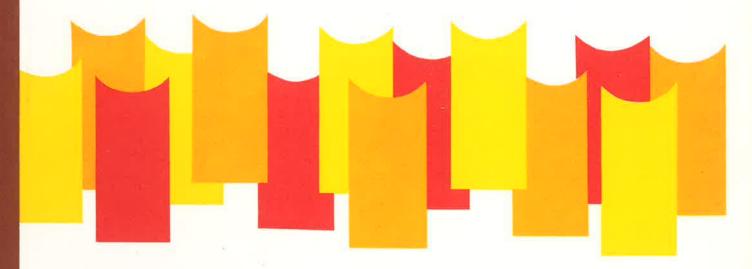
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WATER & SOIL

MISCELLANEOUS PUBLICATION

NO. 28

Bibliography of oceanography and sedimentology for the Northland—Auckland coast





Water & soil miscellaneous publication no. 28 (1981)

BIBLIOGRAPHY of OCEANOGRAPHY and **SEDIMENTOLOGY** for the NORTHLAND - AUCKLAND COAST by T.M. HUME & T.F.W. HARRIS

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WATER & SOIL MISCELLANEOUS PUBLICATION NO. 28

WELLINGTON 1981 Water & soil miscellaneous publication no. 28 (1981)

Bibliography of oceanography and sedimentology for the Northland-Auckland coast

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Water & Soil Miscellaneous Publication No. 28, 1981. 63p. ISSN 0110-4705

This bibliography brings together references concerning the oceanography and sedimentology of the coast and coastal waters, including major estuaries, of Northland-Auckland, New Zealand. It excludes, however, the Manukau and Waitemata Harbours, these being covered by existing bibliographies.

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Bibliography of oceanography and sedimentology for the Northland-Auckland coast / by T.M. Hume and T.F.W. Harris. -Wellington : National Water and Soil Conservation Organisation, 1981. - lv. -(Water & Soil miscellaneous publication, ISSN 0110-4705 ; no.28)

Alphabetical arrangement with subject index.

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1. Oceanography--Pacific Ocean, Southwestern--Bibliography. 2. Oceanography--Tasman Sea--Bibliography. 3. Marine sediments--Pacific Ocean, Southwestern--Bibliography. 4. Marine sediments--Tasman Sea--Bibliography. I. Harris, T.F.W. II. Title. III. Series.

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PREFACE

The purpose of this bibliography is to bring together references to all material concerning the oceanography and sedimentology of the coast and coastal waters of Northland - Auckland, New Zealand. The material selected for inclusion was that which seemed likely to bear on the coastal problems of erosion, sediment mining and the disposal of wastes, these being matters of interest to the sponsors, the National Water and Soil Conservation Organisation. The bibliography therefore contains references to papers which treat the following kinds of subjects; coastal morphology, bathymetry, sediments, geology and soils (where they relate to sediment provenance), sea-level, tides, winds, currents, dispersion, water quality (especially salinity, temperature and suspended sediments) and coastal engineering.

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The area of interest includes the coasts and coastal waters, bounded by the Waikato River on the west, and the Coromandel Peninsula on the east, together with major estuaries but excluding the Manukau and Waitemata Harbours, which are covered by existing bibliographies, in course of being updated by one of us (T.M.H.).

Attention is drawn to the four topics whose inclusion is impractical and which are in any case being handled by specialists who are the best souces of information:

- Sea levels: In addition to measurements being made at the major harbours, there are many others, sometimes 'ad hoc' made by a variety of agencies. The Hydrographic office of the Royal New Zealand Navy has a New Zealand Tidal Library which holds microfilm copies of tide gauge charts and results of harmonic tidal analyses.
- Bathymetry: More detailed charts at varying scales, used to prepare referenced charts, are available by arrangement with the Hydrographer of the Royal New Zealand Navy.

Aerial photography: Apart from the Lands and Survey Department, there are several organisations which hold aerial photographs of the coast. Amongst these are Aero Services (New Zealand) Ltd., New Zealand Aerial Mapping, Whites Aviation Ltd., Air Logistics, and the New Zealand Forest Service.

- Satellite Imagery: Satellite sensed images of coastal waters are now becoming available. The central authority handling these is the Physics and Engineering Laboratory of the Department of Scientific and Industrial Research, distribution being made by the Lands and Survey Department, Wellington.

In the main bibliography the references are set out in alphabetical order of the authors. To most have been added a short annotation which seeks to draw attention to the scope and usefulness of the work, that might not otherwise be apparent from the title. This is especially true for the biological references that have embedded in them valuable oceanographic or sediment data. The references are also listed in a subject index. Location maps have been included for reference.

When possible, copies of the material cited have been incorporated in a collection which is housed in the Water and Soil Division of the Ministry of Works Auckland District Office, and which may be servicable to those having difficulty in locating items. Where reports were commissioned privately, the commissioning authority should naturally be approached if use is to be made of the data.

The sources of references show an interesting distribution; as follows (expressed as a percentage).

Published	0/0	Total
Authorities and Government Agencies	23	
Serials (Journals)	21	
Conferences	4	
Books	3	51%
Unpublished		
Consultants	18	
Authorities and Government Agencies	15	
University theses	14	
University material	2	49%

When, during the course of the literature search, the productivity of the unpublished category become apparent, personal enquiries were instituted, amongst local and catchment authorities, harbour boards and government files. Sometimes the existence of a reference was revealed by the chance recollection of one person, so it is difficult to be sure that the search was exhaustive. In the files category the bibliography includes references to technical reports and filed maps and drawings. In addition to these however the files contain a considerable amount of miscellaneous technical data and background information that for practical reasons is not cited in the bibliography.

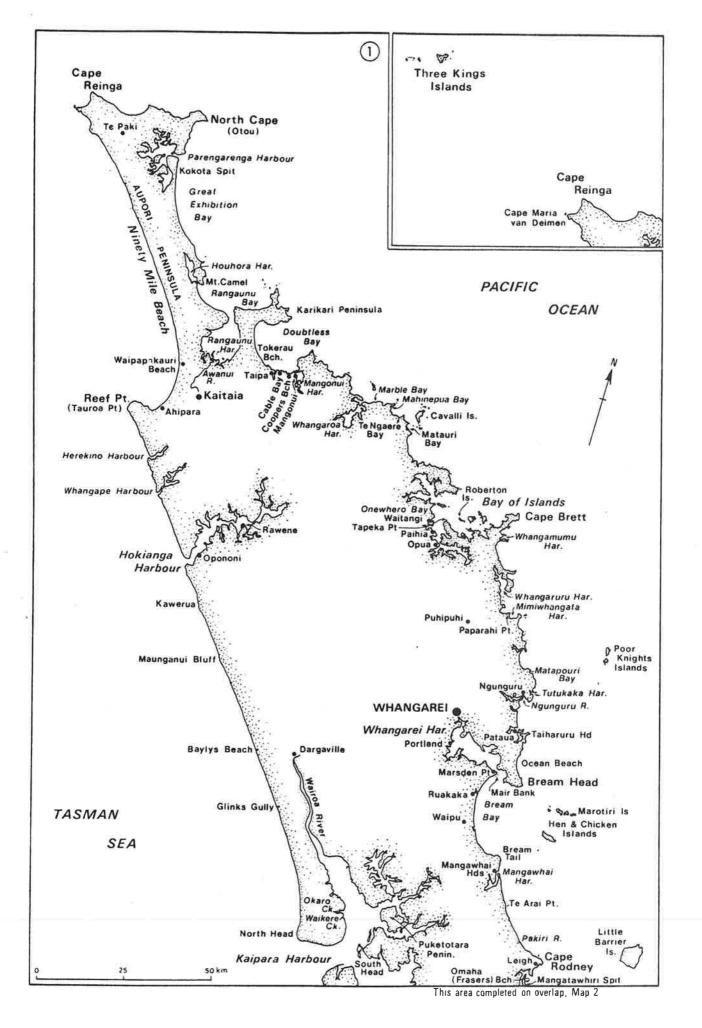
In the course of our enquiries we received much help and co-operation from individuals and organisations, especially librarians. Many responded to an invitation to comment on the first draft which was circulated. Almost all gave permission for unpublished reports to be cited. We are most grateful to all from whom we received assistance. Jane Kelly prepared the maps and the cover.

T.M. Hume, Water and Soil Division, Ministry of Works & Development, Auckland. T.F.W. Harris,C/- Department of Physics,The University of Auckland,Auckland.

JULY 1981.

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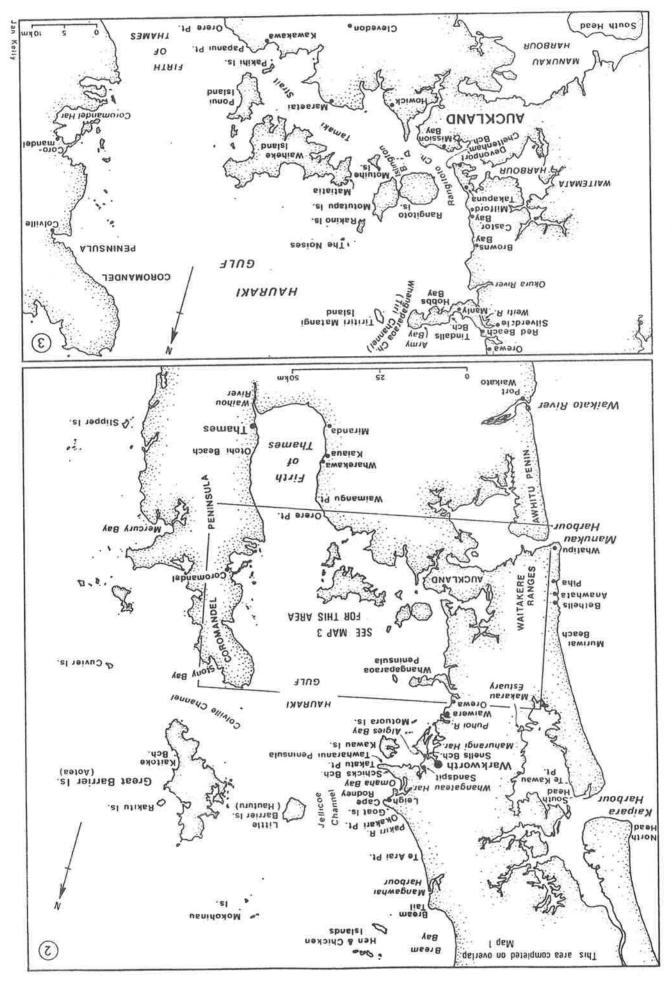
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1. ADAMS, A.D. 1979: Recent foraminifera and sediments of Rangaunu Harbour and inner Rangaunu Bay, Northland. M.Sc. thesis University of Auckland. 185pp. + appendices.

Includes textural and compositional data for surficial sediments.

2. AGNEW, R. 1966: Storm tides in the Tasman Sea. N.Z. Journal of Geology and Geophysics 9 : 239-242.

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Discusses tidal and meteorological factors contributing to higher than normal tides observed in the Kaipara and Manukau Harbours in July 1965.

 AGNEW, R. 1973: Coastal disturbances affecting the North Island of New Zealand. Paper presented to the Conference on Coastal Engineering, Sydney. May 1973.

Discusses sea level changes related to tsunami, meteorological and other causes.

4. ALCOCK, E.A. 1966: A study of the pigmentation and photosynthesis in <u>Ecklonia radiata</u>. M.Sc. thesis, University of Auckland. 130pp.

Refers to light penetration in Goat Island Bay.

5. ALLEN, L.R. 1947: The geology of the Whangarei Heads area, North Auckland, New Zealand. M.Sc. thesis, University of New Zealand. 132pp.

Includes description and photographs of coastal features.

 ALLEN, L.R. 1951: The geology of the Whangarei Heads, Northland. Transactions of the Royal Society of New Zealand 79 : 294-318.

Deals with the stratigraphic and structural geology of the area.

- ANDERSON, P.W.; GRANGE, K.R. 1976: Bibliography of scientific studies of Manukau Harbour, Auckland. Miscellaneous Publications N.Z. Oceanographic Institute 74 : 16pp.
- 8. ANON, 1951: Seawater temperatures in New Zealand. N.Z. Fishing and Shooting Gazette 19 : 9.

Describes research by the Oceanographic Observatory and lists New Zealand surface water temperatures for 1950. 9. ANON, 1974: Commercial dredging of offshore deposits. Soil and Water 10(4) : 43-45.

Discusses some of the major aspects and implications of offshore seabed mining with particular reference to Northland's east coast.

10. ANON, 1974: A possible answer to the growing shortage of land based shingle. Soil and Water 11(2) : 4-6.

Discusses the possibility of mining sands and gravels for building aggregate from the inner shelf of Northland's east coast.

