Report of the Skagafjörður Archaeological Settlement Survey 2009:

Coring and Test pit at Glaumbær (111)

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With the help of

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Permit issued by Kristín Huld Sigurðardóttir, Forstöðumaður Fornleifaverndar ríkisins

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In collaboration with Sigríður Sigurðardóttir, **Byggðasafn Skagfirðinga Glaumbæ**

Additional copies of this report and other reports, as well as much of the raw data can be downloaded from http://www.fiskecenter.umb.edu/SASS.htm

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Goals

The goals of the work at Glaumbær (111) were straightforward. We used cores to identify any areas away from the farm mound that may be areas of early occupations. If any of these earlier occupations were identified, and were substantial, they would be targets for geophysics and further archaeological exploration. We also sought to date the earliest occupation of the visible farmmound by placing and excavating a 3x3 m test pit in the oldest part of the midden.

Coring

Coring at Glaumbær took place on 7/29/2009 and went through 7/30/2009. John Steinberg & Rita Shepard took the cores. We used a JMC backsaver core with two extensions if necessary. For deep midden exploration we sometimes used the N-3 handle, but mostly the standard backsaver handle. We employed the 18 in long 1.5 in wide JMC large diameter sampling tubes. The sample tube was cleaned between each sample and grass placed in the core hole between samples of the same core hole so as to distinguish loose soil fall from in situ deposits. Core locations 1-25 were recorded with a sub-meter GPS in Real time. These coordinates were post-processed and those post-processed coordinates are the ones associated with the cores in this report. Cores with core numbers with coordinate designations were eyeballed based on a grid set up for geophysics. These locations are accurate to within 30 cm of their recorded location. Tephra layers were recorded along with natural and cultural deposits and any inclusions.

We took 39 cores at Glaumbær in 2009 (Figure 1). Ten of these were in the midden area (Figure 2). In general tephra preservation was poor, relative to other middens we have sampled. Of the 10 cores taken in the midden (Figure 3) some identifiable tephra was found in all of them, but it was mostly H3. Because the area around the midden had been taken down to the H1 layer with a backhoe for geophysics, there was no samples either 1776 or 1300. Of the 10 samples taken in the midden 4 had H1, 1 had 1000 and one had the LNL/LNS. The midden is quite deep in spots (Figure 4) and even in the cores we could tell that the variation in color and texture was tremendous.

Test pit

Test pitting began 7/30/2009 and went through 8/12/2009, excavated by Rita Shepard, Emily Button, Kate Corwin, Amanda Schreiner, Kathryn Catlin, Asye Yeager, and with the assistance of Ísak Róbertsson, Kelly Hale and Veronique Forbes. The location was determined by core E922 N211, based on a midden deposit and even more significantly on the fact that a floor deposit was suggested in the core sample. A 3 meter by 3 meter test pit was opened at the following coordinates: NW corner -- E476919.99 N568213.01; NE corner - E476923.00 N567213.01; SW corner -- E476920.00 N568210.02; SE corner E476922.99 N568210.00 (Figure 5 and Figure 6). After clearing the disturbed topsoil, context 101, all contexts were screened and soil samples for botanical analyses were taken from each context, beginning with [102] and ending with [109.] A soil sample was also removed from [112], a small area of floor in the SW corner of the unit. Contexts varied in deposition depth across the unit. The test pit was excavated down to the prehistoric H3 tephra.

H1/1104 tephra was lying just beneath the topsoil. It was limited only by the extent of the excavation, but was discontinuous across the unit and highly cryoturbated. There were some slag inclusions in this tephra layer as well as a few animal bones. A truncation is beginning to emerge through the center of the pit on a north/south axis. Context 102 was mostly ashy silt for about 5 centimeters which contained a few animal bones (Figure 7 and Figure 8); context 103 was another 10-20 centimeters of peat ash midden with lots of charcoal inclusions and a low density of cultural material, including a bronze piece that seems to be a fastener of some sort, slag and iron finds, as well as a few faunal remains (Figure 9). Uncollectable decomposed "butter bone" also was noted in [103.]

The sharp cut through the center of the unit continued down into [104], more steeply on one side than the other. It is not clear what the "gulley" is, though the sharp angle of the cut on the east side suggests that it was purposefully dug out by a spade and could be for some kind of drainage. Context 104 is a very thick (10-24 cm) ashy midden containing some charcoal inclusions, some slag, a few animal bones and teeth, and a lot of "butter bone." Interestingly, we also found what appeared to be fire-hardened dung. It was preserved for analysis, which has not been completed at this time.

At the north end of the unit and adjacent to [104], [105] was a 20-45 cm deep homogenous mixture of aeolian deposit, peat ash, and turf that contained an abundance of faunal remains; medium sized rocks (10-20 cm in diameter) also appeared throughout the context, but were most concentrated in the NE corner where they appeared to be lying on and in a turf (Figure 10). Context 105 extended east to west along the north side of the unit, extending south about 50 cm for the full extent of the north sidewall then stopping abruptly in what appears to be some kind of cut. It overlay an ash stratum [111.]

On the east side of the unit and adjacent to [105], context 106 is a swirly, highly colored (orangepink) ash and turfy midden. This context, [106], was underlain by a thick black charcoal lens, context 108. There were faunal remains and a couple of interesting finds recovered from [106]: three small pieces of polished and shaped bone (finds #139 and #141), and a small worked stone (find #144). Dennis Piechota, conservator, took XRF (x-ray florescence) readings of the soil in [106] and also removed a block of soil for future analysis. The XRF readings indicated that [106] apparently was used for a high heat activity of some kind. Although more analysis will need to be done, the iron content readings collected on site are below.

i i chinnar y AKI ⁺ Kcaungs							
Sample No.	11	12	13	14	15		
Soil	Carmine clay	Multicolored ash	Black greasy	Orange	Brown-olive		
Iron	30%	17%	5%	12%	5%		

Context 107, south of [106] and adjacent to it, was a large area of mixed color ashy turf, 10-20 cm thick across the southern two thirds of the unit. There were a few large rocks (10-40 cm in diameter) scattered through the context, as well as slag and faunal remains. Additionally, several

very large rocks begin to appear along the south part of the east wall in this context, their bases sitting much lower. On the west wall of the unit, [107] begins on the north end in a sharp cut boundary with [105.] It is directly opposite [106] on the east sidewall and nearly identical in composition and depth. Both [106] and [107] lie above [108], the black greasy burned stratum that runs across most of the unit (Figure 11 and Figure 12). It seems likely that [106] and [107] are actually the same context and run the width of the unit east to west, narrowing in depth toward the south. The large rocks next to the east wall interrupt the deposit, but [107] reappears on the south side of the rocks. Underneath, [108] continues uninterrupted along the entire east side of the unit.

Context 108 covers the three quarters of the unit lying south of [105.] It was apparently an area of intense burn. The deposit was greasy, firm, and mostly black with some dark red lenses; it was thickest in the northeast corner and least dense in the southwest. There was little to no rock recovered, but there was some burnt bone. The large rocks exposed in [107] have continued down into [108] and below. This charcoal stratum probably occurred in a high heat environment with oxygen being sucked out of the lowest levels, under [106] and [107.]

