

WELCOME TO THE HOCKEN

FRIENDS OF THE HOCKEN COLLECTIONS: BULLETIN NUMBER 9: SEPTEMBER 1994

Surveying the Hocken's Surveyors

Surveyors played a major, though generally unsung, role in the settlement and development of pakeha New Zealand. In European society, where land is owned individually rather than communally (as was the case in Maori New Zealand) the need to set the boundaries of properties, to lay out lines of communications and, of course, to know exactly the form and features of the land, was and is of paramount importance.

While the Hocken Library was acting as Otago-Southland repository for official archives, its holdings included several hundred cartons of Land and Survey Dept. material. Now that this material has been transferred to the Dunedin office of National Archives (which, incidentally, has upwards of 400 linear metres of land records), and the early New Zealand Company records relating to Dunedin are held in part at the Otago Early Settlers Museum, it would be easy to assume the Hocken might have little to offer in the field of surveying.

That is quite wrong. It has, for instance, the most complete run of the *New Zealand Surveyor* south of Wellington. It has such important primary manuscript documents as Frederick Tuckett's letters and Peter Proudfoot's 1850s diary. Complete runs of parliamentary and Otago Provincial Council journals carry a full range of annual published survey reports. And its printed book holdings included all significant works relating to surveying in New Zealand. In addition to its marvellous holding of J. Turnbull Thomson's paintings, it has important art by other notable surveyors and draughtsmen, such as Buchanan — though there has not been space to list these art works in this bulletin.

The Hocken, in fact, is as proud of its holdings in this field as the province of Otago — thanks largely to Thomson — is proud of its survey record. Major Palmer's 1875 report to central government, while scathing in its criticism of some provincial survey departments, praised the quality of work in Otago. In this, the 150th anniversary year of the first official European purchases of Otago land, it seems opportune to summarise the range of the Hocken Library's holdings and to remind the community of the library's active interest in this subject.

Bibliography

McDonald, D.C. Surveying in New Zealand in the 19th Century: A Select Bibliography, Wellington, Library School, 1973.

Biography

see also entries under Survey Department reports

Adams, Charles W. 'Surveying in Cold Weather,' *Journ. N.Z. Inst. Surv.*, 2: 135–137 (Dec. 1892). Photocopy. Surveying in Otago.

Bagnall, A.G., Murray-Oliver, A., & Curnow, H. 'S.C. Brees: Artist and Surveyor,' *Turnbull Library Rec.*, 1 (4): 36–56 (1968).

Baker, John Holland. A Surveyor in New Zealand, 1857–1896: The Recollections of John Holland Baker, Auckland, W. & T., 1932.

Beattie, J. Herries. *The Pioneers Explore Otago*, Dunedin, ODT, 1947. Includes diaries of John Goldie. Bogle, A.H. *Links in the Chain: Field Surveying in New*

Zealand, Wellington, N.Z. Inst. Surveyors, 1975. Brookes, E.S. Frontier Life: Taranaki, New Zealand, Auckland, H. Brett, 1892.

Brunner, Thomas. Extracts from Journals Kept on Three Expeditions to Explore the West Coast and the Rivers Grey and Buller in the years 1846 and 7. Microfilm.

— Journal of an Expedition to Explore the Interior of the

Middle Island of New Zealand, Nelson, C. Elliott, 1848.

— Journal of an Expedition to Explore the Interior of the Middle Island of New Zealand. Extracted from Journal

Royal Geogr. Soc., 20: 344–378 (1850).

— The Great Journey: an Expedition to Explore the Interior of the Middle Island, New Zealand, 1846–8, Christchurch,

Byar, Flora. A Contribution to the History of New Zealand; John Turnbull Thomson, Early Surveyor. Unpublished MA thesis, 1933.

Chinn. W. Hill. *Packtrack to Highway*, Auckland, Paul's 1963. Includes chapter 'With a Survey Camp' in central North Island.

Crompton-Smith, M. Stephenson Percy Smith, F.R.G.S. (of Taranaki), 1840–1922, a Pioneer Surveyor, Wellington, Ferguson & Osborn, ptrs, 1924.

Dobson, Arthur D. Reminiscences of Arthur Dudley Dobson, Engineer, 1841–1930, Auckland., W. & T., 1930.

