The Gateways Project 2011

Land and Underwater Excavations at Hare Harbor, Mécatina

William W. Fitzhugh
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Arctic Studies Center

Photo Contributions by Wilfred Richard
Produced by Lauren Marr

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1-2011 Project Goals

Discovery of a Basque site at Hare Harbor (EdBt-3), on Petit Mecatina Island in 2002, and ensuing investigations through 2009, resulted in excavations of the site's land and underwater components, including a cookhouse, blacksmith site, middens and underwater ballast dumps and deposits. The site is unusual for having a long history of Basque and other European occupations dating from the mid-16th to the late-19th century, for having contemporary land and underwater components, and for evidence of prehistoric and historic Inuit settlements.

The general goal of Gateways Project research has been to develop a better understanding of (1) the culture history of the Lower North shore; (2) the relationship of its cultural components to neighboring regions, especially northern Quebec-Labrador, Newfoundland, and the Upper Gulf of St. Lawrence; (3) the archaeological remains of its early European settlement; and (4) the preservation and conservation of its cultural resources and its potential for tourism, heritage programs, and economic development.

Fig. 1.2: 2011 site Structure 5 view to the west. Photo by William Fitzhugh.

More specifically, in recent years and as proposed this summer, we have been investigating this unusual (due to its Basque, European, and Inuit components) site, with attention to recovering both land and underwater materials. Relationships between Europeans, Indians, and Inuit are a special focus of project, and previous research has resulted in documenting archaeologically several expansions / migrations of Paleoeskimos and Inuit cultures into the Gulf of St. Lawrence—a topic long debated by experts (Martijn 1980). Discovery in 2009 of Inuit houses that appear to be contemporary with the site's ca. AD 1700 European occupation pose exciting potential for research. If this contemporaneity can be verified, it will be the first archaeological instance of direct Inuit-European collaboration in the North Atlantic European fishery. For these reasons we have given special attention to preparing a detailed map of all site features and excavations, topography, and landscapes.

Our special target for the 2011 season is to complete investigation of the west end of the site where we discovered in 2009 a series of structures, two of which appeared to be Inuit winter dwellings. We excavated S4 in 2010 and found it to be a classic Inuit winter dwelling with sod walls, a sunken entrance tunnel, paved floor, and sleeping benches. An oil-encrusted lamp stand and a fragment of an Inuit cooking vessel also supported this view, even though most of the artifacts recovered were of European origin. One of the unusual features of this structure was that its foundation walls used wood charcoal as a matrix for rocks and occasional sods and whale bones, rather than being of rock and sod construction as most Inuit winter dwellings. Immediately west of S4 was an adjoining structure (S5) which was roughly rectangular, with the same east-west axis as S4. Like S4, S5 was entered through a sunken passageway that twisted through an irregular barrier of boulders, some of which were rockfall that had been cleared from the house

Fig. 1.4: 22N 26W soapstone fragments in situ. Photo by Wilfred Richard.

associated with several ballast piles of Basque origin. area. The rear (uphill) wall was excavated into the bank as in the case of S4. From surface indications it was impossible to clearly identify the west wall of S5, and rock alignments suggested two possible locations, one along the 28W line and the other ca. 31W. A much more irregular grouping of boulders forms the southern wall of this S5 "extension", and there is some indication of a passage through this wall to access the western part of Area 7. West of this structure there is a 2-meter wide pit which we tested in 2009 and found full of pure charcoal. These features are our primary target for the 2011 season. The questions include: (1) is S5 Inuit or a European? (2) Does Area 7 contain one or two separate structures? (3) Are the S5 structure and Area 7 hearth at 20N 30W contemporary with S4? (4) What is the relationship of these structures to the other structures at Hare Harbor? And (5) what is the relationship of the charcoal pit in the western part of A7 and the rest of the site? We also planned an underwater excavation to extend the results of our research on deposits in the harbor

Acknowledgments

As in previous years, the 2010 season was conducted with a small field team: Perry Colbourne serving as Pitsiulak skipper, William Fitzhugh (Smithsonian) as field director, and Wilfred Richard (ASC Research Collaborator) as photographer. On land field assistance was provided by Lauren Marr (Smithsonian), Janine Hinton (Smithsonian), Justine Bourguignon-Tétreault (University of Montreal), Sarai Barreiro-Arguellas (University of Montreal), and Alexandra Evans. Underwater site investigations were completed by Erik Phaneuf and Vincent Delmas (University of Montreal). We received gracious material and moral support from the Colbournes of Lushes Bight, Newfoundland, and many friends in Harrington Harbor, Quebec. Permits were provided by the Department of Culture and Communication of Quebec, and financial support and materials came from the Smithsonian's National Museum of Natural History, the Arctic Studies Center and the University of Montreal, courtesy of Brad Loewen. Lauren Marr and Laura Fleming provided research assistance, and Lauren Marr prepared the maps, illustrations, and oversaw the technical preparation of this report.

Fig. 1.3: 2011 fieldcrew, l to r, Wilfred Richard, Justine Bourguignon-Tetreault, Perry Colbourne, Sarai Barreiro-Arguellas, Janine Hinton, Bill Fitzhugh, Vincent Delmas, Erik Phaneuf and front: Lauren Marr. Photo by Wilfred Richard.

2 - Strategies of Intervention

Fig. 1.5: Sarai Barreiro-Arguellas digging Area 8 midden view to the north. Photo by Wilfred Richard.

The purpose of the 2011 was to explore Structure 5 and excavate along the drip-line below the cliff overhang, to excavate a charcoal-filled pit discovered earlier, and test for other features encountered. The 2011 Gateways Project employed similar strategies of intervention as in previous years at the Hare Harbor 1 site on Petit Mécatina Island. Our focus this season was to excavate the site's Area 7, which extends west of the Structure 4 Inuit winter dwelling in an area that appeared to have another similar structure, which we designated Structure 5. S5 appear to also be of Inuit construction, based on the presence of an entrance passage in a wall of rocks along the south side of the structure, paralleling these features in S4. Our methods included extending the site grid west of S4, clearing Area 7 of surface vegetation, systematic excavation, data-collection, and back-filling and stabilizing the site. Other areas of the site remained untouched in 2011, with the exception of the underwater excavations in the harbor area adjacent to the site, where we extended our earlier grids and excavation several new 2-meter squares. These excavations followed established protocols for underwater archaeology, with full photography, object plotting, excavation by troweling assisted by dredges, mapping of features, and creation of stratigraphic sections.

Systematic Excavations: When research began at Hare Harbor 1 in 2002 we established a grid based on a datum at the top of the ledge bounding the southern edge of the site. Secondary datums were established as needed to facilitate measurements in the vicinity of Areas 1-6. In 2010 we established a datum on the western wall of S4, and in 2011 we continued to use this as the basis for extending the grid into Area 7. The grid's northern limit ran along the 22 North line west to a large rock-fall boulder, and its southern limit ran along the 0 North line. Later a trench was laid our extending south from the entrance of the S4 entry tunnel into an area where we found a midden connected to the S4 occupation. Following photography each 2-meter square was excavated according to stratigraphic levels and data were recorded photographically and on paper map grids. All rocks, features, flakes, tiles, and artifacts and samples were piece-plotted in three dimensions. A composite map was prepared and stratigraphic profiles were drawn for the important sections. At the conclusion of the work the excavated area was back-filled and stabilized with rocks and sods.

Processing, Analysis, and Reporting: All artifacts recovered were traced, plotted, numbered, and described in field notes, and interesting objects were photographed at the time of excavation and in lots by 2-meter square. A field catalog was prepared and everything was carefully packaged and delivered to the Quebec archaeological Laboratory for cleaning, conservation, and formal cataloguing. All maps, and relevant photos and illustrations are reproduced in this field report. Technical analysis of materials is on-going at the time of this report and will be published in detailed monograph in the future.

3- 2011 Expedition Journal

22 July – Friday I rendezvoused with Lauren and Janine at Reagan National Airport at 9:15, lugging my dive gear and personal stuff, with the temperature already in the low 90s, and due for a record-breaking 104-5° later in the day. It will be good riddance to a week of ridiculously hot weather. But upon landing in Portland where Will Richard greeted us at the airport with temps in the high 80s, it still seemed like we were in a blast furnace. The second surprise was Will's new metallic grey Volvo, second-hand, but with few miles on it, and in great shape. We piled in, and an hour later arrived at his beautiful home in the Georgetown woods having a light lunch with Lindsey. Then to the tip of Georgetown Island for a visit with Brenton Perow and his wife Julia, who provided us with our evening lobsters and a few nips of Brent's raspberry wine. Across the mouth of the Kennebec we could see the old Civil War fort and the surf crashing on a beach jammed with swimmers and the odd kayak paddler. By the time we got back the temperature had dropped a couple degrees. The lobster dinner turned out even better than last year's, and by 10pm we were all asleep to the booming of the bullfrogs in the pond.

23 July – Saturday We were up by 5am and on the road by 6, with four big bags of gear on the roof. The day passed quickly as we wound our way north to the turnpike, then east to the Canadian border at St. Stephens. By early evening we were at the Canco Canal and by 7:30 at the North Sydney Nova Scotia ferry terminal. The major excitement up to this point was the search for gas around Pictou and the sticker shock at tank-fills of $60-70 ($1.32/liter). The ferry—*The Highlander*, one of two new ferries recently brought on-line—left on time at 11:30pm and got us in to Port aux Basques by 6am. A smooth ride, fairly comfortable lounge seats to sleep in, and an OK cafeteria for breakfast.

Fig. 1.6: Bill Fitzhugh securing packs on Will's volvo. Photo by Wilfred Richard.

24 July – Sunday The heat wave in the northeastern US had produced stormy weather, fog, and rain in western Newfoundland, so the drive north along the west coast was not as pleasant as usual, but by 12 we were in Corner Brook, canvassing the Canadian Tire store for a solar battery charger and other stuff we needed. We had to pass up a chance to see Greg Wood, who has now left his farm is and back in his old home in Deer Lake, because of our pressing need to reach Harrington by the 31st, when our Quebec divers arrive. The weather cleared east of Corner Brook, and by the time we reached the Long Island ferry it was sunny and blowing hard from the north. The ferry landing was lined with people casting lures into the swift current and pulling up scores of small codfish—the three-week long 'recreational fishery' had just begun. Within a few minutes we were at Perry's and Louise's and had become part of the Colbourne extended clan's Long Island Day reunion. This year's LID drew a couple hundred folks, many coming from afar, including two of Perry's brothers, Christopher and Peter, who live in Ontario, whom I had never met. Eugene the oceanographer, Kay, as well as the local Colbournes, were all on hand for a big dinner at Barb's and Maurice's 'shed.' Jill and Matthew had moved from St. John's to Corner Brook, were she has landed a medical technician position in a lab, while Matthew is working on boats in the Great Lakes. Louise now has an empty house, except for Perry, but at least the girls—other than Tracey in New Brunswick—are pretty close at hand. We immediately took up our lodgings on board the Pits, which was resplendent in her new paint at her old slot at the pier. Perry has done a great job getting her ready, and all systems are 'go' except for the same old problem with the navigation computer, whose auto-pilot will not function. Perry thinks this is related to the switch to a new computer a couple years ago, and to Chad Caravan's failure to have the software registered. This won't hurt our work but is a nuisance, since we paid for the work and Chad's expertise. Now he's out of touch fishing off somewhere in the Grand Banks. It was great to see the whole Colbourne clan in one place, and Grandma Nan looking as chipper as I've seen her in years, although a bit banged up from a fall when she was out on the Pits a week ago. Ever the tough but gracious lady mistress of the clan!

25 July – Monday The night at the pier was quiet, with only a few knocks from the speedboat tied alongside. By 7am we were up at Perry's and into a mug of coffee, and by 8am Perry, Lauren, and Janine were on the ferry bound for Gander where they picked up the air compressor from Kelly and Robert Linfield. Their Dive-Master business has tanked and Robert is now into fishing and doing a bit of dive work on the side. In addition to the compressor we got ten tanks and three weight belts. While waiting for Robert to switch the electric motor for the gas engine, they visited the Gander crash site memorial. Meanwhile Will and I headed back to Springdale to exchange money, pay the fuel bill, and get groceries. Banking was a shocking experience this year, as I lost $800 off the $10,000—the worst US-Canadian exchange rate I've ever seen. For Perry this means 'losing' $250 every Smithsonian pay period! There were better times of course, but that does not help now! By the time we returned Louise had baked some bread for the trip. When Perry returned we finished loading the boat gear and decided we would be able to leave by midday Tuesday. Perry and Louise prepared a nice seafood dinner, complete with cod fillets and 'cod faces'—the head bones with their tasty morsels—provided by Dennis, and snow crab and mussels from Perry's freezer. Another quiet night at the pier. Usually the girls stay at Nan's, but this year the house is filled with Kay and Rosemary, Perry's mute sister who lives in Ontario and is a delightful lady who has risen above her handicap. Kay will be flying back with her tomorrow. Kay has moved on from God's Lake, NWT, to another Indian community even further north, where she is a teacher.

26 July – Tuesday The boat was still all night—no speedboats banging on our side. After a breakfast of bacon and eggs we gathered aboard for the final preps, with a plan to head at least for Fleur de Lys on the Bay Verte Peninsula. We tried contacting Jesperson/Nobeltec service people to see about fixing the computer navigation problem, but the service guy (in India) told us Nobeltec and Jesperson parted ways three years ago and we should be contacting Nobeltec now. We tried but they were still closed (east coast time), and so went off without our autopilot again. We got underway at 11:30 in a light SE breeze, passing a few cod-fishers near Gull Island; but otherwise the bay was empty. Passing Cape St. Charles we decided to head direct for Englee, which we could reach by dark, avoiding windy White Bay. This year we saw nothing moving in or on the water except a few gannets, all the way across, until just outside Englee, where a pod of white-sided dolphins were feeding on capelin or some small fry, surrounded by a flock of similarly-purposed puffins. The lack of wildlife was more than compensated by the presence of ice, however. North of the Horse Islands a huge flat piece of shelf ice had broken in two and the seas for miles around carried its calved off-spring. This was the first piece of the mammoth Petermann glacier/ice island that broke off two years ago and then blocked the narrow straight between Ellesmere and Greenland before finally passing through and entering the Labrador Current stream. The largest piece—about nine miles long—is off Battle Harbor and can easily be seen, along with its smaller 'children,' scattered all about the southern Labrador coast. Many pieces have passed into the Strait of Belle Isle and east along the northern coast of Newfoundland. We're going to see lots more of this Petermann ice along the way. I imagine it's having an impact on international shipping through the Strait of Belle Isle, and it will mean we have to be very cautious, as the smaller chunks can be nearly invisible and do not show up on radar. Englee was almost like a ghost town when we arrived, its fish plants along the harbor-side slumping and docks rotted. "Nothing going on here," replied one guy stringing up electrical cable on his boat at the town wharf. "No fish, capelin, or anything else." Several more-or-less decrepit long-liners were tied up along the pier looking like they hadn't been out for a long time. The only 'action' were a few small boats scattered around the 'cod islands' near a stranded ice-berg—recreational fishermen looking for a few fish for dinner, and a large contingent of ravens and gulls. One other notable presence was a large woman in the harbor-master's shack who was looking after the town's financial interests and dunned us $5.65 for tying up for the night. While the girls wandered about town, attracting quite a bit of attention, Will put on one of his spaghetti dinners, replete with 'trumpets' from his mushroom 'garden' and a fine $2 bottle of wine. This year the Canada custom's folks did not ask for any duty on Will's case; in fact they let us in with no questions at all.

27 July – Wednesday We were up at 5:30 and underway at 6, passing a few small boats already out cod-fishing at the entrance of the bay. Wind was nil and the morning looked good for travel. By the time we reached St. Anthony a light SE breeze had arisen, but it disappeared as we rounded Quirpon and remained essentially flat calm all the way across the Straits to Blanc Sablon, which we reached at 8pm. Just as we were about to enter the Quirpon tickle we passed a large tabular mass of ice that was tilted up and had a harp seal sunning itself at the crest. What inspired it to claw its way up the inclined slope can

Fig. 1.7: Harp seal bathing on the Petermann iceberg. Photo by Bill Fitzhugh.

only be imagined—perhaps a better view? In any case it was not concerned with our close approach for photographs and conspicuously raised its head at the proper moments. We circled and made a second pass and he still did not panic—and too bad for us, as the sight of a large seal sliding down the sloping ice would have been spectacular. Only one other time have Perry or I seen such a display—the other being in Frobisher Bay, when Paloosie shot a big bearded seal sunning itself on the ice in front of our cameras. We considered stopping at Quirpon for a visit with Boyce Roberts, and Will talked with him at 10am about whether we might stop, but he said the weather was calm there and the chance of rounding Nfld and gaining a day on our schedule was too good to pass up. So instead of stopping we hove to in Quirpon Harbor, where Perry did his engine checks and oiling, and continued on. There were several fishing boats at the wharf, so there are more signs of life here than we have seen during the past couple of years. Rounding Cape Norman we came across our first humpback and a group of porpoises. Very little else stirred as we passed down the Newfoundland coast except gannets and fulmers, and many of the latter were molting and could not fly. The gannets were flying about in their desultory way, occasionally wheeling out of the sky and crash-diving into the sea, much like pelicans. The big hit of this passage, though, was the massive ice platforms we encountered in every section of the coast. They looked like giant floating islands, and most were two or three times the height of Pitsiulak—great tabular things with waterfalls of meltwater running off their sides and seabirds stationed like gendarmes all across their edges. They seem attracted to these perches, perhaps because cold air helps keep their parasites at bay, like caribou on snow patches. The largest piece of all was a few miles east of Blanc Sablon; it must have been 300-400 meters long and 30m high. Three or four boats and a guy on a jet-ski were circling it, daring its sides to collapse on them. Some of these boats looked like they were catering to tourists, and this ice—here and elsewhere around southern Labrador and northern Newfoundland—is certainly a major attraction. Nothing like it has ever been seen in living memory. It is also having a major effect on international shipping, because we saw no ships in the Strait other than the Blanc Sablon ferry. Freighters and tankers are all taking the route south of Newfoundland to avoid the ice hazard. Arriving in at Blanc Sablon, while preparing a dinner of macaroni and corned beef, we were greeted by a Monsieur Beaudoin, who said he owned the fish plant and other shore enterprises here. He's been all over the Canadian Arctic and swapped stories for awhile, admiring our "good old fashioned" boat while waiting for his brother to arrive at the dock with a load of herring. From him we learned that Clifford Hart was out of the hospital, living at home with Florence, demented but otherwise okay. After dinner I was able to reach Nick Shattler's wife in St. Augustine and arranged to meet them tomorrow in Cumberland Harbor, where he wanted us to check out some pithouses he has located. A call to Christine and Wilson in Harrington went unanswered. We've burned 600 liters of diesel fuel since leaving Long Island.

Fig. 1.8: Porpoise appears in the Straits. Photo by Wilfred Richard.

28 July – Thursday It turns out that even the Blanc Sablon pier can have a quiet night (we once had a terribly stormy night here). I heard nothing until one of the big fishing boats pulled out about 4:30. We turned out about 6 and tuned up for the run to Cumberland Harbor, where we were to meet Nick Shattler at 1pm. Our departure was delayed by a glitch in the navigation computer, which this time was not

receiving a GPS signal. Eventually we left anyway, and Perry was able to solve the immediate problem by plugging in a small automobile GPS receiver—all this after we have paid several thousand dollars for expensive navigation programs. The last of the Petermann glacier ice showed up a few miles west of Blanc Sablon, and we saw no ice further west in the Gulf. We arrived at Cumberland Harbor about 11:00 Nfld time and anchored in our usual spot. Nick arrived at 1pm Quebec time, 1.5 hours later than Nfld time, and we had a short chat about his pithouse and chert finds. It turns out that the chert did not come from the pithouse but from another site on Bayfield Island, probably not far from the high terrace chert site we found several years ago. We decided not to visit these sites now but rather to wait until we come through on our way home in August. Nick gave us four nice sea-run trout (essentially brook trout with red spots that looked identical to char) and we hoisted anchor and headed west through the inner passage. Gorgeous rocks and coves. Rain storms were building up on the interior, but nothing reached the coast. I spent the rest of the voyage working on the final version of Will's "Maine to Greenland". We passed Tabatière about 6 and Mutton Bay about 7, and arrived at Hare Harbor under a dramatic display of clouds and sun shafts at 9. The entire trip was made in two and a half days with nothing stronger than a 5mph breeze and zero sea swell since St. Anthony. This was the same phenomenal luck we had coming home last August. In other developments, we've found several ants running around, and Perry says there still seem to be some of last summer's infestation alive and kicking. Pretty amazing that they have survived the winter. I'm hoping that we don't have a real outbreak now that we have real food aboard again and are throwing old beer and pop bottled in the trash, one of their favorite haunts. Hare Harbor looks trim and like we left it. Lots of grass and brush to cut, as usual. No sign of peregrines, but there are several white splotches up on the cliff face that may be gull nests. We are wondering if we will be greeted by dead baby harp seals on shore again as last year (this did not happen!).

29 July 2011 – Friday Our first day on the site was a good one with great weather. The high that has settled over Newfoundland and the Gulf continues to bring sun and light winds, today from the southwest, just enough to keep the bugs away. We got up at 6:30 and spent the morning transferring gear ashore and whacking the half-meter-high grass and weeds. Fortunately we had brought both weed whackers. The quantity of hay and silage produced would keep a cow happy for months. Perry spent the morning cleaning the boat and mounting the solar charger, so now we have a passive way to trickle-charge our often-depleted batteries, two of which we replaced this spring. We returned for a lunch of char, finishing off Nick Shattler's gift of yesterday, and returned to the site at 2:00. We are still on Newfie time, and so the cliff shadow engulfed us at 3:30 instead of at 2:00 Quebec time. We shall probably shift to Quebec time when the dive crew arrives in a couple days. The weather turned chilly by 6:30, so we returned for supper a bit early. Lauren and Janine volunteered to cook and cast around for some time before settling on macaroni with moose meat sauce, the latter from Perry's stash—his share of the moose he kills or butchers and packs for friends and neighbors in the fall. With another bottle of Will's wine and the last of Louise's homemade bread, we had a great meal enlivened by a long discussion about the state of US and Canadian economies. Today was the day the US government is supposed to shut down if the Congress does not solve the budget impasse or raise the debt ceiling.

Work at the site progressed really well, considering it was our first day. Everything was in order, as we left it last summer; even our 2x2m grid photo template was untouched, leaning up in the rock shelter where we left it. The Inuit house (S4) excavated last year was in excellent shape. Grass had stabilized the rear wall and grown up around the sides and front, leaving the paving slabs on the floor visible. A few of the floor paving slabs cracked over the winter, and we found a couple of clay pipe stems that eroded out from the front wall. After cutting the grass we gridded out the S5 structure and extended the grid all the way into the big perched rock. The result is quite spectacular, showing a very habitable piece of land that follows the drip-line of the cliff above. There is a very clear wall along the south front of the structure and numerous visible features inside, including clusters of rocks that look like hearth piles, others that seem to be walls or dividers, and large slabs that may be seats, platforms, or hearth stands. A sinuous entryway snakes through the south wall of boulders and rockfall. This wall seems to have been constructed with rock-fall material that had been cleared from the interior spaces. When all the squares were gridded we photographed the entire Area 7 (everything west of S4, west of the 22W line), and in doing so it became obvious that we probably cannot excavate all 30-40 of these squares in the next three weeks with a dig crew of 5, so we shall have to sample and likely do some triage (ion the end we did in fact complete almost all of these squares). Toward the end of the day we were able to open up two 2x2m squares in the middle of S5, one (the easternmost, 18N 24W) contained out test pit from 2009. Both had a thick layer

of charcoal-rich soil just under a thin turf layer. Will's square (18N 26W) turned up a piece of brown earthenware with tiny pits in its surface, and Janine and Lauren's an iron nail soon after they got started. The cultural layer—a charcoal-rich black soil with lots of sand (eroded from the cliff face above) and small fire-cracked rocks in it—is about 15 cm thick, overlain by 2-3cms of turf. We have yet to reach the floor or sterile subsoil. As we left the site, a screech from the cliff above seemed to announce the presence of our old friends, the peregrines. No sign yet of the chattering red squirrel or the lugubrious porcupine.

30 July – Saturday It was very still in the harbor last night, although the boat rocked occasionally from swells entering from the Gulf. Nevertheless this was enough to kindle concern from Janine, who shined her flashlight in at me in my berth on the pilothouse floor asking if the speedboat was bumping. Probably she was just getting introduced to the sound of the anchor chain scraping across the bow-plate as we swing at anchor. Lauren was trying to reassure Janine, but in the morning when we tried to figure out what the trouble had been, Lauren remembered nothing—testament to a good sleep and hard day's work. Or maybe it was the Red River hot cereal that I had made for breakfast. I had not had this breakfast delight since canoeing at Camp Keewaydin in the 1950s, so when I found it on the market shelf in Springdale I couldn't resist. It's more like bird-seed than other types of porridge, but it packs a whallop, sticks with you much of the day, and apparently induces amnesia in sleepy women! This morning I made cream of wheat, a more dependable day-starter.

Fig. 1.9: Bill Fitzhugh enjoying Red River hot cereal. Photo by Wilfred Richard.

Surf was crashing on the outer shore, a good indication of a strong southwest wind. However it was calm in the harbor, and we were able to get in a morning's work before it started to rain during lunch. Will made some grilled "Mac-*Pitsiulaks*" from English muffins, tomatos, cheese and salami—quite tasty. We decided he should offer his recipe to a McDonald's.

At the site we continued excavating 18N 24/26W and opened 18N 28W, extending the excavation down the middle of the structure. By noon 18N 24W was beginning to reveal some structure, with a linear feature (F1) of roof tiles and cobbles extending NW/SE, a series of floor pavement slabs in the northern and eastern areas, and a large granite slab in the SE corner, perhaps a seat or a hearth base (it turned out to be a fallen wall slab). Like the other units inside S5 the soil profile showed three levels: L1: 2-3cm of turf; L2: 3-4cm upper cultural layer of sandy soil mixed with charcoal and chunks of cliff-fall rock and the occasional nail; and L3, a lower cultural level with iron nails, tiles, and charcoal of 3-10 cm, above floor cobbles and slabs or on sterile sand. While some nails are found in L2, most of the cultural deposits are in L3, which is dominated by a matrix of charcoal and fire-cracked rock with little sand. Most of the sand in L2 seems to have eroded from the cliff above or washed down from the shelter. In 18N 28W I found an old soil surface separating L2 from L3, perhaps indicating a roof deposit of sod or skin, or a stable ground surface after the abandonment of the house. Below this level the soil becomes filled with chunks of charcoal, and for the first time a combination of tiles, nails, and pieces of burned or FCR appear. Most of the artifacts were from 18N 24W, where Lauren and Janine have been working just above a cobble pavement (with some roof tiles) on sterile sand. Most of the finds in this square come from just above the pavement in the L2/3 charcoal-filled levels. The use of roof tiles as paving stones indicate access to these Basque materials, which are not found in L2. Finds included a pipe stem, nails and spikes, a fragment of a small blue seed bead, and a glaze fragment spalled from a piece of earthenware ceramic. Will's unit had similar stratigraphy but has produced only spikes and nails and a small piece of undecorated earthenware with tiny pits on its surface. As in 18N 24W, he has a cobble and tile feature in the southern area and slabs in the northeast. The floors of both 18N 24W and 18N 26W are inclined down to the south toward the S5 entry. The northern half of 18N 28W has similar stratigraphy and produced nails from L2 and the top of L3. We need to understand why so much charcoal is found in L2 in a loose, sand-filled deposit that seems like fill rather than house deposits; perhaps this material derives from a charcoal furnace that operated after the occupation of the house So far, the concentration of tiles (rare or completely absent in the turf

and L2), nails, and a glass bead hint at an Inuit occupation dating to or shortly after a Basque occupation and preceding a more industrial operation that produced large amounts of charcoal. (NOTE: This turned out to be a false, as in many other areas we found the charcoal production phase to precede construction of S4 and S5.). A major difference between 18N 28W and the two units to its east is the complete absence in the latter of a floor pavement at the base of L3 and the near absence of artifacts from the L3 level.

31 July – Sunday (Hare Harbor to Harrington and return) The weather had not cleared by morning, and it remained showery and unsettled until late afternoon. We decided not to work at the site and to leave for Harrington after breakfast. Will made his excellent sour cream pancakes and fried bacon. We left about 9:30am and had an easy passage to Harrington, arriving just as the church bells started pealing. A Sunday klatsch of men had gathered outside the Paul Rowsell's store, CMR Sales. Paul's brother Mark Rowsell gave us the low-down on the winter—not as bad as last year because they had enough snow and ice for snowmobile travel. Harp seals came in the fall, but there was no sea ice for birthing and whelping, and they saw no young seals. The summer weather was cold and wet until this past week, and there are few bakeapples showing. The fishing was generally poor—few codfish or lobsters—and the quotas were also low, so the fishing season has already ended at Harrington. One event of interest was the discovery of scallop and other sea shells when the town dug out the small back-up water reservoir at the east end of town; many of the smaller shells were found in the mud in growing position when they were under the sea. Larry Ransom gave me a bunch of shells to use for c14-dating, but I still need to get the elevation of the mud above sea level. We found Wilson Evans at home in his workshop. He had arrived earlier in the morning from Muttton Bay where the rest of the family will remain until Wednesday. Their daughter Alexandra is home from northern Canada after a year away and will be working for the school board on non-classroom education projects in Harrington this year. Mark was kind enough to open the store for us even though it was Sunday, and we took the opportunity to stock up for the coming week when we will have a crew of nine. We cleaned up the boat and prepared for the arrival of the Quebec team by plane from Montreal and Sept Isles. They came from Chevery by water taxi at 7:00, and we set out almost immediately for Hare Harbor, taking advantage of the last evening light. On the way we had a pizza and salad dinner from the HH restaurant and got to know our old and new partners—Vincent Delmas and Erik Phaneuf, and new-comers Justine Bourguignon-Tétreault and Serai Barriero Arguellas (from Mexico), the latter two students at the University of Montreal. Brad Loewen is supporting their participation and Erik's salary with a contract through his environmental company – AECom, a worldwide enterprise for which he is covering archaeological activities in Quebec. The passage was smooth and soon after anchoring we were bedded down in all available nooks and crannies, the girls in the foc's'cle and the guys back aft. In Harrington, at the last minute while I was walking to the boat, I realized I had not secured our emergency oxygen tank from the hospital. At the hospital I found a new nurse on her first day of duty. She knew nothing about oxygen tanks but put me in touch with Nurse Micheline Bernard who remembered us from last summer and helped us get a loan of a tank of oxygen.

1 August – Monday (Hare Harbor) The day dawned clear and bright, with a light north wind—perfect to start diving and to introduce the UM students to the site. Having shifted to Harrington time, we got up at 5:30, an hour after sunrise, and after breakfast assembled the diving gear, posted the emergency telephone numbers for medical assistance on the pilothouse wall, and went ashore. I decided not to dive for a few days, until I see what progress we are making on the land site. We have laid out near fifty 2x2m squares, and we'll be lucky to do thirty. Ashore, we assigned new squares and broke Justine and Serai in on our excavation procedures, and soon we had seven squares working. Down in the cove Perry, Erik, and Vincent got the dredges in the water and set the mooring for the speedboat, where Perry would

Fig. 1.10: First day on the site, southeast view. Photo by Wilfred Richard.

man the two dredge pumps. Erik and Vincent also made their first reconnaissance dive, finding the underwater site in good condition. No scallops or lobsters seen. At noon we returned to the Pits for lunch and found Vincent had prepared tomato soup and sandwiches. We returned to the site for the afternoon, which turned cool and foggy. The divers got the pumps operating, and a bit of dredging was done while the land crew opened up several new squares. We quit digging around 7:00 and returned to Erik's spaghetti, eating our first group meal around the galley table, debating the quality of French vs. other wines and watching with amazement while Janine ate a third helping. Some appetite that girl has! Everyone was in bed by 10 after what was a strenuous but a productive day.

Fig. 1.12: Justine Bourguignon Tetreault. Photo by Wilfred Richard.

2 August – Tuesday (Hare Harbor) Fog hung around all night and into the late morning. We rose at 6:30 to find a light southerly breeze, a lifting fog, and people whoosey from swatting mosquitoes during the night. I had made the mistake of leaving one of the pilothouse windows open a crack for air. Our other insect pests—the ants—seem to be building their forces, with several more seen each day, and larger size. Erik says the solution for carpenter ants such as ours is to prepare a mixture of borax with jam, which they carry back and feed to queen. I keep wondering how riddled the boat is after a full year of these critters munching through our timbers. Within an hour or so the fog burned off and we enjoyed a pleasant morning's dig, interrupted for an hour by the dredge pumps. Underwater, Erik and Vincent got started with their excavations on either side of the central ballast piles. No spectacular finds but the dredging has hardly begun. One highly notable feature: the temperature of the water is very low at 40-50 feet—about 2 Celcius, or ca. 36F, much colder than in previous years. After a lunch of Vincent's doctored-up scrambled eggs and toast we returned to the site and had a spectacular afternoon of finds. Justine started off with several earthenware ceramics; I found more of the stoneware pitcher first recovered yesterday. Then Lauren found a beautiful Maritime Archaic stemmed point of Ramah chert just under the sod in the wall of Structure 5, and right after that I spotted some tell-tale white scratches on a cobble in the stone pile Serai was neatly cleaning. When we extracted it we discovered it was a small Labrador Inuit soapstone lamp turned up-side-down, with only a small piece missing from the rim. A few minutes later I found several pieces of a broken Inuit soapstone cooking pot in the 22N line. A banner day, some of the most important finds recovered from the site over many years. The Ramah chert point might have been in some sods used for house construction, but our elevation may be below the sea level for this coast 3500-4000 years ago. It could have come from the MA people living in the longhouse we found in trap cove on the southern tip of P. Mécatina if the MA sea level is below our site. Otherwise it must have been a relic collected by earlier folks or by the Inuit.

Fig. 1.11: Lauren Marr holding a Ramah chert point found in S5. Photo by William Fitzhugh.

3 August – Wednesday (Hare Harbor) By 6am the Pits was swinging back and forth at anchor and a cold wind was pumping through the boat through the window screen. The wind was in the southeast and a bank of fog was moving in. It looked like it would be a rummy day, but at least it was not raining. We got to the site by 8:00, and after that conditions improved steadily. The divers got their squares working and on land we found more pieces of the Inuit cooking pot and the stoneware jar. About 11:30 we heard the chugging sound of a boast entering the harbor. It was Wilson bringing Christine, Alexandra, and Sarah back from Mutton Bay where they had been visiting Christine's parents, the Vatchers, for a week. They tied up alongside the Pits and we had a nice lunch, catching up on affairs. The girls are so grown up now it's hard to tell who the mother is! They are all off with the Vatchers to Montreal for a couple weeks. After showing them around the site we returned to work. So far not a lot of finds have been made underwater, and Erik is thinking of moving the dig upslope into shallower water partly because of the

Fig. 1.13: The Evans' girls and mother Christine all grown up! Photo by Wilfred Richard.

cold water at depth and because he thinks we may get better material. After the dive Erik and Perry towed the underwater camera Erik had rented for the project around the harbor with the speedboat. The camera is remote, powered by a 12-volt cable from the boat, and gives a good view of the bottom if you can manage to keep it moving slowly enough. You determine this by watching the picture on a monitor and adjusting speed accordingly. So far they have seen nothing of note; the bottom is almost completely devoid of objects or life except for brittle stars (starfish). The apparatus works well at shallow depth but is hard to position at depth. The idea is to identify prospective sites like wrecks before you go to the expense and trouble of launching an underwater excavation. We worked until 6:30 and returned for a diner of tacos and salad. After supper Lauren tried out her star-gazer computer program that identifies the constellations for any time or place you program into it. Unfortunately, the sky was cloudy!

2011 Field Program *We have now been digging for five days, last week with four and for the past two days with six on land and two diving. During this time we have made major progress at the land site but have only begun the underwater work. On land we have concentrated on Structure 5 in Area 7, the region of the site west of the S4 the Inuit winter house, where we suspect at least one other Inuit house is located as well as a charcoal production or some other kind of industrial facility. To date we have opened fifteen squares oriented east-west along the axis of the S4 structure and have completed ten. Following presents our rationale and procedures to date.*

Archaeology Update I *We began work at the land site by cutting the grass off the entire area and gridding the A7 area from 22W to 36W and 12N to 22N. During the first few days we excavated six 2-meter squares that covered the interior of S5: 18N / 24-26-28W and 20N / 24-26-28W. These squares included the interior spaces of S5 north of the structure's front wall and part of what should be the sleeping platform in an Inuit house. The stratigraphy in 18N 24W and 18N 26 was similar: Level 1, 3-5cm of turf overlying Level 2, a dark charcoal-rich 'black earth' that included cultural materials. This layer lay above a pavement of tightly packed beach cobbles that formed the floor of the house. Beneath this level was sterile sand. The units to the north, 20N 24W and 20N 26W had similar stratigraphy; however the cobble pavement extended only one meter north of the 20N line. At that point the cultural level rested directly on sterile sand that angled up toward the north, where it intersects a layer of in-situ beach cobbles. Until we complete the surrounding squares the position of the side and rear walls of S5 remains unclear. The east wall is shared with S4's west wall, but we have yet to determine whether this wall was a common wall for a joint settlement by or was modified by a later occupation of one of these structures. The position of the east wall is suggested by a line of large boulders that arc around from the front of the house and meets a boulder and gravel mounded wall that extends toward the hillside. This wall seems to be the west wall of the dwelling for the cobble pavement ends at the inside edge of this feature. However, the front 'wall' of S5 extends 4 meters west beyond this 'wall' and encloses a floor area that may have been a separate dwelling or working place although this area has no cobble or slab pavement (see photo). (We later determined that this area was outside the S5 'house' floor.)*

4 August—Thursday Today was a day of surprises, at the site and on board. The day began like the past few days, overcast with a light southeast breeze. Early in the morning I began to feel the Pits swinging back and forth on the anchor and the sound of the waves on the shore getting louder. Upon getting up, I found the wind was "in" –into the bay—and the fathometer showed 4.2 fathoms, shallower than usual. It seemed if the boat swung just a bit more on her anchor we might be on the rocks. Erik and I discussed the unusual location and I mentioned it to Perry as we left the boat for the site. Soon after we got ashore and starting working I heard a commotion from the boat and saw Erik in the speedboat messing with the anchor chain. As we had suspected, the anchor had become fouled and the boat had dragged about 50 meters. This is the first time this has happened in many years, perhaps due to chain falling on the anchor while we anchored, or by the boat swinging around the anchor with changes in

the wind. Soon the Pits was secured and we turned to the dig work, which benefitted from improving weather. Janine, Lauren and Will were working on the east wall of S5; Justine in the inner entry of S5a, the potential 'house' area west of S5, and Serai and I on the bank at the rear of the structure in 22N 28 and 22N 30W. In taking the sod off my unit I found more remains of the smashed up rectangular Inuit soapstone cooking vessel I had found previously in 22N 26W, and more pieces were soon found scattered higher up on the bank. To say the least, it is odd to find an Inuit woman's treasured cooking pot broken up and scattered about like this, and I could not help wonder about the circumstances: was the old traditional vessel cast out by an Inuit woman who obtained a European metal replacement? Could it have been an accident? Or was it a malicious act by intruders? The lamp and pot are the center of the Inuit domestic household and is a virtual requirement for traditional Inuit life. An Inuit woman could hardly manage without it. Also, these vessels were usually invested with strong life force and had spiritual meaning. Later in the day Justine recovered a large iron bolt from the S5 "west entry," where she also found tiles used as a pavement beneath large rocks that appear to have been thrown in, filling what appears to be an entrance passage. (Later we determined this was not a house entry, only a gap in the boulders.) Will found some faience with brown and blue painting on a thick white glaze. Lauren, Janine, and Serai also had good finds.

Fig. 1.14: Soapstone cooking pot fragments in situ, 22N 28W. Photo by Wilfred Richard.

As we approached the Pits at dinner time we found Erik flailing the water with a fishing pole and hauling small herring into the boat. The fish were roiling the surface in a frenzy, feeding on a huge mass of krill schooled so thick that the water around the boat was bright red. As the fish cut into the swarming schools the masses of krill dodged and weaved about, swirling in loops, spirals, and long flowing chains, flying into the air trying to escape the herring lunges. Later we found krill plastered on the sides and even on the inside of the zodiac, and when we went to use the toilet, we found krill were being sucked into the toilet intake, swimming in the bowl whole or floating around as body parts or detached dark eyes. Gulls and gannets were wheeling and diving into the mass of krill and herring, and even a young grampus (minke) whale showed up to share the feast. The action continued for several hours, during which Erik landed enough herring for lunch. None of us, including Perry, had ever experienced such an event before and we all felt privileged to witness it close-up. The krill seemed attracted to the Pits, hugging its hull and the small boats; Perry thought they were using the boats as a partial shield from their predators.

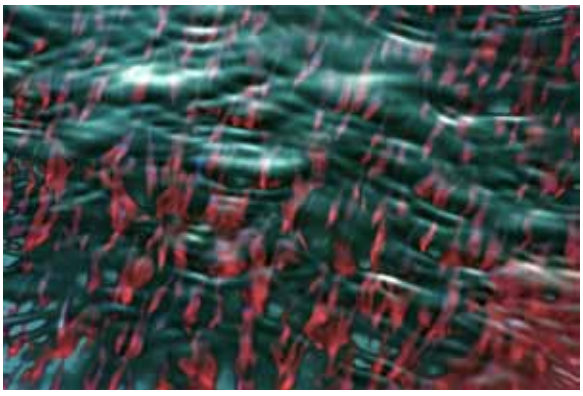


Fig. 1.15: Krill surrounding the Pits. Photo by Wilfred Richard.

5 August—Friday (Hare Harbor) The same weather pattern is persisting—a light eastern breeze in the morning, following by partial clearing by noon. We seem to be in a stable cell north of a gale storm south of Newfoundland, heading east. Okay by me, as it is giving us a good stretch of dry work time. On shore Serai and I continued working on the 22N bank squares at the back of S5. I found more of the broken soapstone pot and large slabs which seem to have been placed as wall retainers when the bank was excavated. Serai finished clearing the stone platform in 22N 30W and began clearing 22N 32W, which has a mass of large rocks embedded in the bank. Justine finished excavating as much of 16N 30W as she could without removing the large rocks that had been dumped or pushed into the 'entry passage' and starting clearing 14N 30W—we want to see what the entire feature looks like before starting to remove them to explore the basal deposits. The three squares along the eastern wall of S5 (16, 18, 20, and 22N/22 W) was being explored by Will, Lauren, and Janine.

Archaeology Update II -- The Eastern Wall *Because S4 and S5 share a common wall and there is no comparable wall foundation for S5's western wall, we needed to explore the relationship between S4 and S5. This has turned out to be more difficult than I thought. The S5 eastern wall was explored in squares 22N 16, 18, 20, and 22W. Judging from surface topography the northeastern corner of S5 should lie in 22N 22W where the land dips down in the southeast quad, presumably because this was part of the original pit excavated for the house. The rear (northern) wall of S5 had no built-up wall of sod or rock. As is typical of most Inuit winter houses, this house (and S4) was placed on a south-facing slope and was excavated into the bank, which then formed the rear wall of the house. The front and side walls would be built up using rocks, turf, and soil excavated from the interior. In the case of S5 there was no structure that remained indicating where the rear wall had been. The eastern wall rises from the house pit to join the western wall of S4, but from surface features it was not possible to know if this shared wall was used by S4 and 5 at the same time, or sequentially. We have not yet been able to resolve this issue from architectural information from our excavation and hope that this can be accomplished by analysis of the artifacts. (NOTE: We later determined that there was no rear or western wall for S5 and that this structure had been abandoned during construction, when activity shifted to building S4 in a more favorable location, outside the cliff shelter's drip-line.) The following summarizes the data from the relevant squares.*

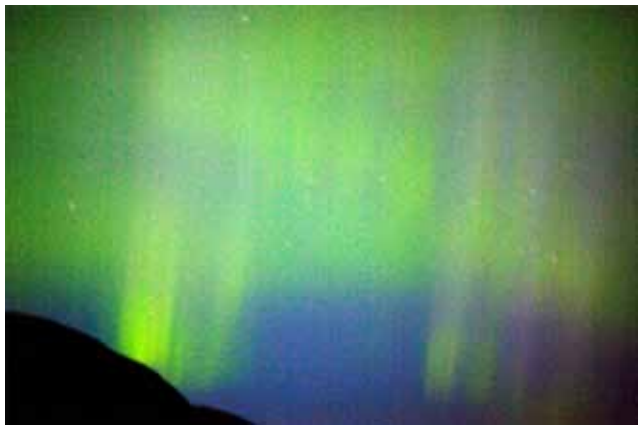


Fig. 1.16: Northern lights seen over HH-1 site. Photo by Wilfred Richard.

Will found the SE corner of the dwelling in the middle of his square marked by large rocks set into a matrix of charcoal chunks. Inside this wall the house deposits were either a charcoal-stained black earth or a brownish soil when not heavily charcoal-stained. A large number of artifacts are being found in these deposits, over 75 in Lauren's square and many also in Will's and Janine's. Other than the ubiquitous nails the more interesting materials include pitted earthenware (found throughout this part of the site—the pits are the size of pinheads and seem to come from the dissolution of particles of temper), a reddish EW globular vessel, thin grey/grey (inside and out) Normandy stoneware, glass beads (blue, white, red). Finds were distributed evenly throughout the 20-30cm of deposits, and we found no evidence of a floor, either of systematic paving or packed floor levels.

The special feature of the evening was the appearance of northern lights, seen from the north around into the east and southeast. Some of the crew had never seen them, so it was quite exciting. Later we heard that there have recently been solar storms that have made electronic communication systems unreliable.

6 August--Saturday (Hare Harbor) Conditions were still fine today, with the major change in our fortune being the depletion of our food locker and drinking water, although we still have about one-third of our ship's fresh water tank left. Since the wind looked like it would stay light, we decided to put in a half-day of work before heading to Harrington. After lunch we packed up the Pits, securing the dive pumps and got the inflatable aboard. The sea was calm for the run in and allowed lots of deck lounging. Rounding the southern tip of Mécatina at least 20 groups of gannets flew by, heading east. Everyone says they are much more numerous this year than ever before. When in groups they fly in line formations like pelicans and dive with the same wheeling turns pelicans do when they spot a fish and dive arrow-like into the water. In fact their behavior makes them a kind of 'northern pelican.' We had not been at the Harrington pier more than two minutes before Paul Rowsell appeared on his 4-wheeler with his usual hearty welcome. We hadn't seen him for two years, as he had been getting medical treatment last summer during our visit. He recommended we get our provisioning done soon, as the *Relais Nordik* would be arriving about 5pm and the store could get too busy. It did not take us long to rack up a thousand dollar bill. Meanwhile the girls dispatched to Wilson's and Christine's for showers and clothes-washing. Christine and Sarah were joining her parents on the steamer, going off for a holiday to Montreal. Just

before the *Nordik* arrived a three-masted sailing vessel entered the harbor and docked. I was busy washing my clothes when Erik came by to say the new arrival was another Smithsonian vessel—I immediately recognized it as the one owned by Walter Adey and his wife, Karen Loveland, and crewed by friends and diver-biologists. They were on their way back from Nain, Labrador, where they have been sampling seaweed, algae, coralline corals, and sea urchins—part of Walter's long-term marine biogeographic study of the northwestern Atlantic. I have been trying to track Walter down in the field for several years, just missing him many times, so what a surprise to find us together tied up at the Harrington pier on the same day. It could never have been planned and certainly would never happen again. Yesterday they have pulled into Cumberland Harbor, where they happened to meet Nick Shattler, who said when asked about our presence, "Oh, Fitzhugh? Why I just saw him here a couple days ago!" Walter gave me a tour of his boat, *Alcai i.*, which is gorgeous in every respect, with fine engineering and design, built on the model of a Norwegian rescue ship for heavy seas and with an ice-strengthened bow. She is all compartmentalized, has desalinization unit, a quiet air compressor, two quiet generators (contra Pits!), and a Cummins diesel main engine. Beautifully fitted-out, three-masted, but steaming largely on engine power, for efficiency, using the sails mostly for a boost when wind conditions permit.

7 August—Sunday (Harrington to Hare Harbor) The pier stayed quiet over the night, but came to life around 7am when Paul Rowsell showed up to prepare his boat Reef Rat for a day's excursion to the mainland beach. Soon others gathered, including Alvin Bobbitt who wanted to show me his recent archaeological finds, a small Ramah chert point and a broad-stemmed quart point, both probably about 2000 years old, and a magnificent barbed harpoon of antler with a rounded base, line hole, a large barb on one side, and a small barb at the tip. It's not Maritime Archaic and is probably about 1-2000 years, but I don't know of comparative examples. He says it came from the base of an eroding bank on the mainland near his cabin. It's so well preserved it might have been in a burial. I called Lynne and heard about a growing financial crisis looming related to the insecurities of the debt-ridden world, and seemingly stimulated by the US raising its debt limit and having its bond ratings drop from the prime rate. Before leaving for Harrington our crew had a tour of *Alcai i*, while their divers checked out the Pits. Perry was especially envious of the quiet 'pocket' generator. Before leaving Harrington we pulled Pits alongside Alcai 1 and Will took some pictures of the two vessels and teams, so we now have a good record of this chance Smithsonian encounter far from home.

Maybe something will come of the meeting and learning more about his current research, using coralline algae growth bands to extract climate history for the western North Atlantic. These algae secrete carbonate deposits that grow very slowly but accumulate a growth-ring-like history of temperature and salinity that can be extracted by laser ablation analysis with accuracy to four-month intervals. So far he and his colleagues have been able to reconstruct a marine climate history back as far as 800 years. He was in northern Labrador this summer to gather samples from colder water where the algae grow slower and perhaps live longer. Walter gave me a copy of his recent publication on seaweeds of the NW Atlantic, in which he reconstructs seaweed biogeography from Maine to Labrador and identifies a new biotic province (Subarctic zone) for these species in the Canadian Maritimes and southern Labrador region and finds new relationships in the history of these species, with a surprising influx of North Pacific species providing the foundation for its present macrophyte flora. His work could provide and important source for marine climate data for interpreting the history of ice-related seals in these regions and the Eskimo cultures that depend on them. We'll talk about this in the fall. Perhaps there might be opportunities for some joint fieldwork as well.

Fig. 1.17: Alvin Bobbit artifacts. Photo by Wilfred Richard.

Right after taking pictures we left for Hare Harbor, having a quiet passage except for some swells from the southeast emanating from the gale reported for the past few days from southern Newfoundland. All hands arrived at HH without motion sickness and we hit the beach after lunch and got a full afternoon's work in. Mostly this involved finishing up the bottom levels of the east wall squares, extending the 30W line to the south, and opening the last two squares at the back of the house on the bank, 22N 22/24W. Some Normandy stoneware and a piece of whalebone (rib?) were recovered from 22N 24W, and

Fig. 1.18: The Pitsiulak meets the Alca i. *Photo by Wilfred Richard.*

Lauren's and Janine's bottom levels produced no evidence of pavement for the S5 interior. Will began work on the outer side of the entry passage. Justine turns out to be allergic to mosquito and black fly bites; large swelling occurs and overnight her left hand swelled from a bite and she had trouble using her fingers. So far she is the only one to have trouble with the flies, which generally have been moderate to absent around our site this summer. (However, a day later Janine also had a swollen hand, apparently also from an insect bite. Both recovered in a day's time.)

While in Harrington I had a chance to see some old friends, though briefly. Amy Evans was having dinner in the local restaurant Saturday evening with a couple who were staying at her B&B. We also saw Lloyd Ransom and we had nice visits with Larry Ransom and his wife, Ada, and Sharon and Jim Ransom. Jim has had some hernia surgery and has not been able to use his sailboat this year and will haul her out shortly. I also bumped into Helen and Miles Evans. Their youngster, Jake, is now 7 and Helen has quit her job at the fish plant, needing more time for her family and looking for other kinds of work. Currently she is managing the helicopter flights to Chevery, scheduling passengers and attending chopper landings. Alexandra decided to come with us to Hare Harbor and dig for a couple of days.

8 August—Monday (Hare Harbor) Rain this morning, our first since leaving Newfoundland. Sounds like it will last until tomorrow afternoon. The divers don't mind but it messed up our progress on shore. We went out about 9am and returned at 12, and during this time most of those working on the lower (southern) squares had moved to squares inside the drip-line. Nothing much was found in any of our old or new units except a few nails. Erik and Vincent moved their dredges to either side of the easternmost stone pile and started digging, finding some worked boat parts, a seal phalange and a few other things. Lauren, I, and Will returned to the site for a couple hours in the afternoon but could not accomplish much even under the rock shelter because the drip-line had moved in since morning and our dry pits had become shower stalls. Back aboard we found everyone in rainy-day mode, drinking tea and making a fancy dinner. Maybe the down-time will allow me to catch up on this journal—particularly our archaeological progress. The rain and southeast wind are supposed to continue until tomorrow afternoon. One problem that surfaced today, other than bad weather, is bug-bite allergies. Now Janine as well as Justine has a swollen right (dominant) hand. They are wondering if they could be getting carpenter ant bites in their bunks at night—but those are double punctures. I'm pretty sure they are reactions from black fly bites since that hand is always out in the open and vulnerable.

Archaeology Update III—the Western Trench *Justine has now cleared the vegetation from four 30W units (12-18N 32W), giving us our first look at the jumble of large mostly-granite rocks occupying a N-S depression we thought might be an entrance passage for the possible structure west of S5. This 'possible' structure occupied a level space between the western wall of S5 (a low barrier of large rocks and gravel that stretched along the 28W line from 17N to 20N) and the 'charcoal pit' located on the 34W line. The area seemed unlikely to be a house since it lacked clear east and west walls, but its north 'wall' had been excavated into the bank and a trench-like feature extended south, down-slope, from a south 'wall' of large granite blocks. The key to the structure would be this trench; if it had a paved floor, midden deposits, and a Inuit-style 'cold trap' entry like other Inuit structures at Hare Harbor (S3, S4, and S5) it would be an Inuit winter house.*

The western trench lies in four squares: 10N to 18N at 30W. The ground surface in the southern three units was covered with peat and moss with long fibery roots that packed the surfaces and spaces between the rocks. When the moss was removed Justine found several Normandy stoneware sherds (thin, and grey inside and out) resting directly on the rocks with no soil present. Five or six of these sherds fit

Fig. 1.20: Smithsonian research crews, from the Pits and the Alca i. *crew take a break from research. Photo by Wilfred Richard.*

together. The next level was a dark black charcoal-rich soil that contained tile fragments, nails, and grains of scorched granite, with increasing amounts and sizes of charcoal chunks with depth. In the small spaces where the bottom of the soil could be reached (before we removed the jumbled top rocks) several large nearly-whole tiles rested on sterile beach sand, where they had apparently been placed as pavement. Several nails were found at this basal level. In 18N 30W a large lens of brown sand intruded into the black earth soil from the west, where it probably originates associated with a large (hearth?) mound we have yet to excavate. On the sterile sand at the south edge of 12N 30W Justine found a single large flake of "Groswater" (West Newfoundland) chert. From the bottom of 14N 30W she recovered a small piece of silver-colored foil, too deep to have been a recent tin-foil intrusion. From 16N 30W, with the same stratigraphy—a jumble of granite rocks apparently tumbled into a trench-like feature between in situ bedrocks—she found a 50-cm long, 2.5cm thick iron bolt with a thin, rounded head and a distal end that may be threaded and capped with a nut (too rusted to be sure without x-ray). The context for this bolt, found on top of the roof-tile pavement near the bottom of the black earth, is with the Normandy stoneware. A piece of whalebone that may have been a knife or ulu handle was found in the upper black earth with two pieces of plain earthenware with pitted surface, a nearly complete clay pipe bowl with tiny roulette marking around its rim, and a sheet of iron (possibly a blade fragment). A few pieces of glazed earthenware were found on the surface of the brown sand lens in 18N 30W. Now that the these four squares have been excavated to the 'top rocks' we need to remove the tumbled-in rocks and see if we found pavement and floor deposits, which would indicate it had been used as an entrance passage. Some of the tumbled rocks look like they might have been part of an entry passage whose walls were destroyed. The absence of more cultural material (earthenware, stoneware) at the base of the black earth on sterile soil suggests this is not a passageway, but on the other hand there is not enough charcoal to indicate that the large rock-pile was a charcoal hearth. (NOTE: subsequent work showed conclusively this area does is not an Inuit entryway and does not have a paved floor beneath the fire-burned jumble of granite bounders.)

Archaeology Update IV--The Western Floor *The area between 28W and the charcoal pit at 34W is a relatively level area created by excavating into the bank to 22N and moving rock-fall from the area south to the 16N line. The middle of this area is occupied by a large rock feature located in 20N 30W and 22N 30W. Serai excavated these squares and found in 20N 30W a circular arrangement of large thick slabs surrounding fire-cracked rock fragments. Among a group of fire-cracked rocks lying on the top of this hearth floor was the turned-over Inuit soapstone lamp. The square adjoining*

Fig. 1.19: Groswater Dorset chert recovered from 12N 30W. Photo by Wilfred Richard.

to the north (22N 30W) continues this rocky bridge to the rising bank and contains large slabs inclined downwards paralleling the sloping surface of the bank. Beneath these slabs two thick horizontal slabs extend into the bank. After exposing these rocks, we are leaving this feature intact until we have excavated the squares to the west. The general impression is of a raised hearth base; however, the slabs are not heavily scorched or fire-cracked. Most of the artifacts associated with this mound were nails; others included the bottom of an earthenware vessel, a blade of an iron knife or blade, and the iron tang of a hafted hand-tool. The rocks in 22N 30W contained two pieces of whale rib and a small piece of bluish glass. Hopefully we will clarify the function of this feature when we complete its excavation. (NOTE: We were unable to interpret this hearth structure further because it would have required excavating deeply into the bank to the north, which we did not have time to do. Our present conclusion is that it is a hearth feature associated with the later Basque and Inuit occupation of the site.)

Fig. 1.22: Land crew headed back to the site. Photo by Wilfred Richard.

The squares east of this mound (18N 28W and 20N 28W), and the western 'wall' of S5, are notable mostly for the absence of diagnostic features.

9 August--Tuesday (Hare Harbor) Rain pelted us all night and throughout the morning until early afternoon. Wilson was to come early to pick up Alexandra, but the weather held him up. The wind was southeast and had raised a big swell; some were eight feet high according to Wilson. However, Hare Harbor remained relatively calm, but there was no question about working, as water was streaming off the cliff face and pouring into the site. Will and I went ashore in the morning to see if there was any damage. We found most of the squares dry; only a few directly under the drip line had filled, and all will drain quickly since the subsoil is sandy. Back aboard, we worked on notes and other chores while watching waves of mist roll by. The weather did not bother the divers, so they began new squares on either side of the ballast pile nearest the site. Higher up and in shallower water now the water temperature has reached the mid-fifties, so they can stay down longer and be more comfortable. So far their work has confirmed the stratigraphic sequence documented at Hare Harbor previously: sterile, wood chips, roof tiles, and fish bones. They are also starting to find whale phalanges. A couple days ago Erik sampled a large plated grass mat identical to a piece found at Red Bay which those excavators interpreted as a bag. Our piece was large and may have been a floor mat, but is constructed with the same simple plating type of weave. They have also found leather shoe materials, boat parts, a few pieces of ceramics, huge amounts of wood chips and fish bones, and a few bird and mammal bones. We have continued our previous discussions about the reason for all the chips, and why they sank and were preserved instead of floating away. The only way this could happen is if the chips remained in heaps on land where they got water-logged before being dumped or washed or eroded into the harbor. The other question is why so many wood chips? The volume is so large that they must have resulted from a large-scale timber or lumber operation. Quantities of bark and cross-cut 'outer wood' chips seem to have resulted from squaring logs. We wonder if lumbering or even boat construction might have been one of

Fig. 1.21: Sarai holding soapstone lamp fragment from 20N 30W. Photo by Wilfred Richard.

