



TR-58

TECHNICAL REPORT

OCEANOGRAPHIC OBSERVATIONS
ARCTIC WATERS

TASK FORCE FIVE AND SIX
SUMMER—AUTUMN 1956

USS REQUISITE (AGS-18)
USS ELDORADO (AGC-11)
USS ATKA (AGB-3)
USCGC EASTWIND (WAGB-279)

*Oceanographic Branch
Marine Surveys Division*

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A B S T R A C T

Results of oceanographic operations conducted by the USS REQUISITE, USS ELDORADO, and USS ATKA in the western Arctic and by the USCGC EASTWIND in the eastern Arctic during summer and autumn 1956 are presented herein.

Despite heavy ice conditions and limited time for oceanography because of higher priority assignments, fifty-four oceanographic stations were occupied. Twenty-sevens stations were taken in the Beaufort-Bering Seas area; thirteen in the Northwest Passage from Amundsen Gulf to 95°W, east of King William Island; and thirteen in the Baffin Bay-Davis Strait area.

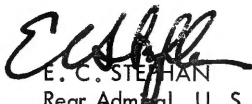
In addition, thirty-one bottom samples and thirty-eight current stations were taken. Bottom samples were collected by Phleger corer and Orange-peel grab sampler; current velocity and direction were measured by Ekman meter. Two of the current stations were 24-hour stations and were located off Point Barrow, Alaska.

Serial data listings for the oceanographic stations are presented subsequent to figures showing their locations. Included in these listings are temperature, salinity, density, sound velocity, and anomalies of dynamic depth.

FOREWORD

During the summer and autumn of 1956, there was considerable activity of U. S. Navy ships in arctic waters. The operating areas of these ships offered excellent opportunities for the collection of oceanographic information in support of the Hydrographic Office's arctic program.

Personnel from the U. S. Navy Hydrographic Office were aboard four vessels and made oceanographic observations whenever the primary objectives of the operations permitted. The results of these observations are presented in this report.



E. C. STEPHAN
Rear Admiral, U. S. Navy
Hydrographer

MBL/WHOI



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I. INTRODUCTION

A. General

Oceanographic operations of the USS REQUISITE (AGS-18), USS ELDORADO (AGC-11), USS ATKA (AGB-3), units of TASK FORCE 5 in the western sector of the Arctic, and the USCGC EASTWIND (WAGB-279), a unit of TASK FORCE 6 in the eastern sector, were conducted during the summer and autumn 1956. Oceanographic data collected were in support of the U. S. Navy Hydrographic Office's ice forecasting program for the Arctic area. Because of the ship's primary mission, all oceanographic observations were made on a not-to-interfere basis.

The oceanographic program consisted of bathythermograph (BT), current, and ice observations, as well as Nansen casts and bottom sampling. A summation of observations taken by all four ships is presented on Page 2. Serial (temperature, salinity, density, sound velocity, and dynamic depth anomaly), current, and bottom sediment data are included in this report. Ice data and bathythermograms are not presented herein; these data are on file at the U. S. Navy Hydrographic Office.

Vertical water temperatures were determined by deep-sea reversing thermometers. Water samples were analyzed for salinity content aboard the ELDORADO, ATKA, and EASTWIND. Temperature and salinity results were dispatched via radio to the U. S. Navy Hydrographic Office for immediate use in ice predictions. These water samples and those collected by the REQUISITE were forwarded to the laboratory in the U. S. Navy Hydrographic Office for analyses and verification.

Interpolations for oceanographic parameters at standard depths and computations of density, sound velocity, and dynamic depth anomalies were accomplished by an electronic computer.

Bathythermograph observations were made in accordance with the reporting procedures specified in H. O. Pub.No. 606-c, "Bathythermograph Observations," 2nd ed., 1956.

Bottom sampling was accomplished with the Phleger corer and Clamshell sampler. All samples were forwarded to the Hydrographic Office for analyses.

Water current observations were made with the Ekman current meter. Wide distribution of pellets in the compass box of the meter made current direction difficult to compute. Therefore, directions were averaged by selecting the 90-degree quadrant in which the most pellets were located, totaling each 10-degree division of the compass box in which a pellet was located, and averaging the total sum.

B. Summary of Oceanographic Operations

1. USS REQUISITE (AGS-18) -- 19 July to 31 August 1956

Twenty-nine oceanographic stations were occupied by the REQUISITE along the coast of Alaska and Canada (Fig. 1).

2. USS ELDORADO (AGC-11) -- 7 to 27 August 1956

The ELDORADO occupied three sites in the Icy Cape-Point Barrow area. One oceanographic station and nineteen surface temperature-salinity observations were obtained while the ship was at anchor (Fig. 2). The results of surface observations are presented on page 54.

3. USS ATKA (AGB-3) -- 10 August to 1 September 1956

The ATKA was on escort duty, through ice to 10/10 coverage, during the majority of time between Point Barrow and the vicinity of Herschel Island. As a consequence, only two of the specified oceanographic stations east of Point Barrow were occupied. The ATKA occupied nine oceanographic stations along the coast of Alaska from Point Barrow and in the Bering Sea during the homeward voyage (Fig. 3).

4. USCGC EASTWIND (WAGB-279) -- 1 to 7 October 1956

The EASTWIND, operating in the eastern sector, occupied thirteen oceanographic stations in the Baffin Bay and Davis Strait areas (Fig. 4). Ten of the scheduled oceanographic stations for the EASTWIND were occupied by the HMCS LABRADOR. This report does not include data from these stations.

SUMMARY OF OCEANOGRAPHIC OBSERVATIONS IN THE ARCTIC REGION, SUMMER-AUTUMN 1956

Cruise Number	Ship	No. Ocean. Stations	No. of BT's	Current Stations	Bottom Samples
00548	REQUISITE	29	92	33	23
00546	ELDORADO	1	120	5	-
00547	ATKA	11	27	-	8
00541	EASTWIND	13	48	-	-

C. Participating Personnel

The following civilian and military personnel took an active part in the summer and autumn 1956 Arctic oceanographic operations.

USS REQUISITE

R. H. Sullivan, Lt., USN

Hydrographic Officer

USS ELDORADO

Mr. W. W. White, Jr.
Mr. L. A. Larson

Oceanographer
Oceanographer

USS ATKA

Mr. E. W. Johnson
Mr. L. W. Wilson

Oceanographer
Oceanographer

USCGC EASTWIND

Mr. W. H. Gladfelter

Oceanographer

II. EXPLANATION OF OCEANOGRAPHIC STATION DATA

A. General

Each of the items appearing on the data pages is explained below. The vertical arrows shown in some of the column headings indicate the location of decimal points. The presence of asterisks to the left of data indicates those data are doubtful; hence, they were not used in the construction of the curve from which interpolated values (standard depth values) were derived. Observed values which were obviously invalid were omitted entirely.

B. Surface Observations

1. Cruise Number. This number is arbitrarily assigned. It identifies the cruise and provides a means of sorting from the IBM files all cards pertaining to that particular cruise. A cruise number for each ship is presented on the flysheet for the tabulated oceanographic data.
2. Station Number. Stations are numbered consecutively, starting with one, at the beginning of each cruise. Therefore, for a complete identification of a particular station, both cruise and station number are necessary.
3. Date. Month and day are given in Arabic numerals. The last three figures of the year are indicated. The hour is Greenwich Mean Time and is that hour nearest to the start of the first cast.
4. Latitude and Longitude. The position of the station is given in degrees and minutes.
5. Sonic Depth. Sonic Depth is the uncorrected sounding for the station, recorded in meters.
6. Maximum Sample Depth. The maximum depth from which a water sample was obtained at the station is given to the nearest 100 meters.
7. Wind. Wind speed is given in meters per second. Direction from which the wind blows is coded in degrees true to the nearest ten degrees. The last zero is omitted. North is 36 on this scale and calm is 0. See Table 1, Compass Direction Conversion Table for Wind, Sea, and Swell Directions.
8. Anemometer Height. The height of the anemometer above the waterline is given in meters.

9. Barometric Pressure. Barometric pressure is coded in millibars, neglecting the 900 or 1000. Thus, 996 millibars is coded as 96 and 1008 millibars is coded as 08.

10. Air Temperature. Dry bulb and wet bulb temperatures are entered to the nearest tenth of a degree (centigrade). A negative temperature is coded by dropping the minus sign and adding 50; thus -10° is coded as 60.

11. Humidity. The percent of humidity is coded directly, 100 percent being coded as 99.

12. Weather. Weather is coded as indicated in Table 2, Numerical Weather Codes - Present Weather.

13. Cloud. Cloud type and amount are coded as indicated in Tables 3, Cloud Type, and 4, Cloud Amount.

14. Sea. Sea direction and amount are coded as indicated in Tables 1 and 5, respectively.

15. Swell. Swell direction and amount are coded as indicated in Tables 1 and 6, respectively.

16. Visibility. Visibility is coded as indicated in Table 7, Visibility.

C. Subsurface Observations

1. Sample Depth. Observed (actual) depth of each sample is given in meters. Interpolated values at standard depths are also given. The standard depths, in meters, are: 0, 10, 20, 30, 50, 75, 100, 150, 200, 250, 300, 400, 500, 600, 800, 1000, 1200, 1500, 2000, 2500, 3000, and thence every 1000 meters.

2. Temperature. The centigrade temperature is given in degrees and hundredths.

3. Salinity. Salinity is given in parts per thousand (by weight) to two decimal places.

4. Sigma-t. To convert to density divide by 1000 and add 1. Thus, a sigma-t value of 22.35 converts to a density of 1.02235.

5. Delta-D. The values in the columns are the anomalies of dynamic depths from the surface to each level in dynamic meters. Each entry is the cumulative sum of the anomalies of dynamic depth of the layer above. These values have been computed for the standard depths only, and serve to identify computed points.

6. Dissolved Oxygen. These values when given are in milliliters per liter to two decimal places. Values of 10.00 or above rarely occur and are coded as 9.99.

7. Sound Velocity. Sound velocity is given in feet per second to one decimal place, corrected for pressure at each depth.

TABLE 1. COMPASS DIRECTION CONVERSION TABLE FOR WIND, SEA, AND SWELL DIRECTIONS

<u>Code</u>	<u>Direction</u>	<u>Code</u>	<u>Direction</u>
00	Calm	19	185° to 194°
01	5° to 14°	20	195° to 204° SSW
02	15° to 24° NNE	21	205° to 214°
03	25° to 34°	22	215° to 224°
04	35° to 44°	23	225° to 234° SW
05	45° to 54° NE	24	235° to 244°
06	55° to 64°	25	245° to 254° WSW
07	65° to 74° ENE	26	255° to 264°
08	75° to 84°	27	265° to 274° W
09	85° to 94° E	28	275° to 284°
10	95° to 104°	29	285° to 294° WNW
11	105° to 114° ESE	30	295° to 304°
12	115° to 124°	31	305° to 314°
13	125° to 134°	32	315° to 324° NW
14	135° to 144° SE	33	325° to 334°
15	145° to 154°	34	335° to 344° NNW
16	155° to 164° SSE	35	345° to 354°
17	165° to 174°	36	355° to 4° N
18	175° to 184° S	99	Variable or unknown

TABLE 2. NUMERICAL WEATHER CODES—PRESENT WEATHER

00	Cloud development visible during past hour.	01	Clouds generally dis-appearing or less developed during past hour.	02	State of sky on the hour unchanged during past hour.	03	Clouds generally forming or developing during past hour.	04	Visibility reduced by smoke.	05	Haze.	06	Widespread dust in suspension in air at time of observation.	07	Dust or sand raised in air at time of observation.	08	Well developed dust devil(s) within past hour.	09	Duststorm or sandstorm during past hour.																				
10	Light fog.	11	Patches of shallow fog at station, NOT less than 6 feet on land.	12	More or less continuous shallow fog at station, NOT less than 6 feet on land.	13	Lightning visible, no thunder heard.	14	Precipitation within sight but NOT reaching the ground.	15	Precipitation within sight, reaching the ground from station.	16	Precipitation within sight, reaching the ground from station.	17	Thunder heard, but no precipitation at station.	18	Squalls within sight during past hour.	19	Funnel cloud(s) within sight during past hour.																				
20	Drizzle (NOT freezing and NOT falling as snow) at station, NOT at time of observation.	21	Rain (NOT freezing and NOT falling as snow) at station, NOT at time of observation.	22	Snow (NOT falling as snow) at station, NOT at time of observation.	23	Rain and snow (NOT falling as snow) at station, NOT at time of observation.	24	Freezing drizzle or freezing rain (NOT falling as snow) at station, NOT at time of observation.	25	Showers of rain during past hour, but NOT at time of observation.	26	Showers of snow, sleet, or rain and snow during past hour, but NOT at time of observation.	27	Showers of hail, or rain and snow during past hour, but NOT at time of observation.	28	Fog during past hour, but NOT at time of observation.	29	Thunderstorm (with or without precipitation) at station, but NOT at time of observation.	30	Slight or moderate duststorm or sandstorm during past hour.	31	Slight or moderate duststorm or sandstorm during past hour.	32	Slight or moderate duststorm or sandstorm during past hour.	33	Severe duststorm or sandstorm, has decreased during past hour.	34	Severe duststorm or sandstorm, has decreased during past hour.	35	Severe duststorm or sandstorm, has increased during past hour.	36	Slight or moderate duststorm or sandstorm, has increased during past hour.	37	Heavy drifting snow, generally high.	38	Slight or moderate drifting snow, generally high.	39	Heavy drifting snow, generally high.
40	Fog, mist at time of observation, but NOT at station during past hour.	41	Fog in patches.	42	Fog, variable, has become thinner during past hour.	43	Fog, thick, has become thinner during past hour.	44	Fog, has become thicker during past hour.	45	Fog, has become thicker during past hour.	46	Fog, has become thicker during past hour.	47	Fog, has become thicker during past hour.	48	Fog, has become thicker during past hour.	49	Fog, has become thicker during past hour.	50	Intermittent drizzle (with or without precipitation) at time of observation.	51	Intermittent drizzle (with or without precipitation) at time of observation.	52	Intermittent drizzle (with or without precipitation) at time of observation.	53	Continuous drizzle (with or without precipitation) at time of observation.	54	Intermittent drizzle (with or without precipitation) at time of observation.	55	Continuous drizzle (with or without precipitation) at time of observation.	56	Slight freezing drizzle, freezing drizzle.	57	Moderate or thick freezing drizzle.	58	Drizzle and rain, slight.	59	Drizzle and rain, moderate or heavy.
60	Intermittent rain (with or without precipitation) at time of observation.	61	Continuous rain (NOT freezing) at time of observation.	62	Intermittent rain (with or without precipitation) at time of observation.	63	Continuous rain (NOT freezing) at time of observation.	64	Intermittent rain (with or without precipitation) at time of observation.	65	Continuous rain (NOT freezing) at time of observation.	66	Slight freezing rain, freezing rain.	67	Moderate or heavy freezing rain.	68	Rain or drizzle and snow, slight.	69	Rain or drizzle and snow, moderate or heavy.	70	Intermittent fall of snowflakes, slight at time of observation.	71	Intermittent fall of snowflakes, slight at time of observation.	72	Intermittent fall of snowflakes, moderate at time of observation.	73	Continuous fall of snowflakes, moderate at time of observation.	74	Intermittent fall of snowflakes, heavy at time of observation.	75	Continuous fall of snowflakes, heavy at time of observation.	76	Ice needles (with or without fog).	77	Granular snow (with or without fog).	78	Isolated starlike snow crystals (with or without fog).	79	Ice pellets (sleet).
80	Slight rain shower(s).	81	Moderate or heavy rain shower(s).	82	Violent rain shower(s).	83	Slight shower(s) of rain and snow mixed.	84	Moderate or heavy shower(s) of rain and snow mixed.	85	Slight snow shower(s).	86	Moderate or heavy snow shower(s).	87	Slight shower(s) of soft or small hail with or without rain and snow mixed.	88	Moderate or heavy shower(s) of soft or small hail with or without rain and snow mixed.	89	Slight shower(s) of soft or small hail with or without rain and snow mixed.	90	Moderate or heavy shower(s) of hail, with or without rain and snow mixed.	91	Moderate or heavy shower(s) of hail, with or without rain and snow mixed.	92	Moderate or heavy shower(s) of hail, with or without rain and snow mixed.	93	Moderate or heavy shower(s) of hail, with or without rain and snow mixed.	94	Most or heavy snow or rain and snow mixed.	95	Slight or moderate duststorm without hail, but with rain and/or snow at time of observation.	96	Slight or moderate duststorm without hail, but with rain and/or snow at time of observation.	97	Heavy thunderstorm without hail, but with rain and/or snow at time of observation.	98	Thunderstorm with hail, but with rain and/or snow at time of observation.	99	Heavy thunderstorm with hail, but with rain and/or snow at time of observation.

TABLE 3. CLOUD TYPE

Code

0	Stratus or Fractostratus
1	Cirrus
2	Cirrostratus
3	Cirrocumulus
4	Alto cumulus
5	Altostratus
6	Stratocumulus
7	Nimbostratus
8	Cumulus or Fractocumulus
9	Cumulonimbus

TABLE 4. CLOUD AMOUNT

Code

0	No clouds
1	Less than 1/10 or 1/10
2	2/10 and 3/10
3	4/10
4	5/10
5	6/10
6	7/10 and 8/10
7	9/10 and 9/10 plus
8	10/10
9	Sky obscured

TABLE 5. SEA AMOUNT

<u>Code</u>	<u>Mean Max. Height of Sea Waves in feet (Approx.)</u>	<u>Description</u>
0	0	Calm (glassy)
1	0 - 1/3	Calm (rippled)
2	1/3 - 1 2/3	Smooth (wavelets)
3	1 2/3 - 4	Slight
4	4 - 8	Moderate
5	8 - 13	Rough
6	13 - 20	Very rough
7	20 - 30	High
8	30 - 45	Very high
9	over 45	Phenomenal ⁺

+ As might be expected in center of hurricane

TABLE 6. SWELL AMOUNT

Code	Approximate Height (feet)	Description	Approximate Length (feet)	
0	----	No swell	----	
1	1 to 6	Low swell	Short or Average	0 to 600
2			Long	Above 600
3	6 to 12	Moderate	Short	0 to 300
4			Average	300 to 600
5			Long	Above 600
6	Greater than 12	High	Short	0 to 300
7			Average	300 to 600
8			Long	Above 600
9	----	Confused	----	

TABLE 7. VISIBILITY

<u>Code</u>		
0	Dense fog -----	50 yards
1	Thick fog -----	200 yards
2	Fog -----	400 yards
3	Moderate fog -----	1000 yards
4	Thin fog or mist -----	1 mile
5	Visibility poor -----	2 miles
6	Visibility moderate -----	5 miles
7	Visibility good -----	10 miles
8	Visibility very good -----	30 miles
9	Visibility excellent -----	Over 30 miles

TABLE 8. WATER COLOR

<u>Code (Percent yellow)</u>	<u>Description</u>
00 -----	Deep blue
10 -----	Blue
20 -----	Greenish-blue (or green blue)
30 -----	Bluish-green (or blue green)
40 -----	Green
50 -----	Light Green
60 -----	Yellowish-green
70 -----	Yellow green
80 -----	Green yellow
90 -----	Greenish-yellow
99 -----	Yellow

III. EXPLANATION OF SEDIMENT ANALYSIS SUMMARY SHEETS

Results of bottom sediment sample analysis performed by the U. S. Navy Hydrographic Office are recorded on the sediment analysis summary sheets. Almost all bottom samples are analyzed weeks after the collection of the samples; therefore, various procedures normally carried out during a routine sediment analysis are not attempted. Determinations such as: wet density, water content, porosity, etc., are not possible after the samples have lost their "in situ" moisture; therefore, all values left blank on the summary sheets indicate these values could not be accurately determined.

The following is a description of the terms employed on the sediment analysis summary sheets:

1. Sample Number. A consecutive number, commencing with 1, applied to each bottom grab sample or core taken successively throughout the cruise.
2. Latitude. Expressed in degrees, minutes, and seconds.
3. Longitude. Expressed in degrees, minutes, and seconds.
4. Date. Day (GMT), month, and year.
5. Sampler Type. Identified by name of device employed.
6. Water Depth (fm.). The uncorrected sonic sounding recorded to the nearest tenth of a fathom.
7. Core Length (in.). Recorded to the nearest whole inch as observed in the laboratory. This information is not given when a grab sampler is employed.
8. Core Penetration (in.). Recorded to the nearest whole inch as observed in the field. This information is not given when a grab sampler is employed.
9. Laboratory Number. A reference number assigned to a fraction of a sample retained by the Laboratory.
10. Subsample Depth in Core (in.). Depth to the nearest whole inch of the mean depth of the subsample. This information was not entered when a surface grab sample or a short core sample was obtained. The analysis of the subsample is assumed as representative of the entire core length.

11. Color. Based on the Geological Society of America Rock-Color Chart.
12. Odor. A qualitative description of any noticeable odors.
13. Wet Density (lbs./ft.³). Density measured to the nearest tenth of a pound as determined by means of a "Mudwate" hydrometer.
14. Rigidense (mm). Determined by means of a Rigidense instrument and measured to the nearest millimeter. For a detailed description of this test procedure refer to: Jaffe, G. and Gaetano, F. W., "A Comparison of Atterberg and Rigidense Tests for the Measure of Plasticity," U. S. Navy Hydrographic Office Technical Report No. 11, May 1955.
15. Maximum Porosity (%). The percentage of pore space in the total volume of the uncompacted sample not occupied by solid matter; computed by the formula, $P = 100 (V - \frac{V}{\gamma})$, where P is the porosity in percent, V is the bulk volume, and v is the aggregate volume of the grains.
16. Minimum Porosity (%). The percentage of pore space in the total volume of the compacted sample not occupied by solid matter; computed by the same formula as given in maximum porosity.
17. Water Content (%). Based on dry weight of the sample and measured to the nearest whole percent.
18. Organic Content (%). Based on the Schollenberger method of organic carbon determination by reduction of chromic acid and expressed to the nearest hundredth percent.
19. Size Analysis. Sample size fraction values are based on dry weight and given in phi (ϕ) units to the nearest whole percent. An American Instrument Company sieving machine and U. S. Standard sieves are used for determining sand and larger size fractions. The pipette method of analysis was used for determining the silt and clay fractions.

QD ϕ - (phi quartile deviation). Is that statistical parameter which is a measure of one half of the spread of the quartiles and is expressed in phi units to the nearest tenth with the given value computed from the formula:

$$QD\phi = \frac{Q_{3\phi} - Q_{1\phi}}{2}$$

Sk_{ϕ} - (phi quartile skewness). Is that statistical parameter which is a measure of half the sum of the first and third quartile values less the median and is expressed in phi units to the nearest hundredth with the given value computed from the formula:

$$Sk_{\phi} = \frac{Q_{1\phi} + Q_{3\phi}}{2} - Md_{\phi}$$

Md_{ϕ} - (phi median). Is the middlemost member of the distribution curve above which 50 percent of the diameters in the distribution are larger and below which 50 percent of the diameters are smaller and is expressed to the nearest tenth of a phi unit.

