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NEARSHORE SURFICIAL SEDIMENT TEXTURES-BEAUFORT SEA, ALASKA

BY

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INTRODUCTION

The surficial sediment character of inner shelf sediments is a commonly used parameter in the interpretation of sedimentary processes and sedimentary environments. We have collected a large number of samples and have made observations on the surficial sediments from the inner shelf of the Beaufort Sea. These data are compiled to aid other geological and non-geological researchers.

This report summarizes Beaufort Sea nearshore textural data on surficial sediments from a variety of sources. The data include laboratory analyses, field notes, diving observations, and published reports. The diversity of data sources, the ways in which the information might be used, and the density of data suggest that a classification of sediment textures similar to that of Trefethen (1950) would be most useful. The three end members we use in this classification are gravel, sand, and mud; gravel-sand and sand-mud boundaries are nominally set at 2 mm and 0.062 mm respectively. The data are graphically displayed in figures 1-a and 1-b. Sample descriptions and other particulars are given in the Appendix.

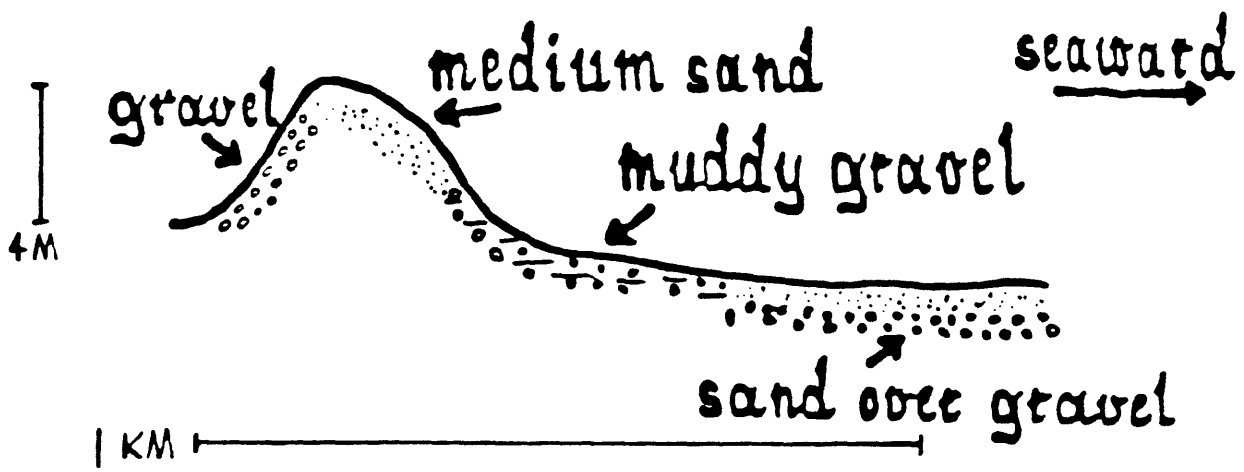
OBSERVATIONS

The most striking observation is the diversity and patchiness of the surficial sediment textures found on the inner shelf. This character is evident at large scale (Figs. 1-a and 1-b) and at a smaller scale based on observations made during diving traverses along the seabed (Reimnitz and Maurer, 1978).

Cores indicate that the diversity in sedimentary character extends vertically as well as laterally (Barnes and others, 1978). A lateral sediment

diversity is characteristic of the entire Beaufort Sea shelf on a regional scale (Barnes and Reimnitz, 1974). This diversity is not readily explained by temperate latitude shelf processes.

Small-scale variability is emphasized in diving observations along 300 to 400 m traverses off Reindeer Island, where clean sand ridges were separated by bioturbated muds (Reimnitz and Barnes, 1974, p. 323). At some locations on the seaward end of the traverses, numerous blocks and slabs of a stiff, silty clay were encountered. These apparently originated from nearby outcrops. Based on diving observations made in the vicinity of the series of shoals, Reimnitz and Maurer (1978) noted that "over much of the area generalization of sediment types cannot be made because of the extreme, short distance variations" such as those sketched below.



Diver's sketch of a shoal northeast of Oliktok Point which illustrates the variability of surficial sediment textures. Area covered is about 500 m of the seabed across and seaward of the shoal (Reimnitz and Maurer, 1978).

COMMENTS

One process responsible for the diversity is ice gouging, which exposes sediments on the seabed which may have been initially deposited under different hydraulic and/or ice regimes than those in the present. The presence of ice at or near the sea floor also acts to locally intensify currents and consequently to locally modify sediment textures. From seismic

data we know that on parts of the inner shelf, Holocene marine sediments are only a few meters thick (Reimnitz and others, 1972). The possibility of including sediment textures relict from earlier depositional environments by the modern process of ice gouging (Reimnitz and Barnes, 1974) and strudle scour, which can exhume sediments to depths of several meters, is almost certain (Reimnitz and others, 1974).

Naidu and Mowatt (1976) unsuccessfully attempted to characterize the inner shelf geographic environments on the basis of textural parameters alone. Geographic depositional environments such as bay and lagoon do not exist in textural terms. For example, these authors assign Harrison Bay and Prudhoe Bay to the same depositional subfacies (Naidu and Mowattt, 1976, p. D-10). Figure 1 shows that Prudhoe Bay surface textures are muds with admixtures of sand and gravel, while Harrison Bay is dominantly a sandy facies immediately off the Colville Delta, with more muddy sediments seaward. A comparison of the vertical stratigraphy also shows a great disparity in the two environments (Barnes and others, 1979). The disparity, however, is to be expected when environmental factors affecting sedimentation in these two areas are considered. Prudhoe Bay is a well protected shallow embayment which has only moderate fetch available for wave build-up in summer. In winter a stable ice sheet suggests ice gouging is of minor importance. Harrison Bay can be exposed to fetches in excess of 50 km when ice is well offshore during the summer. During the winter the bay is subject to ice ridge development and to repetitive gouging of the seabed by ice (Reimnitz and others, 1978; Barnes and others, 1978).

The variability of surface textures in the nearshore sediment implies a varied biologic community. The biologic community in one texturally diverse environment off the Sagavanirktok River is emphasized by Dunton (1979).

The thin nature of the Holocene cover, which is often broken by outcrops of a Pleistocene stiff, silty clay, as well as by local and areal textural heterogeneity, causes variations in the engineering character of nearsurface sediments as well. Furthermore, the availability of gravel suggested by the surficial sediment distribution is tempered by the uncertain thickness and vertical and lateral variability of gravel which, in places, is known to exist only as a surface veneer (Barnes and Reimnitz, 1974). Potential gravel resources will have to be delineated by shallow drilling.

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APPENDIX

This appendix contains field sample number, location, depth from which sample was recoverd, and textural information on sediment samples from the inshore areas of the Beaufort Sea off central northern Alaska (Figs. 1a and 1b). Sample number, location, and depth are self explanatory.

Textural information is presented in three ways. Where size analyses have been performed, the percent of gravel, sand, silt, and clay is given (NA = no analysis). Field and laboratory notes on surficial sediment texture are also presented when available. Using the size data or the sample description when no size data are available, a one to three letter descriptor was determined. The last letter of the descriptor has been capitalized and represents the major constituent of the sample (e.g. gmS = gravelly, muddy sand). Where only the descriptor was used there was some degree of subjectivity involved so no description was included. Silt and clay have been combined in the descriptors because these two size clases were often indistinguishable.

Field No.	Latitude Longitude	Depth (M)	%Gravel %Sand %Silt %Clay	Sample Description g,G = gravel s,S = sand m,M = clay and silt (mud)
71 ABP 11	70°25.3'N 146°08'W	33	1.9 G 31.0 S 30.0 St 37.0 C	gsM-Tube worms and tubes, brittle stars, clams, and polychaete worms. A 1-cm ooze overlies a green, highly cohesive lower unit.
71 ABP 12	70°18.0'N 146°05'W	26	0.0 G 24.9 S 41.2 St 33.8 C	sM-Brittle stars and tube worms. Cohesive clay, no apparent pebbles.
71 ABP 13	70°20.7'N 146°34'W	31	2.7 G 25.1 S 41.4 St 30.7 C	gsM-Sandy mud with miscellaneous sized pebbles. Surface layer is a greenish-grey soup 1-2 cm thick, underlain by a stiff, grey mud with abundant pebbles(to 15 cm diameter).
71 ABP 14	70°25.0' N 147°05'W	28	7.8 G 15.3 S 40.5 St 36.3 C	gsM-Grey, plastic, slightly silty clay, with sparse sand and gravel (maximum 5-cm gravel diameter). Dark, grey clay below grey surface layer.
71 ABP 23	70°38.4'N 148°04'W	27	18.1 G 18.1 S 23.7 St 40.0 C	sgM-Brittle stars, tube worm and amphipods. Two layers: 1 cm red-brown ooze over an olive-grey, more cohesive mud.
71 ABP 25	70°31.2'N 147°31'W	26	3.1 G 13.2 S 39.8 St 43.9 C	gsM-Brittle star, snail shell, and polychaete worms. A few pebbles (<6 cm). Olive-gray clay silt of fine and very cohesive texture. Darker grey at bottom.
71 ABP 36	70°37.2'N 148°11'W	22	41.6 G 37.4 S 11.0 St 9.9 C	msG-Sample loaded with pebbles and larger rocks along with sandy clay; random scatter and roundness. A large number of reduced areas. No textural zonation or sorting.
71 ABP 49	70°36.0'N 148°50'W	22	14.2 G 49.9 S 20.0 St 15.8 C	gmS-Brittle star, tube worms. A soupy, silty clay ooze layer on top of a brown-, grey, olive cohesive clay. Some pebbles (<1 cm) dispersed in sample.
71 ABP 69	70°41.2'N 148°22'W	23	0.0 G 8.0 S 25.2 St 66.7 C	sM-Exceptionally stiff grey clay with minor sand constituent.
71 AJT 1	70°24.6'N 148°23.2'W	3.5	0.0 G 73.7 S 19.1 St 7.1 C	mS-Clean, well sorted silt. No fauna or gravel observed.

Field No.	Latitude Longitude	Depth (M)	%Gravel %Sand %Silt %Clay	Sample Description g,G = gravel s,S = sand m,M = clay and silt (mud)
71 AJT 2	70°20.6'N 148°23.2'W	2.6	0.0 G 5.7 S 77.8 St 16.4 C	sM-Coarse clay or very fine silt. No gravel or organisms observed. Top 1 cm has a high H_2O content.
71 AJT 3	70°27.0'N 148°15.3'W	8.5	0.0 G 29.8 S 54.2 St 15.9 C	sM-Fine silt with 5 to 15% clay. Two 1 cm pelecypods.
71 AJT 4	70°30.0'N 148°00.0'W	11.3	0.0 G 62.4 S 32.3 St 5.3 C	mS-Very coarse silt. A minor amount of clay. Numerous worms.
71 AJT 5	70°26.2'N 148°00.0'W	6.7	2.9 G 79.7 S 12.9 St 4.4 C	gmS-Worm tubes on top. Poorly sorted. Some clays and silts, predominantly coarse sands. (largest particles <7 mm). Medium olive-grey color.
71 AJT 6	70°22.6'N 148°00.0'W	4.6	0.0 G 98.3 S 1.7 St 0.0 C	mS-Well sorted fine sand, no clay. <5% silt. No fauna observed.
71 AJT 7	70°23.5'N 147°45.0'W	7.6	0.0 G 80.6 S 13.5 St 5.9 C	mS-Silt, some bottom fauna.
71 AJT 8	70°22.1'N 147°30.0'W	6.7	0.0 G 48.0 S 38.5 St 13.4 C	sM-Silt, one fish, one live pelecypod, pelecypod valve, and worms.
71 AJT 9	70°18.5'N 147°30.0'W	5.5	39.7 G 39.7 S 14.6 St 5.9 C	mGS-Sand, silt, clay, with assorted subrounded gravel (<2.5 cm); no sorting. Top 1 cm - 1.5 cm is silt and clay. No gravel.
71 AJT 10	70°14.0'N 147°30.0'W	5.0	0.0 G 8.2 S 12.3 St 5.7 S	sM-Fine to very fine sand, some silt. Small pelecypod.
71 AJT 11	70°16.8'N 147°15.0'W	8.5	0.0 G 14.8 S 66.6 St 18.6 C	sM-1 cm of olive grey clay, high H_2O content, overlying a greyish black, slightly silty clay. One segmented worm.