Context 109 was a fairly homogenous layer of multi-colored sandy silt across the unit, with pockets of ash in the SW corner (Figure 16). Two large rocks remain along the east wall, and there were a few medium size angular rocks found along the west wall. Elevations were taken on the floor of this context. A discreet turf seen in [109] in the west wall has individual deposits of the 1000 tephra, the LNS tephras, and the 850 tephra (Figure 13). A very small deposit nearby (also on the west wall and almost a meter to the north) under the LNS may also be the 850 tephra.

Context 110 was miss-assigned on the original context sheets. The deposit was actually a rather thick lens of the H1/1104 tephra within [102] on the north sidewall of the unit.

In the center of the unit and under [109], there is a roughly oval area (about 1 m long and 50 cm wide) of the 1000 tephra (Figure 17). It contained no cultural material and was directly on top of the prehistoric H3 tephra.

The LNS is surprisingly well preserved on the north and west wall with several distinct tephra layers presented. The lowest midden deposits, context 111, rest on top of the LNS in the west and north walls, suggesting an early date.

Importantly, a small section of compact, laminated floor deposit [112] was uncovered in the SE corner of the unit (Figure 18). It extended about cm along the south wall from the corner or the east wall and about 25 cm along the east wall from the south corner. It was about 2 cm thick. A sample was taken for botanical analysis, which has not as yet been completed. This floor deposit lies directly on top of prehistoric H3 tephra.

Interpretation

The Glaubær midden is one of the largest and most spread out middens we have explored in Langholt. Considering it is sandwiched between the 1000 and the 1104 tephra layers, it is one of

the thickest. Clearly, in a very short time, a tremendous amount of peat and wood ash was created. While this pit is not in the thickest part of the midden, it is on top of the 1000 layer. This dating is confirmed by previous radiocarbon dates from wood and bone found in the house and midden (Figure 21). Based on all of these factors, we believe that Glaumbaer was established approximately 1000 AD. If the area of both midden and cultural layers is combined, the entire cultural deposits under 1104 is 6512 m³, by far the largest site in Langholt founded after 1000.

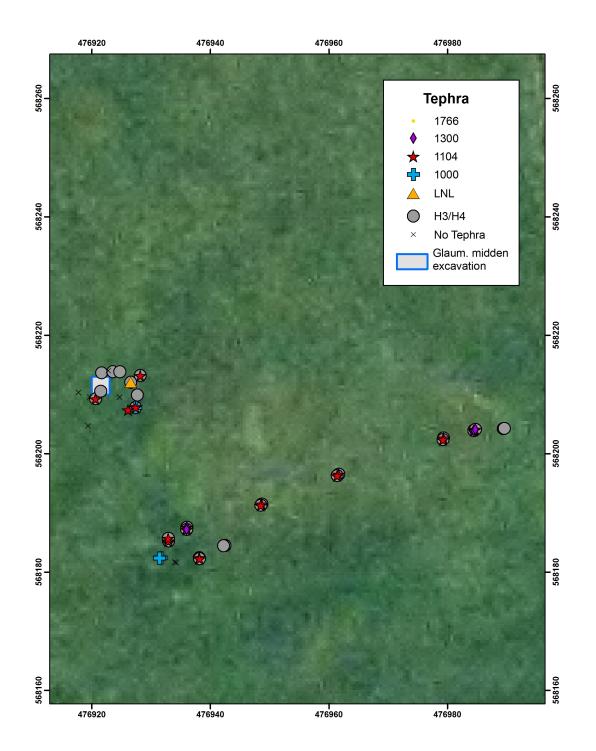


Figure 1. Tephra distribution in cores.

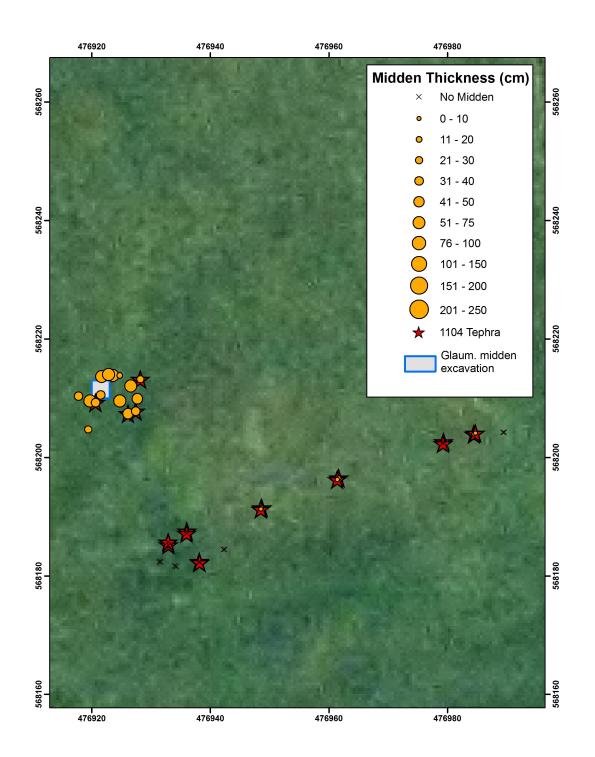


Figure 2. Distribution of midden.

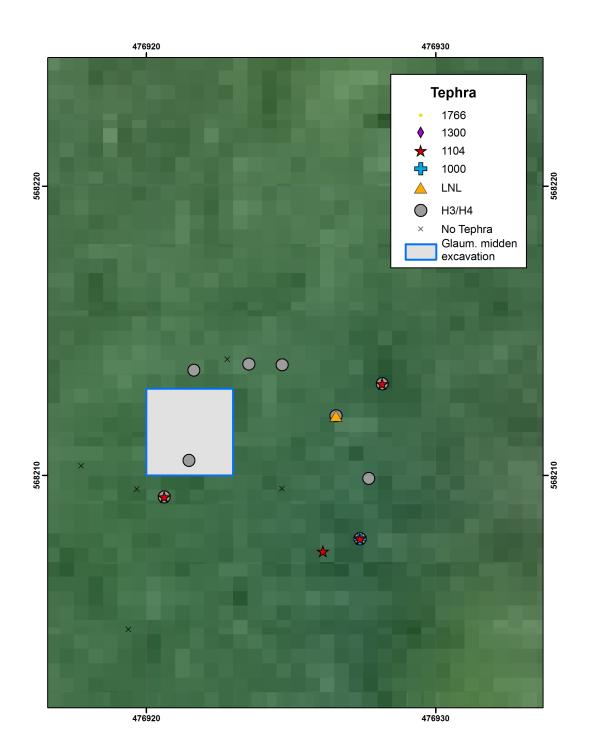


Figure 3. Distribution of tephra layers around midden.