11. APPLIED GEOLOGY ASSOCIATES, 1980: Preliminary report on the foreshore and nearshore sand and shingle resources of the Auckland region. Report prepared for the Marine Division, Ministry of Transport. March 1980. 18pp.

> A summary of existing information covering the geology, sediment source and transport, and history of the coastal sand and shingle systems in the Auckland area.

12. ASH, J.K. 1970: Geology of the Mount Camel area. M.Sc. thesis, University of Auckland. 186pp.

Contains petrographic data.

13. ATTWOOD, T.; TAUNER, G. 1923: Untitled report of beach inspections for mining potential. Report prepared for the Marine Department, Wellington. 4th July 1923. 31pp.

> Describes inspection of beaches of east Auckland area (Goat Island Bay to Tamaki Strait) and western Coromandel Peninsula, (Stony Bay to Otohi Beach on the eastern Hauraki Gulf) and makes recommendations on sand and shingle extraction.

- 14. AUCKLAND HARBOUR BOARD, 1963: Manukau Harbour entrance, surveys of bar 1844-1961. Drawing A680/1 of 5 December 1963.
- 15. AUCKLAND HARBOUR BOARD, 1964: Planning study of channel conditions at the entrance to Manukau Harbour. Internal report, Auckland Harbour Board. 16pp.

Includes data on sedimentation and drift for 1961 and 1963 and climatic and wave data.

- H1/1 of January 1967. Scale 200ft=1".
- H1/46/2 of December 1975. Scale 1:5000.
- H1/46/3 of December 1977. Scale 1:5000.
- H1/46/4 of January 1979. Scale 1:5000.
- H1/46/5 of August 1979. Scale 1:5000.
- H1/46/7 of August 1980. Scale 1:5000.

Seabed bathymetry in vicinity of spoil dumping ground in Hauraki Gulf.

17. AUCKLAND HARBOUR BOARD, 1967-80: Bathymetry of Rangitoto Channel. H1 series. Varying scales.

Numerous drawings at varying scales including pre- and post- dredging data.

- AUCKLAND HARBOUR BOARD, 1969: Bathymetry of Islington Bay. Drawing H1/14 of August 1969. Scale 3 chains = 1".
- 19. AUCKLAND HARBOUR BOARD, 1970: Bathymetry Tiritiri Matangi -Rangitoto Beacon. Drawing H1/22 of 1970. Scale 1 : 18000.

Composite chart drawn from earlier surveys.

- 20. AUCKLAND HARBOUR BOARD, 1970: Bathymetry Motuihe Island Wharf. Drawing H1/24 of November 1970. Scale 40' = 1".
- 21. AUCKLAND HARBOUR BOARD, 1971: Bathymetry around Rangitoto Island Wharf. Drawing H1/25 of January 1971. Scale 400' = 1".
- 22. AUCKLAND HARBOUR BOARD, 1977: Cheltenham Beach seabed profiles. Drawings H1/53 A,B & C of July 1977. Scale 1 : 1000 and 1 : 100.
- AUCKLAND HARBOUR BOARD, 1979: Cheltenham Beach -Devonport. Monitoring changes in beach profiles. Drawing E.2052 of 28 February 1979. Sheets 1 and 2.
- 24. AUCKLAND HARBOUR BOARD, 1979: Matiatia Bay boat mooring area. Drawing H1/65 of April 1979. Scale 1 : 1200.

Bathymetry of Matiatia Bay, Waiheke Island.

25. AUCKLAND HARBOUR BOARD, AUCKLAND REGIONAL AUTHORITY, 1978: Manukau Harbour Plan. Part 2 Supplementary papers. Report compiled by AHB and ARA study group with contributions by various authors.

> Includes a paper reviewing changes in the shoals and channels of the entrance to the Manukau Harbour.

 AUCKLAND REGIONAL AUTHORITY, 1976: Report on a coastal resource area, Kaipara South Peninsula. Planning Division, A.R.A. April 1976. 58pp. + appendices.

Contains general information on the character, uses and soil conservation of the sand dune areas.

 AUCKLAND REGIONAL AUTHORITY, 1979: Investigation of water quality in the Pakiri Estuary. Unpublished report, file reference Cr/262. 8pp. + appendices.

Extensive study relating to algal blooms. Includes comparisons with the water quality of other estuaries.

 AUCKLAND REGIONAL WATER BOARD, 1976: Baseline data on water quality in the Auckland water region obtained in 1975 and 1976. Report prepared for the A.R.W.B. by the Works Division, Auckland Regional Authority, Auckland. 84pp.

> Includes listings of field measurements of various water quality parameters including: temperature, salinity, turbidity, DO, BOD, chloride, pH and coliforms for coastal areas in the Auckland Water Region.

29. AUCKLAND REGIONAL WATER BOARD, 1977: Baseline data on water quality in the Auckland water region obtained in 1976 and 1977. Volume II. Report prepared for the A.R.W.B. by the Works Division, Auckland Regional Authority, Auckland. 55pp.

As for A.R.W.B. 1976.

 AUCKLAND REGIONAL WATER BOARD, 1979: Regional Water and Soil Resources Survey. Volume 1 - statement of water and soil resources for the Auckland water region. Auckland Regional Water Board Technical Publication No. 13. October 1979. 137pp.

Includes a two page listing of tidal gaugings undertaken in the Auckland area.

31. AUCKLAND REGIONAL WATER BOARD, 1980: Untitled tidal measurements in Wairau Creek inlet, Milford. Water Right Application CE/2349 by Takapuna City Council. August 1980. Various pagings.

> Contains measurements of tidal height, ebb tide velocity and discharge made by Auckland Harbour Board at the entrance to the Milford Marina, Wairau Estuary, on 14 June 1980.

32. AUCKLAND REGIONAL WATER BOARD, (in prep.): Baseline data on water quality in the Auckland water region obtained in 1977 and 1978. Volume III. Report prepared for the A.R.W.B. by the Works Division, Auckland Regional Authority, Auckland.

As for A.R.W.B. 1976.

- AUCKLAND REGIONAL WATER BOARD, 1978-1981: Unpublished data 33. from beach surveys. 1. Pakiri - Mangawhai Heads, 8 profiles beach and offshore,

 - surveyed in 1978-79. Reference marks surveyed and levelled.
 - 2. Orewa, 3 profiles, surveyed in January 1979 and 1981.
 - 3. Red Beach, 1 profile, surveyed in 1979 and 1981.
 - 4. Browns Bay, 2 profiles, surveyed in 1979 and 1981.
 - 5. Muriwai, 2 profiles, surveyed 1981.
 - 6. Piha, 2 profiles, surveyed 1981.
- 34. AYLING, A.M. 1978: Okakari Point to Cape Rodney Marine Reserve - a biological survey. University of Auckland. 98pp.

Contains bathymetric measurements.

BACON, M.R. 1971: The ecology of the graspid crabs Plagusia 35. Capensis, Leptograpsus variegatus, Cyclograspsus insularum and Cyclograpsus lavauxi in Northern New Zealand. M.Sc. thesis, University of Auckland. 89pp.

Includes some sediment size data.

BACON, M.R. 1973: The coastal ecology of a recreational resource 36. area: Kawakawa Bay to Miranda. Planning Division, Auckland Regional Authority. 2nd edition 1975. 94pp.

Contains beach profiles and substrate types for 8 beaches.

BACON, M.R. 1974: Interim report on coastal resource area ·37. Cape Rodney to Mangawhai Heads. Planning Division, Auckland Regional Authority. 27pp.

A descriptive treatment of recreational and natural resources.

38. BALLANCE, P.F. 1977: The geology of Motuora Island, Hauraki Gulf. Tane 23 : 77-82.

Includes a description of shore platform development.

 BALLANTINE, W.J.; GRACE, R.V.; DOAK, W.T. 1973: Mimiwhangata marine report. Report prepared for Turbott and Halstead on behalf of New Zealand Breweries Ltd. 98pp.

> Mainly biological but contains some current measurements, and reference to the characteristics of the beaches and dunes.

40. BARDSLEY, E. 1977: The natural history of Kaipara Harbour: a bibliography. Miscellaneous Publications N.Z. Oceanographic Institute 79 : 54pp.

An annotated bibliography

41. BARKER, M.F. 1971: The ecology of barnacle larvae. M.Sc. thesis, University of Auckland. 144pp.

Includes float and drogue measurements of currents near Goat Island.

42. BARKER, M.F. 1975: The effect on the mercury levels of local marine organisms of proposed offshore dredging in northern New Zealand. Report prepared by Bioresearches Ltd. for Landsea Minerals Ltd. 12pp. + appendices.

Studies undertaken as preliminary work prior to the commercial extraction of seabed sands and gravels off the east coast of Northland.

43. BARKER, P.H.; KIBBLEWHITE, A.C. 1965: Physical oceanographic data from the "Tui" Cruise, 1962. N.Z. Journal of Science 8: 604-634.

Seasonal salinity and temperature data - mainly deep water but includes north-east coastal waters.

 BARNET, M.A.F. 1938: The cyclonic storms in northern New Zealand on the 2nd February and the 26th March 1936. D.S.I.R. Mcteorological Office Note No.22 : 34pp. Government Printer, Wellington. New Zealand.

Describes the cyclones and includes data on the average monthly frequency of cyclones affecting the northern part of New Zealand.

45. BARTER, T.P. 1976: The Kaihu Group (Plio-Quaternary) of the Awhitu Peninsula, Southwest Auckland. Ph.D. thesis, University of Auckland. 299pp.

> Gives an account of the physiography and structure of Awhitu Peninsula, and describes the mineralogy provenance, sedimentology, palaeontology and post-depositional alteration of the Plio-Quaternary (Kaihu Group) sediments on the peninsula.

 BARTRUM, J.A. 1926: The western coast of the Firth of Thames. Transactions and Proceedings of the New Zealand Institute 57 : 245-253.

Brief description of terraces, beach ridges and beach deposits.

47. BASKETT, W.G. 1970: Geology of the Ahipara District. M.Sc. thesis University of Auckland. 138pp.

Includes petrographic data.

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- BATT, W.D.; FORTUNE, W. 1973: Geological reconnaissance evaluation of the silica sand potential of the Parengarenga 5B1 and 5B2B2 Blocks. Unpublished report A.H.I. Minerals Ltd.
- 49. BECA CARTER HOLLINGS AND FERNER LTD, 1968: Sewage treatment for Orewa County Town - float testing. Report prepared for Waitemata County Council. 6pp.

Contains trajectories of current floats off Orewa - Red Beach area.

50. BECA CARTER HOLLINGS AND FERNER LTD, 1969: Whangaparaoa float testing. Unpublished data (12 drawings).

Records of float trajectories in vicinity of Army Bay and Tindalls Bay.

51. BECA CARTER HOLLINGS AND FERNER LTD, 1974: Environmental impact report; waste water disposal for the Hibiscus Coast. Report prepared for the Waitemata County Council. 85pp. + appendices.

> Reports estimates of dilutions to be expected from an outfall in the Tiri Channel with original tidal current data (floats and current meters) and dye dilution results. Wind rose and sea surface temperatures for Auckland are included.

52. BECA CARTER HOLLINGS AND FERNER LTD, 1975: Waste water disposal for the Hibiscus Coast. Report prepared for the Rodney County Council, submission to the Auckland Regional Authority. 30pp.

> Includes bacterial sampling data for various beaches near the Whangaparaoa Peninsula.

53. BECA CARTER HOLLINGS AND FERNER LTD, 1975: Environmental impact assessment, Whangaparaoa Peninsula sewage treatment site. Report prepared for the Rodney County Council. 23pp. + appendices.

> Contains results of nitrate and bacteriological analysis of coastal waters of the Whangaparaoa Peninsula and Waiwera Beach.

 54. BECA CARTER HOLLINGS AND FERNER LTD, 1976: Omaha foreshore investigation. Report prepared for the Rodney County Council. 32pp. + appendices.

> A study of foreshore erosion on Mangatawhiri Spit, Omaha Bay. Various solutions to the problem are suggested. Includes appendix by Professor Raudkivi giving estimate of onshoreoffshore sediment transport.

 55. BECA CARTER HOLLINGS AND FERNER LTD, 1977: Hibiscus Coast wastewater disposal scheme. Ultimate and staged construction proposals. Report prepared for the Rodney County Council. 39pp. + appendices.

> Contains estimates of outfall dilutions and a report by Bioresearches Ltd giving tidal current data in the Tiri Channel and Weiti Estuary as well as nutrient and bacteriological analyses for the latter.

56. BECA CARTER HOLLINGS & FERNER LTD, 1978: Whangateau Harbour protection and Omaha Beach reconstruction loan applications. Collection of reports and papers submitted to the Secretary, Local Authority Loans Board, M.W.D. Auckland on behalf of Rodney County Council. November 1978. Various pagings.