Field No.	Latitude Longitude	Depth (M)	%Gravel %Sand %Silt %Clay	Sample Description g,G = gravel s,S = sand m,M = clay and silt (mud)
71 AJT 12	70°11.3'N 147°02.0'W	5.2	0.0 G 45.9 S 39.9 St 14.2 C	sM-Very fine silt with clay. Very soft. High H_2O content.
71 AJT 13	70°12.8'N 147°80.0'W	4.0	0.0G 28.5 S 50.2 St 21.3 C	sM-Olive grey fine-grained clayey silt with many worm tubes.
71 AJT 14	70° 16.3'N 147°00.0'W	4.9	0.0 G 11.9 S 69.0 St 19.0 C	sM-Silty clay, very sticky, well sorted.
71 AJT 15	70°23.8'N 148°29.0'W	2.6	14.7 G 57.1 S 22.8 St 5.3 C	gmS-Fine sand and silt. Minor lenses of organic material. No stratification. No fauna.
71 AJT 16	70°26.5'N 148°30.0'W	7.0	0.0 G 56.7 S 30.6 St 12.7 C	mS-Coarse silt. A zone of fine sand and shell fragments at 5 cm. (less than 3 mm in thickness) Brown color at approximately 3 cm.
71 AJT 17	70°28.0'N 148°45.0'W	4.6	1.7 G 16.0 S 60.8 St 21.4 C	gsM-At approximately 12 cm from surface 2 cm of subangular pebbles (<2 mm, <4 mm). Fine sand layer (.5cm thick) at 3-4 cm from surface. Rest of sample is mostly clay.
71 AJT 18	70°31.0'N 148°45.0'W	13.7	0.0 G 12.7 S 49.4 St 37.8 C	sM-Clay surface 1 cm light to medium brown. High water content.
71 AJT 19	70°29.2'N 148°30.0'W	8.8	0.0 G 45.1 S 35.1 St 19.7 C	sM-Top several mm of light to medium brown clay overlies coarse silt and very fine sand with a few white coarse sand-sized fragments.
71 AJT 20	70°31.8'N 148°30.0'W	14.6	0.0 G 24.6 S 48.2 St 27.1 C	sM-Top 1.5-2 cm of fine brownish clay and silt overlies a grey, very slightly silty clay. A few worms present.
71 AJT 21	70°34.3'N 148°45.0'W	16.8	3.0 G 89.1 S 4.6 St 3.2 C	gmS-Poorly sorted sands with minor silt and pebbles. Broken shell fragments common. A whole pelecypod.

Field No.	Latitude Longitude	Depth (M)	%Gravel %Sand %Silt %Clay	Sample Description g,G = gravel s,S = sand m,M = clay and silt (mud)
71 AJT 22	70°35.5'N 148°30.0'W	20.4	40.0 G 35.9 S 14.1 St 9.9 C	msG-Very poorly sorted silt, sand, subrounded pebbles and large (5 cm) pebbles, minor clay. Grey below 5 cm, brown brindle above.
71 AJT 23	70°30.9'N 149°00.0'W	11.0	2.1 G 42.0 S 42.9 St 12.9 C	gsM-A clay, silt, fine to medium-grained sand mixture, poorly sorted. Sparse gravel of uniform diameter (0.8-1.cm) also present.
71 AJT 24	70°34.8'N 149°00.0'W	17.8	1.6 G 93.7 S	mgS-Fine-grained sand with some silt and clay. Sparse gravel of uniform size (1 cm). Some reddish rust brown color to a depth of 6 cm.
71 AJT 25	70°38.3'N 149°00.0'W	18.3	19.7 G 41.7 S 18.2 St 20.2 C	gmS-Unsorted mixture of clay, silt, sand, and gravel (up to 2.5 cm).
71 AJT 26	70°43.0'N 149°22.5'W	1.7	0.0 G 98.4 S 1.5 St 0.0 C	mS-Well sorted medium-grained sand with small shell fragments. Located on top of shoal.
71 AJT 27	70°47.7'N 149°45.0'W	19.2	0.7 G 40.7 S 35.7 St 22.8 C	gsM-Clay with lenses of silt and sand, no obvious stratification. Some shell fragments. Numerous bottom fauna; worms and fish.
71 AJT 28	70°43.6'N 149°45.0'W	18.0	1.6 G 87.2 S 4.9 St 6.2 C	gmS-Fine-grained to med-grained sand with some silt. Abundant small and large pelecypod fragments. No stratification. Moderately well sorted.
71 AJT 29	70°39.4'N 149°45.0'W	14.6	23.6 G 59.2 S 9.0 St 8.1 C	mgS-Top 5 cm is coarse sand and small pebbles (maximum diameter 1 cm). Poorly sorted. Below this is 3 cm of viscous clay. No silt.
71 AJT 30	70°34.7'N 149°45.0'W	7.6	1.0 G 75.1 S 20.2 St 3.7 C	gmS-Slightly silty olive grey clay at the top grading uniformly to fine, medium-grained darker sand at 6 cm depth. Sand-size shell fragments common.
71 AJT 31	70°33.8'N 150°07.7'W	7.6	0.0 G 20.2 S 51.2 St 28.6 C	sM-An upper 1.5 cm of clay with very minor silt, overlying 4 cm of moderate to poorly sorted coarse to fine-grained sands with shell pelecypod fragments.
71 AJT 32	70°35.0'N 150°30.0'W	8.5	0.0 G 15.0 S 62.8 St 22.2 C	sM-An upper 1 cm dark yellowish brown clay overlying 5 cm of fine to very fine olive grey and black sand. Moderately well sorted. Shell fragments not observed.

Field No.	Latitude Longitude	Depth (M)	%Gravel %Sand %Silt %Clay	Sample Description g,G = gravel s,S = sand m,M = clay and silt (mud)
71 AJT 33	70°40.5'N 150°30.0'W	16.2	0.0 G 42.8 S 30.0 St 27.1 C	sM-Yellowish brown clay. Minor amounts of silt are present. No variation from the top to the bottom in the 5-6 cm sample, except for the usual high water content of the surface layer. No color, or any other change with depth.
71 AJT 34	70°46.0'N 150°30.0'W	18.0	0.0 G 59.2 S 20.0 St 20.7 C	mS-Slightly silty clay with silt lenses. No variation with depth except for higher water content near the surface, and a color change from brown at the surface to grey below. Black mottling observed.
71 AJT 35	70°52.0'N 150°30.0'W	19.8	0.0 G 33.8 S 28.2 St 37.9 C	sM-0.5 to 1 cm of light olive grey clay with silt, overlying well sorted fine-grained, olive grey sand (could have been a lens, but lateral extent unknown) A bottom layer of silty, plastic, slightly organic dark grey clay.
71 AJT 36	70°44.0'N 150°07.5'W	17.1	0.0 G 90.5 S 9.5 St 0.0 C	mS-Very fine to fine-grained dark yellowish brown sand. No vertical variation.
71 AJT 37	70°29.0'N 149°06.5'W	2.1	0.0 G 34.0 S 50.0 St 15.9 C	sM-Very poorly sorted sand, silt, and clay No stratification or vertical variation.
71 AJT 38	70°31.6'N 149°26.1'W	1.5	0.0 G 45.0 S 41.3 St 13.6 C	sM-Sample 0-10 cm. Upper 5-6 cm is well sorted, fine-grained sand with considerable mud. Some sand-free clay is seen; suspect either bioturbation or mixing from ice movement. The lower 4-5 cm was well sorted, clay-free, fine-grained sand.
71 AJT 39	70°31.6'N 149°45.0'W	2.1	0.0 G 35.4 S 55.7 St 8.5 C	sM-Clayey silt. High water content in top 0.5-1 cm of brown color. Darker grey below to about 5 cm. Brown penetrates grey in a vertical, linear mottle.
71 AJT 40	70°35.3'N 149°22.5'W	10.4	0.0 G 7.2 S 70.7 St 22.0 C	sM-Olive grey clay. No apparent silt or sand, but appears to be agglomerated into small grains. The top 0.25 cm is of a brown color.
71 AJT 41	70°32.0'N 148°18.0'W	14.0	0.0 G 96.4 S 3.5 St 0.0 C	mS-Poorly sorted, yellowish brown and black, medium to fine-grained sands with abundant shell fragments. No silt and no clay.

Field No.	Latitude Longitude	Depth (M)	%Gravel %Sand %Silt %Clay	Sample Description (g,G = gravel; s,S = sand; m,M = clay and silt (mud))
71 AJT 42	70°34.3'N 148°05.0'W	22.0	20.4G 46.3 S 17.3 St 15.9 C	gmS-Olive grey clay with silt, sand, and gravel. No sorting. No vertical variation.
71 AJT 43	70°30.0'N 147°30.0'W	22.6	10.6 G 25.7 S 32.4 St 31.2 C	gsM-Dark grey clay, with small amount of sand and gravel which appears to have been added to the clay.
71 AJT 44	70°25.8'N 147°36.7'W	11.0	NA	mG-Mostly rounded gravel up to approx. 10 cm. Appears to be an olive grey clay matrix. This is really the only station located near what appears to be year-round fast ice.
71 AJT 45	70°24.0'N 148°15.0'W	3.4	0.0 G 99.1 S 0.9 St 0.0 C	mS-Yellowish brown and black very fine-grained sand. Well sorted, nothing larger. No clay. One isopod and one shell fragment (Pelecypod?)
70 BS-A	70°29.8'N 150°02.2'W	3.5	0.0 G 5.3 S 86.8 St 7.9 C	sM No Description
70 BS-B	70°24.5'N 148°40.6'W	1.0	13.4 G 76.4 S 7.6 St 2.7 C	gmS No Description
70 BS-1	70°34.2'N 149°53.0'W	2.5	3.4 G 83.7 S 9.5 St 3.4 C	gmS No Description
70 BS-3	70°35.0'N 149°53.3'W	10.0	0.0 G 99.0 S 1.0 St 0.0 C	S-clean sand.
70BS-4	70°36.4'N 149°53.8'W	10.0	0.0 G 91.5 S 5.8 St 2.7 C	mS No Description
70 BS-5	70°37.8'N 149°54.3'W	12.0	1.2 G 61.3 S 22.9 St 14.6 C	gmS-Thin film of medium sand overlying brownish mud overlying a dark grey, slightly stiff mud.
70 BS-6	70°39.1'N 149°54.8'W	13.0	0.0 G 98.1 S 1.9 St 0.0 C	mS-Well sorted, clean, medium-grained sand, overlain by thin mud film.

