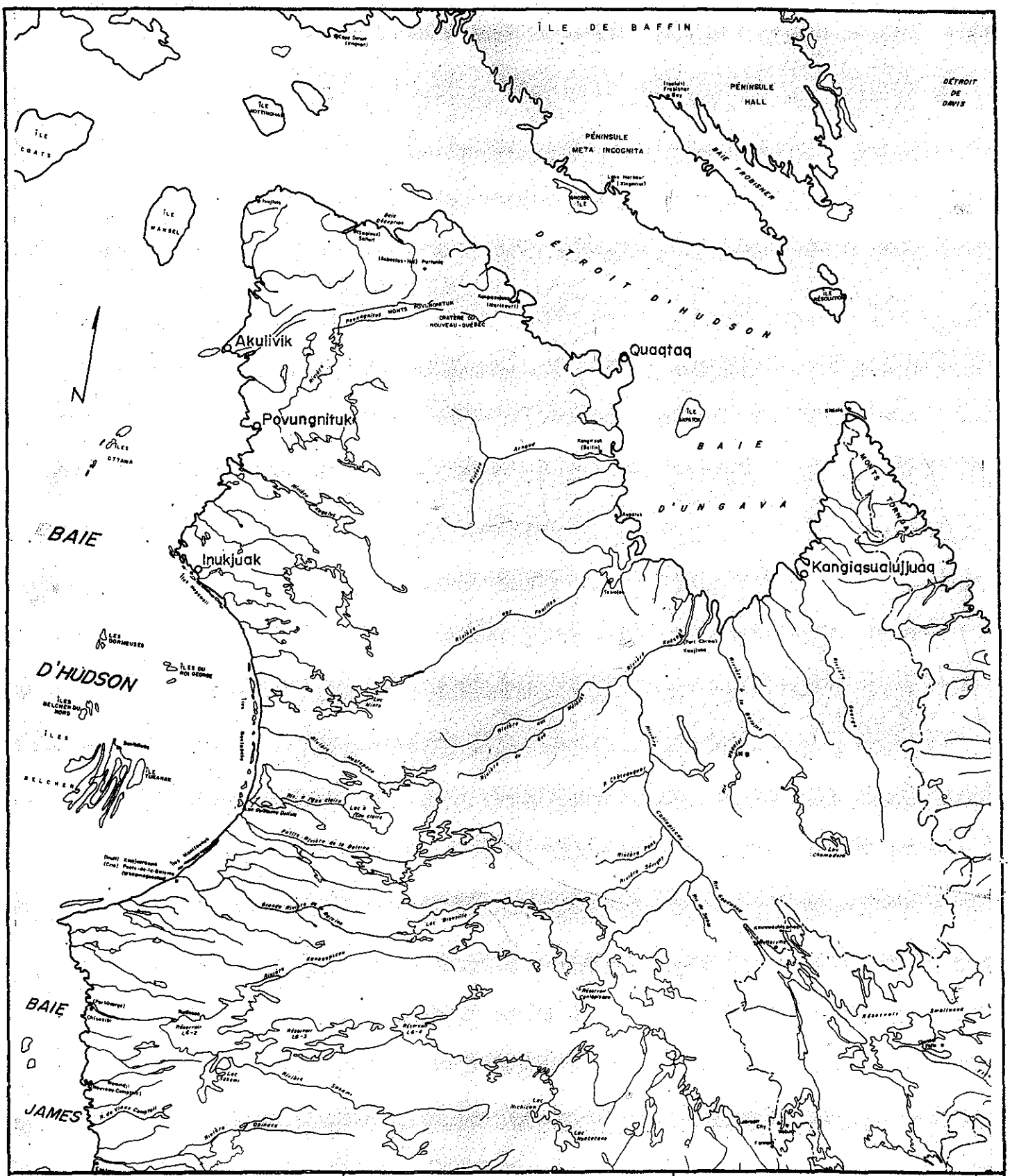
4.0 DESCRIPTION OF SITE JgEj-3

4.1 Location and Physical Setting

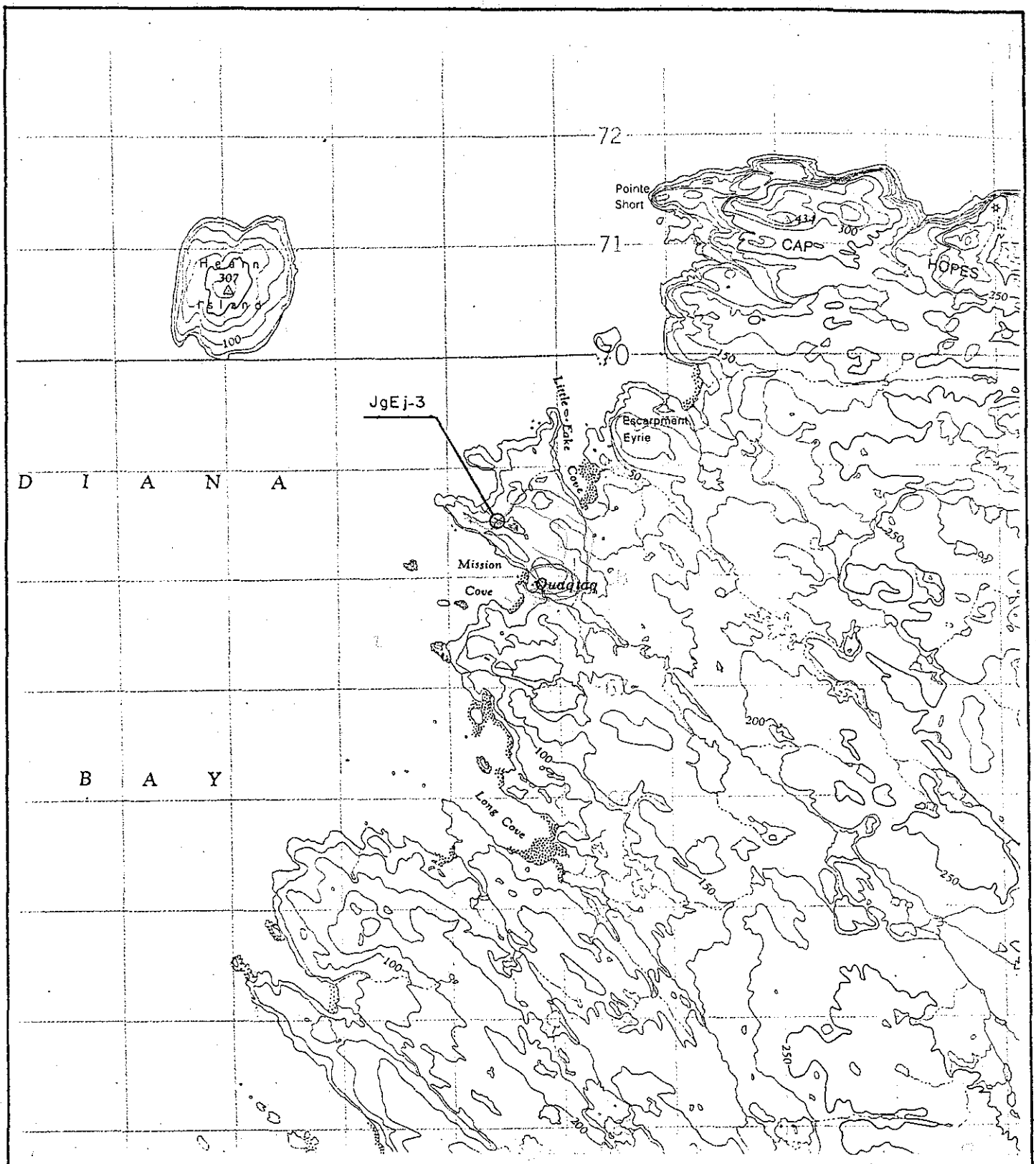
The JgEj-3 site is located on the northeastern shore of Diana Bay, in the Municipality of Quaqtaq, Ungava County, Northern Quebec, at [redacted] (Fig. 1). The site occurs on the western edge of a small pond, roughly 600 m west of the existing Quaqtaq airstrip and about 200 m southeast of Diana Bay (Fig. 2). This pond is situated on the southern flank of a shallow valley bounded, to the north, by a low bedrock hill and, to the south, by an abrupt bedrock ridge. The maximum altitude of this ridge approaches 40 m.a.s.l.

The site, varying in altitude from 15 to slightly more than 18.50 m.a.s.l., occupies a well-drained marine gravel deposit bordered to the north, northeast and southwest by bedrock outcrops (Appendix D). This deposit, measuring roughly 100 east-west by 80 m north-south, covers a surface area of approximately 5025 m^2. A narrow gravel corridor slopes westward between bedrock outcrops from the deposit towards Diana Bay. The edge of the small pond defines the southern and eastern limits of the site.

Site vegetation consists primarily of a sparse cover of low mosses and lichens interpersed with grasses and sedges. A relatively thick layer of sphagnum occurs along the edge of the pond and in several of the semi-subterranean dwellings. Caribou moss predominates on the raised gravel rims of these dwellings.



Aménatech inc. Division aménagement et environnement du Groupe-conseil S. M. inc.	PROJET Emergency archeological survey of the JgEj-3 site Quaqtaq, Northern Quebec.	TITRE Quaqtaq Northwestern Ungava Bay
DESSINÉ PAR L.J	APPROUVÉ PAR Ian Badgley	DATE October 1984
ÉCHELLE 1:5 800 000	RÉFÉRENCE	FEUILLE Fig.: 1



Aménatech inc. Division aménagement et environnement du Groupe-conseil S. M. inc.	PROJET Emergency archeological survey of the JgEj-3 site Quaqtaq, NOrthern Quebec	TITRE Location of site JgEj-3
DESSINÉ PAR L.J	APPROUVÉ PAR Ian Badgley	DATE October 1984
ÉCHELLE 1: 50 000	RÉFÉRENCE	FEUILLE Fig.: 2

4.2 Site Disturbance

As illustrated by the site plan presented in Appendix D, the disturbed zones in the site have been qualified in terms of type and intensity of disturbance. Both major and secondary zones of disturbance are defined. These zones cover approximately 1300 m^2, the euivalent of ca. 25.90% of the total site area.

4.2.1 Major Disturbed Zones

The nine (9) major disturbed zones occurring in the site cover roughly 1105 m^2, or about 22% of the site area (Table 1). These zones are summarized as follows.

