

ARCHAEOLOGICAL SURVEY
OF THE JaEm-3 SITE,
KANGIRSUK, NORTHERN QUEBEC

PRESENTED TO:

THE MUNICIPALITY OF KANGIRSUK
AND
HYDRO-QUEBEC

BY:

THE AVATAQ CULTURAL INSTITUTE INC.

APRIL, 1987

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Summary

An emergency archaeological survey of the JaEm-3 site at Kangirsuk, Northern Quebec, was carried out by the Avataq Cultural Institute during July, 1986. This survey was undertaken on the request of the Municipality of Kangirsuk and of Les Entreprises Guy Latarte inc., a firm contracted to Hydro-Quebec. The research executed was oriented towards the evaluation of possible impacts on the site of construction works related to the relocation of the Hydro-Quebec power plant in the village. These works comprised the proposed exploitation of a borrow pit situated on the periphery of the site or, alternately, the construction of an access road across the site to a second potential borrow pit.

Discovered in 1985, the JaEm-3 site represents a Pre-Dorset and Dorset habitation site characterized by numerous tent rings and scattered surface concentrations of lithic materials. The results of the present survey confirm as well as complement the extent and density of these cultural deposits as previously registered in the site area concerned. Evaluation of these results further indicates that a considerable amount of archaeological information would be destroyed by construction activities suggested in this area.

In order to protect the site, it is recommended that neither of the proposed construction works be carried out in the proposed area. It is also recommended that all future Hydro-Quebec construction projects in Northern Quebec Inuit territories be preceded by an archaeological impact study.

Acknowledgments

We wish to express our gratitude to Mr. Elijah Grey, Mayor of Kangirsuk, and to Mrs. Sarah Grey, Director of the Kangirsuk Housing Authority. Mayor Grey and Mrs. Grey not only assured the protection of the JaEm-3 site pending the advice of Avataq but, through their collaboration, greatly facilitated survey activities. We are also grateful to Mr. Daniel Latarte, of Les Entreprises Guy Latarte inc., who informed us of the circumstances necessitating survey of the site. Special thanks are due to Mrs. Jessie Grey, who graciously provided accommodations in Kangirsuk during the field work.

We are indebted to Mr. Henry Stewart, of Mejiro Gakuen Women's College, Tokyo, Japan, who carried out the survey of the site. Mr. Stewart's assistance in this and other projects contributed substantially to the success of the Avataq 1986 archaeological field programme.

The costs of the survey were initially assumed by the Avataq Cultural Institute. However, subsequently informed of the survey, Mr. Germain Tremblay, Coordinator de Projets spéciaux des Propriétés immobilières, Région Montmorency, kindly consented on the behalf of Hydro-Quebec to re-imburse these costs to Avataq.

The contributions of each of these individuals to the present project are gratefully acknowledged.

1.0 Introduction

The present report concerns the emergency archaeological survey of the JaEm-3 site at Kangirsuk, Northern Quebec. The necessity of carrying out this unanticipated survey was brought to the attention of Avataq on July 5 by Mr. Daniel Latarte, of Les Entreprises Guy Latarte inc. On this occasion, Mr. Latarte informed Mr. Ian Badgley, the institute's Resident Archaeologist, that the Municipality of Kangirsuk had refused his firm permission to exploit certain gravel deposits for construction work in the village. He had been informed, specifically, that the proposed borrow pit was occupied by a prehistoric archaeological site and that, pending the advice of Avataq, no municipal authorization to remove gravel from this area would be forthcoming.

The work concerned, scheduled to begin in August, involved the construction of foundations for the relocation of the Hydro-Quebec power plant in Kangirsuk. According to Mr. Latarte, the proposed borrow pit was one of 2 localities in the vicinity of the village containing gravel of adequate quality for foundation construction. He therefore enquired as to the possibility of excavating the site prior to the beginning of the planned work. Advised that no such excavations could be undertaken, he then requested that Avataq study the feasibility of constructing an access road across the site to the second potential borrow pit. This alternate locality is situated a short distance north of the site.

On Monday, July 7, Mr. Badgley contacted Mr. Elijah Grey, Mayor of Kangirsuk, Mr. Tommy Kotak, President of the Saputik Landholding

Corporation, and Mrs. Sarah Grey, Director of the Kangirsuk Housing Authority. These individuals confirmed the situation as related by Mr. Latarte. Additionally, Mrs. Grey explained that the municipality had not been informed of the location of the proposed borrow pit until July 4 and, consequently, had lacked the time necessary to research alternative sources of construction gravel. She also requested that Avataq carry out a study of the limits of the JaEm-3 site. This request was forwarded in the interest of possibly granting Mr. Latarte's firm permission to exploit an existing borrow pit situated on the southeastern periphery of the site.

The above information was transmitted on the same day to Mr. Charles Martijn of the ministère des Affaires culturelles du Québec and, on the following day, to Mr. Johnny Williams, then Executive Director of Avataq, and Mr. Barrie Gunn, the institute's Cultural Development Officer. Mr. Martijn advised that a letter describing the situation be forwarded to Hydro Quebec by the Avataq executive. He further recommended that measures necessary for the protection of the site be undertaken by Avataq. Concurring with Mr. Martijn, Mr. Williams instructed Mr. Badgley to proceed immediately with the requested studies. However, as Mr. Badgley was then fully involved in the Inuit Archaeological Field School at Quaqtak, he was authorized to dispatch Mr. Henry Stewart, Professor of Archaeology at Mejiro Gakuen Women's College, Tokyo, Japan, to Kangirsuk. Mr. Stewart had been invited to participate in the Avataq 1986 field programme in order to familiarize himself with the current context of Northern Quebec Inuit archaeology and to discuss Japanese collaboration in a long-term research project.