Field No.	Latitude Longitude	Depth (M)	%Gravel %Sand %Silt %Clay	Sample Description g,G = gravel s,S = sand m,M = clay and silt (mud)
70 BS-7	70°41.0'N 149°54.8'W	16.0	0.0 G 98.8 S 1.2 St 0.0 C	mS-Clean sand. Many small, fragile clam shells of various types (taken next to ice edge).
70 BS-8	70°39.9'N 150°01.5'W	15.0	0.0 G 94.2 S 4.3 St 1.5 C	mS-Muddy sand. Small clam shells.
70 BS-9	70°37.4'N 150°02.3'W	13.0	0.0 G 34.9 S 34.7 St 25.4 C	sM-Grey mud, with a 2-cm sandy layer on top. Some shells.
70 BS-10	70°35.9'N 150°02.9'W	10.5	0.0G 69.2 S 22.3 St 8.5 C	mS-1.5 cm layers of sand and mud.
70 BS-11	70°31.9'N 150°05.5'W	3.0	0.0 G 66.3 S 29.3 St 4.5 C	mS-Grey, sandy mud.
70 BS-12	70°30.4'N 150°07.5'W	3.0	0.0 G 22.1 S 62.8 St 15.1 C	sM-Brownish grey mud.
70 BS-13	70°27.0'N 150°08.1'W	1.5	0.0 G 12.1 S 80.4 St 7.6 C	sM-Brownish grey mud with some organic debris.
70 BS-14	70°31.0'N 149°22.3'W	2.0	0.0 G 18.6 S 66.3 St 15.0 C	sM-Very muddy sand, with soft ooze on top.
70 BS-15	70°32.0'N 149°14.5'W	4.0	0.0 G 94.5 S 4.8 St 0.8 C	mS-Sand. Some small shells.
70 BS-16	70°36.1'N 148°44.8'W	19.0	0.0 G 80.1 S 9.0 St 10.9 C	mS-Sand. Numerous benthic organisms, small clam, amphipods, large turibella-like snail. Thin layer (approx. 1 cm) of muddy sediment on top.
70 BS-17	70°34.0'N 148°50.7'W	11.0	0.0 G 99.4 S 0.6 St 0.0 C	mS-Clean sand, thin (approx. 1 cm) mud layer on top. No organisms.(From a steep ridge.)

Field No.	Latitude Longitude	Depth (M)	%Gravel %Sand %Silt %Clay	Sample Description g,G = gravel s,S = sand m,M = clay and silt (mud)
70 BS-18	70°22.7'N 148°09.8'W	2.0	0.0 G 95.4 S 4.6 St 0.0 C	mS-Fine sand, traces of organic matter.
70 BS-19	70°30.9'N 148°35.4'W	13.0	0.0 G 97.6 S 1.7 St 0.7 C	mS-Clean sand with tin film of mud on top. No pebbles. No shells.
70 BS-20	70°30.5'N 148°37.8'W	10.5	0.0 G 95.5 S 3.8 St 0.7 C	mS-Clean sand with thin film of mud. One small pelecypod (from top of ridge).
70 BS-21	70°31.4'N 148°34.6'W	16.0	0.0 G 34.7 S 44.0 St 21.3 C	sM-Grey mud; mud is soft above with slight stratification, and cohesive and firm below.
70 BS-22	70°36.3'N 148°25.3'W	20.0	5.5 G 36.8 S 32.8 St 24.9 C	No Description
71 AER 2	70°18.3'N 147°00.0'W		NA	sG-Mostly gravel.
71 AER 3	70°34.9'N 150°43.8'W	2.0	0.0 G 82.1 S 14.6 St 3.3 C	mS-Well-packed fine, brownish-grey silty sand with dark particulate organic matter.
71 AER 4	70°33.4 N 150°44.7 W	1.3	0.0 G 70.8 S 29.2 St 0.0 C	mS-Fine brown silty sand. No organic matter visible. Hard bottom.
71 AER 5	70°32.8'N 150°45.5'W	1.5	0.0 G 75.1 S 23.0 St 1.8 C	mS-Fine brownish silty sand. Slightly coarser than last station. Hard packed.
71 AER 6	70°32.4'N 150°46.2'W	1.7	0.0 G 88.8 S 9.1 St 2.0 C	mS No Description
71 AER 7	70°31.9'N 150°47.1'W	1.8	0.0 G 64.2 S 30.0 St 5.8 C	mS-Undulating bottom. Some spots appear to be getting softer. Hard, fine, brownish silty sand. No noticeable organic matter.

Field No.	Latitude Longitude	Depth (M)	%Gravel %Sand %Silt %Clay	Sample Description g,G = gravel s,S = sand m,M = clay and silt (mud)
71 AER 8	70°30.9'N 150°48.7'W	1.2	0.0 G 53.1 S 39.5 St 7.4 C	mS-No undulations. A 1-cm thick brownish silty layer overlies a grey sandy silt with much fibrous organic matter.
71 AER 9	70°34.0'N 150°44.0'W	3.6	0.0 G 9.0 S 71.0 St 20.0 C	mS-Brown sandy silt. No fauna or noticeable organic matter.
71 AER 10	70°35.0'N 150°44.0'W	7.0	0.0 G 10.1 S 72.9 St 17.0 C	sM-Brown clayey silt. Some finely disseminated dark organic matter.
71 AER 11	70°35.8'N 150°44.0'W	10.7	0.0 G 9.7 S 64.9 St 25.5 C	sM-Soft brownish silty clay, no noticeable organic matter. No fauna.
71 AER 12	70°29.4'N 150°01.4'W	3.0	0.0 G 1.4 S 77.0St 21.6 C	sM-Dark grey mottled, silty clay. Apparently no stratification.
71 AER 13	70°28.4'N 150°08.8'W	3.0	NA	M-Silty clay. Grey to brown-grey, with burrow mottling. No stratification. Stiff at bottom end of 24-cm core.
71 AER 14	70°34.1'N 149°58.9'W	7.0	NA	sM-Grey silty clay, very stiff at bottom of 20-cm long core. Brownish on top. Perhaps a sandy admixture. No stratification.
71 AER 15	70°19.0'N 148°19.0'W	1.0	0.4 G 59.5 S 22.9 St 17.3 C	mS-2 cm of dark, coarse silty sand overlies a 0.5 cm organic layer with fibrous material, over a dark coarse silty sand layer, over a clay-rich layer.
71 AER 16	70°18.9'N 148°20.7'W	3.0	0.0 G 6.35S 56.6 St 37.1 C	sM-Dark grey silty stiff clay. Softer and brownish in upper 5 cm. A few pebbles (up to 1 cm diam.) No organisms.
71 AER 17	70°20.0'N 148°22.5'W	10.5	NA	M-Dark grey silty clay. No obvious structures, pebbles, or organisms.
71 AER 18	70°20.6'N 148°25.2'W	2.7	4.4 G 10.1 S 71.0 St 14.5 C	gsM-Dark grey, very stiff silty clay. No structure observed.
71 AER 19	70°21.3'N 148°27.1 'W	1.5	0.0 G 37.4 S 58.5 St 4.0 C	sM-Fine to medium-grained brownish silty sand. To 5-cm depth, no stratification. Some worm burrows, and a small clam.

Field No.	Latitude Longitude	Depth (M)	%Gravel %Sand %Silt %Clay	Sample Description g,G = gravel s,S = sand m,M = clay and silt (mud)
71 AER 20	70°22.8'N 148°31.0'W	1.7	0.3 G 72.3 S 22.3 St 5.1 C	mS-Medium-grained, grey-brown silty sand with a few granules. Somewhat oxidized on top. No fauna. 100 feet further offshore showed dark, silty-clayey sand.
71 AER 21	70°23.8'N 148°31.2'W	2.6	0.0 G 12.7 S 65.6 St 21.6 C	sM-3-cm of mud with very little sand overlies a 3-cm fibrous, organic-rich layer, over silty sand. Small and large isopod.
71 AER 22	70°24.6'N 148°30.1'W	4.1	0.0 G 39.6 S 47.4 St 12.9 C	sM-Silty or muddy sand. Worms and burrows. No other fauna. Brown on the surface to grey at 8 cm depth.
71 AER 23	70°25.3'N 148°30.1'W	5.5	0.0 G 58.9 S 34.8 St 6.3 C	mS-Medium-grained, brownish grey, muddy sand, 10 to 20 worm tubes protruding per 100 cm^2 x 1 cm area. No structures in 5-cm slab.
71 AER 24	70°26.0'N 148°29.3'W	6.8	0.0 G 49.2 S 43.9 St 6.9 C	SM-Medium-grained, brownish grey silty sand. Many worm tubes protruding from the sediment surface by approx. 1 cm. A small, live clam and a complet shell of another on the surface. No structures, no change in color in 6-8 cm surface layer.
71 AER 25	70°27.0'N 148°29.0'W	8.2	0.0 G 80.2 S 14.6 St 5.3 C	mS-Medium-grained silty sand. No worm tubes.
71 AER 26	70°28.9'N 148°12.6'W	2.4	0.0 G 44.7 S 43.6 St 11.7 C	sM-Material is definitely over-consolidated. In an area where there should be sandy bottom. Relatively little material freshly deposited.
71 AER 27	70°17.9'N 147°49.4'W	1.5	NA	mS-Fine, light grey, silty sand, no structures or organisms.
71 AER 28	70°17.9'N 147°49.0'W	0.9	0.0 G 50.9 S 46.5 St 2.6 C	mS-Slightly sandy gravel (area is 90-95% gravel), driftwood chips. Some laminaria and very fine fibrous algae. Right outside of beach the bottor turns to fine, silty sand.
71 AER 29	70°18.0'N 147°48.6'W	0.9 M	0.0 G 93.8 S 6.2 St 0.0 C	mS-Medium-grained grey sand.
71 AER 30	70°18.1'N 147°47.9'W	2.1	0.0 G 82.1 S 17.2 St 0.8 C	mS-Medium-grained, well sorted sand.

Field No.	Latitude Longitude	Depth (M)	%Gravel %Sand %Silt %Clay	Sample Description g,G = gravel s,S = sand m,M = clay and silt (mud)
71 AER 31	70°18.8'N 147°47.5'W	3.3	0.0 G 65.3 S 28.2 St 6.5 C	mS-Medium-grained, grey, slightly silty sand/finer brownish oxidized sand in upper 1.5 cm.
71 AER 32	70°19.9'N 147°5.0'W	4.9	0.0 G 76.5 S 19.7 St 3.8 C	mS-Slightly silty fine-grained, grey sand. No stratification, structures or organisms.
71 AER 33	70°20.6'N 147°40.8'W	6.1	25.0 G 61.2 S 9.3 St 4.5 C	mgS-Medium-grained, slightly silty sand in upper 5 cm, mixed with gravel-size material on bottom. Kelp holdfast with gravel and sand.
71 AER 34	70°21.6'N 147°37.0'W	8.5	0.5 G 32.2 S 48.1 St 19.2 C	sM-2-3 cm of silty clay overlying sandy silt, polychetes, clam shell, worm burrows, some pebbles mixed in - stiff mud below.
71 AER 35	70°23.4'N 147°32.0'W	7.6	0.0 G 32.5 S 51.9 St 15.6 C	sM-Slightly sandy, grey to dark grey mud, soft near surface - stiff below. One bivalve. No pebbles.
71 AER 36	70°20.9'N 147°29.9'W	7.3	0.0 G 39.1 S 40.8 St 20.1 C	sM-Two samples: a) 10 cm diameter, angular rock and smaller rocks with sponges and laminaria. b) Slightly sandy mud with 2-cm sand layer, no pebbles, shells, or organisms.
71 AER 37	70°18.3'N 147°26.1'W	7.0	0.0 G 62.9 S 25.3 St 11.9 C	mS-Grey, soft, sandy mud at surface - very stiff at 10 cm depth. Clam shells (including Astarte) and pebbles.
71 AER 38	70°15.7'N 147°23.0'W	6.1	0.0 G 45.5 S 40.8 St 13.8 C	sM-Slightly sandy grey mud, worms and burrows, clams, no pebbles, rusty color next to burrows and the surface layers. Stiff bottom.
71 AER 39	70°14.0'N 147°21.0'W	3.7	0.0 G 88.2 S 11.8 St 0.0 C	mS-Medium-grained sand.
71 AER 40	70°13.3'N 147°14.2'W	77.0	42.0 G 57.2 S 0.0 St 0.0 C	gS-Mostly light-colored sandy material, beach is of gravel size.
72 AER 70	70°35.15'N 151°57.8'W		NA	M-Dark grey stiff, non-stratified, silty clay. Tiny razor clams and possibly fine shell fragments or forams.