Access Road

The access road (Zone 1) extends in a northeast-southwest direction across the 80-metre wide west-central portion of the site. The width of the road varies from 3.5 to 4.5 m. The topsoils along the greater part of this section of the road have been only surficially disturbed by slight grading. In several other locations, however, the sod has been completely removed and the underlying sediments bulldozed; the maximum depth of this disturbance exceeds 15 cm. The northern and southern extremities of this road section consist of gravel fill taken from the site. This material was also used for the construction of the road bed crossing the bedrock surface southwest of the site.

Bulldozed Trenches

Zones II to V are represented by four (4) relatively extensive bulldozed trenches. Two (2) of these trenches are located in the southern half of the site between the pond and the road while the third extends south from the northeastern extremity of the road. The fourth trench is situated in the southwestern portion of the site, west of the road. An additional bulldozed zone occurs on the edge of the road immediately northeast of Zone II. However, this fifth zone is peripheral to the site and does not appear to have affected site integrity.

The bulldozed zones vary, in length, from 16 to 28 m and, in width, from 7 to 14 m (Table 1). The maximum depth of these trenches is variable, ranging from 0.45 m (Zone V) to approximately 1.2 m (Zone II). Roughly 620 m^2, or 12.25% of the total surface area of the site, have been disturbed by bulldozing.

Soil Removal

The two (2) soil removal zones (Zones VI and VII) are characterized by gravel surfaces exposed by shallow bulldozing of topsoils. These zones, situated on the opposite edges of the bulldozed trench designated Zone III, cover a combined area of 74 m^2. The maximum depth of disturbance in these zones is 10 cm.

Surface Disturbance

Excluding the access road, topsoils have been surficially disturbed in two (2) other locations in the site: Zone VIII, extending southeast from the southwestern extremity of the road

TABLE 1. DIMENSIONS OF THE MAJOR DISTURBED ZONES IN SITE JgEj-3

ZONE	TYPE OF DISTURBANCE	DIMENSIONS (M) LENGTH	WIDTH (MAX.)	DEPTH (MAX.)	APPROXIMATE SURFACE AREA m^2	%
I	Graded road	80	4.5	0.2	310	6.17
II	Bulldozed	24	10	1.2	128	2.55
III	Bulldozed	24	7	0.5	124	2.47
IV	Bulldozed	16	10.5	0.9	144	2.87
V	Bulldozed	28	14	0.45	220	4.38
VI	Soil removal	10	2.4	0.1	22	0.44
VII	Soil removal	15	4.5	0.1	52	1.04
VIII	Surface disturbance	13.4	6.5	---	68	1.34
IX	Surface disturbance	7	7.5	---	36	0.72
				TOTAL	**1104**	**21.98**

Max.: Maximum

m: metre

m^2: square metre

%: percentage of total site area

and; Zone IX, located on the southeastern end of the bulldozed Zone IV. In the first of these zones, disturbance has been caused by the passage of heavy tracked machinery. In the second, the surface soil has been furrowed by a toothed loading-bucket.

The maximum dimensions of Zones VIII and IX are 13.40 x 6.50 m and 7.50 x 7.00 m respectively. These zones cover 104 m^2, approximately 2.06% of the site area.

4.2.2 Secondary Disturbed Zones

Secondary site disturbance is represented by a number of gravel piles or ridges, two (2) sod/soil mounds and by the pillaging of the two (2) semi-subterranean dwellings. The combined area covered by these secondary zones is 196 m^2, equalling 3.90% of the total site area (Table 2).

Extensive gravel ridges occur along the southwestern border of the road and the eastern edge of the bulldozed Zone II (Appendix D). These ridges measure up to 0.50 m in height and 3.0 m in base width. The gravel piles, approaching 2.0 m in height, are situated at the ends of the bulldozed Zones III and IV. A substantial sod/soil mound, also roughly 2.0 m in height, is located between the first of these zones and the adjacent bedrock outcrop. The second, less extensive sod/soil mound has been deposited on the eastern edge of the surface-disturbed Zone IX.

The area affected by the gravel piles and ridges and the sod/soil mounds totals approximately 190 m^2. The preservational state of the site surface underlying these deposits remains

TABLE 2. SECONDARY DISTURBED ZONES
IN SITE JgEj-3

TYPE OF DISTURBANCE	APPROXIMATE SURFACE AREA COVERED	
	m^2	%
Gravel ridges	68	1.35
Gravel piles	68	1.35
Sod/soil piles	54	1.07
Pillaging: Structure A	3	0.06
Structure B	3	0.06
TOTAL	196	3.89

m^2 : square metre

% : percentage of total site area

undetermined. However, varying degrees of surface soil disturbance may be presumed in the majority of the cases.

The two (2) pillaged semi-subterranean dwellings, Structures A and B, are located in the eastern part of the site. Significant proportions of the vegetation layer in these dwellings have been randomly removed and the underlying soils thus exposed have been overturned. Pillaging occurs in the centre and the northeastern section of Structure A and in the southern, northeastern and northwestern sections of Structure B. In both dwellings, an area of no less than 3 m^2 has been pillaged. The depth of soil disturbance varies from 5 to 10 cm.

4.3 Stratigraphy

As revealed in the profiles of the bulldozed trenches, the overall site stratigraphy is composed of a thin layer of black organic soil overlying a yellowish-light brown, medium coarse sandy gravel. The organic soil varies in thickness from 2 to 8 cm. Excluding the gravel rims of the semi-subterranean dwellings, this soil appears to extend continuously across the site.

A similar stratigraphy was observed in the two (2) test pits excavated. However, in the test pit located on the rim of structure E, the underlying gravel is characterized by a higher sand content and a medium dark grey colouration. This colouration results, presumably, from a more intensive mineral leaching of the gravel in the rim. In matrix, this material is also somewhat more compact than the gravel observed in the bulldozed trenches.

4.4 Habitations and Features

Sixteen (16) habitation structures and four (4) exterior features were identified in the site. The habitation structures include ten (10) semi-subterranean dwellings and six (6) tent rings. The exterior features comprise four (4) cache pits and a hearth.

4.4.1 Semi-subterranean Dwellings

The ten (10) semi-subterranean dwellings are defined by slight to moderately deep rectangular or square depressions bordered by raised gravel rims. These depressions, although of scattered distribution, tend to concentrate in the central section of the site. Eight (8) of the dwellings are clustered in four (4) groups of two (2); structures E and F occur in relative isolation from these clusters. The minimum separation between clustered dwellings is 50 cm and the maximum, about 6 m. The greatest distance between dwellings is approximately 50 m.

Five (5) of the dwellings are oriented generally north-south and three (3) others either northeast-southwest or northwest-southeast. Structure B is oriented east-west. The orientation of Structure H is undefinable.

As noted earlier, structures A and B have been pillaged. Of the remaining structures, one (1) has been partially disturbed by the passage of heavy machinery (Structure E) and two (2) have been partly destroyed by grading (Structures L and M). Structure H has been almost completely bulldozed, only the western corner of

this dwelling remaining definable. Structures F, G, I and J are undisturbed.

The interiors of the seven (7) fully-measurable dwellings vary, in length, from 3.80 to 5.50 m and, in width, from 2.90 to 4.50 m (Table 3). Internal variation in the dimensions of the individual dwellings is slight, rarely exceeding 25-30 cm. The smallest of the house depressions (Structure I) is roughly 11.00 m^2 in extent and the largest (Structure F), approximately 20.50 m^2. The depth of the dwelling interiors, measured from the crest of the gravel rims, ranges from 10 to 35 cm. The base width of the rims average about 1.0 m.

Most of the gravel rims are either slightly or moderately excurvate in contour. However, those extending along the length axes of structures A and B are incurvate, forming a generally constricted outline for these rectangular dwellings. Also, low (presumably gravel) partitions of short length project from the "rear" walls towards the centre of these structures. The sections of the gravel rims opposite these projections in both structures are comparatively low, suggesting entrances to the dwellings. In both cases, these presumed entrances face towards the pond. A similar opening in the western rim of Structure J, approximately 1.50 m in width, may also represent the entrance to this dwelling. This latter entrance faces the gravel corridor extending to Diana Bay.

Excluding the short partitions and possible entrances, no internal features were identified in any of the dwellings. However, two (2) hearth bases were observed on the edge of the gravel ridge in the immediate vicinity of Structures L and M.

TABLE 3. SUMMARY DESCRIPTION OF SEMI-SUBTERRANEAN DWELLINGS IN SITE JgEj-3

STRUCTURE	PHYSICAL STATE	FORM	ORIENTATION	INTERIOE DIMENSIONS (m) L	W	D	REMARKS
A	Pillaged	Rectangular	NE-SW	4.70	3.50	0.30	Cache pit located on the exterior edge of the north corner of the raised gravel rim; second cache pit situated roughly 3 m north-east of the dwelling
B	Pillaged	Rectangular	E-W	5.00	3.80	0.35	Cache pit located on the southeastern section of the raised gravel rim
E	Partially disturbed	Rectangular	N-S	5.50*	3.50*	0.25*	Surface of the southern half of the dwelling disturbed by passage of heavy machinery
F	Undisturbed	Rectangular	NE-SW	5.40	3.80	0.20	
G	Undisturbed	Rectangular	N-S	3.80	3.30	0.15	
H	Almost completely destroyed	Undefinable	Undefinable	3.50*	2.20*	0.10*	Only the northwestern portion of the structure remains definable; the greater part of the dwelling has been bulldozed
I	Undisturbed	Rectangular	N-S	3.80	2.90	0.10	
J	Undisturbed	Square	N-S	4.50	4.50	0.20	

TABLE 3. SUMMARY DESCRIPTION OF SEMI-SUBTERRANEAN DWELLINGS IN SITE JgEj-3

STRUCTURE	PHYSICAL STATE	FORM	ORIENTATION	INTERIOE DIMENSIONS (m) L	W	D	REMARKS
L	Partially destroyed	Square	N-S	3.60*	2.40*	0.15*	Eastern half of the dwelling disturbed by soil removal and slight bulldozing; southeastern section of the raised gravel rim destroyed
M	Partially destroyed	Rectangular	NW-SE	4.50*	3.30*	0.15*	Southwestern half of the dwelling disturbed by soil removal and slight bulldozing; outline of the destroyed section of the raised gravel rim remains definable

m: metre
L: maximum length
W: maximum width
D: maximum depth in relation to the height of the raised graval rim
*: incomplete measurement or partial dimension

These bases, consisting of burnt-grease encrusted flagstones, suggest that the cultural layer in these dwellings have been seriously disturbed. Numerous rocks and flagstones observed in the majority of the depressions suggest the presence of interior features in the other dwellings.