Fig. 1.23: Underwater Barrel staves, and wood debris at exit end of dredge. Photo by Erik Phaneuf.

the enterprises carried on, as well as whaling and cod fishing. All these activities are associated with the Basques; we have found no underwater evidence of Inuit or other Europeans who used the site in the 17/18th century except the odd bottle or jug from the surface of the sediment.

By the time Wilson and Alexandra left the weather had broken and the sun was poking through. We spent the afternoon at the site, mopping our way through soggy squares. Not much progress with artifacts, but we are gradually expanding the 22N line west to the perched block where there appears to be a slab feature. Will finished his work in the S5 entry passage unit 14N 24W, finding an excellent pavement and step-up threshold entry slab, but surprisingly without finding any Basque or Inuit artifacts on or near the floor, only a couple nails from the charcoal level below the entry paving stones. Large rocks adjacent to the threshold seem likely to be fallen members of the typical lintel Inuit-style doorway. The Inuit occupation of S5 must have been very brief, if it was occupied at all. This view is also supported by the absence of flat interior floor paving stones and lack of a floor deposit above the cobblestone pavement inside the doorway. Another odd feature is the absence of any evidence of a lamp stand or oil-encrusted rocks in a kitchen area inside S5. One possible reason may have emerged with our rain storm, which dumped large quantities of water into the middle of S5 from the cliff drip-line, which funnels water directly onto this floor. Perhaps the Inuit discovered this after they started constructing the house and switched to building the more substantial S4 dwelling to the east, outside the drip-line. Even for a winter dwelling this would have been a problem since there would be many periods of thaw before they would be moving into summer quarters.

I spent the afternoon taking the sod off the two remaining squares in our large excavation block: 14N and 16N 28W. This is the center of the pile of huge granite boulders and slabs, most having originated as rock-fall. A strong-rooted moss had colonized these rocks, as it had also in Justine's 30W squares. After trying to cut it with a trowel and a shovel, I turned to the pruning saw, whose teeth did an effective job. Beneath the moss, between and under the rocks, was nothing but charcoal mixed with a small amount of sand eroded from the surfaces of the rocks. Some of this charcoal deposit was 60-70cm thick and all of it rested on sterile beach deposits. Occasionally a patch of peaty old ground surface was preserved at the bottom between the charcoal and sterile soil, and in Justine's square a few nails and large tiles occurred here. I also found tiles and nails in the lowest levels of charcoal, but in the basal peat only a bit of tile. In the eastern half of 16N 28W I found a layer of cobbles, tiles, and sandy soil in a charcoal-rich black earth just under the sod and above the deeper charcoal level. In this square I only excavated to sterile in the NW quad, and down to the upper cobble level, hoping to find some evidence of Inuit material. I believe this upper black earth and cobble level is the product of Inuit excavating the S5 house pit and dumping the beach deposits into the boulders on the west side of their entry passage. However, no diagnostic artifacts were found. The large stone blocks in these squares appear to have been levered or tipped into their current position during the charcoal production phase, since charcoal is found under and among these rocks. Nothing but nails—and few of them—and tiles were found in the charcoal deposit. Finds of grey stoneware immediately under the sod and in the sod-charcoal interface in the 30W squares gives an end-date for the charcoal production.

10 August—Wednesday (Hare Harbor) Another day with wind from the south, and overcast, sometimes trying to clear but never quite succeeding. This year's weather pattern is highly unusual. In the past we would get the odd storm from the NE, E, or SE, but this year we have had almost a week of cool SE/S winds off the Gulf, and no warm SW summer wind. This continues a pattern of cold and stormy weather that the LNS has experienced all spring. If this is global warming, it's not warming here in summer.

We got to the site early and worked on the 20N and 22N squares along the cliff drip line. 22N follows the change in slope of the bank that appears to mark the point at which the bank was cut into the slope to widen the level working or dwelling area to the south. In many places along the 22N line this cut seems to have been stabilized by placing large slabs of schist on its inclined surface. Excavations along this line also uncovered slabs that were not visible on the surface and many more that were thin and had rotted away. Most of the more substantial slabs are found in the western part of the bank where large blocks also intrude into the excavation area, particularly from 22N 30W to 36W, above and west of the hearth feature in 20N 30W. When the squares along the 22N line were excavated we usually found stratigraphy that included (1) turf, (2) an upper layer of black earth with charcoal, tiles, nails and other materials, (3) a sterile layer of beach sand and cobbles, followed by (4) a second layer of charcoal with tile and sometimes nails. This second cultural layer lies on (5) sterile beach deposits and disappears into the profile as the bank rises towards the large rock-fall material found at ca. 24N and beyond. We were not able to investigate the area north of 22N. The overburden increases rapidly due to greater deposition of eroded materials and perhaps accumulation of materials from human activities (charcoal production?) near the cliff face. While the bank east of 30W seems marked only by inclined stabilizing slabs, in 22N 32-36W we found large blocks jutting out from the bank, and in a few cases thick flat slabs disappeared into the bank. These rocks appear to be features, but we could not determine their function without extending our excavation to the north, which we did not have time to do.

Fig. 1.24: Charcoal pit found in 20N 32W. Photo by Wilfred Richard.

We also began new work to investigate the squares along the 22N line from 36W to 40W. This area includes the area from the "charcoal pit" tested in 2008 to the mound of rocks immediately north of the huge perched block of rock-fall at 40W and is the western-most 'habitable' spot at the Hare Harbor site. Upon opening up these units we found nails and tiles in a black earth deposit a few cms think beneath the turf. These squares also fall in the drip-line. Within this upper BE level we found many small broken granite rocks and beach cobbles and occasional flat slabs, but no features were identified and no ceramics were found. This level lies on an irregular "floor" of small broken rocks and occasional slabs. Time constraints required us to limit our work to the upper BE level. Below the rubble "floor" we noted deeper levels with charcoal that probably relate to the industrial activities association with the charcoal production phase of the HH-1 occupation. Our work in these western squares did not produce much useful information, since we found no recognizable features and only tiles and nails. Two exceptions are notable. In 22N 36W Justine found the broken base of a banded chert plano-convex biface, and in 20N 32W Serai found a mottled brown microblade. Both are Groswater Paleoeskimo artifacts and date to ca. 2200 BP.

During the afternoon the land crew took a break to visit the 19th C. historical site Hare Harbor-2 at the northeastern entrance to Hare Harbor. We found this site in 2002 and collected a large number of ceramic artifacts from a small test pit in 2003(?). The site consists of a midden with many clay pipe fragments and utilitarian ware and a small rectangular structure on a rise between the midden and a pond to the north. We found the site undisturbed and surrounded by the first ripe bakeapples of the season. Near a small cove east of the site we found an oval boulder enclosure built up against a rock outcrop that may be a traditional Inuit cairn burial. The top of this enclosure is open, but its covering rocks may have been moved. One would expect to find traditional Inuit graves in the Hare Harbor vicinity, because at ca. 1700 Inuit would have still practiced their traditional religion. If time permits (NOTE: it did not) we may investigate this site. In 2008 when Vincent visited this cove with a group from Tête á la Baleine, he was told that old people knew of Inuit graves near this cove. They tried to find them, but could not, and

decided the graves must have been covered by a rock-side from the nearby cliff. Perhaps this is one of the earlier-known features that inspired this oral tradition.

Fig. 1.25: 14N 26W pavement(?). Photo by Wilfred Richard.

Will has now completed excavating 14N 24-26W squares in the outer entry of the S5 dwelling. Because of the sinuous nature of the gap in the rocks I thought these units might reveal an extended, paved sunken passage; however, they did not. Rather 14N 26W showed a short continuation of the slab pavement seen to the north, but this feature did not extend south of 25N. Unlike S4, whose entry passage was filled with cultural materials (mostly European EWs), the S5 pavement did not have a distinct cultural layer, and the only artifacts found were two nails in the charcoal layer below and off the pavement to the west. The large granite blocks in the western half of the square were packed in charcoal, and an extension of this "charcoal soil" was found beneath the entry paving stones, again establishing the post-charcoal occupation of S5. To the east, in 14N 24W, the entry was framed by a rising, sod-covered wall of rocks packed in charcoal, as in the other eastern S6 walls. We decided not to excavate below the upper sod level in order to maintain the integrity of the wall.

Erik and Vincent continue their new pits located on either side of the northeastern-most stone pile and are recovering large amounts of material. From test pit TPB2-2 on the east side of Stone Pile 7 Erik is finding bird remains, whale bones, shoe leather, barrel hoops, a few ceramic fragments, lead, boat parts, and worked wood. Vincent, in TPB2-1, is excavating between SP7 and SP6 to the west and is finding large amounts of wood chips as well as bird, fish bones, peat, barrel hoops in the interstices between the rocks. Many of these materials are too large to find their way down between the rocks, so these piles contain a degree of stratigraphic integrity (if one had the time and energy to excavate them!).

11 August—Thursday (Hare Harbor) More of the same today, only wet again. Wind in the E/SE and drizzle turned to rain by late morning. It's Will's birthday, all the same, and he was treated to a jingle at breakfast. Last night he almost begged for beans with onions and maple syrup for lunch. We have not to this point in the trip opened one of the two several-years-old No. 10 size cans of baked beans, so today's the day! Erik obliged with a grand pot of Will's recipe, garnished with a raison bannock. Having returned from the site wet and cold, we enjoyed it greatly.

On shore we continued with the western fringe squares, and Will began to open up 14N 22W, between the entries of S4 and S5, but a chance discovery resulted in re-directing our last few days on site. Worried about the absence of 16th century Basque settlement on land other than the transient 'campsites' north of the cookhouse, I decided to hunt around for other possible occupation areas in the untested areas of the site. On the west side of the huge boulder, between it and the terrace front, is a level area of some 60-70 square meters. I dropped a 40x40cm test pit three meters west of the boulder and immediately encountered slabs, tiles, and charcoal, and soon turned up a Bellamine bottle fragment with a floral medallion, a clay pipestem, a nail, and four pieces of worked soapstone—all in a black earth layer 10-12cm thick, resting on sterile beach sands. As a birthday present I turned this square over to Will, who had barely started before he found the rim of a Normandy stoneware vessel. At this point I decided to terminate our remaining work in the western squares and shift our last few days to exploring this newly-found area, hoping we would have a structure and not just a midden associated with the S4 dwelling. The Bellamine sherd in the most significant single sherd we have found in ten years of work at Hare Harbor, and the soapstone suggests a continuance of traditional Inuit soapstone production, perhaps with European tools long after large amounts of European vessels and technology have become available. Erik took Will's G11 Canon camera in its submersible case down and got some excellent still photos of the dig, its strata, a lobster and other marine life—much better than the murky images he has been able to get with the remote video camera.

Fig. 1.26: Will's birthday celebration aboard the Pits. Photo by Wilfred Richard.

The rain and wind continued for the rest of the day and night, fortunately without much wind. We spent the afternoon reading, writing notes, and preparing Will's birthday dinner, engineered primarily by Lauren, Serai, and Janine, with Vincent serving as chef-d-oeuvre. His manual participation was one-handed, however, as he had a serious accident after returning from his morning dive. While struggling to close the jammed cabin hatch he got his left thumb smashed trying to close the after hatch, pulling the nail out by the root. By the time we returned for lunch he was stabilized and drugged with Motrin, and smilingly apologized to me for the 'inconvenience' as at the time we thought we would have to return to Harrington immediately to have the nail removed. Fortunately, his pain receded and I was able to reach Nurse Yvette who assured us he could be treated on board as long as he kept it clean and dry and changed the dressing. For a while it looked like I would have to take his place as Erik's dive partner, but by evening Vincent was talking about diving. Will's dinner was a great success, with a fabulous pizza, the last of our salad fixings, and a decorated chocolate cake prepared by Lauren and Serai, with note of the lessons Lauren learned about our finicky oven with her 'Will's cake' of 2010. After dinner Will led a long conversation about our society's loss of 'a sense of place', talk that wandered across the earth with topics ranging from drugs to education to our over-reliance on technology, to the last Friday's loss of the US's AAA bond rating and the localizing 'friction of distance" as the cost of travel increases. All this seems to have inspired Lauren to wake in a panic in the middle of the night crying "I can't get out! I can't get OUT," which elicited a massive response from her cabin mates, me, and even Erik, who got caught up in the fracas while returning from the head. "You're fine, Lauren! You're fine. You're on a boat!" She had dreamt she was excavating between two rocks and fell in and couldn't get out. The general malaise was also fueled by swarms of mosquitoes that had somehow got in and were tormenting us. So all in all, we had a very memorable the 11 August "Wills-day."

12 August—Friday (Hare Harbor) For a change the wind was down and no rain even though the wind was from the same SE direction and it was overcast and chilly. The sun tried to show a few times during the day but never really succeeded. After bailing out a couple of inches of rainwater from the zodiac we went ashore and found the charcoal pit square in the 'far west' completely filled with water from the cascades off the cliff's drip-line.

I bailed while the others turned to on three squares outside the S4 entry 6N, 8N, and 10N 20W. Justine—a former art and art history student—accepted my invitation to map the rocks on a master map and spent the entire day lugging from square-to-square the 2x2m grid template we made last year to control Will's wide-angle record shots of each square. This 2x2m frame is strung with line in 50cm blocks, making it easy to draw rocks without measuring then. She did a great job and finished 24 units of the 37 we have opened in the last two weeks and will finish the rest tomorrow.

Fig. 1.27: Marine life in the underwater site. Photo by Erik Phaneuf.

The rest of the team opened the new squares south of the S4 entrance passage. In 2009

when we discovered S4, Will excavated a test pit just outside the entrance passage and found quite a bit of material, but last year, with only Will, Lauren, and me digging, we did not have time to explore whether a real midden existed, as is almost always the case with and Inuit winter house. So now we laid out three 2x2 units south of Will's 2009 square: 6N 20W (Lauren and Janine), 8N 20W (Will), and 10N 20W (Serai). All turned out to have a high concentration of artifacts—30 to 50 per square—balanced about 50/50 in terms of nails/other types, so that we have been recovering more materials that can actually be analyzed. All squares produced numbers of sherds of stoneware, both the thin ware with grey color inside and out as well as the generally thicker grey/brown variety that we found on the floor of S4. Other important finds included a marmite vessel strap handle and a sherd with the traditional cross-hatched decorative band found on some marmite vessels, several varieties of plain earthenware (none glazed), green bottle glass, a chunk of European flint, a clay pipe bowl with rosette rim decoration, a sheet of lead that had been fashioned into a tool handle, a small rectangular cross-sectioned whetstone like those found in other Inuit sites at HH-1, a blue seed bead, and a white and red-striped black bead. Most of these artifact types were also found inside S4, so now we have a solid link between the midden and the house itself.

Fig. 1.28: S-4 midden view to the north. Photo by William Fitzhugh.

The divers also had a productive day and returned with a huge barrel stave, more boat parts, lots of fish bone from a distinct strata that we also saw in some of the other sites. They did some strata drawings and reset the baseline. Vincent's square was full of ballast rocks that we had to remove, and between them he often found caches of material.

While the divers were down this morning I heard Perry talking from the speedboat, after he had shut down the dredge pumps. The overhang of the shelter is a perfect sound-bouncer and we can converse from the site to the harbor-side by speaking in the direction of the shelter. Turns out Perry was talking to a large gannet that had swam up near the boat, and he was trying to lure it closer with a piece of Purity hardbread. Eventually the bird tried the biscuit, but rejected it, and then came even closer, trying out a dried capelin, but he didn't like that either. He got so close he gave Perry's hand a bit of a nip and showed no fear at all. But just when the divers broke the surface, he immediately split. Perry had never heard of gannets being this tame, yet this one seemed comfortable around people and boats. Perhaps he has been accustomed to being fed. Another maritime oddity occurred while the divers were getting ready to enter the water and saw a large splash. Not being able to determine what made the splash, they thought it prudent to wait awhile. Whatever it was—probably a seal—did not return.

Supper was by Erik: corn chips and home-doctored salsa, and a fortified scrambled egg dish with a Portuguese name. Erik had lived in the Azores for a couple years, and was once married to an Azorean woman. According to an old story, an Azorean farmer (a "lavrador") was the first to spy Labrador while on watch from the crow's nest of a ship. By evening the weather was still trying to clear, but at least the wind was down, so perhaps we can have a good day for profiling, photography, and continued work at the prolific midden. We had two speedboats enter the harbor early in the afternoon. They stopped near the site and I waved and invited them up; hearing them speaking French, I guessed they were Providence Harbor people and might be looking to see if Vincent was here, as they had met him two years ago. But instead of coming up or visiting the Pits, they turned and left, just like another boat from Providence did a week or so ago. It seems strange because we have had interesting sessions with people from there over several years. Later we learned that the Providence folks have been meeting tourists off the *Nordik* in Harrington and bringing them to Tête á la Baleine and Providence, stopping at our site on the way to show off the strange attraction.

Fig. 1.29: Perry finds a new friend. Photo by William Fitzhugh.

13 August—Saturday (Hare Harbor) This morning was the first really nice "summer" day we've had for two weeks. There was a regular stream of people through the head before 5:30, so we were up before 6. The crew said it was because of the beans we had for lunch and dinner, but I think it was the sun beaming down on the harbor for the first time in days. We spent the morning finishing up the midden squares, and I tidied up the S5 entry and passage, which required moving some really large threshold rocks to get at the passage below, which turns out to have a very nicely-constructed pavement that can be traced from the threshold step south for 1.5m. The entrance tunnel wall for this house is not as well-made as S4. It cuts through a deep midden of charcoal and rocks and does not have rock-lined walls. Possibly this was the first part of the house that was constructed, and it may have been abandoned before much effort was put into finishing it. Not only are the walls and cold trap not finished, but the interior floor was only paved with cobbles and very few artifacts were found associated with its floor. Will's and my excavation of the entry did not produce any artifacts directly associated with the entry floor, whereas in S4 this was the most productive part of the house. I think S5 may have been under construction or only used only briefly before the Inuit discovered that it was directly under a heavy drip-line stream, and decided to abandon it and build S4.

While this work was going on Janine and Lauren cleaned up the profiles to prepare them for profiling, which we began after lunch. Justine profiled the 26W line, and I got Janine and Lauren started on the 16N line through the middle of the site. An hour later, I found they were still working on the first meter of a 10m profile, mostly due to discussions about what was 'black earth,' 'brown soil,', 'black sandy soil' and other nuances of tone and texture. After getting them to back off and look at the larger picture and the dominant layers, they made good progress and completed the profile. Later in the afternoon Will shot controlled verticals of each square, with assists by Justine as a counterbalance for the heavy camera and tripod on his shoulder, and I moving the 2m grid frame from square to square. Serai is the last to abandon digging, and she opened a half square at the north end of 4N20W. I would love to have more time to finish this midden area instead of the days we spent trying to figure out what was happening at the west end of the site, but it's too late now. Her square has just begun and produced a beautiful oval blue bead and an iron ring-screw.

After the divers completed their afternoon dive they took off with Perry in the speedboat to find fish or bakeapples, up the east shore of Petit Mécatina past Daniel's Harbor to a spot Perry had picked in other years. They returned a couple hours later with three small buckets—not a bad haul for a year with only a so-so showing. Erik baked a bakeapple cake for dinner, and while it did not bake 'dry', it was excellent and appreciated. The main course was shaghetti with moose meat sauce from Perry's stash. We're reaching the bottom of our larder now while still two days out from returning to Harrington. There's lots of talk of having to deal with beans from Will's unending supply, some several years old! As we were returning for lunch a boat appeared and came alongside. It was Lawrence Anderson and his wife and daughter from Harrington. His father had the sealing operation on the south side of Hare Harbor entrance, now rotted away. He had been at our presentations in Harrington several years ago. I asked him if he had heard of a dog-team going over the cliff at the site years ago, almost carrying the driver over, but he had not. He said some Tête a la Baleine people had picked up some tourists in Harrington yesterday and brought them back here. Perhaps that explains why Perry saw two people on top of the cliff above the site this afternoon and the boats that did not want to come ashore yesterday—folks just sight-seeing and hiking around. Lawrence had a batch of mackerel his family caught out beyond off the point.

Fig. 1.30: Entrance to S5 view to the North. Photo by Wilfred Richard.

14 August—Sunday (Hare Harbor)
This was the last day at the site. The day was one of those 'smoky sou'westers' with a good breeze, but murky. Since we plan to leave tomorrow for Harrington, in order to clean up and be sure we could get the Quebec team to their noon flight, we had to finish by evening, so there was a lot to do. Lauren and Janine started by cleaning up the squares, then took elevation readings on the ground surfaces at 1m intervals, and drew the long 20N profile. Justine profiled the 20W wall and 16N, the profile that crosses the S5 entry threshold. Serai finished her 4N 20W 'half-square,' finding more glass beads, orange-glazed earthenware with ridges and grooves under the rim, and marmite earthenware with much finer (small-mesh) cross-hatched decorated bands. Her square also produced a chert biface edge and some flakes, probably of Groswater (Dorset) Paleoeskimo. We're very aware that there are more productive midden squares here west of the big rock and along the terrace front, but everything has an end and more excavation does not seem warranted. By noon we had removed the balks on the 'floor' of S5, finding nothing of importance. I excavated the pedestalled rocks and tiles Will had left inside the threshold rock north of 16N at 22W. There was about 15cms of charcoal between this upper 'floor' and the cobble pavement that appears to form the working floor for about 1.5m circumstances north of the entry. This charcoal deposit does not exist north of the 26N line, where only black earth occurred, in which Lauren found a couple seed beads and glazed ceramic fragments. We also turned over the large slab in the SE corner of 18N 26W, thinking this might be the missing hearth slab; however it turned out to be a large wedge-shaped rock, not a slab, and had no hearth stain. Rather than a hearth slab, it was probably part of the corner wall construction. In fact, we have found no evidence of a hearth in this structure, no clearly-defined west and north walls, no slab construction on the working floor, no external midden, and no cultural deposit or artifacts on the entry floor—all support the view that S5 was never completed or occupied. Construction appears to have begun in an area of the site that had previously been used for charcoal production, leaving huge deposits which were easy to excavate into. Strangely, very few artifacts except nails and tiles became incorporated in this charcoal event. We have not been able to determine the originator of the charcoal production phase, if different from the late 16th C Basque or Inuit. Justine found stoneware shed on the top of the rocks, below the moss in 30W area of the rock pile, possibly equating this even with the Inuit and cook-house components. It is hard to see how this huge event that so altered the landscape in the west end of the site could have been produced without leaving identifiable cultural markers. For this reason I tend to feel that it is probably associated with the 'Basque' component, as represented by the S1 cookhouse floor. This same time period seems to see the appearance of Inuit, whose soapstone vessels and lamp stains are found on the S1 cookhouse floor and in S4 and on the bank north of S5. This period would also equate with the codfish horizon in the underwater deposits and the lead jiggers found in S4. Since the Inuit S4, 5 houses use the charcoal deposits for their foundations these structures probably just post-date the charcoal operation.

The prominence of the charcoal event on land and the wood-chip horizon underwater suggest that these two manifestations are related. We have had many discussions about both, and what they signify. The charcoal is found in greatest concentration near the front (south) walls of S4 and S5 and tends to lens out in profiles north to 22N, where it disappears into the bank. Tiles, large nails, and

Fig. 1.31: Beads found in S4 midden, 4N 20W. Photo by Wilfred Richard.

spikes are associated with it, with tiles most common at the base of the charcoal or on sterile sand. It is thickest in the south walls of S4, and S5 and among the rocks in the rock-pile. The charcoal itself is of mixed formats, consisting of every size from particles to large 'junks' with ring sizes indicating timber up to 40-50cm diameter. However, the most common intact pieces are from wood that is 2-3cms in diameter or smaller. Usually the square profiles that have large charcoal strata do not contain humus levels, sand lenses, or other indicators of chronology; these deposits seem to have been laid down quickly; even tiles and nails or spikes are mostly found near the bottom of the charcoal layer, on or near sterile ground.

Fig. 1.32: Wood stratification in underwater site. Photo by Erik Phaneuf.

One possible clue to the function of the charcoal is the absence of open-air blubber try-works that are the signature features of 16th century Basque sites in southern Labrador and the "Grande Bay" region. Rendering oil from blubber at open linear strings of conical open-centered hearths was typical of 16th century Basque whaling. However this method was replaced by shipboard rendering in the early 1600s. Since oil and wood were too dangerous to use onboard ship, charcoal may have been an acceptable substitute, and if so, this could explain the large charcoal-production activity seen at Hare Harbor.

The underwater wood chips are found in a distinct stratigraphic level, often following a basal layer of peat and tiles. Whalebones are also found in these early layers. Above the wood horizon is the codfish layer, with a clear stratigraphic separation between the two. Many of the wood chips are angled slash-cuts that retain the round exterior surface and have been separated from the timber by axes with a single-shouldered edge. Some long pieces running with the grain have the slash-cut pieces still attached. The prevalence of this type of debitage—rather than trapezoidal chips produced when chopping down trees—indicates that producing square timbers was the dominant wood-working operation at HH-1. Virtually no plank or finished wood production has been found in the underwater deposits, although several pieces of boat parts are evidence of minor on-site boat repair or alteration. The wood chips are predominantly coniferous. Barrel hoops are mostly of red alder, and some have been found with their ends bound with bark wrappings tightened with small wood wedges. Although barrel, tub, and pail staves are common—both as fragments and whole staves—none of the wood debitage relates to barrel production. Finds at Red Bay indicated this work was done in Europe, followed by assembly of prefabricated barrel bundles upon reaching the field destination. Rolls of birch bark are also found among the wood deposits. We assume that the preservation of masses of wood debitage results from production on shore and initial deposition over the terrace front at the site. The bank is very wet and the chips would have become waterlogged, allowing it to sink after eroding into the sea. Green wood or dry chip debitage would have floated away and not entered the deposit.

The question of what the debitage represents is a more complicated story. Barrel hoops and the occasional boat or tub bottom can easily be explained, but they represent less than 1% of the sample. The dominance of timber-squaring debitage suggests the production of bulk timer was important part of the HH1 economy during the site's early underwater phase. Timber was a valuable commodity in Europe. We have considered whether the wood horizon might represent the building of small boats like chaloops, but in that case we would expect more planking and ribs in the deposits. Construction of larger vessels would not have been feasible at a small seaward site like HH1. The massive charcoal operation indicated on shore and thick wood debitage underwater raises the question why the debitage accumulated and was not used for charcoal production. Our best explanation is that these two operations may have taken place at different times. Charcoal production requires a hot fire, with large amounts of wood fuel (mostly commonly branches and small limbs and trigs, followed by smothering the fire with soil and having the wood converted to charcoal without enough oxygen for continued combustion. Usually commercial

production of charcoal in Europe was done by coppicing or pruning the smaller branches of trees, allowing them to re-grow for future harvesting while converting the small stuff in charcoal furnaces or fires whose air supply could be controlled. At HH1 this might have been most easily done by smothering a pre-heated fire by covering it with earth and tarps. The association of large rocks and charcoal suggests that charcoal production here may have been enhanced by pre-heating these rocks before adding the charcoal fuel. We noted that most of these rocks have spalled surfaces, and many are fire-cracked. In areas where we had thick charcoal deposits we also found fire-cracked granite chunks. Alternatively, the site's charcoal may have been produced in the 'charcoal pit' at the west end of the site. We were not able to complete the investigation of this feature due to time constraints at the end of the season. In the end, it does not seem possible to positively link the wood chips and charcoal to a single even or period, but it seems likely the two are associated in some way—perhaps using the wood debitage resulting from tree harvesting and timber-squaring as fuel for charcoal production. Stratigraphically this has to occur before the Inuit occupation and before the cod-fishing phase, which correlated well with the site's Inuit occupation.

Our final afternoon was a frantic exercise in site closure. It was not until about 4pm that we completed all profiles, record-keeping, and site photography and were able to begin the daunting task of back-filling. At 5:30 we were joined by Erik, Vincent, and Perry, who added great momentum and spirit to this operation. Fortunately there was a cool breeze from the west or it would have been miserable. We did not finish until 7:30, when the fog turned to a drizzle. By this time we had exhausted our dirt and sod, packed up our stuff and got back aboard the Pits, muddy, muddy, muddy ("dirty, dirty archaeologists," Perry kept muttering, as mucky buckets and shovels—looked like a French WWI battle trench. In the end the site looked credible with the S5 Inuit entryway uncovered and everything else sodded except for the central part of the S5 interior, which we had to leave to re-sod itself as we had totally expended our sod budget. Back aboard, we hoisted our inflatable up and packed it with gear while Erik pulled the final remnants of our food locker into a memorable dinner of rice and peas, potatoes and onion aux gratin, with canned pears for desert. We drank our last two bottles of wine and toasted ourselves for successfully completing a ten-year "Gateways" project. By 10pm I was too exhausted to journalize and as soon as traffic through my "bedroom" stopped I bedded down and fell asleep, only to wake several times to some infernal knocking as we gently swung on our anchor. Barefoot and underclad, I tried several times to discover its source, but each time I got out into the rain and mosquitoes, the noise would stop, leaving me to wait minutes, swatting away, only to have it cease. Inuit or Basque gremlins at work to the end!

15 August—Monday (Hare Harbor to Harrington) After a not-too-restful night turning on my creaky bones, sun filtered in through the pilothouse windows through a wispy fog at 6am and I felt compelled to make a final pilgrimage to the site to take pictures of the back-filled excavation and see if we had left—in our hasty retreat—any gear lying around. Will came along and we made a round of pictures while the peregrines wheeled and squawked above. Will thinks there may be two sets of parents and young up there, one above our site and another on the cliffs to the east. We collected the square photo-grid left behind last night but found no other errant gear. The site looks fine all re-sodded except for the S5 interior, but in the low early morning light all our foot-prints were like deep pock-marks in the black earth. After retrieving our off-haul anchor we motored out to the small cove northeast of the harbor entrance where I photographed the possible Inuit grave I found a couple days ago. Too bad we don't have time to excavate it and see if there are any bones or objects there, or whether it is a cache or some other type of feature. It does seem like a good location for an Inuit grave, but if it is, it lacks the covering rocks usually found on top. The folks were all up and rowdy by the time we returned. They were 'full of beans'—no way of ending bean jokes, it seems, especially after everyone was complaining about the results of the day we had had beans for lunch and dinner. In my absence as 'waker-upper' and breakfast cook, Erik had usurped my role and made oatmeal. Everyone was still dirty and anxious to get to Harrington and hot water. We pulled anchor and made our final passage to Harrington, with a good bit of rolling about in some residual SW swells left over from the breeze the past two days. In town I found the fish plant open for showers and hot water for laundry, while the girls headed off to Wilson's with huge sacks of clothes. Perry filled the ship's water tanks (and the companion-way!) with 'fish plant' water, and we put 800 liters of fish plant diesel fuel in our tanks (ca. $1.40/liter as opposed to .90-something in Nfld!). Will did our grocery-shopping, and in the afternoon I made a round of social calls to say thanks and goodbye to some of our friends, including Helen, Miles, and young Jake Evans, Amy Evans (sharp as a tack, still 'whipper-snapping' her neat flower garden and baking great 'crumpets'), and Sharon and

Jim Ransom, who informed me that Dr. Hare, who ran the Harrington health service during the Grenfell years from 1908-1912, had an earlier association with Harrington going back into the 1890s if not earlier, through a family connection. As the town's unofficial 'historians,' I urged them to get to work on their historical memoirs, reminding them of how little is written about Harrington and the LNS in general. We ended the evening at Wilson's, where we contributed food which 'our ladies' prepared into another excellent spaghetti dinner ("No more spaghetti after this!" said Perry), enlivened by the appearance of Helen, Miles, and Jake, who took a shine to Lauren's iPad while the rest of us talked about wood chips, wooding, and pored over Wilson's detailed maps of Petit Mécatina and the Mécatina River, where he gets his wood and spends much time exploring. We left with lots of lingering goodbyes and sad feelings about not having—for once in ten years—a definite plan to return. We were all sorry that Christine could not be with us, since she was the elegant hostess and 'house-mother' for our tired, hungry, and dirty crews all these years, while Wilson first identified our underwater site, led us to begin scientific diving, provided information about sites and resources, and provided equipment that helped us conduct our work and investigate the Harrington area. Back aboard, it was foggy but calm and stayed that way for the rest of the night. Hard to believe we have to leave this wonderful community. Not for good, though, as I hope to return to present the final results of our work in a year or two. Perhaps by then they will have managed to use the information and finds we have made.

Fig. 1.33: Backfilled site, view to the west. Photo by Bill Fitzhugh.

16 August—Tuesday (Harrington Harbor to Cumberland Harbor) The fog and rain continued throughout the night but let up during the morning, making it more or less assured that the Quebecers would be able to fly out of Chevery in early afternoon. We rose and 7am to one of Will's signature sour cream pancake feeds, but when most of the crew departed abruptly to see the museum, and I to pay my food and fuel bills, Will was left with a big stack of pancakes which we munched on the rest of the day and re-heated for our breakfast in Cumberland Harbor a day later. The fuel bill was a shocking $1158 at $1.40 per liter, and our CMR food and gas bill came to $1600—not too bad actually for nine people for 16 days. When I paid our fuel bill I asked Madeline to thank all of our friends in management there for the wonderful support they provided us over the years. This year they were a bit apologetic about having to close their fish sales program early, depriving us of many excellent meals, because their fish quotas have been down for the past couple of years, causing them to close down the fishing before we even arrived. I had nice goodbyes with Paul Rowsell and his CMR store team, and by 10:30 we had the Quebec group's luggage on Bryce's water-taxi and ready for the run to Chevery. This time it was the Quebec team that untied our lines and waved farewell as we pulled away from the dock. We all had a great time together this summer and accomplished much more than I had thought possible, both on land and underwater. Erik and Vincent made a great underwater team and kept the "boat fires" burning preparing almost all our lunch and dinner meals. Of course their work

Fig. 1.34: Final goodbye at the Evan's house. Photo by Wilfred Richard.

underwater was superb and they even came up with some spectacular end-game ceramic vessel finds. Serai and Justine were excellent excavators, and Justine's artistic training proved invaluable when it came to crunch-time with profiles and mapping. The participation of all four was made possible by financial support from Brad Loewen at University of Montreal; he provided equipment and paid travel costs and salaries without which we would never have finished the site work this year.

Fig. 1.35: Our Montreal Team says goodbye at Harrington ready to fly back home. Photo by William Fitzhugh.

It was a bit rough around Petit Mécatina but grew calm around Mutton Bay although it remained foggy almost until we reached Cumberland Harbor, taking the Grand Passe (Rigolet) and Sandy Island Passage in to the north end of C.H. We anchored at our usual spot and called Nick Shattler, leaving a message on his phone telling him to meet us in the morning. Will and I decided to break open the salt beef bucket we'd bought in Springdale and experiment making a Pitsiulak version of a "New England boiled dinner" with turnips, carrots, potatoes, and onions. Despite being tough enough to compete with Mongolia's free-range sheep, it was tasty and edible, especially the vegetables! For the first time in three weeks we had water instead of wine with dinner—our stock had finally become depleted! The boat seemed strangely quiet this whole day. It will take a bit of adjustment to re-group into our pre-pandemonium social order.

17 August—Wednesday (Cumberland Harbor to Blanc Sablon) We were up by 7am to be ready for Nick Shattler, who was to come out from St. Augustine and show us some sites he found since our visit with him last year. When he did not arrive by 9am I called and found he never received my telephone message last evening. Nevertheless, by 10am he roared up, and we left for Jacques Cartier Bay with his light fiberglass speedboat in tow and anchored on the east side of the bay, northwest of Canso (pronounced 'Gansa' locally) Island, the place where I found a site with boulder caches and Inuit-style stone fox traps several years ago. Stone traps are a tell-tale sign of prehistoric Thule (Inuit) culture activity and were used until Inuit were able to obtain steel traps from fur-traders in the 19th century. The first site we visited was a small cove with a waterfall on the mainland shore a short distance southeast of the entrance to Canco Island Tickle. The ledges surrounding the cove were full of pitcher plants, and bottle-brush (Canadian Burnet) plants had colonized some of the beach area, but most of the upper boulder terrace beaches were free of vegetation. Here, in the northern part of the beach, was a 3-4m diameter open pit which could have been a large cache or possibly a small shelter. Nearby were a conical cache pit and an undisturbed oval mound that could be an Inuit grave, although we could not tell if it had an open burial chamber inside. Across a small stream which gurgled below us through the boulders were three stone fox traps and some other caches. Most of the traps had been partially dismantled to retrieve a captured animal. We photographed them and designated the site Canco Island Tickle 1 and went on to a second location on Canco Island. This turned out to be the very site we had found previously, called Canco Island 2. In addition to its cache pits and we noticed a


Fig. 1.36: Nick Shattler meets the crew outside St. Augustine. Photo by Wilfred Richard.

large straight-sided pit about 3.5x4.0m in diameter at the west end of the site area that has a sunken floor in its NW sides; this may also be a small dwelling or shelter. This site almost duplicates the features of Canco Island Tickle 1. It was therefore not unexpected—although it was at the same time a great surprise—when Nick showed us a third location, this time on a small island semi-attached to the northwest end of Canco Island, connected to it by a bar that disappears at high tide. Here in the middle of a sandy strip between a sand beach on the north side and the rocky south shore were three Inuit sod winter houses, rectangular in shape, with 4-6 meter long entrance tunnels, stone lintel entries, paved floors and entryways, and raised sleeping benches in the rear. You did not even have to excavate to know this was a small Inuit community dating to the early historical period. The shape of the houses indicated they should date to the late 16th to the early 18th centuries. The lack of enhanced vegetation growth suggested the site did not have deep organic middens. We mapped and excavated seven 50x50cm test pits outside the entrance passage where middens generally occur and found a thin cultural deposit indicated by 5-10cms of dark sandy soil with charcoal, Basque tiles, a few seal bones, and small pieces of iron, mostly nails. The absence of other European items is probably an indicator of a relatively early contact period date, before regular trading relationships had been established. Nick was ecstatic with our confirmation that this was an Inuit village—the first so far found in the St. Augustine area. The site would be relatively easy to excavate and its architecture and pavements would make an excellent reconstruction. We left after an hour's investigation, and Nick headed off to St. Augustine to call Chris Montague, the head of the Metis/Inuit Association with news of more evidence of Inuit in the Gulf, this time for the first time in St. Augustine, which has a well-documented Inuit immigration in the 18/19th century but until now no confirmed early historical period occupation.

Fig. 1.38: Nick Shattler in cache pit at Canso Island Tickle. Photo by William Fitzhugh.

The weather was still good, with a light breeze from the north, off the land, so we decided to head for Blanc Sablon where we could spend the night, visit with the Harts, and prepare for a morning passage across the Strait. The trip took us outside the Old Fort islands where we had heard earlier in the year about an underwater wreck from Dwight Bilodeau. We had considered investigating the wreck but had to abandon the idea after communications broke down. I had also hoped to stop here and survey for an Inuit winter village among the islands, but as in previous years we had to forego this in favor of gaining a good day for crossing the Strait of Belle Isle. Next year our work may focus between here and Brador, allowing for time for such a survey. About 10 miles west of BS we passed one of the huge tabular ice bergs that had broken off the Petermann glacier and worked its way into the Gulf, probably the same one that was attracting tourist attention east of BS when we passed in late July. This time we saw no whales at all.

Fig. 1.37: Three Inuit huse structures on Little Canso Island-1. Photo by Wilfred Richard.

Fig. 1.40: Rainbow outside of Blanc Sablon. Photo by Wilfred Richard.

We arrived at Blanc Sablon at 7:30 and found a spot on the end of the pier, where we usually have to dock because all the protected berths are taken by large fishing vessels. I called Florence Hart and arranged to visit her and Clifford after dinner, which we took at Pizza Delight. Getting there by taxi turned out to be an expensive affair, $7 for a fare for one person and $5 for each additional person, totaling $35. At this point getting to the Harts and back to the boat would be another $85, but we had passed missed seeing them last summer and really wanted to see them as Clifford's health has been tenuous as a result of two strokes and growing dementia. I wanted especially to talk to them about working at the Inuit winter village at their Brador River chalet site next summer, and they seem fine with that. I think we might even interest Florence in taking part in the digging. If we are lucky we may be able to begin an underwater survey in the nearby channels and bays as well. Florence served us a small lunch with some of her fruit 'squares' (pastries) and I 'chatted' with Clifford, who has responsive moments and reacts with some of the old spark. He still enjoys hearing his favorite musical tunes but most of the time sits in his chair watching the television, occasionally coming out with ejaculations over something on the air. Florence is clearly fatigued with being his constant care-giver, especially because of his inability to walk, use a wheel-chair or a walker. She has only a few hours each week when someone comes in to sit with Clifford while she shops or does errands. The time may have to come soon that he needs the care of a nursing home. Our taxi driver came to pick us up after an hour and delivered us to the boat. He reported no special news or developments in Blanc Sablon other than the continued departure of young people for other regions of Canada. However, the Quebec Government's new "Plan Nord" anticipates the completion of Route 138 along the Lower North Shore, and that may bring some needed financial benefits and employment from mining and hydro projects.

18 August—Thursday (Blanc Sablon to Cook Harbor) Up at 4am to find a light north wind blowing off the land—a good sign for crossing the Strait; however, the forecast was for strong southwest wind later in the day, as much as 50km, about 30 Knots. Nevertheless we should be across and beyond Cape Norman by noon. The small-boat fishermen were all going out—another good sign. All this rationale proved wrong. For the first hour everything went smoothly, but by 7am the land breeze had turned to southwest and was building quickly. This was okay for a while, until the speedboat started cutting around, so we brought her up close to the port quarter where she would ride the big humped wave from the ship's propeller. This adds a big strain to the tow rope and slows the Pits speed half a knot or so, but it keeps the speedboat steady and make a constant pull rather than the sudden jerks that result from her shooting down the fronts of the following seas, then veering off with a slack towline until she comes up short and a huge jerk. All seemed fine until we had reached the Newfoundland side of the Strait and began the four-hour run to Cape Norman, where we would turn east and have some shelter from the land. All fine in theory, but our plans were suddenly interrupted by a loud crack. The tow line

Fig. 1.39: Visiting with Clifford and Florence Hart. Photo by Wilfred Richard.

had parted about a foot from the speedboat and she was drifting to the wind. We brought the Pits around and approached, with a plan for me to jump aboard and attach a new line, but once alongside we realized the sea was much too rough. Plan B was to throw an anchor into her bow, hoping it would hook under the cutty and serve as a towline. Perry made several passes while I threw our small danforth anchor into the bow, but each time the hooks failed to grab or pulled out as soon as we put a strain on the line. Next we tried the big 80 pound grapnel (grapple) anchor. But when we got it rigged we realized we could not throw it far enough. Finally, we managed to get the danforth into the bow again and when she slipped out the hooks were tangled with the speedboat painter, a weathered old one-inch line tied to an eye-bolt in the stem. As Will and I hauled the anchor in the green painter was slipping through the hooks. It seemed like we would lose this line, but at the last minute Will was able to grab it and we secured it to our starboard stern cleat. This was the crucial break, but it was not enough, as this line was old and would surely wear through and break when we brought the Pits up to a safe speed. All this time the wind and waves were building and huge whitecaps were rolling past, and Perry had to keep the Pits from falling off broadside to the waves so we could have a stable platform for working. What to do next? The second break came when Perry remembered we had a light grapnel stowed in with our luggage. Retrieving it, we rigged it with a half-inch line and after several failed attempts managed to get it lodged with its hooks under the cutty and found it was secure as long as there was no slack in the line. We secured this line to the port cleat, forming a towing "V" that divided he strain and kept the boat in place with a steady pull on both lines. For the first time it seemed we might have a chance of saving the boat—if the lines would hold and not chaffe through and the anchor remained hooked, for despite the "V" the boat was still being thrust about by the large waves, some of which towered a couple meters above the stern as they roared by, sometimes sporting huge two-foot high whitecaps twenty or thirty feet across. For three more hours I had to sit holding the grapnel line in my hand, taking up any slack that developed, with my heart in my throat every couple of minutes when she veered off and the anchor slid sideways along the speedboat gunwale, threatening to un-hook. The other uncontrollable problem was the constant threat of abrasion, since the grapnel line was constantly rubbing back and forth on the gunwale and its metal anchor shank was rubbing on the painter line. How long they would hold was an open question, especially as we had three more hours of this downwind chaos before reaching Cape Norman. At one point I grew very thirsty and Will brought water and chocolate, and spelled me on tending the towline. Perry meanwhile had to drive the ship by hand to keep her on a steady course, without wandering about as tends to happen in sailing downwind in heavy seas. By this time the wind was blowing 30-35 knots and the seas were 3-4 meters high. After what seemed like an endless time, the Cape Norman lighthouse slipped by and we rounded the cape and began the approach to Cooks Harbor. Perry came aft with a big smile on this face and we realized we were through the worst of it and had managed to avoid losing our trusty boat and motor. Just last week, Wilson Evans had commented on how we had managed to avoid losing her all these years, because towing a heavy boat some twenty feet long is tricky business and requires constant attention and a lot of luck.

Although we were out of the heaviest seas, the entry to Cook Harbor was not without difficulty. While I was tending the line, Will came back saying Perry needed me in the pilothouse urgently. Turns out the GPS chart had us steaming into shoals and soon showed as on land hundreds of meters from where we thought we were. We could see the channel buoys and the course we should take, but the small scale chart Perry had put on-screen was hopelessly wrong—a rare but not unheard-of situation. Shifting to larger scale map put us in the proper position. After a few minutes we were in the harbor and tied up, heaving huge sighs of relief that a dangerous and costly loss had been avoided. Throughout the first half of the escapade I was convinced we'd lose the boat, and was prepared for it—she's fifteen years old and the motor about ten—we'd recover. But it would be a hard to avoid a sense of failure. In hindsight this matter could have been avoided by taking the weather forecast more seriously and better seamanship in maintaining the quality of our tow-line, which I had let deteriorate, planning to replace it next year. On inspection I found it had broken at a knot I had tied to isolate a frayed section of the line, and I also found the thimble nearly rusted through and the line frayed at that point also. I immediately replaced the thimble, retired the line and replaced it with a new one.

For the rest of the afternoon the wind buffeted the Pits against the pier, but the fetch inside the harbor was short and the waves small. Lots of large fishing boats were also in, tied up and waiting for the wind to drop before going out. We spent the time snoozing and tidying up, and the girls went off and came back with snacks they could not live without. Dinner was a joint effort prepared by Will and me, roasting chicken and vegetables in a one-pot meal. Quite tasty, and consumed to the last carrot slice. Lauren had

been able to get email while we were in the middle of the Strait today, and one of the messages was a note from Justine with news of their eventful return. As often happens, the Air Labrador flight got delayed and Serai, Vincent, and Justine missed their connection to Montreal in Sept Isles. (Erik could drive home to Baie Comeau from there so he was not inconvenienced.) They were able to re-book, but the new tickets were going to cost $800. Vincent decided to re-book but Justine and Serai could not and had to spend the night in a youth hostel and take a 12-hour bus ride to Montreal the next day. Evening found us in bed soon after 9pm, exhausted, and the wind still pummeling us. However we expected it to abate by morning.

Fig. 1.42: Bill Fitzhugh watching our cast-away speedboat in the Strait of Belle Isle. Photo by Wilfred Richard.

19 August—Friday (Cook Harbor to Quirpon) According to prediction, the wind dropped by morning, and some of the fishing boats had departed. We were not in a rush and were happy to let the seas abate a bit more before leaving for Quirpon, so Will made some of his sour cream pancakes. We got away about 10am and found a heavy swell rolling in from the northeast, where another big storm had been raging. Huge rollers were cresting up and breaking on the shoals near the Cook Harbor entry. It looks like great California surfing stuff without the surfers. Once at the pier in Quirpon we were protected from the surge and happy to find Boyce Roberts' car parked on the pier waiting for us. We were not able to track him down until later in the day, and went off to see the L'Anse aux Meadows site and have a meal at Gina's and Adrian's Norseman Restaurant. They were both fine—Gina a rotund with a second child (boy) due on October. They were able to seat us despite the arrival of a large bus tour group of older folks from St. John's. While eating we were able to catch up, and bought a few things in the shop, where one of Gilbert Haye's Labradorite seal carvings was selling for $995. A visit to the renovated LAM interpretation Center was a bit disappointing, considering the amount of money and effort that went into it over the past couple of years. They have added new material on the aboriginal groups, but do not include any artifacts demonstrating the site's native history and do not even display (or even mention?) the Dorset soapstone lamp found in the smithy. New work on the jasper is not included, and the story of the site is very limited, with the key artifacts displayed almost haphazardly rather than being high-lighted. What takes prominence are stories about flint-knapping, iron-making, and wood-working, but these are treated more as technologies rather than how they reveal life at the site. The lack of any European context or images leaves the exhibit quite flat, and the central piece, the fine reconstruction of the site, now with buttons that light up key artifacts, does not capture attention of visitors well enough. By contrast the Viking huts at the archaeological site are a tremendous success, with their seasoned, expert re-enactors engaging the visitors effectively and the props and activities well-made and interestingly presented. We spent several hours at the site talking with visitors and the re-enactors, Wade Hillier, Paul Njolstad, Scott Burden, and others. Visitor interest was keen. It would be interesting to compare what they were learning here with what they were getting out of the exhibits. There seems to be little connection between the two experiences. The Center's exhibits could use some active docent-visitor interaction.

Fig. 1.43: Bill Fitzhugh holding the broken line from the speedboat. Photo by Wilfred Richard.

By the time we got back to Boyce's he was

Fig. 1.45: L'Anse aux Meadows new interpretation center Photo by William Fitzhugh.

home preparing a dinner of moose stew and fried codfish, spiced with fiery brew. We talked much about the number of moose licenses given for his region (1400) and for Newfoundland as a whole (in the hundreds of thousands), and the proportion given for bulls, calfs and females, or any of the above, noting that the recent increase in females would soon have an effect to start bringing the total population down. We checked the ice reports on the internet and found the huge Petermann ice Island off the east coast south of St. Anthony. Huge pieces of this mass were breaking off and were cluttering the coast, with 120 recorded in the northern peninsula to Grey Islands, through which we would have to pass. One was blocking the southern exit to Quirpon Harbor. Later in the evening we made our pilgrimage to Skipper Hot's Bar for a few beers and to have Lauren and Janine "screeched in" and become honorary Newfoundlanders. They joined a group of six others on the firing line and gave a great performance under the usual pressure of eating a dried capelin, (mo)lassi-bread, downing a shot of screech, repeating tongue-twisters, and kissing a 'handsome,' sexy frozen codfish after addressing it with the most suggestive language they could muster. Among the initiates was a couple from Carp, Ontario, where our ASC friend Norman Hallendy lives. The Paul's knew of him and will pass greetings of our chance encounter at Skipper Hot's. We did a bit of Newfie-type step-dancing—Will, Lauren, Janine, and me—to tunes like "Haul Away," "I'se the B'y" and others before heading home about midnight, hot and exhausted. By morning it had discovered sets of muscles I had not used for some time.

20 August—Saturday (Quirpon to St. Anthony) I tossed and turned through the night anticipating an early rising, but some strategic rain squalls intervened and convinced me the conditions we required for departure—no fog, little wind—were not present—and so we slept until 8am. It was still foggy and unsettled, with a light breeze. Perry and I decided to wait until later in the day when visibility might improve. In Boyce's loaned car we drove down to an overlook where we could see the southern tickle to look at the ice and found a huge mass blocking nearly the entire channel at its seaward end. Breakers were heaving around both sides, spanning the distance from the ice to shore, blocking our passage. We could exit through the northern tickle and go around Cape Bauld, but the seas there would be terrible and it would cost us two hours travel time. Instead, we decided to drive to St. Anthony to check conditions at that end and to see the ice reported to be filling the harbors from here to St. Anthony. People here have never seen such ice, and probably never will again, since the break-up of the Petermann Glacier and creation of a huge floating island of its seaward tongue is a very rare event. We found huge masses of ice blocking the entrance to Griquet Harbor; a large number of bergs were grounded in St. Anthony Bight; St. Carroll's Cove was completely filled, dwarfing this small coastal village north of St. Anthony; and several large bergs were grounded at the entrance of St. Anthony Harbor, one lodged in the

Fig. 1.44: Lauren Marr and Janine Hinton showing off their new "Newfie" status with "screeched in" certification. Photo by Willliam Fitzhugh.

Fig. 1.46: Icebergs off of St. Anthony. Photo by William Fitzhugh.

middle of the channel inside the harbor. We had a 'lunch' at the friendly Lighthouse Café at the harbor entrance and found the wind down and seas calm, except for big swells from the northeast and southeast, remnants of the large off-shore storms of last week. Most of the big ice seemed to have collected along the shore or had entered the bays and harbors, but the sea appeared mostly clear of ice, and visibility was not bad—perhaps 3-4 miles. Reassured, we returned to Quirpon, gassed up Bryce's car and left a note of thanks at his home, then cast off and tried our luck getting past the ice in the southern tickle. At the wharf some men from Hare Bay were launching a boat to go pick bakeapples on Quirpon Island. Perry tried to convince them the berries there were not yet ripe—a piece of insider information we learned from Boyce—but they were intent on their project, Quirpon being a near-mythical bakeapple location. Our passage past the large ice berg and heaving swells was successful and we had a relatively uneventful trip of two hours to St. Anthony—just a lot of big swells and rolling—while Will sat outside taking pictures of the ice bergs we passed. Their shapes were, as usual, fantastic; some looked like combs with teeth standing up in the air—the air spaces between solid ice lenses having been the loosely-packed winter ice and the teeth the compressed hard ice from the glacier's summer melt. In St. A. we found a berth at the town wharf and spent the rest of the afternoon cleaning the boat and filleting the cod-fish I had bought from a Quirpon fisherman. Lauren and Janine strolled in town, visiting the Grenfell premises and walking the trails up on the hill behind Grenfell's house. Dinner was a cod-fish and vegetable casserole with salad. The girls are finishing up their day goof-balling with some tunes ("Fun! Fun! Fun!") on Lauren's iPad. Perry greased the shaft bearings and we're ready—I hope—for an uneventful crossing to Lushes Bight.

21 August—Sunday (St. Anthony to Lushes Bight) The fishing pier was stinky and bright with lights all night, but at least we were not driven from our berth by a new arrival with stronger claims to the berth than us. I woke about 5:30 as it was starting to get light and put on the coffee and generally clattered around to wake people up. This generally works for Will; and Perry, but not always for Lauren and Janine, who had taken to heart my comment that we don't need them for such simple maneuvers as pier departures. Actually the weather did not seem too promising; it was overcast and the clouds were moving and fog hung on the hills and out at the harbor entrance. But St. A. Harbor is so tight that you can't tell what's outside until you go, so off we went, threading our way through the ice bergs wedged in the harbor channel and around its entrance. Once outside there seemed to be less ice around than when we came in, but the fog was a nuisance as we had only a few hundred yards off visibility. During the next hour or so visibility improved and we could make out the headlands and larger ice bergs, and there were many. Between Green Island and the Horse Islands the radar screen lit up with hundreds of bergs, of which many were long tabular pieces retaining their original Petermann outlet shape. We skirted through them easily, and passed a couple groups of whales and dolphins. Things were calm enough to cook a lunch. Will made some grilled cheese and tomato sandwiches and I fixed up the left-over chicken broth. By 4pm we were at Cape St. Charles and heading into Green Bay and Lushes Bight. Very

Fig. 1.47: Icebergs in St. Anthony Harbor. Photo by Wilfred Richard.

little wind the whole way across, and as we approached the mainland, the makings of thunderheads appeared. It must be a hot day on shore. During the crossing Will snapped hundreds of pictures of bergs and birds, and when I asked him why so many: "One of these may be better than the ones I already have." During the crossing I also straightened out some of my field notes and started writing up unit summaries for the field report. All in all a great final day and perfect crossing—a bit of an antidote for the hassle in the Straits the other day.

22 August—Monday (Lushes Bight) First day back on shore! Not too much to report except that our welcome committee (Louise and Nan) were on the dock last night within a couple minutes of our arrival. The sun had not yet set and the younger folks were tubing and attempting to water ski, some with little success. Most concerned was a medium-sized white dog wanting to leap off the dock after his master. Will made another of his excellent spaghetti Louise joined us for a final dinner on the Pits. Janine took the offer of a real bed at Perry's without hesitation and packed her stuff while Lauren hung in there one more night—and wouldn't you know, had another one of her boat nightmares ("Where am I? Help! I can't get out!"). I woke and rushed to the foc's'le to find here half out of her top bunk and just beginning to figure out where she was. So she also abandoned ship first thing in the morning, leaving Will and me to keep tabs on the leak Perry had identified a week or so ago when the bilge pump began running more frequently than usual.

We spent the morning unloading the boat, first the easily moveable stuff, then the food and kitchen gear, then the 'zodiac,' which had to be thoroughly cleaned and rinsed in fresh water to get the mud and slime out from our dirt-filled dig boots and clothes, and finally the air compressor, filters, tanks and weight belts. By the end of the day she was pretty well stripped and down to what Will and I needed for our floating 'hotel' for a couple days. The weather stayed nice and warm, so we were able to get the inflatable dried and packed in our store shed. We did notice some abrasion on the rubber bottom of the inflatable where she rubs on the deck and is subject to vibration from the prop. We need to watch that next year. We also need to get the 15HP Evinrude engine serviced, as it is sporadically firing only on one cylinder and when she cuts in the unexpected burst of speed could throw you over the stern. For supper Louise cooked up a great meal of grilled ribs, chicken, and steak which we ate on the back veranda with Nan, who is thrilled to have Perry back home. Most of the rest of the Colbourne clan is off working, only Steve home now, walking around peddling his home-grown strawberries. I found a few blueberries ripe in the patch around the close-line, but most are still coming. Everything has been delayed a couple of weeks here and in Quebec this summer, even the bakeapples. They were scarce again on the Quebec Lower North Shore, but in Quirpon they were still not ripe when we passed through.

23 August—Tuesday (Lushes Bight) Another fine day—the summer is finally here, say the Long Islanders, who had had a checkered summer with lots of cool weather and rain. This day we reserved for artifact cleaning, inventory, and packing in Perry's store shed. Perry and Janine left on the 9am ferry for Gander with the dive compressor gear, returning it to Linda and Robert Linfield—an all-day project that got them back at 5pm after burning $112 worth of gas. Will, Lauren and I worked all day until about 10pm and managed to get through all of the collections—about 40 2x2 meter squares, cleaning, making a rough catalogue inventory, and record photography for each square. Will shot the nicer pieces, so we will have a good working record after we send the material to Quebec later this week. Everything got accounted for except for one white glass bead, which seems to have got lost at the site. We packed the collections in clean bags and made sure the numbering was correct, so that Frederic Simard will have no trouble doing the formal cataloguing in Quebec. We made a few new discoveries in the process, including being able to assemble most of a small soapstone cooking vessel that had been smashed and ended up in squares 22N 26W and 28W. That and the lamp from 20N 30W were great finds that raise interesting questions about the Inuit who lived at Hare Harbor and why these objects so precious to Inuit should had been disposed of. The other interesting find was the diversity of glass beads that were found from almost all parts of the excavation areas. Many of these same bead types we have found in other areas of the site as well, suggesting that Inuit were present throughout the area. Another interesting feature was the presence of Groswater (Dorset) pieces—both artifacts and flakes—as well as the strange find of the Maritime Archaic stemmed point. During the evening we had another fine feed á la Louise, this time of seafood: cod, stuffed squid, mussels, and fresh home-baked bread. We had more lab work to do after supper. Will and I got back to the boat for the night about 10pm.

Fig. 1.48: Perry Colbourne navigating the speedboat back from Triton to Long Island. Photo by William Fitzhugh.

This afternoon we learned that there had been a 5.6-6 earthquake centered in northern Virginia that shook much of the East Coast, put a nuclear power plant in Virginia on emergency shut-down, and cracked the Washington Monument. Everyone was evacuated from the Smithsonian buildings, and Bruno Frohlich joked about being one of 5000 people on the mall without toilet facilities. Books fell but he reported no other problems. We also learned that Gaddafi has been flushed and is fighting a rear-guard action with a small band of loyalists and that rebels have taken charge of most of Tripoli. Perhaps of more importance to us is the progress of Hurricane Irene which seems about to strike North Carolina at 135mph and waffle or flood much of the eastern seaboard. If we're lucky we will arrive in Maine just before it reaches that area, but it may screw up Lauren and Janine's flights to DC and Lynne's drive over from Vermont.