Field No.	Latitude Longitude	Depth (M)	%Gravel %Sand %Silt %Clay	Sample Description (g,G = gravel; s,S = Sand; m,M = clay and silt (mud))	
72 AER 71	70°26.42'N 148°47.1'W		NA	sG-Sandy gravel. Slightly off station is muddy sand	
72 AER 72	70°28.33'N 148°43.4'W		NA	gmS-Muddy sand with some granules.	
72 AER 73	70°26.08'N 148°44.0'W	0.5	0.0 G 60.3 S 35.1 St 4.6 C	mS	No Description
72 AER 74	70°25.82'N 148°44.5'W	0.75	0.0 G 70.8 S 26.9 St 2.2 C	mS	No Description
72 AER 75	70°25.47'N 148°44.6'W	1.5	0.0 G 40.5 S 51.7 St 7.8 C	sM	No Description
72 AER 76	70°25.02'N 148°44.7'W	1.0	0.0 G 24.4 S 68.1 St 7.5 C	sM	No Description
72 AER 78	70°25.71'N 148°47.7'W	1.5	0.0 G 64.1 S 32.9 St 3.0 C	mS	No Description
72 AER 79	70°26.39'N 148°48.4'W		NA	sG-Gravel overlain-by sandy gravel	
72 AER 80	70°26.10'N 148°48.7'W	1.5	0.0 G 56.1 S 38.3 St 5.6 C	mS-Dark grey to black silty sand. Few pebbles, some granules, no stratification.	
72 AER 81	70°25.82'N 148°49.3'W	1.2	0.0 G 89.0 S 9.4 St 1.6 C	mS-Slightly silty, medium-grained sand, no pebbles, shells, or stratification. Small pockets of fibrous organic matter.	
72 AER 82	70°26.23'N 148°49.8'W	1.6	0.0G 83.6 S 14.9 St 1.5 C	mS-Slightly silty, non-stratified, medium-grained sand, several pebbles, no shells, some organic material on surface.	
72 AER 83	70°26.42'N 148°49.7'W	2.5	NA	sM-Clayey, sandy silt, much organic matter, some stratification. (In an old strudel hole.)	

Field No.	Latitude Longitude	Depth (M)	%Gravel %Sand %Silt %Clay	Sample Description g,G = gravel s,S = sand m,M = clay and silt (mud)
72 AER 84	70°27.16'N 148°50.4'W	1.5	0.0 G 54.7 S 35.6 St 9.4 C	mS-Brown, very silty fine-grained sand with worm tubes and burrows overlying dark brown to grey slightly silty, fine to medium-grained sand with little organic debris and a few small pebble
72 AER 85	70°28.19'N 148°50.7'W		NA	sM-Brown to grey, slightly sandy clayey silt with some organic debris. Small amphipod, small clam.
72 AER 86	70°28.63'N 148°51.6'W	1.0	0.0 G 11.1 S 71.4 St 17.5 C	sM-Light brown clayey silt with some organic debris overlying a grey, slightly sandy, clayey silt. Small amphipod. No pebbles. Top layer has very little consolidation compared to lower layer.
72 AER 87	70°28.03'N 148°52.4'W	2.5	0.0 G 22.7 S 64.6 St 12.7 C	sM-2 cm of unconsolidated brown, clayey silt with many worm tubes overlying a more consolidated black grey silty fine-grained sand containing no worm tubes.
72 AER 88	70°27.08'N 148°53.9'W	2.0	NA	S-Clean, fine to medium-grained sand, one pebble. No structures.
72 AER 89	70°26.86'N 148°54.0'W	1.1	0.0 G 95.4 S 3.8 St 0.8 C	mS-Clean, fine to medium-grained sand, one pebble. No sedimentary structures.
72 AER 90	70°27.16'N 148°55.9'W	1.5	0.0 G 86.0 S 14.7 St 0.0 C	mS-Clean, fine-grained sand, two pebbles (one is 1 cm in diam.) No structures. A little organic debris near the bottom of grab sample.
72 AER 91	70°27.46'N 149°00.1'W	2.0	0.0 G 50.1 S 44.1 St 5.8 C	MS-Light brown silty, fine-grained sand with little organic debris overlying grey, very fine-grained sandy silt. No pebbles seen. No stratification beyond color change.
72 AER 92	70°26.38'N 148°59.3'W	1.0	0.0 G 68.1 S 24.5 St 7.4 C	mS-Upper 2 cm is fine to medium-grained, slightly silty brown sand. Lower grey material has large pockets of organic material. No fauna. No stratification.
72 AER 93	70°27.10'N 148°47.7'W	6.0	NA	gM-Much organic matter, tundra debris (?). Some pebbles, sticks and wood, and also some rather stiff, grey, clayey silt. (From a 6-m channel bottom.)
72 AER 94	70°25.93'N 148°40.0'W	1.8	NA	gmS-Dark grey, fine-grained, silty sand with some pebbles (one 0.5 cm diam.). Some grasses and small amphipods. No structures or stratificatic

Field No.	Latitude Longitude	Depth (M)	%Gravel %Sand %Silt %Clay	Sample Description g,G = gravel s,S = sand m,M = clay and silt (mud)
72 AER 95	70°26.19'N 148°39.7'W	3.6	NA	sM-Slightly sandy clayey silt. Bownish clayey silt on top.
72 AER 96	70°26.49'N 148°39.7'W	4.2	NA	gS-Gravelly sand, no mud fraction. No shells (on a ridge that is about 1 m high).
72 AER 97	70°26.87'N 148°39.1'W	6.2	NA	gM-Dark grey, stiff, silty clay, brownish on top. A considerable amount of pebbles.
72 AER 98	70°26.72'N 148°41.9'W	4.0	NA	mgS-Gravelly, shelly sand, with a brownish layer of ooze on top.
72 AER 99	70°26.45'N 148°43.8'W	2.0	NA	sM-Brown, sandy silt overlying grey sandy silt. Some organic debris. One pebble.
72 AER 100	70°27.10'N 148°43.7'W	3.8	NA	M-Organic-rich, fibrous matter, 8 cm thick, with a layer of brown silty clay on top and in the middle.
72 AER 101	70°27.72'N 148°43.4'W	4.3	NA	G-Clean beach gravel (on a 1-m topographic high).
72 AER 102	70°27.80'N 148°43.4'W	5.0	NA	mS-Medium to coarse-grained sand with a mud layer on top.
72 AER 103	70°26.95'N 148°44.7'W		NA	S-Brown, fine to medium-grained, clean sand with a small pea-size gravel layer at the bottom.
72 AER 104	70°28.22'N 148°43.2'W	7.5	NA	mS-Brownish, soft, muddy sand with the typical ooze layer on top.
72 AER 105	70°28.63'N 144°43.2W	5.5	NA	S-Clean, well sorted, coarse sand. Minor amount of small shell debris. No mud. No pebbles.
72 SER 106	70°29.03'N 144°43.0'W	10.5	NA	M-Clayey silt, brownish on top, becoming darker to black at 10 cm, overlying muddy sand.
72 AER 107	70°28.40'N 148°46.0'W	6.0	NA	M-4-5 cm of clayey silt overlying muddy sand.
72 AER 108	70°28.22'N 148°47.0'W	4.5	NA	M-7 cm of clayey silt overlying muddy sand.
72 AER 109	70°27.79'N 148°46.3'W	4.0	NA	M-7 cm of light brown clayey silt overlying light brown organic-rich medium-grained sand.
72 AER 110	70°31.30'N 149°08.9'W	3.4	NA	gS-Medium-grained, clean sand with a few pebbles.
72 AER 111	70°31.87'N 149°08.0'W	9.5	NA	M-3 cm of clayey silt, overlying sandy silt, overlying coarse sand and gravel.
72 AER 112	70°32.25'N 149°06.1'W	11.2	NA	gS-Coarse-grained sand, a few pebbles.

Field No.	Latitude Longitude	Depth (M)	%Gravel %Sand %Silt %Clay	Sample Description g,G = gravel s,S = sand m,M = clay and silt (mud)
72 AER 113	70°32.97'N 149°04.6'W	13.0	NA	gmS-Slightly silty coarse sand with approx. 3% gravel.
72 AER 114	70°33.29'N 149°03.7'W	10.0	NA	mS-Coarse-grained sand, slightly muddy
72 AER 115	70°34.95'N 149°00.2'W	10.0	NA	S-Coarse-grained sand.
72 AER 116	70°33.40'N 149°11.3'W	6.5	NA	S-Well sorted coarse sand (on ridge).
72 AER 117	70°33.25'N 149°10.7'W	6.0	NA	S-Well sorted coarse sand (on ridge).
72 AER 118	70°33.57'N 149°11.6'W	12.0	NA	S-Well sorted sand (trough outside of first ridge).
72 AER 119	70°34.30'N 149°12.2'W	9.5	NA	S-Well sorted medium-grained sand (second ridge out
72 AER 120	70°33.50'N 149°27.2'W	4.5	NA	gS-Medium-grained sand with several pebbles and some small clam fragments near the bottom (ridge near shore).
72 AER 121	70°33.50'N 149°27.2'W	5.8	NA	sM-4 cm of sandy, soft mud. Muddy sand below. No pebbles. (In a trough between ridges.)
72 AER 122	70°33.72'N 149°27.3'W	9.0	NA	M-Clean gravel with some shells on bottom, overlai by silty sand, which in turn is overlain by 3-4 of soft brown mud. Second sample of well-consolidated black silt which appears to be laminated, parting along planes. Apparently no fossils.
72 AER 123	70°33.65'N 149°27.4'W	7.0	NA	sM-Silty sand overlain by 3 cm of brown, soft, sand mud.
72 AER 124	70°34.40'N 149°26.8'W	11.0	NA	M-Fine mud, somewhat stiff. Soft mud on top.
72 AER 125	70°34.75'N 149°26.4'W	12.5	NA	sM-Fine sandy silt. Soft mud on top.
72 AER 126	70°35.65'N 149°25.8'W	14.0	NA	mS-4 cm of brown, clayey silt, overlying 3 cm brown to grey silty medium-grained sand, 6 cm light grey, clayey silt. A bottom layer of silty very fine-grained grey sand.
72 AER 127	70°33.50'N 149°27.4'W	5.0	NA	M-Well consolidated silt, dark grey and brown mottled.
72 AER 128	70°28.10'N 148°44.2'W	5.5	NA	gM-Highly consolidated black silt with gravel apparently on top. No real evidence of gravel in the silt.

