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# Archaeological Survey

## *Isua Project - Greenland*

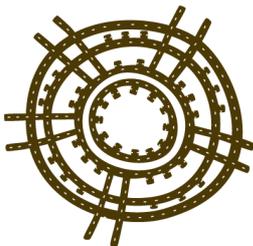


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Greenland National Museum & Archives

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NUNATTA  
KATERSUGAASIVIA  
ALLAGAATEQARFIALU

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## NAALISAGAQ

April 2008 Nunatta Katersugaasivia Allagaateqarfialu/Grønlands Nationalmuseum & Arkiv (NKA) saaffigineqarpoq *London Mining*'imiit Isukasiata Taseraarsuullu akornanni itsarnisarsiortoqarnissaa noqqaassutigalugu. Selskabi taanna pilersaaruteqarpoq Isukasiani aatsitassarsiorfiliornissamik, tassani saviminissamik paaasoqalersaarluni, Taseraarsummi umiarsualiviliassamut piiakkanik qulisakkut assartorneqartartussanik. Piiakkanik assartuivissakkoortumik aqquinniorqalersaarluni. Kulturikkut eqqaassutissanik allanngutsaaliuineramik Inatsisartut inatsisaat nr. 18, 19. november 2007-imeersoq naapertorlugu juli 2008-mi NKA aqquinniariniarneqartukkut misissuisitsivoq, kulturikkut eqqaassutissat tamaaniittut eqqorneqassanersut nalilersortinniarlugu. Itsarnisarsiut misissuineranni aatsitassarsiorfiliassaq, piiakkanik assartuiffissaq aqquinniasallu kulturikkut eqqaassutissanut *toqqaannartumik* ajoqutaasussatut isigineqanngillat. NKA isumaqarpoq pilersaaruteqarnermi itsarnitsanut eqqaassutissat ajoquserneqarnaviarunanngitsut, pilersitsiniarnermi sapinngisamik piaartumik pisariaqarneratut qanoq iliuuseqartoqarpat. Pilersitsinissamik pilersaarutit aallartinneqassappata NKA-p inassutigissavaa itsarnitsanut eqqaassutissatut tamaani nalunaarsorneqarsimasut ersitsut pisariaqarneratut ilisarnaasersorneqarnissaat. Aammattaaq inassutigineqassaaq itsarnitsanut eqqaassutissat qanittuanni suliat aatsaat ingerlanneqartassasut NKA-p aammalu pilersaaruteqartut sinniisuata qutsissumik atorfeqartitap akornanni isumasioqatigiittoqareeraangat .

## RESUMÉ

I april 2008 blev Nunatta Katersugaasivia Allagaateqarfialu/Grønlands Nationalmuseum & Arkiv (NKA) kontaktet af mineselskabet *London Mining* med henblik på at få udført en arkæologisk rekognoscering i et område mellem Isukasia og Taseraarsuk. Selskabet planlægger anlæggelse af en mine ved Isukasia hvori der skal brydes jernmalm som sidenhen skal transporteres ud til en havn, som planlægges anlagt ved Taseraarsuk, via et overdækket transportbånd. Langs dette transportbånd skal der ligeledes anlægges en arbejdsvej. I henhold til gældende lovgivning, i.e. *Landstingslov nr. 18 af 19. November 2007 om fredning af kulturminder*, udførte NKA i juli 2008 en rekognoscering af den planlagte rute for at få et overblik over hvilke konsekvenser projektet vil få for områdets kulturminder. Resultatet af sommerens arkæologiske rekognoscering afdækkede ikke nogle *direkte* konflikter mellem den planlagte mine, transportbånd og vej og det berørte områdes kulturminder. Det er NKA's opfattelse at konstruktionsarbejdet ifm. projektet kan udføres uden at beskadige områdets kulturminder såfremt behørig foranstaltninger træffes så tidligt i konstruktionsfasen som muligt. Såfremt konstruktionsarbejdet påbegyndes anbefaler NKA som det første at registrerede kulturminder i det berørte område afmærkes på behørig vis således at de er synlige i terrænet. Efterfølgende anbefales det at alt konstruktionsarbejde i nærheden af kulturminder kun udføres efter samråd mellem NKA og en højt rangerende repræsentant for projektholder.

## INTRODUCTION

In April 2008 Nunatta Katersugaasivia Allagaateqarfialu/Greenland National Museum & Archives (NKA) received a request from London Mining (LM) regarding the possibility of conducting an archaeological study of the area concerned between Isukasia and Taseraarsuk. The background and context of this study is described in the LM project description *Isua Project - Greenland, Baseline Monitoring Program: London Mining, An application to conduct baseline monitoring in the Isua (confirm) region for the Isua Project, April 2008*, hereafter mentioned simply as the Project.

The archaeological study includes a survey of the areas which are going to be affected by the Project as well as a limited compilation of existing/archival knowledge concerning the pre-historical and historical use of the areas in question.

This archaeological survey was conducted in accordance with Greenlandic law, specifically the Home Rule Government's Antiquities Act **Landstingslov nr. 18 af 19. november 2007 om fredning af kulturminde**. Three NKA employees constituted the 2008 survey team: archaeologist Pauline Kleinschmidt Knudsen, museum technician Fuuja Larsen and museum curator Mikkel Myrup (author).

The results from this summer's survey did not present any major *direct* conflict between the proposed mining site, pipeline and access road and the cultural remains in the affected area. It is the view of the NKA that it is possible to carry out the Isua Project construction work without directly damaging the area's cultural remains if appropriate measures are taken as early in the construction process as possible.

The NKA recommends as a first step, if construction work should begin, that registered cultural remains in the affected areas are adequately marked by the NKA in such a way that they will be visible in the landscape. Additionally, any construction work in the cultural remains' proximity should be carried out only after thorough consultation between the NKA and a senior ranking project holder representative.