The following table is presented for the conversion of phi units to millimeters:
 $\sqrt{-\phi} = \log_2 \text{diameter (millimeters)}$

<u>Phi (ϕ)</u>	<u>Millimeters</u>	<u>Geological Classification</u>
-2	4.0	Granule
-1	2.0	
0	1.0	
1	0.50	Sand
2	0.25	
3	0.125	
4	0.0625	
5	0.0313	
6	0.0156	Silt
7	0.0078	
8	0.0039	
>8	<0.0039	Clay

20. Total Subsample Dry Weight (gm.). Dry weight to the nearest hundredth of a gram.

21. Sphericity (avg.). A measure of the approach of the grain to the form of a sphere and expressed as one of the following: high, medium high, medium, medium low, or low.

22. Roundness (avg.). A function of the sharpness of the grain edges and recorded as one of the following: very angular, angular, subangular, subrounded, rounded, or well rounded.

23. Surface Texture (avg.). A description of the physical appearance of the grain surface recorded as dull or polished and one of the following: smooth, striated, faceted, frosted, pitted, or etched.

24, 25, and 26. Dominant, Secondary, and Other Minerals (%). Based on microscopic examination of the sand size and larger material recorded in percent.

27. Remarks: Sediment Type - determined by the sand, silt, and clay ratios of the sample based on the F. P. Shepard's sediment triangle in the "Journal of Sedimentary Petrology," vol. 24, no. 3, pp. 151-158, 1954.

USS REQUISITE (AGS-18)

(REF. CRUISE NO. 00548)

19 JULY - 31 AUGUST 1956

SURFACE OBSERVATIONS											
CRUISE	STATION	DATE				LATITUDE		LONGITUDE		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YR.	HR.	'	'	'	'		
00548	0001	07	19	956	05	70	19N	162	38W	0026	00

WIND		ANEMO. HGT.	BAR. PRESS.	AIR TEMP °C		HUMIDITY %	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
m/sec	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
04	02	21	12	00	0	00	0	99	01	0	6	02	4	3	40	03

SUBSURFACE OBSERVATIONS						
SAMPLE DEPTH	T °C	S' / ..	σ_t	$\Sigma \Delta D$	O ₂ ml/l	V _f
0000	03 01	30 37	24 22	0 000		4767 3
0000	03 01	30 37	24 22			4767 3
0010	01 30	31 48	25 23	0 032		4747 6
0010	01 30	31 48	25 23			4747 6
0020		32 71				
0020		32 71				

SURFACE OBSERVATIONS											
CRUISE	STATION	DATE				LATITUDE		LONGITUDE		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YR.	HR.	'	'	'	'		
00548	0002	07	20	956	00	70	13N	163	13W	0029	00

WIND		ANEMO. HGT.	BAR. PRESS.	AIR TEMP °C		HUMIDITY %	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER			
m/sec	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.		
09	34	21	17	02	8	02	2	91	03	3	2	04	2	04	1	7	40	08

SUBSURFACE OBSERVATIONS						
SAMPLE DEPTH	T °C	S' / ..	σ_t	$\Sigma \Delta D$	O ₂ ml/l	V _f
0000	02 44	31 69	25 32	0 000		4764 6
0000	02 44	31 69	25 32			4764 6
0010	02 64	31 86	25 44	0 025		4768 8
0010	02 64	31 86	25 44			4768 8
0020	04 45	32 71	25 94	0 049		4798 4
0020	04 45	32 71	25 94			4798 4
0025	03 13	32 89	26 21			4781 0

SURFACE OBSERVATIONS											
CRUISE	STATION	DATE				LATITUDE		LONGITUDE		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YR.	HR.	'	'	'	'		
00548	0003	07	20	956	07	70	16N	162	29W	0018	00

WIND		ANEMO. HGT.	BAR. PRESS.	AIR TEMP °C		HUMIDITY %	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER		
m/sec	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.	
11	05	21	17	04	03	7	92	03	0	5	04	1	04	1	6	40	05

SUBSURFACE OBSERVATIONS							
SAMPLE DEPTH	T °C	S' / ‰	σ_t	$\Sigma \Delta D$	O_2 ml/l	V_f	
0000	03 36	30 97	24 67	0 000		4774	8
0001	03 36	30 97	24 67			4774	8
0010	02 94	32 16	25 65	0 028		4774	4
0010	02 94	32 16	25 65			4774	4

SURFACE OBSERVATIONS											
CRUISE	STATION	DATE				LATITUDE		LONGITUDE		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YR.	HR.	'	'	'	'		
00548	0004	07	20	956	20	70	09N	162	40W	0012	00

WIND		ANEMO. HGT.	BAR. PRESS.	AIR TEMP °C		HUMIDITY %	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER		
m/sec	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.	
10	06	21	17	05	05	3	92	03	6	6	06	2	06	1	7	40	06

SUBSURFACE OBSERVATIONS							
SAMPLE DEPTH	T °C	S' / ‰	σ_t	$\Sigma \Delta D$	O_2 ml/l	V_f	
0000	04 18	32 36	25 69	0 000		4792	1
0000	04 18	32 36	25 69			4792	1
0010	03 77	32 52	25 86	0 022		4787	6
0010	03 77	32 52	25 86			4787	6

SURFACE OBSERVATIONS											
CRUISE	STATION	DATE				LATITUDE		LONGITUDE		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YR.	HR.	'	'	'	'		
00548	0005	07	21	956	10	70	49N	159	53W	0031	00

WIND		ANEMO. HGT.	BAR. PRESS.	AIR TEMP °C		HUMIDITY %	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
m/sec	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
08	09	21	17	03	3	02	2	83	02	6	2	07	1	7	30	06

SUBSURFACE OBSERVATIONS							
SAMPLE DEPTH	T °C	S'/.	σ_t	$\Sigma\Delta D$	O ₂ ml/l	V _f	
0000	01 14	31 85	25 53	0	000	4746	2
0000	01 14	31 85	25 53			4746	2
0010	02 70	32 41	25 87	0	023	4772	0
0010	02 70	32 41	25 87			4772	0
0020	02 83	33 01	26 34	0	042	4776	9
0020	02 83	33 01	26 34			4776	9
0028	01 29	33 24	26 64			4756	0

SURFACE OBSERVATIONS											
CRUISE	STATION	DATE				LATITUDE		LONGITUDE		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YR.	HR.	'	'	'	'		
00548	0006	07	23	956	08	71	22N	146	43W	0037	00

WIND		ANEMO. HGT.	BAR. PRESS.	AIR TEMP °C		HUMIDITY %	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER		
m/sec	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.	
06	12	21	12	02	2	01	7	91	02	6	4		00	0	7	30	04

SUBSURFACE OBSERVATIONS							
SAMPLE DEPTH	T °C	S'/.	σ_t	$\Sigma\Delta D$	O ₂ ml/l	V _f	
0000	02 90	31 50	25 13	0	000	4770	4
0000	02 90	31 50	25 13			4770	4
0010	-01 29	31 96	25 72	0	026	4709	9
0010	-01 29	31 96	25 72			4709	9
0020	-01 24	32 05	25 79	0	048	4711	7
0020	-01 24	32 05	25 79			4711	7
0030	00 70	32 47	26 05	0	069	4744	0
0030	00 70	32 47	26 05			4744	0

SURFACE OBSERVATIONS											
CRUISE	STATION	DATE				LATITUDE		LONGITUDE		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YR.	HR.	'	'	'	'		
00548	0007	07	24	956	06	71	29N	155	55W	0014	00

WIND		ANEMO. HGT.	BAR. PRESS.	AIR TEMP °C		HUMIDITY %	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
m/sec	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
03	05	21	18	06	1	05	3	92	28	0	8			1	40	03

SUBSURFACE OBSERVATIONS							
SAMPLE DEPTH	T °C	S' / ‰	σ_t	$\Sigma\Delta D$	O ₂ ml/l	V _f	
0000	00 47	22 09	17 74	0 000		4694	3
0000	00 47	22 09	17 74			4694	3
0010	-01 56	31 80	25 60	0 062		4705	0
0010	-01 56	31 80	25 60			4705	0

SURFACE OBSERVATIONS											
CRUISE	STATION	DATE				LATITUDE		LONGITUDE		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YR.	HR.	'	'	'	'		
00548	0008	07	26	956	22	70	16N	147	10W	0008	00

WIND		ANEMO. HGT.	BAR. PRESS.	AIR TEMP °C		HUMIDITY %	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER			
m/sec	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.		
06	08	21	22	12	8	10	0	70	05	1	4	00	0	00	0	6	40	02

SUBSURFACE OBSERVATIONS							
SAMPLE DEPTH	T °C	S' / ‰	σ_t	$\Sigma\Delta D$	O ₂ ml/l	V _f	
0000	04 07	08 31	06 66	0 000		4690	4
0002	04 07	08 31	06 66			4690	5

SURFACE OBSERVATIONS											
CRUISE	STATION	DATE				LATITUDE		LONGITUDE		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YR.	HR.	'	'	'	'		
00548	0009	07	30	956	00	69	46N	138	13W	0168	01

WIND		ANEMO. HGT.	BAR. PRESS.	AIR TEMP °C		HUMIDITY %	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
m/sec	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
02	25	21	14	10	0	10	0	99	50	7	8			6	50	01

SUBSURFACE OBSERVATIONS							
SAMPLE DEPTH	T °C	S'./..	σ_t	$\Sigma\Delta D$	O_2 ml/l	V_f	
0000	07 56	06 91	05 38	0	000	4734	1
0000	07 56	06 91	05 38			4734	1
0010	-00 56	28 61	23 00	0	134	4706	9
0010	-00 56	28 61	23 00			4706	9
0020	-00 17	29 99	24 10	0	178	4719	5
0020	-00 17	29 99	24 10			4719	5
0030	-00 61	30 53	24 55	0	214	4715	6
0030	* -02 07	30 53	* 24 58			* 4692	4
0050	-01 25	31 74	25 54	0	272	4712	0
0050	-01 25	31 74	25 54			4712	0
0075	-01 28	32 14	25 87	0	330	4714	7
0075	* 00 68	32 14	* 25 79			* 4764	9
0100	-01 39	32 36	26 05	0	381	4715	4
0100	-01 39	32 36	26 05			4715	4
0150	-01 89	32 65	26 29	0	473	4711	7
0150	-01 89	32 65	26 29			4711	7

SURFACE OBSERVATIONS											
CRUISE	STATION	DATE				LATITUDE		LONGITUDE		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YR.	HR.	'	'	'	'		
00548	0010	07	30	956	24	69	56N	134	03W	0012	00

WIND		ANEMO. HGT.	BAR. PRESS.	AIR TEMP °C		HUMIDITY %	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER		
m/sec	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.	
05	26	21	12	06	7	06	1	93	02	6	7	00	0	00	7	99	00

SUBSURFACE OBSERVATIONS							
SAMPLE DEPTH	T °C	S'./..	σ_t	$\Sigma\Delta D$	O_2 ml/l	V_f	
0000	07 70						
0000	07 70	* 01 15	* 00 84			* 4712	6
0010	-00 94	27 65	22 23			4696	8
0010	-00 94	27 65	22 23			4696	8

SURFACE OBSERVATIONS											
CRUISE	STATION	DATE				LATITUDE		LONGITUDE		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YR.	HR.	'	'	'	'		
00548	0011	07	31	956	22	70	11N	124	40W	0018	00

WIND		ANEMO. HGT.	BAR. PRESS.	AIR TEMP °C		HUMIDITY %	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER			
m/sec	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.		
06	23	21	05	11	1	10	6	94	01	1	2			23	1	7	20	12

SUBSURFACE OBSERVATIONS							
SAMPLE DEPTH	T °C	S' / ‰	σ_t	$\Sigma\Delta D$	O ₂ ml/l	V _f	
0005	06 23	26 07	20 52			4794	4
0010	05 00	27 88	22 07			4785	0
0015	03 72	29 70	23 63			4775	5

SURFACE OBSERVATIONS											
CRUISE	STATION	DATE				LATITUDE		LONGITUDE		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YR.	HR.	'	'	'	'		
00548	0012	08	04	956	03	69	02N	115	55W	0020	00

WIND		ANEMO. HGT.	BAR. PRESS.	AIR TEMP °C		HUMIDITY %	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
m/sec	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
06	29	21	77	12	8	11	1	92	01	7	7			6	10	09

SUBSURFACE OBSERVATIONS							
SAMPLE DEPTH	T °C	S' / ‰	σ_t	$\Sigma\Delta D$	O ₂ ml/l	V _f	
0000	01 60	23 37	18 73	0 000		4717	0
0000	01 60	23 37	18 73			4717	0
0010	-00 52	29 60	23 80	0 065		4711	8
0010	-00 52	29 60	23 80			4711	8
0020	-01 90	30 65	24 67	0 102		4695	1
0020	-01 90	30 65	24 67			4695	1

SURFACE OBSERVATIONS											
CRUISE	STATION	DATE				LATITUDE		LONGITUDE		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YR.	HR.	'	'	'	'		
00548	0013	08	05	956	00	68	38N	113	27W	0006	00

WIND		ANEWO. HGT.	BAR. PRESS.	AIR TEMP °C		HUMIDITY %	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
m/sec	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
06	15	21	15	16	7	11	1	50	01	1	2			7	10	05

SUBSURFACE OBSERVATIONS						
SAMPLE DEPTH	T °C	S' /..	σ_t	$\Sigma\Delta D$	O ₂ ml/l	V _f
0000	02 76	18 68	14 95	0 000		4714 6
0000	02 76	18 68	14 95			4714 6

SURFACE OBSERVATIONS											
CRUISE	STATION	DATE				LATITUDE		LONGITUDE		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YR.	HR.	'	'	'	'		
00548	0014	08	08	956	19	68	34N	113	29W	0021	00

WIND		ANEWO. HGT.	BAR. PRESS.	AIR TEMP °C		HUMIDITY %	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER			
m/sec	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.		
14	30	21	07	01	7	01	7	99	50	0	8	30	2	30	1	4	30	02

SUBSURFACE OBSERVATIONS						
SAMPLE DEPTH	T °C	S' /..	σ_t	$\Sigma\Delta D$	O ₂ ml/l	V _f
0000	00 48	27 01	21 68	0 000		4715 5
0000	00 48	27 01	21 68			4715 5
0010	00 52	27 06	21 72	0 061		4717 0
0010	00 52	27 06	21 72			4717 0
0015	00 51	27 21	21 84			4717 7

SURFACE OBSERVATIONS											
CRUISE	STATION	DATE				LATITUDE		LONGITUDE		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YR.	HR.	'	'	'	'		
00548	0015	08	14	956	21	68	28N	097	49W	0017	00

WIND		ANEMO. HGT.	BAR. PRESS.	AIR TEMP °C		HUMIDITY %	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER			
m/sec	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.		
08	35	21	98	02	8	02	8	99	63	7	8	33	2	33	1	5	50	07

SUBSURFACE OBSERVATIONS							
SAMPLE DEPTH	T °C	S' / ..	σ_t	$\Sigma \Delta D$	O ₂ ml/l	V _f	
0000	00 87	26 36	21 15	0 000		4718	7
0000	00 87	26 36	21 15			4718	7
0010	-00 45	27 07	21 76	0 064		4702	0
0010	-00 45	27 07	21 76			4702	0
0015	-01 44	27 14	21 83			4686	9

SURFACE OBSERVATIONS											
CRUISE	STATION	DATE				LATITUDE		LONGITUDE		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YR.	HR.	'	'	'	'		
00548	0016	08	16	956	14	68	49N	094	56W	0022	00

WIND		ANEMO. HGT.	BAR. PRESS.	AIR TEMP °C		HUMIDITY %	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER			
m/sec	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.		
10	01	21	07	02	8	02	8	99	03	7	8	01	1	01	1	5	00	06

SUBSURFACE OBSERVATIONS							
SAMPLE DEPTH	T °C	S' / ..	σ_t	$\Sigma \Delta D$	O ₂ ml/l	V _f	
0000	01 01	17 49	14 04	0 000		4683	0
0000	01 01	17 49	14 04			4683	0
0010	00 00	20 43	16 41	0 124		4680	4
0010	00 00	20 43	16 41			4680	4
0020	-00 20	22 32	17 93	0 228		4686	0
0020	-00 20	22 32	17 93			4686	0

SURFACE OBSERVATIONS											
CRUISE	STATION	DATE				LATITUDE		LONGITUDE		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YR.	HR.	'	'	'	'		
00548	0017	08	17	956	03	68	37N	095	05W	0086	01

WIND		ANEMO. HGT.	BAR. PRESS.	AIR TEMP °C		HUMIDITY %	WEATHER	CLOUD		SEA		SWELL		WATER			
m/sec	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.	VIS.	COL.	TRANS.	
07	03	21	14	06	1	06	1	99	02	6	8	02	1	02	1	7	02

SUBSURFACE OBSERVATIONS							
SAMPLE DEPTH	T °C	S' / ‰	σ_t	$\Sigma\Delta D$	O_2 ml/l	V_f	
0000	02 87	12 92	10 36	0 000		4691	9
0000	02 87	12 92	10 36			4691	9
0010	-00 41	21 56	17 32	0 137		4678	8
0010	-00 41	21 56	17 32			4678	8
0020	-00 73	23 00	18 48	0 235		4680	6
0020	-00 73	23 00	18 48			4680	6
0030	-00 81	23 47	18 86	0 325		4681	9
0030	-00 81	23 47	18 86			4681	9
0050	-00 85	23 77	19 10	0 499		4683	7
0050	-00 85	23 77	19 10			4683	7
0075	-00 92	23 96	19 26	0 713		4684	9
0075	-00 92	23 96	19 26			4684	9

SURFACE OBSERVATIONS											
CRUISE	STATION	DATE				LATITUDE		LONGITUDE		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YR.	HR.	'	'	'	'		
00548	0018	08	17	956	14	68	28N	097	06W	0028	00

WIND		ANEMO. HGT.	BAR. PRESS.	AIR TEMP °C		HUMIDITY %	WEATHER	CLOUD		SEA		SWELL		WATER				
m/sec	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.	VIS.	COL.	TRANS.		
10	01	21	17	06	7	06	7	99	02	5	8	01	2	01	1	7	90	03

SUBSURFACE OBSERVATIONS							
SAMPLE DEPTH	T °C	S' / ‰	σ_t	$\Sigma\Delta D$	O_2 ml/l	V_f	
0000	03 14	11 01	08 83	0 000		4688	0
0000	03 14	11 01	08 83			4688	0
0010	03 98	12 78	10 21	0 179		4708	3
0010	03 98	12 78	10 21			4708	3
0020	02 18	21 54	17 25	0 317		4719	2
0020	02 18	21 54	17 25			4719	2

SURFACE OBSERVATIONS											
CRUISE	STATION	DATE				LATITUDE		LONGITUDE		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YR.	HR.	'	'	'	'		
00548	0019	08	19	956	22	68	52N	099	37W	0031	00

WIND		ANEMO. HGT.	BAR. PRESS.	AIR TEMP °C		HUMIDITY %	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
m/sec	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
06	35	21	26	03	3	03	3	99	41	4	4	35	1	5	30	08

SUBSURFACE OBSERVATIONS							
SAMPLE DEPTH	T °C	S'/.	σ_t	$\Sigma\Delta$	O_2 ml/l	V_f	
0000	00 54	26 69	21 42	0 000		4715	1
0000	00 54	26 69	21 42			4715	1
0010	00 18	26 74	21 48	0 064		4710	4
0010	00 18	26 74	21 48			4710	4
0020	-00 41	27 12	21 80	0 125		4703	4
0020	-00 41	27 12	21 80			4703	4

SURFACE OBSERVATIONS											
CRUISE	STATION	DATE				LATITUDE		LONGITUDE		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YR.	HR.	'	'	'	'		
00548	0020	08	20	956	19	68	50N	101	31W	0091	01

WIND		ANEMO. HGT.	BAR. PRESS.	AIR TEMP °C		HUMIDITY %	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
m/sec	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
03	15	21	23	02	2	01	7	91	40	0	8			4	10	14

SUBSURFACE OBSERVATIONS							
SAMPLE DEPTH	T °C	S'/.	σ_t	$\Sigma\Delta$	O_2 ml/l	V_f	
0000	02 57	23 35	18 67	0 000		4731	4
0000	02 57	23 35	18 67			4731	4
0010	01 92	23 73	19 00	0 089		4723	9
0010	01 92	23 73	19 00			4723	9
0020	-00 36	27 68	22 25	0 160		4706	6
0020	-00 36	27 68	22 25			4706	6
0030	-00 79	28 21	22 68	0 214		4702	7
0030	-00 79	28 21	22 68			4702	7
0050	-01 42	28 49	22 92	0 315		4695	2
0050	-01 42	28 49	22 92			4695	2
0075	-01 29	29 30	23 57	0 431		4702	2
0075	-01 29	29 30	23 57			4702	2

SURFACE OBSERVATIONS											
CRUISE	STATION	DATE				LATITUDE		LONGITUDE		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YR.	HR.	'	'	'	'		
00548	0021	08	20	956	24	68	44N	101	02W	0034	00

WIND		ANEMO. HGT.	BAR. PRESS.	AIR TEMP °C		HUMIDITY %	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
m/sec	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
04	15	21	21	05	7	05	0	92	40	0	6	15	1	2	10	06

SUBSURFACE OBSERVATIONS							
SAMPLE DEPTH	T °C	S' /..	σ_t	$\Sigma \Delta D$	O ₂ ml/l	V _f	
0000	02 00	24 24	19 40	0 000		4726	7
0000	02 00	24 24	19 40			4726	7
0010	00 40	26 78	21 50	0 073		4713	9
0010	* 03 20	26 78	* 21 35			* 4755	6
0020	-00 54	27 72	22 28	0 132		4704	0
0020	-00 54	27 72	22 28			4704	0
0030	-00 83	28 13	22 62	0 186		4701	8
0030	-00 83	28 13	22 62			4701	8

SURFACE OBSERVATIONS											
CRUISE	STATION	DATE				LATITUDE		LONGITUDE		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YR.	HR.	'	'	'	'		
00548	0022	08	21	956	14	68	51N	105	00W	0060	00

WIND		ANEMO. HGT.	BAR. PRESS.	AIR TEMP °C		HUMIDITY %	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER		
m/sec	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.	
10	16	21	15	05	0	05	0	99	01	1	2	16	4	16	3	10	05

SUBSURFACE OBSERVATIONS							
SAMPLE DEPTH	T °C	S' /..	σ_t	$\Sigma \Delta D$	O ₂ ml/l	V _f	
0000	03 10	24 74	19 74	0 000		4745	0
0000	03 10	24 74	19 74			4745	0
0010	01 11	26 94	21 60	0 071		4725	4
0010	01 11	26 94	21 60			4725	4
0020	-00 64	28 78	22 74	0 128		4704	8
0020	-00 64	28 78	22 74			4704	8
0030	-00 76	28 49	22 91	0 178		4704	4
0030	-00 76	28 49	22 91			4704	4
0050	-01 39	29 03	23 36	0 273		4698	0
0050	-01 39	29 03	23 36			4698	0