> Contains consultants' reports and much technical and background data relating to investigations of foreshore erosion and proposed protection measures on Omaha Beach and the shores of Whangateau Harbour.

57. BECA CARTER HOLLINGS AND FERNER LTD, 1978: Coastal protection recommendations in respect of Omaha Beach and Whangateau Harbour Report prepared for the Rodney County Council. 8pp. BECA CARTER HOLLINGS AND FERNER LTD, 1978: Omaha storm analysis. Report prepared by P.B. Riley. 12 July 1978. 3pp. + appendices.

> Describes factors (i.e. tide levels, wind, synoptic weather scenes) contributing to coastal erosion during the 14-23 June 1978 storm.

 BECA CARTER HOLLINGS AND FERNER LTD, 1978: Takapuna City Council, Milford Marina. Appraisal of silt control schemes. Stage 1 Report. Report prepared for Takapuna City Council. June 1978. 35pp.

> Describes sedimentation problems in a boat marina at the mouth of a tidal creek. Includes data on freshwater and sediment influx, rate of sediment deposition and outlines engineering solutions to the problem.

60. BECA CARTER HOLLINGS AND FERNER LTD, 1979: Omaha beach design and construction proposals. Report prepared for Rodney County Council. February 1979. 22pp. + appendices.

Includes report by Dames Moore and Associates, California (dated 10 January 1979).

61. BECA CARTER HOLLINGS AND FERNER LTD, 1979: Omaha Beach reconstruction. Monthly report #1. Report prepared for Rodney County Council. April 1979. 7pp. + appendices + photographs.

Job status report with details of initiation of sand monitoring program.

62. BECA CARTER HOLLINGS AND FERNER LTD, 1979: Omaha beach reconstruction. Monthly report #2. Report prepared for Rodney County Council. May 1979. 11pp. + appendices + photographs.

> Job status report with notes on monitoring of sand movements at tip of Mangatawhiri Spit in vicinity of foreshore protection works.

63. BECA CARTER HOLLINGS AND FERNER LTD, 1979: Omaha beach reconstruction. Monthly report # 3. June 1979. Report prepared for Rodney County Council. June 1979. 8pp. + appendices + photographs.

> Job status report with notes on monitoring of sand movements in vicinity of protection works.

 64. BECA CARTER HOLLINGS AND FERNER LTD, 1979: Omaha Beach reconstruction. Report # 4. July/August 1979. Report prepared for Rodney County Council. August 1979. 7pp.
 + appendices + photographs.

As for June report above.

65. BECA CARTER HOLLINGS AND FERNER LTD, 1979: Omaha beach reconstruction. Report # 5. September/October 1979. Report prepared for Rodney County Council. 6pp. + appendices + photographs.

As for June report above.

66. BECA CARTER HOLLINGS AND FERNER LTD, 1980: Omaha beach reconstruction. Final construction report. Report # 6. November 1979/March 1980. Report prepared for Rodney County Council. 4pp. + appendices + photographs.

Includes description and photographs of sand movement in vicinity of protection works.

67. BECA CARTER HOLLINGS AND FERNER LTD, 1980: Omaha beach reconstruction. Monitoring report No. 1. Report prepared for Rodney County Council. November 1980. 4pp. + appendices.

> Describes the changes in sand fill, tidal flow patterns and accretion in vicinity of completed foreshore protection works at Omaha.

68. BECHTEL PACIFIC CORPORATION LTD, 1975: Thermal discharge analysis for Marsden Power Station. Report prepared for the N.Z. Electricity Department. 52pp.

> Presents computer model estimates of predicted surface isotherms generated in Bream Bay by recirculating power station cooling water.

 69. BELL, J.M.; CLARKE, E.de C. 1909: The geology of the Whangaroa Subdivision Hokianga Division. N.Z. Geological Bulletin 8 : 115pp.

Includes a brief mention of coastline morphology.

 BELL, W.L. 1950: Sand and shingle in Auckland and Coromandel areas (Rabone Report). Internal report, Auckland District Office, Ministry of Works and Development. November 1950. (File 12/243). 29pp.

> A visual assessment of the composition and state of beaches on the east coast of Northland, Auckland, Coromandel and the shores of the Manukau Harbour.

- 71. BIORESEARCHES LTD, 1974: A preliminary study of the ecological impact of mining gravel from sublittoral deposits off the east coast of Northland. Report prepared for Landsea Minerals Ltd. 25pp.
- 72. BIORESEARCHES LTD, 1975: Assessment of effects of proposed sewage effluent at Omaha on ecology and water quality. Report for the Rodney County Council. 43pp.

Currents were measured with dye and drogues.

73. BIORESEARCHES LTD, 1975: Assessment of the effects of a proposed sewage scheme for the Mahurangi Peninsula on ecology and water quality. Report prepared for the Rodney County Council. 46pp.

Currents were measured with dyes and floats.

74. BIORESEARCHES LTD, 1976: Weiti River sewage disposal environmental impact assessment. Report prepared for the Rodney County Council. 27pp.

> Data on nutrients, bacteria, suspended solids and salinity. Current measurements with dye and drogues.

75. BIORESEARCHES LTD, 1976: Aspects of the Ecology of the area surrounding the oil refinery at Marsden Point. Report prepared for the N.Z. Refining Company. 190 pp. + plates.

Qualitative distribution of sediments in lower harbour and entrance.

76. BIORESEARCHES LTD, 1976: Current testing at Marsden Point Refinery. Report prepared for the N.Z. Refining Company. 10pp.

Drogue observation in the eastern Whangarei Harbour - partly in Bream Bay.

77. BIORESEARCHES LTD, 1977: The plankton and hydrology of the area around the proposed sewage outfall in Tiritiri Channel. Report prepared for the Rodney County Council. 74pp.

> Seven stations monitored monthly for 12 months with measurements of temperature, salinity, oxygen, suspended solids, Secchi depth, total and faecal coli, phosphate and nitrogen, chlorophyll 'a', and biological collection.

78. BIORESEARCHES LTD, 1977: The water quality implications of disposal of treated sewage effluent into the Tiri Channel. Report prepared for the Rodney County Council. 37pp.

Drogued floats were used to measure currents. Water & soil miscellaneous publication no. 28 (1981) BIORESEARCHES LTD, 1978: Report on the ecology at Oyster Point in the South Kaipara Harbour. Report prepared for N.Z. Electricity Department. 169pp.

Temperature, salinity, dissolved oxygen and sediment grain size are recorded.

80. BIORESEARCHES LTD, 1978: Assessment of the effects of rejects disposal on the harbour environment. Report for Wilsons Portland Cement Ltd, Whangarei. 47pp.

> Salinity, temperature, Secchi depth, suspended solids and, dissolved oxygen measured in Portland Reach, Whangarei Harbour.

81. BIORESEARCHES LTD, 1978: The possible effects of power station development on ecology of the Firth of Thames. Report prepared for the N.Z. Electricity Department. 210pp.

> Monthly measurements for a year at nine stations of temperature, salinity and dissolved oxygen in the water column. Two diurnal profiles included as well as sediment type map.

BIORESEARCHES LTD, 1978 and 1979: The monitoring of marine habitats in the vicinity of Marsden Point Oil Refinery. Reports for the N.Z. Refining Co. Number 1: 29pp. + plates. Number 2: 32pp. + plates.

Sediment grain sizes in the vicinity of Marsden Point.

83. BIORESEARCHES LTD, 1979: Proposed refinery expansion and the natural environment. Appendix 4 in Marsden Point Oil Refinery: proposed expansion: environmental impact report. Volume 2. Report prepared for N.Z. Refining Company Ltd. February 1979. 55pp.

> Contains limited information of tidal flow patterns in estuarine and coastal waters in the vicinity of Marsden Point.

84. BIORESEARCHES LTD, 1980: The ecological impact of the proposed forestry wharf at Marsden Point. Report in preparation for the Northland Harbour Board. 79pp.

Sediment grain sizes locally.

 BIORESEARCHES LTD, 1981: Disposal of effluent from proposed refinery outfall. Report prepared for the N.Z. Refining Company. 5pp.

Drogue and dye observation between oil jetties and Mair Bank (Marsden Point) during beginning of an ebb tide.

86. BIORESEARCHES LTD, 1981 (in prep.): The impact of the proposed Wairoa River Marina on the marine ecosystem. Investigation for Rowe and McInnes. 38pp.

> Data on salinity, suspended solids, pH, BOD, nutrients and bacteria. Current measurements with dyes and drogues. Sediment grain sizes.

 BOOTH, J.D. 1974: Observations on the hydrology of Bay of Islands. N.Z. Journal of Marine and Freshwater Research 8 : 671-689.

> Measurements recorded of temperature, salinity, Secchi depth, dissolved oxygen and general water circulation (with drift cards, and drogues at 8m depth).

88. BRADFORD, J.M.; ROBERTS, P.E. 1978: Distribution of reactive phosphorus and plankton in relation to upwelling and surface circulation around New Zealand. N.Z. Journal of Marine and Freshwater Research 12 : 1-15.

Macroscale treatment.

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 89. R.G. BRICKELL, MOSS AND PARTNERS, 1965: Foundation investigation Marsden Point Power Station, Bream Bay, Northland, New Zealand. Report prepared for Bechtel Pacific Corporation Ltd. June 1965.
 19pp. + plates + appendices.

Contains borelog data down to 50 metres below MSL from holes drilled in area of existing station complex.

 90. R.G. BRICKELL, MOSS AND PARTNERS, 1975: Foundation investigation, onshore structures, Marsden B Power Station, Bream Bay, Northland, New Zealand. Report prepared for Bechtel Pacific Corporation Ltd. April 1975. 19pp. + plates + appendices.

Describes borelogs from dune area down to 53 metres below MSL and results of various engineering tests on the sediments.

91. R.G. BRICKELL, MOSS AND PARTNERS, 1975: Site investigation, offshore structures, Marsden B Power Station, Bream Bay, Northland, New Zealand. Report prepared for Bechtel Pacific Corporation Ltd. May 1975. 10pp. + plates + appendices.

> Describes borelogs from seabed area offshore from existing power station down to 45 metres below MSL and results of various engineering tests on the sediments.

- 92. BRITISH ADMIRALTY, 1906: Chart 1898, New Zealand North Island, Hauraki Gulf from Omaha Bay to Tiritiri Matangi, 1 : 36590. Surveyed by HMS Penguin in 1904-5. Published at the Admiralty, London. 17 February 1906.
- 93. BROADBENT, M. 1972: Thermal Power Development: the Marsden Point seismic refraction survey of February 1972. Geophysics Division D.S.I.R. Report 78 : 10pp.

Results of terrestrial seismic survey carried out in vicinity of Marsden Power Station.

94. BRODIE, J.W. 1960: Coastal surface currents around New Zealand. N.Z. Journal of Geology and Geophysics 3 : 235-252.

Reports drift card recoveries, some of which are in the region of interest.

 BRODIE, J.W. 1964: Bathymetry of the New Zealand region. Memoir N.Z. Oceanographic Institute 11. D.S.I.R. Bulletin 161 : 55pp.

> Describes large scale morphological, structural and sedimentological characteristics of the New Zealand plateau.

96. BROOK, F.J.; GRACE, R.V.; HAYWARD, B.W. (in prep.): Soft-bottom benthic faunal associations of Tutukaka Harbour, Northland, New Zealand. Tane:

Contains map of sediments.

97. BROTHERS, R.N. 1954: A physiographical study of recent sand dunes on the Auckland West Coast. N.Z. Geographer 10 : 47-59.

> Deals with dunes between Kaipara South Head and Anawhata, their formation and their erosion-deposition state.

98. BROTHERS, R.N. 1954: The relative Pleistocene chronology of the South Kaipara district, New Zealand. Transactions of the Royal Society of New Zealand 82 : 677-694.

> Describes the composition, structure and origin of Pleistocene sediments of the Kaihu Group between Kaipara South Head and Bethells Beach.

- 99. BROWN, D.A. 1937: The geology of the Clevedon area, Auckland. M.Sc. thesis, University of New Zealand. 76pp.
- 100. BROWN, D.A. 1942: Geology of the west coast of the Firth of Thames. Transactions and Proceedings of the Royal Society of New Zealand. 72 : 69-83.

101. BROWNE, M.L. 1975: Anticyclones in the Australia - New Zealand region. N.Z. Meteorological Services Technical Note 228. 9pp. + appendices.

> Presents the frequency and intensity of anticyclones. Macroscale treatment.

102. BYE, J.A.T.; HEATH, R.A. 1975: The New Zealand semi-diurnal tide. Journal of Marine Research 33 : 423-442.

Model and observed amplitudes and phases of the semi-diurnal tide are compared. Includes the region of interest as part of a much larger study.

