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Lampiran 1. Data Besar Butiran Sedimen

Stasiun	Titik	% Berat						
		2	0,5-1	0,25-0,5	0,125-0,25	0,625-0,125	0,625-0,125	>0,625
Barat	1	16,7%	24,3%	23,7%	20,3%	10,4%	1,0%	1,0%
	2	16,3%	22,3%	24,6%	24,4%	9,8%	0,7%	0,5%
	3	18,6%	20,8%	23,6%	26,2%	8,9%	9,3%	0,1%
	4	32,1%	21,4%	17,1%	19,6%	7,4%	0,9%	0,1%
	5	18,6%	17,9%	24,8%	23,1%	13,2%	1,0%	0,3%
	6	23,7%	20,1%	22,3%	21,5%	9,3%	0,4%	1,6%
	7	18,9%	21,5%	25,6%	24,8%	8,2%	1,1%	0,2%
	8	34,2%	17,4%	19,4%	17,8%	9,8%	1,3%	1,4%
	9	36,0%	16,9%	15,0%	17,9%	11,3%	1,2%	0,3%
	Rata-rata	23,9%	20,3%	21,8%	21,7%	10%	2%	0,6%
Utara	1	24,6%	9,6%	13,1%	26,1%	24,1%	2,3%	0,2%
	2	11,9%	12,5%	14,7%	32,7%	26,0%	2,0%	0,2%
	3	22,2%	11,7%	15,8%	28,6%	23,8%	2,5%	0,1%
	4	10,7%	20,3%	22,7%	28,2%	15,5%	2,3%	0,3%
	5	10,6%	10,8%	17,3%	33,6%	8,0%	2,1%	0,5%
	6	3,6%	20,1%	25,5%	36,1%	18,7%	1,5%	0,2%
	7	23,9%	10,6%	15,7%	26,3%	21,3%	1,3%	0,3%
	8	12,1%	17,3%	22,4%	27,1%	19,6%	2,3%	0,9%
	9	15,2%	20,3%	23,2%	26,1%	14,3%	1,9%	0,1%
	Rata-rata	15,0%	14,8%	19,0%	29,4%	19,0%	2,0%	0,3%

Lampiran 2. Data Tutupan Lamun

Stasiun	Transect garis	Jarak	Nilai Penutupan Lamun(%)	Rata-rata
Barat	1	0	95	60
		10	25	
		20	55	
		30	80	
		40	65	
	2	50	40	71,7
		0	95	
		10	65	
		20	95	
		30	95	
	3	40	55	50,8
		50	25	
		0	40	
		10	55	
		20	80	
			Rata-rata per stasiun	60,8
Utara	1	0	95	49,2
		10	25	
		20	40	
		30	65	
		40	65	
	2	50	5	43,3
		0	95	
		10	95	
		20	40	
		30	25	
	3	40	5	23,3
		50	0	
		0	55	
		10	55	
		20	25	
			Rata-rata per stasiun	38,6

Lampiran 3. Data Analisis Nitrat dan Fosfat pada Substrat

Stasiun	Nitrat	Fosfat
SB.1	0,20	0,52
SB.2	0,40	0,50
SB.3	0,32	0,61
SB.4	0,36	0,27
SB.5	0,48	0,38
SB.6	0,27	0,30
SB.7	0,28	0,40
SB.8	0,48	0,73
SB.9	0,45	0,69
Rata-rata	0,36	0,49
SU.1	0,39	0,66
SU.2	0,41	0,54
SU.3	0,43	0,65
SU.4	0,56	0,47
SU.5	0,51	0,58
SU.6	0,46	0,73
SU.7	0,58	0,79
SU.8	0,60	0,68
SU.9	0,45	0,70
Rata-rata	0,49	0,64

Stasiun	Transect Garis	Jarak	Kerapatan Plot	Kerapatan tiap jenis lamun						
				Cr	Ea	Th	Si	Ho	Hu	Cs
Barat	1	0	272	254	18	0	0	0	0	0
		10	42	0	42	0	0	0	0	0
		20	70	0	70	0	0	0	0	0
		30	84	0	67	17	0	0	0	0
		40	129	19	48	36	0	26	0	0
		50	65	0	25	40	0	0	0	0
	2	0	36	0	36	0	0	0	0	0
		10	64	0	49	15	0	0	0	0
		20	64	0	64	0	0	0	0	0
		30	62	0	27	35	0	0	0	0
		40	32	0	32	0	0	0	0	0
		50	22	0	21	1	0	0	0	0
	3	0	56	40	3	13	0	0	0	0
		10	78	43	0	35	0	0	0	0
		20	51	0	43	8	0	0	0	0
		30	48	0	38	10	0	0	0	0
		40	37	0	23	14	0	0	0	0
		50	36	4	25	7	0	0	0	0
Utara	1	0	97	39	0	58	0	0	0	0
		10	53	0	0	6	0	47	0	0
		20	80	36	0	44	0	0	0	0
		30	67	30	0	37	0	0	0	0
		40	88	32	0	56	0	0	0	0
		50	59	31	0	28	0	0	0	0
	2	0	83	35	0	18	30	0	0	0
		10	69	50	0	19	0	0	0	0
		20	53	0	0	43	10	0	0	0
		30	66	39	18	8	0	1	0	0
		40	9	3	1	5	0	0	0	0
		50	0	0	0	0	0	0	0	0
	3	0	42	26	0	3	0	0	13	0
		10	76	19	14	27	0	0	16	0
		20	81	25	34	5	2	0	0	15
		30	28	0	0	6	0	6	0	16
		40	0	0	0	0	0	0	0	0
		50	6	6	0	0	0	0	0	0

Lampiran 4. Data Kerapatan Lamun

Lampiran 5. Data *Gradistat*

Stasiun Barat

B.1

SAMPLE STATISTICS

SAMPLE IDENTITY: ANALYST & DATE: ,
 SAMPLE TYPE: Polymodal, Poorly Sorted TEXTURAL GROUP: Gravelly Sand
 SEDIMENT NAME: Very Fine Gravelly Very Coarse Sand