4.4.2 Tent Rings

The six (6) tent rings identified in the site are defined by one (1) oval, two (2) semi-circular, and three (3) circular alignments of rocks. Four (4) of these tent rings (Structures C, D, N and O) are concentrated in the east-central part of the site. The other two (2) structures, designated K and P, are situated west of the middle section of the access road.

Structures C, D and K are relatively well-defined, the rocks forming the contours of these tent rings being evenly spaced and, generally, of similar size. The first of these structures measures 3.00 m in diametre (Table 4). A circular concentration of rocks (ca. 80 cm in diametre) in the approximate centre of Structure C suggests a hearth. The oval Structure D is 4.10 m in length by 2.70 m in width. Two (2) parallel lines of cobbles extend in an east-west orientation across the width of the structure. These lines, flaring slightly towards the east, suggest a mid-passage feature measuring between 65 and 70 cm in width. This feature, possibly containing a central hearth, divides the tent ring into two (2) lobes, each of which measures approximately 1.70 m x 2.70 m.

Structure K, about 4.00 m in diametre, is the largest of the circular tent rings. Several vague rock alignments surrounding

TABLE 4: SUMMARY DESCRIPTION OF TENT RINGS IDENTIFIED IN SITE JgEj-3

STRUCTURE	FORM	DIAMETRE (m)	REMARKS
C	Circular	3.00	Circular concentration of rocks in the approximate centre of the structure suggests a hearth.
D	Oval	4.10(L) x 2.70(W)	Mid-passage, measuring 65-70 cm in width, suggested by two (2) parallel alignments of cobbles extending east-west across the width of the structure; possible hearth associated with this feature.
K	Circular	4.00	Possibly associated with an exterior hearth.
N	Semi-circular	3.00	Partially overlapped by Structure D.
O	Semi-circular	3.00	Partially overlapped by Structure N.
P	Circular	3.10	Possibly associated with a cache pit.

m: metre
L: length
W: width

this circle suggest the possibility of other tent habitations in the immediate area of Structure K. A small circle of rocks, provisionnally interpreted as a hearth, occurs 1 m southeast of the structure.

The identification of Structures N, O and P as tent rings is more tentative. The first two (2) of these structures consist of partially overlapping semi-circular rock alignments concentric to the northern extremity of Structure D. These arrangements may suggest a superimpositional sequence of tent habitations, the occupation of Structure N following that of Structure O and preceeding that of Structure D. Alternately, the two (2) semi-circular alignments may indicate wind-breaks or, possibly, a second mid-passage tent ring. Regardless, the regular contour and consistent 3.0 m diametres of these alignments subsumes a natural origin for these presumed structures.

Structure P is similarly composed of a poorly-defined configuration of rocks. However, the presence of a cache pit approximately 1 m southeast of this structure allows the tentative interpretation of this circular configuration as a tent ring.

Structures C and D excluded, no interior features were observed in any of the other tent rings identified.

4.4.3 Exterior Features

The four (4) cache pits recorded in the site are defined by relatively shallow, small circular depressions.

These features occur:

- on the exterior edge of the northeast corner of the Structure A rim;
- approximately 2 m northeast of Structure A;
- on the southeastern section of the Structure B rim;
- roughly 1 m southeast of Structure P, close to the edge of the access road.

These pits vary in diametre from 50 cm (those associated with the gravel rims) to 1.50 m (the example located northeast of Structure A). The depth of these features varies from 10 to 20 cm.

The suggested exterior hearth consists of a small circle of rocks associated with scattered charcoal fragments. This hearth, measuring 60 cm in diametre, is situated about 1.00 m southeast of Structure K.

4.4.4 Adjacent Cultural Features

Two (2) tent rings and three (3) stone-built caches were observed in the vicinity of the site. The tent rings are situated in the western extremity of the gravel corridor approximately 25 m from the Diana Bay shoreline and at an altitude of roughly 4.0 m.a.s.l. The stone alignments defining these structures are oval in configuration, measuring about 6 m by 4 m. A late historic or possibly contemporary origin is suggested for these structures.

The caches are located on the bedrock surface bordering the south-central edge of the pond, some 200 m or more southeast of the site. These caches, built of fairly large, angular boulders, measure up to 2.0 m in base length by 1.5 m in base

width; the maximum height of these features is approximately 1.75 m. The cultural affiliation of the caches remains undetermined. However, while possibly related to the Dorset occupation of the site, historic remains observed in two (2) of the caches (i.e., canvas and rubber fragments) suggest the probability of recent cultural associations.

Several vague circular alignments of rocks were also noted on the bedrock surface roughly 200 m north of the site. At present, however, these circles are not identified as either tent rings or culture features.

4.5 Surface Collections

4.5.1 Lithic Specimens

A total of 449 lithic specimens were surface-collected in the site (Appendix A). These specimens were concentrated in three (3) areas: 1. along the access road in the vicinity of Structures L and M; 2. on the edges of the bulldozed Zone III and; 3. on the gravel pile and sod/soil mound located between this zone and the adjacent bedrock outcrop. Additional specimens were scattered in the Structures E and H areas and along a 70-metre length of the gravel roadbed southwest of the site. No lithics were recovered from any of the undisturbed zones, from the pillaged sections of Structures A and B or, as previously noted, from the two (2) test pits excavated.

Statistically, the eleven (11) lithic raw materials identified in the site are dominated by chert and Ramah quartzite, representing 51.45% and 20.49% of the total collection

respectively (Table 5). These materials are followed by Diana quartzite (7.13%), hyalin (6.46%), quartz crystal (6.01%), milky quartz (2.67%), a black, fine-grained quartzite (2.23%), and chalcedony (1.78%). The hyalin, composed of a mixture of translucide and white quartz, suggests an impure variety of quartz crystal. Similarly, the grain size and structure of the black quartzite suggests that this material represents an opaque variety of Ramah quartzite. Specimens in metabasalt, nephrite and soapstone total 1.78% of the collection.

As summarized in Table 6, the collection consists of 64 worked or used specimens and 385 debitage pieces. Identified chipped-stone tool types include triangular and notched end blades, several varieties of end scrapers, knife fragments and a bi-pointed side blade. Microblades, totalling 26 fragmentary or incomplete specimens in various raw materials, represent the numerically-dominant implement class in the collection. Several large blades and microblade cores, a rough-out, a retouched flake and seven (7) used flakes were also identified.

Polished tools include three (3) burin-like tools in nephrite, a hide-stretcher in metabasalt and the mesial fragment of a lance point or knife in nephrite. Some polishing also occurs on a fragmentary triangular end blade made in Ramah quartzite. Soapstone occurs as a single vessel or lamp fragment.

The debitage pieces have been preliminarily divided into three (3) general categories: rough flakes (N=171); 2. small chipping detritus and flake fragments (N=199) and; 3. debris (N=15). Rough flakes are distinguished from small chipping detritus and flake fragments on the basis of size, the second

TABLE 5. LITHIC RAW MATERIAL PERCENTAGES

RAW MATERIAL	N	%
Chert	231	51.45
Chalcedony	8	1.78
Ramah quartzite	92	20.49
Diana quartzite	32	7.13
Black quartzite	10	2.23
Quartz crystal	27	6.01
Hyalin	29	6.46
Milky quartz	12	2.67
Nephrite	4	0.89
Metabasalt	3	0.67
Soapstone	1	0.22
TOTAL	449	100.00

N: number

%: percentage

TABLE 6. SUMMARY OF LITHIC SPECIMENS
SURFACE-COLLECTED IN SITE JgEj-3

CATEGORIES AND CLASSES / RAW MATERIAL		CHERT	CHALCEDONY	RAMAH QUARTZITE	DIANA QUARTZITE	BLACK QUARTZITE	QUARTZ CRYSTAL	HYALIN	MILKY QUARTZ	NEPHRITE	METABASALTE	SOAPSTONE	TOTAL
WORKED OR USED SPECIMENS	End blades	2		6									8
	Side blade	1											1
	End scrapers	1		3	1								5
	Knives	1	1			1							3
	Knife or point fragment									1			1
	Burin-like tools									3			3
	Hide stretcher										1		1
	Rough-out				1								1
	Macroblades			2			1						3
	Microblades	7	3	8	1		6		1				26
	Microblade cores	3											3
	Retouched flake			1									1
	Used flakes	4		2			1						7
	Vessel fragment											1	1
	SUB-TOTAL	**19**	**4**	**22**	**3**	**1**	**8**		**1**	**4**	**1**	**1**	**64**
DEBITAGE	Rough flakes	113	1	16	15	6	4	7	7		2		171
	Chipping Detritus	88	3	54	14	3	15	18	4				199
	Debris	11						4					15
	SUB-TOTAL	**212**	**4**	**70**	**29**	**9**	**19**	**29**	**11**		**2**		**385**
TOTAL		**231**	**8**	**92**	**32**	**10**	**27**	**29**	**12**	**4**	**2**	**1**	**449**

category comprising objects measuring less than 1 cm^2 (i.e., edge retouch flakes, resharpening flakes, etc.). Debris refers to angular chunks of irregular form characterized by three (3) or more exterior surfaces.

All of the tool types and raw material assemblages recovered in the site are characteristic of Dorset culture lithic technology as currently understood in the northwestern Ungava Bay region of Northern Quebec. The collection, however, is lacking in implements stylistically diagnostic of any Dorset culture phase in particular.

4.5.2 Faunal Remains

A total of eighteen (18) animal bones were collected from the surface of the site. Most of these bones occurred on the edges of the access road, both in and immediately adjacent to structures L and M. Several others were scattered along the periphery of Zone III and on the gravel pile and sod/soil mound associated with this bulldozed trench.

The faunal collection includes a small mandible, two (2) tooth fragments, a flipper toe-bone (all tentatively identified as walrus), three (3) auditory bones and a large fragment of a probable occipital (also possibly walrus). Several pieces have been cut or sliced from the latter. The remainder of the collection consists of ten (10) small, unidentified bone fragments.

