

THE PIONEER LAND SURVEYORS OF NEW ZEALAND

PART IV

BIOGRAPHICAL NOTES

In the following brief sketches the men concerned were all recognized as land surveyors, irrespective of the nature of their qualifications. Virtually all of them were acting under authority to practise and produce plans of survey for lodgement as public records as required under various statutes. In a number of cases these men were also qualified civil engineers or architects and practised both or all three professions. Included also are geological surveyors who carried out topographical surveys in connection with their work. Except for those land surveyors who assisted with the hydrographical surveys, the hydrographical surveyors, whose history has not been neglected by other historians, are not included here. Included are several notables who, although not practising surveyors, were intimately associated with the early surveys of New Zealand.

In the early Colonial days there were several independent surveying authorities, each maintaining its own survey records. Consequently there has been some difficulty, especially because some records have been lost over the years, in tracing the careers of some of the surveyors concerned. In some cases they were engaged under contract and they left the Colony after a brief sojourn, having completed the terms of their contract. This was especially the case with some of the New Zealand Company surveyors and also with some of those enlisted in the Colonial forces during the New Zealand wars and who were engaged for a short term afterwards in surveying and subdividing the conquered land for settlement, and in laying out the roads and superintending their construction. In some cases little remains to identify these surveyors, other than the survey plans they lodged. In the case of those employees of Government agencies, such as The General Government Survey Department, The Waste Lands Department, The Provincial Survey Departments, The Native Lands Purchase Department, The Lands and Survey Department and the Public Works Department, many of the personal files were dispensed with a few years after the employee had left the service.

The biographical profiles which follow contain all but a few of the earlier New Zealand surveyors. Also, with few exceptions, foundation members of the Institute of Surveyors are included. The omissions are due to reasons already explained. A considerable number of surveyors, who qualified just prior to, or since the Institute was founded in 1888, have been omitted because for most of them some details of their professional careers are to be found in the New Zealand Surveyor or in Departmental records.

This copy of Mr Lawn's work comes from a scan of the New Zealand Institute of Surveyors copy of the manuscript converted into a Microsoft Word document.

It is in two Word document files – The first-- Parts I. to III which covers the pioneer period from 1840 to c1900 the second-- Part IV Brief Biographies of 450 Early New Zealand Surveyors

A far as possible it imitates the type written original as to set out and has been checked for agreement with the spelling of names. A few words are in red where modern spell checking has not agreed with the Author.

I have no doubt other errors may be found as this is a very large document to be read literally word by word. Please forward these to the Institute and or to myself so the master copy can be updated.

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BIOGRAPHIES

	<u>Page No</u>
ABBOT, Edward Immyns	295
ADAMS, Charles William	295
ADAMS, Ernest Feltus	295
ALLEN, George Frederic	296
ALLOM, Albert George	296
ALLOM, Albert James	297
ANNABELL, John	298
ANDERSON, Edmund	298
ANDREWARTHA, John	298
ARMSTRONG, William	298
ARTHUR, William	299
ASHCROFT, Albert Edward	299
ASHWORTH, Edward	300
ATKINS, Alfred	300
ATKINSON, Hugh Ronald	300
AUBREY, Harcourt Richard	301
AUSTIN, Albert Duncan	301
AUSTIN, Albert Ernest	301
BABER, James (Junior)	302
BABER, James (Senior)	302
BAIN, Robert Preston	302
BAINES, J.P.	303
BAIRD, James Daniel	303
BAKER, Charles Alma	303
BAKER, John Holland	303
BAKER, Horace	306
BANKS, Charles	307
BARNICOAT, John Wallis	307
BARNARD, James Orme	309
BARR, George Morrison	309
BARRON, Alexander	309
BARRON, David Innes Alfred	310
	<u>Page No.</u>

BARRON, David	310
BARTON, John (Senior)	310
BARTON, John (Junior)	310
BAYLDON, David Henry	310
BEAL, Latham Osborn	311
BEDLINGTON, William	311
BEERE, Daniel Manders	311
BEERE, Edward Holroyd	311
BEERE, Gerald Butler	312
BELLAIRS, Eugene	312
BIGGWITHER, Frederick	312
BIRD, Joseph	313
BLACKBURN, William	313
BLACKETT, James William	314
BLAIKIE, James Armstrong	314
BLAIR, William Newsham	315
BLAKE, William Farley	315
BLAKE, John Thomas	315
BOLD, Edward Henry	316
BOUSFIELD, Octavius Lawes Woodthorpe	316
BOYLAN, John Thomas	317
BOYS, John Cowell	317
BRAY, William Bayly	317
BRIDGE, Charles Hastings	318
BRUNNER, Thomas	319
BREES, Samuel Charles	320
BRODRICK, Thomas Noel	320
BROOKES, Edwin Stanley	321
BROWNE, Richard Herbert	322
BROWNING, John Spence	322
BUCHANAN John	323
BUDGE, William	323
BULLARD, George Henry	324
BURD, Thomas	324
	<u>Page No.</u>

BURNETT, James (Senior)	325
BURSLEM, Francis Henry	325
BURSLEM, John	325
BURTON, George	326
BUSCKE, William	326
BUTLER, Edward William	326
CALDER, William	327
CAMERON, John	327
CAMERON, John Mindoro_	327
CAMPBELL, John	328
CAMPBELL, Robert Esther Moore	328
CARKEEK, Arthur Wakefield	329
CARKEEK, Morgan James Cooper	329
CARRINGTON, Frederick Alonzo	330
CARRINGTON, Augustus Octavius Croker	331
CARRINGTON, Nelson	332
CARRINGTON, Follett	333
CARRINGTON, Wellington	333
CARROLL, Thomas	334
CASS, Thomas	334
CHAMIER, George	335
CHARLTON, Horace	336
CHEAL, Peter Edward	336
CHEAL, Alfred Waimate	337
CHEVALIER, George Robert	337
CLARK, Henry Gostling	337
CLARKE, Marsden	337
CLARKE, William Hill	338
CLIMIE, Henry Westcott	338
CLIMIE, James Daniel	339
CONNELL, William	339
COOM, John	339
COOPER, George Sisson	340
COOPER, William	340
	<u>Page No.</u>

COPPS,	340
COTTRELL, John Sylvanus	341
CREAGH, Oliver Mason	341
CRIDLAND, Henry John	342
CUSSEN, Lawrence	342
DALTON, Joseph Edwin	342
DALTON, Peter Joseph	342
DALTON, William James	342
DARNELL, Bryan Henry	343
DARTNALL, William Whitney	343
DAVIE, Cyrus	343
DAVIE, Frank Harman	344
DAVIES, Richard Hutton	344
DAVISON, William	345
DAVY, Charles	346
DAVY, Edwin	346
DE PELICHET, Charles H Louis	346
DOBSON, Alfred	347
DOBSON, Sir Arthur Dudley	347
DOBSON, Edward	349
DOBSON, Ernest Douglas	349
DOBSON, George	350
DOBSON, John Howard	350
DOUGLAS, Charles Edward	351
DOWNES, Thomas William	351
DRAKE, James Charles	352
DRUMMOND, John	352
DRUMMOND, Thomas McKay	352
DUFFEY, Thomas	353
DUNCAN, George	353
DUNDAS, Alexander	353
DU MOULIN, Jean (John) Peter	354
DUVAUCHELLE,	354
EDGE CUMBE, Francis Henry	354
	<u>Page No.</u>

EDGE CUMBE, Henry Francis	355
EDIE, John	355
ELLIOTT, Samuel	355
FAIRBURN, Edwin	356
FAIRBURN, Frederick Ernest	357
FAIRBURN, Richard Alexander	357
FENTON, Harold Hyde	357
FIELD, Henry Claylands	357
FIELD, Henry August	358
FINNERTY, Charles E	358
FITZGERALD, Gerald	359
FITZGERALD, Michael	359
FITZGERALD, Thomas Henry	359
FITZGIBBON, Graham Coates	360
FLORANCE, Thomas	360
FOOKS, Charles Edward	361
FOY, Thomas Maddick	361
FRASER, De Gennes	361
FRASER, Sir Malcolm	362
FRISSELL, Edward	363
FULLOON, James	363
FULTON, James Edward	363
FULTON, Arthur Robert William	364
GARRETT, Roland	365
GARVIE, Alexander	365
GEISOW, Frederick Henry	365
GILLIES, Robert	366
GOODALL, John	366
GOLD-SMITH, Eric Charles	367
GOLLAN, Donald	367
GORDON, Henry Andrew	367
GOULTER, Cyrus	368
GRAHAM, William Australia	368
GRANT, Thomas Muir	369
	<u>Page No.</u>

GREVILLE, Reginald Palmer	369
GULLY, John	370
GUNDRY, William James	370
GUNDRY, William Richardson	371
GWYNNETH, John	371
HALL, William Jones	371
HALLETT, Walter	372
HALLIDAY, John	372
HAMILTON, William John Warburton	372
HAMMOND, Horace	373
HAMMOND, William Francis	373
HAMMOND, Frank	373
HANDYSIDE, Henry	374
HAMMER, George	374
HANNAH, John	374
HARDING, Samuel	375
HARDING, Samuel John	375
HARDY, Edwin Henry	375
HARMAN, Richard James Strachan	376
HARRISON, John William	376
HARRISON, R J	377
HASZARD, Henry Douglas Morpeth	377
HASZARD, Norman Frederick Johnston	378
HATELY, George	379
HAWKE, David	379
HAY, John	379
HAY, George William Drummond (Major)	380
HAY, Robert	380
HEALE, Theophilus	381
HEAPHY, Charles	382
HECTOR, Sir James	384
HEWLINGS, Samuel	385
HEWSON, Francis Maurice	386
HOCHSTETTER, Ferdinand Von	386

Page No.

HOGAN, Patrick Joseph	387
HOSKING, George Francis	388
HOSKING, Francis John	388
HOVELL, Henry Kinnaird	388
HOWDEN, Francis	389
HOWITT, Herbert Charlton	389
HUGHES, John	390
HUGHES, Thomas William	391
HUGHES, Thomas	391
HUMPHRIES, Thomas	391
HUNT, George	392
HURSTHOUSE, Charles Wilson	392
HUTCHISON, William Henry	394
JACKSON, Henry	394
JACKSON, John Howard	395
JOHNSTON, Adam	395
JOHNSON John Grant	396
JOHNSTON, Robert James	396
JOHNSTON, Thomas Masterman Hardy	396
JOLLIE, Edward	397
JONES, Edgar Chichester	398
JORDON, Thomas Edward	398
KENNEDY, Charles Dugald	398
KENNY, Thomas Nepean Edward	399
KENSINGTON, William Charles	400
KETTLE, Charles Henry	401
KOCH, Augustus Carl Ferdinand	402
KOCH, August Charles	403
LANGMUIR, John	403
LESSONG, Leopold	404
LEWIS, Charles	404
LEWIS, Henry	405
LEWIS, Henry Jonathan	406
LIGAR, Charles Whybrow	406
	<u>Page No.</u>

LOCKE, Samuel	408
LONG, Rowland Champion	408
LORD, Edward Iveagh	408
LOWE, John Henry	409
LOUCH, John Da Vinci	409
LUFF, George Andrew Middlemass	410
LUSK, Daniel Henderson	410
MCARTHUR, Duncan William	411
MCARTHUR, James Arthur	412
MCCLURE, Gordon Hurrell Morland	412
MCCURDIE, William Duncan Ross	412
MCDONALD, Augustus Vanzant	413
MCGEORGE, Leslie Duncan	413
MCINTOSH, Charles Hunter	414
MCINTYRE, George	414
MACKAY, Alexander Randolph	415
MCKAY, James	415
MACKAY, James	415
MACKELLAR, David	417
MACKELLER,	418
MACKENZIE, James	418
MCKERROW, James	419
MACKINNON, Quinton	420
MCNICOL, Malcolm	421
MABEN, Thomas	421
MACE, Frederick (Senior)	421
MAIR, Gilbert (Junior)	422
MALING, Christopher	423
MANTELL, Walter Baldock Durant	423
MARCHANT, Edgar Allman	424
MARCHANT, John William Allman	424
MARCHANT, Frederick William	425
MARCHBANKS, James	425
MARSHMAN, John Parker	426
	<u>Page No.</u>

MASON, Augustus Philip	426
MASON, John Blair	427
MATHEW, Felton	427
MATHIAS, Lionel Octavianus	428
MATTHEWS, Alfred Forde	428
MEASON, Gilbert Laing	429
MEWBURN	429
MERRETT, Joseph Jenner	429
MILLAR, John	430
MILLER, Thomas Snow	430
MILLETT, Richard	430
MITCHELL, Henry Walker	431
MONRO, Alexander	431
MORICE, James Murray	432
MOSS, William Edmund Carew	432
MOUNTFORT, Alfred John	432
MOUNTFORT, Charles Adam	433
MOUNTFORT, Charles Wheeler	434
MUELLER, Gerhard John	434
MURRAY, George Thomas	435
MURRAY, Andrew Hugh	436
MURRAY, William David Browne	436
MURRAY, William George	437
MUSGRAVE, Thomas	437
NANKEVILLE, Robert	438
NEILL, William Thomson	438
NELSON, Charles	439
NICHOLSON, Richard (Sir)	439
NORMAN, Edward	439
NORTHCROFT, William	440
NORTHCROFT, George Andrew	440
O'DONAHOO, Arthur O'Neill	440
O'CONNOR, Charles Yelverton	441
OLDFIELD, Thomas	441
	<u>Page No.</u>

OLIVER, John Thomas	441
O'MEARA, Edward Sherlock	442
O'NEILL, Allan	442
O'NEILL, Charles	443
O'NEILL, William Campbell	443
ORMSBY, George Owen	444
ORMSBY, J R	444
ORMSBY, Arthur Sydney	444
O'RAFFERTY, Cormac Patrick	445
O'RYAN, William	445
OWEN, Frank	445
PARK, James	446
PARK, Robert	446
PARKINSON, Samuel	447
PATERSON, Nathaniel	447
PAVITT, Ernest Alfred	448
PEMBERTON, Charles French	448
PHILLIPS-TURNER, Edward	448
PITCAIRN, Robert H	449
PRITCHARD, George Allen	449
PROUDFOOT, Peter	450
REAY, Robert Charles Lucas	450
REID, John	450
REID, Henry William	451
REILLY, John	451
REYNOLDS, Leslie Hunter	451
RICH, Francis Arthur	452
RICHARDSON, George Frederick	452
ROBERTS, George John	453
ROBINSON, George Frederick	453
ROCHE, Harry	454
ROCHFORD, James	454
ROCHFORD, John	455
ROGAN, John	456

Page no.

ROSS, Daniel	458
ROY, John	458
SADD, Robert Thomas	459
SALE, George Samuel	459
SANDES, Thomas Goodman	459
SAXTON, Henry Waring	460
SCOTT, William Henry	460
SCROGGS, Sidney M	461
SEALY, Edwin Percy	461
SEARANCKE, William Nicholas	452
SEYMOUR, Arthur Penrose	463
SHAIN, William Alexander	463
SHARP, William	464
SHANKS, Charles Barnes	464
SHARPE, James Hill	464
SHEPPARD, Frederick A	465
SHEPPARD, Robert	465
SIMPSON, David Lees	465
SIMPSON, Francis	465
SIMPSON, Leonard	466
SINCLAIR, Andrew	466
SKEET, Harry May	466
SKEET, Henry Luffkin	467
SKEET, Richard Mixer	467
SKEET, William	468
SKINNER, John	468
SKINNER, Thomas Kingswell	468
SKINNER, William Henry	469
SMITH, Frank Stephenson	469
SMITH, Henry Martin	470
SMITH, Maurice Crompton	471
SMITH, Stephenson Percy	471
SMITH, Thomas H	474
SMITH, William Mein	474

Page no.

SNODGRASS, John	475
SOLE, Thomas Gore	475
SPENCE, John	475
SPENCER, William Charles Cotton	476
STEPHENS, Samuel	476
STEWART, James	476
STEWART, John Tiffin	477
STOKES, Robert	478
STOUT, R. T. Hon. Sir Robert	479
STRAUCHON, John L	479
SYMONDS, John Jermyn	480
SYMONDS, William Cornwallis	481
TAYLOR, William Hare	482
TEEDSDALE, Alfred	482
THOMAS, Joseph	483
THOMPSON, Frederick Augustus	483
THOMPSON, Samuel George	484
THOMPSON, Thomas John	484
THOMSON, John Turnbull	485
THORP, Alfred J	485
THORP, Joshua	486
TIFFEN, Henry Stokes	486
TINLINE, John	486
TODD, Richard	487
TOLE, Daniel Austin	487
TOLE, Edward Francis	487
TOLE, John	488
TOLE, John Lambert	488
TOLE, William	488
TORLESSE, Charles Obins	488
TOWNSEND, Charles	489
TRAVERS, William Thomas Locke	490
TREGEAR, Edward De R	491
TRENT, Henry	492

TRESEDER, John Henry	493
TRIPHOOK, Thomas Dawson	493
TUCKETT, Frederick	494
TULLY, J	495
TURNER, Archibald Campbell	495
TURNER, Charles Barker	496
USSHER, Edgeworth Richard	496
UTTING, Frederick James	497
VICKERMAN, Alfred Herbert	497
WAKEFIELD, Charles Marcus	497
WARD, Joseph	498
WARD, Thomas	498
WARNER, Horatio Alfred	499
WARNER, Horatio Nelson	499
WATTS, Charles Fowell Willets	500
WATTS, John W A	501
WEBER, Karl (Charles) Herman	501
WEBSTER, George Johnston	501
WEETMAN, Sidney	502
WELCH, Joseph Sandell	502
WHEELER, William John	502
WHITCOMBE, John Henry	503
WHITE, William Bertram	504
WHITEHEAD, Arthur	504
WHITESIDE, George S	504
WILKINSON, George Thomas	505
WILLIAMS, George Watkyn	505
WILLS, Alfred	506
WILMOT, Ernest Herbert	507
WILSON, Anthony Dickson	508
WILSON, Daniel Cook	508
WILSON, Henry Spier	509
WILSON, Hugh Munro	509
WILSON, John Alexander	509

WILSON, James George	510
WILSON, James Irwin	510
WILTSHIRE, George James	511
WINTER, George John	512
WOOD, Reader Gilson	512
WRAY, Charles Allen	513
WRIGG, Harry Charles William	513
WRIGG, Henry	514
WRIGG, Frederick Augustus	514
WRIGHT, Arthur Blundell	514
WYLDE, Harry James	514
WYLDE, James	515
WYLIE, Andrew	515
YOUNG, Henry William	515
YOUNG, Robert Austen	516
YOUNG, William Spearman	517

ABBOTT Edward Immys

He came to New Zealand as a survey cadet on the staff of the New Zealand Company.

In 1846, in partnership with Sidney M. Scroggs, as contract surveyors, he assisted in the preliminary surveys for the Otago Settlement. Their work included the surveying of the Taieri Plains.

He was a talented artist and musician. A sketch made by him in 1849, of "Dunedin from Little Paisley", and lithographed in 1853, is in the Hocken collection housed in the Hocken Library at Dunedin.

Abbott died in Dunedin in 1849. His name is perpetuated in Abbotsford and Abbotshill at Dunedin.

Ref. "Contributions to the Early History of New Zealand. The Settlement of Otago." Dr. T. M. Hecken. 1898.

ADAMS Charles William (1840 - 1918)

Born in Buckland Tasmania July 7 1840. He was educated at Dr. Boyd's Grammar School, Campbelltown, Tasmania.

He became a survey cadet in Victoria in 1859, returning to Tasmania in 1861. The following year he settled in New Zealand, joining the Survey Department in Otago in 1862. In 1885 he became Chief Surveyor for Otago, and in 1897 he transferred to Marlborough as Chief Surveyor and Commissioner of Crown Lands, from which position he retired in June, 1904.

He was the author of several interesting papers on surveying subjects and was editor of "The New Zealand Surveyor" from 1891 to 1917. On behalf of the Government he was responsible for making the observations and computations for determining the difference of longitude between Sydney and Wellington.

His son, Dr. C. E. Adams, was Government Astronomer at Wellington, and Secretary of the New Zealand Survey Board, 1902-14

C. W. Adams was a foundation member of the New Zealand Institute of Surveyors. See "The New Zealand Surveyor" Vol. XI No. 5 P.140, and Vol. XVI No. 6 P.279.

ADAMS Ernest Feltus (1865 - 1957)

He was born on the Isle of Man, son of James Adams, B.A. with whom he came to New Zealand in 1871. He was educated at the Church of England Grammar School, Parnell and at Thames High School, of which his father was Head Master. In 1881 he joined the Survey Department as a cadet under Mr. J.C. [Blyth](#). In 1886 he was a member of the party under Stephenson Percy Smith which investigated the results of the Tarawera eruption. From 1888 to 1890 he was in private practice in partnership with James [McLaren](#) as surveyors and mining engineers when they carried on a wide and varied practice on the Coromandel peninsula. Subsequently he bought out McLaren's interest. The business had been established in 1867 by W. C. Wright who sold to D. H. Bayldon who transferred to McLaren. The original record plans of the underground workings of the goldfield from 1867 onwards were in Adams' custody and on his death in 1957 at 92 years of age, were handed by his family to the Thames Borough Council as the nucleus of the local Museum.

From 1893 to 1928 he was Consulting Engineer to the Thames Borough Council which did not employ a salaried engineer, and he was responsible for the town drainage, water storage and reticulation, street work and all other engineering work carried out over a period of 35 years. He was also engineer to the Thames Harbour Board from about 1900 to its dissolution in 1936.

One of his sons, Alfgar Vivian Adams, was also a Registered Surveyor and Member of the Institute. He predeceased his father at Thames in January, 1957.

(See "N. Z. Surveyor" No. 215 February, 1957. Also "Early New Zealand Engineers" by Furkert, 1954 and "The Tarawera Eruption" by Keam).

Also "Cyclopaedia of New Zealand" Vol.1 P.482, with photograph.

ALLEN, George Frederic

Government staff surveyor working in Wellington Province in 1856. Mentioned in "History of Land Legislation and Settlement in New Zealand" by W.R. Jourdain, 1925 p.241

He was a foundation member of the New Zealand Institute of Surveyors. Mentioned in "The Wanganui Story" by M. J. G. Smart and A. P. Bates, 1971, in which an incident of the Maori wars of 1865 is related on p.111. His name appears in the list of Authorised Surveyors published in the New Zealand Gazette on 1st January 1904.

* In July 1865 two small redoubts situated at Pipiriki on the banks of the Wanganui River some miles above the town were besieged by a strong force of hostile Hau Haus and were running short of food and ammunition. There was no way of communicating with the town so the commanding officer, Major Brassey, was forced to try unusual methods. Messages written in Latin were placed in empty bottles and a feather stuck in the cork. After dark these were thrown into the river in the hope that as they floated down through the town someone would notice them and pick them up. The message was worded "Omnes sunt recti mitte res belli statim" which indicated that while as yet all were well food and ammunition were needed urgently. A supplementary message was sent overland and was carried through the enemy lines by a friendly Maori. This read "Sumus sine rebus belli satis" (we are without the things of war). Fortunately one of the bottles was retrieved below Wanganui by G. F. Allen and he realised the urgency of sending relief to the beleaguered garrisons. A relief force under Major Brookes arrived on 1st August but the stores he brought proved insufficient. Finally in September the small river steamer "MOUTOA with a strong military escort reached the redoubts at Pipiriki on 10th September with ample supplies and the siege was raised.

ALLOM Albert George (1860 - 1956)

He was born at Thames, the son of Albert J. Allom, who had come to New Zealand in 1842 as a Survey Cadet to the New Zealand Company.

When fifteen years of age he was sent to England to complete his education before taking up a survey cadetship in New Zealand. He was trained as a surveyor at Auckland and after qualifying he joined the Lands and Survey Department and much of his career was spent in surveying some of the most rugged terrain in the North Island. In the King Country he assisted in some of the early reconnaissance

surveys for the Taranaki to Taumarunui railway and for the Te Kuiti to New Plymouth road.

As a young man he was a member of the Thames Volunteers and took part in the expedition to Parihaka in 1881 to quell incipient trouble with the Taranaki Maoris. Subsequently, while engaged on triangulation surveys in the Urewera Country, his party had numerous clashes with the Maoris led by the prophet Rua, who were trying to hinder the surveys.

Later he visited England and on his return he surveyed the Tripp estate in the Mackenzie Country of the South Island. He also laid out the Scenic Summit Road over the Port Hills at Christchurch.

One of his surveys while in the King Country was of the famous Waitomo Caves which had been discovered by another surveyor, Frederick Mace.

He died at Auckland in July, 1956 aged 96 years.

He became a member of the New Zealand Institute of Surveyors in 1889.

ALLOM Albert James (1825 - 1907)

He was a son of an old friend of Edward Gibbon Wakefield, Thomas Allom who was an artist of repute and to whom had been entrusted the engraving of most of the sketches of early New Zealand which were sent home to England by the New Zealand Company's officials and which, owing to their extreme rarity are now highly prized. Another son, Charles, was secretary to Edward Gibbon Wakefield.

Albert accepted an appointment as a survey cadet on the staff of the Company and arrived at Port Nicholson in the Brougham on 9th February, 1842. He was sent to assist with the surveys in the Manawatu district, working under the direction of Robert Sheppard. Subsequently he worked on the road location surveys in the Hutt valley and, after the Company's retrenchments in March, 1843 he was retained in the Company's Survey Office at Wellington.

In anticipation of the completion of the purchase of the Otago Block, Allom and Richard (later Sir Richard) Nicholson, with seven bushmen survey hands, were dispatched from Wellington on the 26th June, 1844 in the schooner Carbon, to join Frederick Tuckett and William Davison in the surveying of the Block. After a protracted and eventful voyage they reached Otago harbour where they assisted in the surveying of the harbour and the beginning of the sectional surveys. Towards the end of 1844, when the Company was in financial difficulties and in conflict with the Colonial Office in Great Britain, the surveys at Otago and elsewhere in New Zealand were suspended. Tuckett, Nicholson and Allom were recalled, leaving Davison as caretaker of the Company's property at Otago.

Allom shortly afterwards returned to England, and in June, 1847 became secretary and amanuensis to Edward Gibbon Wakefield, when the latter was producing his "Art of Colonisation"

"A View of the Art of Colonisation with present reference to the British Empire; in letters between a Statesman and a Colonist. Edited by (one of the writers) Edward Gibbon Wakefield" - which was published on 5th February, 1849 by J. W. Parker, a week after Wakefield had resigned from the Company.

Subsequently Allom had a varied career in the British Colonial Service, holding high positions, principally in the West Indies. Later he returned to New

Zealand and resided in the Thames district where his son Albert George Allom, who also followed the surveying profession, was born.

(See "The Amazing Career of Edward Gibbon Wakefield" by A. J. Harrop, 1929. "Contributions to the Early History of New Zealand" by T. Hocken, 1898. etc.)

A. J. Allom returned to New Zealand as general manager of a copper mining company operating on Great Barrier Island. This company went into liquidation in 1867 through the depression brought on by the termination of the New Zealand wars. Allom then entered the service of the Auckland Provincial Government as an official in the Thames goldfield which had recently been opened.

During his term in the Colonial Service he had been secretary to the Lieutenant Governor of the West Indies and for a period Colonial Secretary. Having contracted malaria he resigned to seek a more healthy climate in New Zealand.

ANNABELL John (1846 - 1919)

He was born in Derby, England, 19th November, 1846. He came to New Zealand in 1860 and served in the Armed Constabulary Forces from 1871 to 1874, when he joined the Survey Department as Assistant Surveyor, serving in Hawkes Bay for two years. He was promoted to District Surveyor, Wellington District and served until 1890, when he entered private practice in the Wanganui district. He was a foundation member of the N. Z. Institute of Surveyors.

ANDERSON Edmund (1834 - 1901)

He was born in Linlithgow, Scotland and educated at Edinburgh and came to New Zealand in the Maori in 1856, after having served his articles with Wiley and Peddle, Surveyors and Engineers. He was appointed to the staff of the Wellington Provincial Council in July, 1857 licensed under Native Lands Act, 1865 on 15th July, 1867. He became Assistant Engineer to the Provincial Council in 1873.

After the abolition of the Council in 1876 he settled in the Wairarapa district and entered private practice with headquarters at Carterton, where he died on 31st July, 1901. He was a foundation member of the N. Z. Institute of Surveyors.

See "Early New Zealand Engineers See also "Cyclopaedia of New Zealand" Vol.1 P.914.

ANDREWARTHA John

He was a Government surveyor working in the Auckland Province in 1855 and residing at Waluku. He is listed in the Provincial electoral roll of 1857 as a surveyor. Evidently he died towards the end of 1857, vide appendix to Journal of Auckland Provincial Council, Session VIII, 1857-8, when his widow petitioned the Government for payment due for the survey of .Manakau Block.

Ref. - History of Land Legislation and Settlement in New Zealand by W. R. Jourdain. 1924 p.241.

ARMSTRONG William (1858 - 1912)

He was born at Sandhurst, Victoria on 1st December, 1858.

He joined the Lands and Survey Department in Otago on 1st January, 1876 as a survey cadet under Mr. David Barron, District Surveyor, and was appointed Assistant Surveyor in January, 1880. He became an Authorised Surveyor in January, 1880. After attaining the rank of District Surveyor he transferred to Napier

at his own request, as a draughtsman. He was promoted to be Chief Draughtsman and Receiver of Land Revenue at Blenheim in August, 1899. A further promotion In April, 1909 made him Chief Draughtsman at Dunedin and on 1st May, 1911 he was appointed Chief Surveyor and Commissioner of Crown Lands for Taranaki.

He died after a brief illness on 26th January, 1912.

He was a foundation member of the New Zealand Institute of Surveyors. See 'Zealand Surveyor' Vol. IX No. 13

ARTHUR William (1837 - 1885)

He was born In Dumbarton, Scotland, educated and trained In Great Britain as an engineer and surveyor. He came to New Zealand in 1860 and in January 1861 entered the Provincial Government Service in Otago. In 1864-65 he triangulated the Tutarau, Wyndham and Toitoti Survey Districts. In 1869 the Highlay, Naseby and Upper Taieri, and in 1871 the Idaburn, Gimmerburn, Leaning Rock, Silver Peaks, St. Bathans, Tarras, Crown, Cardrona, Hawea and Wanaka Districts. On 1st January, 1875 he was appointed Provincial Engineer of Otago which position he held until the abolition of the Provinces.

On 1st January, 1877 he was appointed Chief Surveyor of Otago which position he held until 1885, when he became ill and died at Roslyn on 3rd August, 1885.

(See App. to Journals of House of Reps. 1885, C. Ia.)

ASHCROFT Albert Edward (1862 – 1942)

Born at Cwmbach, Aberdare, Wales, on 31st July, 1862 he was the son of George Ashcroft, Civil Engineer, and Sophia (nee Davey).

He arrived in New Zealand in 1876 and on 1st August, 1878 he entered the Lands and Survey Department at Nelson as a cadet. He was appointed a survey cadet under Assistant Surveyor William Snowden in September, 1879, and passed the surveyor's examination in December, 1881.

He left the Department to enter private practice at Hunterville in January, 1893, and six years later he went to Canada where he entered the Survey Department of the Province of British Columbia. He qualified as a Dominion Land Surveyor in February, 1900.

He was engaged in development projects such as the Gray Canal and Canadian Railways and also practised privately In Greenwood, British Columbia.

He returned to New Zealand in 1927 and coached private pupils in Mathematics, English, Latin and History and from the outbreak of the war in 1939 he coached pre-entrants for the New Zealand Air Force in Mathematics and Navigation, until his death on 20th April, 1942.

In 1958, the centennial of the founding of British Columbia, the Government of the Province erected a monument dedicated to the memory of Albert Edward Ashcroft, one of four such monuments erected to the memory of surveyors and engineers who had made outstanding contributions to the development and advancement of the Province. A. E. Ashcroft had been instrumental in the formation of the White Valley Irrigation and Power Company of which he became the Engineer.

He was a foundation member of the New Zealand Institute of Surveyors and he rejoined the Institute on his return from Canada.

ASHWORTH, EDWARD (1814-1896)

As a young man, recently qualified in the professions of architecture and surveying, Ashworth came from England in the brigantine "TUSCAN" which arrived at Auckland towards the end of October, 1842. A fellow passenger was James Baber (snr.) (q.v.) who also was a trained architect and surveyor.

On arrival they found that the Colony was virtually bankrupt and there was little work offering for architects and surveyors, for the time being. Ashworth occupied himself as a drawing master and produced a number of sketches and watercolours of early Auckland. A number of these are now owned by the Auckland City Art Gallery.

Ashworth left New Zealand in 1814 and returned to England via Sydney. His son, Charles Ashworth was an architect and surveyor in Richmond, Surrey.

See "The Lively Capital" by Tina Platts, 1 971 Avon Fine Prints Ltd., New Zealand.

ATKINS Alfred (1850 - 1919)

He was born in Birmingham, England on June 12th, 1850, and gained his general education at King Edward VI School, Birmingham, from 1860-67. He spent seven years at the School of Science and Art, Birmingham, from 1867-74... Coming to New Zealand in 1875 he was employed on the Waitara to Wanganui railway location. In 1879 he was employed by the Manchester Corporation on the survey of its special settlement block between Palmerston North and the Rangitikei River. He also carried out extensive works at Wanganui in engineering, surveying and architecture.

Gazetted an Authorised Surveyor on 6th August, 1861, he was a foundation member of the New Zealand Institute of Surveyors. He was elected A. M. I. C. E. in 1886, F. R. I. B.A. in 1888 and M. R. San. I in 1891. He was also a foundation member of the New Zealand Institute of Architects and President of that Institute in 1911-12.

He died in Wellington on 18th April, 1919.

ATKINSON Hugh Ronald (1863 - 1956)

Born 15th January, 1863. He was trained as a surveyor and was appointed Engineering Surveyor in P. W. D. in 1901, engaged under J. H. Dobson in connection with the surveys for the Midland Railway via Arthur's Pass. In October 1901 he went to the Rimutaka deviation survey. In 1903 he transferred to the Hokitika-Ross railway survey and a year later was back at the Otira-Arthur's Pass survey. In January, 1908 he was appointed Assistant Engineer on the location of the Waihi-Tauranga Railway, and later that year transferred to the Lands and Survey Department. He retired on 30th June, 1928. He was a Member of the New Zealand Institute of Surveyors. He died at Tauranga in 1956 aged 93.

See New Zealand Surveyor, Vol. XXII p8.

He qualified as a licensed surveyor in 1883, and. engaged in private practice and as a government staff surveyor before joining the Public Works Department in 1901.

AUBREY Harcourt Richard (1818 - 1896)

He was the son of Colonel H. Aubrey of the Life Guards. He had travelled extensively in Europe before coming to New Zealand in the London in 1840 as a member of the survey staff of the Plymouth Company under Frederic Carrington, the Chief Surveyor.

With Carrington's party he arrived at Moturoa on 12th February, 1841, to commence the surveying of the New Plymouth settlement. In 1844 there was a retrenchment of the New Zealand Company's survey staff (the New Zealand Company having taken over the Plymouth Company) and little is recorded of Aubrey's movements until in 1848 he was appointed by the Government as Sub-collector of Customs and Postmaster at Hokianga and in 1856 he was appointed Resident Magistrate and Collector of Customs for the districts of Whangarei and Kaipara, and took up residence at Reotahi, Whangarei Heads.

He retired in 1880 and died at Reotahi on 30th May, 1896. (See "The Story of Whangarei" by Diana Vance, p.76. Aubrey was the first Resident Magistrate to be appointed at Whangarei).

AUSTIN Albert Duncan (1839 - 1903)

Born 19th July, 1839 and educated in England. He came to New Zealand in 1855 and on 1st September that year was engaged as an Assistant Surveyor by the General Government, but transferred to the Nelson Provincial Government on 1st July, 1856. Through a break down in health he left field work in 1866 but subsequently served in the Land Transfer Office in 1871 from which he was appointed Mining Surveyor for the Nelson Province, and in 1872 became Surveyor-in-Charge at Nelson under the General Government. The following year he was appointed Resident Engineer, Public Works Department, Nelson and was engaged on the Nelson – Foxhill railway location. In November, 1875 he transferred to Invercargill in charge of the district in which railway construction was in full swing, to Wakatipu, Waipahi and to Riverton. He became an Authorised Surveyor on 6th September, 1878. On 21st September 1878 he was promoted to District Engineer, Christchurch in charge of all development in Canterbury.

He retired on 1st October, 1887 and died in Christchurch on 11th April, 1903.

AUSTIN Albert Ernest (1862 - 1941)

Born at Nelson 28th June, 1862, son of A.D. Austin. Educated at Nelson College. Served part of his pupil age under his father and partly (1882-83) under John Rochfort. He became an Authorised Surveyor on 12th November, 1883. He was appointed Assistant Engineer in the Public Works Department engaged in surveys for a possible railway from West Coast to the East Coast of the South Island. In 1885 he became a student of the Institute of Engineers and was appointed Assistant Engineer to Westport Harbour Board, serving under C. Napier Bell, until 1888, when he went to the Argentine and Brazil where he was engaged on railway and harbour construction. Back in New Zealand in 1900 he was appointed Resident Engineer to Timaru Harbour Board. In 1904 he went into private practice in Blenheim

as engineer and architect, and also took up 1,000 acres of sheep country in the Upper Wairau and farmed it successfully.

About 1915 he moved to Brightwater, Nelson, and later to Whangarei. He died in Whangarei on 1st July, 1941.

BABER James (Junior) (1853 -)

Born at Auckland in 1853 he was a son of James Baber, who was a surveyor there during the first decade of settlement. Educated at the Church of England Grammar School and at Auckland Grammar School. He was trained in surveying by his father and subsequently under Stephenson Percy Smith. He spent several years on the Auckland survey staff, mainly engaged on triangulation surveys and subsequently served in Hawkes Bay and Wellington districts on trigonometrical surveys. In 1879 he was appointed to the permanent staff in the Auckland District and in 1889 was stationed at Tauranga as District Surveyor.

He was a foundation member of the New Zealand Institute of Surveyors.

(See "Cyclopaedia of New Zealand" Vol. 2, p.232 - has photo also).

BABER James (Senior) (1821 -)

Coming to Auckland in 1842 as a trained surveyor, architect and engineer, James Baber helped to shape the infant town and its environments. He was responsible for laying out and constructing many of the main town and suburban streets and supervised the gangs of Maori workmen who built them. At first for the General Government and subsequently for the Auckland Provincial Council, he carried out many survey contracts. He served for a period as Deputy Waste lands Commissioner, a position he relinquished to enter private practice in partnership with Reader Gilson Wood. He took an active interest in public affairs and local enterprises. He was one of the founders, in 1843, of the Agricultural and Horticultural Society of Auckland which was strongly supported by leading members of the surveying profession and with another surveyor, Edwin Fairburn, shared the duties of secretary.

He was a foundation member of the New Zealand Institute of Surveyors.

He was licensed to survey under the Native Land Act, 1865 and under the Land Transfer Act, 1885. In 1868 he was appointed a Goldfields Surveyor, vide Auckland Provincial Gazette. Appointed Buildings Inspector for Auckland 14th April 1859.
Auckland

BAIN, Robert Preston

A Canterbury Provincial Surveyor from 1857 to 1876. In 1863 he was given the contract of making a topographical survey of southern Westland, which was then part of the Canterbury Province. His contract was from Abut Head southwards to Awarua, while from Abut Head northwards to the Grey were the task of Arthur Dudley Dobson. In September, Bain chartered the schooner "FAWN" at Port Chalmers and sailed north about South Island to Jackson's Bay where he landed his party. Six Otago miners who had been prospecting at Bligh Sound arrived in a whaleboat and Bain recruited them to his survey party. Owing to the very rugged nature of the shore line he decided to survey by open boat. Much time was lost through having to run for shelter from the frequent storms, and one of the miners was drowned in the surf. By January, Bain had reached Big Bay with his survey

work. There a schooner, "PRIDE OP THE HURON", from Dunedin called in and Bain requisitioned it to take his party back to Jackson's Bay. The schooner, however, was wrecked outside Martin's Bay and in February Bain's party and the schooner's crew, faced by starvation, crossed by the Lake McKerrow – Hollyford - Greenstone route to Wakatipu and Dunedin, losing another man on the way. (Dobson had also suffered shipwreck when he arrived with his party at the mouth of the Grey, but, fortunately for him, he and his party with their equipment got on shore without loss).

See "History of Land Legislation and Settlement in New Zealand by Jourdain, p. 242, 1924.

"The West Coast Gold Rushes" by P. R. May 1967 pp 90-91

BAINES, J. P.

He was a member of the Plymouth Company's survey staff under the direction of Frederic Carrington, which arrived at Moturoa in the barque Brougham on 12th February 1841, to survey the site of the New Plymouth Settlement.

Baines had come out in the capacity of a surveyor's assistant, but on 18th October 1841 he was promoted to the position as Assistant Surveyor on Carrington's staff. He assisted in laying out the sections for the first settlement in Taranaki.

BAIRD, James Daniel (1840-1908)

District Surveyor, Wellington Province in the 1860's, Born in Newton, Montgomeryshire. Trained in engineering as an apprentice of the Great Eastern Railway, 1856-1861.

Emigrated to New Zealand in 1863 and in January 1864 was appointed Assistant Provincial Engineer, Wellington. In 1866 he became District Engineer at Masterton, a position he held until 1869. Between 1871 and 1876 he was Provincial Engineer. His work was mainly in the engineering field, but evidently he carried out some land surveys in that connection. In 1885 he was in partnership with Thomas Ward in surveying and engineering in the Wellington Land District.

See "Early New Zealand Engineers" by F. W. Furkert, 1953, p.101.

BAKER, Charles Alma (-1941)

Born and educated in Oamaru he became a survey cadet under J. A. Connell. Became an Authorised Surveyor in July 1881, when stationed at Dunedin. Surveying in Auckland District in 1882. Later he went to Malaya and Borneo working as a surveyor for the Malayan Government. There he acquired extensive interests in rubber plantations and became a magnate in the rubber industry.

Through his investments in tin and rubber in Malaya he became a millionaire and not long before his death in 1941 he presented the British Government two Tornado fighter aeroplanes. This was in addition to earlier similar gifts. At various times he revisited New Zealand mainly for the deep-sea fishing in the Bay of Islands, where he and the American author, Zane Grey, helped to popularise the fishing grounds.

He was a foundation member of the New Zealand Institute of Surveyors.

N. Z. Surveyor XVII, No 2, p. 129 and Vol. XVIII, No. 3, p.189.

BAKER, John Holland (1841 - 1930)

Fourth son of the Rev. Thomas Baker, he was born in the vicarage at Chilcombe, Winchester, England on 4th December 1841. He was educated in England and Germany and in anticipation of his going to New Zealand was taught some carpentry and black-smithing. In 1857 he came to his uncle, Archdeacon Mathias, at Christchurch. On 1st January 1858 he was indentured as a survey cadet by Mr Cyrus Davie of the Canterbury Provincial Survey Office, paying the master surveyor £200 as was required in those days. To gain experience in surveying in bush country he worked for a few months with Mr R. J. S. Harman's party on Banks Peninsula. In 1859 Chief Surveyor Thomas Cass allowed him to come into the office to learn drafting. Baker had a flair for exploration which at that time was a paying proposition for those who found good grazing land and could obtain grazing rights through the Commissioner of Crown lands. In 1860 Baker and his cousin, Frank Mathias, spent a month exploring the back country of the upper Waimakariri and across to Lake Coleridge and the headwaters of the Ashburton and discovered about 15,000 acres of grazing country for which their application to the Land Board was successful, and shortly afterwards sold their rights for £300.

A little later Baker met Samuel Butler, the author, who was proprietor of Mesopotamia sheep station, and in December 1860 the pair set out to explore the upper reaches of the Rakaia River. They hoped to find a workable pass to the West Coast. They did discover a pass which is now known as the Whitcombe Pass because of the surveyor who first crossed over it and lost his life at the mouth of the Grey River after having negotiated this very difficult pass.

Starting from Timaru in March 1861 Baker and Mr E. Owen explored the Mackenzie country and Lakes Pukaki and Wanaka and on through Lindis Pass to the Lindis goldfields. They went to the head of Lake Wanaka and Baker went to the top of the Pass known as Haast Pass. On the return journey they went down the Waitaki river and Baker went on to Oamaru and thence to Dunedin. He went on to Invercargill where he spent a few days before returning to Canterbury. In August, 1861 having qualified as an Authorised Surveyor he left Canterbury to seek an appointment in Southland. On his arrival in Dunedin in August he found the whole community in the throes of gold-fever, the Tuapeka goldfield having recently been opened. He joined a party and went to Gabriel's Gully. After trying their hands at alluvial gold mining they found it more profitable to become storekeepers and traders. After several months Baker left the party and went to Invercargill where Chief Surveyor Theophilus Heale appointed him to the Provincial survey staff. In August 1862 Baker assisted James McKerrow on a geodetic survey connecting Stewart Island to the Southland triangulation survey. Then in addition to sectional surveys Baker made a hydrographical survey of New River estuary. He then continued the triangulation survey of Southland in which he was assisted by his cadet, M. Pugh. Part of this work had previously been done by Mr Gerhard. Mueller. In 1864 Baker was Acting Chief Surveyor during the absence of Heale who recommended that in the event of his not returning to Southland, Baker should be appointed Chief Surveyor. The Province was in debt and for a few days in December 1864, the Provincial Government offices were in the hands of receivers with the bailiffs in possession. As a consequence Baker was obliged to reduce the survey staff. On 4th July the following year. Mr Heale having decided not to return to Southland, Baker, although only twenty-four years of age, was appointed Chief Surveyor.

In the following October, Baker was sent to Auckland Islands to search for shipwrecked sailors, taking with him G. Richardson who was then a reporter on the "Southland Times" and subsequently a member of the survey staff and ultimately Minister of Lands and President of the New Zealand Institute of Surveyors. Following this expedition Baker made an extensive tour of Southland visiting all of the then settled districts. He was then appointed Commissioner of Waste Lands in addition to his office as Chief Surveyor. In his administration he always stressed the necessity of setting aside adequate reserves for gravel, stone, quarries, ferries and other public utilities which had not previously received sufficient attention. At this time he was involved in the extension of the railway system in the Province and with Mr Thomas Paterson, C. E. selected the routes for the extensions. Early in 1866 his younger brother, Horace Baker (Q.V.) came to New Zealand at his suggestion and was placed as survey cadet with Mr G. F. Richardson who was then District Surveyor. The following year J. H. Baker toured Stewart Island with the Governor, Sir George Grey. He also visited Ruapuke Island and the mission station of the Rev. J. H. F. Wohlers.*

In 1868 Baker toured in the North Island and met some notable people including Dr. (later Sir) James Hector, Dr. Daniel Pollen, Alfred Comett, Major Charles Heaphy, V. C., and Major G Drummond Hay, as well as his friend Theophilus Heale, with whom he arranged his brother Horace's transfer to the Auckland survey staff.

Southland was re-annexed with Otago Province in October 1870 and the Invercargill Survey Office became an adjunct of the Otago Survey Department with J. T. Thomson as Chief Surveyor and J. H. Baker as Inspector of Surveys in charge of the Southland district. In May that year Major Heaphy, V. C., and Mr G. S. Cooper, Secretary of Native Affairs, had visited Invercargill to settle about Native Reserves on the mainland and on Stewart Island. Baker made the triangulation survey of Stewart Island and the adjacent islands and supervised the surveys of the Native Reserves. In March 1872 Baker commenced the standard survey of Invercargill which was completed in December 1874. Three months later he went on twelve months leave and travelled via the United States to England. Returning to Invercargill in April 1876 he again took charge of the Provincial Survey Office. In September the Abolition of Provinces Act was passed and soon afterwards J. T. Thomson, as Surveyor General, organised the Lands and Survey Department, and appointed J. H. Baker Chief Surveyor for Canterbury in succession to Samuel Hewlings who had retired.

In 1884 Baker was appointed Commissioner of Crown Lands in addition to his other duties and in April that year, for health reasons, he was obliged to take a year's leave of absence and he went to England via Cape Horn.

Early in 1891 he was appointed Chief Surveyor and Commissioner of Crown Lands for the Wellington District and in March the following year was appointed Assistant Surveyor General. He retired in November 1896 and went to live in England. He revisited New Zealand in 1921 and died in England in 1930.

Ref: For a complete biography see "A Surveyor in New Zealand" (1857-1896).

The recollections of John Holland Baker (1841-1930). Edited by his daughter, Noeline Baker, 1932. This has a photograph.

J. H. Baker's diary is now in the Turnbull Library. It covers the period of Baker from 1857 to 1896. Also the "Exploration of New Zealand" W. G. McClymont, second edition, 1959 Chapter 10 (Oxford University Press).

"Dictionary of New Zealand Biography" Scholefield Vol. 1 p.92.

*Note - J. H. Baker mentions that on his visit to Ruapuke Island in 1867 he met the Rev. Wohlers and Mrs Wohlers and their daughter Gretchen. The latter married Mr Arthur Traill school master at Stewart Island and one of their sons, William Traill entered the surveying profession and was Chief Surveyor at Auckland when he retired in 1949.

BAKER Horace (1851 – 1914)

Born at Koenigswinter, on the Rhine, Germany he was a younger brother of John Holland Baker whose reminiscences were published as "A Surveyor in New Zealand (1857 - 1896)" by the latter's daughter Noeline.

Horace Baker came to join his brother in 1866 when J. H. Baker was Chief Surveyor for Southland Province. He was placed as a survey cadet under Mr. G. P. Richardson who was then on the Provincial survey staff and who later became Minister of Lands (1887 - 1891) and the fourth President of the New Zealand Institute of Surveyors. Baker was licensed under the Native Land Act, 1865 and gazetted in 1870.

In 1869 Horace Baker was appointed a staff surveyor under Theophilus Heale (Inspector of Surveys for the General Government) with headquarters at Auckland. After serving on the trigonometrical survey staff he received a certificate of competency from Mr. Heale on 31st July, 1869. In December 1870 he was sent to assist in the triangulation surveys at Hawkes Bay under Messrs. Heale and Stephenson Percy Smith.

In 1873, under instructions from Mr. Heale he left Auckland to go to Hawkes Bay to undertake the peripheral and topographical survey of the Seventy Miles Bush block of approximately 475,000 acres. The purchase from the Maoris had recently been finalised by Mr. Samuel Locke.

He was appointed Deputy Inspector of Surveys for the East Coast of the North Island on 3rd March, 1875 (New Zealand Gazette 1875, p.337).

Following the establishment of the Lands and Survey Department on the abolition of Provincial government in 1876, Mr. Baker was appointed Chief Surveyor for Hawkes Bay, his appointment dating from 1st January, 1877.

In 1883 he was appointed Commissioner of Crown Lands for Hawkes Bay in addition to his duties as Chief Surveyor, and on 1st January 1887, he was also appointed a Commissioner under the "Native Land Administration Act, 1836".

He resigned from the Public Service at the end of April, 1887 and entered private practice as surveyor and land agent at Napier.

He died at Napier on 23rd Sep 1914.

He was foundation member of the New Zealand Institute of Surveyors.

See also "New Zealand Surveyor" Vol. X No. 7, September, 1914.

BANKS Charles (1851 - 1923)

Born at Edinburgh on 2nd August, 1851 and educated in Edinburgh, Dunedin and Otago University. He trained under G. M. Barr and was engaged on New Plymouth Waterworks, Wanganui Harbour Works and various surveys and triangulations in Otago. He surveyed the Silverstream Water Supply to Dunedin assisted by G. T. Murray. He was later in private practice in Dunedin and for four years with R. S. Allen. He joined the Waitaki County Council as Engineer in 1884 and retired from that position in 1915. He became an Authorised Surveyor in December, 1877

He was elected A. M. I. C. E. in 1891. He was a foundation member of the New Zealand Institute of Surveyors. He died at Oamaru on 12th September, 1923.

BARNICOAT John Wallis (The Honourable) (1844 - 1905)

Born at Falmouth, Cornwall, he received a good education and then trained under a Mr. Thomas of Falmouth, who was a surveyor and engineer. In 1841 he was attracted by the New Zealand Company proposals to form a second settlement somewhere in New Zealand. For £300 he purchased allotments of 201 acres in the scheme and sailed in the Lord Auckland from Gravesend on 25th September, 1841. One of his fellow travellers was Thomas John Thompson, who also was a surveyor. They arrived at Nelson on 26th February, 1842. Soon afterwards, owing to the chaotic state of the settlement because the sections were not yet surveyed, Barnicoat offered his services to Captain Arthur Wakefield, the Company's Nelson agent and was given a contract to survey a portion of the Waimea Plain. He was assisted by T. J. Thompson with whom he entered into partnership. They next received a similar contract in the Moutere district. Next they undertook a contract to survey part of the Wairau Plains the ownership of which was the subject of a dispute between the Company and the Ngatitōia tribe led by Te Rauparaha. In the disaster that occurred on the 16th June, 1843 commonly known as the "Wairau Massacre" Barnicoat was fortunate to escape with his life. Thompson had left the ground a few days earlier.

For the rest of the year Barnicoat was engaged on further settlement surveys in the upper Moutere and Motueka districts. Early in 1844 at the request of the Chief Surveyor, Frederick Tuckett, he joined the expedition to explore the east coast of the South Island down to Stewart Island with the object of selecting a site for the "New Edinburgh" settlement. They sailed in the Deborah from Nelson on the 31st March, 1844. During the course of the expedition Barnicoat and Davison surveyed Waikouaiti harbour, part of the Otago harbour, Molineux Bay and New River harbour, (Invercargill). Crossing to Stewart Island they spent three days there before setting out on the return journey on 1st June.

Barnicoat accompanied Tuckett when, after leaving the Deborah at Molineux harbour, the party proceeded by dinghy up the river to the head of Inchclutha Island. Thence, in the depth of winter, they made the arduous journey overland to Otago harbour, where they rejoined the Deborah and returned to Nelson at the end of September.

Barnicoat took part in the exploring for the elusive "extensive plains" that were needed to complete the New Zealand Company's obligations to supply the agricultural rural allotments. He also assisted in the exploring for a practicable route

from Nelson to the Wairau Valley. In 1846 he explored the Pelorus River and the surrounding country. In 1850, with John Tinline, he sought a shorter and more practicable route to the than that via Top House which had been discovered by Cotterell. His report was published in the Nelson "Examiner" of 3rd and 15th January, 1851. However, a route over the Whangamoia Hill was preferred and Barnicoat was given the task of cutting the road line over Whangamoia to Pelorus River and thence via Kaituna to the Wairau. Barnicoat then relinquished surveying for pastoral pursuits and developed his property.

With the establishment of Provincial Government In 1853 Barnicoat entered politics and was elected to represent Waimea East in the Provincial Council. He had the unique distinction of retaining his seat continuously until the abolition of Provincial Government in 1875. He filled the office of Speaker from 1858 to 1875. In 1883 he received a life appointment to the Legislative Council He retired from the office in 1902.

He had always taken a keen interest in educational affairs and in 1843 helped to found Nelson College, one of the first institutions for secondary education in New Zealand. This College was first mooted in 1843 vide New Zealand Ordinances, 1843, but the College was not opened until 1856, when the necessary funds became available. Barnicoat was one of the original trustees and he served on the Board of Governors for more than forty years. He also served on the Nelson Education Board from its inception in 1836 until 1839. Barnicoat was a stalwart supporter of the Anglican Church and when Nelson was constituted a separate Diocesan See in 1857, Barnicoat became a lay member of synod with the office of Assessor of Bishops Court. He remained a member of synod for forty years.

One of his accomplishments was the art of pen and in sketching and there are a number of his drawings of early pioneering subjects of historic interest still in existence.

He died on 2nd February, 1 905.

References: Cyclopaedia of New Zealand, Vol. 5 p.30 (with photo)

Early New Zealand Engineers by F. W. Furkert, 1953 p.105

Nelson. Ruth M. Allan, 1965.

Contributions to the Early History of New Zealand. T. L. Hocken, 1898
Appendix A. etc. p.203 to 225.

John Wallis Barnicoat. A Biographical Sketch by V. R. Gunn (booklet).

BARNARD James Orme

Licensed under the Native Land Act, 1862 N. Z. Gazette 11th May, 1865. He was a member of the staff of the Provincial Survey Department and subsequently of the Lands and Survey Department under the General Government. Later he was appointed Inspector of Surveys in charge of the Poverty Bay and East Coast Districts which were then directed from Hawkes Bay. Appointed Inspector of Surveys, vide New Zealand Gazette, 1st. June, 1877. He carried out much of the triangulation of the rugged hinterland of Gisborne and the East Coast. Authorised to survey under the Land Transfer Act.

BARR George Morrison (1837 - 1907)

He was born in Glasgow. He was a pupil under Professor Rankine at the Glasgow University, and took firsts in engineering and mathematics. After working on railway location and construction in Scotland he came out to join the Otago Provincial survey staff in October 1862 at Port Chalmers. In 1866 he

transferred to the General Government Service and in 1869 was appointed Provincial Chief Engineer. In 1872 he went into private practice in partnership with Thomas Oliver, and as consultants they were responsible for a number of engineering projects. He was engineer to the Otago Harbour Board from 1882 to 1890. He executed harbour works at Wanganui also, and was responsible for waterworks at New Plymouth, Queenstown, Cromwell, Palmerston North, Mornington and Roslyn and his scheme for Dunedin was adopted in 190?

He was elected M. I. C. E. in 1882. He was a City Councillor for Dunedin for two years and served for four years as a member of the Otago Harbour Board. He was a foundation member of the New Zealand Institute of Surveyors, and with Stephenson Percy Smith shared the honour of being the first Vice President of the Institute. He died in Dunedin on 27th April, 1907.

See "New Zealand Surveyor" 1907, Vol. VIII No. 6 - June, 1907. Cyclopaedia of New Zealand Vol. 4 p.276 (has a photo).

BARRON Alexander (1839 - 1919)

, Born in Craigroy, Morayshire, Scotland in 1839. Educated in Scotland he came to Dunedin in the ship Pladda in 1861. He joined the Survey Department working under District Surveyor W. Arthur, who later became Chief Surveyor of Otago. After qualifying as a Surveyor he carried out surveys in Otago until , the abolition of Provincial Government in 1876 when he went to Wellington with Mr. J. T. Thomson, the newly appointed Surveyor j General. He became one of Thomson's chief assistants in reorganising the Lands and Survey Department. In April, 1891, he was appointed Under-Secretary for Crown Lands and in December, 1896 he became Assistant Surveyor General. In November, 1900, he was Acting Surveyor General, a position he held until January 1902 when he retired. He died at Wellington on 25th May, 1919. He was a foundation member of the New Zealand Institute of Surveyors.

See New Zealand Surveyor, Vol. XI No. 8 March, 1920.

His son David Innes Alfred Barron, who was also a surveyor and member of the New Zealand Institute of Surveyors, predeceased him.

See New Zealand Surveyor, Vol. X No. 13, p.14
 Cyclopaedia of New Zealand, Vol.1 p.182.

BARRON, David Innes Alfred (1869 - 1916)

Born in Dunedin, he was a son of Alexander Barron, a former Surveyor General of New Zealand. He was educated at the Terrace School (Wellington) and at Wellington College and Otago University. He entered the Lands and Survey Department and after qualifying rose to the rank of District Surveyor. He died in Sydney on 30th January, 1916.

See New Zealand Surveyor, Vol. X No. 13, p. 14

BARRON David

Born in Morayshire, Scotland He arrived in Otago in 1865 and joined the Survey Department. In 1873 he was District Surveyor stationed at Naseby. In May, 1893 he was appointed Commissioner of Crown Lands and Chief Surveyor for Westland. In November, 1896 he was promoted to the same offices for Southland and in January, 1901 became Commissioner of Crown Lands and Chief Surveyor for Otago. He retired In May, 1909.

He was a foundation member of the New Zealand Institute of Surveyors.

BARTON John (Senior) (1823 - 1902)

Born in Sheffield, England Came to New Zealand in 1866. In 1872 he was appointed Assistant Engineer to the Wellington Provincial Government, his service terminating with the abolition of Provincial Government. Thereafter it appears he engaged in private practice.

He was a foundation member of the New Zealand Institute of Surveyors. He died at Hokitika on 30th October, 1902.

BARTON John (Junior) (1851 - 1923)

He was born at Upper Hutt and educated at Nelson College. When fifteen years of age he was sent to England to study Civil Engineering and on his return to New Zealand became one of Brogden's team of engineers during the spate of railway construction. In 1878 he became assistant to the City Engineer, Wellington. He became an Authorised Surveyor in December, 1879. In 1881 he resigned to take over the management of his deceased brother's White Rock Sheep Station. He was a member of the New Zealand Institute of Surveyors.

BAYLDON Daniel Henry

He was appointed a Goldfields Surveyor and Mining Surveyor; vide Auckland Provincial Gazette, 28th August, 1871. 1871. He was also licensed under the Land Transfer Act in 1882. In August, 1879 he and his partner Mr. H. Crump, were surveying the Pukeranga block in the Ohinemuri district, about five miles from Paeroa, when the survey party was attacked by an armed band of Maoris. The party was fired on and one of the chainmen, William Daldy McWilliams, was seriously wounded. Fortunately the rest of the party were able to escape and assistance was

obtained to get McWilliams to Hospital at Paeroa. See - New Zealand Herald 1st September (et seq.) 1879, for a full account of the incident.

D. H. Bayldon was a foundation member of the New Zealand Institute of Surveyors.

BEAL Latham Osborn (1858 - 1929)

Borne in Melbourne and educated at the Otago Boys High School (1869-73) and between 1876 and 1880 served his articles under Robert Hay, M. I. C. E. He became an Authorised Surveyor in February, 1881. In 1884 he entered private practice as a Mining Engineer in Otago and Southland. He was lecturer in mine and land surveying at Otago University, 1887 to 1891, and continued in private practice as a mining and engineering consultant. He died on 28th August, 1929.

He was a foundation member of the New Zealand Institute of Surveyors.

Cyclopaedia of New Zealand, Vol. 5 p.280 (has photo).

BEDLINGTON William (R. E.) (1823 - 1891)

Born In Ovingham, Northumberland, 27th September, 1823. Trained as an engineer and surveyor in England, he came to New Zealand in 1851, Under contract to the Auckland Provincial Council he laid out the Special Settlement for the Nova Scotians at Waipu in 1854. He opened up the Whau Colliery and engaged in mining interests. He was gazetted a licensed surveyor under the Native Lands Act on 19th April, 1865. He served for a period as a member of the Auckland Provincial Council and in 1865 he and William Weaver, the Engineer in Chief, were appointed on behalf of the Council to hold an enquiry into the organisation and working of the Provincial Waste Lands Department (vide Report of the Commission, A. No. 13, Proceedings of the Auckland Provincial Council, Session XVIII, 1864-65).

He was the first engineer to the Whangarei County from 1876-80. Subsequently he engaged in private practice as engineer and surveyor.

He died at Auckland on 24th May 1891

BEERE Daniel Manders (1833 -)

Born 1st October, 1833 at Ballynacargy, West Meath, Ireland. Left Ireland and served his cadetship under an uncle, Armstrong, in Canada. Appointed as surveyor under Auckland Provincial Government in February, 1864 and was engaged in the Waikato District. He left the service at the end of October 1867 on completion of the road from Mercer to Ngaruawahia. Appointed Goldfields Surveyor, Auckland Provincial Gazette, 1868. In August, 1873 he was engaged to lay out the railway between Manawatu and Wanganui. On 1st January, 1874 he was promoted to Resident Engineer on the Pakipaki-Waipukurau section of the Napier-Woodville Railway. He was moved to the Waikato on railway construction in 1876 and retired ten years later, and finally settled in Melbourne.

BEERE Edward Holroyd (1843 - 1906)

Born 4th July, 1843 at Ballynacargy, West Meath, Ireland and educated at Limerick Grammar School. He came to New Zealand in 1866 and was engaged in surveying and mining engineering in the Thames district. Appointed Goldfields Surveyor, Auckland Provincial Gazette, 1868. He entered the Government Service in May 1874 and was a surveyor with the Public Works Department at Wanganui In the

following year. He left the Service In 1881 and for a while was engaged In Local Government work in the Patea district. Subsequently he set up in private practice In Wellington where he planned, surveyed and graded Kilbernie, part of Lyall Bay, including Crawford Road, Coutts Street and Onepu Road. He subdivided portions of Miramar, Karaka Bay and Seatoun Heights, where Beerehaven perpetuates his name.

He was a foundation member of the New Zealand Institute of Surveyors.

BEERE Gerald Butler (1836 - 1914)

Born 1st March, 1836 at Ballynacargy, West Meath, Ireland and educated at Dublin. He entered the Army and served in the 62nd Regiment, 5th July, 1855 to 30th September, 1858, and in the 15th Foot, 1st October, 1858 to 7th April, 1863, retiring with the rank of Lieutenant. He was two years and seven months in North America and four years and six months in the Mediterranean. He came to New Zealand in 1864 and was commissioned as Captain in the 4th Waikato Regiment, taking part in the Waikato campaign. In 1865 he joined the Auckland Provincial Service as District Engineer. In 1879 he was appointed Assistant Engineer on the Waikato-Thames Railway project. Following the 1881 retrenchment he was engaged temporarily as Borough Engineer at Patea, then joined James Stewart on the Rotorua Railway construction in 1882. He finally severed his connection with the Public Works Department in 1887 and retired to Auckland where he practised as an Authorised Surveyor. He died at Devonport on 13th March, 1914. He was a Licensed Surveyor under the "New Zealand Institute of Surveyors and Board of Examiners Act, 1900".

See "Armed Settlers" by H. C. M. Norris, 1963.

The first local body established in the Waikato was the Hamilton District Highway Board, and at the first election on 26th September, 1868, Captain G. B. Beere was elected Chairman. The Hamilton suburban district, Beerescourt, is named after him. He was a leading figure in early Hamilton.

BELLAIRS, EUGENE

As a contract surveyor Bellairs was employed by the New Zealand Company in the Nelson settlement. He was one of the surveyors involved in the incident in June, 1843 known as the "Wairau Massacre" from which he escaped unscathed. Subsequently he practised in various parts of New Zealand for a number of years.

He was licensed under the Native Land Act of 1865 vide Auckland Provincial Gazette 4th June, 1866. Licensed by New Zealand Survey Board, vide New Zealand Gazette, 1st January, 1904.

See also — 'Nelson — A History of Early Settlement' by Ruth M. Allan, 1965 Chapter 8.

BIGGWITHER Frederick (1852 - 1934)

Born at Richmond, Nelson, 11th February, 1852 with the name of Wither, and was educated at Nelson College.

Appointed a cadet in the Public Works Department, 8th August, 1873 at Wellington and on 1st July, 1874 transferred to Canterbury on the transalpine railway trial surveys from Amberley to Brunnerton and later, on the **Hurunui** -Waitaki Railway, including the Rangitata Bridge. He was promoted Assistant Engineer on 1st July,

1877 and for a while was stationed at Weka Pass on the Construction of the **Hurunui** Branch Railway.

On 1st January, 1887 he was transferred to the Survey Department and on 14th May, 1891 he became Road Surveyor in the Survey Department, Canterbury. On 16th November, 1892 he was transferred in the same capacity to the Southland district where his work included the opening up of the Catlins district, then in a very wild state. In January, 1895 he was Road Surveyor in Westland and became a member of the Roads Department staff in Westland on 1st April, 1901. He transferred to Canterbury in January, 1902 and was promoted District Road Engineer on 1st July, 1903 when he built the Upper Waiau Bridge. On 1st July, 1909 he transferred to Auckland as Resident Road Engineer in the Public Works Department. In October, 1912 he was promoted Acting District Engineer and became District Engineer, Auckland, on 1st January, 1913. He retired on 1st February, 1917 and died at Auckland on 20th August, 1934.

BIRD, Joseph (1836-)

Appointed to the Taranaki Provincial survey staff on 10th July, 1874
Employed on settlement surveys from Inglewood southwards to Hawera. In 1855 he was appointed Chief Draughtsman in the Lands and Survey Department in Taranaki.
Transferred to Auckland Land Office in 1890

In 1879, with the assistance of T. G. Sole, he continued the meridian line from Huirangi southwards. This line, which was cut for 42 miles through the Taranaki bush, was for the purpose of coordinating the settlement surveys. During the Waikato campaign he was a private in the 1st Waikato Regiment.

He was a foundation member of the New Zealand Institute of Surveyors.

BLACKBURN William

An uncommonly gifted man, an able mathematician and inventor, who could express himself lucidly, he was a sergeant in the Royal Engineers stationed at Woolwich in 1846. He had qualified as an army surveyor but the Royal Institute of Chartered Surveyors had declined to grant him membership when he applied, because he had not been regularly articulated. The Royal New Zealand Fencible Force was being recruited in England and Blackburn applied for permission to join, but his superior officers turned down his application on the grounds that his services were too valuable to the Royal Engineers and that a non-commissioned officer of his special abilities would be superfluous to establishment in New Zealand. Colonel Tulloch of the War Office, who was responsible for the Fencible Force Scheme, interested himself in Blackburn's case and persuaded the Duke of Newcastle, Secretary of State for the Colonies, to secure his release. Actually Blackburn was a serving soldier, not a pensioner, and apparently he was the only non-pensioner to join the Force. He was enrolled on 17th January, 1849, and arrived at Auckland with his wife and family in a detachment of the Fencibles which sailed in the Berhampore and arrived here on 16th June, 1849. His first task was to lay out the allotments for the new military settlers at Onehunga, embracing the area now bounded by Trafalgar Street, Selwyn Street, Symonds Street and Mount Smart Road. He then subdivided the "Back Settlement" now known as the suburb of Te Papapa, which comprised the allotments granted to the Fencibles on completion of the period of service.

On completion of his military service Blackburn practised as a surveyor and engineer and at the conclusion of the Waikato campaign in 1862, he was engaged as a contract surveyor, in laying out the settlements for the military settlers in the confiscated territory in the Waikato. In this connection, he laid out the township of Hamilton West, which is today the main part of the business and commercial centre of the city.

He was licensed to survey under the Native Land Act, 1862, vide New Zealand Gazette, 6th July, 1865 and was appointed a Minefields Surveyor; vide Auckland Provincial Gazette, 1868. (Most of above information supplied by the late G. G. M. Mitchell). See micro-film of War Office files 4-284, 43-89 and 4-290 in the Reference Department of Auckland Central Library.

BLACKETT James William (1855 - 1905)

Born at New Plymouth, 29th October, 1855 he was educated at Nelson College, 1864 to 1871, and won a University Scholarship in 1872.* He joined the Government Service in November, 1871. In July, 1873 he was appointed engineering cadet in the Public Works Department at Wellington and worked in the Wellington and Hawkes Bay districts. In 1874 he went to Moeraki working on the Purakanui and Blueskin Bay section of the Dunedin North Railway construction. In January, 1863 he was transferred to begin surveying the Lewis Pass route for the proposed East Coast-West Coast Railway. The following year he was transferred to the Wanganui district. In February, 1883 he became an Authorised Surveyor.

He left the New Zealand Government service on 31st March, 1889 and went to South America where he had a distinguished career in engineering, in both railway construction and mining developments in the Argentine. After a visit to England in 1895 he went to East Africa as Divisional Railway Engineer between Mombassa and Victoria Nyanza, and then in 1903 following a brief visit to New Zealand in 1902, he went to South Africa as Divisional Engineer on the Central South African Railways.

While in charge of the survey and construction of the Springs - Ermelo line he died at Springs on 14th August, 1905.

*He was the younger son of John Blackett, a former Engineer in Chief of New Zealand and younger brother of John George Blackett. All three played a significant part in the road and railway construction in various parts of New Zealand. See "Early New Zealand Engineers" by F. W. Furkert. p 114-117.

BLAIKIE James Armstrong (-1940)

Authorised Surveyor in October, 1879. Then residing in Invercargill.

He was a foundation member of the New Zealand Institute of Surveyors. Born in Scotland, he arrived in New Zealand with his parents when two years of age. Educated at the old Warepa and Wairewa Schools (Otago) he then spent a term at Otago University before becoming a survey cadet under Mr. Norman Prentice, an early Government Surveyor in Otago. On obtaining his licence he served for many years as a Government Surveyor in Southland, much of the time in the back country adjoining Lakes Te Anau and Manapouri and the Waiau River basin. In 1885 he went to Australia where he surveyed in the back country of Queensland and New South Wales. He also assisted in the standard surveys at Sydney.

In 1890 he returned to New Zealand and commenced practice at Gore as surveyor and civil engineer. Many of the large estates were subdivided by him and he also served the boroughs of Gore and Mataura as Borough Engineer. He died in Gore in November, 1940.

See "New Zealand Surveyor Vol. XVII p.3, November, 1940.

BLAIR William Newsham (1841 - 1891)

Born at Islay, Scotland on 10th August, 1841. He served his articles under a civil engineer and surveyor at Oban. In 1861 he joined the firm of Sir Thomas Bouch, constructor of the Tay Bridge. Coming to New Zealand in 1863 he joined the Otago Provincial staff on 1st January, 1864 working under Mr. T. Paterson. He laid out the railway from Winton to Athol in 1866. He was employed on bridge and road construction and harbour works in North Otago and on 1st. May, 1871 he was appointed by the General Government as District Engineer, Dunedin, for the Public Works Department. He explored for and laid down a proposed scheme for railways over the whole of the South Island, including the Otago Central and Midland Railway. In 1875, after many tests on the strength and other qualities of local timbers and stone he published the book "Building Materials of Otago", with special reference to Oamaru stone. In 1877 he became an Authorised Surveyor and also was elected a Member of the Institution of Civil Engineers (London). The following year he became Engineer-in-Charge South Island, in the Public Works Department. With C. Y. O'Connor he crossed the Southern Alps in five places in 1879, searching for the best route to connect the East and West Coasts, and contributed a comprehensive and masterly report on the whole question of railway communication between Christchurch and the West Coast and with Nelson and Picton and between the latter places and the West Coast. In 1884 he was appointed Assistant Engineer-in-Chief for New Zealand. He explored the King Country to report on a proposed North Island Main Trunk Railway. In 1890 he became Engineer-in-Chief and Under-Secretary for Public Works.

He died in Wellington on 4th May, 1891.

See "Early New Zealand Engineers" by F. W. Furkert, 1953, p.117 and photo opposite p.113.

BLAKE William Farley (1808 - 1888)

Born in Westmeath, Ireland, he was trained there as a surveyor before coming to New Zealand in 1841. Besides surveying he engaged in farming, timber trading and gold mining and acquired a considerable amount of property. He settled in Auckland but his survey operations took him as far afield as Taupo, Taranaki and Thames. About 1843 he married Maata Takohi Tourawiri, who was a land owner in Taranaki. Two of their sons, E. J. and J. T. Blake, were trained as surveyors. W. P. Blake was a member of the Auckland Provincial Council during 1860s.

He was Licensed to survey under the Native Land Act, 1862; vide New Zealand Gazette, 29th November, 1865. He died in Hastings in 1888.

See "Riverhead" by I. B. Madden, 1966 for a brief biography and photo.

Appointed Mining Surveyor, Auckland Provincial Gazette, 1868.