Douglas, Charles E. *Mr Explorer Douglas*. Ed. by John Pascoe, Wellington, Reed, 1957. Douglas was employed as an explorer by the Lands and Survey Dept.

Furkert, F.W. *Early New Zealand Engineers*, Wellington, Reed, 1953. Many early engineers were also surveyors.

Goldie, John. *3 Journal-letters of His Surveying Trips in Otago*, with James McKerrow, Dec. 11, 1861 — May 20, 1863. Typescript.

Gordon, Briar & Stupples, P. Charles Heaphy, Wellington, Pitman, 1987. His life and art.

Hall-Jones, F.G. *John Turnbull Thomson, Surveyor General*, Invercargill, Southland Historical Cttee, 1963.

Hall-Jones, John. John Turnbull Thomson, First Surveyor-General of New Zealand, Dunedin, McIndoe, 1992.

— Mr Surveyor Thomson, Wellington, Reed, 1971.

Herron, D.G. *James McKerrow; Surveyor, Explorer and Civil Servant, with Special Reference to Exploration*. Unpublished MA thesis, 1948.

Jenks, H.J. 'Recollections of a Surveyor', *Historical Review* [Bay of Plenty], 34: 1–10 (May 1986); 35: 63–72 (Nov.1987).

Jenks, Harold. 'Through the Urewera Country,' *N.Z. Surveyor*, 14: 63–66 (June 1929).

Kettle, C.H. Letterbook (Otago) 1846–50. Manuscript.
— 'Manuscript Account of Surveying Activities in Wellington, 1840–1843'. Bound in Letters and Journals of Rev. James Hamlin.

Lauper, Jakob. Over the Whitcombe Pass; the Narrative of Jakob Lauper. Ed. by John Pascoe, Christchurch, W. & T., 1960. Reprinted from the Canterbury Gazette, July 1865.

Lawn, C.A. *The Pioneer Land Surveyors of New Zealand*, Auckland, N.Z. Inst. Surveyors, 1980. Brief biographies of 450 early surveyors.

Macdonald, Barrie. *Imperial Patriot. Charles Alma Baker and the History of Limestone Downs*, Wellington, Bridget Williams, 1993. Baker surveyed in Auckland Province in the 1880s.

- McKerrow, James. Notes on His Reconnaissance Surveys in Otago, 1862–63. Manuscript written May 1907.
- Martin, Marguerite J. The Life and Work of Charles Henry *Kettle*. Unpublished MA thesis, University of Otago, 1934.
- Mueller, Gerhard. My Dear Bannie. Gerhard Mueller's Letters from the West Coast 1865–6. Ed. by M.V.Mueller, Christchurch, Pegasus, 1958.
- Nicholson, Richard. Extracts from His Diary: Otago Surveys etc. 1843-44. Manuscript.
- 'Notes from a Surveyor's Field Book' *Historical Review* [Whakatane], 11: 185–188 (Dec. 1963). Surveying in Opotiki district in latter half of 1866.
- Orchiston, J. 'Exploration in South-west Otago in 1896. Preservation Inlet to Orepuki.' N.Z. Surveyor, 13: 400–405, 447–452 (Sept. & Dec. 1928). Also separate
- Park, James. Early Explorations in the King Country, Dunedin, ODT ptrs, 1922. Canoe journey to Upper Mokau during 1885-87 survey.
- Proudfoot, Peter. Diary 1855–1857. Manuscript. Deals primarily with administrration of surveys in pre-Thomson
- Rochfort, John. The Adventures of a Surveyor in New Zealand and the Australian Gold Diggings, London, David Bogue, 1853. Also facsimile reprint, Christchurch, Capper Press, 1974.
- 'Journal of Two Expeditions to the West Coast of N.Z. in the Year 1859,' extracted from Royal Geog. Soc. Journ., 32: 194-303 (1862).
- Skinner, W.H. Reminiscences of a Taranaki Surveyor, New Plymouth, Thomas Avery, 1946.
- Reminiscences of a Taranaki Surveyor. The manuscript of the previous entry, containing much material not included in the book.
- Taylor, Nancy ed. Early Travellers in New Zealand, Oxford, Clarendon, 1959. Includes writings of Heaphy, Brunner, J.T. Thomson and S. Percy Smith.
- Temple, Philip. New Zealand Explorers: Great Journeys of Discovery, Christchurch, Whitcoulls, 1985. Includes chapters on Brunner and Douglas.
- Thomson, J.T. 'Early Southland: the Reconnaissance Survey. Mr J.T. Thomson's Diary, Looking Around in 1857.' Extracted from Southland Times, 26 Oct. 1933
- 'Extracts from a Journal Kept During the Performance of a Reconnaissance Survey of the Southern Districts of the Province of Otago, New Zealand.' Extracted from Royal Geogr. Soc. Journ., 28: 298-332 (1858).
- Rambles with a Philosopher; or, Views at the Antipodes. Dunedin, Mills Dick, 1867. Discursive jottings include vignettes from his survey trips.
- Torlesse, C.O. The Torlesse Papers; The Journals and Letters of Charles Orbin Torlesse concerning the Foundation of the Canterbury Settlement in New Zealand 1848–51. Ed. by John Pascoe, Christchurch, Pegasus, 1958.
- Wilmot, E.H. 'Exploration of the Hollyford Valley, West Coast of Otago, N.Z. Journ. Sci., 1:459–464 (July
- 'Fiordland Pioneer Survey: Lake Manapouri Dusky Sound Area.' in A.H. & A.W. Reed, Farthest West, Wellington, Reed, 1950: 133–167. Wilmot's day-by-day
- Young, L. Father and Son. A Young Saga, Christchurch, Pegasus, 1976. The son, William S. Young, was surveying in the South Island in the 1850s and 1860s.