24 August—Wednesday (Lushes Bight) This was a boat-moving day—taking the Pits down to Triton and putting here up for the winter, a strange thing to be doing in late August, but she's expensive to keep afloat at the Lushes Bight dock and just a nuisance when not being used. Plus we needed to find out about the leak. Uncle Jim made Will and I a breakfast of fried ham and eggs before we went to Perry's, where we packed the last of the artifacts in plastic pails. Then we loaded on the truck timbers, cradle props and wedges used to support the boat on land and headed down to Triton, some of us on the boat and others in the truck. Ivy Rice, Nan's sister, and her friend Barry Ashby—living in Ontario—came along for the ride. We had a great scenic cruise down Long Island Tickle and around Brighton Island to Triton, taking about an hour. We converged on the Marine Center where Dennis, manager of the boat operations, lifted Pitsiulak out of the water and dropped her in her winter storage place. The entire operation took only one hour. When she was set down we had a chance to look for places that might be leaking and found one glaring problem—a through-hull bolt on the exhaust manifold had corroded, leaving a large hole in the hull. Otherwise she looked in good shape, fouled only small barnacles and a 'beard' of hairy algae that recently has begun to appear on boats for the first time, perhaps resulting from an invasive species due to warmer water temperature. After securing the boat we took the speedboat back through the tickles and passes between the islands, passing large mussel farms and poking into some of the unusual geographic features on the south side of Long Island Tickle that Perry used to explore as a young boy rowing about the coast: the old man, the deep sea cave, pinnacles, his great grand-father's old house site, the remains of the old boat Melvin's drove ashore for 'natural recycling', and other local wonders. We were home within an hour. Dinner was abandoned in favor of a few hours of socializing at Morris and Barb's 'shed'—the local term for an informal night club, a place to gather and have a few drinks without the expense and complications of a formally licensed bar. You just have to bring your own booze and snacks. Most of the Colbourne's—including Nan—show up for a few hours on Wednesday nights. We returned to Uncle Jim's and Prudy's loft over their garage/shop, where they have fixed up a bunkhouse of sorts to be used during summer holidays by their kids and grandchildren, all living in Labrador City. Next door, local teen-agers were hanging out at 'Ken's Shed'—a second Lushes Bight night spot and the one used by the youngsters, who were busy smoking and drinking and doing the usual boasting and posturing as we dropped off to sleep. Today I heard from Frederic Simard in Quebec City that he's ready to receive our artifacts, which we have packed carefully for transit, keeping the underwater materials wet and the land materials separated into fragile and non-fragile (nails, rocks) components.

25 August—Thursday (Lushes Bight) Last day at Lushes Bight and we had another good day with a gusty southwest wind. It's good we took the boat to Triton yesterday. Jim is planning to trip to the

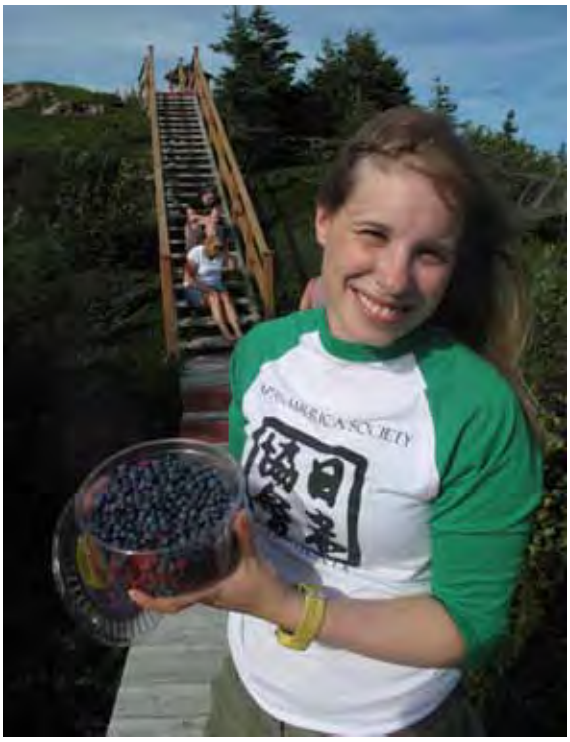


Fig. 1.49: Lauren Marr holding her berry-picking spoils. Photo by Janine Hinton.

Grey Islands northeast of Englee for the weekend to pick bakeapples. He'll need to have calmer weather to make that trip, and now that Hurricane Irene is churning up the Atlantic coast he may have to abandon the berry-picking for the shelter of a better harbor in Englee, fifteen miles to the west. We took the 10am shuttle and drove our containers of artifacts to Budgell's Sports, where we put them on a small pallet and made arrangements for them to be sent to Quebec. We also left our 15HP motor at Budgell's to have them look into the erratic ignition problem. After a seafood lunch at Fudge's Restaurant and tidying up on the Pits (I recovered 'lost' cans of beer in the galley storage crannies but failed to find the "Random Passage" DVD!) we returned to Long Island. The rest of the afternoon was a final clean-up at Perry's, making notes, and blueberry-picking on the trail up to the gazebo. Dinner was another sumptuous meal—this time a boiled dinner with salt beef, roast tur (murre), chicken, pease porridge, stuffing, and other Newfoundland delicacies. Blueberries, cake, and whipped cream for desert. During much of the afternoon news clips kept coming in on the hurricane; email from the SI indicated some damage to the Castle from the earthquake, resulting in its closure. Bruno reported my office survived the shaking without bookcase collapse. Later in the evening we sat around at Jim's and Prudy's chatting, watching TV and finding info on ice bergs for Jim's up-coming trip. One Canada Ice report had a picture from, the 23rd showing two 2-3km diameter ice islands south of the Grey Islands. Apparently we passed right between without seeing them on our course from St. Anthony to Long Island. While we chatted Jim's border collie watched TV intently, following the commercials especially, with occasional groans and moans. I've never seen an animal so tuned in!

26 August—Friday (Lushes Bight to Nova Scotia) Heading south! Will and I were at Perry's at 6:30, finding the coffee perked and gear ready to be tied on the Volvo's roof. After goodbyes and best wishes for the fall we were on the ferry—a huge one this time called *Nonia*, larger than Long Island needs. The politics of the ferry and the hoped-for causeway are a never-ending topic of conversation on the island, and each decision seems to be worse than the last. But that's behind us now, so on to Deer Lake. After paying the ferry fare ($8) I had only $2 Canadian left from project funds and so I had to put on my credit card the gas needed until I could exchange American for Canada in Deer Lake. The ride there was easy, the road in good shape. We breakfasted at the Irving Station restaurant, changed money, and left a note for Greg Wood at his 'old' house across the Humber River, and then went on to Meyer's Minerals in Pasadena, a shop between Deer Lake and Corner Brook where Will has been occasionally buying art. The owner, James Meyers, is a geologist who does as great business producing and selling stone carvings of all sorts, and he carries work from many Labrador artists, including Gilbert Hay and Semigak from Hopedale. Will bought a dancing bear of Semigak's. They do a lot of jewelry-making with Labradorite and Newfoundland stones. It turns out that I had met Jamie in Nain in the early 80s when we were crossing between projects. He was working in the Torngats with the Nfld government geologists and knew all our pals—Bill Ritchie, Gilbert, Terriak and others. He still practices geology on a consulting basis and has detailed knowledge of the rocks of Nfld and Labrador, so we has a great discussion about Ramah Chert, soapstone, and other materials. I suggested he get involved with the Ramah chert trade, an ancient profession that should be continued today. He noted that the famous 10-mile Bay Labradorite quarries have been shut down because the Labrador Inuit Development Council terminated their long-standing arrangement with an Italian stone polisher, and now has lost their only market-provider. The Chinese are now the principal ones polishing Labradorite from slabs cut in Madagascar, but this material is not as bright as the Labrador 'blue-eye' variety and has many small dark veins absent in the Labrador stone. He says 90% of the Labradorite sold in Newfoundland now is from Madagascar. He had no idea why we

would find mica in our Basque/Inuit site, unless it was for windows (He reminded us of the derivation of 'muscovite' from mica that was widely used for windows in Moscow). Perhaps sheets were being so-used in our Inuit houses. The rest of the trip to Port-aux-Basques was uneventful except for heavy rain squalls. Light traffic and a very small crowd on Highlanders, the same ferry we took to Newfoundland in July. The weather had cleared by the time we embarked, and the sea was quite calm.

27 August—Saturday (Nova Scotia to Maine) Highlanders arrived in North Sydney about 11:30pm, disgorging us and hundreds of other vehicles onto a single-lane road that took us along the Bras d'Or lakes and across the Strait of Canco in the early hours of the morning. Will drove until about 2:30 and I took over for the rest of the passage through Nova Scotia and into New Brunswick, with a bit of ground fog but not much other complication. We arrived east of St. John about 6am and had breakfast before raiding the blueberry farm and making off with six 10-pound flats of berries. From there it was only a few miles to St. Stevens and Ganong's Chocolate factory, another of our ritual stops. We crossed the border there without difficulty and made our way south into Maine, where we picked up Route 1 and came down the west side of Penobscot Bay through Camden and Rockport, and from there to Georgetown and Bath, where we stopped for ice cream and I had the largest ice cream cone (ginger) I've ever had in my life. Arriving at Will's completed our journey and I passed out for a couple hours on the moss outside his and Lindsay's house. We had showers, cleaned up and had a great dinner of shrimp etouffé and a lively discussion about the problems facing the American education system. The evening ended with the arrival of hurricane Irene, sending her first raindrops into the woods around the house. I was relieved to see on the news that the storm looks like it will be passing along the coast more than in northern Vermont, therefore perhaps sparing our driveway a big washout. (NOTE: It turned out that the eye of Hurricane Irene passed up the Connecticut Valley right over our house in Fairlee, and with it came 6-8 inches of rain that devastated many of the river towns and cities of Vt and northeastern New York State. Surprisingly however, the impact on our home was minimal, with very little wind and steady but not torrential rain. The storm largely by-passed Maine and the northern coast region.)

Fig. 1.50: Farewell at Perry and Louise's house. Photo by Wilfred Richard.

4 - 2011 Gateways Excavation Field Notes

This was planned as the last season of excavation at the Hare Harbor-1 site on Petit Mécatina Island, located between the communities of Harrington Harbor and Tête á La Baleine on the Quebec Lower North Shore. Notes were kept on individual 2x2 meter excavation units by the excavators and by W. Fitzhugh, who also plotted the unit maps and compiled the artifact field catalog, unit by unit. Excavations were conducted in AREA 7, which included a partially-constructed Inuit dwelling (S5), a hearth platform (S6), a charcoal hearth pit (S7), and a group of large rocks (S8) along the southern edge of Areas 6 and 7. Excavations were also conducted in AREA 8, a midden south of the entrance of S4. The unit notes below are organized by excavation area, feature, and excavation unit, from south-to-north and east-to west.

Fig. 1.51: Site photo to the west. Photo by Wilfred Richard.

Abbreviations used: BE = black earth culture layer; CS = charcoal soil, usually including rocks and some tiles and nails, a pre-Inuit Basque/European formation; SS = sterile beach soil/deposits; BS = brown sand, the soil resulting from decay of the black schist rocks found at the base of the cliff shelter; BT = depth in cms below triangle (the local site datum plane); EW = earthenware; SW = stoneware.

AREA 7

Structure 5 (a partially-constructed Inuit winter dwelling) This structure was identified from surface topography when the western part of HH-1 was first explored in 2009. At that time its observable features included a passage-like depression through the stone/charcoal pile along the southern part of Area 7, a 'cold trap' entry, a cobble-paved 'floor' inside the door, an apparent raised sleeping platform in the (uphill) rear portion of the dwelling, an east wall shared wall with S4, and a suggestion of a wall of sand, boulders, and sod on its west side. In 2009 we excavated a test pit in the center of S5 and found it differed from S4 in having a pavement of cobblestones rather than slabs. Another odd feature was the apparent absence of a west wall. It seemed possible that a N-S alignment of rocks along the 30W line might be the remains of a wall, but this would make S5 an un usually large structure. We assumed that S5's rear wall was similar to S4's, created by excavating the sleeping bench into the rising bank at the bottom of the cliff shelter. However, excavation proved our ideas about the rear and west wall to be wrong; we were not able to identify the rear wall along the bank, and the two possible west wall features at 28W and 30W, proved incorrect. The following documents the excavation of the units in each of the features and structures in AREAS 7 and 8.

Fig. 1.52: Area 7, Structure 5 in the foreground, view to the southwest. Photo by Wilfred Richard.

Structure 5 Entry Passage:
Units 14N 24W, 14N 26W and 16N 24W and 16N 26W contained the S5 entry passage, which passes through a barrier of large rocks derived from cliff rock-fall.

Fig. 1.53: Sructure 5 entrance view to the northwest. Photo by Wilfred Richard.

16N 26W is bordered on the west by large irregular-shaped rocks that form the western side of the passage interior. One of these rocks was more than a meter long, pointed at both ends, and seemed like it could have served as the collapsed western 'door-fame' upright, although how it could have supported a lintel stone is unclear. When excavation began in this unit, removal of the surface vegetation revealed a soil composed almost exclusively of charcoal between the large rocks while in the passage area BE (charcoal-stained soil) appeared next in a layer 10cm thick which had accumulated upon the pavement slabs, which were neatly laid down ca. 210cms BT. IN most of our excavations at this site, BE is generally the culture layer, with many artifacts, but in this case it contained only three nails between 173-190cm BT. A fragment of a seal mastoid bone was recovered at 199cm BT. Three other iron spikes were found in charcoal earth along the eastern side of the unit, in wall context. No other artifacts were found on the passage pavement in 16N 26W or the other units through which it passes (16N 24E, 14N 24W and 14N 26W). This is unusual, for Inuit winter house entries are usually full of artifacts, having served also as a dump or midden, as we found in S3 and S4. Beneath the pavement slabs was more CS. As this soil is not associated with Inuit material and generally contains only nails and tiles we did not excavate below the pavement, also because this would have destroyed the integrity of the entry passage construction.

Fig. 1.54: 16N 26W square. Photo by Wilfred Richard.

16N 24W The eastern edge of the S5 entry passage is on the west and northwest side of 16N 24W. Conditions here were a mirror image of those described for 16N 26W, with pavement slabs below a BE culture layer and CS below the slabs (see 26W soil profile). At the north end of the pavement a rectangular block served as a cold trap and a step-up into the house interior. To the east of this threshold rock a large fallen block may have served as the east entry upright, but as in 16N 26W this rock did not seem well-shaped for this task, and, as well, a horizontal lintel stone was missing. East of the pavement a wall of rocks and charcoal rises to form the east wall of the entry passage in the southern half of the unit. In the northern half, the floor of the structure rises to the level of the house interior and is bounded to the south by the house wall, which runs east into 16N 22W. All of the artifacts in this unit came from the CS in wall context in the eastern half of the square: included were a spalled piece of blue glaze, a nail, a small piece of mica, a lead musket ball, and a piece of sandstone that may have been worked. Nothing was found on the entry pavement.

14N 26W The S5 entry passage extends diagonally across this unit from the NE corner and 'dead-ends' surrounded by three large rocks that rise 50-75cm above the passage floor. Since these rocks block

the entry, they must have been moved into their present position after the pavement was constructed. An opening at passage-level exists in the SE corner of the unit, but there are no slabs here, and the soil consisted of charcoal and smaller rocks similar to the matrix found in the wall areas. Two nails were recovered, and these were in charcoal 'wall' soil 50cm west of the passage pavement. Tiles and charcoal soil is found under the pavement and beneath the large rocks and extends down to sterile soil (SS). The large rocks must have been moved to their present location after the beginning of the initial Basque occupation as tiles, nails, and charcoal are found beneath them. No artifacts and or 'culture layer' was found on the pavement.

Fig. 1.55: 14N 26W square. Photo by Wilfred Richard.

14N 24W This unit consisted exclusively of a mixture of large and small rocks in a matrix of charcoal, capped by a thin upper level of black earth. This unit is a continuation of the wall of rock and charcoal that extends along the south front of S4 and S5 until it joins the hill-slope at 30W. Seven small nails were found between 207-221BT. In order to preserve the integrity of the S5 structure, we did not excavate further into this wall.

14N 22W This unit lies midway between the entrances of S4 and S5 and contains a wall-like bulwark of large rocks running E-W, whose front inclines downwards to the south, with one large slab resting in a vertical position in the SW quadrant. The surface of the ground slopes down from 161BT in the NE corner to 222BT in the SW corner. The sod and black earth layers were excavated, but the lower charcoal layer was left unexcavated. Thirty large nails and spikes were found in the center-eastern part of the square; most of these nails were encrusted and had been embedded in wood. No ceramics, beads, pipes, or other diagnostic materials were found.

Structure 5 Interior The interior of S5 was less well-defined than the entryway and door and is unusual for an Inuit dwelling in that it lacks flat slab pavements and evidence of an oil lamp hearth stand.

18N 24W Much of the central area of this unit had been excavated as a test pit in 2009. At the north end of the passageway a rectangular rock whose surface was about 40cm above the passage pavement served as a step into the house. North of this threshold rock, at approximately the same depth a pavement of round beach cobbles and roof tiles had been laid down on sterile beach gravel throughout 18N 24W except in its NE quad. About 20cms above this pavement we found two clusters of rocks and roof tiles designated Features 1 and 2. After excavation these features failed to materialize as hearth platforms and seemed to have no function we could discern. A large circular flat rock in the SE quad appeared at first to have been a hearth base, but when we turned it over we found no oil encrustation stains and decided it probably was a displaced wall rock. The stratigraphy included a 5-10cm layer of black earth below a thin layer of sod. The BE extended down onto the cobble floor, below which was sterile sand and gravel. Except for a piece of black and white glaze and a nail found on the pavement the remaining fifteen artifacts were found on the eastern side of the unit. In addition to nine nails, we recovered a ceramic fragment, blue and a light blue seed beads, and a clay pipe stem. The latter were common finds in the S4 Inuit house. The absence of flat paving slabs in the working floor of an Inuit winter house, however, seemed odd considering their presence in neighboring S4.

18N 26W The cobble and roof tile pavement found in 18N 24W extended west into this unit with a larger number of flat slabs present. The SW corner contained two large boulders that were part of a curving line of large rocks that appeared to anchor the arcing SW wall of the structure and continued north along the 30W line. While there were many small rocks in this unit, they were spatially dispersed and did not constitute a pavement. BE covered the upper part of the unit and continued down to SS in the northeastern half while in the southwestern quad a thick layer of CS that underlay BE lensed out slightly to the SW of the line between the NW and SE corners. CS began at 170BT in the NW and at 165BT in the

SW corner, where it ended at 195BT on sterile soil (see profile at 16N). A single EW sherd was found in the BE; the other four artifacts were nails found in the black earth northeast of the charcoal lens.

20N 26W This square rises 30-40cm higher than the paved floor of the square to the south and has no pavement, only small scattered rocks in its southern half, while in the north a line of in-situ cobbles angles across the NE quad continuing the cobble border seen to the east in 20N 24W. A few flat slabs are found in the western part of the unit, and here some large rocks above the BE are part of a wall of rocks and gravel along the 28W line. Artifacts are found in the BE in the SW and NE quads and most were small nails, possible having served as fasteners for a wooden sleeping bench. A corneline d'aleppo bead and a piece of white-glazed ceramic were found in the BE layer above the cobbles. The southern part of the unit may have been part of the structure's sleeping platform with a wood bench. The floor area has been excavated by the builders 20cm below the cobble surface of the original beach deposits. The profile along the east wall (26W) had thin layers of alternating sand and charcoal, the later apparently having washed down from the northern slope. There is no thick charcoal (CS) at the base of the BE culture layer. After excavating other surrounding squares we decided that this area probably was not a 'house interior' as it had no slab floor pavement or floor deposits.

20N 24W This unit roughly mirrored 20N 26W, having a cleared 'floor' area in the southern half whose elevation inclined upwards from the cobble pavement in the unit to the south, while to the north it stepped up 10-15cm to the in situ cobble beach rock level that extended east from 20N 26W, with its southern edge angling from NW to SE. This sterile cobble 'floor' also inclined up to the north until it reached the steep bank at the 20N line. Several large rocks were found in the upper BE layer, but they had no apparent function, and no flat slabs were present. The rocks appear to have fallen into the house area from the wall to the east. A thin layer of charcoal separated the BE from SS below. Artifacts were mostly small nails and came from the cobble surface ('bench') area, not from the cleared floor, except for an iron mass resembling a coiled spring and the head of a large spike. The small nails in the cobble layer might have served to fasten planks for a sleeping bench. However, once again, assessment of this area later on suggests that it never had been occupied as a house interior.

S5 East Wall/Border The units between 14N and 22N at 22W form the eastern boundary of S5 and share many common features, exhibiting a series of sub-soil cuts when viewed in E-W profiles that correspond to excavation levels of the 'house floor' and 'sleeping benches'. West of these cuts the soil was dominated by BE deposits containing abundant artifacts similar to those found in S4, while to the east of these cuts, CS and rocks formed a wall that was shared with S4. The edge of the excavated pit that became S5 continued north along the 22W line until it turned west at 19N, passing south of the 20N line and into 22N 24W at ca. 21N. The soil profile at 22W clearly shows the drop into the S5 house pit, the interior 'floor', and the charcoal soil that forms the front wall of the structure.

16N 22W This unit was the southernmost of the S5 east wall squares and also served as the SE corner of the house interior. Most of this unit is CS wall material—large and smaller stones embedded in charcoal—but in the NW quadrant we found BE 'house' deposits arcing from midway down the west wall to 50cm west of the NE corner. The transition between BE and CS was clear and the presence of large rocks in CS high in the soil column extending and into 18N 22W indicated that this area of the house pit had been excavated into the charcoal deposits to create the S5 house interior. Most of the artifacts from this unit came from the NW quad BE 'house' deposits and included nails, pipe stems, glass beads, faience, EW, and SW—all similar to S4 finds. From the CS wall deposits came nails, a remnant of an iron blade and two whale ribs which extended into 16N 20E and served as structural elements.

18N 22W The S5 east wall continues north on the east side of this unit, leaving most of the square as 'inner house space'. The rising level of the soil suggests the unit covers part of the lower floor and the sleeping platform. However, we found no indication of a platform, either in the form of a pavement or riser, or a concentrated floor or platform deposit. It is possible that a sleeping platform could have been present, made of wood planks as we surmise for S4. Instead of a floor level we found a deep deposit of BE containing many artifacts similar to those found in S4 and a large number of small slabs and cobbles distributed without apparent order. Eighty artifacts were recorded, mostly from the central area of the unit with the majority from just west of the 'wall' which follows the 22W line. The most surprising find was from the turf—a Late Maritime Archaic stemmed spear point made of Ramah chert, a type of stone

Fig. 1.57: Prehistoric finds, Maritime archaic point and Groswater artifacts. Photo by Wilfred Richard.

found only in northern Labrador—and has no obvious explanation as it is the only Maritime Archaic artifact known for this section of the LNS. Artifacts from the BE layer include clay pipe fragments, glazed EW faience, SW, thin goblet glass, bottle glass, mica, pyrites nodules, and nails. These materials were found distributed throughout the vertical column of BE, not in floor levels, leaving the impression that they represent a midden or refuse deposit outside the western wall of S4 rather than a floor deposit inside S5 house. This might argue for an S4 midden rather than a S5 house pit, but on the other hand, the E-W profiles at 18N and 20N show an excavated cut into the charcoal/rock wall all along the 22W line, as would be found in a house pit had been excavated for S5. Our best guess is that the charcoal/stone deposits were excavated into with the intent to create a floor for S5, but were abandoned before completion and subsequently the pit was used as a dump for refuse from S4. We believe the abandonment of S5 after it had been partially constructed (entry passage and stepped up floor and bench surfaces) followed the realization that the drip-line from the cliff above runs through the middle of the house area, making its use impossible except in mid-winter temperatures.

20N 22W This unit resembles 18N 22W in having no obvious internal structure other than a rising floor level that intersects the eastern wall's CS and rock formation, and a fairly large number of finds from a deep BE deposit that was thickest in the NE quad where most of the artifacts were located in what would have been the NE corner of S5. Among the finds were nails, a re-worked fragment of a soapstone cooking vessel, a rectangular sandstone whetstone, some fragments of blue and white faience glaze, a large off-black color bead, and pieces of EW. Depths ranged from 80-114BT, without any clear 'floor' level.

22N 22W We excavated the southern half of this square to check on the NE corner of S5 and found this entire unit was outside the structure and above the cut-lines of the house pit (see N-S profile at 22W). The unit lay north of the S5 house wall and demonstrated four soil levels: turf above an upper BE in which we found nails and tile, above a layer of CS, above a lower BE and charcoal level, which lay on SS. The sequence revealed an initial charcoal-rich level that was succeeded by BE midden connected to the level in which many artifacts were found in the other 22W units.

Fig. 1.56: 22N 22W square, trowel points north. Photo by

North Bank Units The N-S profiles show the northern part of S5 from 22W to 28W has a series of cuts into the bank along the 22N line that seem to mark the intersection of the house's rear sleeping platform with the house wall. The stratigraphy is similar in all of these units, indicating a similar series of events beginning with excavation into the bank, followed by a burning episode that left a level composed of a few cms of charcoal (sometimes with tiles and nails), following by erosion that brought sterile grey or brown sand down the burned slope. This layer is usually

covered by a BE deposit with cultural materials like those found in S4 and S5, and then an upper layer of turf. These squares also usually have flat slabs or schist inclined on the sloping bank, perhaps have been placed there to stabilize the surface after the bank had been excavated. Some of these schist slabs have since decayed, leaving a lens of sterile grey or brown sand. One of the problems in interpreting this excavated bank as the rear of a dwelling is that there is no evidence of an internal floor intersecting the bank cut, and no sign of the intersection of a rear wall with a roof. The other is the fact that the bank cut continues to the west many meters beyond 28W, the likely western edge of S5. Our work failed to clarify the issue of the northern and western walls of S5 and left us believing that S5 had not been completed or lived in.

Fig. 1.58: 22N 24W square artifacts. Photo by Wilfred Richard.

22N 24W This unit lies at the center rear of the house and would have been located in its northern wall. A major change of slope upwards occurs at the 20N line here and in 22N 26W (see 26W profile). The bank cut begins about 70cm from the north wall. North of this the BE cultural layer is ca. 10cm thick and consists of sand mixed with charcoal, small tile fragments, and a few nails. At the base of the turf a 40cm long and 8cm wide piece of whalebone extended into the square through its north wall. Charcoal lay at the base of the BE on top of in situ sterile sand and beach cobbles in the northern part of the unit. Along the upper edge of the bank cut there is a deposit of loose charcoal that does not extend south onto the 'floor' level. This floor level has an upper layer of BE with tile fragments and nails overlying a sand/gravel/cobble layer 3-5cm thick over a basal layer 1-2cm thick of charcoal and small amounts of tile. A large boulder lay in the center of the southern part of the unit. A few nails were found in the southern part of the unit but most were in the BE north of the bank cut: nails, SW, blue glass, a whale rib, and a mammal bone. Dry sandy soil helped preserve organics in this area.

22N 26W A similar situation pertained in the next unit west of 22N 24W, with a bank cut following the 21N line, north of which a similar soil profile existed as to the east. Large schist slabs had been laid down on the sloping surface of the bank. The corner fragment of a rectangular soapstone cooking pot with drilled suspension holes was found in BS on the upper bank. This fragment is part of the same vessel found crushed in many pieces under the southern edge of a flat slab near the southern border of the unit, and also with other pieces found in 22N 28W. A folded lead fishing weight like ones found in S4 was also found above the bank cut, as well as a number of nails south of the bank cut.

Fig. 1.59: Copper headband fragment found in 22N 28W. Photo by Wilfred Richard.

22N 28W Similar conditions prevailed in this unit: a large schist slab lay on the slope in the northern part of the square and a bank cut beginning at the 21N line leveled off along the southern edge of the unit. In the SE quad a thick deposit of sandy gravel and small cobbles marked the northern extension of the incomplete 'western' S5 house wall that follows the 28W line north from the large boulders to the south. We did not excavate away this deposit, thinking it might be part of the S5 western wall. However, it later seemed this was merely a gravel dump and not part of a wall, for which there was a gap here and

in the eastern side of 20N 28W. Immediately below the sod and on top of this gravel dump we found five pieces of the same rectangular soapstone vessel recovered in 22N 26W. Most of the other artifacts from this unit came from the center/western side of the unit. Three pieces of a SW vessel and a rectangular, concave plate of copper with rounded corners, rivets and perforations came from the bank just south of the large slab. The copper piece resembles beaded copper brow ornaments worn by 18th c. Labrador Inuit. The rest of the finds were nails.

Fig. 1.60: 22N line west to east. Photo by Wilfred Richard.

Area 7 West West of S5 Area 7 ceased to be dominated by a single structure. Instead, its area contained four features or sub-areas that appear to have been related to charcoal production. The first of these, in 20N 30W and 22N 30W, was a 3m long hearth platform (S6); the second, a pit feature (S7) used for charcoal production at 19N 34W; the third, a possible entry passage (S8) through the boulder/charcoal pile at 30W; and the fourth (S9) the rock and charcoal concentration along the 10N line. In addition to these features, the 22N line between 30W and 38W exhibited a concentration of large slabs and boulders that may have been involved in charcoal production or other activities, but we did not have time to excavate this area.

20N 30W and 22N 30W (S6 Hearth Platform) This unit and the one to the north were dominated by a large oval stone hearth platform centered on 20N, on the surface of which we found fire-cracked rock and rubble and a small oval Inuit soapstone lamp which had been rendered unusable by a break in its side. A small partially-drilled hole in the bottom of its inside surface may have been intended to 'kill' the lamp before disposal. Other artifacts found on and around the hearth in 20N 30W included nails, an EW sherd, a flake of tan flint, and a possible sandstone grindstone. Many more artifacts were found in the northern half of the hearth in 22N 30W, mostly nails from the surface of the hearth slabs, but also a distal portion of a mammal femur, an EW vessel bottom, and the shank of an iron tool blade. The north edge of the hearth intersected a group of large slabs embedded in the sloping bank along the north side of the unit. These slabs must have been placed here to stabilize the bank, and cultural deposits (especially charcoal) extend into the bank below them. We did not excavate below the surface of these slabs or the hearth surface in order to maintain the integrity of these structures. The presence of the Inuit lamp on the hearth surface and two EW sherds near the edge of the hearth suggests contemporaneity of this feature with the Inuit dwelling S4 and the later Basque/European occupation of the site.

Fig. 1.61: 20N 30W square (hearth platform) trowel points north. Photo by Wilfred Richard.

Units 22N 32W to 40W (The Western Drip-line Units) These five units were excavated only to the base of the BE deposits, which constituted a shallow layer 5-10cm deep and contained mostly nails and spikes.

Fig. 1.63: 22W 32W soapstone lamp. Photo by Wilfred Richard.

22N 32W and 34W had steeply-inclined surfaces and were filled with large blocky cliff-fall rocks that seems to have little organization that we could determine. However, in the middle of 22N 34W a thick flat slab emerged horizontally from the bank suggesting a feature or hearth is buried deep in the bank to the north, and in 22N 32W two whale bone ribs were found among the rocks. Many of these rocks appear to have fallen into their present position, while others, like the thick horizontal slab, were obviously placed. Finds in 22N 32W included twelve nails, most from the southern part of the unit, in addition to a piece of light blue bubbly glass, and a piece of green-glazed faience. 22N 34W had several nails and two fragments of thin greenish goblet glass. In the next unit to the west, 22N 36W, the steeply-inclined bank began to level off and there were large rocks were limited to the northern edge of the unit. A number of tiles were found on a flat slab in the center of the unit. Only two artifacts were recovered: a small nail and the broken base of a plano-convex banded chert Groswater or Dorset culture biface. These finds are not unusual as a number of other Groswater and Dorset finds have been made at HH1. Large rocks returned again in 22N 38W; tiles were also common in the shallow upper BE deposit, which contained only three small nails. 22N40W was the farthest-west unit in the site and lay immediately NE of the large perched rock-fall block that marked the end of the site's harbor-front terrace. Many rocks were found in the upper BE level, including tiles, but the only other finds were nails. Beneath the BE layers in these units were deeper level containing charcoal. We did not have time to excavate these deeper levels, and previous experience suggested we would find few artifacts. Our hopes that 22N 40W might have the floor of a structure failed to be realized. Most of the rocks here turned out to be fire-cracked or pieces of cliff-fall. All of these 22N units were located inside the drip-line from the cliff edge above. However we discovered that during prolonged rains, the drip-line migrates inward, to the north, making what seemed at first to be a 'dry' shelter interior one that gradually becomes wetter during the course of stormy or thawing weather.

20N 32W to 20N 36W (S7, Charcoal Pit) 20N 32W lies west of the large hearth platform and its BE culture layer contained small rocks and tiles. Most finds were nails from the NE quad and the SW corner; a piece of greenish goblet glass was found near the west edge of the hearth, along with a chert microblade of Groswater/Dorset origin. The eastern edge of a deep pit centered on the 34W line began at 33W. Our 2009 test pit centering on the 34W line revealed this pit to have a thin BE deposit on its surface and below that a deposit of nearly pure charcoal descended some 50cm until excavation had to be terminated because the huge slab inclined into the pit from 20N 34W made further work impossible. In 2009 a lenticular blue bead was recovered from this pit, suggesting the possibility that Inuit were involved with the charcoal production process. During our work in 2011 a heavy rain storm on the last days of the project filled these excavation units with water from the drip-line, a wetting that continued until we had to close the excavation and leave. We were unable to pursue work on this pit and do not know whether it was part of a formal slab-lined furnace or a simple pit used to smother a fire for producing charcoal. The large slab covering the western side of the pit appears unconnected with

Fig. 1.62: 20N 32W square S7 charcoal pit. Photo by Wilfred Richard.

the charcoal production process and is probably happenstance cliff-fall. 20N 34W contained the western half of the charcoal pit. Work on most of this unit was blocked by a huge slab of rock-fall that covered all but part of the SE quad. Two artifacts were found: A small piece of goblet glass and a piece of glazed roof tile or EW. 20N 36W bordered a ledge outcropping along the southern third of the unit. Most of this unit was free of rocks. No artifacts were found.

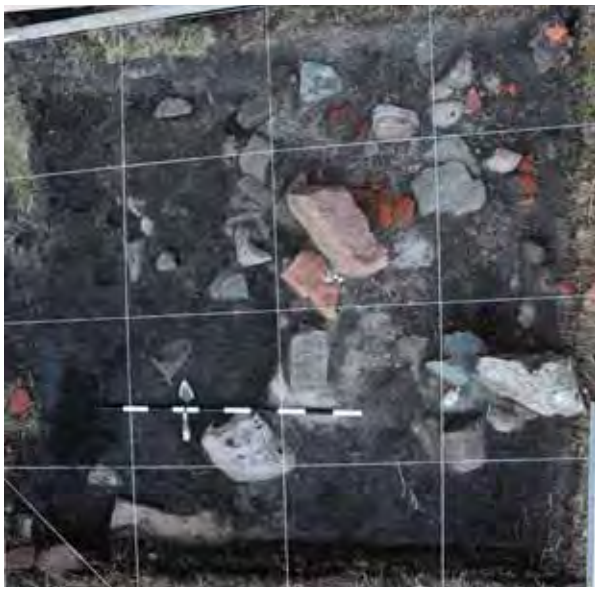


Fig. 1.64: 20N 32W square S7 charcoal pit. Photo by Wilfred Richard.

12N-, 14N-, 16N-, and 18N 30W (Western Trench) The units from 10N to 18N at 30W cut through the concentration of boulders and charcoal that form the mound along the front of S4 and S5. All exhibited similar features: the inclusion of large irregular-shaped granite cliff-fall boulders embedded in BE in the upper levels and CS in their middle and lower levels. On the surface a north-south gap in through the middle of the boulders suggested the possibility of a prepared passage—perhaps the entry to another Inuit structure. However, excavation proved otherwise: none of these units contained rock walls or pavement slabs, and large rocks were found in the middle of what had seemed superficially to have been a passageway.

18N 30W This unit begins south of the hearth platform and includes two large rocks along its northern side that form the southern edge of the hearth. South of this, the unit contained few rocks. Stratigraphy was different here than in other units because of the presence of a thick wedge of brown sandy soil that intruded from what we believe may be a hearth in 18N 32W (not excavated) to the west. The strata included turf, BE, the intrusive BS wedge that extended east only a few cms in the NW to the 31W midline in the SW quad. Below the BS was CS (see 32W profile) and SS. Nineteen artifacts were recovered: a SW-NE trending line of nails in the NE quad (perhaps a single timber full of nails?), and in the BE above the BS in the SW quad several glazed EW sherds, including part of an EW vessel bottom. These finds demonstrate EW deposits post-date the lower charcoal soil deposits and indicate contemporaneity with the later Basque/European and Inuit occupations.

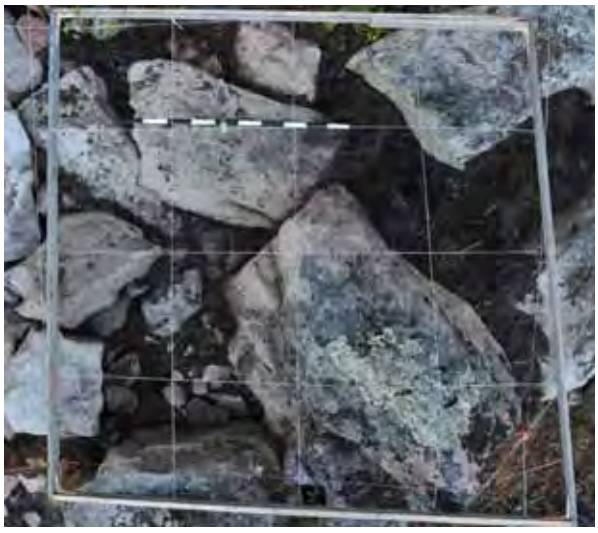


Fig. 1.65: 14N 30W square. Photo by Wilfred Richard.

16N 30W This unit reaches the boulder/charcoal mound and is filled with large granite boulders and angular cliff-fall rocks. Immediately below the moss surface vegetation we found BE deposits with large numbers of nails and some ceramics, including SW, EW, and a fragment of a clay pipe bowl. A large iron bolt 47cm long with a round head with what seems to be a nut screwed on the distal end (too encrusted to identify) was found in the lower BE just above the tiles and charcoal basal layer. Almost all finds came from the eastern side of the unit due to the presence of a large slab blocking excavation of the unit's western side.

14N 30W The accumulation of large granite rocks continued south in 14N 30W, with similar stratigraphic conditions: turf (a thick, nearly intractable moss), black earth with artifacts, charcoal soil with nails and tiles, and sterile soil. Immediately beneath the moss we found several large pieces of stoneware lying on the surface of the

Fig. 1.66: S4 midden view to the south. Photo by William Fitzhugh.

rocks. A small piece of bone was recovered as well as a small matted-up lump of silver foil. This piece did not seem to be intrusive and may actually be silver, although it was shiny and not corroded. There were too many large rocks for us to remove so we were not able to excavate to sterile soil in this unit.

12N 30W The size of the rocks grew smaller in this unit, whose southern side leveled out onto the surface of the terrace front east of the S4 midden. Here where we could excavate to sterile in some parts of the unit, we found no slabs or midden deposits, confirming that the 30W trench was not a passage. Only three artifacts were recovered: two nails and a flake of brown (West Newfoundland?) chert, a material frequently used by Groswater (Dorset) culture.

12N 28W and 14N 28W (Structure 8, Charcoal and Rock Bank) These two units were cleared of vegetation to ascertain the nature of the rocks, but were not excavated. Appearances conformed to the stratigraphy of other units in the rock and charcoal formation along the southern side of the Area 7. Vegetation consisted of a thick moss lying upon a BE layer which in turn lay on CS, and the latter on sterile.

AREA 8

The Structure 4 Midden In the last few days of the project we discovered a midden south of the S4 entrance and west of the large mid-field boulder, and we excavated a 7x2m trench from 3N to 10N. We detected no slab pavement or other structural features in the midden, which was found in a 5-15cm BE layer on top of sterile beach sand and cobbles. The rocks encountered in this sterile layer show no evidence of having been moved. Many artifacts were recovered, and some stoneware and EW sherds probably fit fragments from the S4 house interior. We had to leave Hare Harbor before we could completely excavate this midden, which extends several more meters to the south and west of our trench.

Fig. 1.67: 4N 20W earthenware. Photo by William Fitzhugh.

4N 20E This is the southernmost unit excavated and the last to be dug this summer. Because time was pressing we only excavated its northern half. In addition to several large beach cobbles we found many roof tiles, especially in the western side of the unit. Nevertheless, this square turned out to be one of the most productive of the season, with 36 artifacts recorded for only two square meters: an iron ring-bolt with a screw tang, oval blue-and-white striped beads, a rust-colored bead, green-painted white glazed faience, pipe stems, a decorated marmite EW fragment, orange-glazed EW with a multiple grooved rim, goblet glass, nails, and several flakes of chert, including a biface edge fragment and a scraper. It seems likely there is a Groswater site near the terrace edge in addition to the Groswater hearth we found in Area 2 north of the cookhouse.

6N 20E This midden unit was slightly less productive than the one to the south and most of the 46 finds were from the west side of the square, on the opposite side of the square from the large mid-field boulder. Finds include a cluster of small nails, SW, white-glazed EW, a rectangular sandstone whetstone, a clay pipe bowl, mica, green bottle glass, a flint strike-a-light, and many nails. Rocks were beach formations, and there was no evidence of structure or pavement.

Fig. 1.69: 8N 20W square. Photo by William Fitzhugh.

8N 20E This unit, like the others, had no structural features, and it appeared that the finds were distributed more or less evenly throughout the unit. A test pit in the south-central part of the square led to discovery of the midden and one of the most interesting ceramic finds of the entire project, a floral design medallion on a piece of Bellamine stoneware. In addition several pieces of worked soapstone indicated that soapstone vessel production was taking place at the site rather than only the use and disposal of soapstone produced elsewhere. Other finds included grey/grey (inside/outside) and grey/brown SW, undecorated and brown glazed EW, pipe stems, a blue bead, and a light blue cylindrical bead, green pane glass, a lead sheet tool handle, green bottle glass, goblet glass, a fragment of an iron blade, a round stone (musket?) ball, and many nails were among the 52 finds recorded.

10N 20W The northernmost midden square produced 50 artifact finds evenly distributed throughout the unit, which like the others was deposited on sterile beach sand and gravel without an slabs or structural rocks present. This unit connects to the south side of 12N 20W, excavated last year as part of the S4 entry passage. Cultural material was deposited directly onto the humus above sterile beach deposits and included: a marmite EW strap handle and a marmite fragment with XXX-marked decorative bands, a blue seed bead, a lump of pyrites, grey/grey and grey/brown SW, green bottle glass, a tiny blue oval bead, and nails. Many of these finds have identical matches with finds from inside S4.

The distribution of Area 8 midden finds shows that the boundaries of the midden extend beyond the limits of our excavation, probably at least one meter to east (limited by the boulder) and two meters to the west, toward the terrace front, as well as an undetermined distance south of 3N along the front of the terrace. All of these finds must have been deposited by the Inuit residents of S4, not by Basques or other Europeans.

Fig. 1.68: 10N 20W artifacts. Photo by William Fitzhugh.

5 - Conclusions

The 2011 season ended a ten-year project that began in 2001 investigating the culture history of the Quebec Lower North Shore. Since 2002 much of this effort has been directed at studies of Hare Harbor-1 (EdBt-3), whose Basque remains served as the initial stimulus for excavation at both land and associated underwater locations. However, beginning with the earliest excavations at the cookhouse (S1) the presence of Inuit artifacts—especially pieces of soapstone lamps and cooking vessels—raised questions about Inuit occupancy, and in subsequent years more finds of Inuit soapstone and discoveries of Inuit semi-subterranean winter houses turned our investigations into an exploration of Inuit-Basque/European interactions and Inuit settlement of the LNS more than the study of a Basque field station. In fact, much of the activity at HH-1 may actually have been conducted by Inuit rather than Basques. Three of the five structures at the site are Inuit winter dwellings, and the other two—S1 cookhouse and S2 smithy floors—may have been operated or facilitated by Inuit.

Land Excavations

The 2011 field program explored the westernmost part of the HH-1 site, from 22W to 42W and from 4N to 22N. However most of this effort was between 12N and 22 North. The following briefly describe results from the S4 midden, Structure 5, the Area 7 hearth, and the concentration of charcoal and rocks in the southern area of Area 7.

Structure 4 Midden (Area 8) A 7x2m trench was excavated west of the large boulder in the center of the western part of the site, extending roughly N and S from the opening of the S4 entrance passage, from 3N to 10N. Finds came from 10-20cm of black, charcoal-rich soil below a thin sod layer and resting on a cobble-strewn sandy beach deposit. The absence of slabs indicates that the A8 is not a structure but a midden. These units contained a large number of finds including fragments of stoneware (grey/grey, grey/brown, Bellamine), earthenware (marmite and faience), glass beads, fragments of worked soapstone, glass (goblet, bottle, and pane), clay pipe fragments, whetstones, nails, an iron eye-bolt, lead handles and weights, and fragments of Groswater (Dorset) chipped stone artifacts. The large number of clenched and encrusted nails shows that originally there was a large amount of wood constructions in the deposit, although no wood was preserved. Poor soil conditions also prevented the preservation of bone, both in terms of artifacts and food remains. These deposits replicate the finds from the interior and entry of S4, providing strong justification for the identification of Area 8 as a midden created by the occupants of S4. Refitting studies of the stoneware vessels will probably confirm this supposition.

Fig. 1.70: Site soapstone fragments. Photo by William Fitzhugh.

Structure 5 (Area 7) From surface indications we presumed this structure to be an Inuit dwelling based on its similarity to Structure 4: an entrance passage through a 'wall' of rocks that seemed like the southern wall of a house; a cobble floor found in our test pit of 2009; what seemed like a raised rear sleeping platform; and a rear wall excavated into the bank. As excavation progressed, however, some of these features proved ephemeral or absent. Indications of a western wall formed by a curving alignment of boulders and a gravel/boulder mound along the 28W line had a meter gap in its center and did not show any 'containment' of the putative house's floor. What seemed like a well-paved cobble floor inside the house threshold rock noted in the 2009 test pit actually had no floor deposit; nor could we find a floor deposit associated with this cobble feature elsewhere in what should have been the main working area inside of the house. Artifacts found at this level, above the sterile sand, were exclusively tiles and nails, not beads, pipe parts, or ceramics which we had found on the floor of S4, and no flat slabs were found. It did appear the cobbles had been placed as a kind of pavement near the entryway, but the area they covered

Fig. 1.71: 8N 20W bellarmine ceramic. Photo by Wilfred Richard.

was restricted to a meter radius from the threshold. Another peculiarity was the absence of structural demarcation between a lower working floor and a raised sleeping bench, even though such a change seemed evident surficially. Upon excavation the changes in slope that appeared to mark the floor/bench line and another marking the rear of the sleeping platform were found to be changes in in situ soil levels left by the original builders who may have intended to create a sleeping bench and rear walls. However we could not find an occupation layer that conformed to these levels; nor could we find where an internal floor or sleeping bench layer terminated in a rear wall, or in a western wall, or even in the eastern wall which we thought was shared with S4. In short, we found no house occupation layer or any evidence that full floor pavement or bench surface had been prepared. Even if a bench had been built of wood planks, as we believe was the case in S4, we did not find any small/medium-sized nail fastenings. On the other hand, S5 does have a well-constructed entry passage about 1.5m long paved with flat slabs and tiles bordered by walls made of rock and charcoal, a step-up entry threshold rock, and what may be collapsed lintel uprights. However, even this feature failed to have any floor deposit containing artifacts or midden material. It appeared to have been excavated into the thick bank of charcoal and rocks that forms the rest of the south walls of S4 and S5, along the 12/14N lines. Further, there was no evidence of any midden deposit south of this passage, which terminates abruptly with large block partially blocking the entry. Given this mixture of architectural details and an absence of artifact finds, it appears that S5 was an Inuit dwelling that was abandoned before construction was complete. The few Inuit artifacts found—a few beads and the soapstone vessel fragments—lie outside its floor area. The artifacts found inside the S5 area consist mostly of tiles and nails that probably are associated with the earlier charcoal-production phase. A possible explanation for termination of construction may be related to the fact that rain cascading off the cliff above falls directly into the center of this feature, making its integrity questionable even for winter use. For this reason the builders of S5 may have shifted their activity to the east, creating S4 which lies outside the drip-line.

Western Hearth, Area 7 West of S5 is a large circular rock feature found in 20-22N 30W. At first it appeared this construction was the western wall of S5, but this would have made S5 an impossibly large dwelling. Upon excavation its function as an elevated hearth was obvious, even though it lacked evidence of extensive fire, such as blackened rock surfaces, large amounts of fire-cracked rock, or extensive deposits of charcoal, oil encrustation, or pyroclastic material. On the other hand, a small amount of FCR was present on the hearth surface, and one of the larger rocks found in the center had oil-encrusted surfaces. A small Inuit soapstone lamp was found up-side-down on this surface as well. The absence of a large amount of charcoal removes this feature from consideration as the source of the charcoal found among the rocks at the southern side of the excavation. We are at a loss to explain the function of this feature, whose purpose seems to relate more closely to activities in the bank north of our 22N excavation limit.

Fig. 1.72: S7 Charcoal Pit at west end of Area 7. Photo by Wilfred Richard.

Charcoal Pit, Area 7 One of the features whose excavation could not be completed was a

Fig. 1.73: Fox trap at Canso Island Tickle-1. Photo by Wilfred Richard.

pit located in 20N 32-34W. When tested in 2009 this feature was found to contain a deposit of nearly 100% charcoal. Sometime after its construction and a period of use, a large slab of rock, fell into the pit from the cliff above and lies on its surface, included into the pit on its western side. A lenticular blue bead was recovered from the pit during the test excavation. During the last days of our 2011 season a heavy rain filled the pit with water, preventing further excavation, and we had to leave the feature incompletely excavated. It is unlikely, however, that this feature, which is less than 2m across at the surface, was the source of all the charcoal found at Hare Harbor-1, which is found principally among the mounded rocks along the 12N line from the eastern end of S4 to 20W.

Boulder-Charcoal Deposits This large linear feature running from the southeastern end of S4 at ca. 10W 12N to 20W 14N consists of large granite rocks set in a matrix of nearly pure charcoal. The feature forms the front wall of S4 and S5, where it is ca. 2.5m wide, to 20W where it is ca. 4m wide and has the largest concentration of rocks. The rocks are nearly all of granite and are angular and appear to be cliff-fall. Many of these rocks were probably moved from where they fell to their present locations where they were then used in producing charcoal. Some of the rocks are spalled and fire-burned, and excavations around their bases revealed numerous angular chunks of fire-cracked granite. Where our excavations reached sterile ground we sometimes found unburned peat deposits, which suggest that some of these surfaces were not used for charcoal production. If fact, we could not determine exactly how or where the massive amounts of charcoal were produced. However, since blubber try-works have not been found at the site, and we know that whales were being caught, butchered, and oil casked, ship-board oil rendering may have been taking place using charcoal as fuel rather than wood, whale oil, or blubber scrunchions. It seems likely that charcoal production was initiated by the Basque/Europeans in the later phase of the site's occupation. The Inuit structures post-date the charcoal production phase and probably are contemporaneous with the cookhouse and smithy.

While many questions remain concerning charcoal production and the activities hidden in deeper sediments below the rock shelter north of 22N, this summer's work amplifies knowledge of the HH-1 Inuit occupation, enlarged our sample of artifacts associated with Inuit winter dwelling S4, and revealed a partially-constructed additional Inuit winter dwelling structure (S5) west of S4. It also produced information on hearths and charcoal features associated with this site's later occupation. We did not have time to investigate the possibility of blubber ovens in the rock-fall along the shore at the north end of the site, however, the absence of blubber-encrusted rock and tiles at shoreline and among the finds and surface materials underwater make it unlikely that ovens were located in this area. Nor have we found any indication that blubber ovens under the sheltered area of the cliff.

Underwater Excavations

This summer's underwater excavations expanded previous work and confirmed the stratigraphic sequence established during previous projects. Test pits were expanded at the lower end of the stone piles and two new pits were excavated at a shallower depth on either side of Stone Pile #5 and #7. These excavations revealed a sequence of deposits beginning with roof tiles, followed by layers of peat, wood chips, whalebones, and fish bones, with tiles present throughout. The peat may represent land disturbance during the initial occupation. The wood chip horizon occurs in other areas of the underwater site and consists largely of debris produced during the squaring of timbers, with chips retaining the outer bark and cortex of the original logs. These remains seem to be more extensive than would result from land

Fig. 1.74: Underwater ballast pile showing limestone blocks. Photo by Erik Phaneuf.

clearance and construction of shore facilities and probably indicates preparation of timbers for export purposes. The absence of fragments of planks and curved members seems to obviate ship repair of boat construction activity, although a few boat parts were found. The whale bones found were phalanges and small bones; we presume the larger bones were disposed of at the shallow west end of the harbor where we have found whale bones embedded in the sediments in the past. We obtained a large sample of fish bones from this widespread upper level of deposits, and in one unit recovered a considerable amount of bird bone and some mammal bone. Specific finds of note include two large fragments of earthenware, one a strap-handled marmite vessel and the other a dark-glazed vessel; fragments of a plaited grass mat or basket; leather shoe fragments; barrel and tub staves and bottoms and wood barrel hoops and tightening wedges; large samples of archeofauna, mostly of fish remains; and geological samples of ballast rock. While our underwater excavations include only a small percent of the underwater site area we feel we have obtained a representative sample of those remains. Our survey of Hare Harbor using a remote video camera towed behind our ship's boat failed to reveal evidence of sunken vessels or other interesting remains.

Surveys Results Although the 2011 season was directed largely at completing excavations at the Hare Harbor 1 site, we were able to make some contributions to our regional surveys of the Lower North Shore. In the last days of the project we found an oval 2x1m enclosure among the rocks on the north side of the cove at the northeast entrance of Hare Harbor. This feature is formed by an arc of head-sized boulders placed around the side of a ledge outcrop. No covering rocks were in place, but other rocks outside the enclosure may have been removed from the top of this feature, whose internal area was covered with vegetation. This feature resembles traditional Inuit graves. Local oral history tells of Inuit graves being present here, and this may be one that was opened and left exposed. We photographed but did not have time to investigate this site.

Following our work at Hare Harbor we spent part of a day investigating site locations in Jacques Cartier Bay, where Nicholas Shattler has been searching for sites relating to the Inuit history of the St. Augustine region. At Canso Island Tickle Nick had found some cache pits, a possible small shelter dwelling, and three stone fox traps among the boulder beaches in a small cove at the eastern entry of Canso Island Tickle. We confirmed these identifications as Inuit on the basis of their distinctive stone fox traps with sliding trap doors. A second site he found turned out to be one we located and mapped in 200X, Canso Island 1, having similar features as Canso Island Tickle 1, including several cache pits, three Inuit-style stone fox traps, and a pit structure with a flat platform and a sunken floor that may have been a temporary shelter or dwelling. The third site turned out to be an Inuit winter village with three rectangular, semisubterranean sod-walled dwellings with 4-6m entrance passages, internal slab floor pavements, sleeping platforms, and thin external middens. Test pits recovered Basque roof tile, harp seal bones, nails, and charcoal. The thin deposits on the floors and in the middens, and the scarce inventory of finds suggest that this village had only a brief period of occupancy, probably during the late 16th or 17th century. The scarcity of European materials, compared to Hare Harbor and Brador sites, indicates limited interactions with Europeans, but access to Basque people or sites. This site confirms another area of permanent Inuit settlement along the Lower North Shore, joining other Inuit settlements now known at Brador River, Belles Amour Peninsula, and Hare Harbor at Petit Mécatina. We were not able to make our planned reconnaissance of the Old Fort region, where we expect one or more Inuit villages will also be found.

After returning to Washington I submitted one of the scallop shells Larry Ransom had given me, collected from the fresh water pond/reservoir uphill from the village of Harrington Harbor. We still do not have a precise elevation for the shell bed he found while excavating the pond. However the age returned on the sample was ca. 9000 years old. We will return in 2012 to obtain an elevation to get a better sense of the local uplift curve for this region.

6 - Hare Harbor-1 (EdBt-3) Maps

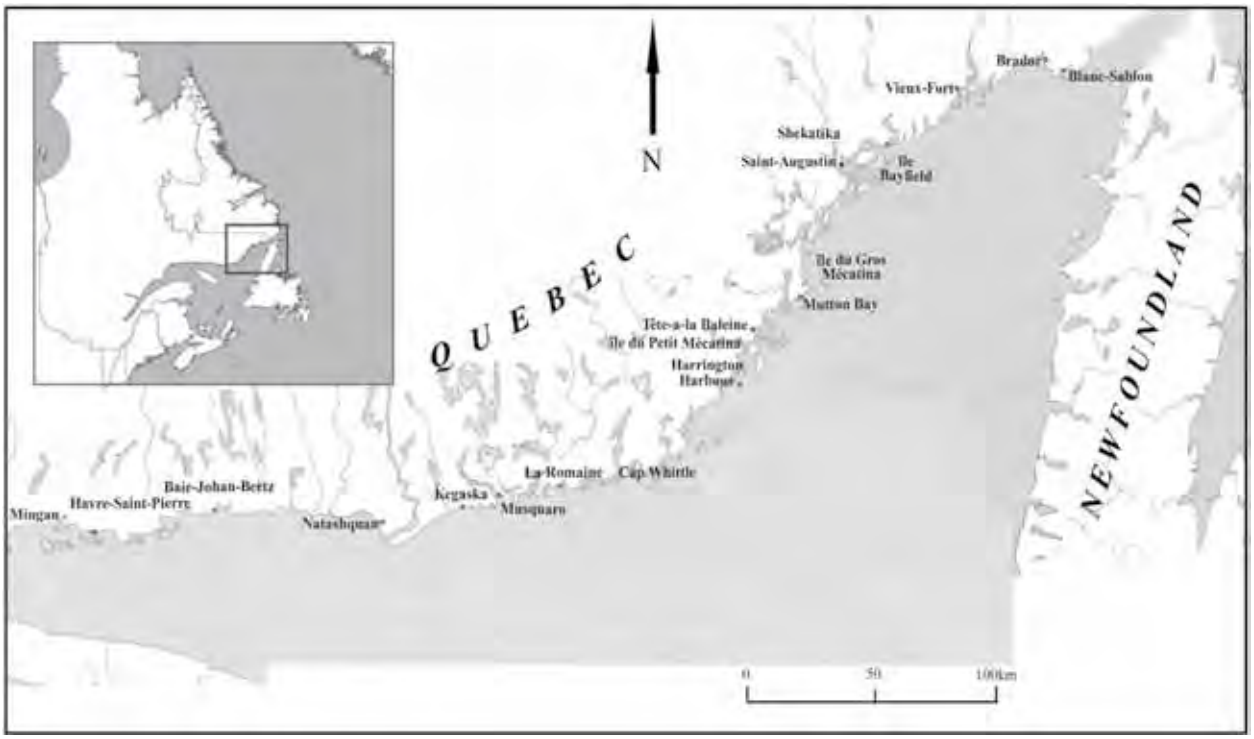


Fig. 1.75: Area of research on Quebec Lower North Shore, 2001-2011.