## BACKGROUND AND PLANNING

Geologists have been aware of the Isukasia iron ore deposits for decades and the first extraction project proposals were drafted in the 70's. The proposals never reached the stage of conducting archaeological surveys though. In conjunction with the geological surveys done in the 70's, several sites of archaeological interest were reported to the NKA. The area is also well known because of its population of caribou (*Rangifer Tarandus Groenlandicus*) which in former times constituted an essential part of the Inuit economy. A more elaborate account of this subject will follow below.

The NKA was approached in the spring of 2008 about the possibility of conducting this survey. Despite the short notice, the museum succeeded in assembling a suitable survey team. This was also due to the fact that the scope of the survey, at this stage and seen from an archaeological point of view, seemed manageable.

Due to the nature of the archaeological features in this area it was decided that the survey should be done by foot, i.e. the team was to hike along the route of the proposed pipeline and access road. The use of helicopter assistance was anticipated at two river crossings and this turned out to be needed in one additional instance.



Fig. 1 The proposed route for pipeline and road provided by the project holder. As seen, the thick black line resembles in reality more of a corridor than just a mere line. In some of the more hilly terrain this posed a problem assessing/determining an exact pipeline and road route.

(Map by London Mining)

The 105+ kilometre hike was planned to be completed over a eleven day period. As it would be associated with an excessive weight to be carried by each team member if all the food were to be brought from the point of departure, three food caches were laid out on designated positions along the proposed pipeline by helicopter a few days in advance of the hike.

All in all the planning and execution of the survey went smoothly thanks to exemplarily good communication with Johannes Kyed at Greenland Mining Services A/S resulting in a effectively flexible helicopter service.



*Fig. 2 Helicopter service just a satellite phone call away when permitted by weather.  
(Photo: NKA)*

## TOPOGRAPHY

The topography of the survey area is relatively varied since it stretches approximately 105 kilometres, from the edge of the inland ice to the fiord coast. Elevation varies between 800+ metres to sea level. The first stretch from the proposed mining and camp site towards the relatively large lake Tarsartuup Tasersua (lake 710) 710 metres asl (see fig. 7) is easily travelled as the terrain consists of soft curved hills, vegetation mainly grasses and low shrubbage combined with the absence of boulderfields. As soon as one reaches the northern shores of Tarsartuup Tasersua (lake 710) though, this changes into a more alpine landscape with steeper slopes and boulderfields. And as one descends towards sea level the vegetation gets denser and more varied.

The area between the proposed mining site and the northern shores of Tarsartuup Tasersua (lake 710) is also where one finds the largest numbers of archaeological features as this is an ancient caribou hunting area. One can enter this area from two sides. One entrance is from the south along the eastern shores of Tarsartuup Tasersua (lake 710) and one is from the west. A more detailed description of these routes can be seen in the paragraph concerning the historical background. The actual route of the proposed pipeline, with an adjacent road, will partly rely on the landscape contours, meaning that one has to use the 'easiest way'. In the area between Tarsartuup Tasersua (lake 710) and the proposed mining site (as well as along other stretches), this means that there is a coincidence between former land use and the proposed pipeline/road as some of the area's main caribou tracks runs along the latter.

## LIVING RESOURCES, PREHISTORY AND HISTORICAL BACKGROUND

The central West Greenland inland has been used for subsistence caribou hunting since early prehistory. In the inner Nuuk Fiord area a <sup>14</sup>C- dating from a structure with relation to caribou hunting suggests that this is taking place as early as 1900-1700 BC (Appelt 2003). The use of caribou is seen in the archaeological record throughout palaeo-eskimo times which ends around 800 BC (Gotfredsen & Møbjerg 2004).

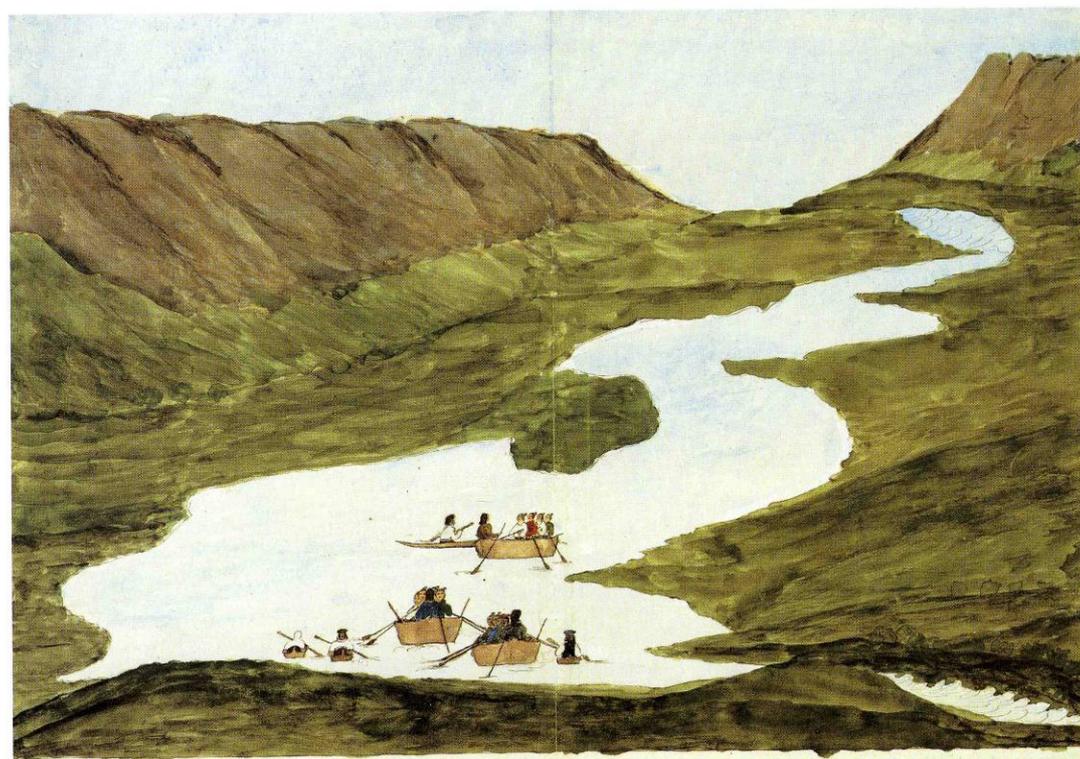
The next inhabitants of the Nuuk Fiord area were the European Norse. The Nuuk area is where the Norse *Western Settlement* was situated and their occupation of the area spanned from the 11<sup>th</sup> century to the 14<sup>th</sup> century AD (cf. Arneborg 2004). The archaeological record suggests that the caribou was also integrated into the Norse economy, although it seemingly never became an essential part of the diet (cf. Arneborg et al 1999).