BLAKE John Thomas (- 1940)

The youngest son of William Farley Blake who trained him as a surveyor. He served during the war in Taranaki under Major Brown. At the time of the Tarawera eruption he was surveying in the vicinity of Lake Taupo. He owned land in the vicinity of Paremoremo, Riverhead. His death occurred at Hastings in 1940.

BOLD Edward Henry (1841 - 1900)

Born at Clithero, Lancashire, 12th August, 1841. On completion of his High School education he underwent training as a mechanical engineer and also pursued the study of chemistry. He went to Victoria in 1861 and when only 20 years of age undertook the setting out of the telegraph line from Tallarook to Avel, at the request of the Government. Coming to Otago in 1863 he was engaged as a road engineer in the Roads Department. Early in 1865 he entered the service of the Canterbury Provincial Government as engineer and surveyor, and while so employed accepted the position of telegraphic engineer on 1st August, 1867. At that time there were only two lines in the North Island, one being from Lyall Bay to the Hutt and the other, controlled by the military authorities, from Auckland to the Waikato. Shortly after the completion of the line from Wellington to Napier, Te Kooti and his fellow prisoners escaped from the Chatham Islands. The prosecution of the line via Taupo was determined upon despite the hostility of a section of the Maori tribes and in 1868 Bold was sent by the Government over the country between Napier and Tauranga with full power to acquire concessions for carrying the wire through Maori territory. The mission was successful and the work of construction, as well as that of the strategic road cutting the centre of the North Island, devolved on Bold. Covering parties of armed constabulary were employed, in some cases, to protect the workmen.

On 12th June, 1869, he was appointed Roads Engineer, Napier-Taupo Road, and also Telegraphic Engineer, East Coast area. He also explored three routes into the interior and his two recommended lines are now important highways.

C.D. Kennedy was articled to him between 1873 and 1877. Between February 1877 and March 1879, Bold was engineer to the Waipawa County and acted for the Hawkes Bay County. He was re-appointed Inspector of Telegraphs in 1879 and Telegraphic Engineer for East Coast and was transferred to Auckland as Inspector of Telegraphs in 1894, which position he held until he died on 4th May, 1900.

He was elected A. M. I. C. E. 11th December, 1877 and was a member of the Institute of Electrical Engineers.

He was a foundation member of the New Zealand Institute of Surveyors.

BOUSFIELD Octavius Lawes Woodthorpe (- 1882)

(A brother of Bishop Bousfield of Pretoria).

In 1850 he came to Hawkes Bay and entered the Provincial Survey Department when the Province was established. He surveyed the Porangahau Block of 130,000 acres in 1855 shortly after it had been purchased by Mr. (later Sir) Donald McLean. He then became a grazier, taking up the Woodthorpe station. Also he was editor of the Hawkes Bay Times, a newspaper which first appeared in 1861.

During the East Coast campaign of 1865 he served in the Hawkes Bay Militia and took part in several engagements including Waerenga-a-Hika in 1865 and

Ngatapa in 1868. After the latter engagement he made a survey of the fortifications and terrain and the resultant plans were annexed to the official Parliamentary Reports. (See also "the New Zealand Wars" by James Cowan, 1923 or p.274 in the 1956 edition).

In 1869 he surveyed the periphery of the Patutahi Block (50,746 acres) which had been confiscated by the Government. Also he surveyed the block acquired by the Crown in the Matawhero district just to the south of the present City of Gisborne.

He died at Gisborne on 19th May, 1882.

See also "Historic Poverty Bay" by J. A. Mackay, 1966, p.456. He was a member of the Hawkes Bay Provincial Council, 1863 - 867.

BOYLAN John Thomas

He was employed in the Public Works Department, New Plymouth, as Assistant Surveyor, his appointment, dating from 1st February, 1872 and he was engaged on road and railway surveys in Taranaki Province for some years. He received his Land Transfer Licence on 3rd September, 1880, when practising in Auckland. In 1882 he was engineer to the Ponsonby Road Board. The following year he was Borough Engineer at Onehunga and from 1885 he was engineer to the Borough of Newton (now part of Auckland City).

He was a foundation member of the New Zealand Institute of Surveyors.

BOYS John Cowell (1823 - 1889)

Born in Sussex and educated in England he came to New Zealand at the age of seventeen as a survey cadet on the staff of the New Zealand Company which was responsible for laying out the Nelson Settlement. For three years he assisted in the exploring, surveying and roading and acquired proficiency in surveying. When the Company's survey operations were suspended after the Wairau massacre, Boys and several other cadets returned to England. There Boys completed his training as a civil engineer and in 1849 returned to New Zealand to become a member of the Company's survey staff under Captain Joseph Thomas who was laying out the Canterbury settlement. He assisted in the Lyttelton-Sumner Road project and then in partnership with Charles Torlesse he made a triangulation and topographical survey of the district between the Waikari and Waimakariri Rivers, and subsequently assisted Thomas Cass on road surveys. At the conclusion of the preliminary surveys Boys and Torlesse went into partnership as contract surveyors laying out the rural sections for the Canterbury Association. They had married sisters, the daughters of James Townsend, an early Canterbury settler, and they also had purchased land at what was then the Rangiora Bush. There they built their homesteads which became the nucleus of the town of Rangiora. Boys maintained his contact with the surveying profession and became a member of the Canterbury Provincial survey staff. In 1853 he was associated with Colonel Campbell in an attempt to unravel the conflicting claims to ownership of the Banks Peninsula land. Later he became Inspector of Surveys, a position he retained until the abolition of Provincial Government in 1876. He then returned to his grazing interests and became a leading breeder of Romney sheep.

BRAY William Bayly (1811 - 1885)

Born in London, he was educated in Switzerland and trained as a civil engineer and surveyor in England under Walker and Barges, London, whom he

joined in 1831. After qualifying he was engaged on railway and dock construction on the Thames and in other parts of England. He was then engaged on railway construction abroad, being inter alia, in Tuscany in 1845 and later with Robert Stephenson in Egypt. He was elected A. M. I. C. E. in 1836 and M. I. C. E. in 1845. He came to New Zealand in 1851 and took up land in Canterbury. In 1853 he was chairman of a committee set up to decide on the road from Lyttelton to Sumner. He supported Captain Thomas's route but suggested a tunnel at Evans Pass. From 1855 to 1857 he was a member of the Canterbury Provincial Council. He took levels of the proposed railway tunnel from Heathcote to Lyttelton and later went to London and arranged the contract for its construction at £235,000. In 1858 he was practising as a surveyor in Canterbury. In 1862 he designed a drainage system for Christchurch and suburbs and also reported on wharves at Lyttelton and after confirmation of his ideas by George Robert Stephenson, who was acting as consulting engineer for the Lyttelton tunnel project, the Officers Point Breakwater was built. In March, 1863 Bray, with Thomas Cass and six others, were appointed a Commission to enquire into harbour accommodation at Lyttelton.

Bray frequently warned the Christchurch authorities of the danger of floods from the Waimakariri River invading the city. His forecast was fulfilled in 1868.

In October, 1870 with John Marshman, he reported to the Provincial Council on the effect of the adoption of the 3 ft. 6 in. railway gauge. On 1st January, 1871 he was appointed District Engineer in the Public Works Department at Christchurch, and his work consisted mainly in the direction of railway construction in the Province. He retired in May, 1872, but his services were utilised from time to time in an advisory capacity. In 1875 he reported on a proposal for draining Lake Ellesmere.

He died at Christchurch in 1885.

BRIDGE Charles Hastings (- 1935).

He was born at Opawa, Christchurch in and educated at Christ's College in that City.

In 1874 he was articled to Mr. Walter Kitson, a staff surveyor of the Canterbury Provincial Survey Department. In 1876 he transferred to the staff of H.J. Lewis in South Canterbury and in 1877 was in the Timaru Survey office. The following year he joined the staff of Mr. G. Laing Meason, who was in private practice in Timaru. At the time there was a boom in land subdivision and Mr. Bridge subdivided some large properties in South Canterbury, many of them for the Australian and New Zealand Land Company.

On obtaining his licence under the Land Transfer Act in June, 1879 he was appointed Land Purchase Surveyor in the Public Works Department, Christchurch and was engaged in the development and construction of railway lines in Canterbury. Subsequently he held a similar position in the Railway Department in Dunedin.

In 1891 he joined Mr. George Hanmer in partnership in private practice which lasted until 1905 when Mr. Bridge began practice on his own account, in which he was joined subsequently by his son, Arthur Hastings Bridge, and in July, 1920 by Mr. Gordon Parkinson.

Except for one large estate in North Otago, practically all of Mr. Bridge's survey work was in Canterbury.

He was a foundation member of the New Zealand Institute of Surveyors, and served on the Council from 1895 to 1929 almost continuously. He Was President in 1917-18, and Was a member of the Survey Board in 1910. He was elected a Fellow of the Institute.

See "The New Zealand Surveyor" Vol. XIV No. 5, March, 1930) & photo. He died at Christchurch 21 February 1935. vide New Zealand Surveyor, Vol. XV. No. 10, p 357 for obituary.

BRUNNER Thomas (1822 - 1874)

He was born at Oxford, England. He came to New Zealand as an Assistant Surveyor to the New Zealand Company, arriving at Nelson in 1841. In 1843 he explored the headwaters of the Buller River and reached as far as the Matukituki, (now Murchison). In 1846 in company with Charles Heaphy, he started from Nelson for the West Coast, via Golden Bay. They examined Farewell Spit, crossed through West Wanganui Inlet and followed the coast to Arahura. After examining the mouth of the Buller River they returned to Nelson by the same route.

In December 1846 he left again, accompanied by two Maoris and their wives, and travelling via the Waimea Valley and the Buller Valley, crossed over the mountains at the head of Lake Rotorua and rejoined the Buller near Murchison. He forced his way down the Buller to its mouth under incredible hardships and near starvation, even having to eat his dog in the last few stages. He followed the coast right down to the Paringa River, reaching this furthest point on 11th December, 1847. He returned by the coast to Greymouth and then followed the Grey River to the saddle leading to the head of the Maruia River. Having long since worn out his boots, he used flax sandals made by his guides, and climbed a mountain about 6,000 feet high, from which he saw open tussock country which he (mistakenly) assumed to be Canterbury Plains. What he saw was evidently the open country at the head of the Maruia. He descended the Inangahua valley to the junction with the Buller and then up the Buller valley to Tophouse, and thence to Nelson. He had travelled 560 days on foot, more than half of it without boots, traversing some of the most inhospitable country in New Zealand, and living on the country - birds, fish and berries, sow thistle, fern root and cabbage tree root - often drenched to the skin, in a district noted for its heavy rainfall. At one stage on the homeward journey, he was stricken with partial paralysis and it says much for the fortitude of Brunner and the loyalty of one of the Maoris (who prevailed on the others, to assist Brunner back to civilisation) that the expedition did not end in tragedy.

In 1851 he was appointed Surveyor of Crown Lands, under the General Government, at Nelson. On 1st July, 1858, he became Chief Surveyor and Commissioner of Works to the Nelson Provincial Council. On 1st October, 1869 he retired, but was retained as Consulting Surveyor by Special Act on account of his great personal knowledge of places and people, and of the history of the early surveys.

On his epic journey in 1846-48 he discovered the Brunner coalfield and Lake Brunner and the town of Brunner bear his name. He contributed an account of his early journeys to the Royal Geographical Society and was elected a Fellow of that Society.

He died in Nelson on 22nd April, 1874 his health having been impaired by the experiences he had undergone.

(Several accounts have been written of Brunner's journeys, two of the best being "The Great Journey" by John Pascoe, and the account given in "Early Travellers in New Zealand" by Nancy Taylor, 1959). In "The West Coast Gold Rushes" by P. R. May, 1967 edition op. p67 is a photo of Thomas Brunner

BREES Samuel Charles (1810 - 1865)

He was educated as a surveyor and engineer at Greys Inn, London. He was appointed Principal Surveyor to the New Zealand Company for a term of three years, succeeding Captain William Mein Smith R. A. whose term expired on 31st March, 1842. Brees arrived in Port Nicholson in the Brougham on 9th February, 1842 and with him came several additional surveyors and survey cadets to strengthen the Company's field staff.

In addition to supervising the completion of the sectional surveys to fulfil the Company's obligations to the settlers, he laid out the line of the road from Wellington to the Wairarapa (Featherston) in 1843.

He was responsible for the production of some of the best known maps of early Wellington and its reserves. He was an able artist and some of his sketches and paintings are still treasured as informative, historical and artistic.

He returned to England when his term expired.

At Brighton, England, in 1849 he held an exhibition of his paintings of New Zealand scenes.

BRODRICK Thomas Noel O. B. E., I. S. O. (1856 - 1931)

He served his cadetship under G. P. Richardson in Southland and after qualifying joined the Lands and Survey Department in Canterbury in 1877. See New Zealand Gazette, 1877, p.705. His first duties were in connection with the re-definition of Crown grant and title boundaries on Banks Peninsula much of which at that time was still clothed with heavy forest. In 1881 he was conducting a triangulation survey at the head of Lake Wanaka, covering the country on both sides of the Makarora River from the Lake to the top of Haast Pass. It was the discovery, during this survey, by Brodrick of Charles Cameron's cairn and powder horn that substantiated the latter's claim to have preceded Haast in the discovery of the Pass.

He was next engaged in settlement surveys on the Canterbury Plains and executed a good deal of triangulation and topographical work around Oxford and of the mountainous country adjacent to the Waimakariri, between the Plains and the Bealey River.

In 1887 he was transferred to Timaru and for the next five years was engaged in surveying the boundaries of many of the extensive pastoral runs in South Canterbury. The boundaries of some of the runs extended, theoretically, to the tops of the mountain range (Southern Alps) between Canterbury and Westland. In the course of this work Mr. Brodrick practically mapped the whole of the eastern side of the Southern Alps between the watersheds of the Rangitata on the north and the Hunter River on the South, and his work included careful measurements of the heights of most of the important peaks within the limits mentioned. The heights were based on the minor triangulation brought up from the East Coast and the agreement with the altitudes determined from the work on the West Coast was remarkably close, the difference on the highest peak (12,349 ft. Mount Cook) being about ten

feet. Many of the stations established and occupied were over 7,000 feet, the highest being the Hochstetter Dome, over 9,000 feet.

In the course of this work, also, Mr. Brodrick made extensive observations of the behaviour of the glaciers of the region, from which the retrocession and retrogression of each could be determined. This material was published in the Survey Report of 1890-91. In 1890 Mr. Brodrick crossed the main range by what is now known as Brodrick's Pass, and thus made the first crossing between Whitcombe's Pass at the head of the Rakaia and Haast Pass.

After 1891 Mr. Brodrick was engaged in subdivisational surveys of estates acquired by the Crown for closer settlement, and on road works in Canterbury. In 1901i. he went to Marlborough where he subdivided the Flaxbourne Estate (57,000 acres) for settlement. His field career ended in 1907 when he went to Gisborne as Land Officer. Following this he was Chief Surveyor and Commissioner of Crown Lands, successively, at Napier, Christchurch and Wellington and finally, he became Under Secretary for Lands. He also held the office of Surveyor General, for a short period in 1920. During his last years in office he was responsible for Implementing the Government's policy of land settlement for returned servicemen of the 1914-18 War.

For his work he was awarded the O. B. E. and the I. S. O. in 1920. He retired in 1922 after 44 years of service and he died at Martinborough on 11th July, 1931.

He was a foundation member of the New Zealand Institute of Surveyors.

See "The New Zealand Surveyor" Vol. XV No. 1 September, 1931.

See "History of Land Legislation and Settlement in New Zealand" - Jourdain, 1924.

BROOKES Edwin Stanley

He was the eldest son of the Rev. E. S. Brookes of Nottingham, England. E. S. Brookes (senior) was one of the leaders of the Nonconformist Emigration Association which organised, in England, the Albertland Special Settlement at Kaipara in the Auckland Province. This was established in 1862, pursuant to the Auckland Provincial Waste Lands Act of 1858.

With two younger brothers, George and Charles, Edwin Brookes, then about twenty years of age, arrived at Auckland on the 8th September, 1862 with the main body of settlers in the Matilda Wattenbach. Almost immediately Edwin was appointed to one of the survey parties engaged on laying out the Albertland Settlement. He acquired a knowledge of surveying and, after a visit to the United States in 1873, he applied for a position on the survey staff and on the recommendation of the Inspector of Surveys, Mr. Theophilus Heale he was appointed Assistant Surveyor on the Taranaki Provincial staff.

He was employed on settlement surveys from Inglewood southwards to Hawera and the Waimate Plains. He also carried out surveys in north Taranaki between Waitara and the Auckland Provincial boundary. In 1877 he introduced in Taranaki the use of the long steel wire for chaining purposes in place of the cumbersome Gunter's chain. He used the wire to good effect in measuring the meridian line which he cut through the bush in Taranaki, from Waitara to Huirangi, whence it was continued southwards in 1879 by Mr. Joseph Bird, assisted by Mr. T. sole. In all the line was surveyed for a distance of 42 miles.

He resigned from the Lands and Survey Department in 1885 and returned to the farm in the Albertland settlement that he and his brothers had established. In 1892 he published "Frontier Life in Taranaki" in which he describes his experiences and mentions many of his surveyor colleagues who shared those experiences during the pioneering years when there was much trouble with recalcitrant Maoris in the eventful days leading to the Parihaka affair of 1881. The story of his earlier years in the Albertland settlement, including his confrontation with a party of Waikato Rebels in 1864, is recounted in J. L. Borrows' "Albertland" published in 1969.

BROWNE Richard Herbert (1843 - 1907)

Born in Norwich and educated in Kent. Arrived in New Zealand about 1863 where he entered the service of the Dunedin City Engineer, and in 1867 was employed on early railway investigations.

In 1872 he was placed in charge of the Mount Ida water race construction, the largest work of its kind then in progress in New Zealand. During this work he was appointed District Engineer, a position he held until the Provincial system was abolished. He then became Engineer to the Maniatoto County Council, which position he held for thirty years, until his death on 27th August, 1907 at Naseby. He became an Authorised Surveyor in December, 1877.

He was a foundation member of the New Zealand Institute of Surveyors.

BROWNING John Spence (1831 - 1909)

Born in Norfolk, England in 1831. His family held shipping interests so he went to the East Indies in September, 1844 as a sailor, and in 1856 came to New Zealand as captain of a vessel trading from Australia. He entered the New Zealand Government Service in 1857 as Assistant Surveyor and Draughtsman in the Public Works Department under Edward Dobson in Canterbury. In 1859-61 as Engineer at Timaru, he graded and supervised the construction of the Timaru-Waimate inland road. In 1862, on the closure of the Canterbury Public Works Department, he entered the Lands and Survey Department as Assistant Surveyor under Thomas Cass. In 1863 he submitted evidence to a Commission set up to report on the best means of making Lyttelton a safe and commodious harbour and the plan submitted by him, and subsequently by the Government, to a Commission of Engineers in England was recommended, with a very slight deviation, and adopted.

In 1864-65, at the commencement of the gold rush era on the West Coast, he and others were sent to explore the passes over the main range with the object of finding a practicable route for a road. One of his discoveries was the pass named after him, Browning's Pass. He was then placed in charge of the surveys as District Surveyor on the West Coast, and he supervised the initial surveys during the mining operations.

In 1876 he was appointed Chief Surveyor for the Nelson Province, where he initiated the system of survey laid down by the reorganised Government Lands and Survey Department. He personally conducted the astronomical and geodetic work in this connection.

In 1891 he also became Commissioner of Crown Lands at Nelson, an office he continued to hold until his retirement on 1st October, 1896.

He was a foundation member of the New Zealand Institute of Surveyors.

See "Cyclopaedia of New Zealand" Vol. 5 p.108.

BUCHANAN John (1819-1898)

Although he was not a surveyor, he was associated with the work of the surveyors for many years. Born in Scotland, he was trained as a pattern designer and draughtsman in the print and dye works at Levenside, Dumbartonshire. He studied botany as a source of dye material. He came to New Zealand in 1849 and settled in Otago, where he began collecting plant specimens which he sent to Sir Joseph Hooker at Kew Gardens, England.

He joined Alexander Garvie's survey party and assisted in the triangulation and reconnaissance surveys in Otago. Previously he had visited the Australian goldfields and had gained some experience in prospecting. During Garvie's surveying expeditions of 1857-58 Buchanan discovered traces of alluvial gold in the Tuapeka and Molyneux (Clutha) rivers but the Provincial authorities did not follow up the report and it was left to others to exploit the field.

See "A History of Gold Mining in New Zealand" J. H. K. Salmon, 1963 p.47 (Government Printer)

"The Exploration of New Zealand by J. G. McClymont, 1959

ed. p.74 which states that James Buchanan was the discoverer.

When Dr. (later Sir) James Hector was appointed Provincial Geologist for Otago, Hooker advised him to look up Buchanan when he arrived in New Zealand. The result was that in 1862 Hector appointed Buchanan to be botanist and draughtsman on his survey staff. Buchanan contributed a great deal to the knowledge of the botany and topography of New Zealand, especially in connection with the rugged districts of Otago and Southland. The numerous sketches and paintings of these regions depict the topography with considerable artistic ability, but he is best known as a botanist. number of his botanical papers were published in the Transactions of the New Zealand Institute. Also his "Indigenous Grasses of New Zealand" illustrated by himself, was the first published botanical work by a resident botanist.

See also "Two Hundred Years of New Zealand Painting", by Gil Docking, 1971

BUDGE William (1816 - 1 871)

He arrived In New Zealand in the Will Watch which brought the members of the New Zealand Company's survey staff to lay out the Nelson Settlement in 1841.

He took part in the exploration of the country around Tasman Bay and in the surveying of the suburban sections at Nelson. In 1844 he surveyed rural allotments in the Golden Bay district (14,000 acres).

He took part in the search for a feasible route from Nelson to the Wairau Valley and in 1846 he cut a track through the forest at the head of Motupiko valley near Top House, the pass that had been discovered by J. S. Cotterell, who had lost his life in the Wairau massacre in 1843.

On the completion of the purchase by the Government of the Wairau district, Budge was sent in 1848 to Wairau and Queen Charlotte Sound to complete the surveys that had been abandoned at the time of the massacre.

He built his home on Budge's Island where he lived until the Island was submerged in an earthquake in 1855. After completing the surveys he acquired and farmed some agricultural land and a grazing run in the Wairau district. He represented the Lower Wairau district in the Marlborough Provincial Council, 1862-64. He died on 30th October, 1871.

See Dictionary of New Zealand Biography. Nelson (A History of Early Settlement) by Ruth M. Allan, 1965.

BULLARD, George Henry (1860-1943)

Born in Nelson in February, 1860, he was educated at Nelson College and showed a bent for mathematics. After two years with the Post and Telegraph Department he joined the Lands and Survey Department in 1879 and served his cadetship in the Reefton and Karamea districts. He qualified as a surveyor in 1882 and was appointed Assistant Surveyor in the Nelson Land District. Transferred to the Taranaki District in 1891 he was promoted District Surveyor in 1897. He surveyed some of the most rugged country in the North Island, in the upper Wanganui valley. As there were no roads much of the work depended on the use of Maori canoes, and most of the workmen he employed were Maoris. In 1909 he was transferred to the Gisborne District as Inspecting Surveyor and in 1912 returned to Taranaki as Chief Surveyor and Commissioner of Crown Lands. In 1920 he was transferred to Canterbury where he held the same appointments. He retired from the Public Service in 1925 and lived in HAITAITAI, Wellington.

During his 46 years service in the Department he had the unique experience of never a day off duty from sickness. He had an extensive knowledge of the problems facing the pioneer settlers, especially in connection with those associated with deteriorating land in the North Island. In his later years he was chairman of the Government committee set up to investigate such problems.

He was a foundation member of the New Zealand Institute of Surveyors and from 1923 to 1943 was a member of the New Zealand Survey Board.

He died at Wellington in March, 1943.

See "New Zealand Surveyor" Vol. XVIII No. 182 (February 1945)

p.166.

BURD Thomas (1858 - 1928)

Born in Devon on 25th April, 1858 and educated at Tavistock and Crediton Grammar Schools, 1868-75. He was trained on the Devon and Cornwall Railway at Okehampton, 1875 - 79. Coming to New Zealand in 1879 he was appointed Assistant Engineer to the Public Works Department at New Plymouth, being engaged on the Stratford to Hawera Railway.

He resigned in 1881 but rejoined in 1883 as Assistant Surveyor at Auckland being engaged on surveys in connection with swamp drainage at Te Aroha. Later the same year he moved north and was engaged on the survey of the Kaipara-Waikato Railway, and in 1886 the survey of the Hamilton-Te Aroha railway. With many others he was retrenched during the 1887 depression, but after a few years in private practice was reappointed to the Lands and Survey Department at Auckland in 1893, and became Assistant Road Surveyor in 1895 and transferred to Te Kuiti as Road Surveyor in 1899. He was promoted District Road Engineer at Te Kuiti in 1903, and

after the merging of the Roads Department and Public Works Department In 1909 he became Assistant Road Engineer, Public Works Department, Hamilton, and In 1912 was promoted to Resident Engineer at Tauranga, where he retired in 1922. He died at Tauranga, 25th August, 1928.

BURNETT James (Senior) (1826 - 1872)

Born in Northumberland on 11th March, 1826 and educated and trained as a colliery engineer. He came to New Zealand in 1852 and took up land in the Whangarei district, but in 1857 he returned to engineering and was employed by the Nelson Provincial Government. In 1860 he went with Dr. (later Sir) Julius Haast to Greymouth, overland, to investigate the coalfields. In 1862 accompanied by John Rochfort, he made surveys of the coal measures about Mount Rochfort, and now known as Burnett's Face and Coalbrook Dale.

His comprehensive surveys included proposals for the full development of the coalfields, covering access railways and roads and the suggestion of the self-acting inclined tramway that eventually was built. At that time Westland was still a wilderness and Westport still to be laid out and Inhabited.

In October, 1863 he was appointed Commissioner under the Coalfields Leases Act, and was instrumental in the development of industry. His activities included the Development of gold mining and on 23rd October, 1 869 he reported on gold bearing reefs at Wangapeka.

He contracted typhoid fever, a disease much more prevalent in those times, and died on 24th February, 1872.

BURSLEM, Francis Henry (1800 - 1888)

Born in the United Kingdom, he came of a distinguished military family. He was educated at the Royal Military Academy, Woolwich and graduated in 1824. He emigrated to the Australian Colonies and engaged in surveying in New South Wales and Tasmania. In 1862, during the New Zealand wars, he offered his services as a military engineer and came to New Zealand where he engaged in surveying the confiscated territory at the close of the Waikato campaign.

He was appointed a Goldfields Surveyor, vide Auckland Provincial Gazette, 1868. He was also engaged by the Auckland Provincial Council as Provincial Architect. Later he was employed on the office staff of the Lands and Survey Department at Auckland. He returned to Sydney in 1 883 and died there on 8th June, 1888.

He was licensed. under the. Native Lands Act 1865, vide Auckland Provincial Gazette 15 May 1866.

BURSLEM John (1841 -)

He was a surveyor who enrolled in the Waikato Militia at Tauranga on 24th August, 1866. He was then twenty-five years of age. He assisted in the surveying of the confiscated land and on the completion of his term of service was granted land at Te Papa (Tauranga) and at East Wairoa. He was a nephew of P. R.. Burslem (q. v) and a grandson of Sir Nathaniel Burslem.

BURTON George (1842 -)

Born in 1842. Licensed under the Native Land Act, 1865. He was a surveyor working for the Hawkes Bay Provincial Council when he was sent to survey the township of Wairoa in 1865. He remained in the Wairoa locality and became a grazier, as well as a surveyor. He surveyed land between the Ruakituri River and Lake Waikaremoana.

He represented Wairoa on the Provincial Council and was the first Chairman of the Wairoa County Council.

See "Early Stations of Hawkes Bay" by Miriam McGregor, 1970 p.264 etc.

BUSCKE William L. (1832 - 1913)

Born in Revel in the Baltic States he was educated at Hamburg University. He arrived in New Zealand about 1850. He joined the Lands and Survey Department in 1874 and was stationed at Kakaramea (Waverley) where a survey office had been established in

1867 in connection with the surveying of confiscated territory. Buscke was draughtsman in charge of that office and he also carried out local surveys. Not having a robust constitution he was unable to undertake constant field work in the damp, inhospitable Taranaki bush country. In 1877 when the Kakaramea office was closed he was transferred to New Plymouth office. In 1884 he was transferred to the Napier office and eventually to Gisborne where he retired in 1892. He died at Gisborne in 1913.

Licensed under the Native Land Act, 7 June, 1869. Vide New Zealand Gazette

BUTLER, Edward William (1842 – 1884)

Surveying in the Rangitikei - Turakina district of Wellington Province in 1866. This is most probably the Edward Butler referred to in "Early New Zealand Engineers" by

F. W. Furkert where it is stated that Butler was born in Ireland and educated in Australia. In 1877 he was the first engineer to be appointed to the newly formed Grey County. The district was very rugged, with very poor communication. His nephew, John Higgins, who joined him as an engineering cadet in 1880, said "the hardships and privations inseparable from the position proved too severe, and he (Butler) died on 4th August, 1884 at the early age of 42. Higgins also recorded "the newly-elected County was faced with many difficulties in opening up the country. Having been the fag end of two Provinces, it had been neglected by both, and the revenue contributed by it expended around Nelson and Hokitika A road had been constructed from Greymouth to Hokitika via Marsden; also to the gold diggings at Maori Creek, Maori Gully and No Town. The total length was 73 miles, with 32 miles of pack-horse tracks. On these roads none of the big rivers and few of the larger creeks were bridged. Punts were operated on the Taramakau and Ahaura Rivers. The big Grey River at Totara Flat had neither punt nor bridge, and wagon traffic was often held up for as long as a week while the river was in flood".

Edmund W. Butler was surveying in the Southland Province in 1863 and it is most probable that this was in fact Edward W. Butler as no further reference to Edmund W. Butler has been found.

CALDER William (1860 - 1928)

Was born in Dunedin and educated at Dunedin High School. He joined the Survey Department and became a survey cadet under Mr. John Strauchen (who later became the Surveyor General of New Zealand and was honoured with membership of the Imperial Service Order). He became an authorised Surveyor and in 1887 he went to Australia where he spent the rest of his professional career.

He made a special study of roading and became known as a world authority on road construction. In 1926 he made a world tour and studied road conditions and subsequently published a report full of information, which was favourably commented on by leading engineering and other technical publications. He was also an hydraulic and mining engineer and a Member of the Institute of Civil Engineers, London.

He died in Victoria in February, 1828.

See "The New Zealand Surveyor" Vol. XIII No. 8.

The high regard in which he was held in Australia was demonstrated when the Victorian Government named Calder Memorial Avenue after him, invited public subscription for the planting of trees and the first of more than ten thousand trees in the avenue, which is situated at Werribee, Geelong, were planted by the Governor and his lady, (Lord and Lady Somers), by the Premier and his wife and by the Lord Mayor and his wife. In addition to the street trees were planted in 28 plots by persons and firms who had given £50 or more towards the establishment of the avenue.

CAMERON John (1845 – (1868).

He was a member of the Otago Provincial survey staff, working in Otago and Southland. In 1868 he was surveying at Preservation Inlet, a desolate and isolated region, when he received an accidental gun-shot wound. Gangrene set in and his assistants, J. S. Welch, A. Hepburn, R. Goodwood did not spare themselves in a strenuous journey in an open boat, which was the only means available to them, to get him to Invercargill, where medical attention would be available, but he died shortly after their arrival.

See "West Coast Exploration" by Thomas MacKenzie. p 5. Reprinted from Otago Daily Times Dunedin, 1896.

CAMERON, John Mindoro (1858 - 1944)

Born on 11th December, 1858. On 1st January, 1878 he was appointed an engineering cadet in the Public Works Department and stationed at Dunedin. He was engaged on the surveys of the Strath - [Taieri](#) section of the Otago Central Railway, the Oamaru - Livingstone Railway and the Clutha Catlins River Railway and on the construction of the Otago Central. In November 1881, he was one of a party sent to Waiau to survey part of the Picton – Hurunui Railway.

On completion of his cadetship, on 1st January, 1882 he was promoted to Assistant Engineer and transferred to Nelson District where he was engaged for the next two years on the construction of roads in the Pelorus district and the construction of the Nelson-Belgrave Railway and the north end of the Picton-Hurunui Railway. On 1st July, 1885 he was sent to Auckland to assist G. G. Simpson on the North Island Main Trunk Railway, principally on surveying access roads and on the Te Kuiti section and the Poro-O-Tarao tunnel. His wife went with him and lived in the

survey camp. The press of the day credited her with being the first European woman to penetrate the King Country which had been closed to Europeans by the Kingite Maoris at the conclusion of the New Zealand wars. Cameron's party was the first after Hursthouse's imprisonment by the Maoris in 1882.

Cameron was an Authorised Surveyor under the Land Transfer Act and some of his plans are lodged in the Auckland Registry. In 1889, owing to the financial depression, when the Government drastically reduced its public expenditure, Cameron was retrenched on 31st March. He set up in private practice but, times being bad, he went to Australia in 1891 and obtained a position with the Roads and Bridges Department in New South Wales. In 1902 he was Director of Public Works Armidale, and from 1904 to 1912 he was Director of Works at Sydney. During the 1914-18 World War, he went to London where he was attached to the Ministry of Munitions. In 1926 he was in Shanghai on engineering works and afterwards held a responsible position in a firm with world-wide connections.

He retired in 1920 and died in the South of England in 1944.

CAMPBELL John

His birthplace was County Tyrene, Ireland, where he joined the Ordnance Survey in 1833, serving under Captain George Dalton, at Dungannon. He left the Ordnance Survey in 1840 and the following year emigrated to Sydney by the William Turner, and in 1842 he came to Auckland where he was Assistant Surveyor on the staff of Felton Mathew, and assisted in the earliest surveys of the town and suburbs of Auckland.

He purchased land in the vicinity of Herne Bay where he laid out a township which he named Campbellville. Part of it situated at Point Erin, which he also named, became a public park which today overlooks the southern approach to the Auckland Harbour Bridge. He also acquired land at Riverhead and became a stock dealer as well as practising as a surveyor and land agent.

CAMPBELL, Robert Esther Moore (1832 - 1912).

Born at Cornwallis, King's County, Nova Scotia, 6 May 1832, he was a son of an Anglican clergyman, John Moore Campbell and his mother was Mary Esther Campbell (nee Sneden).

In 1850 he was sent to England to be trained for a commission in the British Army. In 1852 he went to Australia and subsequently he came to New Zealand about 1857. He practised as a surveyor and in September 1865 he was licensed to survey under the Native Land Act of 1862. Evidently he had some connection with the Armed Constabulary. He took part in the surveying of the confiscated land in the Waikato district and it is recorded that while surveying in the Bay of Plenty in 1866 he was warned off the ground by hostile Maoris and required the protection of the Armed Constabulary to finish the work. (vide Daily Southern Cross, 12 September, 1866)

He became an Authorised Surveyor under the Land Transfer Act in 1878.

He was a foundation member of the New Zealand Institute of Surveyors which was founded in 1888.

He died, at Te Mawhai, Waikato, on 24 October 1912.

CARKEEK, Arthur Wakefield (N. Z. C.) (1843 - 1897)

Born at Nelson, son of Captain Stephen Carkeek the first Customs Officer and Postmaster at Nelson. Arthur and his brother Morgan Carkeek were educated at Nelson College and trained as surveyors and practised widely in New Zealand.

During the Hau Hau troubles, Arthur Carkeek was surveying in the Bay of Plenty district. He joined the Armed Constabulary and saw much active service during the campaign in pursuit of Te Kooti. For conspicuous gallantry he was awarded the New Zealand Cross, the equivalent of the Victoria Cross. An account of the action leading to the award is given in Gudgeon's "Heroes of New Zealand " and is repeated here :

"Sergeant Carkeek obtained the New Zealand Cross for his conspicuous bravery at Ohinemutu in 7th February, 1870. While the forces under Lieut. Colonel McDonnell were serving in the Patetere country, Te Kooti with his forces came out of the bush on the further side of the Ranges and attacked Ohinemutu where Captain Mair and some Arawas were posted. It being of the utmost importance that immediate notice of the same should be dispatched to Colonel McDonnell, Sergeant Carkeek used every exertion to get Natives to convey a note to him at Tapapa through the bush, but as no one could be found to incur the risk, Sergeant Carkeek determined to carry the note himself, and, finding a Native who knew the road, started at daylight, and arrived at Tapapa at about three o'clock p.m., having travelled upwards of thirty miles through dense bush known to be in the occupation of the enemy, with the danger of being surprised at any moment, when certain death would have been his fate".

(Licensed under Native Land Act on 3rd August, 1867). At the conclusion of hostilities Carkeek took part in the surveys for the Scandinavian settlements in the Forty Miles Bush in southern Hawke's Bay and the Seventy Miles Bush in northern Wairarapa.

He died in the Wairau Hospital, Marlborough, on 24th May, 1897.

He joined the New Zealand Institute of Surveyors in 1893.

See "Cyclopaedia of New Zealand" Volume 1 p.1103.

Dictionary of New Zealand Biography. Schofield. Vol. 1, p 139.

CARKEEK, Morgan James Cooper (1846 - 1927)

Born in Nelson in 1846 he was a son of Captain Stephen Carkeek and younger brother of Arthur Wakefield Carkeek, N. Z. C. who also was a surveyor. He was educated at Nelson College. He was appointed draughting cadet on the Wellington Provincial survey staff on 26th January, 1863 and in 1866 became a survey cadet and evidently soon after became an authorised surveyor. (Vide S.C. Plan 10773, Wellington District Office, of a survey by Morgan Carkeek at Foxton in 1866). He was appointed Assistant Surveyor on the Provincial Staff on 1st February, 1871 but resigned in October 1874 to join his brother A. W. Carkeek, in private practice. As a contract surveyor he carried out a number of surveys for the Public Works Department and in this connection in 1882 he was assigned the task of making a reconnaissance survey for the North Island Main Trunk Railway from Te

Awamutu to Marton, but owing to the hostility of the King Country Maoris and their treatment of C. W. Hursthouse and the members of his party, Carkeek was sent to Taranaki instead to survey a route from Stratford to Okahukura and from Urenui to Okahukura.

In December, 1894 he joined the staff of the Lands and Survey Department in Marlborough as a temporary surveyor and was engaged on extensive triangulation surveys. In May, 1902 he was transferred to the Wellington Land District, still on a temporary basis, and on 1st January, 1903 he was appointed to the permanent staff as District Surveyor. He returned to Marlborough on transfer in June, 1906 and was engaged on subdivisional surveys, and in March the following year he was transferred to the Nelson Land District on similar work. He retired from the Department in 1914

In 1888 he was a member of the founding committee of the New Zealand Institute of Surveyors and for a period served on the Council of the Institute As a representative of the Institute he served on the New Zealand Survey Board from 1903 to 1905. He was a Justice of the Peace.

His death occurred at Otaki on 4th May, 1927.

Refs: Cyclopaedia of New Zealand" Vol. 1 p. 1096 "New Zealand Surveyor" Vol. XIII, No. 4 p.136. "The Exploration and Survey of the Marton-Te Awamutu

Section of the North Island Main Trunk Railway" by J. R. Lee. Engineers and Assistants Association Inc. Year Book, 1955.

CARRINGTON, Frederick Alonzo (1807 - 1901)

Often called "the founder of Taranaki".

He was born in Chelmsford in Essex. He studied under Robert Dawson, the distinguished Military Engineer. As a young man he was appointed by the Duke of Wellington to a position in the Ordnance Survey Department. His ability in survey work and topographical delineation attracted the attention of the engineers of the day, and on the passing of the Reform Bill in 1832 he was selected by the Parliamentary Commissioners to describe the boundaries (for electoral purposes) of the Boroughs from Bristol to Manchester, and for that service received the thanks of the Commissioners.

An accomplished surveyor at the age of 33, he was specially selected by the Plymouth Company as its Chief Surveyor to go to New Zealand and choose a site for the new settlement. He sailed from London in the ship London and arrived in Port Nicholson in December 1840. Colonel Wakefield gave him every assistance, by placing at his disposal the barque Brougharn and arranging for the services of "Dicky" Barrett, a well-known whaler, as guide and interpreter, In exploring the various parts of the coast available for the purposes of the settlement.

In February 1841 accompanied by his brother, Augustus Octavius Croker Carrington, as Chief Assistant, and a survey party, he went to Taranaki. The country was then covered with high fern and forest with a dense undergrowth that made it difficult to select the site for a township, and after visiting Waitara to judge of its capabilities as a port, Carrington finally fixed on the present site of New Plymouth. He surveyed the Sugar Loaf Islands and proposed a harbour in their vicinity. He took his plans to England and submitted them to Sir John Rennie, who approved them

and was prepared to construct the harbour. He returned to England in 1844 when he found that the directors of the New Zealand Company (which had absorbed the Plymouth Company) were thinking of ceasing their functions for a time. He then retired from their service, receiving a very complimentary testimonial.

Carrington next engaged in the formation of railways in England. He surveyed lines and made models of engineering works where particular difficulties existed and some of his models were sent to Buckingham Palace at the request of the Prince Consort, who personally thanked him.

During the time he was in England, between 1844 and 1851, he gave much time and attention to New Zealand affairs, particularly to Taranaki iron sand, a sample of which he had taken to England and had analysed by Messrs. Dymond of Holborn, but although the principal men of the day were impressed with the high quality and value of the samples, he was unable to bring the matter to a successful issue. However, he sent to the great Exhibition of 1851 a bar of iron obtained from the sand. and the attention of the Quartermaster-General was called to it.

After visiting California several times in connection with mines, water-races and railways, Carrington returned to New Zealand in 1857 with the object of utilising the iron sand, and to prosecute other schemes affecting Taranaki. The North Island was then in an unsettled state owing to the Maoris assuming a hostile attitude towards the European settlers, and war broke out in 1860, and lasted about ten years. Some time in 1862 Carrington was appointed Government Engineer and Surveyor for Taranaki, and in conjunction with the military authorities, carried out a large amount of road construction in the district.

On the restoration of peace he gave his attention to local body affairs, was nominated and elected Superintendent of Taranaki, being the fifth and last to hold that office. He was elected on 15th October, 1869 and re-elected on 22nd November, 1873, and held the office until the Provinces ceased to exist on 1st November, 1876. For some years after that he represented the Grey and Bell districts in the House of Representatives. He was also a member of the Harbour Board. He retired from politics in 1880.

He was a thorough colonist, and took a great interest in the welfare of the district. He died on 15th July, 1901

CARRINGTON, Augustus Octavius Croker (generally known as Octavius) (1816 - 1901)

Born in Essex, England, 3rd September, 1816. He received his training as a surveyor and engineer under Hennet and Brunel on the Great Western Railway. From 1835 to 1837 he worked on the Ordnance Survey, and later on the Salisbury-Exeter Railway and on the South Eastern Railway.

When his brother Frederick was appointed Chief Surveyor to the Plymouth Company and charged with the responsibility of selecting the site in New Zealand for the New Plymouth Settlement, Octavius was appointed his First Assistant Surveyor, and to ensure that at least one of them arrived safely in New Zealand, Octavius was assigned to the Slams Castle while his brother sailed in the London. They met at Wellington and both sailed on the Brougham to Moturoa in February, 1841.

He assisted in the survey of New Plymouth and then along with other employees of the New Zealand Company he received his dismissal on 31st March,

1843 to take effect on 31st March, 1844, but he elected to waive his right of a year's notice and remain in New Zealand. His brother Frederick having returned to England, Octavius Carrington was accordingly appointed Chief Surveyor without pay which in effect placed him in charge of survey records and to receive payment for surveys as they were required.

In 1845 he joined the Government service on Native Land purchase work, and one of his tasks was the survey of the French Nanto Bordelaise Company's settlers claims at Akaroa. He also assisted in surveying the town of Lyttelton, in 1849

When Provincial Government was established in Taranaki in 1853, he became Provincial Surveyor and held that position until the end of 1870 when he joined the Public Works Department and had charge of road works between New Plymouth and Waitotara, a very risky job in those days, as surveying and working parties had to operate under the protection of armed forces and were sometimes subjected to sniping.

He was also responsible for determining the route for the road north of Waitara in 1871, as far as the Armed Constabulary's furthest outpost at Whitecliffs.

He retired from Government Service towards the end of 1878 and entered upon private practice.

He died in New Plymouth on 12th September, 1901 at the age of 85.

The record of the achievements of cadets trained by Octavius Carrington is outstanding in the annals of surveying in New Zealand. Some of them were :

Stephenson Percy Smith, later Surveyor General

Thomas Humphries, later Surveyor General

Charles Wilson Hursthouse, later Chief Engineer, North Island, Public Works.

George Andrew Northcroft, later Chief Engineer, Orange Free State, South Africa.

Nelson Carrington, later Resident Engineer, Public Works Department, Napier.

Thomas K. Skinner, later Surveyor and Borough Engineer, New Plymouth.

John Skinner, later Surveyor and County Engineer, Taranaki.

Two of Octavius Carrington's sons, Nelson Carrington and Follett Carrington followed the surveying profession.

A. O. C. (Octavius) Carrington was a foundation member of the New Zealand Institute of Surveyors.

See also - Proceedings of the New Zealand Society of Civil Engineers, Volume X, p 229.

CARRINGTON Nelson (1845 -1877)

Born at New Plymouth, the son of Octavius Carrington, he was one of the first European children to be born there.

He entered the Government Service as a cadet in the Provincial Survey Department of which his father was Chief Surveyor, and in June, 1864 was promoted to Assistant Surveyor. In 1865 he laid out the town of Opunake.

By an arrangement with the Hon. Minister of Defence and the Provincial Superintendent, he was transferred to the General Government Survey Department where he remained till February, 1869, engaged in surveying confiscated land in South Taranaki. He was then required for military duty and was gazetted Ensign in charge of Road Works. In April, 1870 he was employed with the Native Road Party on the West Coast — at Opunake and Patea as Assistant Engineer under his father who had charge of the works. In June 1873 he was made Resident Engineer on the Napier and Manawatu Railway, which office he held until his death which was caused by illness brought on by long exposure to wet and cold in the bush-covered Manawatu Gorge.

He died at New Plymouth on 9th May, 1877.

CARRINGTON Follett (1862 - 1948)

He was born at New Plymouth, a son of A. O. C. (Octavius) Carrington the notable Taranaki Surveyor.

Follett Carrington became a survey cadet in the Taranaki Provincial Lands Department, which was later absorbed by the General Government on the abolition of the Provinces, in 1876. He served on the West Coast Commission, of which Sir William Fox and Sir Francis Bell were the principal members, and on whose recommendations the West Coast Reserves Act was based.

He was later transferred to the Wellington District Office of the Lands and Survey Department, where he enjoyed a tremendous reputation as a fast and accurate computer. After a spell of duty in Hawkes Bay, he returned to Taranaki as draughtsman and computer until 1918, when he retired.

As a youth he was a keen and successful yachtsman and also a keen mountaineer. He was a member of the party led by the noted mountaineer, G. E. Mannering, in the first winter ascent of Mount Egmont in 1903.

He was a member of the New Zealand Institute of Surveyors.

He died at New Plymouth in 1948 aged 86 years.

See- New Zealand Surveyor, Vol. XIX, No. 8, p 612.

CARRINGTON Wellington (1814 - 1890)

A brother of Frederick and Octavius (q. v) Wellington Carrington was born and educated in England.

He came to New Zealand in 1835, visiting the Bay of Islands. Subsequently he was appointed to the survey staff of the New Zealand Company, and returned to New Zealand in 1839 in the Cuba as Assistant Surveyor to Captain William Mein Smith, whom he assisted in the first surveys of the Wellington settlement. In the latter part of 1840 he laid out part of the town of Wanganui (then called Petre).

In February, 1841 he joined his brothers in the Taranaki expedition and assisted in the first surveys of the new settlement at New Plymouth.

Subsequently he joined the Native Land Purchase Department.

He took part in the Maori wars and was a Captain in the Taranaki Militia.

He was a member of the Taranaki Provincial Council 1872-73.

He was appointed to the General Government Service on 1st April, 1873 as Assistant Engineer in the Public Works Department and in that capacity was transferred to the Waikato district in June, 1875.

He died at New Plymouth on 9th February, 1890.

CARROLL Thomas (1863 -1946)

Born in Ireland on 20th October, 1863. He came to New Zealand towards the close of the century and joined the Lands and Survey Department as a surveyor, on 1st November, 1899. For many years he was engaged on survey work in the Shannon and Manawatu Districts where conditions for travelling and living were still very primitive, supplies being difficult to obtain and meat supplies were obtained by use of rifle and pig dog. He later transferred to the Roads and Bridges Department when it hived off from the Survey Department. Eventually he was stationed at Te Kuiti, where for many years he was District Surveyor. When he retired on age limit, he continued to survey in private practice at Te Kuiti. He took a keen interest in local affairs and served on the Te Kuiti Borough Council and for a period was Mayor of the Borough.

He died at Te Kuiti on 23rd December, 1946.

Joined the Lands and Survey Department on 1st November, 1899 (New Zealand Gazette, 1913).

See "New Zealand Surveyor" Vol. XIX No. 14 (1947) p.285.

CASS Thomas (1817 - 1895)

He was born in Yorkshire. He was educated at Christ's Hospital and specialised in mathematics. He then went to sea in the East India trade but after three years returned to England where he became an assistant to the Titles Commissioners of Somerset House and gained a knowledge of surveying and conveyancing.

In March, 1841, he was appointed to the survey staff of the New Zealand Company and he sailed in the Prince Rupert, two of his fellow passengers being William Spain, Lands Claims Commissioner, and Charles Whybrow Ligar, Surveyor General of New Zealand. The ship was wrecked at the entrance of Table Bay, South Africa, with the loss of one life. Some of the survivors remained to settle in Cape Colony, but the remainder, including Cass, came on to New Zealand in the brig Antilla, which arrived in Wellington on 8th December, 1841.

He left the Company due to the retrenchments in 1844 and subsequently was employed at the Waitemata and Bay of Islands on survey work. He then joined the Government brig Victoria and had several adventurous years on the New Zealand coast, including the transport in custody from Otago to Wellington of two of the three men who had robbed the Greenwoods at Purau in 1845.

He also took part, as a volunteer, in the Maori War (Heke's Rebellion) and in 1847 returned to England

He returned to New Zealand in 1849 as Assistant Surveyor to Captain Thomas the Chief Surveyor to the New Zealand Company, in charge of the surveys for the Canterbury Association's settlement.

His first task was to survey Lyttelton Harbour, after which he assisted in the survey of Lyttelton and with the triangulation of part of the Canterbury plains. In 1851 he succeeded Captain Joseph Thomas as Principal Surveyor to the Canterbury Association and subsequently became Chief Surveyor for the Province of Canterbury.

In 1854 he selected the site of the town of Timaru which was surveyed by one of his assistants, Samuel Hewlings. Hewlings had been a fellow passenger on the Prince Rupert and on the Antilla in 1841. In 1858 Cass was appointed to the Commission to report on the best route for a railway between Christchurch and Lyttelton, and on the 12th April in the same year he became Commissioner of Native Reserves.

In 1864 he was Chairman of the Commission for Railways and Bridges of Canterbury. Subsequently he returned to England as Emigration Officer for the Provincial Government which position he held until 1868, when he came back to New Zealand and served another three years on the Waste Lands Board and as Chief Surveyor for Canterbury, retiring in 1871.

On 8th January, 1874 Mr. (later Sir) Joshua Strange Williams, the Registrar General of Land appointed a Board to examine applicants for Surveyor's Licenses under the Land Transfer Act of 1870. The Board consisted of Thomas Cass, Samuel Hewlings (who had succeeded Cass as Chief Surveyor and George McIntyre.

After his retirement Cass became a landholder and grazier.

He died on 17th April, 1895.

See also "The Torlesse Papers" edited by Peter Maling - 1958, pp 21-22 and opposite p.112 a portrait of Cass painted by Samuel Butler in 1868.

CHAMIER George (1842 - 1915)

Born on 8th April, 1842 at Cheltenham, Gloucestershire, he was a descendant of a distinguished family of Huguenot origin. Educated in England and at the Polytechnic School, Dresden (1859-60) where he received a scientific education, he emigrated to New Zealand in the ship Chapman, arriving on 10th September, 1860. After serving for a while as a cadet on a back country sheep station in North Canterbury he served from 1862 to 1868 as a road engineer, borough engineer and surveyor in Canterbury; from October, 1862 to September, 1866 he was employed by the Sefton Road Board, later known as the Kowhai Road Board; from 1866 to 1868 he was an Assistant Surveyor on the staff of the Canterbury Provincial Survey Department. In 1869 he left New Zealand for Tasmania where he entered the profession of civil engineering, becoming an Associate in 1879 and a member in 1884 of the Institution of Civil Engineers (London). He was the author of several technical papers and of two novels and a volume of essays of a philosophical nature.

In 1886 he published a pamphlet "The Utilisation of Water in South Australia" which was followed by several technical papers for the Institution of Civil Engineers. His first novel "Philosopher Dick; or Adventures and Contemplations of a New Zealand Shepherd" was published in England in 1891, anonymously. This was followed in 1895 by "A South-Sea Siren" which was reprinted in 1970 with an Introduction by Professor Joan Stevens of Victoria University, Wellington, in which she gives a full biography of Chamier and his family background.

See "A South-Sea Siren" by George Chamier, 1970 Edition. Edited and introduced by Joan Stevens. In 1911 his volume of essays, "War and Pessimism" was published. He died in 1915.

CHARLTON Horace

Came to New Zealand in the Brougham which arrived at Port Nicholson on 9th February, 1842 He was a survey cadet on the staff of the New Zealand Company, and soon after arrival was working under Mr. Wylie, surveying in the Ohariu district. When field operations were curtailed by the Company after 31st March, 1843 Charlton spent some time in the Company's Survey Office at Wellington.

He went to Otago In 1846 and, as a contract surveyor, took part in the preliminary surveys for the Otago Settlement. His contract included Anderson's Bay, and to the south of Cape Saunders, Kaikai Point, Sawyers Bay and the lower Kaikorai.

CHEAL, Peter Edward (1846 - 1931)

He was born and educated in London. He trained in England as a mining engineer and surveyor. He was a member of the first Middlesex Engineer Volunteers. In 1864 he came to New Zealand in the "Eagle Speed" and in 1865 he joined the Survey Department in Auckland and was connected with the Transport Corps during the Waikato campaign.

He was licensed under the Native Land Act, 1865 and gazetted in 1870. From 1867 to 1870 he was engaged in surveying in the Thames goldfield and in Native Land Surveys, and in 1871 he was again on the Government Survey staff surveying on the Waimate Plains in South Taranaki. He was in charge of a staff of six survey parties, with working parties of 100 men, subdividing and roading for settlement. When the Taranaki Maoris found that the surveyors had not been instructed to provide adequate Native Reserves in the district they took action under the leadership of Te Whiti and Tohu, and had Mr. Cheal and his staff placed in carts and removed from the plains. Consequently 800 men of the Armed Constabulary were sent to the district and under cover of their rifles the surveyors resumed their work. He laid out the town of Stratford in 1879.

In the subsequent dispute between the Maoris and the Government which culminated in the Parihaka affair of 1881, Mr. Cheal took part as a member of the Hawera Cavalry.

In 1880 Mr. Cheal returned to Thames in charge of the local Survey Office where he remained until 1886 when he left to enter private practice as Mining Engineer and Surveyor with headquarters at Auckland. During the mining boom of 1895 he was actively engaged in various parts of the Coromandel Peninsula. Later he returned to Auckland and continued in private practice until 1919.

He died at Auckland in 1931

He became a member of the New Zealand Institute of Surveyors in 1890. His son, Alfred W. Cheal, and his grandson, Laurence H. Cheal, are also members of the Institute.

See "The New Zealand Surveyor" Vol. XIV No. 9, March, 1931 Cyclopaedia of New Zealand, Vol. 2 p. 466 has photograph.

CHEAL Alfred Waimate (1878 -1974)

Born at New Plymouth a son of Peter Edward Cheal (q .v.). Qualified as a surveyor in the September Examination 1906. He died at Taupo on 25 March 1974., in his 96th year.

CHEVALIER, George Robert (1832 - 1872) Captain, 65th Regiment.

Born in St. Heliers, Jersey Island, 23rd September, 1832. As a youth he went to England and joined the Ayreshlre Militia, rising to rank of Lieutenant. On the 14th January, 1856, he was gazetted Ensign in the 65th Yorkshire North Riding Regiment of Foot (the "Tigers") then on service in New Zealand. He arrived in New Zealand on 10th January, 1857, and was attached to General Headquarters at Wellington. He was commissioned Lieutenant on 7th December, 1858 and sent to Canterbury where he made a military survey of Banks Peninsula before being transferred to Auckland.

He was a notable marksman and became musketry instructor to the forces stationed at Auckland. Subsequently he took part in the Taranaki and the Waikato campaigns of the New Zealand wars. He was present in a number of engagements and was wounded during the assault on Rangiriri and later was seriously wounded at the assault on Orakau.

He returned to England with the Regiment in 1865, and in 1870 went with the Regiment to India, being stationed at Agra.

He died on the 19th July, 1872 following the amputation of the leg that had been twice injured during his service in New Zealand.

Other than the military survey of part of Banks Peninsula, there is no record of surveys by Captain Chevalier.

Point Chevalier at Auckland is named after him.

CLARK, Henry Gostling

Appointed Chief Surveyor for Marlborough, 19th August, 1862, a position he held until 1876, when Provincial Government was abolished. From 1st July, 1879, to 8th June, 1893 when he retired, he was Chief Surveyor and Commissioner of Crown Lands for Marlborough.

He was a foundation member of the New Zealand Institute of Surveyors.

CLARKE Marsden

Licensed under Native Lands Act, 1865 on 19th October, 1867.

He was the son of an early Church Missionary and was well versed in the Maori language. In 1862, as an interpreter in the Native Department, he was associated with Ir. (later Sir) John Gorst as an interpreter when the latter was sent to establish a court as Resident I in the lower Waikato and was with Gorst during the beginning of the Kingite rebellion when the insurgent Maoris expelled Gorst and his associates from the Waikato.

See "The Maori King" by Sir John Gorst (1864), 1959 edition, p.163 etc.

"Tamihana, the King maker" by L. S. Rickard, 1963 p.135 et seq.

CLARKE, William Hill (1843 - 1906)

Born January 2nd, 1843 in England where he received his training as a surveyor. (Date of arrival in New Zealand not known).

He was working for the Auckland Provincial Council in 1871-72 and in June 1872 he joined the General Government Service and was appointed Resident Engineer in the Public Works Department in the Waikato district in February, 1873. A little later he was on the Public Works staff in Westland and later in Otago. He returned to the North Island in 1882, but left the service in 1884.

He qualified as an Author Surveyor. He was in Hokitika in 1893 and in North Invercargill in 1900.

He was drowned at Hokitika on 14th November, 1906.

CLIMIE, Henry Westcott (1857 - 1929)

He was born in Shrewsbury, England, and came to New Zealand with his father, Daniel Clirnie (under whom he received his engineering training) in the year 1875. He assisted his father in the reconnaissance survey of the railway route from Wellington to Tawa Flat. This survey did not lead to actual work, but before very long the Government made use of the work done and actually started construction. This was discontinued and eventually the Manawatu Railway Company took up the work, adhering closely to Climie's projected line.

Henry Climie then joined the Lands and Survey Department as an Assistant Surveyor in April, 1878, and was engaged in the major triangulation survey in the Wellington District. He later went to Taranaki and endeavoured to carry out surveys in the Waimate Plains, but the hostile Maoris effectively prevented the work from proceeding by ordering their womenfolk to stand in front of the theodolite telescope, whichever way it was turned. The party was transferred to Inland Taranaki, and between 1880 and 1890 Climie located the roading system and subdivided a large portion of that very precipitous area.

He then left the Government Service and commenced private practice, carrying out road and bridge work in the Stratford County. He located, designed and superintended the piercing of the first papa rock road tunnel (on Mangahu Road) suitable for coach traffic, in 1897. He designed the dam and head-works of the Stratford hydro-electric scheme (one of the first in New Zealand) which operated from 1901.

He also carried out a water supply and sewerage service for Stratford in 1903, and for Eltham shortly afterwards, and then for Kaponga and Patea also. (Charles Henry Lawn was resident engineer for the Climie firm at Stratford, 1902-05.

(C. A. L.)

Climie's practice covered a wide field and he brought a water supply to Levin. He moved to Hawkes Bay and carried out similar works at Hastings, Waipukurau, Wairoa, Hunterville and Raetihi.

He died at Hastings on 14th July, 1929.

He was a foundation member of the New Zealand Institute of Surveyors. He was also a foundation member of the New Zealand Society of Civil Engineers (now the N. Z. Institution of Engineers).

See "The New Zealand Surveyor" Vo. XIV No. 1

CLIMIE, James Daniel (1849 - 1928)

He was born at Shrewsbury, England. He was trained in civil engineering by his father, Daniel Climie.

He went to Victoria, Australia, with his father and his brother, H. Climie, in 1870. He practised engineering there and also qualified as a surveyor

In 1875 he came to New Zealand and joined the Government service and worked under J. W. A. Marchant, (at that time on trigonometrical surveys and designated Geodesical Surveyor).

He was appointed District Surveyor in 1880, and carried out his first standard surveys in Wellington City. He was also appointed Inspecting Surveyor and his original works in standard surveys of Wellington and its suburbs, and of several other towns, and of the triangulation surveys he made, have been of great value to the surveyors in those districts. He retired after forty years service with the Lands and Survey Department.

He died at Wellington in 1928 aged 79 years.

He was a foundation member of the New Zealand Institute of Surveyors.

See "The New Zealand Surveyor" Vol. XIII No. 10, December, 1928.

CONNELL William (- 1859)

Came to New Zealand in 1841 and 1st July that year was appointed Assistant Surveyor to the New Zealand Company by Captain Mein Smith. After a few weeks surveying around Wellington he was appointed by Governor Hobson on 27th August to the office of Postmaster General of New Zealand, being the first officer to be so designated. A year later he relinquished that office and served on the staff of the Colonial Secretary. He later retired from the public service to engage in mercantile activities. See "New Zealander" of 24th August, 1859 for an obituary.

See also "A History of the Post Office of New Zealand", 1964 by Howard Robinson.

COOM John (1844 - 1921)

He was born in Cornwall on 22nd October, 1844. He trained as civil engineer and was engaged on a variety of works before coming to New Zealand in 1872. In December, 1876 he was appointed surveyor in the Public Works Department. He became an Authorised Surveyor on 2 December, 1878.

He was associated with T. H. Foy in surveying for Nelson and Blenheim road connections with Christchurch. Subsequently he filled numerous important positions as an engineer and in 1892 was for a period Acting Chief Engineer for New Zealand. On 1st August, 1899 he became Chief Engineer to the Railway Department from which he retired on 31st 1908. He died at Auckland on 18th September, 1921.

COOPER, GEORGE SISSON (1825 - 1898)

His father, George Cooper, came to New Zealand in 1840 as Colonial Treasurer and Collector of Customs on the staff of Captain Hobson, first Governor of New Zealand.

George Sisson Cooper was appointed a Sub-Commissioner in the Native Land Purchase Department on 6th February, 1854, and stationed at New Plymouth. He had previously been an Inspector in the Police Department. His work was mainly in the field negotiating with the Maoris and defining the boundaries of the purchased land and the Native Reserves. Subsequently he was stationed at Wellington and Hawkes Bay as Land Purchase Commissioner, and was appointed Under-Secretary of the Native Office.

In 1865 he was one of the surveyors engaged in surveying the confiscated land in the Waikato district.

See A. J. H. R. 1861 C No. I and 1862 C No. 1.

On 1 June 1 he succeeded William Gisborne as Under-Secretary for the Colony of New Zealand and in addition was permanent head of the Native (Defence) Department from 1871 to 1874 See also - The New Zealand Colonial Secretary's Office and the Department of Internal Affairs. A short History by Andrew Sharp. Published by Government Printer, 1966.

COOPER, William Marshall

Licensed under the Native Land Act, 1862. New Zealand Gazette, 29th November, 1865. He was surveying in the Westland district during the gold rush period. He had some ability as a landscape artist and a copy of one of his sketches of "Okarito in April, 1867" is included in "The West Coast Gold Rushes" (P. R. May, 1967 edition) opposite page 160.

In 1864 -65 he was engaged in surveying the Waikato confiscated lands for settlement. Vide - the Chief Surveyor

(Charles Heaphy) to the Auditor General (Dr. Knight) 17th April, 1865. Journals of the Auckland Provincial Council, Session XVIII 1864-65 A No. 1.

See also - "Malvern. A Centennial History" by G. L. Popple. 1953. p 89. Cooper was working in Canterbury in 1864 before moving to Auckland Province.

COPPS

Little is known about this man who was appointed to the staff of the New Zealand Company on 9th November, 1841 by Captain William Mein Smith, Surveyor General to the Company.

He surveyed in Ohariu Valley and explored for road lines from there to Porirua.

His movements after 30th April, 1842 are not known except that he seems to have taken part in the early surveys in Taranaki and it is recorded that he was instructed to explore the Mokau district and up the Mokau River. He reported two

large seams of coal 16 miles up the river and limestone rocks a further 24 miles up the river.

The journal of William Halse, (the first Commissioner of Crown Lands for Taranaki) reports the death of Copps on 21st August, 1846.

Copps' Christian name is not given in any of the early records.

COTTERELL John Sylvanus (1820 - 1843)

Cotterell was following his profession at Bristol early in 1841 when he became a member of a committee formed in England to establish a "Second Colony in New Zealand" - the Wellington Settlement being the "First Colony". Also he was commissioned to act as agent for some purchasers of scrip who were eventually to be absentee owners.

He arrived at Nelson early in 1842 in the Fifeshire and commenced surveying in the Waimea district, under contract to the New Zealand Company.

Energetically he carried out his survey work and the business of settlement and took a leading part in the exploration of the hinterland of Nelson. He discovered the Tophouse Pass into the Wairau Valley in November, 1842 and moving eastwards he explored the district which subsequently was known as the northern part of the Marlborough Province. He next discovered Lake Rotoiti and explored the surrounding district.

Cotterell was one of the contract surveyors given the task of surveying rural sections in the Wairau district, the ownership of which was in dispute between the New Zealand Company and the chiefs of the Ngati-Toa tribe. The surveyors were warned by Te Rauparaha and Rangihaeata to vacate the district and await the decision of the Land Claims Commission as to the ownership.

In the tragic event, known as the "Wairau Massacre" Cotterell was one of those who were killed. Actually Cotterell and Frederick Tuckett, who was present but escaped, were members of the Society of Friends (Quakers) and neither bore arms against the Maoris but endeavoured to prevent bloodshed.

Cotterell was a month less than twenty-four years of age when he was killed.

See "Nelson" by Ruth M. Allan - 1965

CREAGH, Oliver Mason (- 1922).

Granted Surveyors Licence in 1867, then working in Auckland Province. Authorised to survey under the Land Transfer Act.

He was a Government Surveyor working in the Auckland Land District and carried out many surveys in the South Auckland and Bay of Plenty districts. In April, 1880, he was placed in charge of the surveying of a large block in the Matamata district. The local Maoris were opposed to any surveying in the district and at one stage, while surveying in the Urewera district Creagh's party was hindered by hostile Maoris. It was necessary to troops to the district to enable the work to proceed.

He was a foundation member of the New Zealand Institute of Surveyors.

See Appendices to Journals of House of Representatives, 1880.

"History of Land Legislation and Settlement in New Zealand", Jourdain, 1924

He died in 1922, vide N. Z. Surveyor, Vol. 1. No. 8, p 310.

CRIDLAND, Henry John

A surveyor and land agent at Wellington, he was commissioned by the Canterbury Association to prepare estimates for roads, buildings and other public works for the proposed settlement and for this purpose sailed as a passenger on the survey ship "H. M. S. ACHERON" to Akaroa in February, 1849. It was he who was responsible for the location and commencement of the construction of the Lyttelton to Sumner Road, in 1849. From 1861 to 1865 he was a contract surveyor in Canterbury. He was surveying on the Rangitata Plains in South Canterbury in 1863-65.

See "The Torlesse Papers" edited by P. Maling, 1958 p.35 etc. See also "Wind in the Tussocks" by Barbara Harper, 1972 p.27.

CUSSEN Lawrence

Appointed to survey staff, Lands and Survey Department, Auckland 1st March, 1877 vide New Zealand Gazette, 16th May, 1877.

In 1869 he was licensed under the Native Land Act of 1868.

He and his brother William carried out a great deal of the original triangulation of the southern districts of the Auckland Province. The work was done under severe conditions and the antagonism of the Maoris of the King Country.

He was a foundation member of the New Zealand Institute of Surveyors.

See "History of Land Legislation and Settlement in New Zealand", W. R. Jourdain, 1924 pp. 219, 221

DALTON, Joseph Edwin

Surveyed in Taranaki and on the Manchester Corporation Block in the Manawatu district. Evidently he held a licence under the Native Land Court Act 1862, which was invalidated by the Native Land Act 1878. He served on the Survey staff as a surveyor in 1877, but subsequently did not become an Authorised. or Licensed Surveyor.

DALTON, Peter Joseph

Was in partnership with his brother W. J. Dalton (q.v.) at Auckland. He was an Authorised Surveyor under authority dated 18th July 1877. Licensed to survey under the Native Land Act 1865, vide Auckland Provincial Gazette 23rd January 1866.

DALTON, William James

Born in Paris and was educated as a Civil Engineer under Brunel. He and his brother, P. J. Dalton, engaged as consulting engineers for a London City Sewerage improvement scheme. He was later Resident Engineer on the London and South Western Railway and on the Plymouth Breakwater.

He came to New Zealand in 1865 and was licensed to undertake surveys under the Land Transfer Act and the Native Land Act 1865.

In 1866 he designed improvements in the Freemans Bay area at Auckland.

He and his brother set up in private practice in Auckland as Civil Engineers and Surveyors and William was so engaged until very late in life. He died at Auckland on 11th July 1913.

DARNELL, Bryan Henry (1820 - 1906)

He was born at Darlington, England. After qualifying as a Civil Engineer he went to South Africa. He came to New Zealand in 1871 and joined the General Government Service on 10th September 1873. In 1874 he was appointed Resident Engineer, Public Works Department, on the Waitara-New Plymouth Railway. Subsequently he was transferred to Invercargill as District Engineer. In the depression of the early 1880's he was retrenched and returned to Taranaki where he practised as an authorised surveyor in south Taranaki. Authorised Surveyor, 1 April 1880. About 1894 he took up land near Inglewood and engaged in farming. He died at Bell block on 21st January 1906.

DARTNELL, William Whitney (1844 - 1911)

In 1865 he commenced serving his articles under C. E. Fooks of Christchurch, surveyor and civil engineer. In December 1869 he was appointed Mining Engineer to the Brunner Mine, under James Burnett, senior of the Nelson Provincial Government. In 1873 he was a surveyor in the Grey River district, under the General Government, and on 1st January 1875 he was appointed Resident Engineer at Tokomairiro (Milton) on the construction of the railway to Lawrence. In 1877 he was at Palmerston South on the construction of the South Island Main Trunk Railway. In August 1879 he was promoted District Engineer at Invercargill. He became an Authorised Surveyor on 9th May 1881. He relinquished his office at Invercargill in February 1885 to carry out an investigation of some of Messrs Brogden Bros Claims in connection with railways contracts, and in October 1885 he was appointed District Engineer, Public Works Department, at Nelson. He was elected

M. I. C. E. on 4th December 1888. He left the Public Works Department on 30th September 1887 and subsequently practised in Western Australia until about 1910.

DAVIE, Cyrus (1821 - 1871)

Educated and trained in England as a surveyor and engineer, he left England with the "Canterbury Pilgrims" on board the Sir George Seymour, having missed his passage on the Randolph which had sailed the day before. The Sir George Seymour later overtook the Randolph and Davie was transferred at sea and he shared the cabin of Charles Joseph Bridge, whose son Charles Hastings Bridge was later to enter the surveying profession and become President of the New Zealand Institute of Surveyors.

In 1853 Cyrus Davie, in partnership with R. J. S. Harman (another surveyor) purchased Run 53 which today is the greater part of the area known as Irwell, in the Ellesmere district.

He practised as a surveyor on the Provincial Survey staff which he joined in 1851 and filled the office of Provincial Chief Surveyor for Canterbury (1866-67) while Thomas Cass was in England as Immigration Officer for Canterbury.

He died in Christchurch in 1871 aged fifty.

His son, Frank Harman Davie, and grandson, Frank Lewis Davie, and great grandson, J. M. H. Davie, also entered the surveying profession in New Zealand.

See "White Wings" 1840-1885. Vol. 11 by Sir H. Brett, 1928 p.72.

DAVIE, Frank Harman (1858 -1918)

He was born in Christchurch in 1858. He was the second son of Cyrus Davie, a former Chief Surveyor of Canterbury.

He received his training in Canterbury and was licensed under the Land Transfer Act in 1880. He spent the whole of his professional life in private practice in that Province and for a while was in partnership with Mr George Hanmer. He retired from active practice in 1911, handing over the business to his son, Frank Lewis Davie.

He died at Christchurch on 10th November 1918.

He was a foundation member of the New Zealand Institute of Surveyors.

See "The New Zealand Surveyor" Vol. XI No. 5 p.139.

DAVIES, Richard Hutton C. B. D. S. O. (Major General) (1861-1918)

Born in London 14th August 1861, he was educated at St John's School, St Nicholas College, Hurstpierpoint. On leaving school he came to New Zealand as a cadet on his uncle's sheep station in Canterbury. After two years he left to enter the surveying and engineering profession in the North Island. In 1884 he qualified and for the next fifteen years practised in Taranaki. He was a foundation member of the New Zealand Institute of Surveyors.

He was commissioned Lieutenant in the Hawera Mounted Rifles Volunteers on 2nd May 1895 and promoted Captain the following month. He continued to practice as a surveyor until 3rd October 1899, when he joined the New Zealand Militia (Permanent Staff) as Staff Officer for Instruction of Mounted Rifles Volunteers with the rank of Temporary Major, but was almost immediately seconded for services in South Africa. He embarked with the 1st Contingent on S.S. Waiwera on 21st October as Captain commanding No 1 Company. In May 1900 he was promoted Major in temporary command of 3rd N. Z. (Rough Riders) Contingent. On arrival of the 4th Contingent he was appointed to its command in July 1900 and promoted Lieutenant Colonel, having been made a Commander of the Bath (C. B.) for distinguished active service. For a period he commanded the Colonial Mounted Rifles, a composite Force of Australian and New Zealand troops, and was mentioned in Despatched in April 1901.

He returned to New Zealand in July 1901 and assumed command of the Auckland Military District in October. In January 1902 he was promoted Brevet Colonel and placed in command of the 8th Contingent with whom he embarked for South Africa on S.S. Surrey on 1st February. In May he commanded a composite Column of British and New Zealand troops and was again mentioned in Despatched in July. He returned to his Regular Army duties in New Zealand in August 1902 and for his services in the South African War was awarded (Queen's) South African Medal with five Clasps and King Edward's South African Medal with two Clasps.