	μm	ϕ	GRAIN SIZE DISTRIBUTION	
	MODE 1:	1200.0	-0.243	GRAVEL: 17.2%
MODE 2:	605.0	0.747	SAND: 82.8%	MEDIUM SAND: 20.9%
MODE 3:	302.5	1.747	MUD: 0.0%	FINE SAND: 10.7%
D_{10} :	163.9	-1.203		V FINE SAND: 2.1%
MEDIAN or D_{50} :	633.3	0.659	V COARSE GRAVEL: 0.0%	V COARSE SILT: 0.0%
D_{90} :	2301.8	2.609	COARSE GRAVEL: 0.0%	COARSE SILT: 0.0%
(D_{90} / D_{10}) :	14.05	-2.170	MEDIUM GRAVEL: 0.0%	MEDIUM SILT: 0.0%
$(D_{90} - D_{10})$:	2138.0	3.812	FINE GRAVEL: 0.0%	FINE SILT: 0.0%
(D_{75} / D_{25}) :	4.101	-5.116	V FINE GRAVEL: 17.2%	V FINE SILT: 0.0%
$(D_{75} - D_{25})$:	952.4	2.036	V COARSE SAND: 24.9%	CLAY: 0.0%

	METHOD OF MOMENTS			FOLK & WARD METHOD		Description
	Arithmetic	Geometric	Logarithmic	Geometric	Logarithmic	
	μm	μm	ϕ	μm	ϕ	
MEAN (\bar{x}):	939.0	640.8	0.642	699.4	0.516	Coarse Sand
SORTING (σ):	759.4	2.488	1.315	2.594	1.375	Poorly Sorted
SKEWNESS (S_k):	0.940	-0.243	0.243	0.050	-0.050	Symmetrical
KURTOSIS (K):	2.625	2.200	2.200	0.845	0.845	Platykurtic

Dibagi 1000 0,6994

B.2

SAMPLE STATISTICS

SAMPLE IDENTITY: ANALYST & DATE: ,
 SAMPLE TYPE: Polymodal, Poorly Sorted TEXTURAL GROUP: Gravelly Sand
 SEDIMENT NAME: Very Fine Gravelly Coarse Sand

	μm	ϕ	GRAIN SIZE DISTRIBUTION	
	MODE 1:	605.0	0.747	GRAVEL: 16.5%
MODE 2:	302.5	1.747	SAND: 83.5%	MEDIUM SAND: 24.7%
MODE 3:	1200.0	-0.243	MUD: 0.0%	FINE SAND: 9.9%
D_{10} :	172.6	-1.191		V FINE SAND: 1.2%
MEDIAN or D_{50} :	609.8	0.714	V COARSE GRAVEL: 0.0%	V COARSE SILT: 0.0%
D_{90} :	2283.3	2.534	COARSE GRAVEL: 0.0%	COARSE SILT: 0.0%
(D_{90} / D_{10}) :	13.22	-2.127	MEDIUM GRAVEL: 0.0%	MEDIUM SILT: 0.0%
$(D_{90} - D_{10})$:	2110.6	3.725	FINE GRAVEL: 0.0%	FINE SILT: 0.0%
(D_{75} / D_{25}) :	4.056	-5.658	V FINE GRAVEL: 16.5%	V FINE SILT: 0.0%
$(D_{75} - D_{25})$:	929.8	2.020	V COARSE SAND: 22.7%	CLAY: 0.0%

	METHOD OF MOMENTS			FOLK & WARD METHOD		Description
	Arithmetic	Geometric	Logarithmic	Geometric	Logarithmic	
	μm	μm	ϕ	μm	ϕ	
MEAN (\bar{x}):	909.9	626.2	0.675	691.0	0.533	Coarse Sand
SORTING (σ):	751.7	2.415	1.272	2.559	1.356	Poorly Sorted
SKEWNESS (S_k):	1.033	-0.086	0.086	0.089	-0.089	Symmetrical
KURTOSIS (K):	2.784	2.124	2.124	0.839	0.839	Platykurtic

Dibagi 1000 0,6919

B.3

SAMPLE STATISTICS

SAMPLE IDENTITY: ANALYST & DATE: ,
 SAMPLE TYPE: Polymodal, Poorly Sorted TEXTURAL GROUP: Gravelly Sand
 SEDIMENT NAME: Very Fine Gravelly Medium Sand

	μm ϕ		GRAIN SIZE DISTRIBUTION			
MODE 1:	302.5	1.747	GRAVEL: 17.3%	COARSE SAND: 22.0%		
MODE 2:	605.0	0.747	SAND: 82.7%	MEDIUM SAND: 24.4%		
MODE 3:	1200.0	-0.243	MUD: 0.0%	FINE SAND: 8.3%		
D ₁₀ :	132.1	-1.205		V FINE SAND: 8.7%		
MEDIAN or D ₅₀ :	573.5	0.802	V COARSE GRAVEL: 0.0%	V COARSE SILT: 0.0%		
D ₉₀ :	2305.1	2.920	COARSE GRAVEL: 0.0%	COARSE SILT: 0.0%		
(D ₉₀ / D ₁₀):	17.45	-2.424	MEDIUM GRAVEL: 0.0%	MEDIUM SILT: 0.0%		
(D ₉₀ - D ₁₀):	2173.0	4.125	FINE GRAVEL: 0.0%	FINE SILT: 0.0%		
(D ₇₅ / D ₂₅):	4.367	-6.281	V FINE GRAVEL: 17.3%	V FINE SILT: 0.0%		
(D ₇₅ - D ₂₅):	944.0	2.127	V COARSE SAND: 19.3%	CLAY: 0.0%		

	METHOD OF MOMENTS			FOLK & WARD METHOD		
	Arithmetic	Geometric	Logarithmic	Geometric	Logarithmic	Description
	μm	μm	ϕ	μm	ϕ	
MEAN (\bar{x}):	873.1	543.0	0.881	587.2	0.768	Coarse Sand
SORTING (σ):	785.9	2.800	1.485	3.154	1.657	Poorly Sorted
SKEWNESS ($S\bar{k}$):	1.026	-0.238	0.238	-0.060	0.060	Symmetrical
KURTOSIS (K):	2.692	2.201	2.201	0.971	0.971	Mesokurtic