Accordingly, the survey of the JaEm-3 site was carried out by Mr. Stewart during July 10-12. However, as information subsequently received tended to contradict survey results, Mr. Stewart returned to Kangirsuk on July 16. This second inspection of the site confirmed the results of the survey as originally reported.

Several days after the second inspection, Mr. Latarte met again with representatives of the Municipality of Kangirsuk. During this meeting, his firm was granted permission to exploit an existing borrow pit located on the hillside north of the village. This borrow pit was presumed earlier by Mr. Latarte to be exhausted and, consequently, had not been discussed in the previous meeting. A brief visit to the locality indicated, however, that it contained sufficient quantities of materials appropriate to the planned construction work.

The selection of this final locality eliminated the immediate threat of construction impacts on the JaEm-3 site. Nevertheless, the survey carried out clearly illustrates the potential for archaeological site destruction resulting from construction projects in Northern Quebec Inuit municipalities. It emphasizes, in sum, the necessity of executing impact studies prior to initiating such projects, regardless of scope.

2.0 Summary of the JaEm-3 site

The JaEm-3 site was discovered during the archaeological inventory of the Kangirsuk study area conducted by the Avataq Cultural Institute in 1985. This inventory, sponsored by the ministère des Transports du Québec, was carried out within the context of the environmental impact studies engendered by the Northern Quebec Airports Infrastructure Improvement project. The following descriptions are summarized from the report detailing the results of this inventory (Avataq, 1987).

2.1 General Description

The JaEm-3 site is a mixed Pre-Dorset and Dorset habitation site located in the Municipality of Kangirsuk, Ungava County, Northern Quebec, at 60°1'15"N 70°01'52"W (Figure 1). It is situated in a short valley approximately 400 m north of the Arnaud River and about 200 m northwest of the village (Figure 2). The valley is bounded to the east and west by bedrock hills and, to the south, by a broad, wet basin. The site, covering roughly 26,750 m², varies in altitude from 30 to 34 m.a.s.l.

A narrow, down-cut stream meandering southward divides the site into 2 areas designated A and B (Appendix 3). Area A is composed of generally well-drained gravel deposits situated along the western flank of the valley. These deposits are controlled to the east by bedrock outcrops. Area B consists of a series of raised gravel beach ridges occupying the eastern section of the valley. Low mosses and lichens intermixed with sparse grasses represent the dominant vegetation in

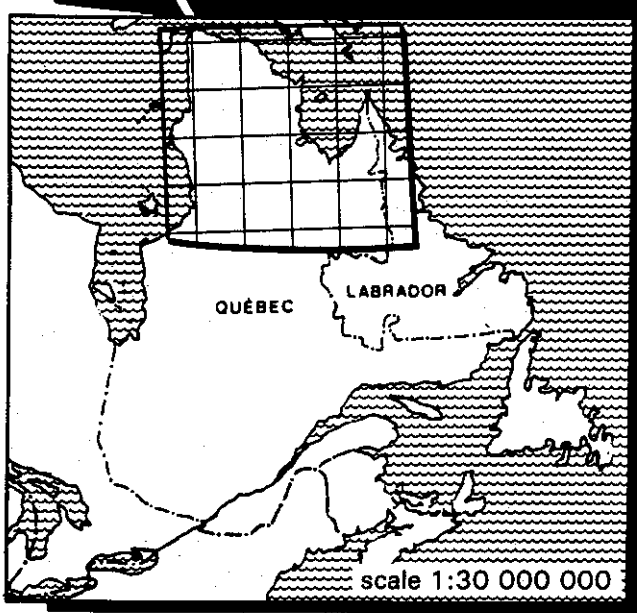
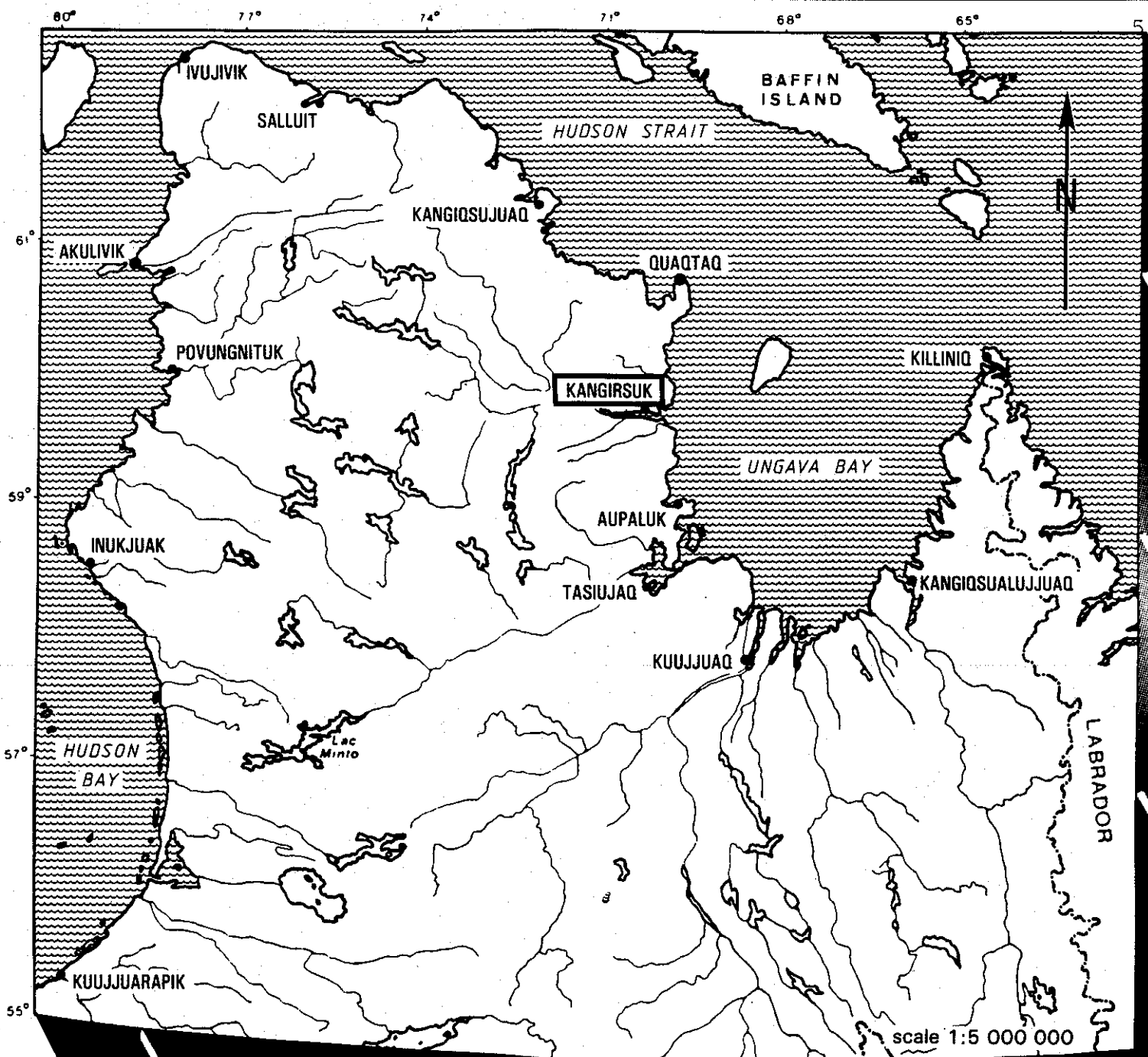