Field No.	Latitude Longitude	Depth (M)	%Gravel %Sand %Silt %Clay	Sample Description g,G = gravel s,S = sand m,M = clay and silt (mud)
72 AER 129	70°29.40'N 148°20.3'W	4.0	NA	M-Black consolidated clay with a few pebbles on the bottom. Brown transient layer on top.
72 AER 130	70°29.40'N 148°20.3'W	4.0	NA	M-Mud layer on top. Coarse-grained sand layer over gravel.
72 AER 131	70°28.90'N 148°19.2'W	2.0	NA	gS-Coarse-grained sand with some gravel.
72 AER 134	70°31.95'N 148°12.8'W	17.0	NA	M-Brown clayey silt, overlying 5 cm grey clayey silt, overlying slightly silty, well sorted, medium-grained sand.
72 AER 135	70°31.95'N 148°10.3'W	12.5	NA	M-1.5 cm of a thin mud layer on top of a slightly pebbly sand (on a ridge).
72 AER 136	70°30.40'N 148°02.8'W	12.5	NA	M-Small amount of brown mud overlying medium to coarse-grained sandy gravel with some fine sand. Segregation by pebble size yields stratification similar to barrier islands.
72 AER 137	70°29.90'N 148°00.4'W	10.5	NA	gmS-Slightly gravelly, muddy sand. Pebbles less than 1.5 cm diameter. Some pebbles on the muddy surface as well as in the sand portion.
72 AER 138	70°31.00'N 147°49.1'W	19.5	NA	sM-4 cm slightly sandy silt overlying a highly consolidated grey clayey silt. A few benthic organisms (worm tube, amphipod) in brown silt. (On a small knoll.)
72 AER 139	70°30.75'N 147°50.5'W	20.0	NA	M-A brown silty thin layer overlying gravelly silty sand.
72 AER 140	70°30.47'N 147°52.5'W	18.0	NA	gsM-Dark grey, pebbly, sandy silt. No stratification
72 AER 141	70°30.00'N 147°55.6'W	8.0	NA	S-Medium-grained clean sand, no pebbles, no stratification, no shells.
72 AER 142	70°29.90'N 147°56.1'W	11.0	NA	gS-Clean, coarse-grained sand with a few pebbles and granules.
72 AER 143	70°29.82'N 147°56.8'W	5.5	NA	gmS-10 cm of slightly silty coarse-grained sand with some granules and large pebbles.
72 AER 144	70°26.20'N 147°51.4'W	5.5	NA	S-Medium-grained sand.
72 AER 145	70°23.70'N 147°30.8'W	1.0	NA	gS-Coarse-grained sand with gravel overlying black, highly consolidated silt.
72 AER 146	70°22.42'N 147°44.2'W	7.0	NA	mS-Silty sand with some shells and a few pebbles.
72 AER 147	70°21.55'N 147°41.8'W	6.0	NA	mS-Medium-grained slightly silty sand with some shells.

Field No.	Latitude Longitude	Depth (M)	%Gravel %Sand %Silt %Clay	Sample Description g,G = gravel s,S = sand m,M = clay and silt (mud)
72 AER 148	70°20.10'N 147°37.6'W	6.0	NA	gmS-Rocks with coralline algae, kelp, sponges and very muddy sand with some pebbles and angular material.
72 AER 149	70°18.95'N 147°33.4'W	5.8	NA	gmS-Very silty, medium-coarse grained sand with abundant, whole, large clam shells and pebbles.
72 AER 150	70°18.20'N 147°29.8'W	6.5	NA	sM-Sandy silt - upper brown layer grading to grey - slightly more consolidated silty sand below.
72 AER 151	70°16.70'N 147°24.3'W	6.2	NA	S-Fine, well sorted sand, some small shell fragments a large isopod, no mud layer on surface. No pebbles or stratification.
72 AER 152	70°15.65'N 147°32.8'W	6.0	NA	sM-Surface of sandy silt, silt below.
72 AER 153	70°15.10'N 147°39.5'W	7.0	NA	gS-Coarse-grained sand with small to medium-sized pebbles.
72 AER 154	70°27.00'N 148°43.5'W	3.5	NA	M-Black, highly consolidated silt. There may be some sand.
72 AER 155	70°29.80'N 149°08.5'W	2.5	NA	G-Pebbles from bottom of Simpson Lagoon, with hydroids attached to all but one.
72 AER 156	70°20.20'N 147°37.5'W	6.5	NA	G-Quartzite cobbles, gneissic granite, meta sandstone - many rocks and rock fragments.
72 AER 157	70°19.40'N 147°38.0'W	5.8	NA	G-Rock chips, 1/2 of rounded, 1/2 of angular rocks, ranging from 20-40 cm in size.
72 AER 158	70°21.70'N 147°34.2'W	7.0	NA	G-Rocks, shells, and algae.
72 AER 159	70°26.42'N 148°47.1'W	2.5	NA	Tundra block taken from upper tundra section in strudel.
72 AER 160	70°26.42'N 148°47.0'W	6.2	NA	Upper lagoonal section in strudel.
72 AER 161	70°26.42'N 148°47.1'W	1.0	NA	M-Highly consolidated sediments from walls of channel (taken in channel off of spit).
72 AER 162	70°26.42'N 148°47.1'W	1.0	NA	M-Dark brown silt (from below lowermost tundra).
72 AER 163	70°30.60'N 148°42.7'W	13.0	NA	M-The bottom is well packed sand, with a thin layer on top, mud and ooze, about 3 cm thick.
72 AER 164	70°26.42'N 148°47.1'W	1.0	NA	gS-Gravel on bottom of strudel. Uppermost sand layer overlies layers of brown silty sand, and black sandy silt.
72 AER 165	70°30.25'N 148°19.2'W	10.0	NA	sM-Taken from outcrop. Consolidated sandy silt, brown to grey, with burrows, incorporated shell fragments and a few pebbles.

Field No.	Latitude Longitude	Depth (M)	%Gravel %Sand %Silt %Clay	Sample Description g,G = gravel s,S = Sand m,M = clay and silt (mud)
72 AER 166	70°26.57'N 148°34.3'W	7.0	NA	sM-At 3-4 cm below sea floor, sandy silt.
72 AER 167	70°25.92'N 148°34.5'W	5.5	NA	M-At 4-5 cm below sea floor, medium-grained, silty sand. Overlain by brownish fine mud.
72 AER 168	70°25.32'N 148°34.6'W	3.5	NA	mS-At 4-5 cm below sea floor, medium-grained silty sand.
72 AER 169	70°33.90'N 148°51.2'W	15.5	NA	G-Gravel sample, lithologically similar to Reindeer, little balck chert. A granite angular cobble.
72 AER 170	70°34.39'N 148°50.5'W	16.0	NA	mS-Snail, pectin, and small clams. Silty sand bottom with many organisms sticking out of surface. Patches in which gravel was 10 cm below surface, other areas just well-packed sand. At 20 cm depth in one area there is fine to medium-grained grey sand.
72 AER 171	70°34.20'N 148°50.6'W	14.0	NA	S-All clean, brown, well sorted medium-grained sand 300 m seaward is black mud with some pebbles.
72 AER 172	70°36.60'N 148°51.4'N	16.5	NA	msG-First grab sample: Few pebbles and worm tubes. Second grab sample: Dark grey silty sandy gravel. Well rounded, fairly large pebbles. Absence of black chert.
72 AER 173	70°32.20'N 149°18.1'W	0.0	NA	sM-Sandy silt on very silty sand. Light grey and massive. Prominent parting from just below tundra horizon. (Taken from bluff on Bertoncini Island, north side.)
72 AER 174	70°34.22'N 149°03.8'W	14.0	NA	M-Light brown, unconsolidated silty clay overlying dark grey, highly consolidated silty clay. Few pebbles (0.5 cm diam.) one amphipod, two small worms. (In basin between 2 ridges.)
72 AER 175	70°34.32'N 149°04.2'W	12.0	NA	S-Well sorted, coarse-grained sand.(Inside of ridge.)
72 AER 176	70°34.27'N 149°04.3'W	13.0	NA	(Inside of ridge.)
72 AER 177	70°34.37'N 149°04.3'W	10.0	NA	S-Coarse-grained sand (lee side of ridge).
72 AER 178	70°34.40'N 149°03.8'W	8.0	NA	S-Medium-grained, well sorted sand (on ridge crest).
72 AER 179	70°34.52'N 149°03.8'W	11.0	NA	S-Medium-grained, well sorted sand (seaward side of ridge).

Field No.	Latitude Longitude	Depth (M)	%Gravel %Sand %Silt %Clay	Sample Description g,G = gravel s,S = sand m,M = clay and silt (mud)
72 AER 180	70°34.72'N 149°03.8'W	14.0	NA	S-Medium-grained, well sorted sand in upper 5 cm, silty sand below. Some granules and some shells (seaward of ridge).
72 AER 181	70°35.12'N 149°03.8'W	16.5	NA	gM-Silty clay, some pebbles (seaward of ridge, still on slope).
72 AER 182	70°36.92'N 149°03.8'W	18.5	NA	gmS-Silty sand, 5 cm, overlying clayey silt, with some pebbles and shells.
72 SER 183	70°34.24'N 149°02.8'W	13.2	NA	sM-Sandy mud, stiff, old, dark, with burrows. Upper 2 cm oxidized. Sand bottom covered with 3 cm thick organic ooze layer (taken from outcrop).
72 AER 184	70°34.19'N 149°02.8'W	11.5	NA	sG-Shelly, sandy gravel at 10 cm below bottom (seaward side of ridge).
72 AER 185	70°24.45'N 149°05.2'W	12.5	NA	S-Coarse-grained well sorted sand (lee side of next ridge).
72 AER 186	70°34.55'N 149°05.2'W	11.5	NA	S-Medium-grained, well sorted sand.
72 AER 187	70°34.72'N 149°05.2'W	14.0	NA	mS-Medium-grained sand, some shells, a little silt in upper layer.
72 AER 188	70°24.90'N 148°30.8'W	3.0	NA	sM-Black consolidated sandy silt (taken from side of strudel).
72 AER 189	70°35.30'N 150°57.2'W	8.5	0.0 G 21.7 S 67.1 St 11.2 C	sM-Silty, light grey, very fine-grained sand with thin brown transient layer on top.
72 AER 190	70°34.60'N 151°11.3'W	8.0	0.0 G 7.1 S 73.4 St 19.5 C	sM-Slightly sandy, soft clayey silt. No structures No pebbles, no organisms observed.
72 AER 191	70°33.75'N 151°26.6'W	4.5	0.0 G 71.3 S 20.1 St 8.6 C	mS-On ridge. Brown, soft, very fine, slightly silty sand, few shells, few worm tubes.
72 AER 192	70°33.65'N 151°30.0'W	2.0	0.0 G 100.0 S 0.0 St 0.0 C	S-Fine to medium-grained, very well sorted buff colored sand. No shells, pebbles or structures.