The Thule Culture, the modern Greenlander's direct ancestors, arrived the Nuuk area in the 14<sup>th</sup> century and soon they had established a regular use of the caribou resource (Gulløv 1997). Greenland was re-colonized by Europeans (the Danish-Norwegian Crown) in 1721 and that year also marks the initial stage of an emerging body of written source material describing the use and importance of the caribou as a resource.

In 1858 a high ranking colonial administrator urges the Greenlandic population to send in accounts of old myths and tales, in written as well as in illustrated form. The purpose being printing these for publication and general distribution and education. This results in the first illustrations depicting traditional caribou hunting and camp life. Especially one person, Aron of Kangeq (b. 1822, d. 1869), is very productive. His production includes a relatively large amount of watercolour paintings with accompanying texts describing caribou hunting in the Nuuk inland area as well as in inland areas further north. In the summer whole families ventured inland to caribou hunting base camps. To reach the camp sites one travels as far as possible by water on the lakes and rivers. The hunters in their kayaks and the rest (the elderly, women and children) in Umiqs (large skin boat). On the following watercolour paintings from the 19<sup>th</sup> century this is illustrated.



*Kigssip akua:  
Tasessuarmut kavilersut.*



*Umiaqian:  
Tasina tassorpât hiquup tassingostâ.*

Fig. 3 & 4 The umiaqs and kayaks are carried around waterfalls to reach calmer waters. These illustrations depict such a location, Maqqaq Alleq, meaning 'the lower place were you carry your vessels' (my translation). At this location the 2008 survey team had to be airlifted because of the river/waterfall.

(Aron of Kangeq. Painted sometime between 1857-61)



Fig. 5 This is an illustration of a base camp between Tasersuaq and Tarsartuup Tasersua. The dwellings are stone huts built almost entirely of large slabs. We see this type of structure on several locations in this area (e.g. I 011), but not outside the greater Nuuk region.

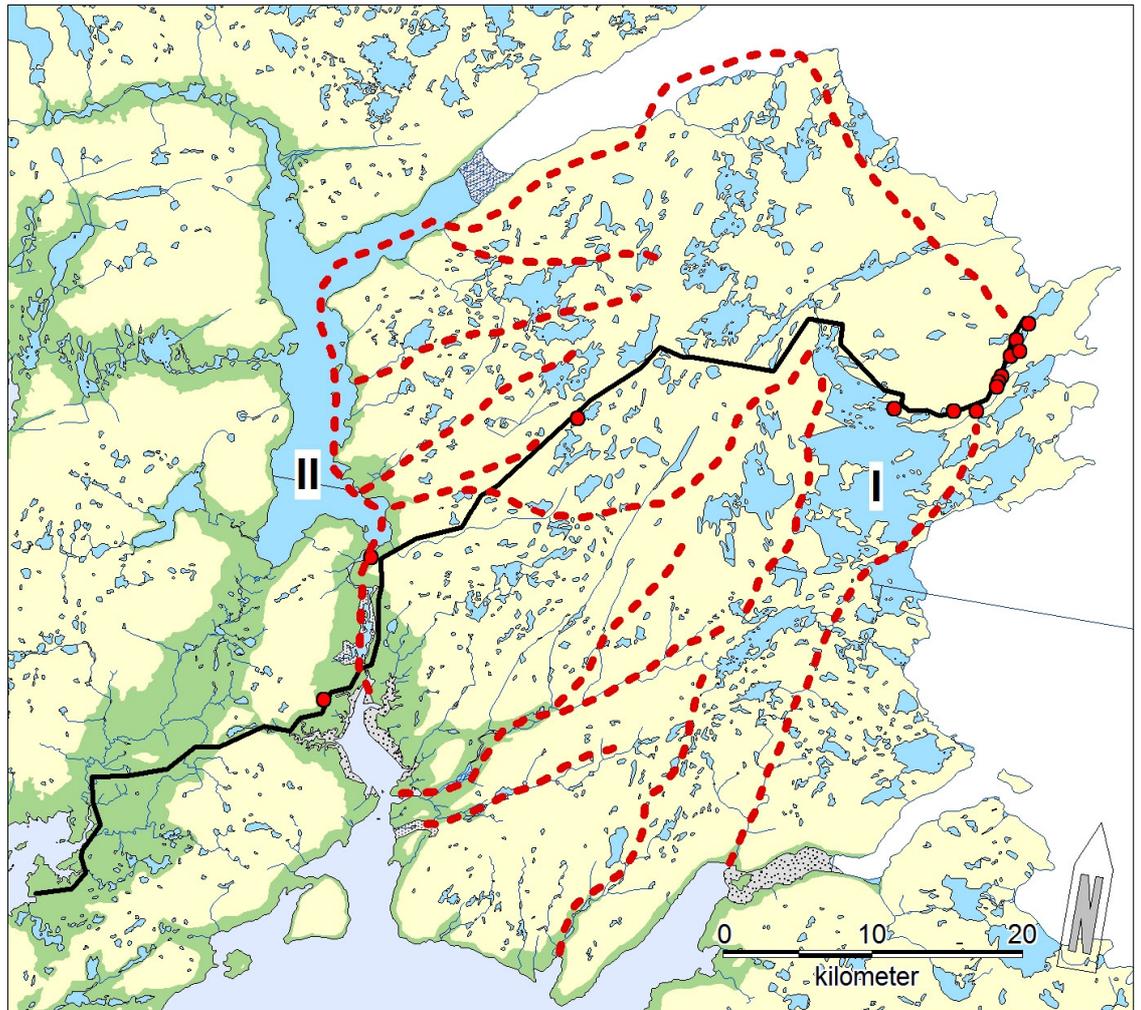
(Aron of Kangeq. Painted sometime between 1857-61)