Dibagi 1000 0,8029

B.4

SAMPLE STATISTICS

SAMPLE IDENTITY: ANALYST & DATE: ,
 SAMPLE TYPE: Polymodal, Poorly Sorted TEXTURAL GROUP: Sandy Gravel
 SEDIMENT NAME: Sandy Very Fine Gravel

	μm ϕ		GRAIN SIZE DISTRIBUTION			
MODE 1:	2400.0	-1.243	GRAVEL: 32.6%	COARSE SAND: 17.4%		
MODE 2:	1200.0	-0.243	SAND: 67.4%	MEDIUM SAND: 19.9%		
MODE 3:	302.5	1.747	MUD: 0.0%	FINE SAND: 7.5%		
D ₁₀ :	256.6	-1.336		V FINE SAND: 1.0%		
MEDIAN or D ₅₀ :	1068.1	-0.095	V COARSE GRAVEL: 0.0%	V COARSE SILT: 0.0%		
D ₉₀ :	2525.1	1.963	COARSE GRAVEL: 0.0%	COARSE SILT: 0.0%		
(D ₉₀ / D ₁₀):	9.842	-1.469	MEDIUM GRAVEL: 0.0%	MEDIUM SILT: 0.0%		
(D ₉₀ - D ₁₀):	2268.5	3.299	FINE GRAVEL: 0.0%	FINE SILT: 0.0%		
(D ₇₅ / D ₂₅):	6.468	-1.421	V FINE GRAVEL: 32.6%	V FINE SILT: 0.0%		
(D ₇₅ - D ₂₅):	1828.1	2.693	V COARSE SAND: 21.7%	CLAY: 0.0%		

	METHOD OF MOMENTS			FOLK & WARD METHOD		
	Arithmetic	Geometric	Logarithmic	Geometric	Logarithmic	Description
	μm	μm	ϕ	μm	ϕ	
MEAN (\bar{x}):	1219.0	833.1	0.263	897.5	0.156	Coarse Sand
SORTING (σ):	886.2	2.571	1.362	2.621	1.390	Poorly Sorted
SKEWNESS ($S\bar{k}$):	0.340	-0.434	0.434	-0.305	0.305	Very Fine Skewed
KURTOSIS (K):	1.480	2.025	2.025	0.629	0.629	Very Platykurtic

Dibagi 1000 0,8029

B.5

SAMPLE STATISTICS

SAMPLE IDENTITY:

ANALYST & DATE: ,

SAMPLE TYPE: Polymodal, Poorly Sorted

TEXTURAL GROUP: Gravelly Sand

SEDIMENT NAME: Very Fine Gravelly Coarse Sand

	μm ϕ		GRAIN SIZE DISTRIBUTION			
	μm	ϕ	GRAVEL: 18.8%	COARSE SAND: 25.1%	SAND: 81.2%	MEDIUM SAND: 23.4%
MODE 1:	605.0	0.747	MUD: 0.0%	FINE SAND: 13.4%		
MODE 2:	302.5	1.747		V FINE SAND: 1.3%		
MODE 3:	2400.0	-1.243	V COARSE GRAVEL: 0.0%	V COARSE SILT: 0.0%		
D ₁₀ :	158.4	-1.227	COARSE GRAVEL: 0.0%	COARSE SILT: 0.0%		
MEDIAN or D ₅₀ :	590.7	0.759	MEDIUM GRAVEL: 0.0%	MEDIUM SILT: 0.0%		
D ₉₀ :	2340.8	2.658	FINE GRAVEL: 0.0%	FINE SILT: 0.0%		
(D ₉₀ / D ₁₀):	14.78	-2.166	V FINE GRAVEL: 18.8%	V FINE SILT: 0.0%		
(D ₉₀ - D ₁₀):	2182.4	3.885	V COARSE SAND: 18.0%	CLAY: 0.0%		
(D ₇₅ / D ₂₅):	4.272	-5.583				
(D ₇₅ - D ₂₅):	955.0	2.095				

	METHOD OF MOMENTS			FOLK & WARD METHOD		
	Arithmetic	Geometric	Logarithmic	Geometric	Logarithmic	Description
	μm	μm	ϕ	μm	ϕ	
MEAN (\bar{x}):	911.4	601.4	0.734	681.6	0.553	Coarse Sand
SORTING (σ):	792.3	2.534	1.342	2.637	1.399	Poorly Sorted
SKEWNESS (S_k):	1.001	-0.022	0.022	0.104	-0.104	Coarse Skewed
KURTOSIS (K):	2.560	2.001	2.001	0.824	0.824	Platykurtic

Dibagi 1000 0,8029

B.6

SAMPLE STATISTICS

SAMPLE IDENTITY:

ANALYST & DATE: ,

SAMPLE TYPE: Polymodal, Poorly Sorted

TEXTURAL GROUP: Gravelly Sand

SEDIMENT NAME: Very Fine Gravelly Coarse Sand

	μm ϕ		GRAIN SIZE DISTRIBUTION			
	μm	ϕ	GRAVEL: 24.0%	COARSE SAND: 22.6%	SAND: 76.0%	MEDIUM SAND: 21.7%
MODE 1:	2400.0	-1.243	MUD: 0.0%	FINE SAND: 9.4%		
MODE 2:	605.0	0.747		V FINE SAND: 2.0%		
MODE 3:	302.5	1.747	V COARSE GRAVEL: 0.0%	V COARSE SILT: 0.0%		
D ₁₀ :	170.4	-1.283	COARSE GRAVEL: 0.0%	COARSE SILT: 0.0%		
MEDIAN or D ₅₀ :	649.5	0.623	MEDIUM GRAVEL: 0.0%	MEDIUM SILT: 0.0%		
D ₉₀ :	2433.1	2.553	FINE GRAVEL: 0.0%	FINE SILT: 0.0%		
(D ₉₀ / D ₁₀):	14.28	-1.990	V FINE GRAVEL: 24.0%	V FINE SILT: 0.0%		
(D ₉₀ - D ₁₀):	2262.7	3.836	V COARSE SAND: 20.3%	CLAY: 0.0%		
(D ₇₅ / D ₂₅):	4.420	-3.656				
(D ₇₅ - D ₂₅):	1064.7	2.144				