SURFACE OBSERVATIONS											
CRUISE	STATION	DATE				LATITUDE		LONGITUDE		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YR.	HR.	'	'	'	'		
00548	0023	08	22	956	06	68	29N	110	00W	0065	00

WIND		ANEMO. HGT.	BAR. PRESS.	AIR TEMP °C		HUMIDITY %	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
m/sec	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
07	16	21	88	07	2	07	2	99	0	6	17	2	17	1	6	01

SUBSURFACE OBSERVATIONS							
SAMPLE DEPTH	T °C	S' / ‰	σ_t	$\Sigma \Delta D$	O_2 ml/l	V_f	
0000	04 13	24 98	19 86	0 000		4760	7
0000	04 13	24 98	19 86			4760	7
0010	00 04	27 68	22 24	0 067		4712	2
0010	00 04	27 68	22 24			4712	2
0020	-00 74	27 92	22 45	0 122		4701	7
0020	-00 74	27 92	22 45			4701	7
0030	-00 87	28 10	22 60	0 176		4701	0
0030	-00 87	28 10	22 60			4701	0
0050	-01 06	28 60	23 00	0 277		4701	4
0050	-01 06	28 60	23 00			4701	4

SURFACE OBSERVATIONS											
CRUISE	STATION	DATE				LATITUDE		LONGITUDE		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YR.	HR.	'	'	'	'		
00548	0024	08	22	956	16	68	33N	113	29W	0021	00

WIND		ANEMO. HGT.	BAR. PRESS.	AIR TEMP °C		HUMIDITY %	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER		
m/sec	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.	
08	27	21	90	04	4	04	4	99	0	8	29	2	29	1	7	30	04

SUBSURFACE OBSERVATIONS							
SAMPLE DEPTH	T °C	S' / ‰	σ_t	$\Sigma \Delta D$	O_2 ml/l	V_f	
0000	03 19	25 48	20 32	0 000		4749	4
0000	03 19	25 48	20 32			4749	4
0010	01 76	27 82	22 27	0 065		4758	6
0015	01 01	29 02	23 27			4733	1

SURFACE OBSERVATIONS											
CRUISE	STATION	DATE				LATITUDE		LONGITUDE		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YR.	HR.	'	'	'	'		
00548	0025	08	27	956	21	69	58N	139	18W	0069	00

WIND		ANEMO. HGT.	BAR. PRESS.	AIR TEMP °C		HUMIDITY %	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER			
m/sec	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.		
10	19	21	15	01	1	01	1	99	03	0	8	11	1	11	1	6	99	00

SUBSURFACE OBSERVATIONS							
SAMPLE DEPTH	T °C	S' /..	σ_t	$\Sigma \Delta D$	O ₂ ml/l	V _t	
0000	01 81	16 47	13 21	0 000		4690	9
0000	01 81	16 47	13 21			4690	9
0010	00 28	28 99	23 28	0 095		4721	5
0010	00 28	28 99	23 28			4721	5
0020	-00 60	30 49	24 52	0 135		4715	0
0020	-00 60	30 49	24 52			4715	0
0030	-01 26	31 63	25 45	0 165		4710	2
0030	-01 26	31 63	25 45			4710	2
0050	-01 42	32 41	26 09	0 209		4712	2
0050	-01 42	32 41	26 09			4712	2

SURFACE OBSERVATIONS											
CRUISE	STATION	DATE				LATITUDE		LONGITUDE		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YR.	HR.	'	'	'	'		
00548	0026	08	30	956	20	69	28N	168	28W	0049	00

WIND		ANEMO. HGT.	BAR. PRESS.	AIR TEMP °C		HUMIDITY %	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER			
m/sec	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.		
07	08	21	14	04	4	03	9	92	03	0	8	07	2	07	2	7	40	01

SUBSURFACE OBSERVATIONS							
SAMPLE DEPTH	T °C	S' /..	σ_t	$\Sigma \Delta D$	O ₂ ml/l	V _t	
0000	04 74	29 90	23 69	0 000		4789	6
0000	04 74	29 90	23 69			4789	6
0010	04 20	31 89	25 32	0 034		4791	0
0010	04 20	31 89	25 32			4791	0
0020	04 59	31 83	25 23	0 061		4796	7
0020	* 07 98	31 83	* 24 81			* 4841	5
0030	04 76	31 85	25 23	0 039		4799	7
0030	04 76	31 85	25 23			4799	7
0040	04 71	* 29 96	* 23 74			* 4791	8

SURFACE OBSERVATIONS											
CRUISE	STATION	DATE				LATITUDE		LONGITUDE		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YR.	HR.	'	'	'	'		
00548	0027	08	31	956	01	69	14N	167	40W	0049	00

WIND		ANEMO. HGT.	BAR. PRESS.	AIR TEMP °C		HUMIDITY %	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER			
m/sec	DIR.			DRY	WET			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.		
03	08	21	13	07	8	06	1	79	01	4	6	08	1	08	1	7	30	02

SUBSURFACE OBSERVATIONS							
SAMPLE DEPTH	T °C	S'/.	σ_t	$\Sigma\Delta D$	O_2 ml/l	V_f	
0000	06 67	30 13	23 66	0	000	4816	5
0000	06 67	30 13	23 66			4816	5
0010	06 48	30 25	23 77	0	042	4815	1
0010	06 48	30 25	23 77			4815	1
0020	06 20	30 69	24 15	0	081	4813	8
0020	06 20	30 69	24 15			4813	8
0030	06 24	31 02	24 41	0	118	4816	2
0030	06 24	31 02	24 41			4816	2
0040	03 91	32 10	25 51			4789	6

SURFACE OBSERVATIONS											
CRUISE	STATION	DATE				LATITUDE		LONGITUDE		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YR.	HR.	'	'	'	'		
00548	0028	08	31	956	04	69	10N	167	19W	0049	00

WIND		ANEMO. HGT.	BAR. PRESS.	AIR TEMP °C		HUMIDITY %	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER			
m/sec	DIR.			DRY	WET			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.		
03	20	21	13	06	7	05	6	85	03	6	7	07	1	07	1	7	40	02

SUBSURFACE OBSERVATIONS							
SAMPLE DEPTH	T °C	S'/.	σ_t	$\Sigma\Delta D$	O_2 ml/l	V_f	
0000	04 85	30 97	24 53	0	000	4795	5
0000	04 85	30 97	24 53			4795	5
0010	02 97	32 05	25 56	0	029	4774	3
0010	02 97	32 05	25 56			4774	3
0020	02 87	32 11	25 62	0	053	4773	7
0020	02 87	32 11	25 62			4773	7
0030	02 06	32 18	25 73	0	077	4762	9
0030	02 06	32 18	25 73			4762	9
0040	02 37	32 10	25 65			4767	7

SURFACE OBSERVATIONS											
CRUISE	STATION	DATE				LATITUDE		LONGITUDE		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YR.	HR.	'	'	'	'		
00548	0029	08	31	956	07	69	01N	166	40W	0032	00

WIND		ANEMO. HGT.	BAR. PRESS.	AIR TEMP °C		HUMIDITY %	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
m/sec	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
04	21	21	14	05	04	92	03	0	8	03	1	03	1	6	40	01

SUBSURFACE OBSERVATIONS							
SAMPLE DEPTH	T °C	S' / ‰		σ_t	$\Sigma \Delta D$	O ₂ ml/l	V _f
		↓	↓				
0000	05 83	30	78	24	27	0	000
0000	05 83	30	78	24	27		4808 0
0010	04 07	31	54	25	05	0	033
0010	04 07	31	54	25	05		4787 7
0020	03 85	31	65	25	16	0	062
0020	03 85	31	65	25	16		4785 7

CURRENT DATA, USS REQUISITE -- 1956

Sta. No.	Position	Date	Local Time	5 Meters		10 Meters		15 Meters		20 Meters		25 Meters	
				Dir. (°T)	Vel. (kn)	Dir. (°T)	Vel. (kn)	Dir. (°T)	Vel. (kn)	Dir. (°T)	Vel. (kn)	Dir. (°T)	Vel. (kn)
1	70°16.3'N 163°15'W	19 Jul	0103	107	0.6			218	0.4	222	0.2		
			0406	154	0.5			152	0.5	161	0.2		
			0810	076	0.3			159	0.1	316	0.2		
2	70°16'N 162°29.1'W	19 Jul	1329	031	0.6			283	0.4	106	0.2		
3	70°09'N 162°40'W	20 Jul	0135	081	0.9								
			0400					010	1.5				
			0810	354	0.4								
4	70°49'N 159°53'W	20 Jul	2258	019	0.7			049	0.6			357	0.6
5	70°52'N 159°25'W	21 Jul	0400	019	0.5	024	0.4	028	0.6				
			0802	025	0.4	007	0.4	005	0.2				
			1206	024	0.5	197	0.2						
			1600	019	0.4	032	0.2	357	0.1				
			2029	142	0.1	290	0.3	253	0.2				
		22 Jul	0024			245	0.4	202	0.4				
			0415	198	0.6	217	0.3	224	0.5				
	0815	182	0.5										
6	71°21.9'N 146°43'W	22 Jul	2135	161	1.1					164	0.9		
											(30 M=154°, 1.2)		
		23 Jul	0001	166	1.3					149	0.9	160	1.1
			0435	179	1.4							164	1.2
7	69°56.8'N 134°03'W	30 Jul	1500	192	1.4	165	0.4						
8	70°11.3'N 124°43.5'W	31 Jul 1 Aug	2000	177	0.4	119	0.2	174	0.1				
			0002	207	0.2	207	0.2	194	0.1				
			0402	059	0.1	267	0.2	272	0.2				
			0800			036	0.2	101	0.3				
			1207	193	0.3	182	0.1	194	0.1				
	1552	087	0.1	178	0.2								
9	69°01.7'N 115°55.3'W	1 Aug	2023	0	0	0	0	0	0				
10	68°38.3'N 113°24'W	4 Aug	1630	184	0.4								
			1800	189	0.5								
			1830	079	0.3								

CURRENT DATA, USS REQUISITE -- 1956 (Cont'd)

Sta. No.	Position	Date	Local Time	5 Meters		10 Meters		15 Meters		20 Meters		25 Meters		
				Dir. (°T)	Vel. (kn)	Dir. (°T)	Vel. (kn)	Dir. (°T)	Vel. (kn)	Dir. (°T)	Vel. (kn)	Dir. (°T)	Vel. (kn)	
10	68°38.3'N 113°24'W	4 Aug	1900	193	0.5									
			1930	191	1.1									
			2000	176	1.1									
			2030	227	0.3									
			2100	210	0.4									
		2130	071	0.5										
		2200	053	0.1										
		5 Aug	0100	158	1.4									
			0130	143	1.4									
			0200	146	1.9									
			0230	160	1.4									
0300	168		0.8											
0410	257		0.5											
11	68°40'N 113°31.5'W	5 Aug	2210	244	0.9	204	0.7							
		6 Aug	0200	139	0.4	140	0.2							
			0600	240	0.4	167	0.4							
12	68°44.2'N 113°32.6'W	7 Aug	0005	220	0.8									
			0530	122	0.2									
13	68°44'N 113°34'W	7 Aug	0925	163	1.7	157	1.7	215	1.6					
			1200	217	1.0	224	0.7	219	0.4					
			1600			108	1.7	090	1.3					
			2000	178	1.0	087	1.0	092	0.8					
		8 Aug	2400	219	0.8	224	1.0	205	0.8					
			0415	079	0.7	101	0.7	073	0.7					
			1210	265	1.5	336	1.7							
			2220	187	0.7	184	0.7	181	0.6					
14	68°27.5'N 113°11'W	9 Aug	0317	181	0.3	067	0.1	148	0.2					
15	68°39.4'N 113°23.8'W	9 Aug	1055	303	1.6	265	2.6	137	2.0					
			1433	220	1.0	197	0.9	220	0.8					
16	69°05.8'N 105°02.8'W	10 Aug	2000	158	0.3	014	0.9	358	0.2					
		12 Aug	0000	018	0.4	038	0.5	028	0.5					
			0500	336	0.3	058	0.2	060	0.3					
			0805	351	0.2	078	0.3	133	0.1					
			1200			298	0							

CURRENT DATA, USS REQUISITE -- 1956 (Cont'd)

Sta. No.	Position	Date	Local Time	5 Meters		10 Meters		15 Meters		20 Meters		25 Meters		
				Dir. (°T)	Vel. (kn)	Dir. (°T)	Vel. (kn)	Dir. (°T)	Vel. (kn)	Dir. (°T)	Vel. (kn)	Dir. (°T)	Vel. (kn)	
17	68°39'N 97°49.2'W	14 Aug	0630	173	0.4	177	0.4	331	0.3					
			1200	194	0.7	229	0.7	331	0.6					
			1607	340	0.3	159	0.3	188	0.4					
			2045	103	0.3									
18	68°49'N 94°56'W	16 Aug	0730	144	0.8	145	0.8	128	0.4					
19	68°37'N 95°05'W	16 Aug	1939	150	0.6			(43 M=271°, 0.2)				(81 M=192°, 0.1)		
20	68°28'N 97°06.4'W	17 Aug	0655	225	0.4			237	0.4			148	0.3	
21	68°51.6'N 99°37'W	19 Aug	1500	313	0.5			021	0.5			105	0.4	
22	68°15'N 101°30.5'W	20 Aug	1145	224	0.2			(45 M=188°, 0.1)				(86 M=204°, 0.1)		
23	68°43.6'N 101°02'W	20 Aug	1702	221	0.6					136	0.7			
												(31 M=100°, 0.2)		
24	68°51'N 105°00'W	21 Aug	0619	260	0.6							(31 M=272°, 0.5)		
25	68°29'N 110°00'W	21 Aug	2236	230	0.1			(32 M=215°, 0.1)				(59 M=220°, 0.1)		
26	68°33.2'N 113°28.5'W	22 Aug	0827	115	2.5	164	2.1	298	1.9					
27	70°11'N 124°44'W	23 Aug	1415	194	0.3	054	0.3							
			1830			359	0.2	229	0.1					
			2205	236	0.3	281	0.2			016	0.2			
			24 Aug	0610	074	0.2	214	0.2			224	0.1		
28	70°11'N 124°46'W	24 Aug	1202	063	0.5			115	0.3			(30 M=110°, 0.3)		
			1625	094	0.3			214	0.1			(30 M=154°, 0.1)		
29	69°58'N 139°18'W	27 Aug	1404	172	1.0			(34 M=035°, 0.5)				(64 M=013°, 0.5)		
30	69°28'N 168°26'W	30 Aug	1327	096	0.4							081	0.4	
													(44 M=090°, 0.6)	

CURRENT DATA, USS REQUISITE -- 1956 (Cont'd)

Sta. No.	Position	Date	Local Time	5 Meters		10 Meters		15 Meters		20 Meters		25 Meters	
				Dir. (°T)	Vel. (kn)	Dir. (°T)	Vel. (kn)	Dir. (°T)	Vel. (kn)	Dir. (°T)	Vel. (kn)	Dir. (°T)	Vel. (kn)
31	69°17'N 167°40'W	30 Aug	1710	216	0.4							153	0.5
												(44 M=146°, 0.7)	
32	69°10'N 167°19'W	30 Aug	1916	137	1.0							180	0.7
												(44 M=194°, 0.5)	
33	69°01'N 166°40'W	30 Aug	2225	193	0.9			192	0.7			162	0.4

SEDIMENT ANALYSIS SHEET
 PIMC-WD-150 (REV. 1-1-88)

1. SAMPLE NUMBER	REQUISITE 1	5. SAMPLER TYPE	Grab
2. LATITUDE	70° 13.1 N	6. WATER DEPTH (m.)	15
3. LONGITUDE	163° 12.6 W	7. CORE LENGTH (m.)	-
4. DATE (day, month, year)	20 July 1956	8. CORE PENETRATION (m.)	-
9. LABORATORY NUMBERS			
10. SUBSAMPLE DEPTH IN CORE (m.)	COMPLETE		
11. COLOR	Olive Grey		
12. ODOR			
13. NET DENSITY (lb./ft ³)			
14. RIGIDNESS (mm)			
15. MAXIMUM POROSITY (%)			
16. MINIMUM POROSITY (%)			
17. WATER CONTENT (%)			
18. ORGANIC CARBON CONTENT (%)			

19. SIZE ANALYSIS AND STATISTICAL MEASURES

a. < -2 _s (%)	99 _s	0.20	99 _s	0.20	99 _s
b. -2 _s to -1 _s (%)	Sand	1	3K _s	0.0	SK _s
c. -1 _s to 0 _s (%)			M _s	2.65	M _s
d. 0 _s to 1 _s (%)	Sand	1	0 _s		0 _s
e. 1 _s to 2 _s (%)	Sand	5	0 _s		0 _s
f. 2 _s to 3 _s (%)	Sand	76			
g. 3 _s to 4 _s (%)	Sand	15			
h. 4 _s to 6 _s (%)	Silt	2			
i. 6 _s to 8 _s (%)					
j. > 8 _s (%)					

20. SUBSAMPLE DRY WEIGHT (gm)	13.66
21. SPHERICITY (avg.)	Med.-Low
22. ROUNDNESS (avg.)	Sub-angular
23. SURFACE TEXTURE (avg.)	Dull & Pitted
24. DOMINANT MINERAL (%)	Quartz 100%
	Org.-Matter - Tr.
25. SECONDARY MINERALS (%)	Feldspar - Tr.
26. OTHER MINERALS (%)	

27. REMARKS: Shell & spicules present.

1. SAMPLE NUMBER	REQUISITE 2	5. SAMPLER TYPE	Grab
2. LATITUDE	70° 16.3 N	6. WATER DEPTH (m.)	10
3. LONGITUDE	162° 29.1 W	7. CORE LENGTH (m.)	-
4. DATE (day, month, year)	20 July 1956	8. CORE PENETRATION (m.)	-
9. LABORATORY NUMBERS			
10. SUBSAMPLE DEPTH IN CORE (m.)	COMPLETE		
11. COLOR	Olive Grey		
12. ODOR	None		
13. NET DENSITY (lb./ft ³)			
14. RIGIDNESS (mm)			
15. MAXIMUM POROSITY (%)			
16. MINIMUM POROSITY (%)			
17. WATER CONTENT (%)			
18. ORGANIC CARBON CONTENT (%)			

19. SIZE ANALYSIS AND STATISTICAL MEASURES

a. < -2 _s (%)	00 _s	0.53	00 _s	00 _s
b. -2 _s to -1 _s (%)	Sand	3	3K _s	-1.0
c. -1 _s to 0 _s (%)	Sand	1	M _s	2.23
d. 0 _s to 1 _s (%)	Sand	2	0 _s	
e. 1 _s to 2 _s (%)	Sand	34	0 _s	
f. 2 _s to 3 _s (%)	Sand	54		
g. 3 _s to 4 _s (%)	Sand	5		
h. 4 _s to 6 _s (%)	Silt	1		
i. 6 _s to 8 _s (%)				
j. > 8 _s (%)				

20. SUBSAMPLE DRY WEIGHT (gm)	30.21
21. SPHERICITY (avg.)	Med.-High
22. ROUNDNESS (avg.)	Low *
23. SURFACE TEXTURE (avg.)	Sub-rounded
24. DOMINANT MINERAL (%)	Dull & Pitted
	Quartz 60%
	Coal? 20%
	Org. Matter 20%
25. SECONDARY MINERALS (%)	
26. OTHER MINERALS (%)	

27. REMARKS: *Portion of sample shown as coal ? 20%

1. SAMPLE NUMBER	70	09	N.	7. CORE LENGTH (in.)	6.5
2. LATITUDE	162	40	W.	8. CORE PENETRATION (in.)	-
3. LONGITUDE	162	40	W.	9. LABORATORY NUMBERS	
4. DATE (Day, month, year)	20 July 1956			10. SUBSAMPLE DEPTH IN CORE (in.)	COMPLETE
5. SAMPLER TYPE	Grab			11. COLOR	Olive Grey
6. WATER DEPTH (fm.)	6.5			12. ODR	
7. CORE LENGTH (in.)				13. WET DENSITY (lb./ft ³)	
8. CORE PENETRATION (in.)				14. RIGIDNESS (cm)	
9. LABORATORY NUMBERS				15. MAXIMUM POROSITY (%)	
10. SUBSAMPLE DEPTH IN CORE (in.)				16. MINIMUM POROSITY (%)	
11. COLOR				17. WATER CONTENT (%)	
12. ODR				18. ORGANIC CARBON CONTENT (%)	
13. WET DENSITY (lb./ft ³)				19. SIZE ANALYSIS AND STATISTICAL MEASURES	
14. RIGIDNESS (cm)				a. < 2 _s (s)	0 _s , .25
15. MAXIMUM POROSITY (%)				b. 2 _s to -1 _s (s)	S _F , .05
16. MINIMUM POROSITY (%)				c. -1 _s to 0 _s (s)	M _F , 2.40
17. WATER CONTENT (%)				d. 0 _s to 1 _s (s)	0 _F
18. ORGANIC CARBON CONTENT (%)				e. 1 _s to 2 _s (s)	0 _F , 0.3
19. SIZE ANALYSIS AND STATISTICAL MEASURES				f. 2 _s to 3 _s (s)	74
a. < 2 _s (s)	0 _s	.25		g. 3 _s to 4 _s (s)	Sand 5
b. 2 _s to -1 _s (s)	S _F	.05		h. 4 _s to 5 _s (s)	Silt 1
c. -1 _s to 0 _s (s)	M _F	2.40		i. 5 _s to 8 _s (s)	
d. 0 _s to 1 _s (s)	0 _F			j. > 8 _s (s)	19.18
e. 1 _s to 2 _s (s)	0 _F	0.3		21. SPHERICITY (avg.)	Med.-Low
f. 2 _s to 3 _s (s)	74			22. ROUNDNESS (avg.)	Sub-angular
g. 3 _s to 4 _s (s)	Sand 5			23. SURFACE TEXTURE (avg.)	Polished & Pitted
h. 4 _s to 5 _s (s)	Silt 1			24. DOMINANT MINERAL (%)	Quartz 100%
i. 5 _s to 8 _s (s)				25. SECONDARY MINERAL (%)	Feldspar - Tr
j. > 8 _s (s)	19.18			26. OTHER MINERALS (%)	Org. Matter - Tr.
21. SPHERICITY (avg.)	Med.-Low			27. REMARKS:	Pebbles and few shells.
22. ROUNDNESS (avg.)	Sub-angular				
23. SURFACE TEXTURE (avg.)	Polished & Pitted				
24. DOMINANT MINERAL (%)	Quartz 100%				
25. SECONDARY MINERAL (%)	Feldspar - Tr				
26. OTHER MINERALS (%)	Org. Matter - Tr.				