Fig. 6 The communal hunting where large groups travels into the inland with their kayaks were abandoned in the 1950'es. This photo was taken in a Nuuk area called Ujarassuit in 1930 by german geologist Karl Gripp.



Fig. 7 This map section shows the inland hunting grounds. The dotted lines represent some of the main access routes into the hunting grounds between Tarsartuup Tasersua (I) and Tasersuaq (II). This information has been obtained through interviews with former users of this land. The red dots represents the archaeological features registered this summer.

(Map by NKA)



Sources like Aron of Kangeq describes how caribou hunting was performed, not only in the mid-19<sup>th</sup> century, but also before that. For example Aron describes how the communal drive hunting was used in pre-colonial times. He illustrated this system of caribou hunting, and today we can find traces after it in the landscape. As mentioned above, people used to travel inland and live in base camps from which the actual hunting took place. The base camp often consisted of houses built mostly of large slabs. These houses had been re-used for generations, but apparently knowledge of their origin was lost already at that time. One possible explanation of this ‘knowledge gap’ could be ascribed to the fact that the Nuuk area was heavily hit by smallpox epidemics in 1733 (the deadliest one, killing off almost 90% of the area’s population) and in the beginning of the 19<sup>th</sup> century. As one sees exemplified above, Aron habitually wrote short explanatory comments below his art work in Greenlandic. In relation to the stone huts he explains that these are “[...] built a long time ago [...]” (my translation). Aron’s

comments were since subjected to a contemporary translation into Danish by the collector and this reads that the stone huts were “[...] (*presumed to stem from the old Norsemen*)” (my translation). This rather erroneous interpretation of Aron’s comment has since had an unfortunate effect. In the principal work on Aron’s life and work (Thisted 1999) it is thus written that the painting depicts how “[...] *they use the old Norse ruins.*” (my translation). Of course we cannot know if Aron and the collector discussed the possibility of the stone huts being of Norse origin and that this then instigated the collector to write as she did but it should be mentioned that Aron also did numerous illustrations in connection with writing down the myths and legends regarding the Inuit’s interaction with the Norse, and if he had been convinced of the stone huts’ Norse origin, he would probably have explicitly told us so in his comment. Today we are still unable to ascribe the stone huts and their origin to one specific culture or period, but the prevailing opinion among researchers is that they *are not* of Norse origin. Further examination will hopefully help us discovering that.

## SURVEY RESULTS

The caribou hunters often travelled for several days away from the base camps, therefore smaller forward camps are seen throughout the hunting grounds surrounding the larger camps. These smaller forward camps often consist of just one or two so-called hunter’s beds. This is a small circle or oval of stones in which one can make a bed of twigs and caribou skins. Even though the inland climate is more constant than the coastal ditto, one is subjected to lower temperatures due to the higher altitudes and it is not unusual to have snow even in the summer. In snow and heavy rain conditions it is of vital importance to keep dry and the use of rock shelters and small caves was necessary as well. It is in this type of setting this summer’s survey took place and, as one will see, the archaeological features registered will correspond to the above mentioned.

As hinted in the above the greater concentration of archaeological sites is situated in the initial stage of the pipeline/road stretch, i.e. between the proposed mine site and Tarsartuup Tasersua (lake 710) (see fig. 8). The sites in this area can all (except I 010)

be categorized as forward hunting camps. They are as such small sites and mostly consists of one or two simple features for example the hunter's bed.