FIGURE 1

Location of the Municipality of Kangirsuk, Northern Quebec

FIGURE 2

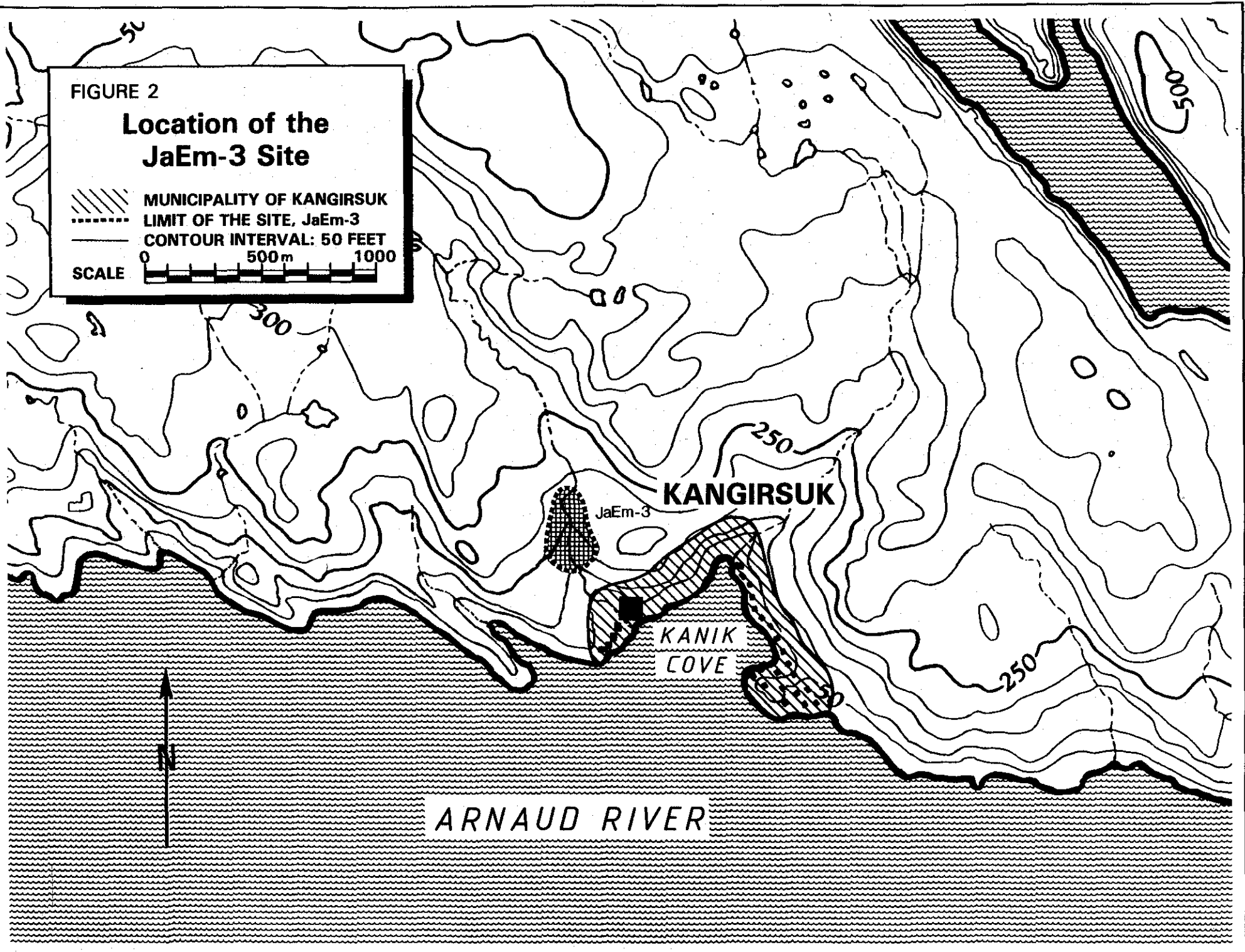
Location of the JaEm-3 Site



MUNICIPALITY OF KANGIRSUK

LIMIT OF THE SITE, JaEm-3

CONTOUR INTERVAL: 50 FEET



KANGIRSUK

KANIK
COVE

ARNAUD RIVER

both areas. Relatively limited sphagnum colonies occur in the north-central portion of Area A. Dense alders extend across the southern extremity of Area B.