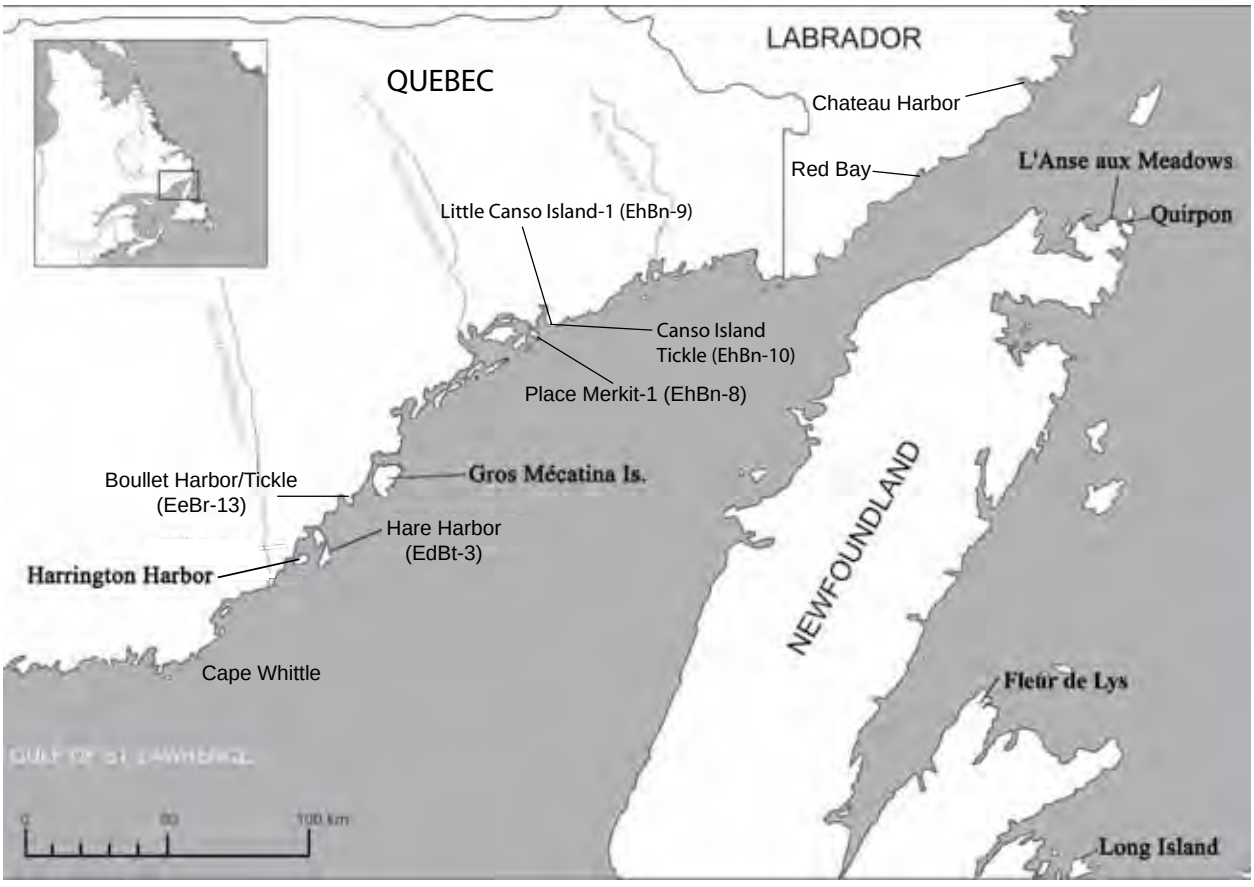


Fig. 1.76: Map of areas visited on 2011 voyage.

Hare Harbor-1

Fig. 1.77: Map of Petit Mécatina Hare Harbor-1 site. Section of map 12 J/11.

Borden Number: Ed Bt-3
Height ASL: ca. 9.14 meters
Military Grid Ref.: 50º 33.73' N 59º 18.12'W
Culture(s): Groswater, Dorset, Basque, European.
Tentative Dating: 2400 B.P., 16-18th ca.
Areal Extent of Site: The entire area from the stone outcrop shelter to the southern ledge to the shore contains cultural materials. The area along the shore also contains cultural materials-the extent of this area has yet to be determined.
Nature of Soils/Sediments/ Vegetation Cover: Grassy, alders, and some juniper under the dry areas of the shelter. There is drainage through Area 2 from the boggy area (A3) down to the shore. Spruce clusters cover the boggy area in the eastern part of the site.
Collection Procedure: Controlled excavation-piece-plotted except for small pieces of tile, test pits of underwater deposit. Samples taken are now at Goverment Archaeological Laboratory, Quebec for analysis, preservation, and cataloging by Anja Herzog and Frederic Simard.
Excavated By: William Fitzhugh, 2011 *Pitsiulak* crew.
Dates Excavated: July 29, 2012 - August 15, 2012

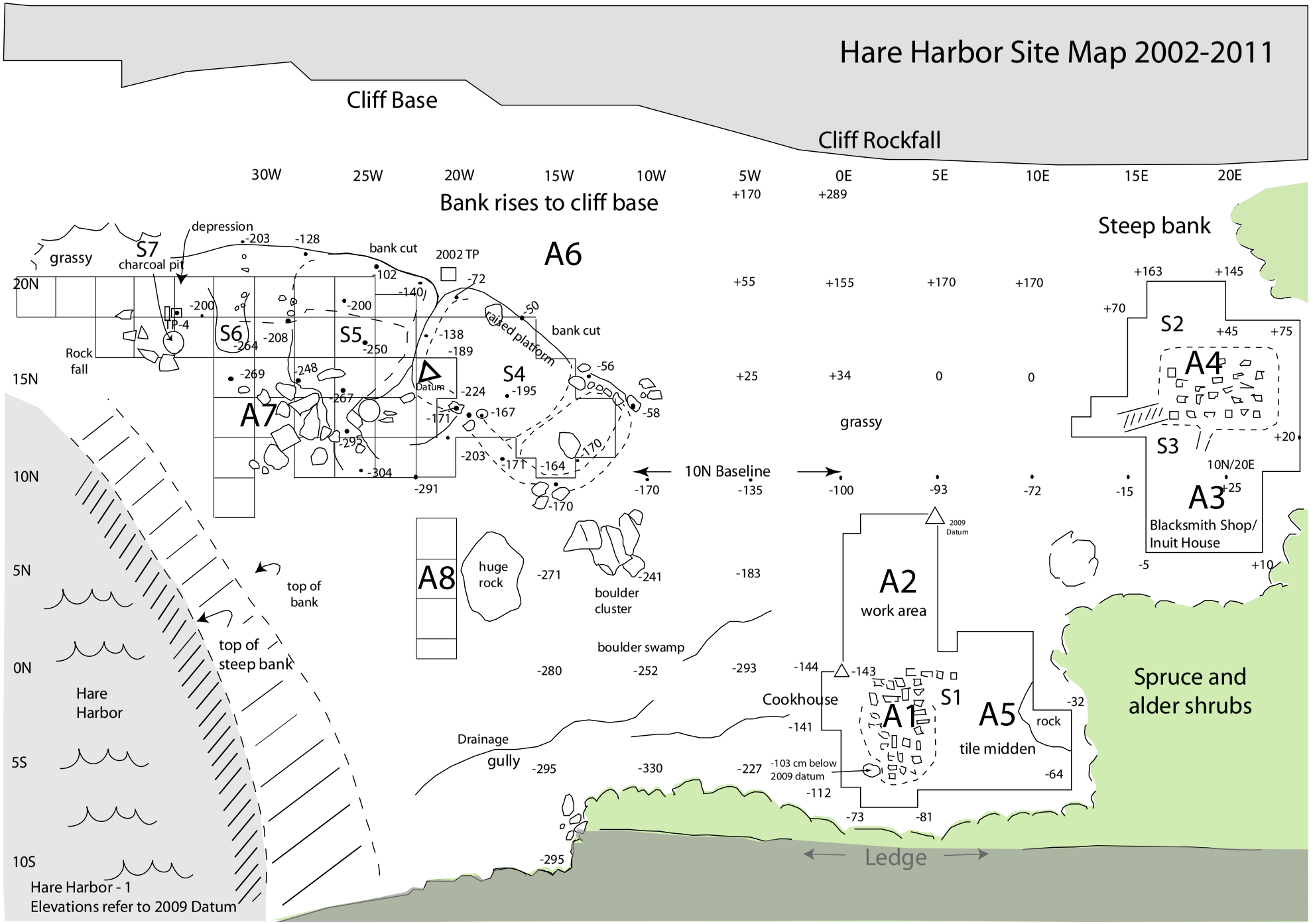
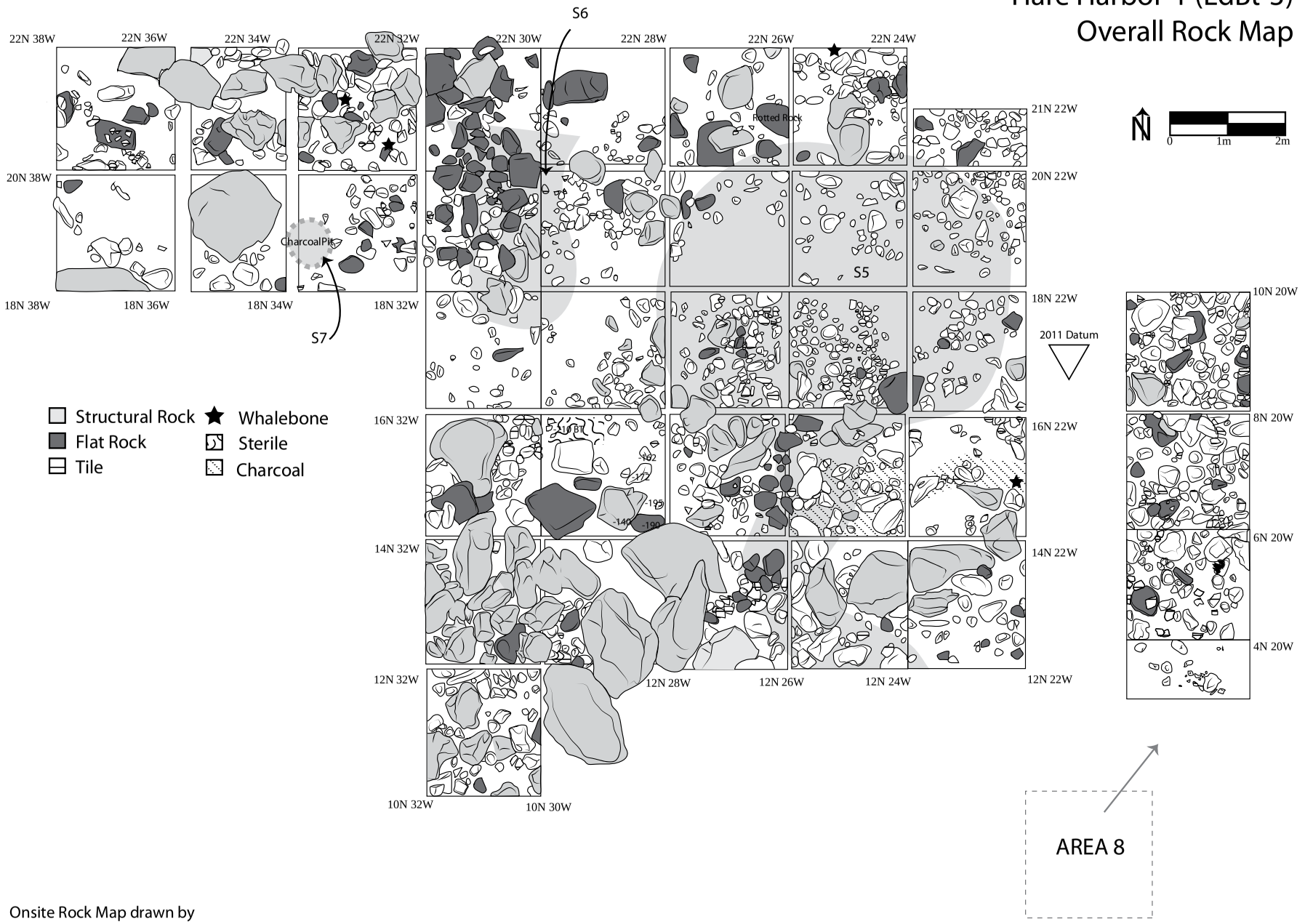


Fig. 1.78: HH-1 areas of excavation 2002-2011.



Onsite Rock Map drawn by
Justin Bourguignon-Tetreault

Fig. 1.79: Area 7 and Area 8 midden rock map

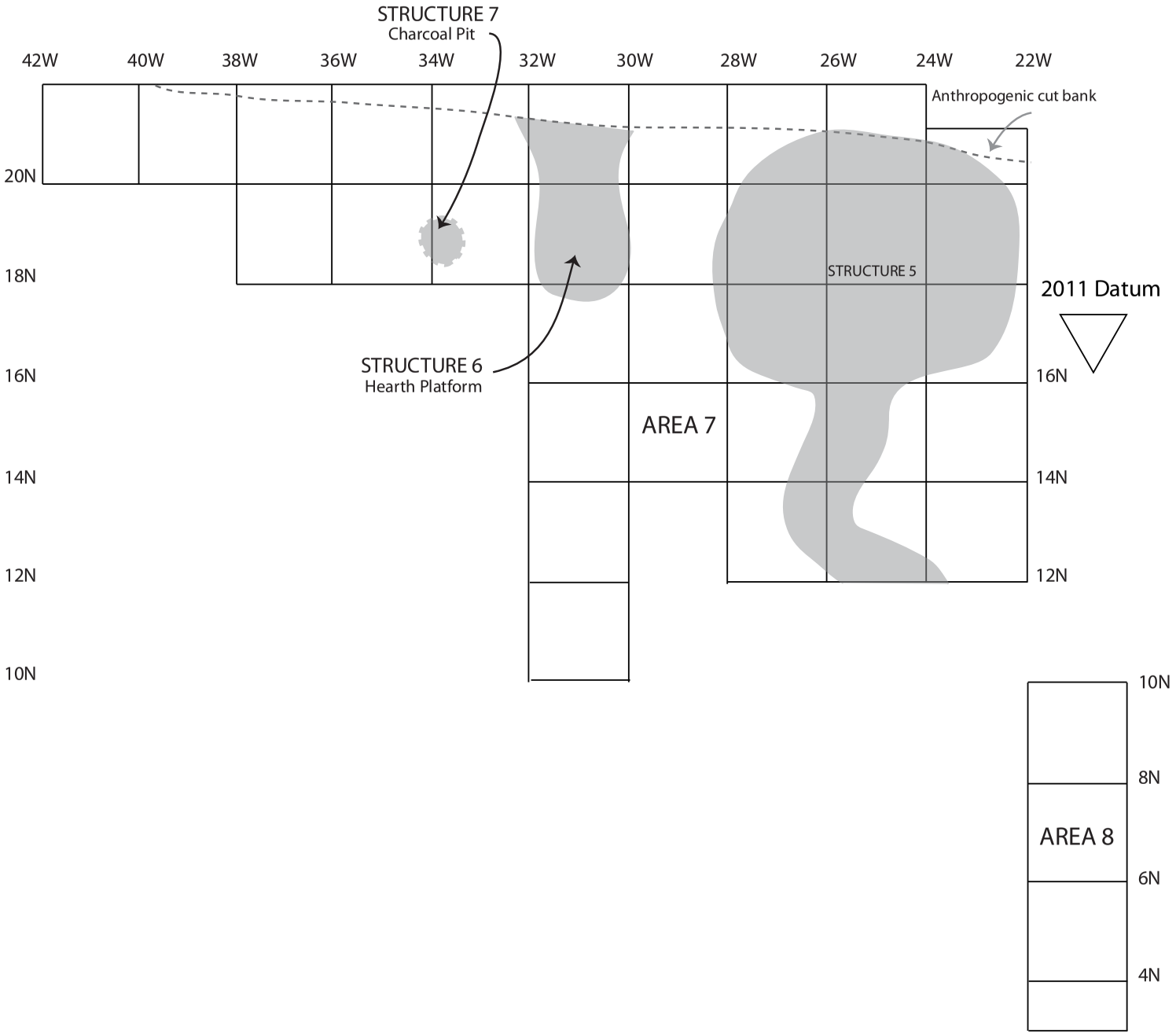


Fig. 1.80: 2011 Area 7 and Area 8 Structure Map.

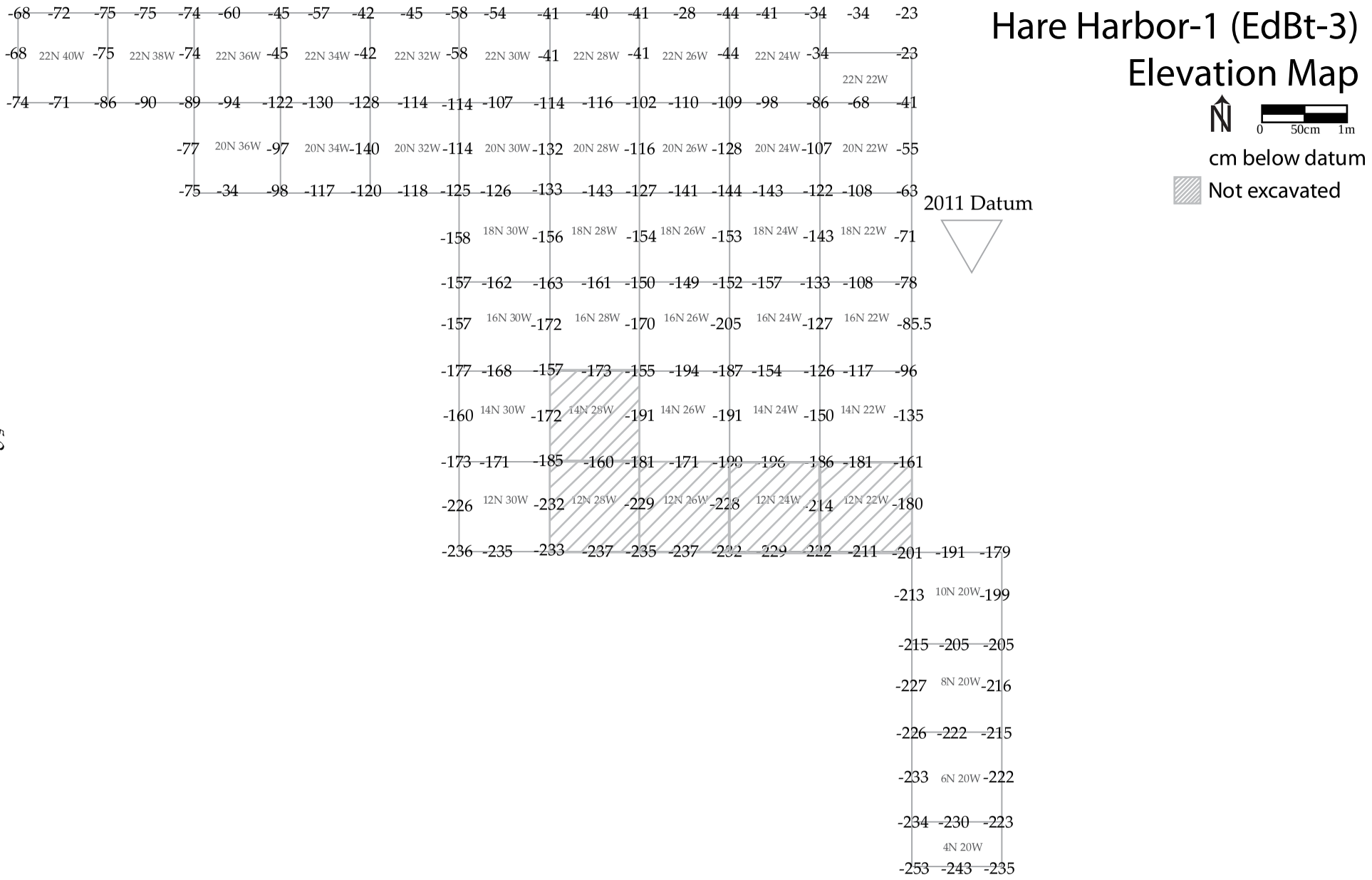


Fig. 1.81: Area 7 and Area 8 elevation map.

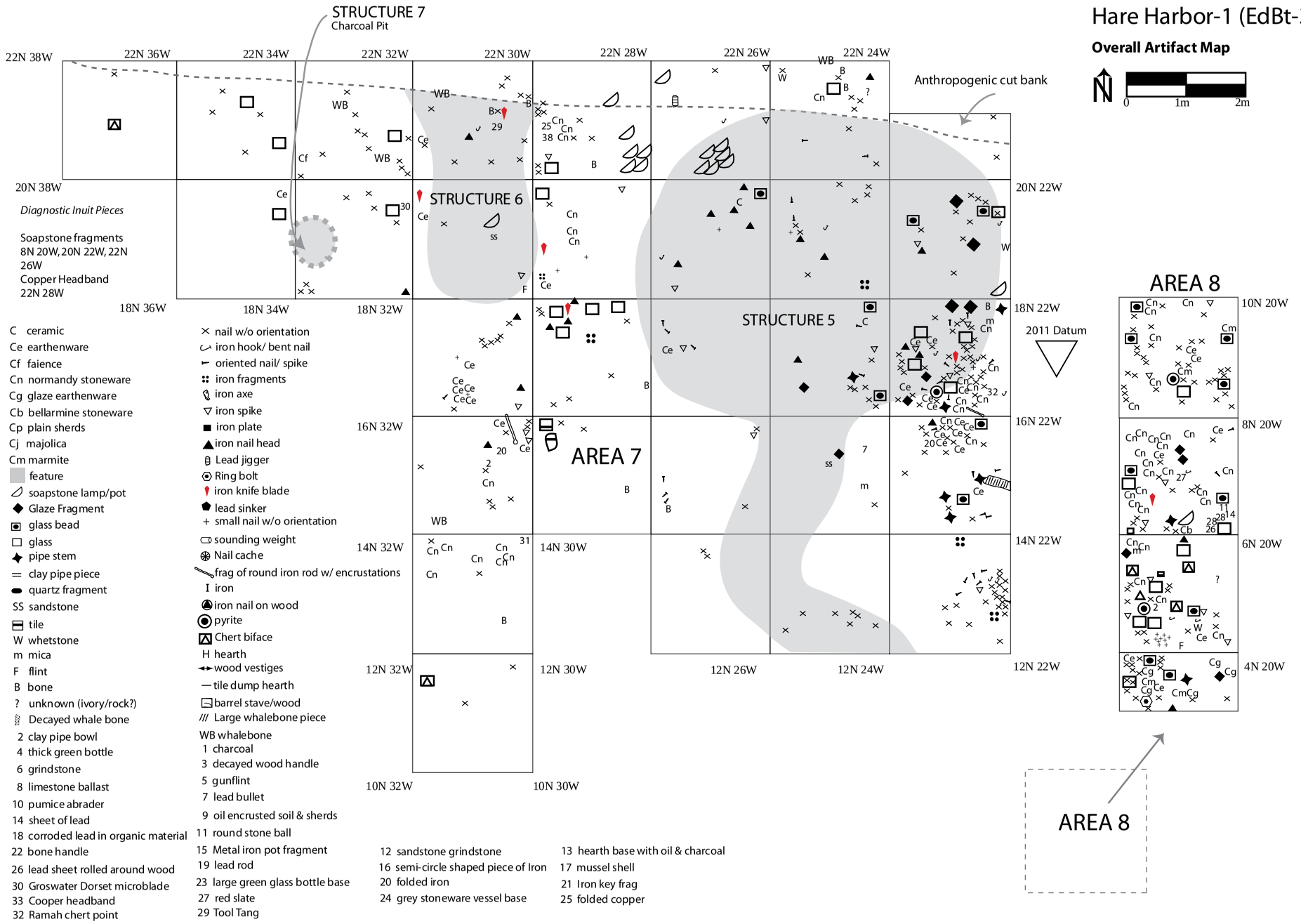


Fig. 1.82: Area 7 and Area 8 overall artifact site map.

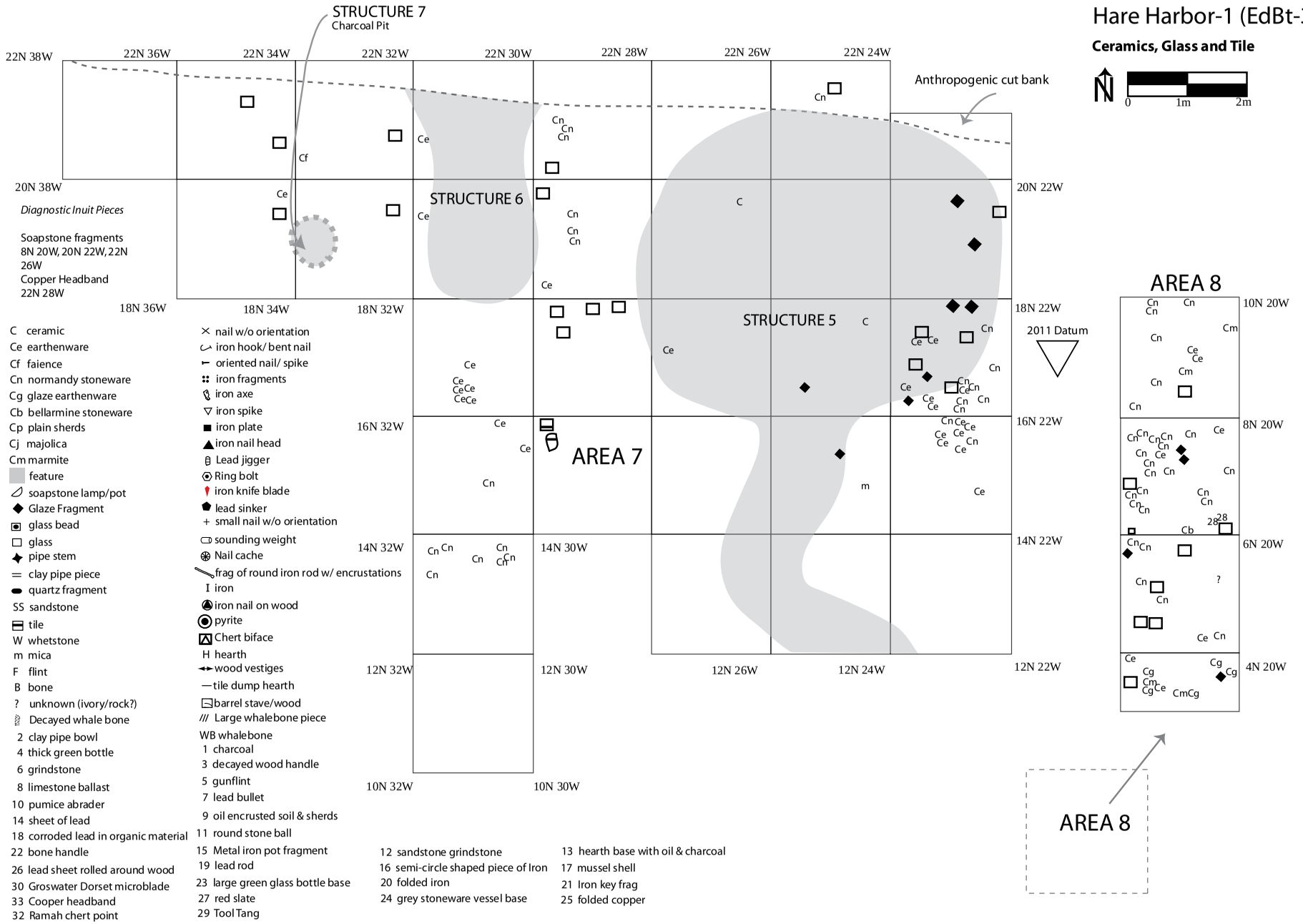


Fig. 1.83: Area 7 and Area 8 ceramics, glass and tile site map.

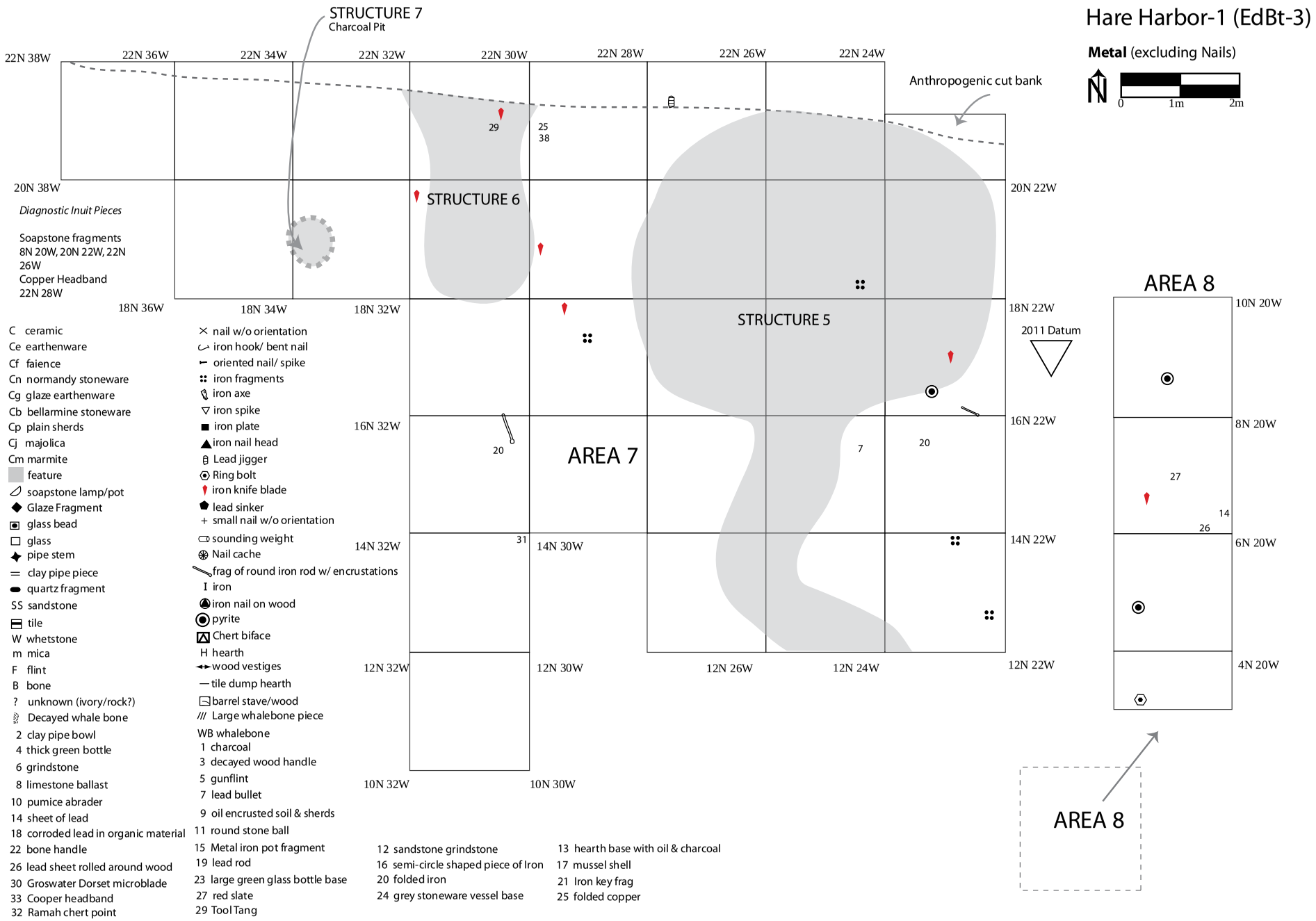


Fig. 1.84: Area 7 and Area 8 metal (excluding nails) site map.

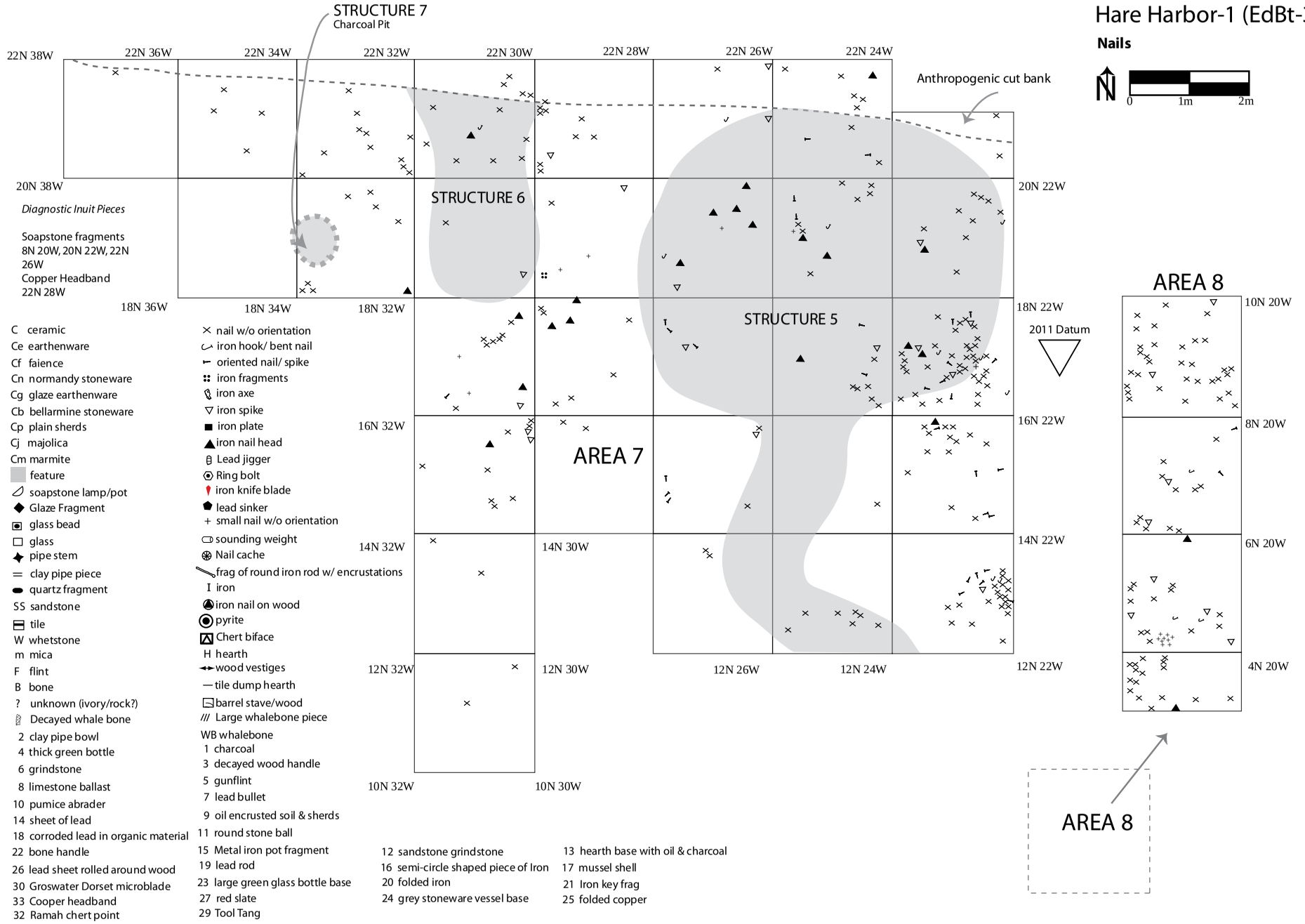


Fig. 1.85: Area 7 and Area 8 nails site map.

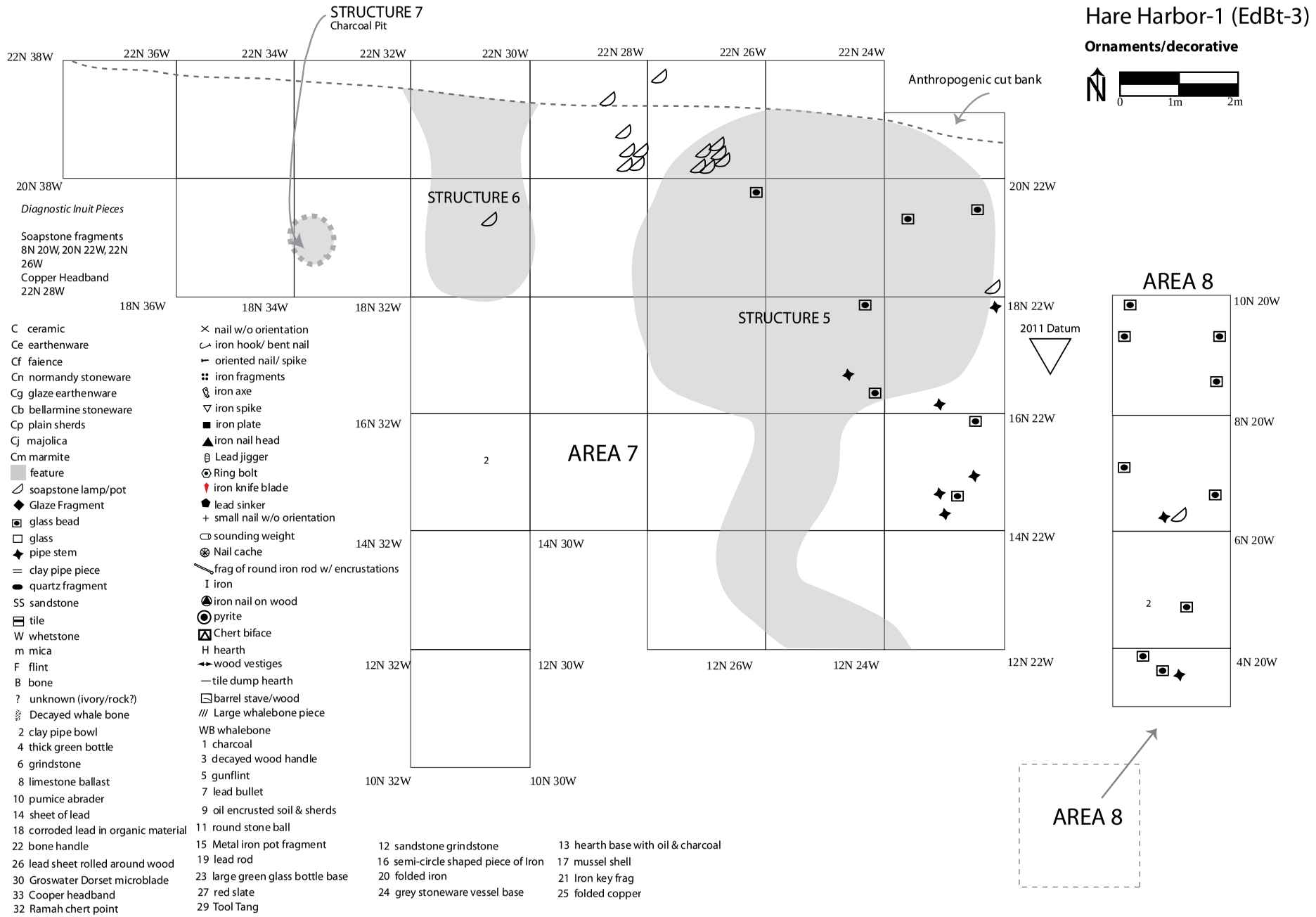


Fig. 1.86: Area 7 and Area 8 ornaments and decorative artifacts site map.

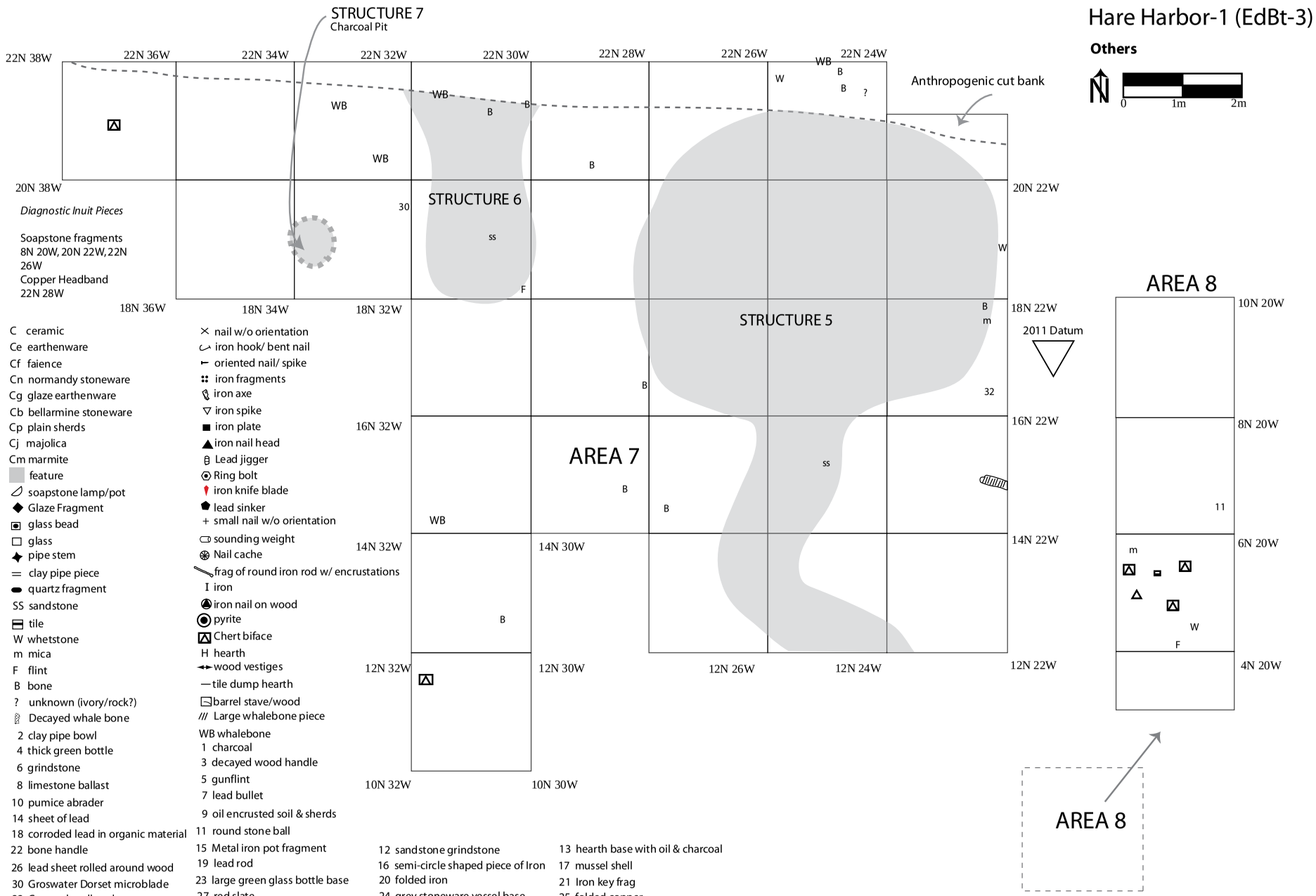


Fig. 1.87: Area 7 and Area 8 other artifacts site map.

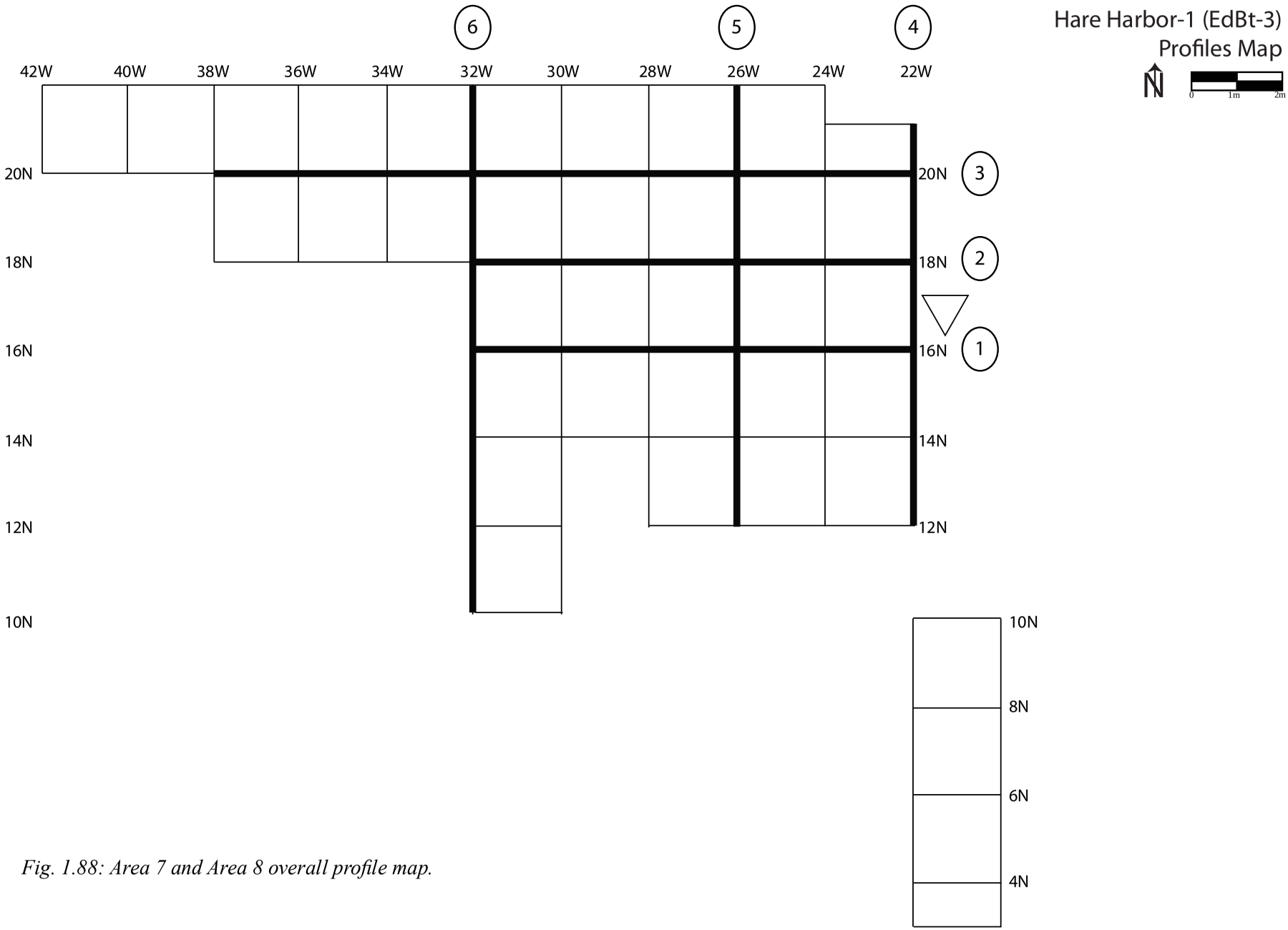


Fig. 1.88: Area 7 and Area 8 overall profile map.

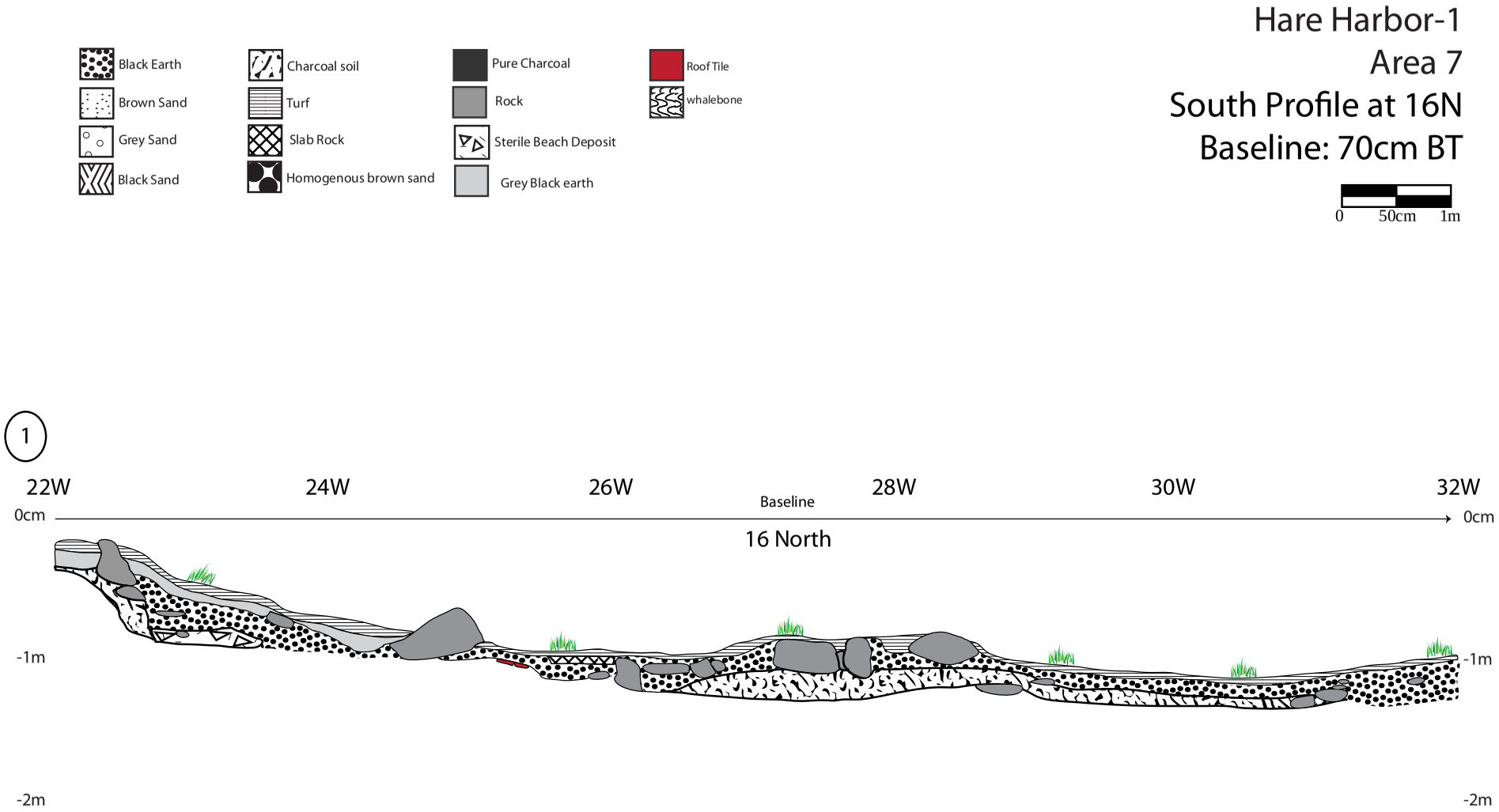


Fig. 1.89: South Profile at 16 North

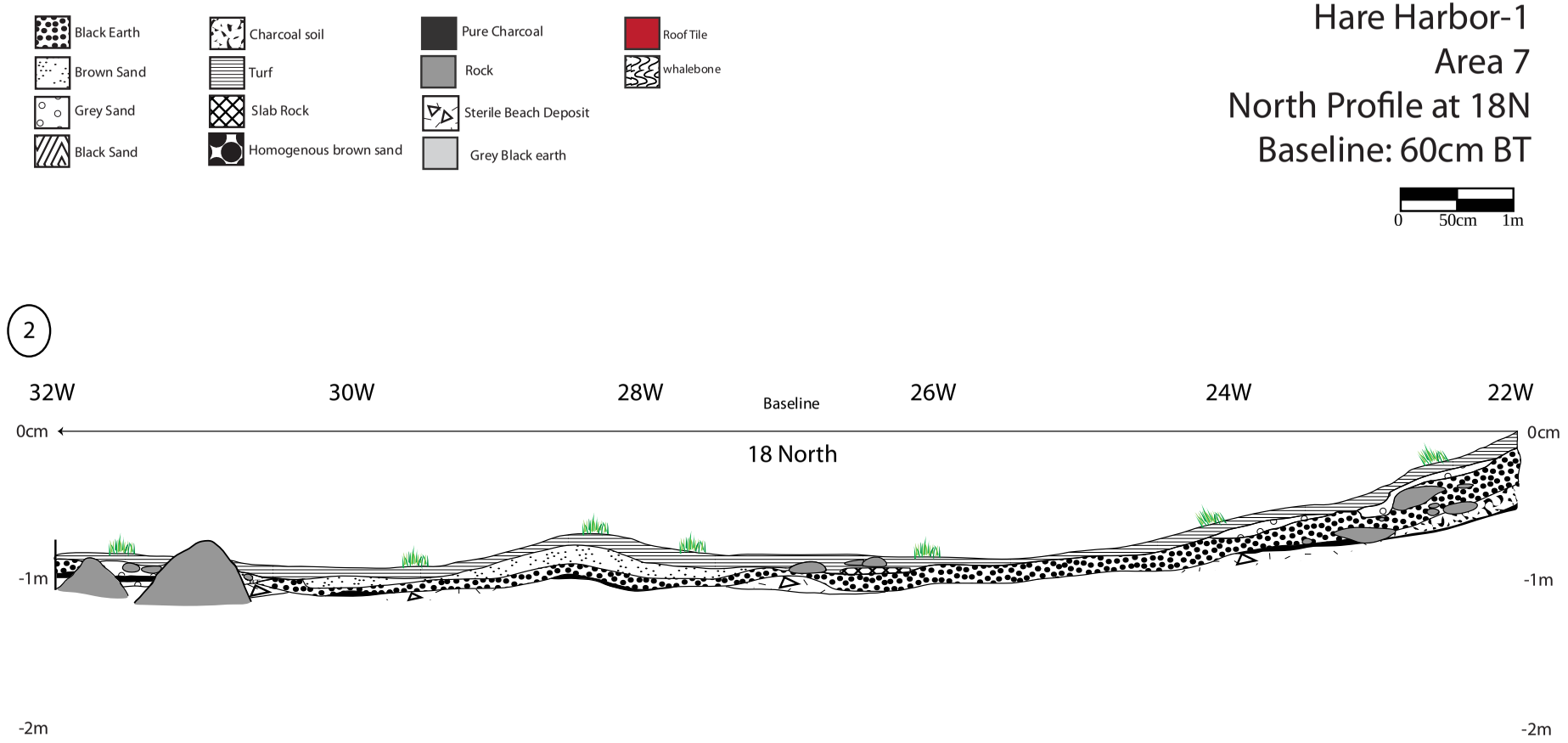


Fig. 1.90: North Profile at 18 North

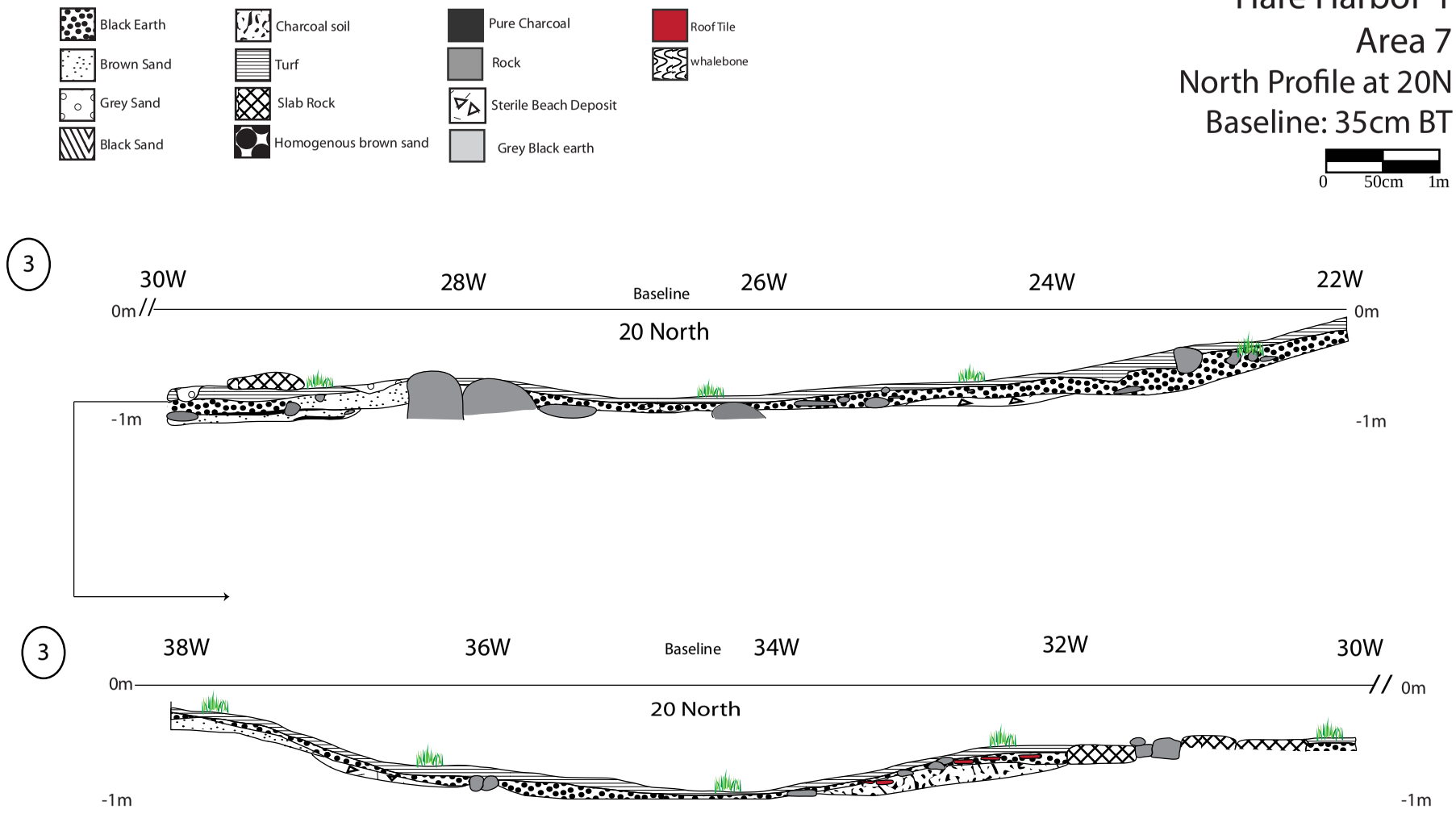


Fig. 1.91: North Profile at 20 North

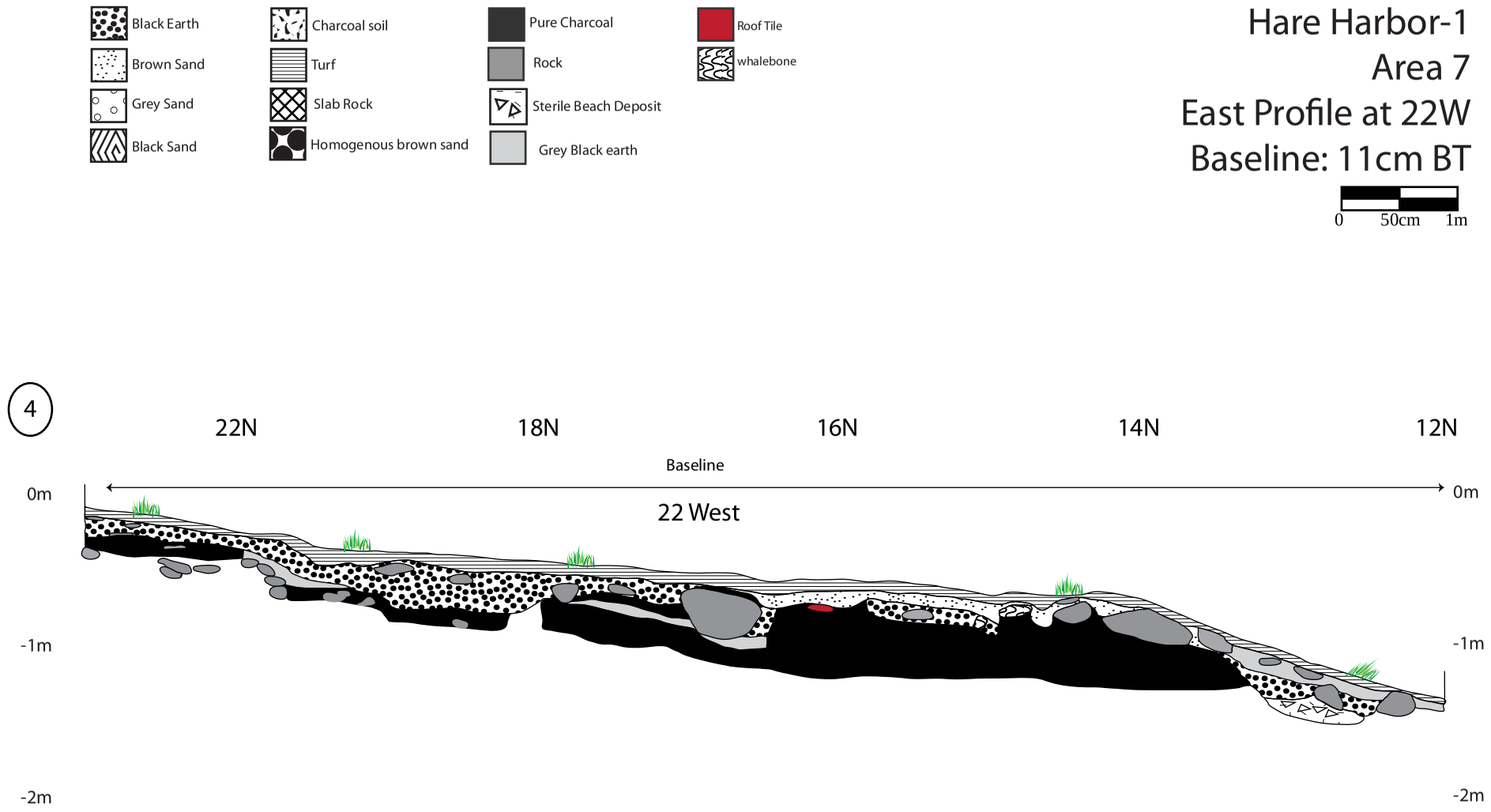


Fig. 1.92: East Profile at 22 West.