	METHOD OF MOMENTS			FOLK & WARD METHOD		
	Arithmetic	Geometric	Logarithmic	Geometric	Logarithmic	Description
	μm	μm	ϕ	μm	ϕ	
MEAN (\bar{x}):	1037.0	691.0	0.533	731.3	0.452	Coarse Sand
SORTING (σ):	837.8	2.579	1.367	2.643	1.402	Poorly Sorted
SKEWNESS (S_k):	0.715	-0.238	0.238	0.060	-0.060	Symmetrical
KURTOSIS (K):	1.974	2.067	2.067	0.806	0.806	Platykurtic

Dibagi 1000 0,73139

B.7

SAMPLE STATISTICS

SAMPLE IDENTITY: ANALYST & DATE: ,
 SAMPLE TYPE: Polymodal, Poorly Sorted TEXTURAL GROUP: Gravelly Sand
 SEDIMENT NAME: Very Fine Gravelly Coarse Sand

	μm ϕ		GRAIN SIZE DISTRIBUTION	
	MODE 1:	605.0	0.747	GRAVEL: 18.8%
MODE 2:	302.5	1.747	SAND: 81.2%	MEDIUM SAND: 24.7%
MODE 3:	1200.0	-0.243	MUD: 0.0%	FINE SAND: 8.1%
D ₁₀ :	251.9	-1.228		V FINE SAND: 1.3%
MEDIAN or D ₅₀ :	621.6	0.686	V COARSE GRAVEL: 0.0%	V COARSE SILT: 0.0%
D ₉₀ :	2341.8	1.989	COARSE GRAVEL: 0.0%	COARSE SILT: 0.0%
(D ₉₀ / D ₁₀):	9.295	-1.620	MEDIUM GRAVEL: 0.0%	MEDIUM SILT: 0.0%
(D ₉₀ - D ₁₀):	2089.9	3.217	FINE GRAVEL: 0.0%	FINE SILT: 0.0%
(D ₇₅ / D ₂₅):	4.078	-4.859	V FINE GRAVEL: 18.8%	V FINE SILT: 0.0%
(D ₇₅ - D ₂₅):	959.4	2.028	V COARSE SAND: 21.5%	CLAY: 0.0%

	METHOD OF MOMENTS			FOLK & WARD METHOD		
	Arithmetic	Geometric	Logarithmic	Geometric	Logarithmic	Description
	μm	μm	ϕ	μm	ϕ	
MEAN (\bar{x}):	952.4	656.2	0.608	710.6	0.493	Coarse Sand
SORTING (σ):	777.9	2.418	1.274	2.565	1.359	Poorly Sorted
SKEWNESS (S_k):	0.947	-0.109	0.109	0.094	-0.094	Symmetrical
KURTOSIS (K):	2.503	2.148	2.148	0.832	0.832	Platykurtic

Dibagi 1000 0,7106

B.8

SAMPLE STATISTICS

SAMPLE IDENTITY: ANALYST & DATE: ,
 SAMPLE TYPE: Polymodal, Poorly Sorted TEXTURAL GROUP: Sandy Gravel
 SEDIMENT NAME: Sandy Very Fine Gravel

	μm ϕ		GRAIN SIZE DISTRIBUTION	
	MODE 1:	2400.0	-1.243	GRAVEL: 34.1%
MODE 2:	605.0	0.747	SAND: 65.9%	MEDIUM SAND: 17.7%
MODE 3:	1200.0	-0.243	MUD: 0.0%	FINE SAND: 9.8%
D ₁₀ :	170.0	-1.343		V FINE SAND: 1.7%
MEDIAN or D ₅₀ :	1027.8	-0.040	V COARSE GRAVEL: 0.0%	V COARSE SILT: 0.0%
D ₉₀ :	2536.8	2.556	COARSE GRAVEL: 0.0%	COARSE SILT: 0.0%
(D ₉₀ / D ₁₀):	14.92	-1.903	MEDIUM GRAVEL: 0.0%	MEDIUM SILT: 0.0%
(D ₉₀ - D ₁₀):	2366.8	3.899	FINE GRAVEL: 0.0%	FINE SILT: 0.0%
(D ₇₅ / D ₂₅):	6.701	-1.430	V FINE GRAVEL: 34.1%	V FINE SILT: 0.0%
(D ₇₅ - D ₂₅):	1861.2	2.744	V COARSE SAND: 17.3%	CLAY: 0.0%

	METHOD OF MOMENTS			FOLK & WARD METHOD		
	Arithmetic	Geometric	Logarithmic	Geometric	Logarithmic	Description
	μm	μm	ϕ	μm	ϕ	
MEAN (\bar{x}):	1213.0	800.6	0.321	875.6	0.192	Coarse Sand
SORTING (σ):	911.7	2.702	1.434	2.684	1.425	Poorly Sorted
SKEWNESS (S_k):	0.331	-0.427	0.427	-0.287	0.287	Fine Skewed
KURTOSIS (K):	1.415	2.001	2.001	0.633	0.633	Very Platykurtic

Dibagi 1000 0,8756

B.9

SAMPLE STATISTICS

SAMPLE IDENTITY:

ANALYST & DATE: ,

SAMPLE TYPE: Polymodal, Poorly Sorted

TEXTURAL GROUP: Sandy Gravel

SEDIMENT NAME: Sandy Very Fine Gravel

	μm		ϕ		GRAIN SIZE DISTRIBUTION	
	μm	ϕ				
MODE 1:	2400.0	-1.243			GRAVEL: 36.5%	COARSE SAND: 15.2%
MODE 2:	302.5	1.747			SAND: 63.5%	MEDIUM SAND: 18.2%
MODE 3:	1200.0	-0.243			MUD: 0.0%	FINE SAND: 11.5%
D ₁₀ :	163.8	-1.353				V FINE SAND: 1.5%
MEDIAN or D ₅₀ :	1074.5	-0.104			V COARSE GRAVEL: 0.0%	V COARSE SILT: 0.0%
D ₉₀ :	2553.6	2.610			COARSE GRAVEL: 0.0%	COARSE SILT: 0.0%
(D ₉₀ / D ₁₀):	15.59	-1.930			MEDIUM GRAVEL: 0.0%	MEDIUM SILT: 0.0%
(D ₉₀ - D ₁₀):	2389.8	3.962			FINE GRAVEL: 0.0%	FINE SILT: 0.0%
(D ₇₅ / D ₂₅):	7.054	-1.444			V FINE GRAVEL: 36.5%	V FINE SILT: 0.0%
(D ₇₅ - D ₂₅):	1908.8	2.818			V COARSE SAND: 17.1%	CLAY: 0.0%

	METHOD OF MOMENTS			FOLK & WARD METHOD		Description
	Arithmetic	Geometric	Logarithmic	Geometric	Logarithmic	
	μm	μm	ϕ	μm	ϕ	
MEAN (\bar{x}):	1247.8	809.2	0.305	882.9	0.180	Coarse Sand
SORTING (σ):	932.1	2.788	1.479	2.717	1.442	Poorly Sorted
SKEWNESS (S_k):	0.235	-0.440	0.440	-0.324	0.324	Very Fine Skewed
KURTOSIS (K):	1.336	1.874	1.874	0.619	0.619	Very Platykurtic

Dibagi 1000 0,8029

STASIUN UTARA

U.1

SAMPLE STATISTICS

SAMPLE IDENTITY:

ANALYST & DATE: ,

SAMPLE TYPE: Polymodal, Poorly Sorted

TEXTURAL GROUP: Gravelly Sand

SEDIMENT NAME: Very Fine Gravelly Medium Sand

	μm		ϕ		GRAIN SIZE DISTRIBUTION	
	μm	ϕ				
MODE 1:	302.5	1.747			GRAVEL: 24.6%	COARSE SAND: 13.1%
MODE 2:	2400.0	-1.243			SAND: 75.4%	MEDIUM SAND: 26.1%
MODE 3:	152.5	2.737			MUD: 0.0%	FINE SAND: 24.1%
D ₁₀ :	140.1	-1.288				V FINE SAND: 2.4%
MEDIAN or D ₅₀ :	342.4	1.546			V COARSE GRAVEL: 0.0%	V COARSE SILT: 0.0%
D ₉₀ :	2441.9	2.835			COARSE GRAVEL: 0.0%	COARSE SILT: 0.0%
(D ₉₀ / D ₁₀):	17.42	-2.201			MEDIUM GRAVEL: 0.0%	MEDIUM SILT: 0.0%
(D ₉₀ - D ₁₀):	2301.7	4.123			FINE GRAVEL: 0.0%	FINE SILT: 0.0%
(D ₇₅ / D ₂₅):	7.849	-5.400			V FINE GRAVEL: 24.6%	V FINE SILT: 0.0%
(D ₇₅ - D ₂₅):	1204.0	2.973			V COARSE SAND: 9.6%	CLAY: 0.0%

	METHOD OF MOMENTS			FOLK & WARD METHOD		Description
	Arithmetic	Geometric	Logarithmic	Geometric	Logarithmic	
	μm	μm	ϕ	μm	ϕ	
MEAN (\bar{x}):	902.2	508.0	0.977	490.7	1.027	Medium Sand
SORTING (σ):	904.4	2.958	1.565	3.084	1.625	Poorly Sorted
SKEWNESS (S_k):	0.883	0.241	-0.241	0.378	-0.378	Very Coarse Skewed
KURTOSIS (K):	2.034	1.667	1.667	0.597	0.597	Very Platykurtic

Dibagi 1000 0,4907

U.2

SAMPLE STATISTICS

SAMPLE IDENTITY: ANALYST & DATE: ,
 SAMPLE TYPE: Polymodal, Poorly Sorted TEXTURAL GROUP: Gravelly Sand
 SEDIMENT NAME: Very Fine Gravelly Medium Sand

	μm ϕ		GRAIN SIZE DISTRIBUTION			
	μm	ϕ	GRAVEL: 11.9%	COARSE SAND: 14.7%	SAND: 88.1%	MEDIUM SAND: 32.7%
MODE 1:	302.5	1.747	MUD: 0.0%	FINE SAND: 26.0%		
MODE 2:	152.5	2.737		V FINE SAND: 2.2%		
MODE 3:	605.0	0.747	V COARSE GRAVEL: 0.0%	V COARSE SILT: 0.0%		
D ₁₀ :	139.4	-1.079	COARSE GRAVEL: 0.0%	COARSE SILT: 0.0%		
MEDIAN or D ₅₀ :	315.8	1.663	MEDIUM GRAVEL: 0.0%	MEDIUM SILT: 0.0%		
D ₉₀ :	2112.1	2.843	FINE GRAVEL: 0.0%	FINE SILT: 0.0%		
(D ₉₀ / D ₁₀):	15.15	-2.636	V FINE GRAVEL: 11.9%	V FINE SILT: 0.0%		
(D ₉₀ - D ₁₀):	1972.7	3.922	V COARSE SAND: 12.5%	CLAY: 0.0%		
(D ₇₅ / D ₂₅):	4.070	4.937				
(D ₇₅ - D ₂₅):	528.1	2.025				

	METHOD OF MOMENTS			FOLK & WARD METHOD		
	Arithmetic	Geometric	Logarithmic	Geometric	Logarithmic	Description
	μm	μm	ϕ	μm	ϕ	
MEAN (\bar{x}):	665.2	407.0	1.297	391.6	1.352	Medium Sand
SORTING (σ):	717.2	2.566	1.359	2.644	1.403	Poorly Sorted
SKEWNESS (S_k):	1.591	0.520	-0.520	0.350	-0.350	Very Coarse Skewed
KURTOSIS (K):	4.222	2.224	2.224	0.855	0.855	Platykurtic