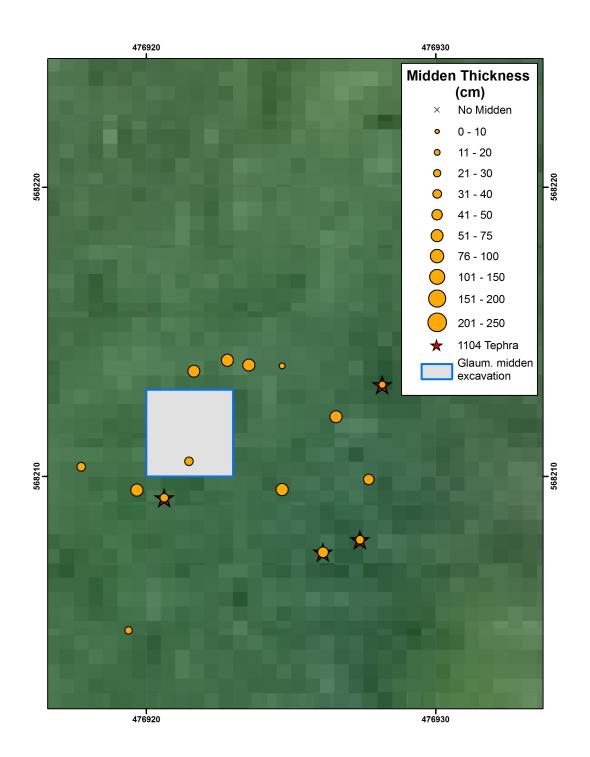


Figure 4. Distribution of midden around midden.



Figure 5. Location of excavation relitive to modern museum

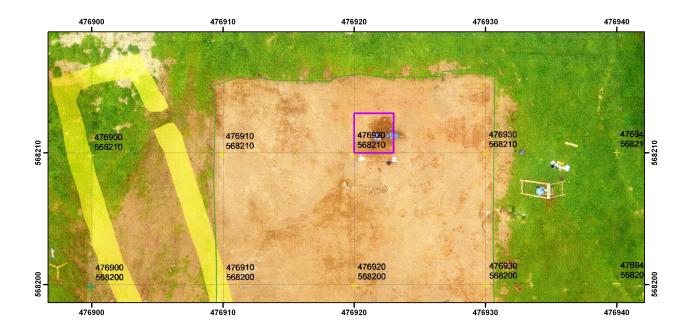


Figure 6. Kite photo showing excavation underway with outline of longhouse excavated in 2005 superimposed.

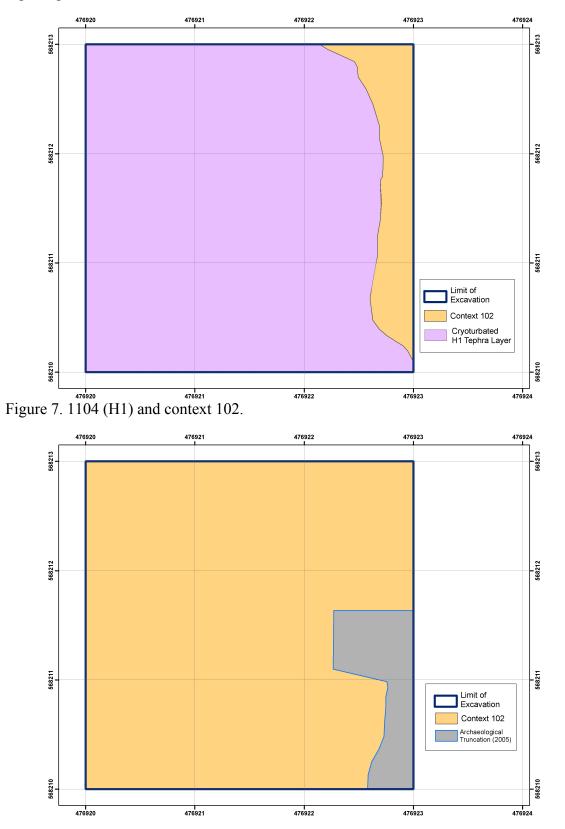
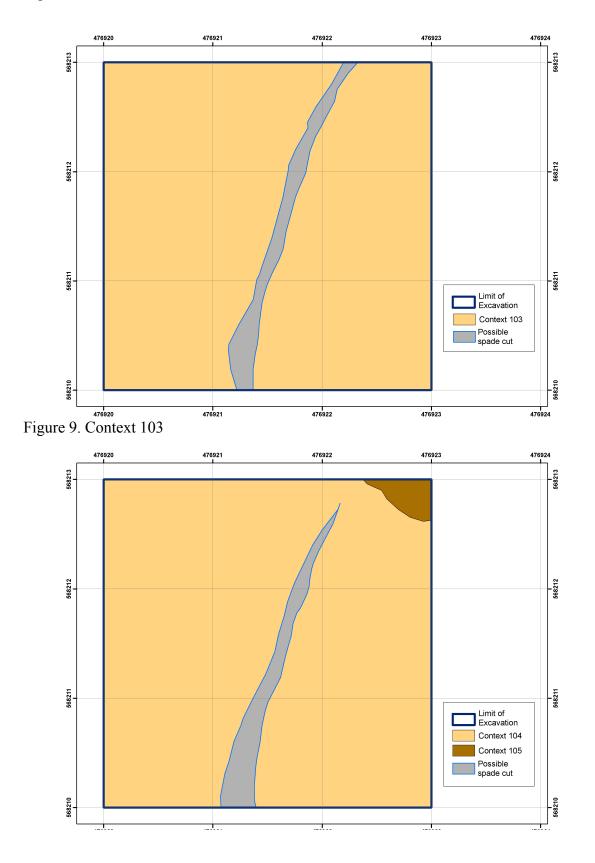
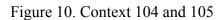
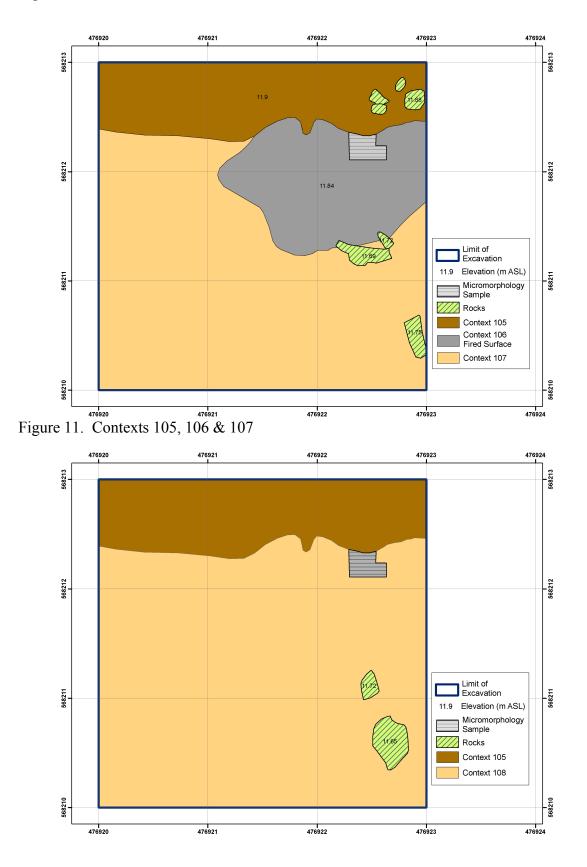


Figure 8. Context 102.