Field No.	Latitude Longitude	Depth (M)	%Gravel %Sand %Silt %Clay	Sample Description (g,G = gravel; s,S = sand; m,M = clay and silt (mud))
72 AER 193	70°36.20'N 151°31.8'W	5.2	0.0 G 42.0 S 48.9 St 9.2 C	sM-Fine, sandy silt. Few small shells and worm tubes. A slightly more sandy layer 5 cm thick, at 5 cm depth (top of ridge).
72 AER 194	70°36.20'N 151°35.2	4.5	0.0 G 99.0 S 1.0 St 0.0 C	S-Very well sorted medium-grained sand, shells, no structures (ridge crest).
72 AER 195	70°36.20'N 151°35.7'W	5.4	0.0 G 24.7 S 48.2 St 27.1 C	sM-Slightly sandy, light grey, unconsolidated silt. The 6 cm thick sample apparently represents the transient layer. Near bottom there is a slight increase in the amount of medium-grained sand. No shells, structures, or fauna.
72 AER 196	70°35.65'N 151°43.6'W	3.0	1.3 G 85.7 S 13.0 St 0.0 C	gmS-Clean, well-sorted, fine-grained sand, with very small clam shells and some organic debris.
72 AER 197	70°38.90'N 151°42.8'W	5.2	0.0 G 77.7 S 19.5 St 2.8 C	mS-Slightly silty, fine-grained sand with many worm tubes projecting from top. Slight layering effect from overlying clean sand and underlying slightly silty sand.
72 AER 198	70°40.89'N 151°43.2'W	7.2	0.0G 53.0 S 31.7 St 15.4 C	mS-Light brown, silty medium-grained sand (4 cm thick) overlying slightly silty dark grey clay which is not highly consolidated.
72 AER 199	70°44.40'N 151°43.4'W	10.0	0.0 G 26.2 S 53.0 St 20.8 C	sM-Brown sandy transient silt layer overlying dark grey slightly clayey soft silt. No organisms.
72 AER 200	70°43.70'N 151°53.8'W	12.5	0.0 G 42.6 S 27.3 St 30.1 C	mS-Sandy silt transient layer 6-8 cm thick overlying silty sand with large amount of broken shells. Shells were not present in upper layer. 1 large pebble (4 cm).
72 AER 201	70°34.95'N 152°00.4'W	1.8		gmS-Brown-grey, medium to coarse-grained silty sand with pebbles and some organic material.
72 AER 202	70°35.80'N 152°08.2'W	2.0	0.0 G 56.3 S 29.5 St 14.1 C	mS-Silty, medium-grained sand. Some organic matter and wood pieces. A few shell fragments. No pebbles, or structures.
72 AER 203	70°37.90'N 152°04.8'W	2.6	0.0 G 22.4 S 67.1 St 10.5 C	sM-Muddy, fine-grained sand with no layering. Some organic debris, mainly plant fragments.

Field No.	Latitude Longitude	Depth (M)	%Gravel %Sand %Silt %Clay	Sample Description g,G = gravel s,S = sand m,M = clay and silt (mud)
72 AER 204	70°39.49'N 152°02.2'W	3.2	0.0 G 39.4 S 49.2 St 11.4 C	sM-Silty sand or sandy silt. Quite a bit of of fine to medium-grained sand leaked from sampler prior to opening. A few worm tubes. No structures, no shells.
72 AER 205	70°43.75'N 151°58.0'W	1.5	0.0 G 94.9 S 5.1 St 0.0 C	mS-Clean, fine-grained sand with some small black bits of organic material (lee side of Pacific Shoal).
72 AER 206	70°41.50'N 151°59.3'W	1.2	0.0 G 98.6 S 1.4 St 0.0 C	S-Well sorted, medium-grained sand. No shell fragments, no pebbles (crest of Pacific Shoal).
72 AER 207	70°46.75'N 152°03.1'W	5.3	0.0 G 23.2 S 54.3 St 22.5 C	sM-Silty, fine-grained sand with some worm tubes and a few granules.
72 AER 208	70°41.40'N 151°24.3'W	12.0	0.0 G 14.8 S 63.1 St 22.1 C	sM-Clayey silt overlying sandy silt with some shells.
72 AER 209	70°38.80'N 150°03.5'W	12.0	0.0 G 45.5 S 24.9 St 29.6 C	sM-Clayey silt overlying sandy silt with some shells.
72 AER 210	70°36.50'N 150°50.7'W	10.5	0.0 G 14.5 S 59.2 St 26.3 C	sM-Very soft clayey, sandy silt, no shells, no pebbles. Perhaps all from transient layer.
72 AER 211	70°35.20'N 150°40.2'W	3.0	0.0 G 44.9 S 47.5 St 7.6 C	sM-Recent fine-grained silty sand with some worms. Homogenous and soft. No shells or structures.
72 ABP 13	70°13.7'N 145°30.0'W	25	0.0 G 45.0 S 29.0 St 25.5 C	sM-High concentration of tube worms of two different types. Surface layer of oozey plastic mud and sand overlies a stiffer mud with some gravel (pea-size or smaller). Bottom layer has no gravel but a gritty fine sand.
72 ABP 14	70°24.0'N 145°38.0'W	37	.0.0 G 37.0 S 19.5 St 43.2 C	gsM-Surface is fine to medium sandy ooze with large rocks (to 20 cm diam.). Smaller gravel also present (poorly sorted). Starfish and clam shells. Worms and tubes absent. Subsurface is fine-medium-grained sand. Gravel also prsent but not as large as surface layer. Worms and many black oxidized lines.

Field No.	Latitude Longitude	Depth (M)	%Gravel %Sand %Silt %Clay	Sample Description g,G = gravel s,S = sand m,M = clay and silt (mud)
72 ABP 25	70°21.4'N 146°36.0'W	26	NA	sM- Oozey fine-grained sand. Subsurface has very stiff, fine to coarse, jagged in the subsurface.
72 ABP 26	70°19.6'N 146°30.0'W	17	NA	sM-A stiff, sticky, dense, grey clay with no pebbles.
72 ABP 27	70°29.4'N 147°38.0'W	23	0.0 G 23.0 S 77.0 St and C	sM-Layer of mud on top. Gravel layer, sand layer below this, and mud layer below sand.
72 ABP 28	70°31.4'N 147°33.0'W	26	NA	sM-Surface very fine-medium sand silt. Subsurface has very fine to medium-grained silt, much stiffer. Rocks in subsurface layer larger than 1 cm diam.
72 ABP40	70°42.0'N 148°26.0'W	27	NA	mS-Surface is fine to medium-grained silt. Subsurface is silt and stiff mud with 2-cm size gravel.
72 ABP 41	70°35.0'N 148°41.0'W	19	NA	M- 3-8 cm fine mud on top. Clean, reduced sand, with H_2S odor. Solid sand down below 8 cm.
72 ABP 46	70°42.0'N 150°07.0'W	18	NA	mS-3 layers of sand. First layer has fine to medium sand with very little mud. Second layer has dark grey to black sand with many organics. Third layer is lighter grey-brown. Both sublayers were fine to medium-grained sand interspersed with pea gravel. Tube worms and clam shells in surface layer.
72 ABP 47	70°50.0'N 150°10.0'W	24	NA	M-Fine hydroplastic mud surface grading into very sticky lower layer with a very fine to fine clean, dark sand at~10 cm. No pebbles, a few broken shells. Tube worms are only fauna.
72 ABP 60	70°52.7'N 151°00'W	19	NA	M-Brown mud layer 0-5 cm, mud with sand pockets below. Four pebbles of 3 cm diameter. The lower sandy mud had black layers and a H_2S smell. Clam shells, barnacle plates, worms, bryozoan.
72 AJT 3	70°29.0'N 149°03.3'W	3.0	NA	S-Fine-grained sand in top 2 cm. Below this is grey clay.

Field No.	Latitude Longitude	Depth (M)	%Gravel %Sand %Silt %Clay	Sample Description g,G = gravel s,S = sand m,M = clay and silt (mud)
72 AJT 4	70°29.5'N 148°07.6'W	2.4	NA	sM-Silty and slightly sandy clay, with many worms and small pelecypods. Uniform.
72 AJT 5	70°27.2'N 148°10.3'W	7.3	NA	mS-Silt or fine-grained sand, dark greenish grey. Unconsolidated.
72 AJT 6	70°25.2'N 148°10.2'W	5.5	NA	mS-Silt or very fine-grained sand. Dark greenish grey. Unconsolidated.
72 AJT 7	70°22.8'N 148°10.8'W	2.4	NA	mS-Silt or very fine-grained sand. Finer and seems to have more clay than stations 5 and 6, but otherwise appears to be the same.
72 AJT 8	70°21.4'N 147°56.7'W	3.7	0.0 G 11.0 S 67.6 St 21.4 C	sM-Silty clay, medium grey, with high H_2O content
72 AJT 9	70°23.8'N 147°53.3'W	6.0	NA	mS-Silt or very fine-grained sand.
72 AJT 12	70°30.0'N 147°45.0'W	17.0	NA	gsM-Gravelly and sandy clay.
72 AJT 13	70°31.3'N 148°04.2'W	16.0	NA	gsM-Gravel, sand, silt, and clay.
72 AJT 15	70°18.1'N 147°37.0'W	6.0	NA	mS-Sand, silt, clay - primarily sand.
72 AJT 16	70°14.7'N 147°41.8'W	2.7	0.0 G 66.0 S 29.2 St 5.2 C	mS-Slightly clayey silt.
72 AJT 17	70°13.6'N 147°00.0'W	6.0	NA	mS-Slightly clayey silt, with a piece of gravel.
72 AJT 18	70°20.3'N 147°04.1'W	13.0	0.0 G 16.0 S 50.5 St 33.5 C	sM-Soft unconsolidated greenish-grey clay with lumps of grey clay.
72 AJT 19	70°16.3'N 146°45.5'W	8.0	NA	mS-Medium sand, poorly sorted.
72 AJT 20	70°16.0'N 146°30.0'W	13.4	0.0 G 33.0 S 48.0 St 18.6 C	gsM-2 cm silty sand with gravel, poorly sorted, not at all indurated. OVerlies smooth, fairly well indurated and fairly hard uniform grey clay. Clay has black streaks and smells of H_2S.

Field No.	Latitude Longitude	Depth (M)	%Gravel %Sand %Silt %Clay	Sample Description g,G = gravel s,S = sand m,M = clay and silt (mud)
72 AJT 21	70°14.4'N 146°15.0'W	13.4	0.0 G 22.0 S 78.0 St and C	mS-2 cm of dark olive green watery clay over unindurated fine impure sand.
72 AJT 22	70°11.4'N 146°15.0'W	3.0	NA	M-Unindurated uniform silt.
72 AJT 23	70°09.8'N 146°00.9'W	2.0	0.0 G 89.0 S 10.5 St 0.0 C	mS-Totally unconsolidated silt.
72 AJT 24	70°12 145°55.0'W	12.0	0.0 G 87.0 S 9.8 St 3.5 C	mS-Uniform unindurated, very fine-grained sand, appears somewhat poorly sorted.
72 AJT 25	70°10.1'N 145°45.0'W	12.0	NA	gsM-Gravelly plastic grey hard clay. Amount of gravel decreases down through top few cm. Top 2 cm is soft, watery, and slightly sandy. Bottom 4-6 cm is hard clay without much gravel.
72 AJT 26	70°12.2'N 146°30.0'W	4.0	NA	M- Silt.
72 AJT 27	70°25.2'N 147°31.0'W	12.8	NA	gsM-A sand-silt-clay mixture. Gravel up to 15 cm maximum dimension with attached organisms.
72 AJT 28	70°27.3'N 147°31.0'W	19.0	NA	gmS-Gravelly, clayey, unconsolidated sand.
72 AJT 29	70°25.3'N 147°17.5'W	18.0	NA	gsM-Gravelly sand, silt, and clay.
72 AJT 30	70°45.0'N 150°00.0'W	20.0	0.0 G 10.6 S 89.0 St and C	M-2 cm of olive-grey brown soupy silt over 14 cm of clay with black streaks and H_2S smell.
72 AJT 32	70°37.2'N 149°34.0'W	16.0	NA	M-Unconsolidated offshore silt (moderate olive grey).
72 AJT 33	70°40.5'N 149°33.0'W	21.0	0.0 G 11.0 S 41.1 St 48.2 C	sM-Grey, smooth, fairly hard, sticky clay with dark streaks of medium, dark grey. No H_2S smell.
72 AJT 34	70°43.3'N 149°32.2'W	20.0	NA	M-Medium olive grey unconsolidated silt.
72 AJT 35	70°45.8'N 149°32.0'W	21.0	NA	sM-Dark grey very fine-grained sandy clay, seems like the grey offshore clay with a sand admixture. Not very indurated.