Dibagi 1000 0,3916

U.3

SAMPLE STATISTICS

SAMPLE IDENTITY: ANALYST & DATE: ,
 SAMPLE TYPE: Polymodal, Poorly Sorted TEXTURAL GROUP: Gravelly Sand
 SEDIMENT NAME: Very Fine Gravelly Medium Sand

	μm ϕ		GRAIN SIZE DISTRIBUTION			
	μm	ϕ	GRAVEL: 21.2%	COARSE SAND: 15.1%	SAND: 78.8%	MEDIUM SAND: 27.3%
MODE 1:	302.5	1.747	MUD: 0.0% <td>FINE SAND: 22.7% <td></td> <td></td> </td>	FINE SAND: 22.7% <td></td> <td></td>		
MODE 2:	2400.0	-1.243		V FINE SAND: 2.5% <td></td> <td></td>		
MODE 3:	152.5	2.737	V COARSE GRAVEL: 0.0%	V COARSE SILT: 0.0%		
D ₁₀ :	140.9	-1.256	COARSE GRAVEL: 0.0%	COARSE SILT: 0.0%		
MEDIAN or D ₅₀ :	343.6	1.541	MEDIUM GRAVEL: 0.0%	MEDIUM SILT: 0.0%		
D ₉₀ :	2389.0	2.827	FINE GRAVEL: 0.0%	FINE SILT: 0.0%		
(D ₉₀ / D ₁₀):	16.96	-2.250	V FINE GRAVEL: 21.2%	V FINE SILT: 0.0%		
(D ₉₀ - D ₁₀):	2248.2	4.084	V COARSE SAND: 11.2%	CLAY: 0.0%		
(D ₇₅ / D ₂₅):	6.965	-7.747				
(D ₇₅ - D ₂₅):	1069.2	2.800				

	METHOD OF MOMENTS			FOLK & WARD METHOD		
	Arithmetic	Geometric	Logarithmic	Geometric	Logarithmic	Description
	μm	μm	ϕ	μm	ϕ	
MEAN (\bar{x}):	853.2	494.7	1.016	487.4	1.037	Medium Sand
SORTING (σ):	860.0	2.845	1.508	3.043	1.606	Poorly Sorted
SKEWNESS (S_k):	1.024	0.260	-0.260	0.374	-0.374	Very Coarse Skewed
KURTOSIS (K):	2.386	1.786	1.786	0.631	0.631	Very Platykurtic

Dibagi 1000 0,4874

U.4

SAMPLE STATISTICS

SAMPLE IDENTITY:

ANALYST & DATE: ,

SAMPLE TYPE: Polymodal, Poorly Sorted

TEXTURAL GROUP: Gravelly Sand

SEDIMENT NAME: Very Fine Gravelly Medium Sand

	μm	ϕ	GRAIN SIZE DISTRIBUTION	
MODE 1:	302.5	1.747	GRAVEL: 10.7%	COARSE SAND: 22.7%
MODE 2:	605.0	0.747	SAND: 89.3%	MEDIUM SAND: 28.2%
MODE 3:	1200.0	-0.243	MUD: 0.0%	FINE SAND: 15.5%
D_{10} :	148.8	-1.033		V FINE SAND: 2.6%
MEDIAN or D_{50} :	529.6	0.917	V COARSE GRAVEL: 0.0%	V COARSE SILT: 0.0%
D_{90} :	2046.3	2.749	COARSE GRAVEL: 0.0%	COARSE SILT: 0.0%
(D_{90} / D_{10}) :	13.75	-2.661	MEDIUM GRAVEL: 0.0%	MEDIUM SILT: 0.0%
$(D_{90} - D_{10})$:	1897.5	3.782	FINE GRAVEL: 0.0%	FINE SILT: 0.0%
(D_{75} / D_{25}) :	4.054	-13.072	V FINE GRAVEL: 10.7%	V FINE SILT: 0.0%
$(D_{75} - D_{25})$:	832.1	2.019	V COARSE SAND: 20.3%	CLAY: 0.0%

	METHOD OF MOMENTS			FOLK & WARD METHOD		Description
	Arithmetic μm	Geometric μm	Logarithmic ϕ	Geometric μm	Logarithmic ϕ	
MEAN (\bar{x}):	749.0	499.7	1.001	488.3	1.034	Medium Sand
SORTING (σ):	679.3	2.460	1.298	2.565	1.359	Poorly Sorted
SKEWNESS (S_k):	1.387	0.067	-0.067	-0.040	0.040	Symmetrical
KURTOSIS (K):	3.953	2.163	2.163	0.848	0.848	Platykurtic

Dibagi 1000 0,4883

U.5

SAMPLE STATISTICS

SAMPLE IDENTITY:

ANALYST & DATE: ,

SAMPLE TYPE: Polymodal, Poorly Sorted

TEXTURAL GROUP: Gravelly Sand

SEDIMENT NAME: Very Fine Gravelly Medium Sand

	μm	ϕ	GRAIN SIZE DISTRIBUTION	
MODE 1:	302.5	1.747	GRAVEL: 12.8%	COARSE SAND: 20.9%
MODE 2:	605.0	0.747	SAND: 87.2%	MEDIUM SAND: 40.5%
MODE 3:	1200.0	-0.243	MUD: 0.0%	FINE SAND: 9.6%
D_{10} :	161.6	-1.106		V FINE SAND: 3.2%
MEDIAN or D_{50} :	344.9	1.536	V COARSE GRAVEL: 0.0%	V COARSE SILT: 0.0%
D_{90} :	2152.2	2.629	COARSE GRAVEL: 0.0%	COARSE SILT: 0.0%
(D_{90} / D_{10}) :	13.32	-2.378	MEDIUM GRAVEL: 0.0%	MEDIUM SILT: 0.0%
$(D_{90} - D_{10})$:	1990.6	3.735	FINE GRAVEL: 0.0%	FINE SILT: 0.0%
(D_{75} / D_{25}) :	3.675	-62.251	V FINE GRAVEL: 12.8%	V FINE SILT: 0.0%
$(D_{75} - D_{25})$:	743.0	1.878	V COARSE SAND: 13.0%	CLAY: 0.0%