History

- Bridge, C. Hastings. 'The Profession of Surveyor in New Zealand and the Institute', N.Z. Surveyor, 13: 11–14 (March 1926).
- Easdale, Nola. Kairuri: The Measurer of the Land: the Life of Adams, Charles W. The Measurement of Distances with the 19th Century Surveyor Pictured in His Art and Writings, Petone, Highgate/Price Milburn, 1988.

- Zealand, Wellington, Govt. Printer, 1925. A history of the Lands and Survey Dept. 1841–1924 is given on pp. 200-232.
- Lawn, C.A. 'The Surveyors' Association of the Province of Auckland — founded 22nd June 1865.' Reprinted from the N.Z. Surveyor, Sept. & Dec. 1965.
- McCormack, Trish. A History of Surveying and Mountaineering in Westland, Hokitika, Dept. of Conservation, 1988.
- McRae, James A. New Zealand Institute of Surveyors, 1888–1988, [Dunedin], The Institute, 1989.
- N.Z. Dept. Lands & Survey. The Department of Lands and Survey, 1876–1976. Centennial. Wellington, 1976.
- 'Historic Background of Land Surveying in New Zealand'. Photocopied from N.Z. Surveyor, pp. 371–376 (1958).
- Walsh, K.W. 'Early Surveying in the Waikato', Auckland Waikato Hist. Journ., 46: 23–26 (April 1985).

Hydrographic Surveying

- Drury, Byron. Revised Sailing Directions &c for the Northern Part of the Colony of N.Z., Auckland, Williamson and Wilson ptrs, 1854.
- [Hansard, G.A.] Journal of the Voyage of the Acheron, 1849–51. Photocopy of transcript by Sheila Natusch of journals in National Maritime Museum, Greenwich, and Hocken Library. Previously attributed to J. Lort Stokes.
- Jones, T.M. 'HMS *Pandora* in the Bay of Plenty, 1852', Historical Rev. [Whakatane], 18: 1–14, 62–79 (May & Nov. 1970). Extracts from Lt. Jones's journal.
- Natusch, Sheila. The Cruise of the Acheron, Christchurch, Whitcoulls, 1978.
- Ross, J. O'C. This Stern Coast, Wellington, Reed, 1969. Stokes, J. Lort. Cruize of H.M.S. Acheron on the Coast of New Zealand. Transcript of article in Nautical Mag. (June
- Journal of the Voyage of the Acheron 1849–1850. Manuscript. N.Z.'s first major hydrographical survey.
- Log of the Acheron, Jan. 1849 Mar. 1850. Photostat. [By G.A.Hansard, see above].
- Manuscript of Proposed Book Entitled 'The Voyage of the Acheron', Devonport to Funchal pp. 1-5 and New Zealand pp. 90–115. Photocopy.
- 'Survey of the Southern Part of the Middle Island of N.Z.' Photocopy from *Journ. Royal Geog. Soc.*, 21: 25-29 (1851).