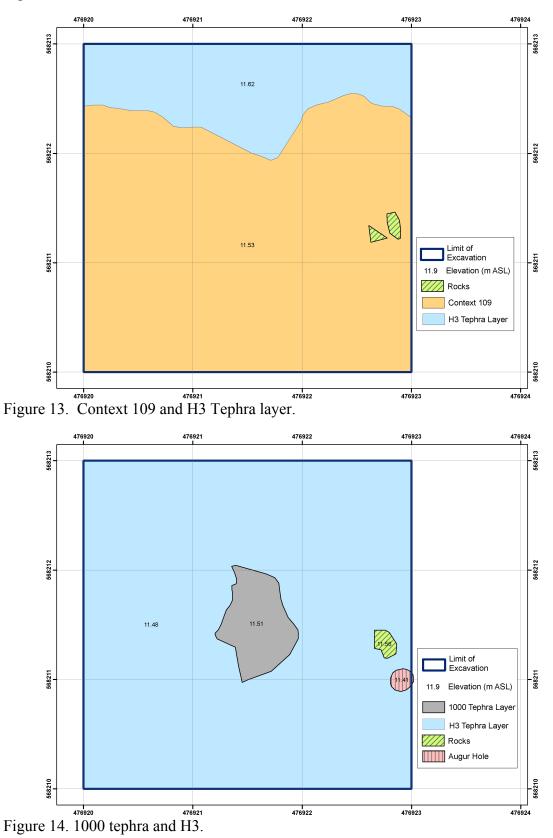


Figure 12. Context 105 and 108



Figure 15. Context 105, 106 107 looking north



Figure 16. Photo looking north of Context 109 and H3.



Figure 17. 1000 tephra against H3 looking east.

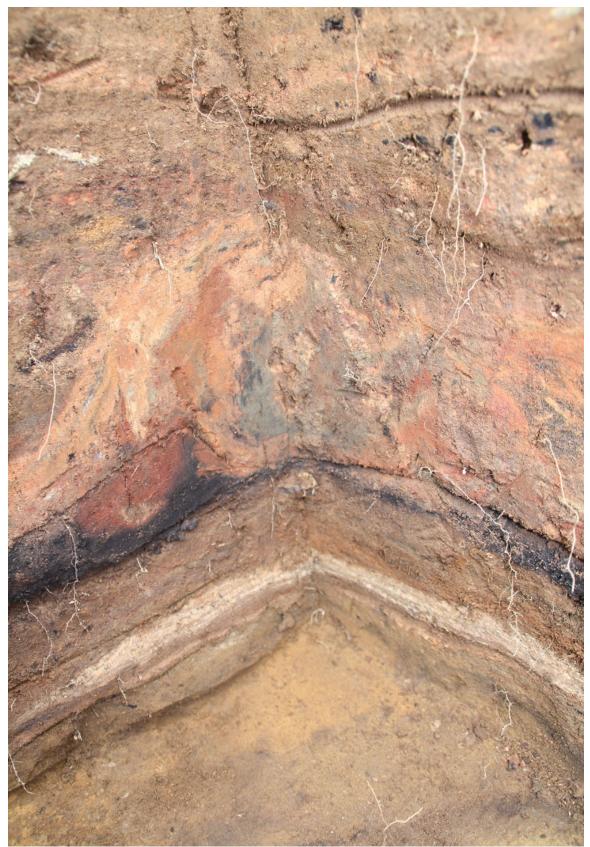


Figure 18. Southeast wall corner profile showing floor [112]

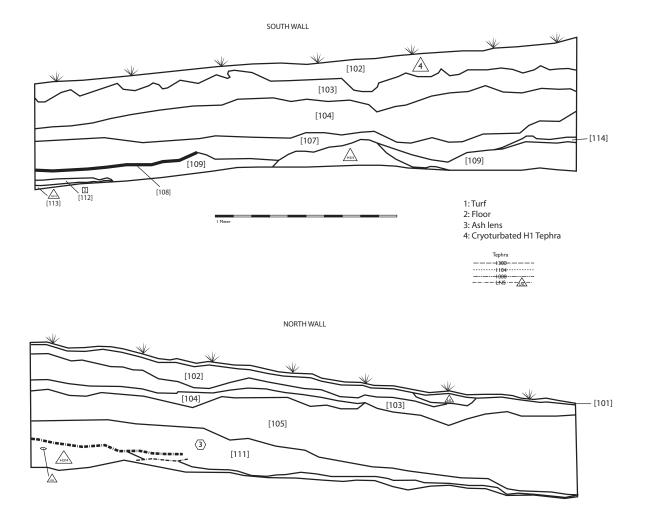


Figure 19. North & south wall test pit profile.

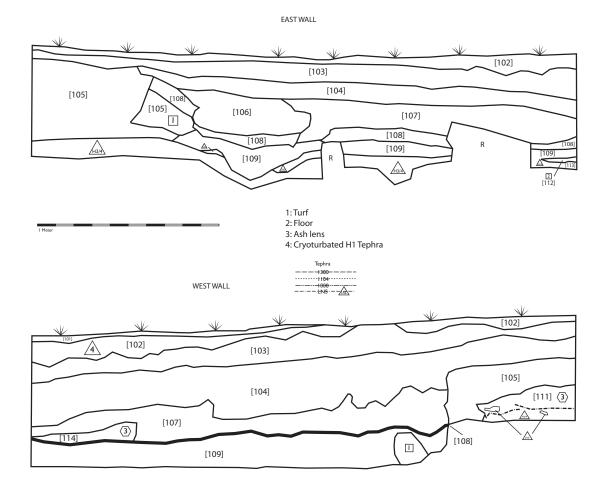


Figure 20. East and west test pit profiles.

Calibrated Age Ranges

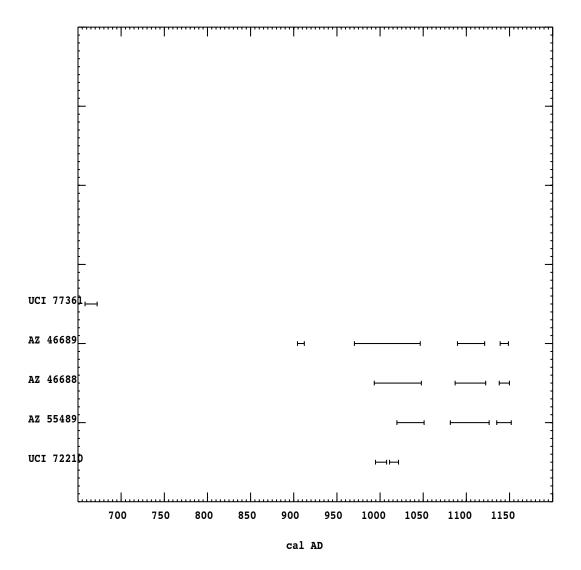


Figure 21. Radiocarbon dates from Glaumbær (111)

Site 11	1	Tephra Layer	Depth	East	North
Core	1			476932.904	568185.214
		H1	28		
		H3	35		
Core	2			476931.402	568182.327
	-	1000	60	470001.402	000102.021
Corro	4	1000	00	170000 4 40	569492 220
Core	4			476938.149	568182.239
		H1	25		
		H3	35		
Core	5			476935.995	568187.167
		1300	30		
		H1	40		
		H3	60		
Core	6			476942.22	568184.461
		H3	30		
Core	7			476948.481	568191.278
		H1	20	100-10.101	0001011210
			35		
Cara	0	H3	30	170004 404	E69406 06E
Core	8			476961.404	568196.265
		H1	20		
		H3	35		
Core	9			476979.269	568202.349
		H1	18		
		H3	60		
Core	10			476984.477	568203.909
		1300	18		
		H1	23		
		H3	55		
Core	11	-		476989.426	568204.191
		H3	50		
Core	11	115	50	476022 004	568185.672
Core	14		00	476932.881	500105.072
		H1	28		
-		H3	35		
Core	15			476931.624	568182.385
		1000	60		
Core	17			476938.115	568182.43
		H1	25		
		H3	35		
Core	18			476936.013	568187.549
		1300	30		