In December 1906 he was appointed Third Military Member of the N. Z. Defence Council and Inspector General of the N. Z. Defence Forces and promoted to the substantive rank of Colonel. By arrangement with the Imperial Government he proceeded to the United Kingdom in 1909 for a year's training with the British Army and when this was completed he was offered and accepted with New Zealand

Government approval a four-year appointment as Commander 6th Infantry Brigade, Aldershot, in the temporary rank of Brigadier General.

On the outbreak of war in August 1914 he left for France with his Brigade and was mentioned in Despatches for distinguished service with the British Expeditionary Forces at Mons. In February 1915 he was transferred permanently to the British Regular Army and promoted Major General, subsequently assuming command of the 20th Division in the field in France. He was again mentioned in Despatches in January 1916, but later that year was medically evacuated to the United Kingdom and after a long illness died in London on 11 May 1918.

A watercolour portrait of General Davies painted while he was in Cannock Chase Hospital, Staffordshire, was handed to the New Zealand High Commissioner, London in 1923 and transferred to the Minister of Defence in New Zealand. It is understood this portrait was deposited with the Dominion War Memorial Museum.

See also obituary in N. Z. Surveyor, Vol. XI, No 4, June-September 1918, which contains, inter alia, the Army list record of his service in South Africa.

See also "Te Moa - 100 Years of History of the Inglewood Community, 1875-1975" compiled by R. W. Brown, 1975. Chapter 24 has a biography of General R. H. Davies and facing p.225 is a photograph.

DAVISON William

As an Assistant Surveyor to the New Zealand Company, Davison was a member of the survey staff sent out from England in 1841 in the Will Watch and the Whitby to lay out the Nelson settlement. His first task was to survey a number of suburban sections adjacent to the township of Nelson. He then went to the Upper Motueka where he surveyed a number of "accommodation" allotments.

In April 1844 he was a member of the party under Chief Surveyor, Frederick Tuckett, that explored the east coast of the South Island to select the site for the Scottish Free Church Settlement. When the Otago Block had been acquired for that purpose Davison commenced the survey of the block but shortly afterwards, owing to the New Zealand Company finding itself in financial straits, surveying operations were suspended and all staff in Otago except Davison were recalled to Nelson or Wellington.

He remained to look after the Company's interests in Otago and occupied his time by making a survey of the Otago Harbour and the coastline. When the surveys were resumed in February 1846 with Charles Kettle as Chief Surveyor for the Otago Settlement, Davison and Robert Park were appointed staff surveyors and there were nine contract surveyors. Davison and Park laid out the town of Dunedin and shortly after the completion of the surveys towards the end of 1847, Davison returned to England where he became the manager of the factory in Halstead, Essex of the well known firm of Cortaulds. His son, Sir William E. Davison succeeded him in the management.

In Dominion Archives: N. Z. C. 263. Data on surveys and surveyor's diaries.

N. Z. C. 264. Has, inter alia, Davison's journal which covers the period November 1844 to March 1848.

Hocken Library, Dunedin: M. S. S. Unclassified. Various; among which is a copy of Davison's Journal, which covers the survey of the Waiholo district.

See also "The Stewart Islanders" by Olga Sansom. 1970 p.176-177.

DAVY Charles (1825 - 1914)

Born in Glamorgan, Wales, he was the eldest son of Captain Leyson Henry Davy, a retired officer of the East India Company. Captain Davy and his son, Edwin, arrived at New Plymouth in the Amelia Thompson on 25th March 1841 among the first of the Plymouth Company's settlers in Taranaki. Charles and his brother Henry arrived in the Himalaya on 23rd December 1843. Captain Davy purchased some large tracts of land to settle his Sons before he returned to England. Charles and Edwin engaged in Surveying and engineering and in 1846 were members of the Taranaki Provincial survey staff.

Like many of the early surveyors, Charles Davy turned to land development and farming and engaged in Surveying intermittently. In the early years the Province was in straitened circumstances and could not support survey staff.

In 1872 Charles Davy was the first Engineer of the Rangitikei Highway Ward.

He became an authorised surveyor, under the Land Transfer Act in December 1878.

Subsequently he went to Wanganui and farmed in the Whangaehu district.

He died at Fitzroy, New Plymouth on 16th April 1914 in his ninetieth year.

Licensed under the Native Land Act, December 1870.

DAVY Edwin

Son of Captain L. H. Davy a former officer of the East India Company, he was born in Glamorgan, Wales and came to New Plymouth with his father in the Amelia Thompson in 1841. He and his brother Charles entered the surveying profession in Taranaki and in 1846 were on the Provincial survey staff.

In 1850 Edwin went to Auckland and became a business man. He entered local politics and was elected to represent the East Ward in Auckland's first municipal elections held on 25th November 1851. This "Common Council" expired the following year when the British Government disallowed the Provincial Act under which it had been established.

Edwin Davy was appointed a Gold Fields Surveyor, vide Auckland Provincial Gazette of 1868. He was a member of the committee set up in June 1865, to establish the Surveyor's Association of the Province of Auckland, a fore-runner of the New Zealand Institute of Surveyors.

DE PELICHET, Charles H. Louis (c.1820 - 1853)

A Londoner, came out to Nelson in the Will Watch in 1841 as an "Improver" on the survey staff of the New Zealand Company under Frederick Tuckett whose task was to lay out the Nelson Settlement. After a few years in the Nelson district assisting when the surveys and learning the profession, he moved to Otago in

November 1847 where he assisted Charles Kettle, the New Zealand Company's Chief Surveyor at Otago, in laying out the sections at the head of the Otago Harbour.

At the end of 1850 he moved to Hawkes Bay, where (Sir) Donald Maclean was concluding the purchase, for the Government, of the Ahuriri and other large Blocks of Maori Land. De Pelichet was one of the signatories to the deed of purchase of the Hapuku Block and was one of the surveyors engaged in surveying the blocks in preparation for the subsequent settlement surveys.

About the end of 1853 while engaged in surveying for ES. Curling, of Te Kopanga he met his death under tragic circumstances. One day, being too wet for the work in hand, he and his assistants decided to hunt for wild pigs. They separated and after a time one of his men seeing some branches moving fired at the spot and was horrified a moment later to discover he had fatally shot his employer. He was buried at Wautukai, where his grave may be seen at the Patangata golf course, surrounded by a picket fence.

On December 22 1851 De Pelichet married Frederica, daughter of Dr Howe at Wellington. Dr Donald Gollan married his widow. Mr De Pelichet left one son, Louis de Pelichet, who became the manager of Mangatarata Station for Spencer Gollan and eventually assisted him to found the firm of de Pelichet, McLeod and Company, well known in Hawkes Bay as stock and station agents.

DOBSON, Alfred (1824 - 1887)

Born in London and educated at Old London University and in France. He was trained as a civil engineer on the Lynn and Ely Railway and the Great Northern Railway, under Sir William Cubitt by whom he was sent to Germany to report on the electric telegraph, then in its infancy.

In 1851, for health reasons, he came to New Zealand where his brother Edward (senior) had preceded him, and commenced surveying and engineering in Canterbury, and later in Nelson. He was appointed Commissioner of Public Works to the Nelson Provincial Government in 1854, a position he relinquished in 1858, in which year he laid out the town of Blenheim, which was a private venture of Messrs Seymour, Farrar and Fell.

In 1860 he was practising as a surveyor in Marlborough, i.e. before the Province was constituted, and when it was constituted he became Provincial Surveyor and Engineer and was responsible, inter alia, for the surveys of the Picton-Blenheim railway and the draining of the Blenheim swamp and the flood control works of the Wairau basin.

Subsequent to the abolition of Provincial Government he engaged in private practice.

He died in Blenheim on 6th September 1887.

His son, Ernest Douglas Dobson, received his training as engineer and surveyor under him.

DOBSON, Sir Arthur Dudley (1841 - 1939)

Born in Islington, London, 9th September 1841, and arrived in New Zealand in 1850 with his father Edward Dobson. He was educated in Tasmania and at Christ's College, Christchurch and trained as a civil engineer and surveyor by his father, 1859-64. He assisted Dr Haast (afterwards Sir Julius von Haast) and Dobson's

brother-in-law since Haast married a daughter of Edward Dobson, in the geological survey of Banks Peninsula, particularly the line of the Lyttelton Railway Tunnel. In 1860 he surveyed the bed of Lyttelton Harbour. He next surveyed the road to Kaiapoi and Rangiora and prepared a scheme for draining the Rangiora swamp.. He made the first survey of the upper Hurunui and Lake Sumner. He also marked out the road from Riccarton to the Rangitata River.

In 1862 he made a topographical survey of the McKenzie Country in company with Haast. The following year he began the surveys of the West Coast, arriving by schooner at Hokitika on 1st January 1864. In March that year he discovered Arthur's Pass and also brought horses over the Hurunui Saddle to assist in his work in Westland. On the completion of the West Coast survey he went to the Collingwood goldfield, but soon left to continue surveying and exploring for roads from Nelson to the West Coast. In 1866 he was appointed Assistant Provincial Engineer of Nelson. In 1869 he was appointed District Engineer of the West Coast Goldfields in the Nelson Province with headquarters at Westport. On 16th May 1871 he became Provincial Engineer and on 21st December the same year became also Chief Surveyor at Nelson. While remaining part time with the Provincial Government, he joined the General Government on 1st October 1872 in charge of railway construction etc., in the Westport district until September 1878 when he joined his father in private practice. He became an Authorised Surveyor in September 1878. Between 1880 and 1882 he was engaged in the construction of part of the Timaru Harbour, and surveyed alternate railway routes over the Southern Alps, notably via Arthur's Pass (eventually adopted) and via the Hurunui Saddle (Harper's Pass). As a result of the Arthur's Pass survey a company was formed and in 1884 Dobson was sent to England with others to raise capital, and by their efforts the Midland Railway Company was formed.

In 1885 he went to Australia and took a contract to construct the Warnambool Breakwater and also undertook other contracts, all of which were successful.

In 1898 he returned to New Zealand and carried out irrigation works in the Rakaia district, designed and built White's Bridge over the Waimakariri, and surveyed and reported on a hydro electric scheme for harnessing the Waimakariri. In 1901 he became City Engineer at Christchurch and held the position for the next twenty years.

For a short time he occupied the Engineering Chair at Canterbury University College during the absence of Professor Scott.

In 1925 he was elected President of the New Zealand Society of Engineers, the forerunner of the New Zealand Institute of Engineers.

In 1931 he received a knighthood.

He was elected a member of the Geological Society on 30th December 1874 and became M. I. C. E. on 8th March 1882. He was a member of the Royal Society of Victoria, Australia, and was twice President of the Philosophical Institute of Canterbury.

He was a member of the New Zealand Institute of Surveyors.

He died. at Christchurch in 1939 aged ninety-eight.

His autobiography was published under the title of "The Reminiscences of Arthur Dudley Dobson", Whitcombe and Tombs, 1930.

(The above is a précis from “Early New Zealand Engineers” by Furkert).

DOBSON, Edward (1816 - 1908)

Born in England and educated in London under an Architect and surveyor and studied engineering at the London University.

In 1842 he was elected Associate member of the Institution of Civil Engineers, and in 1843 Associate member of the Royal Institution of British Architects.

In 1848 he joined the noted firm of Railway Engineers, John Rastrick, and engaged in railway construction until he came to New Zealand in 1850.

On 25th November 1854 he was appointed Provincial Engineer for Canterbury, and he designed and built all of the important works carried out in that Province for a period of fourteen years, including the Lyttelton railway tunnel, the road to Akaroa, and a railway system for Canterbury. In 1865 he constructed the road through Otira Gorge on the route discovered by one of his sons, Sir Arthur Dudley Dobson. (This road over Arthur’s Pass was opened on 20th March 1866).

Edward Dobson served on several important Commissions on proposed engineering projects in various parts of New Zealand.

In 1869 he went to Victoria, Australia and for a while was Acting Engineer in Chief .

He returned to New Zealand in 1876 and surveyed railway routes in North Canterbury. In 1878 he entered private practice in partnership with his son Arthur. He was elected M. I. C. E. in 1881 and was awarded the Telford Medal.

From 1887 to 1892 he was lecturer in Engineering at Canterbury University College. He was author of several works including “Pioneer Engineering” and “Public Works of Canterbury”.

He was a foundation member of the New Zealand Institute of Surveyors and practised to an advanced age.

He died on 19th April 1908 aged ninety-two. Ref: The NZ Surveyor. Vol. VIII,. No 10, June 1908 for obituary.

Sons of Edward Dobson who became engineers and surveyors were Arthur and George. Sir Julius von Haast was a son-in-law. His brother Alfred, and nephews Ernest and John were also engineers and surveyors.

The “Dobson Lectures” of the New Zealand Institution of Engineers were established to honour the memories of Edward Dobson and his son Sir Arthur Dudley Dobson.

DOBSON, Ernest Douglas (1863 - 1938)

Born in Blenheim son of Alfred Dobson Provincial Engineer for Marlborough. He learned his profession under his father and also Gerald Fitzgerald.

He qualified as an Authorised Surveyor in 1887 and set up in private practice in Blenheim. In 1897 he was elected A. M. I. C. E. In 1901 he became Borough Engineer at Masterton and in 1914, Borough Engineer at Westport. In 1919 he was engaged by the Government to install a water supply for the town of Apia, Samoa.

Returning to New Zealand in 1921 he joined the Public Works Department in the Gisborne district. He subsequently returned

to private practice in Blenheim, where he died in 1938.

“New Zealand Surveyor” - Vol. XVI, No 7, June 1939.

DOBSON, George (1840 - 1866)

Son of Edward Dobson was born in London and came to New Zealand in 1851. Shortly afterwards he went to Tasmania and attended a private school of his uncle the Rev. Charles Dobson. When he returned to New Zealand he was trained as an engineer and surveyor by his father.

In 1864 he was engaged in laying out roads in the upper Waimakariri and Bealey districts and in searching for a practicable pass over the Southern Alps for a road to link east and west Canterbury (Christchurch and Westland). He reported on the practicability of a road over Arthur's Pass which had been discovered by and named after his brother Sir Arthur Dobson.

Subsequently he assisted his father in supervising the construction of this road.

In January 1866 he was appointed Assistant District Engineer for Westland. Five months later he met a tragic end, being murdered near the site of the present village of Dobson, near Brunnerton, by the Sullivan-Burgess-Kelly gang of bushrangers on 28 May 1866.

DOBSON, John Howard (1852 - 1924)

Born at Buckland Prosser Plains, Tasmania 16 April 1852, son of Rev. Charles Dobson who was a brother of Edward and Alfred Dobson, well known engineers and surveyors, in New Zealand.

He was educated at Hobart and after some training in survey work came to Westland, New Zealand in October 1873 and engaged in mining. In 1885 he was engaged by the New Zealand Midland Railway Company on the survey for the construction of the railway from Stillwater to Jacksons and on to Reefton.

When the Company suspended operations in 1893 he went to Coolgardie, West Australia for a short period.

The Government having taken over the assets of the Midland Company, and not being able to get possession of the Company's working plans for the Midland Line, Dobson, who was familiar with the surveys, was engaged to resurvey the line and make fresh plans. He commenced this work in 1895 and carried the formation well up the Otira River.

In 1895 he was given the task of finding an alternative to the Rimutaka Incline via the Waiohine and Tauherenikau valleys.

In December 1898 he was transferred to Marlborough to make a location survey for the Blenheim-Culverden railway.

A year or two later he was back at Otira setting out the tunnel lines.

Between 1901 and 1904 he alternated between Otira and Southland on railway construction work. He also took up hydro-electric survey investigation and was engaged on the surveys at Lake Coleridge. He was also engaged in the surveys for the irrigation of parts of Otago.

He retired in 1918 and lived at Nelson, where he died on 23rd June 1924.

DOUGLAS, Charles Edward (1840 - 1916)

Born on 1 July 1840 in Edinburgh he was educated there at the Royal High School. He came to New Zealand in 1862. Arriving at Port Chalmers on 17 December, he went to the Otago goldfields in the Queenstown region, where he engaged in mining and prospecting. About 1866 he moved to the Okarito field in southern Westland. There, while prospecting and exploring he met the District Surveyor Gerhard Mueller and was engaged by him as a member of his survey party. While with Mueller he learned the elements of land surveying and draughtsmanship. He also collected mineralogical specimens and specimens of the flora and fauna which he forwarded to the appropriate authorities for classification. In 1868 he accompanied Dr (later Sir) Julius von Haast on a rapid geological survey of southern Westland and from Haast gained some knowledge of geological surveying.

After an interlude of several years during which he engaged in cattle farming and in exploring, he joined G. J. Robert's survey party in the course of the triangulation survey of the region. Douglas' work was mainly in connection with filling in the topographical details in the map of the most rugged district in New Zealand, a task that required many years of unremitting toil. He was of great assistance not only to Mueller and Roberts, but also to W. Wilson, G. T. Murray and other leading surveyors working in Westland.

For more than twenty years he was engaged exploring and mapping the western regions of the southern Alps. He was an expert bushman and mountaineer and often worked alone for months at a time. On several of his more arduous expeditions his companion was the prominent mountaineer, A. P. Harper.

Although Douglas was not a fully qualified surveyor, the Surveyor General gave him a special appointment as an Explorer, a position unique in the annals of the Lands and Survey Department. He retired from the Department in 1909 and he died at Hokitika on 23 May 1916.

In 1897 Douglas was awarded the Gill Memorial prize of the Royal Geographical society for his "persistent explorations during twenty-one years of the difficult region of forests and gorges on the western slopes of the New Zealand Alps" vide the Journal of the Royal Geographical Society of May, 1897.

For a comprehensive biography, based on Douglas' diaries and letters, see "Mr Explorer Douglas compiled by John Pascoe and first published by A.H. & A. W. Reed, 1957.

See also - "My Dear Bannie" Gerhard Mueller's Letters from the West Coasts 1865—66". Edited by M. V. Mueller, Pegasus Press, 1958 pp. 2

DOWNES, Thomas William (1833 -)

Born in London, he came to New Zealand in 1857 and his first employment was as drawing master at Nelson College. In 1861 he was appointed to the Provincial Survey staff at Wellington where he served for ten years. He then joined the Public Works Department, in which he served for three years. He became an authorised surveyor in December 1877. In 1874 he set up in private practice at Bulls.

He was a foundation member of the New Zealand Institute of Surveyors.

Cyclopaedia of New Zealand Vol. 1 p.1275.

DRAKE, James Charles

Drake came to New Zealand in the Fjfreshjre in 1841 as a survey cadet on the staff of the New Zealand Company and assisted in the surveys for the Nelson Settlement. He was active in the search for a practicable route for a road from Nelson to the Wairau Valley across the intervening mountain ranges and in November 1843 accompanied by J. Parkinson, he discovered the Maungatapu Saddle over which a road was subsequently built.

In 1844 he was a member of Frederick Tuckett's expedition down the east coast of the South Island to decide on the location of the Scottish Free Church Settlement, and it was Drake who then surveyed John Jones' land at Waikouaiti which was the subject of a claim before the Land Claims Commission in 1844.

In 1846-47 Drake and J. Tully, in partnership as contract surveyors, were engaged in surveying that part of the Otago Block lying between the Tokomairiro and Taieri Rivers and the Waihola and Waipori Rivers in preparation for the Otago Settlement.

In 1851 Drake was working in the Wellington Settlement, making a bridle track across the Rimutaka Ranges from Wellington to the Wairarapa. Shortly afterwards he was an unofficial member of Mr Donald McLean's party which went to Hawkes Bay to negotiate the purchase of large tracks of Maori Land for the Crown.

In January 1863 Drake was a member of the Canterbury Provincial Survey staff when it was decided to open up the West Coast. Drake was sent to survey and construct a bridle track down the Taramakau River to its mouth and thence to the Grey-Arnold River boundary of the Province. Drake's track was to be a continuation of that being constructed over Harper's Pass by a party under D.C. Howitt and when Howitt and two of his party were drowned in Lake Brunner on 27th June 1863 Drake was sent to complete the work commenced by Howitt.

Sir Arthur Dudley Dobson in his "Reminiscences" published in 1930, mentions that Drake was himself drowned in a stream between Collingwood and Takaka a few years later.

See "Contributions to the Early History of New Zealand" by T. M. Hocken, 1898 etc.

DRUMMOND John (1820 - 1900)

Born in Glasgow. After spending some years on the Australian goldfields he came over to New Zealand goldfields and in 1862 was a mining surveyor at Tuapeka. In 1870 he was employed by the General Government and re-surveyed the Gisborne-Ormond Road and surveyed the Gisborne to Wairoa road, via Te Reinga and the telegraph line route over the same country. He was the first engineer to the Poverty Bay Highways Board 1872-73 and from 1875-77. He then became the first engineer to the Borough of Gisborne on 10th July 1877 and retired on 31st July 1883. He died at Christchurch 26th November 1900.

DRUMMOND, Thomas McKay (1846-1934)

Son of Donald Drummond who settled at Evans Bay, Wellington in 1842.

Born in Wellington in 1846 he went with his parents to live at Kahurangi in the Wairarapa in 1860. He joined the Government service as a cadet with Mr R. M. Skeet and afterwards with Mr E. Anderson, District Surveyor. After qualifying he was associated with Alexander Dundas in the triangulation survey of the Wairarapa

(1868-70) when the region between the Tararua and Puketoï ranges was surveyed. In 1870 he accompanied Mr Dundas to the West Coast of the Wellington province and was engaged on the surveys of the Manawatu and Rangitikei Blocks which occupied a number of years. In the eighties he went into private practice in the Wairarapa where he died on 15th February 1934.

He was a foundation member of the New Zealand Institute of Surveyors.

Cyclopaedia of New Zealand Vol. p.887.

New Zealand Surveyor Vol. XV No 8, p.276. Page 277 has a photo of T. M. Drummond, A. Dundas, E.W. Butler, T. W. Downes, J. Kelleher and E.W. Foster. Dated May 1868. The surveyors in the group photo were at that time engaged on the Wairarapa triangulation survey.

DUFFEY, Thomas

He came to New Zealand in 1841 as an Assistant Surveyor on the staff of the New Zealand Company and was engaged on the first surveys of the Nelson Settlement. He was responsible for surveys in the Suburban North district and in the Takaka valley.

When his contract with the Company expired he settled in the Stoke district. No further records have been found.

See "Nelson. A History of Early Settlement" by Ruth M. Allan, published by A.H. & A. W. Reed, 1965.

DUNCAN George (1814 - 1888)

Born in Yorkshire, England.

In January 1873 he was appointed District Engineer of Roads under the Otago Provincial Council. In 1874 he laid out the first nine miles of the Palmerston-Waihemo railway. For a short period in 1879-80 he was employed as a surveyor in the Government Lands and Survey Department.

Some of the works for which he was responsible were the cable tramways at Dunedin and later at Melbourne, Australia.

He died in East Hawkesbury, Australia, 20th May 1888.

DUNDAS Alexander

His first recorded surveys were in Otago in 1861, as a member of the Provincial survey staff. In 1862 he laid out the town of Palmerston. In 1864 he moved to Wellington as an Assistant Surveyor on the Provincial staff, working in the Wairarapa district where he was responsible for much of the original triangulation survey. In 1870 he moved to the western side of the Province and for a number of years was engaged on the subdivision of the extensive Manawatu and Rangitikei blocks.

The following vignette from the "New Zealand Surveyor" recounts one of his experiences

"When the site of Palmerston North was but a bush clearing with half a dozen weatherboard huts, each with a pungent fire of dried cow dung at the back and front doors, to ward off the deadly ngaeroa (mosquito) a survey party, consisting of Alex. Dundas, Tom Drummond, Arthur Dermer and their chainman, Hori Ngapaka, were

under canvas near the present site of the Boys' High School at the edge of the forest which stretched ten miles west. The beach road to Wellington was interrupted by storms and all travel was stopped. The surveyors packed the tent and provisions on the tethered cow, which was also their portable dairy, and went to Awahuri through the track less bush for a week's sport, shooting pigeon and kaka, wild pigs or cattle. When their holiday ended, Hori strapped the traps on the patient pack-milker and the party struck out for home. After eight hours' weary tramp they found a spot on the Oroua River, a mile below the last night's camp, recognised by some stranded articles of torn clothing which had been thrown into the river. Next morning being sunny, aided by a compass, they started due east, and got through swamp and tangled wood till dark. Again they camped for the night, cold and hungry. Molly, the cow, being fed on succulent leaves, gave a half gallon of milk. At day dawn the hungry Maori packed up and roused the bosses. To their amazement he took the halter off the cow and Molly, adding her instinct to that of the Maori, up-tailed and made for the permanent camp at a gallop, followed by three swearing surveyors. They reached home in ten minutes!"

Alexander Dundas was a foundation member of the New Zealand Institute of Surveyors.

See "New Zealand Surveyor" Vol. XV No 8 p.277 for a photo of Dundas and his colleagues taken in May 1868.

DU MOULIN, Jean (John) Peter (1816 - 1901)

A young French surveyor, he arrived at the Bay of Islands about the time of the signing of the Treaty of Waitangi having been engaged by certain French land claimants to survey and delineate their claims. He arrived at the infant town of Auckland in the Westminster on 17th March 1840 and joined the survey staff of Felton Mathew, the Acting Surveyor General of whom Du Moulin became a protégé. He assisted Mathew in the first surveys at Auckland and there is evidence that when Mathew left New Zealand in 1847, Du Moulin was given charge of his field books and maps.

He enlisted in the 3rd Waikato Regiment in 1864 and served as a Captain in the Waikato campaign. He owned land on the southern slopes of Mount Eden, calling his Estate "Sunnyside' He subdivided this land into residential sections during the 1880's this being the first such subdivision in what subsequently became the Borough of Mount Eden.

DUVACHELLE, J A

A young French surveyor, he came to the Bay of Islands in 1840, about the time of the signing of the Treaty of Waitangi to survey the land claimed by E. Vafler and other French claimants, who were putative owners of land in the Bay of Islands and on Banks Peninsula. Eventually he settled on land which was granted to him at the northern end of Akaroa Harbour situated on the Bay which now bears his name. He acted as an agent for the French claimants before the Land Claims Commission.

EDGE CUMBE, Francis Henry (1848 - 1891)

Born at Chippenham, Wiltshire, 5th March 1848.

He joined the New Zealand Armed Constabulary on 21st September 1872 and served in the Bay of Plenty district. He received his discharge on transfer to the Public Works Department on 30th November 1873. At that time the Constabulary

were engaged on road construction. Edgcumbe was engaged on Government contracts and in 1877 became an authorised surveyor, working in the South Auckland district, which included much confiscated land. In common with other surveyors he had his share of difficulties with the Maoris. On 23rd October 1879, the New Zealand Herald reported that Edgcumbe's trig stations between Huntly and Rangiriri had been destroyed and he and his party ordered off the ground. At that time he was a Government staff surveyor stationed at Ngaruawahia.

He died at Auckland on 16th May 1891.

He was a foundation member of the New Zealand Institute of Surveyors,
EDGE CUMBE, Henry Francis (1876 - 1918)

A son of F. H. Edgcumbe, he was born at Ngaruawahia on 5th February 1876. He joined the Lands and Survey Department on 17th November 1893. His name appears on the first list of Licensed Surveyors published in the New Zealand Gazette, 10th January 1902. He was then practising at Te Awamutu, where his death occurred on 15th November 1918.

He was Land Transfer Draughtsman at Dunedin in 1915 when he enlisted in the New Zealand Expeditionary force and served overseas during World War I.

EDIE John (1856 - 1928)

Born at Newcastle, New South Wales, 14th December 1856 and arrived in New Zealand in 1860 with his parents. The family settled in what is now Edievale, Otago.

He entered the Government Service as a survey cadet in 1874 and part of his training was under Mr C. W. Adams. On completing his training he spent some years on survey work throughout Otago, including the difficult Catlins Bush district. From 1885 to 1888 he was Engineer to the Tuapeka County. He then rejoined the Survey Department, continuing until 1898 when he entered private practice. He again became County Engineer in 1903 and retired in 1925.

He had been elected to the House of Representatives for the Tuapeka seat in 1922 and for the Clutha seat in 1925. He was for some years on the Lawrence Borough Council and was also Mayor for a period. He had farming interests at Edievale, a district named after the family. He died on 8th June 1928.

He was a foundation member of the Institute of Surveyors. See "N. Z. Surveyor, Vol. XIII No. 9, September 1928.

ELLIOTT Samuel (1787 - 1865)

He arrived in Auckland with members of his family on 1st April 1843 aboard the Westminster, and commenced practice as a contract surveyor, evidently in partnership with a Mr Hughes. The partnership was dissolved in 1846, vide a notice in the news paper Zealandia. In 1847 he was employed on the temporary staff of the New Zealand Government's Survey Department and was retrenched in 1849. In 1855 he was employed by the Auckland Provincial Board of Works. Subsequently he practised privately and for a while was in partnership with a Mr De Coverly.

He died at Whau, Auckland on 15th March 1865. His death certificate gives his age as 81 years but the passenger list of the Westminster gives his age in 1842 as 55 years.

See also "History of Land Legislation and Settlement in New Zealand" by W.R. Jourdain, 1924 p.241.

FAIRBURN Edwin (1827 - 1911)

One of the earliest European children to be born in New Zealand, he was the third son of Mr. W. T. Fairburn who first visited New Zealand in 1819 and subsequently became a missionary of the Church Mission Society, under the Rev. Samuel Marsden. Edwin Fairburn was educated at the mission school at Waimate. He entered the Government Service in the Deeds Registry Office at Auckland but transferred to the Survey Department in 1847 on being appointed as a survey cadet by the Surveyor General, Mr. C. W. Ligar, the first such appointment to be made in New Zealand.

In 1849 he was again a clerk in the Deeds Registry where he remained until 1853 when he engaged in contract surveying until 1858. In September that year he entered the Survey Department in Sydney, New South Wales but resigned in 1860 and return to New Zealand to work in the Otago Survey Office. In 1861 he went to Europe, mainly studying in Germany. On returning to New Zealand he obtained a licence to survey under the Native Land Act, 1865 (vide New Zealand Gazette of the 17th June, 1867). He was as engaged for several months on Triangulation surveys in the Waikato District where he introduced the use of the long steel band in place of the Gunter's chain that previously had been in universal use. He was so impressed with the superiority of the continuous steel band which he was the first to use, that he strongly advised Mr. Heale and Mr. S. Percy Smith to use it for base-line measurements. In January, 1871, Messrs. Heale, S. Percy Smith and Horace Baker measured the Hawkes Bay Base (Maraekakaho) with a steel band with excellent results.

In 1868 Edwin Fairburn was appointed a Goldfields Surveyor (vide Auckland Pro Gazette 1868). In 1870 he joined the Auckland Provincial Survey Department and in 1877, when the Lands and Survey Department was established he became a District Surveyor. Shortly afterwards he was given charge of the road works north of Auckland when he was transferred to the Public Works Department. He introduced graded roads where before there had be nothing but "bullock dray tracks" which had been designed to obviate expensive side cuttings. He laid out the Great North Road from North Shore to Mongonui, a distance of more than 200 miles. He retired in 1892, and died on 9th December 1911. In Germany he had acquired the German language and he had also a good knowledge of Maori on which he published some papers in the Transactions of the N. Z. Institute.

While employed in the Land Registry at Sydney he wrote a pamphlet on "Land Registration" in which is to be seen the germs of part of the system that was afterwards elaborated by Colonel Torrens and is now embodied in our Land Transfer System. He also wrote 'The Ships of Tarshish' and several other imaginative works which contained some novel ideas for those times.

He was a foundation member of the New Zealand institute of Surveyors.

See the N. Z. Surveyor Vol. IX No. 12 p.278 (December, 1911). Proceedings of the N. Z. Society of Civil Engineers Vol. X (1923-4

FAIRBURN, Frederick Ernest

Born at Waimate Bay of Islands in 1861, he was a son of R. A. Fairburn. He was educated at Parnell Grammar School, Auckland and was trained as a surveyor by his father and by Mr. W. J. Wheeler. He qualified as a surveyor in 1880 he was licensed to survey under the Land Transfer Act. After twelve years in the surveying profession he left to set up in business in North Auckland.

Ref: "Cyclopaedia of New Zealand" Vol. 2 p.590.

FAIRBURN, Richard Alexander (1829 – 1896)

Born a Kerikeri in 1820, he was a son of the missionary, William Thomas Fairburn an elder brother or the well-known - surveyor, Edwin Fairburn (C. V.) Richard Fairburn was the first New Zealand born surveyor. He was practising in the Auckland c Province before 1857 when he was listed in the Provincial electoral roll as a surveyor.

He was licensed under the Native Land Act, 1862, vide He Zealand Gazette, 19th April, 1865. He was appointed District Surveyor for the Bay of Islands on 30th June, 1865. He received his license to survey under the Land Transfer Act in January, 1880, vide Chief Surveyor's File 42/12 Auckland

Lend Office,

FENTON, Harold Hyde (1828 – 1883)

Born in England, he came to New Zealand in 1853. In 1854 he was Acting Provincial Surveyor for Auckland Province when he gave evidence before the Commission of Inquiry into the organisation and working of the Auckland Provincial Waste Lands Department. Listed as a surveyor in the Auckland Provincial Electoral Roll in 1855. He was appointed Assistant Surveyor under the Southland Provincial Council on 21st December, 1861 and Provincial Engineer, Southland on 1st November, 1862, succeeding Theophilus Heale. Subsequently he went to Canterbury and engaged in private practice until in 1874 he became Engineer to the Kowhai Road Board. He was appointed a Gold- fields Surveyor and mining surveyor in 1868, vide Auckland Provincial Gazette. He became an Authorised Surveyor on 12th June, 1878. He died at Balcairn on 4th January, 1883.

FIELD, Henry Claylands (1825 - 1911)

Born at Holybourne, Hampshire, and educated at the Stockwell Grammar School, the City of London School, and at Kings College, London, and was articled to Sir John Rennie, the famous bridge Engineer. Having gained some experience on railway work in England he emigrated to New Zealand in 1851 and settled in Wanganui where from 1862 to 1870 he acted as Engineer and Clerk to the Town Board. He was Engineer or Consultant to numerous Road Boards and was responsible for the construction of many miles of roads, the best known being that from Wanganui to Karioi, which he explored in 1869, and which was named after him, "Fields Track". (On 17th July 1870, he had acrimonious correspondence with W. Buller, (later Sir W.) Resident Magistrate, who had been appointed to investigate costs etc. concerning this track. Field said he had spent seven weeks in exploration for which he did not charge. Buller replied that he had cut only 18½ miles of line in nine weeks. Wm. H. Hales (later Engineer in Chief of the Public Works Department) was told to report and made an inspection accompanied by Alfred Edgecumbe, Field's Assistant. Field said his estimate for 28 miles was £350, whereas 18 miles

had cost £220. These facts were quoted by Mr. Furkert, in his "Early New Zealand Engineers" to show the cost of work in those days).

He published a book on "The Ferns of New Zealand" and papers on other scientific subjects. He retired from active practice in 1884, and died at Aramoho on 28th February, 1911. Two of his sons, H. A. Field (President of the N. Z. Institute of Surveyors, 1898-99) and W. H. Field, represented the Otaki and Manawatu Electorates in Parliament.

FIELD, Henry August (1851 - 1899)

He was born at Wanganui, the son of H. C. Field the Engineer, and he entered the Government Service as a cadet in 1868 and qualified as a surveyor in 1872. He became an Authorised Surveyor in December, 1879.

Then, in cooperation with his cousin, D. H. Munro, he carried out a topographical and trigonometrical survey of the country in the Upper Wanganui and Taupo districts. This was immediately after the close of the Maori War, and they were the first Europeans to enter the district after the hostilities, and it was still in a troubled and disaffected state. He remained there for two years, his party of Maoris being his sole companions. The experience thus gained rendered him a valuable witness before the Main Trunk Railway Commission, and it was largely due to his evidence that the present route was adopted. He relinquished his engagement with the Government on account of ill health, but continued to practice privately, in conjunction with sheep farming at Waikanae.

From 1893 until he died he sat on Hutt County Council as representative of Whareora Riding. He was elected Member of Parliament for the Otaki Electorate in 1896 and held it until his death on December 10th, 1899.

His particular hobbies were the land and native questions, and he had some experience as a member of the Wellington Land Board.

He was a foundation member of the New Zealand Institute of Surveyors, and was President in 1898 and 1899.

See obituary notice, N. Z. Surveyor, December, 1899, Vol. 5 No. 8.

FINNERTY, Charles E Captain) (1841 - 1899)

Son of Colonel C. Finnerty, a veteran of the Crimean War and a member of a family possessing a distinguished military record, his ancestors holding commissions in an unbroken line from the reign of Charles II. He was born at Malta, 23rd August, 1841 Educated in France and at the Royal Military College, Sandhurst, he came out top of 200 students in 1857. He was commissioned Ensign in the 75th Regiment serving in India. Transferring as a Lieutenant to the 99th Regiment in November, 1862 he went to China where he served under General Gordon. One of his tasks during the campaign was a ride of 1,000 miles through unknown territory and he had a full share of fighting and hardships. On his health breaking down he sold his commission and came to New Zealand in 1866 to recuperate.

On recovery he joined the Colonial Forces and served during the Waikato Campaign in 1864 and subsequently joined the Armed Constabulary as Drill and Musketry Instructor until 1873. In 1874. he joined the Survey Department as an Assistant Surveyor in Taranaki, where he assisted in the surveying of the confiscated land. He retired from the Government service in 1884 and entered private practice.

He was Chairman of the Patea Harbour Board, 1886-1894 and was Mayor of Patea in 1890.

He died at Patea on 27th February, 1899.

He was a foundation member of the New Zealand Institute of Surveyors.

FITZGERALD Gerald (1857 – 19)

He was born in Christchurch 26th June, 1857. He was appointed a cadet in the Public Works Department Wellington, on 1st July, 1874 and later was stationed at New Plymouth. He was on the Wellington and Masterton railway construction then on the Waitara and Patea railway for two years. On 1st March, 1878 he went to Dunedin as Assistant Engineer on Otago Central Railway survey. On 1st July, 1878 he went for two months to the Forty Mile Bush and then to Nelson on the construction of the Nelson-Belgrove Railway. On 1st July, 1897 he was transferred to Blenheim to carry on the Blenheim-Awatere Railway and the Marlborough roads. On 1st January, 1889 he was transferred to the Survey Department and on 6th October, 1891 he went back to the Public Works Department at Westport, but almost immediately transferred to Auckland Office.

On 4th May, 1893 he went to Hunterville in charge of construction of the Main Trunk Railway. He left on 11th September, 1894 to enter private practice, in partnership with De J. Clere.

He was a foundation member of the New Zealand Institute of Surveyors.

FITZGERALD Michael

Trained as a surveyor and Civil Engineer in Great Britain and came to New Zealand in the 1840s. He was in charge of construction of the eastern outlet from Wellington at the same time that Captain A. Russell 58th Regiment was in charge of the north-western access. He reported on 17th December, 1848 that he expected to have the road made to Pakuratahi in about a year and on 10th October, 1849 the track over the Rimutakas was gazetted as available for cattle driving, and in 1850 tenders for the formation of a track over the saddle were called for. On 16th August, 1853 he was appointed Surveyor in charge of the Survey Dept. of Wellington and later, Chief Surveyor for Wellington and Hawkes Bay.

In 1862 he was a member of the Hawkes Bay Provincial Council. In 1865 he was Surveyor of Native Lands and laid out the towns of Te Mahia and Wairoa, in Hawkes Bay. In 1871 Fitzgerald and James Mitchell were surveying the railway from Marton to Wanganui.

He served during the East Coast campaign of the New Zealand wars, 1865, as Captain of the Napier Militia and received the New Zealand Medal.

Thomas Henry Fitzgerald (q. v.) was his brother.

FITZGERALD, Thomas Henry (1824 - 1888)

Born in Carrickmacross County Monaghan Ireland. He arrived in New Zealand in the George Fyfe, in 1842 as an Assistant Surveyor to the New Zealand Company and was one of the signatories of the Te Aro Deed (Wellington, 1844), having been appointed to the Government survey staff. As the first Government surveyor in the Wellington district he was responsible for surveying Native Reserves and for superintending the construction of roads between Wellington and the Wairarapa. In

1853 he was appointed to survey the Native lands purchased in Hawkes Bay. He was elected to represent Ahuriri (Napier) in the Wellington Provincials Council (1857-59) and took a leading part in the demand for separation from Wellington and the establishment of the Province of Hawkes Bay. He was elected the first Superintendent of the Hawke s Bay Province (1859-61). During 1860 he represented the County of Hawke in Parliament.

In 1862 he went to Australia and entered Government service in Queensland as a surveyor but resigned to start a sugar plantation. He was elected to the Queensland Parliament in 1867 and was Colonial Treasurer in the Lilley Government (1868-69). Subsequently he was a member for Bowen (1873) but resigned owing to insolvency in 1875. His sugar plantation proving unprofitable, he resumed survey practice and retired in 1885.

He died on 10th November, 1888.

See "Dictionary of New Zealand Biography".

Michael Fitzgerald (q. v.)was his brother.

FITZGIBBON, Graham Coates (1823 - 1887)

Born in Ireland 23rd January, 1823. Educated in London. Articled to Sir Charles Lanyon, M. I. C. E. and in 1843 was Assistant Engineer on various railways in Ireland. In 1852 was surveying the Illinois Central Railway, U.S.A. and for several years on the construction of railways in Canada and the

U.S.A. In 1858 he was engaged on the Ceylon Railway (Colombo to Kandy) survey and construction.

He came to New Zealand in 1860 for the Dun Mountain Copper Mining Company as chief assistant to W. T. Doyne. They surveyed and built the railway and Fitzgibbon then acted as manager when the line was completed. In 1861 he was engaged on river control works in Marlborough and subsequently he was employed mainly on engineering projects. He was licensed to undertake surveys under the Native Land Act, 1865.

He returned to England in 1868 and thereafter was engaged on archaeological and historical matters. He died in England, 4th April 1887

FLORANCE Thomas

It is probable that Thomas Florance was the first professional land surveyor to settle in New Zealand. He came with his wife to the Bay of Islands and settled at Whakapu in 1834 and his earliest known surveys in this country bear that date.

He later moved to Auckland and assisted in the first surveys of the town and suburbs of Auckland. He made a number of surveys for the purposes of the Land Claims Commission, mainly in the North Auckland and Coromandel Peninsulas.

He purchased land in the town of Auckland and also acquired land at Riverhead and in the Waikato, and engaged in farming.

Surveying in the North Auckland district from 1837 to 1854.

See "History of Land Legislation and Settlement in New Zealand by W.R. Jourdain, 1924 Page 241

See "Riverhead. The Kaipara Gateway", by Ian B. Madden, 1966. Page 42

FOOKS, Charles Edward (1829 – (1907)

Born in Weymouth, England, and trained as a civil engineer in London and articled to M. Cooper of Lincoln's Inn. He came to New Zealand in 1851 and was engaged in the Survey Office of the Canterbury Association during 1855-56 and practised as an architect.

About 1866 he was asked to survey the feasibility of irrigating the Canterbury plains and in 1869 he constructed twelve miles of water race at Westerfield that is still in use. He surveyed the road from Omihi to Cheviot for the Hon. William ("Ready Money") Robinson. In 1871 he reported on the irrigation between the Waimakariri and Rolleston. In 1873 he was Engineer to the Wakanui Road Board. In 1877 he became the first Borough Engineer of Ashburton, and also was practising as a Licensed Surveyor, Engineer and Architect in Canterbury. He surveyed the swamps of the famous Longbeach estate with a view to drainage.

He died at Ashburton on 17th November, 1907.

He was a foundation member of the Institute of Surveyors.

FOY, Thomas Maddick

In 1874 he was engaged in reconnaissance surveys for railway routes in the South Island and his work also included searching for road routes in the Nelson and Marlborough Provinces.

In 1879 he surveyed the country between Napier and Wallingford with the view to a possible railway route, and he later surveyed a route between Masterton and Woodville via Alfredton. He then was engaged in railway location surveys between Wanganui and Hawera until 1881.

He became an Authorised Surveyor on 10th October, 1878.

FRASER De Gennes (1852 - 1938)

Born in Karachi, In 8th August, 1852. Educated at Jersey and at Sydney College, Bath, England, he studied engineering under Colonel Thomas Fraser R. E. and at 18 passed his examinations as an Engineer.

He came to New Zealand in December, 1870 and in 1872 he joined the Lands and Survey Department as a cadet under George Watkyn Williams who was then District Surveyor at Patea, engaged in surveying confiscated Maori land. After qualifying as a surveyor one of his tasks in 1877 was to survey the Momahaki Block of confiscated land in the Waitotara District. Great objection to the survey was taken by the Maoris whose land had been confiscated. Survey pegs and flags were removed, bridges torn down and tracks destroyed, always by the women, while the men merely looked on. The trouble culminated in the murder of the camp cook who, it was believed, was mistaken for Fraser himself. A detachment of Armed Constabulary was later sent to the settlement and three Maoris were captured, one of whom was banged for the murder. Meanwhile the surveys had been suspended and after a delay of several months the surveyors returned in larger parties of over thirty men with instructions to resist any interference. However, the work proceeded without further interruption, and no force was necessary.

He also surveyed part of the Waimate Plains near Hawera and in partnership with Edward Tregear from 1882 to 1886 he assisted in the roading of Waverly, Waitotara and Mania districts.

He became the first Engineer to the Pahiatua County Council in 1889 and in 1900 was Borough Engineer at Woodville.

Later he held the office of Engineer successively to the Wairoa County, Cook County and Gisborne Borough.

He retired to Auckland in 1919 and died there on 4th June, 1938.

He was a foundation member of the New Zealand Institute of Surveyors.

See "N. Z. Surveyor" Vol. XVI No. 5 August, 1938. Also "Early New Zealand Engineers" by Furkert

FRASER, Sir MALCOLM K. C. M. G. (1834 – (1900)

Surveyor, Civil Engineer and administrator, he was born in Gloucestershire, England, son of William Fraser of Clifton.

He was a surveyor in Auckland Province - 1857-9 and District Surveyor in the Native Land Purchase Department – 1859-63. Later he joined the Canterbury Provincial survey staff as District Surveyor and in 1865 was working on the West Coast surveying the western end of the road from Christ-church over Arthur's Pass. He was appointed Chief Surveyor for Westland on 22nd March, 1868 when Westland County hived off from Canterbury. He was also appointed Commissioner of Crown Lands for Westland on 4th May, 1869. The following year, on the recommendation of the Governor of Western Australia (Sir Frederick Weld, a former Premier of New Zealand) he was appointed Surveyor General of Western Australia.

The following account of his career in Western Australia is a slightly abridged extract from 'Australian Dictionary of Biography, v. 4 1851 - 1890 pp. 215-6. (Fraser's predecessor as Surveyor General was J. S. Roe).

"Fraser soon reorganised his department, reduced its permanent staff to the few officers competent in geodesical and trigonometrical surveying and Insisted that the routine field work of pegging and traversing be done by private surveyors at piece-work rates. The permanent staff became inspectors and also conducted a large scale trigonometrical survey which when completed in the late 1880s, linked all the coastal regions of Western Australia from the Kimberleys in the north to Esperance district in the south. Fraser also raised the entrance standards to the surveying profession and, with the help of his deputy, John Forrest, made the Crown Lands Office the most efficient, economical, corruption-free and revenue-producing of the Government departments. Fraser encouraged inland exploration and also advised the Government on the engineering problems in proposals for building Government and private railways.

"In 1870 Fraser became a member of the Executive and Legislative Councils and in 1872 was given the additional post of Commissioner of Crown Lands. As Colonial Secretary in 1883-90 he was senior member and Governor's spokesman in the Legislative Council.

"During his twenty years in the legislature Fraser was associated with several major revisions of Crown Land Regulations and active in the constitutional discussions which preceded the establishment of Parliamentary Government in 1890. He represented Western Australia at several

intercolonial conferences, and was made C. M. G. in 1881 and K. C. M. G. in 1887. An able administrator, especially during his early years in Western Australia, he

merits notice as one of the few who were able to work in harmony with Sir Napier Broome, an achievement which his contemporaries in the colony found difficult to understand and his superiors in the Colonial Office quite amazing.

In 1890 Fraser retired to London on a pension. On the recommendation of the first Premier (of Western Australia) Sir John Forrest, he was appointed Western Australia's first agent-general in England and held the post until 1898. Aged 66, he died at Clifton on 17th August, 1900." (Governor Broome was the erstwhile settler in Canterbury whose wife under her pen-name of Lady Barker wrote Station Life in New Zealand" etc.)

See also - History of Land Legislation and Settlement in New Zealand by W.R. Jourdain 1924 p.241 etc.

FRISSELL Edward

Licensed under the Native Land Act 1862 New Zealand and Gazette, 12th October, 1865. He had been practising for several years in the Auckland District when he became an Authorised Surveyor in July, 1877. He was surveying in the vicinity of Pirongia in partnership with Richard Todd in November, 1870, and fortunately for Frissell they had established separate camps several miles apart. On 28th November while Todd and his chainman, John Peacock, and two Maori assistants were at breakfast they were attacked by a party of Kingite Maoris and Todd was killed. Peacock and the two Maori assistants, one of whom was wounded, managed to escape and warn Frissell.

FULLOON James (1843 – 1865)

Son of a trader and his Maori wife (an East Coast chieftainess) Fulloon was educated at the Mission School at Rotorua by the Rev T. Chapman, and proved to be an excellent scholar.

When the survey ship H. M. S. Pandora was surveying the coast of New Zealand Fulloon was attached to Captains Drury's staff as an interpreter and a survey trainee. Later he was appointed to the staff of the Native Land Purchase Department under Donald McLean whom he accompanied on numerous expeditions. On the outbreak of the Waikato War he was attached to General Sir Duncan Cameron's staff as interpreter and in June, 1863 made some useful intelligence reports to the Government concerning the attitude of the local tribes towards war.

After the murder of the Rev. Carl Volkner by the Hau Haus at Opotiki in March 1865, Fulloon was sent as interpreter on H. M. S. Eclipse (Captain Fremantle) which visited Opotiki and the surrounding district with the intention of apprehending the murderers. Early in the following August, Fulloon went to Whakatane in the cutter Kate to report on the attitude of the local Maoris and to endeavour to raise a contingent of loyal natives. Hau Haus boarded the Kate at night while sheltering in Whakatane harbour and Fulloon and two of his com while asleep in their cabins were shot and killed.

FULTON James Edward (1854 – (1928)

Born in Dunedin 11th December, 1854, he was a son of the Hon. James Fulton, M. L. C. who, before his elevation to the Legislative Council, was for many years the representative of the Taieri electorate in the House of Representatives.

In 1874 J. E. Fulton entered the Public Works Department as a cadet under the Engineer-in-Chief, John Carruthers, and in 1878 was appointed Assistant Engineer and also became an authorised surveyor. In 1880 he entered on private practice in the Auckland Province and two years later he was Resident Engineer for the Wellington-Manawatu Railway (Palmerston-Waikanae Section) under H. P. Higginson.

In 1887 he reported on the Palmerston North water supply and sewerage. By 1889 he was manager and locomotive superintendent of the Wellington-Manawatu Railway from which he resigned in 1897 and entered private practice. He designed and built the Kelburn Cable Tramway, (on which he was assisted by his cousin, James Edward Thomson, M. N. Z. I. S.) the original Kelburn Viaduct across Tinakori Gulley and many bridges, including the Ballance Bridge over the Manawatu, and the Otaki, Ohau, Rangitikei and Lower Shotover bridges.

He surveyed and built the Taupo Timber Company's railway of 50 miles, (Putaruru to Mokai) and also the Tongariro Timber Company's railway. In 1906 he made a trip to America, England and Europe to study advances in railway engineering. He became an Authorised Surveyor in May, 1878.

He became an Associate Member of the Institute of Civil Engineers in 1881 and a Member in 1888, and was a Member of the Institute of Mechanical Engineers, a Member of the Australian Society of Civil Engineers and of the New Zealand Society of Civil Engineers (now the New Zealand Institution of Engineers) and of the New Zealand Institute of Surveyors.

He founded the Fulton Bequest of the New Zealand Institution of Engineers and also the Fulton Bequest of the Institute of Surveyors.

He was a foundation member of the New Zealand Institute of Surveyors and was President in 1909 - 1910.

He died at Wellington on 4th December, 1928.

See "N. Z. Surveyor" Vol. XIV No. 1

FULTON, Arthur Robert William (1853 – (1888)

Born 3rd October, 1853 was a son of J. Fulton M. H. R. for Taieri, and a brother of James Edward Fulton a former President of the New Zealand Institute of Surveyors.

He entered the Public Works Department as an engineering cadet under John Carruthers M. I. C. E., 1st September, 1873, qualifying four years later as Assistant Engineer. He became an Authorised Surveyor in 1877. He was elected A. M. I. C. E. in February 1879, having left the Government Service the previous year to enter private practice under H. P. Higginson, M. I. C. E. in which employ he remained until 1881, when he entered the service of the New South Wales Government and was engaged on the survey of the Goulburn-Cooma Railway. When Higginson was appointed Chief Engineer for the construction of the Wellington-Manawatu Railway he sent for Fulton who returned to New Zealand as Resident Engineer for the Southern Section of that Railway, and subsequently traffic manager as well.

He was elected M. I. C. E. in July, 1888, dying the same year.

He was a foundation member of the New Zealand Institute of Surveyors and a member of the first Council of the Institute.

See Vol. No. 1 of the New Zealand Surveyor for an obituary notice.

GARRETT Roland (1837 – (1919)

A well known civil engineer and surveyor, he practised in Wanganui for many years. In his younger days he served as a Lieutenant in the Kai Iwi Cavalry during the Maori Wars, and was a holder of the New Zealand War Medal.

He was Licensed under the Land Transfer Act in 1878.

He was one of the founders of the New Zealand Institute of Surveyors and served as secretary of the Wanganui Branch until shortly before his death.

See New Zealand Surveyor. Vol. XI No. 7 and Vol. XVI No. 6.

GARVIE, Alexander (1820 - 1859)

He arrived at Port Chalmers in the "BLUNDELL" on 1st September, 1848 among the first of the Otago settlers. In the new settlement he was at first engaged as a builder and carpenter and later turned to surveying and was an Assistant Surveyor under Peter Proudfoot, q.v.* He later was Assistant Surveyor under J. T. Thomson and carried out vast topographical surveys in central Otago. He commenced the Provincial Triangulation Survey in 1857 when he laid down the base line on the Taieri Plains. In 1859 he laid out the town of Blue Skin, later renamed Waitati. His death occurred soon afterwards.

* He was trained as a surveyor by C. H. Kettle.

Ref: Invercargill Pioneers. F. G. Hall-Jones 1946. (Otago Daily Times and Witness, Newspapers Coy. Ltd.

See "History of Land Legalisation and Settlement in New Zealand" W. R. Jourdain, 1925 p.242.

"Mr Surveyor Thomson" John Hall Jones 1971.

GEISOW, Frederick Henry (1831 – (1907)

Born at Frankfort on Main - son of Dr. F L. Geisow of Frankfort University. Had a military education, was a lieutenant in the Austrian Army, in the Artillery and later in the Engineering and Fortifications Branch. He went to Australia in 1858 and came to New Zealand in 1859. In 1860 in Southland he entered into partnership with Gerhard Mueller (later Chief Surveyor and Commissioner of Crown lands at Auckland) for five years, when Mueller went to the West Coast. (See My Dear Bannie" by M. V. Mueller).

In 1866 Geisow was appointed District Surveyor for Southland Provincial Government and in July, 1872, after Southland was reunited with Otago, he was District Surveyor on the Otago staff. In 1874 he was engaged on railway construction in the Westport district and in 1875 was transferred as District Engineer on railway construction at Waipukurau. He became a Registered Surveyor in 1877. In 1877 he returned to Invercargill as Engineer to the Southland County. In 1881 he went to Australia where he remained until 1896 when he returned to New Zealand and was engaged at the Moanataieri Mine at Thames. In May, 1898 he was back in the Public Works Department in charge of the Helensville Northwards Railway

construction, where he remained until his retirement on 31st July, 1907. He then went back to Australia and died at Sydney on 20th November, 1907.

GILLIES Robert

Authorised Surveyor in 1877. Then residing in Otago. Surveying in Otago in 1857.

A son of John Gillies (1802 - 71) who arrived with his family in Dunedin in 1851, Robert Gillies first recorded survey is a triangulation in the vicinity of Invercargill in 1857. He carried out numerous surveys in Otago and Southland. In 1857 he reported he had discovered alluvial gold in a creek between Waikiwi and Makariwa. Earlier that year his brother, Thomas B. Gillies, had discovered gold in the Mataura river.

See also "The Story of Early Dunedin" by A.H. Reed, 1956, pp. 226 and 259.

GOODALL John (1839 – (1905)

He was born at Tavoy, India. Educated in England and from 1858 served five years pupilage under William Robertson C. E. of Glasgow and Professor W. J. Macquorn Rankine. Coming to New Zealand in 1863 he was appointed Assistant Engineer on the Auckland-Drury Railway. As a private in the 3rd Waikato Regiment he took part in the Waikato campaign and was a recipient of the New Zealand War Medal. From 1864 to 1866 he was surveying land for military settlers in the Waikato. Between 1867 and 1874 he carried on a private practice as Civil and Mining Engineer on the Thames goldfields. During 1874-76 he was Resident Engineer for the Auckland Improvement Commission and in 1876-77 he prepared plans and superintended the construction of the Auckland Waterworks under William Errington. Between 1877 and 1883 he was Harbour Engineer at Timaru. He then was appointed Engineer to the Napier Harbour Board. About 1891 he went into private practice in Auckland until 1894 when he went to Australia. He returned to Auckland in 1898 and practised until 1904.

He helped to form the Auckland Provincial Surveyor's Association in 1865. In 1883 he was elected A. M. I. C. E. In 1865 he was licensed to survey under the Native Land Act, 1865 and he was also a Licensed Surveyor under the Institute of Surveyors and Board of Examiners Act, 1900. Appointed a Goldfields Surveyor, vide Auckland Provincial Gazette, 1868.

GOLD-SMITH, Eric Charles (1848 – (1912)

Born at Camberwell, Surrey he was the son of Captain Henry Gold-Smith who came to New Zealand by the ship Star of India in 1862, in command of No. 5 Company of the 1st Waikato Regiment. E. C. Gold-Smith was educated at Matthews Denmark Hill Grammar School, Camberwell, and came to New Zealand in the barque Bosphorus in 1864 and in 1867 became a survey cadet under Mr. John Lowe in the Waikato district. He enlisted in the Volunteer Engineers Corps under Captain H. L. Skeet and saw service in the Bay of Plenty campaign. He later served as a sergeant in Major Fraser's expedition into the upper Waimana district in pursuit of the rebels led by Te Kooti. He resumed surveying in 1870 on the staff of the General Government under Captain Theophilus Heale.

In January, 1897, he became Commissioner of Crown Lands and Chief Surveyor of Hawkes Bay. In 1906 he moved to Canterbury as Commissioner and

Chief Surveyor and in July, 1909 was appointed to the Auckland district as head of the Department there. He retired there at the end of 1911, and his death occurred on 13th March, 1912.

See New Zealand Surveyor, Vol. IX No. 13.

GOLLAN Donald (1811 - 1887)

Born at Colloden, Scotland, and educated at Inverness and Edinburgh Academy, he was trained as a civil engineer and surveyor. He came to New Zealand in 1841 as a member of the New Zealand Company's survey staff.

Evidently most of his work for the Company was in connection with road location and construction. In 1849 he was a member of Captain Thomas's survey staff laying out the Canterbury settlement. Gollan planned and built the first pier at Lyttelton harbour and in association with J. H. Cridland, laid out and commenced the construction of the Lyttelton-Sumner road.

Towards the end of 1851 Gollan went to Hawkes Bay where he became the proprietor of the Mangatarata sheep station. He took a leading part in the separation movement that led to the founding of the Hawkes Bay Province and later became a member of the Provincial Council.

In 1853 he was a member of the first Wellington Provincial Council, representing the Hawkes Bay and Wairarapa districts, and from 1857 to 1859 the Ahuriri district. In 1861 he was elected to represent the Waimarama district on the Hawkes Bay Provincial Council.

He was a founder of the Agricultural and Pastoral Association.

In 1864 during the Maori troubles, he was Captain in the Napier Militia.

He died on 14th October, 1887.

GORDON, Henry Andrew (1831 - 1917) F. G. S.

He was born in Aberdeenshire, Scotland and educated at King's College, Aberdeen and trained as a mining engineer.

In 1851 he went to India where he practiced his profession. Three years later he went to Victoria, Australia and subsequently, following the "gold rush" to Otago, he arrived at Port Chalmers in 1861. He was a mine manager for several companies before being appointed Assistant Engineer in the Public Works Department on the West Coast on 4th May, 1874. He surveyed the route for the railway from Stillwater to Nelson. Assisted by G. T. Murray he laid out the Jackson's Bay-Hollyford Road and the Goulands Downs road (Collingwood to Karamea) and also the Mahakipawa and other Marlborough Sounds roads.

In 1880 he was Engineer to the Greymouth Harbour Board and in 1884 he became Inspecting Engineer of Lines. In 1888 he was elected A. M. I. C. E. and in the same year published "Gordon's Mining and Engineering and Miner's Guide" in the preparation of which, particularly the drawings, he was assisted by G. T. Murray.

In 1903 he became a member of the Senate of the University of New Zealand as one of the Government representatives. He was also a Fellow of the Geological Society.

In his latter years he was in private practice in Auckland where he died in April, 1917.

He was a foundation member of the New Zealand Institute of Surveyors and was the third President of the Institute, holding office in 1893-94

See "New Zealand Surveyor" Vol. X No. 1 March-June, 1917. See also "Early New Zealand Engineers by F. W. Furkert.

Cyclopaedia of New Zealand, Vol. 2 p.467 has photograph.

GOULTER Cyrus (1825 – (1891)

His birth place was Bath, England.

He arrived in Nelson in the ill-fated Fifehire, in 1842. In partnership with Joseph Ward he carried out a number of contract surveys for the New Zealand Company, including the laying out of the township of Waitohi (Picton) in 1850.

Subsequently he purchased and farmed the Hawkesbury sheep station of 9,000 acres. He was elected to the Marlborough Provincial Council, on which he served from 1860 to the dissolution of provincial government in 1876. In 1873 he became Commissioner of Crown Lands for Marlborough, a position he held until his retirement in 1879.

He was Speaker of the Provincial Council, 1860-62 and again from 1865 until the dissolution in 1875.

He died on 17th February, 1891

GRAHAM, William Australia (1841 – (1916)

Born at Auckland, he was a son of George Graham, M. H. R who represented Newton (Auckland) electorate in Parliament and was formerly an officer of the Royal Engineers who came to New Zealand as a member of the staff of Lieutenant Governor Hobson in 1840. William Graham commenced his education at Auckland and was sent to England where he attended Clewer House School, Windsor, and Hele's Grammar School, Exeter. He returned to New Zealand in 1854 and entered the surveying profession.

He became a competent Maori linguist and during the Waikato campaign was interpreter to General Carey. At the conclusion of the campaign he was engaged in surveying confiscated land and laid out Hamilton East for the settlement of the officers and men of the 4th Waikato Regiment. It was at W. Grahams survey camp at Tamahere on 27th May, 1865, that General Carey and Wiremu Tamihana, the Maori leader, drew up and signed the peace terms that ended the Waikato campaign. He was licensed to survey under the Native Land Act, 1862, vide New Zealand Gazette of 19th April, 1865. In 1866 he was one of the surveyors engaged in surveying confiscated land to the south of Tauranga. The survey parties, twelve in all, were driven out by the former Maori owners and in the case of Graham and his partner, William Gundry, their survey instruments and equipment were taken by the Maoris and not recovered until several months later.

He was appointed a Goldfields Surveyor, vide Auckland Provincial Gazette, 1868.

At the conclusion of the East Coast campaign in 1867 he was surveying confiscated land at Poverty Bay and acting as intern between the Maoris and the Government. Some years later King Mahuta presented Graham with a white mere in recognition of his services as a mediator between Maoris and Europeans in the

Waikato. Later he settled at Hamilton and with his brother, Mr. S.S. Graham, farmed a property at Tamahere. He took a leading part in local affairs and in 1873 was elected to represent the Waikato on the Auckland Provincial Council. From 1884 to 1887 he was Mayor of Hamilton and in 1888 he became first Chairman of the Waikato Hospital Board.

One of his sons, Kenneth Montrose Graham, also entered the surveying profession, retiring in 1946 from the office of Commissioner of Crown Lands for the Auckland district.

W. A. Graham died on 9th May, 1916.

See Dictionary of New Zealand Biography.

See "Armed Settlers" by H. C. Norris, 1963 edition, p 70 for photograph.

GRANT, Thomas Muir (- 1907)

He joined the Lands and Survey Department in 1877, and qualified as a surveyor. For some years he was one of the best qualified draughtsmen employed at the Head Office of the Department at Wellington. He was transferred to the Westland District in March 1902 as Chief Draughtsman, and in July 1906 he was promoted to be Chief Draughtsman and Chief Surveyor at Nelson. His death resulted from an accident incurred while crossing a rough river bed near Murchison. He died there on 7 December 1907. When the New Zealand Survey Board was established in 1901, T. M. Grant was a member and first Secretary.

See New Zealand Surveyor, Vol. VIII No. 8 p.373. _____

GREVILLE, Reginald Palmer (1862 – (1923) F. R. G. S.

He was born in Invercargill and was educated at Scot's School, Hokitika. In 1878 he went to Wellington where he had the distinction of securing top in the Junior National Scholarship.

In 1891 he gained his certificate as an Authorised Surveyor. Appointed Assistant Surveyor in the Lands and Survey Department New Zealand Gazette 1st August 1882 having joined the Department on 1st May, 1878. He also studied for the law examinations and qualified as a Solicitor.

He was appointed as assistant Surveyor and stationed at Pahiatua, and he was responsible for much of the survey of the Forty Mile Bush district. From 1906 to 1910 he served on the staff of the Geological Survey of New Zealand. See "New Zealand Geological Survey". 1865 - 1965" by Peggy Burton.

In 1914 he was stationed at Hamilton and in that year acted as chairman of the Kauri Gum Commission and afterwards initiated the Kauri Gum Department, which was formed as a consequence of the report of that Commission.

In 1919 he was appointed Commissioner of Crown Lands and Chief Surveyor of the North Auckland Land District when the Auckland Land District was partitioned into two districts. His duties included that of Kauri Gum Commissioner, and he was sent to America to investigate the Kauri gum market.

He died on 6th September, 1923.

He was a Fellow of the Royal Geographic Society and was a foundation member of the New Zealand institute of Surveyors.

See the New Zealand Surveyor' Vol. XII No. 5 March, 1924.

GULLY, John (1819 - 1888)

Born in Bath, England. His early training was in the draughting department of a foundry. Later he became a clerk in a bank. He emigrated to New Zealand in 1852 and arrived at New Plymouth in the barque "JOHN PHILLIPS".

He began cultivating a bush farm at Omata and later took a clerking position at New Plymouth. When the Taranaki War broke out in 1860 he took part as a member of the Militia but was invalided out and went with other refugees to Nelson. There for a while he was drawing master at Nelson College. He then received an appointment with the Provincial Survey Department as a draughtsman. His fellow artist, J.C. Richmond was in charge of the Department as Commissioner of Crown Lands. Gully also engaged in surveying for the Department and on one occasion he was involved in a boating accident in which some lives were lost. Gully was a member of the official party visiting the West Nelson Goldfields in January, 1865, in the steamer Wallaby. On the 28th January the vessel was off the mouth of the Puller River, but it was not possible for her to cross the bar. A party set out in the ship's boat to cross the bar, but the boat was swamped with the loss of four lives, including the Provincial Superintendent, J.P. Robinson. Gully and a fellow surveyor, James Burnett, and the Superintendent's son were the survivors.

Gully retired in 1878 and devoted his time to painting and music. He is best known as an artist. Among his works was a folio produced in 1877 in collaboration with Sir Julius von Haast, comprising a number of views of the Southern Alps. He exhibited in the Royal Academy in 1871.

See also "Two Hundred Years of New Zealand Painting" by Gil Docking, 1971 published by A.H. and A. Reed.

GUNDRY, William James

As a young surveyor of part Maori parentage he took part in the Waikato campaign in 1863-64 as guide and interpreter attached to the Imperial Forces. At the attack on Rangiriri in November, 1863, he was sent forward to arrange with the insurgent chiefs the unconditional surrender. In March the following year he and another young surveyor, G. T. Wilkinson, were reconnoitring near Kihikihi when they observed with a theodolite and reported the activities of a number of Maoris preparing the defences of the pa at Orakau where the last battle of the campaign was fought. (Vide "The New Zealand Wars" James Cowan 1955 edition p.377 etc.)

He also took part in the Bay Plenty campaign and subsequently was engaged in surveying the confiscated land. Towards the end of 1866 twelve survey parties were engaged in subdividing land in the rear of Te Puna. They were driven off the ground by strong parties of armed Hau Haus and the theodolites of Messrs. Gundry and W. A. Graham were impounded. It was not until the ensuing bush campaign was almost concluded that the theodolites were recovered. Early in 1867 Gundry was Gazetted Lieutenant in the Engineer Volunteers commanded by Captain H. L. Skeet, and took part in the rigorous bush fighting. Later he was promoted Captain and placed in charge of a contingent of loyal Maoris and took part in the campaign in Poverty Bay following the massacre which occurred there in November, 1868. He and his Arawa tribesmen and a contingent of Ngati-Porou under Captain T. W. Porter on the 1st January, 1869 comprised the storming party which gained the outer works of the strongly built Ngatapa Pa, which was captured three days later.

Gundry took part in the unsuccessful pursuit of Te Kooti and his adherents through the wild Urewera country and later he transferred as a Sub-inspector in the Armed Constabulary when that Corps was engaged in road building as well as guarding the frontiers. He resigned in January, 1875, to take an appointment as Interpreter under the Native Land Act, 1873. He was then residing at Patea. (New Zealand Gazette, 1875 p.85).

GUNDRY, William Richardson

Arrived in Hokianga in 1840 and was engaged in surveying.

He was a surveyor working in Auckland in 1843 and is mentioned as a member of the Agricultural and Horticultural Society founded at Auckland on 8th May, 1843. Several other surveyors are mentioned as officials or members of the Society.

In 1865 he was gazetted as a Licensed Surveyor under the Native Land Act and as a contract surveyor was one of the surveyors concerned in the subdivision of the Pukekohe Block. He laid out the township at Pukekohe in 1865.

See "Gleanings from Early New Zealand History" by J. P. Kalauger, 1950 p.49

GWYNNETH John

As an Auckland Provincial surveyor Gwynneth laid out the township of Opotiki in 1860. When hostilities broke out in 1863 he became a Captain in the Bay of Plenty Volunteers and took part in the campaign and was a recipient of the New Zealand War Medal. He was then engaged in surveying the confiscated land in the Bay of Plenty. He became an Authorised Surveyor in May, 1878. Licensed under the Native Land Act, 1862, New Zealand Gazette, 11th May, 1865. Appointed Goldfields Surveyor, Auckland Provincial Gazette, 1868. He was elected the first Mayor of the Borough of Cambridge in 1886.

Hall, William Jones (1854 – (1907)

Born in South Australia, he came to New Zealand with his parents in 1864. He was educated at Otago Boys' High School and subsequently served as a cadet under Mr. J. A. Connell.

On completing his cadetship he went to the United States of America and worked for three years on the construction of the Southern Pacific Railway. He returned to Dunedin in 1876 and for the next two years was on the staff of the Lands and Survey Department in Southland. He received his Land Transfer Licence at Invercargill in 1878 and then engaged in private practice in Canterbury. In 1885 he went to Melbourne where he carried out contracts in connection with the city's cable tramways. After returning to New Zealand in 1904 he was resident engineer in connection with waterworks at Masterton and at Hawera. Later he was consultant engineer to the Dunedin City Council and Drainage Board. At the time of his death he was surveyor to the Roslyn County.

See "The New Zealand Surveyor" Vol. VIII No. 8. Cyclopaedia of New Zealand Vol. 5 page 282 for biographical information and photo.

HALLETT, Walter

Licensed under the Native Land Act 1865. Licensed in May 1869. Appointed Surveyor in Lands and Survey Department, Napier, 24th October, 1878 (New Zealand Gazette, 1878 p.196)

He was a foundation member of the New Zealand Institute of Surveyors.

He had been in private practice in Hawkes Bay before joining the Department. In June, 1869 he and his brother, Thomas Hallett, had been assisting Mr. H. W. Mitchell with a survey near Lake Taupo and the three of them were returning to Napier when they turned aside at Pepepe on the 8th June to visit the military encampment and discovered the massacre that had occurred there on the 6th and were able to warn the military authorities. (See "(The New Zealand Wars" by J. Cowan, 1956 edition, Vol. II p.367

HALLIDAY, John (1854 - 1912)

He was born in Belfast, Ireland and obtained his training as an engineer under Messrs. Lawson and Sons of Leeds. He came to New Zealand in 1872 as an engineer to Brogden Brothers to assist in carrying out the railway construction contracts undertaken by them. He was in charge of works including tunnelling, near Dunedin. When Brogden Brothers left New Zealand he joined Robert Hay on bridge building and other extensive engineering works. He was authorised as a surveyor on 4th July, 1881. He reported on the proposed water supply for Invercargill and for a period from 8th February, 1886 was Borough Engineer there.

He was elected A. M. I. C. E. in 1886 and moved to Australia in April, 1888 where, on 29th May, 1889, he was appointed Civil Engineer superintending the construction of Victoria Dock for the Melbourne Harbour Trust. He became Assistant Engineer in 1892 and Engineer in 1894, which position he held until his death on 16th July, 1912. He was highly esteemed by those who worked with him and is commemorated by a granite memorial fountain which they erected at the Port.

He became M. I. C. E. on 6th February, 1906.

HAMILTON, William John Warburton (1825 - 1883)

Born in Kent, he was educated at Harrow and at schools in Paris and Brussels. At the age of eighteen he sailed for Sydney in the Bangalore. Captain Fitzroy, proceeding to New Zealand to take office as Governor, was a fellow passenger and Hamilton became his private secretary. During the war in the Bay of Islands, in 1845 as a Lieutenant in the Auckland Militia and Aide de Camp to the Governor, he saw something of the fighting. He returned to England in 1846 but came back to New Zealand in 1848 to become survey officer on H.M.S. Acheron, under an arrangement between the Royal Navy and the New Zealand Company. His task was to explore and map as much as possible of the Interior of the country while the hydrographers were charting the shoreline. Hamilton made some original explorations in Otago and Canterbury. Governor Grey appointed him Resident Magistrate at Wanganui in 1850 and in 1853 he was transferred to Lyttelton as Collector of Customs.

In the first elections for the Canterbury Provincial Council he was elected to represent Lyttelton, and held the Office until 1857 when he became Provincial Auditor and Treasurer for the General Government.

In 1856 he was appointed Resident Magistrate in Canterbury and dealt with difficult Maori land questions which he suitably cleared up.