Legal

- Esterman, Leslie. Legislation for Surveys and Subdivisions, Auckland, Legal Research Foundation, School of Law,
- Kelly, Edmund, M. Summary of the Law Relating to Land Surveying in New Zealand (Excluding Local Acts and the Survey Regulations ...), 3rd ed., Wellington, N.Z. Inst. Surv., [1958]
- Langmuir, J. 'Occupation No Certain Proof of Title or Original Survey, with Special Reference to Street or Road Alighnments, Identification and Land Transfer Surveys', N.Z. Surveyor, 10: 199-204 (March 1915).
- McRae, J.A. ed. The Surveyor and the Law, Wellington, N.Z. Inst. Surv., 1981 and 1984.
- Travers, W.T.L. 'Notes on the System of Survey Proposed by Mr Thomson to be Adopted for New Zealand, from a Legal Point of View,' Trans. N.Z. Inst., 9: 280-293 (1876).

Methods, 19th Century

- A. 'Some Hints on Laying off Roads in Difficult Hilly Country', Journ. N.Z. Inst. Surv., 1: 35–37 (Dec. 1889). Photocopy.
- Long Steel Tapes, Wellington, Govt. Printer, 1888.
- 'On the Determination of the Mean Level of the Sea',

Photocopy.

- Beal, L.O. The Advantages of Field Telegraphy for Surveyors, *N.Z. Surveyor*, 4: 56–58 (Sept. 1895). Photocopy.
- Connell, J.S. 'On New Zealand Surveys,' *Trans. N.Z. Inst.*, 8: xxvii–xliii (1875).
- Davis, J.W. 'Standard Surveys and Street Alignment,' *Journ. N.Z. Inst. Surv.*, 1(2): 32–34 (Dec 1889). Photocopy.
- [Dawson, R.K.] Report on Surveying Considered with Reference to New Zealand, and Applicable to the Colonies Generally, London, W. Clowes, 1840.
- 'Extracts from the Instructions of the Directors of the Plymouth Company of New Zealand to Their Chief Surveyor, Mr F.A. Carrington,' *N.Z. Journal*, 1: 193–194 (15 Aug. 1840). Includes principles for laying off New Plymouth.
- Heale, Theophilus. Principles and Practice of Surveying, to be Adopted by Officers Employed in the Field in Connection with the Inspector of Surveys' Department, Wellington, Govt. Printer, 1871.
- Langmuir, John. 'A Few Remarks on Standard Surveys; a Procedure of Chaining Adapted Thereto; Description of Implements Used; and Permanent Marking,' *N.Z. Surveyor*, 3: 128–139 (June 1894). Photocopy.
- 'On Laying Out Roads,' *Journ. N.Z. Inst. Surv.*, 2: 94–98 (Sept. 1892). Photocopy.
- Lessong, L. 'On the Relative Amount of Error in the Observed and Calculated Angles by Fixing the Position of a Point from Three Fixed Points,' *Journ. N.Z. Inst. Surv.*, 1(4): 73–75 (Nov. 1890). Photocopy.
- Neill, W.T. 'On the Use of the Barometer as a Levelling Instrument,' *Journ. N.Z. Inst. Surv.*, 3: 66–72 (Sept. 1893). Photocopy.
- Park, James A. Instructions for the Determination of Meridian Latitude and Time, with a 5in. or 6in. Transit-Theodolite, 2nd ed., Auckland, Champtaloup & Cooper, 1897.
- Pickett, J.E. A Short Comparison of the New Zealand and Victorian Survey Systems. Reprinted from Victorian Inst. Surv. Trans. & Proc., 4: 1–8 (1891–99). Photocopy.
- Richardson, G.F. 'Survey: Practical and Precise,' *Trans. N.Z. Inst.*, 33: 492–498 (1900).
- Thomson, J.T. 'Colonial Standard Survey,' *Trans. N.Z. Inst.*, 9: 96–108 (1876).
- An Exposition of Processes and Results of the Survey System of Otago, Dunedin, H. Wise, 1875.
- An Outline of the Principles and Details Connected with the Colonial Survey of the Province of Otago, Dunedin, Otago Witness ptrs., 1861.
- Travers, W.T.L. see Legal section above.
- Wakefield, Felix. Colonial Surveying, With a View to the Disposal of Waste Land, in a Report to the New-Zealand Company, London, J.W. Parker, 1849.
- Whitehead, Arthur. A Treatise on Practical Surveying as Particularly Applicable to New Zealand and Other Colonies ..., London, Longman & W.Roberts, 1848.