- 103. CAMERON, J.F. 1975: Coastal developement in Rodney County. Architectural Association, Auckland. Bulletin 68 : 14-15.
- 104. CAMPBELL, G.H. (in prep):Coasts. Annotated bibliography of environmental research in the Auckland region. Planning Division, Auckland Regional Authority. 1970-1980. 23pp.

Unpublished draft of annotated bibliography.

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- 105. CARRIG, J.A.; SPENCE, R.M. 1977: Coastal planning in New Zealand. A preliminary bibliography to 1975. Ministry of Works and Development Library. 36pp.
- 106. CARTER, L. 1969: The Mahurangi Limestone from Puketotara Peninsula, Northland, New Zealand. N.Z. Journal of Geology and Geophysics 12 : 104-118.

Contains mineralogical data that may be useful in provenance studies of Kaipara Harbour sediments.

107. CARTER, L. 1971: Stratigraphy and sedimentology of the Waitemata Group, Puketotara Peninsula, Northland. N.Z. Journal of Geology and Geophysics 14 : 169-191.

Contains mineralogical data that may be useful in provenance studies of Kaipara Harbour sediments.

108. CARTER, L. 1975: Sedimentation on the continental terrace around New Zealand: a review. Marine Geology 19 : 209-237.

> A general account of the setting, composition and origin of continental shelf sediments.

109. CARTER, L. 1980: Ironsand in continental shelf sediments off Western New Zealand - a synopsis. N.Z. Journal of Geology and Geophysics 23 : 455-468.

> Reviews the distribution, composition and origin of surficial and subsurface ironsand deposits between the Arawata River (Westland) in the south and Kaipara Harbour in the north.

110. CARTER, L.; HEATH, R.A. 1975: Role of mean circulation, tides and waves in the transport of bottom sediment on the New Zealand continental shelf. N.Z. Journal of Marine and Freshwater Research 9 : 423-448.

It is concluded that shelf sediments are moved by combined wave and tidal action. Transport directions are deduced.

111. CARTER, L.; EADE, J.V. 1980: Hauraki Sediments. N.Z. Oceanographic Institute Chart, Coastal Series, 1 : 200,000.

Surficial sea floor sediments east of the area between Ngunguru Bay and Mercury Bay.

112. CASSIE, R.M. 1960: Hydrology of the Hauraki Gulf. Proceedings of the N.Z. Ecological Society 7: 40-43.

A collation of existing temperature and salinity observations with some remarks on turbidity.

113. CATHCART, R.W. 1979: Water and soil guidelines for urban development in coastal areas. Internal report, Northland Catchment Commission, Whangarei. 17pp.

Discusses development guidelines for east and west coast beaches typical of the Northland area.

114. CAWTHRON INSTITUTE, 1978: Appraisal of the Omaha ocean beach protection plan 1977. Report prepared for the Rodney County Council. April 1978. 87pp. + appendices.

> An environmental impact report on the Omaha Beach Protection Plan as described in the April 1977 report presented jointly by Dames Moore and Associates, Prof. Per Bruun and Bernard McCarthy and Partners.

115. CHRISTIE, A.B. 1975: Sedimentology of Pleistocene and Recent ironsands, west coast of the North Island, New Zealand: a study of grain size distributions of some Recent ironsands and the sedimentology of a Pleistocene and Recent ironsand deposit at Waikato North Head. M.Sc. thesis, University of Victoria. 116. CHRISTIE, A.B. 1979: Sedimentary structures in Quaternary ironsands at Waikato North Head, New Zealand. N.Z. Journal of Geology and Geophysics 22 : 213-226.

Evidence suggests an aeolian origin for most of the deposit.

117. CLARIDGE, G.G.C. 1961: Mineralogy and origin of the yellow-brown sands and related soils. N.Z. Journal of Geology and Geophysics 4: 48-72.

> Describes the mineralogy and origin of soils developed on wind-blown sands including those in Awhitu Peninsula, Kumeu, Dargaville, Waipapakauri and Ruakaka.

118. COCHRANE, G.R.; MALE, A.G.R. 1977: Regional and seasonal patterns of stream sediment discharges along New Zealand coasts from SKYLAB and LANDSAT satellite imagery. Proceedings of the N.Z. Ecological Society 24 : 13-20.

> Includes comment on the Manukau Harbour, Kaipara Harbour, Hauraki Gulf, and Firth of Thames regions.

- 119. COMMISSION FOR THE ENVIRONMENT, 1974: Hibiscus Coast sewage proposals. Environmental impact audit. Commission for the Environment, Wellington. 142pp.
- 120. COMMISSION FOR THE ENVIRONMENT 1974: Marsden B Power Station; environmental impact audit. Commission for the Environment Wellington. August 1974. 18pp. + submissions.

Contains some comments on shoreline movements.

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- 121. COMMISSION FOR THE ENVIRONMENT, 1979: Proposed boat launching facilities Browns Bay, Auckland. Environmental impact audit, January 1979. 27pp. + appendices + submissions.
- 122. COMMISSION FOR THE ENVIRONMENT, 1979: Marsden Point Oil Refinery : proposed extensions : environmental impact audit. Commission for the Environment Wellington. Various pagings.

Contains measurements of historical shoreline change at southern perimeter of N.Z. Refining Company's boundary at Marsden Point.

123. CORNFORTH, R.C.D. 1980: Leigh Climate Report. Marine Laboratory, Leigh, University of Auckland. 96pp.

Preliminary survey after 13 years data collection at the Marine Laboratory weather station.

124. CORNWELL, W.L. 1974: Auckland Thermal Power Station. Wharekawa site - Firth of Thames. Engineering geology and site investigations. Auckland Engineering Laboratory, Ministry of Works and Development. Report 74/38: 10pp. + appendices.

Contains information on beach ridges.

125. CORNWELL, W.L. 1974: Auckland Thermal Power Station. Waimangu site - Firth of Thames. Engineering geology and site investigation. Auckland Engineering Laboratory, Ministry of Works and Development. Report 74/39: 10pp. + appendices.

Includes data on coastal gravel deposits.

126. CORNWELL, W.L. 1976: Aggregate resources of the Auckland Area. Report No. 2. Naturally occurring fine aggregate. Auckland Engineering Laboratory, Ministry of Works and Development. Report 76/9: 6pp. + appendices.

Notes on the origin, location, and commercial use of east and west coast beach and harbour sands.

 127. CORNWELL, W.L. 1977: City of Waitemata subdivision at Piha (Wright and Salmon appeal). Auckland Engineering Laboratory, Ministry of Works and Development. Report 77/21: 4pp.
 + appendices + photographs.

Describes historical shoreline change on North Piha beach.

128. CORNWELL, W.L. 1979: The gravel deposits of Onewhero Bay Bay of Islands. Auckland Engineering Laboratory, Ministry of Works and Development. Report 79/8: 6pp. + appendices + photographs.

> Discusses the nature and origin of beach and beach ridge sand and gravel deposits with particular reference to their commercial exploitation for the exposed aggregate market.

129. COTTON, C.A. 1951: Redeposition theory of sedimentation. N.Z. Journal of Science and Technology B 32 : 19-25.

Describes the processes of sedimentation around the New Zealand coast.

130. COTTON, C.A.; COLLINS, B.W.(Ed.) 1974: "Bold Coasts." A.H. and A.W. Reed, Wellington. 354 pp.

> Discusses the reason for the difference in the morphology of the east and west coasts of the north of the North Island. Emphasises the importance of the Waikato River sediments as a source of sediment supply.

- 131. COX, J.E. 1977: Northland Peninsula (distribution, description and pedogenesis of yellow brown sands). Pp. 18-47. In Neall, V.E. (editor): "Soil groups of New Zealand." Part 2. Yellow brown sands. N.Z. Society of Soil Science, Wellington. 272pp.
- 132. CULLEN, D.J. 1966: A series of coloured charts of New Zealand coastal sediments. D.S.I.R. Information Series 56. N.Z. Oceanographic Institute contribution 190: 11pp.

Describes the chart series in terms of the quality of information, representation of sediments on the charts, and criteria used in positioning sediment boundaries.

133. DAMES MOORE AND ASSOCIATES, 1975: Stabilisation plan for Omaha Beach sandspit. Report prepared for Broadlands Properties Ltd. December 1975. 18pp. + appendices.

Discusses reasons for sandspit erosion (waves, tides, currents), proposes engineering solutions to the problems which include groynes and Longard sand filled tubes.

134. DAMES MOORE AND ASSOCIATES, 1977: Omaha ocean beach beach protection plan. Report prepared for Broadlands Properties Ltd. in conjunction with Prof. Per Bruun and Bernard McCarthy and Partners. April 1977. 11pp. + appendices

> A report on the investigation and the recommended method of prevention of the coastal erosion at Omaha Beach.

135. DAMES MOORE AND ASSOCIATES, 1978: Addendum to Omaha Beach protection plan - April 1977. Report prepared for Broadlands Properties Ltd. in conjunction with Prof. Per Bruun. July 1978. 7pp. + appendices + photographs.

> Discusses protective measures necessary to control erosion inside Whangateau Harbour and their relation to Omaha Beach protection works. Includes notes on tidal velocities and tidal prism at Whangateau Harbour entrance.

136. DELFT HYDRAULICS LABORATORY 1976: Gulf Harbour reclamation project Hobbs Bay (New Zealand). Report prepared for Parkdale Development Ltd. August 1976. 13pp. + appendices.

> Presents information on bathymetry, water levels, currents, wind and waves (including wave records and wave refraction and wave energy data) and seafloor sediments for Hobbs Bay, Whangaparaoa Peninsula.

 137. DEL GROSSO, R.F. 1971: Some aspects of beach morphology and sediments of Bethells and Piha, Auckland West Coast. M.A. thesis, University of Auckland. 118pp. + appendices.

> Includes visual wave records made in 1971, profiles and sediment size data. Beach profile and sediment textural changes are compared to changes in energy conditions (wind data and visual wave observations) over an 8 month period.

138. DELLOW, V. 1955: Marine algal ecology of the Hauraki Gulf, New Zealand. Transactions of the Royal Society of New Zealand 83 : 1-91.

> Includes notes summarising the geology, wind, rainfall, air temperature, sea temperature, salinity, pH, pollution, turbidity; tidal currents, streams and levels; and waves in the Gulf.

139. DE LISLE, J.F.; KERR, I.S. 1964: The climate and weather of Northland, New Zealand. N.Z. Meteorological Service Miscellaneous Publication 115 : 37-50.

A brief account of the weather systems and characteristics.

140. DOWNIE, J. 1976: Te Paki land use study: preliminary report on the dune sands of the Te Paki stream area. Report prepared for N.Z. Department of Lands and Survey, Auckland. 8pp.

Coastal dunes: forms, processes and effects of forestry.

141. DROMGOOLE, F.I. 1964: Ecology of the sublittoral boulder beaches at Little Barrier Island. Tane 10 : 70-78.

Contains a physical description of sublittoral boulder beaches.

142. DURBIN, E. 1969: Phytoplankton ecology and productivity in Whangateau Harbour. M.Sc. thesis, University of Auckland. 175pp.

Includes data on temperature, salinity distributions, nutrients, and silica-salinity relationship.

143. EADE, J.V. 1970: Poor Knights Bathymetry. N.Z. Oceanographic Institute Chart, Coastal Series, 1 : 200,000. 144. EADE, J.V. 1974: Hauraki Bathymetry. N.Z. Oceanographic Institute Chart, Coastal Series, 1:200,000.

Depth contours at 25m intervals.

145. EADE, J.V. 1974: Poor Knights Sediments. N.Z. Oceanographic Institute Chart, Coastal Series, 1:200,000.

Chart of surficial seafloor sediments east of the area between Whangaroa Harbour and Whangarei.

- 146. ELLIOT, J.D. 1967: The geology of the Ocean Beach Matapouri Bay Coastal Region, Northland. M.Sc. thesis, University of Auckland. 174pp.
- 147. ELLIOT, J.D. 1968: Some tertiary igneous rocks from the Ocean Beach - Matapouri coastal region, Northland. Transactions of the Royal Society of New Zealand. Geology 6 : 13-21.

Contains petrographic data.

148. ESLER, A.E. 1974: Vegetation of the sand country bordering the Waitakere Range, Auckland : the southern beaches. Proceedings of the N.Z. Ecological Society 21:72-77.

Shows the progradation of Whatipu Beach since 1940.

149. ESLER, A.E. 1975: Vegetation of the sand country bordering the Waitakere Range, Auckland : Piha Beach. Proceedings of the N.Z. Ecological Society 22 : 52-56.

Includes comments on historical changes in beach stability.