He held a number of public offices and directorships. He was a Governor of Christs College and a member of the Board of Governors of Canterbury (University) College from 1875 to 1883. He was Deputy Commissioner of Crown Lands for Canterbury in 1875. (N. Z. Gazette. "In addition to being a sound geologist, an explorer, the founder of a large family, a bank manager, a news paper proprietor, a magistrate, a politician and a successful negotiator with Maori owners, Hamilton has been described as "the financial wizard of early Canterbury") +

He died on 6th December, 1883.

+ "Squatter and Settler in the Waipara County" by Douglas Creswell, 1952 page 44 (One of his grandsons was Archibald Hamilton, a notable New Zealand trained civil engineer, and author of "Road Through Kurdistan", and another (a brother of the foregoing) was Herbert Hamilton, a member of the New Zealand Institute of Surveyors).

HAMMOND Horace (1862 --1923)

Born in London and came to New Zealand with his parents in 1871. He was educated in Dargaville and received his professional training under his father, W. P. Hammond, (later W. P. Hammond and Sons, Engineers, Architects and Surveyors) at Auckland

In 1889 he was appointed Engineer to the Hobson County, a position he held until 1898 when he resigned to enter private practice with the firm, Hammond, Spanhake and Hammond.

He was a member of the Institute of Municipal and County Engineers, and a Fellow of the New Zealand Institute of Architects, and was a foundation member of the New Zealand Institute of Surveyors.

He died at Dargaville on 9th August, 1923.

HAMMOND, William Francis

Trained as a surveyor, architect and engineer in England, he came to New Zealand in 1871 and commenced practice at Auckland. Later his sons Frank and Horace joined him in the firm of W. F. Hammond and Sons, practising at Auckland. He was a foundation member of the New Zealand Institute of Surveyors. Granted licence under Land Transfer Act in January, 1880.

HAMMOND, Frank (1858 -)

Born in England he came to New Zealand with his parents in 1871 . At sixteen years of age he commenced his training as a surveyor under his father, W.F. Hammond. He also had some experience of surveying work in New South Wales and Victoria before joining his father as a partner at Auckland in 1882. He obtained his Land Transfer Licence in June, 1883. He was a foundation member of the New Zealand Institute of Surveyors.

HANDYSIDE Henry (1831 - 1877)

He was a member of the Marlborough Provincial survey staff when the Province was founded in 1859. That year he was working in the Sounds district and at Picton and he laid out the township of Tuamarina. Evidently he assisted in the exploration for passes over the ranges to the newly opened goldfields in Westland in 1861, vide report by Christopher Maling in the Nelson Examiner of 6th March, 1861

Evidently Handyside left the survey staff in 1863 and as a contractor built the first bridge to span the Waiau River. This bridge was completed in 1864 The following year he was Nelson Provincial Engineer when the road through the Wairau gorge was under construction.

He returned to England about 1876 and took chambers in Wimpole Street in London and commenced practice as a Civil Engineer.

He died in London in 1877 aged 46

Refs: History of Land Legislation and Settlement by J. R. Jourdain, 1924. p.241

Footprints by J. N. W. Newport, 1962 p.91

The Amuri. A County History by G. W. J. Gardner 1956 p.198 and p.38, footnote No. 37.

The West Coast Gold Rushes by P. R. May 2nd ed. 1967 p.58.

Hanmer George (1859 - 1934)

He was born in Sydney when his parents were on their way from Canada to settle in New Zealand. After a few years his parents returned to England temporarily and he began his education in a private school in North Wales. He finished his schooling at Christ's College on returning to New Zealand and then entered the Survey Department at Christchurch where he was appointed survey cadet under Mr. J. S. Welch. Appointed survey cadet, vide New Zealand Gazette, 8th August, 1877. Became an authorised Surveyor in July, 1882.

On qualifying as a surveyor he left the Department and entered into private practice as a partner of Mr. Frank Harman Davie. In 1891 the partnership was dissolved and he went into partnership with Mr. Charles Hastings Bridge. In 1905 Mr. Bridge withdrew and Mr. Hanmer took into partnership Mr. Leonard Webb and later Mr. E. C. Barker. Mr. Hanmer retired from practice in 1931.

He died at Christchurch on 15th June, 1934.

He was a foundation member of the New Zealand Institute of Surveyors and was the first Secretary of the Canterbury local committee.

See "The New Zealand Surveyor" Vol. XV No. 9 page 320.

HANNAH, John (1860-1942)

Born 13th September, 1860 at Newton Stewart, Scotland. Came to New Zealand with his parents about 1868. He was educated at Halliwells School, Dunedin and the District High School, Invercargill, between 1868 and 1875.

In 1878 he entered the Public Works Department as a cadet and a year later was transferred to the Lands and Survey Department. In 1881 he was appointed

Assistant Surveyor at Invercargill and was employed in this field for thirteen years. In 1895 he commenced a consulting engineering and surveying practice in North Auckland with headquarters at Mangawai.

From 1898 to 1901 he was Engineer to the Otamatea County and then he returned to the Public Works Department in charge of railway location of the North Auckland Railway, until 1904 when he was transferred to Rotorua, and in 1908 he commenced the survey of the East Coast Railway, Waihi to Opotiki. He was promoted Resident Engineer in charge of all work in the Bay of Plenty district. In September, 1920 he was transferred to Wellington as District Engineer and he retired on 23rd June, 1927.

He died at Lower Hutt on 13th June, 1942.

HARDING, Samuel (1822 - 1907)

He was born in Limerick and educated and trained as an engineer and surveyor. He came to New Zealand and entered the Auckland Provincial Service. With James Stewart, he was engaged in the survey for a railway from Auckland to Drury about 1861. Construction of this line was stopped in 1867 owing to financial stringency. Appointed a Minefields Surveyor, vide Auckland Provincial Gazette, 1868.

Harding was appointed Resident Engineer at Kaipara on 1st February, 1872. Later he engaged in private practice in partnership with his son S. J. Harding, until the latter, in 1894, joined the Government Service. He lived in retirement at Mt. Eden, but died at Turangarere on 29th June 1907 having gone there to visit his son.

He was a foundation member of the New Zealand Institute of Surveyors.

HARDING, Samuel John (1861- (1948)

He was born 9th May, 1861 at Auckland, where he was educated and subsequently trained under his father, Samuel Harding. He served in the Public Works Department on railway surveys in the Bay of Plenty and in January, 1896 was transferred as Assistant Engineer to Hunterville. In September, 1898 he was transferred to railway construction at Blenheim and retransferred to the Main Trunk Construction, in 1903.

On 1st February, 1908 he was transferred to Nelson in charge of the Public Works District, and in September, 1911 to Napier as District Engineer. For health reasons he sought an office position and served in the Auckland office of the Department from March, 1915 to the date of his retirement 21st August, 1926. He was a foundation member of the New Zealand Institute of Surveyors.

He died at Auckland on 19th April, 1948

HARDY, Edwin Henry

Educated at Otago Boys High School, Otago University and in England. He joined the Lands and Survey Department in February, 1876 and after qualifying as an Authorised Surveyor in May, 1880, he served sixteen years as a staff surveyor in Otago and Auckland Districts. He then took up mining engineering in which he had an extensive and successful practice. (Gazetted Assistant Surveyor 19th April, 1881.

Transferred to Auckland in 1881). He was a foundation member of the New Zealand Institute of Surveyors.

HARMAN, Richard James Strachan (1826 - 1902)

He was born in Dublin 14th April, 1826 and educated at Rugby. He qualified as a civil engineer, after serving his articles with George and John Rennie, and soon afterwards came to New Zealand with the "Canterbury Pilgrims". As there were few openings for engineers at that time, he engaged in estate management and land agency work. In March, 1854 he was appointed Immigration Agent for the Canterbury Provincial Government and returned to the United Kingdom where for the next three years he was successful in securing some thousands of immigrants required to build up the Province's labour force.

On 4th May, 1857 he was appointed Assistant Surveyor on the provincial staff, and in the same year was elected to the Canterbury Provincial Council and on 7th April appointed Waste Lands Commissioner. He also did a good deal of surveying around Banks Peninsula for the Provincial Government. During this time he had to attend Land Board meetings twice a week at Christchurch. This involved walking through bush to Purau on Lyttelton Harbour from Duvauchelles Bay, in Akaroa Harbour, then rowing across Lyttelton Harbour and walking on to Christchurch. To cover this journey eight times a month would strain the hardest of men today.

In 1865 he was a member of the party that discovered Brownings Pass.

He served on several commissions and was a member of the South Waimakariri River Board. He was a man of wide interests, and in 1871 was Deputy Superintendent of Canterbury Province. (Photo in Vol. 2, History of Canterbury). He died on 26th November, 1902.

HARRISON, John William (1855 – (1925)

Born in Burnley, Lancashire he came to New Zealand in 1878 in the ship SAM MANDEL and commenced surveying in the Auckland district as an assistant to T. W. Hickson and in 1884 he was authorised as a surveyor and mining engineer. In the early 1890s he commenced practice in partnership with Foster, mainly in the Auckland metropolitan and the Coromandel regions. After some years the partnership was dissolved and he continued on his own account. In 1910 he was joined in partnership by C.A. Grierson and he retired in 1920 when his son Percy joined the firm.

Many of his early years as a surveyor were spent in the bush, opening up large tracts of Crown and Native lands throughout Auckland Province. On many occasions he would set out with a packhorse, a gun, a dog a sack of flour and two or three experienced bushmen and virtually lived off the land for months on end and on one occasion did not see his second son until the latter was six months old. After the lean years of the early 1890s he set out by scow for Coromandel to take advantage of the gold rush and spent six months there, working day end night, pegging out the claims for the excited and impatient miners.

Latterly he built up the largest private practice in Auckland and was official surveyor to all the major public bodies in the region. He lived practically all of his life in New Zealand at Devonport and served for some years on the Borough Council. As a sportsman he was a keen bowler and in 1899 won the Auckland Singles

championship. His sons Percy and John also excelled in this sport and the latter became President of the New Zealand Bowling Association.

He moved to Epson in 1920 and died there in 1925.

He was a Vice President of the New Zealand Institute of Surveyors and served for a term on the New Zealand Survey Board (1912 - 13).

See "New Zealand Surveyor" Vol. X No. 3 p.70

"Cyclopaedia of New Zealand" Volume 2 p.468 which has a photograph.

HARRISON, R _____ J

He was appointed to the survey staff of the New Zealand Company at Wellington on 1st November, 1840, by Captain William Mein Smith, Surveyor General to the Company. As Assistant Surveyor he worked in the Wellington and Manawatu districts. He was one of the surveyors retrenched on 31st March, 1843 when the Company was in financial difficulties. In 1846 he was in partnership with Captain Joseph Thomas as a contract surveyor, surveying the district between Molyneux and the Tokomairiro Rivers, for the New Zealand Company, in connection with the Otago Settlement, under the direction of C. H. Kettle, the Company' Chief Surveyor for Otago

HASZARD, Henry Douglas Morpeth (1862 -1938)

Born at Monganui, he was the eldest son of Robert Haszard who came from Prince Edward Island, Canada and settled at Monganui in 1855.

Henry Haszard was educated at Auckland Grammar School and after completing the Civil Service Entrance Examination he was appointed a survey cadet in the Lands and Survey Department at Auckland in 1880. He was trained by Assistant Surveyor R. Neumann and qualified as an Authorised Surveyor in 1883. He was first posted to Kawhia and subsequently to the

Clevedon and Rangiriri districts. He also carried out surveys in the Thames and Ohinemuri districts and was one of the first to be employed in the King Country when it was re-opened to Europeans, and in 1890 he became interested in drainage and reclamation schemes involving the lower Waikato and Piako swamps.

In 1886, immediately after the Tarawera eruption, he assisted Mr. S. Percy Smith, the Assistant Surveyor General, in making a topographical survey of the district affected by the eruption. The following year he accompanied Mr. Smith on the expedition to Raoul (Sunday) Island to annex the Kernadec group as a British possession and to survey the islands. In 1903 he was commissioned to survey the Niue Islands and on completion of this work and publication of the resultant Admiralty charts he was elected a Fellow of the Royal Geographical Society.

In 1909 he was appointed Acting Chief Surveyor for the Canterbury District and subsequently he became Commissioner of Crown Lands at Westland (1912), Southland (1915) and Canterbury (1919) and retired from the Public Service in 1920 after 40 years in the Lands and Survey Department.

In 1913 he was Chairman of the Royal Commission on Forestry in New Zealand.

He was a foundation member of the New Zealand Institute of Surveyors.

See "The New Zealand Surveyor" Vol. XVI No. 6, December, 1938 etc.

Re the HASZARDS and the MORPETHS

There is a reference in "Waihi Borough Council - Diamond Jubilee – 1902 -1962", edited by Nellie Scott Climie and published by the Borough Council, to the above mentioned families, the Haszards and the Morpeths, vide page 30 - "over a hundred years ago a venture was promoted by two families, the Haszards and the Morpeths, who built a brig to bring them from Canada to New Zealand. Many of their descendants have been closely identified with the goldfields, both the Morpeth family and the Haszard brothers, Harry, Norman, Fen and Reg."

The Haszard brothers, H. D. M., Norman Frederick Johnston, Moore Fenwick and Reginald, were sons of Robert Haszard. All except Reginald were surveyors and he was a Member of the Australasian Institute of Mining Engineers. A cousin, Keith F. Haszard was also a surveyor, trained by M. F. Haszard. William Theodore Morpeth was a well known member of the surveying profession and C.D. Morpeth was for many years the Secretary of the New Zealand Institute of Surveyors.

(Note: H. D. M. Haszard always had plenty of initiative and if he thought certain action should be taken he got on with the job without waiting for the necessary authorisation. There were a number of instances on his personal file. On the eve of his retirement, without waiting the necessary sanction of the authorities at Head Office at Wellington, he appointed the present writer a survey cadet in Canterbury on twenty-four hours notice. Fortunately his action was subsequently ratified, but not without some comment from Head Office. - C. A. Lawn).

HASZARD, Norman Frederick Johnston (1867 - 1 919)

Son of Robert Haszard, (see also H. D. M. Haszard) he attended VVellesley Street public school at Auckland and won a scholarship which took him to Auckland Grammar School. On passing the Civil Service Examination in 1884 he attended the Lands and Survey Office at Auckland on a voluntary basis to learn plan drawing and computations while waiting for an appointment. In 1885 he joined the survey party of his elder brother, H. D. M. Haszard, as chainman.

In 1885 he applied to sit the Authorised Surveyor's examination and although some exception was taken by the Surveyor General to the fact that he had not served as a regularly appointed survey cadet, he was permitted to sit and qualified by examination in March, 1889. The following year he was appointed to a position as a temporary employee on the field staff of the Lands and Survey Department and stationed at Eketahuna. During 1891 and 1892 he was engaged on the survey of a 20,000 acre block at Waikanae. He then was transferred to the Auckland District, still on a temporary basis, and continued with the Department until 1895 when he left to enter private practice at Thames and soon afterwards became a member of the Australasian Institute of Mining Engineers.

In 1902 he went to the Gold Coast, West Africa, where he was a Government Surveyor for the Colony until 1904 when he moved to the Malay States as Trigonometrical Surveyor, and in 1911 he became Assistant Superintendent of Revenue Surveys. He died at Kuala Lumpur in December, 1919.

(Note: The firm at Thames in 1896, known as Haszard Brothers and Johnston, Mining Engineers and Surveyors, comprised, in addition to N. F. J. Haszard, Messrs. Reginald Haszard, Mining Engineer, Moore Fenwick Haszard, Licensed Surveyor and Walter Herbert Johnston, Licensed Surveyor and Mining Engineer.

See "Waihi Borough Council - Diamond Jubilee - 1902-1962"

N. S. Climie, Editor. Page 30 etc.)

N. F. J. Haszard became a member of the New Zealand Institute of Surveyors in 1893.

See also "The New Zealand Surveyor" Vol. XI No. 9, June, 1920.

HATELY, George

As a surveyor on the Otago Provincial Survey Department (1858-1862) he assisted in the surveying of the town of Invercargill and carried out a number of triangulation and subdivisional surveys in Otago and Southland.* He was a member of Southland Provincial Council from 1867 until the reunion with Otago in 1870.

See "History of Land Legislation and Settlement in New Zealand" W. R. Jourdain, 1925 p.242

* In partnership in private practice with A. P. Scott. Invercargill Pioneers. F. G. Hall-Jones. 1946. p 57.

HAWKE David

Born in Cornwall in 1858, he came to New Zealand in 1878 arriving at Lyttelton in the ship Waitangi. For two years he was a contractor on road construction in the Oxford district. He then joined the Government survey staff in Canterbury. In 1886 he relinquished surveying to take up sheep farming in the Oxford district. He took an active part in local government and served for many years, being Chairman of Oxford County Council 1913-14 and 1917-18.

See also - Oxford. The First Hundred Years by Q. A. Gillespie 1953 p.223.

HAY John (1848 - 1907)

He was born in Kent in 1848 and arrived with his parents at Port Chalmers in the Ajax on 8th January, 1849. His father was the proprietor of Hilly Park, South Molyneux. John trained as a surveyor under C. W. Adams and qualified in 1869. He was engaged in contract surveying for a few years and in 1873 was appointed District Surveyor for Western District, Southland. One of his most important works, as well as one of his most difficult tasks was the making of a reconnaissance survey of the land between the mouth of the Waiau River and Preservation Inlet, in 1882-3. He reached the head of Lake Pōteriteri and made two successful expeditions, one almost to Long Sound and another northwards by the Hay River to a point from which he saw Dusky Sound. The success of the expedition was due, largely to Hay's construction of a canvas boat which he used to cross Lakes Hauroko and Pōteriteri and sail down Long Sound in Preservation Inlet. Some four months were spent in the bush, and considering the climate and nature of the country, it is amazing that he accomplished so much. (See "The Exploration of New Zealand" by W. G. McClymont, Second Edition, page 109).

Hay was transferred to Dunedin as Chief Surveyor for Otago, in 1897 and four years later he returned to Invercargill as Commissioner of Crown Lands, which position he held at the time of his death on 1st August, 1907.

He was a Member of the Institute of Surveyors.

See "The New Zealand Surveyor" Vol. VIII No. 7, page 345.

HAY, George William Drummond (Major)

He was engaged in early mining enterprises at Coromandel in 1852-53 when Charles Heaphy was Goldfields Commissioner for that district. In 1855 when the Native Land Purchase Department was established under Mr. Donald McLean he was appointed District Commissioner and Surveyor in that Department for the Thames-Piako district. In 1859 he and Charles Heaphy were attached as guides and interpreters to Dr. Ferdinand von Hochstetter's geological surveying expedition covering parts of the Auckland Province. Julius von Haast, Hochstetter's assistant later remarked of them that their exploits in field and forest were, to him, reminiscent of Fenimore Cooper's "Deerfoot" and "Pathfinder" and that they lost nothing in comparison with Cooper's fictitious characters.

During the Taranaki War of 1860-61, he was attached as interpreter to the staff of General Pratt and on 14th March, 1861, he was sent as the General's emissary to confer with Wiremu Tamihana, a leading chief who was acting for the insurgent Maoris. At first their attempts to establish peace were unsuccessful but on the 19th, when Drummond Hay was supported by Messrs. Donald McLean and Robert Parris of the Native Department, an armistice was arranged that lasted until May, 1863, when fighting again broke out in Taranaki.

In 1863, when the Waikato campaign commenced he joined the Forest Rifles as a volunteer and took part in a number of engagements. As a Major in command of a detachment of the Forest Rangers he took part in the Bay of Plenty campaign in 1864, when he helped to organise the defences of the friendly Arawa tribes and in April took part in the fighting around Maketu when the Tai-Rawhiti were defeated and dispersed.

In 1870 he purchased 2,000 acres of Maori land in the Waikato near the present town of Morrinsville, but continued to practise as a surveyor.

See "Life and Times of Julius von Haast" by H. P. von Haast, 1848, Chapter II; which refers to G. W. Drummond Hay as a Captain and Aide-de-Camp to the Governor, Colonel Gore Browne, and Native Commissioner of the Southern districts of Auckland, in 1859, when he was appointed guide to Hochstetter's expedition.

See "The Maori King" by John Gorst (1864) 1959 edition, page 106. "Tamihana. The King Maker" by L. S. Rickard, 1963, pages 95-98.

HAY, Robert (1847 - 1928)

He was born in London and educated at Wimbledon College. He arrived in New Zealand in 1865 and entered the Provincial Survey Department of Otago and later was assistant to the Provincial Engineer. For two years he was engaged as engineer to David Proudfoot, the contractor who built the Port Chalmers- Dunedin Railway. From 1876 to 1920 he was in private practice as a consulting engineer, and during that period he was at various times consultant to Taieri and Tuapeka

Counties, and Boroughs of North East Valley, West Harbour, Mornington, St. Kilda and at times Dunedin City. His practice was wide and varied and included the Gisborne (Te Arai) water supply.

He was elected M. I. C. E. in 1885, and was a foundation member of the New Zealand Institute of Surveyors.

He died at Waitomo Caves on 20th November, 1928.

HEALE Theophilus (1816 - 1885)

Born in England. He received a good classical education and was a good mathematician and navigator and had studied geology and languages. He went to sea early and was a ships captain at 24 years of age.

He commanded the Aurora bringing the first of the New Zealand Company settlers to New Zealand, arriving at Wellington on 22nd January, 1840. His vessel was lost on Kaipara bar in May, 1840 while obtaining a return load of Kauri Spars. He then formed a partnership with Sinclair, and brought out machinery for sawmilling from England. He set this up at Cornwall is, where it operated as the first steam-driven mill in New Zealand. He took up land at Tamaki in 1843, but the venture was not a success so he returned to England where he was one of those who gave evidence before a Committee of the House of Commons. He also published a book, "New Zealand and the New Zealand Company". In 1845, back in New Zealand, in partnership with Frederick (later Sir Frederick) Whittaker, he undertook a copper mining venture at Kawau Island but owing to litigation with a company already operating there, Heale and Whittaker sold out in 1850. Later he was copper mining on Great Barrier Island. On 3rd March, 1855, he was appointed to the Legislative Council by Governor Fitzroy, but resigned in December because he thought the new Governor, Captain George Grey, should have a free hand in appointing an executive. He remained in the Auckland Province, and engaged in saw-milling, copper mining and other enterprises. In June, 1860 he was elected Member of Parliament for Auckland Suburbs electorate, but a year later was defeated at the election. On 26th September, 1861, he was gazetted Chief Surveyor of Southland, and in December, Provincial Engineer also. Early in 1864 he explored Stewart Island with a view to settlement, and reported on 15th February, 1864 and again in July. On 25th May, 1864, he was elected Deputy Superintendent of Southland, but owing to a technicality, his election as Superintendent later in the year was disallowed, and he left Southland. He then engaged in contract surveying in the Bay of Plenty, where there was still intermittent trouble with the dissident Maoris after the Waikato War. In January, 1867, he was appointed Chief Surveyor of Auckland and also Inspector of Surveys, N. Z. Gazette 26th November, 1867, which position he held until 1876. He immediately introduced reforms in survey practice, and initiated the major triangulation.

In 1871 he wrote a treatise, "The Principles and Practice of Surveying". On 3rd April, 1877, he became a Judge of the Native Land Court. He finally retired in 1883, and returned to England, where he died at Orpington, Kent, on May 19th, 1885.

While in Southland he was active in railway construction and designed, inter alia, the railway from Bluff to Invercargill, including the iron bridge over the Oreti River, similar in construction to the modern Bailey Bridge. He also experimented with wooden rails as an economy measure.

With his appointment as Inspector of Surveys in 1867 he became virtually Surveyor General of New Zealand, an office that had been in abeyance since the resignation of C. W. Ligar about 1854

Heale was a scholar of repute, especially in Greek, Latin, French and Italian and he became a member of the first senate of New Zealand University. He was also a competent astronomer and mathematician and his "Principles and Practice of Surveying" was for many years a standard work.

With the assistance of Stephenson Percy Smith, he inaugurated the Trigonometrical Survey of the North Island, an event that is commemorated by a monument on Mount Eden, Auckland.

He was an important witness before the Commission of Enquiry into the Organisation and Working of the Waste Lands Department, held at Auckland in December, 1864 and reported in the Journal of Auckland Provincial Council, A No. 13, 1864- 65.

Heale presided over an important conference of Provincial Chief Surveyors held at Wellington and reported in the Appendices to the Journals of the House of Representatives, H.1., 1873.

See - Cyclopaedia of New Zealand. Vol. 2 p 103 for short biography and. photo.

HEAPHY Charles (1820 – (1881)

He was born in England where his father, Thomas Heaphy and his younger brother, also named Thomas, were notable artists.

Charles, at an early age, showed promise as an artist and before seventeen years of age had been awarded both the bronze and silver medals of the Royal Academy. He was a candidate for the gold medal when he was chosen to become draughtsman and artist to the New Zealand Company in 1839, and he sailed in the *Tory* with Colonel Wakefield and the other officials who formed the vanguard of Company's settlement at Wellington. Edward Jerningham Wakefield's "Adventure in New Zealand" published in 1845, gives an account of their first few months in this country.

Heaphy's adventurous spirit is demonstrated by the number of exploring expeditions in which he took part. The first of these was in 1840 when he and Dr. Ernst Deiffenbach accompanied Richard Hanson, the Company's Agent, to the Chatham Islands in the *Cuba*, for the purpose of negotiating the purchase of the islands. On the return of the expedition to Wellington, Heaphy and William Deans joined the surveyors, Messrs. Stokes and Park, and their survey hands, on a reconnaissance survey up the west coast from Wellington to Moturoa the site of the future New Plymouth. They suffered many privations and near starvation before they reached Wellington again.

In 1842 Heaphy was sent to England with despatches for the Court of Directors and while there he wrote and published "A Narrative of a Residence in Various Parts of New Zealand", which gives an account of the founding of the Wellington Settlement.

Before going to England he had taken part in the first reconnaissance expedition which chose the site for the Nelson Settlement, and it was to Nelson that he returned from England. There he engaged in road making and in exploring the

difficult country surrounding the Nelson Settlement, and he was highly commended by the Company's Chief Agent, William Fox, who later became Sir William Fox, and Premier of New Zealand.

Towards the end of 1843 Heaphy and J. S. Spooner, another Company surveyor, spent a few weeks exploring the country between Rotoiti and the west coast, passing, en route, through a steep gorge they called "The Devil's Grip".

He next examined the high country between Riwaka and Takaka and went as far as the Aorere Valley, and then in 1844 he explored from Nelson to Croisilles and the Pelorus Sound.

In March, 1845, he and Charles Christie explored country from Rotoiti south-eastward towards the upper Wairau.

In February, 1846 with William Fox and Thomas Brunner, he explored to the south west of Rotoiti discovering Lake Rotoroa and the upper reaches and tributaries of the Buller River. Then, in March, 1846, with Thomas Brunner, he set out to explore the west coast, going first from Nelson to Aorere by boat and thence to Pakawau on foot. Heaphy visited Cape Farewell and then he and Brunner crossed over to the Whanganui Inlet, where they were joined by two Maori guides. They then travelled down the coast, traversing extremely difficult terrain and subsisting on whatever food they could find, and reached the Arahura River on 27th May. From there they retraced their steps and suffering almost starvation conditions reached Nelson on 18th August, five months after they had set out.

In 1848 Heaphy joined the Survey Department at Auckland and held for a short period the office of Goldfields Commissioner for Coromandel (the first such Commissioner to be appointed in New Zealand), and was appointed District Surveyor at Mahurangi in 1855 and at Auckland in 1858. In 1859 he was guide to the expedition of Dr. Ferdinand von Hochstetter, during his examination of the Waikato coalfield and the Coromandel goldfield, and brief geological survey of Auckland peninsula.

In 1859 when trouble with the Maoris was threatening, Heaphy joined the Parnell Company of Volunteers at Auckland, and when war broke out he was appointed Staff Surveyor to the Forces, serving in the field under Generals Sir Duncan Cameron and Sir Trevor Chute and Brigadier General Carey, and he was present at the engagements at Rangiriri and Meremere. On 11th February, 1864, while attached to the force commanded by Colonel Sir Henry Havelock, V. C. he performed an act of conspicuous bravery for which he was recommended for an award of the Victoria Cross which he did not receive until 1867 because at that time, only men of the regular forces were eligible to receive it, and the New Zealand Cross, an equivalent decoration, was subsequently instituted for members of the Colonial Forces. Heaphy was one of the first non-regulars to receive the Victoria Cross, and the only member of the Colonial Forces serving in the New Zealand Wars to receive it.

In 1864 Heaphy was appointed Chief Surveyor to the General Government, at Auckland, his main task being to superintend the surveying of the land confiscated at the close of hostilities.

Appointed a Minefields Surveyor vide Auckland Provincial Gazette, 1868. He was licensed to survey under the Native Land Act, 1862 vide N. Z. Gazette, 31st August, 1865. In 1865 the Surveyors Association of the Province of Auckland was

founded with Heaphy as its first Chairman. This Association was a fore runner of the New Zealand Institute of Surveyors.

Through ill health he resigned from the Department in 1866 and not long afterwards was elected to represent the Parnell Electorate in Parliament. He served only one term and in 1872 was appointed Commissioner of Native Reserves. He became an Authorised Surveyor in December 1878 and in 1878 he was appointed a Judge of the Native Land Court.

Again through ill health he resigned in 1880 and moved to a more genial climate at Brisbane, where he died on 3rd August, 1 881

The Cyclopaedia of New Zealand, Vol. 2, page 105, Auckland Provincial District, states Charles Heaphy was born in 1822, and that his father had been an Aide-de-Camp to the Duke of Wellington during the battle of Waterloo.

Charles Heaphy in 1851 married Catherine, daughter of the Rev. John Churton, chaplain to the first Wellington Settlement in 1840, and later Colonial Chaplain and Vicar of St. Paul's Church, Auckland.

For accounts of some of his journeys of exploration see "Early Travellers in New Zealand" by Nancy Taylor, 1959 and "Nelson - a History of Early Settlement" by Ruth M. Allan, 1965. Some of Heaphy's own reports are to be found in issues of the "Examiner", an early Nelson newspaper.

Biographical sketches are to be found in T. W. Gudgeon's "Heroes of New Zealand" published in 1887; in A.H. Reed's "Heroes in Peace and War", 1959; and in F. W. Furkert's "Early New Zealand Engineers" 1953, and in other works.

Heaphy was an assiduous artist and his paintings of early New Zealand scenes are of great historical value. Several are owned by the Hocken Library of Dunedin and by the Turnbull Library of Wellington.

HECTOR, Sir James K. C. M. G. ,F. R. S, etc (1834 - 1907)

Born in Edinburgh, 18th March 1834 he was educated at Edinburgh Academy and at Edinburgh High School where he matriculated in 1852. He attended Edinburgh University where his studies included geology and mineralogy under Professor Edward Forbes, and he graduated M. D. in 1856.

In March 1857 he was selected by Sir Roderick Murchison, director-general of the geological survey of Great Britain, to act as surgeon and geologist with an expedition to explore the western part of North America, under Captain John Palliser, R. N . The programme entailed a four year survey of the area west of Lake Superior and north of the 49th parallel, principally with a view to settlement possibilities, and also to search for passes suitable for horse traffic and possibly a railway through the Rockies to British Columbia. Hector led one of the survey parties and it was he who discovered the most practicable route which he called Kicking Horse Pass because it was there that he almost lost his life when kicked in the chest by a horse. He spent three years on this exploration and on his return to Great Britain he was made a Fellow of the Royal Society of Edinburgh and of the Geological Society and of the Royal Geographical Society.

In 1861 he was offered and accepted the position of Provincial Geologist for Otago and he landed at Dunedin on 15th April 1862. He made a geological survey of Otago and also parts of Westland. In 1864 he helped to organise the New Zealand

Industrial Exhibition held in Dunedin. He completed his survey of Otago by April 1865 and shortly afterwards was appointed Director of the Geological Survey Department of New Zealand, which he organised, and he was also appointed Curator of the Colonial Museum at Wellington. The following year he was elected a Fellow of the Royal Society and assisted in the founding of the New Zealand Institute.

In 1871 he became a member of the first Senate of the University of New Zealand and in 1885 he was elected Chancellor. In 1875 he was awarded the Lyell Medal and received the C. M. G. for his services in Canada.

In 1879 he was appointed executive commissioner to the Sydney Exhibition and a year later to the Melbourne Exhibition and he reported on the coal resources of Victoria. In 1886 he was created K. C. M. G. for his services as Commissioner for the New Zealand Industrial Exhibition held at Wellington the previous year. He was three times President of the Australasian Association for the Advancement of Science and was awarded the Founder's medal by the Royal Geographical Society. He was a member of several learned societies and was elected Honorary Member of the New Zealand Institute of Surveyors in 1901

On 30th December 1868 he married Maria Georgina, eldest daughter of Sir David Monro who as Dr Monro had taken part in some of the early exploring expeditions in the South Island in association with some of the New Zealand Company surveyors.

Sir James Hector died at Lower Hutt on 6th November 1907.

See "New Zealand Dictionary of Biography", Scholefield.

"N. Z. Geological Survey 1865 - 1965" by Peggy Barton 1965, p.11. "The New Zealand Surveyor", 1901, p.26.

"New Zealanders and Science" S. H. Jenkinson, 1940, Chapter 5.

HEWLINGS, Samuel

Born in Wallingford, Berkshire and trained as a surveyor in England. Hewlings and Thomas Cass came to New Zealand with C. W. Ligar who had been appointed Surveyor General for the Colony in place of Felton

Mathew, who had been earlier appointed as Acting Surveyor General. Ligar and his party and William Spain, who had been appointed Land Claims Commissioner, sailed from Portsmouth on 21st April, 1841, in the New Zealand Company's ship, Prince Rupert. This ship was wrecked on September 4th near Capetown, with the loss of one life. Some of the survivors remained in Cape Colony and the rest came on to New Zealand in the brig Antilla, which arrived at Wellington on 8th December.

Hewlings assisted in the surveys at Auckland and the Bay of Islands. In September, 1849 he undertook contract surveys for the commencement of the Canterbury Settlement directed by Captain Joseph Thomas. He surveyed the Heathcote River and part of the Christchurch district. Subsequently he was engaged in surveying the rural sections throughout the Canterbury Associations territory.

On the 28th September, 1854., he accepted a position on the survey staff of the Canterbury Provincial Government, working under Thomas Cass, Chief Surveyor, who instructed him to commence the triangulation and topographical surveys of South Canterbury i.e. the territory southwards from the Rangitata River.

He laid out the town ship of Geraldine which he made his headquarters. In July, 1855, he received instructions to survey the land purchased from the Crown by the Rhodes brothers. The following year he laid out the southern part of the town of Timaru on Crown land while E. H. Lough laid out the northern part on land owned by the Rhodes brothers.

In September, 1858, Hewlings resigned from the Government service to join Edward Jollie in partnership as contract surveyors working for the Provincial Government. In 1863 they laid out the town of Arowhenua (later renamed Temuka). Hewlings had purchased adjoining land and subdivided it, naming the township Wallingford after his birthplace. Today Wallingford is the business centre of Temuka.

In 1861 trigonometrical surveys and topographical surveys were continued from Pareora to the Orari River, extending six miles inland. The work was undertaken by Hewlings assisted by Charles R. Shaw and Robert Townsend. The purpose of the surveys was to define the grazing runs. The work was based on magnetic meridian and much of it was not integrated and consequently much revision was necessary at a later date. In 1862 the work was extended to embrace the whole coastline between the Rangitata and Waitaki Rivers and a depth inland of eight miles. Hewlings made his headquarters at Timaru where he took a leading part in the development of the town which became a borough on 13th July, 1868. A Town Council had been elected in 1865 and functioned under a Chairman (Hewlings) who became the first Mayor when the Borough was incorporated. Hewlings succeeded Thomas Cass as Chief Surveyor for Canterbury on 1st September, 1871 and retired from the Government service at the end of 1876.

References:- "The Torlesse Papers" edited by Dr. P. Maling, 1958

"The History of South Canterbury" by J.C. Andersen, 1916

"Timaru Centenary" by J. S. Parker, 1968

"Early Timaru" by F. G. Hall-Jones, 1956

"South Canterbury" by O. A. Gillespie, 1958

Official records etc.

HEWSON, Francis Maurice (1832-1917)

Born in Limerick, Ireland, 30th January, 1832. Came to New Zealand in 1860 but his early career has not yet been traced.

On 19th January, 1871 he was appointed Surveyor, Auckland, on the construction of the Auckland-Drury Railway, on which he was engaged, off and on, until the 1889 retrenchment. He was re-engaged in the Government Service in 1893 and was engaged on various railway surveys, including the Paeroa-Te Aroha Railway, the Whangarei-Kamo Railway and the Hukurenui section of the North Auckland Railway. In 1901 he moved to the Kawakawa-Railway construction and on 31st October, 1905 he retired from the Service, but remained in private practice for a while.

He died at Thames on 26th April, 1917.

HOCHSTETTER, Ferdinand Von

Born in Wurtemberg, Austria in 1829, son of a clergyman-naturalist. At the university he studied theology but specialised in geology. He joined the Austrian

Geological Survey in 1854 and in 1858 was appointed geologist to the 'Novara' expedition, on a voyage of scientific exploration around the world, sponsored by the Austrian Government. Soon after the arrival of the ship in Auckland in December, 1858, the New Zealand Government commissioned him to make a geological survey of the central districts of Auckland Province. He was assisted in this work by Dr. (later Sir) Julius von Haast. Guides for the survey work were the surveyors, Charles Heaphy and G. Drummond Hay. His reports are to be found in the Auckland Provincial Gazette of 1860. Besides a report on the geology of the Province there is one on the Drury coalfields. Hochstetter next made a brief visit to Nelson Province where he made an inspection of the "mineral belt". A geological survey of this region was made by Haast after Hochstetter returned to Austria.

Refs:

1. N. Z. Geological Survey 1865-1965 by Peggy Burton. Published by Department of Scientific and Industrial Research.
2. Life and Times of Sir Julius von Haast by H. P. von Haast
1948 Avery Press, New Plymouth
3. "Geology of New Zealand" by F. von Hochstetter, 1864, with which was published his geological map of "The Southern Part of the Province of Auckland". This work was the first study of any consequence of the geology of New Zealand. Ernst Deiffenbach, in his "Travels in New Zealand" (2 vols) 1843, makes a few general comments on the geological formations he observed during his travels, but his work could not be considered to be a close survey.
4. "New Zealanders and Science" by S. H. Jenkinson, 1940 Published by Department of Internal Affairs. See Chapter 4.

HOGAN. Patrick Joseph (1806 - 1878)

Born in Dublin, Ireland, he was a student at the Royal Academy of Dublin, and evidently had had some military service.

He joined the New Zealand Fencibles as a sapper and arrived at Auckland in the Oriental Queen on 19th September, 1849. His wife and five children also came out with the troops. He was stationed at Onehunga where he received a grant of an acre of land on the completion of his seven years service.

Subsequently he was an art teacher at the Auckland Mechanics Institute.

His draughtsmanship and knowledge of surveying gained him an appointment with the Survey Department at Auckland in 1854 where, as a surveyor, he was a contemporary of Charles Heaphy, who was also a notable early New Zealand artist and surveyor.

Hogan produced a number of paintings in and around Auckland that are among the best of the historic paintings of the district in existence. Several enlarged copies of his work have been used as murals, especially in the Auckland television studio of the New Zealand Broadcasting Service.

In 1858 Hogan moved to Sydney where he received an appointment as a draughtsman in the Survey Office. He died in Sydney in 1878.

Listed as a surveyor in Auckland Provincial Electoral Roll in 1855 and subsequently.

HOSKING, George Francis

Born in Cornwall, England, he served his articles (1857 - 60) under his father, Francis Wills Hosking, a surveyor in Cornwall. In 1869 he went to Victoria, Australia, and engaged in mining surveying. The following year he came to New Zealand and commenced practice as a land and mining surveyor in the Waikato district. He was licensed under the Mining Act in July, 1873 and under the Land Transfer Act in July, 1876. In 1880 he held the appointments (simultaneously) of Engineer to the Waikato County, the Cambridge Highways Board, the Newcastle (Ngaruawahia) Highway Board, and the Cambridge Town Board. In 1881 his nephew, Francis John Hosking, joined him as a survey cadet. In 1860, in partnership, they moved to Dargaville and they carried out much of the pioneering survey work in the Kaipara district.

He was a foundation member of the New Zealand Institute of Surveyors.

HOSKING, Francis John F. R. G. S. (1863-1936)

Born in Cornwall, England, he came to New Zealand where he joined his uncle, G. F. Hosking, to whom he was articulated as a survey cadet in 1881, at Cambridge. After qualifying he remained with his uncle and together they moved to Dargaville in 1886. For the next forty five years he engaged in private practice in the Kaipara district. He served on several local bodies including eleven years as a Borough Councillor. He was also a Justice of the Peace and was a Fellow of the Royal Geographical Society of London.

He was a foundation member of the New Zealand Institute of Surveyors.

His son, J.D. Hosking and grandson, P. T. Hosking, are also practising surveyors and Members of the Institute.

He died at Dargaville on 25th September, 1936.

See New Zealand Surveyor, Vol. XV No. 13, October, 1936 and Vol. XVI, No. 1, February, 1937. (See also a copy of Mr. Hosking's Articles, an interesting document on my file. C. A. L.).

HOVELL, Henry Kinnaird (1862 – 1946)

Born at sea he was a son of Lt. Col. C. H. Hovell, a former brigade surgeon with the military forces in New Zealand. An uncle, was a member of Hume's expedition when the first white men saw the site of Melbourne and he is commemorated by a statue in the Land Office at Sydney.

H. K. Hovell had an adventurous career, practising at various times in the Hawkes Bay, Wellington, West Coast, and Gisborne Land Districts and in Fiji. He was articulated to the firm of Ellison and Son in Hawkes Bay and after qualifying as a surveyor he was employed by Mr. Horace Baker in Hawkes Bay. In 1889 he led an expedition of prospective settlers to Sunday Island in the Kermadecs, soon after those Islands had been annexed as a British dependency under the control of the New Zealand Government. Later he went to Fiji where he practised for a while. On returning to New Zealand he practised for short periods in the Wellington and West Coast districts before moving to Gisborne district. One of his first tasks, in 1899, was to lay out the Native Township of Tuatini. Subsequently he settled at Te Araroa where he continued to practise until his eightieth year.

In his youth he was a notable athlete, excelling in many sports. He was a powerful swimmer, an attribute which gained him the recognition of the Royal Humane Society by an award for gallantly saving lives during a storm at Napier Harbour in 1890. He was also one of the best shots with rifle and shotgun in the Colony.

Like some of his fellow surveyors he suffered from native opposition while surveying in the East Coast district. On one occasion his life was in danger. While surveying near Hicks Bay he and his party were ordered off the ground. When he refused to go the obstructionists assaulted the survey party and smashed Hovell's theodolite. He was over powered and tied to a tree while the assailants debated the manner of his death. The intercession of a group of Maori women saved his life.

He was a foundation member of the New Zealand Institute of Surveyors.

He died at Te Araroa in 1946

See "New Zealand Surveyor" Vol. XIX No. 3 pp. 187 and 198.

HOWDEN. Francis

He Was Road Engineer for Otago under the Provincial Government in 1862. He carried out the triangulation survey of the district around Roxburgh in 1867, including the measuring of the base line at Roxburgh East. He was authorised as a surveyor, at Dunedin, on 6th July, 1868.

surveyor, at Dunedin, on 6th July, 1878.

HOWITT, Herbert Charlton (1838 – 1863)

Born at Esher, Surrey, he was a son of William and Mary Howitt, two popular authors in England in the early Victorian period. Another of their sons was Alfred William Howitt, a notable explorer in Australia who led the search for survivors of the ill-fated Burke and Wills expedition of 1861. William Howitt and his family went to the Australian goldfields in the early 1850s, and the sons established themselves as competent explorers and surveyors. H. C. Howitt arrived in Canterbury in 1860 when interest in the West Coast goldfield was growing.

In "The Story of Canterbury", A.H. Reed tells the story of Hewitt's death.

"In 1862 the Canterbury Provincial Council resolved to have a horse track formed from the Hurunui Plains, over the Harper Pass, to the mouth of the Grey, and Howitt, then twenty five years of age, and inured to hardship, having had experience on exploring expeditions in Australia, was appointed to carry on the work, with three assistants, Little, Miller and Hammett. After cutting the track for forty miles over the Pass down to the Taramakau, they struck across to Lake Brunner, where they pitched a camp, as temporary headquarters. Occasional arduous journeys were made to the coast to replenish stores, but they were well supplied with birds, fish and eels in the vicinity of the camp. In June, (mid-winter) 1863, they were cutting the track along the margin of the Lake, through wet bush and across rugged country. On Saturday 27th June, Howitt, Little and Miller put out in a canoe, to replenish the larder. Soon after the wind rose and continued to blow for a couple of days. When they did not return to camp Hammett supposed they had taken shelter but by Thursday he was very anxious and started on foot to search for them. The way round the lake was through deep bogs in which he sometimes sank to the waist. At last, finding further progress on foot impossible, he contrived to make a raft, on

which he coasted the lake, camping on shore at night. On Friday he found Howitt's swag rolled up in a little tent pitched near the mouth of a stream. He sought right round the lake but found no further trace of the missing men. It was not until some weeks later that Hammett reached the coast, exhausted and almost demented. The bodies of the three men were never found."

Little more than month before the events related above, the starved and exhausted Jakob Lauper had arrived at Howitt's camp at Lake Brunner to report the drowning of the surveyor, John Henry Whitcombe, while they were attempting to cross the Taramakau river after their fearful journey over Whitcombe Pass and down the Hokitika River to the mouth of the Taramakau.

Howitt was able to assist Lauper to make his way over Harper pass on his journey back to Christchurch.

In 1865 William Howitt in his "The History of Discovery in Australia, Tasmania and New Zealand", recounts the tragic death of his son.

HUGHES John (1823 - 1870)

Born in the United Kingdom, he completed his education at Dublin University and then went to Kent to assist his uncles, who were surveyors, on a contract for the British Government.

Under contract to Lord Petre, who was a director of the New Zealand Land Company and a considerable land holder in New Zealand, John Hughes with his wife and infant daughter arrived at Wellington in the ship Ajax in March, 1849. After working in the Wellington district, John Hughes and a relative, Thomas Hughes, went to Port Cooper (Lyttelton) in November, 1849 and were given a contract to carry out triangulation and topographical surveys in the district north of Christchurch for the New Zealand Company in connection with the Canterbury Settlement. On the conclusion of this work early in 1853, John Hughes returned to Wellington and was engaged on contract surveys for the Provincial Council. In 1856-67 he was engaged on surveys in the Carterton locality and one of his tasks was to complete a contract survey of the Masterton and Greytown Blocks which had been commenced by William Corbett. This involved the laying out of the townships and the laying out of roads of which the road from Greytown to Masterton is still known as Hughes Line.

In 1860-61 Hughes was working for the Hawkes Bay Provincial Council in the Porangahau district and later he moved to Napier. His licence to survey under the Native Land Act, 1865, was signed by Sir George Grey on 9th August, 1866. Some time before this he had returned to Wellington and was residing in the Ohariu Valley. He died at Wellington on 20th February, 1870, aged forty-seven years.

His son, William Thomas Hughes, and his grandsons L. and V. H. Hughes, and his great grandson, P. V. Hughes, also followed the profession of surveying.

See "The Torlesse Papers" by Dr. P. Maling, 1958 p.113 etc.

"The History of Land Legislation and Settlement in New Zealand" by W.R. Jourdain, 1924 p.242.

"Beyond the Waimakariri" by D. N. Hawkins, 1957 p.14

"Old Greytown" by A.G. Bagnall, 1953.

HUGHES, Thomas William (1856 - 1933)

Born in Wellington, 11th January, 1856, the son of John Hughes the surveyor q.v. Educated at Wellington Boys College 1874-75. He was trained as a surveyor and civil engineer and practised in the Wellington, Nelson and Marlborough districts. He was licensed under the Land Transfer Act on 10th June, 1889 and became a member of the New Zealand Institute of Surveyors in June, 1898. He died at Auckland on 11th January, 1933.

Joined the Lands and Survey Department on 11th November 1889. (New Zealand Gazette, 1913).

?Insert of Information received from Australian Archives ?

HUGHES Thomas

In partnership with John Hughes, who appears to have been a relative, he was surveying in the Wellington Settlement in 1849 when they undertook contract surveying for the Canterbury Association's settlement, assisting in the triangulation and topographical surveys north of Christchurch. His subsequent movements have not been traced. The date of his arrival in New Zealand has not been ascertained but it is probably he who is mentioned in the late Professor John Rutherford's "Founding of New Zealand" based on Mr. and Mrs. Felton Mathew's journals, as being associated with another surveyor named Halls in some of the earliest surveys in the Bay of Islands and Auckland around 1841.

See also "The Torlesse Papers" edited by Dr. P. Maling, 1958.

"Beyond the Waimakariri" by D. N. Hawkins, 1957 p.14.

Humphries, Thomas (1841 - 1928)

When ten years of age he arrived at New Plymouth with his parents aboard the Sir Edward Paget on 26th January, 1851. His father Dr. E. L. Humphries, was Surgeon-Superintendent at Taranaki.

In 1857 Thomas Humphries joined the staff of the Survey Department of the Taranaki Provincial Government under the Chief Surveyor, A. O. C. (Octavius) Carrington.

Throughout the period of the Taranaki War he was a member of Atkinson's Forest Rangers (Taranaki Volunteers) with the rank of Ensign. He achieved prominence as a crack rifle shot. During his military service he remained on the staff of the Provincial Survey. In 1870 he succeeded Carrington as Chief Surveyor, and in 1874 was made Inspector of Native Land Surveys for the General Government, holding the dual positions until the abolition of the provinces in 1876, when he was appointed Chief Surveyor for Taranaki under the General Government, and in 1885 Commissioner of Crown Lands as well.

The initiation of a general survey system for New Zealand in 1876 required a knowledge of the fundamental sciences of geodesy and astronomy, and Humphries was one of those to whom such work made a strong appeal, his interest in it never wavering, especially in the practical application of astronomy. The dense primeval forests of Taranaki, on the floor of which the early surveyor busied himself, made astronomical control of his bearings essential for the safety of his work, and

Humphries therefore, in a booklet he prepared for the benefit of his professional colleagues, explained the bare essentials for doing so in the simplest effective methods.

His "Testing Traverse Bearings" has been invaluable as the best primary introduction to astronomy for the young surveyor in practice; it was born of struggles with solemn treatises which took no account of flood and forest and strenuous labour as accessories to observations of stars.

Thomas Humphries was among the first, in 1874, to introduce the use of the steel band in place of the Gunter's chain.

In 1882 he undertook for the British authorities the observation of the transit of Venus; and in 1885 he was allotted the photographic work of the total eclipse of the sun. He also engaged in close and accurate observational work in Taranaki, determining differences between the astronomical and geodetic latitudes of a number of stations, revealing very considerable differences, and opening up thus the problems of deflection of the plumb-line, which in New Zealand still require a systematic study. His work was recognised by election as a Fellow of the Royal Astronomical Society.

As a land administrator he saw Taranaki gradually settled and was unceasing in his efforts to give full effect to the policy of the Government in placing men of limited means on virgin land, mostly bush-clad, and no effort on his part was spared to establish selectors of Crown Lands on suitable holdings and to prepare the country for settlement on the best lines.

He subsequently held office as Commissioner of Crown Lands at Auckland (1889) Hawkes Bay (1891) Nelson (1897) and Canterbury (1902).

On 1st July, 1906 he was appointed Surveyor General, and he retired on 30th June, 1909, having served for fifty-two years in the Survey Departments of Taranaki and New Zealand.

When the Survey Board of New Zealand was established in 1896, he became a member of the first Board to be set up.

He was a foundation member of the New Zealand Institute of Surveyors and was President from 1910 until 1916. He died on 30th August 1928

See "History of Land Legislation and Settlement in New Zealand" - Jourdain, 1924.

See "The New Zealand Surveyor" Vol. XIII No. 9, September, 1928 (Portrait).

HUNT, George T

Was a survey cadet on the staff of the New Zealand Land Company. He arrived at Port Nicholson in the barque Brougham on 9th February, 1842, and shortly afterwards went to assist Captain Joseph Thomas with the surveys at Wanganui. Subsequently he returned to Wellington and assisted C. H. Kettle with surveys in the Hutt Valley.

HURSTHOUSE, Charles Wilson (1841 - 1911)

Born in Norwich, England, he arrived in New Zealand with his parents on the Pekin, 29th February, 1843. In 1855 he was appointed survey cadet in Taranaki under Mr. Octavius Carrington. In 1860 he was sent with Mr. Carrington to survey the Waitara Block, the ownership of which was disputed among the Maoris and with

the Land Purchase Department. The obstruction of the survey was the immediate cause of the Taranaki war of 1860. From 1860 to 1864 Hursthouse was engaged in the war and then until 1872 he was constructing roads around New Plymouth, subdividing land for military settlers, and other duties in Taranaki.

On 9th March, 1871, he was appointed surveyor to the Public Works Department and was responsible for railway location surveys from Whenuakura to Waingongoro. He also surveyed the route for "Mountain Road" (the main road from New Plymouth to Hawera) and for the Stratford-Opunake Road, which was first known as "Hursthouse's Track". While surveying the latter he met with considerable obstruction from the Maoris who, on one occasion, deprived him of his theodolite which was later returned to him on the intervention of Wiremu Kingi, the paramount chief.

In 1875 he was appointed Resident Engineer, Public Works Department, Taranaki, a position he held until 1878 when he left to go contracting. He became an Authorised Surveyor under the Land Transfer Act, in September, 1878, and in March, 1880, he was constructing roads in the Parihaka district and meeting much resistance from the local Maoris. When a large force of Armed Constabulary Volunteers confronted the Maoris at Parihaka on 5th November, 1881, and arrested the Maori leaders Te Whiti and Tohu Kakahi, it was Hursthouse who acted as interpreter for the Native Minister, the Hon. John Bryce.

In February, 1883, he was engaged by the Government to explore a route for the North Island Main Trunk Railway, between Waitara and Te Awamutu. On the borders of the King Country he met with much opposition from the Maoris and on the 20th March he and his assistant, Robert Newsham, and Maori guide, Te Haere, were captured by an armed party of dissident Maoris led by the fanatical Mahuta. Hursthouse and his companions, with their hands tied behind their backs and their legs bound by plough chains, were imprisoned in a shed where they remained without food or water and suffering the attacks of mosquitoes for more than forty hours while listening to their captors debating as to how they were to be killed. They were rescued by a party of friendly Maoris who overpowered their captors. Among the leaders of the rescue party were notorious Te Kooti and Te Wetere, who had been the leaders respectively of the perpetrators of the Poverty Bay massacre of 1868 and the Puke-aruhe massacre of 1869. Their rescue of Hursthouse was an acknowledgement of their pardon the previous month under the Amnesty Act of 1883.

Subsequently the surveys were allowed to proceed and Hursthouse remained some years in the King Country as Resident Engineer for the northern end of the Marton-Te Awamutu section of the Main Trunk Railway construction.

He then became Engineer of Roads in the Te Kuiti district and in 1901, when the Roads Department was established, he became the first Chief Engineer for Roads for New Zealand, from which position he retired on 31st March, 1909.

During his military service he was commissioned Ensign in the Taranaki Military Settlers in 1866, Lieutenant in the Taranaki Militia in 1869 and Captain in 1881. He was the recipient of the New Zealand War Medal.

He was a member of the Taranaki Provincial Council from 1869 to 1873, and was a foundation member of the New Zealand Institute of Surveyors.

He died at Lower Hutt on 25th February, 1911

Ref. Early New Zealand Engineers. F. W. Furkert, 1953 p. 194

Dictionary of New Zealand Biography. Scholefield.

N. Z. Survey

The New Zealand Wars. James Cowan. Vol. 1 p.175 etc. (photo) (1953 ed.)

South of the Aukati Line. Dick Craig. 1962. Chaps. XVII & XVIII and photo facing 5.

HUTCHISON, William Henry (-1907)

He received his Licence to survey under the Land Transfer Act on 15th December, 1877 and most of his career was served in Otago, where he also engaged in civil engineering. In 1881 he was in partnership with Matthew Begg at Dunedin.

He met his death under tragic circumstances on 5th February, 1907. While bathing at Moeraki Bay he was attacked by a shark. He struggled ashore with great difficulty and die almost immediately from shock and loss of blood.

He was a foundation member of the New Zealand Institute of Surveyors.

See New Zealand Surveyor. Vol. VIII No. 67 March, 1907.

JACKSON, Henry (1830 - 1906)

Educated at York College in England. At the age of fifteen years he entered the Indian Navy as a midshipman and during seventeen years service had attained the rank of lieutenant. During the time he was in the Navy he had charge of the Marine Survey in the Indian Ocean for four years, and as Navigating Lieutenant he surveyed the Coco Channel, being then in command of H. M. Surveying vessel "Krishna".

He had some exciting experiences in the Persian Gulf, where he took an active part in the suppression of slave-trading. At one period he was attached to the Commission for the delineation of the Turko-Persian Boundary, and on one occasion he rode from the head of the Gulf through Kurdistan to Mount Ararat, where the three frontiers, Russian, Turkish and Persian met at that time; and thence to Trebizond on the Black Sea and on to Constantinople where he was engaged for three years completing the plans. On another occasion he narrowly escaped with his life, being warned just in time by his Armenian servant. He had been reconnoitring on the Turko-Persian boundary for three months disguised as a Turk when this event happened. At another time he went from Bushire, on the Persian Gulf, to Sinope on the Black Sea with a Turkish caravan. He also spent a considerable time in India, having been all through the Presidencies of Bombay, Madras, Calcutta and the Punjab.

In 1862 he came to New Zealand on a two years furlough, and during his absence the Indian Navy was abolished. Deciding to remain in the Colony he entered the Provincial Survey Department at Wellington. He was a first class mathematician and he initiated the first major triangulation of the Wellington Province. In 1865 he was appointed Chief Surveyor, in succession to Robert Park. He retired in 1879 and the following year was elected to Parliament as Member for Hutt, but served for only a short time.

He was highly qualified and was an accomplished linguist, having a good knowledge of French, Arabic, Persian and Hindustani.

He died at the Hutt on 19th October, 1906.

(In 1879, mainly on account of his refusal to alter the Wellington (Provincial) system of triangulation from the Magnetic to true meridian, Jackson fell foul of the newly established survey authorities and an official enquiry was held which resulted in his dismissal from the service, see N. Z. Gazette No. 31 of 20th March, 1879. However, on appeal, his dismissal was cancelled, and shortly afterwards he resigned from the Department).

Vide N. Z. Gazette, 1880 No. 96 and p.1476 October, 1880.

JACKSON, John Howard (1847 - 1 916)

Born in Essex, his early education was at Mill Hill School, Saffron Walden, England. He came to New Zealand in 1858 with his parents who settled at Onehunga. He was trained as a surveyor and civil engineer. As a youth he saw service during the Waikato campaign as a member of the Auckland Engineers unit and was the recipient of the Maori War medal. Subsequently he was employed in the Lands and Survey Department as a surveyor in the Waikato district. Authorised Surveyor in January 1878.

In 1873 he was appointed Surveyor in the Public Works Department at Marton, being engaged on the Foxton-New Plymouth Railway construction. In 1876 he was employed by the owners of the Manchester Block - a Special Settlement centred on Fielding - to subdivide and develop this large estate.

In 1881 he moved to Lichfield, near Putaruru, where he was engaged in similar work for an English land company, developing its estates.

After an interlude in private practice at Hamilton he was appointed General Manager of a mining company operating at Lawrence, from which he retired in 1912. The following year he went to Brentford, Ontario, Canada, where he died on 6th October, 1916.

J. H. Jackson was a foundation member of the New Zealand Institute of Surveyors.

See "New Zealand Surveyor" Vol. X No. 16, January, 1917.

"Early New Zealand Engineers" by F. W. Furkert.

JOHNSTON Adam (1839 - 1874)

He was an Assistant Surveyor and Assistant Engineer to the Otago Provincial Government. In 1866 he laid out the town of Roxburgh on the opposite side of the Clutha River from where the first settlement was made alongside the Teviot Junction. In 1868 he was sent to survey Preservation Inlet and made a lengthy report on this work in February, 1869. In April, 1871 he was Assistant District Engineer in the Clutha River district where he investigated and reported on the Ecclefechan works for the improvement of the Clutha River channel. In 1871 also he was preparing railway land plans near Cavisham. In 1874 he was Resident Engineer of the Public Works Department at Tokomairiro in charge of the Lawrence Branch Railway, where he was killed by a horse on 23rd January, 1874.

See also references in "Port Preservation" by A. C. and N. C. Begg, Whitcombe and Tombs, 1973.

JOHNSON, John Grant (1824 - 1873)

His father, Dr. John Johnson, arrived in the Bay of Islands in the ship Westminster, in March, 1840 and attended Governor Hobson as medical adviser, and assisted in obtaining signatures of Maori leaders to the Treaty of Waitangi and in the search for the site for and founding of the capital city, Auckland. In 1841, he was officially appointed Colonial Surgeon Coroner and Health Officer, stationed at Auckland.

John Grant Johnson, like Charles Heaphy, was a competent landscape artist who was trained as a surveyor. In his earlier years in New Zealand he took part in trading activities and in 1852 had a trading station at Tahuna, near the site of the town of Morrinsville. When the Native Land Purchase Department was inaugurated in 1854, with Mr. (later Sir) Donald McLean as Chief Commissioner, John Grant Johnson was appointed a Deputy Commissioner and was responsible for the work in the Auckland and Whangarei Districts. He was also called upon to endeavour to straighten out the various claims to ownership of land in Banks Peninsula. He met the Maori claimants there in June, 1856, but was not able to come to terms with them at that time. Subsequently two Canterbury surveyors, Messrs. W. J. W. Hamilton and Cyrus Davie, were successful in completing the purchase for the Government on the lines suggested by Johnson. Later Johnson left the Department and entered private practice at Whangarei, where he was responsible for many of the town and rural subdivisions during the early period of development of the district.

In 1862 he married Jessie Mair Holman of Whangarei and was consequently related by marriage to two other early surveyors, namely Messrs. Gilbert Mair and William Bedlington. He died in 1873 at the age of 49.

Some of his sketches and paintings of historical interest are deposited in the War Memorial Museum at Auckland.

See article in the New Zealand Herald, 15th June, 1963 by Jeanne H. Goulding. (This has a photo of J. G. Johnson).

JOHNSTON, Robert James (1842 -)

Born 1st June, 1842. He was the first Engineer to the Borough of Greymouth, serving from 1868 to 1885. In 1886 he was appointed Inspector of Public Works in the Greymouth district and his service terminated in the 1887 retrenchment.

He was in private practice in the West Coast and Marlborough districts until 1902, when he went to South Africa.

He was a foundation member of the New Zealand Institute of Surveyors.

JOHNSTON, Thomas Masterman Hardy (1817 – (1894)

Born at Belfast, Ireland, 23rd July, 1817. He was a godson of Admiral Sir Thomas Masterman Hardy, Bart. G. C. B., who commanded the Victory at Trafalgar, hence his names. He was educated at Chelsea and in France. He trained as a civil engineer and surveyor under John Barrow C. E. of Chelsea. In 1843 he was an assistant engineer under Robert Stephenson on the permanent surveys of the Chester to Conway Railway. He next served under Joseph Locke on the Caledonian

Extension and the Central Devon and Cornwall Railways. From 1847 to 1856 he served under I. K. Brunel. He gained much experience in railway, bridge and harbour construction works. In March, 1856 he joined the Madras Railway Company and went to India where he was responsible for numerous engineering projects.

In 1870 he was acting Chief Engineer to the Government of Travancore when he was appointed Secretary and Consulting Engineer in the Public Works Department in the State of Hyderabad. He left India in September, 1872, and after six months in England to recuperate his health, he came to New Zealand. For a brief period in 1874 he was engineer to the Waimate Road Board and then went into private practice in Dunedin as T. M. Hardy-Johnston and Company, Civil Engineers, Architects, Land, Marine and Mining Engineers, with branch offices at Wellington, Invercargill and Oamaru. In February 1876 he surveyed an extension of the town of Clinton. The firm carried out numerous development works. In December, 1877 Johnston became an Authorised Surveyor. In 1885 he was practising in Canterbury with an office in Christchurch. He died at Christchurch on 26th September, 1894.

See "Early New Zealand Engineers" by Furkert, 1953 p.198.

JOLLIE Edward (1825 - 1894.)

He was born in Cumberland. He came to New Zealand in the Brougham which arrived at Port Nicholson on 9th February, 1842 Jollie was a Survey Cadet on the staff of the New Zealand Company.

His elder brother, Francis, also came to New Zealand and was a well known identity at Nelson and in Canterbury, and was a Parliamentarian and for a while a Cabinet Minister.

Edward Jollie assisted with surveys at Wellington and at Nelson. In partnership with Alfred Wills and Andrew Wylie, as contract surveyors, he took part in the preliminary surveys for the Otago settlement in 1846.

In 1849 he served under Captain Thomas, Chief Surveyor to the Canterbury Association. Jollie assisted in the surveying of Sumner and of Christchurch and Lyttelton.

He then followed pastoral pursuits and took part in the search for an overland stock route from Nelson to Canterbury. In 1852 he discovered Jollie's Pass and in partnership with E. J. Lee, in February and March that year, drove the first flock of sheep from Nelson to Canterbury. He then engaged in sheep farming as proprietor of the Mount Parnassus station. While at Mount Parnassus he was gazetted a Magistrate of the Nelson Province and also Acting Commissioner of Crown Lands. In 1861 he sold his interests and bought land at Southbridge in Canterbury, calling his new farm "Beachcroft". He represented the Cheviot electorate in Parliament in 1859-60.

He still engaged occasionally in surveying and entered into a partnership with Samuel Hewlings in 1858. A dispute arose between the Provinces of Canterbury and Otago over the rentals of grazing runs on the border of the two provinces, and Jollie was associated with W. S. Young in defining the boundary which had not previously been surveyed. In 1863 Jollie and Hewlings laid out the town of Temuka for the Canterbury Provincial Government.

In Canterbury he played a leading part in provincial politics and as Provincial Secretary in 1866, 1868-69 and 1870, was three times head of the executive. He

subsequently subdivided his Southbridge property and in 1879 went to England where he stayed for five years. He then returned to New Zealand and bought land at Waireka, near Patea in Taranaki.

He died there on 7th August, 1894.

See "A History of Canterbury' Vol.1 Canterbury Centennial Association. 1957.

See "The Torlesse Papers" Dr. P. Maling, 1958.

JONES, Edgar Chichester (1837 -)

Licensed in April, 1872 under the Native Land Act, 1865. He was born on 16th October, 1837. There is no information as to where he was born or trained, but on 29th June, 1869, he was appointed Assistant Engineer in the Public Works Department at Thames. Five months later he was transferred to the Marine Department. In August, 1874, he was reappointed to the Public Works Department. In 1877 he surveyed the site of the proposed Harbour at New Plymouth. In January, 1878 he was transferred to Wellington and was among those retrenched during the financial depression in 1880. He became Engineer to the Wellington Harbour Board in May, 1881 and served until 1884 when he rejoined the Public Works Department at Wellington, but left the service 16th June, 1884 His subsequent career has not been traced.

See "Early New Zealand Engineers" by F. W. Furkert, 1953 p.200

JORDAN, Thomas Edward

A young surveyor working in the Tauranga district assisting in the surveying of confiscated land, he joined the Volunteer Engineers unit raised by Captain H. L. Skeet and took part in the Bay of Plenty campaign. He was mortally wounded in the action at Te Umu-o-Korongaehe and died on 15th February, 1867.

See "The New Zealand Wars" by James Cowan, 1956 edition pp. 158-159.

KENNEDY, Charles Dugald (1858 - 1929)

He was born and educated at Napier and educated at the Napier Grammar School under the Rev. Mr. Marshall and the Rev. D'Arcy Irvine.

At fifteen years of age he passed the Civil Service Examination and took up the study of surveying, being articled to the well known engineer and surveyor, E. H. Bold, who was subsequently engineer-in-charge of the Telegraph Department at Napier.

In 1877 Kennedy entered the Lands and Survey Department and was working in the King Country when the surveyors were stopped by a party of 80 armed Maoris under Te Rangihwinui Kepa (Major Kemp). Although then only 19 years of age Kennedy was placed in charge of an expedition of 60 armed Maori volunteers and saw a great deal of rough work. He was Gazetted as an Authorised Surveyor in 1878 and carried out surveys in the high back country of Hawkes Bay and in the King Country.

In 1880 he entered private practice, which he continued for the rest of his life, while concurrently acting as consultant to numerous local authorities in the Hawkes Bay Province. His best known work was the reclamation of the land on which Napier

South now stands, and it is generally acknowledged that it was his conception and execution of the plan that made Napier South possible.

He keenly followed the movements and effects of every flood in Hawkes Bay after the disastrous flood of 1897, and during every fresh one he would go out and inspect every part of the district, compiling data on the rise of water, the deposits of silt and the courses of the rivers that has been of inestimable value to other students of river problems since. His treatise on the travelling of shingle in Hawkes Bay is the most valuable scientific work on the problem that exists, and his book on the reclamation of Napier South is widely quoted as an authority.

He was a student, too, of the problem of eliminating salt from the low-lying lands adjacent to Napier so as to make them suitable for farming, and the data he compiled from practical experience on a property in Maraenui Road is amongst the most authoritative there is on the question, and was of great value in dealing with the problem after the earthquake of 1931 raised thousands of acres above sea level in the vicinity of Napier.

Not content with his success as an engineer and surveyor he determined to qualify as a lawyer, and he passed his examinations as a solicitor in 1888 and as a barrister the following year. Shortly afterwards he went into partnership with Mr. H. B. Lusk in the legal business while his brother, Arthur Angus Kennedy took charge of the surveying business.

Mr. Kennedy, as became a citizen of standing, took his fair share in the public affairs of his district. He was for some years on the Napier City Council, he served a term on the Hawkes Bay County Council, and he was Chairman of the Hawkes Bay Rivers Board from 1917 to 1923.

He was an ardent votary of most outdoor sports and excelled in all he took up. He was an excellent rifle shot and in 1893 while in England he won several prizes at the Bisley meeting in competition with some of the best in the British Commonwealth.

He was a foundation member of the New Zealand Society of Civil Engineers (now the N. Z. Institution of Engineers) and a foundation member, also, of the New Zealand Institute of Surveyors.

He died at Napier on 17th January, 1929.

See "The New Zealand Surveyor" Vol. XIV, No. 1 March, 1929.

Appointed Assistant Surveyor - N. Z. Gazette 1878 p.163

KENNY, Thomas Nepean Edward (1840 - 1930)

He was the son of Colonel Kenny, 3rd N. I., and was born at Moulmein, Burma, on July 3rd, 1840. He was educated in England at Norwich Grammar School, Queenwood College, and Hyde House School, Winchester, from which last he passed his military examination and joined the 73rd Regiment in 1858.

He went to India in 1859 to his Regiment at Lucknow and served in India until the Regiment was sent home to England in 1860. He exchanged into the second Battalion of Royal Welsh Fusiliers (23rd) and served at Malta and Gibraltar until 1864. when he resigned his commission and joined his brother Captain Courtenay Kenny, who was sheep farming near Picton in Marlborough.

He joined the New Zealand Armed Constabulary as Sub-inspector, in 1869, and was specially commended in the N. Z. Gazette for his work in building redoubts; he also constructed many of the early roads in the Waikato at this period, and was employed by the Government to survey and report on the Waipa River. He was later stationed at the Waihi Redoubt near Hawera, where he was in charge of the New Plymouth, and later the Thames Districts

He left the Police Force under Government retrenchment scheme in 1880 and took up surveying, obtaining his licence in 1881. He practised in the Ohinemuri and Thames districts until 1887, when he was appointed Clerk and Treasurer of the Ohinemuri County, a position he held until 1908.

He returned to surveying, practising in partnership with his sons, Thomas Willoughby Kenny and Courtenay Kenny, with headquarters at Paeroa, for some years. Later he was practising in Marlborough for a few years, and finally retiring he went to Wellington where he died on 2nd July, 1930.

He was a member of the New Zealand Institute of Surveyors.

See "The New Zealand Surveyor" Vol. XIV No. 8 December, 1930.

KENSINGTON, William Charles (1845 - 1922) I. S. O.

Born in Criccieth, Wales, he was educated at Grosvenor School Bath, and at King's School, Bruton, Somerset.

He came to New Zealand as a sergeant in the Imperial Forces and took part in the East Coast Campaign. He was at Tauranga at the time of the attack on Gate Pa. Subsequently he was granted a commission as Ensign in the New Zealand Militia and received the New Zealand Medal. He joined the Survey Department as a cadet in 1863, in the Waikato district, and in 1866 completed his examinations, qualifying as an Assistant Surveyor. He was engaged as an Inspector of Surveys under the Native Land Act, 1865, and was appointed a special Commissioner to investigate disputes over Native Lands in Hawkes Bay. In 1871 he was Deputy Inspector of Surveys and in 1876 became Chief Draughtsman in the Auckland office in the reorganised Lands and Survey Department.

In 1902 he was appointed Under-secretary for Crown Lands and in 1906 Permanent Head of the Lands and Survey Department. In 1909 he was awarded the I. S. O. and he retired in 1912.

He was responsible for inaugurating the Land Drainage Branch and controlled the Afforestation Branch which subsequently became the State Forest Service.

He died on 20th August, 1922.

He was a foundation member of the New Zealand Institute of Surveyors.

Two of his sons, N.C. and H. M. Kensington, were also members of the Institute.

See "Dictionary of New Zealand Biography", Scholefield.

"History of Land Legislation and Settlement in New Zealand"
Jourdain.

"The New Zealand Surveyor".

KETTLE, Charles Henry (1820 - 1862)

He was born at Sandwich in Kent. He was a mathematics master when in 1839 he decided to emigrate to New Zealand. He sailed in the *Oriental* and arrived at Port Nicholson in January, 1840. On arrival he was employed as a clerk with a firm of shipwrights and engineers until September, 1840 when he joined William Mein Smith's survey staff as Assistant Surveyor.

He explored Porirua, the country surrounding Port Nicholson, and Upper Hutt. In 1842 with Alfred Wills he made a journey round the Tararua Range. Leaving the present site of Foxton on 5th May he reached the Manawatu Gorge on 11th and then traversed the gorge and travelled through virgin bush to the Wairarapa. After two attempts he found a passage from Wairarapa Lake to the Hutt Valley and reached Wellington on 8th June. They made an epic journey through country previously unknown to Europeans. See "N. Z. Gazette".

He returned to England in 1843 and there joined the "New Edinburgh" scheme for the settlement of the Otago Block. He was appointed surveyor and engineer for a term of three years. He returned to New Zealand in 1846 and assembled a party of surveyors and proceeded to Otago Heads. The contract surveyors under his direction then laid out the settlement. His personal contribution was the surveying of Port Chalmers town and the sounding of the harbour, followed by a reconnaissance of the whole block and the setting out of the town of Dunedin.

After completing that task he fluctuated between surveying, politics and farming. In 1851 as Government Surveyor he made two exploratory expeditions westwards of Dunedin, towards central Otago. His work at that time included Deputy Registrar of Deeds. He later took up land at Kaihiku as a sheep grazier. He abandoned sheep farming when his station was declared a "Hundred" and subdivided.