Methods, 20th Century

- Adams, A.V. 'Plane-Table Surveying in Taranaki,' *N.Z. Surveyor*, 14: 213–216 (March 1930).
- Adams, C.W. On the Determination of Time, Latitude and Azimuth with an 8-inch Transit Theodolite, Wellington, Govt Printer, 1905.
- Belcher, A.D. 'The Cook Strait Connection. An Insight into Wellington-Karamea Earth Deformation,' *Landscape*, new series 12: 8–11 (Nov. 1982).
- Conly, G. Piet's Eye in the Sky. The Story of New Zealand Aerial Mapping, Wellington, Grantham House, 1986.
- Harrington, Graham J. Contouring by Computer from Stadia Field Data, Lincoln, N.Z. Agric. Eng. Inst., 1976.
- Jeffery, D.G. & Chapple, R. 'Electro-Magnetic Distance Measurement in New Zealand Surveys,' *N.Z. Surveyor*, 24: 607–615 (Sept. 1965).
- 24: 607–615 (Sept. 1965). Lee, Lawrence P. First-Order Geodetic Triangulation of New

- Survey, 1978.
- Mackie, J.B. 'Notes on a Triangulation Survey Carried Out in the Waitaki Valley for Control of Photogrammetry,' *N.Z. Surveyor*, 23: 115–123 (Aug. 1960).
- N.Z. Dept Lands & Survey. An Exposition of the Work, Methods and Organization of the New Zealand Survey ..., Wellington, Govt. Printer, 1925.
- Neill, William T. 'The Adjustment of Triangulation by the Method of Least Squares,' *N.Z. Surveyor*, 6: 214–234, 246–262 (June & Sept. 1903).
- The Use of the Barometer for the Determination of Heights, 2nd ed. Wellington, Govt Printer, 1922.
- Otway, Peter M. & Wood, P.R. Surveying Equipment and Procedures for Earth Deformation Studies, Lower Hutt, N.Z. Geol. Surv., 1974.
- Park, James A. Adjustment of Transit Theodolite, Wellington, Ferguson & Osborn, 1923.
- Text-book of Theodolite Surveying and Levelling for the Use of Students in Land and Mine Surveying, London, Charles Griffen, 1908.
- Rowe, G.H. 'Surveying by the Stars,' *Landscape*, new series 11: 24–26 (May 1982).
- Stephens, Peter, van Asch, Piet & Clark, Mairi. *No Clouds Today*, Palmerston North, Dunmore, 1991. Aerial mapping.
- Thompson, T.K. 'Daylight Observations to Stars by Surveyors,' *N.Z. Surveyor*, 13: 155–159 (Sept. 1927).
- van Asch, H.P.D. 'The Growth of Aerial Survey and Its Effect on the Work of the New Zealand Private Surveyor,' *N.Z. Surveyor*, 24: 472–482 (March 1965).

Miscellaneous

- Chambers, Preston. 'The Surveyor's Apprentice,' *N.Z. Surveyor*, 13: 224–229 (March 1928).
- Gough, R.P. *The Land Survey System in New Zealand*, paper presented to 80th Annual Conference of N.Z. Inst. of Surveyors, 1968. Overview of history, land title surveys, administration, map production etc.
- H[ewitt], J.D.R. 'The Prospects of Surveying and Surveyors in New Zealand,' *Journ. N.Z. Inst. Surv.*, 1(1): 14–16 (1889).
- Hunter, Howard W. 'The New Zealand Surveyor,' *N.Z. Surveyor*, 25: 62–68 (March 1966). Extend and scope of work of private practising surveyor.
- Logan, B.H. 'The Size and Shape of Residential Lots, *N.Z. Surveyor*, 24: 641–646 (Sept. 1965).
- Murray, W.D.B. 'A Few Remarks on Surveying,' *N.Z. Surveyor*, 4: 122–129 (1896). Practical advice on surveying in the field: 'The best class of men [to employ] are middle-aged men, say from 25 to 40'! Photocopy.
- N.Z. Inst. Surveyors. 1974 Report on the Future Scope and Structure of the Profession of Surveying, [Wellington, The Institute], 1974.
- Rules and By-laws of the New Zealand Institute of Surveors, Wellington, Lyon & Blair ptrs, 1888.
- The Structure of the Surveying Profession in New Zealand ..., [Wellington', The Institute, 1982.
- Palmer, H.S. 'Major Palmer's Report on the Longitude of Various Places in New Zealand,' *N.Z. Gazette* (1876), 18: 229–232 (30 March 1876).
- 'Pegs,' *N.Z. Surveyor*, 9: 284–285 (Dec. 1911). N.Z. timbers which are durable, doubtful and unsuitable.
- 'A Revolving Protractor,' *N.Z. Surveyor*, 9: 56–58 (Sept. 1909). Invented by B.Stuart, of Chertsey.
- Thompson, T.K. 'Training of Cadets,' N.Z. Surveyor, 13: 261–264 (June 1928).