1. SAMPLE NUMBER	71	21.9	N.	7. CORE LENGTH (in.)	20
2. LATITUDE	146	53	W.	8. CORE PENETRATION (in.)	20
3. LONGITUDE	146	53	W.	9. LABORATORY NUMBERS	
4. DATE (Day, month, year)	22 July 1956			10. SUBSAMPLE DEPTH IN CORE (in.)	Mid (1 _s to 3 _s) Bot (18" - 19 ^{1/2} ")
5. SAMPLER TYPE	Phleger Corer			11. COLOR	Dark Grey
6. WATER DEPTH (fm.)	20			12. ODR	
7. CORE LENGTH (in.)	20			13. WET DENSITY (lb./ft ³)	
8. CORE PENETRATION (in.)				14. RIGIDNESS (cm)	
9. LABORATORY NUMBERS				15. MAXIMUM POROSITY (%)	
10. SUBSAMPLE DEPTH IN CORE (in.)				16. MINIMUM POROSITY (%)	
11. COLOR				17. WATER CONTENT (%)	
12. ODR				18. ORGANIC CARBON CONTENT (%)	
13. WET DENSITY (lb./ft ³)				19. SIZE ANALYSIS AND STATISTICAL MEASURES	
14. RIGIDNESS (cm)				a. < 2 _s (s)	0 _s , 1.28
15. MAXIMUM POROSITY (%)				b. 2 _s to -1 _s (s)	Sand
16. MINIMUM POROSITY (%)				c. -1 _s to 0 _s (s)	Sand
17. WATER CONTENT (%)				d. 0 _s to 1 _s (s)	Sand
18. ORGANIC CARBON CONTENT (%)				e. 1 _s to 2 _s (s)	Sand
19. SIZE ANALYSIS AND STATISTICAL MEASURES				f. 2 _s to 3 _s (s)	Sand
a. < 2 _s (s)	0 _s	1.28		g. 3 _s to 4 _s (s)	Silt 2
b. 2 _s to -1 _s (s)	Sand	.43		h. 4 _s to 5 _s (s)	Silt 23
c. -1 _s to 0 _s (s)	Sand	5.70		i. 5 _s to 8 _s (s)	Clay 21
d. 0 _s to 1 _s (s)	Sand	2		20. SUBSAMPLE DRY WEIGHT (gm)	25.31
e. 1 _s to 2 _s (s)	Sand	0.8		21. SPHERICITY (avg.)	Medium
f. 2 _s to 3 _s (s)	Sand	0.8		22. ROUNDNESS (avg.)	Sub-rounded
g. 3 _s to 4 _s (s)	Silt 2			23. SURFACE TEXTURE (avg.)	Rough Polished
h. 4 _s to 5 _s (s)	Silt 23			24. DOMINANT MINERAL (%)	Quartz 95%
i. 5 _s to 8 _s (s)	Clay 21			25. SECONDARY MINERAL (%)	Org. Mat. 5%
j. > 8 _s (s)	25.31			26. OTHER MINERALS (%)	Org. Mat. 5%
21. SPHERICITY (avg.)	Medium			27. REMARKS:	Bedding - organic-rich beds as follows: 0-1 _s ", 17 ^{1/2} -17 3/4", 18-19 ^{1/2} ". Evaporation took place.
22. ROUNDNESS (avg.)	Sub-rounded				
23. SURFACE TEXTURE (avg.)	Rough Polished				
24. DOMINANT MINERAL (%)	Quartz 95%				
25. SECONDARY MINERAL (%)	Org. Mat. 5%				
26. OTHER MINERALS (%)	Org. Mat. 5%				

1. SAMPLE NUMBER	REQUISITE 6	5. SAMPLER TYPE	Grab
2. LATITUDE	71 28.3 N.	6. WATER DEPTH (m.)	7
3. LONGITUDE	155 58 W.	7. CORE LENGTH (ft.)	-
4. DATE (day, month, year)	23 July 1956	8. CORE PENETRATION (ft.)	-
9. LABORATORY NUMBERS			
10. SUBSAMPLE DEPTH IN CORE (ft.)	COMPLETE		
11. COLOR	Olive Gray		
12. ODOR			
13. WET DENSITY (lb./ft. ³)			
14. RIGIDNESS (mm)			
15. MAXIMUM POROSITY (%)			
16. MINIMUM POROSITY (%)			
17. WATER CONTENT (%)			
18. ORGANIC CARBON CONTENT (%)			

19. SIZE ANALYSIS AND STATISTICAL MEASURES			
a. < 2 _φ (%)	00 _s .36	00 _s	00 _s
b. 2 _φ to -1 _φ (%)	SK _s .09	SK _s	SK _s
c. -1 _φ to 0 _φ (%)	M ₆ 2.45	M ₆	M ₆
d. 0 _φ to 1 _φ (%)	01 _s	01 _s	01 _s
e. 1 _φ to 2 _φ (%)	Sand 1	03 _s	03 _s
f. 2 _φ to 3 _φ (%)	Sand 79		
g. 3 _φ to 4 _φ (%)	Sand 10		
h. 4 _φ to 5 _φ (%)	Silt 6		
i. 5 _φ to 6 _φ (%)			
j. > 6 _φ (%)	Clay 4		
20. SUBSAMPLE DRY WEIGHT (gm)	28.30		
21. SPHERICITY (avg.)	Medium		
22. ROUNDNESS (avg.)	Sub-rounded		
23. SURFACE TEXTURE (avg.)	Polished & Ridged		
24. DOMINANT MINERAL (%)	Quartz 100%		
25. SECONDARY MINERAL (%)	Feldspar - Tr.		
26. OTHER MINERALS (%)	Org. Matter Tr.		

27. REMARKS:	
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1. SAMPLE NUMBER	REQUISITE 7	5. SAMPLER TYPE	Phlegger Corer
2. LATITUDE	70 16	08 N.	4, 5
3. LONGITUDE	147 02	05 W.	14
4. DATE (day, month, year)	26 July 1956		
9. LABORATORY NUMBERS			
10. SUBSAMPLE DEPTH IN CORE (ft.)	Top (0-2")	Bot (12"-14")	
11. COLOR	Grayish Black	Grayish Black	
12. ODOR			
13. WET DENSITY (lb./ft. ³)			
14. RIGIDNESS (mm)			
15. MAXIMUM POROSITY (%)			
16. MINIMUM POROSITY (%)			
17. WATER CONTENT (%)			
18. ORGANIC CARBON CONTENT (%)			

19. SIZE ANALYSIS AND STATISTICAL MEASURES			
a. < 2 _φ (%)	00 _s 1.40	00 _s	00 _s
b. 2 _φ to -1 _φ (%)	Sand	SK _s .45	SK _s
c. -1 _φ to 0 _φ (%)	Sand 1	M ₆ 5.10	M ₆
d. 0 _φ to 1 _φ (%)	Sand	01 _s	01 _s
e. 1 _φ to 2 _φ (%)	Sand	03 _s	03 _s
f. 2 _φ to 3 _φ (%)	Sand 1		
g. 3 _φ to 4 _φ (%)	Sand 19		
h. 4 _φ to 5 _φ (%)	Silt 48		
i. 5 _φ to 6 _φ (%)	Silt 10		
j. > 6 _φ (%)	Clay 21		
20. SUBSAMPLE DRY WEIGHT (gm)	27.35		
21. SPHERICITY (avg.)	Med.-High		
22. ROUNDNESS (avg.)	Sub-rounded		
23. SURFACE TEXTURE (avg.)	Rough Dull		
24. DOMINANT MINERAL (%)	Quartz 75%		
25. SECONDARY MINERAL (%)	Org.-Mat. 65%		
26. OTHER MINERALS (%)	Mica - Tr.		

27. REMARKS:	Core uniform throughout; olive-gray oxidation
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REQUISITE 8				REQUISITE 9			
1. SAMPLE NUMBER	2. LATITUDE	3. LONGITUDE	4. DATE (Day, month, year)	5. SAMPLER TYPE	6. WATER DEPTH (m.)	7. CORE LENGTH (m.)	8. CORE PENETRATION (m.)
46	69° N	138° W	30 July 1956	Phleger Corer	56.8	6.8	
9. LABORATORY NUMBERS				10. SUBSAMPLE DEPTH IN CORE (m.)			
Top				Top (0-2")			
Dark Gray				Olive Gray			
Dark Gray				Olive Gray			
Dark Gray				Olive Gray			
Bottom				Bot (3 1/4"-16")			
Dark Gray				Olive Gray			
Dark Gray				Olive Gray			
Dark Gray				Olive Gray			
94				93.5			
29				30			
13. NET DENSITY (lb./ft ³)				14. RESIDUE (%)			
94				30			
15. MAXIMUM POROSITY (%)				16. MINIMUM POROSITY (%)			
29				30			
17. WATER CONTENT (%)				18. ORGANIC CARBON CONTENT (%)			
29				30			
19. SIZE ANALYSIS AND STATISTICAL MEASURES				19. SIZE ANALYSIS AND STATISTICAL MEASURES			
a. <-2φ (Σ)	0φ	0φ	0φ	0φ	0φ	0φ	0φ
b. -2φ to -1φ (Σ)	SK ₆	SK ₆	SK ₆	SK ₆	SK ₆	SK ₆	SK ₆
c. -1φ to 0φ (Σ)	M ₆	M ₆	M ₆	M ₆	M ₆	M ₆	M ₆
d. 0φ to 1φ (Σ)	0φ	0φ	0φ	0φ	0φ	0φ	0φ
e. 1φ to 2φ (Σ)	0φ	0φ	0φ	0φ	0φ	0φ	0φ
f. 2φ to 3φ (Σ)	0φ	0φ	0φ	0φ	0φ	0φ	0φ
g. 3φ to 4φ (Σ)	0φ	0φ	0φ	0φ	0φ	0φ	0φ
h. 4φ to 6φ (Σ)	0φ	0φ	0φ	0φ	0φ	0φ	0φ
i. 6φ to 8φ (Σ)	0φ	0φ	0φ	0φ	0φ	0φ	0φ
j. > 8φ (Σ)	0φ	0φ	0φ	0φ	0φ	0φ	0φ
20. SUBSAMPLE DRY WEIGHT (gm)	16.76	16.27	17.31	19.02	32.02		
21. SPHERICITY (avg.)	*Medium	*Medium	*Medium	Medium	Medium		
22. ROUNDNESS (avg.)	Sub-rounded	Sub-rounded	Sub-rounded	Sub-angular	Sub-rounded		
23. SURFACE TEXTURE (avg.)	Dull & Pitted	Dull & Pitted	Dull & Pitted	Rough Dull	Rough Dull		
24. DOMINANT MINERAL (%)	Org. Mat., 70% Quartz 20%	Org. Mat., 70% Quartz 20%	Org. Mat., 70% Quartz 20%	Quartz 50% Org. Mat., 10%	Quartz 55% Org. Mat., 10%		
25. SECONDARY MINERAL (%)	Phos. Pellets 10%	Phos. Pellets 10%	Phos. Pellets 10%	Shell - Tr.	Shell - Tr.		
26. OTHER MINERALS (%)							
27. REMARKS: Organic matter includes shells, brown resinous vegetal detritus, etc. Core uniform throughout. Oxidation on exposed surfaces. * Top and Mid. Indicates Phosphatic Pellets-Medium High.				27. REMARKS: Evaporation has taken place. Core uniform throughout.			

1. SAMPLE NUMBER	5. SAMPLER TYPE	Grab
REQUISITE 10		
2. LATITUDE	N.	10
3. LONGITUDE	W.	40
4. DATE (day, month, year)		31 July 1956
9. LABORATORY NUMBERS		
10. SUBSAMPLE DEPTH IN CORE (in.)	COMPLETE	
11. COLOR	Olive Gray	
12. ODRR		
13. NET DENSITY (lb./ft. ³)		
14. RIGIDISE (cm)		
15. MAXIMUM POROSITY (%)		
16. MINIMUM POROSITY (%)		
17. WATER CONTENT (%)		
18. ORGANIC CARBON CONTENT (%)		
19. SITE ANALYSIS AND STATISTICAL MEASURES		
a. $\sigma_1 - \sigma_2$ (s)	00 _s .39	00 _s
b. $-2\sigma_1$ to $-1\sigma_1$ (s)	Sk _s .12	Sk _s
c. $-1\sigma_1$ to 0 _s (s)	Md _s 2.70	Md _s
d. 0 _s to $1\sigma_1$ (s)	0 _s	0 _s
e. $1\sigma_1$ to $2\sigma_1$ (s)	03 _s	03 _s
f. $2\sigma_1$ to $3\sigma_1$ (s)	3	
g. $3\sigma_1$ to $4\sigma_1$ (s)	66	
h. $4\sigma_1$ to $6\sigma_1$ (s)	23	
i. $6\sigma_1$ to $8\sigma_1$ (s)	5	
j. $> 8\sigma_1$ (s)	4	
20. SUBSAMPLE DRY WEIGHT (gm)	24, 13	
21. SPHERICITY (swp.)	Medium-Low	
22. ROUNDNESS (swp.)	Sub-angular	
23. SURFACE TEXTURE (swp.)	Dull & Smooth	
24. DOMINANT MINERAL (%)	Calcite 100%	
25. SECONDARY MINERAL (%)	Quartz - Tr.	
26. OTHER MINERALS (%)	Shell - Tr.	
27. REMARKS:	Entire sample less than 30 gms.	

1. SAMPLE NUMBER	5. SAMPLER TYPE	Phlegset Cover
REQUISITE 11		
2. LATITUDE	N.	28
3. LONGITUDE	W.	42
4. DATE (day, month, year)		14 August 1956
9. LABORATORY NUMBERS		
10. SUBSAMPLE DEPTH IN CORE (in.)	Top	Bottom
11. COLOR	Pale Brown	Pale Reddish Brown
12. ODRR		
13. NET DENSITY (lb./ft. ³)		
14. RIGIDISE (cm)		
15. MAXIMUM POROSITY (%)		
16. MINIMUM POROSITY (%)		
17. WATER CONTENT (%)		
18. ORGANIC CARBON CONTENT (%)		
19. SITE ANALYSIS AND STATISTICAL MEASURES		
a. $\sigma_1 - \sigma_2$ (s)	00 _s	00 _s
b. $-2\sigma_1$ to $-1\sigma_1$ (s)	Sk _s	Sk _s
c. $-1\sigma_1$ to 0 _s (s)	Md _s	Md _s
d. 0 _s to $1\sigma_1$ (s)	01 _s	01 _s
e. $1\sigma_1$ to $2\sigma_1$ (s)	09 _s 1	09 _s 2
f. $2\sigma_1$ to $3\sigma_1$ (s)	Sand 1	Sand 1
g. $3\sigma_1$ to $4\sigma_1$ (s)	Sand 6	
h. $4\sigma_1$ to $6\sigma_1$ (s)	Silt 43	23
i. $6\sigma_1$ to $8\sigma_1$ (s)		
j. $> 8\sigma_1$ (s)	Clay 49	78
20. SUBSAMPLE DRY WEIGHT (gm)	21, 36	17, 27
21. SPHERICITY (swp.)	Medium	Medium-Low
22. ROUNDNESS (swp.)	Sub-rounded	Sub-rounded
23. SURFACE TEXTURE (swp.)	Polished & Pitted	Polished & Pitted
24. DOMINANT MINERAL (%)	Quartz 100%	Quartz 100%
25. SECONDARY MINERAL (%)	Org. Mat. Tr.	Org. Mat. Tr.
26. OTHER MINERALS (%)		
27. REMARKS:	Evaporation has taken place. Stratification evident. Banding evident throughout from pale reddish brown to pale brown. Dark organic material at top.	

REQUISITE 12				REQUISITE 13			
1. SAMPLE NUMBER	2. LATITUDE	3. LONGITUDE	4. DATE (Day, month, year)	5. SAMPLER TYPE	6. WATER DEPTH (ft.)	7. CORE LENGTH (ft.)	8. CORE PENETRATION (ft.)
68	49	56	16 August 1956	Phleger Corer	37	05	18
9. LABORATORY NUMBERS							
10. SUBSAMPLE DEPTH IN CORE (ft.)				11. COLOR			
Top				Bottom			
Dark Gray				Olive Gray			
12. ODR							
13. WET DENSITY (lb./ft ³)							
14. RIGIDNESS (cm)							
15. MAXIMUM POROSITY (%)							
16. MINIMUM POROSITY (%)							
17. WATER CONTENT (%)							
18. ORGANIC CARBON CONTENT (%)							
19. SIZE ANALYSIS AND STATISTICAL MEASURES							
a. < 2 _φ (%)	9	0%	3.13	5	0%	2.45	0%
b. -2 _φ to -1 _φ (%)	6	5%	1.33	8	3%	.72	5%
c. -1 _φ to 0 _φ (%)							
d. 0 _φ to 1 _φ (%)	9	0%	2.85	8	0%	2.83	0%
e. 1 _φ to 2 _φ (%)							
f. 2 _φ to 3 _φ (%)	17	0%		18	0%		0%
g. 3 _φ to 4 _φ (%)	10	11		11			
h. 4 _φ to 6 _φ (%)	8	9		9			
i. 6 _φ to 8 _φ (%)	23	14		14			
j. > 8 _φ (%)	17	17		17			
20. SUBSAMPLE DRY WEIGHT (cm)							
21. SPHERICITY (avg.)							
22. ROUNDNESS (avg.)							
23. SURFACE TEXTURE (avg.)							
24. DOMINANT MINERAL (%)							
25. SECONDARY MINERAL (%)							
26. OTHER MINERALS (%)							
27. REMARKS:							

REQUISITE 12				REQUISITE 13			
1. SAMPLE NUMBER	2. LATITUDE	3. LONGITUDE	4. DATE (Day, month, year)	5. SAMPLER TYPE	6. WATER DEPTH (ft.)	7. CORE LENGTH (ft.)	8. CORE PENETRATION (ft.)
68	49	56	16 August 1956	Phleger Corer	37	05	18
9. LABORATORY NUMBERS							
10. SUBSAMPLE DEPTH IN CORE (ft.)				11. COLOR			
Top				Bottom			
Dark Gray				Olive Gray			
12. ODR							
13. WET DENSITY (lb./ft ³)							
14. RIGIDNESS (cm)							
15. MAXIMUM POROSITY (%)							
16. MINIMUM POROSITY (%)							
17. WATER CONTENT (%)							
18. ORGANIC CARBON CONTENT (%)							
19. SIZE ANALYSIS AND STATISTICAL MEASURES							
a. < 2 _φ (%)	9	0%	3.13	5	0%	2.45	0%
b. -2 _φ to -1 _φ (%)	6	5%	1.33	8	3%	.72	5%
c. -1 _φ to 0 _φ (%)							
d. 0 _φ to 1 _φ (%)	9	0%	2.85	8	0%	2.83	0%
e. 1 _φ to 2 _φ (%)							
f. 2 _φ to 3 _φ (%)	17	0%		18	0%		0%
g. 3 _φ to 4 _φ (%)	10	11		11			
h. 4 _φ to 6 _φ (%)	8	9		9			
i. 6 _φ to 8 _φ (%)	23	14		14			
j. > 8 _φ (%)	17	17		17			
20. SUBSAMPLE DRY WEIGHT (cm)							
21. SPHERICITY (avg.)							
22. ROUNDNESS (avg.)							
23. SURFACE TEXTURE (avg.)							
24. DOMINANT MINERAL (%)							
25. SECONDARY MINERAL (%)							
26. OTHER MINERALS (%)							
27. REMARKS:							

3rd core on top; remainder of core uniform. Pebbles throughout core.

Evaporation. Organic-rich (black) bedding at 11.3"-12.3". Streaks of similar characteristics present throughout core. Bottom (16"-18") indicates quartz traces.

1. SAMPLE NUMBER	REQUISITE 34	5. SAMPLER TYPE	Phleger Corer
2. LATITUDE	68 28	6. WATER DEPTH (m.)	N. 15.3
3. LONGITUDE	06.4	7. CORE LENGTH (m.)	W. 13
4. DATE (Day, month, year)	17 August 1956	8. CORE PENETRATION (m.)	
9. LABORATORY NUMBERS			
10. SUBSAMPLE DEPTH IN CORE (m.)	Top (0-2")	Mid (2 1/2" - 3 1/2")	Bot. (11" - 13")
11. COLOR	Dark Yellow Brown	Dark Yellow Brown	Grayish Red & Dark Yellow Brown
12. ODR			
13. WET DENSITY (lb./ft ³)			
14. RIGIDNESS (cm)			
15. MAXIMUM POROSITY (%)			
16. MINIMUM POROSITY (%)			
17. WATER CONTENT (%)			
18. ORGANIC CARBON CONTENT (%)			
19. SITE ANALYSIS AND STATISTICAL MEASURES			
a. < -2 _s (s)	00 _s	00 _s	00 _s
b. -2 _s to -1 _s (s)	SK _s	00 _s	SK _s
c. -1 _s to 0 _s (s)	1 H _s	1 H _s	H _s
d. 0 _s to 1 _s (s)	2 0 _s	5 0 _s	0 _s
e. 1 _s to 2 _s (s)	10 0 _s	25 0 _s	0 _s
f. 2 _s to 3 _s (s)	13	20	5
g. 3 _s to 4 _s (s)	11	7	9
h. 4 _s to 5 _s (s)	29	10	39
i. 5 _s to 6 _s (s)	Silt	8	
j. > 6 _s (s)	Clay	24	42
20. SUBSAMPLE DRY WEIGHT (mg)	16.30	30.42	18.03
21. SPHERICITY (avp.)	Medium-High	Medium-High	Medium
22. ROUNDNESS (avp.)	Sub-angular	Sub-rounded	Sub-rounded
23. SURFACE TEXTURE (avp.)	Rough Polished	Rough Polished	Rough Polished
24. DOMINANT MINERAL (s)	Quartz 100%	Quartz 100%	Quartz 100%
25. SECONDARY MINERAL (s)	Mica - Tr.	Glaucophane Tr., Mica - Tr.	
26. OTHER MINERALS (s)	Phos. pebbles	Phos. pebbles	Phos. pebbles
27. REMARKS:	Stratification as follows: 1" sandy bed - 2 1/2" to 3 1/2" 1 1/2" grayish-red - 7 1/2" - 7 3/4" 1 1/2" grayish-red - 10" - 11 1/2"	Evaporation has taken place at top.	Evaporation has taken place at top.