In 1861 he was elected Member of Parliament for Bruce. He was keenly interested in social movements and was a founder and later the president of the Young Men's Christian Association at Dunedin

In 1862 he was appointed Provincial Auditor but died shortly afterwards on 5th June, 1862, the victim of an attack of typhoid fever in an epidemic brought about by the unsanitary conditions in Dunedin caused by the large influx of population at the beginning of the gold rushes.

His son, Nathanea], was a cofounder of the well known firm of Stock and Station Agents in Hawkes Bay, Williams and Kettle. Another son, Charles Cargill Kettle, born 1 June, 1850, became New Zealand's first native-born Supreme Court Judge.

See also "N. Z. Surveyor" Vol. XIX No. 2 August, 1946, p.133.

For biographical sketch see "Contributions to the Early History of New Zealand" by Dr. T. M. Hocken, 1898.

See also "The Life and Works of Charles Kettle" by Margaret J. Martin, an unpublished thesis in the Hocken Library, Dunedin

The following biography that has been struck through has been replaced with the agreement of Mr Lawn by two supplied by Mr Laurie Lee.

KOCH, Augustus Charles Frederick (1835 - 1901)

~~Born in Berlin, Germany. He was a student at the Royal Academy and graduated B.A. at Berlin University. He studied art under Handel, the eminent portrait painter and engraver.~~

~~In the interests of his health he went to sea and became second officer in an East India trader. When the "NOVARA" arrived in Auckland in 1858, bringing the Austrian scientific expedition to New Zealand, Koch was attached to Hochstetter's staff as artist and cartographer during his expeditions in Auckland and Nelson Provinces, and he projected the first map of Auckland. Most of his drawings of that time are in the Colonial Museum at Vienna.~~

~~He remained in New Zealand after Hochstetter's departure and was employed by the Government in surveying, mapping and subdivisional work in the vicinity of Auckland. He introduced the process in photography of printing from negatives and developed photo-lithography.~~

~~He moved to Hawkes Bay where his fellow countryman G. H. Weber, was Chief Surveyor, and became the first Chief Draughtsman in that Province. He prepared the first map of the Province (1874) and produced the first lithographic map of Napier. He next went to the Thames goldfield as a mining surveyor and was then appointed Chief Draughtsman in the Public Works Department and stationed at Wellington. One of his tasks was the preparation for Parliamentary Purposes of the Auckland-Waikato railway maps.~~

~~He died on 31st December, 1902.~~

~~See "New Zealand Gazette" 8th March, 1897 in which August Charles Koch is listed as a Licensed Surveyor.~~

~~—"New Zealand Times" 1st January, 1902, obituary notice.~~

~~"Dictionary of New Zealand Biography" Scholefield.~~

KOCH, Augustus Carl Ferdinand (1834 - 1901)

Born in Berlin, Germany, 25 Mar 1834. He was a student at the Royal Academy of Arts and graduated B.A. at Berlin University in 1850. He studied art under Mandel, the celebrated portrait painter and engraver. On medical advice he left Berlin in 1851, journeyed through the Mediterranean to London, and then followed a seafaring career for several years, in the course of which he visited Auckland in 1855 in the 'Egmont'. In 1858, again in the 'Egmont', he returned to Auckland with the intention of settling permanently.

He brought with him a small lithographic printing press with which he earned a living for a while. In 1859 he was engaged by the Auckland Provincial Government as draftsman and meteorological observer to Dr F. v. Hochstetter's exploring expedition, and later in the same year he was appointed Chief Draftsman in the Survey Office of the newly-formed province of Hawke's Bay. **He held this position for ten years, doing a small amount of survey work as well.** * He also assisted in the formation of a volunteer corps in Napier, and was awarded the New Zealand War Medal for his part in leading an expedition against Te Kooti.

In 1870 he left Napier and joined Mitchell and Baker in business as mining surveyors on the Thames goldfields, but the venture was not successful. In 1871 he joined the Public Works Department in Wellington as a draftsman. He prepared a map of New Zealand on 1:1,000,000 which was used by the Survey Department, when it was established in 1876, as the base for its maps. In 1887 he was dismissed during a period of retrenchment, and earned a living by illustrating technical journals and books. In 1898 he was reemployed by the Public V Department as a temporary draftsman.

He died 31 Dec 1901.

— Family information; P. W. D records; Scholefield; N. Z. Times 1 Jan 1902.

* The section in red appears to be crossed out in L. P. Lees biography.

KOCH, August Charles (1869 -)

Son of Augustus Carl Ferdinand Koch.

Granted certificate as surveyor, N. Z. Gaz. 1897, p.1167.

His granddaughter (Mrs Shirley Usher, 222 Toupehi Rd.

Turangi) supplied the following note to the Alexander Turnbull Library in 1979:

A. C. Koch is my maternal grandfather and was in charge of a survey party at the age of 19 working between Fielding and Taihape. At some stage he was working around Tokaanu and inland Waihi as he referred to the Waihi near Tokaanu. As he was born in 1869 this must have been around 1880. I also believe he did survey work on the Taihape-Napier road (Gentle Annie). As he spoke about the Rangipo Desert we have wondered if he was involved with the formation of the Desert Rd.

In 1899 he transferred to the Railways Department and for thirteen years was District Engineer in Wellington. Then went to Auckland and surveyed the railways waterfront deviation. When war broke out in 1914 this deviation was shelved, although the survey was completed. Then to Wanganui where he was District Engineer. Around 1920 for a short time he was District Engineer in Dunedin before in 1920 moving to Auckland as District Engineer. Retired about 1924. His name is mentioned either in the Bogle book Links in the Chain or the book written on the Main Trunk Railway. He was for a while living at National Park and was living at Poro-o-tarao where he supervised the railway tunnel. Before living at Poro-o-tarao he was at Te Kuiti. I am not at all sure of the correct chronological order of these stays.

He married Ethel Sophie Beale (whose father was the 4th Mayor of Hamilton) 1894 or 1895.

LANGMUIR John (1855 - 1916)

He was born at Melbourne and arrived in New Zealand when seven years of age.

Early in 1874 he joined C. W. Adams' Survey party in Otago as a cadet and towards the end of 1876 he qualified as a surveyor and was appointed a Staff Surveyor, and seven years later he became District Surveyor. In March, 1902, he was promoted to Chief Draughtsman at New Plymouth.

He specialised in precise surveying and in January, 1905, was transferred to Auckland as Inspecting Surveyor, and carried out the Standard Survey of the City of Auckland and the adjacent suburbs. He was also responsible for the measurement of the baselines for checking and extending the triangulation of the North Island. Five of these are mentioned in the Surveyor General's report of 1912-13 in which it is stated - "in regard to the accuracy of our baseline measurements ... I feel sure that the New Zealand work will stand comparison with that carried out in any part of the world". Details of these baselines are given in Appendix III p.22 of the report which clearly demonstrate the great accuracy of Langmuir's work.

In January, 1913 he was placed on the staff of the Head Office of the Lands and Survey Department as Inspecting Surveyor. Having a preference for geodetic work he had declined promotion to the office of Commissioner of Crown Lands or Chief Surveyor.

He was a foundation member of the New Zealand Institute of Surveyors.

He died on 9th March, 1916.

See "New Zealand Surveyor" Vol. X No. 13 March, 1916.

LESSONG Leopold (1825 - 1896)

He was born at Cassel, (Hesse) in Germany about 1825.

He took his degree of Doctor of Mathematics at Magdeburgh University when 19 years old. In 1848 he took part in the revolution provoked by the imposition of unjust taxation. During this uprising he became acquainted with Karl (or Charles) Herman Weber, afterwards Chief Surveyor of Hawkes Bay. In 1852

Lessong left Germany with a cousin, Julius Seehof, and went to Melbourne where they established a business as general merchants. After a few years Lessong left to join the survey staff in Hamilton, Victoria, where he gained a knowledge of practical surveying.

When the West Coast gold rush commenced he went to Sydney and bought survey instruments to enable him to come to New Zealand as a surveyor.

He was engaged in surveying in the Waikato District at the time of the Waikato War. Subsequently he went to Taranaki to assist in the surveying of the confiscated territory. On one occasion the Maoris drove the survey party out of the bush and for a while prevented the survey. About 1876 Lessong went to Napier, and he practised in the Hawkes Bay district until his death which occurred on 3rd May, 1896.

He was also known as an enthusiastic and able chess player.

He was a foundation member of the New Zealand Institute of Surveyors.

Appointed a Goldfields Surveyor and Mining Surveyor Auckland Provincial Gazette, 1868.

LEWIS Charles

A son of Henry Lewis, the former Chief Surveyor of Nelson Province, Charles Lewis spent most of his professional life in the western districts of the Province. He was stationed at Collingwood where he practised as a licensed and authorised surveyor.

Early in his career in 1875 he laid out the village of Ferntown. Another of his surveys in 1882 was the making of a reconnaissance survey to explore the possibility of constructing a road from Collingwood via the Aorere valley and across the ranges to the township of Karamea on the western coast. The following year he carried out a triangulation survey of the region. The members of his party on this occasion were H. P. Washbourne, A. Berry and J. Hargreaves. Washbourne has left a written account of the hardships endured by the party in the course of the survey. Beset by foul weather in the densely forested region and hemmed in by flooded streams, they were never dry, day or night. Cut off from food supplies they were badly weakened by starvation and their clothing was in rags by the time they managed to make their way back to Collingwood.

The roadline was eventually laid out in 1888 by J. B. Saxon and Lewis supervised the cutting of the track which is now known as the Heaphy Track.

Living as he was in the vicinity of Nelson's famous "mineral belt" Lewis became interested in mineralogy and he collected more than half a ton of specimens of various minerals to be found in the district. These were tabulated and prepared for display and in 1885 he presented the collection to the Collingwood Institute and Library. Unfortunately the building and the collection were destroyed by fire in 1897.

Charles Lewis was a foundation member of the New Zealand Institute of Surveyors.

See also "Collingwood. A History of the Area from earliest days to 1912" by J. N. W. Newport, 1971 (Caxton Press).

"Nelson Pilgrimage" by A.H. Reed, 1965 pp. 73-88
- the story of the Heaphy Track.

LEWIS Henry

Henry Lewis in 1855 was a surveyor on the staff of the Nelson Provincial Survey Department. In 1860, he was engaged in exploring for a suitable route for a road to connect the town of Nelson with the goldfields that were opening up in the south-western part of that Province. In April, 1860, with Christopher Maling and D. Stewart, he explored the headwaters of the Wauau-ua, Boyle and Lewis Rivers and discovered the Lewis Saddle that was the key pass to opening up a route to the West Coast, Nelson and Canterbury.

A century later, in 1961, the Nelson Committee of the National Places Trust erected a commemorative plaque at the summit of Lewis Pass. This plaque was unveiled by Mr. J. T. Lewis, a great-grandson of Henry Lewis. The names of Maling and Stewart and also W. L. T. Travers and John Rochfort all of whom had assisted Lewis in the discovery of the Pass, are also inscribed on this plaque.

Henry Lewis succeeded Thomas Brunner as Chief Surveyor for the Nelson Province in 1866 and on his retirement in 1872 was succeeded in office by his son-in-law Mr. (later Sir) Arthur Dudley Dobson, the discoverer of Arthur's Pass, on the route from Christchurch to Greymouth.

See "The Amuri. A County History" by W. J. Gardiner, 1955.

"The Reminiscences of Arthur Dudley Dobson", 1930. etc. etc.

LEWIS, Henry Jonathan (1848 – 1933)

Son of Henry Lewis, the Nelson Provincial Surveyor q.v. He joined the survey staff of the Nelson Province in 1863.

His cadetship was served in the office of the Nelson Provincial Survey Department for three and a half years, and then he was Draughtsman and Mining Surveyor on the Survey Staff of the Nelson and Canterbury Provinces until his appointment as Assistant Surveyor on the Canterbury staff in 1874. He went over to the Lands and Survey staff in 1876 on the abolition of Provincial Government and remained with the Department until the end of April, 1878 when he went into private practice. He became an Authorised Surveyor in February, 1883. He surveyed at Canterbury, Wanganui and Auckland and rejoined the Lands and Survey Department in the Gisborne Office, as Land Transfer Draughtsman.

He was a foundation member of the New Zealand Institute of Surveyors.

He died in 1933.

See "The N. Z. Surveyor" Vol. XV No. 7 November, 1933.

LIGAR, Charles Whybrow (1809 - 1881) (Colonel, New Zealand Militia)

C. W. Ligar, civil and military engineer, was born in 1809 at Ceylon where his father was stationed with his regiment. He was educated at the Royal Military College at Sandhurst and received a commission in the Royal Engineers, but shortly afterwards resigned. He was employed on the Ordnance Survey of Ireland until 1840 when he was appointed by Lord John Russell, Minister for the Colonies, to be Surveyor General of New Zealand.

Ligar and his survey staff arrived at Wellington from Sydney on 8th December, 1841 in the Brig Antilla. William Spain, Land Claims Commissioner, Thomas Cass and Samuel Hewlings, surveyors, were fellow passengers. They had left Portsmouth on 21st April, 1841 in the New Zealand Company's ship Prince Rupert. This ship was wrecked on September 4th near Capetown, with the loss of one life. Some of the survivors stayed in Cape Colony and the rest came on to New Zealand in the Antilla.

Ligar superseded Felton Mathew as Surveyor General because the appointment of the latter as Acting Surveyor General, by Governor Gipps in Sydney, was regarded by the Colonial Office as a temporary appointment.

A great deal of Ligar's work in New Zealand was in connection with the acquisition of Maori Land for European settlement. Among other matters he assisted in the finalising of the purchase of the Wairau land in Marlborough after the disputed ownership between the New Zealand Company and the Ngatitōa had resulted in the massacre at Tuamarina in 1843. During the campaign in the Bay of Islands in 1845-46, against the rebels led by Hone Heke, he was a Colonel in the New Zealand Militia.

In 1846 to explore the possibility of an overland route from Wellington to Auckland, Ligar and W. B. White, Sub-Inspector of Armed Constabulary, walked from Wellington by way of Otaki, Manawatu, Wanganui, Patea, New Plymouth, Mokau, Te Kuiti, Ngaruawahia and Tuakau, most of the itinerary being at that time destitute of European inhabitants. On 26th November, 1846, after visiting the Waikato district to select a route for a road in that direction to connect Auckland and Wellington, Ligar reported to Governor Grey that the road would strike four navigable rivers and give

direct communication for the Matamata tribes (under the notable chief Wiremu Tamihana Tarapipipi Te Waharoa) with Auckland. Te Wherowhero (later to become the Maori King) had promised to give up tapus and secret places, where necessary, for the purpose of the road.

After the establishment of Provincial Government in 1853, when each Province had its own Survey Department, Ligar seems to have had a roving commission as Surveyor General for several years. Jourdain in his "History of Land Legislation and Settlement in New Zealand" (p.204 says "he (Ligar) was Surveyor General until control of surveying devolved on the Chief Surveyors of the several Provinces. In the early days of the Colony the Surveyor General had many extra duties, and a notice in the Gazette of the 16th November, 1848 notifies his appointment as a member of the Legislative Council of New Ulster; though, as the Council's term of office was of short duration, it does not appear that he acted for more than a brief period. A further notice in the Gazette of 18th February, 1856, gave him the additional appointment of Commissioner under the Crown Titles Ordinance (New Ulster); and it is probable that it was soon after this latter date that he relinquished the position of Surveyor General and proceeded to Victoria, becoming Surveyor General of that Colony". This was shortly after the Victorian goldfields had been opened up.

In the latter part of 1856 Ligar was Chief Surveyor for the Province of Southland, and in that capacity approved the survey plans of the town of Campbell Town (now Bluff). In 1856 also, he became a runholder of the Blackmount sheep station in the Waiau district of Southland. He also made an official visit to Melbourne to attempt to attract the capital of Australian grazier investors in the development of the hinterland of Southland and Otago. Also in 1856 he reported the existence of gold-bearing sands in the Mataura River.

Evidently while in Melbourne he paved the way for a transfer to that Colony where he soon became Surveyor General, from which office he retired in 1869. It was during his term of office in Victoria that the ill-fated Burke and Wills expedition of 1860-61 took place and Ligar was an ex-officio member of the organising committee.

After his retirement he returned to Europe and after residing for some time in England, Germany, Morocco, Algeria and Spain, he finally settled down in Texas, where he embarked on stock raising. He died in February, 1881.

References:

- By Royal Appointment, Surveyor General of New Zealand, 5th February, 1841
- Gazetted Surveyor General of New Zealand, Auckland, 28th December, 1841.
- Appointed Commissioner of Land Claims 27th January, 1846 under N. Z. Ordinance, Session 1, No. 2, 1841
- Appointed Member of Legislative Council. N. Z. Gazette, 16th Nov 1848.
- Appointed Commissioner under Crown Titles Ordinance, Session 10, No. L 18L (New Ulster) vide Gazette 18th February, 1856.
- Obituary notices: New Zealand Herald, 15th February and 4th March, 1881

LOCKE Samuel (1836 - 1890)

Born in Norfolk, England he was trained as a surveyor before coming to Auckland in 1853. He engaged in surveying and employed Maoris from whom he learned their language in which he became proficient. In 1859 Donald McLean appointed him as a surveyor in the Native Land Purchase Department as District Surveyor in Hawkes Bay. During the Hau Hau rising he raised a native contingent under Whanga and Kopu and with the help of fifteen Europeans defeated the enemy at Wairoa River. It was on his advice that the sale of firearms and ammunition to the natives of the East Coast and Poverty Bay was made illegal in 1864.

In 1869 he joined the Lands and Survey Department of the General Government.

He was a member of the Hawkes Bay Provincial Council for Napier Town, 1866-69, and was appointed Resident Magistrate and Officer in Charge of Native Affairs on the East Coast. During 1870-71 he acted for the Crown in the purchase of the Seventy Mile Bush (Southern Hawkes Bay) of 400,000 acres, part of which was subsequently settled by immigrants from Scandinavia. He and his father-in-law (Joseph Rhodes of Napier) leased

Paramata (Tolaga Bay) in 1868, and in association with W.F. Hargreaves in 1874 he held the Waikohu Run, and in 1878 he acquired part of the Makauri Block near Gisborne.

In 1873 he was instrumental in settling a dispute between the Wairoa tribe and the Ureweras.

He was elected to represent the East Coast in Parliament and held the seat from 1884 until 1887.

He took a keen interest in the promotion of education among both races.

He died at Auckland in April, 1890.

See "Historic Poverty Bay and the East Coast" 2nd Edition, 1966 p. 355 etc. (By J. A. Mackay).

New Zealand Dictionary of Biography. Scholefield.

LONG, Rowland Campion

Licensed under the Native Land Act, 1862, vide N. Z. Gazette 29th October, 1865. While surveying a block of land at Hihutaia for Mr. H. Alley in 1879 the work was interrupted by a party of Maoris who claimed to have an interest in the land under survey. The legal owner, Mr. Alley, had to institute legal proceedings before the survey could be completed. See - New Zealand Herald, 5th November, 1879.

LORD, Edward Iveagh (1843 - 1911)

He was born at Richmond, Tasmania and educated at Hobart High School. He was articled to a firm of Civil Engineers and passed the qualifying examinations. He came to New Zealand in 1864 and was engaged in the surveys for military settlement in the Waikato. In 1866 he was on the West Coast of the South Island and was employed by the Canterbury Provincial Council to lay out 200 miles of tracks for the gold prospectors, in some of the most difficult country in New Zealand. On completion of this work he joined the Public Works Department and in 1875 he

was transferred to the Lands and Survey Department as District Surveyor, Hokitika and Greymouth, which position he held for ten years when he commenced private practice. In 1891 he held the position of Borough Engineer of Greymouth, concurrently with his private practice. In 1899 he relinquished private practice as municipal engineering fully occupied his time.

He was a member of the Institute of Mining Engineers, and also of the Institute of Municipal and County Engineers.

He was a foundation member of the New Zealand Institute of Surveyors.

He died at Greymouth on 21st March, 1911, a few months after his retirement.

See – Early New Zealand Engineers by F. W. Furkert, 1953, P 204

Cyclopaedia of New Zealand, Vol. 5 p 550, for a photo.

LOWE, John Henry (1841 -1906)

Born 22nd November 1841 and educated and trained as a civil engineer in England. In 1864 he arrived at Nelson. He was licensed to survey under the Native Land Act, 1862 - vide N. Z. Gazette 12th October, 1865. On 30th March, 1867 he was appointed by the Nelson Provincial Government as District Surveyor of the Nelson South West Goldfields. (There was another goldfield in the Marlborough Sounds region). In September, 1868 he was appointed District Engineer. On 1st April, 1869 he became Resident Magistrate and Goldfields Warden, which appointments were under the General Government and from which he resigned in February, 1870. He joined the Public Works Department in 1872 as Assistant Engineer and was promoted Resident Engineer at Oamaru in 1873, on railway construction. Then he served at Wellington and Christchurch and Dunedin. On 26th April, 1892 he was Chief Engineer, Working Railway Department, at Wellington. He resigned in July 1899 and took up work as a missionary in India. He lived later in England and died there in 1906.

Licensed under Native Land Act, 1862 - October, 1865.

He was elected M. I. C. E. in 1877.

LOUCH, John Da Vinci (1854 – 1937)

Born in Ireland 25th July, 1854 and trained as a Surveyor and Civil Engineer by his father Mr. Fitzgibbon Loach C. E. He came to New Zealand in 1875 and was associated with Vesey Stewart's emigrants at Kati Kati in the Bay of Plenty. He obtained work as a surveyor in the Public Works Department, being engaged on Auckland defence works. In February, 1886 he was employed in surveys for the North Auckland railway under Mr. Samuel Harding until his retirement on 31 at July owing to the retrenchment caused by the financial crisis in the national economy. He won a competition arranged by Dr. (later Sir) John Logan Campbell for the best design for laying out his property at One Tree Hill, part of which in 1902 Sir John Logan Campbell gave to the people of New Zealand as Cornwall Park. He was reappointed to the Public Works Department for general work in the Auckland district in November, 1889, and in October 1891 was on the Whangarei-Kawakawa Railway. Three years later he was on railway works in the South Auckland district and became Assistant Engineer to the Eketahuna-Woodville Railway Works. On 6th March, 1898, he was allocated to the completion of the north end of the North Island Main Trunk Railway.

On 1st July, 1901, he was promoted Resident Engineer being in local charge of the construction until the rails met between Auckland and Wellington.

On 20th August, 1908, he was appointed District Engineer at Wellington, where he retired on 24th April, 1920. He died at Palmerston North on 2nd April, 1937.

He was licensed under the Land Transfer Act, 1885 on 28th April, 1886.

LUFF, George Andrew Middlemass (1862 - 1938)

Born at Napier, 1st March, 1862. Completed his education at Kings College, London and commenced studying engineering under Messrs Reed and Sons, of Brighton, in 1878, but returned to New Zealand in 1879, where he joined the Public Works Department in 1886 he was appointed Assistant Engineer in local charge of railway construction between Mangamahoe and Eketahuna. In 1891 he was elected A. M. I. C. E, and continued on railway construction from Eketahuna to Woodville, In May, 1893, he joined the staff of Wellington City Council as principal Assistant Engineer.

In 1898 he entered private practice but until 1909 he alternated between private practice and local body engineering. In 1909 he became Assistant Engineer Public Works Department in charge of construction of the Domett-Parnassus section of the South Island Main Trunk Railway. From 1911 he engaged in engineering and surveying in a private capacity, in the Fielding district. He died at Fielding on 13th September, 1938.

He was a Licensed Surveyor, under a licence issued by the New Zealand Survey Board.

LUSK, Daniel Henderson (1833 - 1921) Major in New Zealand Militia.

Born in Renfrewshire, Scotland in 1833.

Came to New Zealand in 1849 as a survey cadet on the New Zealand Company's staff and assisted with the surveying of Christchurch and surrounding district. Later he went to the Auckland Province and in 1856 took up land near Waiuku. He also did some survey work for the Provincial Government. When war broke out in Taranaki in 1860 he was active in organising local defence corps. Due to his efforts the Forest Rifles Volunteers Corps was formed with three companies, one each at Mauku, Waiuku and Pukekohe. As Lieutenant he commanded the Mauku Company and subsequently he commanded the corps.

The Forest Rifles took part in several engagements in which, like their contemporaries the Forest Rangers, they fought with distinction, particularly at the battle of Bald Hills near Mauku on 22nd October, 1863.

When General Cameron's forces advanced into the Upper Waikato, Lusk joined as a Captain in the Transport Corps. When the supply steamer "Avon" sank in the Waipa River, temporarily blocking river transport, Captain Lusk, with a company of Militiamen succeeded in getting commissariat supplies through to the troops at Te Rore by rapidly cutting a pack-track from Raglan Harbour over the ranges to Waipa and kept the army supplied until the "Avon" was replaced.

He was present at Rangiriri and Orakau and other important engagements during the war, and when the Waikato campaign concluded with the fall of Orakau Pa and large tracts of Maori land were confiscated in 1865, he was one of the surveyors engaged in surveying the confiscated land on which to place military settlers. With the rank of Major he commanded the Volunteer corps in the district to the south of Auckland until 1878.

He also took part in local body affairs being the Chairman of the first Mauku Road Board in 1872 and subsequently, having taken up land in the Waitomo district he became the first Chair man of the Waitomo County Council when the County was established in 1905.

He was a member of the Auckland Provincial Surveyor's Association when it was established in 1865. Licensed under Native Land Act, 1862. N. Z. Gazette, 11th May, 1865.

In February, 1889, he became an Authorised Surveyor under the Land Transfer Act of 1885 and in June, 1893, he was appointed to the staff of the Lands and Survey Department at Auckland as Assistant Surveyor and Crown Lands Ranger for the Thames County. His principal tasks other than surveying were the appraisal of the kauri timber resources on the Crown Lands in the Thames Coromandel and Ohinemuri districts, and assessing the very considerable amounts of timber, running into millions of board feet, that had been stolen by some of the timber companies. He was instrumental in recovering a considerable amount of the revenue of which the Department had been defrauded. He remained with the Department until well over the retiring age limit and eventually retired at the end of 1903.

See "The Defenders of New Zealand" by T. W. Gudgeon, 1887 pages 111-117 for biographical notes and portrait.

McARTHUR, Duncan William (1848 - 1922)

Born at Oban, Scotland 13th March, 1848 Came with his parents to Dunedin in 1859. They moved to Invercargill where he served his articles under his older brother James A. McArthur, and qualified as a surveyor. He also studied engineering under W. N. Blair., the Provincial Engineer in Dunedin. About 1872 he was employed by Brogden and Son, contractors for railway construction in various parts of New Zealand, and he was engaged on railway work on the Dunedin-Invercargill line. In 1874 he was Resident Engineer of Public Works in Westland, stationed at Greymouth. In 1879 he returned to Invercargill and entered private practice as Engineer and Surveyor in partnership with his brother, John D. McArthur. He practised in Southland and for a time in Victoria, Australia. In 1895 he returned to New Zealand and became engineer to the Ohinemuri County. He was appointed Borough Engineer to Waihi in August, 1903, a position he held until 1912, when he again took up private practise, engaging in mining engineering and general practice in the Coromandel and Ohinemuri districts. He moved to Auckland in 1912 where he died on 13th March, 1922, his 72nd birthday.

He was elected A. M. I. C. E. in 1882 and he was a foundation member of the New Zealand Institute of Surveyors. Became an Authorised Surveyor in September, 1878.

McARTHUR, James Arthur (1837 - 1898)

Born in Oban 21 at March, 1837 and educated there and in Glasgow. He came to Gabriel's Gully in 1861. He was appointed Assistant Surveyor, Invercargill in December, 1861 and subsequently promoted District Surveyor, Invercargill. He suffered a serious accident in 1869 which prevented him from engaging in field work and he became Chief Clerk and Draughtsman in the Land Transfer Office at Invercargill. In 1875 he became Office Engineer of Public Works at Dunedin, a position he held successively at Auckland and at Head Office at Wellington. He became an Authorised Surveyor in December, 1877. In 1896 he was acting Under-Secretary of Public Works, during the absence of Mr. H. J. H. Blow. He retired on 9th June, 1898 and died ten days later.

McCLURE, Gordon Hurrell Morland (1858 - 1948)

Born in London, he was a son of Dr. G. McClure who came to New Zealand in 1863 as Surgeon to the Province of Southland. After private education G. H. F. McClure began his professional career in 1875 in the civil engineering branch of the Otago Provincial Railway Department. On the dissolution of Provincial Government he transferred to the newly established Lands and Survey Department. In August, 1877 he was appointed survey cadet to Mr. James Hay and he qualified as a surveyor in 1880 and was transferred to the Canterbury district. His first assignment was Banks Peninsula on settlement surveys and then he carried out extensive triangulation surveys in the high country extending to the summits of the Southern Alps. A number of the stations were at elevations of from 7000 to 9000 feet and at times the work was dangerous. On at least one occasion he nearly lost his life through falling down a crevasse. Following the passing of the 1892 Land Act he was engaged in subdividing the large estates that were taken over by the Crown, the first of which was the Cheviot Estate. He was appointed a District Surveyor in 1892, and in 1894 he carried out the Standard Surveys of Christchurch and Timaru and then after a brief period on the West Coast became Chief Draughtsman at Christchurch.

He became Chief Surveyor and Commissioner of Crown Lands for Westland in June, 1909 and held the same offices in Southland - January, 1912 to October, 1915; and Wellington - 1915 to August, 1922, when he retired after forty-five years in the Lands and Survey Department.

He was a foundation member of the New Zealand Institute of Surveyors.

Refs. "New Zealand Surveyor" Vol. XIX No. 7 p.535.

"Cyclopaedia of New Zealand" Vol. 3 p.148

McCURDIE, William Duncan Ross (1857 - 1948)

Born near Ayr, Scotland on 30th November and was educated at Minishant School and Glasgow University. He came to New Zealand with a letter of introduction to the Surveyor General, James McKerrow from Sir James Fergusson, a former Governor of New Zealand. He was appointed as assistant to Mr. W. H. Skinner in Taranaki. He had previously passed the British Civil Service Examination, coming fifth on the list. He decided to take the New Zealand Civil Service Examination, so he went to Dunedin and took classes at the Otago University and passed the examination at the top of the list. He then became a survey cadet in the Survey Department under Mr. C. W. Adams, and in due course passed the Authorised Surveyor's Examination. He

then was engaged for some time in the difficult Catlins Country, obtaining an extensive experience over a period of ten years. In 1898 he moved to North Otago in connection with the subdivision of a number of large estates which the Government had purchased for closer settlement. In 1899 he was given leave to go to Britain and the U.S.A. to get wider experience in engineering.

Four years after his return he entered the service of the Dunedin City Council on 2nd October, 1905 and became City Engineer on 8th March, 1911. From the position he retired on 29th, February, 1924. Subsequently he was engaged as a consultant by the Te Awamutu Borough Council, and he died there on 22nd May, 1948.

He was a foundation member of the New Zealand Institute of Surveyors.

McDONALD, AUGUSTUS VANZANT (1842 - 1912)

Surveying in Canterbury in 1873. (Book 47/4 Christchurch Survey Office).

Born at Sholapore, India. He was educated in England and in 1858 was apprenticed to mechanical engineering, and in 1860 he was in the drawing office of J. Whitworth and Co. In 1861 he was articled to C. Sacre, M. I. C. E. for three years, mostly in the workshops of the Manchester-Sheffield Railway. In 1864 he entered the drawing office and in 1865 he was transferred to the survey branch on extensions of the Manchester-Sheffield and Lincolnshire Railway. From 1866 to 1867 he was Engineer on the Tinsley and Rotherham Branch, and in 1869 he came to New Zealand. On 8th August, 1871 he was associated with W.R. Bray in estimates for the Malvern tram or railway and the Oxford and Eyreton tram or railway. The following year he was appointed District Engineer to the Canterbury Provincial Council. In July 1874 he joined the General Government as Assistant Engineer, Public Works Department, on railway extensions. In 1875 he was gazetted General Manager of the Auckland and Mercer Railway, an office he held until 1909. This was under the control of the Public Works Department until the Working Railways Department was formed and then under that Department.

He was elected M. I. C. E. on 30th May, 1876.

He died in Te Awamutu on 7th October, 1912.

He claimed to be a descendent of Flora McDonald, the heroine of Prince Charles' escape after Culloden.

See 'Early New Zealand Engineers' by F. J. Furkert, 1953 p.211.

McGEORGE, Leslie Duncan (1854 - 1939)

Born in Adelaide, South Australia, 29th January, 1854. Educated at St. Peter's College, Adelaide. He commenced his training as a surveyor under G. F. Richardson in 1871 and subsequently with the Public Works Department in South Australia, engaged in railway location and engineering works. In 1875 he came to New Zealand and worked under the Otago Provincial Surveyor, William Arthur, on railway location and construction in Southland. The following year he was transferred to Cromwell as District Engineer for Central Otago and with the abolition of Provincial Government that year he became County Engineer to Vincent County, an office he held until 1902, when he left to enter private practice in Dunedin and later at Timaru. He qualified as an Authorised Surveyor in June, 1883. In 1912 he joined the Westport Coal Company as engineer and retired in 1925. During his career he had

been responsible for the construction of many miles of roads and railways and of numerous bridges in the development of Otago and Southland. When he retired he went to live in Melbourne where he died on 5th September, 1939.

McINTOSH, Charles Hunter

Arrived at the Bay of Islands in the "Westminster" 17th March, 1840. Surveyor in Auckland District in 1855. Listed in Auckland Electoral Roll, 1855. He was on the staff of the Native Land Purchase Department and in 1865 he was one of the surveyors engaged in surveying the confiscated land in the Waikato district.

McINTYRE George (1844 – 1934)

Born at Orilla, Ontario, Canada, on 9th April, 1844 he went with the family to England in 1852, where he attended Manchester Church Grammar School (Cheetam's Foundation), and when the family moved to Launceston, Tasmania, where his father was Incumbent of Deloraine. He completed his education at Launceston. He entered the Survey Department at Hobart, afterwards being transferred to the Land Transfer Office there as Draughtsman. Shortly afterwards he qualified as a surveyor and obtained an appointment by the Surveyor-General as a Government Surveyor.

He came to Canterbury in 1866 where he worked on the staff of Mr. S. Hewlings who held a contract from the Provincial Government for the survey of Crown Lands sold between the Rangitata River and Waitaki River.

He had learned Pitman's shorthand at Hobart and had had some practice as a reporter of Parliamentary debates. In 1867, when the New Zealand "Hansard" was inaugurated by the Hon. E. Stafford, George McIntyre applied for and obtained appointment as a member of the staff, returning to his survey work in South Canterbury for the recess. He served on the staff for five consecutive sessions.

In 1869 he was appointed to the staff of the Engineer-in-Chief for the Thames Goldfields, where he made the first map showing all mining leases etc.

He returned to Wellington for the 1870 session during which the Land Transfer Act was passed, to come into operation in January, 1871.

Mr. W. Sefton Moorhouse was the first Registrar-General of Land, and on his recommendation Mr. McIntyre was appointed his secretary and had a large share in bringing the Act into force. About October, 1872, Mr. Moorhouse resigned and Mr. (afterwards Sir) Joshua Strange Williams, District Land Registrar for Canterbury, succeeded him, but remained at Christchurch, to which place the staff of the head office was transferred. The Lands and Survey Department was then under the Provincial Government.

On 8th January, 1874, Mr. Williams appointed George McIntyre a member of a Board to examine applicants for Surveyor Licences under the Land Transfer Act. The other members were Mr. Thomas Cass, a former Chief Surveyor, and Mr. Samuel Hewlings, Chief Surveyor for Canterbury.

In 1874 Mr. McIntyre accepted an appointment under Mr. Hewlings and was gazetted as Surveyor-in-Charge of Plotting and Compiling Maps. Two years later he resigned to enter private practice, being succeeded by Mr. Donald Monro.

From that date Mr. McIntyre continued in private practice in Canterbury and Marlborough, in partnership first with Mr. H. P. Blanchard, then with Mr. A. J. Lewis

and subsequently with Mr. George Slater. He continued to practice until about his eightieth year.

He was a staunch member of the Anglican Church and filled the offices of Church warden and Vestryman on a number of occasions. He became a member of the Christchurch Diocesan Synod in 1874 and attended his 56th session in 1929. He was a member of the old Avon Road Board and of the New Brighton Borough Council, of which Borough he was Mayor for two years. For three years he served as a member of the Christchurch Drainage Board. He was also a Justice of the Peace. He was Chairman of Directors of the Brighton Tramway Company from its commencement until it was taken over by the Christchurch Tramway Board in 1905.

He was a foundation member of the New Zealand Institute of Surveyors and was elected a Fellow on 21st August, 1925.

See "The New Zealand Surveyor" Vol. XV No. 7 November, 1933.

MACKAY, Alexander Randolph (1852 - 1922)

For many years he was County Engineer to the Wairoa County, Hawkes Bay and had been a resident in that district for thirty years at the time of his death in 1922.

He was a foundation member of the New Zealand Institute of Surveyors.

See "The New Zealand Surveyor" Vol. XII No. 2 page 46

McKAY James (1867 - 1934)

Born at Stafford (Westland) in 1867 he was educated at Reefton and entered the Lands and Survey Department there. On becoming an authorised surveyor he was transferred to the North Auckland District where he worked for many years. On being promoted to the status of District Surveyor he was sent to the Hunterville district and was engaged in surveying the route of the Main Trunk Railway. In 1909 he left the Department and returned to Westland to manage mining interests until they closed down in 1922.

He died at Greymouth on 25th June, 1934

He joined the New Zealand Institute of Surveyors in 1892.

See "The New Zealand Surveyor" Vol. XV No. 9 page 321

MACKAY James (1831 - 1912)

Born in Scotland, he was a son of James Mackay who brought his family to New Zealand in the "SLAINS CASTLE" which arrived at Nelson in 1845. James Mackay (senior) was a member of the first General Assembly (Parliament) of New Zealand which was prorogued in 1854. James (junior) worked on his father's farm until 1853 when he commenced farming on his own account on 1,500 acres in the Golden Bay district. However, he evinced a strong predilection for exploring unknown territory and in 1856 with John Clark he explored the upper Takaka district, discovering a pass to the Heaphy River. Then with three Maori companions he explored the headwaters of the Aorere, Heaphy, Karamea and Anatoki rivers and furnished the Provincial Council with maps and reports of the territory.

The following year he walked the coast line from Cape Farewell to the mouth of the Mawhera (Grey) river which he ascended to the Mawheraiti junction. En route

he had taken soundings at the mouths of the Grey and Buller rivers and reported that they were navigable for coastal craft.

He became thoroughly conversant with the Maori language and also gained a working knowledge of topographical surveying so that some years later he was authorised to undertake surveys for the purposes of the Native Land Act. Mr. Donald McLean, Native Secretary and head of the newly founded Native Land Purchase Department, was impressed with his qualifications and personality and he appointed Mackay a Commissioner for the purpose of negotiating the Native Reserves. When each of his fellow Commissioners, Alfred Dommett, Charles Heaphy and Thomas Brunner, resigned to take up other appointments, Mackay became the sole Commissioner for the South Island and despite the fact that he was as yet only twenty seven years of age his ability gained him the appointment as Assistant Native Secretary in 1858.

On the discovery of gold in the Collingwood district he successfully negotiated with the Maori land owners for the opening up of the goldfield and despite his youthfulness he was given the additional responsibility as Warden of the gold field, the first such appointment to be made in New Zealand.

In 1859, as land purchase officer he completed the purchase of the Kaikoura block and was then instructed to negotiate with the Putini Ngai Tahu the purchase of the vast region of the West Coast lying between Kahurangi Point and Milford Sound.

Travelling across heavily forested ranges and treacherous unbridged rivers and enduring every kind of hardship, some times on the verge of starvation, Mackay nevertheless combined the purchasing business with exploring for suitable access routes. His first conference with the Maori owners was abortive as they were very reluctant to part with certain portions of their territory. After returning all the way to Auckland to consult the authorities he was encouraged to make a further attempt and arrived back on the West Coast in February, 1860. The second expedition was no less arduous than the first but eventually on 21st May at the kainga at Mawhera the deed of sale was signed whereby 7,500,000 acres passed to the Crown and some 10,000 acres were reserved for the vendors.

In the same year, with John Lockett he explored the Tasman Range district discovering Mount Peel and Diamond Lake. Then with the Knyvett brothers he blazed a pack track from the upper Aorere to the mouth of the Heaphy river. From there he walked alone to the mouth of the Buller, covering a distance of about seventy miles in a single day.

Soon after the War broke out in the Waikato, Mackay was called to Auckland and his first task was a mission to the Ngati-Maru at Thames. Some of these tribesmen had been assisting the Waikato insurgents against the British forces. Mackay's task was to induce them to surrender their arms and keep the peace. At the confrontation, in which Mackay's supporting party consisted of five southern Maori boatmen, it was his resolute bearing that eventually won the day and the arms were given up, but at one stage of the proceedings the lives of Mackay and his party hung by a thread.

During the campaign Mackay was placed in charge of the prisoners of war and at its conclusion, following the confiscation of the Waikato lands, he was given the difficult task of resettling the displaced natives. After a conference with Wiremu Tamihana certain reserves were set aside for the

Maori people.

In May, 1864 he was appointed Civil Commissioner for the Hauraki district. He learned of the existence of gold at Kauaeranga (Thames) and commenced negotiations with the Maori land owners to obtain permission for prospecting in the area. Despite the reluctance of most of the chiefs some prospecting was permitted and the presence of gold confirmed.

Eventually in July, 1867 an agreement was reached with some of the chiefs for the mining of a limited area and the goldfield was officially opened on 30th July with Mackay as Warden and Resident Magistrate at Thames.

Subsequently the boundaries of this field were extended to embrace the Coromandel Peninsula. Later, when gold deposits were discovered in the Ohinemuri district, Mackay was instrumental in the opening up of the Ohinemuri, Te Aroha and Waitekauri goldfields.

He was elected to represent the Thames district in the Auckland Provincial Council and held office from 1870 to 1873. He resumed his duties with the Native Department's Civil Commissioner for the Waikato. In May, 1873, at great personal risk, he went alone into the King Country to try to arrange the extradition of Purukutu, the murderer of Timothy Sullivan. One night, during this visit, an attempt on his life was made by a fanatical Hau Hau and he would probably have been killed but for the intervention of Rewi Maniapoto, the notable chief.

For the Crown he purchased the Awaiti block in 1876 and during the survey the Ngati-Hako raised an objection and attempted to stop the survey, threatening to shoot Mackay or anyone else who trespassed on their land. Mackay and his party went at once to the danger spot and on their approach a volley was fired over their heads. Mackay immediately advanced to the armed Maoris and told them in no uncertain terms that he could not be deterred by such conduct. There was no further trouble.

In 1879 he returned to the South Island as Warden and Resident Magistrate at Greymouth and in 1881 he retired from Government service. He went to Auckland and soon afterwards commenced a business at Paeroa as miners' agent and land agent.

He died there on 13th October, 1912.

See "Dictionary of New Zealand Biography". Scholefield.

Journal of the Auckland and Waikato Historical Societies No. 19, September, 1971. Article by Norton Watson.

MacKELLAR David (1831 - 1892)

David MacKellar came to New Zealand from Victoria, Australia, in December, 1855 in the ship "GENERAL WOOL" with his elder brother Peter and his brother John. Peter MacKellar and Alexander McNab had explored the Mataura region in midwinter 1855, and MacKellar had applied for and been granted a grazing licence over Run 112 which embraced most of the Waimea Plains in Southland. In the "GENERAL WOOL" the brothers had brought a flock of sheep from Australia and arrived at Bluff on 29th January, 1856. Shortly afterwards the ship "TARBERT CASTLE" brought over another flock which was also destined for the MacKellar Brothers station which comprised about 60,000 acres. The MacKellars were among the first graziers to pioneer Southland.

David MacKellar had been trained in architecture, engineering and surveying, but his surveying in New Zealand was confined to exploring and topographical surveying. In 1857 he was one of the first Europeans to reach the southern end of Lake Wakatipu and the following year he viewed the northern end from the summit of Mt. Nicholas. In March and April, 1861, he and George Gunn, the proprietor of "Wantwood" station explored the country to the westward of Lake Wakatipu, and from a high peak glimpsed the sea on the west coast. MacKellar made a topographical survey of the country they explored and provided the Chief Surveyor, J. T. Thomson, with a copy of the map. Lakes MacKellar and Gunn were named after the explorers.

David MacKellar became the proprietor of Waikaia station in 1867. He sold this station in 1874. and subsequently purchased "Brooksdale" at Tapanui. He left New Zealand in 1880 to take up a large ranch in Mexico, where he was murdered on 29th September, 1892, as the result of a fencing dispute.

See "The Riversdalians" by Stanley Slocombe, 1973, which devotes Chapter II to the MacKellar Brothers. (Gore Publishing Company (1971) Limited).

MackELLAR Peter (1827 – 1884) practised as a surveyor in Glasgow before he joined his brother David in Australia. He explored the Matura basin in 1855 and subsequently became the proprietor of the Longridge Run, in the Waimea district in Southland. He served on the Southland Provincial Council and later retired to his "Wellesley" property at Invercargill, which subsequently was subdivided into residential lots and is now a suburb of Invercargill.

See "Historical Southland" by F. G. Hall-Jones, 1945 p.100 etc. (Otago Daily Times and Witness Newspapers Ltd.)

MackENZIE, James (I. S. O.) (1849 – 1928)

He was born in Edinburgh, Scotland, in November, 1849 and came with his parents to Otago in 1858. He was educated in the district schools of Otago and at the Otago Boy's High School, where he was a pupil at its opening in 1863.

He joined the Otago Provincial Survey Department in February, 1867, and was a survey cadet under John Cameron and later S. Thompson, and qualified as a surveyor in February, 1872. He then took up a position on the Wellington Provincial staff as an Assistant Surveyor, which position he occupied until March, 1874, when he was promoted to the status of District Surveyor, and held this position until May, 1879, when he was specially selected for the position of Chief Draughtsman in the Wellington District Office.

In January, 1902, he was promoted to the position of Commissioner of Crown Land and Chief Surveyor in Taranaki, and in 1904 he was appointed Commissioner of Crown Lands and Chief Surveyor for the Auckland District.

In April, 1912, he was promoted to the position of Surveyor General, which position he held until his appointment as Under-Secretary for Lands and Permanent Head of the Department in April, 1914, finally retiring in September, 1915.

James Mackenzie served on a number of Commissions and Government Boards, including the North Island Representation Commission from 1901 to 1908, at various times was a School Commissioner in Auckland, Taranaki and Wellington, was ex officio Chairman of the New Zealand Survey Board, Chairman of the Scenery Preservation Board, member of the Land Purchase Board and of the Native Land Purchase Board, member of the State Advances to Settlers Board, the Public Trust and Government Insurance Boards.

He was a Fellow of the Royal Geographical Society, and on the eve of his retirement the honour of Membership of the Imperial Service Order was conferred on him.

During his cadetship with John Cameron they were exploring and surveying in the very rugged country of Preservation Inlet, many miles from any settlement. Cameron suffered an accidental gunshot wound which resulted in mortification before he could be conveyed to the Bluff, the nearest place where medical aid could be secured. The only means of conveyance from Preservation Inlet to the Bluff was by an open boat and, though his assistants, James Mackenzie and J. S. Welch, did their best to reach the Bluff in time to save his life, they were unfortunately unsuccessful.

Mackenzie was a foundation member of the New Zealand Institute of Surveyors.

The Hon. Sir Thomas Mackenzie, G. C. M. G., F. R. G. S. a former Minister of Lands, was a brother of James Mackenzie. Between 1888 and 1894 Sir Thomas took part in several exploring expeditions in the very rugged country lying between Dusky Sound and Lake Manapouri.

McKERRON James F. R. A. S., F. R. G. S. (1834 - 1919)

Born at Kilmarnock, Ayrshire, Scotland, on the 7th July, 1834 and educated at Kilmarnock Academy and Glasgow University. He arrived in New Zealand on 26th November, 1859 and obtained a position as Assistant Surveyor in the Otago Provincial Survey Department under J. T. Thomson, and for the next two years was engaged on settlement surveys. During the years 1861 to 1863 he conducted an exploratory topographical survey over the lakes district of Otago, a tremendous task which covered a region of between three and four million acres of land as well as six large lakes. Going first to Wanaka and thence to Queenstown, which was then only a lonely sheep station, he crossed Lake Wakatipu and worked his way to Southland. The following year he worked from Wakatipu to Wanaka where he surveyed Lakes Wanaka and Hawea and extended the survey of the Matukituki valley, begun by Jollie and Young in 1859 when defining the boundary between Canterbury and Otago. In 1863 he surveyed Lakes Te Anau and Manapouri, during which, from Mount Pisgah, he sighted Caswell Sound on the West Coast, but bad weather prevented his crossing the saddle and reaching the sea. He next went to the head of Lake Wakatipu and then east to the Arrow and Shotover Rivers. In all he surveyed over five hundred miles of country running from Lake Hawea to Foveaux Strait and including not only the magnificent lakes but also some of the highest and most rugged country to be found in New Zealand.

He was next appointed Geodesical Surveyor and Inspector of Surveys and his work included the extension of triangulation surveys, in the Otago and Southland districts.

In 1873 he was appointed Chief Surveyor of Otago and three years later, on the abolition of Provincial Government, when the Lands and Survey Department was established, with J. T. Thomson as Surveyor General, James McKerrow was appointed Assistant Surveyor General and transferred from Otago to Wellington.

On the 1st November, 1879 he succeeded J. T. Thomson as Surveyor General, and he was also appointed Inspector of Native Land Surveys, an office that had previously been held by Theophilus Heale. His appointment also included the office of Secretary of Lands and Mines.

On 23rd January, 1889, he was appointed Chief Commissioner of Railways, a position he occupied until the end of 1894, and on 1st January, 1895, he was appointed Land Purchase Inspector and Chairman of the Land Purchase Board. He retired from the Public Service on 31st December, 1901, after having completed 22 years of continuous service.

Subsequent to his retirement, from February to June, 1901 he was a member of the Midland Railway Commission, and in 1905 he was Chairman of the Land Commission which travelled throughout the Dominion taking evidence on the land question with a view to future legislation.

James McKerrow was a competent astronomer and in December, 1882, was responsible for the observation of the transit of Venus. He was elected a Fellow of the Royal Astronomical Society. For his earlier work on the original surveys in Otago and Southland he was elected a Fellow of the Royal Geographical Society.

In a private capacity he was a director of the Gear (Meat) Company for some years and also Chairman of the Wellington Trust Investment and Agency Company. He was also a prominent member and office bearer of the Presbyterian Church.

When the New Zealand Institute of Surveyors was founded in 1888, James McKerrow was elected the first President and held office in 1888-89 and 90 and again in 1907 and 1908. He was elected a Fellow of the Institute.

He died at Wellington on 29th June, 1919.

See "The New Zealand Surveyor" Vol. XI No. 7 of November, 1919.

MACKINNON Quinton (1851 – 1892)

Born in the Shetland Islands in 1851, he was the son of a Presbyterian Minister. He fought with the French in the Franco-Prussian war 1870-71 and came to New Zealand soon afterwards. He joined the Survey Department in Otago.

In 1881 he qualified as a Licensed Surveyor and was stationed at Te Anau.

He gained a great reputation as an explorer in the rugged country to the west of Te Anau and his name is perpetuated in Mackinnon Pass which he discovered in 1888. It was mainly due to his efforts that the renowned "Milford Track" was opened to tourism.

He met his death by drowning when his whaleboat foundered in Lake Te Anau on 30th November, 1892.

See "Early Fiordland" by John Hall-Jones, 1968.

MCNICOL, Malcolm (1856 - 1905)

He was born and educated in Otago. At an early age he entered the Survey Department and qualified as a surveyor. Appointed Assistant Surveyor, Lands and Survey Department, Canterbury, vide New Zealand Gazette, 1st June, 1877.

His duties took him all over Otago and Canterbury and in the 1890s, when, as a result of the Land Act of 1892, large estates were being subdivided for closer settlement, he was engaged in surveying the Cheviot Estate and other lesser estates in the Amuri and Hanmer districts. Early in 1895 McNicol was one of the surveyors sent to the Kaikoura district and was engaged in topographical and subdivisional surveys of the Hundalee and Okarahia country.

He left the Government service in 1898 to undertake private practice at Kaikoura, where he died in May, 1905.

See "The New Zealand Surveyor" Vol. VII. No. 6.

MABEN, Thomas (1844 - 1919)

Born in Scotland, he came to New Zealand at an early age and settled in Otago where he served his cadetship and became a surveyor on the staff of the Survey Department. About 1881 he left New Zealand and spent several years abroad. Eventually he was appointed Surveyor General of Samoa and later became Resident British Administrator in Samoa. This was before the administration of Western Samoa was ceded to Germany following the convention signed by Great Britain, the U.S.A. and Germany on 2nd December, 1899. He then returned to New Zealand and joined the Land Transfer Office at Christchurch as a computer. He retired in 1910 and was then appointed as assistant at the Magnetic Observatory at Hagley Park, Christchurch, a position he held until a few weeks before his death in 1919.

He was Licensed on 1st January, 1902, under "The New Zealand Institute of Surveyors and Board of Examiners Act, 1900".

See New Zealand Surveyor, Vol. XI No. 7 p.179.

MACE, Frederick (Senior) (1849 - 1921)

Prior to coming to New Zealand in 1875 he had spent five years in the Public Works Department in India. Shortly after his arrival at Auckland he joined Mr. Laurence Cussen's survey party working in the Southern districts of Auckland Province. In January, 1879 he transferred to Mr. O. M. Creagh's party. Although he did not become an Authorised Surveyor nevertheless he carried out numerous surveys, including triangulation, for the Lands and Survey Department under the direction of Mr. L. Cussen. Mr. Mace is best known for his discovery and exploration, with the help of a Maori companion, of the Waitomo Caves. He died at Otorohanga on 25th October, 1921.

His nephew, Frederick Mace (Junior) was a Registered Surveyor and a member of the New Zealand Institute of Surveyors.

MAIR Gilbert (Junior) N. Z. C. (1843 - 1923)

He was born at Whangarei on 10th January, 1843. The local Maori chiefs gave him the name of Tawatawhiti and he became commonly known as "Tawa" by Maoris and Europeans alike.

During the Maori disturbances in the North in 1845 the Mair family was forced to leave Whangarei and seek refuge in Auckland. Later they returned to Whangarei. In 1860 Gilbert Mair was articled to the Surveyor General at Auckland and learned land surveying obtaining his certificate as a provincial surveyor in 1864. Before the Waikato war broke out he was assisting in surveying and subdividing a large tract of land purchased by the Crown from the Maoris in the area lying between Raglan and the Waikato Heads.

He joined the military forces and had a distinguished career, attaining the rank of Captain, and receiving the New Zealand Cross, equivalent of the Victoria Cross, for many acts of bravery in the field. As an officer of the Defence Forces part of his duty, on a number of occasions, was to provide protection for the surveyors engaged in surveying land confiscated from the Maoris as reparations for the so called "rebellion".

When his military career ended he became interpreter to the House of Representatives, Chairman of Maori Councils, Government Agent at Tauranga and Land Purchase Officer for several districts. He also worked on the Military Pensions Board, and on behalf of the Government, guided and entertained many notable visitors from abroad through the Hot Lakes District, of which he had an unrivalled geographical, historical and traditional knowledge.

These visitors included the Duke of Edinburgh, 1870, the Duke and Duchess of Cornwall and York (George V and Queen Mary) in 1902, and the Prince of Wales (Edward VIII) in 1920.

Mair's collection of Maori curios and artefacts are now owned by the Dominion Museum, Auckland.

Gilbert Mair was on active military service for seven years (1865-1872) and took part in many actions. He had a number of narrow escapes from death but never received a wound. When in command of forty Ngatimanawa acting as covering party to Staff Surveyors engaged in surveying confiscated land, he took part in skirmishes at Te Akeake, Te Kaki, Paengaroa and Pye's Pa. On another occasion, at Te Umu-o-korongaehe, with Lieutenant Herne and Private Eric Goldsmith (of Captain Skeet's Volunteer Engineer Company) Mair carried out from under heavy fire from pursuing rebels, the surveyor, Private Thomas Edward Jordan, mortally wounded. Mair received his commission as Lieutenant on 25th April, 1867.

Mair was promoted to the rank of Captain and placed in command of a contingent of friendly Maoris. He took part in the campaign against the Hau Haus and subsequently took a leading part in pursuit of the notorious Te Kooti.

Gilbert Mair died at Tauranga on 29th November, 1923.

His biography is given in "The Mair Family" by Andersen & Petersen, 1956. See also "The New Zealand Wars" by James Cowan, 1923 (Reprint, 1956).

MALING, Christopher N. Z .C. (1840 - 1917)

He was the son of Chief Constable Thomas Maling, one of the victims of the "Wairau Massacre" at Tuamarina in 1843. Severely wounded Thomas Maling endeavoured to escape but died in the bush and his remains were not found until almost two years later. In the interim his grief stricken wife died and the orphaned son and daughter were taken to Auckland by Bishop Selwyn and were there cared for by Harbour Master David Rough and his wife.

Christopher was trained as a surveyor and also had a distinguished military career.* In February, 1860, he accompanied Mr. W. L. T. Travers in exploring the upper Wairau in the Nelson Province and discovered Maling's Pass, named after him. The following month he accompanied Henry Lewis and D. Stewart on an expedition when they discovered Lewis Pass, a fact that is commemorated by a monument at the summit of the Pass erected by the Historical Places Trust. This monument bears the names of the discoverers and also those of Travers and John Rochfort whose earlier work had contributed to its discovery.

In 1859 Maling was associated with Julius Haast in a search for moa bones in the Aorere valley, Nelson district.

In 1864 Maling was working in the Auckland Province assisting with the triangulation survey of the confiscated land and in surveying the allotments near Hamilton for the Military settlers. On 12th October, 1865 he was Gazetted a Licensed Surveyor under the Native Land Act.

As a sergeant, and later as Captain, in the small but elite Corps of Guides (expert bushmen and scouts who could speak the Maori Language) Maling saw much active service in the Campaign against the fanatical Hau Haus. For several acts of gallantry in action he was awarded the New Zealand Cross in 1870.

At the close of hostilities he was engaged in surveying lines for the telegraph through the bush clad centre of the North Island.

According to T. W. Gudgeon in "The Defenders of New Zealand" writing in 1887, Maling had gone to Japan some time before and held a post of some responsibility under the Japanese Government.

He served abroad and attained the rank of Colonel. He died in England in February, 1917.

See "Heroes of Peace and War in early New Zealand". A.H. Reed 1959.

"Defenders of New Zealand" T. W. Gudgeon, 1887.

New Zealand Notables, Series III p.138. Burdon, 1950.

* He was appointed a cadet In the Nelsen Provincial survey staff, vide V.& P. (Nelson) 1858 - p 85 an 86.

MANTELL, Walter Baldock Durant (1820 – 1895)

He was a son of Dr. Gideon Mantell (1790 - 1852) L. L. D., F. R. S. the eminent geologist.

Born at Lewes, Sussex, he was educated at Brighton and studied medicine at London University but did not proceed to a degree. He came to New Zealand among the first settlers brought out by the New Zealand Company. He arrived at Wellington

in the "ORIENTAL" in January, 1840. Disappointed in the land that had been assigned to him at Wainui he accepted employment with the Company and assisted in the forming of the settlements at Wanganui and New Plymouth. In 1841 he was clerk to the magistrates (J. P. s) at Wellington and the following year was Postmaster. In 1845 he was overseer on the military road being built from Wellington to Porirua.

In 1848 he was appointed by the Government as Commissioner for the extinguishment of Maori titles in the Middle (South) Island. In association with Alfred Wills, the surveyor, he arranged for and surveyed the Native Reserves set aside for the Maori vendors in Canterbury and Otago. He resided in Otago and during his term of office arranged the purchase of about 3,000,000 acres of Maori lands.

In 1851 he was appointed Commissioner of Crown Lands for Otago and held the office until 1856 when he resigned because the Government had not honoured its obligations in respect of schools, hospitals and reserves in accordance with the agreements he had made with the Maori vendors.

In 1860 he was elected Member of the House of Representatives for the Wallace Electorate and held the office for five years. In July, 1861 he was Native Minister for a few months in the Fox Administration. In 1862-63 he was Secretary for Crown Lands and Postmaster General in the Domett Ministry. In the Weld Ministry he was Native Minister (1864-65 and for a short time Native Secretary. In 1866 he was appointed to the Legislative Council on which he served until his death, 7th September, 1895.

He had acquired an intimate knowledge of the Maori language and customs and he contributed many papers on the Maoris and the moa beds of Waingongoro (Taranaki) and Waikouaiti (Otago) and the cave drawings in the Takiroa Caves, Waitaki valley.

He was a founder and for some years secretary of the New Zealand Institute and was President of the Wellington Philosophical Society in 1870.

See "New Zealand Dictionary of Biography", Scholefield.

MERCHANT, Edgar Allman (1880-)

Born at Wellington, he was a son of J. W. A. Marchant (Surveyor General). Educated at Boys High School, Christchurch and at Wellington College. He joined the Lands and Survey Department in 1898, and qualified as a surveyor in 1902, having passed the 1902 Examination set by the Federated Surveyors Boards of Australia and New Zealand with Credit.

In 1906 he resigned from the Lands and Survey Department to enter private practice with Mr. T. B. R. Dix at Wanganui.

See New Zealand Gazette, January, 1903 No. 5 p.200.

Cyclopaedia of New Zealand, Vol. 6 p.604.

MERCHANT, John William Allman (1841 - 1920)

Born in Belgaun, India, son of Dr. Allman, surgeon of the 4th Regiment. Educated at Queen's College, Hampshire, England, and on his father's death adopted the surname of his step-father with whom he was engaged on railway work in Brazil. In 1860 he joined the survey staff in Victoria, Australia and qualified as a

surveyor in 1862. He then came to New Zealand and practiced privately at Invercargill. In 1865 he joined the Lands and Survey Department and surveyed in the Nelson goldfields. In 1875 he was appointed Deputy Inspector of Surveys under the Native Land Act. The following year he was appointed Geodesical Surveyor in connection with the major triangulation survey of the North Island. In 1879 he became Chief Surveyor for the Wellington District and in 1884 was appointed Commissioner of Crown Lands also. Subsequently he was appointed Chief Surveyor for Canterbury and in 1902 became Surveyor General of New Zealand.

He retired in 1906 and died on 22nd December, 1920.

He was a foundation member of the New Zealand Institute of Surveyors. Appointed First Geodetic Surveyor, vice S. P. Smith, who was promoted Chief Surveyor at Auckland, 25th January, 1877 vide N. Z. Gazette, 1877 p.632.

See Dictionary of New Zealand Biography.

MARCHANT, Frederick William (1852 - 1917)

Born 2nd April, 1852. He was educated at Kings College, London. In 1869 he was articled to Wm. Smith at Cavendish Engineering Works, London, until 1873 when he came to New Zealand. From February, 1874 until 1878 he was an engineering cadet in the Public Works Department, under John Carruthers. He was employed on the Waitara-New Plymouth, the Dunedin-

Invercargill and the Amberley-Waitaki Railways. He became an

Authorised Surveyor in January, 1878. In 1879 he left the Government Service to become engineer to the Mount Cook Road District. In 1881 he was elected A. M. I. C. E. In 1883 he was associated with G. Laing Meason in numerous engineering projects. In 1886 he was appointed Resident Engineer to the Timaru Harbour Board, which position he held until 1893, when he went into private practice, and was consultant to a number of local authorities, including the New Plymouth Harbour Board for whom he designed the dredge "Paritutu" which was probably the best known vessel of its type in New Zealand waters.

He retired in 1916 and died in London in 1917.

He was a foundation member of the N. Z. Institute of Surveyors.

MARCHBANKS James C. M. G. (1862 - 1947)

Born at Dunedin he was educated at the Provincial School and at Otago University. In 1878 he joined the Public Works Department and was articled to W. N. Blair, the Chief Engineer for Otago. From 1878 to 1884 he served under Messrs. Ussher, P. S. Hay and Cooke, including the construction of the main railway from Port Chalmers northward, the survey of the Otago Central Railway from Dunstan to Lake Hawea, and the trial line from Glenoarnaru to Owaka. He also worked under J. Buchanan, Mechanical Engineer to the Public Works Department. He became an Authorised Surveyor in July, 1883. In 1884 and 1885 he was engaged with J. Douglas Gillies on the location of the railway through the Manawatu Gorge, Gillies being at the Ashhurst end and Marchbanks at the Woodville end. He then surveyed a bridle track over the Haast Pass from Makarora down the Haast River. From 1885 to 1889 he was engaged in various railway works, including the construction of the Glenham Branch, Windsor- Livingstone Dunbach, Catlins River and Otago Central Lines and the trial survey of the line from Lawrence to Roxburgh.

In January, 1890 he joined the Manawatu Railway Company as assistant to J. E. Fulton who was Manager, Chief Engineer and Locomotive Superintendent to the Company. In 1895, on the resignation of Fulton, Marchbanks became Chief Engineer. In 1908, when the Company was taken over by the Government, Marchbanks was appointed Chief Engineer to the Wellington Harbour Board, and in 1923 he became General Manager as well. He retired in 1932 but was retained as consulting engineer until 1935.

He became an authorised surveyor 1883 and A. M. I. C. E. in M. I. C. E. in 1901. He was made C. M. G. in 1932. He served on numerous Royal Commissions, and during the 1914-1918 war was Honorary adviser to the Minister of Munitions.

He was a foundation member of the New Zealand Institute of Surveyors.

He took a deep, active and long sustained interest in the formation of the N. Z. Society of Civil Engineers and its successor, the N. Z. Institution of Engineers, being the Hon. Treasurer for twenty-seven years from 1914 to 1941. He died at Heretaunga in 1947.

MARSHMAN, John Parker (1823 - 1913)

He was born in Bristol and educated in England. He came to Wellington in 1842 and was assistant to Captain Joseph Thomas of the New Zealand Company's survey staff. He assisted in roading surveys in the Kauaeranga Gorge and other works. He again was associated with Captain Thomas in the early surveys for the Canterbury Settlement. One of his tasks in 1860 was the surveying for drainage purposes of the extensive Rangiora Swamp when his assistant was Arthur Dudley Dobson. He then became Provincial Treasurer but in 1861 he was appointed Immigration Agent for Canterbury in London a position he held until 1867. On returning to Canterbury he was appointed Railways Secretary and in 1869 he became General Manager of Railways for Canterbury. In 1870 he resigned to become Commissioner of Waste Lands and on the abolition of provincial government he was appointed in 1876 to be Commissioner of Crown Lands for Canterbury. He retired from the Lands and Survey Department in February, 1884. He died on 23rd November 1913.

He was a friend of Samuel Butler, the author and artist, who painted the portrait of John Marshman which is now owned by the Canterbury Society of Arts.

Refs. "A History of Canterbury" Vol. 11 Ed. by W. J. Gardner, 1971 (Whitcombe and Tombs)

"Land Legislation and Settlement in New Zealand" W.R. Jourdain, 1925 p.239 (Government Printer).

"Reminiscences" Sir A.D. Dobson, 1930.

MASON Augustus Philip (1842 - 1910)

Born at Grange Walk, Holloway, London in 1842 he was educated at a private academy at Laleham on the Thames. In 1856 he went to Melbourne as a passenger on the James Baines. At seventeen years of age he joined the survey staff engaged in surveying the route for the Melbourne-Geelong railway. Subsequently he was engaged in survey work in Ballarat and other parts of Victoria. He came to New Zealand at the time of the Otago gold rush and engaged in gold mining for a short time, without success, and returned to Victoria where he joined the staff of Mr. H. H.

Blair, Mining Engineer, at Gaffney's Creek. Later he worked under Mr. S. Vickery, Surveyor General of Victoria. Early in 1867 he returned to New Zealand and entered the Survey Department at Wellington working on the trigonometrical survey of the Wairarapa under Mr. Alexander Dundas. In March, 1872, he was appointed Land Transfer Draughts-man at Wellington. In 1887 he resigned to enter private practice in partnership with Mr. R.R. Richmond, until 1901 when he practised on his own account and worked intermittently for the Land Transfer Office.

He died on 31st August, 1910.

He was a foundation member of the New Zealand Institute of Surveyors.

See New Zealand Surveyor Vol. IX, No. 7 September, 1910.

Mr. Mason took an active part in establishing the Institute of Surveyors and in 1901 he was appointed Treasurer to the Survey Board set up under the "Institute of Surveyors and Board of Examiners Act, 1900".

See New Zealand Surveyor, Vol. XVI No. 6.

MASON, John Blair (1858 - 1927)

Born in Dunedin 22nd September, 1858. Served his apprenticeship in an Otago Foundry and at the same time attended lectures at the Otago University. In 1882 he was articled to Messrs. Barr and Oliver, and later was Mechanical Engineer and Marine Surveyor as assistant to G. M. Barr who was the Engineer to the Otago Harbour Board. He went to Australia in 1887 and was engaged in harbour surveys until 1890 when he was a Marine Surveyor and Engineer to the Ports and Harbours Department, Victoria

Back in New Zealand he commenced private practice in Otago, and in 1904 became Engineer, Secretary and Treasurer to the Otago Harbour Board, which position he held until 1913, when his engineering duties took up his whole time. He was elected M. I. C. E. in 1913. In 1916 he again entered private practice, but was retained as consultant by the Harbour Board. In 1919 he moved to Auckland and in partnership with Messrs. Lee and Owen carried on an extensive practice.

He served on special commissions with Messrs. Ferguson and Williams in connection with Gisborne, Waikokopu and Napier Harbours, and with Messrs. Ferguson and Furkert reported on improvement measures for Greymouth Harbour.

He was President of the N. Z. Society of Civil Engineers, for the period 1917-1918, having been a foundation member. In 1915 he received the Telford Premium from the Institution of Civil Engineers for his paper on Harbour improvements and works at Otago.

He was a member of the New Zealand Institute of Surveyors.

He died at Devonport on 24th December, 1927.

MATHEW Felton (1801 – (1847)

He was born in Goswell Street, London and trained in England as a surveyor. He went to New South Wales in 1829 as Assistant Surveyor of Roads and Bridges and in 1836 became Town Surveyor at Sydney. In 1839 he was selected by Governor Gipps and Captain Hobson to become Acting Surveyor General of the projected Colony of New Zealand.

He arrived with Captain Hobson, as a member of his very small staff, at the Bay of Islands, on the 29th January, 1840, and witnessed the preliminary negotiations that led to the Treaty of Waitangi and the establishment of New Zealand as a British Colony.

His first task was to seek for a suitable site for the chief town and seat of Government for the new Colony. He was responsible for the purchase of the trading station belonging to James Reddy Clendon, at Okiato, Bay of Islands, as the temporary seat of Government. He then explored the coast down to the Southern end of the Firth of Thames and then, on a subsequent voyage to the Waitemata, accompanied by Captain Hobson, selected the site of Auckland for the capital city, much to the displeasure of the inhabitants of the recently settled town of Wellington.

During the two years he served as Acting Surveyor General he was faced with the greatest of difficulties through shortage of staff and labourers and lack of instruments. He surveyed the country around the Waitemata and laid out the town of Auckland, assisted by a very small staff that was really inadequate for the work ahead. His planning was subjected to adverse criticism but it is now clear that some of his ideas were in advance of his time.

In January, 1842 he was superseded as Surveyor General by Charles Whybrow Ligar who had been appointed in England by the Colonial Office. Mathew was then appointed Postmaster General for New Zealand and performed other duties as a Government official.

His health failing, he left New Zealand to return to England in 1847. He chose to go by the Panama route as he wished to obtain personal knowledge of the feasibility of constructing a ship canal across the isthmus. He became very ill when the ship called at Lima, Peru, and he died there on 26th November, 1847.

Some of his field books and original maps of Auckland are deposited in the Public Library at Auckland. His journals and those of his wife are the basis of "The Founding of New Zealand" by J. Rutherford, 1940. These also are deposited at Auckland.

MATHIAS, Lionel Octavius (1860 -1905)

Born at Christchurch, the eighth son of Archdeacon Mathias and educated at Christ College. He joined the Lands and Survey Department in 1877 as a cadet under District Surveyor T. N. Brodrick. After qualifying he worked in various parts of the Canterbury Province until about 1902 when he transferred to Southland. His work there included the survey of the Edendale Settlement and at the time of his death he was engaged on surveys in the vicinity of Orepuke, where he died on 18th April, 1905.

See New Zealand Surveyor. Vol. VII No. 6.

Appointed Assistant Surveyor, N. Z. Gazette, 1st June, 1881

MATTHEWS, Alfred Forde (1851 - 1926)

Born at Auckland in 1851 . Educated in Otago, he entered the Lands and Survey Department as a survey cadet at Invercargill. In 1878 he became an Assistant Surveyor, and subsequently transferred to the Wellington district. In 1881 he resigned to enter private practice at Gisborne. For many years he was engaged in

surveying in the rugged, bush clad, districts of the East Coast, Poverty Bay and eastern Bay of Plenty.

In 1897 he was elected Chairman of the Whataupoko Road Board. He became an Authorised Surveyor in December, 1878.

He was a foundation member of the New Zealand Institute of Surveyors.

He died at Gisborne in 1926.

See N. Z. Surveyor Vol. XIII No. 4 p.86

Cyclopaedia of New Zealand Vol. 2 p.957.

MEASON, Gilbert Laing (1854 - 1924)

He was born in India, 29th May, 1851 . He was educated in England and trained as a Civil Engineer (1870-72) and served his pupilage under F. D. Banister, M. I. C. E. Railway Engineer, Brighton and South Coast Railway, 1872-74). His first position in New Zealand was in 1876-77 as Assistant Engineer, Public Works Department on constructing the Timaru-Oamaru Railway. In 1877 he was consulting engineer (with F .W. Marchant) to Levels County. He became an Authorised Surveyor in July, 1883. In 1885 he was Engineer to the Geraldine County Council and later in partnership with F. W. Marchant until 1890. In 1893 he was elected A. M. I. C. E. and in 1903 transferred to M. I. C. E. In 1899 the partnership was dissolved when he became Engineer for the Hutt River Board, which position he held until his death at Wellington on 14th May, 1924. Co-laterally with his position with the Hutt River Board he carried on a general engineering practice.

He was a foundation member of the New Zealand Institute of Surveyors

MEWBURN

Was appointed to the survey staff at Wellington on 26th June, 1841, by Captain William Mein Smith, Surveyor General to the New Zealand Company, and sent to explore the district between the Hutt and Porirua, with the object of locating road lines. He surveyed the Pawai-tangi-nui district and from Karori down the Kaiwarawara stream to the Hutt. He also repegged some of the Wellington sections when the original stakes had been repeatedly pulled out by the dissident Maoris. He left the Company's service on the 2nd July, 1842. His Christian name is not given in the Surveyor General's records.