	METHOD OF MOMENTS			FOLK & WARD METHOD		Description
	Arithmetic μm	Geometric μm	Logarithmic ϕ	Geometric μm	Logarithmic ϕ	
MEAN (\bar{x}):	728.9	480.8	1.056	485.1	1.044	Medium Sand
SORTING (σ):	713.1	2.410	1.269	2.326	1.218	Poorly Sorted
SKEWNESS (S_k):	1.520	0.312	-0.312	0.492	-0.492	Very Coarse Skewed
KURTOSIS (K):	3.997	2.487	2.487	0.916	0.916	Mesokurtic

Dibagi 1000 0,4851

U.6

SAMPLE STATISTICS

SAMPLE IDENTITY:

ANALYST & DATE: ,

SAMPLE TYPE: Polymodal, Poorly Sorted

TEXTURAL GROUP: Gravelly Sand

SEDIMENT NAME: Very Fine Gravelly Medium Sand

	μm ϕ		GRAIN SIZE DISTRIBUTION			
MODE 1:	2400.0	-1.243	GRAVEL: 25.9%	COARSE SAND: 18.5%		
MODE 2:	302.5	1.747	SAND: 74.1%	MEDIUM SAND: 26.2%		
MODE 3:	605.0	0.747	MUD: 0.0%	FINE SAND: 13.6%		
D ₁₀ :	158.2	-1.298		V FINE SAND: 1.2%		
MEDIAN or D ₅₀ :	592.9	0.754	V COARSE GRAVEL: 0.0%	V COARSE SILT: 0.0%		
D ₉₀ :	2458.7	2.661	COARSE GRAVEL: 0.0%	COARSE SILT: 0.0%		
(D ₉₀ / D ₁₀):	15.55	-2.050	MEDIUM GRAVEL: 0.0%	MEDIUM SILT: 0.0%		
(D ₉₀ - D ₁₀):	2300.6	3.959	FINE GRAVEL: 0.0%	FINE SILT: 0.0%		
(D ₇₅ / D ₂₅):	7.062	-1.774	V FINE GRAVEL: 25.9%	V FINE SILT: 0.0%		
(D ₇₅ - D ₂₅):	1736.7	2.820	V COARSE SAND: 14.6%	CLAY: 0.0%		

	METHOD OF MOMENTS			FOLK & WARD METHOD		
	Arithmetic	Geometric	Logarithmic	Geometric	Logarithmic	Description
	μm	μm	ϕ	μm	ϕ	
MEAN (\bar{x}):	1009.4	634.4	0.656	699.6	0.515	Coarse Sand
SORTING (σ):	881.8	2.710	1.439	2.702	1.434	Poorly Sorted
SKEWNESS (S_k):	0.725	-0.014	0.014	0.119	-0.119	Coarse Skewed
KURTOSIS (K):	1.855	1.746	1.746	0.617	0.617	Very Platykurtic

Dibagi 1000 0,6996

U.7

SAMPLE STATISTICS

SAMPLE IDENTITY:

ANALYST & DATE: ,

SAMPLE TYPE: Polymodal, Poorly Sorted

TEXTURAL GROUP: Gravelly Sand

SEDIMENT NAME: Very Fine Gravelly Medium Sand

	μm ϕ		GRAIN SIZE DISTRIBUTION			
MODE 1:	302.5	1.747	GRAVEL: 24.1%	COARSE SAND: 15.8%		
MODE 2:	2400.0	-1.243	SAND: 75.9%	MEDIUM SAND: 26.5%		
MODE 3:	152.5	2.737	MUD: 0.0%	FINE SAND: 21.4%		
D ₁₀ :	144.0	-1.284		V FINE SAND: 1.7%		
MEDIAN or D ₅₀ :	504.9	0.986	V COARSE GRAVEL: 0.0%	V COARSE SILT: 0.0%		
D ₉₀ :	2434.6	2.796	COARSE GRAVEL: 0.0%	COARSE SILT: 0.0%		
(D ₉₀ / D ₁₀):	16.91	-2.178	MEDIUM GRAVEL: 0.0%	MEDIUM SILT: 0.0%		
(D ₉₀ - D ₁₀):	2290.7	4.080	FINE GRAVEL: 0.0%	FINE SILT: 0.0%		
(D ₇₅ / D ₂₅):	5.301	-4.436	V FINE GRAVEL: 24.1%	V FINE SILT: 0.0%		
(D ₇₅ - D ₂₅):	1102.7	2.406	V COARSE SAND: 10.6%	CLAY: 0.0%		

	METHOD OF MOMENTS			FOLK & WARD METHOD		
	Arithmetic	Geometric	Logarithmic	Geometric	Logarithmic	Description
	μm	μm	ϕ	μm	ϕ	
MEAN (\bar{x}):	914.2	534.2	0.905	564.9	0.824	Coarse Sand
SORTING (σ):	888.9	2.858	1.515	3.042	1.605	Poorly Sorted
SKEWNESS (S_k):	0.886	0.196	-0.196	0.115	-0.115	Coarse Skewed
KURTOSIS (K):	2.070	1.695	1.695	0.733	0.733	Platykurtic

Dibagi 1000 0,5649

U.8

SAMPLE STATISTICS

SAMPLE IDENTITY:

ANALYST & DATE: ,

SAMPLE TYPE: Polymodal, Poorly Sorted

TEXTURAL GROUP: Gravelly Sand

SEDIMENT NAME: Very Fine Gravelly Medium Sand

	μm ϕ		GRAIN SIZE DISTRIBUTION			
	μm	ϕ	GRAVEL: 11.9%	COARSE SAND: 22.0%	SAND: 88.1%	MEDIUM SAND: 26.5%
MODE 1:	302.5	1.747	MUD: 0.0%	FINE SAND: 19.3%		
MODE 2:	605.0	0.747		V FINE SAND: 3.3%		
MODE 3:	152.5	2.737	V COARSE GRAVEL: 0.0%	V COARSE SILT: 0.0%		
D ₁₀ :	142.0	-1.078	COARSE GRAVEL: 0.0%	COARSE SILT: 0.0%		
MEDIAN or D ₅₀ :	507.3	0.979	MEDIUM GRAVEL: 0.0%	MEDIUM SILT: 0.0%		
D ₉₀ :	2110.9	2.816	FINE GRAVEL: 0.0%	FINE SILT: 0.0%		
(D ₉₀ / D ₁₀):	14.87	-2.613	V FINE GRAVEL: 11.9%	V FINE SILT: 0.0%		
(D ₉₀ - D ₁₀):	1968.9	3.894	V COARSE SAND: 17.0%	CLAY: 0.0%		
(D ₇₅ / D ₂₅):	4.183	-17.538				
(D ₇₅ - D ₂₅):	822.0	2.064				

	METHOD OF MOMENTS			FOLK & WARD METHOD		
	Arithmetic	Geometric	Logarithmic	Geometric	Logarithmic	Description
	μm	μm	ϕ	μm	ϕ	
MEAN (\bar{x}):	735.1	470.3	1.088	470.5	1.088	Medium Sand
SORTING (σ):	707.0	2.561	1.357	2.633	1.397	Poorly Sorted
SKEWNESS (S_k):	1.407	0.150	-0.150	-0.020	0.020	Symmetrical
KURTOSIS (K):	3.846	2.101	2.101	0.841	0.841	Platykurtic

Dibagi 1000 0,4705

U.9

SAMPLE STATISTICS

SAMPLE IDENTITY:

ANALYST & DATE: ,

SAMPLE TYPE: Polymodal, Poorly Sorted

TEXTURAL GROUP: Gravelly Sand

SEDIMENT NAME: Very Fine Gravelly Medium Sand

	μm ϕ		GRAIN SIZE DISTRIBUTION			
	μm	ϕ	GRAVEL: 15.0%	COARSE SAND: 22.9%	SAND: 85.0%	MEDIUM SAND: 25.8%
MODE 1:	302.5	1.747	MUD: 0.0%	FINE SAND: 14.1%		
MODE 2:	605.0	0.747		V FINE SAND: 2.1%		
MODE 3:	1200.0	-0.243	V COARSE GRAVEL: 0.0%	V COARSE SILT: 0.0%		
D ₁₀ :	153.4	-1.161	COARSE GRAVEL: 0.0%	COARSE SILT: 0.0%		
MEDIAN or D ₅₀ :	565.1	0.823	MEDIUM GRAVEL: 0.0%	MEDIUM SILT: 0.0%		
D ₉₀ :	2236.5	2.705	FINE GRAVEL: 0.0%	FINE SILT: 0.0%		
(D ₉₀ / D ₁₀):	14.58	-2.329	V FINE GRAVEL: 15.0%	V FINE SILT: 0.0%		
(D ₉₀ - D ₁₀):	2083.2	3.866	V COARSE SAND: 20.1%	CLAY: 0.0%		
(D ₇₅ / D ₂₅):	4.201	-7.516				
(D ₇₅ - D ₂₅):	901.8	2.071				

	METHOD OF MOMENTS			FOLK & WARD METHOD		
	Arithmetic	Geometric	Logarithmic	Geometric	Logarithmic	Description
	μm	μm	ϕ	μm	ϕ	
MEAN (\bar{x}):	840.4	554.3	0.851	518.3	0.948	Coarse Sand
SORTING (σ):	746.0	2.522	1.334	2.592	1.374	Poorly Sorted
SKEWNESS (S_k):	1.154	0.005	-0.005	-0.054	0.054	Symmetrical
KURTOSIS (K):	3.068	2.063	2.063	0.834	0.834	Platykurtic

Dibagi 1000 0,5183

Lampiran 6 Hasil analisis *Independent T-test* Kandungan Nitrat dan Fosfat pada Substrat.

Tests of Normality

	ST	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statistic	Df	Sig.	Statistic	df	Sig.
PO43-	Stasiun Barat	,149	9	,200 [*]	,948	9	,667
	Stasiun Utara	,189	9	,200 [*]	,973	9	,921
NO3-	Stasiun Barat	,149	9	,200 [*]	,938	9	,557
	Stasiun Utara	,196	9	,200 [*]	,921	9	,405

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Independent Samples Test

	Levene's Test for Equality of Variances		t-test for Equality of Means							
	F	Sig.	t	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference		
								Lower	Upper	
PO43	Equal variances assumed	3,020	,101	-2,425	16	,028	-,15556	,06415	-,29155	-,01956
	Equal variances not assumed			-2,425	13,112	,030	-,15556	,06415	-,29403	-,01708
NO3-	Equal variances assumed	,651	,431	-3,029	16	,008	-,12778	,04219	-,21722	-,03834
	Equal variances not assumed			-3,029	15,047	,008	-,12778	,04219	-,21768	-,03788

Lampiran 7. Dokumentasi Pengambilan Data



Gambar 16. Pengamatan komposisi jenis lamun dan tutupan lamun.



Gambar 17. Perhitungan kerapatan lamun.



Gambar 18. Pengambilan sampel substrat dengan menggunakan paralon PVC (diameter 5 cm, panjang 20 cm).



Gambar 19. Pengukuran salinitas air laut menggunakan *Hendrefractometer*.



Gambar 20. Pengukuran arus laut menggunakan layang-layang arus.



Gambar 21. Pengukuran suhu air laut menggunakan termometer.

Lampiran 8. Dokumentasi Analisis Sampel



Gambar 22. Pengukuran pH sedimen dengan menggunakan pH meter.



Gambar 23. memisahkan sedimen dari masing masing sieve net.



Gambar 24. Mengeringkan sampel di dalam ruangan dan membersihkan sampel sedimen.