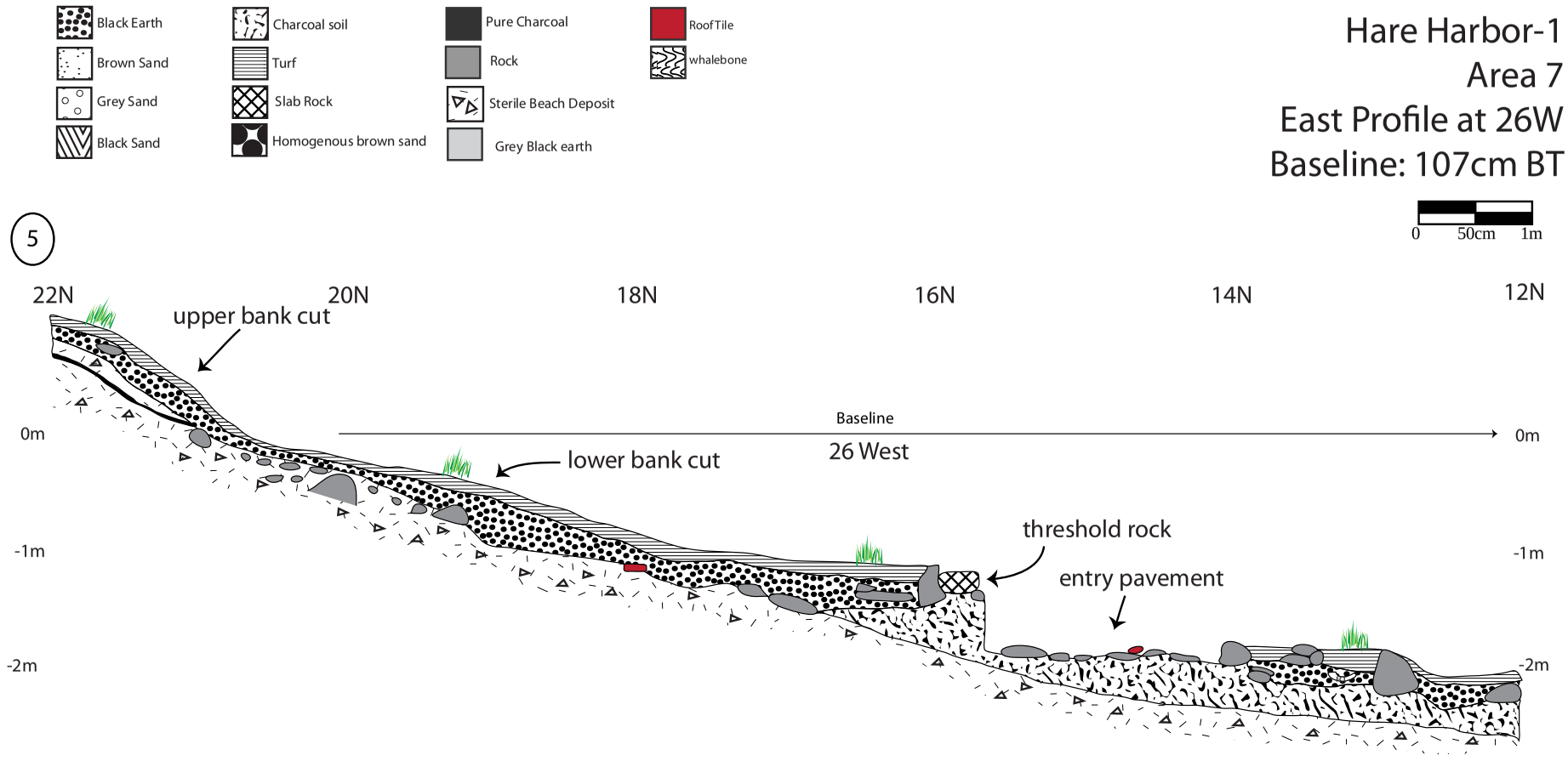


Fig. 1.93: East Profile at 26 West.

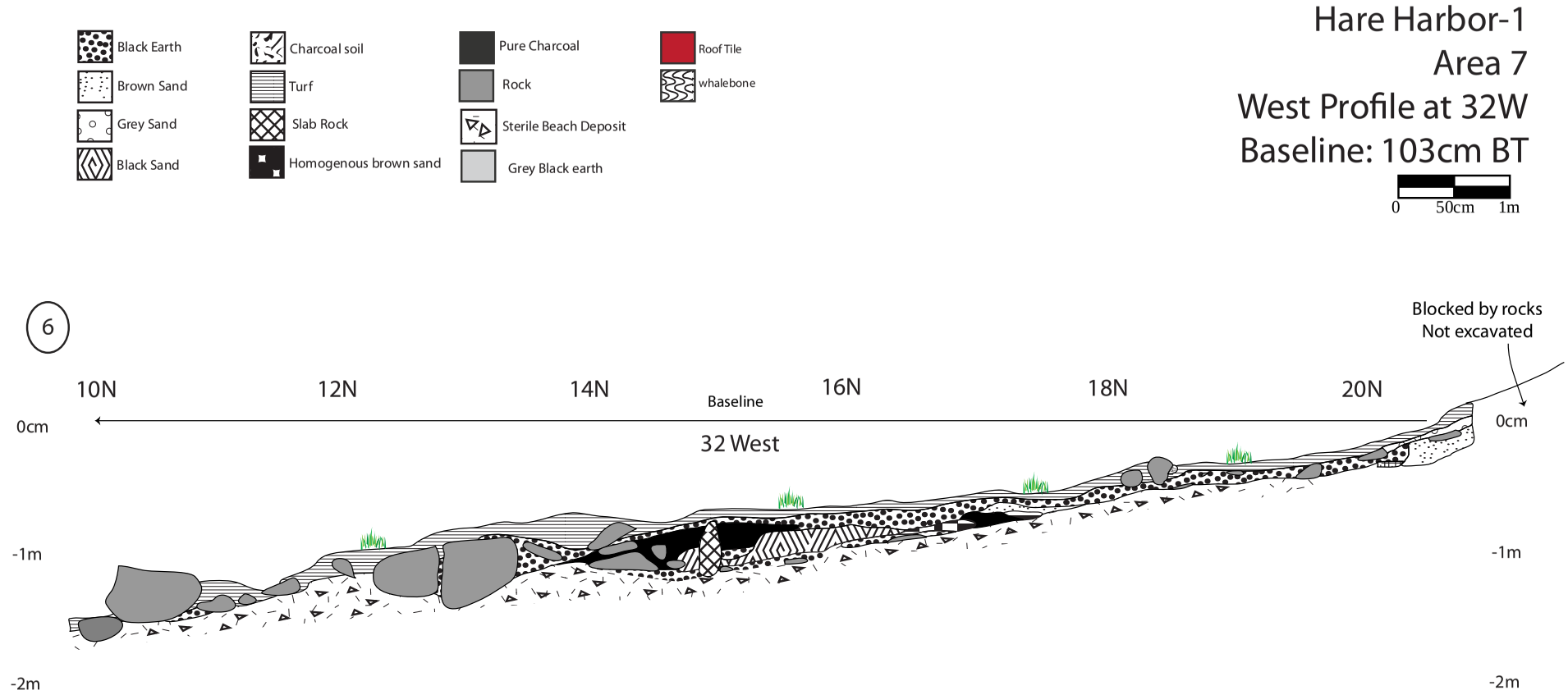


Fig. 1.94: West Profile at 32 West.

Hare Harbor-1 Artifact Inventory

Area 7

Fig. 1.95: view of 12N 30W. Photo by Wilfred Richard.

Fig. 1.96: Artifacts from 12N 30W. Photo by Wilfred Richard.

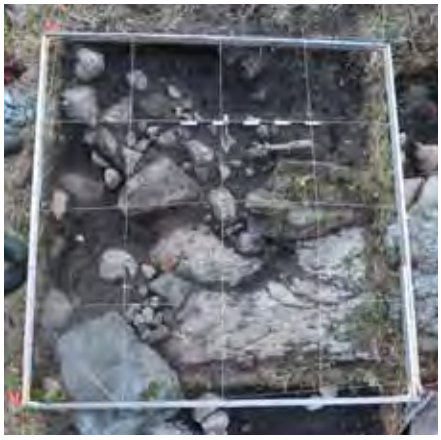


Fig. 1.97: view of 14N 22W. Photo by Wilfred Richard.

Fig. 1.98: Artifacts from 14N 22W. Photo by Wilfred Richard.

Fig. 1.99: view of 14N 24W. Photo by Wilfred Richard.

Fig. 1.100: Artifacts from 14N 22W. Photo by Wilfred Richard.

Fig. 1.101: view of 14N 26W. Photo by Wilfred Richard.

Fig. 1.102: Artifacts from 14N 26W. Photo by Wilfred Richard.

Fig. 1.103: view of 14N 28W. Photo by Wilfred Richard.

Fig. 1.104: view of 14N 30W. Photo by Wilfred Richard.

Fig. 1.105: Artifacts from 14N 30W. Photo by Wilfred Richard.

Fig. 1.106: view of 16N 22W. Photo by Wilfred Richard.

Fig. 1.107: Artifacts from 16N 22W. Photo by Wilfred Richard.

Fig. 1.108: Artifacts from 16N 22W. Photo by Wilfred Richard.

Fig. 1.109: view of 16N 24W. Photo by Wilfred Richard.

Fig. 1.110: Artifacts from 16N 24W. Photo by Wilfred Richard.

Fig. 1.111: view of 16N 26W. Photo by Wilfred Richard.

Fig. 1.112: Artifacts from 16N 26W. Photo by Wilfred Richard.

Fig. 1.113: view of 16N 28W. Photo by Wilfred Richard.

Fig. 1.114: Artifacts from 16N 28W. Photo by Wilfred Richard.

Fig. 1.115: view of 16N 30W. Photo by Wilfred Richard.

Fig. 1.116: Artifacts from 16N 30W. Photo by Wilfred Richard.

Fig. 1.117: Artifact from 16N 30W. Photo by Wilfred Richard.

Fig. 1.118: view of 18N 22W. Photo by Wilfred Richard.

Fig. 1.119: Artifacts from 18N 22W. Photo by Wilfred Richard.

Fig. 1.124: Artifacts from 18N 22W. Photo by Wilfred Richard.

Fig. 1.125: Artifacts from 18N 22W. Photo by Wilfred Richard.

Fig. 1.120: view of 18N 24W. Photo by Wilfred Richard.

Fig. 1.121: Artifacts from 18N 24W. Photo by Wilfred Richard.

Fig. 1.126: Artifacts from 18N 24W. Photo by Wilfred Richard.

Fig. 1.122: view of 18N 26W. Photo by Wilfred Richard.

Fig. 1.123: Artifacts from 18N 26W. Photo by Wilfred Richard.

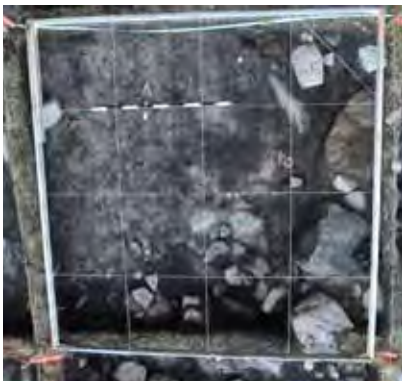


Fig. 1.127: view of 18N 28W. Photo by Wilfred Richard.

Fig. 1.128: Artifacts from 18N 28W. Photo by Wilfred Richard.

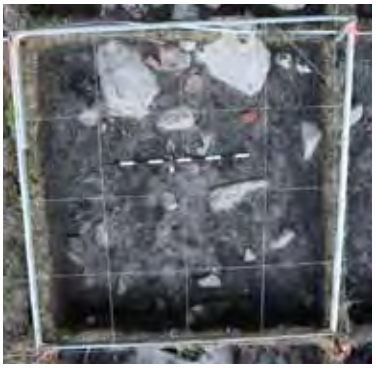


Fig. 1.129: view of 18N 30W. Photo by Wilfred Richard.

Fig. 1.130: Artifacts from 18N 30W. Photo by Wilfred Richard.

Fig. 1.131: view of 20N 22W. Photo by Wilfred Richard.

Fig. 1.132: Artifacts from 20N 22W. Photo by Wilfred Richard.

Fig. 1.133: Soapstone fragment with hevelled out marks from 20N 22W. Photo by Wilfred Richard.

Fig. 1.134: view of 20N 24W. Photo by Wilfred Richard.

Fig. 1.135: Artifacts from 20N 24W. Photo by Wilfred Richard.

Fig. 1.136: view of 20N 26W. Photo by Wilfred Richard.

Fig. 1.137: Artifacts from 20N 26W. Photo by Wilfred Richard.

Fig. 1.138: view of 20N 28W. Photo by Wilfred Richard.

Fig. 1.139: Artifacts from 20N 24W. Photo by Wilfred Richard.

Fig. 1.140: closeup of stoneware from 20N 24W. Photo by Wilfred Richard.

Fig. 1.141: view of 20N 30W. Photo by Wilfred Richard.

Fig. 1.142: Artifacts from 20N 30W. Photo by Wilfred Richard.

Fig. 1.143: closeup of soapstone from 20N 30W. Photo by Wilfred Richard.

Fig. 1.144: view of 20N 32W. Photo by Wilfred Richard.

Fig. 1.145: Artifacts from 20N 32W. Photo by Wilfred Richard.

Fig. 1.146: view of 20N 34W. Photo by Wilfred Richard.

Fig. 1.147: Artifacts from 20N 34W. Photo by Wilfred Richard.

Fig. 1.148: view of 22N 22W. Photo by Wilfred Richard.

Fig. 1.149: Artifacts from 22N 22W. Photo by Wilfred Richard.

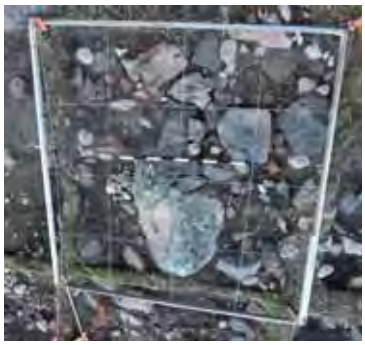


Fig. 1.150: view of 22N 24W. Photo by Wilfred Richard.

Fig. 1.151: Artifacts from 22N 24W. Photo by Wilfred Richard.

Fig. 1.152: view of 22N 26W. Photo by Wilfred Richard.

Fig. 1.153: Artifacts from 22N 26W. Photo by Wilfred Richard.

Fig. 1.154: view of 22N 28W. Photo by Wilfred Richard.

Fig. 1.155: Artifacts from 22N 28W. Photo by Wilfred Richard.

Fig. 1.156: view of 22N 30W. Photo by Wilfred Richard.

Fig. 1.157: Artifact from 22N 30W. Photo by Wilfred Richard.

Fig. 1.158: view of 22N 32W. Photo by Wilfred Richard.

Fig. 1.159: Artifacts from 22N 32W. Photo by Wilfred Richard.

Fig. 1.160: view of 22N 34W. Photo by Wilfred Richard.

Fig. 1.161: Artifacts from 22N 34W. Photo by Wilfred Richard.

Fig. 1.162: view of 22N 36W. Photo by Wilfred Richard.

Fig. 1.163: Artifacts from 22N 36W. Photo by Wilfred Richard.

Fig. 1.164: view of 22N 38W. Photo by Wilfred Richard.

Fig. 1.165: Artifact from 22N 38W. Photo by Wilfred Richard.

Fig. 1.166: view of 22N 40W. Photo by Wilfred Richard.

Fig. 1.167: Artifacts from 22N 40W. Photo by Wilfred Richard.

Fig. 1.168: Artifact found in 2010 backdirt Photo by Wilfred Richard.

Area 8

Fig. 1.169: view of 4N 20W. Photo by Wilfred Richard.

Fig. 1.170: Artifacts from 4N 20W. Photo by Wilfred Richard.

Fig. 1.171: Artifacts from 4N 20W. Photo by Wilfred Richard.

Fig. 1.172: view of 6N 20W. Photo by Wilfred Richard.

Fig. 1.173: Artifacts from 6N 20W. Photo by Wilfred Richard.

Fig. 1.174: Artifacts from 6N 20W. Photo by Wilfred Richard.

Fig. 1.175: Artifacts from 6N 20W. Photo by Wilfred Richard.

Fig. 1.176: view of 8N 20W. Photo by Wilfred Richard.

Fig. 1.177: Artifacts from 8N 20W. Photo by Wilfred Richard.

Fig. 1.178: Artifacts from 8N 20W. Photo by Wilfred Richard.

Fig. 1.183: Artifacts from 8N 20W. Photo by Wilfred Richard.

Fig. 1.185: view of 10N 20W. Photo by Wilfred Richard.

Fig. 1.179: Artifacts from 10N 20W. Photo by Wilfred Richard.

Fig. 1.180: Artifacts from 10N 20W. Photo by Wilfred Richard.

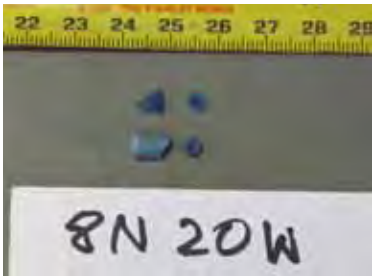


Fig. 1.181: Artifacts from 8N 20W. Photo by Wilfred Richard.

Fig. 1.184: Artifacts from 8N 20W. Photo by Wilfred Richard.

Fig. 1.182: Artifacts from 8N 20W. Photo by Wilfred Richard.

Artifact Gallery

Fig. 1.187: 4N 20W Marmite sherds. Photo by Wilfred Richard.

Fig. 1.188: 4N 20W earthenware sherds. Photo by Wilfred Richard.

Fig. 1.189: 4N 20W beads. Photo by Wilfred Richard.

Fig. 1.190: 6N 20W sherds. Photo by Wilfred Richard.

Fig. 1.191: 6N 20W bellarmine sherd. Photo by Wilfred Richard.

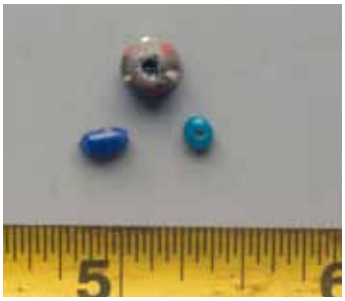


Fig. 1.192: 10N 20W beads. Photo by Wilfred Richard.

Fig. 1.193: 12N 30W flint sherd. Photo by Wilfred Richard.

Fig. 1.194: 16N 30W clay pipe bowl. Photo by Wilfred Richard.

Fig. 1.195: 18N 22W Ramah chert point. Photo by Wilfred Richard.

Fig. 1.196: 16N 34W musket ball. Photo by Wilfred Richard.

Fig. 1.197: 20N 22W earthenware glaze. Photo by Wilfred Richard.

Fig. 1.198: 20N 22W beads. Photo by Wilfred Richard.

Fig. 1.199: 20N 26W bead and glaze sherd. Photo by Wilfred Richard.

Fig. 1.200: 20N 28W bead. Photo by Wilfred Richard.

Fig. 1.203: 20N 32W Dorset microblade. Photo by Wilfred Richard.

Fig. 1.202: 20N 30W soapstone lamp. Photo by Wilfred Richard.

Fig. 1.201: 20N 28W ceramic sherds. Photo by Wilfred Richard.

Fig. 1.204: 22N 26W fishing line weight. Photo by Wilfred Richard.

Fig. 1.205: 22N 28W copper headband. Photo by Wilfred Richard.

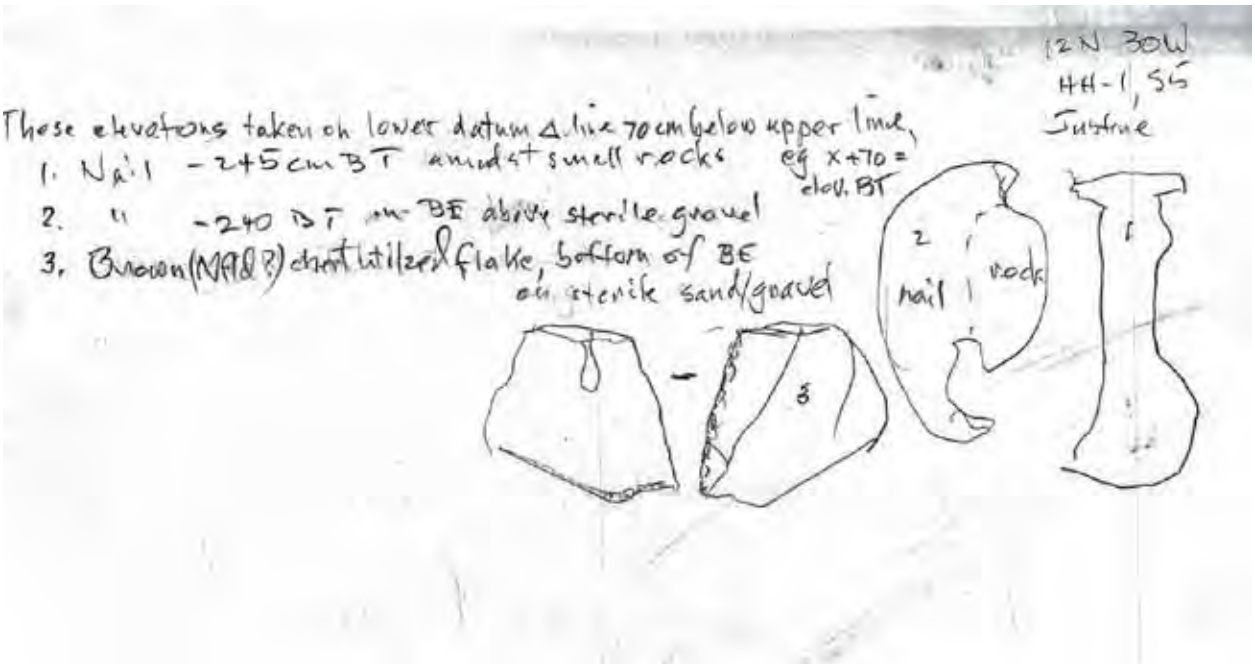
Fig. 1.209: 22N 28W ulu made of glass. Photo by Wilfred Richard.

Fig. 1.206: 22N 28W soapstone pot bottom fragment. Photo by Wilfred Richard.

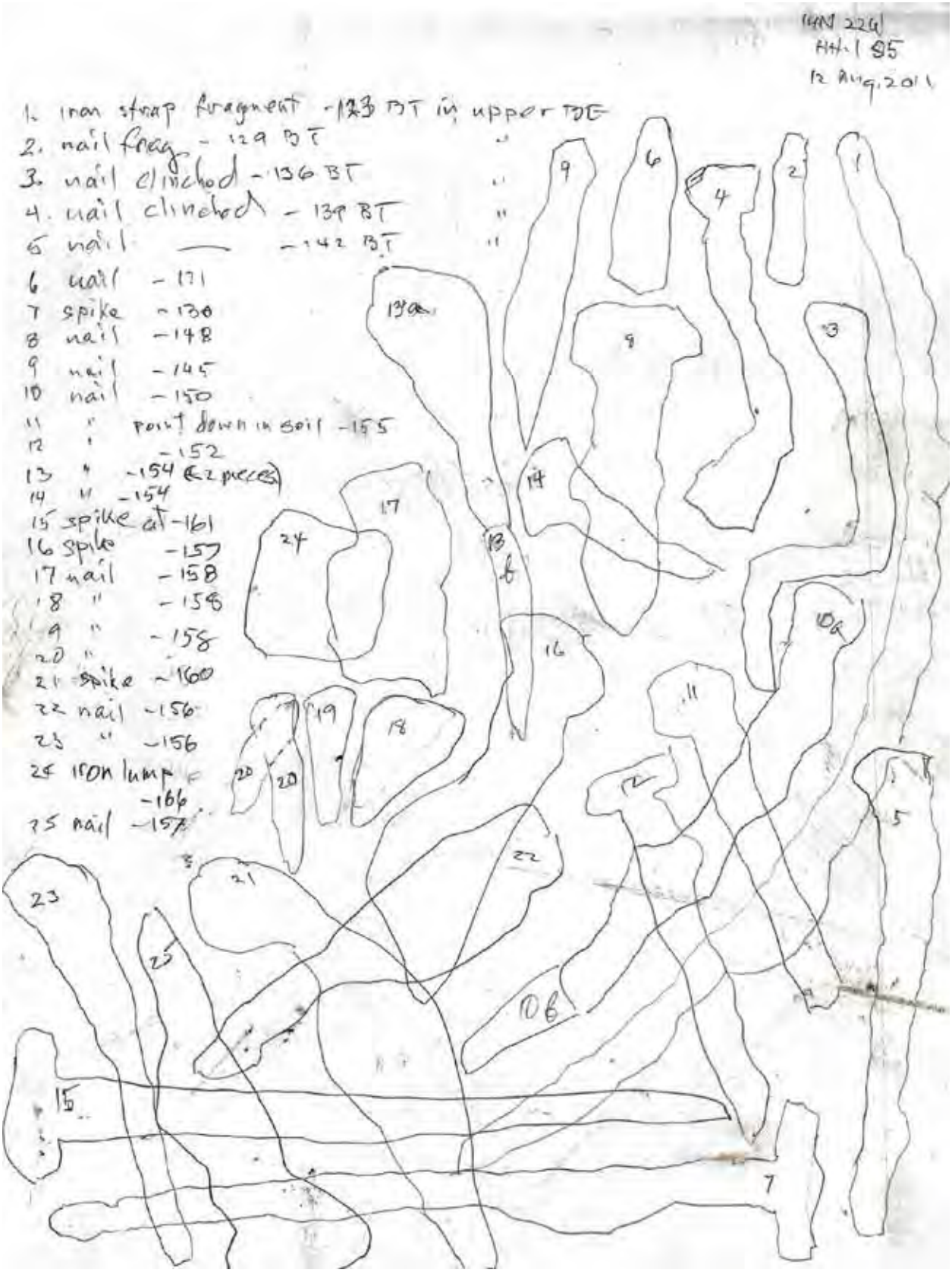
Fig. 1.208: 22N 28W soapstone pot reconstruction fragment. Photo by Wilfred Richard.

Fig. 1.207: prehistoric finds. Photo by Wilfred Richard.

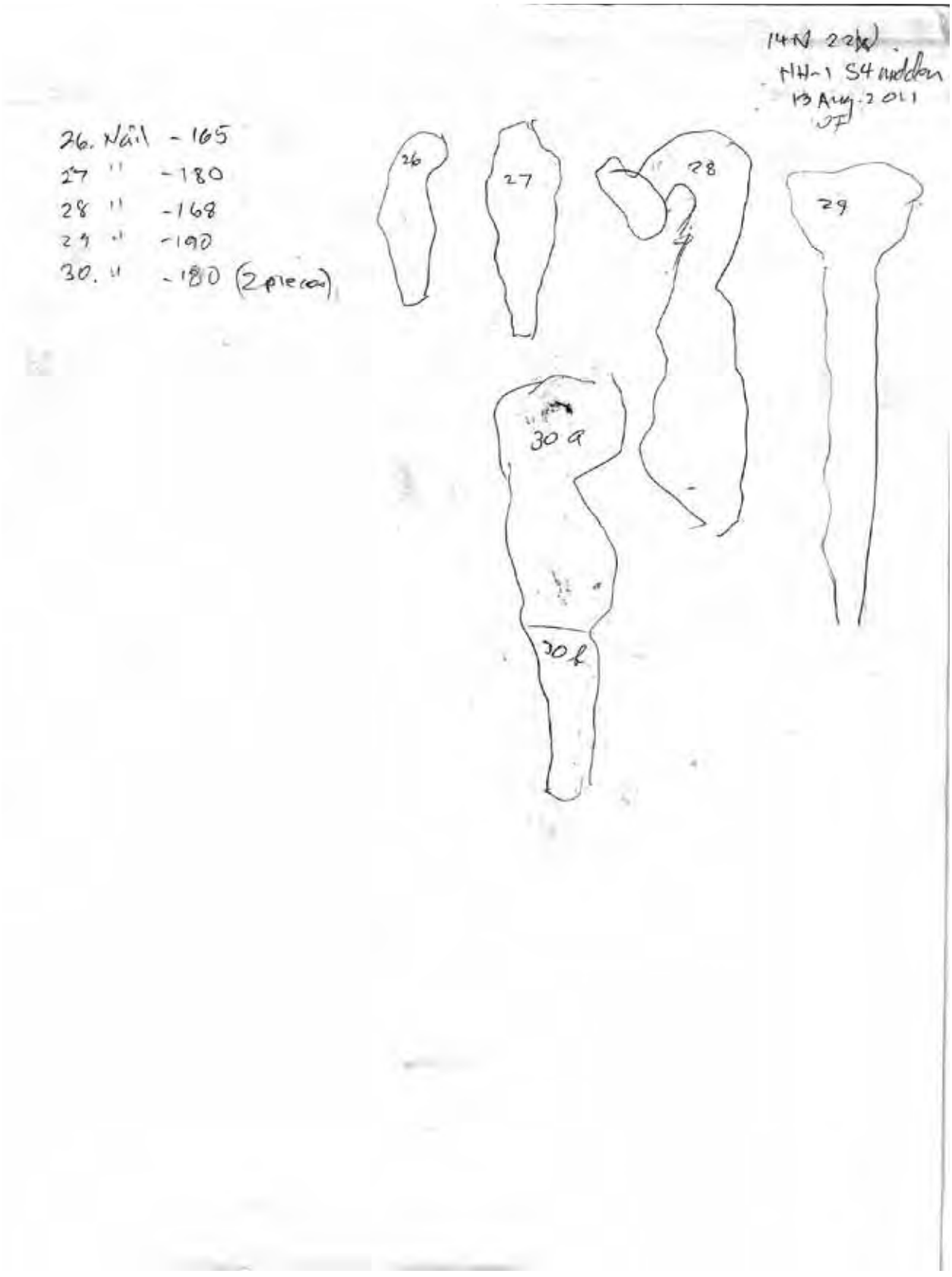
HH-1 Artifact Drawings, By Square



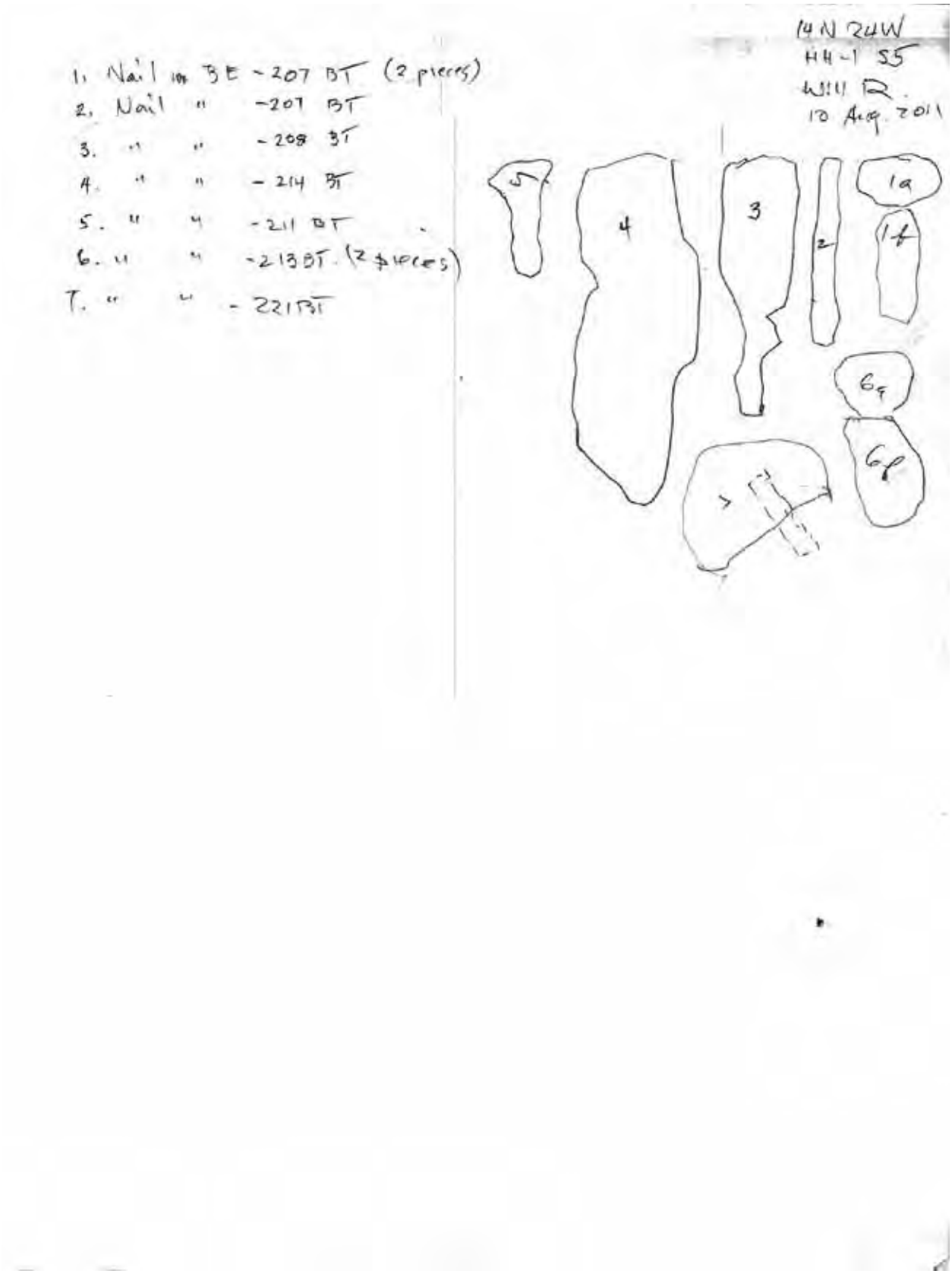
HH-1 Area 7 12N 30W artifact drawings.



HH-1 Area 7 14N 22W artifact drawings.

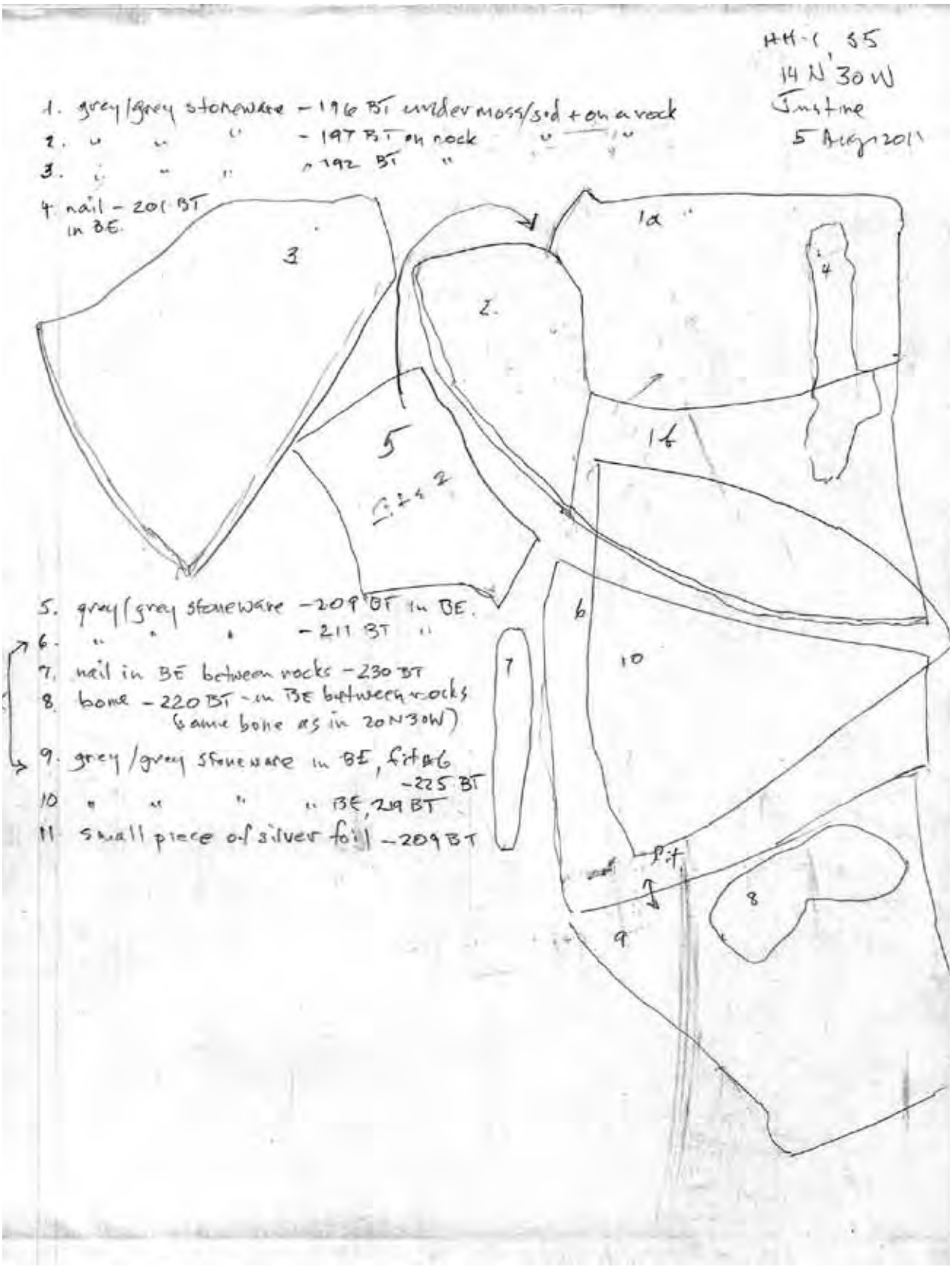


HH-1 Area 7 14N 22W artifact drawings.



HH-1 Area 7 14N 24W artifact drawings.

HH-1 Area 7 14N 26W artifact drawings.



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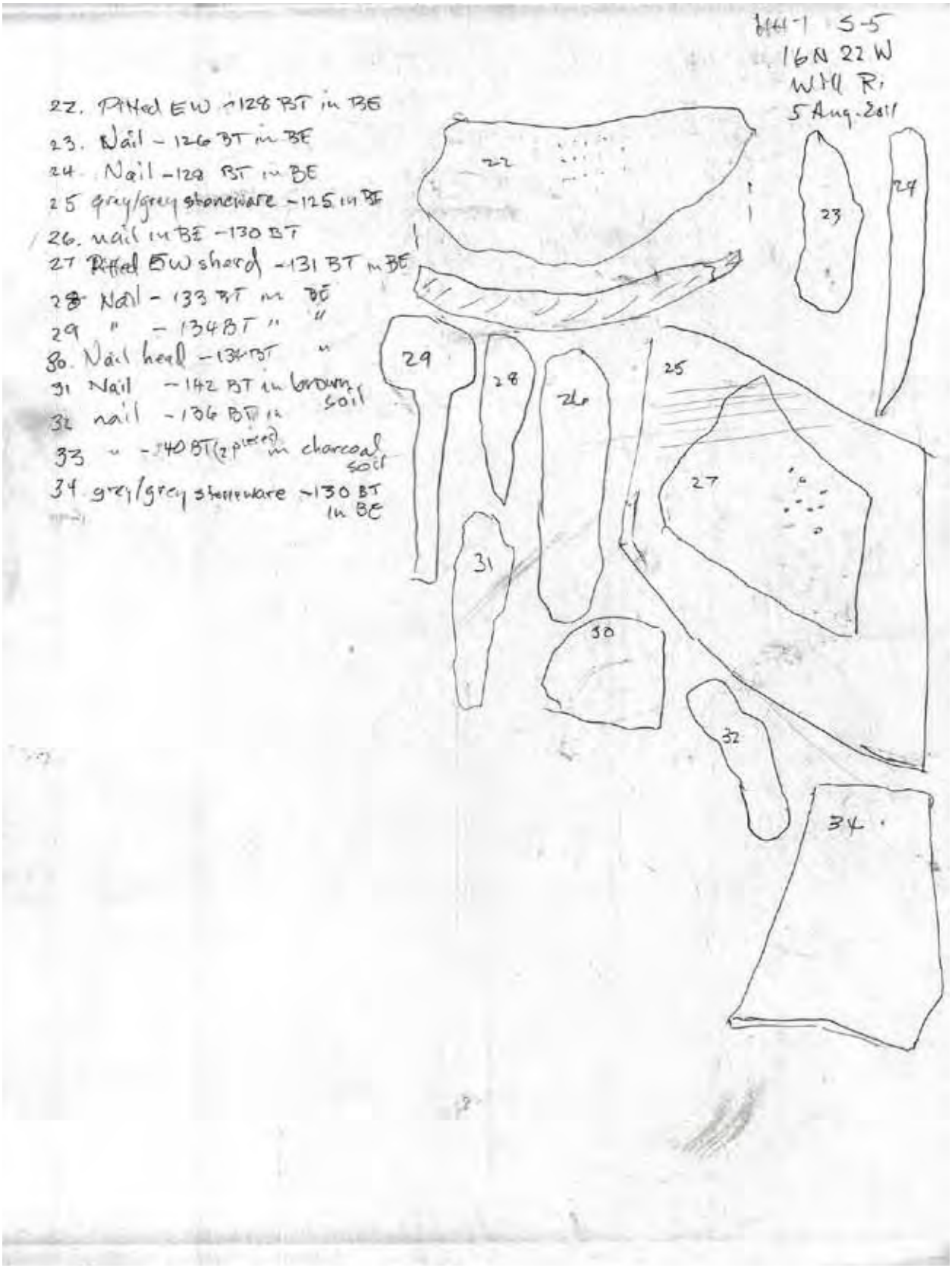

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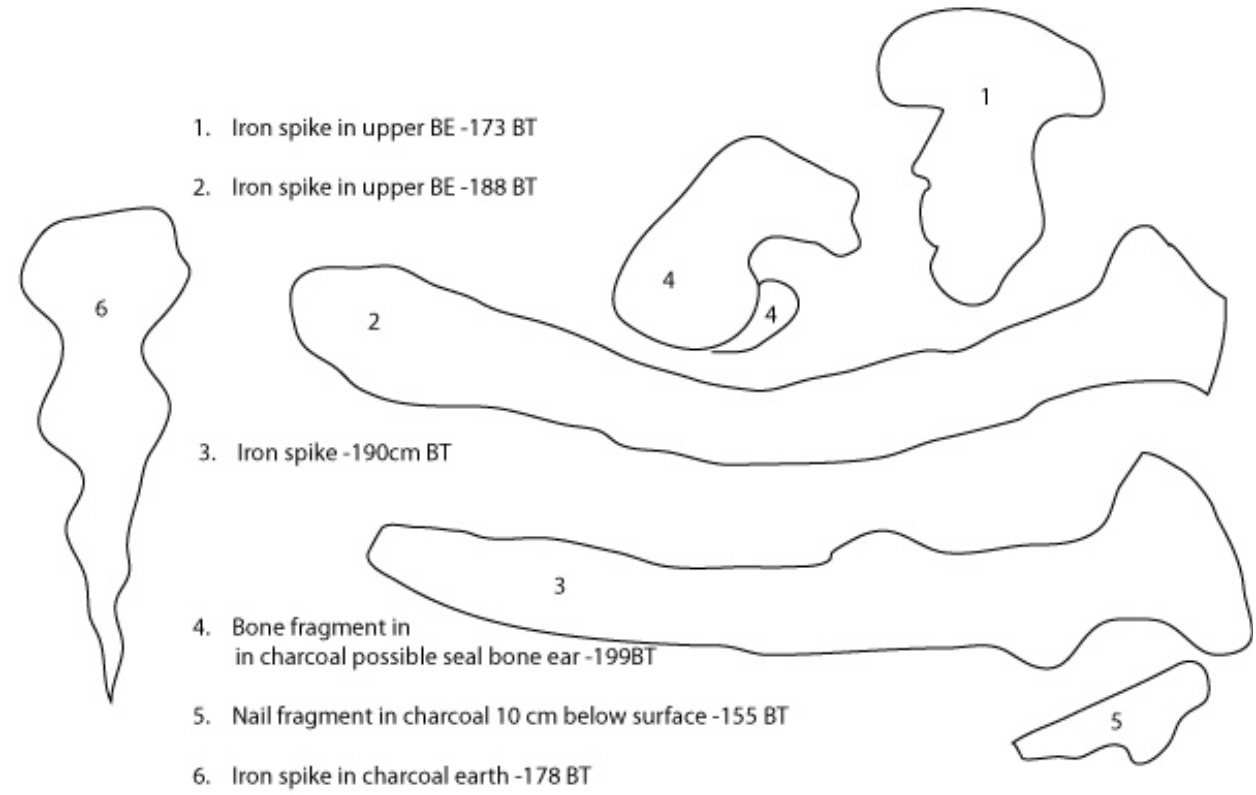

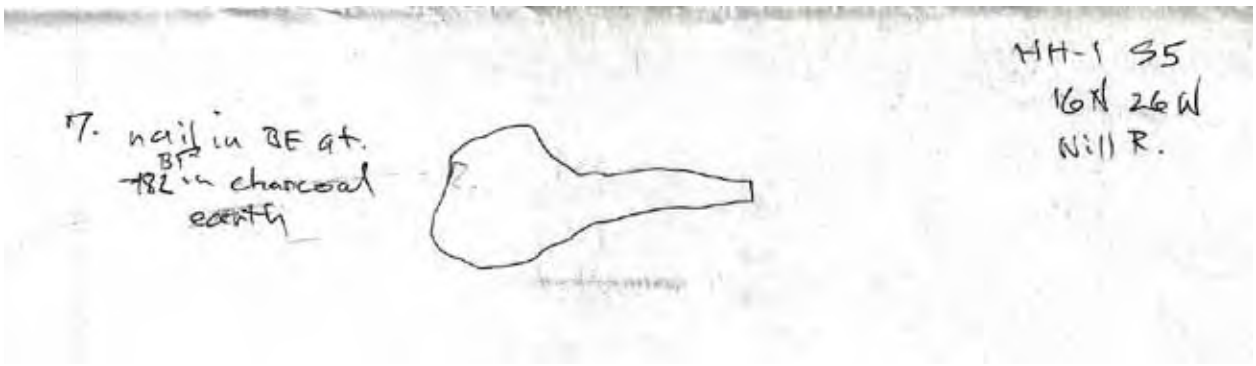

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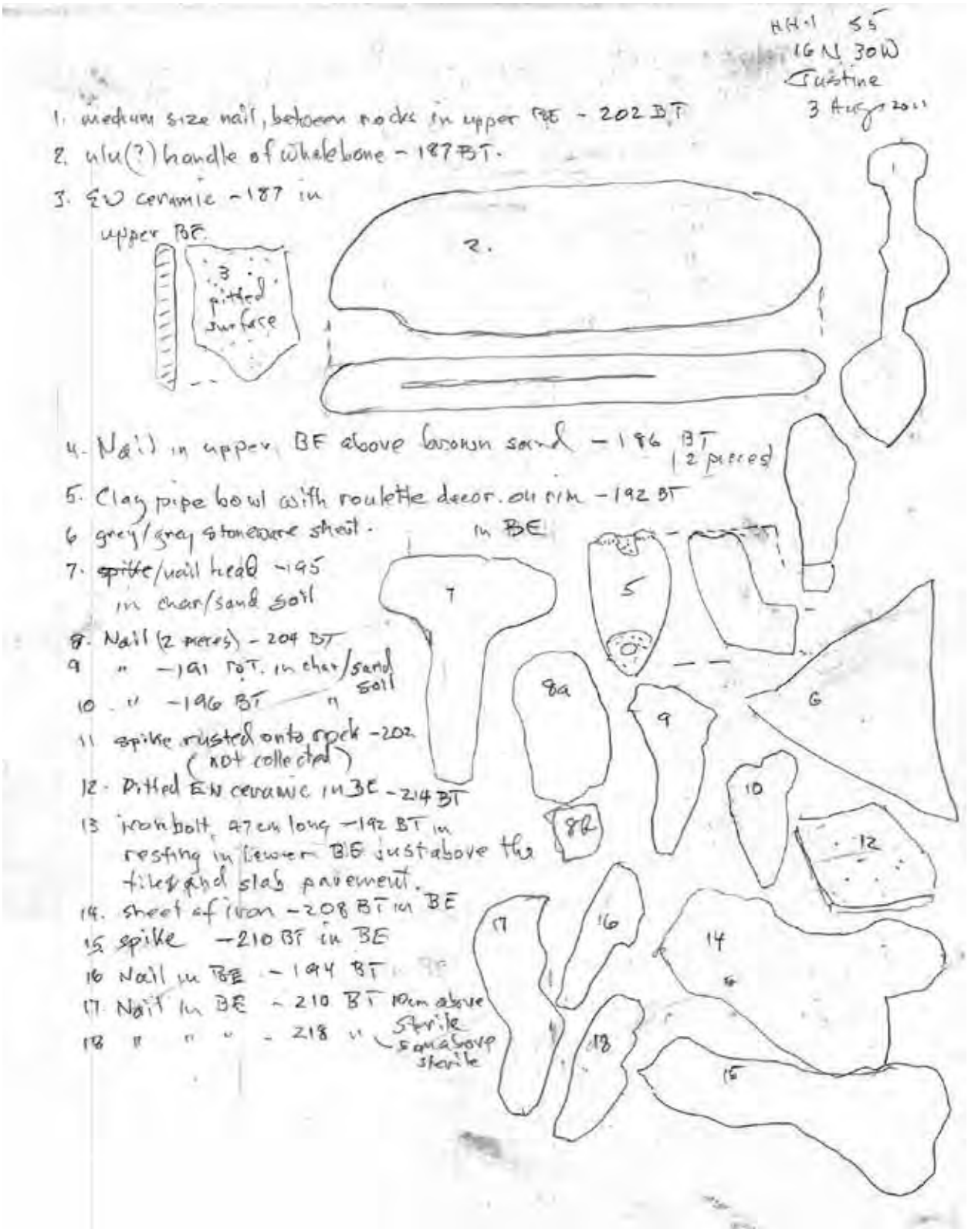

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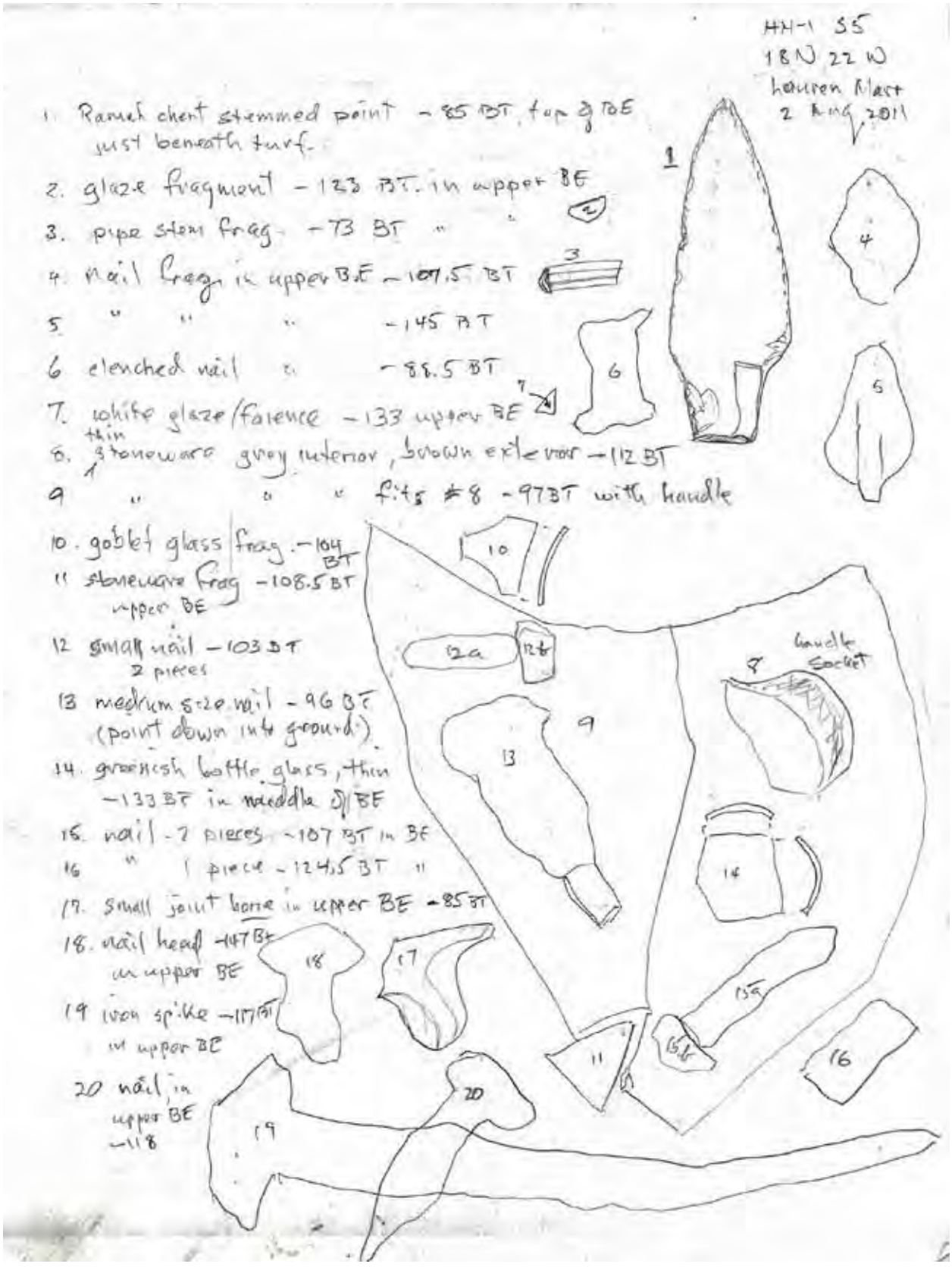

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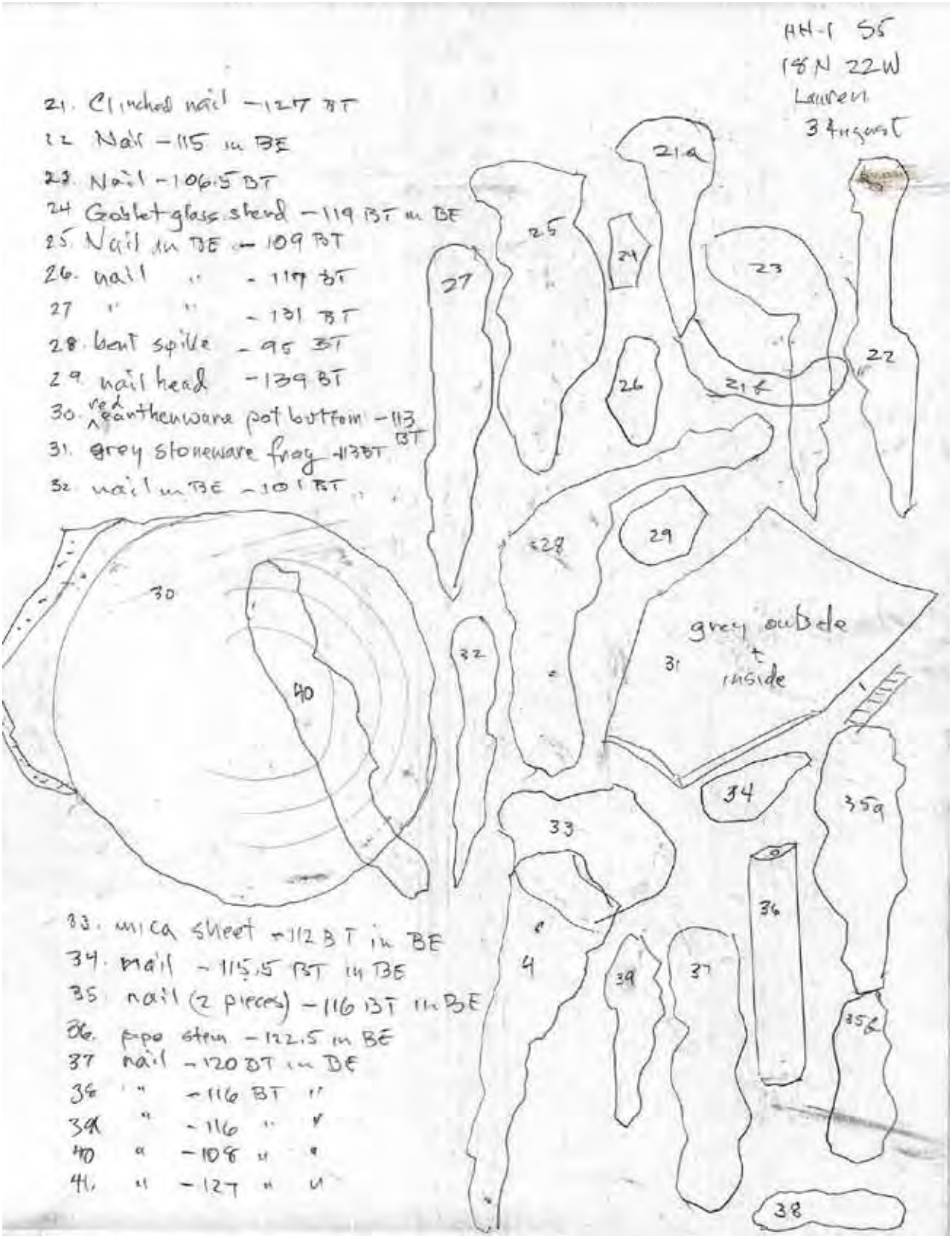