5.0 PRELIMINARY INTERPRETATIONS

5.1 Site Chronology

The interpretation of the chronology of the JgEj-3 site is complicated by the limited scope of the survey conducted and by the character of the lithic data collected. However, these circumstances notwithstanding, it is suggested that occupation of the site dates to between 700-200 B.C.

This suggestion is based primarily on the 15 to 18.50 m.a.s.l. altitude of the site, an elevation intermediate to those recorded for Pre-Dorset and Dorset habitation sites in the Diana Bay region. For example, while Pre-Dorset sites occur between 16 and 22 m.a.s.l., Dorset settlements are generally situated below 12 m.a.s.l. (c.f., Aménatech, 1984). The former are estimated to date to the last half of the second millenium B.C.; the latter are radiocarbon-dated to no earlier than 220 B.C. (Plumet, 1975). The suggested 700 B.C. maximum derives from the earliest radiocarbon date available for Dorset occupation of northern Ungava. This date is reported for the Tyara site, located on Sugluk Island (Taylor, 1968).

The proposed dates suggest, further, a (possibly) late Early or Middle Dorset cultural affiliation for the site. This suggestion is supported, in part, by Structure D, the mid-passage tent ring. The mid-passage in this structure is reminiscent of axial features commonly associated with Early Paleoeskimo Independence I and Pre-Dorset tent rings as well as with Independence II habitations, an Early to Late Paleoeskimo transitional phase. The last of these cultures, dated to ca. 1100-

650 B.C., is partly contemporaneous with the development of the Dorset culture. Consequently, the presence of this type of tent ring, suggesting the temporal continuity of an earlier cultural trait, may indicate a mid-first millenium B.C. date for the initial occupation of the site. A terminal Late or Middle Dorset affiliation is thus implied.

On a more specific level, it is felt that a Middle rather than Early Dorset affiliation is more probable for the site occupation. This presumption is suggested, albeit more tenuously, by the absence in the lithic collection from the site of technological traits frequently associated with the early phase of Dorset culture in the Canadian Eastern Arctic and Subarctic. From this perspective, it may be of interest to note that such traits, including a "box-base" point and an edge-serrated implement, are represented in a small surface collection recovered from a site located on the crest of the bedrock ridge, roughly 200 m southwest of JgEj-3 (Badgley, 1977). This second site (JgEj-1) is tentatively interpreted as an Early Dorset look-out and chipping station.

5.2 Character of Occupation

The data presently available indicates that JgEj-3 represents a multi-seasonal habitation site occupied during summer and non-summer months. Further, variation in habitation dimensions and distribution suggest that these occupations involved numerically-differing populations through time.

For example, the variable dimensions of the seven (7) measurable semi-subterranean dwellings, ranging from 11.0 to

20.5 m^2, suggest households composed of single and extended nuclear families as well as, possibly, two (2) families (i.e., the partly partitioned Structures A and B). As based on Harp's (1976) calculations for eastern Hudson Bay and Newfoundland Dorset habitations, these families may have averaged between five (5) and seven (7) individuals. The dual family residences suggested by Structures A and B may indicate, then, social units totalling a maximum of approximately fifteen (15) persons during non-summer occupation of the site.

Additionally, it may be presumed that the two (2) habitations comprised in each of the four (4) dwelling clusters observed were simultaneously occupied. Therefore, a maximum population of roughly thirty (30) individuals may be speculated for cold weather occupation of the site. However, as contemporaneity of occupation of dwellings and dwelling clusters remains undetermined, this estimate may be either excessive or too conservative.

With the possible exception of the mid-passage Structure D, all tent rings identified in the site appear to relate to single family summer residences. Minimal social units composed of five (5) individuals are suggested. Available data, however, does not permit any speculation on maximum populations occupying the site during summer.

6.0 EVALUATION OF THE JgEj-3 SITE

6.1 Physical State

Access road construction activities have resulted in the destruction or serious surface disturbance of approximately 1300 m^2 in the JgEj-3 site, roughly 26% of the total site area as defined. These activities have affected to varying degrees of severity the preservational state of at least four (4) semi-subterranean dwellings; Structure H has been almost completely obliterated, the greater parts of Structures L and M have been destroyed, and fully half of Structure E has been surficially altered. Of these dwellings, only the latter offers any possibility for the controlled recovery of "in situ" cultural data of significance to coherent archaeological analysis and interpretation.

Also, the distribution of the lithics collected in the site, particularly along the edges of the bulldozed Zone III and on the gravel pile and sod/soil mound associated with this zone, suggests that several tent rings and/or activity areas have been completely destroyed. The number and character of these suggested structures is undeterminable.

Conversely, six (6) other semi-subterranean dwellings, and a minimum of six (6) tent rings have not been affected by construction activities. These habitations, combined with extensive, undisturbed interstructural zones containing several exterior features, represent 74% of the total site area. With the exception of the pillaged Structures A and B, the physical context of the cultural deposits and materials relating to Dorset

occupation of these habitations and zones is presumed to be relatively well-preserved. These structures (including those pillaged) and interstructural zones are assessed as being fully susceptible to controlled archaeological excavation.

From a more comprehensive point of view, the absence of cultural materials, structural remains and features in and bordering on Zones IV and V may suggest that these bulldozed trenches are peripheral to the principal occupation area of the site. This hypothesis implies that the proportion of undisturbed to disturbed cultural deposits is greater than that calculated on the basis of overall site dimensions as perceived. Alternately, it should be emphasized that both of these bulldozed trenches are of an extent sufficient to have completely eradicated any and all traces of occupation in these zones. Consideration of the distribution of habitations in the site suggests that this second hypothesis is more probable than the first.

6.2 Archaeological Importance

The JgEj-3 site is provisionally interpreted as representing a multi-seasonal Middle Dorset settlement dating to between ca. 700-200 B.C. These interpretations, combined with (apparent) clarity of habitation structures and respectable lithic productivity, allow the site to be evaluated as being of high potential importance to a number of archaeological problems concerning the Dorset culture. These problems, both local and regional in character, include the following:

1. Clarification of the Paleoeskimo cultural sequence in northeast Ungava in general and in the Diana Bay region in particular.

While several Pre-Dorset and numerous Late Dorset sites have been studied in the Diana Bay region, an approximately 800-year long period intervening between these cultures in this region remains archaeologically undocumented. Although an occupational hiatus followed by the movement of Late Dorset groups into the region may be indicated, available data from surrounding areas suggests the possibility of a Pre-Dorset-Dorset cultural continuum in northeastern Ungava (c.f., Fitzhugh, 1980, for example). The site, then, is assessed as being of particular importance to a better understanding of this period in northeastern Ungava.

2. Determination of the origins of northwestern Ungava Bay Dorset populations and inter-regional contacts.

Although certain lithic raw materials found in northwestern Ungava Bay Dorset sites confirm post-200 B.C. contacts with contemporaneous groups to the east and west, the original movement of Dorset populations or diffusion of Dorset cultural traits into this region remains to be determined. As suggested by the altitude of the JgEj-3 site, Dorset occupation of this region may date to as early as 700 B.C. Also, as the only known source of Ramah quartzite is located in Ramah Bay, northern Labrador, the relatively high percentage of this material collected in the site indicates contact between Ungava Bay and Labrador Dorset populations at this early date. A Labrador origin for Dorset groups in northeastern Ungava Bay may be implied.

3. Study of Dorset settlement-subsistence relationships in northeastern Ungava.

Archaeological research activities conducted to date in northeastern Ungava have tended to focus on the testing or excavation of individual Dorset semi-subterranean dwellings. These activities have produced a considerable body of Dorset technological and subsistence data. However, the greater part of these data relates to late autumn to early spring adaptations, comparatively little attention having been directed towards summer occupations. In addition, the multiple re-occupations indicated in the majority of the excavated dwellings complicates the identification of single occupational components and structural relationships in these sites.

The multi-seasonality of occupation and the apparent clarity of the habitation structures in JgEj-3 strongly suggest that the site is of importance to the clarification of these adaptational aspects of the Dorset culture in northeastern Ungava. Moreover, the spatial relationships of the structures observed implies the possibility of obtaining information directly relevent to the analysis of Dorset social organization and site demography.

In sum, the JgEj-3 site is assessed as being of potential importance to a more comprehensive understanding Dorset culture chronology and adaptations in northeastern Ungava. This assessment, however, is theoretical in nature and, as such, remains incomplete. As in any archaeological evaluation, practical considerations for the management of the site as a cultural heritage resource must also be taken into account. These

considerations concern, basically, the practicability and necessity of further archaeological research at the site.

For example, the location of JgEj-3 in an area used by the community of Quaqtaq suggests that further (albeit unintentional) disturbance of the site is inevitable. Hence, additional archaeological research at the site may be considered as not only desirable but also as necessary. From this perspective, the well-defined and relatively limited spatial extent of the remaining undisturbed portion of the site should be emphasized. These circumstances facilitate the coherent planning of the techniques and procedures required for extensive and systematic field research. Also, the location of the site close to the village of Quaqtaq simplifies the logistic arrangements necessary for any such field activities. Implicitly, then, the character and the situation of the JgEj-3 site are favourable to continued archaeological research at the site.

In conclusion, the evaluation of the data available suggests, firstly, that the JgEj-3 site is of high potential importance to a more complete comprehension of Dorset culture in northeastern Ungava. Secondly, practical considerations concerning the management of the site as a cultural heritage resource illustrate not only the desirability but also the feasibility of further archaeological research at the site.

7.0 RECOMMENDATIONS

In consideration of the assessed archaeological importance of the JgEj-3 site and in view of the feasibility of mitigating further adverse impacts on this cultural heritage resource, it is therefore recommended:

- That an archaeological excavation programme be organized and undertaken at the site at the earliest possible opportunity.

The recommended excavation, to be carried out, preferably over two (2) consecutive years, would be both rescue in character as well as research oriented. In the first case, further loss of cultural information, either through inadvertent disturbance or continued pillaging, would be avoided. Also, the gravel deposit occupied by the site would be made available to the community of Quaqtaq for other construction works (such as the maintenance of the access road, for example). In the second case, excavation would focus on the controlled recovery of data directly relevent to specific archaeological research problems, both local and regional in scope.

- That the excavation programme include the analysis of the data recovered immediately following the completion of each field season.

The lack of analysis during the course of both short and long-term archaeological projects often results in the accumulation of data which, although quantitatively impressive, are either extraneous or redundant to stated research objectives.