Identified habitation structures are represented by 24 tent rings, 15 of which are located in Area B (Table 1). These structures, of varying form, range from 1.90 m in diameter to 4.90 x 2.50 m in internal dimensions. Excluding 2 partially-disturbed tent rings in Area B, all other habitation structures appear to be intact. Other features recorded at the site comprise 3 stone fox traps and a small cache, all of which are situated on the southern edge of Area A.

Limited sampling of the site produced a total of 148 lithic specimens (Table 2). Of these specimens, 17 were recovered from test pits excavated in Area A and 131 from test-pitting and surface-collecting in Area B. This collection is composed of 140 waste flakes and 8 tools. The latter include 2 fragmentary projectile points, an almost complete knife in polished slate, a biface fragment, 2 retouched flakes, and 2 used flakes. Black chert, probably of local origin, is the predominant raw material. Other varieties of chert, Ramah quartzite, and a reddish slate occur in small percentages.

As concerns archaeological importance, it should be noted that the JaEm-3 site has yielded the only evidence of Pre-Dorset occupation currently known on the west coast of Ungava Bay. The presence of these data now indicates that this area was originally populated by Early Palaeoeskimo groups sometime during the second half of the first millenium B.C. Also, the spatial and altitudinal relationships of the Pre-Dorset and Dorset components at the site suggest that the locality

Table 1. Summary of Habitation Structures Identified at the JaEm-3 site, 1985.

<u>Area</u>	<u>Structure</u>	<u>Form</u>	<u>Dimensions (m)</u>	<u>Remarks</u>
A	1	circular	2.70 dia.	
	2	circular	2.70 dia.	
	3	undetermined	2.20 x 1.30	
	4	oval	5.10 x 3.50	- presumed entrance approximately 50 cm in width oriented towards the south.
	5	circular	2.80 dia.	
	6	oval	3.40 x 2.80	- mid-passage varying from 25 to 60 cm in width oriented east-west - entrance approximately 75 cm in width oriented towards the east.
	7	circular	1.90 dia.	- entrance approximately 90 cm in width oriented towards the south.

Table 1. Summary of Habitation Structures Identified at the JaEm-3 site, 1985.

<u>Area</u>	<u>Structure</u>	<u>Form</u>	<u>Dimensions (m)</u>	<u>Remarks</u>
	8	oval	3.80 x 2.60	- mid-passage approximately 50 cm in width and oriented north-south suggested.
	9	oval	4.90 x 2.50	- mid-passage about 1.0 m in width and oriented northwest-southeast suggested. - entrance roughly 75 cm in width oriented towards the northeast.
B	10	oval	2.90 x 2.70	
	11	oval	2.80 x 2.60	
	12	circular	2.10 dia.	
	13	circular	2.10 dia.	
	14	oval	2.70 x 2.20	
	15	circular	2.20 dia.	
	16	circular	2.10 dia.	
	17	circular	2.20 dia.	
	18	rectangular	2.40 x 2.0	

Table 1. Summary of Habitation Structures Identified at the JaEm-3 site, 1985.

<u>Area</u>	<u>Structure</u>	<u>Form</u>	<u>Dimensions (m)</u>	<u>Remarks</u>
	19	circular	2.10 dia.	
	20	oval	3.00 x 2.30	
	21	circular	2.10 dia.	
	22	undetermined	2.80 x 1.90 (x)	- partially destroyed by access road.
	23	undetermined	3.00 x 2.00 (x)	- partially destroyed by access road.
	24	oval	2.40 x 2.10	

(m): metre
 dia.: diametre
 (x): incomplete dimensions

(Source: Avataq, 1987, tableau 7).

Table 2. Summary of Lithic Specimens Collected at the JaEm-3 site, 1985.

CATEGORY	Surface						Access Road	Test Pits									Total
	Concentrations		Structures					S.1	S.2	S.3	S.4	S.5	S.6	S.7	S.8	S.9	
	<u>1</u>	<u>2</u>	<u>18</u>	<u>19</u>	<u>20</u>	<u>22</u>											
PROJECTILE POINTS										1	1						2
KNIVES							1										1
BIFACES							1										1
RETOUCHED FLAKES							2										2
USED FLAKES	1	1															2
WASTE FLAKES	<u>26</u>	<u>20</u>	<u>18</u>	<u>4</u>	<u>30</u>	<u>2</u>	<u>17</u>	<u>1</u>	<u>2</u>	<u>-</u>	<u>11</u>	<u>2</u>	<u>2</u>	<u>1</u>	<u>2</u>	<u>2</u>	<u>140</u>
Total	27	21	18	4	30	2	21	1	2	1	12	2	2	1	2	2	148

(Source: Avataq, 1987, tableau 8)

was rapidly re-occupied by succeeding Late Palaeoeskimo groups. An early phase of the Dorset culture, as yet undocumented in the area, may be indicated. On the other hand, sites of this culture located in the Arnaud basin have been radiocarbon-dated to as late as the 14th century A.D. Consequently, should an early Dorset phase be confirmed at the JaEm-3 site, then some 2500 years of continuous Palaeoeskimo occupation in the Kangirsuk region may be presumed.

2.2. Area B

As the proposed construction works are projected only in Area B, all survey activities were limited to this part of the site. As already noted, this area is composed of raised gravel beach ridges situated in the eastern section of the valley. These well-drained formations are bordered to the east by a bedrock hill and, to the west, by the stream terrace. The area is delimited to the north by an extensive bedrock outcrop. The beach ridges are bounded to the south by a borrow pit.