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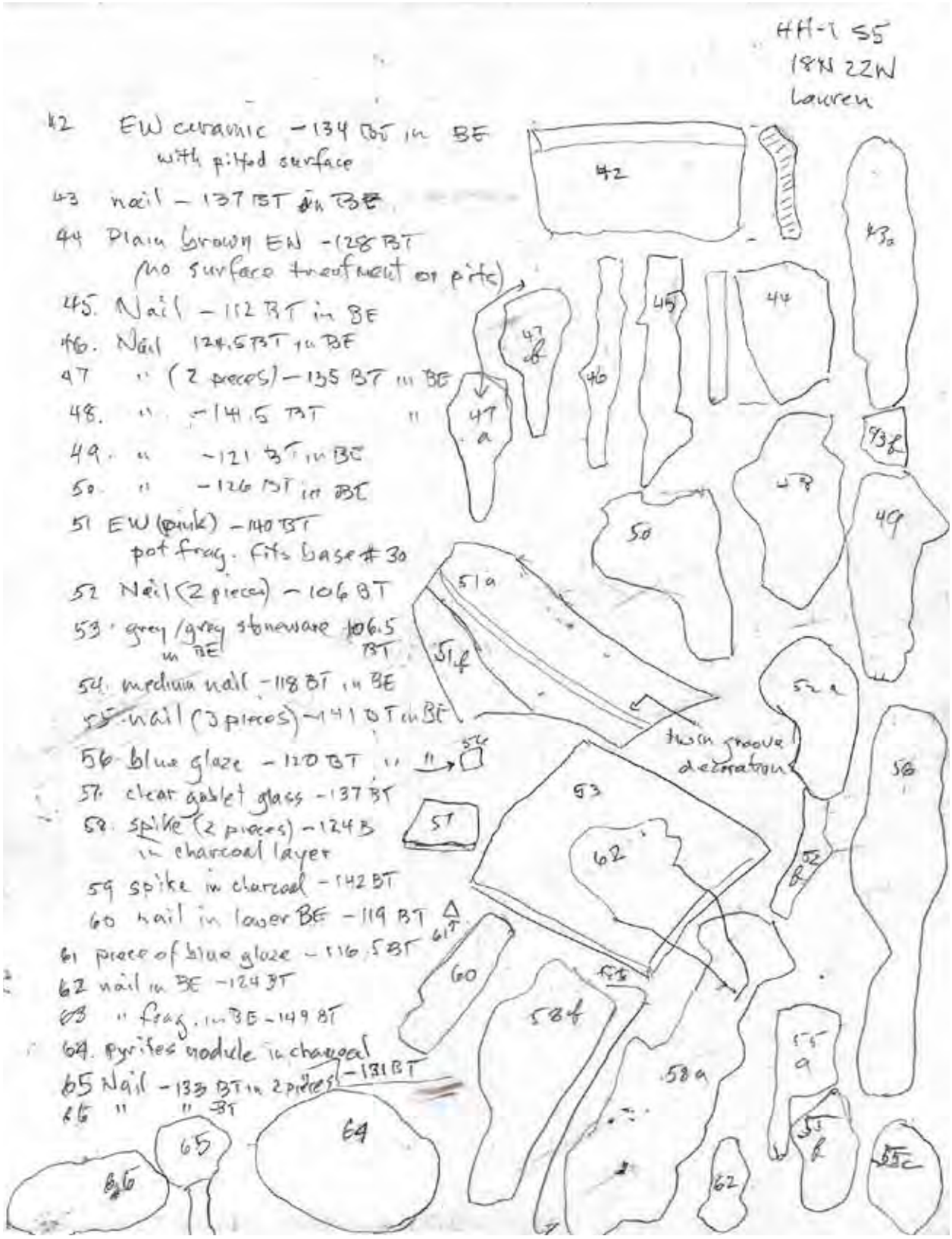

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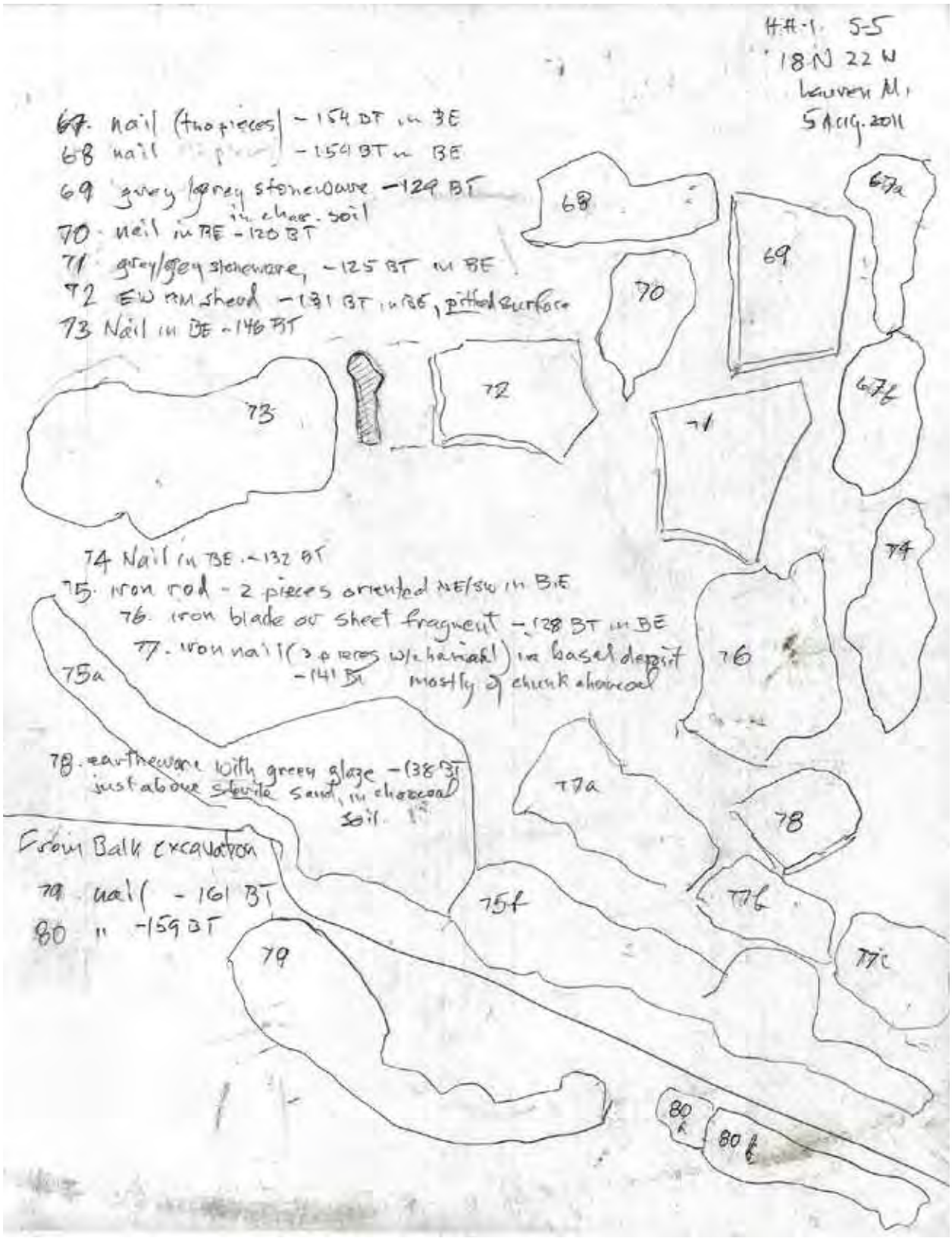

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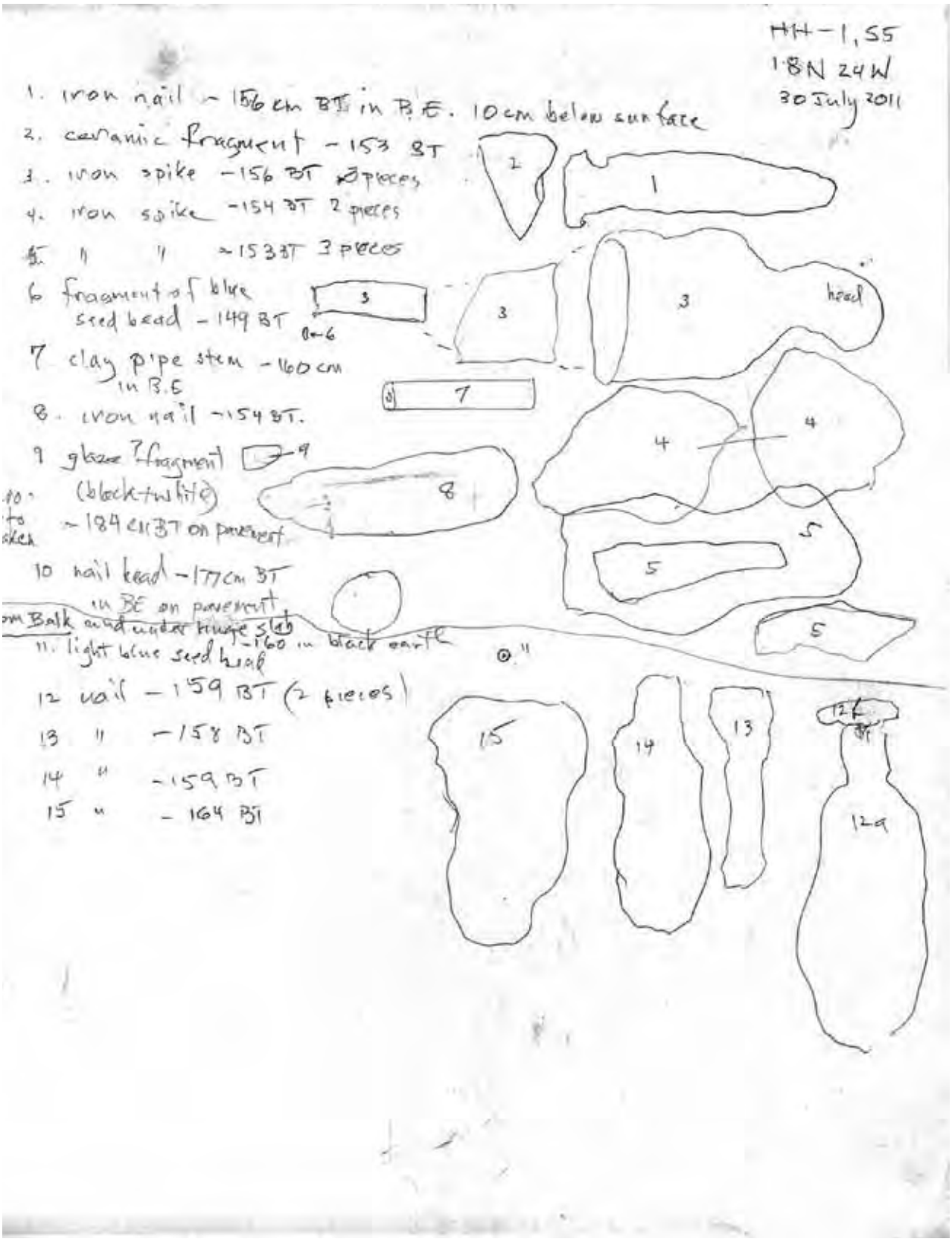

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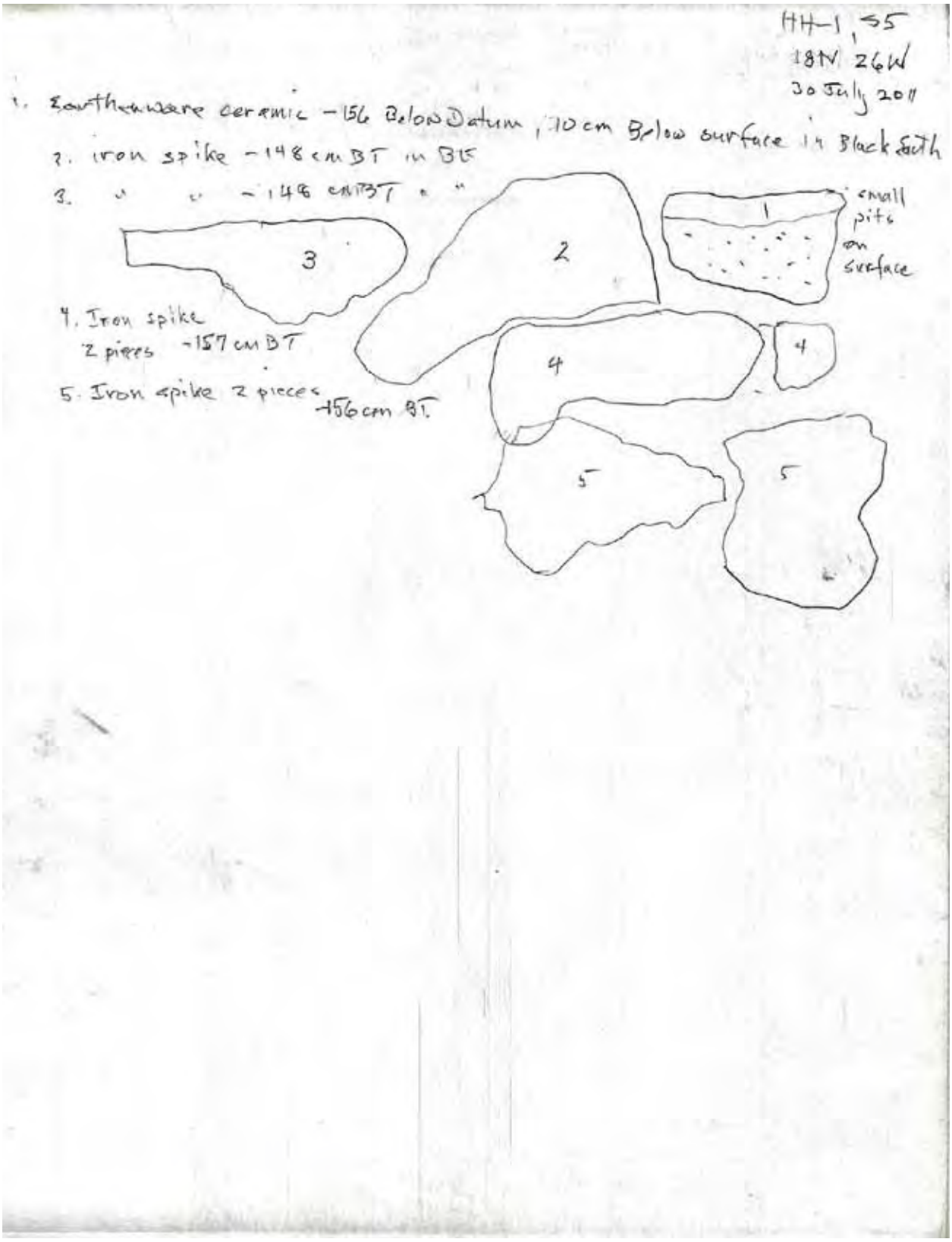
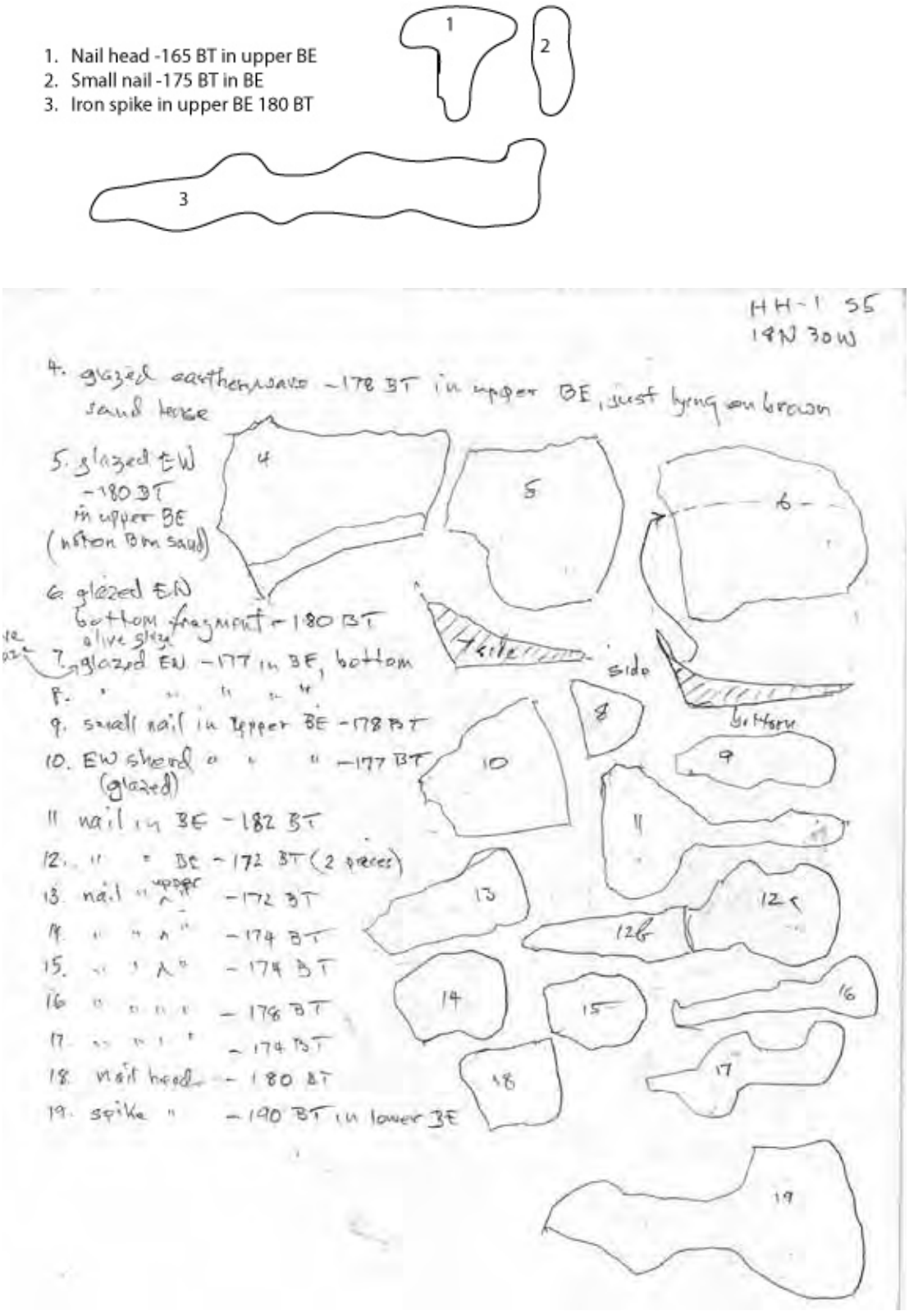


HH-1 Area 7 18N 26W artifact drawings.

HH-1 Area 7 18N 28W artifact drawings.



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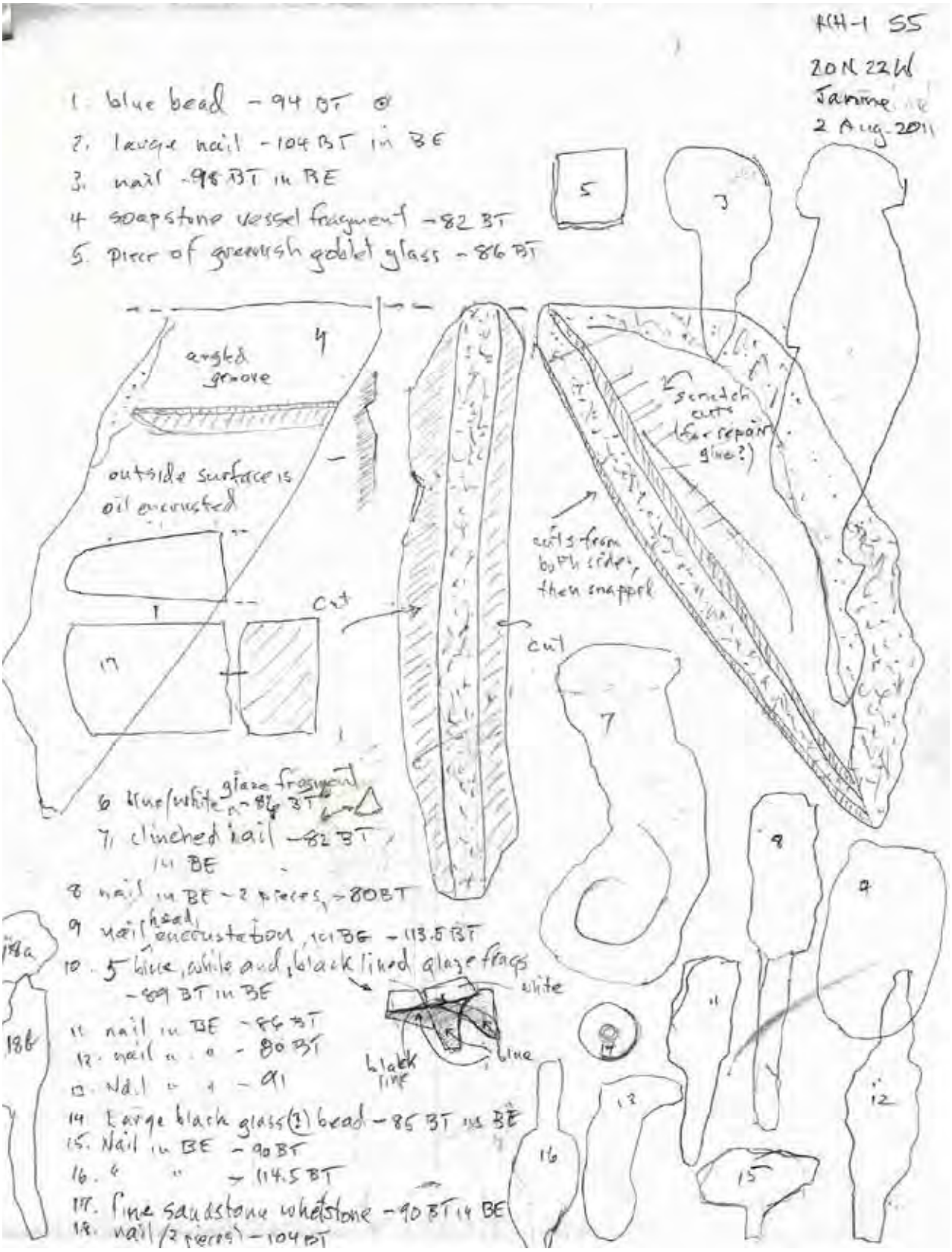

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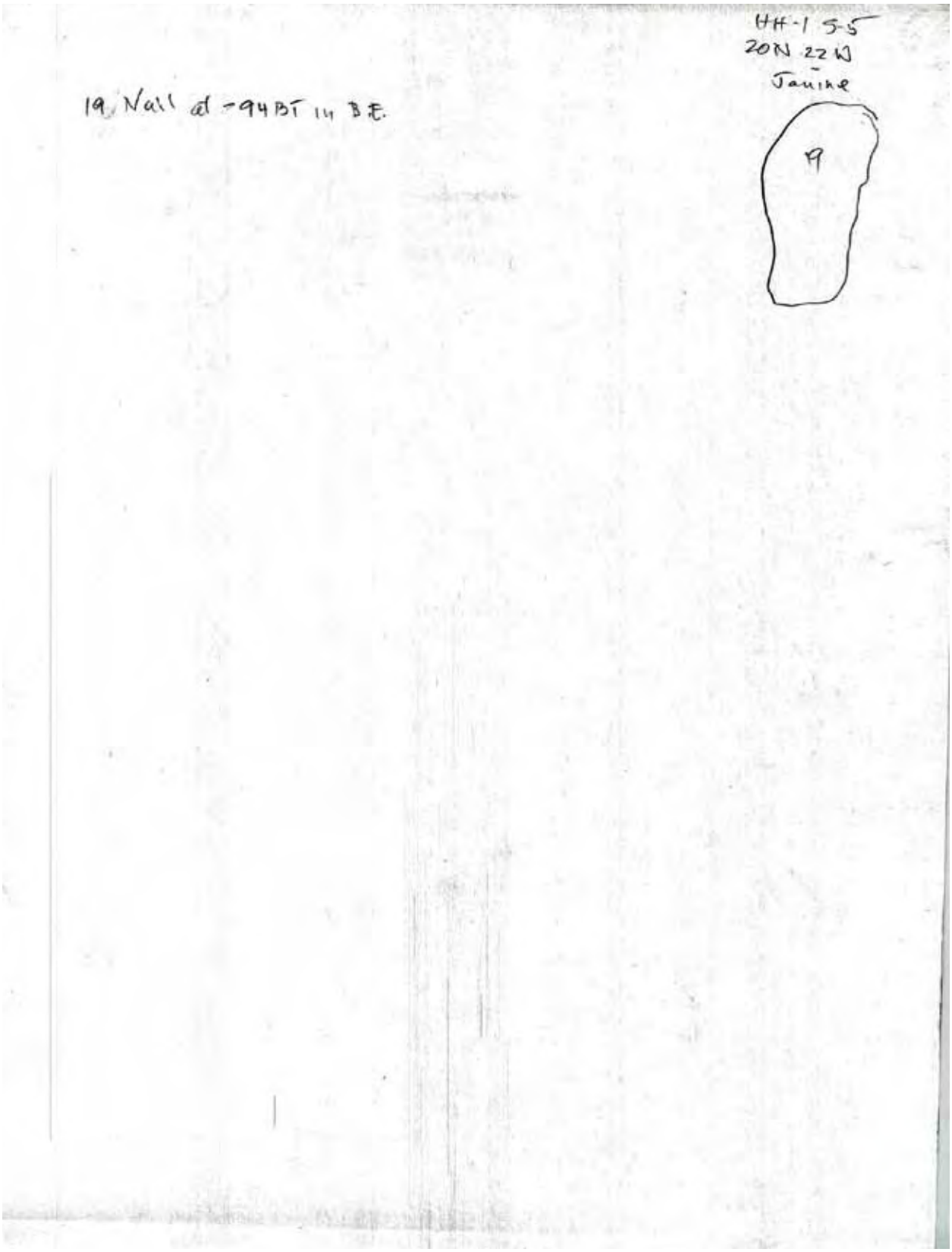
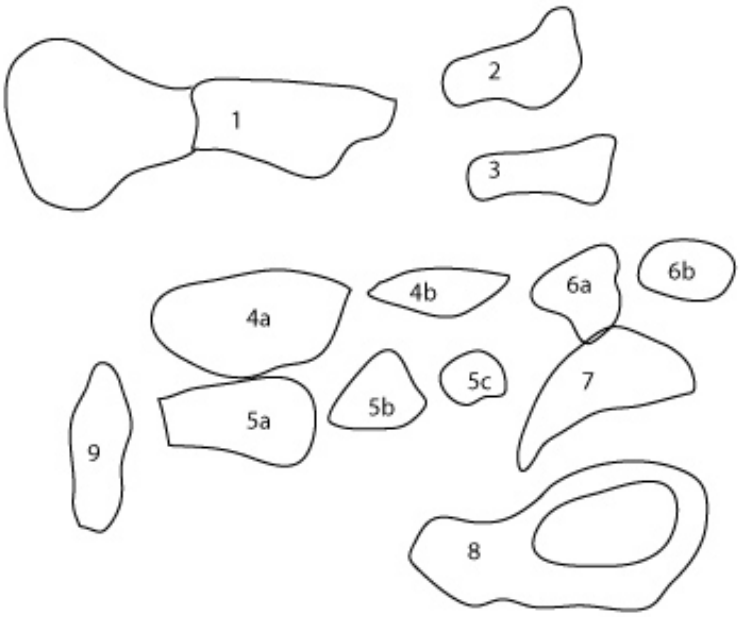
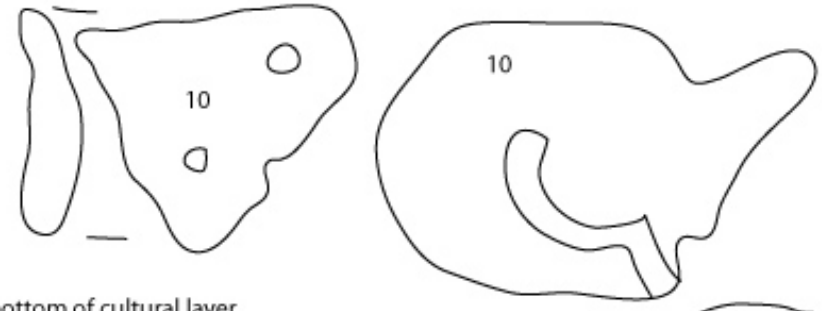


HH-1 Area 7 20N 22W artifact drawings.

1. Iron spike (2 pieces) -127 BT
2. Nail fragment -126.5 BT in base of turf
3. Nail fragment -130 BT
4. Nail fragment -130 BT
5. Nail head -136.5 BT 2 pieces
6. Nail fragments -112 BT
7. Nail fragment -108 BT
8. Clenched nail -139 BT
9. Small nail 135.5 BT



10 Iron mass -150 BT in many piece a coiled strap of iron, blade like piece and other fragments



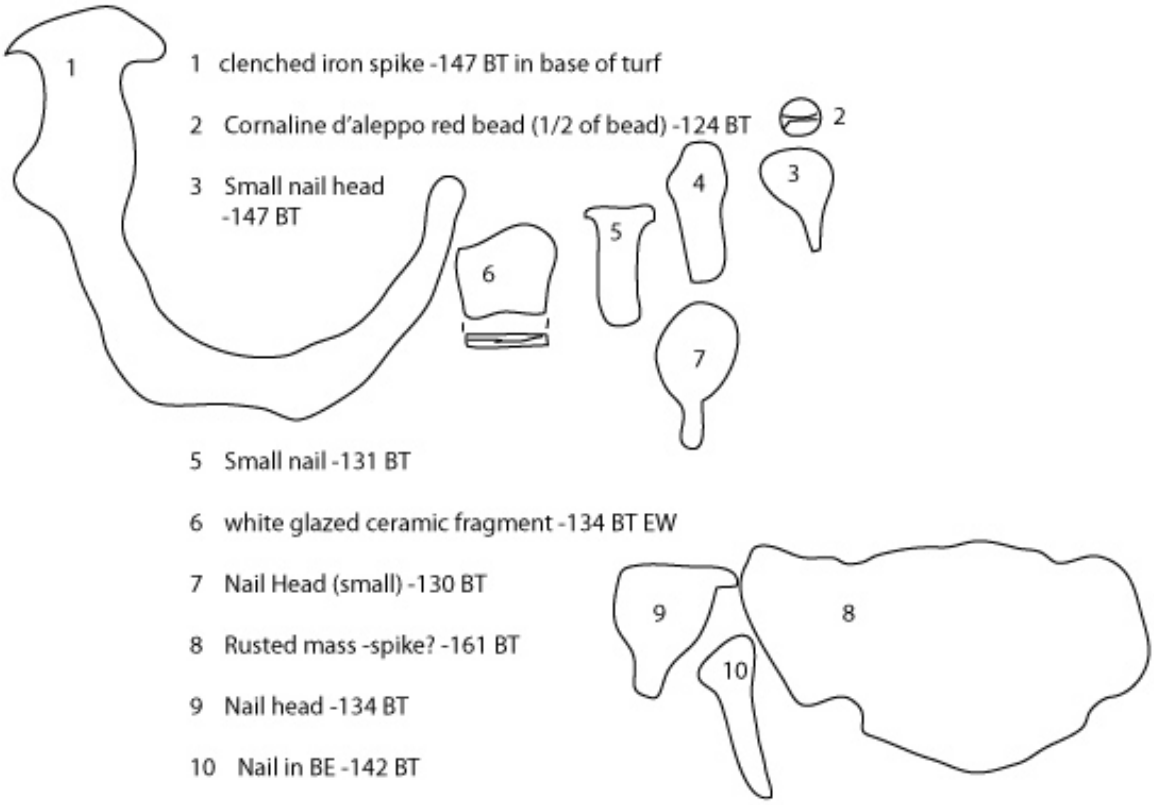
11 Nail head -147 bottom of cultural layer

12 Nail -150BT

13. Nail fragments -109 BT

14 Iron nail fragment -141 BT

HH-1 Area 7 20N 24W artifact drawings.



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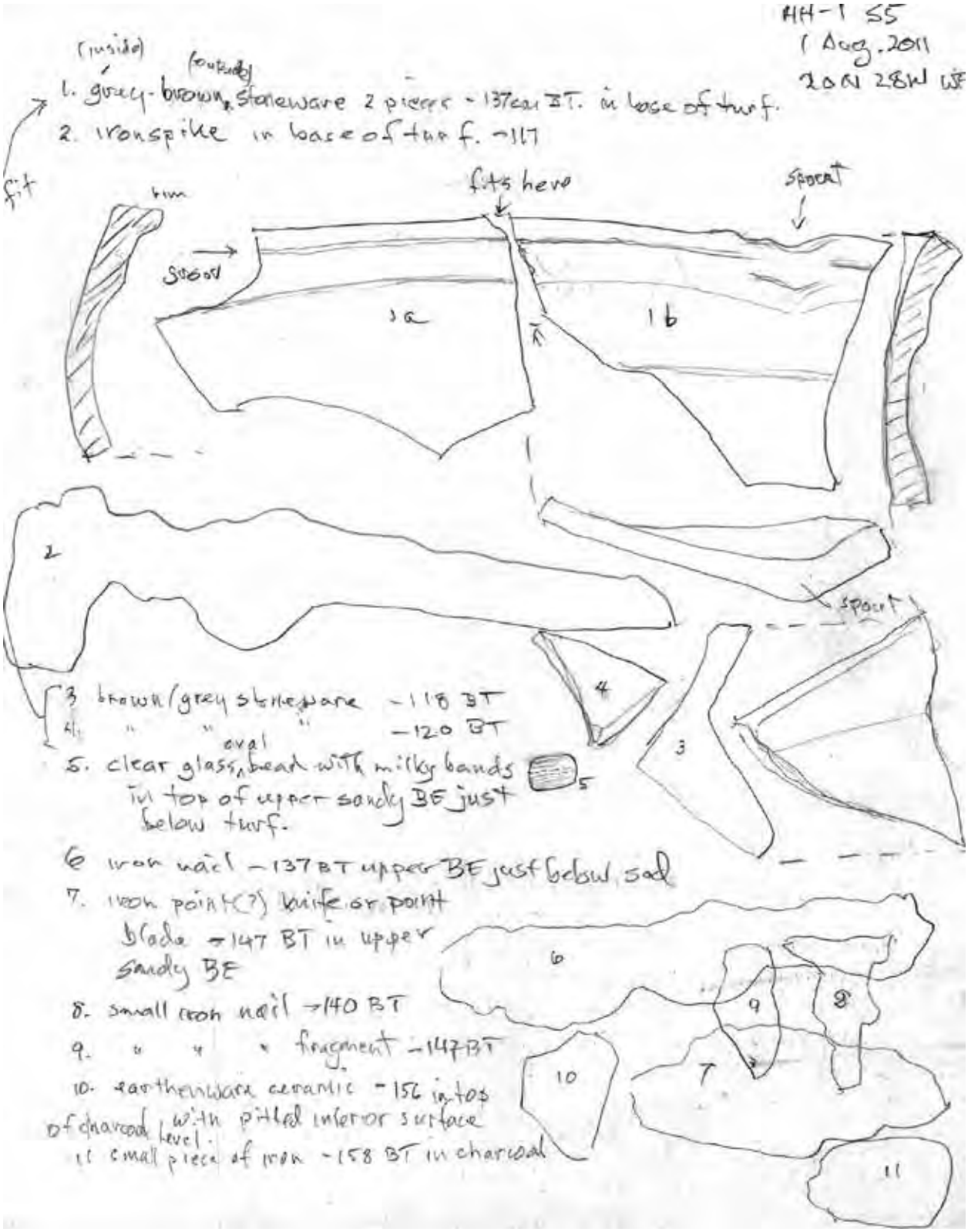

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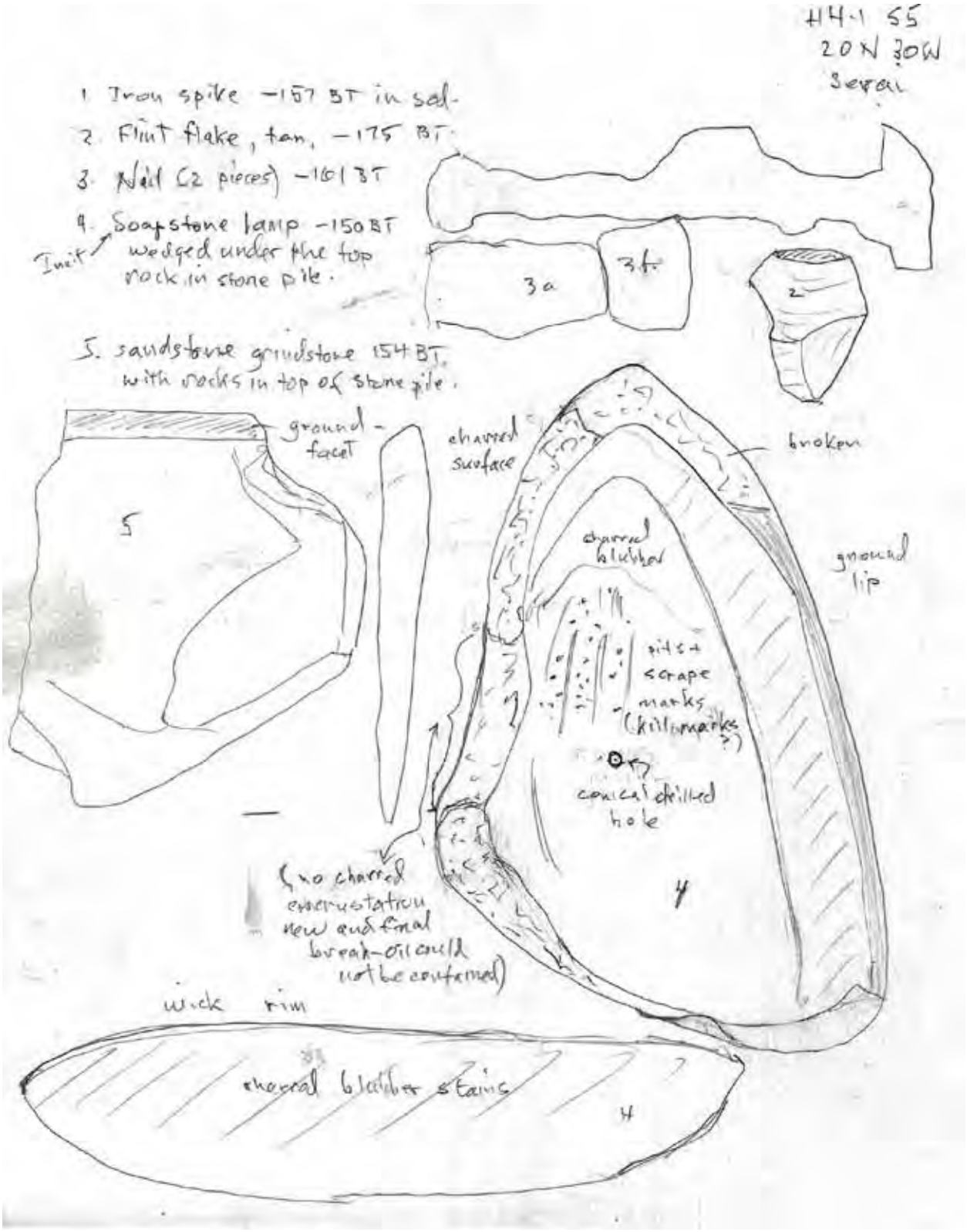
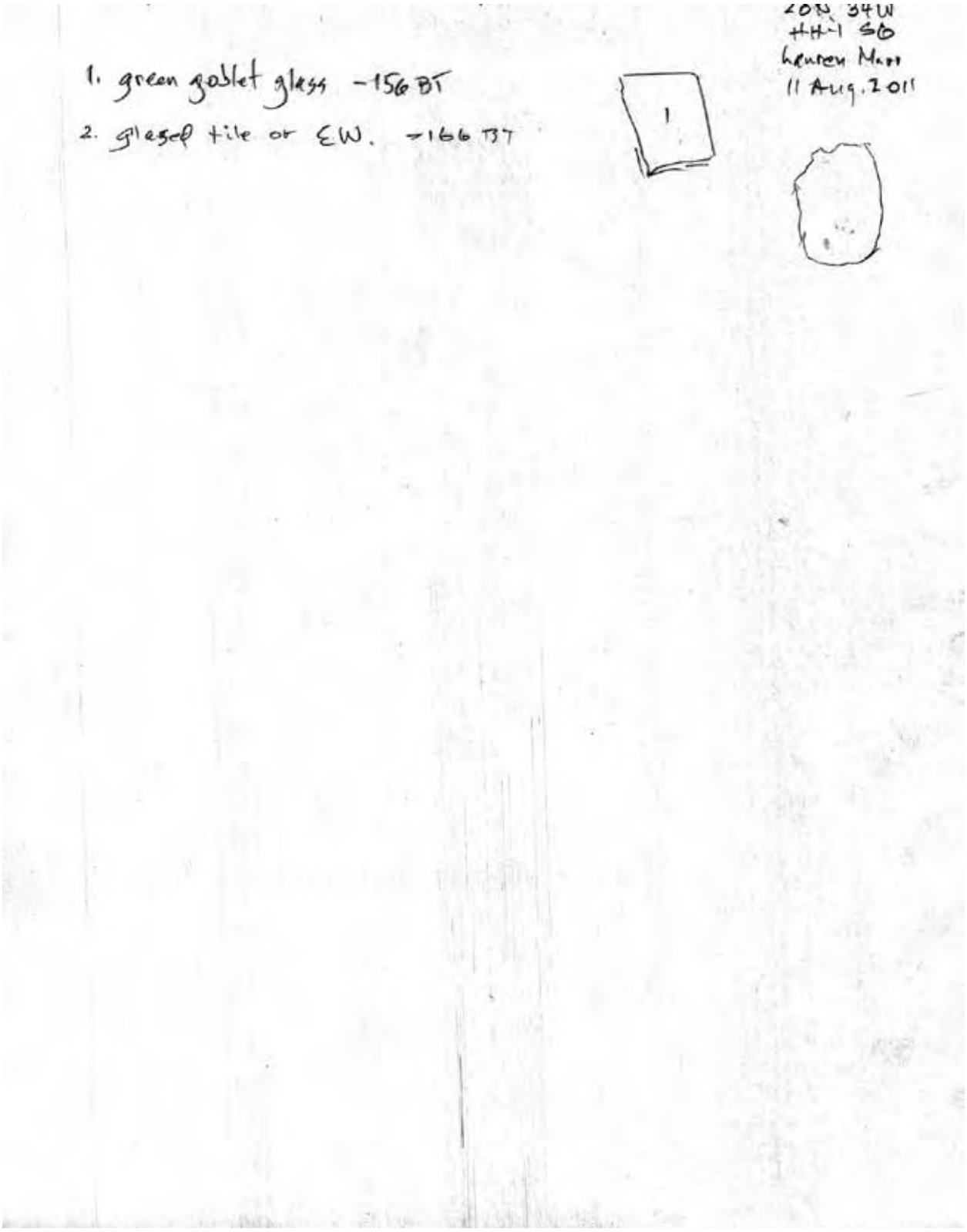
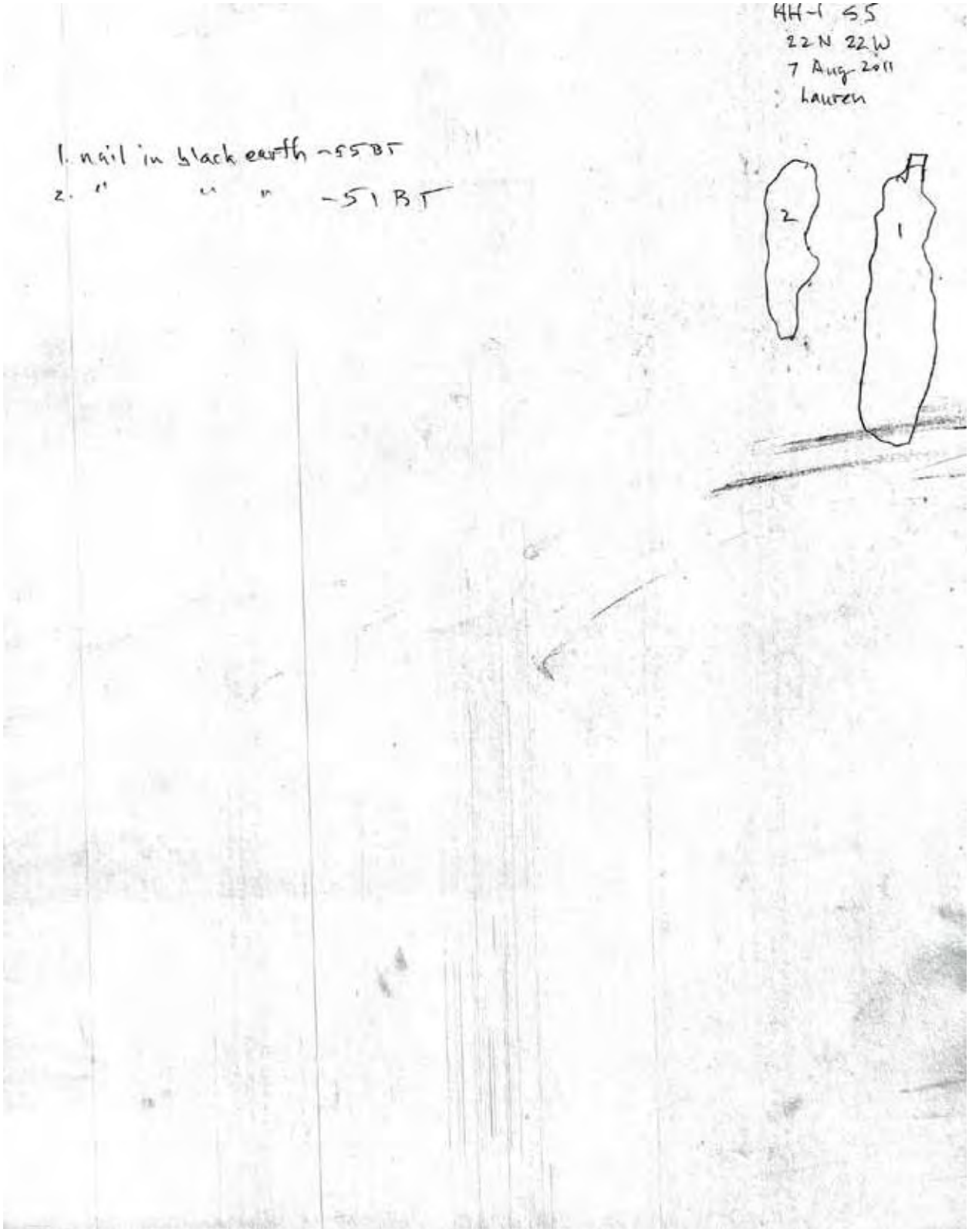


HH-1 Area 7 20N 30W artifact drawings.

HH-1 Area 7 20N 32W artifact drawings.



HH-1 Area 7 20N 34W artifact drawings.



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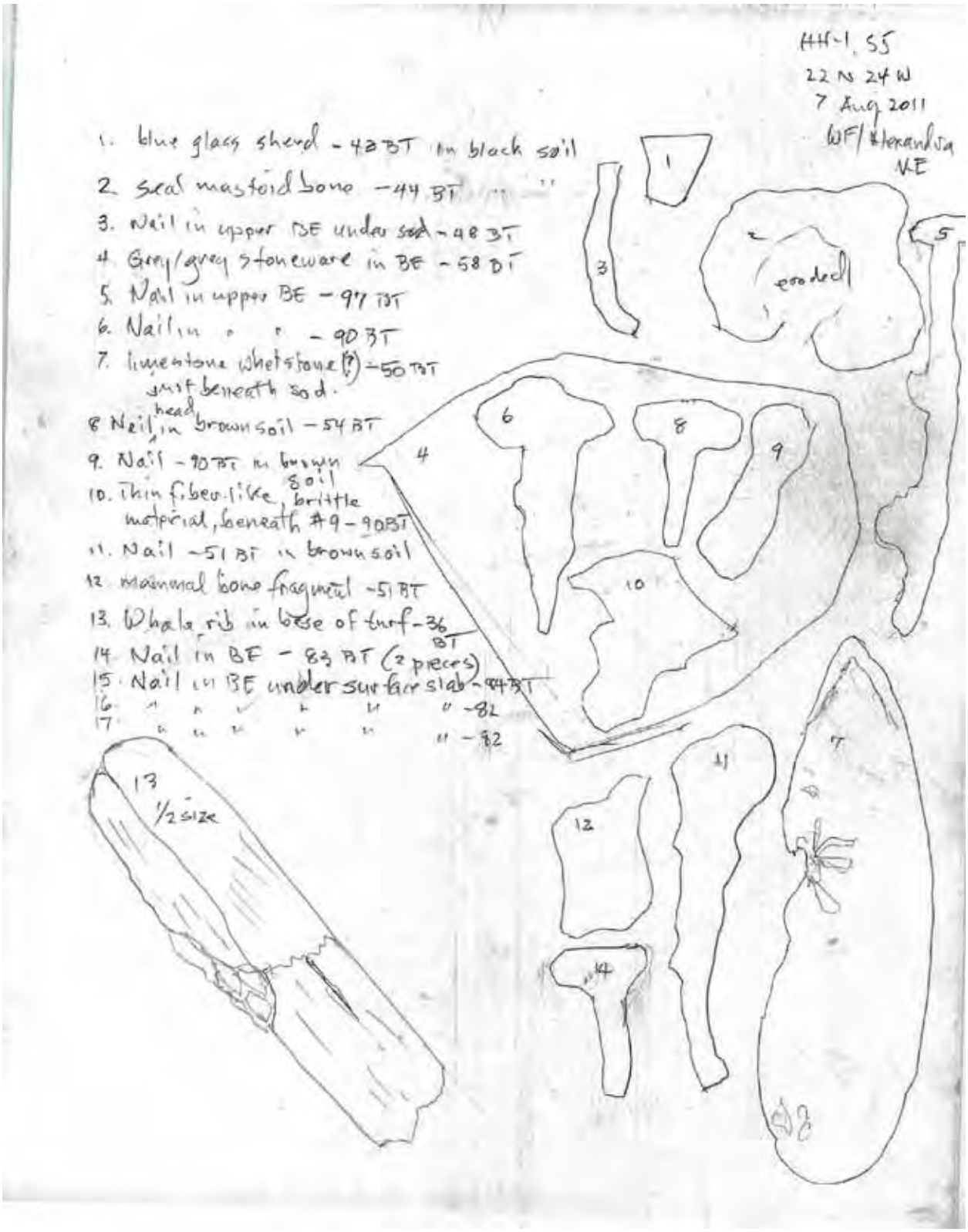

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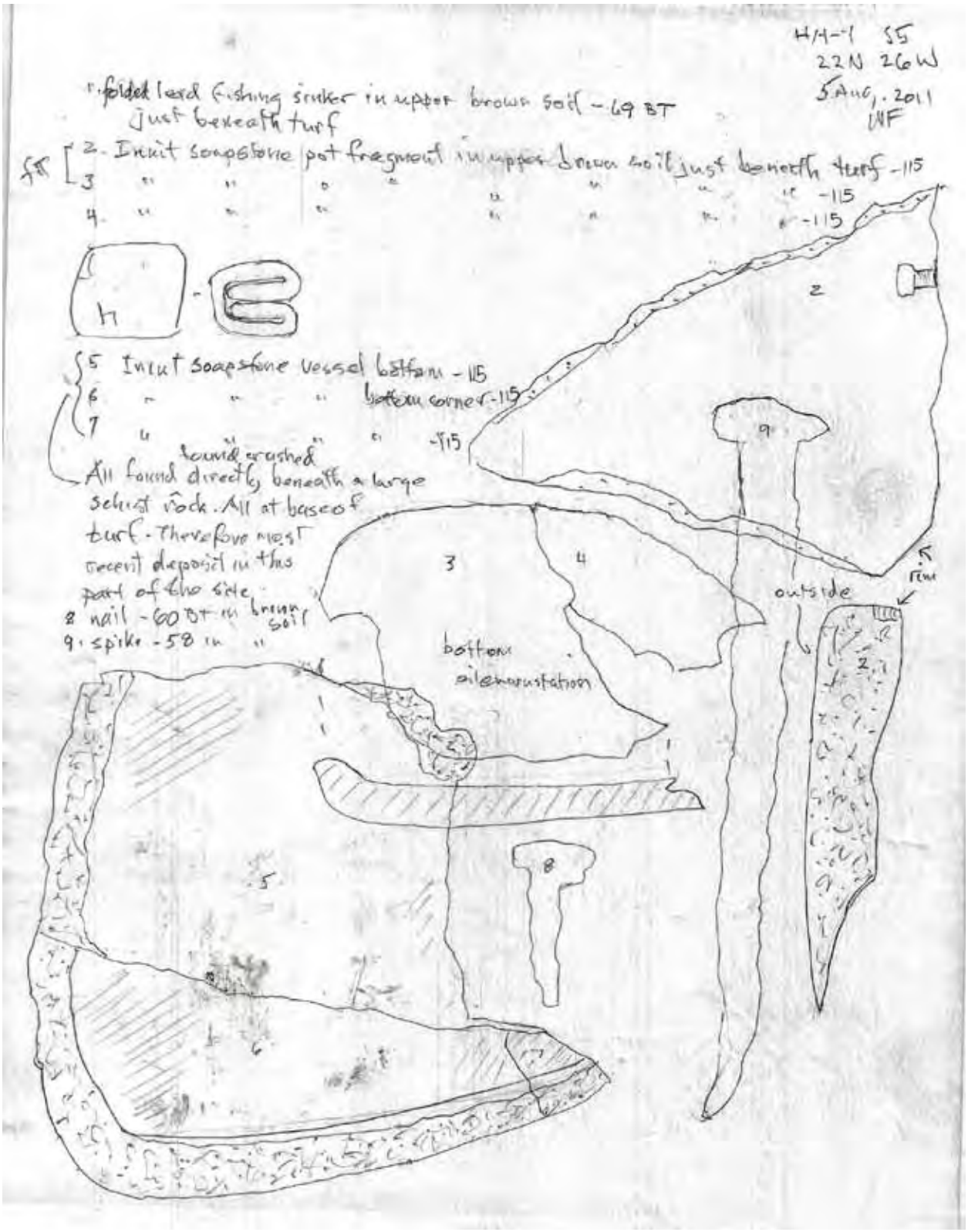

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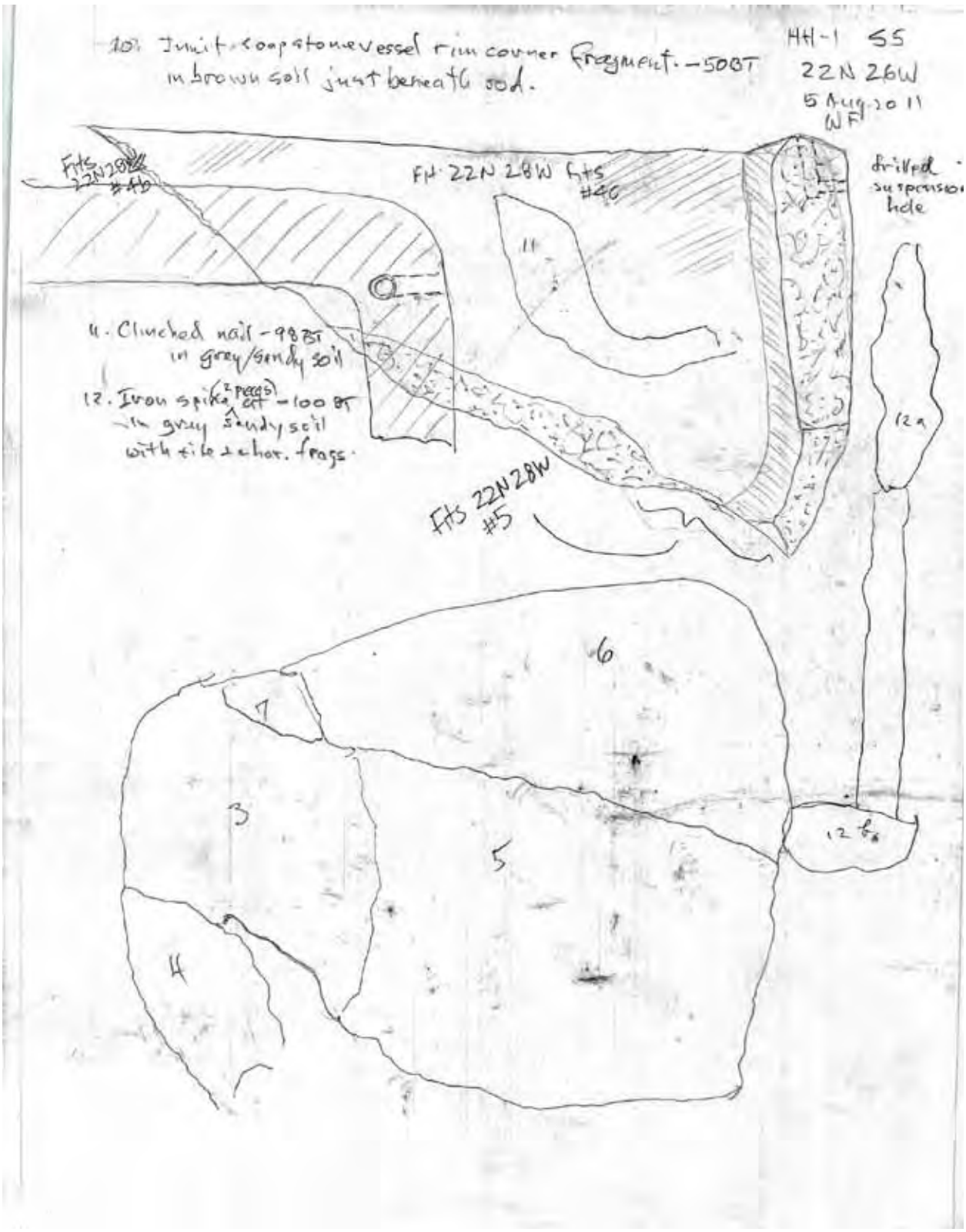

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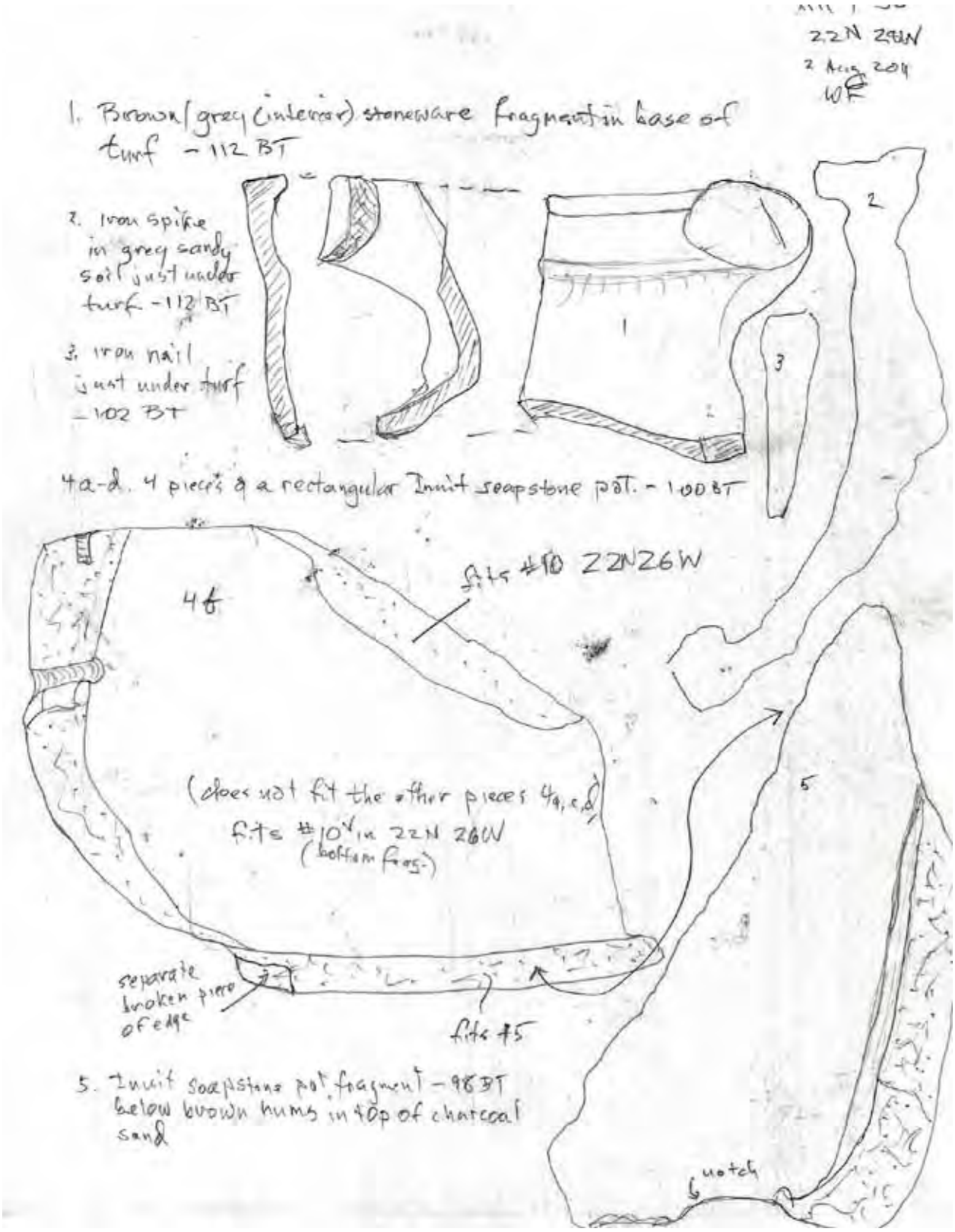