1. SAMPLE NUMBER	REQUISITE 15	5. SAMPLER TYPE	Phleger Corer
2. LATITUDE	68	6. WATER DEPTH (m.)	N. 17.2
3. LONGITUDE	99	7. CORE LENGTH (m.)	W. 36
4. DATE (Day, month, year)	19 August 1956	8. CORE PENETRATION (m.)	
9. LABORATORY NUMBERS			
10. SUBSAMPLE DEPTH IN CORE (m.)	Top	Mid (19" - 21")	Bottom
11. COLOR	Grayish Black	Grayish Black	
12. ODR			
13. WET DENSITY (lb./ft ³)			
14. RIGIDNESS (cm)			
15. MAXIMUM POROSITY (%)			
16. MINIMUM POROSITY (%)			
17. WATER CONTENT (%)			
18. ORGANIC CARBON CONTENT (%)			
19. SITE ANALYSIS AND STATISTICAL MEASURES			
a. < -2 _s (s)	00 _s	00 _s	00 _s
b. -2 _s to -1 _s (s)	Sand	SK _s	SK _s
c. -1 _s to 0 _s (s)	Sand	H _s	H _s
d. 0 _s to 1 _s (s)	Sand	0 _s	0 _s
e. 1 _s to 2 _s (s)	Sand	4 0 _s	0 _s
f. 2 _s to 3 _s (s)	Sand	1	1 0 _s
g. 3 _s to 4 _s (s)	Sand	36	33
h. 4 _s to 5 _s (s)	Silt		
i. 5 _s to 6 _s (s)	Clay	60	66
20. SUBSAMPLE DRY WEIGHT (mg)	12.69	10.15	13.72
21. SPHERICITY (avp.)	Medium-High	Medium-High	Medium
22. ROUNDNESS (avp.)	Sub-rounded	Sub-rounded	Sub-rounded
23. SURFACE TEXTURE (avp.)	Pol. & Pitted	Pol. & Pitted	Pol. & Pitted
24. DOMINANT MINERAL (s)	Org. Mat. 50%	Org. Mat. 50%	Quartz 60%
25. SECONDARY MINERAL (s)	Phos. Pellets	Phos. Pellets	Phos. Pellets
26. OTHER MINERALS (s)			
27. REMARKS:	Evaporation has taken place. Oxidized to light brown. Core uniform throughout.		

1. SAMPLE NUMBER	2. LATITUDE	3. LONGITUDE	4. DATE (Day, month, year)	5. SIMPLER TYPE	6. WATER DEPTH (m.)	7. CORE LENGTH (m.)	8. CORE PENETRATION (m.)	9. LABORATORY NUMBERS	10. SUBSAMPLE DEPTH IN CORE (m.)	11. COLOR	12. ODR	13. WET DENSITY (lb./ft ³)	14. RIGIDNESS (mm)	15. MAXIMUM POROSITY (%)	16. MINIMUM POROSITY (%)	17. WATER CONTENT (%)	18. ORGANIC CARBON CONTENT (%)	19. SIZE ANALYSIS AND STATISTICAL MEASURES	20. SUBSAMPLE DRY WEIGHT (gm)	21. SPHERICITY (avg.)	22. ROUNDNESS (avg.)	23. SURFACE TEXTURE (avg.)	24. DOMINANT MINERAL (%)	25. SECONDARY MINERAL (%)	26. OTHER MINERALS (%)	27. REMARKS	
REQUISITE 16	68°	101°	20 August, 1956	Phleger Corer	50	30.5	44.3		Mid (19"-21")	Pale Brown		90.0	32	64				76	15.37	Medium-High	Medium-High	Sub-rounded	Pol. & Pitted	Phos. Pellets 10%	Quartz 30%	Other Minerals 10%	Matted organic matter shrouding other constituents. Stratification due to differential oxidation in bottom 5 inches. Otherwise core uniform throughout. Bottom saturated.
1. SAMPLE NUMBER	68°	101°	20 August, 1956	Phleger Corer	50	30.5	44.3		Mid (19"-21")	Pale Brown		90.0	32	64				76	15.37	Medium-High	Medium-High	Sub-rounded	Pol. & Pitted	Phos. Pellets 10%	Quartz 30%	Other Minerals 10%	Matted organic matter shrouding other constituents. Stratification due to differential oxidation in bottom 5 inches. Otherwise core uniform throughout. Bottom saturated.

1. SAMPLE NUMBER	2. LATITUDE	3. LONGITUDE	4. DATE (Day, month, year)	5. SIMPLER TYPE	6. WATER DEPTH (m.)	7. CORE LENGTH (m.)	8. CORE PENETRATION (m.)	9. LABORATORY NUMBERS	10. SUBSAMPLE DEPTH IN CORE (m.)	11. COLOR	12. ODR	13. WET DENSITY (lb./ft ³)	14. RIGIDNESS (mm)	15. MAXIMUM POROSITY (%)	16. MINIMUM POROSITY (%)	17. WATER CONTENT (%)	18. ORGANIC CARBON CONTENT (%)	19. SIZE ANALYSIS AND STATISTICAL MEASURES	20. SUBSAMPLE DRY WEIGHT (gm)	21. SPHERICITY (avg.)	22. ROUNDNESS (avg.)	23. SURFACE TEXTURE (avg.)	24. DOMINANT MINERAL (%)	25. SECONDARY MINERAL (%)	26. OTHER MINERALS (%)	27. REMARKS
REQUISITE 17	68°	101°	20 August, 1956	Phleger Corer	43.6	02	37		Top	Pale Brown		95.0	64					82	17.88	Medium	Medium	Sub-rounded	Polished & Pitted	Org. Mat. 20%	Phos. Pellets - Tr.	Uniform core; Evaporation has taken place.
1. SAMPLE NUMBER	68°	101°	20 August, 1956	Phleger Corer	43.6	02	37		Top	Pale Brown		95.0	64					82	17.88	Medium	Medium	Sub-rounded	Polished & Pitted	Org. Mat. 20%	Phos. Pellets - Tr.	Uniform core; Evaporation has taken place.

REQUISITE 18		PHLEGER CORNER	
1. SAMPLE NUMBER	68	5. SAMPLER TYPE	N.
2. LATITUDE	51	6. WATER DEPTH (ft.)	33.9
3. LONGITUDE	00	7. CORE LENGTH (in.)	21
4. DATE (day, month, year)	21 August 1956	8. CORE PENETRATION (in.)	
9. LABORATORY NUMBERS			
10. SUBSAMPLE DEPTH IN CORE (in.)	Top (0-2")	Mid (10"-12")	Bot. (19"-21")
11. COLOR	Dark Yellow	Dark Yellow	Dark Yellow
	Brown	Brown	Brown
12. ODR			
13. WET DENSITY (lb./ft ³)			
14. RIGIDNESS (mm)			
15. MAXIMUM POROSITY (%)			
16. MINIMUM POROSITY (%)			
17. WATER CONTENT (%)			
18. ORGANIC CARBON CONTENT (%)			
19. SIZE ANALYSIS AND STATISTICAL MEASURES			

Pebbles			
a. < 2 _s (%)	00 _s	00 _s	00 _s 1-90
b. -2 _s to -1 _s (%)	3 _s	3 _s	3 _s 5-60
c. -1 _s to 0 _s (%)	M _s	M _s	M _s 5-75
d. 0 _s to 1 _s (%)	01 _s	01 _s	01 _s
e. 1 _s to 2 _s (%)	03 _s	03 _s	03 _s 7
f. 2 _s to 3 _s (%)	5	5	5 8
g. 3 _s to 4 _s (%)	6	6	6 7
h. 4 _s to 6 _s (%)	44	44	44 23
i. 6 _s to 8 _s (%)			21
j. > 8 _s (%)	36	36	36 25
20. SUBSAMPLE DRY WEIGHT (gm)	19.56	26.52	32.51
21. SPHERICITY (avg.)	Medium-High	Medium-High	Medium-High
22. ROUNDNESS (avg.)	Sub-rounded	Sub-rounded	Sub-rounded
23. SURFACE TEXTURE (avg.)	Rough Polished	Rough Polished	Rough Polished
24. DOMINANT MINERAL (%)	Quartz 100%	Quartz 100%	Quartz 100%
25. SECONDARY MINERAL (%)	Mica Tr.	Mica Tr.	Mica Tr.
26. OTHER MINERALS (%)	Pyrobole Tr.	Org. Mat. Tr.	Pyrobole Tr.

27. REMARKS: Evaporation has taken place. Diminution of approx. 2" from original length. Black streaks throughout, probably high organic content.

REQUISITE 19		PHLEGER CORNER	
1. SAMPLE NUMBER	68	5. SAMPLER TYPE	N.
2. LATITUDE	29	6. WATER DEPTH (ft.)	36
3. LONGITUDE	00	7. CORE LENGTH (in.)	10
4. DATE (day, month, year)	22 August 1956	8. CORE PENETRATION (in.)	
9. LABORATORY NUMBERS			
10. SUBSAMPLE DEPTH IN CORE (in.)	Top (0-2")	Bot. (8"-10")	
11. COLOR	Moderate Brown	Moderate Brown	
12. ODR			
13. WET DENSITY (lb./ft ³)			
14. RIGIDNESS (mm)			
15. MAXIMUM POROSITY (%)			
16. MINIMUM POROSITY (%)			
17. WATER CONTENT (%)			
18. ORGANIC CARBON CONTENT (%)			
19. SIZE ANALYSIS AND STATISTICAL MEASURES			

Pebbles			
a. < 2 _s (%)	3	00 _s	00 _s
b. -2 _s to -1 _s (%)	Sand	3 _s	3 _s
c. -1 _s to 0 _s (%)	Sand	M _s	M _s
d. 0 _s to 1 _s (%)	Sand	01 _s	01 _s
e. 1 _s to 2 _s (%)	Sand	03 _s	03 _s
f. 2 _s to 3 _s (%)	Sand	3	3
g. 3 _s to 4 _s (%)	Sand	1	1
h. 4 _s to 6 _s (%)	Silt	19	29
i. 6 _s to 8 _s (%)			
j. > 8 _s (%)	Clay	38	63
20. SUBSAMPLE DRY WEIGHT (gm)		25.46	14.20
21. SPHERICITY (avg.)	Medium	Medium	Medium
22. ROUNDNESS (avg.)	Sub-angular	Sub-angular	Sub-rounded
23. SURFACE TEXTURE (avg.)	Dull Rough	Rough Dull	Rough Dull
24. DOMINANT MINERAL (%)	Quartz 45%	Quartz 100%	Quartz 100%
25. SECONDARY MINERAL (%)	Org. Mat. Tr.	Glauconite Tr.	Glauconite Tr.
26. OTHER MINERALS (%)	Glauconite Tr.		

27. REMARKS: Quartzite pebbles in sand fraction. Pebbles scattered throughout. Core uniform. Evaporation has taken place.

1. SAMPLE NUMBER		REQUISITE 20		5. SAMPLER TYPE		Phleger Corer	
2. LATITUDE	68° 33' N.	6. WATER DEPTH (m.)	11.4				
3. LONGITUDE	113° 28.5' W.	7. CORE LENGTH (m.)	13				
4. DATE (Day, month, year)	23 August 1956	8. CORE PENETRATION (m.)					
9. LABORATORY NUMBERS							
10. SUBSAMPLE DEPTH IN CORE (m.)	Top (0-2")	Bot (11"-13")					
11. COLOR	Dark Yellow	Pale Brown					
12. ODR							
13. NET DENSITY (lb./ft ³)	121	125*					
14. RIGIDNESS (cm)							
15. MAXIMUM POROSITY (%)							
16. MINIMUM POROSITY (%)							
17. WATER CONTENT (%)							
18. ORGANIC CARBON CONTENT (%)							
19. SIZE ANALYSIS AND STATISTICAL MEASURES							
a. - 2ϕ (s)	00, 2.66	00, 2.20	00, 00				
b. - 2ϕ to -1ϕ (s)	2 S ₆ , 1.71	3 S ₆ , .25	S ₆ , S ₆				
c. -1ϕ to 0ϕ (s)	Sand	3 M ₆ , 4.15	M ₆ , M ₆				
d. 0ϕ to 1ϕ (s)	Sand	2 0 ₆	0 ₆ , 0 ₆				
e. 1ϕ to 2ϕ (s)	Sand	12 0 ₆	0 ₆ , 0 ₆				
f. 2ϕ to 3ϕ (s)	Sand	34	14				
g. 3ϕ to 4ϕ (s)	Sand	7	12				
h. 4ϕ to 5ϕ (s)	Silt	11	23				
i. 5ϕ to 6ϕ (s)	Silt	10	13				
j. > 6ϕ (s)	Clay	20	16				
20. SUBSAMPLE DRY WEIGHT (gm)	24.48	42.10					
21. SPHERICITY (avg.)	Medium-Low	Medium-Low					
22. ROUNDNESS (avg.)	Sub-angular	Sub-angular					
23. SURFACE TEXTURE (avg.)	Polished & Pitted	Polished & Pitted					
24. DOMINANT MINERAL (s)	Quartz 95%	Quartz 100%					
25. SECONDARY MINERAL (s)	Org. Matter 5%						
26. OTHER MINERALS (s)							
27. REMARKS: Large sub-angular cobble coated with green and purple organic material. Bedding plane 7.5".							

1. SAMPLE NUMBER		REQUISITE 21		5. SAMPLER TYPE		Grab	
2. LATITUDE	69° 58.1' N.	6. WATER DEPTH (m.)	38				
3. LONGITUDE	139° 17.5' W.	7. CORE LENGTH (m.)					
4. DATE (Day, month, year)	27 August 1956	8. CORE PENETRATION (m.)					
9. LABORATORY NUMBERS							
10. SUBSAMPLE DEPTH IN CORE (m.)		Halved					
11. COLOR		Olive Gray					
12. ODR							
13. NET DENSITY (lb./ft ³)							
14. RIGIDNESS (cm)							
15. MAXIMUM POROSITY (%)							
16. MINIMUM POROSITY (%)							
17. WATER CONTENT (%)							
18. ORGANIC CARBON CONTENT (%)							
19. SIZE ANALYSIS							
a. - 2ϕ (s)	5	00, 2.28	00, 00				
b. - 2ϕ to -1ϕ (s)	Sand	1 S ₆ , .38	S ₆ , S ₆				
c. -1ϕ to 0ϕ (s)	Sand	1 M ₆ , 4.30	M ₆ , M ₆				
d. 0ϕ to 1ϕ (s)	Sand	1 0 ₆	0 ₆ , 0 ₆				
e. 1ϕ to 2ϕ (s)	Sand	2 0 ₆	0 ₆ , 0 ₆				
f. 2ϕ to 3ϕ (s)	Sand	23					
g. 3ϕ to 4ϕ (s)	Sand	9					
h. 4ϕ to 5ϕ (s)	Silt	20					
i. 5ϕ to 6ϕ (s)	Silt	13					
j. > 6ϕ (s)	Clay	20					
20. SUBSAMPLE DRY WEIGHT (gm)		29.87					
21. SPHERICITY (avg.)		Medium-Low					
22. ROUNDNESS (avg.)		Sub-angular					
23. SURFACE TEXTURE (avg.)		Polished & Pitted					
24. DOMINANT MINERAL (s)		Quartz 95%					
25. SECONDARY MINERAL (s)		Org. Matter - Tr.					
26. OTHER MINERALS (s)							
27. REMARKS: Pebbles.							

1. SAMPLE NUMBER	REQUISITE 22	5. SAMPLER TYPE	Phleger Corer
2. LATITUDE	69 27.5 N.	6. WATER DEPTH (m.)	27
3. LONGITUDE	168 28 W.	7. CORE LENGTH (m.)	10
4. DATE (Day, month, year)	30 August 1956	8. CORE PENETRATION (m.)	
9. LABORATORY NUMBERS			
10. SUBSAMPLE DEPTH IN CORE (m.)	Top (0-2")	Bot (8"-10")	
11. COLOR	Olive Gray	Olive Gray	
12. ODR			
13. WET DENSITY (lb./ft ³)			
14. RIGIDNESS (mm)			
15. MAXIMUM POROSITY (%)			
16. MINIMUM POROSITY (%)			
17. WATER CONTENT (%)			
18. ORGANIC CARBON CONTENT (%)			

19. SIZE ANALYSIS AND STATISTICAL MEASURES			
a. < 2 _φ (%)	00 _s	00 _s 2.20	00 _s
b. -2 _φ to -1 _φ (%)	3 _φ	3 _φ 15	3 _φ
c. -1 _φ to 0 _φ (%)	M _φ	M _φ 4.75	M _φ
d. 0 _φ to 1 _φ (%)	01 _φ	01 _φ	01 _φ
e. 1 _φ to 2 _φ (%)	02 _φ	02 _φ	02 _φ
f. 2 _φ to 3 _φ (%)	03 _φ	03 _φ	03 _φ
g. 3 _φ to 4 _φ (%)	04 _φ		
h. 4 _φ to 5 _φ (%)	05 _φ		
i. 5 _φ to 6 _φ (%)	06 _φ		
j. > 6 _φ (%)	07 _φ		
20. SUBSAMPLE DRY WEIGHT (gm)		24.15	
21. SPHERICITY (ave.)		Medium	Medium-High
22. BOUNDRSS (ave.)		Sub-rounded	Sub-rounded
23. SURFACE TEXTURE (ave.)		Rough Dull	Rough Dull
24. DOMINANT MINERAL (%)		Org. Mat. 90%	Quartz 100%
25. SECONDARY MINERAL (%)		Feldspar 10%	Feldspar - Tr.
26. OTHER MINERALS (%)		Mica - Tr.	Mica - Tr.
27. REMARKS:		Core uniform throughout.	

1. SAMPLE NUMBER	REQUISITE 23	5. SAMPLER TYPE	Phleger Corer
2. LATITUDE	69 14.1 N.	6. WATER DEPTH (m.)	27
3. LONGITUDE	167 39.5 W.	7. CORE LENGTH (m.)	21
4. DATE (Day, month, year)	31 August 1956	8. CORE PENETRATION (m.)	
9. LABORATORY NUMBERS			
10. SUBSAMPLE DEPTH IN CORE (m.)	Top (0-2")	Bot (19"-21")	
11. COLOR	Greyish Black	Greyish Black	
12. ODR			
13. WET DENSITY (lb./ft ³)			
14. RIGIDNESS (mm)			
15. MAXIMUM POROSITY (%)			
16. MINIMUM POROSITY (%)			
17. WATER CONTENT (%)			
18. ORGANIC CARBON CONTENT (%)			

19. SIZE ANALYSIS AND STATISTICAL MEASURES			
a. < 2 _φ (%)	00 _s	00 _s 1.63	00 _s
b. -2 _φ to -1 _φ (%)	3 _φ	3 _φ .28	3 _φ
c. -1 _φ to 0 _φ (%)	M _φ	M _φ 5.50	M _φ
d. 0 _φ to 1 _φ (%)	01 _φ	01 _φ	01 _φ
e. 1 _φ to 2 _φ (%)	02 _φ	02 _φ 6	02 _φ
f. 2 _φ to 3 _φ (%)	03 _φ		
g. 3 _φ to 4 _φ (%)	04 _φ		
h. 4 _φ to 5 _φ (%)	05 _φ		
i. 5 _φ to 6 _φ (%)	06 _φ		
j. > 6 _φ (%)	07 _φ		
20. SUBSAMPLE DRY WEIGHT (gm)		18.16	24.07
21. SPHERICITY (ave.)		Medium-High	Medium-High
22. BOUNDRSS (ave.)		Sub-rounded	Sub-rounded
23. SURFACE TEXTURE (ave.)		Rough Dull	Rough Dull
24. DOMINANT MINERAL (%)		Org. Mat. 75%	Quartz 95%
25. SECONDARY MINERAL (%)		Org. Mat. 20%	Org. Mat. 5%
26. OTHER MINERALS (%)		Mica - Tr.	Pyrobole - Tr.
27. REMARKS:		Evaporation has taken place. Core uniform throughout. Oxidation to olive gray color along margins of core.	

1. SAMPLE NUMBER	RECOUTSIDE 24	5. SAMPLER TYPE	Phleger Core
2. LATITUDE	69 10.4	6. WATER DEPTH (ft.)	27
3. LONGITUDE	167 19.2	7. CORE LENGTH (in.)	5
4. DATE (day, month, year)	31 AUGUST 1956	8. CORE PENETRATION (ft.)	
9. LABORATORY NUMBERS			
10. SUBSAMPLE DEPTH IN CORE (ft.)	(2"-4")		
11. COLOR	Dark Grey		
12. ODOR			
13. NET DENSITY (lb./ft. ³)			
14. REICHME (mm)			
15. MAXIMUM POROSITY (%)			
16. MINIMUM POROSITY (%)			
17. WATER CONTENT (%)			
18. ORGANIC CARBON CONTENT (%)			
19. SITE ANALYSIS AND STATISTICAL MEASURES			
a. < -2 _s (%)	00 _s	01 _s	02 _s
b. -2 _s to -1 _s (%)	1 5s _s	5s _s	5s _s
c. -1 _s to 0 _s (%)	Sand 1 M _s	M _s	M _s
d. 0 _s to 1 _s (%)	Sand 1 01 _s	01 _s	01 _s
e. 1 _s to 2 _s (%)	Sand 3 03 _s	03 _s	03 _s
f. 2 _s to 3 _s (%)	Sand 9		
g. 3 _s to 4 _s (%)	Sand 16		
h. 4 _s to 5 _s (%)	Silt 24		
i. 5 _s to 6 _s (%)	Silt 20		
j. > 6 _s (%)	Clay 26		
20. SUBSAMPLE DRY WEIGHT (mg)	23.16		
21. SPHERICITY (avg.)	Medium		
22. ROUNDNESS (avg.)	Sub-rounded		
23. SURFACE TEXTURE (avg.)	Rough Dull		
24. DOMINANT MINERAL (%)	Quartz 90%		
	Mica 5%		
25. SECONDARY MINERAL (%)	Org. 16.5%		
26. OTHER MINERALS (%)	Feldspar - Tr. Pyrrhotite - Tr.		
27. REMARKS:	Evaporation has taken place.		