Field No.	Latitude Longitude	Depth (M)	%Gravel %Sand %Silt %Clay	Sample Description g,G = gravel s,S = sand m,M = clay and silt (mud)
72 AJT 36	70°31.7'N 150°15.0'W	3.7	NA	M- 0.5 cm of yellowish brown unconsolidated clay over a clayey, silty, very fine-grained sand, greyish black, speckled in appearance.
72 AJT 37	70°33.0'N 150°00.5'W	4.9	NA	M-Olive grey silty clay, unconsolidated, watery.
72 AJT 38	70°37.5'N 150°00.0'W	14.0	NA	sM-Olive grey fine-grained sand with clay. The surface cm is strongly clayey and less sandy.
72 AJT 39	70°41.0'N 150°00.0W	16.0	NA	sM-Dark grey smooth, grey clay, soft and watery, with some fine sand in the top 2-3 cm.
72 AJT 40	70°34.0'N 150°30.0'W	6.0	NA	M-Smooth, uniform, semi-indurated clay. The oxidized and more watery surface layer (3-4 cm thick) olive grey.
72 AJT 41	70°38.5'N 150°30.0'W	14.0	NA	M-Olive grey clayey silt, most clay is in the top 2 cm (watery).
72 AJT 42	70°42.5'N 150°30.0'W	18.0	NA	M-Olive grey slightly silty clay. No vertical change in lithology.
72 AJT 43	70°40.0'N 151°00.0'W	14.0	0.0 G 76.0 S 28.0 St and C	mS-Moderate olive grey silt, slightly clayey, unconsolidated. No vertical variation noted.
72 AJT 44	70°45.0'N 151°30.0'W	12.0	0.0 G 26.0 S 74.0 St and C	sM-A very silty clay. Top 3 cm is watery, soft, and brownish.
72 AJT 45	70°48.0'N 152°00.0'W	7.0	0.0 G 38.0 S 48.2 St 13.3 C	sM-Silt.
72 AJT 46	70°42.0'N 150°15.0'W	19.0	NA	M- Uniform unconsolidated silt (no clay). No vertical variation.
72 AJT 47	70°38.0'N 150°15.0'W	14.0	NA	M-Top 1 cm is olive grey soupy clay, very liquid. Lower 1-5 cm is speckled silt, only very slightly clayey.
72 AJT 48	70°35.0'N 150°15.0'W	10.0	NA	M-Olive grey silt, only slightly clayey. No vertical variation.

Vibracores 1976 and 1977

Field No.	Latitude Longitude	Depth (M)	%Gravel %Sand %Silt %Clay	Description of Surface Layer g,G = gravel s,S = sand m,M = clay and silt (mud)
V-1	70°19.0'N 148°22.0'W	3	NA	M-Medium grey silty clay to clayey silt.
V-2	70°22.3'N 148°28.4'W	1.7	NA	sM-Irregular layers or pockets of clean oxidized fine sand. Sandy mud interbedded with sand layer
V-3	70°24.0'N 148°33.2'W	1.5	NA	S-Medium to fine, partly oxidized sand, upper 10 cm homogenous.
V-4	70°27.3'N 148°28.2'W	6.5	NA	mS-Grey, slightly muddy medium to fine sand, homogenous to mottled.
V-5	70°28.9'N 148°24.2'W	2.5	NA	S-Light grey sand, fine and clean down to around 30 cm.
V-6	70°29.4'N 148°21.1'W	4.0	NA	S-Light grey, fine, clean, homogenous sand.
V-7	70°30.5'N 148°21.6'W	11.0	NA	mS-Clean, grey, medium-grained sand with only traces of bedding. Dark grey silty clay lumps at the surface.
V-8	70°29.8'N 148°20.8'W	8.0	NA	S-Medium to coarse sand with a few scattered granules and small shell fragments, structureless gradually fining down to fine-medium sand.
V-9	70°20.1'N 147°31.1'W	6.5	NA	gS-Dark grey, medium sand, angular, structureless, with a few granules and a small pebble. Two shells at surface, one live Astarte.
V-10 B	70°17.1'N 147°44.3'W	27.0	NA	sM- Generally dark, reduced sandy mud with small olive oxidized zones at surface.
V-11	70°17.7'N 147°47.0'W	1.0	NA	sM-Brownish grey sandy mud.
V-12	70°24.1'N 148°18.5'W	3.0	NA	S-Medium sand, partly oxidized in upper 15 cm. Shells at 8 cm.
V-13 B	70°44.8'N 150°28.1'W	19.0	NA	mS-Interspersed pockets of grey sandy mud and oxidized fine to medium sand.
V-14	70°41.5'N 150°27.2'W	1.5	NA	sM- Soft, brownish grey homogenous silty clay, sandy in upper 5 cm. Several small, irregular sand pockets from 5-10 cm down in core.
V-15	70°37.0'N 150°27.0'W	12.4	NA	mS-Grey, muddy, medium-grained sand, grading at approx. 2 cm into oxidized clean, medium-grained sand.

Vibracores 1976 and 1977

Field No.	Latitude Longitude	Depth (M)	%Gravel %Sand %Silt %Clay	Description of Surface Layer g,G = gravel s,S = sand m,M = clay and silt (mud)
V-16	70°36.3'N 150°28.2'W	11.5	NA	M-Trace of horizontal bedding, characterized by dark and light banding, and discontinuous silty laminae and pockets. No organic-rich layers.
V-17	70°34.0'N 150°28.2'W	8.5	NA	M-Very soft and wet in upper 5 cm. Grey, homogenous clayey silt.
V-18	70°33.2'N 150°27.9'W	3.3	NA	sM-Grey silty clay with interbedded lenses of oxidized medium to fine-grained sand. Clay contains lenses of organic matter. Bedding plane lamination and fining upwards in sands.
V-19	70°32.8'N 150°28.1'W	2.0	NA	mS-Medium-grained, oxidized, clean sand grading downward into fine sand with some silt. There appears to be a large, irregular burrow with smaller burrows adjacent.
V-20	70°31.4'N 150°27.5'W	1.5	NA	S-Dark brown, possible burrows. Clean fine sand, light-brown, oxidized in lower 5 cm, mottled in upper half.
V-21	70°33.8'N 151°01.0'W	4.0	NA	mS-0.5 cm of mud. Small clam and a small razor clam. Slightly muddy, fine sand, bedding planes often marked by coal particles.
V-22	70°32.5'N 150°59.6'W	0.6	NA	mS-Very fine sand/silt layers. Fine, brownish, well-sorted sand with slightly undulating, horizontal layering.
V-23	70°29.5'N 150°59.5'W	1.0	NA	mS-Top 1 cm of fine/medium-grained oxidized sand. Homogenous, brownish silt, possibly some bedding
V-24	70°33.2'N 149°11.2'W	7.5	NA	S-Slightly darker, fine to medium sand. No pebbles, no shells.
V-25	70°18.85'N 148°21.9'W	2.3	NA	gsM-Thinly laminated sandy silt with small pockets of sand, with pebbles up to 15 mm at 8 cm.
V-26	70°19.5'N 148°26.1'W	1.5	NA	gsM-Slightly sandy silt with horizontal bedding, small pockets of ripple structures, few scattered small pebbles and fragile shell fragments and intact shells, traces of organic matter.
V-27	70°25.77'N 148°48.3'W	1.3	NA	mS-Muddy fine sand, disrupted by burrowing in upper 3 cm and at 6-24 cm (Polychaete?). Noted live worms (to 16 cm) when core was cut.
V-28	70°25.28'N 148°41.9'W	1.0	NA	S-Clean, fine sand.

Vibracores 1976 and 1977

Field No.	Latitude Longitude	Depth (M)	%Gravel %Sand %Silt %Clay	Description of Surface Layer g,G = gravel s,S = sand m,M = clay and silt (mud)
V-29	70°24.03'N 148°00.2'W	5.5	NA	gS-Clean, medium-grained pebbly sand with few shells. No structure, sharp irregularities.
V-30	70°22.1'N 148°05.9'W	1.5	NA	S-Clean, fine sand, fine cross-bedding in upper 10 cm Rather well-preserved except for some burrowing structures. Upper 10 cm has very small shells.
V-31	70°19.9'N 147°54.05'W	1.3	NA	mS-Surface or near-surface organic layer. Fine sand with ill-defined horizontal layers.
V-34	70°23.74'N 147°28.5'W	5.0	NA	gS-Coarse pebbly sand showing trace of bedding throughout, granules to 7 mm. Sand is sub-rounded.
V-35	70°29.1'N 147°36.8'W	19.0	NA	msG-Hash of poorly sorted mixture of coarse, highly angular to rounded gravel to clay. Very highly compacted material.
V-37	70°29.25'N 148°09'W	10.0	NA	gS-Well-sorted clean, medium to fine sand; with scattered, well-rounded granules and small pebbles-mostly in the upper 4 cm.
V-38	70°29.25'N 148°17.7'W	4.6	NA	gS-Medium-grained sand with 50% granules and pebbles, well-rounded, a few shell fragments. No internal structures.
V-39	70°28.68'N 148°21.5'W	4.5	NA	gmS-Stiff grey muddy fine sand with a few scattered granules, intensely bioturbated, polychaetes, lacking primary bedding structures.
V-40	70°28.9'N 148°21.6'W	1.0	NA	gS-Medium to coarse-grained sand with a few scattered granules.
V-41	70°28.7'N 148°18.1'W	2.45	NA	gS-Medium to coarse, clean, pebbly sand, homogenous. Largest clast 8 mm. Rare shell fragments.
V-42	70°29.54'N 148°20.8'W	5.3	NA	S-Clean, light brown-grey medium, well sorted sand totally disrupted.
V-43	70°32.27'N 148°21.7'W	12.7	NA	gS-Clean, fine sand with scattered granules up to 6 mm - thin 1.5 mm worm tubes (Polychaete).
V-44	70°34.05'N 149°0.65'W	12.75	NA	S-Fine to medium clean sand with faint traces of primary ripple structures in upper 15 cm.
V-45	70°34.0'N 149°0.65'W	6.7	NA	S-Very clean medium to fine sand throughout entire core, several very small fragile shell fragments, not a single pebble, granule, mud lump or organic matter.