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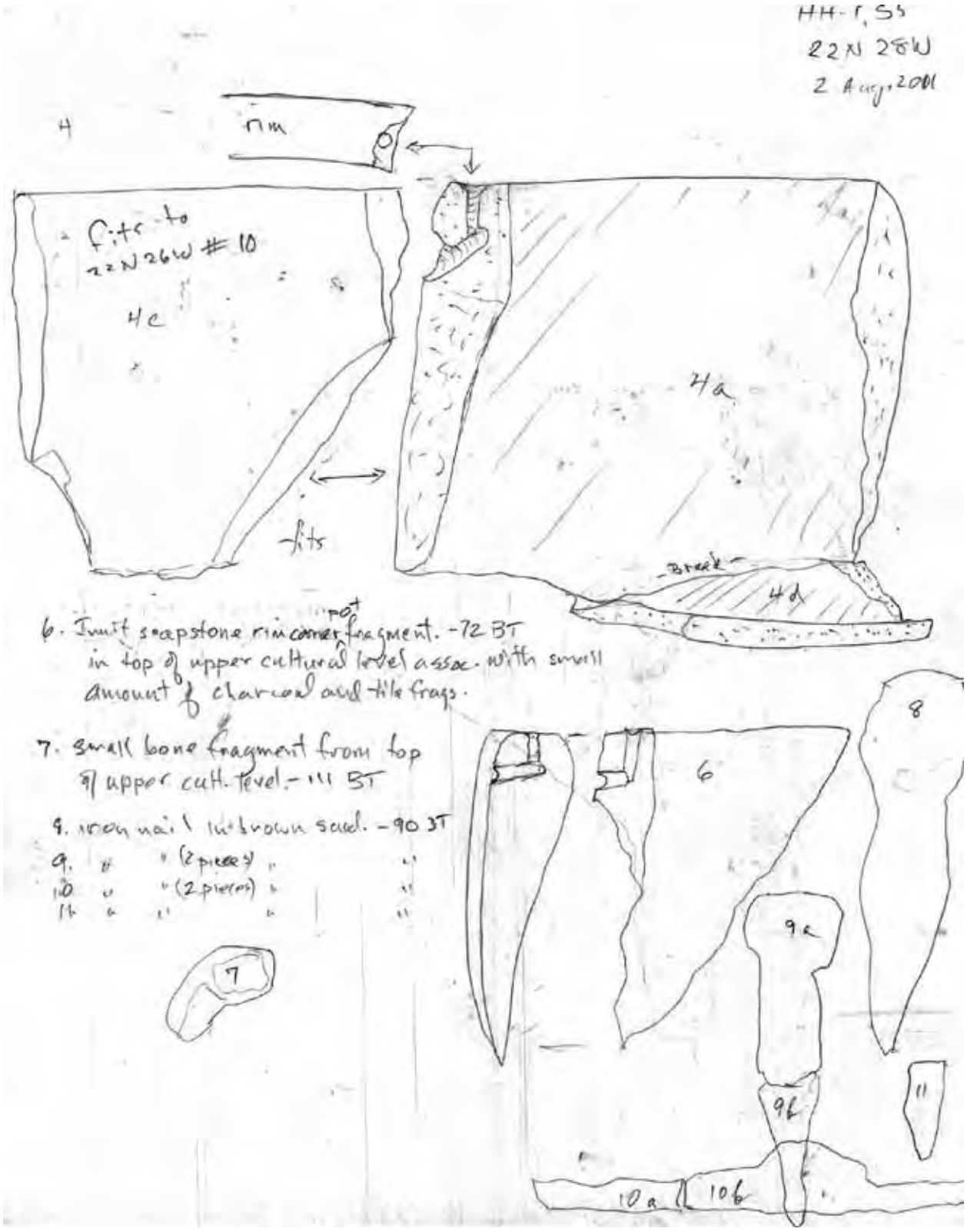

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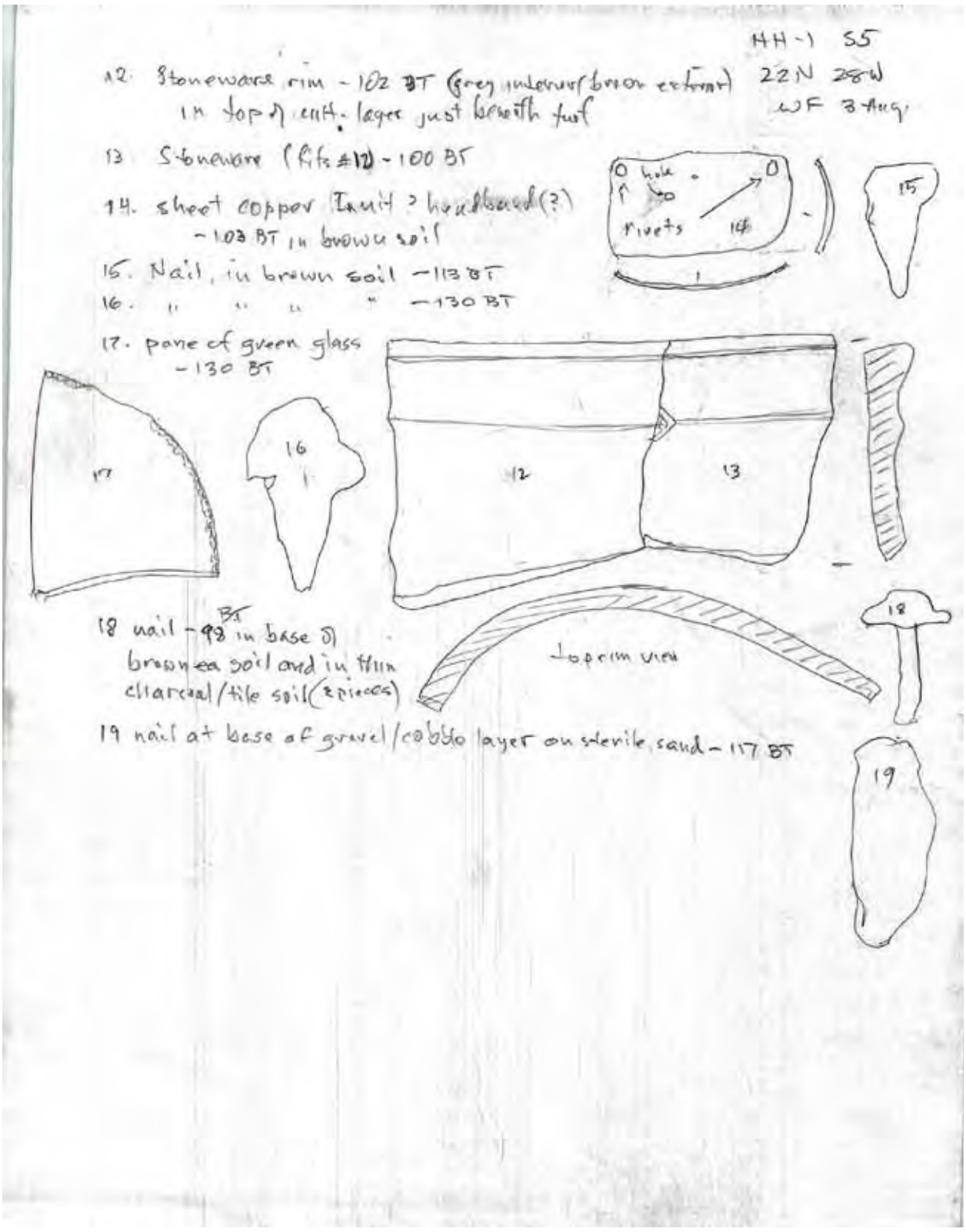

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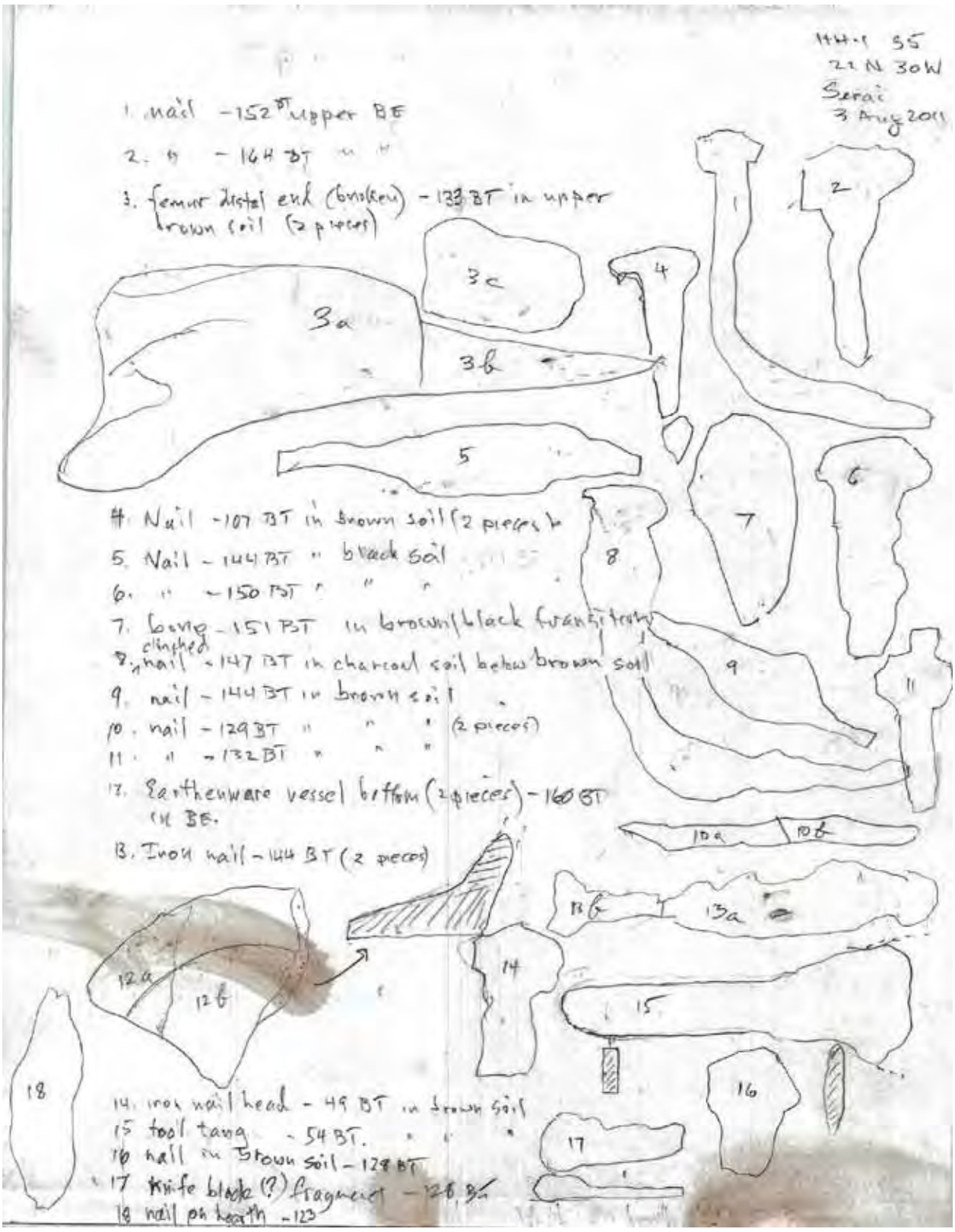

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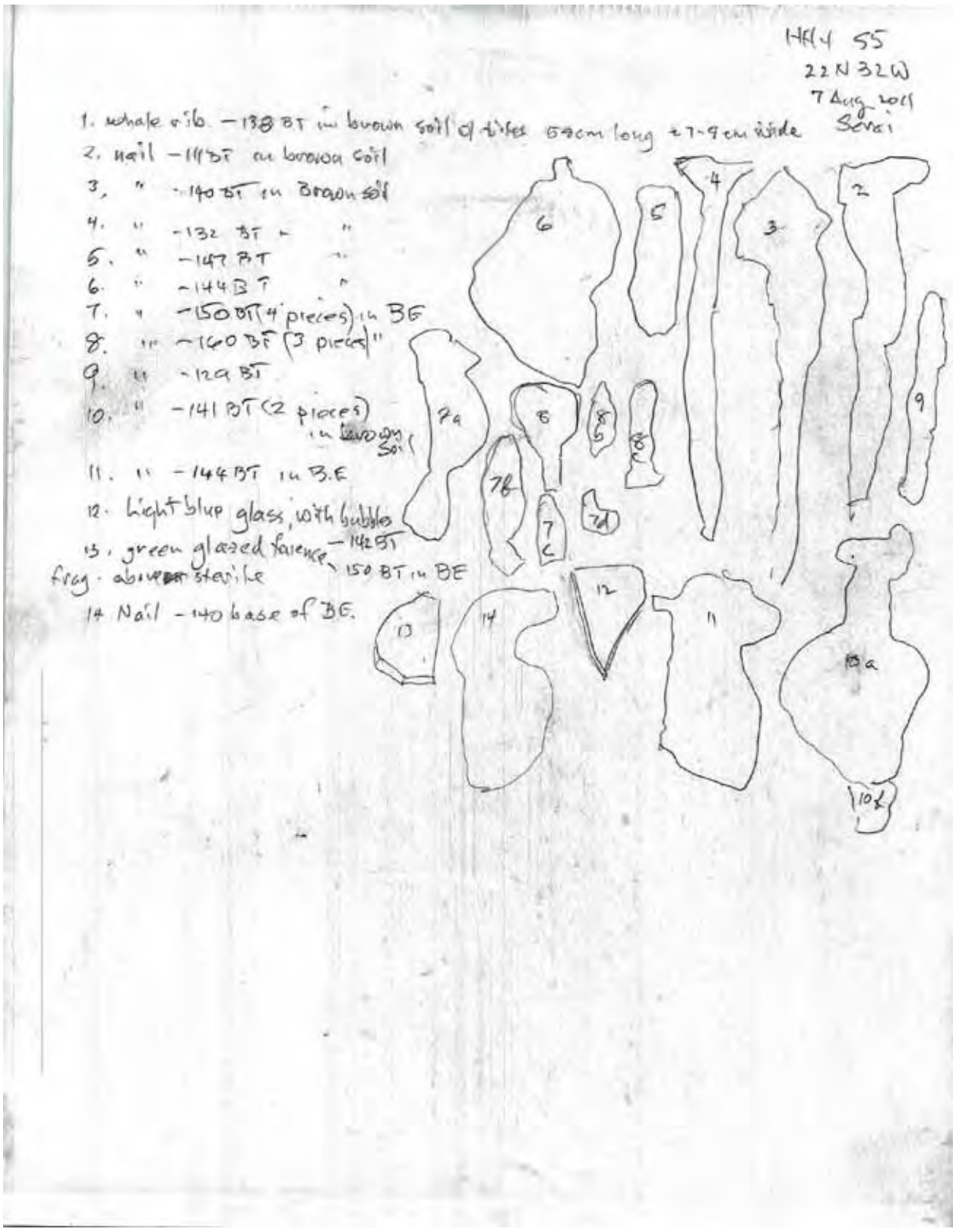

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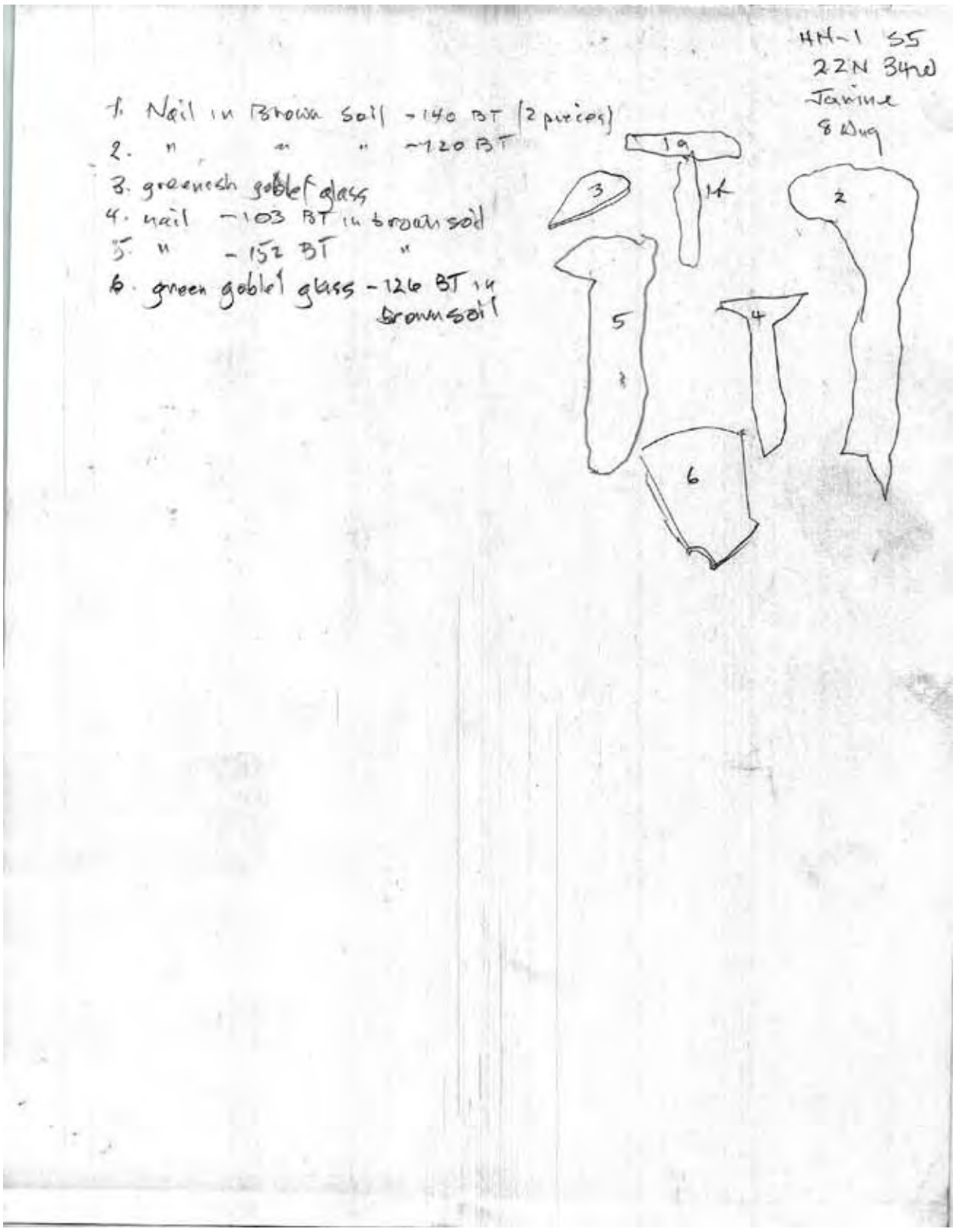

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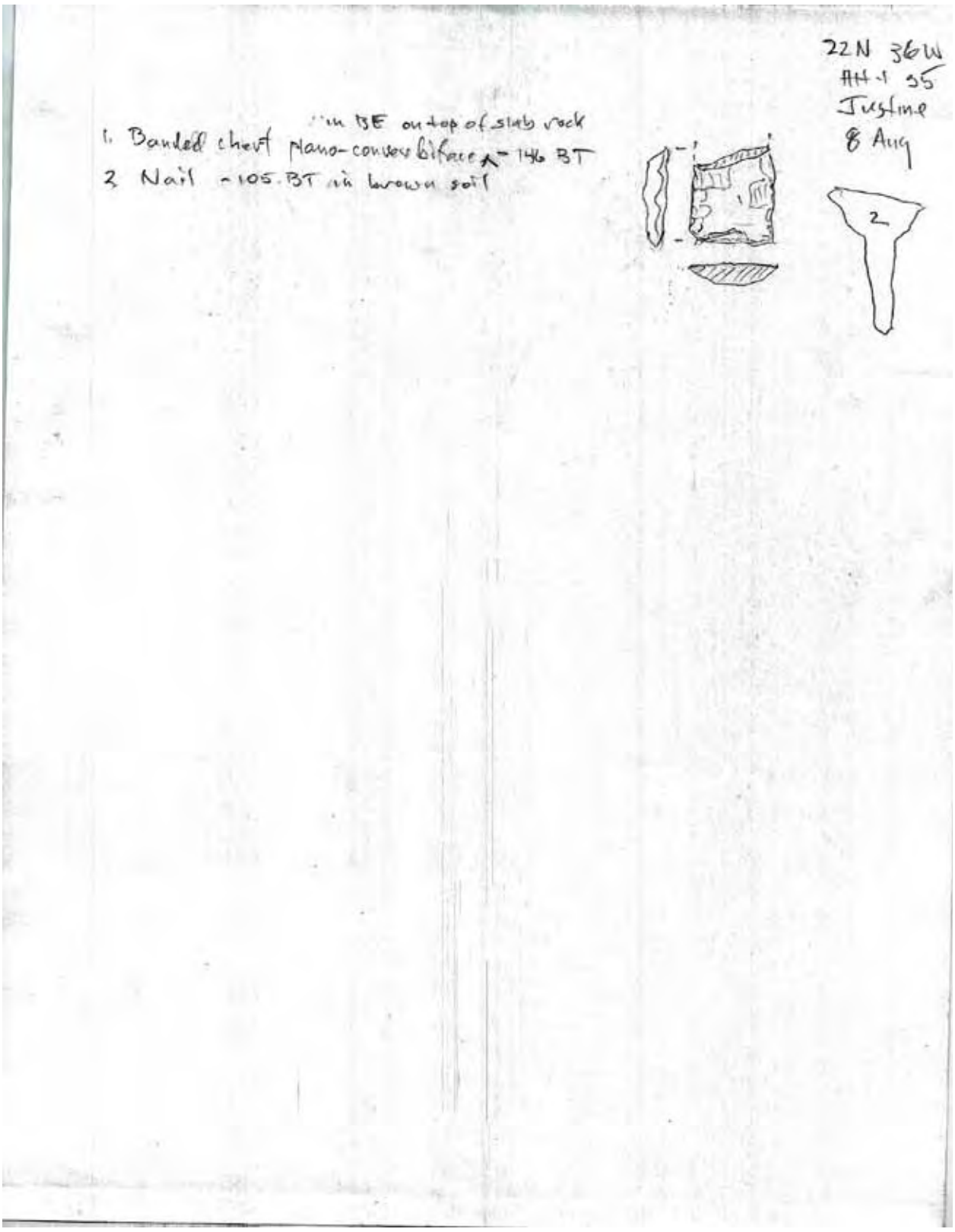

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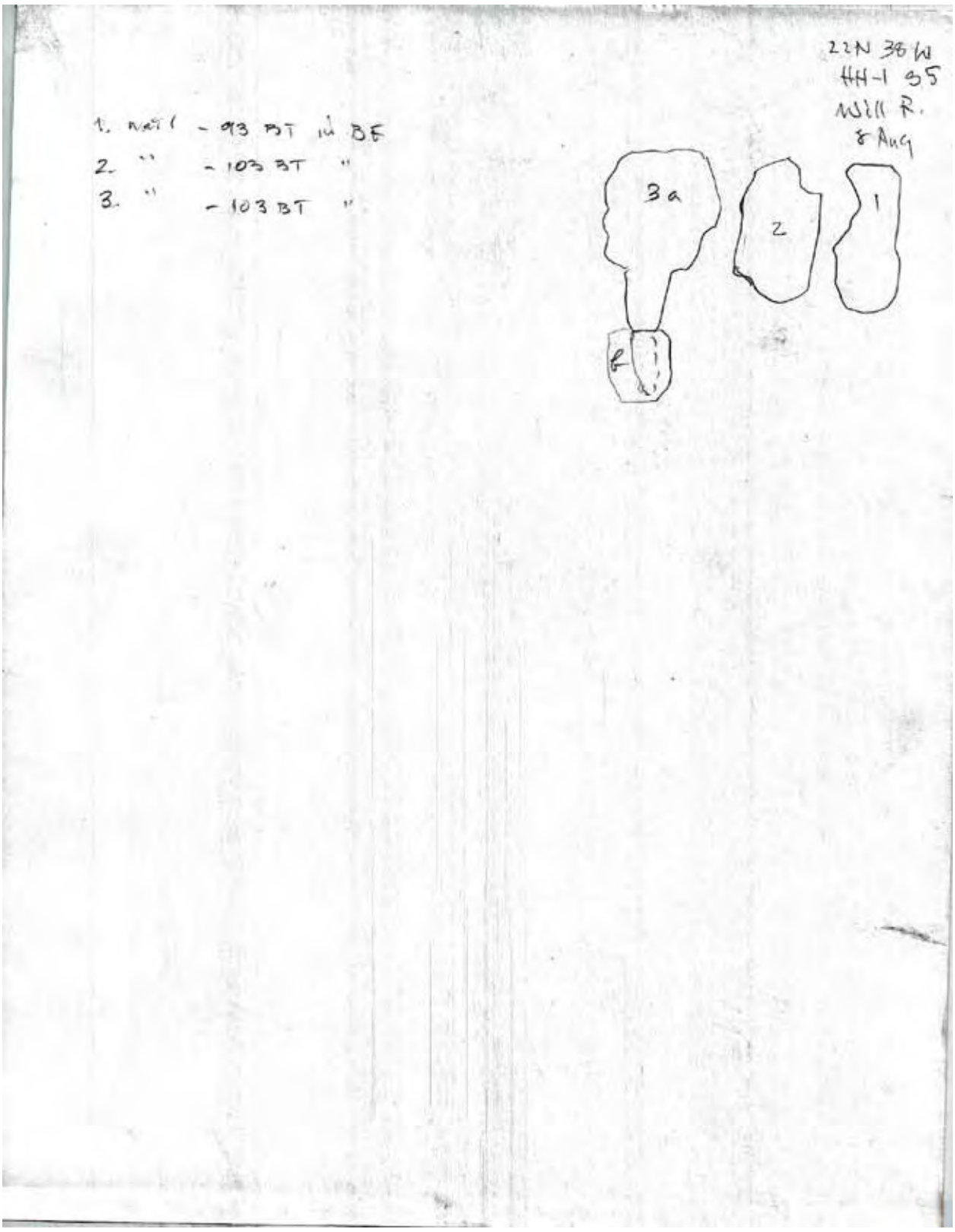

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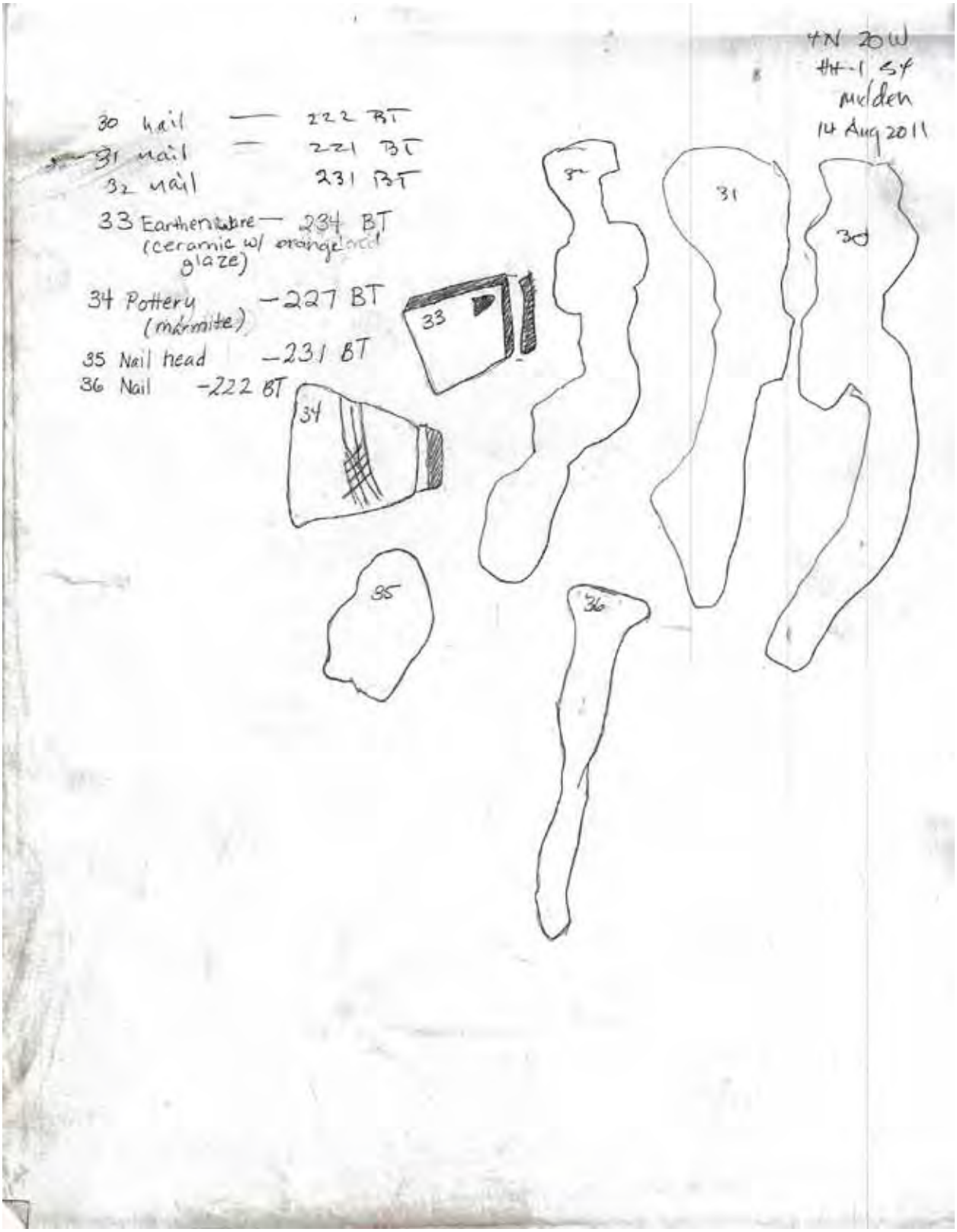
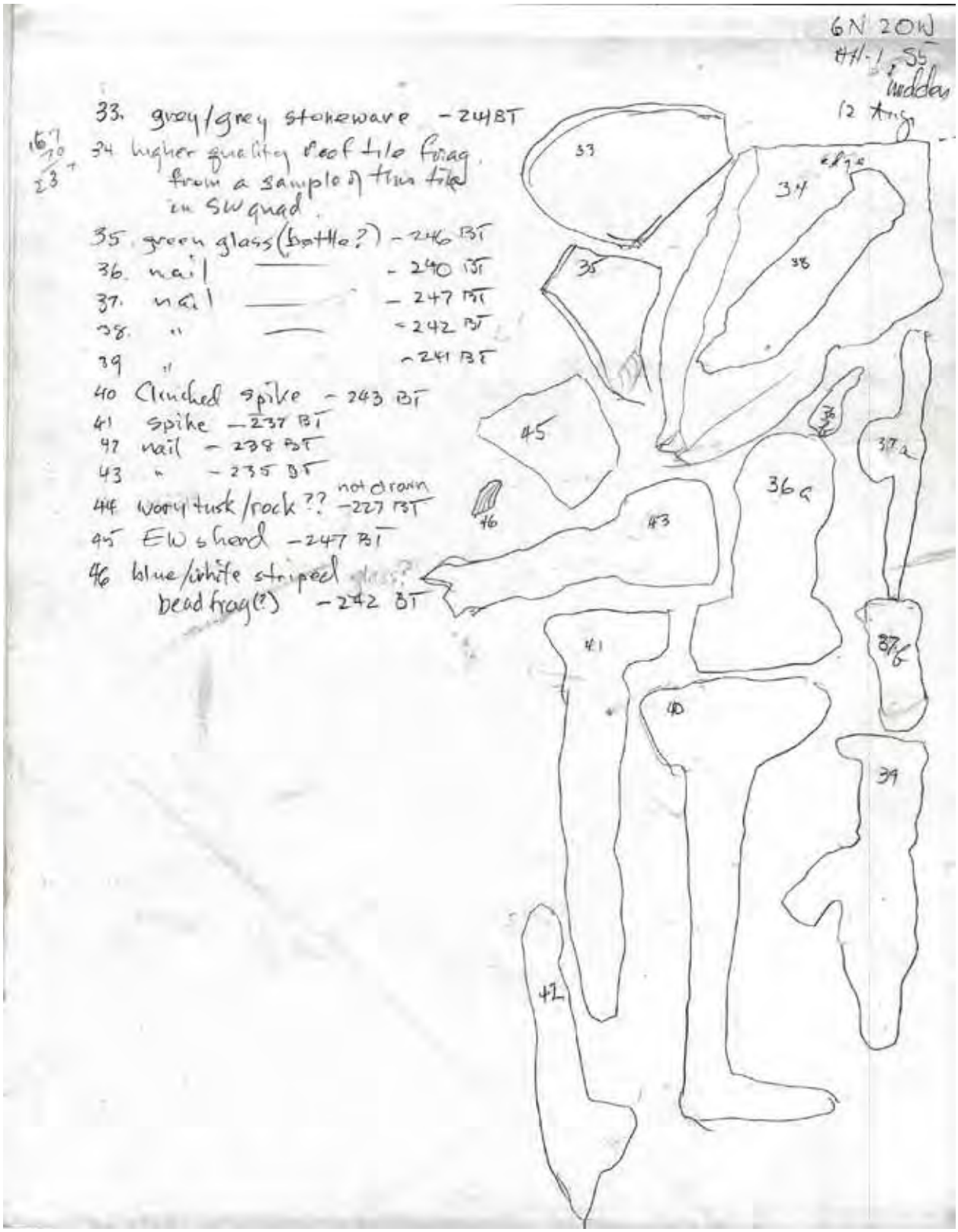
HH-1 Area 7 22N 40W artifact drawings.

HH-1 Area 8 4N 20W artifact drawings.



HH-1 Area 8 4N 20W artifact drawings.

HH-1 Area 8 6N 20W artifact drawings.



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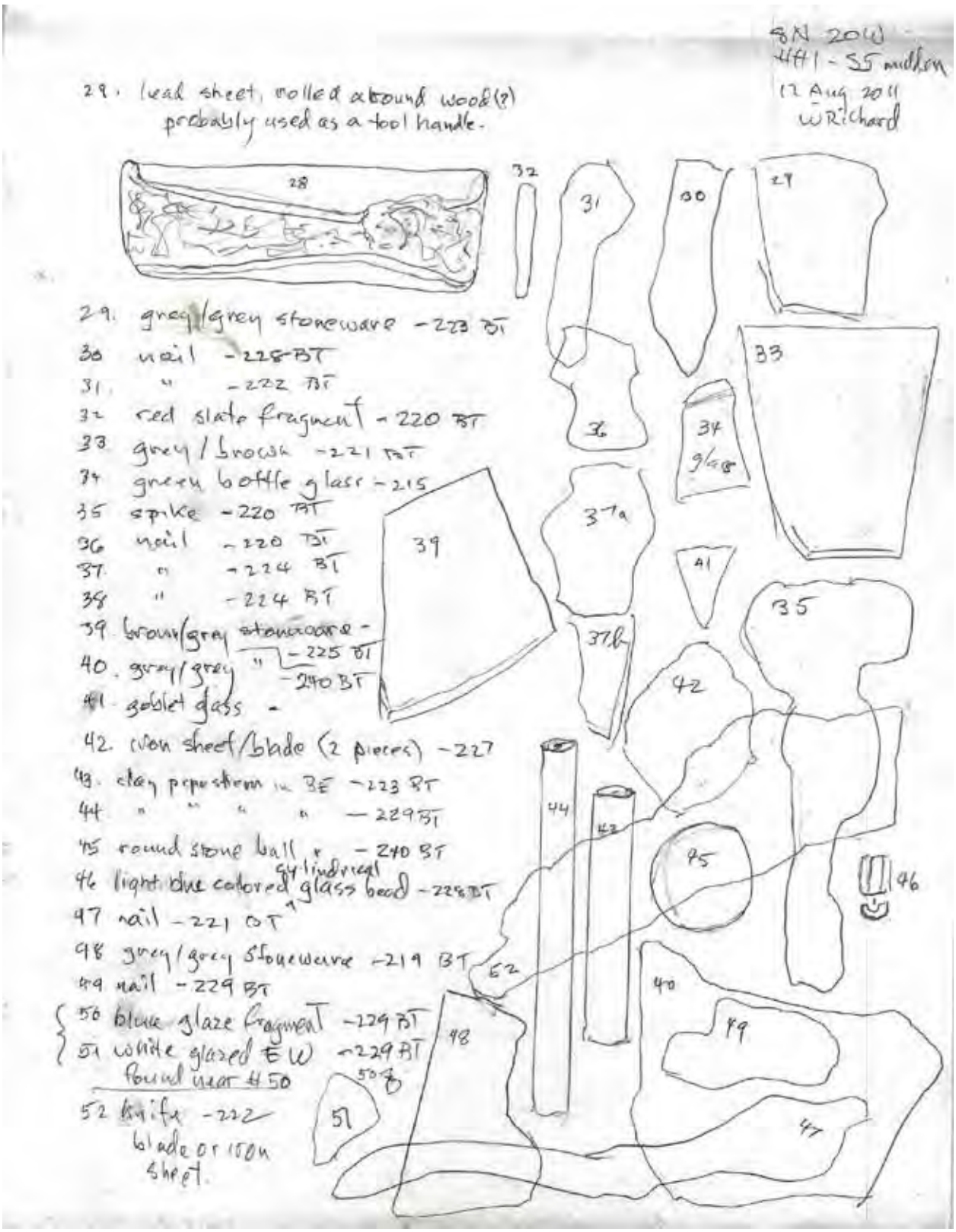

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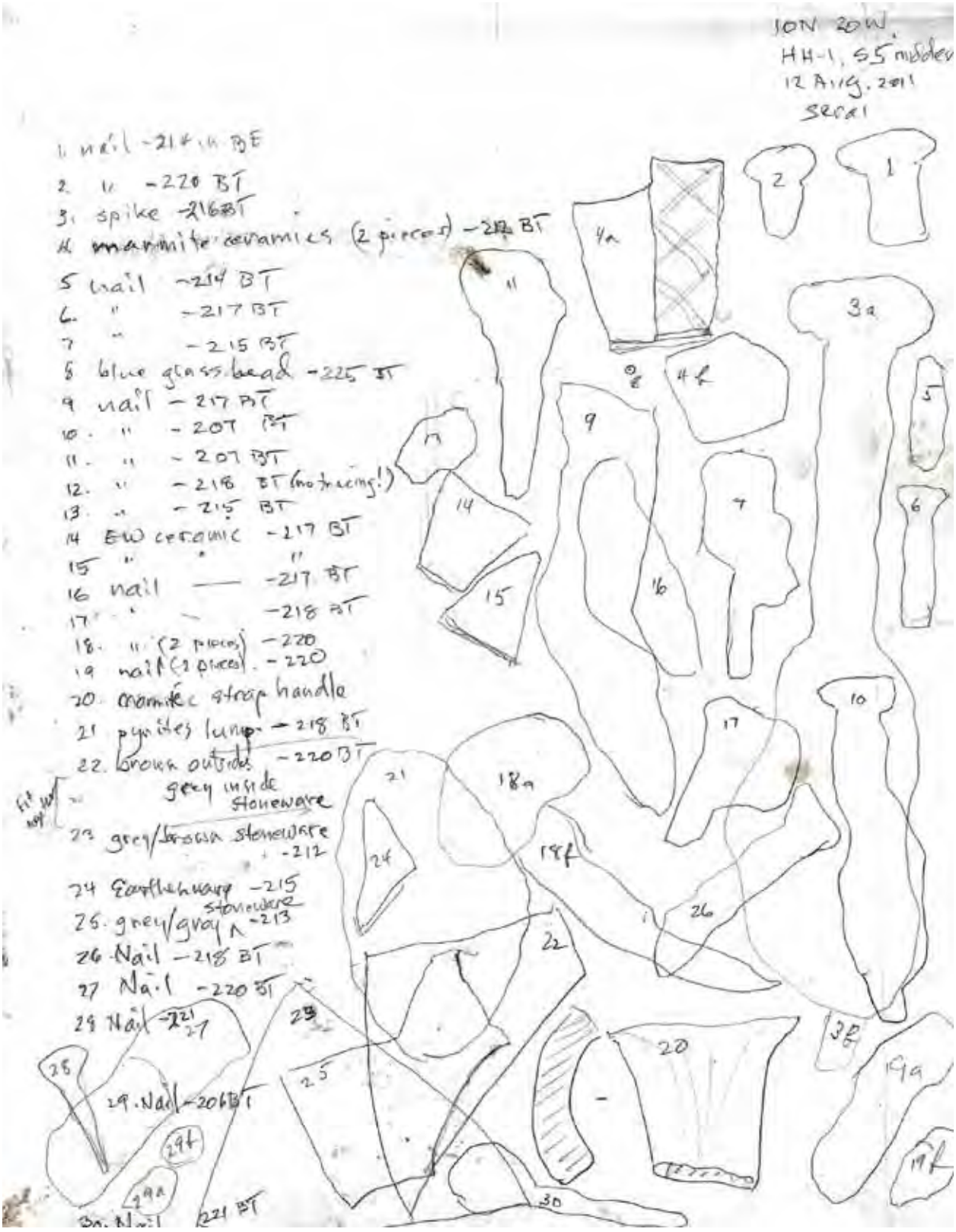
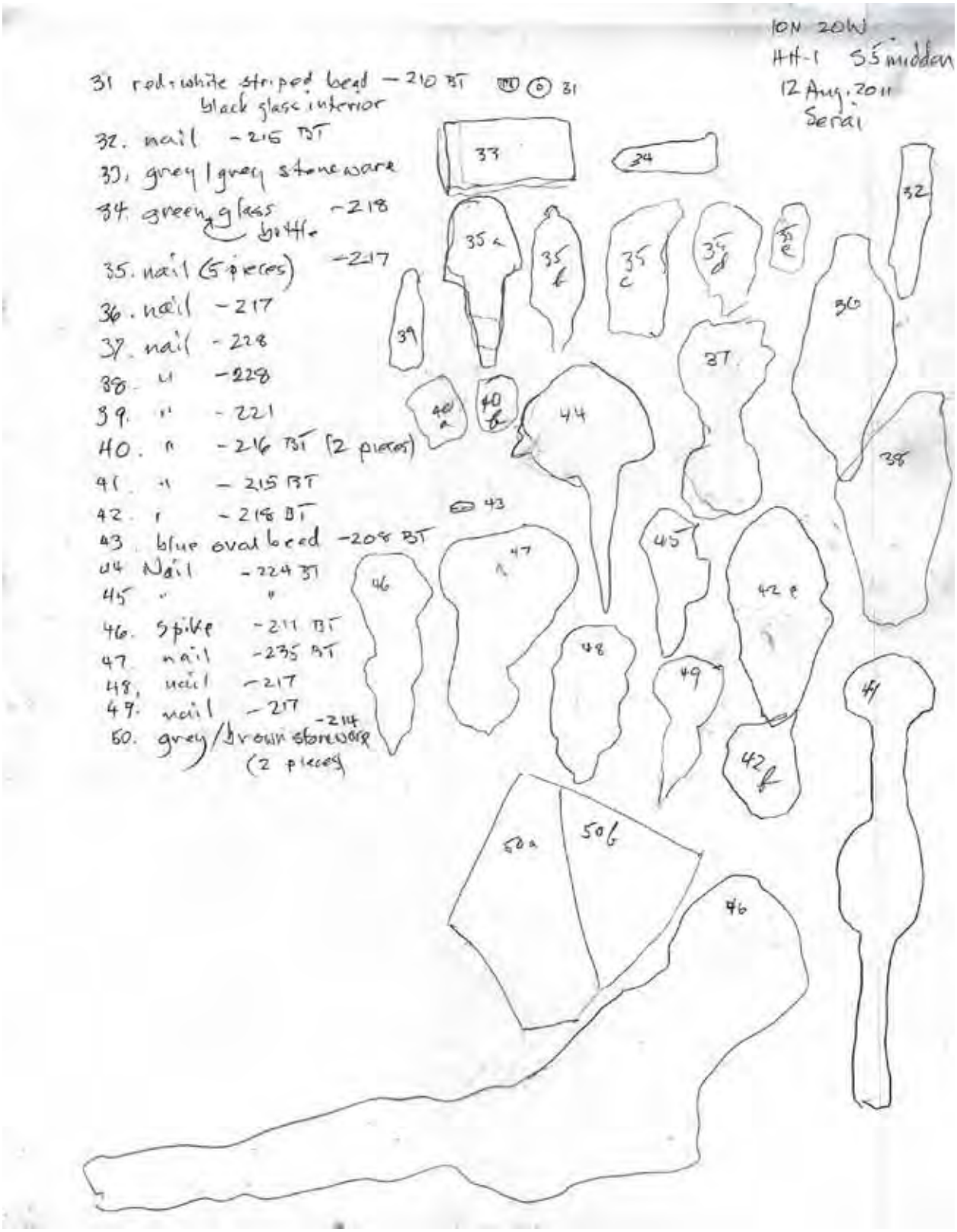


HH-1 Area 8 10N 20W artifact drawings.



HH-1 Area 8 10N 20W artifact drawings.

7 - 2011 Little Canso Island-1

Fig. 1.210: Little Canso Island-1 (EhBn-9).

Site Name: Little Canso Island
Borden Number: EhBn-9
GPS: N51 16.045', W58 15.191'
Map Ref.: Shekatika 1:50 000 number is 12-O-8
Culture: Inuit
Tentative Dating: 17th - 18th C
Areal Extent of Site: 40x100 meters
Site Type/Seasonality: Sod house winter village
Site Location: On the east side of Little Canso Island, in a grassy area just west of the island's connecting bar with Canso Island, only a few meters above sea level.
Description of Site: Three sod house foundations, rectanguilar in outline, with 6-8m loing entrance passages. Some indications of rear and lateral sleeping benches, and internal hearth platforms. Site is entirely intact with no obvious disturbance. Some indication of a thin midden outside the entryways.
Nature of Soils/Sediments: Sandy, well-drained.
Vegetation Cover: grass, berry bushes, and a small patch of ground willows
Raw Materials: Basque tiles, iron, bone
Collection Procedure: Test pits excavated by trowel.
Samples Taken: small number of artifact samples
Potential for Further Work (# of Squares, Depth of Deposit ?): excellent. Short one-season occupation by a group of Inuit hunters and fishermen. The site is undisturbed and would be easy to excavate.
Color slides: digital photos of structures, surroundings and artifacts.
Surveyed by: William Fitzhugh, Lauren Marr, Janine Hinton, Wilfred Richard, Nicholas Shattler
Date: 17 August 2011

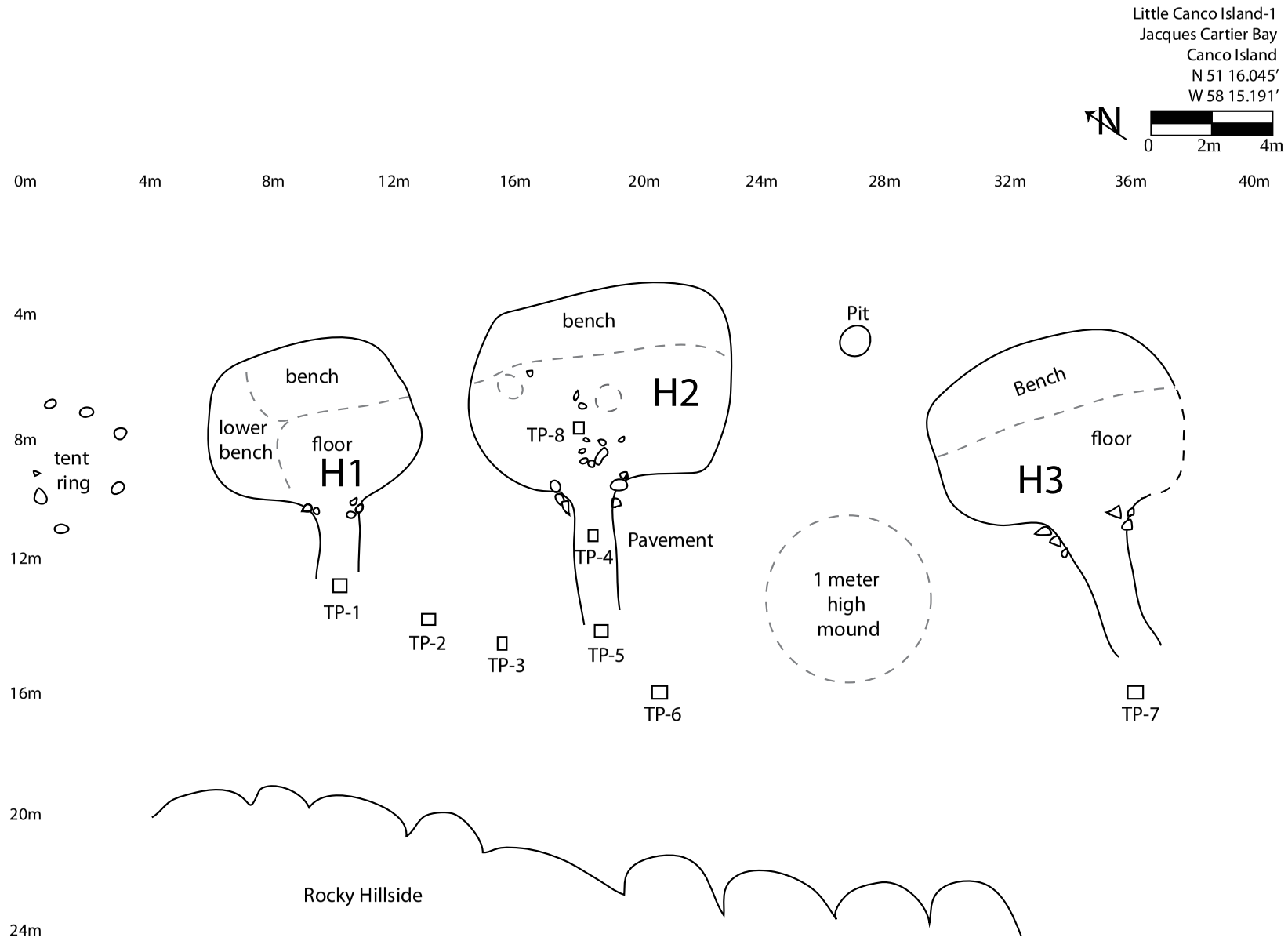


Fig. 1.211: Flat Island site map.

Nick Shattler has been surveying site locations in the St. Augustine region for several years, with special attention to possible Inuit sites. After we found Inuit sites at Petit Mecatina it seemed likely that Inuit sites must also be found elsewhere along the coast between Cape Whittle and Blanc Sablon. Our finds of stone Inuit Style fox traps at Canso Island, and his discovery of boulder caches and stone fox traps at Canso Island Tickle were strong indicators of the presence of an Inuit winter village in the vicinity. Recently, he found three house depressions with sunken entrances on Little Canso Island and we visited the site with Nick after completing our work at Mecatina.

The site is on a sandy knoll on the southeast side of Little Canso Island, south of a bar that connect the island to Canso Island at low tide. A beach on the north side of the site and a cove southwest of the isthmus provides boat launching capabilities in any wind direction. Raised boulder beaches west of the site have what may be Paleoeskimo (Groswater) caches and other structures; the highest boulder beach has larger cache pits and a possible dwelling pit.

The three Inuit structures are sub-rectangular winter dwellings the slightly rounded sod and sand walls, excavated interiors with a lower floor area and a raised sleeping platform, rock-built entryways, and sunken entrance passages of varying lengths. House 2 the largest has two raised mounds in the center that may be hearths or lamp stands for two families. Each house has a raised sleeping area in the rear of the dwellings. House 2 and 3 are the largest and House 1 is the smallest. 50cm x 50cm test pits in all the structures except H1 (TP-1), and one small 20cm x 20cmin House-2 revealed the same results: Basque roof tile fragments and seal bones (in a small quantity). A few pieces of small iron nails we recovered from two test pits. None of the houses have thick well-preserved middens outside their entry passages, all tests showed thin deposits and a very sandy soil mixed with small amounts of charcoal. Probes with a steel rod showed all houses have flat stone pavements on their working floors and entry passageways, but not on their sleeping benches. All entries face southwest and the rear sides of the house face the cove. The absence of much seal bone, minimal midden deposits, and scarcity of European of Inuit artifacts suggests a brief occupation by three extended families, probably all at the same time. Absence of European ceramic, beads or metal all suggests the site dates back to the late or post-Basque (post 1590s) period before there were many trading opportunities with Europeans. My estimation is early to mid 1600. Excavation would produce beautiful examples of Inuit architecture but perhaps only modest collections of material culture and a relatively small body of archeo-fauna. A nice cultural geography story could be put together using the Inuit evidence of fox traps, caches, and perhaps graves from nearby sites. A single tent ring is also found just north of House-1.

8 - 2011 Canso Island Tickle-1

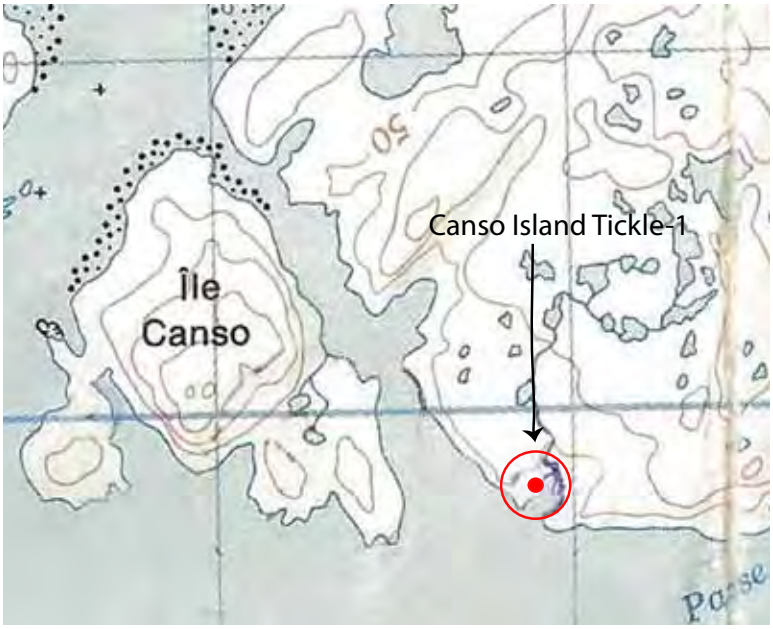
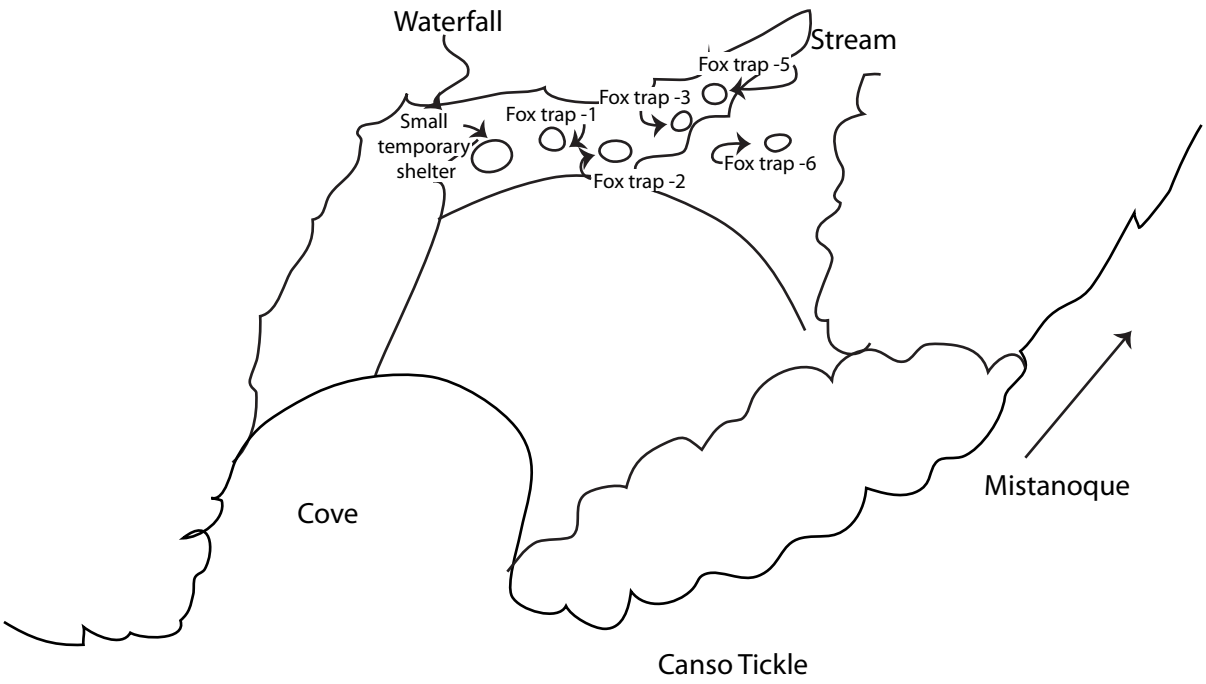


Fig. 1.212:Map of Canso Island Tickle-1 (EhBn-10).

Site Name: Canso Island Tickle-1
Borden Number: EhBn-10
GPS: 51 16.045N, 58 15.191'
Map Ref.: Shekatika 1:50 000 number is 12-O-8
Culture: Inuit
Tentative Dating: 17th - 18th C
Areal Extent of Site: 20x100 meters
Site Type/Seasonality: All seasons
Site Location: In a small cove on the mainland southeast of Canso Island, where a small brook enters from the hills above the site.
Description of Site: Entire site is located on a boulder beach, composed of large head-sized (and larger) rocks that have been used to create a pithouses, several food caches, and 3-4 fox traps. These sites are locted on the upper boulder beach terrace about 10-20m above sea level.
Nature of Soils/Sediments/Vegetation Cover: boulders only, no soil
Vegetation: no vegetation
Raw Materials: various
Collection Procedure: No collections were made and no artifacts were seen
Samples Taken: no
Potential for Further Work (# of Squares, Depth of Deposit ?): This site should be mapped and its structures drawn. Photos do not capture their essential nature. The site is undisturbed.
Color slides: digital photos of structures, surroundings and artifacts.
Surveyed by: William Fitzhugh, Lauren Marr, Janine Hinton, Wilfred Richard, Nicholas Shattler
Date: 17 August 2011

Canso Island Tickle
Jacques Cartier Bay
N 51 15' 52.67"
W 58 13' 59.03"



A small cove on the mainland side of Canso Tickle has two streams entering its boulder beaches. The upper beach has several structures including a large and well formed pit that is large enough to have been a small temporary shelter (#1). This same area of the boulders has a cache pit and an oval mound of rocks that may be an Inuit grave. It appears undisturbed but we could not see if it has an empty space inside. To the south of this and slightly higher are three other structures all stone Inuit-style fox traps in various states of disassembly. Across the tickle we visited Canso Island-1, a raised boulder beach where we found cache pits and fox traps in 2003/4? This site also has three stone fox traps, boulder cache pits and a larger pit with what looks like a sleeping platform for one person and a small sunken floor area.