- 150. ESTCOURT, I.N. 1976: Bibliography of scientific studies of New Zealand mainland estuaries, inlets, lagoons, harbours and fiords. Miscellaneous Publications N.Z. Oceanographic Institute 75 : 40pp.
- 151. FARNELL, E.J. 1973: Geology of the Cape Reinga area Northland. M.Sc. thesis, University of Auckland. 157pp.

Contains petrographic data.

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152. FERGUSON, S.R. 1974: The velocity structure of the sea-bed and basement rocks between Leigh and the Mokohinau Islands. M.Sc. thesis, University of Auckland. 101pp.

A seismic refraction survey was used to determine the compressional - wave velocity structure of the sea bed and underlying basement (to a depth of 3km) on a line between Leigh and the Mokohinau Islands.

153. FERGUSON, S.R.; HOCHSTEIN, M.P.; KIBBLEWHITE, A.C. 1980: Seismic refraction studies in the northern Hauraki Gulf, New Zealand. N.Z. Journal of Geology and Geophysics 23 : 17-25.

Includes data on the thickness of unconsolidated Quarternary sediments in the Hauraki Gulf.

154. FERRAR, W.T. 1925: The geology of the Whangarei - Bay of Islands subdivision, Kaipara Division. N.Z. Geological Survey Bulletin 27 : 134pp.

> Includes brief descriptions of the coastline, harbours and Recent coastal deposits including raised beaches, storm beaches and sandspits.

155. FERRAR, W.T. 1934: The geology of the Dargaville - Rodney subdivision Hokianga and Kaipara Divisions. N.Z. Geological Survey Bulletin 34 : 86pp.

Includes a brief description of the coastline.

156. FRISBY, R.B. 1980: Bream Bay - Record of coastal observation programme and calculation of longshore transport rate. Internal report, Technical Services, Water and Soil Division, MWD, Wellington. December 1980. 42pp. + appendices.

> Application of various longshore transport formulae to beach observer records made at Marsden Power Station over the period February 1978 to July 1980.

157. FULLER, A.S. 1953: Seasonal variation in plankton and salinity in the Hauraki Gulf, New Zealand. Nature, London 171 : 525-526.

Contains salinity measurements as far north as the Bay of Islands.

158. FURKERT, F.W. 1947: Tidal compartments, their influence on dimensions of harbour entrance channels. Proceedings of the N.Z. Institution of Engineers 33 : 195-211.

> Derives a relationship between the tidal compartment and the area of the entrance channel for estuaries including Kaipara, Manukau, Hokianga, Auckland and Parengarenga Harbours.

Water & soil miscellaneous publication no. 28 (1981)

 159. GARNER, D.M. 1961: Hydrology of New Zealand coastal waters. Memoir N.Z. Oceanographic Institute 8. D.S.I.R. Bulletin 138: 85pp.

Contains seasonal salinity and temperature data.

160. GARNER, D.M. 1969: The seasonal range of sea temperature on the New Zealand shelf. N.Z. Journal of Marine and Freshwater Research 3 : 201-208.

> Temperatures were measured every 10 miles on a track between the shore and the 200m depth contour.

 161. GARNER, D.M. 1979: Ocean current meter records. New Zealand coastal waters. University of Auckland, Physics Department. Maui Development Environmental Study. Physics Report No. 79-1: 4pp. + appendices.

> Reports current meter data from the Tiri Channel (Whangaparaoa Peninsula), Great Barrier Island and Goat Island regions.

 162. GARNER, D.M.; RIDGWAY, N.M. 1965: Hydrology of New Zealand offshore waters. Memoir N.Z. Oceanographic Institute
 12. D.S.I.R. Bulletin 162: 62pp.

Includes temperature and salinity data recorded in the vicinity of North Cape and the outer Hauraki Gulf made in the winter of 1956 and the summer of 1957.

- 163. GIBB, J.G. 1974: Technical note on commercial dredging of offshore deposits. Unpublished report, Water and Soil Division, Ministry of Works and Development, Wellington. 6pp.
- 164. GIBB, J.G. 1974: Sand extraction North Kaipara Harbour, Waikere and Okaro Bays. Report prepared for Auckland District Office, Ministry of Works and Development, by Technical Services Section, Ministry of Works and Development Wellington. October 1974. (ADO File 12/243 Vol. 3)

Report on sand extraction from seabed and beaches in the northern arm of Kaipara Harbour.

165. GIBB, J.G. 1977: Sediment data for beaches and rivers, North Island, New Zealand. Publication of the Geology Department, Victoria University of Wellington, 7. 24p.

> Describes sand and gravel beach sediment sampling and analytical techniques and provides textural and mineralogical data for west coast Northland beaches.

166. GIBB, J.G. 1977: Heavy minerals of the west coast, North Island beach sands. Pp 77-86 in Neall, V.E. (Ed.) "Soil Groups of New Zealand" Part 2. Yellow-Brown Sands. New Zealand Society of Soil Science.

> Describes alongshore variations in abundance of minerals and their sources along west coast Northland beaches.

167. GIBB, J.G. 1978: Rates of coastal erosion and accretion in New Zealand. N.Z. Journal of Marine and Freshwater Research 12 : 429-456.

> Includes rates of coastal erosion and accretion for the Manukau and Kaipara Barriers, Baylys Beach (West Coast), Ngunguru Spit and Mimiwhangata Bay (East Coast).

168. GIBB, J.G. 1979: Late Quaternary shoreline movements in New Zealand. Ph.D. thesis, University of Victoria. 217pp. + appendices.

> Deals with longshore drift, erosion and accretion and sea level changes around the New Zealand coast.

169. GILLIE, R.D. 1979: Sand and gravel deposits of the coast and inner shelf east coast, Northland Peninsula, New Zealand. Ph.D. thesis, University of Canterbury. 331pp.

> Describes the composition, origin and dynamics of surface sand and gravel deposits off the east coast of Northland between Whangaroa Harbour and Bream Head. The effects of mining the deposits are discussed.

170. GILLIE, R.D.; KIRK, R.M. 1980: Possible physical impacts from offshore sand and gravel mining: Northland, New Zealand. Report prepared for Landsea Minerals Ltd. 20pp. + figures.

Considers possible physical impacts from offshore sand and gravel mining between Whangaroa Harbour and Bream Head.

171. GILMORE, A.E. 1961: Tsunami warning charts. N.Z. Journal of Geology and Geophysics 4 : 132-135.

Charts have been constructed to assist in predicting the travel times of tsunami waves reaching the New Zealand coast from known origins.

172. GOLDIE, P.J. 1975: The Quaternary geology of an area north of Houhora. M.Sc. thesis, University of Auckland. 104pp. + appendices.

> Describes the geomorphology, geology, pedology, textural and compositional characteristics, paleontology and development of Quaternary sediments on part of the Aupouri Peninsula. Water & soil miscellaneous publication no. 28 (1981)

173. GORDON, D.P.; BALLANTINE, W.J. 1976: Cape Rodney to Okakari Marine Reserve. Review of knowledge and bibliography to December 1976. Tane 22 Supplement : 146pp.

> Contains some data on sea state, light penetration, water chemistry (nutrients, oxygen, salinity), temperature, currents, winds, and sediment sizes; and a review.

174. GRACE, R.V. 1965: The bottom fauna of the entrance to the Whangateau Harbour. Undergraduate dissertation, University of Auckland. 102pp.

Contains bathymetry and map of sediments.

175. GRACE, R.V. 1966: The bottom communities of the entrance to the Whangateau Harbour. Tane 12 : 63-70.

Contains bathymetry and some qualitative remarks on water transparency.

176. GRACE, R.V. 1968: The vertical distribution and diurnal migration of zooplankton in the Hauraki Gulf. M.Sc. thesis, University of Auckland. 76pp.

> Contains vertical profiles and interpretation of temperatures and salinity over a 24hr period, as well as movements of drogues at 2 and 20 metres, in the western Hauraki Gulf.

177. GRACE, R.V. 1972: The benthic ecology of the entrance to the Whangateau Harbour, Northland, New Zealand. Ph.D. thesis, University of Auckland. 205pp.

> Includes bathymetry, tidal flow patterns, sediment size, temperatures and salinities.

178. GRACE, R.V. 1972: Submissions on hydrology in relation to marine life of the Poor Knights Islands: In:- Application of Environmental Defence Society for a declaration of a marine reserve around the Poor Knights Islands. 74pp.

> Discusses hydrology and currents in northern New Zealand, and contains original data on surface temperature and salinity between Tutukaka and the Poor Knights.

179. GRACE, R.V. 1977: Sea surface temperatures between Mangonui and the Moturoa Islands, North-Eastern New Zealand, in May 1976. Tane 23: 67-69. 180. GRACE, R.V. 1978: Tawharanui marine monitoring programme: Report on progress. Report prepared for Auckland Regional Authority. 29pp.

> Biological monitoring of intertidal and sublittoral stations. Also contains notes and photographs of effects of storm of 18th July 1978 on shoreline and sublittoral areas.

181. GRACE, R.V. 1980: A survey of sediments and marine life at Milford in relation to proposed disposal of dredge spoil. Report prepared for the Takapuna City Council. December, 1980. 35pp.

> Includes description of grain size distribution of surficial sediments between Castor Bay and Milford Beach to one kilometer offshore.

182. GRACE, R.V. 1981: Establishment of environmental monitoring stations at Milford in relation to proposed disposal of dredge spoil. Report prepared for the Takapuna City Council. 28pp.

Contains grain size information additional to that in Grace (1980).

183. GRACE, R.V. 1981: Paparahi marine survey. Report for Department of Lands and Survey. 27pp.

Contains map of rock/sand boundary and bathymetry.

- 184. GRACE, R.V. (in prep.): Sea surface temperature patterns between Tutukaka and the Poor Knights Islands, 1969 to 1981. Journal of the Royal Society of New Zealand.
- 185. GRACE, R.V. (in prep.): Sea surface temperatures between Leigh and Rakitu Island, December 1980 to January 1981. Tane:
- 186. GRACE, R.V.; GRACE, A.B. 1977: Mimiwhangata marine monitoring programme. Report on first year, 1976-1977. Report prepared for Mimiwhangata Trust, New Zealand Breweries Ltd. 19pp.

Contains quarterly beach profile data, and biological monitoring of intertidal and sublittoral stations.

- 187. GRACE, R.V.; GRACE A.B. 1978: Marine notes on Hen Island, northern New Zealand. Tane 24: 131-135.
 - Contains surface temperature data from Whangarei Heads to Hen Island.

188. GRACE, R.V.; HAYWARD, B.W. 1980: Macrobenthos of the Cavalli Islands, northern New Zealand. Tane 26: 189-209.

Contains map of sediments.

189. GREGORY, C.R. 1979: Aspects of the beach geomorphology of Waiheke Island. M.Sc. thesis, University of Auckland. 82pp.

Classifies Waiheke Island beaches on the basis of geomorphology and sediment characteristics.

190. GREGORY, M.R. 1966: Rocks of the Waitemata Group Whangaparaoa Peninsula Northland. M.Sc. thesis, University of Auckland. 233pp.

Includes petrographic data.

191. GREGORY, M.R. 1978: Accumulation and distribution of virgin plastic granules on New Zealand beaches. N.Z. Journal of Marine and Freshwater Research 12 : 399-414.

> Describes how the imported feedstock of the local plastics industry finds its way into the marine environment where it is distributed by coastal currents.

192. GREGORY, M.R. 1978: The New Zealand shoreline and application of an oil spill vulnerability index. Pp. 42-72 in Hodder, P. (Compiler) : "A Minor Oil Spills Workbook" Centre for Continuing Education, University of Waikato, Hamilton, and Commission for the Environment, Wellington.

> Describes an oil spill vulnerability index for the New Zealand coast including the area of interest, developed on the basis of physical processes and shoreline characteristics, together with an understanding of the initial biological effects.

193. HAMILL, P.F. 1979: Beach sands of the Waitakere Ranges, Auckland West Coast. M.Sc. thesis, University of Auckland. 104pp. + appendices.

> Investigates textural and compositional characteristics of beach sands between Muriwai and Whatipu. Trends in grain size and mineral content, together with a consideration of offshore water movements are used to develop a model for sediment sources and sinks and energy distribution along the coast.

194. HAMILTON, W.M. 1961: Little Barrier Island (Hauturu). D.S.I.R. Bulletin 137 (2nd Edition) : 198pp. + separate pouch of maps.

> Mainly concerned with the natural history; includes some reference to the coastal morphology, and sediment transport at Te Titoki Point.

195. HARRISON AND GRIERSON AND PARTNERS, 1973: Environmental impact report; Gulf Harbour reclamation. Report prepared for Parkdale Developments Ltd. 1973. 31pp. + appendices

Summarises data in Delft 1976 report on Hobbs Bay.