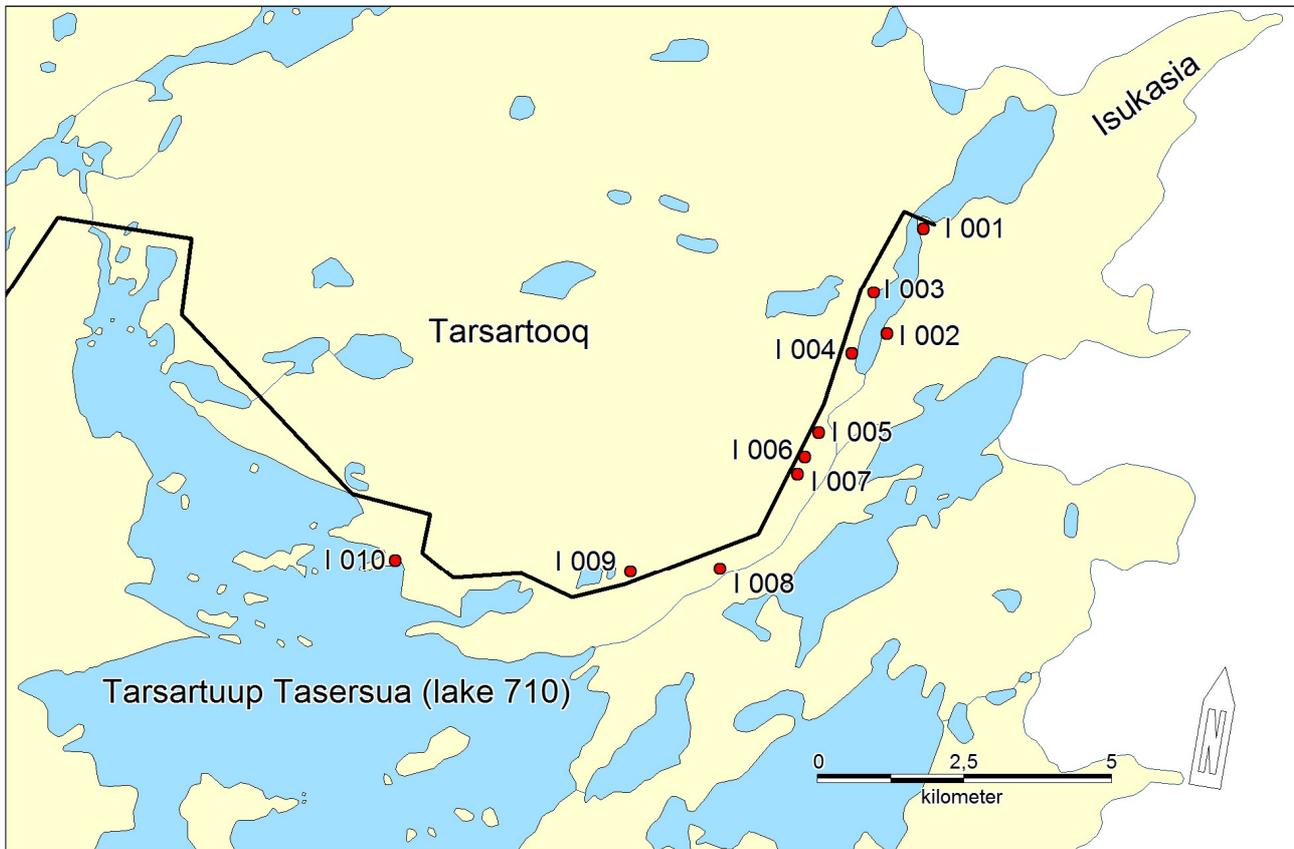


Fig. 8 The stretch between the proposed mine site and Tarsartuup Tasersua revealed the greatest concentration of archaeological features. As shown on the lower map only three additional sites were registered away from the Tarsartooq as the area north of Tarsartuup Tasersua is called. (Map by NKA)