Site 1	11 т	ephra Layer	Depth	East	North
	F	11	40		
	F	13	60		
Core	19			476942.458	568184.505
	F	13	30		
Core	20			476948.682	568191.467
	F	11	20		
	F	13	35		
Core	21			476961.634	568196.502
	F	11	20		
	F	13	35		
Core	22			476979.332	568202.634
	F	-11	18		
	F	13	60		
Core	23			476984.72	568204.078
	1	300	18		
	F	41	23		
	F	13	55		
Core	24			476989.604	568204.258
	F	13	50		
Core	921e209r	า		476920.614	568209.255
	F	41	20		
	F	13	70		
Core	922e211r	ו		476921.471	568210.516
	F	13	60		
Core	922e214r	ו		476921.646	568213.636
	F	13	62		
Core	924e214r	ı		476923.54	568213.844
	F	13	76		
Core	925e214r	ı		476924.686	568213.819
	F	13	65		
Core	927e208r	า		476926.107	568207.38
	F	11	19		
Core	927e212r	า		476926.55	568212.062
	L	NL	55		
	F	13	70		
Core	928e208r	ו		476927.381	568207.812
	F	11	15		
	1	000	38		
	F	13	60		

Site 11	1 Tephra Layer	Depth	East	North
Core	928e210n		476927.69	568209.896
	H3	70		
Core	929e214n		476928.154	568213.17
	H1	35		
	H3	60		

Site 111	description		top depth		bottom depth	Thickness
CORE	918e210n	476917.75		568210.331		
	Low Density Cultural		0		40	40
	Rock		40		40	0
CORE	920e205n	476919.378	3	568204.679)	
	Low Density Cultural		0		30	30
	Rock		30		30	0
CORE	920e210n	476919.67		568209.531		
	Midden		0		60	60
	Turf		60		80	20
CORE	921e209n	476920.614	ł	568209.255	5	
	Aeolian Deposit		0		20	20
	Midden		20		60	40
	Aeolian Deposit		60		80	20
CORE	922e211n	476921.471	l	568210.516	6	
	Midden		0		35	35
	Floor		35		55	20
	Aeolian Deposit		55		80	25
CORE	922e214n	476921.646	3	568213.636	3	
	Midden		0		60	60
	Aeolian Deposit		60		80	20
CORE	923e214n	476922.804	ŀ	568214.013	3	
	Midden		0		60	60
	Rock		60		60	0
CORE	924e214n	476923.54		568213.844	Ļ	
	Midden		0		75	75
	Aeolian Deposit		75		80	5
CORE	925e210n	476924.688	3	568209.549)	
	Low Density Cultural		0		30	30
	Midden		30		40	10
	Floor		40		44	4
	Midden		44		60	16
	Rock		60		60	0
CORE	925e214n	476924.686	6	568213.819)	
	Midden		0		50	50
	Low Density Cultural		50		65	15

Site 111	description		top depth		bottom depth	Thickness
CORE	927e208n	476926.107	7	568207.38		
	Aeolian Deposit		0		25	25
	Midden		25		62	37
	Aeolian Deposit		62		80	18
	Midden		80		90	10
	Rock		90		90	0
CORE	927e212n	476926.55		568212.062	2	
	Midden		0		55	55
	Aeolian Deposit		55		80	25
CORE	928e208n	476927.381	1	568207.812	2	
	Aeolian Deposit		0		18	18
	Midden		18		50	32
	Aeolian Deposit		50		85	35
	Midden		85		90	5
	Aeolian Deposit		90		95	5
	Rock		95		95	0
CORE	928e210n	476927.69		568209.896	6	
	Midden		0		50	50
	Aeolian Deposit		50		80	30
CORE	929e214n	476928.154	1	568213.17		
	Midden		0		30	30
	Aeolian Deposit		30		80	50

			SA	SS 2	009			
Site 111			DATE	8/13/2	009			
Sample	173	[117]						
	Vol 3		Light Fraction	n grams	27.76	Heavy Fraction grams	9.71	
Analysist	WAF		Date Analized			Content		%
	4 .		Andiized		Во	ne	5	
Other pres	sent:				Ch	arcoal	5	
					Du	ing	1	
					Ro	ck	10	
	400			Caryoph	eae	Silene Silene Stellaria	Cour 226 16 5 5 13 1	nt Charred Yes Yes Yes Yes Yes
Sample		[118]						
	Vol 3		Light Fraction	n grams		Heavy Fraction grams		
Analysist			Date Analized		Da	Content	2	%
Other pres	sent:				Bo	ne arcoal	2 3	
					Ro		90	

Family		Count	Charred
Cyperaceae		1	Yes
Caryophyllaceae	Silene	6	
Caryophyllaceae	Silene	5	Yes

			SASS 2009		
Site 111		DA	TE 8/13/2009		
Sample	187	[118]			
١	/ol 3	Light Fra	ction grams	Heavy Fraction	grams
Analysist	WAF	Date Analized		Content	%
Other prese	ent:			Bone	1
				Charcoal Rock	2 90
			Family Caryophyllacea Caryophyllacea		Count Charred 5 Yes 2
			Contonbullooo		

		Caryophyllaceae Silene	4	Yes
		Cyperacea	4	Yes
Sample 181	[122]			
Vol 3	Light Fract	ion grams Heavy Fraction	grams	
Analysist waf	Date Analized	Content		%
Other present:		Bone	1	
Other present.		Charcoal	5	
		Rock	90	0

Family		Coun	t Charred
Cyperaceae		1	Yes
Caryophyllaceae	Silene	13	Yes
Caryophyllaceae	Silene	1	

Sample 175 [123]	ATE 8/13/2009 raction grams Heavy Fraction grams 3/12/2010 Content Bone Charcoal Rock	rams % 1 5 2
Vol 3Light FAnalysistWAFDateAnalized	3/12/2010 Content Bone Charcoal	% 1 5
Analysist WAF Date Analized	3/12/2010 Content Bone Charcoal	% 1 5
Analysist WAP Analized	Bone Charcoal	1 5
Other present:	Charcoal	5
	Family Caryophyllaceae Stellaria Caryophyllaceae Stellaria Caryophyllaceae Silene Empetraceae Empetrum	Count Charred 2 Yes 1 8 Yes
	Cyperacea Juncaceae	6 Yes 2 Yes
Sample 177 [123]		
• • •	raction grams 15.06 Heavy Fraction g	rams 20.31
Analysist AA & WAF Date Analized	Content	%
Other present:	Bone Charcoal	5 5
	Dung	10
	Rock	75

Family		Count	Charred
Cyperaceae		4	Yes
Polygonaceae		1	Yes
Caryophyllaceae	Silene	4	Yes
Caryophyllaceae	Silene	6	

Site 111

SASS 2009

DATE 8/13/2009

Light Fraction grams

Sample	185	[123]	
V	ol 3		Light Fr
Analysist	WAF		Date Analized

Other present: Insects

Heavy Fraction grams

Content		%
Bone	3	
Charcoal	35	
Dung	2	
Rock	4	

Family		Count	Charred
Ranunculaceae		1	Yes
Juncaceae		1	Yes
Empetraceae	Empetrum	1	Yes
Cyperaceae		7	Yes
Caryophyllaceae	Silene	13	Yes
Caryophyllaceae	Stellaria	5	Yes
Caryophyllaceae	Stellaria	2	