MERRETT, Joseph Jenner (1816 – 1854)

Merrett came to New Zealand from Sydney about the end of 1839. Evidently he had been trained as a surveyor and draughtsman. He had considerable artistic ability and was a good topographer. Like his fellow surveyor-artists, Ashworth, and Eastwood, he turned to painting when there was little offering for surveyors during the financial depression in the Colony at that time. He took a great interest in the Maori people and their culture and his painting and some of his contributions to the "New Zealander" an early Journal circulating in the Colony, are of considerable historical interest. Some of his paintings of Maoris were used to illustrate A. S. Thomson's "The Story of New Zealand" (1859). His best known work is the painting called "Native Feast held at Remuera, Auckland. N. Z. May 11th 1844. Merrett was present on that historic occasion and evidently he resided at Auckland until 1847.

Subsequently he resided at Turanganui (Gisborne) and at New Plymouth. He died at Wellington in 1854.

Merrett married a Maori and acquired a good knowledge of the language. During the expedition from Auckland to the thermal regions in 1841, led by Dr. Dieffenbach and Captain W. C. Symonds, Merrett joined the party at Otawhao on 26th April and journeyed with them to Rotorua and remained with them until 18th May.

See "Journal of Ensign Best" edited by Nancy M. Taylor, 1966 Appendix X.

Also "Two Hundred Years of New Zealand Painting" by Gil Docking p.34

MILLAR John (1807 - 1876)

He was born in Scotland and trained as an engineer and surveyor. Went to Melbourne in the early 1850s and engaged in local and general government engineering projects. In 1863 he came to New Zealand as engineer to the Town Board of Dunedin. Later he joined the Public Works Department at the beginning of Vogel's public works and immigration projects in 1870, and was engaged in surveying and reporting on the various railway routes in Otago. In 1874 he was Borough Engineer at Wanganui. On 3rd April, 1875 he was Gazetted Provincial Engineer and Chief Surveyor, Nelson Province, and held the position until the abolition of the Provinces, 24th January, 1876. He died at Nelson on 15th November, 1876.

MILLER, Thomas Snow (1859-1917)

Born in Wales 16th November, 1859 and was educated at the Royal Navy School, New Cross, London, between 1871 and 1875. He then entered a cadetship under Alex. Barrett M. I. C. E. of Cardiff, until 1878 when he came to Invercargill and was two years under Walter A. Bews, first as an assistant and then as a partner on railway works, Wairio to Nightcaps, roads, bridges, street tramways at Invercargill, and waterworks at Arrowtown and Tapanui.

In 1883 he was Assistant County Engineer for Wallace. In 1886 he was appointed Engineer to South Invercargill and also East Invercargill until it joined Invercargill in 1910. In 1891 he surveyed the Snares Island and laid out a lighthouse site with two miles of access tramway. After the amalgamation of Invercargill Borough he carried on private practice, including private subdivisions and consequent development. He became an Authorised Surveyor in December, 1879.

He was a foundation member of the New Zealand Institute of Surveyors.

He died at Dunedin on 13th August, 1917.

MILLETT Richard (1824 - 1874)

Appointed Assistant Mining Surveyor on the Wakatipu Goldfields in 1865, he was stationed at Queenstown. He carried out the triangulation surveys of Kawarau and surrounding districts, and surveys of mining leases and farming areas. In 1872 he was stationed at Grahamstown, Thames Goldfield, working for the Auckland Provincial Council. He assisted John James O'Neill, Resident Engineer, and John Carruthers, Engineer-in-Chief of the Public Works Department, in collecting data and designing a water supply for the mining companies in the gold-fields. In 1874 he was Resident Engineer for the construction of the water races at Thames. He died

suddenly at Thames on 14th February, 1874 Appointed a Goldfields Surveyor, Auckland Provincial Gazette, 1868.

MITCHELL, Henry Walker

Licensed under the Native Land Act, 1865. Then practising in Hawkes Bay Province. He and the Hallett brothers had been surveying a block of land near Taupo and were riding back to Napier on 8th June, 1869, when they decided to visit the military outpost at Opepe. Thus it was that the “massacre” that had been perpetrated by Te Kooti’s followers the previous day was discovered and the military authorities warned.

He became an Authorised Surveyor in August, 1881.

He was a foundation member of the New Zealand Institute of Surveyors. His son Henry Tai Mitchell was also a member of the Institute.

See also “The New Zealand ‘Wars” Vol. 2 by James Cowan, 1956 edition p.367.

His earliest recorded survey was in Jacobs River Hundred, Southland, dated. 1862.

MONRO Alexander

He was licensed as a surveyor on 6th July, 1865, under the Native Land Act, 1865. In 1870, assisted by Samuel Begg, who afterwards became an artist on The London Illustrated News, he laid out the town of Gisborne. In 1872 Monro was surveyor and engineer on the Masterton and Manawatu Gorge Road and the following year was engaged in a similar capacity on the Seventy Miles Bush roads in connection with the Scandinavian Settlements, works he continued to control until 31st August, 1876.

(According to J. A. Mackay (History of Poverty Bay, Second Edition, 1966 p.387) Monro was a nephew of Sir David Monro, the well known Nelson settler who had been associated with Frederick Tuckett in the selection of the site for the Otago Settlement, and whose biography has been published as “Thoroughly a Man of the world” (Rex E. Wright-St. Clair, 1971). Alexander Binnings Monro (1838-1918) was a nephew of Sir David Monro. As youths he and his brother George came to New Zealand and became settlers in the Nelson district and subsequently in Marlborough, where they engaged in sheep farming. Their first joint farming efforts were unsuccessful and had to be abandoned. Wright-St. Clair makes no mention of Alexander’s surveying

activities, but does mention that another young relative of Sir David Monro, George Carmichael-Smyth, after some experience of life on sheep runs, was attached to a surveyor at Nelson, named Woolley (George Joseph Woolley, Nelson Staff Surveyor – 1863-78) to learn that occupation. Carmichael-Smyth returned to England in 1868. Alexander Monro married Elizabeth Cotterell in 1862. For a short period, November, 1869 to April 1870 he was a member of the Marlborough Provincial Council. On the death of his older brother, David Binnings Monro, Alexander succeeded to the Softlaw estate near Kelso and returned to Scotland).

See also “Early New Zealand Engineers” by F. W. Furkert (1954 p .232.

See “Life in Early Poverty Bay” (Times Jubilee Handbook) published May, 1927 p.187 for a photograph of Alexander Monro. (The Daily Southern Cross, 13th July, 1865, p. 4 lists Alexander Monro as a recipient of a licence to survey under the Native Lands Act, 1862). Vide N. Z. Gazette for 6th July, 1865.

In 1865 Alexander Monro was engaged. in surveying the confiscated land. at Onewhero, in the Waikato district. Vide, N. Z. Journals of the Auckland Provincial Council. Session XVIII. L864-5. A. No. 1. Papers relating to the Waikato Settlements.

MORICE, James Murray (1861 -1930)

Born in Elgin, Scotland and educated there and at Edinburgh University, attending the latter from 1883 to 1886. He graduated B.Sc. in 1887. After some practical experience in the field he came to New Zealand in 1888 and obtained a position with the Lands and Survey Department on road surveys and general location surveys until 1902 when he became Assistant City Engineers Wellington. He specialised on water supply and sewerage works and supervised the construction of dams at Karori (upper) and Wainui-o-mata (Morton) and Orongorongo. On his retirement in September, 1927, he entered private practice and was employed for special investigations by the City Council.

He was elected A. M. I. C. E. in 1914 and M. I. C. E. in 1924

He was a member of the New Zealand Institute of Surveyors. He died in Wellington on 16th February, 1930.

See "The New Zealand Surveyor Vol. XIV No. 5 March, 1930

MOSS, William Edmund Carew (1864 - 1931)

Born in Auckland and educated at the Church of England Grammar School, Parnell. His earlier years had been spent in Fiji when his father F. J. Moss, H. P. was Administrator of Rarotonga for some years. On leaving school he joined the Lands and Survey Department in 1880 (N. Z. Gazette 29th December, 1880) as a Cadet and qualified as an Authorised Surveyor in July, 1884. Soon after qualifying he went to Tasmania and subsequently to West Australia where most of his professional life was spent. In Tasmania and Victoria he had been responsible for railway location and construction. He returned to New Zealand in 1892 and was engaged on road exploration and surveys. On the opening up of the Coolgardie goldfields he returned to Australia where he joined the Public Works Department in the survey and construction of the Coolgardie Railway and on the survey for the pipeline to supply water to Coolgardie. At Kalgoorlie he was appointed to the Mines Department and some years later went into private practice and undertook contract surveys for the Lands Department.

He was a foundation member of the West Australian Institute of Surveyors and also a member of the New Zealand Institute of Surveyors.

He died at Perth, West Australia, in July, 1931

See New Zealand Surveyor, Vol. XV No. 1 September, 1931 (photo).

MOUNTFORT, Alfred John (1860 - 1927)

He was born in Dunedin, son of Charles Wheeler Mountfort, an early Otago surveyor.

In 1876 Alfred Mountfort joined the survey party of his elder brother, Charles Adam Mountfort, who was engaged on surveys for the Manchester Corporation in the Manawatu district. Later he went with his brother to undertake surveys in

Taranaki for the West Coast Commission. This included surveys in Opunake and Upper Waitara districts from 1882 to 1884.

They next carried out exploration for the northern portion of the Stratford-Ongarue railway.

In 1884 Alfred Mountfort was appointed Assistant Surveyor and was engaged in surveys around Apiti. This was followed by road location surveys in the Pohangina district, after which he joined the Lands and Survey Department and served in the Akitio, East Wairarapa and Waimarino districts.

He was promoted to the status of District Surveyor and transferred to the Auckland District where he served at Taupo and Kawhia. Subsequently he was transferred to Canterbury where he remained until 1917, when he was transferred to Mangonui in North Auckland.

He had the reputation of having few equals as a bushman and explorer.

He died at Mongonui on 17th August, 1927.

He was a member of the New Zealand Institute of Surveyors.

See New Zealand Surveyor Vol. XIII No. 5 September, 1927.

MOUNTFORT, Charles Adam (1854 – 1940)

Born at Christchurch, he was a son of Charles Wheeler Mountfort who was one of the pioneer surveyors of Canterbury and Otago.

C.A. Mountfort served his cadetship under his father in Canterbury, commencing about 1870. He qualified as a licensed surveyor under the Land Transfer Act and in 1876 he transferred to the Wellington district where he was engaged on the surveys of the Manchester Block based in Fielding. Here he was joined by his brother, A. J. Mountfort, who also qualified as a licensed surveyor, and by his father. (Became Authorised Surveyor in May, 1880) (Joined Lands & Survey Department 6th September, 1886).

He next was engaged on the surveys for the West Coast (North Island) Commission, in the Taranaki district. Following that he made a reconnaissance survey for a railway that was subsequently built from Stratford to Ongarue. Then he returned to the Wellington District where he surveyed large blocks of Crown Lands for roading and settlement, including the laying out of the towns of Raetihi and Taihape.

In 1899 he was transferred to standard surveys and was responsible for the standard surveys of Napier, Havelock North, and Taradale, and also for the rural standard surveys at Kimbolton, Fielding and Palmerston North, covering seventy miles of traverse as well as the connecting triangulation and a base line of 5 miles. It was for his standard surveys that he was best known for his tireless care and meticulous accuracy.

He retired in 1923 in his seventieth year and lived at Fielding.

He was a foundation member of the New Zealand Institute of Surveyors.

See "the New Zealand Surveyor" Vol. XV No. 9 October, 1934 He was the author of a pocket book of useful tables for the use of surveyors in the field.

MOUNTFORT, Charles Wheeler (1826 - 1918)

Born at Ashton near Birmingham. Went to London in 1843 and trained as a civil engineer. He and his brother Benjamin Woolfield Wheeler (1822-1898 - for many years Canterbury Provincial Architect) with their brides and sister Susanna (afterwards Mrs. Isaac Luck) arrived at Lyttelton among the "Canterbury Pilgrims" aboard the CHARLOTTE JANE, on 16th December, 1850. (The partnership of Benjamin Mountfort and Isaac Luck, Architects, was responsible for the designing of the Provincial Council Chambers, of the original Canterbury University buildings, of the Canterbury Museum and a number of other architectural gems that remain today as monuments to their professional ability).

On arrival in Canterbury the brothers commenced farming at Opawa on a section they had purchased from the Canterbury Association before leaving England. Neither being farmers, B. W. Mountfort returned to his profession as the Provincial Architect and Charles in 1856 obtained an appointment in the Survey Department at Dunedin under the provincial Chief Surveyor, J. T. Thompson. Mounfort's work in Otago and Southland included the original surveys of the Lindhurst and Waimumu districts for the 2,000 acres scheme under the Otago Provincial Council's "Land Sales and Leases Ordinance" of 1856. Also surveying the routes for the first telegraph lines in Southland and Otago.

Towards the end of 1868 he returned to Christchurch and subsequently, about 1876, moved to the North Island where two of his sons, Charles Adam Mountfort and Alfred John Mountfort had entered the surveying profession and were engaged on the surveys in connection with the Manchester Block in the Manawatu district.

In 1878 he accepted an appointment in the Lands and Survey Department in Gisborne, which position he retained until 1883, when he retired, and shortly afterwards settled in Napier, where he resided until his death on 21st April, 1918 when almost 92 years of age.

See also "New Zealand Surveyor" Vol. 11 No. 4. of June-September, 1918.

MUELLER, Gerhard John (1835 - 1918)

Born at Darmstadt, the son of a Danish Professor of Mathematics at Darmstadt University, in 1835. Electing not to undergo compulsory military training in the German army, Mueller left Germany in 1853 for England and from there sailed to New York. After many adventures in the United States, Nicaragua, Honolulu, the Society Islands and Australia, he arrived at Auckland in 1858. There he met Mr. (later Sir) Maurice O'Rorke, who advised him to take up surveying and engineering. Mueller then went to Invercargill where he met Frederick Henry Giesow, a civil engineer and Surveyor, who undertook his training and eventually the two became partners. In 1862 Mueller married Elizabeth Bannatyne McArthur and Giesow married her sister, Catherine, and thus both became brothers-in-law of two other young surveyors, James Arthur McArthur and Duncan William McArthur.

In 1865, in search of survey work, Mueller went first to Dunedin, where he met J. T. Thomson, the Chief Surveyor and learned of prospects in Westland where goldfields were being opened up. He then went to Christchurch, where Thomas Cass was Provincial Surveyor. At that time all Government surveys were made by staff

surveyors, but Mueller became the first contract surveyor when Cyrus Davie, the Acting Chief Surveyor, appointed him to undertake the surveying of the Native Reserves on the West Coast, which was then part of Canterbury Province.

On completion of the Native Reserves, towards the end of 1865, he laid out the town of Okarito and thus commenced a long career as surveyor and explorer on the west Coast which began at the height of the gold rushes. On 2nd May, 1866, Mueller was advised by the Chief Surveyor, Thomas Cass, of his appointment to the Canterbury Provincial staff as Assistant Surveyor and Mining Surveyor for the Southern District of Westland, with headquarters at Okarito. One of the first tasks Mueller and his party were called on to perform was the search for the body of George Dobson, the young surveyor who had been murdered by a gang of bushrangers in the vicinity of Arnold River. Mueller sought for ten days but Dobson's remains were found by another party.

Westland became a separate Land District in 1868 with Mr. (later Sir) Malcolm Fraser as Chief Surveyor. On 10th July, 1871, he was succeeded by Gerhard Mueller. On 1st July, 1885, Mueller was given the additional appointment as Commissioner of Crown Lands for Westland.

In 1891 he was transferred to Auckland as Chief Surveyor and Commissioner of Crown Lands. From 1st January, 1862 to the end of June, 1904 he held the additional office of Assistant Surveyor General for New Zealand.

He was a foundation member of the New Zealand Institute of Surveyors.

See "My Dear Bannie Mueller's letters from the West Coast, 1865-66 edited by his daughter, M. V. Mueller (1958) which contains biographical information and photographs.

MURRAY, George Thomas (1859 - 1947)

He was born at East Taieri on 11 November, 1859. He was educated at the Oamaru Grammar School, of which he was dux in 1876.

He joined the firm of Barr and Oliver as a cadet in 1877 and was trained as a Civil Engineer and Surveyor. He passed his examination for Authorised Surveyor in 1880, and then went to Scotland for further education and experience, taking lectures at Edinburgh University under Professors Fleming, Geike and Tait. While engaged with the firm of Meik and Son he carried out preliminary work in connection with the Forth Bridge project and many other works. In 1883 he was sent by the firm of Falkner and Tancred to explore for and prepare a report on the proposed railways for the Siamese Government. He returned to New Zealand in 1886 and joined the Mines Department, being employed in the roughest parts of Westland and Marlborough and Nelson. He surveyed a road over the Goulard Downs from Collingwood to Karamea, and from Jackson's Bay to the Hollyford Valley.

In 1889 he was transferred to the Lands and Survey Department and was employed on road engineering in the Pahiatua and Palmerston North districts. In 1893 he was working under J. T. Stewart for the Wanganui River Trust. The following year he went on a trip to Europe. In 1901 when the Roads Department was formed he was transferred to that Department and was responsible for pioneering the roading of much of the most difficult country in the North Island, including the Raetihi Upper Wanganui, and Ohura districts, and the wild bush country between Waimarino and the Taranaki West Coast. This was before the

advent of the North Island Main Trunk Railway, and his local knowledge was of great assistance towards the selection of the route for this line and also the Stratford-Taumarunui line.

On the merging of the Roads and Public Works Departments (in 1910) he controlled the construction of railways, buildings, bridges and other works as well as roads in Taranaki. In July 1915 he was transferred to Head Office of Public Works Department at Wellington as Staff Engineer, and the following year became District Engineer at Auckland. As such he was responsible for the construction of the North Auckland Railway and the completion of the Waiuku railway. In 1920 he was promoted to Inspecting Engineer for the Public Works Department. When the Main Highways Act was passed he was chosen to inaugurate its operation, and most of his time until his retirement in September, 1925 was devoted to this work. He was appointed a Member of the first Main Highways Board on 12th June, 1923. He died in Auckland on 25th July, 1947

He was a foundation member of the New Zealand Institute of Surveyors.

MURRAY, Andrew Hugh (1844 -)

Born in Wellington and educated at Wanganui. During 1865-68 he saw active service in the Maori War. He served five years with G. J. Roberts who was engaged on the Geodetic and Topographical Survey of Westland. He then commenced practice in the Rangitikei district, and was part-time engineer to the Rangitikei County Council and the Marton Borough Council. He explored the country around the Murumoto Plains and a route into it which became known as Murray's Track. He explored country through which the North Island Main Trunk Railway now passes, and he climbed Ruapehu and discovered the Hot Lake. He moved to the Wairarapa district and practised there. He explored the Tararua Ranges to open up a road between Greytown and Otaki and developed a practicable road.

See Cyclopaedia of New Zealand Vol.1 p.887.

MURRAY, William David Browne

As an Otago Provincial Surveyor his first recorded surveys were in the Tapanui district in 1875 when one of his tasks was laying out the township of Kelso. In 1879 his work included settlement surveys in the Teviot district which involved the triangulation of the Old Man (Obelisk) Range. Later he transferred to the Nelson Land District where one of his tasks in 1888 was the triangulation of some 75,000 acres in the Blind Bay region. Subsequently he was transferred to the Wellington Land District where he surveyed some of the rugged country in the Inland Patea district. In July 1896 he was appointed Chief Draughtsman in the Head Office of the Lands and Survey Department. He retired on 30 June 1909. He was a foundation member of the New Zealand Institute of Surveyors. The following extract from "Land Legislation and Settlement in New Zealand" is based on Murray's official diary for 1879.

"An incident in the work of W. D. B. Murray illustrates the varied life of a surveyor. In January, 1879, he was surveying land in the Teviot (Otago) district for settlement near the Old Man Range, and was instructed to fix a trig. on the summit of Old Man Rock, which stands at the northern end of the range at a height of over 5,000 feet above sea level. The rock itself is a solid pillar over 80 feet high, with straight sides, about 25 feet along the base and 9 feet in diameter across the top. Here is an extract from his diary. 'January 13; Started with men and camp for Obelisk (or Old Man) Range at foot. 14; Started up the mountain; when three parts

up it came on to rain, with snow and mist; had to go back to camp. This is midsummer! 15; In camp; weather clearing. 16; Took men and horses up the mountain; ascended the rock, drilled hole, fixed iron bar with flag, and camped at foot of rock. 17 and 18; Reading bearings to iron bar from surrounding stations; camped at foot of range. 20; camped at foot of rock to start boundary line. Fearful night; snow 9 ft. deep in the morning; horses and men nearly perished; tents blown to smithereens. 21 ; Back at old camp at foot of range to refit. 22; up again to Old Man; ascended with theodolite, set onto distant trigs. etc etc.

The manner in which the rock was ascended is of interest. A pointed lead weight was attached to the end of a long line of strong thin whipcord: an assistant, E. H. Hardy, Edwin Henry Hardy was at that time survey cadet, was sent to the other side of the rock to look out for, and held the weight if it came over; and then, with a flying heave the surveyor sent the weight fair over the top at first attempt. A stout strong marline was then bent on to the whipcord, and on to this a $\frac{3}{4}$ inch manila rope, which was knotted every foot, and when this was hauled over the two ends were pegged firmly in the ground, with heavy rocks on top; and grasping the rope, the surveyor went up hand over hand to the top, the knots giving great assistance. The assistant then came up, and after him the hammer, drill, bottle of water and iron bar were hauled up. A hole 9 inches deep was drilled in the centre of the rock, the iron bar fixed in it and duly flagged. So far as is known, it is still in position. It may be mentioned that many men have been lost on the Obelisk Range; in one gully are the graves of seven men, all of whom were lost in the same snowstorm (during the days of the early gold rushes)".

Ref: History of Land Legislation and Settlement in New Zealand, by W. R. Jourdain (Department of Lands and Survey. Government Printer 1925) p.229.

MURRAY, William George (1841 -)

Born in Bamfshire, Scotland, when about twenty years of age he came to New Zealand and joined Mr. E. P. Sealy's party, surveying in Canterbury. Shortly afterwards he went to the West Coast where he entered the Survey Department as a survey cadet. After qualifying as a surveyor he spent many years surveying on the West Coast during the height of the gold mining era. In November, 1896, he became Commissioner of Crown Lands and Chief Surveyor for Westland. In February, 1902, he was transferred to the Nelson Land District, where he held the same offices. He retired at the end of June, 1906.

He was a foundation member of the New Zealand Institute of Surveyors.

See Cyclopaedia of New Zealand Vol. 5 p.30.

MUSGRAVE Thomas

As an assistant Surveyor, he came to New Zealand in 1841 in the Whitby with the survey staff to lay out the Nelson Settlement. In October, 1841, he took part in the exploration of the Tasman Bay district which decided the site for the settlement. He was responsible for laying out the Suburban South allotments which extended from the outskirts of Nelson town to the edge of the Waimea Plain. In October, 1842 he was one of the surveyors who went to Takaka to survey the rural allotments in that district.

See "Nelson – A History of Early Settlement" by Ruth M. Allan, 1965.

Musgrave also surveyed land in the Wairau and Awatere districts before Marlborough became a separate Province and the first of these surveys are dated 1853.

NANKEVILLE Robert

Joined the survey staff of the New Zealand Company, under Captain William Mein Smith, at Wellington on 15th May, 1841, as Assistant Surveyor, and was engaged on surveys in the Wellington settlement and in Manawatu. He was one of the surveyors retrenched on 31st March, 1843, when the Company was in financial difficulties. Nankeville went to Port Cooper (Lyttelton) in 1849 and when the surveys for the Canterbury Association commenced he worked as a contract surveyor under the direction of Captain Thomas, the Principal Surveyor to the New Zealand Company in Canterbury Settlement.

NEILL, William Thomson (1866 – 1943)

Born at Carlisle, Lanarkshire, Scotland in 1866, he came to Dunedin with his mother in 1874. He joined the Lands and Survey Department there in 1883 when William Arthur, who initiated the training of several of New Zealand's notable surveyors, was Chief Surveyor. He served his field cadetship under Mr. E. H. Wilmot for two years after which he passed the

Surveyor's examination. Before being appointed Assistant

Surveyor he worked under Mr. J. Strauchon for a period. Next he was transferred to Hawkes Bay to revise some of the early surveys in the southern part of that district, and in 1889 was stationed in the Poverty Bay district on settlement and roading surveys in the heavily bushed Motu area. The road from Waihuka Stream to Motu, for many years known as Neill Road, is now a considerable portion of the State Highway between Gisborne and Opotiki.

In 1890 he visited Australia and studied the survey systems of New South Wales and Victoria, and the methods in vogue at the Sydney and Melbourne Astronomical Observatories. The 1892 Land Act resulted in the acquisition by the Crown of a number of large estates in Southland, Otago and Canterbury and in 1893 W. T. Neill was transferred to Otago to assist in the subdivision of some of these estates. He was also Acting Road Engineer for Otago for two years.

In 1899, in association with Dr. C. C. Parr F. R. S. he initiated the Magnetic Survey of New Zealand. He then carried out the first extensive contour survey undertaken in New Zealand, the topographical survey of the region extending from the Taieri to the Waikouaiti Rivers.

In 1901 he was appointed District Surveyor at Dunedin, when his work included Defence and Railways Surveys for the Public Works Department. For health reasons he spent 1907 in the Gisborne Office as Land Transfer Draughtsman, and the following year, having been granted six months furlough, he visited Canada, the United States of America, Great Britain and the European Continent, studying the survey systems of the various countries. On his return he undertook the standard survey of Dunedin. In 1918 he was transferred to the Head Office of the Department at Wellington as Chief Inspector of Surveys and in 1920 succeeded Mr. T. N. Brodrick as Surveyor General. He retired in 1929 and was succeeded by Mr. H. E. Walshe.

As a mathematician, he was of outstanding attainment and wide knowledge in physical sciences. In addition to his official duties he found time to write many papers on mathematical and physical subjects. These were published in Departmental reports and in the New Zealand Surveyor and in overseas scientific journals. He died in Wellington in February, 1943.

See New Zealand Surveyor Vol. XIV No. 1 p.18 and No. 2 p.84

See New Zealand Surveyor Vol. XVII No. 182 p.165

NELSON Charles (1829 -)

Born in Sweden, he was Swedish and Greek by birth, a son of Professor Nillson of Lund University. He went to sea in 1844 and after visiting New Zealand intermittently after 1852, he finally settled in Matai Glorit, about 1860. During his many years at Kaipara he was a sailor, and Surveyor and a skilled linguist and Maori interpreter, an authority on Maori lore and became the first proprietor of the Kaipara Hotel

In 1862 he was in partnership with E. F. Tole in a surveying practice. In April, 1869 he was licensed under the Native Land Act of 1868.

See "Men Came Voyaging by C. M. Sheffield, 1963 p.60.

NICHOLSON Richard (Sir)

Came to New Zealand as a Survey Cadet on the staff of the New Zealand Company. He arrived at Port Nicholson in the BROUGHAM on 9th February, 1842.

He was sent to work under Captain Joseph Thomas in laying out town and rural sections at Wanganui. He was next engaged on similar work in the Hutt valley. Following the Company's staff retrenchment of 31st March, 1843 the cadets were employed on office work at Wellington.

Anticipating the purchase of the Otago Block, which was concluded on 31st July, 1844 Messrs. Nicholson and A. J. Allom were dispatched from Wellington in the CARBON on the 26th June, to join Frederick Tuckett and William Davison at Otago and to commence the surveys of the Otago Block. Through adverse weather the schooner was forced to seek shelter in various bays, the sails were split to ribbons and the schooner almost wrecked, and the voyage took a whole month. Under Tuckett's direction they surveyed the harbour and commenced to lay out the suburban sections. Towards the end of 1844 the Company was in financial straits and survey operations were suspended.

Tuckett was recalled to Nelson and early in 1845 Messrs. Nicholson and Allom were recalled to Wellington, leaving Davison to take care of the Company's property at Otago.

Nicholson returned to England in 1845 and entered the legal profession in which he served with distinction and was awarded a knighthood. In particular in 1865 and the following years he was closely associated with the Shrewsbury peerage case which was one of the most important and notable peerage cases ever tried.

NORMAN Edward (1820 - 1875)

He was a survey cadet on the staff of the New Zealand Land Company. He arrived at Port Nicholson in the barque BROUGHAM on 9th February, 1842 and

shortly afterwards was sent to assist with the surveys in the Manawatu district under the direction of Robert Sheppard.

“Another artist whose quality is only now becoming appreciated

In 1855 he was advertising in the Lyttelton Times as a draughtsman who could supply accurate sketches of the Colony. He was well known in South Canterbury as ‘a clever landscape sketcher’ and his finest known work is the beautiful pencil and wash ‘Birds Eye View of the MacKenzie Country’ (c.1866).”

See “A History of Canterbury” Vol. 2 1971 Chapter XXI p.468 (Whitcombe & Tombs Ltd.).

In 1852 Edward Norman was sent to Kaikoura to survey the peninsula but met with much opposition from the Maoris who attempted to prevent him from completing the survey.

See “Kaikoura” by J. M. Sherrard 1966 p.80 (Caxton Press)

NORTHCROFT William (1807 - 1888)

He was trained as an architect and surveyor and practised in Essex. In 1852 he came to New Zealand and took up land at New Plymouth. He served in the militia during the Taranaki War. From 1st January, 1866 until 1867 he was Surveyor of roads and Bridges under the Provincial Government and then went into private practice. From 1861 to 1865 he was a member of the Provincial Council. He was Provincial Secretary and for a time Deputy Superintendent. In 1868 he became Secretary to the Provincial Board of Education and later, Secretary of the Education Board.

NORTHCROFT, George Andrew (1849 - 1939)

Born in England in 1849, he arrived in New Plymouth with his parents on the 16th April, 1852 in the ship CRESSWELL. His father was William Northcroft, q.v.

Joining the Taranaki Provincial service in the Survey Department in 1864. George Northcroft was trained as a surveyor by Octavius Carrington and became an assistant surveyor in 1867, stationed in the Patea district during the latter part of the Taranaki war. He resigned from the Provincial service in November, 1876, when he was engineer to the borough of New Plymouth. He joined the Lands and Survey Department on 1st November, 1876, stationed at Wellington and was transferred to the Auckland as Land Transfer Draughtsman in July, 1884. During the depression years of the 1880s Northcroft was one of those whose services were dispensed with, with compensation for loss of office. He went to South Africa and entered the service of the Orange Free State as an engineer, eventually retiring from the position of Chief Engineer.

He died in Jersey, in the Channel Islands in 1939.

See New Zealand Surveyor Vol. XVI No. 9 p.411

O'DONAHOO, Arthur O'Neill (- 1911)

Born in Tasmania, he completed his education at Melbourne University. He came to New Zealand about 1877 and joined the Lands and Survey in Canterbury. In 1882 he transferred to Taranaki as staff surveyor until 1887 when he left to join Mr. Everard W. Seaton in partnership in private practice. In 1906 he went to Australia and was given charge of surveys in the Muswellbrook district in New South Wales. In

1910 he retired and went to live at Gosford, near Sydney. He died there on 8th November, 1911

Mr. O'Donahoo was a foundation member of the New Zealand Institute of Surveyors and had taken an active part in its establishment. He was a member of the first Council of the Institute.

See New Zealand Surveyor Vol. IX No. 12 and also Vol. XVII No. 6. Vol. VI No. 5. When the constitution of the New Zealand Survey Board was amended in 1901 Mr. O'Donahoo and the Hon. G. F. Richardson were the first representatives of the New Zealand Institute of Surveyors to be appointed.

O'CONNOR, Charles Yelverton (1843 - 1902) C. M. G.

Born in Ireland and educated at Waterford. In 1859 he was apprenticed to J. Challoner Smith, M. I. C. E. a railway contractor. In 1865 he came to New Zealand and was Assistant Engineer to the Canterbury Provincial Council, under Edward Dobson. In 1870 he was Engineer for Westland and on 15th August, 1871, he was appointed District Engineer for Public Works Department, Westland and in 1872 for Canterbury and in 1872 for Canterbury and Westland, and for a term, for Nelson. He was also Consulting Engineer for the Hokitika Harbour Board, and assisted Sir John Coode with information for his Greymouth and Hokitika harbour reports.

He was authorised as a surveyor, at Hokitika, on 1st April, 1880.

In 1880 he was Inspecting Engineer for the South Island under the General Government and was elected M. I. C. E. From 1883 to 1890 he was Under-Secretary for Public Works. In 1890 he was appointed Marine Engineer and in 1891, with John Goodall, he reported on the accretion troubles of Timaru Harbour and recommended the extension of the breakwater. On 30th April, 1891, he went to Western Australia as Engineer-in-Chief.

There he designed and carried out the construction of Freemantle Harbour and Coolgardie Water Supply, two major engineering works.

He was also General Manager of Railways, Western Australia until 1896. In 1897 he was awarded the C. M. G.

Photo on p.240 of "Early N. Z. Engineers" by Furkert, 1953.

OLDFIELD Thomas (-1902)

As a young man he had taken part in the Crimean War and had come to New Zealand where he joined the Armed Constabulary and served during the Maori Wars. He was a Sergeant in the Armed Constabulary and was the recipient of the New Zealand War Medal.

He joined the Survey Department in Taranaki in 1898 and was engaged on surveys at the head of the Whenuakura River at the time of his death which occurred at his survey camp on 20th October, 1902.

See "History of Land Legislation and Settlement in New Zealand" Jourdain, p.217.

OLIVER, John Thomas (1821 - 1900)

Born in Roxburghshire, Scotland. He was trained as a surveyor and engineer in southern Scotland by a Mr. Mitchell. He arrived in Otago in 1851 and was Road Surveyor under the Provincial Government in 1859 and District Engineer in 1864. He was constructing the road over Saddle Hill in 1861 when the Otago Central "gold

rush” commenced and all of his men left in haste to join the rush. He was in charge of road and bridge construction until 1872 when he went into partnership with G. M. Barr in Dunedin, operating over an extensive field. Oliver attended chiefly to Otago roads and bridges, notably in the Waitaki County, while Barr took work far afield. When Barr became Otago Harbour Engineer in 1882, Oliver retired from active practice. Authorised. Surveyor in July, 1884.

See “Early New Zealand Engineers” by F. W. Furkert, 1953 p.236 (Thomas Oliver)
O’MEARA, Edward Sherlock

As a member of the Auckland Volunteers, Edward O’Meara took part in the Waikato Campaign seconded as a surveyor attached to the Imperial Forces. On 2nd March, 1864 steamers for the first time used the Waikato River above Ngaruawahia. The gunboats KOHEROA and PIONEER under Commodore Sir William Wiseman, R.N. with a detachment of the 65th Regiment aboard, steamed as far as Kirikiriroa (where Hamilton now stands) and stayed the night. The following day the KOHEROA went on to Pukerimu, a few miles from where Cambridge now is. Mr. O’Meara and his survey party and a few soldiers under Captain Bulkley went ashore where a survey was commenced. The surrounding country was strongly occupied by the enemy who soon gathered to repulse the survey party. The latter and their supporting contingent made a hasty retreat to Ngaruawahia.

When the campaign ended with the defeat of the Waikato tribes, O’Meara was one of the surveyors engaged in surveying the confiscated territory. He was involved in the Bay of Plenty and East Coast campaigns and engaged in surveys in those districts.

In 1865 he was gazetted a surveyor for the purpose of the Native Lands Act and also for the Mining Act, and in 1878 was licensed under the Land Transfer Act.

He was a foundation member of the New Zealand Institute of Surveyors.

O’NEILL Allan (1802 - 1886)

Born in County Antrim, Ireland, he was educated and trained as a surveyor and civil engineer. For some years he was engaged on the Ordnance Survey and on railway surveys in Great Britain.

He arrived at New Plymouth in the Timandra on 23rd March, 1843 as a surveyor on the staff of the New Zealand Company but shortly afterwards the Company had to retrench and reduce its survey staff. On his dismissal O’Neill walked overland to Auckland where he arrived in September after six weeks of travelling through trackless and almost uninhabited wilderness.

At Auckland he was employed by the Government and was responsible for some of the first surveys on the North Shore at Takapuna and Devonport. In September, 1852 he was elected to the Legislative Council of New Ulster for the Northern Division. The following year, when Provincial Government was established he was elected to the Provincial Council on which he served until 1868. In 1854 he was City Surveyor and Treasurer for Auckland.

His brother James also gave his time to public affairs as a member of the Provincial Council and of the House of Representatives and eventually was called to the Legislative Council.

The Bayswater district was at one time called O'Neill's Point because most of the peninsula was owned by the brothers.

Allan O'Neill died at Auckland on 5th July, 1886.

See Dictionary of New Zealand Biography. Scholefield.

Decently and in Order by G. W. A. Bush, 1970 p.50.

O'NEILL, Charles

A son of JOHN O'NEILL of Auckland.

He was a District Engineer under the Otago Provincial Council in 1861. Later he went to the Thames goldfield where he practised as a mining engineer and surveyor. He was appointed a Minefields Surveyor in 1868 (vide Auckland Provincial Gazette). He was elected to represent the Thames Goldfield in Parliament in 1866-69 and again in 1871-75. On the 19th October, 1871, he introduced a Bill called the "Plan of Towns Regulation Bill" which was for the purpose of regulating the width of streets, the provision of adequate public reserves etc. for which there was at that time no existing legislation. This was the first attempt to legislate for the control of town planning in New Zealand. The Bill passed its third reading in the Lower House but was rejected in the Legislative Council on the casting vote of the Speaker. On October 12th 1875 "The Plan of Towns Regulation Act, 1875" was passed and came into force on 1st January, 1876. It followed very much on the lines of O'Neill's Bill of 1871.

In 1870 Charles O'Neill surveyed and reported on a proposed railway route across the Rimutaka Ranges. In 1874 he was Wellington Provincial Engineer and proposed tramways for Wellington City. On the abolition of the Provinces he retired from Government Service to enter private practice but retained his interest in the Wellington tramways which came into operation in 1878. Records of his career after 1879 are wanting and it appears that he left New Zealand permanently about that time.

See "Early New Zealand Engineers" by F. W. Furkert 1953 p.236

Paper by C. B. Barrowclough B.A. L. L. B. "Town Planning Law and Practice in New Zealand" read before Otago Section of the Royal Society of New Zealand, 16th June, 1936 and published in "Planning" Bulletin No. 3 of the Town Planning Institute of New Zealand, September, 1936.

O'NEILL, William Campbell (1847 - 1913)

Born in Inverary, Scotland in 1847 he emigrated to Victoria in 1862. Shortly afterwards he joined the gold rushes to Otago and the West Coast. About 1876 he went north and for a brief period practised as a surveyor in partnership with Robert Campbell at Whangaroa. He then commenced practice on his own account at Monganui.

He was a foundation member of the New Zealand Institute of Surveyors.

See Cyclopaedia of New Zealand, Vol. 2 p.591

New Zealand Surveyor, Vol. X No. 1 p.108.

ORMSBY George Owen (- 1862)

He was born in Ireland where he was trained as a surveyor. He emigrated to Australia where he assisted in the first surveys of the town of Melbourne. He and his brother Robert, who was a graduate of Dublin University, came to New Zealand in 1842 and George was an early settler at Onehunga. He was engaged as a contract surveyor, surveying Crown Land and practising privately. He also made a chart of Manukau Harbour. One of his surveys in 1851 was of the two Te Papa Blocks which today are the site of the City of Tauranga and its environs. This survey was made for the Church Mission Society in connection with its claims before the Land Claims Commission.

In 1855 George Ormsby was appointed a Commissioner of the Provincial Waste Lands Board and was also a Commissioner of the Board of Works and Provincial Road Surveyor. (Vide Auckland Provincial Gazette, 1855).

He was the first European to settle at Onehunga on land he had purchased from the local Maoris in 1844 when Governor Fitzroy suspended the Crown's preemptive rights over Maori lands. Ormsby's claim to ownership was subjected to investigation by the Land Claims Commission and the land was subsequently taken by the Government for the purposes of the Fencibles (military) settlement which was established at Onehunga. Ormsby refused to accept the compensation offered by the Government and contested the Government's action. The litigation was protracted and the report of the Commissioner (Francis Dillon Bell) states that Ormsby died, in 1862, before the report was published. (Vide A. J. H. R, 1862, D No. 10).

See also "This Stern Coast" by J. O' C. Ross 1969 p.111.

ORMSBY, J R

In "The History of Land Legislation and Settlement in New Zealand" 1924 p.241 W.R. Jourdain lists J. R. Ormsby as a surveyor working in the Auckland region in 1847. A search of existing records reveals no further information and it seems very probable that the person referred to was Robert Ormsby the younger brother of G. O. Ormsby, q.v.

In 1844 Robert was exploring in the bush at the back of Kawhia Harbour when he became lost and was found in a weak and delirious state by a young Maori chief of the Maniapoto tribe. Ormsby was nursed back to health by Pianaki (the sister of the chief) whom Ormsby subsequently married. He was adopted into the tribe and subsequently took an influential part in the management of public affairs in the Kawhia district and within the Rohepotae (King Country).

Ref. South of the Aukati Line by Dick Craig 1862 Chapter XIX

ORMSBY, Arthur Sydney (1825 - 1887)

He was born in Ireland. He was trained as a civil engineer by Mr. George Halpin and was engaged on railway works in Ireland and England until 1849 when he went to the United States where he worked on a number of railway projects one of them being the Hoosac Tunnel, which at that time was the longest in North America. In 1852 he sailed for Australia and shortly afterwards came to New Zealand. He was engaged

on contract surveys for the Government but left the Government service on 14th October, 1855, to practise as a Civil Engineer at Auckland. He eventually returned to England in 1861 and entered private practice. (Vide I. C. E. Transactions Vol. 155).

See Early New Zealand Engineers by F. V. Furkert 1953 p.237.

O'RAFFERTY Cormac Patrick

In 1855 he was Surveyor to the Auckland Provincial Waste Lands Board and a member of the Provincial Board of Works, described as a Civil Engineer. In January, 1857 he became Commissioner of Crown Lands at Auckland.

On 14th March, 1859 in a letter to J. O'Shannesy, Chief Secretary of Victoria, written in Melbourne (St. Kilda) and now in the Turnbull Library, he claimed to have been in New Zealand for four years, having succeeded Mr. C. W. Ligar as Chief Surveyor and Commissioner of Waste Lands. He was writing on the question of Land Laws and pointing out pitfalls as evidenced in New Zealand changes. He mentions 1854, Grey's Regulations; 1855, Whittaker's Regulations; 1856, Campbell's Regulations and 1858, Williamson's Regulations, and expects new ones next year.

In 1857 he prepared a system of levels for the City of Auckland.

From 1st September, 1863 to 1865 he was Inspecting Engineer for Roads in Otago. Thereafter no record has been found of his career.

See Early New Zealand Engineers, by F. W. Furkert, 1953 p.237 History of Land Legislation Settlement in New Zealand by W.R. Jourdain, 1924 p.237.

O'RYAN William (1851 - 1939)

He was born in Ireland and educated at Fermoy and Cork. In 1876 he arrived in New Zealand. He joined the Survey Department and was engaged on trigonometrical surveys and later as draughtsman in Napier and Gisborne. In 1880 he was with the firm of Winter and Haig, Engineers and Surveyors, carrying out pioneering work for the Cook County and other local bodies in that area.

He became an Authorised Surveyor in February 1881

In 1893 he was appointed Engineer to the Waiapu County where his work included much bridge building. In 1918 he left the service of the Waiapu County to become Engineer to the Matakaoa County, retiring in 1926 to live in Auckland.

He was a foundation member of the New Zealand Institute of Surveyors.

He died at Auckland on 2nd October, 1939.

OWEN Frank (1851 - 1907)

Born in Dulwich and educated at Dulwich College, he entered on a maritime career at fifteen years of age. When eighteen years of age he joined the survey staff of E. J. Champion at Wellington. He worked also with T. W. Downes in the Wellington Province, surveying the Manchester Block 1870. He became an Authorised Surveyor in February, 1883 and set up in private practice at Fielding, where he died on June, 1907.

He was a foundation member of the New Zealand Institute of Surveyors.

See Cyclopaedia of New Zealand Vol. p.1235. Has Photo.

PARK JAMES (1856 - 1946)

Born at Kintore near Aberdeen and educated there. He attended the Imperial College of Science, and was Ramsey Prizeman in Geology. He came to New Zealand in 1876 and was sheep farming for two years. He was then on the staff of the New Zealand Geological Survey from 1878 to 1883 under Sir James Hector, and then he was Mining Geologist for the Geological

Survey until 1890. From 1890 to 1896 he was Director of the Thames School of Mines, and then for five years he was General Manager and Consulting Engineer to the Anglo-Continental Company, of London. From 1901 to 1931 he was Professor of Mining and Economic Geology at Otago University.

He was President of the New Zealand Institute of Mining Engineers, President of the Otago Institute, Vice-President of the Otago Astronomical Society, and President of the Otago Technological Society. Also he was an honorary member of the Institute of Mining and Metallurgy, London, and a Fellow of the Geological Society.

He published *Geology of New Zealand*; *Mining Geology*; *Theodolite Surveying and Levelling*; *Cyanide Process of Gold Extraction*; *General Geology*; *Practical Hydraulics*; *Practical Assaying* and forty official reports on Geological explorations between 1885 and 1890. In his latter years he lived at Oamaru where he died 28th July, 1946. Air Marshal Sir Keith Park was a son.

From 1883 to 1885 James Park was draughtsman and surveyor in the Lands and Survey Department at Nelson. See also "N. Z. Geological Survey. 1865 - 1965 by Peg Burton, pp 23 - 25 for a biography. Also, N. Z. Surveyor Vol. XIX, No. 4

PARK Robert (1812-1870)

He was born in Scotland. He came to Port Nicholson in the ship CUBA in 1839 as a member of the New Zealand Company's survey staff. He took part in some of the early exploratory expeditions and reconnaissance surveys, a noteworthy one being that made in the latter part of 1840 from Wellington to Moturoa (New Plymouth), in company with Robert Stokes, Charles Heaphy and William Deans.

In 1842 he was Town Surveyor for Wellington and his street formation plans are still to be seen in the City Engineers Office. In 1850 he was Government Surveyor in Wellington District, when he was selected by Donald MacLean, Lands Commissioner, because he was "good with natives, practical, correct and expeditious", to make the survey of the Ahuriri Block that had just be purchased. He prepared a map of Hawkes Bay reaching from Mohaka to Porangahau, published in 1851

In 1860 he moved to Canterbury where he took up land at Winchmere (*Winchmore?*) which he farmed in winter and still did some surveying for the Provincial Government in the summer. He died 10th March, 1870 at Christchurch.

He was licensed under the Native Land Act, 1865 vide N. Z. Gazette, 1867. See "Pioneers on Port Cooper Plains" by John Deans, 1964. This gives Park's "family tree".

PARKINSON Samuel

As a contract surveyor working for the New Zealand Company in the Nelson Settlement in 1843 he was one of those who undertook to survey land in the Wairau district. In April, 1843, three survey parties left Nelson in boats for the mouth of the Wairau. At Cloudy Bay they were informed by the Maoris that, as the land had not been sold to the Company the surveys would be prevented. Nevertheless the surveyors established their camps up the Wairau on the 25th April and the surveys commenced. Exception was taken by the Maori claimants and soon afterwards the surveys were interrupted and the surveyors and their belongings removed from the ground. The resultant intervention by an armed party of special constables led by Company officials from Nelson ended in the tragic incident known as the "Wairau Massacre" in which a number of lives were lost, including the surveyor J. S. Cotterell, and several survey hands. The result was that for some time the Wairau district, which was evacuated by the Europeans and Maoris alike, remained uninhabited. Parkinson, on his own initiative, made an attempt in August to complete his contract, but as the Company had given the Government its assurances that the surveys would not be completed without Government permission, and because the Maoris again objected and would not permit the survey to proceed, he was ordered to withdraw.

In November, 1843, Parkinson and J.C. Drake, aided by some Maori guides left Nelson via the Maitai and explored for a practicable route over the ranges to the Wairau. They discovered the Maungatapu route but the Chief Surveyor, Frederick Tuckett, who later traversed part of the route with them, vetoed its adoption as he considered it suitable only as a pack track.

See "Nelson – A History of Early Settlement" by Ruth M. Allan 1965.

PATTERSON Nathaniel (1860 – 1951)

Born in Northern Ireland, he was of Scottish descent, son of Walter Paterson, a former teacher at Otago Boys High School. His great grandfather was Sir Walter Scott's "Old Mortality" and his grandfather was the Rev. Dr. Nathaniel Paterson, one of the first moderators of the Free Church of Scotland. As an infant he arrived in Dunedin with his parents and when fourteen years of age he was indentured to the firm of Connell and Moodie, surveyors and engineers, at Dunedin, as a survey cadet.

He qualified as an Authorised Surveyor in 1880 and the same year he was licensed to survey under the Land Transfer Act. He left the firm of Connell and Moodie in 1899 to join his brother Edward in founding the firm of N. and E. S. Paterson as surveyors, civil engineers, land and stock brokers, at Dunedin. The firm practised widely in Otago and Canterbury. Nathaniel Paterson was a foundation member of the New Zealand Institute of Surveyors in 1888.

In due course his son, Henry L. Paterson joined the firm. He was President of the Institute of Surveyors, 1942-1947. Subsequently Henry's sons K. W. and M. C. Paterson, joined the firm and became members of the Institute and are carrying on the business founded by their Grandfather, Nathaniel Paterson, who died at Dunedin in 1951.

Refs: "New Zealand Surveyor" Vol. XX No. 3 p.184 for photograph of members of the Paterson family.

“New Zealand Surveyor” Vol. XX No. 7 p.4, obituary.

“Cyclopaedia of New Zealand” Vol. 4, p.247.

PAVITT, Ernest Alfred (- 1945).

In 1875 he was surveying in Canterbury and subsequently he moved to Poverty Bay where he was employed until 1890 when he left New Zealand to enter the service of British North Borneo where he worked on the survey staff of the Lands Department which was directed by a former New Zealand surveyor, Mr. N. Tone. After several years of survey work in connection with large tobacco estates and exploration surveys to the centre of Borneo he was appointed Acting Commissioner of Lands. In 1898 after returning from furlough spent in New Zealand he was appointed Superintendent of Public Works and member of the Legislative Council, a position he held until 1901, when he resigned to join Mr. George Panting in constructing the Jesselton- Beaufort Railway. He next joined the Central Borneo Company as Assistant Manager of Labuan Island coal mines. Shortly afterwards the company dissolved and Mr. Pavitt went to the Federated Malay States on a gold-mining venture under the Duff Development Company. Through contracting malaria he returned to New Zealand to recuperate and then returned to Borneo in 1906, having been appointed Superintendent of Public Works and Collector of Land Revenue. In 1908 he was appointed Chief Surveyor, an appointment he held until his retirement in November, 1923. He then went to live in Hobart, Tasmania, where he died in 1945.

See New Zealand Surveyor Vol. XII No. 5 p.201, and Vol. XIX No. 3 p.186

He was a member of the New Zealand Institute of Surveyors.

He became an Authorised Surveyor in August, 1883.

PEMBERTON Charles French

Born in England where he was educated and trained as an engineer, he emigrated from Chelsea and arrived at Wellington in 1857. After two years assisting in surveys in the Wellington Province he went to Canterbury and joined the Provincial survey staff and was stationed at Stillwater. In 1860 he was sent to establish a survey office and lay out the township of Sefton where his cottage and the office were the nucleus of the town which developed a few years later when the railway was opened in 1875. Other townships laid out by him were Amberley in 1864 and Ashley in 1866. He took a prominent part in local affairs and was Chairman of the Kowhai Road Board in 1876.

See also “Beyond the Waimakariri” by D. N. Hawkins, 1957 (Whitcombe & Tombs).

PHILLIPS-TURNER Edward (F. R. G. S. etc) (1864 -1937)

He was born in Ireland and came to New Zealand with his parents in 1870. Later the family went to Tasmania where he received his education at the Hutchins School and by private tuition, after which, at the age of sixteen he went to sea for a year but then relinquished the idea of a maritime life. In 1882 he studied privately in England and then returned to Tasmania. He came to New Zealand in 1884 and took up surveying and completed his examinations in 1887. During the next few years he was engaged in surveying in various places in New Zealand and in New South Wales, and in 1891 he accepted a Government appointment to carry out mining surveys on the west coast silver field of Tasmania. In 1894 he returned to New

Zealand and joined the Lands and Survey Department in Auckland. In 1908 he was appointed to the Head Office of the Department at Wellington as Inspector of Scenic Reserves for the Dominion. In 1913 he was appointed Secretary of the Royal Commission on Forestry and in the following year was a member of the Royal Commission of the reservation of scenery along the Wanganui River.

In 1918 forestry was made a distinct branch of the Lands and Survey Department and Mr. Phillips-Turner was put in charge. The following year a separate Forestry Department was established with Mr. Phillips-Turner as head with the title of Secretary of Forestry. In 1920 the Department was reorganised as the State Forest Service with Mr. L. M. Ellis as Director and Mr. Phillips-Turner as Secretary in charge of administration. Mr. Ellis resigned in 1928 and was succeeded as Director by Mr. Phillips-Turner who retained the office until his retirement in 1931.

He was a Fellow of the royal Geographical Society and was a Member of a number of bodies in New Zealand and elsewhere whose activities were concerned with his vocation. In botany he did much valuable research, and his publications on botanical and forestry subjects are numerous. His most important work, perhaps, was "The Trees of New Zealand", written in collaboration with Dr. Cockayne. He was a Fellow of the Linnaean Society of London, and of the Royal Society of New Zealand. He was also a professional member of the Empire Forestry Association and was President of the New Zealand Forestry League.

He was also a member of the New Zealand Institute of Surveyors.

See The New Zealand Surveyor, Vol. XIII No. 9 September, 1928.

PITCAIRN, Robert H (-1869)

In February, 1859, with the threat of war in Taranaki, Robert Pitcairn became one of the original members of the Taranaki Volunteer Rifle Company which was then founded and in which fellow recruits were the well known surveyors, Messrs. C. W. Hursthouse, S. Percy Smith and G. F. Robinson. Subsequently, during the Bay of Plenty campaign, he served as Colour Sergeant in the Auckland Volunteer Engineer Company, under Captain H. L. Skeet. At the conclusion of the campaign he was engaged in the surveying of confiscated land around Ohiwa Harbour. The district was raided by the arch rebel Te Kooti, and his followers, early in 1869 and on 2nd March, Robert Pitcairn was captured on Uretawa Island and murdered.

He was a member of the Auckland Provincial Surveyors Association founded in 1865.

Refs: 'Primus in Armis' the journal of the Taranaki Regiment, Vol. 1 July 1936 p.32.

Daily Southern Cross, 9, 15 and 31 March, 1869.

The New Zealand Wars, James Cowan. Vol. 2 1956 edition p.510.

PRITCHARD George Allen (1825 – (1895)

Born 1 October 1825 in Tahiti where his father, G. Pritchard, was L. M. S. Missionary and later British Consul until 1843

He was sent to England for his education and later returned to Tahiti. Subsequently he spent some time in Samoa and then went on to New South Wales, whence he came to New Zealand in 1865 and was engaged in surveying the confiscated land in the Waikato district for the military settlers. He settled in Hamilton

for a while. About 1871 he returned to Samoa and engaged in trading between Australia and the Pacific islands. He died in Samoa in 1895.

He was licensed to survey under the Native Lands Act of 1865, vide New Zealand Gazette 10 January, 1867.

PROUDFOOT Peter (1825 - 1857)

When twenty-four years of age arrived in Otago in the "Cornwall" 23rd September, 1849. He worked under Charles Kettle and subsequently was appointed Provincial Surveyor on 24th March, 1855. He was elected a member of the Provincial Council in December, 1855 and of the Education Board in May, 1855. He was appointed Commissioner of Crown Lands on 12th June, 1855 and Receiver of Land Revenue in January, 1857. He died on 14th October, 1857.

See "The Story of Early Dunedin" by A. E. Reed, p.99 et seq. for an account of the dispute between Captain Cargill and C. T.. Kettle involving Peter Proudfoot, about the possession of the Dunedin Survey Office and the custody of the office keys. This book has a portrait of Peter Proudfoot on page XXXVIII and also one of Charles Henry Kettle on page XXXII.

REAY, Robert Charles Lucas (1839 - 1911)

Born in England, he arrived at Auckland with his parents in 1842. His father was placed by Bishop Selwyn as the first Anglican clergyman in the Nelson settlement. Robert Reay returned to England to complete his education and then joined the Royal Navy and was placed on a survey vessel for training.

During the New Zealand wars of the 1860s he returned to New Zealand and undertook surveys in the confiscated territory in the Waikato and in Taranaki. He subsequently joined the Lands and Survey Department and worked in the Chatham Islands, Bay of Plenty and Hawkes Bay districts. Appointed a Goldfields Surveyor Auckland Provincial Gazette, 1868. Appointed Assistant Surveyor, Lands and Survey Department, vide New Zealand Gazette 1st July, 1877.

He resigned from the survey staff and entered private practice at Tauranga In 1886 he went to Wairoa, Hawkes Bay where he was in private practice for some years, working in all parts of Hawkes Bay.

He died at Wairoa on 24th June, 1911.

He was a foundation member of the New Zealand Institute of Surveyors.

See New Zealand Surveyor, Vol. IX No. 10 June, 1911 p.229.

REID John

Trained as a surveyor and civil engineer in the United Kingdom he emigrated to New Zealand and took up a position in the Provincial Survey Department of Otago under J. T. Thomson. In 1860 he was largely responsible for developing the system of land recording for the Provincial Government when there was a considerable increase in land transactions due to the opening up of the gold fields. This system, devised in Otago, was the nucleus of that subsequently adopted and developed as standard practice in New Zealand. In reporting on the Crown Grant Record Maps prepared by John Reid, Mr. Thomson remarked that these maps formed the authentic ground work of all titles to land and would be of intrinsic service at a future time in the preservation of land titles.

In 1876 Reid joined Messrs. George and James Duncan in founding the firm of Reid and Duncan, surveyors, civil engineers and estate agents. In 1885 the partnership was dissolved and Reid was joined by his sons, Henry William and Edward Herbert, in carrying on the business. The firm executed many contracts for the General Government in Otago and Canterbury.

Ref: "Cyclopaedia of New Zealand" Vol. 4 p.275, which has photo of Messrs. J. M. and E. H. Reid.

REID, Henry William (1862 - 1936)

Born at Dunedin, he was the second son of John Reid who was a surveyor and engineer and an Otago pioneer. H. W. Reid was educated at Dunedin, one of his school masters being Mr. (later Sir) Robert Stout, who had been trained as a surveyor in Scotland before coming to New Zealand. After attending Otago Boys' High School and Otago University, Reid qualified as a surveyor and engineer and in July, 1882 became an Authorised Surveyor. After joining the staff of Messrs. Reid and Duncan (John Reid and Messrs. George and James Duncan) he assisted in the surveying and development of the suburbs at Roslyn, Mornington and the Mornington extension tramways. On the dissolution of the partnership in 1885 he joined his father in the establishment of Reid and Son at Dunedin. Later the firm was joined by another of John Reid's sons, Mr. E. H. Reid and the firm became a company designated John Reid and Sons, in business as surveyors, and civil engineers, accountants, share-brokers, land and estate and general commission agents. On the demise of John Reid and the retirement of E. H. Reid, H. W. Reid remained the senior director until his retirement in March, 1936.

He was a foundation member of the New Zealand Institute of Surveyors.

He died at Dunedin on 18th November, 1936.

See New Zealand Surveyor, Vol. XVI No. 1 February, 1937 (photo)

REILLY John (1846 - 1916)

Born in Tamnagharrige County, Ireland, in 1846 he was educated at the Royal School, Inneskillen, and at Trinity College, Dublin, where he graduated B.A. and obtained a diploma in Civil Engineering. He came to New Zealand in 1867 and after practising for three years went to the Friendly Islands as a planter. He returned to New Zealand in 1886 and practised in the Auckland district and in 1888 set up his headquarters at Coromandel where he died in 1916. (Cyclopaedia of New Zealand Vol. 2 p.901 has photograph).

He was licensed under The New Zealand Institute of Surveyors and Board of Examiners Act, 1900" and was a member of the Institute.

Ref. New Zealand Surveyor Vol. X No. 16 p.336.

REYNOLDS, Leslie Hunter (1862 --1947)

Born in Dunedin and educated at Ed. Park's School, Barrett's Private School and at the Otago Boys' High School, 1875-79. In 1878 he was apprenticed to Kinkaid and McQueen in 1881 he joined the Government Survey Department. In 1884 he went to England to take up Harbour Engineering under William Shield, M. I. C. E. at Peterhead, being also for a time with Sir John Coode, for whom he reported on harbour schemes for Granada, West Indies, and at Port of Spain, Trinidad. On completion of these duties he returned to England where he remained until 1890,

when he was sent to Peru by James Livesy and Sons in connection with a proposed canal between Lake Titicaca and Lake Poopo. In 1892 he returned to New Zealand and was employed as consulting engineer to various harbour works, e.g. Wairoa, Nelson, Wanganui and Gisborne. He also practised as a mining engineer and did extensive survey work.

He died at Gisborne.

He was a member of the New Zealand Institute of Surveyors. See Cyclopaedia of New Zealand, Vol. 4. p288 for photograph.

RICH, Francis Arthur B.Sc. (1859 – 19)

Born in Otago and educated in Otago and Hawkes Bay. He took first place in the N. Z. Civil Service Examination in 1877, and entered the Survey Department on 9th August that year. Gazetted Assistant Surveyor, April, 1881 (Lands and Survey Department) . After his cadetship he served some years as staff surveyor at Napier and like many others was retrenched in November

1889 owing to the prevailing financial depression.

He went to the United States of America and studied engineering, graduating at the College of Mining of the University of California. He then practised mining and electrical engineering in California and Colorado. He returned to New Zealand in 1897 and practised as a mining consultant, with headquarters in Queen Street, Auckland.

He was a member of the New Zealand Institute of Surveyors.

RICHARDSON, George Frederick (The Honourable) (1837 - 1909)

Born at Cheltenham, England, the elder son of Dr. Frederick Hall Richardson. The family come to Otago in the ship DOMINION 1851. In May, 1854 when seventeen years of age, G. F. Richardson, on foot, drove the first mob of cattle to be taken south of the Clutha river, from Otepopo to Oaklands, much of the distance through uninhabited country. For the next few years he pioneered Oaklands, the block of virgin country selected by his father. In 1860 he joined the Otago Provincial survey staff as a cadet under Mr. James McKerrow, and the following year, when Southland seceded from Otago, he became a member of the Southland staff, serving under Theophilus Heale. For a time, after qualifying as a surveyor, he became Town Surveyor of Invercargill and also engaged in private practice. When Southland was reunited with Otago he had for many years the conduct of the surveys of the extensive district abutting on the western side of the Maitai River, assigned to him by the Otago department on the fee system of payment. One of his surveys, in 1874 was the laying out of the main part of the town of Gore. During this period he combined surveying with the management of the Oaklands estate and also entered local politics and became Chairman of the Southland County. In 1884 he was elected to the House of Representatives and held the Maitai electorate until 1893. He was Minister of Lands and Immigration (1887-91) in the Atkinson administration. He also was Minister of Mines (1887-89) and Minister of Agriculture (1889-91). He was again returned to Parliament in 1896 but retired soon afterwards.

He joined the New Zealand Institute of Surveyors in 1893 and was first elected President in 1895, and held that office until 1898. He was again elected in 1900 and held office until 1907. He was again elected for a term of two years on 27th January, 1909 but died on 25th October that year.

He took on active interest in promoting legislation for the advancement of the surveying profession including the "Institute of Surveyors and Board of Examiners" Act, 1900 and the arrangements for reciprocity with the surveying authorities of the Australian states. As a New Zealand representative he attended conferences of survey authorities at Melbourne in 1902 and 1905, and at Sydney in 1908.

See New Zealand Surveyor, Vol. IX No. 4 December, 1909 etc.

ROBERTS George John (1848 - 1910)

Born in Wellington he was educated in England and trained as a surveyor and engineer in Glasgow. He returned to New Zealand in 1869.

He joined the Wellington Provincial survey staff as a cadet in April, 1872 and was promoted Assistant Geodesical Surveyor a year later. He then went to Westland and was engaged in the triangulation of some of the Country's most rugged terrain. Owing to the arduous nature of this work his health broke down in 1889 and he was then employed as Land Transfer Draughtsman in the Hokitika office. In 1894 he was promoted Chief Draughtsman and in February, 1902, became Chief Surveyor and Commissioner of Crown Lands for Westland. He retired on 31st August, 1909. He died at Hokitika on 13th September, 1910.

He was a foundation member of the New Zealand Institute of Surveyors.

See New Zealand Surveyor Vol. IX No. 7 September, 1910

Cyclopaedia of New Zealand Vol. 5 p.493

History of Land legislation and Settlement in New Zealand (Jourdain) p.228.

ROBINSON, George Frederick (1839 - 1933)

He was born in Manchester, December 19th, 1839 and when fourteen years of age sailed for New Zealand in the barque CRESSWELL and landed at New Plymouth in June 1855, where he engaged in farming pursuits. In February, 1859, the Maori troubles threatening, he joined the Taranaki Rifle Volunteers, and during the war period was stationed at the Bell Block Stockade, taking part in the battles of Puketakauere, Mahoetahi and Huirangi as well as numerous skirmishes, gaining the New Zealand War medal and also the war pension.

In 1870 he engaged in the flax industry becoming manager successively of two flax mills. When the industry failed in 1872, owing to falling prices, he went to Australia and was bridge building on the Goulburn to Yass Railway studying civil engineering and surveying at the same time.

Returning to New Zealand in 1874 he succeeded Octavius Carrington as Taranaki Provincial Engineer and formed and bridged the main road from Opunake to Wanganui.

On the abolition of Provincial Government in 1875 he was taken over by the General Government and put in charge of the Inglewood, Stratford, Hawera, Meremere, Waverley and Waitotara districts. Subsequently his duties included those of Crown Lands Ranger for a district extending from Awakino to the Cook Straits and was also an Inspector under the Forest Trees Planting Encouragement Act.

In 1901 he was transferred to the Wellington District Survey Office as Road Surveyor, and in 1903, when the roads and Bridges Department was set up, with

Charles Wilson Hursthouse as Chief Engineer, he was appointed District Engineer for Wellington. He retired in 1909.

His sons, Ernest Crellin Robinson and Cedric Keith Robinson, also were surveyors, and members of the Institute of Surveyors.

G. F. Robinson died at Christchurch in his ninety-fourth year, on September 21st, 1933.

See The New Zealand Surveyor Vol. XIV No. 8 and Vol. XV No. 7.

ROCHE Harry (1856 - 1949)

He was born on 19th December, 1856 at Cork, Ireland, and was educated at the Collegiate School, Cork (1864-72) and then was two years at Queens University, Ireland, and three years at the Royal Indian Engineer College, Cooper's Hill. He was then employed at the Handyside Ironworks, Derby, and at the Dudley Ironworks. Following this he came to New Zealand, and worked under James Stewart the engineer, on railway location and construction. From 1881 to 1885 he was engaged on locating and constructing forty miles of railway. From 1887-88 he was on land drainage, and between 1889 and 1891 was with the Whakatane Road Board. He then went to New South Wales for three years of general engineering practice. In 1894 he returned to New Zealand and for two years engaged in road surveying. In 1896 he became Engineer to the Waihi Gold-mining Company and held that position for eighteen years, carrying out all classes of engineering works, including the design and construction of the Horahora hydro-electric generating station.

In 1914 he settled in Cambridge and entered private practice. He was a member of the Cambridge Borough Council and the Electric Power Board. He retired in 1946 and resided in Remuera, Auckland, where he died in March, 1949 aged ninety-three years.

He was a member of the New Zealand Institute of Surveyors.

ROCHFORD James (1856 - 1949)

He was born in London, England and trained as an architect. He left England for New Zealand in 1851 with his brother John, the surveyor. On arrival in Wellington he made an expedition to Wanganui, but was not impressed with the prospects of an opening in architecture, so he returned to England.

In 1854 the Rochfort family emigrated to New Zealand and took up land at Riwaka, the family business being controlled by the eldest son, John, with the others employed under him. James had brought out a sawmill plant which he set up and worked, the timber being transported to Nelson in the family whaleboat. In common with the Nelson settlers, they fell on hard times, and sold the mill and the farm, and John turned to Engineering and surveying and James to architecture. This not proving remunerative, James went to work with John and learned engineering and surveying. He was appointed Mining Engineer on the West Coast under the Canterbury Provincial Government in 1865.

Early in 1866 he was appointed District Engineer at Hokitika, which position he held until December, 1869, when he was appointed Provincial Surveyor of Hawkes Bay. He resigned in July, 1871 and was appointed Resident Engineer, Public Works Department on 16th September, 1872. In 1874 he left the Government Service and set up in private practice as engineer and surveyor in Hawkes Bay. He

was elected A. M. I. C. E. in 1888, and he was Borough Engineer of Hastings from 1890 to about 1895. He was interested in river control work and his activities extended throughout Hawkes Bay, covering work for various local bodies, companies and private clients.

He died at Napier in 1926. N. Z. Surveyor, Vol. XIII No. 4 p.86.

He was a foundation member of the New Zealand Institute of Surveyors, and a member of the first Council of the Institute.

His son Guy Rochfort, was also a surveyor and member of the New Zealand Institute of Surveyors.

ROCHFORD, John (1832 – 1894)

Born in London and apprenticed to civil engineering under Sir Mark Isambard Brunel. He arrived in New Zealand in 1851 (see James Rochfort) and was employed by the Government in surveying around Wellington, and then went with Robert Park and Donald Maclean to Rangitikei to survey Native Reserves. He then decided to go to Australia where gold rushes were taking place, but before doing so made a hazardous journey, unaccompanied, to Napier, via the Manawatu and the Pohangia Rivers and over the Ruahine Range, and nearly died of starvation on the way.

He left New Zealand in the middle of 1852 and had an adventurous and exciting time at the Australian diggings where he gained much experience but not much gold. He returned to London in October, 1853 and published a booklet, "the Adventures of a Surveyor in New Zealand" before returning to New Zealand with other members of the Rochfort family, to take up land at Motueka. After suffering in common with the other settlers during the prevalent economic depression, he resumed the practice of his profession in 1858. When surveying on the West Coast for the Nelson Provincial Government, he had the misfortune to lose most of his supplies when his canoe capsized in the Buller River. Nevertheless, he decided to carry on, and he and his party eked out an existence on native birds and eels and fernroot, and eventually got some supplies from the cutter "Supply" which was the first trading vessel ever to enter the Buller River. On this survey gold and coal were discovered in the Buller Valley and later the Denniston Coal Mine was the result.

In 1859 he surveyed the Nelson-Canterbury boundary, passing down the Taramakau to Lake Brunner and by the Arnold and the Grey Rivers to the Coast. He was the first to use the name "Westland" for the parts of the Nelson and Canterbury Provinces that ultimately became the Westland County.

In April, 1862, with Mr. James Burnett, he made a detailed report on the coalfields of Denniston and Mokihinui, with suggestions for their access. He also found a route from Hanmer to Ahaura and started its construction, and also a track from the Buller to the Grey along the coast. In June, 1863 he reported on the Whangapeka coal measures. He explored the country between Golden Bay and Karemea Bight, reported copper and quartz between Heaphy and Kohaihai and also reported coal between Upper Karamea and Lyell which could be worked by open cast. In the latter part of 1863 he joined the Canterbury Provincial Service and had charge of one of the parties sent to cut tracks to the West Coast. He reported on Karamea Pass. In 1864 he surveyed the coast line of South Westland, completing the contract originally let to Robert Bain.

On 23rd June, 1865 he was gazetted District Surveyor and accompanied Captain Gibson on an expedition to South Westland as far as Mahitahi, examining all river mouths as possible ports. In 1865 also he laid out the town of Greymouth and received a bronze medal from the New Zealand Exhibition for explorations on the West Coast. Licensed under the Native Lands Act, 1865 and gazetted on 26th October, 1867. On 1st October, 1869 he joined the General Government Service. In 1871 he was engaged on laying out the Rimutaka Railway line. On 25th November, 1872 he was appointed surveyor in charge of plotting and computing under the Canterbury Provincial Council, but soon afterwards rejoined the General Service and surveyed the Buller Gorge Railway.

From 1874 to 1876 he was engineer to the Timaru and Gladstone Board of Works. He became an authorised Surveyor in October, 1878. In 1882 he commenced engineering reconnaissance of the North Island Main Trunk Railway, between Marton and Te Awamutu and completed this in 1887 in face of strong opposition from the Maoris. His latter years were spent in surveys in Westland and mining investigations in Nelson and South Auckland.

He died in the King Country in 1894.

He was a foundation member of the New Zealand Institute of Surveyors.

Ref: The West Coast Gold Rushes by P. R. May, 1962

Early New Zealand Engineers by F. W. Furkert, 1953 p.254

History of Land Legislation and Settlement in New Zealand by W. R. Jourdain, 1924

South of the Aukati Line by Dick Craig 1962 Chaps. XVII & XVIII

Adventures of a Surveyor in New Zealand, by John Rochfort, 1853

Nelson. A History of Early Settlement by Ruth Allen, 1965.

For Rochfort's report on obstruction to surveys see A. J. H. R. 1884, D.5, p 3.

ROGAN John (1822 - 1899)

Came to New Zealand as Second Assistant Surveyor on the Plymouth Company's survey staff which was under the direction of Fredrick Carrington, the Company's Chief Surveyor. The party of surveyors arrived in the barque Brougham at Moturoa (the Sugar Loaves) on 12th February, 1841 to commence the surveys for the New Plymouth settlement.

Rogan and his fellow surveyors and workmen had a foretaste of things to come, when in 1842 the Ngatiawa and others began to dispute the ownership of the land near Waitara which was being surveyed. In July, 1842 the New Zealand Company's New Plymouth Agent, J. T. Wicksteed, called on the Magistrate, Captain Cooke, to swear in twenty six men of the survey parties as special constables armed with twelve muskets and other arms the expedition, led by Cooke, proceeded to Waitara. On this occasion the Maoris were overawed; there had never previously been a clash of armed forces between them and the Europeans anywhere in the country; twelve months later a similar show of force met with disaster at Wairau in Marlborough.

In his subsequent career Rogan had much to do with the Maoris and their disputes over land ownership. When New Zealand Land Company began in 1843 a

policy of staff retrenchment, Rogan elected to remain at New Plymouth and waive his right to a year's notice and became clerk to the Resident Agent. In 1845 he left the service of the Company and assisted with surveys in Wellington and Taranaki districts until 1854, when he was appointed Land Purchase Commissioner for the Government, in Taranaki district. In 1857 he was appointed Commissioner for the Waikato District and in 1859 was transferred to the Kaipara District.

At the conclusion of the Taranaki War of 1860 over the disputed Waitara Purchase, John Rogan, who had succeeded Donald McLean as head of the Land Purchase Department was sent by Governor Grey to implement the terms of an arrangement Grey had made with the Maori fighting chief Hapurona for the peaceful settlement of the dispute, and also to arrange for the necessary surveys to be carried out. Rogan met the Maori leaders most of whom remained obdurate in their determination to prevent any further encroachment by the surveyors or any Europeans on the land they claimed had never been alienated or for which they had never been compensated. Any idea of sending surveyors on to this land had to be abandoned.