Periodicals

- Landscape. No.1 (1959) No.54 (1976); new series, No.1 (1977) No.13 (1983). Hocken has Nos. 30, 32–38, 40–54; ns Nos 1–13. This was a staff magazine.
- N.Z. Survey Draughtsmen's Journal. 1(1) (1947) 2(12) (Sept. 1954). Hocken holds 1(1–3, 5–8); 2(10 & 12).

- N.Z. Draughtsmen's Journal. 2(13) (July 1955). Only one issue under this title, and held by Hocken. Succeeded by:
- N.Z. Draughtsmen. 1(1957) today. Hocken holds 1(1–5, 7); 2(1-3); 3(1-3); 4(1) to 5(3); 6(1) on.
- N.Z. Surveyor (at first titled Journal of N.Z. Institute of Surveyors). 1 (1889) – today. Hocken holds 1(1); 2(5); 4(1) - 9(4, 6-10, 12-13, 15-16); 10(1) - 11(1-5, 9-13);12(1) - 34; No. 283 (Aug. 1993) on. This journal contains not only original papers from N.Z. surveyors (some listed here under various subject headings), but also articles reprinted from overseas sources.

Regulations

- N.Z. Dept Lands & Survey. Regulations for Conducting the Survey of Land in New Zealand; together with Land Transfer Survey Regulations, Index and Appendix, Wellington, Govt Printer, 1897.
- Regulations for Conducting the Survey of Land in New Zealand, Wellington, Govt. Printer, 1908; also the 1925
- N.Z. Survey Board. Examination Rules Under the Surveyors Registration Act, 1928, Wellington, 1934.
- N.Z. Survey Dept. Regulations and Instructions of the Survey Department of New Zealand, 2nd ed., Wellington, Govt Printer, 1879; also 3rd ed., 1886.
- 'Regulations for the Examination of Surveyors under The Land Act, 1892,' N.Z. Gazette, 15: 398-400 (5 March 1896).

Survey Department Reports

PROVINCIAL: Survey reports were generally published in either the Provincial Gazettes or the Votes and Proceedings, the Hocken having a complete set of the Otago publications. Accounts of the field and office survey work undertaken make up the bulk of the reports. Though not part of departmental reports, of particular significance are the accounts by Thomson and McKerrow of their early reconnaissances:

- McKerrow, James. 'Reconnaissance Survey of the Wanaka and Hawea Lake District,' Otago Prov. Govt. Gaz., 5: 11-18 (23 July 1862).
- Thomson, J.T. 'Report ... on the Reconnoissance [sic] Survey of the Southern Districts of Otago, Executed during the Months of January, February and March, 1857,' Otago Prov. Govt. Gaz., 3: 256–275 (22 Sept. 1859).
- NATIONAL: Annual reports of the Survey Dept (1877–1892), Lands and Survey Dept (1892–1987) and Dept of Survey and Land Information, DOSLI (1987 – on) are contained in the Appendices to the Journals, House of Representatives (AJHR). These first appeared in the H papers (1878–80); thereafter in the C papers. Until the early 1900s the annual reports contained exhaustive information about the surveys and surveyors. Thus from 1879 to 1908 the field work of individual surveyors is listed. Addtional survey material was published in Records of the Survey of New Zealand, vols 1-5 (1923/24 - 1927/28). Almost complete sets of all these papers are held by the Hocken. A limited number of technical papers are included in the reports, such as the following:
- Adams, C.W. 'Report on the Difference of Longitude between Sydney Observatory, New South Wales, and Survey Observatory, Mount Cook, Wellington, New Zealand, 1884, Appendices, C.1: 1-24.
- 'Longitude of New Zealand (Summary of Observations and Results), 1902, C.1: 87–89.
- 'Measurement of Standard Chain', 1901, C.1: 158-159.
- Neill, W.T. 'Corrections to be Applied to Field Measurements with Long Steel and Invar Tapes,' Records, 2:59-82 (1925/26).