Also, this lack frequently inhibits modification of earlier objectives in terms of the quality of the data produced by a given site. The proposed analysis, to be carried out during winter months, would remedy the problem of data redundancy and allow (for the second field season) the development of research orientations more appropriate to the site. It would also provide an integrated body of analytical data for discussion and interpretative purposes without the lengthy delays endemic to archaeological research programmes.

- That the recommended research be community-oriented and involve the direct and active participation of the residents of Quaqtaq.

The community of Quaqtaq has expressed a strong interest in cultural heritage studies of direct relevence to the local population. It is therefore proposed, firstly, that the community be involved in all phases of the organization and administration of the recommended research and, secondly, that the field work and analysis be carried out by Inuit research assistants. This recommendation is forwarded in the interest of providing training to Inuit in archaeological techniques and procedures and of increasing awareness of the importance of cultural heritage resources and studies. Also, the engagement of local Inuit research assistants will not only allow reduction of logistic expenditures but also permit a more proportionate amount of the project budget to remain in the community than would otherwise be the case.

- That the proposed research programme be administered by the Tuvaaluk Landholding Corporation of the Municipality

of Quaqtaq conjointly with the Avataq Cultural Institute Inc.

The development of policies for the appropriate management of cultural heritage resources in territories pertaining to the Northern Quebec Inuit necessitates the full involvement of this population in the administration of regional and local archaeological research programmes. From this perspective, the Avataq Cultural Institute, as mandated, would assume overall administrative responsibility for the proposed programme while, on the local level, the Tuvaaluk Corporation would assure community-oriented research. Moreover, benefits accrued by the latter from the programme would contribute to the development of additional projects, both archaeological and non-archaeological, within the municipality.

- That the community of Quaqtaq in particular and the Northern Quebec Inuit in general be fully informed of the results of the recommended research programme.

All too frequently, the results of archaeological research projects carried out in northern regions remain the exclusive information of the southern-based archaeological community. Therefore, it is recommended that the proposed research programme include previsions for the publication and diffusion of research results in Inuktittut. Also, in order to assure that all segments of the population are informed, it is suggested that a documentary film illustrating the research be produced during the course of the programme.

It is further recommended that the artifact collections from the site be fully accessible to the local and regional populations for educational purposes. Such accessibility, both during and following the completion of research activities, is essential to the valorization of cultural heritage resources and, more particularly, to the maintenance of the cultural identity of the Northern Quebec Inuit.

8.0 PERSONNEL

The field work conducted during the present project was carried out by Mr. Ian Badgley, senior archaeologist of Aménatech Inc., and Mr. Juusippi Ilimasaut, of the Makivik Corporation. Mr. Ilimasaut also served as field photographer. The site plans were prepared by Mr. Luc Jacques, landscape architect. The text of this report, written by Mr. Badgley, was typed by Ms. Dominique Saint-Germain and Ms. Joanne Audy.

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APPENDIX A

APPENDIX A: CATALOGUE OF LITHIC SPECIMENS

1. WORKED AND USED SPECIMENS

CATALOGUE NUMBER	CLASS	DESCRIPTION	RAW MATERIAL
1	Triangular end blade	- Distal fragment	Ramah quartzite
2	Triangular end blade	- Latero-proximal fragment	Ramah quartzite
3	Triangular end blade	- Unifacial, on blade; distally incomplete	Ramah quartzite
4	Triangular end blade	- Latero-proximally incomplete	Ramah quartzite
5	Triangular end blade	- Laterally incomplete	Ramah quartzite
6	Triangular end blade	- Distally incomplete	Ramah quartzite
7	Triangular end blade	- Latero-proximal fragment	Chert
8	Notched end blade	- Distally incomplete	Chert
9	Eared end scraper	- Complete	Chert
10	Eared end scraper	- Complete	Ramah quartzite
11	Notched end scraper	- On a flake; complete	Ramah quartzite
12	Thumbnail end scraper	- Complete	Ramah quartzite
13	Triangular end scraper	- Complete	Diana quartzite
14	Notched knife	- Bifacial, on a microblade; distally incomplete	Chert
15	Knife	- Distal fragment	Black quartzite
16	Knife	- Distal fragment	Chaleedony
17	Bi-pointed side blade	- Complete	Chert
18	Burin-like tool	- Complete	Nephrite
19	Burin-like tool	- Complete	Nephrite
20	Burin-like tool	- Complete	Nephrite
21	Rough-out	- Bifacial; complete	Diana quartzite
22	Hide-stretcher	- Partially flaked and polished; complete	Metabasalt
23	Lance point or knife	- Polished; mesial fragment	Nephrite
24	Microblade core	- Fragment	Chert
25	Microblade core	- Fragment	Chert
26	Microblade core	- Fragment	Chert
27	Retouched blade	- Bifacial; mesial fragment	Ramah quartzite

APPENDIX A: CATALOGUE OF LITHIC SPECIMENS

1. WORKED AND USED SPECIMENS

CATALOGUE NUMBER	CLASS	DESCRIPTION	RAW MATERIAL
28	Blade	- Mesial fragment	Ramah quartzite
29	Stemmed blade	- Distally incomplete	Quartz crystal
30	Stemmed microblade	- Single-shouldered	Quartz crystal
31	Stemmed microblade	- Proximal fragment	Chaleedony
32	Microblade	- Distally incomplete	Chaleedony
33	Microblade	- Distally incomplete	Milky quartz
34	Microblade	- Latero-distally incomplete	Quartz crystal
35	Microblade	- Mesial fragment	Quartz crystal
36	Microblade	- Distal fragment	Quartz crystal
37	Microblade	- Distally incomplete	Quartz crystal
38	Microblade	- Proximally and distally incomplete	Chert
39	Microblade	- Distally incomplete	Chert
40	Microblade	- Proximally incomplete	Chert
41	Microblade	- Proximal fragment	Chert
42	Microblade	- Mesial fragment	Chert
43	Microblade	- Distally incomplete	Chert
44	Microblade	- Proximally and distally incomplete	Chert
45	Microblade	- Distally incomplete	Chaleedony
46	Microblade	- Distally incomplete	Ramah quartzite
47	Microblade	- Distally incomplete	Ramah quartzite
48	Microblade	- Mesial fragment	Ramah quartzite
49	Microblade	- Mesial fragment	Ramah quartzite
50	Microblade	- Mesial fragment	Ramah quartzite
51	Microblade	- Mesial fragment	Ramah quartzite
52	Microblade	- Distal fragment	Ramah quartzite
53	Microblade	- Proximal fragment	Ramah quartzite
54	Microblade	- Distally incomplete	Diana quartzite
55	Microblade	- Proximal fragment	Quartz crystal
56	Vessel fragment	- Exfoliated	Soapstone
57	Retouched flake	- Distally incomplete	Ramah quartzite
58	Used flake	- Mesial fragment	Ramah quartzite
59	Used flake	- Distally incomplete	Ramah quartzite

APPENDIX A: CATALOGUE OF LITHIC SPECIMENS

1. WORKED AND USED SPECIMENS

CATALOGUE NUMBER	CLASS	DESCRIPTION	RAW MATERIAL
60	Used flake	- Complete	Quartz crystal
61	Used flake	- Distally incomplete	Chert
62	Used flake	- Mesial fragment	Chert
63	Used flake	- Proximally and distally incomplete	Chert
64	Used flake	- Lateral fragment	Chert

APPENDIX A: CATALOGUE OF LITHIC SPECIMENS

2. DEBITAGE

CATEGORY	RAW MATERIAL	NUMBER OF SPECIMENS	CATALOGUE NUMBER(S)
Rough flakes	Chert	113	65 to 177
	Chalcedony	1	178
	Ramah quartzite	16	179 to 194
	Diana quartzite	15	195 to 209
	Black quartzite	6	210 to 215
	Quartz crystal	4	216 to 219
	Hyalin	7	220 to 226
	Milky quartz	7	227 to 233
	Metabasalt	2	234 to 235
Chipping detritus and small flake fragments	Chert	88	236
	Chaleedony	3	237
	Ramah quartzite	54	238
	Diana quartzite	14	239
	Black quartzite	3	240
	Quartz crystal	15	241
	Hyalin	18	242
	Milky quartz	4	243
Debris	Chert	11	244 to 254
	Hyalin	4	255 to 258

APPENDIX B

APPENDIX B. LIST OF PHOTOGRAPHS

ROLL	NEGATIVE	SUBJECT	ORIENTATION	DATE
C84-2(7)	25	Cache pit, northeast of Structure A	SE	26/08/84
(colour)	26	Cache pit, Structure A rim	SE	26/08/84
	27	Structure A	SW	26/08/84
	28	Structure A	E	26/08/84
	29	Pillaging, Structure A	NE	26/08/84
	30	Pillaging, Structure A	N	26/08/84
	31	Structure B	NNW	26/08/84
	32	Structure B	NE	26/08/84
	33	Pillaging, Structure B	W	26/08/84
	34	Pillaging, Structure B	S	26/08/84
	35	Structure C	SW	26/08/84
	36	Structure C	SW	26/08/84
	37	Structure D	SSE	26/08/84
C84-2(8)	1	Mid-passage, Structure D	W	26/08/84
(colour)	2	Structure D	N	26/08/84
	3	Bulldozed Zone IV, central section	S	26/08/84
	4	Bulldozed Zone IV, northern section	SW	26/08/84
	5	Bulldozed Zone IV, central section	S	26/08/84
	6	Bulldozed Zone IV, southeastern section	ESE	26/08/84
	7	Zone IX, Surface Distribution and sod/soil mound	S	26/08/84
	8	Structure N	N	26/08/84
	9	Structure O	NE	26/08/84
	10	Bulldozed Zone III	SW	26/08/84
	11	Bulldozed Zone II, southern section	W	26/08/84
	12	Bulldozed Zone II, central section	WNW	26/08/84
	13	Bulldozed Zone II, northern section	NW	26/08/84
	14	Zone II, gravel pile and sod/soil mound	NW	26/08/84
	15	Soil Removal Zone VII	N	26/08/84
	16	Soil Removal, Zone VII, and gravel pile, Zone III	N	26/08/84
	17	Bulldozed Zone III, southwestern section	WSW	26/08/84