Field data recorded in 1985 indicated that cultural remains in Area B extended to the northern bedrock outcrop and to the foot of the eastern valley slope. The former limit corresponds to the location of 2 identifiable habitation structures while the latter was confirmed by scattered lithic specimens and several possible tent rings observed on the surface. Although no cultural data were registered on the stream terrace, this section of the site was nevertheless included in the area

As suggested by cultural materials observed on the surface, the southern limit of the area was defined as occurring roughly 30 m north of the existing borrow pit (c.f., Avataq, 1987, annexe 3, plan

85(1):026). However, subsequent to the inventory of the site, this borrow pit was briefly exploited for the construction of gravel foundations for new houses in the village (Avataq, 1986). This construction work, carried out in 1985 for the Société des Habitations du Québec, extended the borrow pit some 15 to 20 m towards the north and northwest.

Area B, calculated to cover approximately 12,500 m², measured 125 x 100 m in overall dimensions. Surface disturbance noted included an access road extending northward from the borrow pit and several ATV and snowmobile trails in the western portion of the area. The access road is ungraded; it results, instead, from the repeated passage of vehicles and machinery across the site. Both the road and the trails are down-cut into cultural deposits.

All but 3 of the 15 habitation structures previously identified in the area are located west of the access road. Of the others, 2 have been partially destroyed by the road. Additional structures are suggested by poorly-defined alignments of stones scattered across the beach ridges. Notable clusters of probable tent rings were recorded in the northwestern, east-central, and southwestern portions of the area.

As mentioned earlier, sampling activities in Area B yielded a total of 131 lithic specimens, 123 of which were surface-collected. The majority of the latter was recovered from 2 relatively extensive concentrations situated in the central portion of the area west of the access road as well as from the surface of the road, particularly in the vicinity of the 2 disturbed tent rings. Smaller lithic concentrations occur in several of the habitation structures. Numerous other specimens were observed scattered across the surface of the area.

3.0 Research Orientations and Procedures

3.1 Objectives

The immediate objectives of the research undertaken at the JaEm-3 site were two-fold:

- .to define as precisely as possible the southern limit of Area B and;
- .to study the feasibility of constructing an access road across this area of the site.

These objectives were organized in accordance with the requests of the Municipality of Kangirsuk and of Les Entreprises Guy Latarte inc. In both cases, research was oriented towards the evaluation of the impacts on heritage resources in Area B of proposed construction works related to the relocation of the Hydro-Quebec power plant in the village. The ultimate objective of the survey, then, was to propose measures for the mitigation of such impacts on these resources.

3.2 Community Consultation

Meetings with representatives of the municipal council of Kangirsuk were held prior to initiating and immediately following completion of field activities. The first meeting, convened on the evening of July 10, centred on the explanation of survey objectives and techniques. Survey results and recommendations were presented during the second meeting, held on the afternoon of July 12. This meeting included a visit to Area B of the site by municipal representatives.

Both meetings were attended by Mayor Grey and Mrs. Sarah Grey, representing the Municipality of Kangirsuk. These individuals were also consulted during the supplementary inspection of the site carried out on July 16.

4.3 Field Methods

Methods applied in the field included extensive as well as intensive visual inspections and the excavation of a single test pit. The inspections focused, firstly, on the definition of the southern limit of Area B and, secondly, on the clarification of the distribution and density of cultural features and materials visible on the surface of the area. The test pit, numbered S-10, was excavated in order to verify the identification of a previously unrecorded tent ring. This test pit measured 50 x 50 cm by 15 cm in depth.

As initially organized, field activities excluded the collection of cultural materials. Accordingly, lithic specimens observed in the test pit were left in the back-filled excavation. On the other hand, a small number of lithics were collected during the visual inspections. These objects occurred in 2 widely-dispersed surface scatters located on the access road. The recovery of these specimens was deemed necessary to the rescue of immediately endangered site data.

3.4 Registration Techniques

The lithic specimens recovered were collectively registered as occurring in Collection Area 1 or 2. The overall distribution of the specimens was also recorded.

A revised plan of Area B was prepared using a pocket transit and a 60-metre survey chain. This plan, incorporating 1985 inventory data, illustrates the principal physical characteristics of the area (including the borrow pit) and the location of all identified habitation structures, zones containing clusters of probable tent rings, and all positive and negative test pits. Lithic concentrations and the collection areas are also indicated.

Particular attention was devoted to the mapping of the northern edge of the borrow pit in relation to several permanent reference points. These points comprised the southernmost limits of 3 bedrock outcrops situated in the southern portion of the area. Compass bearings and distances recorded were then cross-referenced with the access road and nearby habitation structures

Area B in general, the borrow pit, the newly-identified habitation structure, and a probable tent ring located in the northwestern section of the area were photographed in colour and in black and white.

4.0 Survey Results

The results of the survey both confirm and complement the archaeological information registered in Area B of the JaEm-3 site during 1985. These results include the registration of previously unrecorded data as well as observations concerning the spatial extent and distribution of cultural remains in this area of the site.

4.1 Data Recorded

Structure 25

This newly-identified tent ring, designated Structure 25, is located in the southern portion of the area, at an altitude of approximately 30 m.a.s.l. (Appendix 3). It is situated roughly 3 m east of the access road and about 10 m north of the edge of the borrow pit. The structure is defined by an oval alignment of generally small, irregularly-spaced flat stones. The overall dimensions of the alignment are 3.00 x 2.75 m, with the longer axis oriented east-west. Neither the entrance nor internal features are discernible on the surface.

Vegetation in the structure is composed predominately of low mosses and lichens mixed with sparse grasses. The grasses increase in frequency along the perimeter of the stone alignment.