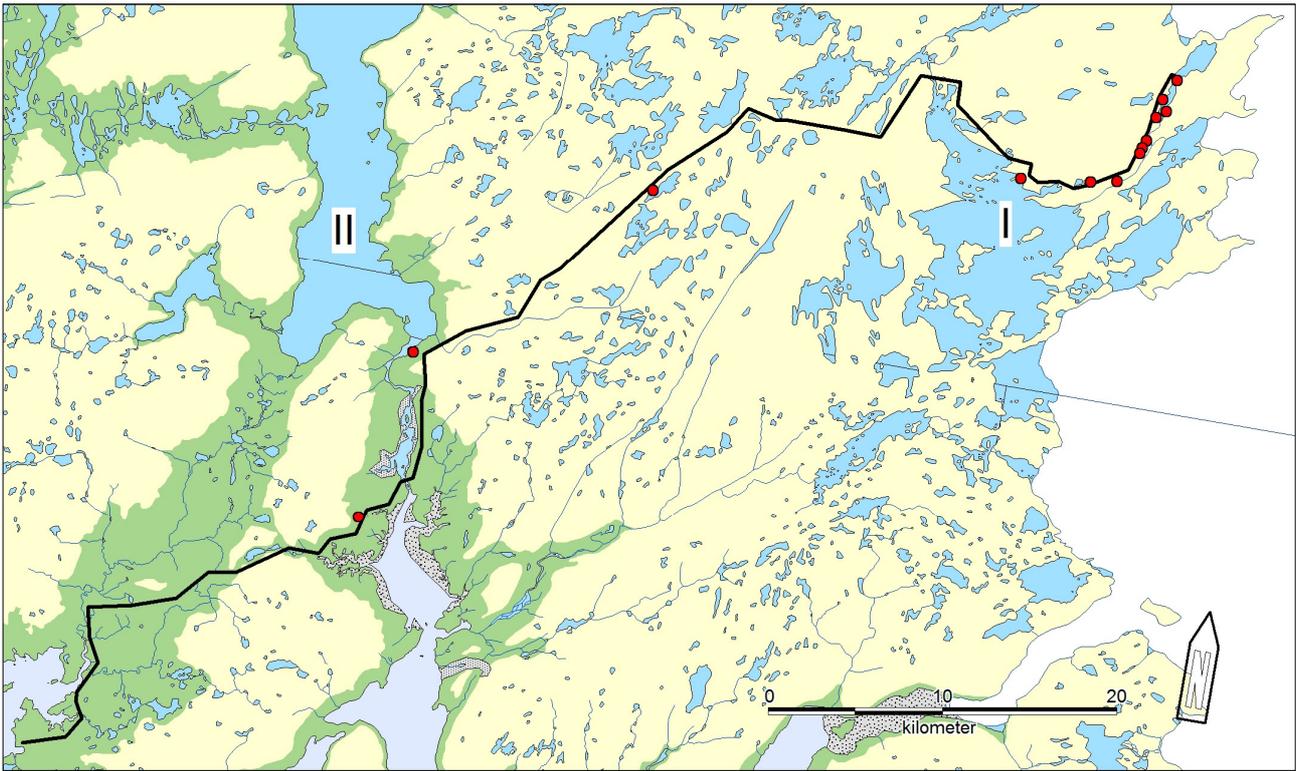
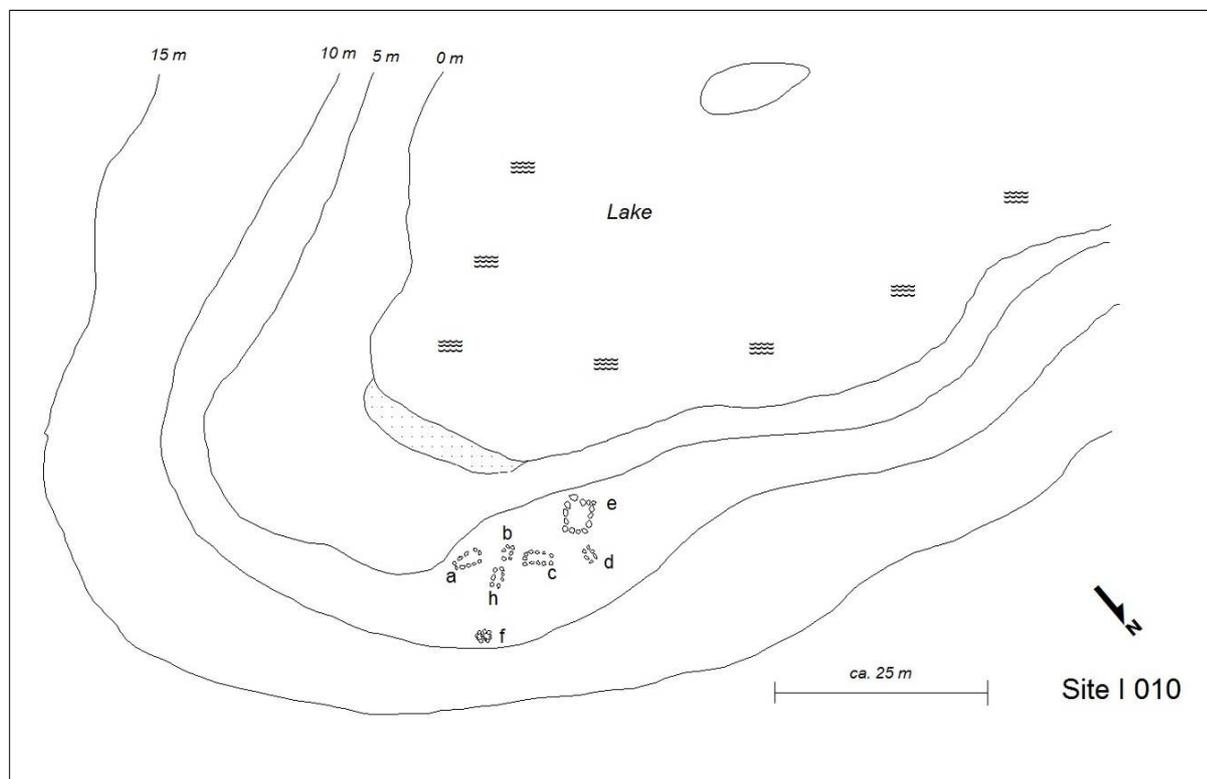
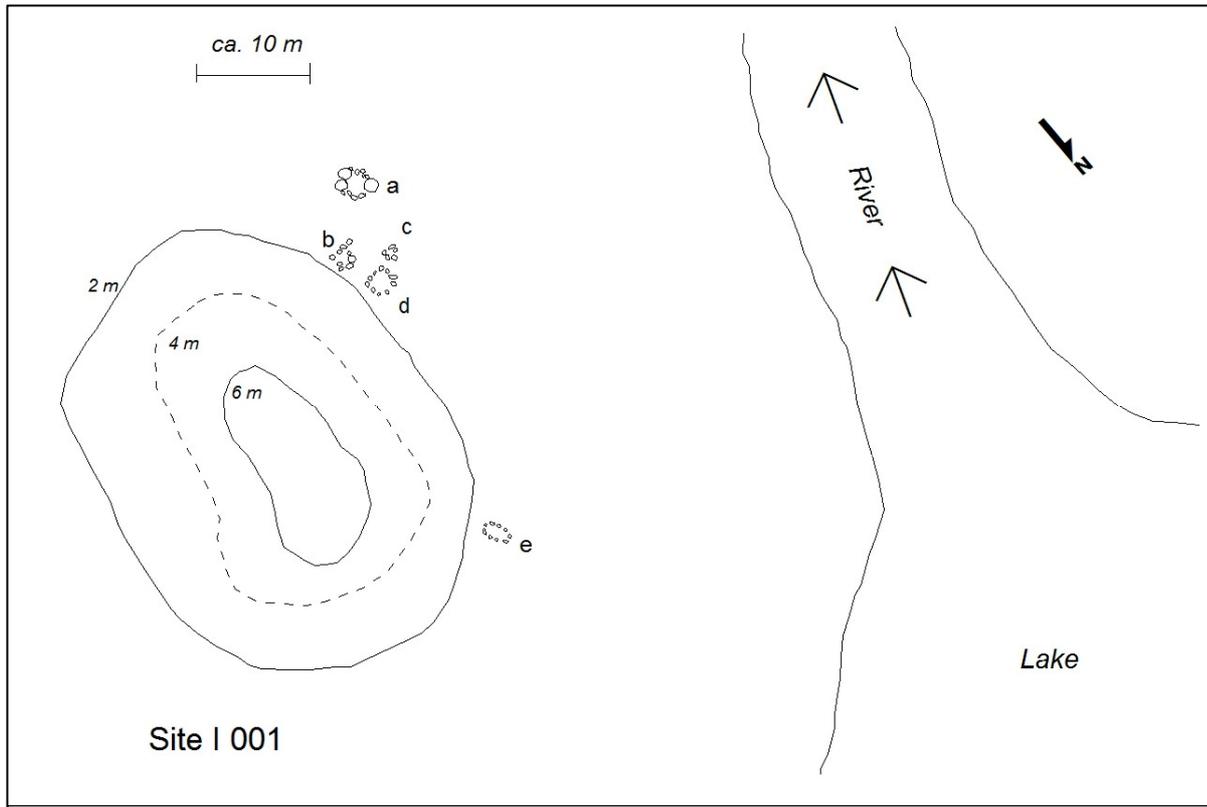