APPENDIX B. LIST OF PHOTOGRAPHS

ROLL	NEGATIVE	SUBJECT	ORIENTATION	DATE
	13	Soil Profile, Bulldozed Zone III	SE	26/08/84
	14	Soil Profile, Bulldozed Zone IV	SW	26/08/84
	15	Soil Profile, North Wall, Test Pit 2, Structure E rim	N	26/08/84
	16	Flagstone Hearth Base; near Structure L	--	26/08/84
	17	Flagstone Hearth Base, near Structure M	--	26/08/84
	18	Structure E and Surface Disturbance, Zone VIII	SE	27/08/84
	19	Structure A and B, overview	N	27/08/84
	20	Structure E and Bulldozed Zones IV and V, overview	NNW	27/08/84
	21	Structure B and Bulldozed Zones III and IV, overview	N	27/08/84
	22	Structure A and B and Bulldozed Zone III, overview	N	27/08/84
	23	Structure E and Bulldozed Zone IV, overview	NNW	27/08/84
	24	Structure E and Bulldozed Zone V, overview	NW	27/08/84
	25	Structure F	SW	27/08/84
	26	Structure G	W	27/08/84
	27	Structure I	SE	27/08/84
	28	Structure J	S	27/08/84
NB84-2(7) (black and white)	48	Cache pit, northeast of Structure A	SE	26/08/84
	50	Cache pit, Structure A rim	SE	26/08/84
	52	Structure A	SW	26/08/84
	54	Double exposure	--	26/08/84
	56	Double exposure	--	26/08/84
	58	Structure B	NNW	26/08/84
	60	Structure B	NE	26/08/84
	62	Pillaging, Structure B	W	26/08/84

APPENDIX B. LIST OF PHOTOGRAPHS

ROLL	NEGATIVE	SUBJECT	ORIENTATION	DATE
	64	Pillaging, Structure B	S	26/08/84
	66	Structure C	SW	26/08/84
	68	Structure C	SW	26/08/84
	70	Structure D	SSE	26/08/84
NB84-2(8) (black and white)	1	Mid-passage, Structure D	W	26/08/84
	2	Structure D	N	26/08/84
	4	Bulldozed Zone IV, central section	S	26/08/84
	6	Bulldozed Zone IV, northern section	SW	26/08/84
	8	Bulldozed zone IV, central section	S	26/08/84
	10	Bulldozed Zone IV, southeastern section	ESE	26/08/84
	12	Zone IX, Surface Disturbance and sod/soil mound	S	26/08/84
	14	Structure N	N	26/08/84
	16	Structure O	NE	26/08/84
	18	Bulldozed Zone III	SW	26/08/84
	20	Bulldozed Zone II, southern section	W	26/08/84
	22	Bulldozed Zone II, central section	WNW	26/08/84
	24	Bulldozed Zone II, northern section	NW	26/08/84
	26	Zone II, gravel pile and sod/soil mound	NW	26/08/84
	28	Soil Removal Zone VII	N	26/08/84
	30	Soil Removal, Zone VII, and gravel pile, Zone III	N	26/08/84
	32	Bulldozed Zone III, southwestern section	WSW	26/08/84
	34	Bulldozed Zone III, central section	W	26/08/84
	36	Bulldozed Zone III, central section	WNW	26/08/84
	38	Bulldozed Zone III, northeastern section	NW	26/08/84
	40	Structure E and Surface Disturbance, Zone VIII	WNW	26/08/84
	42	Structure E and Surface Disturbance, Zone VIII	SW	26/08/84

APPENDIX C

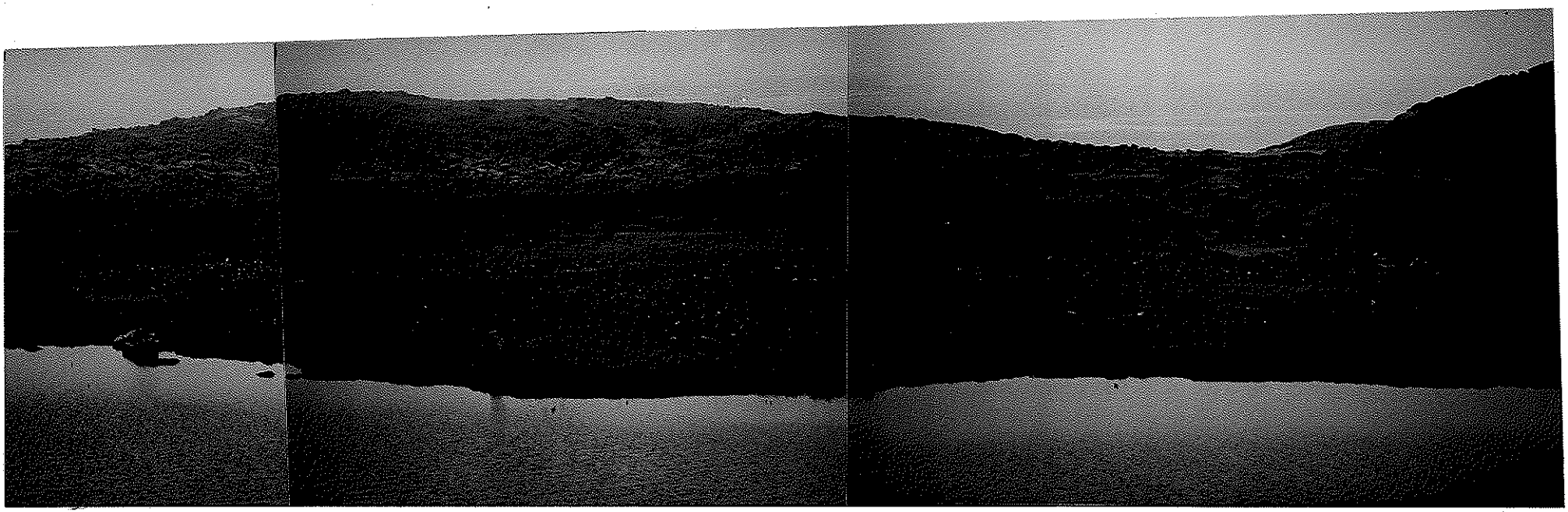

PHOTO 1. Site JgEj-3 the southeast. Bulldozed zone IV is located in the centre foreground and zones III and V in the right and left background. Depressions in the right foreground represent structures A and B. Structure E is indicated by the light green vegetation left of zone IV.

PHOTO 2. Access road, zone 1, southern section

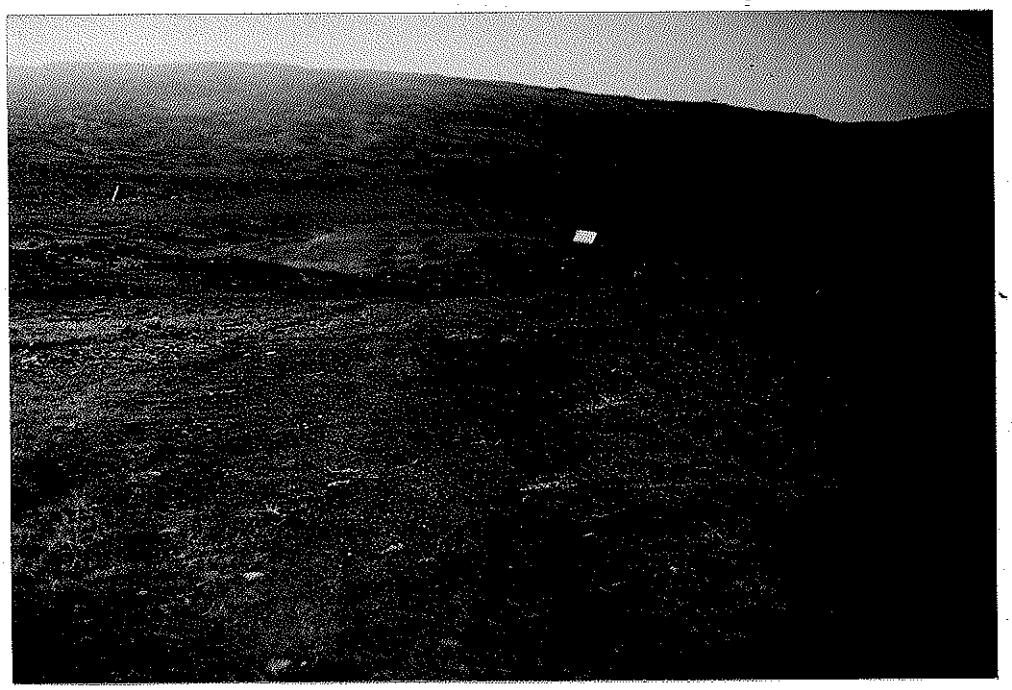

PHOTO 3. Access road, zone 1, northern section

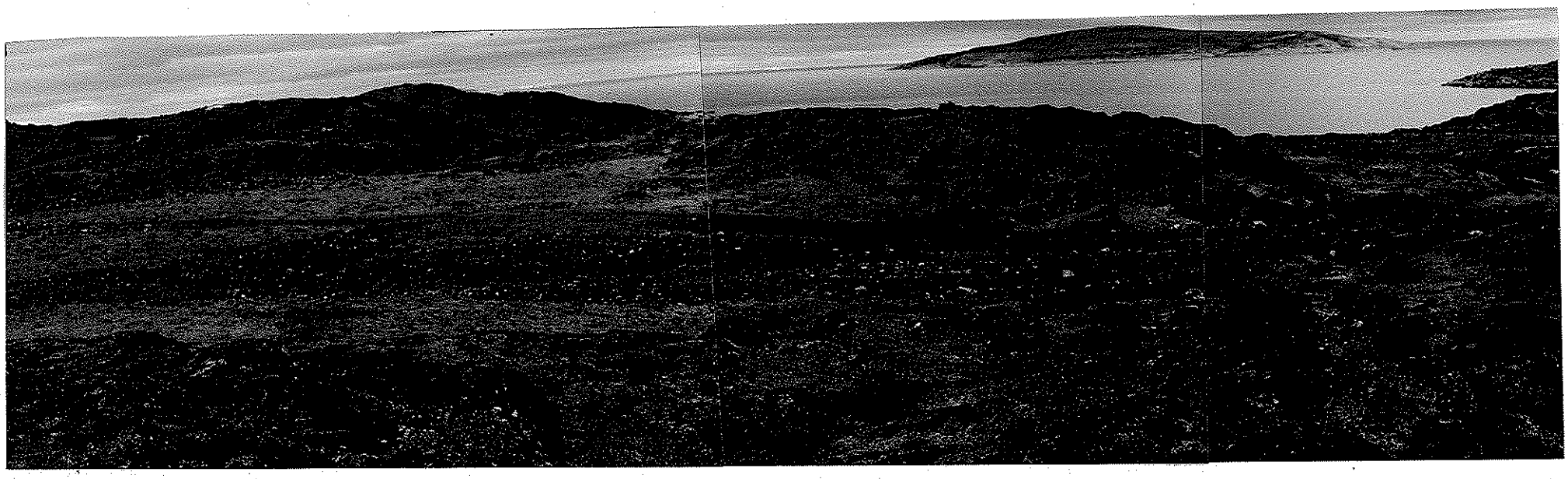

PHOTO 4. Bulldozed zone 11 from the east

PHOTO 5. Bulldozed zone II from the northwest (access road in foreground)

PHOTO 6. Bulldozed zone III from the northeast soil removal zones VI and VII are located on the right and left edges of the trench.