196. HARRISON AND GRIERSON AND PARTNERS, 1974: Mahurangi Harbour marine studies. Report prepared for the Auckland Regional Authority, on marine studies carried out at Mahurangi Harbour for proposed treated sewage effluent discharge at Dawson Creek. 62pp. + appendix.

> Has information on tidal range, soundings, temperature and salinity, bacteriology, currents, water exchange, and estimates of dilution as well as diffusion coefficients.

197. HARRISON AND GRIERSON AND PARTNERS, 1974: Omaha Bay marine studies. Marine studies carried out at Omaha Bay for proposed treated sewage effluent discharge at Ti Point. Report prepared for the Auckland Regional Authority. 50pp.

> Contains bathymetry and the results of field measurements of tidal currents and dispersion in Omaha Bay, with estimates of outfall dilutions. Includes a wind rose for Warkworth.

- 198. HAY, C. 1977: Proposed boat launching facilities Paihia-Waitangi locality - an environmental impact report. N.Z. Department of Lands and Survey. 24pp.
- 199. HAYWARD, B.W. 1972: Geology of the Kawerua coastline, North Auckland. Tane 18 : 149-168.

Outlines the geology of an 8km section of coast immediately south of the Hokianga Harbour. Includes a description of Holocene beach sands, boulder beaches, low sandy terraces and dunes.

200. HAYWARD, B.W.; GRACE, R.V.; BROOK, F.J. (in press): Soft-bottom benthic macrofaunal communities of the eastern Bay of Islands, northern New Zealand. Tane 27:

Contains maps of sediments.

201. HEALY, T.R. 1966: Coastal platform morphology : A comparison of beaches at Whangaroa Heads and Piha, New Zealand. Auckland Student Geographer 1 : 157-168.

Describes mechanisms of high tide level platform development.

202. HEALY, T.R. 1967: Morphology of shore platforms in the Auckland area. Proceedings of the 5th N.Z. Geography Conference Auckland. August 1967. pp. 163-168.

Describes erosional forms of shore platforms around the Waitemata Harbour and Hauraki Gulf.

203. HEALY, T.R. 1967: The shore platforms of the Whangaparaoa Peninsula, Northland. M.Sc. thesis, University of Auckland. 105pp.

> Describes the platforms and discusses the relative importance of processes and controls in the formation of their features.

204. HEALY, T.R. 1974: The equilibrium beach : a model for real estate development and management of the coastal zone in the northeast of New Zealand. Proceedings of the International Geographical Union Regional Conference, Massey University, December 1974. pp. 319-324.

> Dune and beach behaviour and management strategies are discussed with respect to the equilibrium beach concept.

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"The Land our Future : Essays on Land Use and Conservation in New Zealand." Longman Paul/N.Z. Geographical Society. 324pp.

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- 207. HEALY, T.R.; MILLAR, A.; NELSON, C.S. 1980: Behaviour of a conservative pollutant in a well-mixed estuary - The Portland Cement Works rejects in Whangarei Harbour (Abstract). N.Z. Marine Sciences Society Conference Wellington. August 1980.
- 208. HEALY, T.R.; KIRK, R.M. (in press): Coasts. Chapter 5 in J. Soons and M.J. Selby (Eds) "New Zealand Coastal Landforms". Longman Paul.

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> The ratios of tidal compartment to entrance cross-sectional area of 20 New Zealand estuaries are recorded. These include Whangarei, Whangaroa, Rangaunu, Parengarenga, Hokianga, Kaipara and Manukau Harbours and Doubtless Bay.

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> Results of bi-monthly observations between March 1974 and January 1975 of temperature, salinity and turbidity (Secchi disc) are presented. Tidal exchange between Port Fitzroy and open sea is discussed.

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- 219. HOBBS, R.J. 1975: Some planning implications of coastal erosion. Dip. Town Planning thesis, University of Auckland. 41pp.

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- 234. HYDROGRAPHIC OFFICE, R.N.Z.N. 1969: Chart N.Z. 43, Maunganui Bluff to Manukau Harbour, 1:280,000.
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- 236. HYDROGRAPHIC OFFICE, R.N.Z.N. 1972: Chart N.Z. 4111, Three Kings Islands, 1:30,000.
- 237. HYDROGRAPHIC OFFICE, R.N.Z.N. 1973: Chart N.Z. 521, Cape Brett to Bream Tail, 1:100,000.
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- 254. HYDROGRAPHIC OFFICE, R.N.Z.N. 1978: Chart N.Z. 5321, Kawau Island to Rakino Island including Whangaparaoa Passage, 1:40,000.
- 255. HYDROGRAPHIC OFFICE, R.N.Z.N. 1978: Chart N.Z. 51, Tauroa Point to Cape Brett, 1:200,000.
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- 261. JAMES, J.W. 1972: Nitrogenous nutrients in the Jellicoe Channel. M.Sc. thesis, University of Auckland. 124pp.
- 262. JASMAD RESEARCH; T.J. SPROTT AND ASSOCIATES, 1975: N.Z. Vinyl Ltd : An environmental impact report on the proposal to establish a vinyl chloride processing plant to manufacture polyvinyl chloride resins at Marsden Point. Report prepared for N.Z. Vinyl Ltd. December 1975. 261pp.

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> Includes data on areas, status, whether a survey has been made, and gives qualitative remarks on water quality condition and degree of stratification.

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> Presents analytical techniques utilising satellite imagery for determining the directions of coastal currents by mapping suspended sediment dispersal patterns. Some examples from the Auckland region are discussed.

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303. MASON, R.S.; RITCHIE, L.D. 1979: Aspects of the ecology of Whangarei Harbour. Report commissioned by the Northland Harbour Board and the Ministry of Agriculture and Fisheries. 88pp.

Contains some data on winds, salinity, temperature, tidal streams, and sediment texture, mineralogy, and provenance.

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> Information on seabed topography, grain size distribution off Browns Bay and brief comments on sand movements.

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> Contains various navigational, meteorological and astronomical data, information on tidal flows and streams, and tide tables for current year.

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Plan showing survey bench mark co-ordinates and levels and dune toe line traverse as at June 1950.

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Borehole logs only.

MINISTRY OF WORKS AND DEVELOPMENT, 1960: Marsden Point
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 (6 Sheets) of October 1960, Whangarei District Office.

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312. MINISTRY OF WORKS AND DEVELOPMENT, 1960: Marsden Point. Proposed Oil Refinery Site. Ground levels and marine soundings. Drawing WR 9141 of Whangarei District Office. Scale 200 ft = 1 ".

> Seabed soundings and current velocity (meter) measurements in the vicinity of Marsden Point, Whangarei Harbour.

313. MINISTRY OF WORKS AND DEVELOPMENT, 1962: Marsden Point Oil Refinery Jetty Site Tidal Observations for 17-9-62. Drawing WR 9172 (1 Sheet) of September 1962, Whangarei District Office.

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- 314. MINISTRY OF WORKS AND DEVELOPMENT, 1965-80: Published and unpublished data from beach surveys.
 - 1. Great Barrier Island, Kaitoke and Palmers Beaches, 9 sites, beach profiles surveyed at approximately monthly intervals 1966-1968 and 1980.
 - 2. Mangatawhiri Spit, Omaha Beach, 7 sites, beach profiles surveyed at approximately monthly intervals 1965-1968 and 1980 (Note: 1980 surveys include offshore area).
 - 3. Bream Bay, 16 sites, beach profiles surveyed at approximately monthly intervals from 1976-1979. Some nearshore profiles.
 - 4. Ocean Beach, 6 sites, beach profiles surveyed at approximately monthly intervals from 1976-1979. Some nearshore profiles.

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315. MINISTRY OF WORKS AND DEVELOPMENT, 1967-74: Nuclear Power Station Investigations. Kaipara Harbour. Ministry of Works and Development (Auckland) and Power Division (Wellington) files.

> Various reports and miscellaneous data relating to investigations carried out in vicinity of South Head, Te Kawau Point and Shelly Beach. Include tides, waves, salinity, water temperature, suspended solids and sea bed profiles.

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318. MINISTRY OF WORKS AND DEVELOPMENT, 1968: Proposed Nuclear Power Station. Te Kawau Point Site. Hydrological Investigations. Drawing WR 10455 Whangarei Residency Office. 2 sheets. September 1967.

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319. MINISTRY OF WORKS AND DEVELOPMENT, 1970: Tidal gauging, Waiwera Estuary. Drawing WR 10938 (7 Sheets) 1970. Whangarei District Office. 320. MINISTRY OF WORKS AND DEVELOPMENT, 1975: Pataua Estuary. Drawing WR 11764 (3 sheets) of February 1975. Whangarei District Office.

> Data from tidal gauging at entrance to the Pataua Estuary, Northland, includes tide levels, velocity, discharge and tidal volume.

321. MINISTRY OF WORKS AND DEVELOPMENT, 1975: Makarau tidal gauging. Drawing WR 11800 (7 sheets) of May-June 1975, Whangarei District Office.

> Data from tidal gauging in the Makarau Estuary of the southern Kaipara Harbour. Spring and neap tide data on tide levels, velocity, discharge, and tidal volume.

322. MINISTRY OF WORKS AND DEVELOPMENT, 1975: Webers Bridge tidal gauging. Drawing WR 11794 (3 sheets) of July 1975. Whangarei District Office.

> Data from tidal gauging carried out in the upper reaches of the Whangaroa Harbour. Includes tide levels, velocity, discharge and tidal volume.

323. MINISTRY OF WORKS AND DEVELOPMENT, 1976: N.Z. Electricity Department Auckland Thermal No 1 Power Station. Waimangu Point tidal current survey. Drawing WR 11871 of January 1976, Whangarei District Office. Scale 1 : 20,000.

> Plots of drogue-float tracks of surface currents carried out on 6 June 1975 in the vicinity of Waimangu Point, Firth of Thames.

324. MINISTRY OF WORKS AND DEVELOPMENT, 1976: Doubtless Bay sewage outfall tidal investigation. Drawing 11872 of February 1976, Whangarei District Office. Scale 1 : 25,000.

> Plots of drogue-float tracks in the vicinity of Taipa and Coopers Beach and the entrance to Mangonui Harbour on the 14 - 15 February 1976.

325. MINISTRY OF WORKS AND DEVELOPMENT, 1976: Doubtless Bay sewage outfall tidal investigation. Drawing H 0610 of February 1976, Water and Soil Section, Whangarei District Office. Scale 1 : 25,000.

Plots of drogue-float tracks in southern Doubtless Bay made on 3 - 4 December 1975.

 326. MINISTRY OF WORKS AND DEVELOPMENT, 1977: Bay of Islands tidal current survey (float tracks 12 - 13 August 1977). Drawing H 0680 of July 1977, Water and Soil Section, Whangarei District Office. Scale 1 : 15,000.

Plots of drogue float tracks (ebb tide) in the Moturoa Island - Tapeka Point - Roberton Island area.

327. MINISTRY OF WORKS AND DEVELOPMENT, (unpublished): Daily measurements of beach characteristics at Paihia. Water and Soil Section, Whangarei District Office.

Observations of wave and beach characteristics, made by a local resident.

328. MORTON, J.E.; CHAPMAN, V.J. 1968: "Rock shore ecology of the Leigh area, North Auckland." University of Auckland. 44pp.

Contains data on temperatures at Leigh and winds at Mokohinau Is.

329. MORTON, J.E.; MILLER, M.C. 1968: "The New Zealand Sea Shore." Collins, Auckland. 637pp.

> Contains some physical data, e.g. sediment sizes at Howick beaches, profiles of beaches at Muriwai, Milford, Howick and Cheltenham beaches.

- 330. MORTON, J.E.; THOM, D.; LOCKER, R. 1973: "Seacoast in the Seventies." Hodder & Stoughton, Auckland. 118pp.
- 331. MURRAY-NORTH PARTNERS LTD, 1975: Rodney County Council -Sandspit development proposals - preliminary report. Report prepared for Rodney County Council. 20pp. + drawings.

Describes proposed marina development at mouth of Matakana Estuary and includes hydrographical survey sections made in the area. 332. MURRAY-NORTH AND PARTNERS LTD, 1975: Sewage treatment and disposal for coastal townships adjacent to the Whangateau and Mahurangi Harbours. Report prepared for Rodney County Council. 135pp.

> The report examines in general terms the economic and environmental constraints inherent in sewering coastal townships with high summer and low winter populations. The ecological implications of specific marine disposal outfall sites are discussed. Previous schemes are examined and modifications proposed. Contains a report by Bioresearches Ltd. with current measurements in Little Omaha Bay and Kawau Bay (Snells Beach).

333. NEAVE, D.S. 1977: Recreation studies in New Zealand - a bibliography. Ministry of Recreation and Sport. 52pp.

Lists studies of coastal planning.

334. NELSON, C.S. 1977: Grain-size parameters of insoluble residues in mixed terrigenous - skeletal carbonate sediments and sedimentary rocks : some New Zealand examples. Sedimentology 24 : 31-52.