USS ELDORADO (AGC-11)

(REF. CRUISE NO. 00546)

7 - 27 AUGUST 1956



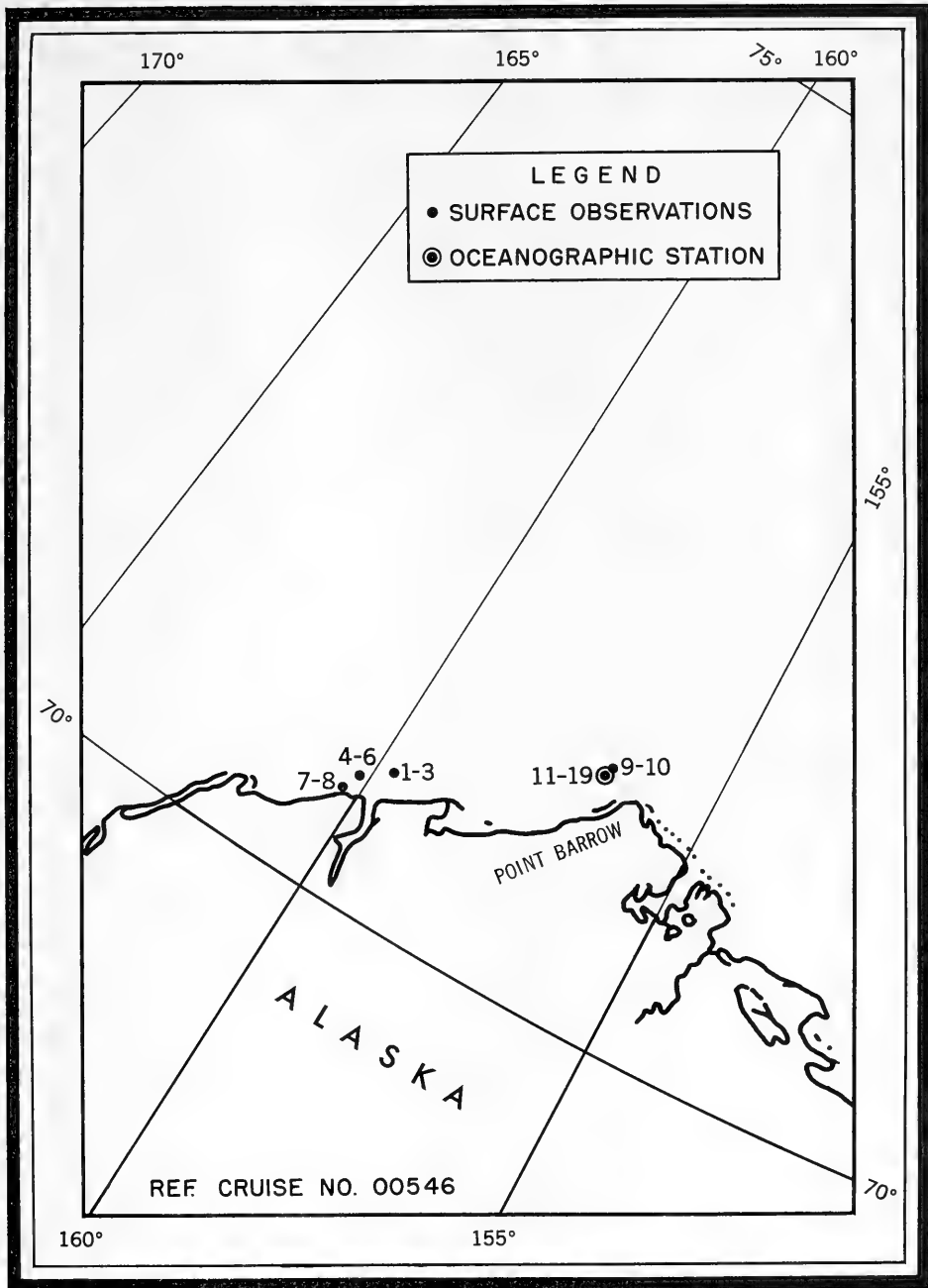


FIGURE 2. LOCATIONS OF OCEANOGRAPHIC OBSERVATIONS,
USS ELDORADO—AUGUST 1956

SUMMARY OF SURFACE TEMPERATURE-SALINITY DATA

Observation No.	Date	Time (GMT)	Latitude (N)	Longitude (W)	Sonic Depth (m)	Surface Temperature (°C)	Surface Salinity (‰)
1	7 Aug	0300	70°46'	159°48'	17	4.64	27.68
2	7 Aug	2100	70°46'	159°48'	17	4.72	27.32
3	8 Aug	2100	70°46'	159°48'	17	4.48	26.64
4	9 Aug	2000	70°39'	160°09'	19	4.12	25.70
5	10 Aug	2000	70°39'	160°09'	19	3.90	24.69
6	11 Aug	2000	70°39'	160°09'	19	3.74	24.58
7	12 Aug	2000	70°35'	160°18'	16	3.90	26.06
8	13 Aug	2000	70°35'	160°18'	16	3.34	27.27
9	14 Aug	2000	71°20'	156°46'	31	-1.52	32.34
10	16 Aug	2000	71°20'	156°46'	31	-1.08	31.53
11	17 Aug	2000	71°21'	156°44'	31	-1.00	30.64
12	19 Aug	0500	71°21'	156°44'	31	-1.36	33.17
13	19 Aug	2100	71°21'	156°44'	31	-0.42	33.10
14	20 Aug	2000	71°21'	156°44'	31	-1.45	32.92
15	21 Aug	1900	71°21'	156°44'	31	-1.46	32.38
16	24 Aug	2000	71°21'	156°44'	31	-0.45	28.10
17	25 Aug	2000	71°21'	156°44'	31	-1.36	32.68
18	26 Aug	2000	71°21'	156°44'	31	-1.37	32.43
19	27 Aug	1900	71°21'	156°44'	31	-0.79	28.44

SURFACE OBSERVATIONS											
CRUISE	STATION	DATE				LATITUDE		LONGITUDE		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YR.	HR.	'	'	'	'		
00546	0001	08	23	956	20	71	21N	156	44W	0031	00

WIND		ANEMO. HGT.	BAR. PRESS.	AIR TEMP °C		HUMIDITY %	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER			
m/sec	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.		
02	22	30	17	51	4	52	2	85	03	6	3	99	1	99	1	7	20	06

SUBSURFACE OBSERVATIONS							
SAMPLE DEPTH	T °C	S' /..	σ_t	$\Sigma\Delta D$	O_2 ml/l	V_f	
0000	-01 29	33 08	26 63	0 000		4714	2
0001	-01 29	33 08	26 63			4714	3
0010	-01 37	33 17	26 70	0 014		4713	9
0015	-01 41	33 22	26 75			4713	8

CURRENT DATA, USS ELDORADO -- 1956

Sta. No.	Position	Date	Local Time	Surface		9 Meters		16 Meters		25 Meters	
				Dir. (°T)	Vel. (kn)	Dir. (°T)	Vel. (kn)	Dir. (°T)	Vel. (kn)	Dir. (°T)	Vel. (kn)
1	70°46'N 159°48'W	6 Aug	1650	066	1.5						
			2200	067	1.4	337	1.6	337	1.3		
		7 Aug	1020	080	1.6	346	1.8	352	1.6		
			1600	066	1.6	296	1.5	351	1.6		
		8 Aug	1030	242	2.2						
	1430	053	2.2	327	2.3	332	2.1				
2	70°39'N 160°09'W	9 Aug	1030	077	1.3	015	1.4	037	1.0		
			1500	132	0.4	104	0.8	354	0.6		
		10 Aug	1030	037	0.5	337	0.9	012	1.1		
			1400	057	0.7	320	0.8	017	0.3		
		11 Aug	1030	060	1.5	341	1.4				
	1415	067	1.5	333	1.5	313	0.4				
3	70°35'N 160°18'W	12 Aug	1030		0	302	0.3	037	0.1		
			1420	040	0.2					(13 M=072°, 0.2)	
		13 Aug	1030	130	1.0	177	1.0			(14 M=121°, 0.9)	
4	71°20'N 156°46'W	14 Aug	1345					157	1.7		
			1445					164	2.0		
			1545					156	1.3		
			1645					168	1.5		
			1745					170	1.4		
			1845					157	1.2		
			1945					163	1.3		
			2045					158	3.6		
			2145					165	1.5		
			2245					172	1.3		
			2345					157	1.2		
			15 Aug	0045	159	1.2					
				0145	156	1.6					
				0245	163	1.4					
		0345		173	1.2						
0445	164	1.3									
	0545	146	1.2								
	0645	163	1.0								
	0745	173	0.7								
	0845	173	1.1								

CURRENT DATA, USS ELDORADO -- 1956 (Cont'd)

Sta. No.	Position	Date	Local Time	Surface		9 Meters		16 Meters		25 Meters		
				Dir. (°T)	Vel. (kn)	Dir. (°T)	Vel. (kn)	Dir. (°T)	Vel. (kn)	Dir. (°T)	Vel. (kn)	
4	71°20'N 156°46'W	15 Aug	1045					173	1.3			
			1145					173	1.2			
			1245						168	1.3		
		16 Aug	1400	114	1.5							
			1030	112	1.0			170	1.3	167	1.2	
			1410	116	1.3			173	1.4	171	1.8	
5	71°21'N 156°44'W	17 Aug	1030	118	0.9			128	0.3	146	0.4	
			1410	127	1.1			0	0	0		
		18 Aug	1015	083	0.5			336	0.5	333	0.8	
			1410	065	0.6			023	0.5	040	0.4	
		19 Aug	1600	103	0.3			280	0.4	123	0	
		20 Aug	1030	049	0.6			310	0.8	0	0	
			1600	023	0.2			0	0	320	0.4	
		21 Aug	1145	105	1.3							
			1200					176	1.2			
			1300					176	1.0			
			1400					173	1.2			
			1500					173	1.0			
			1600					163	1.1			
			1700						1.0			
			1800					183	0.7			
			2000					155	0.8			
			2100					148	1.1			
			2200					133	1.0			
			2300					113	0.9			
2400						123	0.8					
22 Aug	0100					143	0.6					
	0200					163	0.4					
	0300											
	0400					138	0.6					
	0500					0	0					
	0600					0	0					
	0700					318	0.3					
	0800					003	0.2					
0900					053	0.3						
1000					043	0.3						

CURRENT DATA, USS ELDORADO -- 1956 (Cont'd)

Sta. No.	Position	Date	Local Time	Surface		9 Meters		16 Meters		25 Meters	
				Dir. (°T)	Vel. (kn)	Dir. (°T)	Vel. (kn)	Dir. (°T)	Vel. (kn)	Dir. (°T)	Vel. (kn)
5	71°21'N 156°44'W	22 Aug	1100					018	0.4		
			1410	0	0			030	0.2	333	0.6
	2200		0	0	(5 M=348°, 0.2)		349	0.8			
	23 Aug	1100	053	0.8	333	1.2	335	1.2	333	1.1	
					(5 M=326°, 1.1)		(20 M=337°, 1.0)				
		1140	060	0.6							
		1450	053	0.8			333	1.1	335	0.8	
	24 Aug	1400	0	0			343	0.8	341	0.8	
	25 Aug	1030	0	0			323	0.6	345	0.7	
			1405	260	0.3			349	0.6	313	0.3
	26 Aug	0815	118	1.2			185	1.2	160	0.7	
			1400	0	0			153	1.3	181	0.7
	27 Aug	0900	0	0			163	1.2	157	1.1	

USS ATKA (AGB-3)

(REF. CRUISE NO. 00547)

10 AUGUST - 1 SEPTEMBER 1956



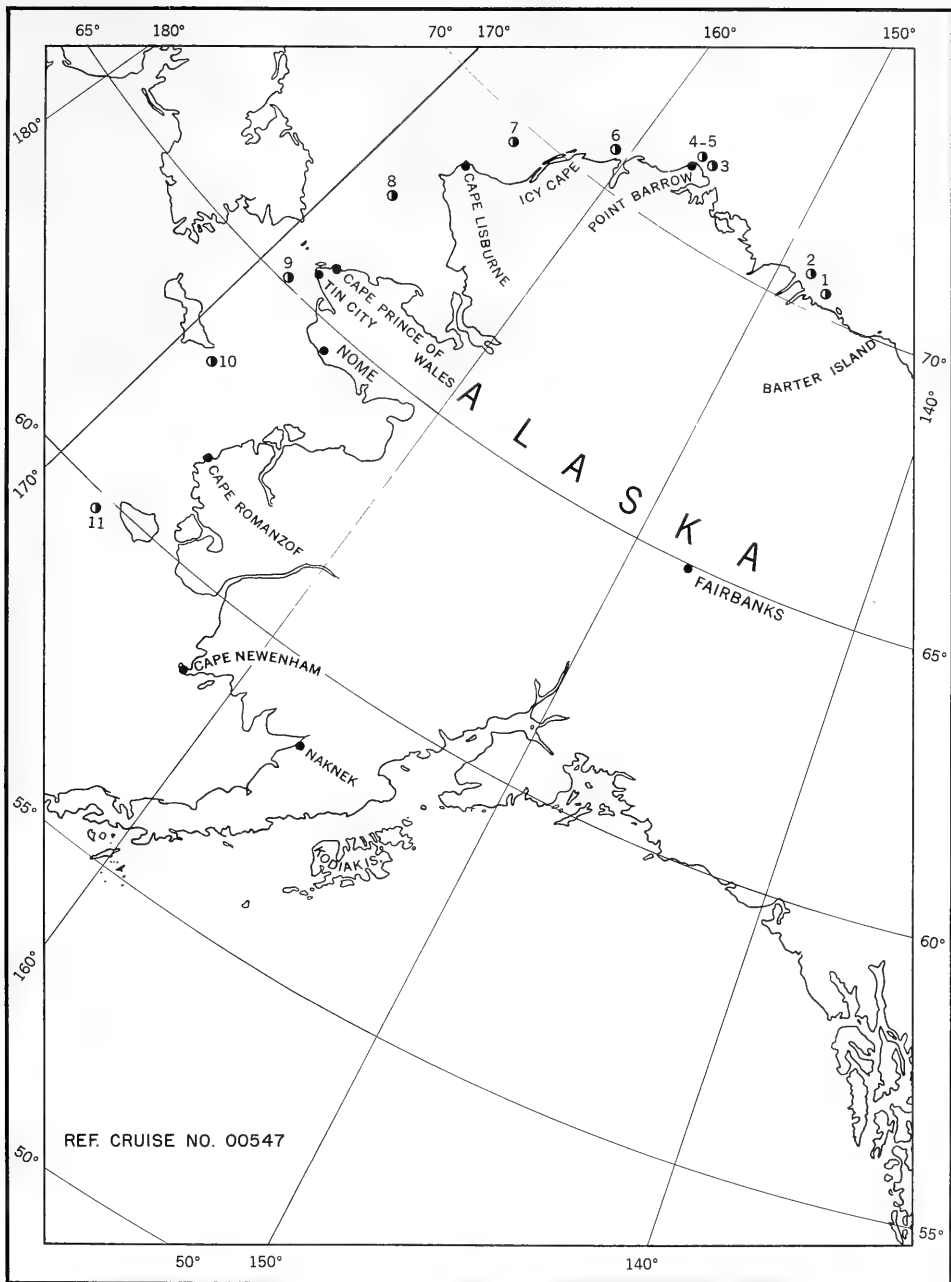


FIGURE 3. STATION LOCATIONS, USS ATKA—AUGUST, SEPTEMBER 1956



SURFACE OBSERVATIONS											
CRUISE	STATION	DATE				LATITUDE		LONGITUDE		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YR.	HR.	'	'	'	'		
00547	0001	08	10	956	20	70	21N	147	08W	0011	00

WIND		ANEMO. HGT.	BAR. PRESS.	AIR TEMP °C		HUMIDITY %	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER		
m/sec	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.	
05	07		12	01	7	01	4	96	02	6	8	00	0	00	0	6	04

SUBSURFACE OBSERVATIONS							
SAMPLE DEPTH	T °C	S'/.	σ_t	$\Sigma\Delta D$	O ₂ ml/l	V _f	
0000	00 00	17 09	13 73	0 000		4665	5
0000	00 00	17 09	13 73			4665	5
0005	00 72	18 13	14 56			4681	5
0010	-00 52	21 55	17 31	0 121		4677	0
0010	-00 52	21 55	17 31			4677	0

SURFACE OBSERVATIONS											
CRUISE	STATION	DATE				LATITUDE		LONGITUDE		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YR.	HR.	'	'	'	'		
00547	0002	08	11	956	06	70	36N	148	22W	0023	00

WIND		ANEMO. HGT.	BAR. PRESS.	AIR TEMP °C		HUMIDITY %	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
m/sec	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
05	03		13	00	7	00	6	96	71	0	8			5		

SUBSURFACE OBSERVATIONS							
SAMPLE DEPTH	T °C	S'/.	σ_t	$\Sigma\Delta D$	O ₂ ml/l	V _f	
0000	00 13	14 92	11 98	0 000		4658	2
0000	00 13	14 92	11 98			4658	2
0005	00 18	17 95	14 42			4672	3
0010	-01 27	27 70	22 28	0 105		4691	8
0010	-01 27	27 70	22 28			4691	8
0015	-01 46	29 65	23 86			4697	5
0020	-01 45	29 67	23 87	0 153		4698	0
0020	-01 45	29 67	23 87			4698	0

SURFACE OBSERVATIONS											
CRUISE	STATION	DATE				LATITUDE		LONGITUDE		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YR.	HR.	'	'	'	'		
00547	0003	08	12	956	22	71	23N	155	51W	0014	00

WIND		ANEMO. HGT.	BAR. PRESS.	AIR TEMP °C		HUMIDITY %	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
m/sec	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
12	28		22	02	24	01	7	92	02	0	8			6		

SUBSURFACE OBSERVATIONS						
SAMPLE DEPTH	T °C	S'/.	σ_t	$\Sigma\Delta D$	O ₂ ml/l	V _f
0000	02 24	27 18	21 73	0 000		4742 7
0000	02 24	27 18	21 73			4742 7
0005	02 25	27 16	21 72			4743 0
0010	02 24	27 16	21 72	0 061		4743 2
0010	02 24	27 16	21 72			4743 2

SURFACE OBSERVATIONS											
CRUISE	STATION	DATE				LATITUDE		LONGITUDE		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YR.	HR.	'	'	'	'		
00547	0004	08	15	956	03	71	22N	156	39W	0023	00

WIND		ANEMO. HGT.	BAR. PRESS.	AIR TEMP °C		HUMIDITY %	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
m/sec	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
17	08		22	00	6	50	8	76	01	8	3	25	1	7		03

SUBSURFACE OBSERVATIONS						
SAMPLE DEPTH	T °C	S'/.	σ_t	$\Sigma\Delta D$	O ₂ ml/l	V _f
0000	-00 73	30 14	24 24	0 000		4710 3
0000	-00 73	30 14	24 24			4710 3
0005	-00 74	30 19	24 28			4710 6
0010	-01 68	32 90	26 49	0 026		4707 8
0010	-01 68	32 90	26 49			4707 8
0015	-01 69	32 90	26 49			4708 0
0020	-01 67	32 94	26 52	0 042		4708 8
0020	-01 67	32 94	26 52			4708 8

SURFACE OBSERVATIONS										
CRUISE	STATION	DATE				LATITUDE	LONGITUDE	SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH	
		MO.	DAY	YR.	HR.					
00547	0005	08	22	956	02	71 21N	156 42W	0037	00	

WIND		ANEMO. HGT.	BAR. PRESS.	AIR TEMP °C		HUMIDITY %	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
m/sec	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
13	05		12	50	6	51	1	88	01	6	3			7		

SUBSURFACE OBSERVATIONS							
SAMPLE DEPTH	T °C	S'/.	σ_t	$\Sigma\Delta D$	O ₂ ml/l	V _t	
0000	-01 02	31 02	24 96	0 000		4709 5	
0000	-01 02	31 02	24 96			4709 5	
0005	-01 68	33 04	26 61			4708 2	
0010	-01 63	33 21	26 74	0 022		4710 0	
0010	-01 63	33 21	26 74			4710 0	
0015	-01 63	33 24	26 77			4710 4	
0020	-01 60	33 24	26 77	0 035		4711 2	
0020	-01 60	33 24	26 77			4711 2	
0030	-01 58	33 30	26 81	0 047		4712 4	
0030	-01 58	33 30	26 81			4712 4	

SURFACE OBSERVATIONS										
CRUISE	STATION	DATE				LATITUDE	LONGITUDE	SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH	
		MO.	DAY	YR.	HR.					
00547	0006	08	30	956	05	70 40N	160 40W	0050	00	

WIND		ANEMO. HGT.	BAR. PRESS.	AIR TEMP °C		HUMIDITY %	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
m/sec	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
11	05		20	52	2	53	2	90	02	6	8	06	4	7		

SUBSURFACE OBSERVATIONS							
SAMPLE DEPTH	T °C	S'/.	σ_t	$\Sigma\Delta D$	O ₂ ml/l	V _t	
0000	-01 61	32 79	26 40	0 000		4707 9	
0000	-01 61	32 79	26 40			4707 9	
0005	-01 63	32 77	26 39			4707 8	
0010	-01 62	32 75	26 37	0 016		4708 1	
0010	-01 62	32 75	26 37			4708 1	
0015	-01 63	32 77	26 39			4708 4	
0020	-01 60	32 77	26 39	0 033		4709 1	
0020	-01 60	32 77	26 39			4709 1	
0030	-01 59	32 79	26 40	0 049		4710 0	
0030	-01 59	32 79	26 40			4710 0	

SURFACE OBSERVATIONS												
CRUISE	STATION	DATE				LATITUDE		LONGITUDE		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH	
		MO.	DAY	YR.	HR.	'	'	'	'			
00547	0007	08	30	956	16	69	38N	165	06W	0035	00	

WIND		ANEMO. HGT.	BAR. PRESS.	AIR TEMP °C		HUMIDITY %	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
m/sec	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
13	09		15	00	0	50	6	89	01	0	2	07	4	07	2	6

SUBSURFACE OBSERVATIONS							
SAMPLE DEPTH	T °C	S' / ‰	σ_t	$\Sigma\Delta D$	O ₂ ml/l	V _f	
0000	01 32	31 64	25 35	0 000		4748	0
0000	01 32	31 64	25 35			4748	0
0005	01 35	31 67	25 37			4748	8
0010	01 33	31 67	25 38	0 026		4748	8
0010	01 33	31 67	25 38			4748	8
0015	01 36	31 65	25 36			4749	5
0020	01 34	31 66	25 37	0 052		4749	5
0025	01 28	31 69	25 39			4749	1

SURFACE OBSERVATIONS												
CRUISE	STATION	DATE				LATITUDE		LONGITUDE		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH	
		MO.	DAY	YR.	HR.	'	'	'	'			
00547	0008	08	31	956	05	67	25N	167	47W	0044	00	

WIND		ANEMO. HGT.	BAR. PRESS.	AIR TEMP °C		HUMIDITY %	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
m/sec	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
09	28		17	04	4	2	96	02	6	8	25	3		7		

SUBSURFACE OBSERVATIONS							
SAMPLE DEPTH	T °C	S' / ‰	σ_t	$\Sigma\Delta D$	O ₂ ml/l	V _f	
0000	06 33	30 26	23 80	0 000		4812	6
0000	06 33	30 26	23 80			4812	6
0005	06 31	30 28	23 82			4812	7
0010	06 31	30 30	23 83	0 041		4813	1
0010	06 31	30 30	23 83			4813	1
0015	02 14	31 91	25 51			4762	1
0020	00 98	32 18	25 51	0 072		4746	4
0020	00 98	32 18	25 51			4746	4
0030	00 94	32 16	25 51	0 094		4746	4
0030	00 94	32 18	25 51			4746	4

SURFACE OBSERVATIONS												
CRUISE	STATION	DATE				LATITUDE		LONGITUDE		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH	
		MO.	DAY	YR.	HR.	'	'	'	'			
00547	0009	08	31	956	18	65	05N	168	32W	0036	00	

WIND		ANEMO. HGT.	BAR. PRESS.	AIR TEMP °C		HUMIDITY %	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
m/sec	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
06	34		21	06	7	05	3	81	02	6	2	29	2	7		06

SUBSURFACE OBSERVATIONS							
SAMPLE DEPTH	T °C	S' / ‰	σ_t	$\Sigma\Delta D$	O ₂ ml/l	V _f	
0000	05 76	31 24	24 64	0 000		4809	0
0000	05 76	31 24	24 64			4809	0
0005	05 73	31 24	24 64			4808	9
0010	05 50	31 33	24 74	0 033		4806	5
0010	05 50	31 33	24 74			4806	5
0015	05 08	31 40	24 84			4801	4
0020	04 47	31 47	24 96	0 064		4793	6
0020	04 47	31 47	24 96			4793	6
0030	00 27	32 36	25 99	0 089		4737	0
0030	00 27	32 36	25 99			4737	0