PHOTO 7, Central section of bulldozed zone 111 from the east

PHOTO 8. Bulldozed zone 111 gravel pile from the south

PHOTO 9. Bulldozed zone 111 gravel pile and sod/soil mound from the southeast

PHOTO 10. Bulldozed zone IV and gravel pile from the north.

PHOTO 11. Bulldozed zone V from the south

PHOTO 12. Bulldozed zone V from the northwest

PHOTO 13. Bulldozed zone V from the northeast. Structure J is located in the foreground.

PHOTO 14. Soil removal zone VII from the south.

PHOTO 15. Surface distrubance zone VIII from the northwest. Structure E is indicated by the light green moss and partially destroyed gravel rim in the centre of the photograph.

PHOTO 16. Surface disturbance zone IX, sod/soil mound and zone IV gravel pile from the north.

PHOTO 17. Pillaging in the centre of structure A.

PHOTO 18. Pillaging in the east-central portion of structure A.

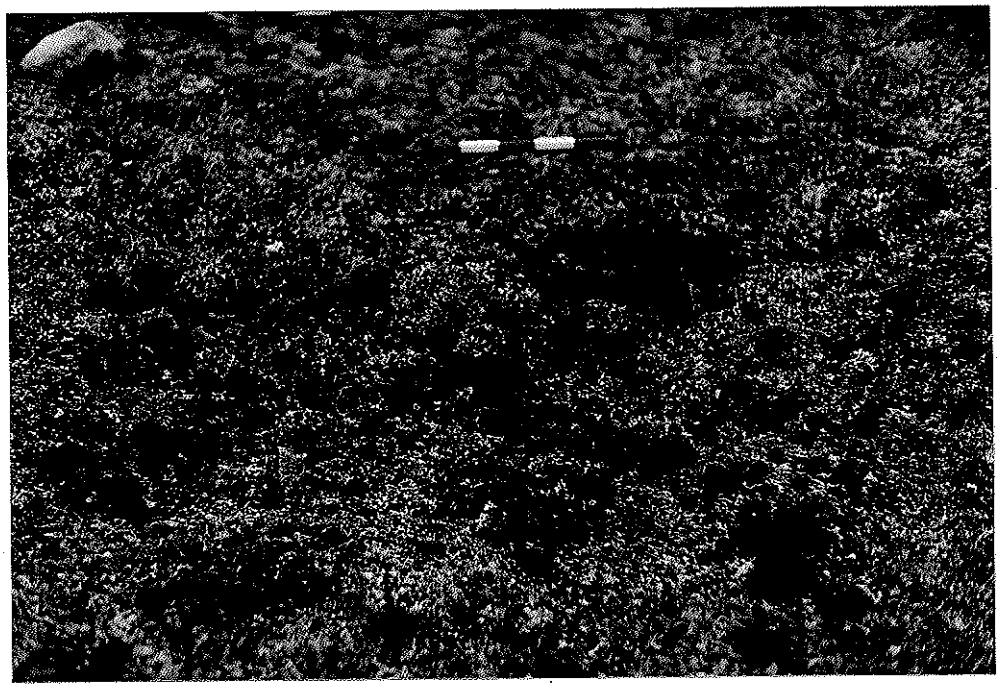

PHOTO 19. Pillaging in the northeastern poortion of structure B.

PHOTO 20. Pillaging in the northwestern portion of structure B.

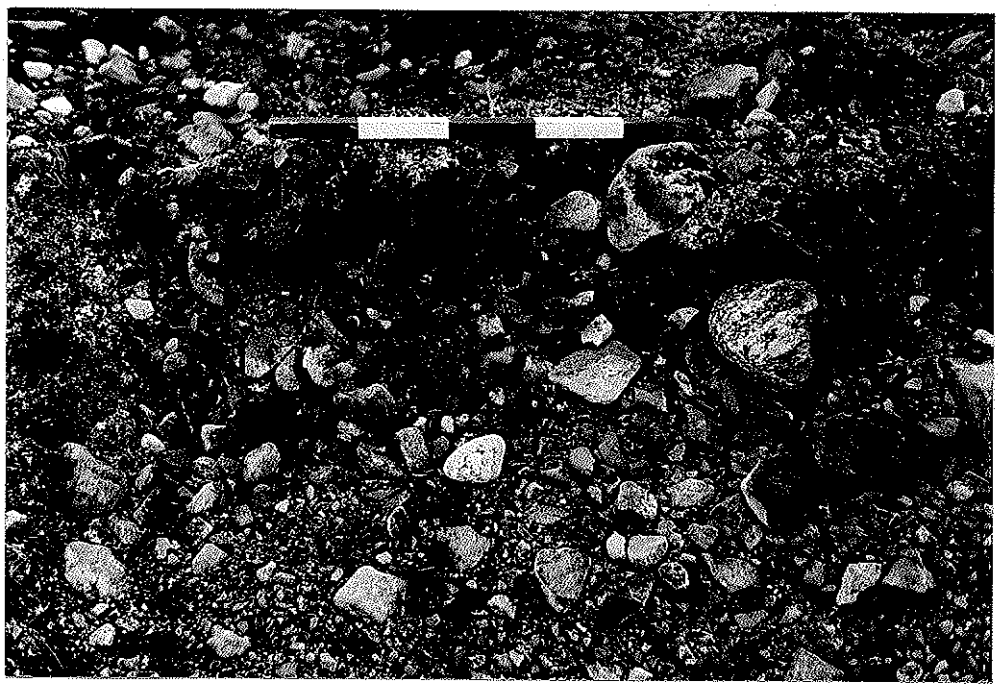

PHOTO 21. Soil profile, bulldozed zone III.

PHOTO 22. Soil profile, bulldozed zone IV.

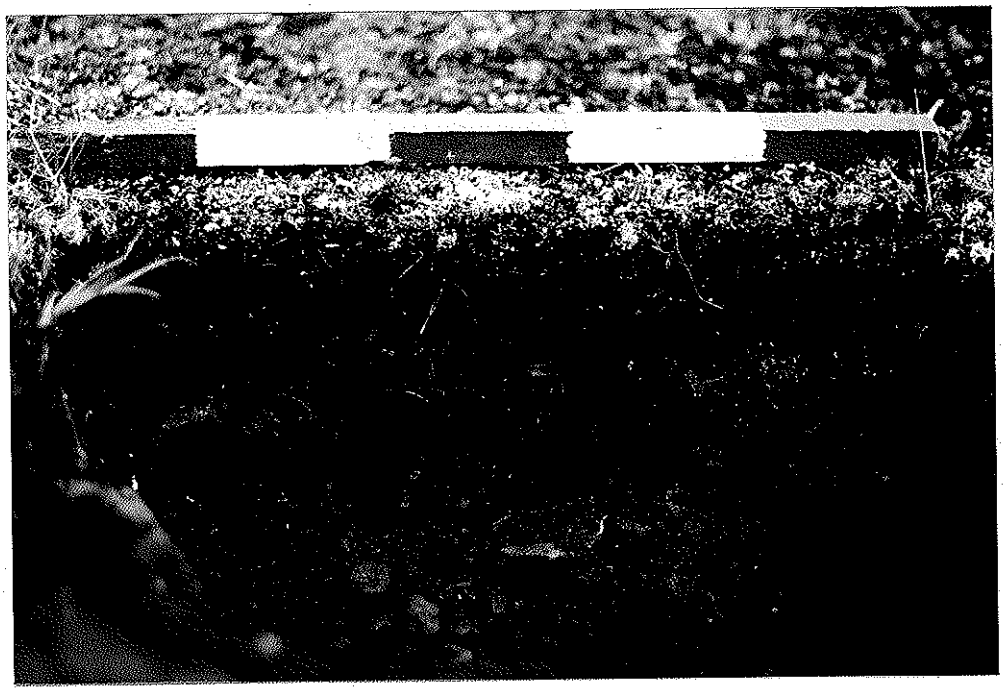

PHOTO 23. Soil profile, north wall of the test pit on the rim of structure E.

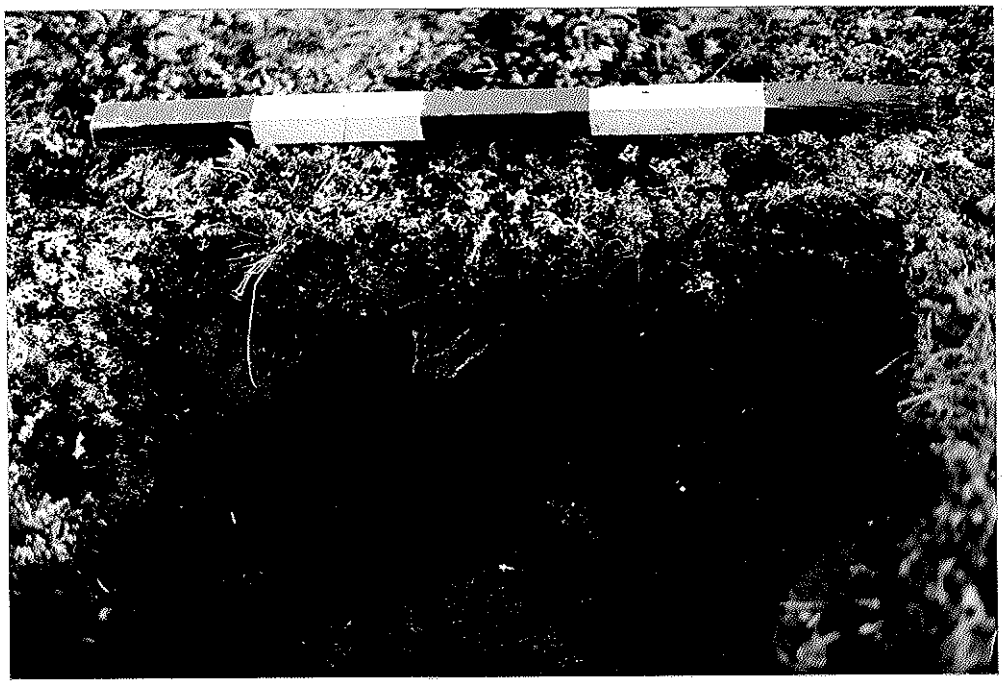

PHOTO 24. Soil profile, north wall of the test pit in in structure F

PHOTO 25. Structure A from the northeast. Pillaging is indicated by overturned sod in left-centre.