Contains textural and compositional data on Takapuna and Mission Bay beaches, Auckland.

335. NELSON, C.S.; MILLAR, A.S. 1978: Distribution of Portland clay washings in Whangarei Harbour. Northland Harbour Board (Whangarei) Report ILB : IMD. 23pp.

> Using mainly mineralogical criteria, discusses the sedimentation and distribution of Portland cement washings in Whangarei Harbour.

336. NICHOLSON, D.S.; FYFE, H.E. 1958: Borehole survey of North Island ironsands from New Plymouth to Kaipara Harbour. N.Z. Journal of Geology and Geophysics 1 : 617-634.

> Includes estimates of the (above sea level) quantities of total sand and recoverable ironsand (approx 58% Fe) at Waikato Heads, Manukau Harbour North Head, Piha and south Muriwai.

 337. NOBLE, H.M.; MOORE, J.T. 1977: A case history beach stabilisation design study (Omaha Beach). Coastal Sediments.
 5th Symposium of the Waterway, Port, Coastal and Ocean Division, American Society of Civil Engineers. 16pp. 338. NORTHLAND CATCHMENT COMMISSION, (undated): Baseline water quality data. In the Commission files.

Measurements made usually of temperature, dissolved oxygen, BOD, pH, bacteria and nutrients. Localities include Bream Bay, Whangarei Harbour (Upper and Lower), Ngunguru, Bay of Islands, Whangaroa Harbour, Mangonui Harbour, Mangonui East Coast, Coopers Beach, Cable Bay, Taipa, with some measurements at Hokianga Harbour and Kaipara Harbour.

339. N.Z. DEPARTMENT OF LANDS AND SURVEY, 1972-1978: North Auckland district Coastal reserves investigation. Reports for: Hobson County 1979: 71pp. Bay of Islands County 1975: 48pp. Whangarei County 1974: (no pages given). Waiheke County 1978: 97pp. Rodney County 1975: 89pp.

Contains general description of the coastal areas and details of proposed reserves.

340. N.Z. DEPARTMENT OF LANDS AND SURVEY, 1979: Onewhero Bay technical reports. Compiled by Auckland District Office. May 1979. 72pp.

> A collection of 10 reports outlining the nature, origin, value (commercial, scientific, archaeological), and impact of mining shingle from the raised beach adjoining Onewhero Bay.

341. N.Z. DEPARTMENT OF LANDS AND SURVEY, 1979: Karikari Peninsula. A land use study. 71pp.

> Includes a section on geology with the analyses of beach and dune sediment samples, and describes the marine environment of Rangaunu Bay qualitatively.

- 342. N.Z. GEOLOGICAL SURVEY, 1973: "Quaternary Geology North Island (1st Ed.). 1 : 1,000,000." N.Z. Geological Survey Miscellaneous Series. Map 5. D.S.I.R. Wellington.
- 343. N.Z. OCEANOGRAPHIC INSTITUTE, 1974: Marsden B Power Station. Letter with attachment to N.Z. Electricity Department. 24pp.

Records temperature, current and bathymetric measurements in vicinity of Marsden Power Station.

- 344. N.Z. OCEANOGRAPHIC INSTITUTE(in prep.) Measurements of tidal flow and sediment transport in Rangaunu Harbour. Unpublished data held by N.Z. Oceanographic Institute.
- 345. NICHOLSON, D.S. 1958: Borehole survey of North Island ironsands from New Plymouth to Kaipara Harbour. N.Z. Journal of Geology and Geophysics 1 : 617-634.

A quantitative description of the ironsand resources of coastal sands. Includes data for Muriwai and Piha beaches and the Manukau and Waikato Heads.

346. NICHOLSON, D.S.; CORNES, J.J.S.; MARTIN, W.R.B. 1958: Ilmenite deposits in New Zealand. N.Z. Journal of Geology and Geophysics 1 : 611-616.

> A quantitative description of the ilmentite resources of the New Zealand coast. Includes data for Muriwai and Piha beaches and the Manukau and Waikato Heads.

- 347. NORTHLAND CATCHMENT COMMISSION, 1979-81: Unpublished data from beach surveys.
 - 1. Bream Bay, 16 sites (see MWD, 1865-80), beach profiles surveyed at irregular intervals 1979-81.
 - 2. Ocean Beach, 6 sites (see MWD, 1965-80), beach profiles surveyed at irregular intervals 1979-81.
- 348. NORTHLAND HARBOUR BOARD, 1981: Northland Forestry Port Marsden Point. Environmental impact report. Prepared by Northland Harbour Board. April 1981. 265pp.

Contains a review of hydrology and sediments (see Healy, 1980 for details).

349. PAUL, L.J. 1968: Some seasonal water temperature patterns in the Hauraki Gulf. N.Z. Journal of Marine and Freshwater Research 2 : 535-558.

> Describes the changing pattern of water temperature in the Hauraki Gulf at approximately two-monthly intervals during one and a half seasonal cycles in 1965-1966, as determined from sea surface temperatures and bathythermograph profiles. Currents, tides, water clarity and oceanic influences in the outer Gulf are also discussed.

350. PEEK, S.M. 1979: A comparative study of beach hydrodynamics on the east and west coasts of the North Island, New Zealand. M.A. thesis, University of Auckland. 112pp.

> Includes a study of the beach profiles of Bream Bay and Muriwai Beach, relating them to the incident wave energy deduced from synoptic weather charts or wave measurements near the entrance to Whangarei Harbour.

- 351. PICKRILL, R.A. 1979: Wind waves in New Zealand : an annotated bibliography. Miscellaneous Publications N.Z. Oceanographic Institute 88. 27pp.
- 352. PICKRILL, R.A.; MITCHELL, J.S. 1979: Ocean wave characteristics around New Zealand. N.Z. Journal of Marine and Freshwater Research 13 : 501-520.

Wave climate of the north-east coast deduced from measurements at Hicks Bay and Tauranga Harbour.

- 353. RAUDKIVI, A.J. 1978: Omaha erosion protection. Design notes on northern and southern groynes. Report prepared for Beca Carter Hollings and Ferner Ltd. 15 September 1978. 5pp.
- 354. RAUDKIVI, A.J. 1980: Stability of Orewa Beach. Report prepared for the Rodney County Council. 9pp.

Describes magnitude of historical fluctuations in beach profile of Orewa, gives estimates of significant wave height and maximum water level for storm events, and suggests measures for erosion control.

355. RAUDKIVI, A.J. 1981: Report on the Orewa Beach investigation. Report prepared for Rodney County Council. March 1981. 41pp.

> Discusses the beach erosion problem at Orewa and presents several engineering solutions including beach wall, beach nourishment and storm-wave run-up barrier.

- 356. REED, J.J. 1961: Preliminary petrological investigation of ironsand deposits at Port Waikato Heads. Auckland Engineering Laboratory, M.W.D. Report 61/6: 3pp. + appendices.
- 357. REID, J.F. 1979: Mangatawhiri Barrier-spit : geomorphology and surficial sediments. M.A. thesis, University of Auckland. 132pp.

The morphology, surficial sedimentary characteristics and origin and development of the barrier-spit are described. Sea level changes are discussed.

- 358. REID, S.J. 1979: Meteorological effects of the storm in the New Zealand area, 18-21 July 1978. N.Z. Meteorological Service Technical Note 238. 15p.
- 359. RESTALL, A.A. 1964: Sand dune reclamation on Woodhill Forest. N.Z. Journal of Forestry 9 : 154-161.

Techniques of sand dune stabilisation and planting in dune areas behind Muriwai Beach.

360. RICHARDSON, R.J.H. 1975: The Quarternary geology of the North Kaipara Barrier. M.Sc. thesis University of Auckland. 148pp.

Discusses the geomorphology, composition and origin of sediments (including modern beach sands) that make up the south Kaipara Barrier.

361. RICKARD, B.F. 1968: Temperature microstructure in the ocean and its influence on acoustic propagation. M.Sc. thesis, University of Auckland. 179pp.

Measurements made off Goat Island over a total time of about 4 weeks including thermistor and current meter recordings.

362. RICKETTS, B.D. 1975: Quaternary geology of the Parengarenga Harbour, Te Kao District. M.Sc. thesis, University of Auckland. 152pp.

> Describes the distribution, composition and origin of Quarternary - Recent sands of part of the Aupouri Peninsula. Includes considerable textural and petrographic data.

363. RIDGWAY, N.M. 1972: Direction of drift of surface oil with wind and tide. N.Z. Journal of Marine and Freshwater Research 6 : 185-193.

> Measurements of the directions of movement of surface oil slicks from the t.e.v. Wahine are compared with theoretical calculations. The theoretical method is then applied to predict surface oil movements in Bream Bay, Northland.

364. RIDGWAY, N.M. 1980: Hydrological conditions and circulation off the west coast of the North Island, New Zealand. N.Z. Journal of Marine and Freshwater Research 14 : 155-167.

> Includes the deep waters between Manukau Harbour and Cape Reinga. Salinity, temperature, and currents.

- 365. RITCHIE, L.D.; SAUL, P.J. 1974: Survey of a sub-littoral mining application area - the Tutukaka Coast. Unpublished report, Fisheries Management Division, Ministry of Agriculture and Fisheries, D.S.I.R. Wellington. 36pp.
- 366. ROBERTS, P.E.; PAUL, L.J. 1978: Seasonal hydrological changes in continental shelf waters off the west coast, North Island, New Zealand, and comments on fish distribution. N.Z. Journal of Marine and Freshwater Research 12 : 323-340.

Includes surface and subsurface temperature and salinity data collected on 7 lines between the Waikato River mouth and North Cape, between January 1971 and March 1973.

367. RUSSEL, B.C. 1971: Ecological relationships of rocky reef fishes of northeastern New Zealand. M.Sc. thesis, University of New Zealand. 220pp.

Refers to currents.

368. SANDERSON, B.G. 1979: A study of ocean circulation using radio drogues. M.Sc. thesis, University of Auckland. 172pp.

Contains trajectories of radio-tracked floats using drogues (at 10-20m) in the Hauraki Gulf region.

369. SCHOFIELD, J.C. 1960: Sea level fluctuations during the last 4000 years as recorded by a chenier plain, Firth of Thames, New Zealand. N.Z. Journal of Geology and Geophysics 3 : 467-485.

Describes beach ridges at Miranda, dating of shell material from which shows an overall fall in sea level of + 2.1m over the last 3,900 years.

370. SCHOFIELD, J.C. 1967: Sheet 3 - Auckland. "Geological Map of New Zealand, 1 : 250,000." D.S.I.R. Wellington.

- 371. SCHOFIELD, J.C. 1967: Sand movement at Mangatawhiri Spit and Little Omaha Bay. N.Z. Journal of Geology and Geophysics 10: 697-731.
 - Presents textural, mineralogical and malacological evidence from seabed samples to demonstrate dispersal of sediments between beach and offshore. The effect of sea level in causing coastal change is discussed.
- 372. SCHOFIELD, J.C. 1969: Reconnaissance survey of silica sands, Parengarenga. Industrial Minerals and Rocks 1968. D.S.I.R. Information Series 63 : 76-92.

Describes the distribution, composition and origin of silica sands between Paxton Point and the Parengarenga Harbour.

373. SCHOFIELD, J.C. 1970: Coastal sands of Northland and Auckland. N.Z. Journal of Geology and Geophysics 13 : 767-824.

> A comprehensive account of the mineralogy, texture and origin of dune and beach sands. Includes textural and mineralogical data of field samples.

374. SCHOFIELD, J.C. 1973: Post-glacial sea levels of Northland and Auckland. N.Z. Journal of Geology and Geophysics 16 :359-366.

> Compares beach-ridge systems at Matauri Bay, Mangatawhiri Spit, Manly, Miranda and Cooks Beach to date sea-level change.

375. SCHOFIELD, J.C. 1975: Sea-level fluctuations cause periodic post-glacial progradation, South Kaipara Barrier, North Island, New Zealand. N.Z. Journal of Geology and Geophysics 18: 295-316.

> Textural, mineralogical and geomorphological evidence is used to explain the origin of South Kaipara Barrier sands.

376. SCHOFIELD, J.C. 1975: Beach changes in Hauraki Gulf, 1965-1968: Effect of wind, sea-level changes and offshore dredging. N.Z. Journal of Geology and Geophysics 18 : 109-127.

> Relates beach profile changes at Ocean Beach, Omaha Beach and Castor Bay to those at Kaitoke and Palmers Beaches on Great Barrier Island.

377. SCHOFIELD, J.C. 1978: Sea-floor sediments and sea-level change, Omaha Bay, New Zealand. Fourth Australian Conference on Coastal and Ocean Engineering. Institute of Engineers, Australia. pp. 30-33.