SITE 111	FIND 121	AREA C		CONTEXT 101		
MATERIAL TY	'PE OE	BJECT TYPE	DESCR	IPTION	ATTE	NTION
Metal						
DATE 7/30/2009	ID KEC, RSS,		NIQUE_ID 1C101F121			at €onservator Gregory Bailey
Material Cha Iron fragment small nail, 24 1.5g Storage Reco	x 12 x 5mm,	Condition Dirt, corrosion all surfaces, e previous brea	vidence of ks/spalls.	SASS Other Box Metals (corrosion reduced using bamboo skewers and soft nylon bristle brush. Scrubbed under running tap water with a stiff nylon bristle brush. Object was then placed in a low concentration (~1% by weight) tannic acid in deionized water solution. After five days, the object was removed and scrubbed with a nylon bristle brush, then allowed to dry over night. After drying, the object was treated with a final two applications of tannic acid solution (10% by weight tannic acid in deionized water with a small amount of isopropyl
	ubaer 01#121 9GHB				efore eatment	alcohol). The solution was applied with cotton swabs, with approximately 3 hours between applications.

SITE 111	FIND 122	AREA C		СОNTEXT 101		
MATERIAL T	YPE O	BJECT TYPE	DESCI	RIPTION	ATTENT	ION
DATE 7/30/2009	ID KEC, RSS,	NBS	UNIQUE_ID 111C101F122	Conser 7/31/20		Conservator egory Bailey
Material Ch Slag/iron par	aracteristics n, 35.9g	Condition Dirt, roots p surfaces.	resent on all	Storage L SASS Other S Box		Treatment Objects were cleaned mechanically with a soft nylon bristle brush.

Storage Recommendations

Other Notes



SITE	FIND	AREA		CONTEXT		
111	123	С		101		
MATERIAL T	YPE OB	JECT TYPE	DESCI	RIPTION	ATT	ENTION
Lithic						
DATE	ID		IQUE_ID	••••••		Dateonservator
7/30/2009	KEC, RSS, I	NBS 1110	C101F123	7/31/2	2009	Gregory Bailey
Material Ch	naracteristics	Condition		Storage	Location	
Obsidian, 22 3.7g	2 x 11 x 10mm,	Dirt present all	surfaces.	SASS Other S Box	Sites 200	09 Cleaned mechanically with soft nylon bristle brush.
0.7g				Dox		

Storage Recommendations Oth

Other Notes



SITE	FIND	AREA		CONTEXT		
111	125	С		1104		
MATERIAL T	YPE OB	JECT TYPE	DESCR		ATTENTIO	N
Lithic						
DATE	ID		UNIQUE_ID		ation Dateo	
7/31/2009	KEC	1	11C1104F125	8/1/2009) Greç	jory.Bailey
Material Ch	aracteristics	Condition		Storage Lo	cation	Treatment
White stone or chalcedor 8mm, 2.7g	possibly quartz ıy, 15 x 15 x	Dirt present o	on all surfaces.	SASS Other Site Box	es 2009	Cleaned mechanically using a soft nylon bristle brush.

Storage Recommendations Ot

Other Notes



SITE 111	FIND	AREA C		CONTEXT 1104		
111	124	C		1104		
MATERIAL TY	PE 0	OBJECT TYPE	DESCR	IPTION	ATTENTIC	N
Lithic						
DATE 7/31/2009	ID NBS		NIQUE_ID 1C1104F124	Conserva 8/1/2009	tion Dat € o Gre	o nservator gory Bailey
	aracteristics dian, 18 x 1 I x 7mm, 1.5	7 x Dirt present all	surfaces	SASS Other Site Box		Treatment Cleaned mechanically using soft nylon bristle brush.

Storage Recommendations

Other Notes



SITE 111	FIND 127	AREA C	CON 102	ТЕХТ	
MATERIAL TY Lithic	/PE C	BJECT TYPE	DESCRIPTION	N ATTE	NTION
DATE 8/1/2009	ID NBS	_	QUE_ID 102F127	Conservation D 8/3/2009	at €onservator Gregory Bailey
Material Ch 2 small white possibly quar chalcedony, l approximatel diameter, 1.3	rtz or both y 7mm in	Condition Dirt present on a	ll surfaces. SASS Box	Storage Location Other Sites 2009	Treatment Cleaned mechanically using soft nylon bristle brush

Storage Recommendations

Other Notes

SITE	FIND	AREA		CONTEXT		
111	128	С		102		
MATERIAL	ТҮРЕ	OBJECT TYPE	DESCRII	PTION	ATTENTION	
Metal						
DATE 8/1/2009	ID NBS		IQUE_ID C102F128	Conserva 8/3/2009	tion Dat €onse Gregor	ervator y Bailey
Material C	Characteristics			Storage Loc		Treatment
Slag, 14 x	9 x 6mm, 0.9ថ	Dirt present on		SASS Other Sites Box Metals Conta		eeaned mechanically using oft nylon bristle brush.

Storage Recommendations

Other Notes

SITE 111	FIND 130	AREA C		CONTEXT 122		
MATERIAL TY	PE OE	BJECT TYPE	DESCRIF	PTION	ATTENTIO	N
Metal						
DATE 8/1/2009	ID NBS, RSS		IQUE_ID C122F130	Conserv 8/3/2009	ation Dat e or Greg	nservator Jory Bailey
Material Cha 2 iron rivets, 1 10mm, 3.0g; 2 16mm, 3.5g	17 x 17 x 25 x 18 x	Condition Dirt, corrosion p all surfaces. Of signs of previou spalls/breaks.	ojects show E Is	Storage Lo SASS Other Sit Box Metals Con	es 2009	Treatment Cleaned mechanically and corrosion reduced using bamboo skewers and soft nylon bristle brush. Object was then scrubbed with a stiff nylon bristle brush, wrapped in aluminum foil and placed in a galvanic bath (5% by weight sodum carbonate in deionized water). After five days, objects were removed and scrubbed with a nylon bristle brush. The objects were allowed to dry over night, and then placed in a
1 2 Indunturlan	062 CME 2m 3 4 5		9 10	FED 11 III		low concentration (~1% by weight) solution of tannic acid in deionized water. After three days, the objects were removed and scrubbed once again, then left to dry. After drying, two final treatments of tannic acid solution (10% by weight in deionized water with a small amount of isopropyl alcohol) were applied, with approximately 3 hours between applications.
	OGHB					

SITE 111	FIND 132	AREA C		CONTEXT		
MATERIAL T	ΟΕ	BJECT TYPE	DESCRIP	TION	ATTENTIO	Ν
DATE 8/4/2009	ID RSS, KEC		IIQUE_ID C103F132	Conser 8/6/200	vation Dat ©o)9 Greg	nservator Jory Bailey
2 bent or cu objects, both 3mm		Condition Dirt, corrosion p all surfaces. Other Notes	В	Storage L ASS Other Si ox Metals Co	ites 2009	Treatment Cleaned mcehcanically using bamboo skewers and soft nylon bristle brush. Objects were then scrubbed with a stiff nylon bristle brush and immersed in a low concentration (~1% by weight) solution of tannic acid in deionized water. After five days, the objects were removed and scrubbed with a nylon bristle brush, then allowed to dry over night. After drying, the objects were treated with a final two applications of tannic acid solution (10% by weight tannic
Image						acid in deionized water with a small amount of isopropyl alcohol). The solution was applied with cotton swabs, with approximately 3 hours between
Glaum IN C II	2 3 4 Introducturelin abaer a3 # 132 9 GHB			DOI	ore atment	applications.
Glav 111 C 3/13/	2 3 4		7 8	9 Afte trea	er atment	