As the Taranaki war went on the Kingite Maoris in South Auckland became very excitable, and it needed but small provocation for them to break out into open hostility. Towards the end of October, 1860, the body of Eriata a Maori of Patumahoe, was found dead in the bush, and although the wound was apparently an accident, the Maoris around Manakau, Patumahoe and Waiuku concluded that he had been murdered by a European. Donald McLean and John Rogan and Archdeacon Maunsell visited Patumahoe and at an inquiry a jury of Europeans returned a verdict of accidental death. An extract from the journal of Stephenson Percy Smith, who was at that time surveying land near the Waikato Heads, indicates the perilous nature of the meeting in the bush. "October, 18, 1860. Messrs. McLean and Rogan returned from Waiuku, and I hear that they had a very narrow escape from being murdered (at Patumahoe). It all depended upon the "Tangata wero" (the spearman who advanced to challenge a party of visitors) as to how he would throw his spear. But Ihaka Takaanini (the chief of Ngati Tamaoho, who was a friend of the Pakeha) forcibly prevented the man from throwing it, or they, together with other white men present, assuredly would have been killed. The Maoris agreed to let the supposed murder pass by this time, but in the next incident of the kind they "will not require any one to go and investigate the matter"."

A kind of armed truce existed in Taranaki until on 4th May, 1863, a party of two officers and seven men were shot down by an ambush at Oakura. The Government tried to avert further warfare and sent Rogan, as head of the Native Department, at the risk of his life, with a letter to the Maori King, Matutaera (Tawhiao) at Ngaruawahia, detailing the events at Taranaki which ended in the Oakura massacre, and asking whether, in the opinion of the King, the deed was murder or not. After being stopped several times and searched for concealed weapons, Rogan reached Ngaruawahia but was not permitted to see the King. The Kingites were divided in their opinions but the stronger elements or the Kingite party considered the Oakura affair was an act of war, not of murder. Shortly afterwards the Waikato War began. Rogan had his headquarters, and owned property, at Helensville on the Kaipara. In 1864 he was appointed Magistrate, in addition to his duties as head of the Land Purchase Department and of the Native Department. He was licensed to survey under the Native Land Act, 1862 vide N. Z. Gazette, 12th October, 1865. With the passing of the Native Land Courts Act, of 1865 John Rogan

became the first Judge of the Maori Land Court. For the first year or so he had an anxious time keeping a watchful eye on two sections of dissident Maoris who were at large in the Kaipara district. These were some Hau Hau emissaries from the war-torn tribes of the south and a number of Maori prisoners who had escaped from Kawau Island in August, 1864.

During his term of office Rogan headed a number of commissions and investigations concerning disputed Maori lands. He retired in 1875 and went to Mount Albert, where he purchased a considerable amount of property and went in for urban development. The largest of his subdivisions was called Roganville, and was part of the early development of Auckland suburbia.

In the course of his official career Rogan had helped toward the development of roads and railways in the Auckland district.

John Logan died on 20th June, 1899.

See "The Maori King" by Sir John Gorst, 1864 (Reprinted and edited by Keith Sinclair, 1959)

"Men Came Voyaging" by C. M. Sheffield 1963. etc.

ROSS Daniel (1849 – 19)

Born on 8th January, 1849

In March, 1866 he was appointed to the Hawkes Bay Provincial survey staff. Licensed under the Native Land Act, 1865 in May, 1870. Six years later he was Assistant Provincial Engineer under Mr. C. H. Weber, Provincial Engineer and Chief Surveyor. Much of his survey work was in connection with railway location and construction.

From 1873 and 1874 he was in charge of engineering works in the Seventy Miles Bush district of Hawkes Bay. In 1878 he entered private practice as a contract surveyor stationed at Woodville. In January, 1896, he was appointed Engineering Surveyor on the Waipahi - Heriot Railway, in Otago and the following March was transferred to Jackson's on the Midland Railway Otira section. In June, 1898, he transferred to the Nelson district on the Tadmire - Hope section of the railway, and in October the following year returned to the Otira section of the Midland line. Subsequently he transferred to the Gisborne - Ngatapa Railway construction from which he retired in December, 1900. His name is included in the New Zealand Gazette notice of August, 1901 among those who were granted licences by the Survey Board under "The New Zealand Institute of Surveyors and Board of Examiners Act, 1900". Further particulars are not available.

Ref: Early New Zealand Engineers by F. W. Furkert, 1953, p.256

ROY John (1823 - 1864

He came to New Zealand about 1851 and with T. H. Fitzgerald and T. D. McManaway comprised the survey staff of the General Government at Wellington after the New Zealand Company had ceased survey operations and until the Provincial Government took over. In 1853 he was appointed Provincial Engineer, Wellington. In May, 1860, he became Provincial Engineer for Otago, which was then a more prosperous place with a larger population than Wellington. It was on his recommendation that several local authorities adopted by-laws to protect the

unmetalled roads by requiring that heavy transport vehicles (bullock and horse drawn wagons) have tyres of a width proportionate to maximum loads and that front and rear axles be of different length to minimise the rutting of the roads.

In July, 1861 he took up land for sheep farming on the Ruataniwha Plains, in Hawkes Bay. Later he returned to Dunedin where he died on 21st February, 1864 aged 41 years.

SADD, Robert Thomas (1858 - 1937)

Born at Nelson in 1858, he was educated at Nelson College. He entered the Lands and Survey Department at Nelson in 1874 and qualified as a surveyor in 1878. In July, 1909 he was appointed Commissioner of Crown Lands and Chief Surveyor for the Nelson Land District. In June, 1912 he was transferred to Hawkes Bay where he held the same offices. In April, 1914 he transferred to Otago as Commissioner of Crown Lands and Chief Surveyor and retired on 31st October, 1923.

He was a foundation member of the New Zealand Institute of Surveyors.

Cyclopaedia of New Zealand Vol. V p. 30 (Photo).

He died in Nelson 2 September 1937, vide N. Z. Surveyor, Vol. XVI, No. 3, p 121.

SALE, George Samuel (1831 - 1922)

Born in Rugby, England. He was educated at Cambridge University where he took a "first" in Classics, and where he lectured for two years before coming to New Zealand in 1860. During the next five years in Canterbury he worked on a survey party, where he gained some knowledge of surveying, was for brief periods manager of a sheep station, editor of the Christchurch Press, a gold-digger at Blue Spur, Otago, and Provincial Treasurer.

On 1st April, 1865, he was appointed Warden and Commissioner for the West Canterbury Gold Fields (West Coast). In this capacity he found his knowledge of surveying to be helpful when he personally laid out some of the mining town sites and adjudicated on the siting of mining claims. After the hurly burly of the gold rushes he left the goldfields to become the foundation Professor of Classics and English at Otago University where he taught for thirty-seven years. He died in England in 1922, aged ninety-one. Some of his survey plans of the period 1866 to 18714 were lodged in the Lands and Survey Office at Christchurch.

He was Commissioner of Crown Lands for Westland, 1st May, 1868 to 14th May, 1869.

See "The West Coast Gold Rushes" by P. R. May, 1967 p.260 etc.

SANDES, Thomas Goodman (1846 - 1897)

Born in County Cork, Ireland, on 24th April, 1846 he was educated at Cambridge and trained as an engineer and surveyor. Part of his training was two years in the office of Mr. George May, C. E., Admiralty Engineer at the Harbour of Refuge, Alderney, Channel Islands. He came to New Zealand in 1863 and served during the Waikato Campaign in the 2nd Waikato Regiment. When the Regiment was disbanded he went to the Thames gold field and practised as a Goldfields Surveyor, having been so appointed, vide Auckland Provincial Gazette, 1868. He joined the Armed Constabulary (Armed Engineers Corps) when the railway and

roads were being constructed up the Waikato valley and he assisted in the surveying and engineering work. For his war services he received the New Zealand 7 Medal.

He was employed by the Post and Telegraph Department in surveying the route for the telegraph line from Tauranga to Taupo in 1871 and laid out the line from Patea to New Plymouth via Opunake the following year. Owing to native objections the Opunake—New Plymouth connection was not constructed until 1877.

In 1877 he settled in Hamilton and became Engineer to the Waikato County Council and held that position until 1892, on a consultant basis, being paid fees for the work done but retaining the right of private practice. He acted as consultant to other local bodies, including the Waipa and Raglan Counties, the Hamilton Borough and the Kirikiriroa and Tamahere Road Boards.

Illustrative of the vicissitudes of the colonial era is the following extract based on a report in the Waikato Times of 3rd October, 1878. "T. G. Sandes, the surveyor, was riding at Taupiri when his horse fell suddenly, rolled on him and in getting up kicked him on his right wrist and left elbow, dislocating the centre bone at the joint. Sandes walked to Taupiri, caught the train to Hamilton that evening, and was able to have his injuries treated by Dr. Waddington. The previous week Sandes had been swept off his horse while crossing the Piako River and had to swim for it". See "Settlers in Depression" by O.K. .M. Norris, 1964.

Sandes was a foundation member of the New Zealand Institute of Surveyors.

He died at Hamilton on 6th May, 1897.

See also "Early New Zealand Engineers" by F. W. Furkert, 1953.

SAXTON, Henry Waring (1848 - 1919)

Born at Newport in Shropshire, England 17th September, 1848. He received most of his education in Germany and Switzerland. After training as an engineer and surveyor in England, between 1866 and 1871, he then went to Switzerland where he was engaged in railway survey and construction. Later he went to European Turkey, on the same type of work. On 1st February, 1876 he was elected A. M. I. C. E. In January, 1876 he came to New Zealand and for a few months was engaged in the Public Works Department at Wellington before transferring to the Lands and Survey Department at New Plymouth, where he remained until his retirement in 1918. His work was mainly confined to the office, as chronic asthma prevented his doing much field work. He was a competent linguist, conversant with six European languages, as well as Latin and Greek.

He died at New Plymouth on 1st December, 1919.

One of his Sons, CL. Saxton, is a member of the New Zealand Institute of Surveyors, practising at New Plymouth.

SCOTT, William Henry (1839 - 1919)

Born in England 17th April, 1839 and served apprenticeship under Sir Thomas Bouch, M. I. C. E. from 1857 to 1861, and under his direction carried out surveys and construction of railways etc. in England until 1865. From 1865 until 1879 he was engaged on engineering projects in India, including a term in the Indian Public Works Department. In 1880 he came to New Zealand and entered private practice for a while. He was authorised as a surveyor at Dunedin on 13th September, 1880.

In 1883 he was appointed Borough Engineer at Oamaru. He was appointed Borough Engineer at Oamaru. He specialised in harbour works and in 1885 was appointed Resident Engineer to Greymouth Harbour Board to carry out Sir John Coode's scheme. In 1890 he went to Carterton, Victoria where he remained until 1910 as Municipal Engineer. He died at Melbourne on 6th October, 1919. Elected A. M. I. C. E. in 1873.

SCROGGS, Sidney M

Was the son of a Colonel in the British Army.

He came to New Zealand as a cadet on the survey staff of the New Zealand Company, arriving at Port Nicholson in the Brougham on 9th February, 18142.

He assisted with the surveys at Wellington and Wanganui and after the retrenchment of some of the Company's staff on 31st March, 1843, he was retained in the Company's Survey Office at Wellington.

In 1846 he was in partnership with Edward Immyns Abbott when, as contract surveyors, they surveyed the Taieri plains section of the Otago Block in connection with the Otago Settlement surveys directed by Charles Kettle.

In 1849 he was in Canterbury assisting with the preliminary surveys for the Canterbury Settlement. He was responsible for some of the trigonometrical and topographical surveys and with Edward Jollie, commenced the survey of the town of Christchurch. Soon after the start of this survey Scroggs left the Company's service and returned to England.

Scrogg's hut was the first dwelling erected in the town of Christchurch.

In England Scroggs eventually entered the priesthood of the Church of England.

SEALY, Edwin Percy (1839 - 1903)

Born in England and educated at Clifton College, he came to New Zealand in the Clontarf in 1859. After some experience on sheep stations he entered the Provincial Survey Department in Hawkes Bay in 1862 and three years later went to Canterbury as a surveyor on the Provincial survey staff. He was an enthusiastic alpinist, a fine naturalist and an excellent photographer. In 1869 he was associated with Julius von Haast on the latter's last exploring expedition in the Mount Cook region. Subsequently Sealy explored much of that region and also the Mackenzie country. He made an extensive collection of the local flora and fauna and made a series of alpine photographs for the newly founded Canterbury Museum which was directed by von Haast. His photography earned him the gold medal at the Vienna Exhibition.

On retiring from the Government service (about 1870) he farmed at Southern Downs, near Timaru, and also continued in private practice as a surveyor. He was a promoter of co-operation among farmers and was Chairman of Directors of the Farmers Co-operative Association of which he was a founder. Following an address to the Timaru Debating Society in December, 1880, he published a pamphlet "Are we to Stay Here?" which is one of the most important radical pamphlets ever published in New Zealand and one that had a strong influence over the next ten years. Subsequent political action resulted in agrarian reforms, the prevention of

further land aggregation and the breaking up of the large estates under the operation of the Land Act of 1892.

A mountain in the Southern Alps and a street in Timaru, named after him, perpetuate his memory.

He died on 30th October, 1903.

See Dictionary of Biography. New Zealand Scholefield, 1940

Land and Society in New Zealand. Edited by RUFF. Watters, 1965 History of South Canterbury by J.C. Andersen, 1916 p.330

Has photo of Sealy and his brother, H.J. Sealy who also was a surveyor in Canterbury and Auckland.

SEARANKE, William Nicholas (1816 -)

He was of Danish ancestry, and was the eighth child of a Naval Officer who had fought under Nelson at Copenhagen.

Educated at Eton and trained as a surveyor, he came to New Zealand

when twenty six years of age, arriving at Port Nicholson in the Brougham on the 9th February, 1842 to take up a position as Assistant Surveyor on the staff of the New Zealand Company. After a short period of surveying at Wellington and at New Plymouth he left the Company's service when the Company was in financial difficulties. He set out to explore the interior of the North Island and at Te Kopua he formed an alliance with Hariata, a Maori woman of high lineage, and they had four children. Their second son, Te Tahuna, married Tiahuia, the daughter of Tawhiao, the Maori King, and the daughter of Te Tahuna and Tiahuia was Princess Te Puea Herangi, a noted leader of the Maori people. The name Herangi is the Maori for Searancke.

About 1850 he went to the Californian goldfields but the visit was not successful and he returned to New Zealand, where he obtained a position as surveyor in the Land Purchase Department. He was licensed to survey under the Native Land Act, 1862, N. Z. Gazette 11th May, 1865.

He was one of the early explores of the interior of the North Island and his report of prospective lines of road from Auckland to Rangiawhia, a total distance of some four hundred miles, is published in the New Zealand Gazette of 27th October, 1857. In 1857 he became Civil Commissioner for the Wellington district of the Land Purchase Department, under the Chief Commissioner, Donald MacLean. Searancke was responsible for purchasing for the Crown, many thousands of acres of Maori land.

In 1865, at the close of the Waikato War, he was appointed Resident Magistrate and Agent of the Native Department, with headquarters at Ngaruawahia. At that time there were many difficulties in administering the law. It is reported that Searancke, from Ngaruawahia, had to hold an inquest on a man drowned in the river and found some distance from a town. The Assistant Law Officer of the Colonial Secretary's Office wrote and rebuked him for not having a full jury and informed him that his inquest was invalid. Searancke replied that his jury consisted on every available man living within seven miles, and it was impossible to obtain twelve. What was he to do? There appears to have been no further correspondence.

In 1867 his district was extended to include Hamilton and Whatawhata.

In 1875 he relinquished his duties as Native Agent but still had to travel many miles on horseback to carry out his Magisterial duties. He retired at the end of 1878 but still sat on the Bench occasionally as a Justice of the Peace. In 1884 when sixty eight years of age, he rode from Hamilton to Thames to attend a Court case, and later rode back to Hamilton.

SEYMOUR, Arthur Penrose (1832 - 1923)

Born at Marksbury, Somersetshire, on 20th March, 1832 he came to New Zealand in 1851 and settled in Marlborough where he practised as a surveyor having obtained his practising certificate from the Provincial Government on 26th December, 1854

In 1860 he was elected a member of the first Marlborough Provincial Council. He became run-holder in the Awatere district and in 1864 became Superintendent of the Province. In that office he served two terms, the second from 1870 until the abolition of Provincial Government in 1876.

In 1865 he was appointed to the Legislative Council but resigned in 1872 when he was elected to represent the Wairau electorate in the House of Representatives. He resigned in 1875 to visit England but was re-elected in 1876 on his return. He was Chairman of Committees from 1879 to 1882. From 1887 to 1890 he represented the Waimea-Picton electorate.

In 1887 he was elected the first chairman of the Marlborough Education Board, an office he held for many years. He also held office as Mayor of Picton and for many years served on the Marlborough Land Board.

He died at Picton on 3rd April, 1923 in his ninety first year.

Ref: Cyclopaedia of New Zealand Vol. 5 p.308

Marlborough A Provincial History by McIntosh, 1940.

He was a member of the New Zealand Institute of Surveyors.

SHAIN, William Alexander (1850 – 1907)

Joined the Public Works Department at Hokitika in 1874. and became a staff surveyor in 1878. He was among those retrenched in 1888 owing to the financial depression. On 6th October, 1891 he was reappointed as Assistant Engineer, at Greymouth. On 10th April, 1894. he was Acting Resident Engineer at Hunterville, and on 1st September that year became Resident Engineer at Mangaonoho. While there he was thrown from a horse vehicle, suffering severe head injuries. Thereafter he suffered from fits and had a

presentiment that he would die in a fit. In January, 1897 he visited Australia and on his return in 1898 took up duties at Dunedin. On 1st July, 1901 he was transferred to Nelson, where his work was interrupted by sick leave. He died at Nelson about 2nd January, 1906, in his office, not being found until 7th January owing to the office staff having just moved down to the Midland Railway Works south of Tadmore.

He was a member of the New Zealand Institute of Surveyors.

See 'Early New Zealand Engineers', 1953 by F. W. Furkert

SHARP William (1847 - 1936)

Born in Yorkshire, England. He was educated near Sheffield and in Wellington College, Sandhurst. He was trained as an engineer and surveyor in England and in 1874 went to Japan where he was assistant engineer on the Imperial Government Railway until 1877. Then he was on railway surveys in North Wales, and he studied assaying and mineralogy for five months before coming to New Zealand where he arrived in October, 1878. He was appointed assistant engineer, Public Works Department, Invercargill, and was also an Authorised Surveyor. He was Resident Engineer on the Lumsden Railway construction in 1881, and later was in charge of the Southland Public Works Department district. In 1887 he was one of those retrenched owing to the financial depression, and he started in private practice, and was part time engineer to the Invercargill Borough Council, and the Bluff Harbour Board and had an extensive practice as engineer, surveyor and architect. He retired in 1914 and died at Timaru in 1936, in his ninetieth year.

He was a member of the New Zealand Institute of Surveyors. Authorised Surveyor, 15th September, 1879.

See "Early New Zealand Engineers" by F. W. Furkert, which contains a portrait of Sharp.

SHANKS Charles Barnes (1841 - 1922)

Born in Glasgow in 1841, he was educated at Bluecoat School, London. When sixteen years of age he came to New Zealand in the Southern Cross, arriving at Port Chalmers. He entered the service of the Otago Provincial Council as a survey cadet in 1857 under Mr. J. T. Thomson and in 1860 qualified as a surveyor. In 1869 he visited England and returned to New Zealand two years later to re-enter the service of the Otago Province as a District Surveyor. On the abolition of Provincial Government he entered the Lands and Survey Department in Canterbury where he became Chief Draughtsman in 1888. He was a foundation member of the New Zealand Institute of Surveyors.

He died in England on 12th March, 1922.

See "Cyclopaedia of New Zealand" Vol. 3 p.147 (photo).

New Zealand Surveyor Vol. XII No. 3 p.73

SHARPE, James Hill (-1930)

He arrived in Canterbury in the late 1860s and took up engineering and surveying as his profession.

He was among the first to obtain a licence under the Land Transfer Act from the Registrar-General, Joshua Strange Williams, in 1873, and he was in private practice at Christchurch until July, 1888 when he became Clerk and Surveyor to the Oxford Road Board. In April, 1901, he transferred to the Riccarton Road Board, and on the amalgamation of this Board with the

Waimairi County Council he became Engineer and Clerk to the Council and served in that capacity until 1920, when he retired.

He joined the New Zealand Institute of Surveyors in 1891.

He died at Opawa, Christchurch, on 18th April, 1930.

See The New Zealand Surveyor, Vol. XIV No. 6 June, 1930.

He was an Associate member of the New Zealand Society of Engineers, the forerunner of the New Zealand Institution of Engineers.

SHEPPARD, Frederick A

With his brother Robert, arrived in New Zealand in the BROUGHAM on 9th February, 1842 to join the staff of the New Zealand Company as Assistant Surveyor.

In March, 1842 he was sent to Wanganui to assist in the surveys there.

He had difficulty in carrying out his surveys owing to active opposition by the Maoris who claimed the Company had not purchased the land.

SHEPPARD Robert

With his brother Frederick, he arrived in New Zealand on the BROUGHAM on 9th February to join the staff of the New Zealand Company as Assistant Surveyor.

In May, 1842 he was sent to take charge of the surveys in the Manawatu district which had previously been under the direction of Charles Kettle.

Subsequently he was engaged on surveys in the vicinity of Wellington.

SIMPSON, David Lees (1839 - 1888)

Born in Lanarkshire and trained by his brother, a civil engineer in Glasgow. He came to New Zealand in 1862 and in June, 1863 he was appointed Engineer for Roads and Bridges on the staff of the Otago Provincial Council, under Thomas Paterson M. I. C. E. In January, 1865 he became Resident Engineer to the Bluff - Invercargill Railway and soon after was promoted to District Engineer of the Province of Otago. He was licensed to survey under the Native Lands Act, 1862 vide N. Z. Gazette 12th October, 1865. In July, 1867, he was appointed Provincial Engineer for Southland. The following year he was District Engineer for Roads and Works in Otago. On 8th December, 1872, he succeeded G. M. Barr (Q.V.) as Provincial Engineer and as Inspecting Engineer of the Port Chalmers-Dunedin Railway contract. In 1874 he resigned to become Engineer to the Otago Harbour Board, which position he held until 1882. He became an Authorised Surveyor in December, 1877, and was elected M. I. C. E. in December, 1880. In 1883 he left New Zealand and went to New South Wales where he practised as a consulting engineer and designed the Wollongong Harbour. He died before the construction could be started.

See also "Early New Zealand Engineers" by F. W. Furkert, 1953 p.266

SIMPSON Francis (1846 - 1912)

Born in Lancaster, England, in 1846 he came to New Zealand with his parents in 1853. He was educated at Wesley College and at the Church of England Grammar School at Auckland. As a youth he saw service in the Waikato campaign, holding a commission as lieutenant in the 2nd Waikato Regiment in which his brother Leonard, also a surveyor, was a Captain.

At the conclusion of the campaign he entered the service of the Auckland Provincial Council on the survey staff. Appointed Goldfield Surveyor and mining surveyor, Auckland Provincial Gazette, 28th August, 1871. He joined the Lands and Survey Department as a District Surveyor at Gisborne in 1875 and was engaged in that district, sometimes in collaboration with his brother Leonard, until 1892 when he was promoted Chief Draughtsman at Napier, and subsequently at New Plymouth. In

1904 he became Commissioner of Crown Lands and Chief Surveyor for Taranaki. He retired in December, 1911, and died at New Plymouth on 23rd April, 1912.

See New Zealand Surveyor Vol. IX No. 1 14

Cyclopaedia of New Zealand Vol. 6 p.63.

SIMPSON, Leonard

Born in Lancashire, England, he came to New Zealand with his parents in 1853. He was educated at the Church of England Grammar School at Auckland. Trained as a surveyor he was licensed under the Native Land Act of 1862 and gazetted 21st June, 1865. He enlisted in the 2nd Waikato Regiment it was formed in 1863 and was commissioned as a Captain and took part in the Waikato campaign. He was a member of the Auckland Provincial Surveyor. Association founded in 1865 and at the close of the Waikato campaign he assisted in the surveying of the confiscated territory, working in the Bay of Plenty and the Poverty Bay districts in partnership with his brother Francis Simpson (q.v.). Subsequently, after his brother entered the Lands and Survey Department in 1877, he practised privately and was authorised as a Licensed Surveyor under the Land Transfer Act in 1878.

SINCLAIR, Andrew (1833 - 1923)

Arriving in Auckland, from Glasgow, in the ship "Kathleen Stuart Forbes" in 1852, he entered the Land Purchase Department as a surveyor engaged in defining the boundaries of land purchased from the Maoris. The Department was then administered from Auckland and directed by Donald McLean. He was licensed under the Native Land Act, 1865 on 10th January, 1867. After the establishment of the Native Land Courts in 1865, Sinclair became Chief Surveyor to the Native Department and, as such, drafted the regulations governing the surveying of Maori Lands. He retired about 1877.

He was a nephew of Dr. Andrew Sinclair, the Colonial Secretary and noted botanist, who, while on an expedition with the geologist and explorer, Julius von Haast, was drowned on the 28th March, 1861 when attempting to ford the flooded Rangitata River.

Andrew Sinclair died at Auckland on 29th May, 1923.

SKEET, Harry May (1857 – 1943)

Born on 31st August, 1857 he was the son of Captain H. L.

Skeet (q.v.) by whom he was trained as a surveyor. He went to Taranaki with his father in 1872 and joined the Lands and Survey Department there on 1st January, 1876. Most of his field service was in the rugged rain-forest clad back country of Taranaki. He was engaged on settlement surveys in the region between Stratford and the Wanganui River and carried the triangulation survey from Cape Egmont to the boundaries of the Wellington and Auckland districts, through country that was all heavily forested. He also had to contend with Maori opposition to the surveys. Between 1876 and 1883, on no less than five occasions in an endeavour to prevent the surveys, they took possession of his camp and equipment and he had to obtain the protection of the Armed Constabulary to complete the surveys.

One of his major tasks during the period 1898 to 1901 was to make a topographical survey of the Egmont National Park, a job that taxed the physique of Skeet and all members of his party.

On 25th June, 1909, he became Commissioner of Crown Lends and Chief Surveyor for Southland and on 1st January transferred to Auckland as Commissioner and Chief Surveyor. He retired on 1st November, 1923.

He was a foundation member of the New Zealand Institute of Surveyors.

Ref: Land Legislation and Settlement in New Zealand. W. R. Jourdain, 1924 Pp. 219, 221 etc.

Egmont A. B. Scanlan, 1961 (A.H. and A. Reed) Chapter 20.

SKEET Henry Luffkin (-1882)

Evidently he was surveying in the Napier district and also the Nelson Province in the early 1860s. See "White Wings" by Sir Henry Brett, 1928, Vol. 2 p.134 which gives an account of the wreck of the ship Delaware near Whakapuaka on 4th September, 1863. Shortly after leaving Nelson, for Napier, on the 3rd the ship ran into a terrific storm and was driven onto the rocks by the fierce gale. An attempt by the 22 years old mate, Henry Squirrell, to swim ashore with a line was unsuccessful, but shortly afterwards a few Maoris appeared on the beach and Skeet, who was the only passenger and who was a good Maori linguist, was able to direct the efforts of the Maoris in securing a line. To do so they had to enter the raging surf at the imminent risk of their lives. One of them was a woman, Huria Matenga (Julia Martin) a Chieftain-ess of the Ngatiawa, Ngatiama and Ngatittoa tribes, and a granddaughter of Te Puoho, one of Te Rauparaha's lieutenants. All were rescued except Henry Squirrell who had been left on the ship, presumed dead, but who was later seen to come on deck when the ship began to break up, but it was then impossible to save him.

In 1864 Skeet was instrumental in recruiting a corps of engineers to take part in the Bay of Plenty campaign. At the conclusion of hostilities he was engaged in surveying the confiscated land at Tauranga. Subsequently, in 1872, he and his staff were transferred to Taranaki and Skeet was in charge of surveying confiscated land in South Taranaki. Soon afterwards he became Chief Surveyor of the Land Purchase Department. He died at New Plymouth in 1882 while in charge of the surveys for the West Coast Royal Commission. He was licensed under the Native Land Act, 1862 vide N. Z. Gazette 12th October, 1865.

H. L. Skeet was a member of the Surveyors Association of the Province of Auckland, founded in 1865.

See also "The New Zealand Wars" by James Cowan. Vol. 2 p.156.

His son, Harry May Skeet, was a well known surveyor and a foundation member of the New Zealand Institute of Surveyors.

SKEET Richard Mixer (1832 - 1894)

He was born at Ipswich, Essex, came to New Zealand in 1853 and did some surveying in the Nelson Province before moving to Hawkes Bay, where he became a member of the Government staff, surveying in Hawkes Bay and Wairarapa. He was appointed surveyor to the Wellington Town Board on 12th September, 1865 and acted until 1871. After leaving Wellington he was surveying and engineering in the Rangitikei district, and then set up in practice in Gisborne in 1872 and was Engineer to the Poverty Bay Highways Board, 1873-75. He was the first Engineer to the Cook

County established in 1876, which extended from Cape Runaway to Paritu Bluff. In 1878 he went into private practice at Gisborne. He died on 26th March, 1894.

See "Early New Zealand Engineers" by F. W. Furkert.

SKEET William

Licensed under the Native Land Act, 1865, vide N. Z. Gazette 1867. He was then working in the Wellington district.

In 1860 he was practising in the Nelson Province, working in the Wangapeka district. He blazed the trail up the Tadmire River and then crossed over the Hope saddle to the Hope River which he traversed to the junction with the Buller. He was engaged in exploring for suitable routes to open up the back country. In 1862 he was working in the Inangahua region to the south of the Buller. An extract from one of his letters to the Superintendent of Nelson Province, dated 21st February, 1862, is to be found as Appendix II in "Yesterdays in Golden Buller" by Ella Matthews (Pegasus Press, 1957) p.213.

See also "Nelson. A History of Early Settlement" by Ruth M. Allan (A.H. and A. J. Reed) 1965 p.436

"The West Coast Gold Rushes" by P.M. Ross (Pegasus Press 1967 Edition p.75).

"Footprints" by J. N. W. Newport (Whitcombe & Tombs, 1962) several references.

SKINNER John (1853 - 1917)

He was born at New Plymouth, 28th September, 1853. In 1883-84 he was employed in the Native Affairs Department. Then he joined the firm of Skinner and Sole (see T. K. Skinner) engaged in private practice and as consultants to the Taranaki County Council and the Borough of New Plymouth.

He died as a result of a road accident at Bulls on 19th December, 1917.

He was a foundation member of the New Zealand Institute of Surveyors

SKINNER, Thomas Kingswell (1849 - 1925)

He was born at New Plymouth and trained under A. O. C. (Octavius) Carrington. He joined the Provincial Government about 1870 and was engaged principally on the survey of native lands being acquired for settlement. He was Land Purchase Surveyor in 1875(4) ?. **County Engineer and Surveyor Taranaki 1877.** After the abolition of the Provinces he started business as a surveyor and engineer in partnership with T. G. Sole, in 1881, and the following year was engaged on the survey of the railway from New Plymouth to Hawera. He became an Authorised Surveyor in April, 1882. New Plymouth was constituted a Borough in 1876 and T. K. Skinner was responsible for the first water supply and other important works for the next nineteen years. In 1895 he took up private practice while still acting as consulting engineer to the Borough of New Plymouth until 1902 when a full time engineer was appointed.

He died at New Plymouth on 29th August, 1925.

With his brothers, John and William H., who were also surveyors, he was a foundation member of the New Zealand Institute of Surveyors.

See - Cyclopaedia of New Zealand. Vol. 6, p 123 for photograph.

SKINNER, William Henry (1857 - 1946)

He was born in February, 1857 at New Plymouth where his parents were among the pioneer settlers who arrived in Taranaki in 1841.

He joined the Taranaki Provincial survey staff on 1st July, 1872 as a cadet under Thomas Humphries, the Chief Surveyor. The first important survey on which he was engaged was the Mountain Road from Lepperton to Normanby, now part of the Main Highway. In 1874 he laid out the block of forest land where Inglewood now stands. Following his appointment as Assistant Surveyor he surveyed frontier settlements all over Taranaki, when the district was clothed in dense rain forest. Health reasons caused his transfer to office duties and in 1888 he became Land Transfer Draughtsman and inspecting surveyor for Taranaki. Subsequently he served as Commissioner of Crown Lands and Chief Surveyor in the districts of Marlborough, Hawkes Bay and Canterbury. He retired in 1919 after forty-seven years' service, and returned to Taranaki. He died at New Plymouth in October, 1919 aged ninety years.

Throughout his long life he was a loyal and devoted citizen of the town and district he had seen develop through three generations. He was keenly interested in the early history of Taranaki and was a lasting friend of the Maori people, their culture, traditions and history. He published many press articles and books on early Taranaki history, including his autobiography "Reminiscences of a Taranaki Surveyor" and, in collaboration with the late Professor J. Rutherford, "The Establishment of the New Plymouth Settlement in New Zealand."

He assisted Stephenson Percy Smith and Edward Tregear to found the Polynesian Society and for a time was its secretary and editor and a frequent contributor to its journal. Harry Skinner, Professor of Anthropology at Dunedin University was his son.

A source of great personal satisfaction to Mr. Skinner was his success in procuring the permanent reservation of many areas of scenic and historical interest. Most of these were in Taranaki, but they included the famous gannet rookery at Cape Kidnappers and the site of the Marlborough Pa where Major Bunbury proclaimed British sovereignty over the South island.

He was a foundation member of the New Zealand Institute of Surveyors.

See New Zealand Surveyor Vol. XI No. 7 and Vol. XIX No. 4. etc. His Autobiography, "Reminiscences of a Taranaki Surveyor" has a photo.

SMITH, Frank Stephenson (- 1923)

A, son of John Stephenson Smith, an early Taranaki settler and Commissioner of Crown Lands for Taranaki, F. S. Smith was a younger brother of Stephenson Percy Smith (q.v.) a former Surveyor General of New Zealand.

He became a survey cadet under Octavius Carrington in Taranaki. During the war in Taranaki, in 1860 he served in the Taranaki Militia. Later he took part as a Volunteer in the Parnell Rangers in the Waikato campaign. He returned to Taranaki and assisted in the subdivision of the confiscated territory in southern Taranaki and in the Waitotara district, during the period when the survey parties carried out their tasks under the protection of covering parties of Imperial troops and the Armed

Constabulary. In 1874 he joined his brother S. P. Smith in the Auckland district as Assistant Surveyor.

During his long service in the Lands and Survey Department he spent many years in the Marlborough and North Canterbury districts, one of his tasks being the triangulation of the high rugged territory where the boundaries of the former Provinces of Nelson, Marlborough and Canterbury join. It was in this region that disaster befell Smith's party on 9th June, 188(5)6. At that time he was District Surveyor and he and his party, comprising Messrs. Hugh Thompson, L. Paske, W. Mitchell and J. Bagley were engaged on the triangulation in the ranges at the head of the Waiau and Clarence Rivers at elevations of between 3,000 and 7,000 feet. With threatening deterioration in the weather they were moving out to take up winter quarters in the lower country of the of the Waiau. They were caught in a severe snowstorm in the early part of the day, but, in expectation of finding less snow in the lower levels they pushed on over Fowler's Pass into the Clarence Valley, only to find all tracks obliterated and the blinding snow piled up to a depth that rendered travelling by man or horse almost impossible. After nightfall they struggled on and about 10 p.m. Mr. Paske died from cold and fatigue. Mitchell had set out in search of assistance and being unable to force his way through the snow he rode his horse into the Clarence River and worked his way down its freezing channel for four or five miles to the St. James homestead where a relief party Was quickly organised, and led by John Campbell and Mitchell reached Smith and his companions at 2 a.m. just as Hugh Thompson died on horseback in the arms of Campbell. But for the efforts of Mitchell it is probable that the whole party would have succumbed.

As District Surveyor, F. S. Smith was in charge of the Kaikoura Survey Office from 1897 to 1902 and. during that time he superintended the surveying of some 25,000 acres of better class land into sixty farms and a further quarter of a million acres into twenty-nine Small Grazing Runs. A. J. H. R. C.1 p.39 1902. At the end of the period the Kaikoura Office was closed and he was transferred to Gisborne district as Inspector of Surveys in charge of the Gisborne end East Coast surveys. At that time the Auckland Land District comprised the whole of the former Auckland Province except the Gisborne and East Coast districts and the Gisborne Office was administered from Hawkes Bay.

In July, 1906 he returned to Blenheim as Chief Surveyor and Commissioner of Crown Lands for Marlborough Land District. He retired from the Government Service at the end of August, 1911 and died in Blenheim not long afterwards.

He was a foundation member of the New Zealand Institute of Surveyors.

See History of Land Legislation and Settlement by W. R. Jourdain, 1924.

Kaikoura. A History of the District by J. M. Sherrard, 1966 p.221 etc.

Molesworth by L. J. McCaskill, 1969 p.32.

SMITH, Henry Martin (1860 -)

Educated at Auckland Grammar School, May 1875 to December 1877. He passed the Senior Civil Service Examinations in December, 1876. He then joined the Lands and Survey Department 1st April, 1878 as a survey cadet under Mr.

F. Simpson in the Gisborne district, then administered from Hawkes Bay. He passed the surveyors examination in April, 1881 and was appointed Assistant Surveyor.

Owing to the financial depression in New Zealand Mr. Smith was one of the officers retrenched in July, 1885 with compensation for loss of office.

He was authorised under the Land Transfer Act of 1885 and entered private practice.

He was a Foundation member of the New Zealand Institute of Surveyors. He again joined the Lands and Survey Department on 30th August, 1889.

SMITH, Maurice Crompton (1864 - 1953)

Born at Auckland, he was the eldest son of Stephenson Percy Smith, the eminent surveyor and historian. He was educated at Auckland Grammar School and in 1882 (New Zealand Gazette 1st January, 1882) joined the Lands and Survey Department as a field cadet under James Baber (junior) then engaged on triangulating the formidable Urewera country. At the conclusion of his three years cadetship he qualified as a surveyor and was appointed Assistant Surveyor, working mainly in the North Auckland Land District. One of his early tasks, in association with Mr. A. B. Wright, engineer, and a work force of two hundred Armed Constabulary, was the laying out and forming the present main roads around Tokaanu and Mount Tongariro. His settlement surveys were widespread, including Waiuku, Wairarapa, Pahiatua, Waverly and Patea districts and Great Barrier Island.

In 1892 he was transferred to the Wellington District Office in charge of plan examination and in 1908 was appointed Chief Draughtsman at New Plymouth. The following year he returned to District Office at Wellington as Chief Draughtsman. In 1914 he became Chief Draughtsman at Head Office of the Department at Wellington, from which position he retired in 1924. For a brief period in 1912 he was Acting Chief Surveyor for the Wellington District and in 1922 was Acting Surveyor General.

He was a foundation member of the New Zealand Institute of Surveyors and served as a Councillor. In 1921 he became editor of the New Zealand Surveyor and served as editor until June, 1939.

For many years he was Secretary of the Survey Board.

He died at Khandallah in April, 1953.

SMITH, Stephenson Percy F. R. G. S. etc. (1840 – 1922)

Born in Suffolk England, in June, 1840 he came of a family which claimed among its ancestors Sir John Franklin and Matthew Flinders. With his parents he arrived in New Zealand at Port Chalmers in the ship "Pekin" in December, 1849. The family settled at New Plymouth in February, 1850, and five years later Percy Smith became the first cadet in the Survey Department in Taranaki, C. W. Ligar being then Surveyor General.

Percy Smith served under A. O. C. (Octavius) Carrington, Chief Surveyor for Taranaki. A year later Thomas Humphries and Charles Wilson Hursthouse had also become survey cadets under Octavius Carrington.

In January, 1858, having recently completed his cadetship and having been appointed an Assistant Surveyor, although still under eighteen years of age, Percy

Smith, accompanied by C. Hursthouse and three other youthful companions, Messrs. Arthur Standish, Fred Murray and James Scott McKellar, set out on an expedition which traversed much of the interior of the North Island.

It was while subdividing and roading the bush land around New Plymouth that Stephenson Percy Smith began to acquire a knowledge of the Maori language and history and his efforts were so persistent and successful that he is recognised as one of the most accomplished of Maori scholars.

He joined the Native Land Purchase Department, then under the direction of John Rogan, at Auckland on 30th October, 1859, and up to 1863 was engaged on the surveying of large blocks of Native Land around Auckland. During this period, and for some years afterwards, there were troubled times in the North Island, the Maori Wars causing great loss to the settlers and much of the survey work having to be carried out under the protection of military covering parties, as the country was harassed by hostile natives. On several occasions Smith and his party had narrow escapes when working under armed protection in hostile territory. In April, 1860, when Auckland was threatened with invasion by the Waikato tribes, such was his prestige among the Maoris and the Government Officials that, although only twenty years of age, Percy Smith was sent as an emissary to the friendly Ngatiwhatua at Kaipara to solicit assistance in the defence of Auckland.

Following the termination of the Waikato campaign at Orakau in 1864, Percy Smith was engaged in surveying areas of confiscated land south of Auckland for immigrant settlements. In 1865, as District Surveyor, he was transferred to Taranaki to survey areas of confiscated land north of New Plymouth, much of this work having to be carried out under the protection of covering parties.

On completion of this work he undertook in partnership with G. W. Williams and C.A. Wray, the surveying of the district between the Waitotara and Waingongora Rivers for the purpose of locating the military settlers. Once again military protection was necessary.

In January, 1868, he was entrusted with the triangulation and subdivisional surveys of the Chatham Islands, which occupied him for the whole of that year, and he returned to New Zealand in February 1869, to resume work in Taranaki, surveying roads and Native Reserves. While Percy Smith was surveying at the Chathams the notorious Te Kooti and his fellow prisoners overpowered their guards and escaped to Poverty Bay where they perpetrated the massacres of November, 1868.

In February, 1870, Percy Smith was transferred to Auckland, to work under the direction of Theophilus Heale, Inspector of Surveys, on the inauguration of the Major Triangulation of the North Island. From then until the change in survey administration brought about by the abolition of the Provincial Government and the establishment of the Lands and Survey Department, he triangulated the territory from Mangonui in the north to the Manawatu Gorge in the south.

In the newly established Lands and Survey Department, under J. T. Thomson F. R. G. S. as Surveyor General, Percy Smith was appointed First Geodesical Surveyor and continued the Major Triangulation. Shortly afterwards, on 25th January, 1877 he was promoted to Chief Surveyor of the Auckland District, which at that time comprised the greater part of the Auckland Province.

In 1882 he succeeded James McKerrow as Assistant Surveyor General, but he remained at Auckland where he continued his duties as Chief Surveyor.

Immediately following the Tarawera eruption of 10th June, 1886 assisted by E. C. Goldsmith and H. D. M. Haszard, he made a topographical survey of the country affected by the eruption. His report to the Government is recorded in the official reports of 1886 under "The Eruption of Tarawera, 1886".

The following year he and Captain Fairchild, of the Government Steamer "Stella" were sent to the Kermadec Islands to take possession as a New Zealand dependency.

In March, 1888, Percy Smith was appointed Commissioner of Crown Lands for the Auckland District in addition to his duties as Chief Surveyor and Assistant Surveyor General. On the 29th January the following year, James McKerrow, the then Surveyor General having been transferred to the office of Chairman of the Board of Railway Commissioners, Percy Smith became Surveyor General and Secretary for Crown Lands and Mines i.e. Permanent Head of the Lands and Survey Department, which position he held until his retirement in October, 1900.

Over the years he continued his studies of the Maori and of the Polynesian race and in 1897 he obtained six months leave of absence to visit the principal islands of the Pacific occupied by the Polynesian people. In 1892 he had been responsible for the founding of the Polynesian Society and following his 1897 voyage the results of his observations were published in the "Journal of the Polynesian Society" of which he and Edward Tregear were the joint editors.

Stephenson Percy Smith was a Governor and Life Member of the New Zealand Institute, now the Royal Society, of New Zealand, and was also a member of several other learned societies in New Zealand and abroad.

He was a foundation member of the New Zealand Institute of Surveyors and held the office of President in 1891-92.

He died at New Plymouth on 19th April, 1922.

He was the author of several works and numerous technical papers.

An outline of his career is recorded in the annual report of the Lands and Survey Department of 1900-01

His biography "Pioneer Surveyor" was published in the New Zealand Surveyor commencing in Vol. XII No. 1 of March-June, 1922 by his son Crompton Smith.

Re Stephenson Percy Smith

Extract from Wellington "Times" of 22nd November, 1900 on the occasion of a presentation to Mr. Smith who was retiring from the position of Surveyor General of New Zealand.

"In the early days among the Maoris and in remote districts his services had been of a remarkable character. So great was the trust with which the Maoris regarded him that he was allowed to penetrate country and run his lines where no other surveyor dared venture ... he often carried his life in his hands when out in the Urewera country. He had many times to trust to his own resources and the goodwill of the natives, among whom his word was always looked upon as being as good as his bond."

John Stephenson Smith, the father of S. P. Smith, was an early settler in Taranaki who became Commissioner of Crown Lands for that Province, serving in that ca for nine years from October, 1865.

Frank Stephenson Smith (q.v.) a former Chief Surveyor and Commissioner of Crown Lands for Marlborough, was a younger brother of S. P. Smith.

Maurice Crompton Smith (c.v.) was the son of S. P. Smith.

SMITH, Thomas H

Was a survey cadet on the staff of the New Zealand Land Company who arrived at Port Nicholson in the barque BROUGHAM on 9th February, 1842 and assisted with the surveys in the Wellington district where he was associated first with Arthur Whitehead, and subsequently with other Company surveyors, Messrs. Mewburn and Captain Joseph Thomas.

SMITH, William Mein (1798 - 1869) (Captain, Royal Artillery)

Born at Capetown, he joined the Army as a cadet when fifteen years of age. He was a lieutenant in 1822 and served for a time in Canada and later in Woolwich and at Gibraltar. In 1833 he was appointed Master of Plan Drawing at Woolwich and was Professor at the Royal Military Academy in 1839, when he was selected as Surveyor General to the New Zealand Company and granted three years leave of absence to go to New Zealand.

He arrived at Port Nicholson on 3rd January, 1840 in the ship CUBA and commenced to lay out the town of "Britannia" at the site of the present Petone, but floods caused a change of plans and he transferred survey operations to Wellington, completing the preliminary plans for selection of sections in July of the same year, a remarkable achievement under the circumstances. He was gazetted a Magistrate (J.P.) in 1841 and later in the same year proceeded to Wanganui to superintend the selection of lands there for the intended settlers. In 1842 at the expiration of his leave period he retired on half pay and decided to remain in New Zealand.

At the request of Colonel Wakefield he investigated for the Company the prospects of settling the Chatham Islands and then he made a voyage down the east coast of the South Island investigating the harbours as far south as Stewart Island, with a view to further settlements by the Company. On the return voyage the cutter "The Brothers" entered Akaroa Harbour on the 10th November, and the heads the weather was gusty and squally and the vessel difficult to handle. She was struck heavily, broadside on, by a sudden squall and capsized. A Maori woman and her two infants were trapped in the hold and could not be saved. The nine members of the crew and the two passengers, all of whom were on deck, managed to scramble into the ship's boat which had floated free. Captain Smith lost all of his instruments and the field books, drawings, and journals, and subsequently had to write his report from memory.

Following the Wairau Massacre he was appointed Captain of Militia and assisted in constructing the defences at Wellington. In 1845 during the Maori troubles he commanded a three gun battery at Clay Point (now Stewart Dawson's Corner) at Wellington. He later took up a pastoral run in south Wairarapa, which he worked in partnership with Samuel Revens until 1869. He also engaged in surveying for the Provincial Council including the surveying of part of the Wairarapa plains and laying out the town of Featherston.

He was a member of the Executive Council in 1851 and in 1858 was elected to the Provincial Council on which he served until 1865.

He died on 3rd January, 1869.

SNODGRASS John (1842 -)

Born in Glasgow, Scotland in 1842 he arrived in New Zealand in 1864 and took up surveying in Otago. The following year he went to the West Coast and engaged in gold mining. He entered the Survey Department at Hokitika in 1870 and qualified as a surveyor. In 1879 he was District Surveyor stationed at Westport.

He was a foundation member of the New Zealand Institute of Surveyors.

See - Cyclopaedia of New Zealand Vol. V p.169 which has a photo.

SOLE, Thomas Gore (1858 - 1936)

Born at New Plymouth in 1858, son of an early settler who arrived at New Plymouth in the Oriental in 1841. He joined the Provincial Survey Department in 1874 and became a qualified surveyor in 1879. One of his first tasks was to assist Joseph Bird to cut the meridian line from Huirangi southwards to the coast. This line commenced at Waitara and was cut from Waitara to Huirangi by Mr. E. S. Brookes in 1877-78. The total length was forty-two miles. This line and perpendiculars to it marking Survey District Block boundaries were used as alternative to triangulation for the control of bearings in the cadastral surveys. Subsequently checked by the triangulation surveys the line was found to be very accurately laid down. During the progress of the survey, which coincided with the Maori troubles which culminated at Parihaka in 1881, the survey marks were interfered with on a number of occasions.

In 1881 Mr. Sole resigned to join Mr. T. K. Skinner in partnership in private practice. The partnership dissolved in 1890 when Mr. Sole went farming. Subsequently he again commenced private practice at New Plymouth.

He died, there on 20 January 1936.

He was a foundation member of the New Zealand Institute of Surveyors.

See "Cyclopaedia of New Zealand" Vol. 6 p.91 which has a photo.

SPENCE John (1840 - 1906)

Born in Scotland he came to New Zealand and joined James McKerrow's survey party in Otago towards the end of 1863. Three years later he was appointed to take charge of the Queenstown Survey Office and shortly after was promoted District Surveyor.

In 1877 he became Chief Surveyor for the Southland District, and in 1882 Commissioner of Crown Lands also.

He resigned in 1891 to go to South Africa to practice in the Transvaal goldfields. Owing to the hostile attitude of the Boer Government he left South Africa to practice in the West Australian goldfields. About the turn of the century he returned to New Zealand and practised in Westland. He died at Ross on 2nd December, 1906. New Zealand Surveyor, Vol. VIII No. 4 December, 1906.

He was a foundation member of the New Zealand Institute of Surveyors.

SPENCER, William Charles Cotton (1844 - 1915)

Born at Te Ngae on 12th March, 1844 he was a son of the Rev. S. M. Spencer who came to New Zealand with Bishop Selwyn in 1842. His early years were spent at his father's mission stations at Kariri and Te Mu on Lake Tarawera. He was educated at Mr. S. Kempthorne's school at Parnell, Auckland, and afterwards engaged in farm work at Tauranga. On the outbreak of war he went to Waimate in the Bay of Islands and subsequently joined the Survey Department under Major Charles Heaphy. When the Thames goldfield was opened he spent some time in the Warden's Office at Thames and later rejoined the Survey Department. See New Zealand Gazette 1878. For some years he was engaged on surveying in the heavily wooded district from Gisborne to the East Cape. Later he worked on the Coromandel Peninsula and in the lower Waikato. He retired in 1909. He died at Auckland on 11th March, 1915.

He was a foundation member of the Institute of Surveyors.

(New Zealand Surveyor Vol. X No. 9 March, 1915).

STEPHENS Samuel (1811 - 1855)

Born in Southampton, England.

Educated and trained as a surveyor in England, Stephens came to New Zealand in the Whitby as First Assistant Surveyor on the survey staff sent out in the 'Will Watch and the Whitby to lay out the Nelson Settlement. The surveys of the Riwaka and Motueka districts were directed by him.

Following the Wairau Massacre, in 1843, he succeeded Frederick Tuckett as Chief Surveyor when the latter was appointed Resident Agent for the Company, owing to the death of Captain Arthur Wakefield at Wairau. Earlier in 1843 Stephens had been appointed Resident Magistrate (Justice of the Peace) at Riwaka, where he had settled on the block of land he had selected. In 1854 he was elected to represent the Nelson settlement in Parliament.

Like his fellow surveyors, F. Tuckett and J. S. Cotterell, Stephens was a member of the Society of Friends (Quakers)

He died at Riwaka on 26th January, 1855.

He represented the Motueka and Massacre Bay districts on the Nelson Provincial Council from 1853 until his death in 1855.

STEWART James (1833 - 1914)

Born and educated in Perthshire, he served his engineering articles under P. D. Brown of Perth and was afterwards his chief assistant. He came to New Zealand in the JOSEPH FLETCHER in 1859 and commenced practice as a Civil Engineer, at Auckland where he immediately achieved success in winning a competition for the design of a municipal water supply. With Samuel Harding (snr.) he surveyed the railway route from Auckland to Drury, mainly through dense bush. In 1862 he was appointed first Engineer to Auckland City, but in 1863, owing to Maori War troubles he went to Australia on behalf of the New Zealand Government and purchased the steamers for use on the Waikato River during the campaign. He carried out other special work in the Waikato and then he and Harding were appointed engineers for

the construction of the Auckland-Drury Railway. In 1867 he was appointed Inspector of Steamers for the General Government. He designed the Bean Rock and Ponui Passage Lighthouses.

In 1868 he was elected A. M. I. C. E. and became an Authorised Surveyor on 9th August, 1881 and was licensed under the Land Transfer Act in July, 1884

In January, 1870 he surveyed the upgrading of the Auckland-Drury Railway for the General Government and in 1872 became Resident Engineer, for the extension of the railway to Mercer, and two years later was promoted to take charge of all railway works in the Auckland Province. In 1877 he was made M. I. C. E.

In 1882, following the general retrenchment owing to the slump in the national economy, he entered private practice Ashley Hunter. He was engineer to the company which built the Rotorua Railway and also the Thames Valley Railway and Te Aroha County Tramways. In 1896, after visiting England to gain the latest information on the subject, he again entered partnership with Ashley Hunter and laid the Auckland Electric Tramways. He also designed the pumps for the Calliope Dock.

He died in Auckland on 12th February, 1914.

See New Zealand Surveyor Vol. X No. 5

Cyclopaedia of New Zealand Vol. 2 p has photograph.

STEWART, John Tiffin (1827 - 1913)

His birthplace was Rothsay, Scotland. He was trained as an engineer and surveyor under Professor W. J. M. Rankine and under Messrs. Gordon and Hill and also Messrs. Bell and Miller. On qualifying as an engineer he emigrated first to Melbourne, in 1852, where he spent two years, and then to New Zealand where he was appointed to the Government Service, being employed in the Waikato district (Whaingaroa - now called Raglan) for a short time and then proceeding to the Wanganui and Manawatu districts. In 1857 he traversed and mapped the Manawatu River from the sea to the gorge, and also its tributaries, the Orua and the Pohangina, from their junctions with the Manawatu to their mountain gorges. From October, 1858, to December, 1860 he was engaged by the General Government on the work of defining the boundaries of the recently purchased blocks of Maori lands covering about 300,000 acres. In 1861 he was appointed Provincial Engineer at Wellington, his work including the surveying of roads in the Wairarapa and Castlepoint districts. From January, 1864 to December, 1868 he was in charge of the Wellington and Manawatu districts with headquarters at Foxton, and was responsible for the construction of the Manawatu Gorge road, a noteworthy achievement. During 1859 he was District Surveyor, Wellington and then reverted to his engineering duties in the Manawatu district.

In November, 1870, he was appointed District Engineer, Public Works Department at Foxton, and later (1885) at Wanganui. Under his direction much of the Foxton-New Plymouth railway was constructed and much of the roading of the Manawatu and Wanganui districts was built.

As District Surveyor in 1865 he was responsible for laying out the town of Palmerston North. He retired in 1889, being then in charge of Public Works in the Taranaki, Wanganui and Hawkes Bay districts.

He became an Authorised Surveyor in 1878. He was elected a Member of the Institution of Civil Engineers in 1880.

After his retirement he took an active part in public affairs. At its inception he became a member of the Wanganui River Trust and gave his time and professional services gratuitously as engineer to that body during its impecunious years, up to the time of his death. He actively supported the Astronomical, Orchestral, and Crafts and Beautifying Societies at Wanganui, and bequeathed his home for the purpose of training hospital nurses in the care of infants and sick children, and it was designated the Karitane-Stewart Home.

He married a daughter of Captain Stephen Carkeek whose sons, Morgan and Arthur Carkeek were also members of the surveying profession. He died at Wanganui on 19th April, 1913.

Ref: New Zealand Society of Civil Engineers. Proceedings 1920-21 Vol. VII p.265.

Early New Zealand Engineers. F. W. Furkert, 1953 p.272.

New Zealand Surveyor. Vol. X No. 2 p.42

STOKES Robert (110 – 1880)

Born in England, where he trained as a surveyor.

He was appointed one of the assistants of Captain W. Mein Smith by the New Zealand Company and arrived at Port Nicholson in the "CUBA" in January, 1840. He began the survey of the Hutt Valley and Stokes Valley is called after him. In August, 1840 accompanied by James Park, Charles Heaphy, William Deans and Jerningham Wakefield, he made an overland reconnaissance survey from Port Nicholson to Wanganui and Moturoa. (New Plymouth) and as result of their reports a settlement was founded then called Petre, but subsequently, Wanganui. Stokes left the Company's service in 1842 and went into business. In 1843 he went to South America, but returned to Wellington in 1844, and went into the newspaper and printing business in which he engaged until 1865. Between 1857 and 1865 he represented the town of Wellington in the Provincial Council. In 1858 he carried a Bill through the Council to establish municipal government for Wellington, and also commenced his advocacy of a railway line over the Rimutaka Ranges. He took up land in Hawkes Bay in December, 1860. He maintained his advocacy of the railway, and although the Provincial Council resolved to build the railway it did not proceed because the tenders proved to be beyond the resources of the Province, and did not eventuate until the General Government undertook the work many years later.

Stokes and his brother Dr. John Milbourne Stokes engaged in sheep farming in Hawkes Bay from 1861 onwards. He was called to the Legislative Council in 1862 and served until 1878. He died on 20th January, 1880.

See also Early Stations of Hawkes Bay. Miriam McGregor, 1970 p.131

In 1824 he was the proprietor of the newspaper, The N. Z. Spectator and Cook Strait Guardian.

Dr. J. M. Stokes arrived in New Zealand in 1840 as medical officer on the Captain Theophilus Heale.

STOUT, Rt. Hon. SIR Robert K. C. M. G., P. (1844 – 19430)

Sir Robert Stout was one of New Zealand's most distinguished politicians, jurists and administrators, who in the course of a long career was elected to the highest and most responsible offices in the gift of the nation.

Born in the Shetland Islands, he came to New Zealand in 1864. He had been trained and had qualified as a surveyor but because on arrival he found little work offering in that field he turned to the teaching profession and while engaged as a teacher commenced the study of law. He was one of the first students of the newly founded University of Otago and subsequently, after qualifying, became its first lecturer in law.

He entered politics when elected as a member of the Otago Provincial Council in 1872. Subsequently he was elected to the House of Representatives and in 1878 became Attorney General in the Grey Ministry. He continued as one of New Zealand's foremost political figures for the rest of his life. He held successively the offices of Attorney General, Minister of Education, Minister of Lands (1878-79) Premier (1884) and Administrator of New Zealand for brief periods in 1910, 1912, 1920 and 1924.

His career in law was also distinguished and in 1899 he became Chief Justice. As an educationalist he served for twenty years as Chancellor of the University of New Zealand.

He received a knighthood as K. C. M. G. in 1880 and became a Privy Councillor in 1921.

Although he did not practise as a surveyor in New Zealand he was of great assistance to the profession during the founding of the Institute of Surveyors and he was elected an Honorary Member in 1903.

See also - Portrait of a Profession. 1969. Edited by Robin Cooke, Q. C. (A.H. & A. W. Reed) pp. 44-46 a biographical profile by Professor I. L. M. Richardson.

For an example of Sir Robert Stout's literary style see "The Rise and Progress of New Zealand which is the Introduction to Thomas Bracken's "Musings in Maoriland", published by A. T. Keirle in 1890, as a jubilee volume in connection with the fiftieth anniversary of the founding of the Colony of New Zealand.

STRAUCHON John L. S. O (1848 - 1934)

He was born in Swinton, Berwickshire, Scotland and educated at Edinburgh, Glasgow and Kilmarnock. One of his teachers was James Pryde, F. E. I. S. editor of all the early editions of "Chambers Mathematical Tables and of "Chambers Mathematics", from whom Mr. Strauchon learned navigation.

In 1861 the family came to New Zealand and John Strauchon was for a time in the office of "The Otago Daily Times and Witness" and then in the Provincial Engineer's Office. His headquarters was at Oamaru for about two years and then at Hampden, where he joined the Survey Department as a cadet, and he assisted with numerous development projects in North Otago. He then joined Mr. G. M. Barr for about eighteen months and was with Mr. Adam Johnston, his successor for a similar period. He was then appointed assistant to J. T. Thomson (afterwards Surveyor

General) with his astronomical work at Rockside Observatory, at which time Mr. Strauchon connected to the Otago District triangulation. He then was sent to Martin's Bay to lay down the true meridian for the triangulation survey then being commenced by Messrs. S. Thompson and James Mackenzie, to cover the rugged country of Western Otago.

There followed many years of active and incessant field work laying out towns and settlements, triangulation surveys and astronomical checks, over a wide range of country embracing the Otago, West Coast and Nelson Districts. His more active field work ended with his appointment as Chief Surveyor and Commissioner of Crown Lands in Westland, in 1891. Subsequently he held the same offices at Taranaki (1893) Wellington (1902) and Auckland (1908). He became Surveyor General in 1909 and Under-Secretary for Lands and Survey and for Immigration in 1912. He also served on a number of Government Boards, including Chairmanship of the Survey Board, and represented New Zealand at the conference of Surveyors-General in Melbourne in 1911

After his retirement in 1914 he served on several Royal Commissions and Committees. He received the decoration of the Imperial Service Order in 1912.

He was a foundation member of the New Zealand Institute of Surveyors, and was President in 1919-20.

See "The New Zealand Surveyor" Vol. XIV No. 6 June, 1930.

SYMONDS, John Jermyn (1816 - 1883)

Youngest son of Sir William Symonds, Surveyor General to the Royal Navy, and brother of Captain T. C. Symonds (q.v.)

He joined the New South Wales Survey Department in 1839 on the recommendation of Lord Normanby. In 1841 he came to New Zealand to join his brother, Captain V. T. C. Symonds at Auckland. He received an appointment as Acting Protector of Aborigines and was engaged in the purchasing and surveying of native lands. He was also appointed Assistant Police Magistrate.

While stationed at Wellington in 1844 he was directed as representative of the Government to accompany an expedition led by Frederick Tuckett, the New Zealand Company's Chief Surveyor of the Nelson Settlement, which set out in the brig Deborah (Captain Thomas Wing) to explore the East Coast of the South Island for the purpose of selecting a site for the Scottish Free Church settlement. Symonds' task was to ensure that no surveys were commenced before the land had been purchased from the Maoris and the native title properly alienated. The expedition culminated in the purchase of the Otago Block and Symonds was a signatory of the deed of purchase on 31st July, 1844.

The following year he volunteered for service in the 99th Regiment in Heke's war in the Bay of Islands and was present at the engagements at Ohaeawai and Ruapekapeka as a commissioned officer.

In 1846 he was appointed Native Secretary and Protector of Aborigines and was private secretary to the Governor, Sir George Grey. One of his tasks was to try to settle the dispute between the Maoris at Wanganui and the New Zealand Company over the lack of Native Reserves at Wanganui.

He resigned on 16th June, 1848 and exchanged into the Ceylon Rifles Regiment and returned to England with a staff appointment. The following year he returned to New Zealand in charge of a detachment of the New Zealand Fencibles which arrived at Auckland in the ship *Berhampore* on 16th June, 1849. He settled at Onehunga with Major Kenny's Company. He was appointed a Justice of the Peace in 1853 and Resident Magistrate at Onehunga in 1858. He resigned his appointment when elected Member of Parliament for the Pensioner Settlements in 1858 (1858-1860). In 1861 he was again Resident Magistrate at Onehunga and in 1880 he was appointed a Judge of the Native Land Court (N. Z. Gazette, 1880 p.1475)

As a member of the Auckland business community he took part in local affairs and, inter alia, helped to found the Auckland Savings Bank and the Agricultural Society.

He died on 3rd January, 1883.

See Dictionary of New Zealand Biography, Dr. G. H. Scholefield, 1940 Vol. 2.

SYMONDS, William Cornwallis (1810 - 1841)

He was a son of Sir William Symonds, a former Surveyor General to the Royal Navy. Sir William took a prominent part in the affairs of the New Zealand As in 1837.

Trained for the Army, W. C. Symonds was commissioned in the 38th Regiment in 1828. It is possible, according to reports, that he visited New Zealand in 1836 or 1837. He was on friendly terms with Edward Gibbon Wakefield and in 1837 at Wakefield's request he went to Havre to bring to England two Maori youths, Nayti (Nahiti) and Jackey (Te Aki) who had been taken to France by a French whaling captain as members of his crew and then abandoned.

As an unattached half-pay officer Symonds came to New Zealand in 1839 as agent of a Scottish land company (the New Zealand Manakao and Waitemata Company) that had claims or pretensions to about 90,000 acres around Auckland isthmus. He was staying with the Ngatiwhatua chiefs at Kaipara harbour where he met Colonel Wakefield when the New Zealand Company's ship *Tory* was stranded there in December, 1839. The Ngatiwhatua were the owners of most of the land in the Auckland isthmus, and Symonds was well acquainted with them before the arrival of Captain Hobson, R. N. as British Consul in 1840.

In December, 1839, Symonds was gazetted Captain in the 96th Regiment by the War Office but Captain Hobson, who had been appointed Governor and was desperately short of trained staff, arranged to retain his services in New Zealand as Police Magistrate and Assistant Surveyor General.

In February, 1840 Symonds had reported to his Company that he had inspected the land it claimed and had been put into possession by the chiefs. In the same month he had accompanied Captain Hobson on the latter's first visit to the Waitemata. He accompanied Hobson in June and there is little doubt that Symonds took a prominent part in the selection of the isthmus as the site for New Zealand's first capital city. The Company's claim, however, was subjected to examination under the Land Claims Ordinance and eventually the Company was a 1927 acres fronting Manakau Harbour near Puponga Point. There Symonds laid out the township of Cornwallis, but the township was subsequently abandoned by the Company's settlers.

One of Symonds' first tasks as Police Magistrate was to visit the chiefs on the West Coast of the North Island to procure their signatures as adherents to the Treaty of Waitangi. Then, in association with the Surveyor General, Mr. Felton Mathew, he was instrumental in acquiring from the Ngatiwhatua the site for the town of Auckland and assisted in surveying the site.

In March, 1841, he was directed by Governor Hobson to accompany Doctor Ernst Dieffenbach (the expatriate German medico and naturalist who had come to New Zealand in 1839 in the ship *Tory* with Colonel Wakefield, as an employee of the New Zealand company) on an expedition into the centre of the North Island as far as the thermal regions to ascertain the resources of the country. Symonds' task was to meet as many Maori chiefs as possible and discuss with them the implications of British law and administration. Lieutenant A. D. W. Best of the 80th Regiment also accompanied the expedition.

Shortly after his return from this expedition Captain Symonds lost his life in tragic circumstances on 22nd November. He was drowned while making a valiant attempt to cross the entrance to Manakau Harbour in a ship's boat during a storm for the purpose of taking medical aid to the dangerously ill wife of the missionary, James Hamlin, who was stationed at Orua. In the turbulent seas the boat was upset and although Symonds and the oarsmen were all strong swimmers, only one, a Maori, survived.

Ref; Dictionary of New Zealand Biography. Dr. G. H. Scholefield,
1940 Vol. 2

Adventure in New Zealand, E. J. Wakefield, 1845

Journal of Ensign Best. Edited by Nancy M. Taylor. Government Printer, 1966

Curtain Raiser to a Colony. Cecil and Celia Manson, 1962 Whitcombe & Tombs.

TAYLOR, William Hare (1833-)

Born in England, his first experience in surveying was as an articled cadet of Sir John Goode for a period of three years. Coming to New Zealand in 1873, he joined the Lands and Survey Department under Charles Heaphy, Chief Surveyor, and was engaged in surveying in the Waikato. Subsequently he surveyed in various districts in the Auckland Province. He was licensed under the Land Transfer Act in 1881.

He was a foundation member of the New Zealand Institute of Surveyors.

TEESDALE Alfred (1848-)

Born in London in 1848 he came to New Zealand in the *CHAPMAN*. He entered the surveying profession at Auckland. In 1871 he qualified and went to Hawkes Bay and served for a short time in the Public Works Department. In 1872 he went to Gisborne and commenced private practice. For many years he worked in the rugged, heavily forested hinterland of Poverty Bay.

He was a foundation member of the New Zealand Institute of Surveyors.

He was granted a Licence under the Land Transfer Act on 15th December, 1877.

As a contract surveyor he surveyed the Kaitangiwhenua block of 6,000 acres in Taranaki in 1878-79.

See "Cyclopaedia of New Zealand" Vol. 2 p.985.

THOMAS Joseph (1803 -) (Captain. 87th Regiment of Fusiliers)

Before coming to New Zealand he had served in the Army in India and had been Aide-de-Camp to Sir John Malcolm. He arrived in Port Nicholson in March, 1839, and for a time was with Captain Daniels at his whaling station at Porirua, where he met E. J. Wakefield. On 13th May, 1841, Thomas was appointed Assistant Surveyor under Captain W. Mein Smith, at Wellington and was sent to assist with the survey of Wanganui. On 31st March, 1843 when the Company was in financial difficulties, several members of the survey staff, including Thomas, were retrenched. The following year, with H. S. Harrison, he made explorations overland, via the Wairarapa, to Hawkes Bay and as far as Mahia Peninsula. He was one of the contracting surveyors to survey the Otago Block under the direction of Charles Kettle in 1846, when Thomas and R. J. Harrison, in partnership surveyed the district between the Molyneux and Tokomairiro Rivers. At the conclusion of this work Thomas returned to England, and on applying to the New Zealand Company was engaged to select a suitable block of about a million acres in New Zealand for the Canterbury Association, and then, subject to the approval of his choice by Governor Grey and Bishop Selwyn, to prepare for the arrival of settlers.

Thomas arrived in Wellington in 1848, and soon afterwards reported his choice of Port Cooper and the adjoining plains for the Canterbury Settlement. Although Grey expressed a preference for Manawatu, or the Wairarapa, Thomas's selection was agreed to in May, 1849 and the survey commenced in July. Under his direction towns were laid out at Lyttelton, Sumner and Christchurch.

When John Robert Godley, as Principal Agent of the Canterbury Association, arrived in New Zealand in April, 1850, he found that Thomas had already expended most of the funds available for development, and Godley was critical of the Lyttelton to Sumner road then under construction, on which a considerable sum had been expended. Under Thomas's direction a great deal of exploration surveying and preliminary road work had been done, but the Company dispensed with his services in 1851, paying him £500 in compensation. Later that year he was an unofficial member of the party under (Sir) Donald McLean, when the latter went to Hawkes Bay, on behalf of the Government, to purchase the Ahuriri and Waipukurau Blocks.

For a short time Thomas was a sheep run-holder at Akatio. This Run was subsequently held by Dr. Featherston, the Superintendent of the Wellington Province. Thomas was also associated with Donald McLean as part owner of Akitio Sheep Station.

Ref: The Torlesse Papers. Edited by P. B. Maling, 1958 (Pegasus Press).

Capt. W. M. Smith to Captain J. Thomas. May 13, 1841 vide

Principal Surveyor's Letter Book p.54 (New Zealand Company

THOMPSON, Frederick Augustus (1859 - 1919)

Born May, 1859.

He joined the Lands and Survey Department as a cadet in 1877 and after qualifying as a surveyor worked as an Assistant Surveyor in the Canterbury and

Marlborough districts. He was transferred to the Wellington district as a District Surveyor in 1903. On 1 July 1909 he was promoted. Chief Draughtsman to the Hokitika office and in 1911 he was transferred as Chief Draughtsman in the Napier office. On 1 June 1912 he was appointed Commissioner of Crown Lands and Chief Surveyor for the Nelson Land District. He died at Nelson in 1919.

One of the cadets trained by him was Archibald Hugh Bogle who became president of the New Zealand Institute of Surveyors.

F. A. Thompson was a foundation member of the Institute.

See New Zealand Surveyor. Vol. XI No. 7

Also "Links in the Chain" By A. H. Bogle. 1975

THOMPSON, Samuel George (1842 - 1925)

Born in Kinross, Scotland, he was educated at Cleish and at Edinburgh. He came to Port Chalmers in the SAVILLA in 1859 and joined the survey staff of the Otago Province as a cadet. He qualified in 1868 and as Assistant Surveyor he was in charge of the settlement surveys at Martins Bay. In 1872 he was for a short time District Surveyor in the Wellington district. The following year he returned to Otago in the Lands and Survey Department. He became Land Transfer Draughtsman in the Dunedin Office, in 1897, and subsequently Chief Draughtsman.

He died at Dunedin in 1925.

He was a foundation member of the N Zealand Institute of Surveyors.

See Cyclopaedia of New Zealand Vol. 4

New Zealand Surveyor Vol. XIII No. 1 p.9.

"Pioneers of Martin's Bay" by Alice McKenzie, 1947

THOMPSON, Thomas John

Among the members of the committee (named the 'Second Colony of New Zealand') set up in England in February, 1841 for the purpose of organising a second settlement in New Zealand under the aegis of the New Zealand Com were three surveyors who eventually went to New Zealand to assist in laying out the settlement. They were F. Tuckett, J. S. Cotterell and T. J. Thompson.

Thompson arrived at the site chosen for the settlement (Nelson) in the Lord Auckland on the 27th February, 1842 He and his fellow surveyor, J. W. Barnicoat, had shared a cabin on the voyage and subsequently they worked in partnership as contract surveyors laying out various sections of the settlement at Waimea East and Moutere. They were also involved in the first contract surveys in the Wairau, prior to the massacre which occurred there on 17th June, 1843 because of the surveys. Barnicoat and Thompson had completed their field work and Thompson and his party had returned to Nelson a few days before.

Thompson had selected a block of land in the Moutere West district and he turned his attention to developing and farming this block. He was a member of the founding committee of the Nelson Agricultural and Horticultural Association in 1843. From time to time he engaged in surveying and in December, 1879, he was licensed under the Land Transfer Act.

His son, Thomas Kirkpatrick Thompson, also was a member of the profession and of the New Zealand Institute of Surveyors.

See "Nelson. A History of Early Settlement" by Ruth M. Allan, 1965

THOMSON, John Turnbull (1821 - 1884)

He was born at Glororum in Northumberland. He studied engineering under eminent masters and trained in the same office as Sir William Armstrong. After qualifying he went to the Straits Settlement in 1838 where he spent eighteen years in due course becoming Chief Surveyor and Civil Engineer. One of his tasks was the extensive survey of the Singapore Straits in which he cooperated with Commander Samuel Congalton, R.N. Another task was the designing and erection of the Horsburgh Lighthouse (similar in design to the Eddystone) on the Pedra Blanca (White Rock) some twenty miles east of Singapore. This light is still functioning.