Hare Harbor 1 2011 Underwater Site Report

By Erik Phaneuf

The 2011 underwater archaeological project in Hare Harbor marked the fifth season of exploring the Basque remains associated with the terrestrial site of Inuit and Basque/European cohabitation. Following previous field season goals, underwater investigation continued to gather as much information about the chronology and stratigraphy of the underwater site, particularly in association with the ballast stone pile. Furthermore, we attempted to corroborate Ben Ford's theory of artifact distribution around the stone piles to verify the relationship between ship positions above the ballast piles and refuse disposal. As always, we hoped to gather additional information to better understand the life aboard the Basque ships and the economical exploitation of the site including whale and cod exploitation.

Methodology The underwater work focused on the excavation of test units around the ballast mounds to gather information about the stratigraphic relation between different mounds and the different strata observed on the site. The work took place between 1 August and 16 August 2011, three years after the last underwater expedition directed by Ben Ford in 2008. During the first week of work, bottom time was greatly reduced due to an easterly wind which brought not only sunny days but also crystal clear water with temperatures as low as 34 °F. Lasting more than 50 minutes at this freezing temperature was almost impossible. With the second week came westerly winds which changed the water temperature to a significantly warmer 50 °F. Warmer temperatures brought rainy days which brought murky land-washed fresh water into the harbor, reducing visibility from perfect to only about ten meters. The underwater archaeology team consisted of Vincent Delmas and Erik Phaneuf. Divers logged 25 dives in 14 days, totaling approximately 52 hours of excavation, during which four areas 2x2 meter squares were excavated.

Excavation was completed with two water dredges consisting of two polyvinyl chloride (PVC) pipes and 40 meters of fire hose attached to 5.5 horsepower HondaTM motor pumps. The pumps were mostly operated at half throttle in order to provide a better control of the removal of sediment at the bottom. The sediment was either collected in the inside the "mouth" of flexible hose or the hose was directly used to excavate the layer, depending on density. The collected soil was inspected during the excavation at the end of each dive as no screening of the sediments was undertaken. Each test unit was recorded after excavation using Mylar paper and pencil, and notes and observations about the excavations were gathered after each dive. All raised artifacts were catalogued and photographed on the research vessel MV Pitsiulak and placed in clean plastic bags with fresh water, each bag being marked with provenance. The collection was then sent to the Centre de Conservation du Québec for preservation and consolidation.

Background In 2001, the Basque site Hare-Harbour 1 (EdBt-3) was discovered by the Smithsonian's Arctic Studies Center which was conducting archaeological surveys of the Quebec Lower North Shore (LNS) from the Mingan Islands to the Strait of Belle Isle. The Gateways Project has many goals, the first one being the exploration of the region and to identify new archaeological sites for further studies. Over the years the project discovered scores of new sites from a complete Maritime Archaic long-house to a 19th century fishing and trading post, and occupations from all the prehistoric and historic cultures present on the coast between those dates.

In 2003, a local diver and friend of the Gateway project in Harrington Harbor did a preliminary dive at the site and reported the presence of numerous piles of ballast stones,,roof tiles, whale bones, and large pot fragments. All artifacts were preserved at the Quebec Conservation Center (Fitzhugh and Sharp 2003). Due to the evident richness of the deposit, the underwater archaeology department of the University of Montreal became involved, sending a team to complete the excavation of numerous stone piles in 2005. During this initial excavation, artifacts from the 19th century seal fisheries and other pot fragments and whale flipper bones from the Basque occupation were collected. It became obvious that numerous ships were anchored at the same time in front of the terrestrial Basque site (Fitzhugh, Chretien, Sharp and Phaneuf,2006). In 2006 the underwater site plan was refined and seven 50 cm² test-pits were excavated

along the north-south axis of Baseline A, perpendicular to the shore. At a depth of 10 to 60 feet, test-pits gave a first glance of the complex, well-defined stratigraphy indicating the site's rich potential (Fitzhugh, Phaneuf, Leece, 2007). The 2007 (Fitzhugh and Phaneuf 2008) and 2008 (Fitzhugh and Ford 2009) expeditions marked the first 2x2m squares to be excavated on the eastern side of Stone Pile-5 (SP-5) and around SP-8. The squares excavated around SP-5 corroborated the stratigraphy observed in the test-pits and made possible the comparison with the stratigraphy observed in an underwater trench in Red-Bay (Stevens and Cumbaa 2007: I, 210). The similarity between the two sites is quite impressive and would seem to support similar programs of economic activities at both sites. The overall artifact collection from underwater and terrestrial field seasons indicates an occupation from the mid 17th to the mid 18th century (Vincent Delmas and Anja Herzog, personal communication).

2011 Results The first two squares were positioned at unexplored extremities of SP-5: TPC1-1 which is at the opposite side of previously excavated TPB-1. and TPB-2 and TPC0-1, directly south of SP-5 (Figure 1.213). The two other squares were positioned to get a better understanding of the positioning of the stone piles and the economic activities and refuse disposal in relationship to the ships' likely anchoring position. Therefore, TPB2-1 square was set at the widest part west of SP-7, between SP-6 and SP-7, and the fourth and last one, TPB2-2, was positioned at the opposite side east of SP-7. More importantly, the distance between the squares always permitted constant visual contact between the divers.

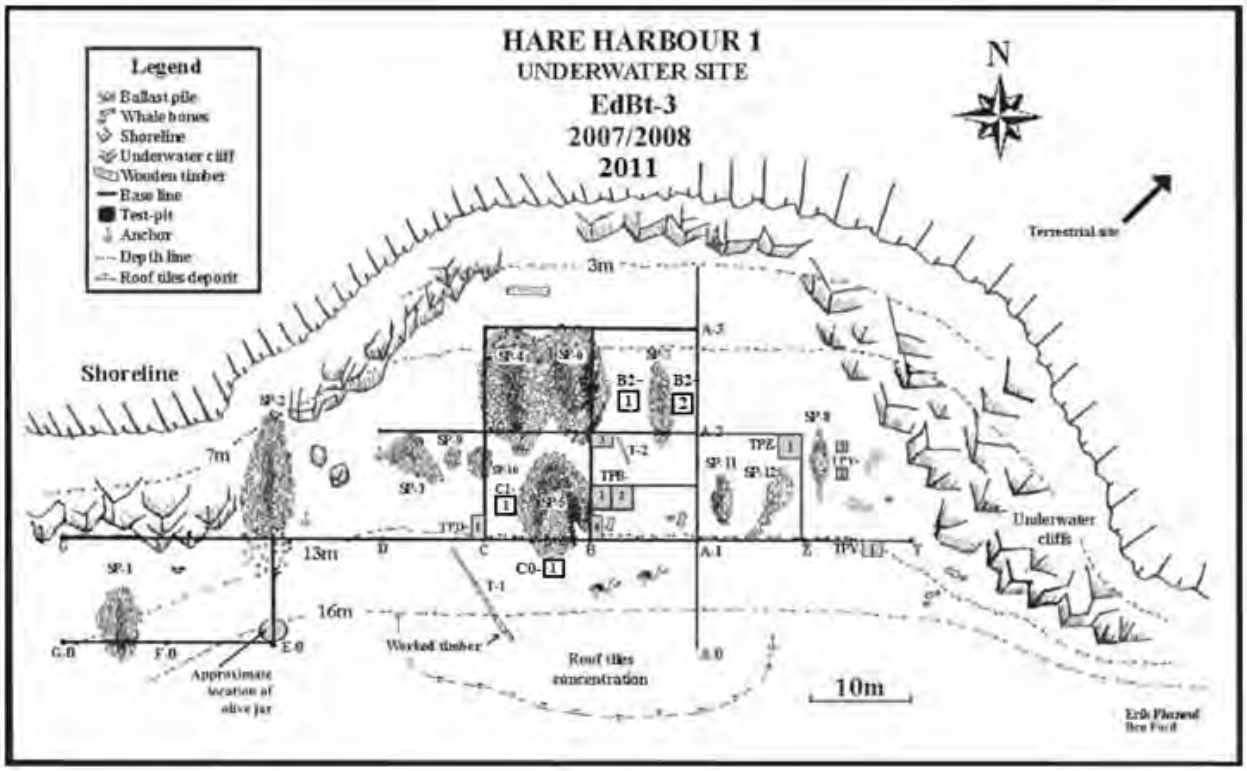


Fig. 1.213: Hare Harbor-1 underwater site plan with excavated squares from the 2007, 2008, and 2011 expeditions.

Square TPC0-1 This two-meter square pit was positioned directly against the southern limit of the ballast mound SP-5 at 1.45 m south the 01 baseline and at 1.80 m west of the B1 bar and 6.10 m east of the C bar (Figure 1.213). At about 55 foot deep, a equal depth as Test Pit-2 excavated in 2006, it was not surprising to observe similar stratigraphy. The first layer (L1) was a surface deposit composed of loose sand, coarse shell fragments and occasional tile fragments resting directly on the surface as well as within the matrix about 5 to10 cm thick. The surface of L1 was also the home of numerous living sea snails, the most common being the pelican foot. The yellowish and fluid matrix also had some pebble stones and small fragments of possibly broken ballast stones and roof tiles less than 20 cm in diameter, dispersed over the entire area of the square.

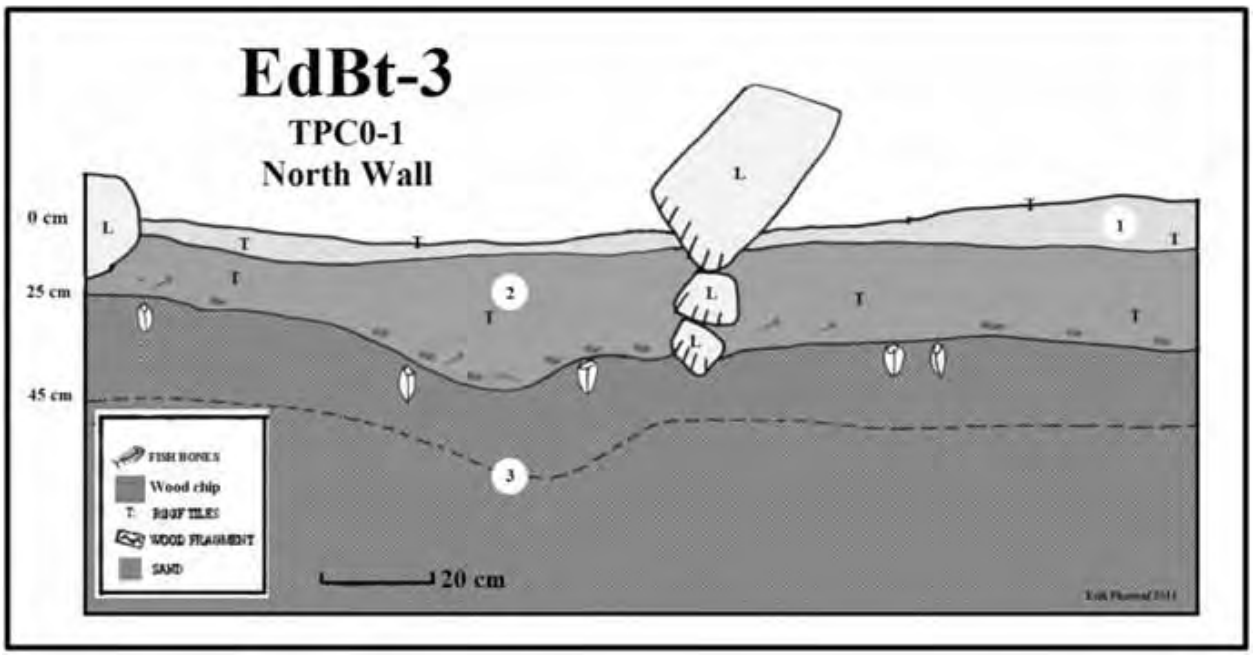


Fig. 1.214: Stratigraphy of the northern wall of square C0-1

Layer 2 averaging 20 cm in thickness was composed of greasy and slightly compacted greyish silty matrix with inclusions of many complete dead shells and numerous shell fragments as well as broken corallinacea algae fragments (Figure 1.229). Also, rare fragments of roof tiles and small clusters of fish bones, probably of single individual fish, were distributed unevenly within L2 over the 2 meter square area. Rare ballast stones are also found unevenly distributed within the square, every stone excavated was resting over the occupation layer as wood chips and sometimes fish bones were found directly under them. The occasional wood chip was observed within L2 but is found in greater concentration at its lower interface without forming a well-defined horizon as was observed in TPC1-1.
The artifact collection from L2 includes one sherd of a small receptacle made of yellow-glazed fine earthenware (Figure 1.215), a few sherds of a black-glazed stoneware container (Figure 1.216), one clay pipe bowl (Figure 1.217), and some fragments of common non-glazed red paste ceramic. It is possible that the black glazed sherds were yellow in origin since it was observed that the color of the glazed was altered by prolonged exposition to saltwater. The clay pipe with no markings would seem to date from between 1820 to 1860 since it resembles type 23 of Ivor Noël Hume typology of the evolution of English clay pipes . Ecofacts from L2 were mostly composed of fish bones found in small concentration and some fragments of mammal long bones and bird bones. The easterly half of the square was the richest in term of artifact distribution, but the westerly limit of the square had a clearer lower interface with a greater number of wood chips present.

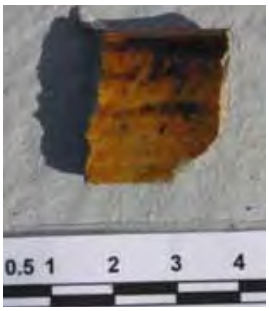


Fig. 1.215: Fragment of a yellow glazed fine earthenware container.

Fig. 1.216: Fragment of a black glazed stoneware container.

Fig. 1.217: Mid-19th century clay pipe bowl.

Fig. 1.218: Pitcher fragment from TPC1-1

Fig. 1.219: TPC0-1 with some clams still in place in L3, eroded northern wall on top.

Layer 3 (L3) the deepest layer, was made of fine compact gray sand with the presence of angular stones ranging in diameter from 5 to 10 cm. More compact and lighter in color than L2, it was excavated to about 25 cm in depth to an average of about 45 cm under the surface. It did not yield traces of human occupation. An interesting observation about this layer was the presence of numerous bivalve mollusks, possibly blunt gaper clams, found as if they had died suddenly, as if they were covered quickly by L2 and suffocated (Figure 1.219). No artifact was found in this layer but the presence of wood chips was scarcely observed, probably as the result of bioturbation since numerous live razor clams and occasional horse mussels were encountered while excavating.

TPC1-1 Set at about 45 feet deep and at the widest part of the western side of SP-5, this two-meter square had an upper layer of loose sand similar to L1 of the first square. The westerly wall of the square was 1.75 m east the north/south C baseline, and its southern limit was at 2.70 m north of the 0 baseline. Three different layers were excavated; thoughout, L2 had different concentration or pockets of different woodworking remnants. The majority of the ballast stones were present in the eastern half of the square. The ballast stones rested on top of L3 with woodchips found under the stones.

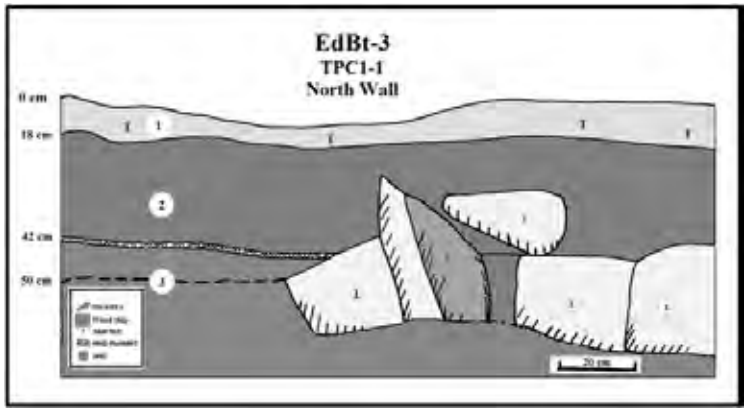


Fig. 1.220: TPC0-1 with some clams still in place in L3, eroded northern wall on top.

Layer (L1) was composed of a loose yellowish sandy matrix with numerous shell fragments and the occasional roof tile fragment resting directly at its surface. Some rounded granite stones less than 20 cm in diameter were present within this layer. Occasional roof tile fragments were found throughout the L1 matrix, and at the interface between L1 and L2 we found a large fragment of a beige paste earthenware pitcher glazed on the inside (Figure 1.218), one of the best ceramic pieces found this year.

Layer 2 (L2) ranged in thickness from 20 to 40 cm and was composed mostly of organic material, largely wood chips and flakes of different sizes mixed with pockets of sawdust and concentrations of peat and roots. The wood chips and flakes (Figure 1.223) were the result of squaring logs since most of the chips were from the outside part of the tree, often with the bark still present. Smaller woodchips were the result of perpendicular cuts along the axis of the tree which were then removed from the log with an axe or adze.

Fig. 1.221: Elements of cooperage from Layer 2 in TPC1-1.

Fig. 1.222:Elements of cooperage from Layer 2 in TPC1-1.

Fig. 1.223: Wood chips from L2 lying at the bottom at the end of the dredge.

Within this layer many fragments of barrel hoops were present, but only a few wedges were actually found. Only one hoop element was kept since it had a unique cut which likely facilitated the jointing of the hoop ends by wrappings. Other wooden artifacts were found mainly in the shape of squared and bevelled sticks ranging in length from 7 to 30 cm. One piece of timber is thought to be an oak distal fragment of a small-craft futtock or rib since it presented a curved shape and had two nail holes perpendicular to its length. Elements of cooperage were also found as illustrated in Figure 1.221 and Figure 1.222.

Other organic materials included fish, bird, mammal and small juvenile whale bones found along with walnut shells, leather shoe fragments, and a woven mat made of grass (Figure 1.226) which was found at the lower interface of L2, resting directly on L3. An identical example of this type of mat was encountered in Red-Bay (Grenier et al. 2007). Only a fragment 25 cm long and 10 cm wide could be preserved since the grass was extremely fragile. The sample was pressed between two plastic clip boards at the bottom and held together using numerous rubber bands. Only two ceramic fragments were found, one small body fragment of black-glazed stoneware and a nice fragment of common yellow earthenware, glazed on the inside (Figure 1.227). The enormous quantity of wood chips (Figure 1.223 and 1.228) and axe-cut marks testifies to the importance of this activity at the site, specifically the preparation of squared timbers from round logs. It was not the first time that a layer with a great quantity of wooden chip was excavated underwater: the same type of stratum was observed in TPB-1, 2 and 4 in previous years. Ballast stones, all limestone, were resting within this layer and within L3.

Layer 3 was composed of compact gray sand with few inclusions similar to L3 of the TPC0-1 square. Most of the ballast stones rested within this layer, with an occasional stone found within Layer 2. All ballast stones were made of limestone.

TPB2-1 This two-meter square was about 40 feet below the surface. It was positioned at the widest

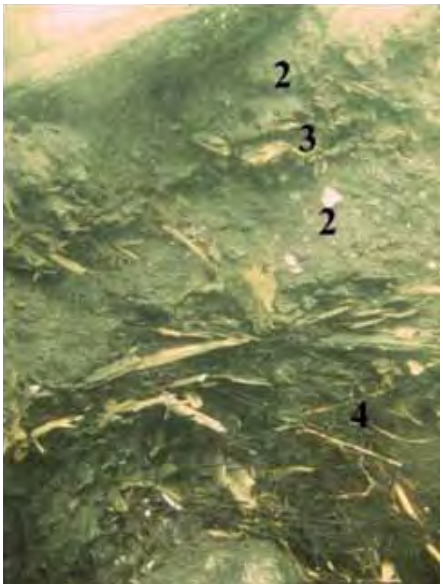


Fig. 1.224: Stratigraphy of the western wall of the TPB2-1 square.

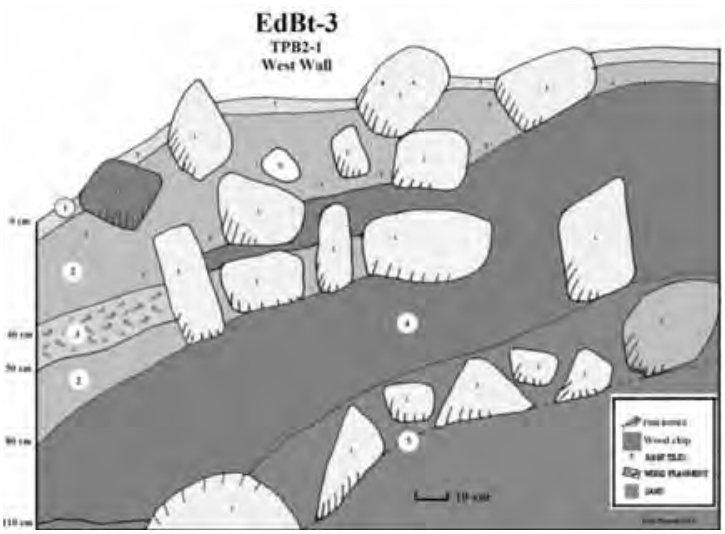


Fig. 1.225: Stratigraphy of the western wall of the TPB2-1 square.

Fig. 1.226: Woven grass mat from TPC1-1.

Fig. 1.227: Common yellow earthenware jar fragment.

Fig. 1.228: Searching through a Layer 2 sample for small artifacts and ecofacts.

point west of SP-7 to once again support the idea that the greater concentration of artifacts should be found at the extremities of the stone piles as well as to verify the stratigraphic relation of the pile with the site. It was set at 4.2 m south of Baseline 3 and 3.7 m north of Baseline 2 at 3.2 m east of the Baseline B (Figure 1). The spatial distribution of stones and stratigraphic layers changed within the 2m² area. The northern half of the square had an elevated amount of ballast present as well as a thinner L2 sandy layer. The cod bone layer was not well-defined, and at times not present at all, possibly due to a higher concentration of stones. Matrix deposits were present only within ballast stones interstices where small concentration of L2, L3 and L4 were observed.

Fig. 1.230: Ballast stones partly covered by calcareous algae.

In order to excavate this square and reach the sterile compact sand of L5, more than 50 ballast stones belonging to either SP-6 or SP-7 had to be removed. The ballast s, quadrangular in shape, varied in length from 10 to 45 cm and ranged in width from 10 cm up to 40 cm, they rarely stones exceeded 25 cm in thickness. Most are angular limestone blocks with an occasional more rounded stone made of quartzite, granite, or gneiss (Figure 1.229 and 1.230). It is interesting to note that all the buried stones were without holes as compared wirh the stones observed on the top of the piles which were filled with shellfish burrows. This proves that some of the site inhabitants were rock-boring organisms probably of the pholadidea genus since great paddocks were excavated on the site.

Fig. 1.229: Some of the ballast stones removed from TPB2-1 and a top of the pile ballast stone.

Layer 1 (L1) ranged in depth from 5 to15 cm and was composed of loose surface sand with the same characteristics as L1 observed in TPC0-1 and TPC1-1. Some ballast stones were found resting at the lower interface of this layer. Layer 2 (L2) was composed of a grayish matrix made of loose and soft greasy silt also found within the interstices of the limestone ballast rocks. This layer present numerous fragments of broken sea shells as well as living clams. Within the interstices of the ballast stones one observes concentrations of wood chips, fish bones, and also small pockets of charcoal.

Layer 3 (L3) differs a bit depending on its localization within the square. On the southern wall, L3 is a 5 to 15 cm thick layer made of cod bones (Figure 1.224 and 1.225). The skeletal elements come principally from heads although other skeletal remains are present, probably the result of processing cod for the European market (Fitzhugh et al. 2011). This layer is sandwiched within the gray greasy silt matrix of L2 forming the fourth layer. On the northern half of the square, things differ a bit. Here L3 is mostly made of wood chips and sawdust within a loose silty matrix, so the fish bone layer is sandwiched partly between wood flake and chip layers or by a loose silt layer, all of which is intermixed between

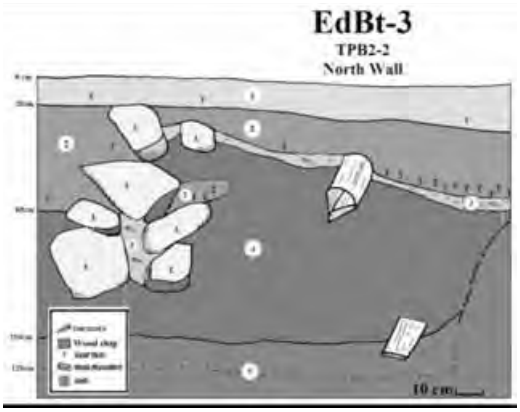


Fig. 1.231:Stratigraphy of the northern and western wall of square B2-2

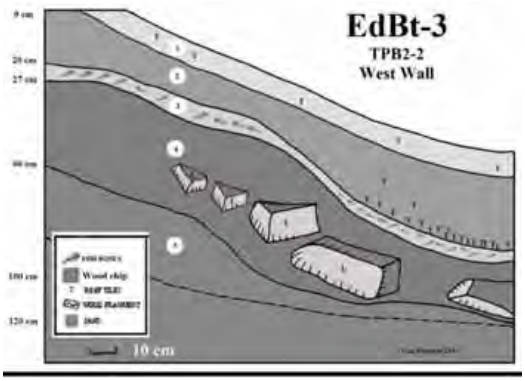


Fig. 1.232: Stratigraphy of the northern and western wall of square B2-2

ballast stones. Layer 4 (L4) is the organic layer illustrated in Figure 14 which is made of timber-squaring debris as well as peat and roots. Its thickness varies from 40 to 80 cm depending on where it is situated within the square. Some barrel hoops, some bird bones, one coarse earthenware pot handle (Figure 1.241) and a shoe sole were found within L4.

Layer 5 (L5) Here again the organic layer had an abrupt lower interface and rested on a fine compact sand similar to L3 of the previous two squares. At about a meter under the surface, this layer was excavated in order to exhume some of the ballast stones resting within the matrix. Neither artifacts nor ecofacts were found resting under the stones.

Square TPB2-2 This two-meter square was set on the east side of SP-7 on the opposite side from TPB2-1, also at its widest point and about 40 feet below the surface. It was set at 6.9 m south of Baseline 3 and 1.3 m north of Baseline 2 at 1.5 m west of Baseline A (Figure 1.213).

Layer 1 (L1) ranged in depth from 5-15 cm and was composed of loose surface sand with the same characteristics as L1 observed in TPC0-1, TPC1-1 and TPB2-1. Some ballast stones were found resting at the lower interface of this layer. Layer 2 (L2) is a very compact sandy layer averaging 20 cm in thickness with deeper sedimentation on the western part of the square probably due to perturbation by falling ballast stones. Numerous roof tile fragments ranging from 1 cm to half a tile, and many fish bones, were found at the lower interface of this layer. At the southeast corner of the square, within L2, between the compact sandy layer and the silty L3, excavators found seven whale phalanges, some still in anatomical position.

Layer 4 (L4) was composed of more than 90 cm of organic material made mostly of wood chips and flakes, with mixed pockets of sawdust, peat, and roots. Again, most of the chips were the result of log-squaring. Some branches were observed and one tapered log, about 25 cm in diameter, was found in the northern wall (Figures 1.231 and 1.232). Most of the ballast stones rested within this organic matrix. The artifacts collected from this layer included large quantity of bird bones, including six skulls from at least four different species (Figure 1.234), most of them found directly within the wood chips, but some within the interstices of the ballast stones within L2 and L3. Numerous barrel hoop fragments, some more than

Fig. 1.233: Barrel stave and part of a tapered log.

Fig. 1.234: Bird bone collection from L4.

Fig. 1.235: Worked piece of oak wood.

Fig. 1.236: Leather shoe sole.

Fig. 1.237: Pitch made of sap

Fig. 1.238: Unidentified pieces of lead.

Fig. 1.241: Leather shoe sole.

Fig. 1.239: Fragment of a pot found in between Stone Pile 4 and 5.

Fig. 1.240: Fragment of a pot found in between Stone Pile 4 and 5, in situ.

one meter long, were observed resting at the lowest interface directly on the compact and sterile sand of L5. The organic collection consisted of a complete barrel stave, a bucket stave, what seems to be the end of another small boat futtock or rib, some unidentified worked oak elements (Figure 1.235) possibly pertaining to small-craft construction, some elements of leather from a shoe (Figure 1.236), and finally some pitch nodules made of resinous sap often used in boat manufacturing (Figure 1.237). Two small fragments of cut sheets of lead (Figure 1.238) and small fragments of coarse orange and yellow glazed earthenware were also found within L4. The last and fifth layer was made of fine compact sand similar to that found throughout the site.

Layer 5 (L5) was made of fine compact gray sand lighter in color than L2. Excavated to at least 10 cm in depth, the abrupt superior interface was found at more than a meter deep on the northern part of the square. It did not yield traces of human occupation. For an unknown reason, the L5 layer rose rapidly in the north-east corner of the square as can be seen in figure 1.231.

Surface Finds In keeping with the past seasons' tradition of finding artifacts lying directly on the bottom away from the excavation like the 2007 porringer and the 2008 almost complete olive jar, in 2011, between SP-4 and SP-5 excavators found resting on the bottom and slightly buried within the first sandy layer, a remarkable fragment of a large red paste common earthenware pot with an handle about 7 cm wide as seen in Figure 25. The mouth of the pot was slightly glazed.

Conclusion The underwater excavations have always provided a different lens through which to examine the Hare Harbor site. Remnants of log-squaring as well as codfish exploitation, so predominant underwater, are completely absent on land. Underwater archaeology provides an important contribution to understanding the economic activities of the overall Hare Harbor site. Also, underwater preservation of bones and organic material offers a more complete view of subsistence activities, including bird hunting and what seems to be a marginal whaling activity. On the other hand, iron objects are completely missing from the artifact collection as well as any evidence of Inuit presence in the underwater record.

Once more, the 2011 excavation brought to light an extensive faunal collection which contains many bird bones as well as marine and possibly terrestrial mammal remains, greatly adding to the existing collection. It is interesting to note that the underwater faunal collection differs from what is found on land, for most, if not all bird bones come from the underwater collection, the same can be said for the presence of whale bones.

The array of bird bones from the underwater site supports the idea that occupants were consuming birds like gulls, puffins, auklets, ducks, geese and partridges among other large migrant species (St-Germaine 2011). The mammals, mostly from seals, also included fox remains, some domestic pig and other unidentified mammals. The faunal collection seems to indicate a summer-early fall occupation during which time the occupants were engaged in marine exploitation. Fish remains were found in layers more than 10 cm thick at some places and predominantly were of cod species, the skeletal remnants showed processes associated with commercial use (Fitzhugh et al. 2011). As for whaling activities, the mitochondrial DNA analysis of 37 whale bone samples from previous years support the idea that the Basque were exploiting mostly, if not exclusively, bowhead whales from the analysis of at least seven different whales (Fitzhugh et al. 2011; Ford, 2011).

The stratigraphic relation with the ballast pile remains problematic due to the fact that within the many interstices there was found a mixture of all known layers observed on the site. Ballasts are found within all the layers either resting completely inside the woodchip matrix, resting on top of it or resting within the upper layers. This would tend to support the idea that there were multiple visits to the site and not simply one single occupation. As to the refuse present in the underwater site, it seems proximity to surrounding area of the pile is richer when it comes to numbers of artifacts and ecofacts. Additionally, the stratigraphy is better defined on the edges of the ballast piles since squares excavated further away or on the southern part of, at least at one pile, did not yield many objects, ecofacts, or clearly defined stratigraphic layers.

Future excavation done on the site should concentrate on the northern part of the ballast pile SP-4 and SP-6 in the 10 to 15 feet depth line. Also, the western part of the site is still unexplored and the surroundings of ballast pile SP-2 could also be explored.

Fig. 1.242: Vincent Delmas and Erik Phaneuf holding underwater finds. Photo by Wilfred Richard.

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Appendix 1:
LNS 2011 Land Excavations Artifact Catalog

HH1
Area 8 Structure 4 midden, Area 7 Structure 5 charcoal pit and hearth, Area 7, Canco Island Test Pits

Quebec Gateways 2011 Artifact Log – by Square

Area, Structure	Square/ Unit	Artifact #	Artifact	Depth	Additonal Artifact description
Canco Island Test Pits	TP-2	1	Roof tile	NA	
		2	Roof tile	NA	
		3	Roof tile	NA	
		4	12 pieces of bone (seal?)	NA	bone likely to be seal
Canco Island Test Pits	TP-5	1	Roof tile	NA	
		2	Roof tile	NA	
		3	3 pieces of bone (seal?)	NA	bone likely to be seal
Canco Island Test Pits	TP-6	1	Tooth (ungulate?)	NA	possibly caribou tooth
		2	long bone (caribou?)	NA	
		3	Many small fragments of bone	NA	
		4	tile fragment	NA	
		5	nail fragment	NA	
Canco Island Test Pits	TP-7	1	tile fragment	NA	
		2	tile fragment	NA	
		3	tile fragment	NA	
		4	tile fragment	NA	
		5	tile fragment	NA	
		6	tile fragment	NA	
		7	tile fragment	NA	
		8	iron	NA	Nail fragment
		9	2 pieces of bone	NA	seal
Area 8 Structure 4 Midden	4N 20 W	1	bead	217	White and blue striped, 3 blue stripes on each side
		2	Ring bolt	224	
		3	earthenware sherd	215	White glazed
		4	glaze fragment	211	4 pieces green painted white glaze from earthenware
		5	Chert fragment	227	tan chert biface edge fragment
		7	pipestem	221	
		8	chert fragment	222	scraper edge
		9	glaze fragment	221	2 pieces green/brown mottled
		15	Chert flake	220	grey chert
		16	Chert flake	219	brown chert
		17	earthenware sherd	226	brown earthenware plain
		18	Marmite sherd	221	With roller decoration

HH1

Area 8 Structure 4 midden, Area 7 Structure 5 charcoal pit and hearth, Area 7, Canco Island Test Pits

Quebec Gateways 2011 Artifact Log – by Square

		19	glass sherds	221	5 pieces clear goblet glass
		26	earthenware sherd	224	orange glazed
		27	earthenware sherd	222	plain
		28	earthenware sherd	221	2 pieces orange glazed rim piece
		29	bead	222	rust colored
		33	earthenware sherd	234	orange glaze
		34	Marmite sherd	227	With roller decoration
		Nails	17 nails	NA	
Area 8 Structure 4 Midden	**6N 20W**	1	stoneware sherd	234	grey on grey stoneware rim
		2	glaze fragment	236	White glaze (5 pieces) found in black earth
		3	stoneware sherd	240	grey on grey stoneware
		7	whetstone	136	sandstone whetstone in black earth
		8	stoneware sherd	238	strap handle
		9	pipe bowl	240	with roulette décor on rim
		12	mica	237	
		13	glass sherd	235	green glass (bottle?) fragment
		18	glass sherd	238	green bottle fragment
		19	glass sherd	236	green bottle fragment
		20	stoneware sherd	244	grey outside brown inside stoneware
		32	flint		flint strike a light
		33	stoneware sherd	241	grey on grey stoneware
		34	roof tile		higher quality roof tile fragment sample from SW quadrant
		35	glass sherd	246	green glass (bottle?) fragment
		44	unknown	227	6 pieces possible walrus ivory tusk, dense concentric bone?
		45	earthenware sherd	247	
		46	bead fragment(?)	242	blue white striped glass
		nails	28 nails	NA	
		1	stoneware sherd	225	grey on grey Normandy stoneware rim
		3	stoneware sherd	225	bellamine stoneware with olive glaze outside
		5	stoneware fragment	215	fits with #19, brown on grey stoneware
		7	pipestem	225	found in black earth
		9	soapstone vessel fragments	225	6 pieces
		10	stoneware sherd	220	grey on grey stoneware
		11	stoneware sherd	222	grey on grey stoneware
		12	earthenware sherd	213	
		14	stoneware sherd	226	grey on brown

HH1
Area 8 Structure 4 midden, Area 7 Structure 5 charcoal pit and hearth, Area 7, Canco Island Test Pits

Quebec Gateways 2011 Artifact Log – by Square

Area 8 Structure 4 Midden	**8N 20W**	15	stoneware sherd	217	grey on grey
		16	stoneware sherd	226	grey on brown
		17	stoneware sherd	230	grey on brown
		18	earthenware sherd	222	brown sherd
		19	stoneware sherd	230	grey on brown, fits with #5
		21	stoneware sherd	226	grey on brown
		23	bead	232	blue glass bead
		26	stoneware sherd	225	grey on grey
		27	glass sherd	228	green pane glass
		28	lead sheet		lead sheet possibly rolled around wood(?), possibly used as tool handle
		29	stoneware sherd	223	grey on grey
		32	slate	220	red slate fragment
		33	stoneware sherd	221	grey on brown
		34	glass sherd	215	green bottle glass
		39	stoneware sherd	225	brown/grey
		40	stoneware sherd	240	grey/grey
		41	glass sherd		goblet glass
		42	iron sheet	227	2 pieces possibly a blade
		43	pipestem	223	clay, in black earth
		44	pipestem	229	clay, in black earth
		45	stone ball	240	round stone ball
		46	bead	228	light blue colored cylindrical glass bead
		48	stoneware sherd	219	grey/grey
		50	glaze fragment	229	blue glaze
		51	earthenware sherd	229	white glazed found near #50
		52	iron blade	222	knife blade or iron sheet
		nails	17 nails	NA	
Area 8 Structure 4 Midden	**10N 20W**	4	Marmite sherd	212	2 pieces
		8	bead	225	blue glass bead
		14	earthenware sherd	217	
		15	earthenware sherd	217	
		20	Marmite sherd	217	strap handle
		21	pyrites lump	218	
		22	stoneware sherd	220	brown outside grey inside, fits with #23
		23	stoneware sherd	212	grey/brown, fits with #22
		24	earthenware sherd	215	
		25	stoneware sherd	213	grey/grey
		31	bead	210	red and white striped bead with black glass interior

HH1
Area 8 Structure 4 midden, Area 7 Structure 5 charcoal pit and hearth, Area 7, Canco Island Test Pits

Quebec Gateways 2011 Artifact Log – by Square

		33	stoneware sherd		grey on grey
		34	glass sherd	218	green glass (bottle?) fragment
		43	bead	208	blue oval bead
		50	stoneware sherd	214	2 pieces, grey/brown stoneware
		Nails	35 nails	NA	
Area 7	**12N 30W**	3	Chert fragment		brown (newfoundland?) chert utilized flake bottom of black earth on sterile sand/gravel
		Nails	2 nails	NA	
Area 7 Structure 5 charcoal pit and hearth	**14N 22W**	1	Iron strap fragment	123	found in upper black earth
		24	Iron lump	166	
		Nails	28 Nails	NA	
Area 7 Structure 5 charcoal pit and hearth	**14N 24W**	Nails	7 nails	NA	
Area 7 Structure 5 charcoal pit and hearth	**14N 26W**	Nails	2 Nails	NA	
Area 7	**14N 28W**	NA	NA	NA	No artifacts found in this square
Area 7	**14N 30W**	1	stoneware sherd	196	under moss/sod, grey/grey fits with 2 and 5
		2	stoneware sherd	197	under moss/sod, grey/grey fits with 1a and 1b and 5
		3	stoneware sherd	192	under moss/sod, grey/grey
		5	stoneware sherd	209	grey/grey in black earth fits with 1a, 1b and 2
		6	stoneware sherd	211	grey/grey in black earth fits with #9
		8	bone	220	found in black earth between rocks same type of bone found in 20N 30W possibly seal ear bone not collected
		9	stoneware sherd	225	fits with #6, grey/grey, found in black earth
		10	stoneware sherd	219	found in black earth
		11	silver foil	209	
		Nails	1 nail	NA	
		2	Pipestem	101	found in upper black earth under sod
		4	pipestem	115	decorated stem

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Area 8 Structure 4 midden, Area 7 Structure 5 charcoal pit and hearth, Area 7, Canco Island Test Pits

Quebec Gateways 2011 Artifact Log – by Square

Area 7 Structure 5 charcoal pit and hearth	**16N 22W**	8	earthenware sherd	105	round stone ball
		11	bead	109	large blue glass bead in black earth
		12	pipestem	115	burned pipestem
		13	earthenware sherd	124	white glazed earthenware sherd with blue and brown small motif décor in black earth, glazed on both sides
		14	earthenware sherd	125	white glazed earthenware sherd spout fragment, 2 pieces
		15	iron plate	127	riveted iron plate
		18	bead		LOST, unable to locate, white bead in black earth above charcoal, lost
		19	earthenware sherd	120	not pitted wiped surface
		20	earthenware sherd	121	red earthenware vessel handle, found in black earth remnants of yellow glaze
		22	earthenware sherd	128	pitted, in black earth
		25	stoneware sherd	125	grey/grey, in black earth
		27	earthenware sherd	131	pitted
		34	stoneware sherd	130	grey/grey
		Nails	19 nails	NA	
Area 7 Structure 5 charcoal pit and hearth	**16N 24W**	1	glaze fragment	157	2 pieces, small spall of blue glaze in nearly 100% charcoal
		3	mica	153	
		4	musket ball	156	lead musket ball, found in charcoal
		5	sandstone	177	carved (?) brown sandstone
Area 7 Structure 5 charcoal pit and hearth	**16N 26W**	4	Bone	199	Bone fragment in charcoal, seal ear/bulla bone(?)
		Nails	6 nails	NA	
Area 7	**16N 28W**	3	Bone	198	2 pieces, seal ear/bulla bone(?), in black earth above upper cobble level (Inuit deposit)
		Nails	2 Nails	NA	
Area 7	**16N 30W**	2	whalebone handle	187	ulu(?)
		3	earthenware sherd	187	upper black earth
		5	pipe bowl	192	clay pipe bowl with roulette décor on rim
		6	stoneware sherd		found in black earth, grey/grey

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Area 8 Structure 4 midden, Area 7 Structure 5 charcoal pit and hearth, Area 7, Canco Island Test Pits

Quebec Gateways 2011 Artifact Log – by Square

		12	earthenware sherd	214	pitted sherd found in black earth
		13	iron bolt	192	47 cm long resting in lower black earth just abpve the tile and slab pavement
		14	iron sheet	208	found in black earth
		Nails	11 nails	NA	
Area 7 Structure 5 charcoal pit and hearth	**18N 22W**	1	ramah chert point	85	top of black earth just beneath turf
		2	glaze fragment	123	in upper black earth
		3	pipestem	73	
		7	glaze fragment	133	white glaze faience, in upper black earth
		8	stoneware sherd	112	grey/brown, thin, fits with #9
		9	stoneware sherd	97	with handle grey/brown, fits #8
		10	glass sherd	104	goblet glass
		11	stoneware sherd	108.5	upper black earth
		14	glass fragment	133	greenish bottle glass, thin in middle of black earth
		17	bone	85	small joint bone
		24	glass fragment	119	goblet glass, in black earth
		30	earthenware sherd	113	red earthenware pot bottom, fits #51
		31	stoneware sherd	113	grey/grey
		33	mica	112	found in black earth
		36	pipestem	122.5	found in black earth
		42	earthenware sherd	134	found in black earth, with pitted surface
		44	earthenware sherd	128	plain brown no surface treatment or pits
		51	earthenware sherd	140	2 pieces, pink, pot fragment fits #30
		53	stoneware sherd	106.5	grey/grey found in black earth
		56	glaze fragment	120	blue glaze found in black earth
		57	glass fragment	137	clear goblet glass
		61	glaze fragment	116.5	piece of blue glaze
		64	pyrite nodule	131	in charcoal
		69	stoneware sherd	129	grey/grey
		71	stoneware sherd	125	grey/grey
		72	earthenware sherd	131	rim sherd in black earth, pitted surface
		76	iron blade	128	pobble blade or sheet fragment, found in black earth
		78	earthenware sherd	138	green glaze just above sterile sand in charcoal
		Nails	52 Nails	NA	
Area 7 Structure 5	**18N 24W**	2	earthenware sherd	153	possible roof tile fragment
		6	bead	149	fragment of blue seed bead

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Area 8 Structure 4 midden, Area 7 Structure 5 charcoal pit and hearth, Area 7, Canco Island Test Pits

Quebec Gateways 2011 Artifact Log – by Square

charcoal pit and hearth	**18N 24W**	7	pipestem	160	clay pipestem fragment, in black earth
		9	glaze fragment	184	black and white glaze fragment, in black earth on pavement
		11	bead	160	light blue seed bead, found in balk
		Nails	10 Nails	NA	4 nails found in balk
Area 7 Structure 5 charcoal pit and hearth	**18N 26W**	1	earthenware sherd	156	10 cm below surface in black earth
		Nails	4 Nails	NA	
Area 7	**18N 28W**	5	knife blade	170	with rivets
		7	iron sheet	167	metal fragment
		10	bone	178	lower black earth, carpol/tarsal, or walrus mandible fragment with tooth channel in charcoal/rich charcoal black earth
		Nails	9 Nails		
Area 7	**18N 30W**	4	earthenware sherd	178	olive glazed, in upper black earth, just lying on brown sand
		5	earthenware sherd	180	olive glaze, in upper black earth not on brown sand, fits with #6 and #7
		6	earthenware sherd	180	bottom fragment olive glaze, fits with #7 and #5
		7	earthenware sherd	177	bottom fragment olive glaze, fits with #6 and #5
		8	earthenware sherd	178	fragment olive glaze
		10	earthenware sherd	177	upper black earth, olive glaze
		Nails	13 nails	NA	
Area 7	**18N 32W**	NA	No artifacts found		
Area 7 Structure 5 charcoal pit and hearth	**20N 22W**	1	bead	94	blue bead
		4	soapstone vessel fragment	82	
		5	glass fragment	86	piece of greenish goblet glass
		6	glaze fragment	86	blue/white glaze fragment
		10	glaze fragment	89	5 pieces, blue, white and black lined flaze fragments
		14	bead	85	large black glass(?) bead in black earth
		17	whetstone	90	fine sandstone whetstone, in black earth
		Nails	12 nails	NA	

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Area 8 Structure 4 midden, Area 7 Structure 5 charcoal pit and hearth, Area 7, Canco Island Test Pits

Quebec Gateways 2011 Artifact Log – by Square

Area 7 Structure 5 charcoal pit and hearth	**20N 24W**	10	iron mass	150	in many pieces a coiled strap of iron, blade like piece and other fragment, 2 pieces.
		Nails	13 Nails	NA	
Area 7 Structure 5 charcoal pit and hearth	**20N 26W**	2	bead	124	half of bead, cornaline d'aleppo red bead
		6	earthenware sherd	134	white glazed in 2 pieces
		Nails	8 nails		includes rusted mass which is likely to be a fragment of a spike
Area 7	**20N 28W**	1	stoneware sherd	137	grey interior, brown exterior stoneware, 2 pieces in base of turf
		3	stoneware sherd	118	brown/grey stoneware
		4	stoneware sherd	120	brown/grey stoneware
		5	bead		clear glass oval bead with milky bands in top of upper sandy black earth just below sod
		7	iron point	147	knife blade (?) or iron point in upper sandy black earth
		10	earthenware sherd	156	in top with pitted interior surface
		11	iron piece	158	small piece of iron in charcoal
		Nails	4 nails	NA	
Area 7	**20N 30W**	2	flint	157	flint flake in sod
		4	soapstone lamp	150	Inuit soapstone lamp wedged under top rock in stone pile, pits and scrapes inside may be kill marks
		5	grindstone	154	sandstone grindstone with rocks in top of stone pile
		6	iron blade	160	9 fragments of an iron blade (with rivets?)in top of black earth
		7	earthenware sherd	167	with pits on surface
		Nails	3 Nails	NA	
Area 7	**20N 32W**	4	microblade	150	groswater (Dorset) microblade in black earth
		5	glass sherd	149	greenish goblet glass in black earth
		Nails	8 Nails	NA	
Area 7	**20N 34W**	1	glass sherd	156	green goblet glass
		2	earthenware sherd (?)	166	olive glazed; possibly tile

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Area 8 Structure 4 midden, Area 7 Structure 5 charcoal pit and hearth, Area 7, Canco Island Test Pits

Quebec Gateways 2011 Artifact Log – by Square

Area 7 Structure 5 charcoal pit and hearth	**22N 22W**	Nails	2 nails	NA	
Area 7 Structure 5 charcoal pit and hearth	**22N 24W**	1	glass sherd	43	blue glass sherd in black soil
		2	bone	44	seal mastoid bone in black soil
		4	stoneware sherd	58	grey/grey stoneware in black earth
		7	whetstone	50	limestone whetsone(?) just beneath sod
		10	unknown	90	thin fiber-like brittle material beneath #9
		12	bone	51	mammal bone fragment
		13	bone	36	whale rib in base of turf
		Nails	10 nails	NA	
Area 7 Structure 5 charcoal pit and hearth	**22N 26W**	1	sinker	69	folded lead fishing sinker in upper brown soil, just beneath turf
		#2, #3, #4, #5, #6, #7: soapstone pieces found crushed and directly beneath a large schist rock all at the base of the turf. Therefore, most recent deposit in this part of the site			
		2	soapstone pot fragment	115	Inuit soapstone pot fragment in upper brown soil just beneath turf, fits with #3
		3	soapstone pot fragment	115	Inuit soapstone pot fragment in upper brown soil just beneath turf, fits with #2
		4	soapstone pot fragment	115	Inuit soapstone pot fragment in upper brown soil just beneath turf
		5	soapstone pot fragment	115	Inuit soapstone vessel bottom
		6	soapstone pot fragment	115	Inuit soapstone vessel bottom corner
		7	soapstone pot fragment	115	Inuit soapstone vessel bottom fragment
		10	soapstone pot fragment	50	Inuit soapstone vessel rime corner in brown soil just beneath sod
		Nails	4 nails	NA	
Area 7	**22N 28W**	1	stoneware sherd	112	brown/grey stoneware fragment in base of turf
		4	soapstone pot fragment	100	4 pieces of a rectangular Inuit soapstone pot
		5	soapstone pot fragment	98	Inuit soapstone pot fragmentbelow brown humus in top of charcoal sand
		6	soapstone pot fragment	72	Inuit soapstone rim corner pot fragment in top of upper cultural level associated with a small amount of charcoal and tile fragments
		7	bone	111	small bone fragment from top of upper cultural layer

HH1

Area 8 Structure 4 midden, Area 7 Structure 5 charcoal pit and hearth, Area 7, Canco Island Test Pits

Quebec Gateways 2011 Artifact Log – by Square

		12	stoneware sherd	102	grey interior brown exterior in top of cultural layer just beneath turf, fits #13
		13	stoneware sherd	100	fits #12
		14	headband	103	Inuit(?) copper headband(?) in brown soil
		17	glass sherd	130	pane of green glass
		Nails	10 nails	NA	
Area 7	**22N 30W**	3	bone	133	femur distal end (broken) in upper brown soil, 3 pieces
		7	bone	151	found in brown black transition soil
		12	earthenware sherd	160	2 pieces, earthenware vessel bottom in black earth
		15	handle	54	tool tang, in brown soil
		17	knife blade	128	knife blade (?) fragment
		Nails	13 nails	NA	
Area 7	**22N 32W**	1	bone	138	whale rib in brown soil of tiles 58 cm long 27.9 cm inside
		12	glass sherd	142	light blue glass sherd with bubbles
		13	earthenware sherd	150	green glazed faience in black earth just above sterile
		Nails	11 nails	NA	
Area 7	**22N 34W**	3	glass sherd		greenish goblet glass
		6	glass sherd	126	green goblet glass in brown soil
		Nails	4 Nails	NA	
Area 7	**22N 36W**	1	chert	146	banded chert plano-convex biface in black earth on top of slab rock
		Nails	1 Nail	NA	
Area 7	**22N 38W**	Nails	3 Nails	NA	
Area 7	**22N 40W**	Nails	5 Nails	NA	
Area 7	**24N 36W**	No artifacts found			
Back dirt	**Stucture 4**	NA	glass	NA	green bottle glass

Appendix 2:
LNS 2011 Underwater Excavations Artifact Catalog

Hare Harbor 1 2011 Underwater Catalog

TPC0-1			
EdBt-3-C0-1-01 Clay Pipe bowl	Fourneau de pipe en terre cuite fine argileuse blanche . Type 23 de la typologie de Hümes 1820 et +		
EdBt-3-C0-1 Common redware ceramic fragment	Tesson de céramique commune à pâte orange sans glaçure		
EdBt-3-C0-1 yellow glazed fine earthenware	Tesson de céramique glaçuré à pâte jaune		

EdBt3-C0-1 Common redware ceramic fragment	Tesson de terre cuite grossière à pâte rouge	
EdBt3-C0-1 Common yellow ware glazed ceramic fragment	Tesson de terre cuite fine, pâte jaune, glaçure	
EdBt3-C0-1 Common yellow ware glazed ceramic fragment	Deux tessons de terre cuite fine, pâte jaune, glaçure	
EdBt-3-C0-1 Ecofacts Fish bones	Ossements de poisson	

EdBt-3-C0-1 Ecofacts Mammal bone	Fragment de diaphyse d'os long de mammifère	
EdBt-3-C0-1 Ecofacts Mixed bones	Ossements d'oiseaux, une vertèbre de mammifère et ossements de poissons	
TPC1-1		
EdBt-3-C1-1-01 Baril stave	Fragment distal de douve de baril 2 cm d'épaisseur 13 cm de largeur	
EdBt-3-C1-1-02 Baril hoop	Fragment distal de cerceau de baril avec encoche 12,5 cm de long 2 cm de hauteur	

EdBt-3-C1-1-03 Yellow ware jar fragment glazed inside the mouth	Fragment de pot en céramique grossière à pâte jaune Anse de 5,5 cm de largeur Lèvre intérieur glaçurée d'une hauteur de 4 cm	
EdBt-3-C1-1-04: Hoop wedge	Coin de cerceau de baril Longueur de 9 cm 3 cm à son plus large Pointe fracturée	
EdBt-3-C1-1-05 Barrel head	Maitresse main de fond de baril en chêne Longueur totale de 53 cm et 35 cm à son plus court 13 cm de hauteur 1,7 cm d'épaisseur Trou traversant la planche fermé à l'aide d'une petite cheville de bois	

EdBt-3-C1-1-06 Bucket stave	Douve de baquet en chêne Longueur 39 cm Largeur variant de 11,5 à 10, 5 cm Épaisseur 1,1 cm	
EdBt-3-C1-1-07 Rug or basket	Fragment de tapis en herbe tressée 25 cm de long 10 cm de largeur	
EdBt-3-C1-1-08 Distal end of an oak rib possibly from a small craft	Fragment distal d'une varangue ou allonge de petite embarcation en chêne Arêtes chanfreinées 15 cm de longueur Allant de 4 à 3 cm de largeur 2,5 cm d'épaisseur à son maximum	

EdBt-3-C1-1-09 Barrel head	Maitresse main de fond de baril en chêne Longueur totale de 57 cm et 348cm à son plus court 11 cm de hauteur 1,8 cm d'épaisseur Trous traversant la planche de 2,5 cm de diamètre et 1,5 cm de diamètre	
EdBt-3-C1-1-10 Pitcher fragment, yellow ware glazed inside	Fragment de pichet en terre cuite commune à pâte beige avec glaçure à l'intérieur	
EdBt-3-C1-1 Tapered wooden peg	Cheville de bois quadrangulaire de 12,5 cm de long 1,3 cm de côté à son plus large Pointe biseautée Taillé sur trois faces	

EdBt-3-C1-1 Possible fragment of baril stave	Petite pièce de bois perforé appartenant possiblement à un douve de baril			
EdBt-3-C1-1 Ecofacts Mixed bones	Phalange de baleine Os iliaque de mammifère Tarsométatarse d'oiseau			
EdBt-3-C1-1 Ecofacts Half a nut shell	Demi-coquille de noix			

EdBt-3-C1-1 Leather fragment of the sole of a shoe	Fragment de semelle de soulier en cuir 12,5 cm de largeur 7,5 cm de hauteur Nombreuse traces de points de couture sur le rebord	
EdBt-3-C1-1 Ecofacts Whale bones	Deux phalanges de baleine	
EdBt-3-C1-1 Ecofacts Mixed bones	Une côte de mammifère et os de nageoire de mammifère marin	
EdBt-3-C1-1 Yellow ware glazed ceramic fragment	Tesson de terre cuite fine, pâte jaune, glaçure	

EdBt-3-C1-1 Ecofacts Mammal phalange	Phalange de mammifère marin	
EdBt-3-C1-1 Ecofacts Fish bones	Ossements de poisson	
EdBt-3-C1-1 Tapered piece of wood	Morceau de bois quadrangulaire avec pointe biseautée 25,5 cm de long 3,5 cm de côté à son plus large	

EdBt-3-C1-1 Tapered piece of wood	Petite pièce de bois taillé 12,5 cm de longueur 1 cm d'épaisseur	
EdBt-3-C1-1 Tapered piece of wood	Pièce de bois taillé 7 cm de longueur 1,3 cm de diamètre à son plus large	
EdBt-3-C1-1 Ecofact Fish bones	Ossements de poisson	

EdBt-3-C1-1 Ecofacts Half a nut shell	Demi-coquille de noix	
EdBt-3-C1-1 Tapered piece of wood	Morceau de bois quadrangulaire avec pointe biseautée 30 cm de long 4 cm de côté à son plus large	

EdBt-3-C1-1 Tapered piece of wood	Coin de bois Longueur de 7 cm 1,3 cm à son plus large	
EdBt-3-C1-1 Leather fragment	5 fragments de cuir provenant d'un soulier	
TPB2-1		
EdBt3-B2-1 Ceramic handle	Anse en céramique commune à pâte jaune avec glaçure à l'intérieur du col	

EdBt3-B2-1 Leather fragment of a shoe	Fragments de cuir appurtenant à un soulier	
EdBt3-B2-1 Ecofact Bird bone	Tarsométatarse	
EdBt3-B2-1 Worked piece of wood	Pièce de bois travaillé 25 cm de longueur 2,2 cm d'épaisseur Largeur variant de 2,5 à 1,5 cm	

TPB2-2		
EdBt3-B2-2 -01 Worked piece of oak	Pièce de bois en chêne travaillé 15,5 cm de haut 14 cm de largeur 3,7 cm d'épaisseur Angles chanfreinés	
EdBt3-B2-2 -02 Wooden peg	Cheville de bois biseautée 13,5 cm de longueur 2,5 cm de largeur jusqu'à une pointe en biseau de 1,3 cm de largeur	
EdBt3-B2-2 -03 Broken fragment of a possible boat rib	Fragment possible d'allonge ou de varangue de petite embarcation 20 cm de longueur 4 cm de largeur Trou vestige de clou de 0,5 cm de diamètre	

EdBt3-B2-2 -04 Barrel stave	Douve de baril 95 cm de longueur 12 cm de largeur au centre	
EdBt3-B2-2 -05 Bucket stave	Douve de baquet en chêne Longueur 18 cm Largeur variant de 6,5 à 4,5 cm Épaisseur 1,1 cm	
EdBt3-B2-2 Ecofact Bird bone collection	Nombreux ossements d'oiseaux	

EdBt3-B2-2 ceramic fragments	3 tessons de céramique commune		
EdBt3-B2-2 Pitch Resinous sap	Échantillon de brai		
EdBt3-B2-2 Ecofact Barrel hoop fragments	Nombreux fragment de cerceau de baril		

EdBt3-B2-2 Ecofact Mammal bones	Ossements de mammifère	
EdBt3-B2-2 Shoe sole	Semelle de soulier en cuir 24 cm de longueur 8,5 cm de largeur à la plante du pied Talon 6 cm de largeur 3 cm de largeur en son centre	
EdBt3-B2-2 Ecofact Whale phalanges	4 phalanges de mammifère marin (baleine)	

EdBt3-B2-2 Leather fragment of a shoe	2 fragments de cuir provenant d'une semelle de soulier	
EdBt3-B2-2 Lead sheet fragment	Deux pieces en plomb	
EdBt3-B2-2 Yellow ware glazed ceramic fragment	Tesson de céramique commune à pâte beige et glaçure jaune	

EdBt3-B2-2 Ecofacts Whale phalanges	Sept phalanges de mammifère marin