The altitude of the tent ring suggests a Dorset culture affiliation for Structure 25. This interpretation is supported by the form of the tent ring and by the lithics observed in the test pit.

Lithic Specimens

A total of 23 lithic specimens were surface-collected on the southern section of the access road (Appendix 2). Of these specimens, 5 were recovered from Collection Area 1 and 18 from Collection Area 2. The first of these collection areas is situated directly west of structure 25, roughly 13 m north of the borrow pit. The second is located 4 m north of the first, or approximately 5 m south of structure 22. Both of the zones surface-collected measure 4.00 x 3.50 m in maximum dimensions.

The specimens recovered comprise 14 waste flakes and 8 tools. The latter include a distally-incomplete stemmed knife, 2 biface fragments and 2 retouched flakes. Four used flakes were also collected.

The knife and a biface fragment are in Ramah quartzite. The other 23 specimens are in chert, a black variety predominating.

4.2 Observations

Delimitation of Area B

The location of all habitation structures and the 2 major lithic surface concentrations identified in 1985 was confirmed by field observations. Lesser concentrations and individual lithic specimens were also noted in several habitation structures as well as scattered throughout the greater part of the area. In contrast, only 2 of the 3 clusters of probable tent rings registered earlier were observed. The third cluster was located in the southwestern extremity of the area,

between the access road and the ATV trail. This portion of the area is now encompassed by the borrow pit.

As previously mentioned, Area B is delimited to the north by an extensive bedrock outcrop and, to the east, by the hill flank of the valley. Alternately, the western limit is redefined as corresponding to a second extensive outcrop and to the sections of the ATV trail situated north and south of this outcrop (c.f. Appendix 3). This redefinition is based on the lack of cultural remains observed on the surface of the stream terrace west of the outcrop and the trail. Similarly, neither habitation structures nor cultural materials were observed either on the surface immediately peripheral to or eroding from the northern perimeter of the borrow pit. This perimeter is of irregular contour, extending from the eastern hill flank progressively towards the southwest. The most southerly habitation structure identified in the area (i.e., structure 16) is located roughly 17 m northwest of the nearest edge of the borrow pit. On the other hand, structure 25 is situated no more than 10 m north of the borrow pit. These structures are considered to approximate the southern limit of the area.

Based on these observations, Area B is now calculated to cover approximately 8,075 m². The overall dimensions of the zone are 95 x 85 m, the longer axis oriented north-south. The reduction in the dimensions of the area as initially defined results: 1. from the elimination of the stream terrace from the area and; 2. from the expansion of the borrow pit. However, as no test pits were excavated along the stream, the exclusion of the terrace from the area remains provisional. Conversely, the extent of borrow pit exploitation prohibits confirmation of the

probable tent rings previously noted in the southwestern extremity of the area.

Distribution of Cultural Remains

The bulk of the 16 identified habitation structures occur in 3 clusters of varying extent. The first of these clusters consists of 5 tent rings situated in the southwestern portion of the area while the second, also composed of 5 structures, spans the southern section of the access road. The third cluster comprises 4 tent rings located in proximity to the western outcrop. The 2 other habitation structures are situated on the northwestern periphery of the area, 25 m north of the latter cluster.

The habitation clusters and inter-structural spaces cover a combined surface area of approximately 1,800 m². This zone extends roughly 65 m in east-west orientation, parallel to the edge of the borrow pit, and about 60 m in north-south orientation. The minimal distance between the clusters varies from 15 to 20 m.

Numerous lithic specimens are distributed throughout the clusters and the intervening spaces, most notably between the southwestern and south-central clusters. The latter space, containing the 2 major surface concentrations and the 2 collection areas, is characterized by a particularly dense and relatively continuous distribution of lithics. As mentioned earlier, lesser concentrations and scattered specimens occur along the access road in the northern part of the second cluster and in association with the west-central group of tent rings.

In general, identified habitation structures and observed lithic specimens decrease progressively in frequency towards the eastern, northeastern and, to a lesser extent, northern limits of Area B. However, as illustrated by the site plan presented in Appendix 3, the northwestern and east-central portions of the area are occupied by groups of suggested tent rings. The first group is situated between the west-central habitation cluster and structures 10 and 11 and the second, roughly 15 m northeast of the south-central cluster. Several possible tent rings are also noted along the eastern hill flank. Additionally, individual lithic specimens are sporadically distributed throughout the eastern and northern sections of the area.

5.0. Conclusions

Available data indicate that the JaEm-3 site was initially occupied by Pre-Dorset groups. The 4 tent rings interpreted as pertaining to these groups, situated on the northern peripheries of Areas A and B, suggest that this Early Palaeoeskimo occupation was of limited extent and short duration. In contrast, occupation of the site by succeeding Late Palaeoeskimo groups appears to have been both repeated and extensive, particularly in Area B. For example, Dorset habitation structures (presumed to include most if not all of the probable tent rings) are widespread throughout the greater part of this area. The principal habitation zone, comprising a minimum of 14 tent rings, covers roughly 1,800 m², representing approximately 22.5% of Area B as now calculated. Moreover, the relative density of lithics associated with these structures suggests intensive occupation of this zone.

As concerns the immediate objectives of the present survey, the southern limit of Area B is defined as occurring, variably, between 17 and 10 m north of the borrow pit perimeter. This limit corresponds to the southernmost tent rings recorded on the eastern and western extremities of the principal habitation zone. However, though unconfirmed, the possible tent rings previously noted in the section of the area now encompassed by the borrow pit suggest that cultural deposits may have extended some 20 m or more towards the south.