SURFACE OBSERVATIONS												
CRUISE	STATION	DATE				LATITUDE		LONGITUDE		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH	
		MO.	DAY	YR.	HR.	'	'	'	'			
00547	0010	09	01	956	05	63	04N	168	25W	0040	00	

WIND		ANEMO. HGT.	BAR. PRESS.	AIR TEMP °C		HUMIDITY %	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER		
m/sec	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.	
04	07		22	08	3	07	2	85	02	6	8	35	1	35	1	7	08

SUBSURFACE OBSERVATIONS							
SAMPLE DEPTH	T °C	S' / ‰	σ_t	$\Sigma\Delta D$	O ₂ ml/l	V _f	
0000	07 09	31 93	25 01	0 000		4829	3
0000	07 09	31 93	25 01			4829	3
0005	07 07	31 93	25 02			4829	3
0010	07 05	31 94	25 03	0 029		4829	4
0010	07 05	31 94	25 03			4829	4
0015	06 91	31 95	25 05			4827	9
0020	05 33	32 01	25 29	0 058		4807	5
0020	05 33	32 01	25 29			4807	5
0030	02 22	32 23	25 76	0 082		4765	5
0030	02 22	32 23	25 76			4765	5

SURFACE OBSERVATIONS											
CRUISE	STATION	DATE				LATITUDE		LONGITUDE		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YR.	HR.	'	'	'	'		
00547	0011	09	01	956	21	59	42N	167	45W	0023	00

WIND		ANEMO. HGT.	BAR. PRESS.	AIR TEMP °C		HUMIDITY %	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
m/sec	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
04	23		20	10	08	9	87	02	6	6	20	2	20	1	7	08

SUBSURFACE OBSERVATIONS							
SAMPLE DEPTH	T °C	S' / ‰		σ_t	$\Sigma \Delta D$	O ₂ ml/l	V _t
	↓	↓	↓	↓	↓	↓	↓
0000	09 41	30 73	23 74	0 000			4853 7
0000	09 41	30 73	23 74				4853 7
0005	09 27	30 75	23 78				4852 4
0010	09 26	30 75	23 78	0 041			4852 5
0010	09 26	30 75	23 78				4852 5
0015	09 22	30 76	23 79				4852 4
0020	09 14	30 82	23 85	0 082			4851 9
0020	09 14	30 82	23 85				4851 9

ATKA 1				ATKA 2			
1. SAMPLE NUMBER	2. LATITUDE	3. LONGITUDE	4. DATE	5. SAMPLER TYPE	6. WATER DEPTH (ft.)	7. CORE LENGTH (ft.)	8. CORE PENETRATION (ft.)
70	36.0° N	148° 22' W	11 August 1956	Phleger Cover	22.5	20	7-6
9. LABORATORY NUMBERS							
10. SUBSAMPLE DEPTH IN CORE (ft.)							
11. COLOR							
12. ODOR							
13. NET DENSITY (lb./ft. ³)							
14. RIGIDNESS (mm)							
15. MAXIMUM POROSITY (%)							
16. MINIMUM POROSITY (%)							
17. WATER CONTENT (%)							
18. ORGANIC CARBON CONTENT (%)							
19. SITE ANALYSIS AND STATISTICAL MEASURES							
a. < -2 _s (%)	0 _s	0 _s	0 _s	0 _s	0 _s	0 _s	0 _s
b. -2 _s to -1 _s (%)	1	SV _s	SV _s	SV _s	SV _s	SV _s	SV _s
c. -1 _s to 0 _s (%)	2	M _s	M _s	M _s	M _s	M _s	M _s
d. 0 _s to 1 _s (%)	2	0 _s	0 _s	0 _s	0 _s	0 _s	0 _s
e. 1 _s to 2 _s (%)	4	0 _s	0 _s	0 _s	0 _s	0 _s	0 _s
f. 2 _s to 3 _s (%)	13						
g. 3 _s to 4 _s (%)	7						
h. 4 _s to 5 _s (%)	32						
i. 5 _s to 8 _s (%)	40						
j. > 8 _s (%)							
20. SUBSAMPLE DRY WEIGHT (gm)							
21. SPHERICITY (avg.)							
22. ROUNDNESS (avg.)							
23. SURFACE TEXTURE (avg.)							
24. DOMINANT MINERAL (%)							
25. SECONDARY MINERAL (%)							
26. OTHER MINERALS (%)							
27. REMARKS: Sample appears to have retained its original water content. Sample too small for wet density, Rigidity and reference sample. Larger grains show drickanter shapes. Shell and Forams 5%							

ATKA 1				ATKA 2			
1. SAMPLE NUMBER	2. LATITUDE	3. LONGITUDE	4. DATE	5. SAMPLER TYPE	6. WATER DEPTH (ft.)	7. CORE LENGTH (ft.)	8. CORE PENETRATION (ft.)
71	22.5° N	155° 51.0' W	12 August 1956	Phleger Cover	20	20	7-6
9. LABORATORY NUMBERS							
10. SUBSAMPLE DEPTH IN CORE (ft.)							
11. COLOR							
12. ODOR							
13. NET DENSITY (lb./ft. ³)							
14. RIGIDNESS (mm)							
15. MAXIMUM POROSITY (%)							
16. MINIMUM POROSITY (%)							
17. WATER CONTENT (%)							
18. ORGANIC CARBON CONTENT (%)							
19. SITE ANALYSIS AND STATISTICAL MEASURES							
a. < -2 _s (%)	0 _s	0 _s	0 _s	0 _s	0 _s	0 _s	0 _s
b. -2 _s to -1 _s (%)	1	SV _s	SV _s	SV _s	SV _s	SV _s	SV _s
c. -1 _s to 0 _s (%)	2	M _s	M _s	M _s	M _s	M _s	M _s
d. 0 _s to 1 _s (%)	2	0 _s	0 _s	0 _s	0 _s	0 _s	0 _s
e. 1 _s to 2 _s (%)	4	0 _s	0 _s	0 _s	0 _s	0 _s	0 _s
f. 2 _s to 3 _s (%)	13						
g. 3 _s to 4 _s (%)	7						
h. 4 _s to 5 _s (%)	32						
i. 5 _s to 8 _s (%)	40						
j. > 8 _s (%)							
20. SUBSAMPLE DRY WEIGHT (gm)							
21. SPHERICITY (avg.)							
22. ROUNDNESS (avg.)							
23. SURFACE TEXTURE (avg.)							
24. DOMINANT MINERAL (%)							
25. SECONDARY MINERAL (%)							
26. OTHER MINERALS (%)							
27. REMARKS: Sample shows more oxidation in upper portion of core than in lower portion. Some evaporation may have occurred. *Inorganic Material Only.							

1. SAMPLE NUMBER	ATKA 3	5. SAMPLER TYPE	Phleger Corer.
2. LATITUDE	71° 22.2' N	6. WATER DEPTH (m.)	12.6
3. LONGITUDE	156° 38.5' W	7. CORE LENGTH (m.)	2
4. DATE (day, month, year)	15 August 1956	8. CORE PENETRATION (m.)	
9. LABORATORY NUMBERS			
10. SUBSAMPLE DEPTH IN CORE (m.)	COMPLETE		
11. COLOR	Dark Gray		
12. ODRP	None		
13. WET DENSITY (lb./ft ³)			
14. RIGIDITY (cm)			
15. MAXIMUM POROSITY (%)			
16. MINIMUM POROSITY (%)			
17. WATER CONTENT (%)			
18. ORGANIC CARBON CONTENT (%)			
19. SIZE ANALYSIS AND STATISTICAL MEASURES			
a. < 2 _φ (%)	00 _φ	00 _φ	00 _φ
b. -2 _φ to -1 _φ (%)	1 SK _φ	SK _φ	SK _φ
c. -1 _φ to 0 _φ (%)	1 Hd _φ	Hd _φ	Hd _φ
d. 0 _φ to 1 _φ (%)	0 _φ	0 _φ	0 _φ
e. 1 _φ to 2 _φ (%)	0 _φ	0 _φ	0 _φ
f. 2 _φ to 3 _φ (%)	2		0 _φ
g. 3 _φ to 4 _φ (%)	4		
h. 4 _φ to 6 _φ (%)	53		
i. 6 _φ to 8 _φ (%)			
j. > 8 _φ (%)	30		
20. SUBSAMPLE DRY WEIGHT (gm)	29.11		
21. SPHERICITY (avg.)	High		
22. ROUNDNESS (avg.)	Sub-rounded		
23. SURFACE TEXTURE (avg.)	Frosted Dull		
24. DOMINANT MINERAL (%)	Quartz 40% Mica 40% Rock Frag. 10% Silt 10%		
25. SECONDARY MINERAL (%)			
26. OTHER MINERALS (%)			
27. REMARKS: Evaporation and oxidation has occurred. Water content not applicable. Limonite stain on Olive Gray film due to oxidation since sample was taken.			

1. SAMPLE NUMBER	ATKA 4	5. SAMPLER TYPE	Phleger Corer
2. LATITUDE	70° 40.0' N	6. WATER DEPTH (m.)	27
3. LONGITUDE	160° 40.0' W	7. CORE LENGTH (m.)	11
4. DATE (day, month, year)	30 August 1956	8. CORE PENETRATION (m.)	
9. LABORATORY NUMBERS			
10. SUBSAMPLE DEPTH IN CORE (m.)	Top (0-1")		
11. COLOR	Greenish Black		
12. ODRP	Strong H ₂ S		
13. WET DENSITY (lb./ft ³)			
14. RIGIDITY (cm)			
15. MAXIMUM POROSITY (%)			
16. MINIMUM POROSITY (%)			
17. WATER CONTENT (%)			
18. ORGANIC CARBON CONTENT (%)			
19. SIZE ANALYSIS AND STATISTICAL MEASURES			
a. < 2 _φ (%)	Granule & Large	19	0 _φ 2-23
b. -2 _φ to -1 _φ (%)	Sand	12	SK _φ -29
c. -1 _φ to 0 _φ (%)	Sand	11	Hd _φ 1.60
d. 0 _φ to 1 _φ (%)	Sand	4	0 _φ
e. 1 _φ to 2 _φ (%)	Sand	9	0 _φ
f. 2 _φ to 3 _φ (%)	Sand	25	
g. 3 _φ to 4 _φ (%)	Sand	5	
h. 4 _φ to 6 _φ (%)	Silt	7	
i. 6 _φ to 8 _φ (%)			
j. > 8 _φ (%)	Clay	7	
20. SUBSAMPLE DRY WEIGHT (gm)		42.95	61.80
21. SPHERICITY (avg.)		High	High
22. ROUNDNESS (avg.)		Rounded	Rounded
23. SURFACE TEXTURE (avg.)		Frosted Dull	Frosted Dull
24. DOMINANT MINERAL (%)		Quartz 50% Mica 40% Rock Frag. 10%	Quartz 50% Mica 40% Rock Frag. 10%
25. SECONDARY MINERAL (%)		Peldspar 10%	Peldspar 10%
26. OTHER MINERALS (%)			
27. REMARKS: Several large angular pebbles spread sporadically throughout core. Top 1" contain traces of Shell, Forams and Magnetic Material.			

1. SAMPLE NUMBER	ATKA 5	5. SIMPLER TYPE	Phleger Cover
2. LATITUDE	69° 37.5' N.	6. WATER DEPTH (ft.)	19
3. LONGITUDE	165° 06.5' W.	7. CORE LENGTH (in.)	10
4. DATE (Day, month, year)	30 August 1956	8. CORE PENETRATION (in.)	
9. LABORATORY NUMBERS		10. SUBSAMPLE DEPTH IN CORE (in.)	Bot (0.1" - 0.2")
11. COLOR	Dark Grey	Top (0-1")	Dark Grey
12. ODOR	Clayey		Dark Grey
13. NET DENSITY (lb./ft ³)			Clayey
14. RIGIDNESS (cm)			
15. MAXIMUM POROSITY (%)			20
16. MINIMUM POROSITY (%)			
17. WATER CONTENT (%)			58
18. ORGANIC CARBON CONTENT (%)			
19. SIZE ANALYSIS AND STATISTICAL MEASURES			
a. < 2 _s (%)	0 _s 0.93	0 _s 0.75	0 _s
b. -2 _s to -1 _s (%)	5 _s 0.30	5 _s 0.30	5 _s
c. -1 _s to 0 _s (%)	M _s 3.55	M _s 3.40	M _s
d. 0 _s to 1 _s (%)	Sand 1	0 _s	0 _s
e. 1 _s to 2 _s (%)	Sand 4	0 _s	0 _s
f. 2 _s to 3 _s (%)	Sand 26	0 _s	0 _s
g. 3 _s to 4 _s (%)	Sand 31		
h. 4 _s to 5 _s (%)	Silt 19		
i. 5 _s to 6 _s (%)	Silt 7		
j. > 6 _s (%)	Clay 11		
20. SUBSAMPLE DRY WEIGHT (cm)	27.08	26.12	21.93
21. SPHERICITY (avg.)	High	Low	Low
22. ROUNDNESS (avg.)	Rounded	Sub-angular	Sub-angular
23. SURFACE TEXTURE (avg.)	Frosted dull	Polished Rough	Polished Rough
24. DOMINANT MINERAL (%)	Quartz 70%	Quartz 65%	Quartz 65%
25. SECONDARY MINERAL (%)	Rock Frag 20%	Rock Frag 20%	Rock Frag 15%
26. OTHER MINERALS (%)	Feldspar 10%	Feldspar 10%	Feldspar 10%
27. REMARKS: Sample uniform throughout. May have been some evaporation. " " contains traces of mica and Diatoms 5% Bottom 1" contains Mica 5% and Diatoms 5%.			

1. SAMPLE NUMBER	ATKA 6	5. SIMPLER TYPE	Phleger Cover
2. LATITUDE	67° 25.0' N.	6. WATER DEPTH (ft.)	24
3. LONGITUDE	167° 47.0' W.	7. CORE LENGTH (in.)	16
4. DATE (Day, month, year)	31 August 1956	8. CORE PENETRATION (in.)	
9. LABORATORY NUMBERS		10. SUBSAMPLE DEPTH IN CORE (in.)	Top (0-1")
11. COLOR	Dark Grey	Top (0-1")	Dark Grey
12. ODOR	Clayey		Dark Grey
13. NET DENSITY (lb./ft ³)	106.5		Clayey
14. RIGIDNESS (cm)			
15. MAXIMUM POROSITY (%)	23		20
16. MINIMUM POROSITY (%)			
17. WATER CONTENT (%)			45
18. ORGANIC CARBON CONTENT (%)			
19. SIZE ANALYSIS AND STATISTICAL MEASURES			
a. < 2 _s (%)	0 _s 0.90	0 _s 0.77	0 _s
b. -2 _s to -1 _s (%)	5 _s 0.20	5 _s 0.12	5 _s
c. -1 _s to 0 _s (%)	M _s 5.50	M _s 5.30	M _s
d. 0 _s to 1 _s (%)	0 _s	0 _s	0 _s
e. 1 _s to 2 _s (%)	Sand 0 _s	1 0 _s	0 _s
f. 2 _s to 3 _s (%)	Sand 1	1	
g. 3 _s to 4 _s (%)	Sand 8		
h. 4 _s to 5 _s (%)	Silt 57		
i. 5 _s to 6 _s (%)	Silt 15		
j. > 6 _s (%)	Clay 20		
20. SUBSAMPLE DRY WEIGHT (cm)	26.12	26.12	21.93
21. SPHERICITY (avg.)	Low	Low	Low
22. ROUNDNESS (avg.)	Sub-angular	Sub-angular	Sub-angular
23. SURFACE TEXTURE (avg.)	Polished Rough	Polished Rough	Polished Rough
24. DOMINANT MINERAL (%)	Quartz 65%	Quartz 65%	Quartz 65%
25. SECONDARY MINERAL (%)	Rock Frag 20%	Rock Frag 20%	Rock Frag 15%
26. OTHER MINERALS (%)	Feldspar 10%	Feldspar 10%	Feldspar 10%
27. REMARKS: Sample uniform throughout. May have been some evaporation. " " contains traces of mica and Diatoms 5% Bottom 1" contains Mica 5% and Diatoms 5%.			

1. SAMPLE NUMBER	ATKA 7	3. SAMPLER TYPE	Phleger Corer
2. LATITUDE	05.0 N.	5. WATER DEPTH (m.)	20
3. LONGITUDE	163 W.	7. CORE LENGTH (in.)	4
4. DATE (Day, month, year)	31 August 1956	8. CORE PENETRATION (m.)	
9. LABORATORY NUMBERS			
10. SUBSAMPLE DEPTH IN CORE (m.)	COMPLETE		
11. COLOR	Dark Gray		
12. ODR	Strong H ₂ S		
13. WET DENSITY (lb./ft ³)			
14. RIGIDNESS (cm)			
15. MAXIMUM POROSITY (%)			
16. MINIMUM POROSITY (%)			
17. WATER CONTENT (%)			
18. ORGANIC CARBON CONTENT (%)			
19. SITE ANALYSIS AND STATISTICAL MEASURES			
a. < -2 _s (s)	0 _s 1.27	0 _s	0 _s
b. -2 _s to -1 _s (s)	SK _s .40	SK _s	SK _s
c. -1 _s to 0 _s (s)	Sand 1 H _s 3.43	H _s	H _s
d. 0 _s to 1 _s (s)	Sand 2 0 _s	0 _s	0 _s
e. 1 _s to 2 _s (s)	Sand 13 0 _s	0 _s	0 _s
f. 2 _s to 3 _s (s)	Sand 21		
g. 3 _s to 4 _s (s)	Sand 29		
h. 4 _s to 5 _s (s)	Silt 12		
i. 5 _s to 6 _s (s)	Silt 7		
j. > 6 _s (s)	Clay 15		
20. SUBSAMPLE DRY WEIGHT (gm)	19.92		
21. SPHERICITY (avg.)	Medium		
22. ROUNDNESS (avg.)	Sub-rounded		
23. SURFACE TEXTURE (avg.)	Smooth Dull		
24. DOMINANT MINERAL (%)	Quartz 65%		
25. SECONDARY MINERAL (%)	Rock Frag. 25%		
26. OTHER MINERALS (%)	Feldspar 10%		

27. REMARKS: Sample appears to contain much organic material. Not sufficient sample for wet density and rigidity. Some evaporation has occurred.

1. SAMPLE NUMBER	ATKA 8	3. SAMPLER TYPE	Phleger Corer
2. LATITUDE	04.0 N.	5. WATER DEPTH (m.)	22
3. LONGITUDE	163 W.	7. CORE LENGTH (in.)	9
4. DATE (Day, month, year)	1 September 1956	8. CORE PENETRATION (m.)	
9. LABORATORY NUMBERS			
10. SUBSAMPLE DEPTH IN CORE (m.)	Top (0-1")		
11. COLOR	Dark Gray		
12. ODR	Strong H ₂ S		
13. WET DENSITY (lb./ft ³)			
14. RIGIDNESS (cm)			
15. MAXIMUM POROSITY (%)			
16. MINIMUM POROSITY (%)			
17. WATER CONTENT (%)			
18. ORGANIC CARBON CONTENT (%)			
19. SITE ANALYSIS AND STATISTICAL MEASURES			
a. < -2 _s (s)	0 _s 0.85	0 _s 0.83	0 _s
b. -2 _s to -1 _s (s)	SK _s 0.61	SK _s 0.20	SK _s
c. -1 _s to 0 _s (s)	H _s 3.16	H _s 3.05	H _s
d. 0 _s to 1 _s (s)	0 _s	0 _s	0 _s
e. 1 _s to 2 _s (s)	Sand 1 0 _s	2 0 _s	0 _s
f. 2 _s to 3 _s (s)	Sand 43	47	
g. 3 _s to 4 _s (s)	Sand 28	25	
h. 4 _s to 5 _s (s)	Silt 17	16	
i. 5 _s to 6 _s (s)	Silt 4	4	
j. > 6 _s (s)	Clay 7	6	
20. SUBSAMPLE DRY WEIGHT (gm)	36.72	49.18	
21. SPHERICITY (avg.)	Medium	Medium	
22. ROUNDNESS (avg.)	Sub-rounded	Sub-rounded	
23. SURFACE TEXTURE (avg.)	Smooth Frosted	Smooth Frosted	
24. DOMINANT MINERAL (%)	Quartz 65%	Quartz 65%	
25. SECONDARY MINERAL (%)	Rock Frag. 25%	Rock Frag. 25%	
26. OTHER MINERALS (%)	Feldspar 10%	Feldspar 10%	

27. REMARKS: Sample uniform throughout. Predominantly sand. May be an increase in clay towards the bottom of core. Top 1" contains traces of Diatoms. Bot. 1" contains Diatoms & Mica (Tr.)