In the 1880s and 1890s the papers contain numerous accounts of explorations which provide much geographic information about the areas concerned, as well as often

- surveyors in the field. Reports from this period include the following:
- Brodrick, T.N. 'Exploration of Route from Lake Ohau to Paringa,' 1897, C.1: 116–118
- Cussen, Lawrence. 'Report on the Topographical Survey of the Tongariro Mountains, 1891, C.1A: 36–38.
- [Report on Triangulation of King Country, North Island], 1884, C.1: Appendices 29–31.
- 'The Triangulation of the King Country, Auckland, 1885, C.1A: Appendices 21–24; 1886, C.1A: Appendices
- Douglas, Charles E. 'The Fox Glacier,' 1898, C.1: 118-119.
- 'On the Westland Alps,' 1894, C.1: 71–75
- 'Report by Mr Douglas of Explorations Made along the Copland River, 1893, C.1: 42–47.
- 'Report on Cook's River District,' 1896, C.1: 110–112. Hall, John. 'Report of Exploration in the County of Fiord
- ...', 1883, C.2: 44–45 Hall, W.Y.H. 'Report on Country West of Lake Te Anau,' 1899, C.1: 136–137.
- Mueller, Gerhard. 'Proposed Track from Canterbury to Westland via Mathias Pass,' 1881, C.4: 35–38.
- 'Reconnaissance Survey of the Clarke and Landsborough Country, Westland, 1887, C.1: Appendices 12–13.
- 'Reconnaissance Survey of the Head-waters of Arawata and Waiatoto Rivers, Westland,' 1885, C.1A: Appendices 25-27.
- 'Reconnaissance Survey of the Head-waters of the Okuru, Actor and Burke Rivers, Westland, 1890, C.5: 49-52.
- 'Report upon Reconnaissance Survey of Part of West Coast between Cascade Plateau and Jackson's River on the North, and Lake McKerrow and Hollyford on the South,' 1884, C.1: Appendices 73–74.
- Skeet, H.M. 'The North-eastern Corner of Taranaki,' 1885, C.1 A: Appendices 24–25.
- 'Reconnaissance Survey of Roads between Taranaki and the North Island Main Trunk Railway,' 1888, C.1A: Appendices 29–31.
- Smith, S. Percy. 'Notes on the Present State of the Country Immediately Round the Site of the Eruption of Tarawera, 1894, C.1: 81-83.
- Strauchon, John. 'Exploration of the Southern Portion of Tautuku Forest,' 1885, C.1A: Appendices 27–28.
- 'Topographical Reconnaissance of Tautuku Forest,'
- 1886, C.1A: Appendices 16–18. Weetman, Sidney. 'Reconnaisance Survey of New Routes to the Hermitage,' 1897, C.1: 118–119.
- Wilmot, E.H. 'Exploration and Topographicaol Survey in Fiord County, 1897, C.1: 119–121.

Two later reports of exploration are:

- Preston, R.W. 'Exploration of Tutoko, Cleddau and Hollyford Valleys with a View to Finding a Return Track from Milford Sound to Lake Wakatipu, 'Records, 1: 25–26 (1923/4).
- 'Exploration of Part of Quadrilateral Bounded by Sutherland Sound, the Arthur River, Milford Sound and the Tasman Sea,' *Records*, 1: 26–27 (1923/4).
- Though not part of Survey Dept reports, the following significant papers should be noted:
- 'Conference of Chief Surveyors,' 1873, H.1: 14p. Report on state of N.Z. surveys.
- Palmer, H.S. 'The State of the Surveys in New Zealand,' 1875, H.1, 33p. Often very critical.
- Thomson, J.T. 'The Surveys of New Zealand,' 1877, H.17A: 19p.

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