SITE 111	FIND 134	AREA C		сонтехт 104		
MATERIAL T	YPE	OBJECT TYPE	DESCR	IPTION	ATTEN	TION
Metal						
DATE 8/5/2009	ID RSS		IQUE_ID C104F134	Conserva 8/11/200		t ©onservator Gregory Bailey
Material Cl Iron object, <u>j</u> blade, 52 x		D' 1 '	present on	Storage Loo SASS Other Site Box Metals Cont	es 2009	Treatment Cleaned mechanically using bamboo skewers, scalpel, and nylon bristle brush. Treated with 3 applications of tannic acid solution (10% tannic acid by weight in deionized water with small amount of isopropyl alcohol) rolled on swabs, with 3 hours between applications.
Storage Rec	ommendatio	Other Notes				

image	
cm 062 CME 2m / (*) 1 2 3 4 5 6 7 8 9 10 1 2 3 4 5 6 7 8 9 10 Glaunbaer 11 C 104 # 134 B/11/09 GHB BT	Before treatment
cm 062 CME 2m / / (***/* ***) 1 2 3 4 5 6 7 8 9 10 1 3 4 5 6 7 8 9 10 10 1 3 4 5 6 7 8 9 10 10 1 3 4 5 6 7 8 9 10 10 1 3 4 5 6 7 8 9 10 10 10 10 10 10 10 10 10 10 10 10 10	After treatment

SITE 111	FIND 135	AREA C	СОНТ 104	EXT	
MATERIAL TYP	PE (DBJECT TYPE	DESCRIPTION	ATTE	NTION
Metal					
DATE 8/6/2009	ID RSS		QUE_ID 104F135	Conservation E 8/11/2009	at €onservator Gregory Bailey
Material Char Iron bar, possi nail, 47 x 10 x Storage Recon	bly pin or 6mm	Condition Dirt, corrosion pre all surfaces. S Other Notes	esent on SASS	torage Location Other Sites 200 etals Container	9 Cleaned mechanically using bamboo skewer and nylon bristle brush. Object was broken during this phase of treatment. Break edges were cleaned with isopropyl alcohol and joined using B-72 in acetone. Object was then treated with 3 applications of tannic acid solution (10% by weight tannic acid in deionized water with a small amount of isopropyl alcohol) rolled on swabs, with three hours between applications.
Image					
1 2	nbaer 1/#1355 GHB			Before treatment	
The start and a	3 11111111111 2045 #135 GHB		7 8 9	After treatment	

SITE 111	FIND 143	AREA C		CONTEX 105	г	
	-	-				
MATERIAL T	YPE OI	BJECT TYPE	DESCR	IPTION	ATTENTIO	Ν
Metal						
DATE 8/7/2009	ID KEC		JNIQUE_ID 11C105F143		nservation Dateo	nservator gory Bailey
Iron object w	aracteristics ith curved end ddlehead, 33 x	,		SASS Oth	ge Location er Sites 2009 s Container	Treatment Cleaned mechanically using bamboo skewer and nylon bristle brush. During this process, one portion of the head spalled off, exposing the central void. Both parts of the object were treated with 3 applications of tannic acid solution (10% by weight tannic acid in deionized water with a small amount of isopropyl alcohol) rolled on cotton swabs, with 3 hours between
Storage Reco	ommendations	Other Not	es			applications.
Image						1
cm 1 IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	062 CME 2 3 huntonhunton	2m /0F 4 5	Frin ® 6 7 8 Iuuluuluuluul		Before treatment	

After

treatment

Glaumbaer 111C105#143

8/11/09 GHB BT

Glaumbaer 111 C 105 # 143 8/13/09 GHB

AT

cm 062 CME 2m /UFKIN @ 2 3 4 5 6 7

SITE	FIND	AREA		CONTEXT		
111	138	С		105		
MATERIAL T	YPE (OBJECT TYPE	DESCI	RIPTION	ATTE	ENTION
Metal						
DATE 8/6/2009	ID KEC		IIQUE_ID C105F138	Conse 8/11/2		Dat ©onservator Gregory Bailey
Material CH Iron fragmer 4mm	naracteristics nt, 20 x 6 x	Condition Dirt, corrosion p all surfaces	present on	SASS Other S Box Metals Co	Sites 200	9 Cleaned mechanically using
Storage Reco	ommendation	other Notes	;			

cm 062 CME 2m UFKIN ® 1 2 3 4 5 6 7 8 undundundundundundundundundundundundundu	Before treatment
Claumboer 1NC 105#138 8/11/096HB BT	
Cm 062 CME 2m UFKIN ®	
1 2 3 4 5 6 7 8 Induntonlantantantantantantantantantantantan	After treatment
Glaumbaer 11/C 105 #138 8/13/09 GHB AT	

SITE 111	FIND 142	AREA C		CONTEXT		
MATERIAL T	YPE OE	BJECT TYPE	DESCRIP	TION	ATTENTIO	N
Metal						
DATE 8/7/2009	ID KEC		IQUE_ID C105F142	Conserva 8/11/2009	tion Dat €o 9 Gree	nservator gory Bailey
Iron square.	h aracteristics with spalls, 24 x 20 >	Condition Dirt, corrosion p all surfaces		Storage Loc ASS Other Sites ox Metals Conta	s 2009	Treatment Cleaned mechanically using bamboo skewer and nylon bristle brush. Treated with three applications of tannic acid solution (10% tannic acid by weight in deionized water with small amount of isopropyl alcohol) rolled on swabs, with three hours between applications.
Storage Rec	ommendations	Other Notes				

Image	
cm 062 CME 2m / UFKIN ® 1 2 3 4 5 6 7 8 9 10 11 Induction induction inducting inducting induct	Before treatment
Glaumbaer 111C 105#14z 8/11/09 GHB BT	
cm 062 CME 2m /UF KIN @ 1 2 3 4 5 6 7 8 uuluuluuluuluuluuluuluuluuluuluuluuluul	After treatment
Glaumbaer 111 C105 #142	
8/13/09 CHB	

SITE	FIND	AREA		CONTEXT		
111	140	С		105		
MATERIAL T	YPE O	BJECT TYPE	DESCRI	PTION	ATTENTIC	N
Metal						
DATE 8/7/2009	ID KEC		IIQUE_ID C105F140	Conserva 8/11/2009	ation Dat€o 9 Gre	n servator gory Bailey
	aracteristics h circular head eter, 16 mm	Condition J, Dirt, corrosion p all surfaces		Storage Loc SASS Other Site Box Metals Cont	s 2009	Treatment Cleaned mechanically using bamboo skewer and nylon bristle brush. Treated with three applications of tannic acid solution (10% by weight tannic acid in deionized water with small amount of isopropyl alcohol) rolled on swabs, with three hours between applications.
Storage Reco	ommendations	Other Notes	5			

inage	
cm 062 CME 2m / UFKIN ® 1 2 3 4 5 6 7 8 9 10 11 Glaumbaer 11C 105 # 140 8/11/09 GHB BT	Before treatment
Claumbaer 1 2 3 4 5 6 7 8 Glaumbaer 11 C 105 #140 8/13/09 GAB AT	After treatment