> Correlates bathymetric, sediment texture and radio-carbon-dated shell lags data from Omaha Bay to describe the origin of sediments on the sea floor. Considers the likely effect of removal of sand from the system.

> > 14

378. SCHOFIELD, J.C. 1979: Coastal erosion and coastal sand supplies from the Auckland - Northland region. 10th N.Z. Geography Conference 1979. pp. 39-42.

A review paper.

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> Terrace remnants cut in Waiuku Blacksand deposits on the Manukau Barrier are evidence of former relatively stationary sea levels between + 48m and +20m.

380. SCHOFIELD, J.C.: WOOLHOUSE, L. 1970: Industrial sands of Northland and Auckland. Industrial Minerals and Rocks 1969. D.S.I.R. Information Series No. 79 : 29-102.

> Specifications are given for various industrial uses of sand. The availability of sands, including marine sands, is discussed.

- 381. SEAGAR, S.B. 1966: The geology of Ponui Island and the eastern part of Manukau County. M.Sc. thesis, University of Auckland. 106pp.
- 382. SKINNER, D.N.B. 1967: Geology of the Coromandel region with emphasis on some economic aspects. Ph.D thesis, University of Auckland. 2 volumes + maps.

Contains petrographic data.

383. SMALE, D. 1962: The geology of the Coromandel - Colville area. M.Sc. thesis, University of Auckland. 135pp.

Includes petrographic data.

384. SMIDT, R.E.; COX, J.E.; FURKERT, R.J.; WELLS, N. 1977: Mineralogy of topsoils of Ngunguru Basin. Northland, New Zealand. N.Z. Journal of Science 20 : 297-301.

> Presents mineralogical data for parent materials, topsoils and stream sediments in the area.

385. SMITH, S.P. 1878: Notes of a traditional change in coast-line at Manukau Heads. Transactions of the N.Z. Institute 11 : 514-516.

> Discussion of former coastline positions between the Manukau Harbour and the Waikato Heads based on Maori folklore.

386. E.T. SMITH McNAUGHT WHANGAREI LTD, 1974: Matapouri Estuary erosion report. Report prepared for Whangarei County Council. 18pp. + appendices + drawings.

Contains information on tidal streams, erosion and bathymetry.

387. E.T. SMITH McNAUGHT WHANGAREI LTD, 1976: Whangarei Harbour dredging study. Report prepared for Northland Harbour Board. 96pp.

Report summarises existing data on hydraulics, water quality, sedimentation and dredging for Whangarei Harbour.

388. SPENCER, E.M. 1964: A bibliography of New Zealand coastal geomorphology and submarine morphology 1950-1964. N.Z. Library School, Wellington. 30pp.

> The bibliography covers the area between 30° - 50°S and 165°E - 175°W. Geomorphological features of the coast including raised beaches, sand dunes, harbours and sea floor morphology are described. A section on hydrology includes circulation in harbours, ocean currents and sea surface temperatures.

389. STANTON, B.R. 1973: Hydrological investigations around northern New Zealand. N.Z. Journal of Marine and Freshwater Research 7 : 85-110.

> Describes hydrological observations and current measurements made between latitudes 32-37°S and longitudes 170° - 175°E during 1970 and 1971. Tidal and oceanic current speeds and directions and upwelling phenomena are documented and explained.

390. STENBERG, I.L. 1975: Environmental assessment of a treatment plant outfall: Whangaparaoa. Proceedings, Technical Group on Water, N.Z. Institution of Engineers Annual Conference: 159-168.

Describes float and dye tests made off the Whangaparaoa Peninsula.

391. STEVEN, FITZMAURICE AND PARTNERS, 1974: Water movements off Taipa Beach. Report prepared for the Mangonui County Council. October 1974. 6pp. + drawings.

Reports float and dye studies of currents off Taipa on two days.

392. STEVEN, FITZMAURICE AND PARTNERS, 1977: Sewerage of east coast area, Mangonui County. Reassessment report prepared for the County of Mangonui. 95pp.

> Considers an ocean outfall to serve the Taipa area off Doubtless Bay and includes float trajectories and some deductions about the circulation in Doubtless Bay. See also Ministry of Works and Development (1976) drawing 11872.

393. STEVEN, FITZMAURICE AND PARTNERS, 1978: Sewage of east coast areas, Mangonui County Council outfall survey. Report prepared for the County of Mangonui. 4pp. + diagrams.

Concerns an outfall in Taipa Bay in Doubtless Bay and includes float trajectories off Otengi Headland.

394. SUMMERHAYES, C.P. 1967: Marine environments of economic mineral deposition around New Zealand : a review. N.Z. Journal of Marine and Freshwater Research 1 : 267-282.

Brief mention of beach and shelf mineral deposits.

- 395. SUMMERHAYES, C.P. 1967: Auckland Bathymetry. N.Z. Oceanographic Institute Chart, Oceanic Series, 1 : 1,000,000.
- 396. SUMMERHAYES, C.P. 1969: Recent sedimentation around northern-most New Zealand. N.Z. Journal of Geology and Geophysics 12 : 172-207.

Sediment textural and compositional data are used to describe the distribution and origin of shelf, nearshore and beach sediments in the North Cape - Three Kings Islands area. 397. SUMMERHAYES, C.P. 1969: Submarine geology and geomorphology off northern New Zealand. N.Z. Journal of Geology and Geophysics 12 : 507-525.

> Describes surficial sediments, geology and bathymetry of continental shelf, upper continental slope and offshore banks northwest of North Cape.

398. TAYLOR, F.J. 1973: Phytoplankton and nutrients in the Hauraki Gulf approaches. Proceedings, International Symposium on the Oceanography of the South Pacific, Wellington: 485-492.

> Includes seasonal data on silica, phosphate and nitrogen, and mentions upwelling.

- 399. THOMPSON, R.M.C. 1981: A bibliography of the major ports and harbours of New Zealand (marine geology, physical oceanography and related topics). Miscellaneous Publications N.Z. Oceanographic Institute 93. 60pp.
- 400. TILSLEY, R. 1970: Coastal protection with gabion groynes. Soil and Water 7 : 26-27.

Describes the use of rock-filled gabion baskets as groynes between Kaiaua and Miranda on the west coast of the Firth of Thames.

- 401. THOMPSON, B.N. 1961: Sheet 2 Whangarei (1st Ed.) "Geological Map of New Zealand 1 : 250,000." D.S.I.R., Wellington
- 402. THOMPSON, I.C. 1975: Recent foraminifera and superficial sediments on an area of the continental shelf and upper slope east of the North Island, New Zealand. M.Sc. thesis, University of Auckland. 66pp + appendices.

Examines sea bed morphology (shoals, sand waves and terraces) and surficial sediments from an area lying across the entrance to the Hauraki Gulf. The sediments are mapped on the basis of textural and compositional characteristics and their origin is explained. Foraminiferal assemblages are described and distribution patterns related to various environmental factors.

403. TONKIN AND TAYLOR, 1979: New Zealand Electricity. Marsden Power Stations. Coastal erosion investigation. Phase 1 report. Report prepared for N.Z. Electricity. December 1979. 29pp. + appendices.

> Summarises coastline change in vicinity of Marsden Power Station from 1827, and assesses factors influencing shoreline stability.

 404. TONKIN AND TAYLOR, 1980: N.Z. Electricity, Marsden Power Stations. Coastal erosion investigation. Foreshore protection trial. Report prepared for N.Z. Electricity, November 1980. 24pp. + appendices.

> Describes the design manufacture, installation and laboratory and field testing of a beach protection apron constructed from fabric cloth apron weighted with concrete filled tubes.

405. TONKIN AND TAYLOR, 1981: N.Z. Electricity. Marsden Power Stations. Coastal erosion investigations. Wave studies. Report prepared for N.Z. Electricity. February 1981. 32pp. + appendices.

> Describes and presents data from a new type of wave recorder installed at Bream Bay. Collates these data with wave data from a waverider buoy and daily wave observations to identify wave climate for Bream Bay. Presents wave refraction diagrams for waves striking the northern half of the Bream Bay coastline.

406. TOPPING, R.M. 1973: Benthonic foraminifera from Puhoi Estuary, Auckland, New Zealand. B.Sc. (Hons) thesis, University of Auckland. 37pp. + appendices.

Some data on bathymetry, tides, currents, salinity and temperature.

407. TORTELL, P. (in press): New Zealand Atlas of Coastal Resources. Commission for the Environment. 24pp. + maps.

Atlas provides criteria for decision-making in case of an oil spillage.

- 408. TURNER, F.J.; BARTRUM, J.A. 1929: The geology of the Takapuna - Silverdale District, Waitemata County, Auckland. Transactions of the N.Z. Institute 59 : 864-902.
- 409. VAN DER LINDEN, W.J.M. 1968: Three Kings Bathymetry. N.Z. Oceanographic Institute Chart, Oceanic Series, 1:1,000,000.
- 410. VAN ROONE, H. 1979: An assessment of sandmining at Parengarenga Harbour, Northland. Internal report, Planning Division, M.W.D., Auckland. 11pp. + appendices.
- 411. VAN ROONE, H. 1981: Parengarenga : rare beauty and sandmining. N.Z. Environment 29 : 47-50.

Examines the environmental effects of sandmining at the northern tip of Kokota Spit, Parengarenga Harbour.

412. WATKINS, J.M. 1974: Pickmere Atlas of Northlands East Coast New Zealand. Whitcoulls. 30 charts.

> Charts of selected coastal areas between the Bay of Islands and Parengarenga as well as of some islands. Details of some estuaries are included. The scales are variable but are usually several inches to the mile.

413. WEBBER, R.E. 1974: Hydrology and acoustics in the Hauraki Gulf. M.Sc. thesis, University of Auckland. 71pp.

> Describes seasonal variations in the water-mass structure of the continental shelf between Leigh and the Mokohinau Islands as a basis for formulating predictive models of acoustic propagation.

414. WELLMAN, H.W. 1962: Holocene of the North Island of New Zealand : a coastal reconnaissance. Transactions of the Royal Society of New Zealand. Geology 1 : 29-99.

> Correlates various marker horizons (including volcanic ash, tuff, waterborne pumice, drowned forests, Maori occupation sites and fossil soils) in 50 stratigraphic sections in coastal sediments around the North Island.

415. WHITTEN, R.F.: Systematics and ecology of northern Hauraki Gulf bryozoa. Ph.D. thesis, Unviersity of Auckland. 515pp.

> Includes brief summary notes on Hauraki Gulf bathymetry, temperature and salinity, currents and tides, turbidity, sediments and rates of deposition.

416. WILLIAMS, P.W. 1976: Progradation of Whatipu Beach 1844-1974, Auckland, New Zealand. Pp. 1-7 in McLean, R.F. (Ed.): "Case studies of coastal progradation in New Zealand during the past century." Contribution to International Geographic Union's Working Group on the Dynamics of Shoreline Erosion. May 1976. 98pp.

> Documents shoreline change at Whatipu Beach since 1844 on the basis of data from hydrographic charts, ground survey data and aerial photographs. Results indicate progradation of more than 1 km in places.

417. WILLIAMS, P.W. 1977: Progradation of Whatipu Beach 1844-1976, Auckland, New Zealand. N.Z. Geographer 32 : 84-89.

As for Williams P.W. 1976.

418. WILSHERE, D.S. 1971: Waihou River suspended sediment. N.Z. Engineering 26 : 303-336.

Discusses the sedimentation characteristics of the estuary of the Firth of Thames.

419. WOOD, A.M. 1976: Waipapa Group melange of Kawau Island. M.Sc. thesis, University of Auckland. 155pp.

Includes petrographic data.

 420. WRIGHT, A.B. 1911: An untitled inspection report of Auckland and Coromandel beaches for mining potential. Report prepared by Public Works Department, Wellington. 8 August 1911. 14pp.

> Report on sand and shingle resources on Auckland and Coromandel beaches and recommendations for mining. (Photographs of beaches with original).

421. WRIGHT, J.B. 1964: Iron-titanium oxides in some New Zealand ironsands. N.Z. Journal of Geology and Geophysics 7: 424-444.

> Includes optical, magnetic, X-ray and chemical data for some Waikato North Head and Muriwai iron sands.

422. WRIGHT, L.W. 1969: Coastal changes at the entrance to the Kaipara Harbour 1836-1966. N.Z. Geographer 25: 58-61.

Summarises shoreline changes on the basis of Admiralty charts, Lands and Survey maps and aerial photographs.

423. YOCK, D. 1973: A study of the beach and dune sands from Muriwai to Kaipara South Head. M.A. thesis, University of Auckland. 119pp.

> Describes the trends in textural and compositional characteristics of dune and beach sands from Muriwai to Kaipara South Head. Provenance of the sediments is described.

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