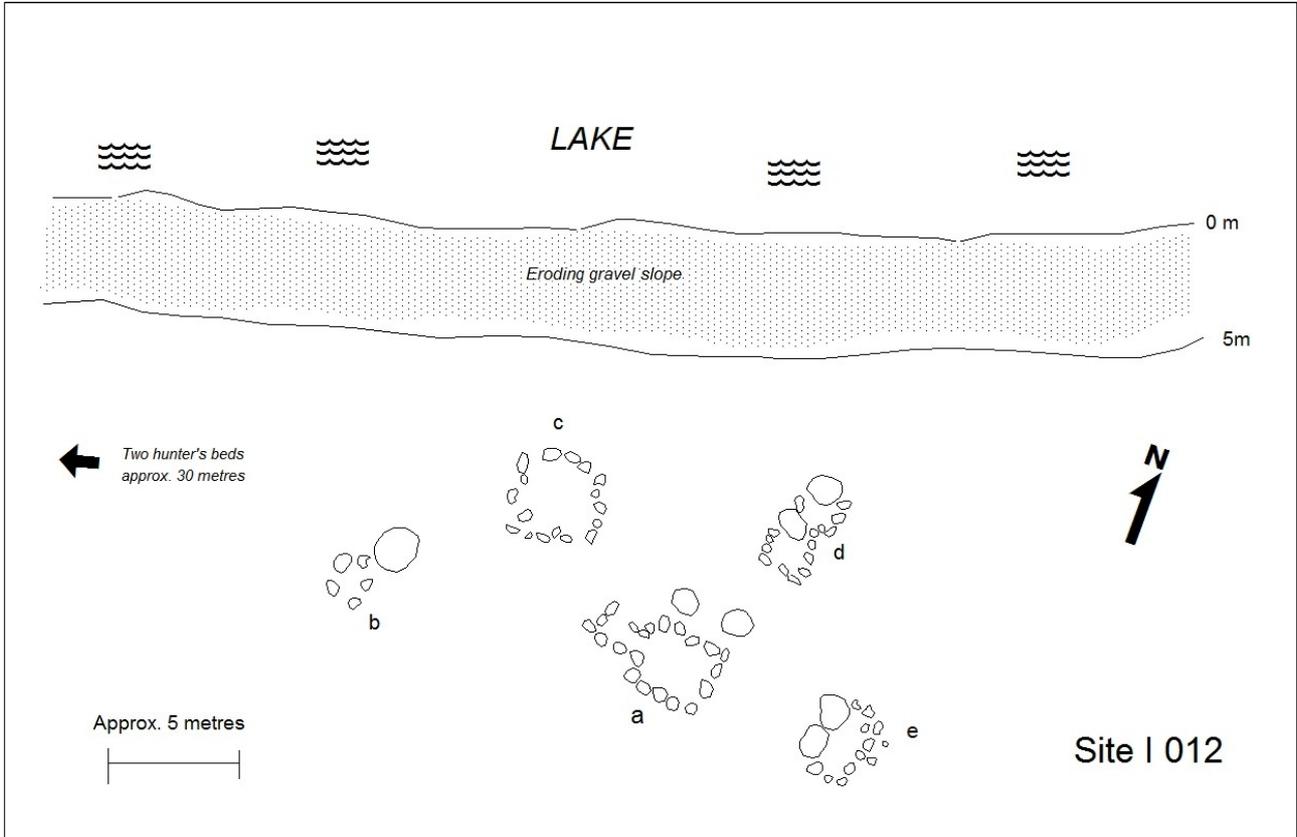
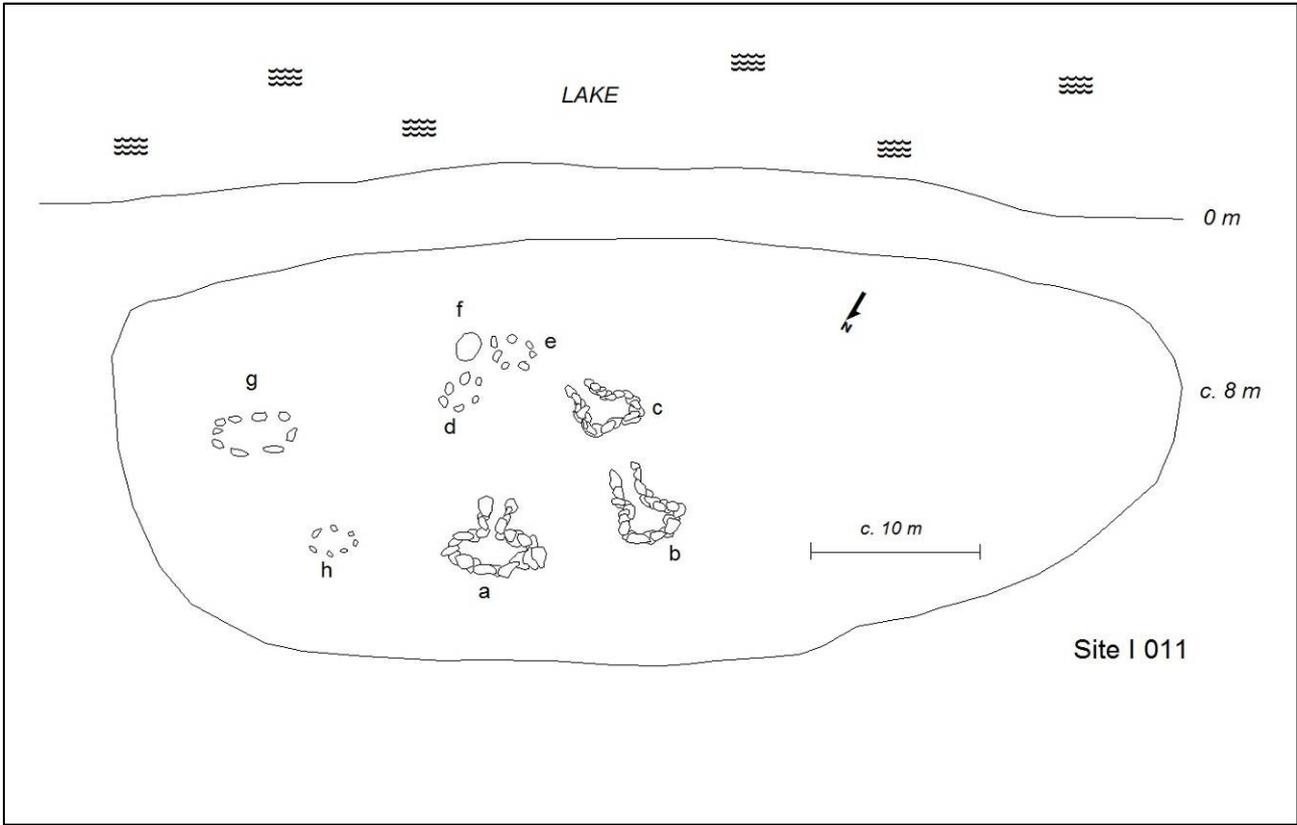
Fig. 9 The Tasersuaq (II) and Tarsartuup Tasersua (I) area with the distribution of all archaeological features examined in 2008. (Map by NKA)