SITE 111	FIND 139	AREA C		CONTEXT 107		
MATERIAL T	YPE	OBJECT TYPE	DESCR	RIPTION	ATTENT	ION
Lithic						
DATE 8/7/2009	ID ARY		QUE_ID 107F139	Conserv 8/11/200		Sonservator regory Bailey
Material Ch Polished bon curved, 16 x			II surfaces	SASS Other Sit Box		Treatment Cleaned mechanically with a soft hair bristle brush

Recommendations
Recommendations

Other Notes Appears to be associated with 111C[107]F141

Image

cm 062 CME 2m 062 CME	Before treatment
$\begin{array}{c c} cm & 062 \ CME & 2m & \\ 1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 & 9 \\ \hline 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 \\ \hline 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 \\ \hline 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 \\ \hline 1 & 1 & 1 & 1 & 1 & 1 & 1 \\ \hline 1 & 1 & 1 & 1 & 1 & 1 & 1 \\ \hline 1 & 1 & 1 & 1 & 1 & 1 \\ \hline 1 & 1 & 1 & 1 & 1 & 1 \\ \hline 1 & 1 & 1 & 1 & 1 & 1 \\ \hline 1 & 1 & 1 & 1 & 1 & 1 \\ \hline 1 & 1 & 1 & 1 & 1 & 1 \\ \hline 1 & 1 & 1 & 1 & 1 & 1 \\ \hline 1 & 1 & 1 & 1 & 1 & 1 \\ \hline 1 & 1 & 1 & 1 & 1 & 1 \\ \hline 1 & 1 & 1 & 1 & 1 \\ \hline 1 & 1 & 1 & 1 & 1 \\ \hline 1 & 1 & 1 & 1 & 1 \\ \hline 1 & 1 & 1 & 1 & 1 \\ \hline 1 & 1 & 1 & 1 & 1 \\ \hline 1 & 1 & 1 & 1 & 1 \\ \hline 1 & 1 & 1 & 1 & 1 \\ \hline 1 & 1 & 1 \\ \hline 1 & 1 & 1 & 1 \\ \hline 1 & 1 & 1 \\ \hline 1 & 1 & 1$	

SITE 111	FIND 141	AREA C		СОNTEXT 106		
MATERIAL T	YPE	OBJECT TYPE	DESCR		ATTENTIO	N
Lithic						
DATE 8/7/2009	ID ARY		UNIQUE_ID 11C106F141	Conserv 8/11/200	ation Dat €o)9 Gree	nservator gory Bailey
Material Ch Polished bon curved, 18 x	aracteristics he fragment, 7 x 6mm	D' 1	on all surfaces	SASS Other Site Box		Treatment Cleaned mechanically using soft hair bristle brush.

Storage F	ecommendations
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Other Notes Appears to be associated with 111C[106]F139

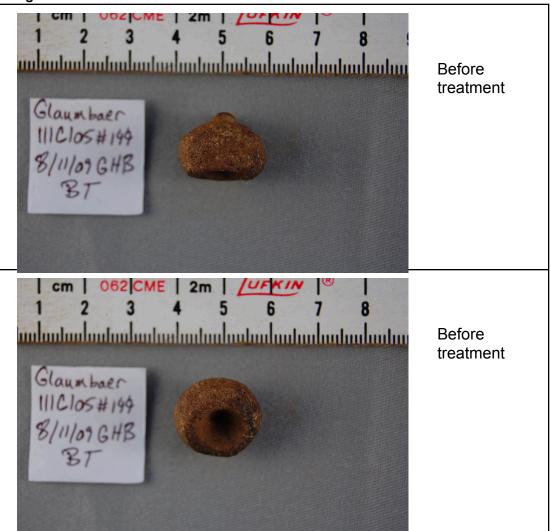
Image

cm 062 CME 2m / UF KIN @ 1 2 3 4 5 6 7 8 Industried and a state of the second	Before treatment
$\begin{array}{c c} cm & 062 \ CME & 2m & \mu \\ 1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 & 9 \\ \hline 1 & 3 & 4 & 5 & 6 & 7 & 8 & 9 \\ \hline 1 & 3 & 4 & 5 & 6 & 7 & 8 & 9 \\ \hline 1 & 3 & 4 & 5 & 6 & 7 & 8 & 9 \\ \hline 1 & 3 & 4 & 5 & 6 & 7 & 8 & 9 \\ \hline 1 & 3 & 4 & 5 & 6 & 7 & 8 & 9 \\ \hline 1 & 3 & 4 & 5 & 6 & 7 & 8 & 9 \\ \hline 1 & 4 & 1 & 1 & 1 & 1 \\ \hline 1 & 1 & 1 & 1 & 1 & 1 \\ \hline 1 & 1 & 1 & 1 & 1 & 1 \\ \hline 1 & 1 & 1 & 1 & 1 & 1 \\ \hline 1 & 1 & 1 & 1 & 1 & 1 \\ \hline 1 & 1 & 1 & 1 & 1 & 1 \\ \hline 1 & 1 & 1 & 1 & 1 \\ \hline 1 & 1 & 1 & 1 & 1 \\ \hline 1 & 1 & 1 & 1 & 1 \\ \hline 1 & 1 & 1 & 1 & 1 \\ \hline 1 & 1 & 1 & 1 & 1 \\ \hline 1 & 1 & 1 & 1 & 1 \\ \hline 1 & 1 & 1 & 1 & 1 \\ \hline 1 & 1 & 1 & 1 & 1 \\ \hline 1 & 1 & 1 & 1 & 1 \\ \hline 1 & 1 & 1 & 1 & 1 \\ \hline 1 & 1 & 1 & 1 \\ \hline 1 & 1 & 1 & 1 & 1 \\ \hline 1 & 1 & 1 \\ \hline 1 & 1 & 1$	Before treatment

SITE	FIND	AREA		CONTEXT		
111	144	С		105		
MATERIAL TY	PE OB	JECT TYPE	DESCR	RIPTION	ATTENTIO	Ν
Lithic						
DATE	ID		QUE_ID		ation Dateo	
8/10/2009	KEC	1110	C105F144	8/11/200	9 Gre	gory Bailey
Round worke point in cente	aped concavity de, 17mm	Condition Dirt present on a	all surfaces	SASS Other Site Box		Treatment Cleaned mechanically using soft hair bristle brush

Storage Recommendations

Other Notes



SITE 111	FIND 133	AREA C	co 10	NTEXT 3	
MATERIAL T	YPE OE	ВЈЕСТ ТҮРЕ	DESCRIPTI	ON ATT	ENTION
Copper and composite ol	oject, Copper with iron post itting on	Condition Dirt, corrosion p	ssible traces Box norphs r dome and	Conservation 8/11/2009 Storage Location SS Other Sites 20 Metals Containe	09 Cleaned mechanically using

Storage Recommendations	s
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Other Notes

Appears to be similar in materials and construction to 104C[265]F221 Further treatment/assessment recommended

Monitor for corrosion