Secondly, the widespread distribution of habitation structures and lithics militates against the construction of an access road across Area B. It is stressed, in particular, that any construction work either on or peripheral to the existing road will obliterate a considerable

portion of the principal habitation zone. Also, the limitations of the survey preclude assessment of the eastern section of the area and the stream terrace as archaeologically unimportant. Regardless of these limitations, it is nevertheless assumed that road construction in either of these localities would inevitably destroy archaeological data in the eastern section and along the western periphery of the area.

6.0 Recommendations

The JaEm-3 is evaluated as being of importance to a better archaeological understanding of Palaeoeskimo occupations in western Ungava Bay in general and in the Kangirsuk region in particular. This assessed importance resides, essentially, on the presence of the Pre-Dorset component and on the presumed earliness of Dorset occupation of the site. It further takes into account the quality and perceived clarity of the prehistoric cultural information contained in the site.

The results of the present survey, combined with 1985 inventory data, tend to indicate that Area B of the site was extensively and intensively occupied by Dorset groups. The cultural deposits associated with these multiple re-occupations have been partially disturbed by local traffic across the area. It is also possible that exploitation of the borrow pit may have destroyed part of these deposits.

The following recommendations are forwarded in the interest of preventing further disturbance of the JaEm-3 site and, additionally, of mitigating future construction impacts on archaeological sites in Northern Quebec Inuit territories. In both cases, policies for the management of cultural heritage resources are explicit.

It is therefore recommended:

.that no construction works be undertaken in Area B of the JaEm-3 site;

Specifically, it is recommended that neither of the proposed construction works be carried out in this area. As already emphasized, cultural materials are not only concentrated in close proximity to the northern perimeter of the borrow pit but also are widespread throughout the area. Further exploitation of the borrow pit or construction of the suggested access road will result, it is certain, in the destruction of a considerable amount of prehistoric cultural data. So too, any other development projects involving landscape alteration in this area (or Area A as well) of the site.

.that appropriate measures be implemented in order to assure the protection of the JaEm-3 site;

As noted earlier, cultural deposits contained in Area B (including at least 2 habitation structures) have been partially disturbed by local vehicle traffic. Moreover, field observations confirm that the continued use of the existing access road is compounding erosion of disturbed deposits. In order to protect the site from further disturbance, it is suggested, then:

- that vehicles be prohibited from crossing the site;
- that the site in general and Area B in particular be monitored at regular intervals;
- that, if possible, the master plan of the Municipality of Kangirsuk be revised so as to exclude the site from future development projects.

The first of these suggestions refers to the restriction of all non-essential traffic on the site, particularly during the absence of

snow cover. It involves: 1. informing the local population of the location and importance of the site and; 2. the erection of markers clearly delimiting the site areas. Site monitoring would involve, basically, the periodic inspection and photography of disturbed zones. It would also include the systematic collection and registration of cultural materials eroding in these zones. These activities could be carried out in June and September by a local resident trained in basic archaeological field techniques.

In regards to the third suggestion, it need be emphasized that the developmental concerns of the municipality are of first priority. Obviously, any revision of the master plan will be limited by practical considerations as well as by prevailing physical and environmental circumstances in the vicinity of the village. From this perspective, municipal development projects in the JaEm-3 site locality would supersede in importance the conservation of the site. Should such be the case, then it is strongly recommended that controlled archaeological salvage excavations be conducted in the concerned sections of the site. Also, in order to assure maximum recovery of endangered data, these excavations would need to be carried out well in advance of planned construction activities.

.that all future Hydro-Quebec construction projects in Northern Quebec Inuit territories be preceded by an archaeological impact study;

The situation necessitating the present survey illustrates the potential for archaeological site destruction resulting from

construction projects in Northern Quebec Inuit territories. The adverse effects of such projects are further demonstrated by the impacts of similar work carried out in the Municipality of Quaqtaq during 1986. In this instance, exploitation of gravel deposits for the construction of foundations for the new Hydro-Quebec power plant in the village partially destroyed a known archaeological site. Also, other deposits exploited for this work had been previously determined as possible site locations.

The proposed studies are recommended in order to mitigate the impacts of future construction projects, regardless of scope, on Northern Quebec Inuit archaeological resources. These studies would involve a preliminary phase focused on the determination of the archaeological potential of projected construction localities and, results depending, the field survey of these localities. The first phase is essential to the identification of recorded archaeological sites as well as of the theoretical archaeological potential of the localities concerned. It also allows the necessity of undertaking survey to be determined. For example, certain localities which have undergone extensive landscape alteration generally do not need to be surveyed. Already developed housing lots in the villages are a case in point. However, all zones determined to be of high or moderate archaeological potential should be systematically verified in the field. Such zones habitually include well-drained gravel deposits frequently selected as borrow pits.

In order to be of any use, the recommended studies need be executed at least one year prior to the beginning of the planned construction work. This scheduling is necessary to the formulation and

implementation of any impact mitigation measures which may result from surveys.

.that the communities in particular and the regional population in general be fully informed of the results of all future archaeological projects in Northern Quebec Inuit territories;

Until recently, archaeologist working in Northern Quebec Inuit territories often neglected to inform the local residents of research results. In particular, information concerning the location of and data recovered from researched sites has been transmitted only rarely to the communities. However, as heritage resources, archaeological sites in these territories are of direct importance to the Northern Quebec Inuit. These sites represent, in effect, the physical manifestation of past lifeways ancestral to the traditional adaptations of this population.

The diffusion of research results to the communities will enhance awareness of archaeological sites and, consequently, contribute to the conservation of these sites. The protection of the JaEm-3 site afforded by the Municipality of Kangirsuk amply demonstrates this point. In fact, it was only through an awareness of the site by local officials, notably Mayor Elijah Grey and Mrs. Sarah Grey, that borrow pit exploitation in Area B was prevented. These individuals had been informed of the location of this and all other known sites in the vicinity of the village following the completion of the 1985 archaeological inventory at Kangirsuk.