#	degrees west	degrees north	Structures
I 001	-49,86057	65,17216	2 tenthouses, 1 hunter's bed, 1 cache, 1 tentring
I 002	-49,86679	65,15508	2 hunter's beds
I 003	-49,87209	65,16245	1 hunter's bed, 1 tenthouse (double type)
I 004	-49,88027	65,14626	2 hunter's beds (one double type), 1 rock shelter
I 005	-49,88111	65,14301	2 shooting blinds
I 006	-49,88705	65,13709	4 hunter's beds
I 007	-49,89191	65,13457	1 hunter's bed
I 008	-49,90363	65,11733	1 hunter's bed
I 009	-49,92791	65,1139	1 hunter's bed
I 010	-50,02557	65,10699	4 tenthouses, 2 hunter's beds
I 011	-50,47424	65,06142	3 stone huts (slab built), 3 tenthouses, 2 caches
I 012	-50,71921	64,9646	4 stone built structures, 3 hunter's beds
I 013	-50,74521	64,87171	1 hunter's bed

Tabular view of all sites of archaeological interest examined in 2008.

SKETCHES ILLUSTRATING THE LARGEST SITES EXAMINED IN 2008





*PHOTOGRAPHED EXAMPLES OF STRUCTURES*



*Tenthouse foundation (I 003).  
Photo: NKA 2008*



*Stone hut (I 011).  
Photo: NKA 2008*



*Shooting blind (I 005).*  
*Photo: NKA 2008*



*Hunter's bed (I 009)*  
*Photo: NKA 2008*

## CONCLUDING REMARKS AND RECOMMENDATIONS

The archaeological record combined with the ethnographic accounts tell us that the Nuuk region inland and its population of caribou has been important to humans throughout their Greenlandic history. Since the first people set foot in these parts of the country approximately 4.000 years ago caribou has played a role in the annual hunting cycle, as it does today. The traces and remains of this type of land use now face the prospect of being neighbour to a new and essentially different kind of land use, namely mining. This year's archaeological survey done in connection with the Project's proposed mine, pipeline and access road revealed a cultural landscape. A landscape strewn with evidence of human use, and although imperceptible to most modern people, it is nonetheless very real. The cultural remains in this area do not possess any properties of monumental character, on the contrary, many of them are hardly visible to the untrained eye. But that *does not* make their cultural historical significance less interesting or less important to the Greenlandic people and to research. According to the Greenlandic Antiquities Act, no grading system of cultural remains exists, hence a small fireplace older than a century holds, in principle, the exact same cultural value as the most massive Norse church ruin.

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The NKA recommends as a first step, if construction work should begin, that registered cultural remains in the affected areas are adequately marked by the NKA in such a way that they will be visible in the landscape. Additionally, any construction work in the cultural remains' proximity should be carried out only after thorough consultation between the NKA and a senior ranking project holder representative.

Ultimately, the NKA must stress that the 2008 archaeological survey in no way can be considered a guarantee for the account of *all* cultural remains possibly affected by the Project. Chances of cultural remains missed by the surveyors are present, consequently more could, and most probably will, turn up as any additional time is spent in the area.

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