Vibracores 1976 and 1977

Field No.	Latitude Longitude	Depth (M)	%Gravel %Sand %Silt %Clay	Description of Surface Layer g,G = gravel s,S = sand m,M = clay and silt (mud)
V-46	70°33.75'N 149°01.3'W	13.8	NA	gM-Slightly pebbly, cohesive clay, clasts from 1 mm granules to 15 mm, larger clasts rounded and smaller ones anuglar. Pockets of sand in upper 8 cm.
V-47	70°27.7'N 148°57'W	2.0	NA	gmS-Very fine laminated silty sand alternating with 2-4 cm unit of fine to medium silty sand. A few scattered pebbles up to 15 mm. Worm tubes extend 7-8 cm.
V-48	70°30.42'N 149°14.1'W	2.5	NA	gmS-Silty medium sand, coarse bedding in upper 15 cm. Polychaete worm tubes in upper 8 cm. Scattered fibrous organic pieces several pebbles to 8 cm.
V-49	70°32.44'N 149°30.7'W	3.0	NA	sM-Sandy mud with ill-defined bedding. Mottled or disturbed. A few sticks and fibrous organic matter, several granule-size clasts. Finely laminated in upper 1 - 2 cm.
V-50	70°30.7'N 149°26.75'W	1.4	NA	gS-Finely-bedded to ripple-bedded, clean, fine sand, a few scattered pebbles up to 8 cm.
V-51	70°30.4'N 149°56.4'W	2.0	NA	S-Upper 4 cm finely laminated very fine sand.
V-52	70°36.69'N 150°24.8'W	13.0	NA	sM-Surface is slightly sandy clayey mud, this alternates with well laminated clean sand units.
V-53	70°36.69'N 150°24.8'W	13.0	NA	sM-Surface of cohesive slightly sandy clayey silt alternating with muds and cross-bedded clean sand units.
V-54	70°36.69'N 150°24.8'W	13.0	NA	mS-Slightly muddy medium sand, with a few shell fragments and worm tubes.
V-55	70°33.88'N 150°28.0'W	7.0	NA	sM-Light grey clayey silt with 5-6 cm thick fine sand layers interbedded. Sand units have fine bedding to cross bedding structures. Sands in upper part of core have burrows.
V-56	70°32.4'N 150°28.4'W	2.5	NA	S-Surface very fine to fine clean sands with well preserved primary structure.
V-57	70°32.4'N 150°28.4'W	2.0	NA	mS-Surface of very fine to fine clean sands with well preserved primary structure. Contains fibrous organic matter, cyrtodaria fragments and mud balls.
V-58	70°32.4'N 150°28.4'W	2.0	NA	mS-Same as Core V-57.
V-59	70°27.68'N 150°11.7'W	1.3	NA	S-Surface of clean fine cross-bedded sand.

Vibracores 1976 and 1977

Field No.	Latitude Longitude	Depth (M)	%Gravel %Sand %Silt %Clay	Description of Surface Layer g,G = gravel s,S = sand m,M = clay and silt (mud)
V-60	70°28.43'N 150°13.1'W	1.0	NA	S-Interbedded sequences of fine to very fine sand at the surface.

Gas Samples - 1978

# 3	70°35.6'N 149°32.8'W	12.0	NA	sM-Soft grey surface mud underlain by slightly silt. fine sands.
# 4	70°38.1'N 150°31.5'W	13.5	NA	mS-Slightly muddy fine sand.

Dive Site No.	Latitude Longitude	Depth (M)	%Gravel %Sand %Silt %Clay	Sample Description g,G = gravel s,S = sand m,M = clay and silt (mud)
72-1	70°35.6'N 149°27.1'W	12.		M-Bioturated, soft mud. (Flat bottom.)
76-18	70°33.2'N 149°11.0'W	11.5		mS-Muddy (medium-grained) sand. (seaward foot of major shoal, between gouges.)
72-2	70°33.12'N 149°11.5'W	5.0		S-Clean, medium-grained sand with clam fragments. (Intensely gouged flat bottom on major shoal).
76-5	70°28.4'N 148°47.2'W	4.5		mGS-Undisturbed muddy sand near gouge. Sandy, muddy gravel in a flat bottom near gouge flank.
76-4	70°26.9'N 148°37.5'W	6.4		sGM-Grey, cohesive mud and very stiff, muddy, sandy gravel with some shells. (Flat bottom.)
76-6	70°26.9'N 148°30.5'W	8.5		M-Very soft surficial sediment underlain by fairly stiff layer. (Flat bottom and floor of gouge.)
76-7	70°28.1'N 148°24.0'W	8.5		M-Fairly soft 2.5 cm layer of mud with numerous clams over mud. (Flat bottom, gouge-trough, flank and floor.)
76-3	70°24.2'N 148"31.5'W	3.0		mS-Fine, muddy sand (Flat bottom).
75-1	70°19.8'N 148°23.5'W	2.5		mS-Fine, muddy sand (Flat bottom).
76-2	70°24.0'N 148°17.3'W	3.1		mS-Slightly muddy medium-fine grained sand. (Flat bottom).
76-19	70°24.9'N 148°01.0'W	7.0		mS-Muddy sand. (Rippled flat bottom).
76-8	70°19.5'N 147°51.5'W	2.5		MS-Muddy sand and very stiff mud. (Flat bottom with ripples).
76-9	70°17.2'N 147°42.8'W	3.0		gmS-Muddy sand on a flat bottom ripple field. Angular, pea-size gravel exposed.
76-10	70°12.8'N 147°41.0'W	1.6		MS-Highly muddy, medium-grained sand. (Flat bottom).
76-17	70°23.8'N 147°28.7'W	1.5		mGS-Muddy sand and pea-size gravel on the flat bottom and gouged flank.
76-15	70°18.2'N 147°18.7'W	6.0		gSM-Soft mud in the high ground covered by worm worm tubes. Muddy sand in the depression between worm tube patches. Accumulations of pebbles and shells in small patches with occasional small rounded cobbles.

Dive Site No.	Latitude Longitude	Depth (M)	%Gravel %Sand %Silt %Clay	Sample Description g,G = gravel s,S = sand m,M = clay and silt (mud)
76-14	70°14.7'N 147°10.5'W	5.5		sM-Sandy mud on a flat bottom.
76-11	70°10.3'N 147°01.0'W	4.5		sM-Sandy mud on a flat bottom with decayed ripple train. Burrowing activity.
76-12	70°10.8'N 146°03.4'W	2.5		sM-Sandy mud. Small scale relief from bioturbation on a slightly undulating bottom.
76AER	70°21.2'N 147°46.3W	7.0		GM-Exposed boulders between 80 and 100 cm. 5 to 6 cm surface of highly bioturbated soft grey mud. Compacted granular material under the mud layer; cobbles could be felt buried within mud. Diverse benthic community.
76AER	70°13.0'N 145°57.0'W	200.0		GMS-Numerous sub-rounded to angular coarse pebbles and cobbles with brown algae and other marine growth. Medium-grained sand. Low-relief ledges of thinly bedded mud.
78AER	70°27.9'N 147°48.7'W	8.0		gS-Gravelly sand. 2-3 m undulating relief. Coarse sand in the lows, sandy gravel on the flanks, medium sand on the crests.
72 AER	70°25.4'N 147°47.3'W	7.0		S-Clean, medium-grained sand on the crest of Dinkum Sands. Muddy sand on the slope. Muddy, pebbly on the bottom (7 m).
77AER-31	70°43.1'N 149°24.4'W	15.0		gsM-A gravel, sand, and mud mixture.
77AER-32	70°40.5'N 149°15.1'W	16.0		gS-Coarse sand with gravel patches.
77AER-33	70°35.0'N 149°07.2'W	11.0		gM-Pebbly mud with gravel patches.
77AER-34	70°31.3'N 148°56.8'W	11.0		gS-Gravelly sand.

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Sheet 2

sample station location

mud

sand

gravel

M

S G

Beaufort Sea

Cross I

Kuparuk River

Prudhoe Bay

Sagavanirktok River

Bullen Point

Brownlow Point

147°

146°

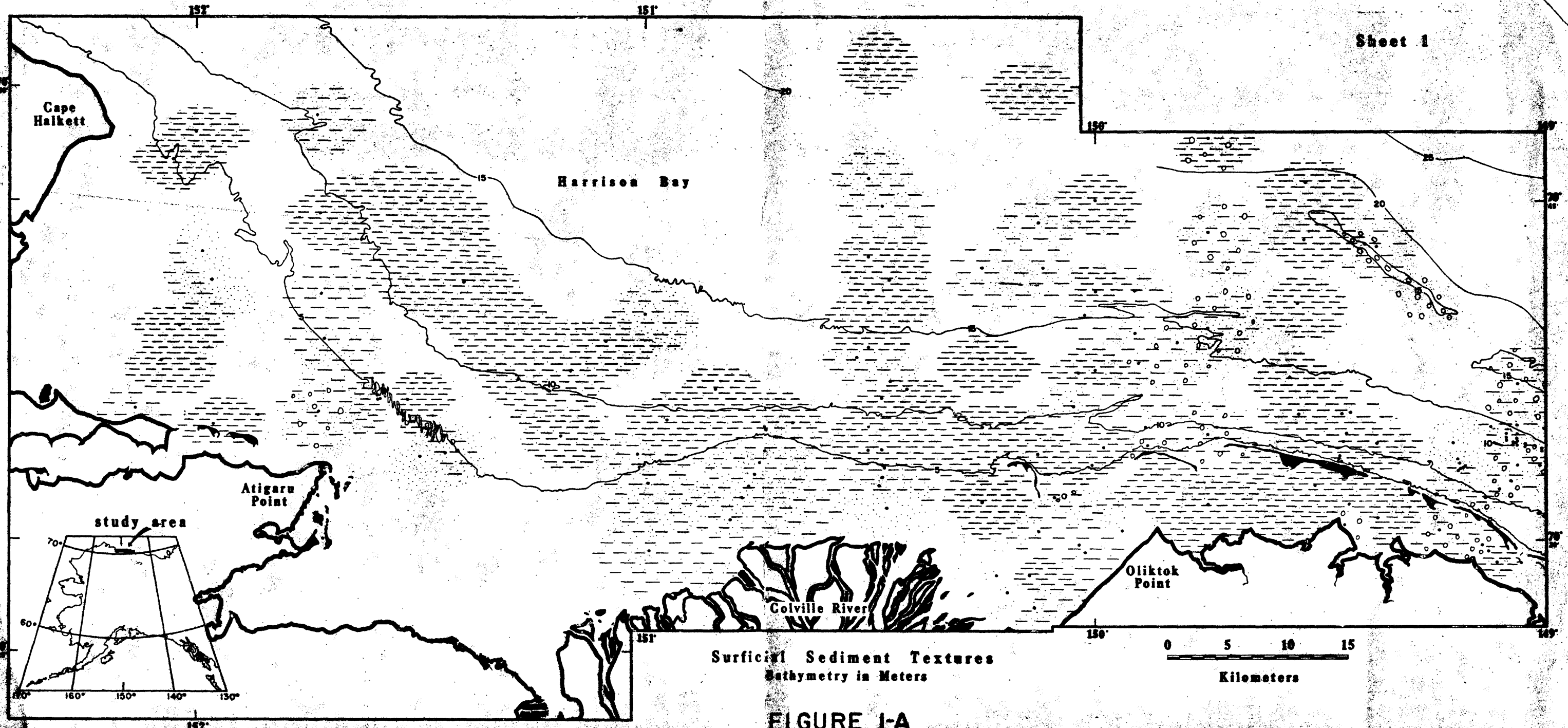
148°

70° 30'

FIGURE 1-B

80-196

Sheet 1



Surficial Sediment Textures
Bathymetry in Meters

FIGURE I-A