These circumstances stress the need for developing policies for the transmission of cultural heritage information to Northern Quebec

Inuit communities. The development of such policies pending, it is suggested nevertheless that detailed summaries of the results of all future archaeological research projects be forwarded to the relevant community or communities. These summaries, to be provided as rapidly as possible following completion of field work, should include archaeological site distribution maps, site plans, and a selection of photographic prints.

7.0. Personnel

The survey of the JaEm-3 site was carried out by Mr. Henry Stewart, Professor of Archaeology at Mejiro Gakuen Women's College, Tokyo, Japan. The text of the present report has been written by Mr. Ian Badgley, Resident Archaeologist of Avataq. The figures and revised site plan have been drafted by Mr. Rick Rock, of Rock Design. This report has been typed by Miss. Barbara Halawnicki, secretary of the Avataq Archaeology Department.

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PHOTOGRAPHS



Photo 1. General view of the borrow pit and southern portion of Area B, towards the south.



Photo 2. View of the northern section of the borrow pit, towards the west.



Photo 3. General view of Area B, towards the northwest.



Photo 4. View of the southern portion of Area B, towards the southwest. The black camera bag near the access road in the centre of the photo marks the location of structure 25.



Photo 5. Structure 25, Area B, towards the south.



Photo 6. Probable habitation structure, northwestern portion of Area B, towards the south.

Appendix 1

List of Photographs, JaEm-3,

Area B, Kangirsuk, 1986

Appendix 1. List of Photographs, JaEm-3, Area B, Kangirsuk, 1986.

Roll No.	Negative	Subject	Orientation	Date
C86-9(1)	0	Structure 25	W	11-7-86
	0A	Structure 25	S	11-7-86
	1A	Probable structure, northwest sector	SW	11-7-86
	2A	Probable structure, northwest sector	S	11-7-86
	3A	Probable structure, northwest sector	N	11-7-86
	4A	Southern portion of Area B	SW	11-7-86
	5A	Borrow pit and southern portion of Area B	S	11-7-86
	6A	Southern portion of Area B	SW	11-7-86
	7A	General view, Area B	W	11-7-86
	8A	General view, borrow pit and Area B	NW	11-7-86
	9A	General view, Area B	NW	11-7-86
	10A	Borrow pit	W	11-7-86
	11A	Borrow pit and southern portion of Area B	WNW	11-7-86
	12A	General view, Area B	NW	11-7-86
	13A	General view of the village of Kangirsuk	E	11-7-86
	14A	Overview of Area B	SW	11-7-86
	15A	Overview of Area B	SW	11-7-86
	16A	Borrow pit and southern portion of Area B	W	11-7-86
	17A	Overview of borrow pit and Area B	NW	11-7-86
18A	General view, northern portion of Area B	NNW	11-7-86	
19A	General view, borrow pit and Area B	NW	11-7-86	

Roll No.	Negative	Subject	Orientation	Date
C86-9(2)	0A	Structure 25	S	11-7-86
	1	Test pit S-10, structure 25	S	11-7-86
	2	Biface fragment, Collection Area 1	-	11-7-86
	3	General view of borrow pit and Area B (from Area A)	E	11-7-86
	4	General view of borrow pit and Area B (from Area A)	E	11-7-86
	5	View of the southern portion of the Area B	E	11-7-86
	6	Structure 25 and test pit S-10	N	11-7-86
	7	Structure 25 and test pit S-10	W	11-7-86

Roll No.	Negative	Subject	Orientation	Date
BW86-9(1)	4	Probable structure, northwest sector	SW	11-7-86
	5	Probable structure, northwest sector	S	11-7-86
	6	Probable structure, northwest sector	N	11-7-86
	7	Southern portion of Area B	SW	11-7-86
	8	Borrow pit and southern portion of Area B	S	11-7-86
	9	Southern portion of Area B	SW	11-7-86
	10	General view, Area B	W	11-7-86
	11	General view, Area B	NW	11-7-86
	12	General view, Area B	NW	11-7-86
	13	General view of the village of Kangirsuk	E	11-7-86
	14	Overview of Area B	SW	11-7-86
	15	Overview of Area B	SW	11-7-86
	16	Overview of borrow pit and Area B	NW	11-7-86
	17	General view of Area B	NW	11-7-86
	18	General view, borrow pit and Area B	NW	11-7-86
	19	General view, borrow pit and Area B	NW	11-7-86

Appendix 2

Catalogue of Lithic Specimens,
JaEm-3, Area B, Kangirsuk, 1986

Appendix 2. Catalogue of Lithic Specimens, JaEm-3, Area B, Kangirsuk, 1986.

a) Worked or Used Specimens

<u>Catalogue No.</u>	<u>Class</u>	<u>Provenance</u>	<u>Description</u>	<u>Raw Material</u>
31	Stemmed knife	Surface, Coll. 1	-distally incomplete	Ramah quartzite
32	Biface	Surface, Coll. 1	-fragment	Ramah quartzite
33	Biface	Surface, Coll. 2	-fragment	Chert
34	Retouched flake	Surface, Coll. 1		Chert
35	Retouched flake	Surface, Coll. 2		Chert
36	Used flake	Surface, Coll. 2		Chert
37	Used flake	Surface, Coll. 2		Chert
38	Used flake	Surface, Coll. 2		Chert
39	Used flake	Surface, Coll. 2		Chert

b) Debitage

<u>Catalogue No.</u>	<u>Provenance</u>	<u>Raw Material</u>	<u>Number of Specimens</u>
40	Surface, Coll. 1	Chert	2
41	Surface, Coll. 2	Chert	12

Coll.: Collection Area.

Appendix 3

Plan of the JaEm-3 site