USCGC EASTWIND (WAGB-279)

(REF. CRUISE NO. 00541)

1 - 7 OCTOBER 1956



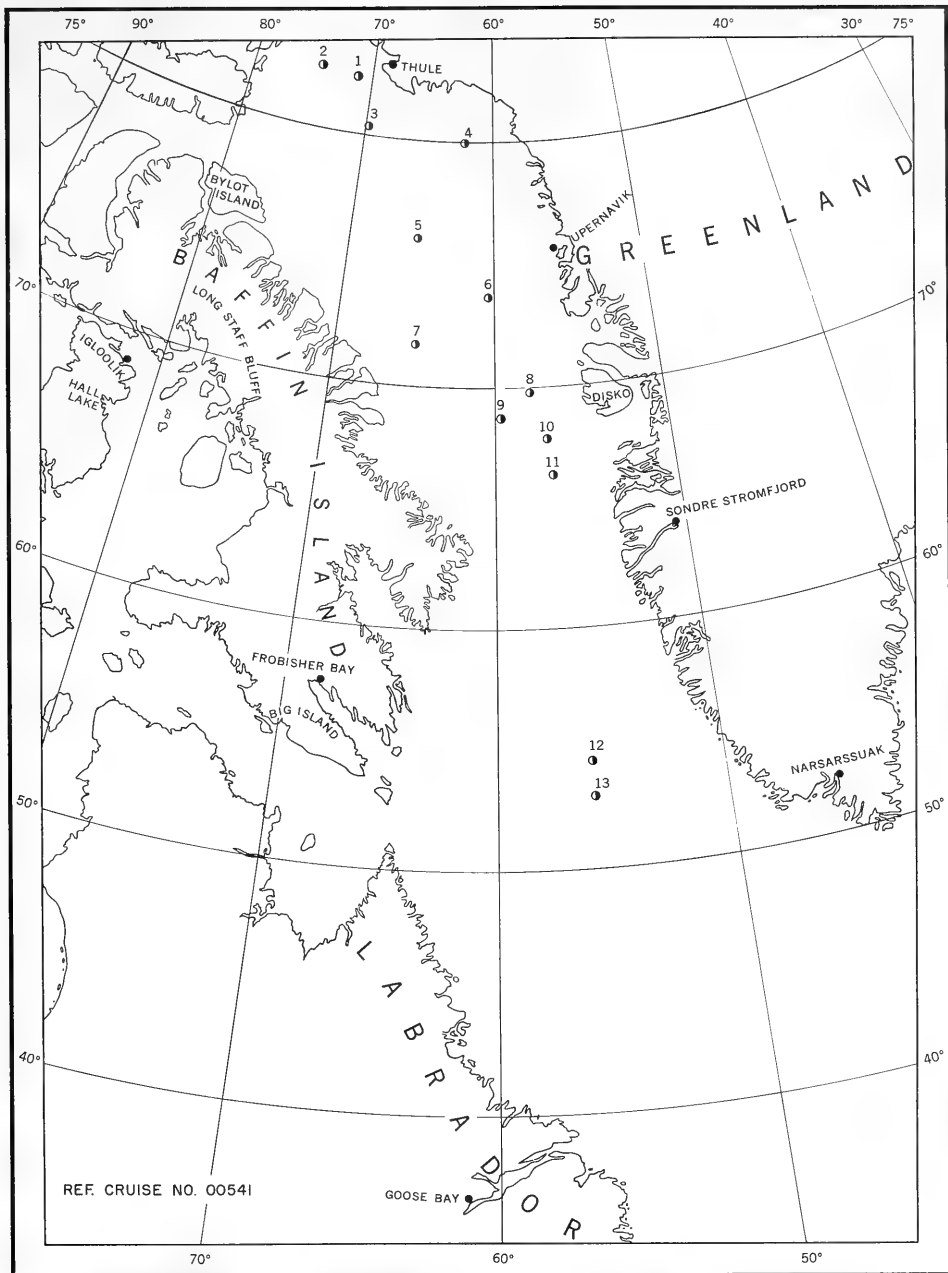


FIGURE 4. STATION LOCATIONS, USCGC EASTWIND — OCTOBER 1956



SURFACE OBSERVATIONS											
CRUISE	STATION	DATE				LATITUDE		LONGITUDE		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YR.	HR.	'	"	'	"		
00541	0001	10	01	956	17	76	15N	071	00W	0640	02

WIND		ANEMO. HGT.	BAR. PRESS.	AIR TEMP °C		HUMIDITY %	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
m/sec	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
02	03	23	98	00	6	00	0	90	70	6	8	34	3	7		

SUBSURFACE OBSERVATIONS							
SAMPLE DEPTH	T °C	S'/.	σ_t	$\Sigma\Delta D$	O_2 ml/l	V_t	
0000	-00 80	33 08	26 61	0 000		4721	9
0001	-00 80	33 08	26 61			4721	9
0005	-00 77	33 06	26 60			4722	5
0010	-00 75	33 11	26 64	0 014		4723	4
0010	-00 75	33 11	26 64			4723	4
0015	-00 73	33 15	26 67			4724	1
0020	-00 70	33 16	26 67	0 028		4725	0
0020	-00 70	33 16	26 67			4725	0
0030	-00 67	33 28	26 77	0 041		4726	5
0030	-00 67	33 28	26 77			4726	5
0040	-01 32	33 61	27 06			4718	4
0050	-01 35	33 69	27 12	0 064		4718	9
0050	-01 35	33 69	27 12			4718	9
0075	-01 63	33 76	27 19	0 087		4716	2
0100	-01 72	33 82	27 24	0 108		4716	5
0100	-01 72	33 82	27 24			4716	5
0150	-01 31	33 93	27 32	0 148		4726	5
0200	-00 11	34 02	27 34	0 185		4748	4
0200	-00 11	34 02	27 34			4748	4

SURFACE OBSERVATIONS											
CRUISE	STATION	DATE				LATITUDE		LONGITUDE		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YR.	HR.	'	"	'	"		
00541	0002	10	01	956	21	76	17N	074	15W	0457	02

WIND		ANEMO. HGT.	BAR. PRESS.	AIR TEMP °C		HUMIDITY %	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
m/sec	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
08	35	23	02	52	8	53	9	76	01	4	2			35	6	8

SUBSURFACE OBSERVATIONS							
SAMPLE DEPTH	T °C	S'/.	σ_t	$\Sigma\Delta D$	O ₂ ml/l	V _f	
0000	-00 90	33 10	26 63	0 000		4720	4
0001	-00 90	33 10	26 63			4720	5
0005	-00 90	33 16	26 68			4721	0
0010	-00 93	33 16	26 68	0 014		4720	8
0010	-00 93	33 16	26 68			4720	8
0015	-00 94	33 17	26 69			4721	0
0020	-00 94	33 16	26 68	0 028		4721	2
0020	* -01 17	* 33 57	* 27 02			* 4719	4
0030	-00 93	33 15	26 67	0 041		4721	9
0030	-00 93	33 15	26 67			4721	9
0040	-01 12	33 31	26 81			4720	2
0050	-01 13	33 34	26 83	0 067		4720	8
0075	-01 15	33 38	26 87	0 097		4722	1
0085	-01 16	33 46	26 93			4722	9
0100	-01 16	33 64	27 08	0 125		4724	6
0100	-01 16	33 64	27 08			4724	6
0150	-00 99	33 79	27 19	0 171		4730	9
0200	-00 57	33 93	27 29	0 213		4741	0
0200	-00 57	33 93	27 29			4741	0

SURFACE OBSERVATIONS											
CRUISE	STATION	DATE				LATITUDE		LONGITUDE		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YR.	HR.	'	'	'	'		
00541	0003	10	02	956	05	75	14N	069	38W	0673	02

WIND		ANEMO. HGT.	BAR. PRESS.	AIR TEMP °C		HUMIDITY %	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
m/sec	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
05	09	23	07	01	1	00	3	86	02	6	1			8		

SUBSURFACE OBSERVATIONS							
SAMPLE DEPTH	T °C	S'‰	σ_t	$\Sigma\Delta D$	O ₂ ml/l	V _f	
0000	-00 34	32 86	26 42	0	000	4728	0
0001	-00 34	32 86	26 42			4728	1
0005	-00 35	32 84	26 40			4728	1
0010	-00 32	32 90	26 45	0	016	4729	1
0010	-00 32	32 90	26 45			4729	1
0015	-00 82	33 33	26 82			4723	5
0020	-01 13	33 37	26 86	0	030	4719	2
0020	-01 13	33 37	26 86			4719	2
0030	-01 33	33 51	26 98	0	041	4717	2
0030	-01 33	33 51	26 98			4717	2
0040	-01 34	33 51	26 98			4717	6
0050	-01 31	33 72	27 15	0	062	4719	6
0050	-01 31	33 72	27 15			4719	6
0075	-01 37	33 80	27 21	0	084	4720	5
0100	-01 42	33 86	27 26	0	105	4721	5
0100	-01 42	33 86	27 26			4721	5
0150	-00 98	33 95	27 32	0	144	4731	7
0200	00 00	34 00	27 32	0	182	4750	0
0200	00 00	34 00	27 32			4750	0

SURFACE OBSERVATIONS											
CRUISE	STATION	DATE				LATITUDE		LONGITUDE		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YR.	HR.	'	"	'	"		
00541	0004	10	02	956	16	75	00N	062	00W	0585	02

WIND		ANEMO. HGT.	BAR. PRESS.	AIR TEMP °C		HUMIDITY %	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
m/sec	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
09	09	23	17	01	7	00	3	77	01	6	5	09	3	10	4	8

SUBSURFACE OBSERVATIONS										
SAMPLE DEPTH	T °C		S'..		σ_t	$\Sigma\Delta D$	O ₂ ml/l	V _f		
	↓	↓	↓	↓						
0000	00	50	32	32	25	94	0	000	4738	6
0001	00	50	32	32	25	94			4738	6
0005	00	50	32	38	25	99			4739	1
0010	00	00	33	19	26	67	0	017	4735	3
0010	00	00	33	19	26	67			4735	3
0015	-00	77	33	58	27	02			4725	4
0020	-01	23	33	65	27	09	0	029	4718	8
0020	-01	23	33	65	27	09			4718	8
0030	-01	29	33	66	27	10	0	039	4718	5
0030	-01	29	33	66	27	10			4718	5
0040	-01	36	33	65	27	09			4717	9
0050	-01	27	33	78	27	19	0	057	4720	5
0050	-01	27	33	78	27	19			4720	5
0075	-01	29	33	83	27	24	0	079	4721	9
0100	-01	31	33	87	27	27	0	099	4723	2
0100	-01	31	33	87	27	27			4723	2
0150	-01	03	33	88	27	27	0	140	4730	6
0200	-00	43	33	88	27	24	0	181	4742	9
0200	-00	43	33	88	27	24			4742	9

SURFACE OBSERVATIONS											
CRUISE	STATION	DATE				LATITUDE		LONGITUDE		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YR.	HR.	'	'	'	'		
00541	0005	10	03	956	04	73	00N	065	00W	2158	02

WIND		ANEMO. HGT.	BAR. PRESS.	AIR TEMP °C		HUMIDITY %	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
m/sec	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
07	19	23	24	01	4	00	6	86	78	6	8	19	3	19	3	7

SUBSURFACE OBSERVATIONS							
SAMPLE DEPTH	T °C	S'/.	σ_t	$\Sigma\Delta D$	O ₂ ml/l	V _f	
	↓	↓	↓	↓	↓	↓	↓
0000	00 81	30 50	24 47	0 000		4735	5
0001	00 81	30 50	24 47			4735	5
0004	00 83	30 52	24 48			4736	1
0008	00 07	32 79	26 34			4734	5
0010	00 25	32 94	26 45	0 025		4738	0
0012	*-01 63	*31 89	*25 67			*4704	4
0015	00 27	33 21	26 67			4739	8
0020	-00 61	33 32	26 80	0 039		4727	0
0023	-01 00	33 37	26 85			4721	4
0030	-01 50	33 40	26 89	0 052		4714	0
0031	-01 54	33 41	26 90			4713	5
0038	-01 60	*33 95	*27 34			*4715	3
0050	-01 41	33 59	27 04	0 073		4717	5
0075	-01 09	33 79	27 20	0 097		4724	9
0077	-01 07	33 80	27 20			4725	3
0100	-00 87	33 93	27 30	0 118		4730	4
0150	-00 73	34 05	27 39	0 154		4736	1
0153	-00 72	34 05	27 39			4736	4

SURFACE OBSERVATIONS											
CRUISE	STATION	DATE				LATITUDE		LONGITUDE		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YR.	HR.	'	"	'	"		
00541	0006	10	03	956	13	71	48N	060	30W	1004	02

WIND		ANEMO. HGT.	BAR. PRESS.	AIR TEMP °C		HUMIDITY %	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
m/sec	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
03	14	23	25	03	9	02	8	83	01	9	6	18	2	18	2	8

SUBSURFACE OBSERVATIONS									
SAMPLE DEPTH	T °C		S'..		σ _t		ΣΔD	O ₂ ml/l	V _f
	↓	↓	↓	↓	↓	↓			
0000	00	56	30	77	24	70	0	000	4732 8
0001	00	56	30	77	24	70			4732 9
0005	01	38	31	65	25	36			4749 2
0010	02	43	32	77	26	18	0	026	4769 6
0010	02	43	32	77	26	18			4769 6
0015	02	33	32	67	26	11			4768 0
0020	02	42	32	85	26	24	0	044	4770 4
0020	02	42	32	85	26	24			4770 4
0030	00	86	33	48	26	86	0	059	4750 7
0030	00	86	33	48	26	86			4750 7
0040	-00	73	33	55	26	99			4727 4
0050	-01	01	33	58	27	02	0	081	4723 7
0050	-01	01	33	58	27	02			4723 7
0075	-00	84	33	61	27	04	0	107	4728 0
0100	-00	62	33	66	27	07	0	132	4733 1
0100	-00	62	33	66	27	07			4733 1
0150	-00	05	33	84	27	19	0	179	4745 6
0200	00	71	34	13	27	39	0	218	4761 3
0200	00	71	34	13	27	39			4761 3

SURFACE OBSERVATIONS											
CRUISE	STATION	DATE				LATITUDE		LONGITUDE		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YR.	HR.	'	'	'	'		
00541	0007	10	03	956	17	70	50N	064	43W	2103	02

WIND		ANEMO. HGT.	BAR. PRESS.	AIR TEMP °C		HUMIDITY %	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
m/sec	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
04	09	23	21	51	7	52	8	77	02	6	3	99	2	99	2	8

SUBSURFACE OBSERVATIONS							
SAMPLE DEPTH	T °C	S _v ‰	σ _t	ΣAD	O ₂ ml/l	V _f	
0000	00 02	29 74	23 89	0 000		4720	2
0001	00 02	29 74	23 89			4720	2
0005	00 04	29 74	23 89			4720	8
0010	00 04	29 75	23 90	0 040		4721	1
0010	00 04	29 75	23 90			4721	1
0015	00 16	30 93	24 84			4728	3
0020	-00 86	32 50	26 15	0 070		4719	6
0020	-00 86	32 50	26 15			4719	6
0030	-00 78	32 45	26 10	0 089		4721	2
0030	-00 78	32 45	26 10			4721	2
0040	-01 56	32 59	26 24			4710	2
0050	00 24	32 78	26 33	0 125		4739	5
0050	00 24	* 29 96	* 24 06			4727	4
0075	-00 86	33 19	26 70	0 163		4725	9
0100	-01 63	33 51	26 99	0 193		4716	6
0100	-01 63	33 51	26 99			4716	6
0150	-01 53	33 87	27 27	0 240		4722	7
0200	-01 42	33 87	27 27	0 280		4727	5
0200	-01 42	33 87	27 27			4727	5

SURFACE OBSERVATIONS											
CRUISE	STATION	DATE				LATITUDE		LONGITUDE		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YR.	HR.	'	"	'	"		
00541	0008	10	04	956	09	69	55N	057	43W	0274	02

WIND		ANEMO. HGT.	BAR. PRESS.	AIR TEMP °C		HUMIDITY %	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
m/sec	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
09	04	23	14	01	7	00	6	81	03	6	1	04	2	04	2	8

SUBSURFACE OBSERVATIONS						
SAMPLE DEPTH	T °C	S'‰	σ _t	ΣΔD	O ₂ ml/l	V _f
0000	01 78	32 66	26 14	0 000		4759 1
0001	01 78	32 66	26 14			4759 1
0005	01 81	32 75	26 21			4760 2
0010	01 82	32 67	26 14	0 019		4760 3
0010	01 82	32 67	26 14			4760 3
0015	01 79	32 61	26 10			4759 9
0020	01 77	32 63	26 11	0 038		4760 0
0020	01 77	32 63	26 11			4760 0
0030	02 00	32 66	26 12	0 057		4764 1
0030	02 00	32 66	26 12			4764 1
0040	01 97	33 13	26 50			4766 2
0050	01 86	33 71	26 97	0 087		4767 7
0050	01 86	33 71	26 97			4767 7
0075	00 98	33 77	27 08	0 113		4756 4
0100	00 47	33 82	27 15	0 137		4750 5
0100	00 47	33 82	27 15			4750 5
0150	00 55	33 88	27 19	0 182		4754 9
0200		33 89				
0200	* 02 10	33 89	* 27 10			* 4780 8

SURFACE OBSERVATIONS											
CRUISE	STATION	DATE				LATITUDE		LONGITUDE		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YR.	HR.	'	'	'	'		
00541	0009	10	04	956	15	68	49N	059	30W	1097	01

WIND		ANEMO. HGT.	BAR. PRESS.	AIR TEMP °C		HUMIDITY %	WEATHER	CLOUD		SEA		SWELL		WATER		
m/sec	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.	VIS.	COL.	TRANS.
09	34	23	13	02	8	00	6	65	02	4	3	02	2	02	2	8

SUBSURFACE OBSERVATIONS							
SAMPLE DEPTH	T °C	S'./..	σ_t	$\Sigma\Delta D$	O_2 ml/l	V_f	
0000	00 30	31 41	25 22	0 000		4731	6
0001	00 30	31 41	25 22			4731	7
0004		31 37					
0009	00 33	31 36	25 18			4732	4
0010	00 37	31 45	25 25	0 027		4733	5
0012	00 41	31 55	25 33			4734	6
0015	00 37	31 51	25 30			4734	0
0020	-00 46	32 53	26 16	0 050		4726	0
0027	-01 22	33 40	26 89			4718	3
0030	-01 33	33 43	26 91	0 065		4716	9
0037	-01 51	33 50	26 97			4714	7
0046	-01 58	33 57	27 03			4714	5
0050	-01 62	33 60	27 06	0 087		4714	2
0057	-01 67	33 64	27 09			4714	0
0075	-01 54	33 73	27 16	0 111		4717	5
0100	-01 50	33 82	27 23	0 133		4720	0
0115	-01 24	33 84	27 24			4725	1

SURFACE OBSERVATIONS											
CRUISE	STATION	DATE				LATITUDE		LONGITUDE		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YR.	HR.	'	"	'	"		
00541	0010	10	04	956	23	67	50N	056	37W	0146	01

WIND		ANEMO. HGT.	BAR. PRESS.	AIR TEMP °C		HUMIDITY %	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
m/sec	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
12	03	23	05	00	0	00	0	99	71	0	8	03	2	03	2	7

SUBSURFACE OBSERVATIONS						
SAMPLE DEPTH	T °C	S'/.	σ_t	$\Sigma\Delta\theta$	O ₂ ml/l	V _f
0000	02 91	32 97	26 30	0 000		4776 7
0001	02 91	32 97	26 30			4776 8
0005	02 91	32 94	26 27			4776 9
0010	02 92	32 95	26 28	0 017		4777 4
0010	02 92	32 95	26 28			4777 4
0015	03 01	33 04	26 34			4779 3
0020	02 99	33 06	26 36	0 035		4779 4
0020	02 99	33 06	26 36			4779 4
0030	03 03	33 10	26 39	0 051		4780 8
0030	03 03	33 10	26 39			4780 8
0040	03 20	33 10	26 38			4783 8
0050	03 19	33 18	26 44	0 084		4784 6
0050	03 19	33 18	26 44			4784 6
0075	02 66	33 47	26 72	0 120		4779 7
0093	01 83	33 75	27 01			4769 9

SURFACE OBSERVATIONS											
CRUISE	STATION	DATE				LATITUDE		LONGITUDE		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YR.	HR.	'	'	'	'		
00541	0011	10	05	956	07	66	02N	056	32W	0465	02

WIND		ANEMO. HGT.	BAR. PRESS.	AIR TEMP °C		HUMIDITY %	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
m/sec	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
11	05	23	98	02 8	02 5	97	61	0	8	03	2	03	2	6		

SUBSURFACE OBSERVATIONS						
SAMPLE DEPTH	T °C	S ⁺ /..	σ _t	ΣΔD	O ₂ ml/l	V _t
0000	02 41	33 12	26 46	0 000		4770 2
0001	02 41	33 12	26 46			4770 2
0005	02 41	33 12	26 46			4770 5
0010	02 42	33 12	26 46	0 016		4770 9
0010	02 42	33 12	26 46			4770 9
0015	02 42	33 13	26 47			4771 3
0020	02 41	33 11	26 45	0 032		4771 3
0020	02 41	33 11	26 45			4771 3
0030	02 37	33 12	26 46	0 048		4771 4
0030	02 37	33 12	26 46			4771 4
0040	02 51	33 10	26 43			4773 9
0050	02 40	33 22	26 54	0 078		4773 4
0050	02 40					
0075	02 51	33 68	26 90	0 112		4778 4
0087	02 60	33 84	27 02			4781 1
0100	02 72	33 99	27 13	0 138		4784 2
0150	03 50	34 26	27 27	0 183		4799 4
0173	03 82	34 34	27 30			4805 6

SURFACE OBSERVATIONS											
CRUISE	STATION	DATE				LATITUDE		LONGITUDE		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YR.	HR.	'	'	'	'		
00541	0012	10	07	956	12	54	39N	055	34W	0284	02

WIND		ANEMO. HGT.	BAR. PRESS.	AIR TEMP °C		HUMIDITY %	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
m/sec	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
08	28	23	21	03	9	01	7	67	01	8	2	31	2	31	2	8

SUBSURFACE OBSERVATIONS							
SAMPLE DEPTH	T °C	S'/.	σ_t	$\Sigma\Delta D$	O ₂ m/l	V _f	
0000	02 53	32 16	25 68	0 000		4767	9
0001	02 53	32 16	25 68			4767	9
0005	02 55	32 16	25 68			4768	5
0010	02 55	32 17	25 69	0 023		4768	8
0010	02 55	32 17	25 69			4768	8
0015	02 56	32 19	25 70			4769	3
0020	02 51	32 18	25 70	0 046		4768	9
0020	02 51	32 18	25 70			4768	9
0030	02 31	32 24	25 76	0 069		4766	8
0030	02 31	32 24	25 76			4766	8
0040	00 67	32 57	26 14			4744	6
0050	-00 72	32 66	26 27	0 109		4724	3
0050	-00 72	32 66	26 27			4724	3
0075	-00 89	32 88	26 45	0 151		4724	0
0082	-00 91	32 93	26 50			4724	4
0100	-00 74	33 06	26 59	0 188		4728	7
0150	-00 26	33 34	26 80	0 256		4740	2
0164	-00 13	33 40	26 84			4743	3

SURFACE OBSERVATIONS											
CRUISE	STATION	DATE				LATITUDE		LONGITUDE		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YR.	HR.	'	'	'	'		
00541	0013	10	07	956	15	53	00N	055	30W	0146	01

WIND		ANEMO. HGT.	BAR. PRESS.	AIR TEMP °C		HUMIDITY %	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
m/sec	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
13	20	23	22	06	7	04	4	71	00	2	8	32	1	32	1	8

SUBSURFACE OBSERVATIONS							
SAMPLE DEPTH	T °C	S' /..	σ_t	$\Sigma \Delta D$	O_2 ml/l	V_t	
0000	02 72	31 95	25 50	0 000		4769	7
0001	02 72	31 95	25 50			4769	8
0005	02 68	32 04	25 58			4769	8
0010	02 69	32 09	25 61	0 024		4770	5
0010	02 69	32 09	25 61			4770	5
0015	02 81	32 10	25 61			4772	5
0020	02 71	32 10	25 62	0 048		4771	4
0020	02 71	32 10	25 62			4771	4
0030	02 55	32 10	25 63	0 072		4769	7
0030	02 55	32 10	25 63			4769	7
0040	02 17	*31 94	*25 53			*4764	1
0050	01 74	32 07	25 67	0 119		4759	0
0050	01 74	32 07	25 67			4759	0
0075	00 53	32 39	26 00	0 173		4743	8
0100	-00 89	32 69	26 30	0 220		4724	7
0100	-00 89	32 69	26 30			4724	7



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current, and bottom sediment data.

1. Oceanography - Arctic
2. Bottom Sediments - Arctic
3. Ships - USS REQUISITE
4. Ships - USS ELDORADO
5. Ships - USS ATKA
6. Ships - USCGC EASTWIND

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