PHOTO 26. Structure A from the west.

PHOTO 27. Structure B from the southeast. Pillaging is shown by the overturned sod in the centre-left and right. Cache pit on the rim of the structure is indicated by the rocks and longer grass in the centre foreground.

PHOTO 28. Structure B from the southwest.

PHOTO 29. Structure C from the northeast. The scale is located right of the centre of the tent ring.

PHOTO 30. Structure D from the south. The scale is located in the approximate centre of the mid-passage.

PHOTO 31. Structure D mid-passage from the east.

PHOTO 32. Structure E From the southeast. The scale is located in the approximate centre of the dwelling. The partially destroyed gravel rim is indicated by the surface disturbance in the centre of the photograph.

PHOTO 33. Structure F from the north. Light green vegetation defines the interior of the dwelling.

PHOTO 34. Structure G from the south. The scale is located in the approximate centre of the dwelling.

PHOTO 35. Structure H from the north. The interior limits of the remaining portion of the dwelling are defined by the light green vegetation in the centre and centre-right of the photograph.

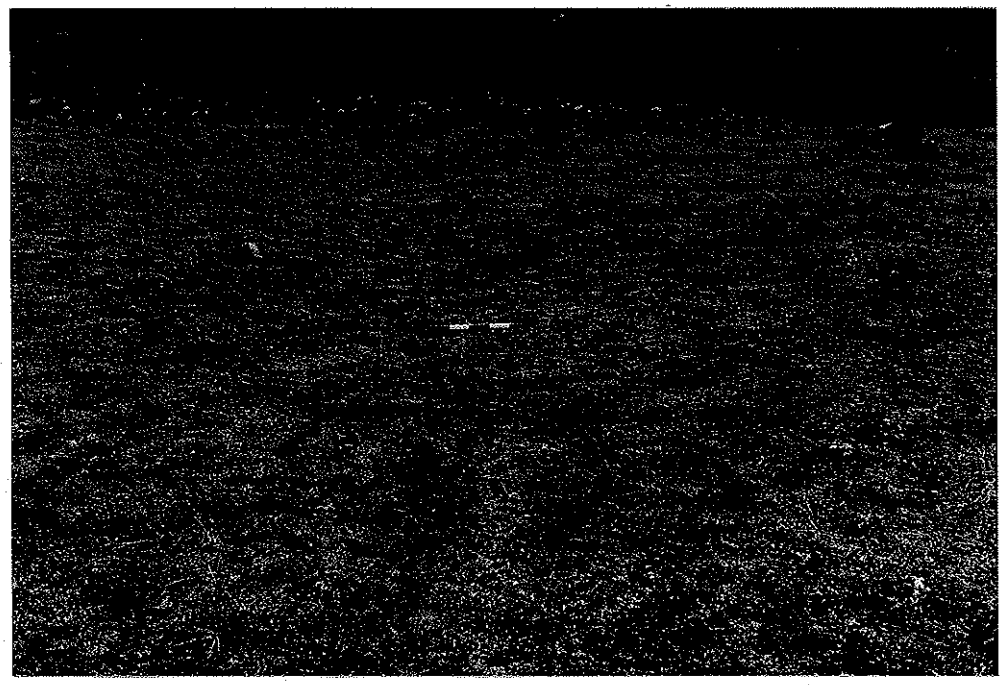

PHOTO 36. Structure I from the east. The scale is located in the approximate centre of the dwelling.

PHOTO 37. Structure J from the south. The scale is located on the gravel rim of the dwelling.

PHOTO 38. Structure K from the east. The scale is located right of the centre of the tent ring.

PHOTO 39. Structure L from the south. The dark and light green vegetation in the left foreground define the interior edge of the gravel rim.

PHOTO 40. Structure M from the northeast. The raised gravel rim is indicated by the grey moss bordered by the light green vegetation in the centre-right.

PHOTO 41. Structure N from the south. The tent ring is indicated by the rocks extending in a semi-circular alignment from the left to the lower right edge of the photograph.

PHOTO 42. Structure O from the Southwest. The light green vegetation defines the interior of the tent ring.

PHOTO 43. Structure P from the southeast. The band of dark and light vegetation and the associated rocks define the circumference of the tent ring.

PHOTO 44. Flagstone hearth base located on the periphery of structure L. Use of the flagstone as a hearth base is indicated by the encrusted burnt grease.

PHOTO 45. Flagstone hearth base located on the periphery of structure M. Burnt grease is encrusted along the right hand edge of the flagstone.

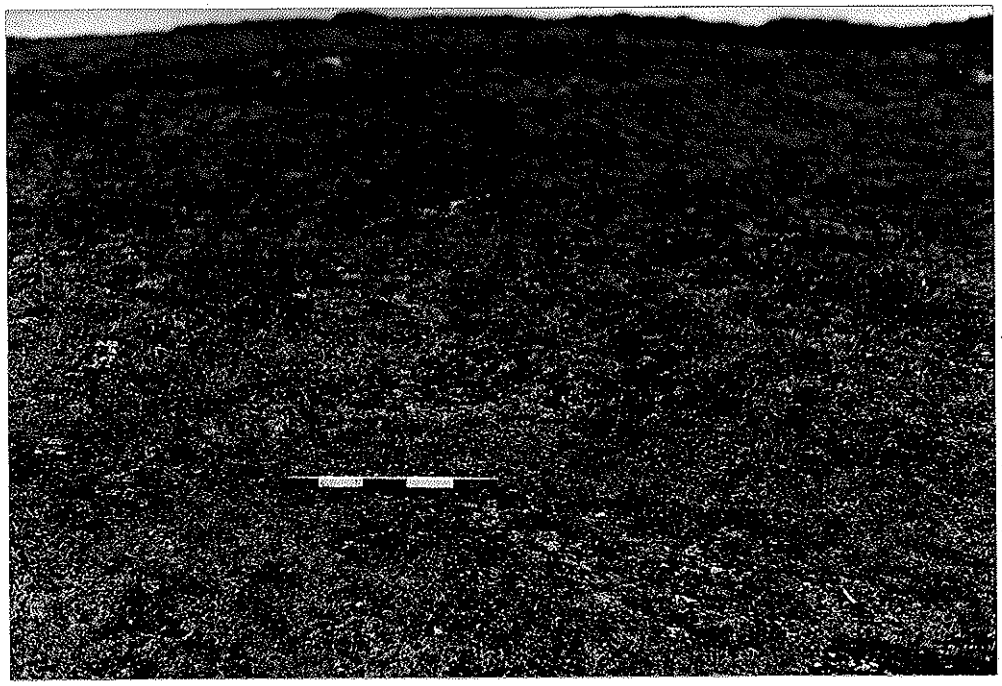

Photo 46. Cache Pit situated northeast of structure A. The pit is identified in the photograph by the light green vegetation.

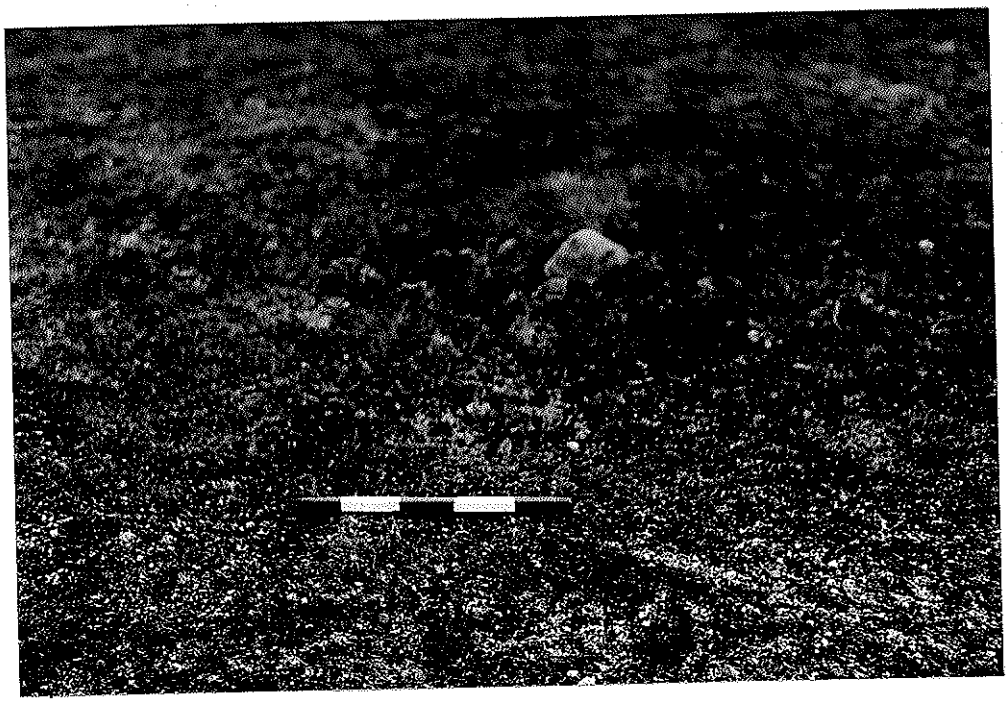

PHOTO 47. Cache pit on the rim of structure A. The pit is identified in the photograph by the green vegetation.

PHOTO 48. Cache pit situated southeast of structure P. The pit is identified by the light green vegetation.

PHOTO 49. Exterior hearth situated southeast of structure K.

APPENDIX D

APPENDIX E