Through his health declining, he decided to visit New Zealand in 1856 and was appointed Chief Surveyor of Otago, under the Provincial Government on 9th May, 1856. His first survey was of the New River Estuary; this was followed by the survey of the town of Invercargill. During his first year of service he made extensive exploratory and reconnaissance surveys, as far afield as Te Anau, Wanaka and Hawea, including the exploration of the Waiau, Oreti, Aparima and Mataura Rivers and the discovery of the Lindis Pass.

In a dispute between the Otago and Canterbury Provinces over the boundary, he disagreed with Colonel T. R. Mould who had been appointed by the Governor to settle the dispute, and ultimately Thomson's objection was upheld. (This boundary was subsequently surveyed by two Canterbury surveyors, Jollie and Young). He prepared a complete scheme for the development of Otago Harbour, estimated to cost £250,000 and to be carried out gradually over a period of thirty years. During his term as Chief Surveyor he also served on several occasions as Provincial Engineer, and carried out a number of works, including bridging. He designed and constructed the first bridge over the Clutha at Cromwell, and also bridged the Roaring Meg and the Gentle Annie, all on the Queenstown Road.

In 1864 he was chairman of a sanitary commission set up to decide what should be done to remedy the unsanitary condition into which Dunedin, with no drainage system, had fallen during the sudden increase of population to over 20,000 from 2,000 in 1859 i.e. before the rush to the Otago goldfields. (Charles Kettle, who was then Provincial Treasurer, was a victim of a typhoid epidemic).

In 1869 Thomson also became Commissioner of Crown Lands, and in 1873 he became Chief Commissioner of Surveys and Works, which he held until the dissolution of the Provinces in 1876. He then became Surveyor General for New Zealand and established the Department of Lands and Survey. He retired in 1879 and went to live at Invercargill. He became a member of the Borough Council, and Mayor of Gladstone. He died at Invercargill on 15th October, 1884.

For complete Biography see "Mr. Surveyor Thompson" by J. Hall Jones. 1971

THORP, Alfred J (1842 - 1912)

Born at Te Kouma (North Auckland) in 1842. A relative of Joshua Thorp (q.v.). He was living at Wairoa (near Auckland) when the Waikato War began and he served as a volunteer in the Wairoa Volunteers and was awarded the New Zealand War Medal.

In November, 1869 he was Licensed to survey under the Native Land Act, 1865. Much of his survey work was carried out in the Coromandel and Thames and surrounding districts.

THORP Joshua (1796 - 1862)

Came to the Bay of Islands as a passenger on the "Justine" which arrived at Kororareka (Russell) on 4th April, 1840. Later he went to Auckland and was a contract surveyor authorised by the Surveyor General, C. W. Ligar. His work was mainly in connection with the Old Land Claims and included Claims 444 and 444B which he surveyed for the Church Missionary Society. Evidently he engaged in surveying intermittently as he is listed in the Provincial Electoral roll for 1855 as farming in the Wairoa (near Auckland) and Thames districts.

TIFFEN, Henry Stokes (1819 – 1896)

He was the oldest son of William Tiffen of Hythe, in Kent, England. He was trained as a surveyor in England and received an appointment as Assistant Surveyor to the New Zealand Company arriving at Port Nicholson in the Brougham on 9th February, 1842, to take up a three contract with the Company. He carried out surveys in the Wellington, Wairarapa and Hawkes Bay districts

In 1845 he went into partnership with Captain J. H. Northwood as a grazier in the Wairarapa and subsequently in Hawkes bay also. Eventually the partnership was dissolved, Northwood taking the Wairarapa land and Tiffen established himself on his Homewood sheep station near Waipukurau in Hawkes Bay.

As District Surveyor in Hawkes Bay he was signatory to the Deed of Purchase of Scind Island (Mataruahou) the site of Napier, on 13th of November, 1856. In 1862 he was Chief Surveyor for the Province of Hawkes Bay, and in 1857 he succeeded Alfred Domett as Commissioner of Crown Lands for Hawkes Bay, a position he held until September, 1863.

On 1st November, 1858 Hawkes Bay was proclaimed a Province, with Napier as its capital. H. S. Tiffen was one of the ten Councillors elected to the first Council for the Province.

(A fuller biography of H. S. Tiffen is given in "Early New Zealand Families" by Douglas Cresswell, published by Whitcombe & Tombs 1956.)

He was a member of Hawkes Bay Provincial Council, 1859-61 and 1867-75.

TINLINE John (1821 – 1907)

He was born in Jedburgh, Roxburghshire, Scotland. In 1839 he emigrated to Australia to join his brother, George at Adelaide, where he worked for a short time as a surveyor, before sailing for Wellington in September, 1840. There he was engaged in a commercial venture and in 1842 he went to Nelson at the beginning of settlement and took up an appointment as Clerk of the Magistrates Court and Native Interpreter and also carried out surveys at Golden Bay. He took part in several exploratory expeditions and in 1850 discovered the route for the road between Nelson and Pelorus Sound through the Rai Valley. In 1851 he took up Weld's Hill Run in partnership with his brother Robert. Later, having sold his interest to his brother, he took up sheen farming in the Amuri district, occupying the Lynden Run, from 1859 to 1884. He served on the Nelson Provincial Council, 1859-60 and was Chairman of the Amuri County Council, in 1881. In 1881, also, he was co-founder

with J. D. McFarlane and John Grigg (of Longbeach) of the Canterbury Frozen Meat Company.

He endowed the John Tinline Scholarship for English Honours in the University of New Zealand, and also scholarships at Nelson College.

He died on 26th February, 1907.

See Dictionary of New Zealand Biography, Scholefield which has a photo.

TODD Richard (-1870)

As an Auckland Provincial Surveyor when hostilities commenced in the Waikato campaign in 1863, Todd was stationed at Kawhia and was instrumental in preparing the defences of the small settlement by converting the little local courthouse into a blockhouse. From 1864 onwards he was a well known figure in the district around Raglan and in the lower Waikato. He was gazetted a Licensed Surveyor under the Native Lands Act. on 19th April, 1865.

In November, 1870 he and his partner Edward Frissell, were surveying a block of land bordering on the Rohepotae (King Country) near Pirongia when they received a warning that the Kingite Maoris were going to prevent them from proceeding. Fortunately for Frissell he and Todd had set up separate camps several miles apart. On the morning of 28th November while Todd and his chainman, John Peacock and their two Maori assistants were at breakfast they were suddenly attacked by party of Kingite Maoris and Todd was shot and killed. Peacock and his companions, one of them wounded, managed to escape and warn Frissell.

See New Zealand Surveyor Vol. XIV No. 9 p.416 which has a photograph in which Todd appears with J. I. Wilson, Bruin and Brown.

TOLE, Daniel Austin

He was one of several members of a family of surveyors and competent artists. He was practising in Auckland in the 1850s and his name is listed in the Elector Roll of the Province in 1857 as a surveyor.

He served in the Waikato campaign as a Captain in the Auckland Volunteers and was awarded the New Zealand War Medal.

On 28th October, 1858 he succeeded Charles Heaphy as Provincial Surveyor and Waste Lands Commissioner. Vide Auckland Provincial Gazette, 1868.

On 5th October, 1871, he was appointed Commissioner of Crown Lands at Auckland. Vide New Zealand Gazette, 1871

He retired at the end of February, 1888.

He was a son of John Tole, a surveyor who came to New Zealand in 1854 and commenced practice at Auckland.

TOLE, Edward Francis

He was a son of John Tole (q.v.) a surveyor who came to Auckland in 1854 and commenced practice at Auckland.

E. F. Tole was in partnership with Charles Nelson (q.v.) in a survey practice in 1862. He was licensed under the Native Land Act, 1862 (vide N. Z. Gazette, 19th April, 1865) and under the Land Transfer Act, March 1881. He was appointed a

Goldfields Surveyor (vide Auckland Provincial Gazette, 1868) and was a foundation member of the New Zealand Institute of Surveyors.

TOLE John (1807-1879)

A fully qualified surveyor and Architect, John Tole came to New Zealand with the members of his family in 1854 and commenced practice at Auckland. Four of his sons entered the surveying profession in New Zealand. They were William; Edward Francis; John Lambert; and Daniel Austin. The latter was Chief Surveyor and Commissioner of Crown Lands for the Auckland Province from 1871 to 1888. Another son, the Hon. Joseph Augustus Tole, K. C. was a lawyer and politician. He was Crown Prosecutor at Auckland for many years and was Minister of Justice in the Stout Administration in 1884.

John Tole was a member of the Auckland Provincial Surveyors Association which was founded in 1865.

He died at Auckland in November, 1879.

Ref: New Zealand Herald, 25th November, 1879.

TOLE, John Lambert

He was a son of John Tole (q.v.) an early surveyor in the Auckland district. He was in partnership with his brother William from about 1857 and was licensed under the Land Transfer Act of 1870.

He was a foundation member of the New Zealand Institute of Surveyors.

TOLE William

A son of John Tole (q.v.).

He was licensed to survey under the Native Land Act 1865 (vide New Zealand Gazette, 25th April, 1865) and subsequently under the Land Transfer Act, and was practising in the Auckland district in 1879. Later he worked in the Gisborne district.

He was a foundation member of the New Zealand Institute of Surveyors.

TORLESSE, Charles Obins (1825 – 1866)

Born in 1825, he was the eldest son of Charles Martin Torlesse, Rector of Stoke-by-Nayland, Suffolk, and Catherine (nee Wakefield) the eldest of the Wakefield family which played a prominent part in the settlement of New Zealand.

Charles Obins Torlesse was educated at Blackheath Proprietary School and at Stanmore, in Middlesex. In 1840 he went to the College of Civil Engineers, at Putney, and the following year although he was only sixteen years of age, his uncle Captain Arthur Wakefield, who was appointed leader of the expedition to found the Nelson Settlement, offered to take him as a survey cadet, and he arrived in New Zealand in 1841 as a member of the survey staff.

At Nelson he assisted in the laying out of the allotments and acquired proficiency in surveying. Following the Wairau Massacre, which occurred in June, 1843 and in which his uncle Arthur Wakefield, and other leading settlers lost their lives, Torlesse returned to England as also did his friend, John Cowell Boys and other junior members of the survey staff including Frank Moline and William E. Wilkinson. In England Torlesse and Moline spent some months surveying railway lines and then Torlesse became private secretary to his uncle, Edward Gibbon

Wakefield, who was engaged in promoting the Canterbury Settlement. Although it was contrary to his uncle's wishes, Torlesse in due course was appointed a member of Captain Joseph Thomas's survey staff. Captain Thomas, Thomas Cass (his First Assistant Surveyor) and Torlesse, sailed for New Zealand in the *Bernecia* which arrived at Port Nicholson on 21st November 1848.

In Canterbury Torlesse carried out extensive topographical and trigonometrical surveys on a systematic basis as advocated by another of his uncles, Felix Wakefield who was also a surveyor. This system enabled the colonists to select the land, for which they held land orders, prior to the sectional surveys.

Writing to Torlesse in October, 1850, Captain Thomas said, *inter alia*, ' from my arrival in New Zealand you have accompanied me and most materially assisted me, in my first exploring operations and subsequently with no other assistance than a Boy (a Maori youth) and at a cost to the Association of £3/9/- you discovered and explored another block of nearly 2 Million of Acres on the South side of the Chalomondeley (sic) (Rakaia) River.

... It gives me the greatest pleasure to record in the Journal of the Association the zeal and diligence with which you discharge your duties, the information and assistance you have always afforded me, but more particularly adding so largely to our previous knowledge of the country by exploring it at great personal risk, the District to the Southward of the Chalomondeley."

The preliminary surveys were terminated in May 1850 and subsequently Torlesse, in partnership with J.C. Boys, engaged in contract surveying in laying out the rural sections for the Canterbury Association's settlement. In December, 1851, Charles Torlesse married Alicia, a daughter of Mr. and Mrs. James Townsend, early Canterbury settlers. John Boys, Torlesse's partner married another daughter, Priscilla Townsend. Torlesse and Boys had acquired land in the district that was then known as Rangiora Bush and added the occupation of grazier to that of surveying. Their homes became the nucleus of the town of Rangiora. The partners continued with surveying particularly Boys, while Torlesse, who travelled widely through the Canterbury Province, purchased large tracts of grazing country over the Ashley River. In 1861 Torlesse and his family went to England and on their return to Canterbury the following year he gave up farming, sold his sheep stations and became a partner of Henry Matson as a stock agent and sheep inspector, with headquarters at Christchurch. In 1864 he became seriously ill and as soon as he became well enough to travel he went to England with his family. He remained an invalid and died on the 14th November, 1866.

Fortunately for historians the letters and journals of C.O. Torlesse have been preserved and are now held in the Canterbury Museum. Those of the period, 1848-1851 have been edited by Dr. Peter Maling and published in 1958 as "The Torlesse Papers".

See also "Beyond the Waimakariri" by D. Hawkins 1957, which gives an account of the activities of Torlesse and Boys in the Rangiora district.

TOWNSEND Charles (1823 - 1863)

He arrived in the ship *Cressy* with his father, James Townsend, and other members of the family, who were among the "Canterbury Pilgrims". His brother Robert, and his brothers-in-law, C.O. Torlesse and J.C. Boys were also pioneer surveyors in Canterbury. After some experience in surveying on Banks Peninsula and a sojourn

in the Australian goldfields, Charles Townsend was appointed by Chief Surveyor, Thomas Cass in 1863 to establish a survey depot on the West Coast, at the mouth of either the Taramakau or the Grey River. At that time there were no permanent residents in West Canterbury (Westland) and as surveying contracts were being let to Arthur Dobson and Robert Bain the depot was for the purpose of supplying the survey parties and prospectors who were beginning to explore the West Coast rivers. In March, 1863, the schooner *Crest of the Wave* was chartered to take Townsend and his party with a prefabricated store building to the West Coast. A change of plans had required that the depot be situated at the mouth of the Hokitika river but on the poorly charted and stormy coast they had some difficulty in locating the river mouth from the ship so Townsend and a boat's crew in the ship's whaleboat sought for and found the entrance but the master refused to attempt to take his ship across the dangerous bar and sailed north to the mouth of the Grey leaving Townsend and the boatmen to make their way overland. They eventually reached the Grey on 31st May. Earlier that month the ill fated surveyor, Henry Whitcombe had been drowned in attempting to cross at the mouth of the Taramakau. In October after the depot had been established at the mouth of the Grey, Townsend and members of his party went back to the Hokitika to recover the whaleboat but on the return trip on the 9th October owing to mishandling of the boat at the entrance of the Grey, it was capsized in the breakers and only two members of the party, Sherrin and Simeon were able to struggle ashore, the others, Townsend, Mitchelmore, and Solomon, were drowned.

Ref: Lyttelton Times 14th November, 1863

"West Coast Gold Rushes" by P. R. May, 1967 p.p. 87, 88, 91

Reminiscences by A. D. Dobson, 1930 p.60

TRAVERS, William Thomas Locke (1819 - 1905) F. L. S.

As one of the Colony's early Parliamentarians and businessmen, Travers was a man of wide interests and adventurous nature. Although he was not a member of the surveying profession he was one of several of kindred spirit, like Ernst Dieffenbach, Sir William Fox, Sir David Monro and Walter Mantell, to mention but a few, who freely gave of their time and energies and worked with some at the early surveyors in exploring the terrain and scientifically appraising the geology and the flora and fauna of their adopted country.

Travers was born in Newcastle County Limerick Ireland and was educated in France. He entered the British Foreign Legion for the Carlist War in Spain. As a Lieutenant in the 2nd Regiment of Lancers he served three years, 1835-38, and was decorated for gallantry.

He then studied law and was admitted as a solicitor in London in 1844. He came to New Zealand in the *Kelso* and landed at Nelson in 1849. The following year, during one of his first expeditions into the back country, he discovered alluvial gold in the Takaka River. Several years later the Collingwood goldfields were opened.

He was elected to represent Nelson in New Zealand's first Parliament in 1853 and in the second Parliament he represented Waimea, 1854-59. He unsuccessfully contested the Superintendency of Nelson Province in 1855 but subsequently was appointed a district judge, but he resigned to return to private practice.

As opportunity offered he undertook exploring expeditions, mainly in search of practicable routes from Nelson and Marlborough to Canterbury and Westland. On some of these expeditions he was associated with Christopher Maling, Henry Lewis and Arthur Dobson.

As proprietor of the Lake Guyon Run in Marlborough he was interested in the grazing industry but left Nelson to go to Canterbury where he practiced as a barrister at Christchurch. He stood against Moorhouse for the office of Superintendent of Canterbury Province in 1866 but was unsuccessful. He re-entered Parliament as Member for Christchurch, 1867-69, and was elected to the Provincial Council for Heathcote in 1867 but resigned to move to Wellington. He was elected to represent Wellington in Parliament in 1877 but resigned the following year.

He was associated with Ludlam, Mantell and Hector in getting the Wellington Botanical Gardens set aside as a public reserve. He was deeply interested in botany and ornithology and contributed many papers on those subjects, and also on geology and Maori customs, to the Wellington Philosophical Society. He was one of the founders of the New Zealand Institute and was appointed a governor of that body for life.

He was a director of several public companies, including the Manawatu Railway Company.

As an author he is best known for his "Stirring Times of Te Rauparaha" which was first published by Whitcombe and Tombs in 1872.

He was commissioned as a Captain in New Zealand Militia in 1863 and for many years was an officer in the Volunteers. He died on 26th April, 1903.

Refs. Dictionary of New Zealand Biography Scholefield. Portrait of a Profession, edited by Robin Cooke Q. C. 1969 A.H. & A. W. Reed.

TREGEAR, Edward De R (I. S. O.) F. R. G. S. (1846 – 1931)

He was born at Southampton, England on 1st May, 1846 the only son of Captain W. J. Tregear, a sea captain of the East India Company. He was educated at private schools in England and came to New Zealand in June, 1863 and entered the surveying profession, working at Thames and Coromandel. The Waikato campaign of the Maori Wars had begun a few weeks after his arrival at Auckland and at the age of eighteen years he joined the military forces and saw a good deal of active service. He eventually attained the rank of Captain, in command of the Waikato Native Contingent. For his services he was granted the New Zealand Medal.

After the war he joined the Civil Service and in 1868 was gazetted a mining surveyor in the Auckland goldfields. In October, 1875, he was appointed to the staff in Taranaki to assist with the surveying of the confiscated lands, and also surveys in the vicinity of Inglewood. He resigned in July, 1876 but remained in Taranaki and in June the following year he was granted a licence under the Land Transfer Act, and was in charge of a survey party working for T. K. Skinner, a well known Taranaki surveyor and engineer.

On 3rd March, 1881, he was appointed draughtsman to the West Coast Commission (1880-1884) and at the conclusion of this work he was Chief Draughtsman of the Wellington Office until the creation of the Labour Department, when, in 1891, he was appointed Secretary to the Bureau of Industries. The

following year he became also Chief Inspector of Factories, and in 1898 he became Secretary of the Labour Department, which position he held for the rest of his official career. In that period, working with the Hon. W. Pember Reeves, and the Premier, the R. Hon. R.J. Seddon, his was the hand which largely shaped the legislation on conciliation and arbitration, on shops and factories, on the improvement of shearers accommodation, the abolition of the truck system and the early stages of the provision for workers dwellings, workers' compensation, and advances to workers.

On his retirement from the Public Service in 1911 he was made a member of the Imperial Service Order. Mr. R.J. Seddon said of him that he was one whose name was "revered throughout the world in the cause of labour reforms".

Early in his colonial career Mr. Tregear became a student of the philology and ethnology of the South Seas, and with Stephenson Percy Smith was co-founder of the Polynesian Society. His "Maori-Polynesian Comparative Dictionary" was published in 1881. He published also several works on cognate subjects and for his work with reference to the French Polynesian colonies the French Government made him an Officer of the French Academy.

In 1887 he became a Fellow of the Royal Geographical Society, and other learned institutions with which he was connected included the Anthropological Society, The Historical Society, the French Society for the Study of Polynesian Lore, The Polynesian Society of Hawaii, and the Royal Society of Italy. He was a Fellow of the Imperial Institute from 1899 and in 1907 was the president of the New Zealand Civil Service Association.

He was a foundation member of the New Zealand Institute of Surveyors and the first editor of "The New Zealand Surveyor".

Apart from his departmental work, Mr. Tregear served the State as Chairmen of the Royal Commission on Private Benefit Societies, (1897), as Chairman of the Kauri Gum Industry Commission, (1898), and Chairman of the Cost of Living Commission of 1912.

Twice, after the Maori War, he held volunteering commissions; as Captain of the Patea Rifles in 1879, and as Captain of the Civil Service Rifles in 1899, at the time of one of the Russian war scares, which led to the fortification of New Zealand's principal ports, and the formation of volunteer corps.

A biography of Edward Tregear is included in James Cowan's "Famous New Zealanders" and in the "New Zealand Listener" of 14th April, 1961, is a tribute to him, which mentions inter alia that "the Tregears were one of the most ancient and distinguished of Cornish families, and had traditionally been the Sheriffs of Cornwall". It also mentions that Tregears "Maori-Polynesian Comparative Dictionary" was the leisure-time work of ten years, and that Max Muller, the celebrated German philologist said of it that it was "the work of six men's private lifetimes".

Edward Tregear died at Wellington in October, 1931

See "The New Zealand Surveyor" Vol. XV No. 2, December, 1931

His licence to survey under the Native Land Act was dated August 1869.

TRENT Henry (1848 - 1914)

Born at Blackheath, England, where his education commenced, and after emigrating to New Zealand he attended Nelson College.

He joined the Nelson Provincial Survey Department as a survey cadet in 1863. In 1868, following the opening of the Buller Goldfields, he was transferred to Westport District Office as Assistant Surveyor and Mining Surveyor. In 1873 he became District Surveyor for the Grey Valley and on the abolition of Provincial Government in 1876 he was transferred to the General Survey Department. The following year he was promoted Chief Draughtsman at Nelson.

In 1904 he was promoted to the position of Commissioner of Crown Lands and Chief Surveyor at Blenheim. On 1st July, 1906, Henry Trent became Chief Surveyor and Commissioner of Crown Lands at Napier.

He retired from the Public Service in May 1909 and returned to Nelson where he died on 12th September, 1914.

He was a foundation member of the New Zealand Institute of Surveyors.

TRESEDER, John Henry (1862-1952)

Born on 30th April, 1862 at Dunedin and was educated at All Saints' Grammar School and at Otago Boys High School. He served his articles under Robert Hay, M. C. I. E. between 1880 and 1884 and continued as assistant until 1887. From 1888 to 1891 he was employed under W. Sharp A. M. I. C. E. in general surveying and engineering practice. He was appointed to the Lands and Survey Department in Southland as a surveyor on 19th October 1891, in a temporary capacity, and was also classified as a draughtsman. On 1st November, 1902 he was transferred to the Roads Department as Road Surveyor and on 1st July, the following year was promoted District Road Engineer, which position he held until the dissolution of the Roads Department, and he was subsequently Resident Engineer in the Public Works Department at Invercargill for about three years. On 1st May, 1915 he was transferred to the Lands and Survey Department, being in charge of land drainage works on the Rangitikei Plains until 24th May, 1923, when he became Chief Draughtsman in the Dunedin Office of the Lands and Survey Department. He retired on 30th June, 1928 and moved to Oamaru, where he practised privately until 1941, after which he moved to Whangarei. He died at Auckland in September, 1952.

TRIPHOOK, Thomas Dawson

From earliest available records this surveyor carried out surveys for the Wellington Provincial Government in the Wairarapas in 1856 and also in the Hawkes Bay Province in 1859.* He was interested in geology and conchology and was of assistance to Dr. Ferdinand Hochstetter, the noted geologist of the Novara expedition of 1859, by sending to him a number of specimens from Hawkes Bay which enabled Hochstetter to write a brief section on the Hawkes Bay region which he was unable to visit. In 1863 Triphook was engaged by the South Rakaia Road Board to take levels through the Killinchy swamp for the purpose of a drainage scheme.

In August, 1865, Triphook laid out the township of Bealey at the confluence of the Waimakariri and Bealey Rivers for the Provincial Government. Owing to erosive floods and the fact that the town site was shaded by high mountains in wintertime, the site was abandoned later and a new township laid out on the present site of Bealey.

Mentioned in - Gateway to the Wairarapa, 1857-1957 by C. J. Carle

Land legislation and Settlement in New Zealand, by W.R. Jourdain

Ellesmere County, by G. W. Graham and L. I. B. Chapple 1965 p.86.

N. Z. Geological Survey 1865-1965 by Peggy Burton p.8.

See Hochstetter's lecture on the Geology of Auckland(delivered at the Mechanics Institute, Auckland on 24th June, 1859 and published in the Auckland Provincial Gazette No. 14, 1859.

* He practised as an authorised surveyor and land and commission agent at Napier and was a member of the Provincial Council (1861-62). See also "Our Village - Our Story, 1860 - 1962. "by I. E. Nolan M.A. for the Havelock North Borough Council, 1962.

TUCKETT Frederick (1807 – 1876)

He was born near Bristol, the fifth son of Philip Tuckett of the Manor House, Frenchlay. The family were members of the Society of Friends, generally known as "Quakers". Frederick to a first apprenticed to the tanning trade, after which he travelled for three years in the United States. On his return to England in 1831 he turned to civil engineering, and after some study he was engaged by Brunel, who was then building the Great Western Railway. After a few years on this work he was offered the position of Chief Surveyor and Engineer for the expedition sent out by the New Zealand Company to found the Nelson settlement. He sailed on the "Will Watch" on April 22, 1841 with a small staff of assistant surveyors and survey cadets, and some survey labourers. On arrival he explored the district suggested by Colonel Wakefield and, during the survey into allotments, he expressed his opinion that there was insufficient suitable land to satisfy the Company's commitments to the purchasers, all of whom had purchased land orders before England. The position was further aggravated by the number of absentee owners i.e. purchasers of land orders who remained in England, but who drew some of the best available sections in the ballot. In the search for additional land the Top House Pass and the Wairau Valley were discovered, and when the ownership of the Wairau disputed by the Ngatitōa, under Te Rauparaha, Tuckett advocated awaiting the decision of Commissioner Spain but the precipitate action of Magistrate Thomson and Captain Arthur Wakefield resulted in the affair of 17th June, 1843 known as the Wairau "Massacre". Tuckett was one those present who managed to escape, uninjured. Subsequently he acted as Resident Agent for the Company in place of Captain Wakefield, who had been killed.

In 1844 when negotiations for the Scottish Free Church Association's settlement were proceeding between the Association and the New Zealand Company, Tuckett was requested to select the site for the settlement. He undertook the commission but only on the firm understanding that there would be no interference by the Company in coming to a decision. In 1844, with assistant surveyors Barnicoat and Davison, and with Dr. David Monro as a member of the entourage, he explored the east coast of the South Island as far as Stewart Island, and finally decided on the district surrounding the Otago Harbour, as the site for the settlement. Tuckett arranged for the purchase of the Otago Block, comprising 400,000 acres, from the Maori owners, on 20th June 1844. In 1847 he returned to England, where he continued to take an active interest in the Aborigine's Protection Society, and in emigration affairs.

A copy of Tuckett's diary for the period March 28th, 1844 to June 1st, 1844 covering the voyage of the Debra from Wellington to Jacob's (Aparima River) and back as

far as the Molyneux (Clutha River) from whence Tuckett and party walked overland to the Otago Heads is published as Appendix A in Dr. Hocken's "Contributions to the Early history of New Zealand", 1898. Appendix B of the same work is the copy of a letter from Tuckett to Dr. Hodgkinson which gives Tuckett's views on the activities of the New Zealand Company. Appendix C is a copy of a letter to the editor of the Nelson Examiner, dated July 20th, 1844 Dr. (later Sir) David Monro who was a member of Tuckett's party on the journey to Otago; this letter gives a good account of the exploration of the coast. Appendix D is a copy of Colonel Wakefield's report to the Secret of the New Edinburgh Company on the purchase of the Otago Block. Appendix E is a précis of the Terms of Purchase of Land and Pasturage in the Settlement of Otago – August 1849 which recapitulates the arrangements made between the Association of Lay Members of the Free Church of Scotland and the New Zealand Company, and the Company and the New Zealand Government, and also a copy of the Crown Grant of Otago Block.

TULLY J

Came to New Zealand in the BROUGHAM, which arrived at Port Nicholson, on 9th February 1842. He was a survey cadet on the staff of the New Zealand Company; He assisted with the surveys at Wellington, mainly under the direction of H. S. Tiffen.

In 1846 he took part in the preliminary surveys of the Otago Settlement as a contract surveyor, in partners with J. C. Drake. They surveyed the districts between the Tokomairiro and Taieri Rivers and between the Waiholo and Waipori Rivers.

He was Licensed under the Native Land Act, 1865

TURNER, Archibald Campbell (1835 - 1912)

Born in St. John's, New Brunswick, Canada, he was a son of Colonel C. B. Turner, one of the Duke of Wellingtons veterans. A. C. Turner was educated in England and trained as an engineer in Canada and served as an Ensign in the Canadian Militia before leaving for New Zealand in 1861. Arriving at Auckland in 1862 he took part in the Waikato campaign in 1863-64 as a Lieutenant in the Auckland Militia. At the conclusion of the campaign he commenced private practice at Tauranga as a contract surveyor and engineer. During the campaign against Te Kooti and the Hau Hau rebels he joined the Colonial Forces as a Captain and saw much active service.

In April, 1865 he was licensed to survey under the Native Lands Act and on 22nd December, 1866 he entered the Government Service as a surveyor of Native Lands. On 1st May, 1869, he was appointed Resident Engineer for the Bay of Plenty where he carried out roading and other development works until 1879 when he became Engineer to the Tauranga County Council. He was appointed as Surveyor in the Lands and Survey Department on 1st March, 1877 (New Zealand Gazette, 1877, p.568). He became an Authorised Surveyor in October, 1876 and in 1891 he again went into private practice. He surveyed the Napier-Wairoa Road for the General Government and subsequently, (about 1893) he was appointed Road Engineer at Waitotara and then District Road Engineer, Wellington. In 1899 he was Road Engineer, Rotorua, a position involving membership, and for a long period, Chairman of the Rotorua Town Board, a Government position which he held until 6th March, 1906. On the constitution of the Roads Department in 1900, he became District Road Engineer. He retired from Government Service in 1906 and the

following year became County Engineer, Tauranga and also Engineer to the Rangitikei Drainage Board.

He died at Papamoa on 30th December, 1912.

He was a foundation member of the New Zealand Institute of Surveyors.

See Cyclopaedia New Zealand, Vol.1 p.108 which has a photograph.

New Zealand Surveyor, Vol. X No. 1 p.108

“Heroes of New Zealand” by T. W. Gudgeon 1887 which has a portrait and biographical notes.

TURNER, Charles Baker (1856 - 1932)

Born 28th November, 1856 in Canada, was a son of A. C. Turner, the surveyor and engineer. He was appointed as engineering cadet in the Public Works Department, Wellington on 25th July, 1874 and shortly afterwards was sent to Wanganui to gain general experience in engineering work. He qualified as an Assistant Engineer in January, 1878 and remained at Wanganui until the 31st October, 1880, when he was one of the many retrenched on account of the economic depression. On 12th January, 1885 he re-entered the Service as Assistant Surveyor on the Kihikihi Railway project (North Island Main Trunk Railway) but after less than twelve months, depression still persisting, he was put off again until the 12th January, 1887, when he was reemployed as a surveyor on the Main Trunk Railway, again in a temporary capacity. On 7th January, 1895 he was appointed Assistant Road Surveyor in the Lands and Survey Department, and was transferred in the same status, to Rotorua in August that year, and he remained in Rotorua where, on the establishment of the Roads Department in 1901, he became Assistant Road Engineer in that Department, and in November, 1906 he was transferred to Auckland and where he served until the Roads Department

was absorbed by the Public Works Department, In November, 1909, and Turner was transferred back to the Lands and Survey Department, in which he served until his retirement on 30th October, 1921. He died on 5th July, 1932.

USSHER, Edgeworth Richard (1839 - 1916)

Born in Canada on 15th June, 1839 he was educated there and trained as a civil engineer and worked on the survey of the Canadian Pacific Railway. He came to New Zealand in 1861 and obtained employment with the Otago Provincial Government as a Surveyor of Roads, which position he held until 1st June, 1869. On 1st December, 1871 he was engaged as an officer of the newly organised Public Works Department as a railway surveyor, with headquarters at Dunedin. In 1873 he returned to the Otago Provincial Government as surveyor of waste lands. In 1877 he became an Authorised Surveyor. On 1st July, 1878, he was made Resident Engineer, Public Department at Dunedin, being employed chiefly on the Dunedin-Christchurch railway, including the Deborah Bay tunnel. In 1879, he was promoted to District Engineer of Otago, from 1895 to 1906, in addition to the Otago Provincial district, he controlled the Canterbury district, his duties including the railway to Cheviot, and the Midland Railway in the north and west, and the Orepuki, Waiau and Catlans River railways at the other extreme, with the Otago Central railway in the interior. At the same time in these combined districts he was exploring for and directing surveys of hydro-electric power sources, in association with Mr. P. S. Fey.

Before he retired on 31st December, 1908, he had commenced the construction of the Gore, Waikaka, Riversdale, Switzers and Waimahaka extension railways. He was elected M. I. C. E. in 1886.

He died in Dunedin on 13th April, 1916

He was a foundation member of the New Zealand Institute of Surveyors.

See - Early New Zealand. Engineers, by F. W. Furkert, 1953, P 256, for photo.

UTTING, Frederick James

He arrived in New Zealand in the ship "RED JACKET" in 1859. He was a native of Kings Lynn, England, where he was trained as a surveyor and civil engineer. One of his early surveys in New Zealand was the township of New Lynn, Auckland, which he named after his home town.

With Charles O'Neill, Provincial Engineer, he assessed alternative routes for the Kaipara Railway In 1870.

He was licensed under the Native Land Act 1865, vide Auckland. Provincial Gazette 27 February 1866.

VICKERMAN, Alfred Herbert (1862 - 1939)

Born on 21 at August, 1862 at Spring Creek, Marlborough, and educated at Nelson College, 1874-78. He started work with the Public Works Department on railway construction on 19th March, 1879, but was appointed a survey cadet with the Lands and Survey Department on 10th March, 1880, and stationed at Nelson. He was transferred to the Auckland Office in November, 1883, during the financial depression and in June, 1895 he became Assistant Surveyor and a year later District Surveyor, in the Auckland district. On 1st April, 1901 he was appointed Assistant Road Engineer in the newly formed Roads Department, and continued in that position until the Roads Department was merged in the Public Works Department on 1st August, 1909, when he became Assistant Road Engineer In that Department. On 1st November, 1910 he was transferred back to the Lands and Survey Department as District Surveyor. In June, 1914 he was appointed draughtsman in charge of the Road Legalisation Branch of the Survey Department at Auckland and on 8th May, 1917 he was promoted to Chief Draughts man, Invercargill, which position he held until 31st May, 1927, when he retired.

He died at Hautapu, Cambridge on 18th June, 1939.

He was a member of the New Zealand Institute of Surveyors.

WAKEFIELD, Charles Marcus (1838 -1902)

A son of Daniel Bell Wakefield, a former Judge of the Supreme Court In New Zealand, he was born on 1st May; 1838 in England where he was educated. He was a nephew of Edward Gibbon Wakefield.

He came to New Zealand in 1854 and joined his uncle, Felix Wakefield, a former surveyor, and his cousin, Charles Obins Torlesse, a surveyor on the Canterbury Provincial survey staff. He trained as a surveyor and was appointed to the Provincial staff engaged in surveying in Canterbury and Nelson from 1862 until 1869. His work included roading on Banks Peninsula and the telegraph line from Christchurch to Nelson.

In 1869 he sailed for England in the ship "BLUE JACKET". When about 500 miles from the Falkland Islands the ship caught fire and had to be abandoned. All that Wakefield salvaged from his baggage was his diary. He returned to New Zealand in 1871 and finally returned to England in 1875.

(He meticulously wrote up his diary from 11th September 1856, onwards and his diaries are being edited by his grand daughter, Mrs. Priscilla Williams, with a view to having them published. These diaries are destined for the Turnbull Library, Wellington. Vide - article in Auckland Star, 4th September, 1974, "Glimpse of Life in New Zealand Last Century" by Judy Bradwell).

WARD Joseph (1817 – 1892)

Born in Staffordshire in 1817 he had been a bailiff on a Clifford estate near Tixall in Staffordshire before June, 1842 when he and his wife, Martha, (daughter of Henry Redwood, and sister of Francis Redwood, who became the first Archbishop and Metropolitan of the Roman Catholic Church in New Zealand) joined a group of Catholic colonists, sailing in the GEORGE FYFFE to the Nelson settlement. At Nelson Ward worked as a surveyor for the New Zealand Company, and also kept a school for the Redwood family.

After the completion of the purchase of the Wairau Block had been arranged in 1847, between Te Rauparaha and the other Ngatitōa chiefs and the Government, Ward worked with his brother-in-law Cyrus Goulter, in setting out part of the newly acquired block and also surveyed many of the large runs in the Wairau and Awatere valleys.

Subsequently he became a run-holder and grazier in Marlborough Province and he also assisted in explorations for stock routes to open up the back country.

Ward was elected to represent the Wairau district in the first Nelson Provincial Council, and in 1860 (Marlborough having been proclaimed a separate province on October 9th, 1859) elected to the Marlborough Provincial Council, on which he served from 1860 to 1876 i.e. the whole period of its existence.

He represented the Wairau Electorate in Parliament from 21st June, 1875 to 6th December, 1875. His death occurred on 12th November, 1892.

See Cyclopaedia of New Zealand Vol. 5 p.311 for photo of Ward in his later years.

WARD Thomas (1849 - 1934)

He was born at Oxford, England and educated at the Public School of Rochester. He served his time in the New England Works and was employed under the Great Northern Railway and Messrs. Ransom and Rapier, studied at University College, London, giving special attention to engineering structures. He came to New Zealand in 1873 and was soon afterwards appointed Borough Engineer at Westport. He next became engineer to the Oakes firm, the contractors constructing the Rimutaka Railway. From there he went to the construction Manawatu Railway in a similar capacity.

In 1877 he was appointed Assistant Engineer to the Wellington Corporation, but on the 6th December, 1883, he resigned and commenced private practice in Wellington which flourished for over fifty years. In 1884 he qualified as a Licensed Surveyor, and his practice thereafter covered a widely distributed field of both surveying and engineering. He engineered the Karori Tunnel, and supervised the

laying out of Wellington east, Roseneath, Northland and Highland Park and other sections of Wellington City's expanding territory.

He was one of the founders of the New Zealand Institute of Surveyors, and its first Secretary, and later for his many services was made a Fellow of the Institute. He was elected in 1892.

He continued in practice until well after his eightieth year, and it is stated that when over eighty years of age he was surveying in a swamp, where conditions were strenuous and unpleasant. At 5 o'clock his chainman offered to carry his theodolite back to camp. The old man drew himself up haughtily and said, "When the day comes that I can't carry my own instrument it'll be time for me to pull out", and he shouldered the theodolite and set off. He cannot be said to have retired.

He died at Wellington in 1934

See "New Zealand Surveyor" Vol. XV No. 10 June, 1935.

WARNER, Horatio Alfred (1858 -)

Born at Auckland, 18th October, 1858, son of H. N. Warner (g v) who trained him as a surveyor. They were associated in survey work in various districts in the Auckland Province. H. A. Warner was examined by Mr. S. Percy Smith, Assistant Surveyor General, and granted his licence under the Land Transfer Act of 1885, on 13th January, 1886.

He then became an Assistant Surveyor on the staff of the Land and Survey Department in the Auckland District, working mainly in the North Auckland peninsula. In October, 1901, through a breakdown in health, he transferred to the draughting staff at Auckland Office of the Department.

He was a foundation member of the New Zealand Institute of Surveyors.

WARNER, Horatio Nelson (1819 - 1906)

Born at Highgate, London, in 1819. He attended Lauder-dale House School, Highgate. In 1833 he entered into training for a mercantile career and afterwards acquired a knowledge of surveying. He left London in 1836 for New South Wales where he remained for three years, intending to return to England. Early in 1840 he left Sydney in the schooner KATE and came to New Zealand in charge of Mr James Campbell's survey' staff, comprising Mr. Thomas Crummer, surveyor, and Messrs. l'Anson and Sutherland, cadets. The original intention was to survey the land in the South Island claimed

by Johnny Jones which subsequently was surveyed by J.C. Drake.

The KATE arrived at the Bay of Islands on 5th March, 1840 a month after the first signatures were attached to the Treaty of Waitangi. Instead of proceeding to the South Island the survey party went to the Hokianga Harbour where they laid out the township of New Bristol, opposite Herd's Point (Rawene), as a private venture of Thomas Poynton. This township was never occupied and never claimed by the purchasers and eventually was settled under the "forty acres" scheme.

In October, 1840, Warner went to the infant town of Auckland and was employed by the Acting Surveyor General, Felton Mathew, in laying out the town and suburbs of Auckland. In 1844, with the threat of native unrest in the Bay of Islands, Warner transferred to the Royal Engineers Department at Auckland under Major

Marlow, and assisted in laying out the defences of Auckland surrounding the Albert Barracks, the construction of which was supervised by Mr. George Graham, also of the Royal Engineers.

Mr. Warner left the Royal Engineers in 1854 to take charge of the Provincial Lands Department as Chief Draughtsman. The following year he was appointed to the field staff as Deputy Waste Lands Commissioner. He was also appointed Commissioner of Crown Lands, an office he retained until 1867 when he retired from the Provincial service.

During the Taranaki war of 1860 and the Waikato campaign of 1863 Warner served as senior sergeant in the Auckland Rifles Volunteers and at the conclusion of the campaign he assisted in the surveying of the confiscated land.

In 1868 he was gazetted as a Goldfields Surveyor and Mining Surveyor and in 1870 was granted a licence under the Land Transfer Act. From 1870 until 1875 he acted for the Government as Official Agent in the Thames and Coromandel goldfields. Subsequently he worked in partnership with his son, Mr. H. A. Warner, in private practice and was still actively engaged in 1895.

In 1888, when 69 years of age, he was a foundation of the New Zealand Institute of Surveyors and had been practicing in New Zealand longer than any other member. Mr. A. O. C. (Octavius) Carrington was three years his senior but had commenced practice in New Zealand in 1841. Another veteran foundation member, Mr. James Baber (senior) had commenced practice in New Zealand in 1842.

H. N. Warner died at Auckland on 16th January, 1906.

- Refs. 1. The supplement to the New Zealand Herald of 24th August, 1895 has a lengthy biographical article with a portrait of H. N. Warner.
2. "New Zealand Surveyor" Vol. VIII p.205, March, 1906.
- 3, "Auckland Provincial Gazette 1868.
4. H. N, Warner as Deputy Waste Lands Commissioner, was one of those who submitted evidence to the Commissioner of Enquiry into the organization and working of the Waste Lands Department in 1865. See Journal of Auckland Provincial Council, Session XVIII, 1864-64 A. No. 13.

WATTS, Charles Fowell Willets

Charles Watts as Assistant Surveyor, and his brother J. W. A. Watts, as an "Improver" i.e. survey cadet, arrived in New Zealand as members of the New Zealand Company's survey staff sent out from England in 1841 in the Whitby and the Will Watch to lay out the Nelson Settlement. Charles assisted in surveying the Nelson town sections and subsequently, in association with William Budge laid out rural allotments in the Golden Bay district. In 1844 in association with J. C. Drake and W. Bishop, he explored the Pelorus district in an endeavour to find a practicable route for a road from Nelson to the Wairau district. On the termination of his engagement with the New Zealand Company he leased 20,000 acres of Crown land as a grazier. In 1853 he was surveying for the Survey Department in the Wairau district. Eventually he acquired the Landsdowne sheep station in the Wairau Valley, where he was one of the pioneer settlers.

WATTS, John W A

See reference to C. F. W. Watts J. W. A. Watts, on the termination of engagement with the New Zealand Company, became a grazier in the Wairau Valley. In 1858 he carried out several contract surveys for the Crown in Marlborough and eventually held a grazing run in the Amuri County.

He was drowned in Waiau River, North Canterbury 14th January, 1862.

WEBER, Karl (or Charles) Herman (1830 - 1886)

He was born in Bavaria and educated and trained as a surveyor and engineer. Having become involved in a revolution in 1848, he fled to the United States of America, and there he formed one of a party, under General Fremont who laid off, the transcontinental railway from New York between 1846 and 1853. His share in the work is commemorated by his name having been bestowed upon a town, river and mountain In the Rocky Mountains.

After harbour engineering in South America he proceeded to Australia, and whilst there he was engaged in January, 1860 by the Hawkes Bay Provincial Council as District Surveyor, later to become Chief Surveyor and Provincial Engineer of the province holding this position from 1864 to 1877. His surveys and work in Hawkes Bay are kept in mind by the fact that the township and county of Weber in the southern part of the Province are named after him. After retiring from the Survey Department in 1876 he became the first engineer to the Napier Harbour Board, and also carried out extensive drainage works.

On 11th November 1870, he was instructed by John Blackett, Engineer –in-Chief of the Colony, to explore a road and railway from Napier to the Manawatu Gorge. He and J. T. Stewart agreed that the south, or left bank should be followed through the gorge. A contemporary plan shows their line joining with a line surveyed by John Rochfort from Wellington, at a point where Woodville now stands.

In March, 1879 he prepared a report on the whole harbour development to assist Sir John Goode in making his recommendation on Napier Harbour. He then entered private practice, while still acting as consultant to the Harbour Board.

In 1886 he disappeared while exploring the country between Eketahuna and Pahiatua, and it was not until 1889 that the mystery of his disappearance was solved, when a party of bushfellers discovered his skeleton in dense bush, within two chains of the road, heart failure being the probable cause of his sudden and tragic death.

As Provincial Engineer he laid out many of the main roads of the province, and in 1873 provided a scheme for the reclamation of an area of swamp land lying between Hastings Street and Carlyle Street, In the present town of Napier, together with suggestion and schemes for drainage, reclamation, and harbour works in other parts of the district.

WEBSTER George Johnston (1863 -)

He was born on 1st December, 1863. Between January, 1879 and January, 1884 he served his cadetship under John Webster, A.M. I. C. E. and for the following eighteen months was assistant to the same employer, during which time he qualified as an Authorised Surveyor. He acted as engineer -surveyor to the Rangiora Town

Board, the Waimakariri Harbour Board, the Eyreton Road Board and the Mandeville Road Board. In June, 1856, he was a Borough Engineer of Kaiapoi. He was elected A. M. I. C. E. on 1st April 1890. Between 1891 and 1915 he held appointments with various local bodies, as engineer, including, Oxford, Whakatane, Carterton, Feuding and Dargaville.

He was a foundation member of the New Zealand Institute of Surveyors.

WEETMAN Sidney F. R. G. S.

As a contract surveyor in 1866 he was one of the surveyors who laid out the allotments at Hamilton for the military settlers of the 4th Waikato Regiment. Subsequently he joined the Lands and Survey Department in the Auckland Province. In 1873 he was appointed Resident Engineer for the district north of the Bay of Islands. In April 1889 he was appointed Commissioner of Crown Land and Chief Surveyor for the Taranaki Land District and subsequently held those offices in Marlborough (1893 - 1897) and Canterbury (1897 - 1902).

He was a foundation member of the New Zealand Institute of Surveyors.

WELCH, Joseph Sandell (1831 – 1919)

He joined the Survey Department at Dunedin in 1867 and subsequently transferred to the Public Works Department as an engineer and surveyed a considerable part of the railway, north-wards from Dunedin. He returned to the Lands and Survey Department in 1877 in the Canterbury District and was stationed at Akaroa. Appointed Assistant Surveyor, Lands and Survey Department Canterbury, vide New Zealand Gazette, 1st April, 1877. He continued in the field until 1893 when failing health induced him to accept a position as senior draughtsman at Wellington. He retired in 1909 and his death occurred at Wellington in 1918.

He was a foundation member of the New Zealand Institute of Surveyors

Ref. History of Canterbury Vol. 2 W. J. Gardiner, ed. 1971 p471. Welch

was an able artist who exhibited in Fine Arts Exhibition, Dunedin in 1869. History of Land Legislation and Settlement in New Zealand, by W. R. Jourdain, 1925, p 225. An account of the valiant attempt by Welch and James Mackenzie to save the life of John Cameron (q.v.)

WHEELER, William John (1861- -1932)

Born at Auckland on 9th May, 1861, he was educated at Auckland and on 9th December, 1874 joined the Lands and Survey Department. In March, 1880 he was appointed survey cadet under Mr. F. H. Edgecumbe, in the Waikato district where much of the land had been confiscated a few years earlier at the conclusion of the Waikato War. Appointed Assistant Surveyor New Zealand Gazette 15th June, 1883. Working in a hostile environment Mr. Wheeler determined to accumulate a thorough knowledge of the Maori language and obtained a first class interpreter's Licence. On numerous occasions his efforts at appeasement when difficulties with the Maoris arose, were invariably successful. On one occasion, however, the survey party was in a very serious position. This has been related by Mr. W.R. Jourdain in his "History of Land Legislation and Settlement in New Zealand" as a typical incident of Maori opposition such as was faced by a number of the pioneer, surveyors in the course of their work.

“When J • Wheeler surveyed, the Taurawharona Block, in the Waiapu district, Poverty Bay, in 1892, he was obstructed by a large party of Natives acting under the direction of Koroneho Kopuha, who felled trees around the party as they were observing, and finally carried off the theodolite. This matter was speedily adjusted, and six of the offenders were fined in the nearest Magistrate’s Court. The feeling, however, grew more hostile, and a trig station erected on Pukekiore Hill was destroyed by Maoris under Te Kakahi. Fines were again levied on the offenders, but without sufficient effect, as another party of Maoris under Enoka Rukuata overturned the trig station when re-erected, and an ugly situation developed. However, tactful representations prevailed, and again the offenders were fined by the Magistrates. It must be stated that during the foregoing scenes of obstruction by the Maoris any incautious action by the small party of surveyors would have led to a melee, with probably serious consequences, and that the surveyor and his men were in a more dangerous position than might be gathered from this brief narration. As a result of the continuous fines, threats were made to shoot the Natives who were pointing out to Mr. Wheeler the boundaries lines of the block, but thanks to influential representations from the Government and leading chiefs to the Maori ringleaders, all Native opposition was subsequently withdrawn and the surveys resumed without further trouble”.

Mr. Wheeler, in the course of his professional career, worked in the North Auckland, Whangarei, and East Coast districts and became Chief Inspector of surveys in the Auckland district, a position he held for a number of years before being appointed to take charge of the Gisborne Office in 1916. He retired from the Government Service in 1921 and practised privately in the Gisborne district. He took a keen interest in rifle shooting and was a life member of the Gisborne Defence Rifle Club.

He died at Gisborne on 2nd September, 1932.

He was a foundation member of the New Zealand Institute of Surveyors.

See New Zealand Surveyor, Vol. XV No. 5 p.166 (photo)

WHITCOMBE, John Henry (1830 - 1863)

He was born in Devonshire and trained as a civil engineer under I. K. Brunel. In 1854 he went to India to follow his profession, but two years later he came to New Zealand and obtained a position under the Canterbury Provincial Council, where he became Provincial Surveyor. In May 1863 with Jacob Louper, a Swiss guide who had recently arrived in New Zealand, he set out to find a practicable route from Canterbury to the West Coast. They ascended the Rakaia River valley and crossed the pass now known as the Whitcombe Pass, into the western watersheds. They reached the coast but were in a very low condition from exposure and want of food but neither Hokitika nor Arahura were inhabited. In attempting to make their way to the mouth of the Grey River, where there was a Maori settlement, they had to cross the Taramakau River and Whitcombe’s strength was not equal to the effort and he was drowned when two derelict and waterlogged canoes in which they attempted to cross were overturned in the breakers at the river mouth. Louper recovered and buried the body, which was later moved by the Government to the cemetery in Hokitika, where a combined monument commemorates Henry Whitcombe, George Dobson, Herbert Charlton Howitt and Charles Townsend, all of whom were surveyor-engineers during the early days the gold rush and the pioneering of Westland.

See "Over the Whitcombe Pass" by John Pascoe, 1960 (Whitcombe & Tombs) for Louper's account of the expedition.

"Early New Zealand Engineers" by F. W. Furkert 1953 p 290.

WHITE William Bertram.

In 1846, as Sub-Inspector of Constabulary, he accompanied the Surveyor General C .W. Ligar, on a walk through the North Island to assess the possibilities of a road from Wellington to Auckland They walked by way of Otaki, Manawatu, Wanganui, Patea, New Plymouth, Mokau, Te Kuiti, Ngaruawahia and Tuakau, most all the itinerary being at that time destitute of European inhabitants,

Later he joined the Survey Department at Auckland.

He was appointed Deputy Waste Lands Commissioner, Auckland Province, vide Auckland Provincial Gazette, 1859, and was stationed at Monganui as Police Magistrate (J.P.) and surveyor, 19th October, 1859. Later he became a Judge of the Native Land Court.

See "History of Land Legislation and Settlement in New Zealand" by W.R. Jourdain, 1924 p.241.

WHITEHEAD Arthur

Arrived in New Zealand in the BROUGHAM on 9th February 1842 as an Assistant Surveyor, on the staff of the New Zealand Company.

His first surveys were in connection with laying out sections in Hutt Valley, in both Lower and Upper Hutt. He was also responsible for subdividing land at Watt's Peninsula. In 1843 he was placed in charge of road location up the Hutt Valley and on the route over the Rimutaka Range that was eventually to connect with the Wairarapa.

In 1848 he was the author of "A Treatise on A Practical Surveying as Particularly Applicable to New Zealand and other Colonies".

WHITESIDE, George S. (1863 - 1942)

As an infant he arrived in New Zealand with his parents in 1864 and spent his early years on a farm. In 1882 he joined Mr. Charles Stevens' survey party and worked under Mr Steven in the Auckland district for five years as a survey hand. In 1892 he worked under Mr. A. B. Wright, Road Engineer and surveyor of the Lands and Survey Department, and subsequently with Mr. E. Fairburn in the Auckland district.

In 1902 he was appointed engineer to the Otamatea County and subsequently, at various times, engineer to the Opotiki, Nelson, Inglewood and Blenheim Counties.

He passed the surveyors examination in September, 1904 and was responsible for surveying and supervising the construction of the Tuakau section of the Main Trunk railway line.

The Jubilee Supplement to the New Zealand Surveyor, Vol. XVI No. 6 (December, 1938) has two articles by Mr. G. S. Whiteside, "Surveying Among the Nova Scotians" and "A Reminiscence", which are redolent of surveying in New Zealand during the pioneering period.

WILKINSON, George Thomas, (1844 – 1906)

Born and educated in England, he arrived in New Zealand in 1864 to assist in the surveying of confiscated land under the direction of the Chief Surveyor, Major Charles Heaphy. Towards the conclusion of the Waikato campaign he was in laying out the township of Kihikihi when he observed and reported the construction of the Orakau pa by the Maoris. During the war years the surveyors, for their own defence, armed themselves with breech-loading carbines and revolvers. As a volunteer Wilkinson joined the assault on Orakau as a member of the party comprising Major Jackson's Bush Rangers and a Company of the 18th Royal Irish. He continued the surveys and subsequently took part in raids into enemy-held territory. At the conclusion of the Tauranga Campaign he assisted Mr. F. J. Utting in laying out the township of Te Papa (Tauranga) and subsequently took up a block of confiscated land near the entrance of the Waioeka Gorge not far from Opotiki. His partners were Messrs. Livingstone, Moore and Begg. On the 21st May, 1867 while sheltering in their whare from heavy rain, they were suddenly attacked by a party of Hau Haus under the notorious Tamaikowha. The Europeans were armed but were without ammunition. They made a break to reach the surrounding bush but only Wilkinson and Livingstone succeeded in doing so and escaping to the safety of the redoubt at Opotiki. Moore and Begg were shot down and tomahawked.

Wilkinson returned to Tauranga where the surveyors were being interrupted in their work by hostile Maoris. The surveyors formed an engineering Company commanded by H. L. Skeet, with W. Gundry as his lieutenant. Wilkinson joined the Company and took part in the bush campaign in which it played a distinguished part.

Afterwards he was appointed interpreter to the Magistrate at the Thames goldfield and was sent to Te Kuiti, following the attack on Commissioner James Mackay, to ascertain the feeling of the Kingite Maoris. In 1878 he was appointed Land Purchase Officer and later Principal Officer of the Native Department in the Waikato. He was Native Agent at Alexandria (Pirongia) and president of the Maori Council at Otorohanga.

He died on 4th February, 1906.

See Dictionary of New Zealand Biography and "The New Zealand Wars" – J. Cowan

WILLIAMS, George Watkyn (1845 – 1896)

Born in Exmouth (England) in February, 1845 the only son of George Williams he came to New Zealand with his parents in 1856. In 1862, fifteen years of age, he joined the General Government Survey Department at Auckland and in 1865 was dispatched to the Taranaki to take part in the provincial surveys. On the 18th April, 1866, he left the Government service, and in conjunction with Messrs. S. Percy Smith, C. A. Wray, and F. Wilson he went to the Patea district to survey what was then a terra incognita into allotments for military settlers. This expedition was accomplished under exceptional difficulties through the active hostilities of the local Maoris. The surveyors had to perform their work under the protection of covering parties of the 18th Regiment (Royal Irish) and when the regulars were withdrawn, under the protection of the rifles of the colonial forces. This work took about two years to accomplish, and the survey parties had frequently to guard against surprises by the Natives and to repel hostile attacks.

At the conclusion of this work, Williams made a brief visit to England and on his return went into business as a mining agent at Thames.

He re-entered the Survey Department, as District Surveyor at Patea in 1871, and in 1874 was promoted to Inspecting Surveyor for the Wellington district. One of his tasks was to assist Colonel (later Major General) Scratchley, R. E. to survey the sites chosen by the latter, for permanent defences of the principal ports of the Colony. He was next transferred to Auckland as Inspector of Surveys, and in May, 1887 he was promoted Chief Surveyor and Commissioner of Crown Lands for Hawkes Bay. In 1891 he was transferred to Invercargill to fill the same offices in Southland. He died at Dunedin on 3rd November, 1896 having left Invercargill with the intention of taking up similar positions at Christchurch, to which he had been promoted.

During his service in the Pates district (1865-68) he served in several expeditions led by colonel McDonnell, and received the New Zealand War medal. He was also appointed a lieutenant in the New Zealand Militia.

His partner, Captain C. A. Wray, was also his brother-in-law.

Williams was a foundation member of the New Zealand Institute of Surveyors. See obituary in "The New Zealand Surveyor" for December, 1896.

WILLS Alfred

Arrived in New Zealand on 9th February, 1842 as a cadet on the survey staff of the New Zealand Company. He came out on the BROUGHAM. He was sent to the Manawatu district where he worked under Charles Henry Kettle with whom he made an epic journey in mid-winter 1842, when they ascended the Manawatu River and passing through the Gorge, penetrated the Forty mile bush to Wairarapa and crossed the Rimutaka Range to Wellington, which they reached on 8th June.

His next work, still under Kettle, was in the Ohiro district near Wellington and then in the Hutt Valley. When Kettle and others were retrenched in March, 1843, Wills worked under the direction of Arthur Whitehead on road location surveys in the Hutt Valley.

In partnership with Edward Jollie and Andrew Wyllie, as contract surveyors in 1846, he took part in the preliminary surveys for the Otago settlement. They surveyed the districts of Molyneux, Balclutha, Inch Clutha, Kaihiku, Puerua and Waiwera. In January, 1848, in association with John White, he carried out surveys at Wanganui for the Land Purchase Department. Under the direction of Donald MacLean, Native Commissioner, they delineated the boundaries between the Company's land and the Native Reserves, for the purpose of settling a long standing dispute.

Wills was associated with W. B. D. Mantell in 1848 when the latter was charged with the task of selecting and surveying the land for the Native Reserves in connection with the purchase of the greater part of the South Island. Leaving the Kaiapoi Pa in August, 1848 they spent many weeks walking overland and exploring the coastal areas from the Ashley River in the north to Dunedin in the south, selecting and surveying the reserves en route. This was virtually the first extensive and official exploration of Canterbury.

See "History of Canterbury" Volume I p106 (Canterbury Centennial Association, 1957)

"The Exploration of New Zealand" McClymont (p.49, 1959 edition)

WILMOT, Ernest Herbert (1855-1952)

He was born at sea when his parents were voyaging from England to settle in Adelaide, South Australia. After a few years there and at Melbourne, the family moved to New Zealand, arriving at Dunedin in January, 1863, where Ernest attended Shaw's Grammar School, one of his teachers being Mr. (later Sir) Robert Stout. He then attended Otago Boys High School of which he was dux in 1871, and first winner of the Chamber of Commerce Gold Medal and of the Richardson Scholarship.

On leaving school he joined the staff of the "Evening Star" at Dunedin: but after two years with the newspaper, during which he attended classes at Otago University, he applied for and was accepted as a survey cadet in the Survey Department of Otago.

Having qualified as a surveyor, he was appointed Staff Surveyor in January, 1877 and placed in charge of the Queenstown district. At that time and for many years afterwards, that district was the scene of considerable mining activity, both reefing and alluvial and later on dredging claims were taken up over the river beds. The country was extremely rough and the roads to the principal mining localities were mostly pack tracks. The Surveyor had to make provision for transporting his camp and party, both by lake and land, to any place where claims were pegged off by miners and surveys required. He had also to report to the Goldfields Warden on all applications for mining privileges.

In addition to mining surveys he was engaged on trigonometrical and topographical surveys and also on rural and settlement surveys in Otago, Canterbury and Southland districts. As a pioneer surveyor he explored the valleys of the Hollyford and Eglinton Rivers and the country between Lake Manapouri and Dusky and Smiths Sound, and discovered the lowest pass to the Sounds now called Wilmot Pass. In the Departmental reports on Mr. Wilmot's work, two incidents are recorded that illustrate the dangers that were sometimes faced by the pioneer surveyors. In 1881 Wilmot's party had an unnerving experience whilst traversing the Hollyford Valley. Travelling was dangerous in many places, where the mountain-sides were just a mass of moving stones. On one occasion a huge rock came away and struck cadet A. Burns, who was carrying the instrument box on his back. But for the box receiving the first shock he would have been killed. In 1883, when Mr. Burns was in charge of a field party, one of the members of the party, Ronald Raymond, was drowned when attempting to cross the Hollyford River.

Another member of the party was marooned on an island in the river for more than five days without food or shelter in atrocious weather, before he was rescued. Mr. Wilmot had arrived at the scene of the accident on the following day and finding only the tools and other equipment, and all the members of the party missing, had to return to Queenstown to organise a search party.

In 1906, he was appointed Inspecting Surveyor at Hokitika and subsequently Chief Draughtsman and Clerk to the Land Board for Westland. In 1908 he was promoted to be Commissioner of Crown Lands and Chief Surveyor at Dunedin, and in March, 1914 he was a Surveyor General. He was also Chairman of the Joint Representation Commission and member of the Government Life Insurance Investment Board and member of the Land Settlement Board. -

He retired from Public Service in 1920 and moved to Auckland where he died in 1952 at the great age of ninety-seven years.

Two notable cadets who were trained by Mr. Wilmot at Queenstown and ultimately followed him as Surveyor-General were W. T. Neill and H. E. Walsh. Mr. Wilmot was a foundation member of the New Zealand Institute of Surveyors.

See "New Zealand Surveyor" Vol. XX No. 8 August 1952.

"History of Land Legislation and Settlement in New Zealand" P by W. R. Jourdain.

"Record of Survey in New Zealand" Volume III (which has photograph of Mr. Wilmot.) etc. etc.

WILSON, Anthony Dickson (1841 - 1934)

Born In Scotland on 13th July, 1841 he arrived in New Zealand in 1858 and joined the Otago Provincial survey staff, serving his cadetship under his cousin, Mr. George Hatley, District Surveyor of Otago and Southland. In the course of his work in the south he assisted in the survey of the town of Invercargill and subsequently he was surveyor to the Warden's Court during the gold rush. He laid off the first road from Invercargill to Queenstown via Cromwell. He then moved to the North Island where he surveyed in the Seventy Miles Bush district. During the Maori Wars he was, surveying in the region of the upper Wanganui River when he and his party had to flee for their lives and just managed to reach Wanganui before it was besieged by the rebel Maoris. On the occasion of the eruption of Mount Tarawera in 1886, he and his party who were working in the affected district, again had to flee for their lives and on returning to their camp site when danger had passed, found the country covered by rock and lava.

During his career he engaged in extensive **geodesical** survey work and had climbed many of the highest mountains in New Zealand. He placed the first trig station on the summit of Mount Tapuaenuku (9465 ft.) One of his tasks was to connect the triangulation surveys of the North and South Islands across Cook Strait. This survey was accomplished in 1883 and as some of the stations were up to fifty miles apart, heliostat signals were used. For this work, Mr. Wilson was accorded special mention by the then Prime Minister, the Right Hon. John Ballance and the Surveyor-General Mr James McKerrow. In 1888 he left the Department to enter private practice at Blenheim. He carried out a number of contract surveys for the Government including the surveying of the 53,000 acre Hillersden state. In 1901 he retired from surveying and took up sheep farming in the Pelorus Sound district. He was a foundation member of the New Zealand Institute of Surveyors.

He died at Picton on 20th January, 1934.

See "The New Zealand Surveyor. Vol. XV No. 8 p.279.

WILSON, Daniel Cook (1841 – 1902)

He was born at Dungannon, County Tyrone, Ireland, a son of Andrew Wilson, surveyor and engineer. When Andrew Wilson died as the result of an accident, in 1852, three of the sons, a Irvin aged twenty years, Henry Spier aged fourteen years, and Daniel Cook aged eleven years, took ship for the gold diggings in Victoria, Australia, where they arrived in 1853. Subsequently the three brothers came to New Zealand. Daniel arrived in New Zealand in 1857 and after some time at sea, qualified for a mate's certificate. Later he took up surveying under his, brother, James, who was a Government Surveyor, and was responsible for much of the early roading in the Whangarei County. Daniel qualified as a licensed surveyor and in 1882 he was

appointed County Engineer to Whangarei, and held that position until his death, which occurred at Whangarei on 22nd August, 1902. During his term as County Engineer he is credited with the construction of 400 miles of road and the incidental bridges. He was a good Maori linguist and he and his brothers employed, mainly, Maori workmen on their survey parties - He was a foundation member of the New Zealand Institute of Surveyors.

See "New Zealand Surveyor", Vol. XIV No. 9 March, 1931. Article "Who's Who"
The late A.H. Pickmere, Fellow of the New Zealand Institute of Surveyors, was a grandson of Daniel Wilson

WILSON, Henry Spier (1838 - 1916)

Born in Dungannon, County Tyrone, Ireland he came from a family of land surveyors, his father being a surveyor practising in Ireland, and his brothers James Irwin and Daniel Cook Wilson who practiced in New Zealand In 1853 he and his brothers went to the gold diggings in Victoria. Two years later James came to New Zealand and joined the Survey Department at Auckland. Henry and Daniel Wilson arrived In New Zealand a year or two later. Like his brothers, Henry entered the surveying profession and was licensed under the Native Land Act on 28th November, 1865. On numerous occasions he acted as assistant surveyor and engineer in partnership with his brothers.

In October, 1886 he was appointed Acting Forest Ranger for Hobson County, by Thomas Kirk, Chief Conservator of State Forests. State Forests were then administered by the Lands and Survey Department and Henry Wilson later became Crown Lands Ranger for the district.

Subsequently e entered the Lands and Survey Department in which he served for many years as a Crown Lands Ranger retiring in September, 1900.

He died at Whangarei in 1916.

WILSON, Hugh Munro (1865 – 1929)

He was born at Whangarei, the son of James Irwin Wilson q.v., and trained under him as a surveyor and engineer. He joined the Survey Department and qualified as an Authorised Surveyor on 5th June, 1883. At twenty-one years of age he was appointed engineer to the Rodney County Council, which position he held for eight years. In 1889 he was appointed Engineer to the Waitemata County with right to private practice. He extended this and by 1890 had sub-offices at Whangarei and Thames. In the latter district he had large mining connections. In 1902 he was also Engineer for the Waitakere Water Supply, for Auckland City. In 1903 he left the Waitemata County employ and turned exclusively to private practice.

He was a foundation member of the New Zealand Institute of Surveyors.

He died at Remuera on 5th June, 1929.

See Cyclopaedia of New Zealand Vol. 2 p.469 for photo.

WILSON, John Alexander (1856 - 1928)

Born in France on 9th Sept 1856 and arrived in New Zealand with his parents in 1858. On 30th January, 1875 he was appointed to an engineering cadetship in the Public Works Department at Wellington. A year later he was transferred to Hokitika.

At Westland on 10th October 1878 he became an authorised surveyor. While in Westland he was engaged on surveys, railways and water-races and road works, and on 1st September 1880, he was transferred to Westport as Assistant Engineer. In 1887 he was elected A. M. I. C. E.

On 30th January owing to the general retrenchment, he left the Government Service and became Engineer to the Westport Harbour Board. A year later he was re-appointed as Resident Engineer, Public Works Department, Westport. On 19th May, 1893 he was transferred to Wellington. In 1898 he was transferred to Jackson's in charge of the Midland Railway construction. He then was elected M. I. C. E. In 1900 he went to Hunterville to take charge of the North Island Main Trunk railway construction, at the Southern end. In 1902 he went to a similar position in charge of the Waipara-Cheviot railway, and eastern end of the Midland railway. In 1907 he was transferred to Auckland, as District Engineer, which position he held until his retirement on 30th December, 1912. He died at Northcote, Auckland on 29th November, 1928.

He was a foundation member of the New Zealand Institute of Surveyors.

WILSON, James George (1861 – 1942)

Born in Hawkes Bay, he was a son of Captain James Wilson. During the rising led by Te Kooti in the late 1860s the family was stationed at Matawhero, a few miles south of the present city of Gisborne. In the massacre that occurred on the night of 10th November, 1868, James and his mother were the only survivors of the Wilson family, but she was so seriously wounded that she died on 17th December at the home of her sister, Mrs. T. H. Lowry, Okawa sheep station in Hawkes Bay, where she and her son had been taken after the massacre. James subsequently joined the Lands and Survey Department in Hawkes Bay, appointed survey cadet 1st August, 1878 vide The New Zealand Gazette, 1878, appointed Assistant Surveyor, New Zealand Gazette 22nd November 1882, and qualified as a surveyor, working in the Hawkes Bay and East Coast districts.

He was a noted rifleman and was one of New Zealand's representatives at Bisley in 1902. When Te Kooti was pardoned by the Government under the Amnesty Act of 1833, and signified his intention of returning to his ancestral home in Poverty Bay, it became known to the authorities that Wilson had vowed to shoot Te Kooti if the opportunity ever occurred. Although Te Kooti was prevented from returning to the Gisborne district the authorities took the precaution of transferring James Wilson as a surveyor, to the Canterbury district. He retired in 1925 and his death occurred at Rangiora in 1942.

He was a foundation member of the New Zealand Institute of Surveyors.

See "Historical Poverty Bay" (second edition, 1966) p.257 etc. J. A. Mackay.

WILSON, James Irwin (1832 -1913)

Born at Dungannon, County Tyrone, Ireland, where his father, Andrew Wilson was a surveyor and engineer (see also Daniel Cook Wilson and Henry Spier Wilson). James learned surveying and engineering under his father, and when his father was accidentally killed in 1852, James then aged twenty years, took his brothers Henry, aged fourteen, and Daniel aged eleven, with him to the gold diggings in Victoria, Australia. There he practised his profession and was engaged on the location survey for the Geelong-Ballarat railway. In 1855 he came to New Zealand, and was

appointed to the survey staff of the Auckland Province, being employed in the Mahuranga, Wade and Waiwera districts. In 1862 he was promoted Provincial Surveyor. In 1864 on the illness of the Chief Surveyor, Charles Heaphy, he was sent to take charge of the Military surveys in the Waikato. Owing to dissatisfaction with the Administration he resigned, and was one of those who gave evidence before a Commission set up to investigate the administration of the Auckland Provincial Waste Lands Department. He was licensed to survey under the Native Land Act 1862, vide New Zealand Gazette 11th May, 1865.

In 1865 he entered the service of the General Government as District Surveyor for North Auckland and on 1st March, 1873 he was appointed Road Engineer in the Public Works Department. In 1876 he resigned from the Government Service and entered private practice. He died at Whangarei on 4th October, 1913.

(Both James and Henry Wilson married daughters of John Munro, who was Member of the House of Representatives for Marsden Electorate and a leader of the Scottish community from Nova Scotia, who had settled the Waipu district. It appears that the father was averse to the suit of James for his daughter, but James was determined and he chartered a cutter, sailed to Whangarei, and in true buccaneer style sailed off with his bride. The father soon came to respect and admire his son-in-law and when Henry sought the hand of his second daughter, he raised no objections. Sons and grandsons of the Wilson brothers entered the surveying profession, and the names of several Munro Wilsons are to be found among the members of the New Zealand Institute of Surveyors, and also that of a grandson of Daniel Wilson, A.H. Pickmere).

He was a foundation member of the New Zealand Institute of Surveyors.

See "New Zealand Surveyor" Vol. X No. 4 for an obituary notice and short biography. (December, 1913). Brodrick Munro Wilson F. N. Z. I. S. was a grandson.

"The New Zealand Surveyor" Vol. XIV No. 9 March, 1931 "Who's Who" an article on the brothers, with a photo, and also there is one in which James appears with three other surveyors, one of whom was Richard Todd, the surveyor who was murdered by the Kingite Maoris, at Pirongia, in 1870. From left in photograph are, John Breen. John David Brown, James Irwin Wilson and Richard Todd.

WILTSHIRE, George James (1846 - 1905)

Born at Croydon, Surrey England. After passing through the local Grammar School he was articled to a Civil Engineer in London. Between 1865 and 1870 he was engaged on various works in England and came to Dunedin in 1870. Licensed under the Native Lands Act, 1865 vide New Zealand Gazette, 30th December, 1870. Shortly afterwards he went to the Thames goldfield.

Later he engaged in survey work in various localities until 1876 when he settled in Wellington and became Assistant Surveyor under Mr. N. Marchant. In 1888 he became City Surveyor, Wellington, and retired in 1898.

He then carried on in private practice until his death on 10th August, 1905. He was a member of the Wellington City Council from 1903 until his death.

WINTER, George John (Colonel, V. D.) (1845 – 1920)

Born in Ellerslie, Tasmania, and educated at Brighton College, England, and came to New Zealand in 1865, after having been trained as a surveyor in Tasmania. He was in Invercargill for a few months and then joined the Colonial defence forces and took part in the siege of Waerenga-a-hika near Gisborne. In 1868 he served in engagements arising from Te Kooti's revolt. He served in various military units in Poverty Bay, rising to the rank of Major, and eventually was posted to the reserve with the rank of Lt. Colonel, in 1906.

Licensed under the Native Land Act, 1865, New Zealand Gazette, 14th November, 1867. He was laying out the line of road from Poverty Bay to Hicks Bay, 112 miles, in 1871-72, his permanent appointment to the Public Works Department dating from 26th March, 1872. He was the second to hold the office of engineer to the Cook County, which then extended from Cape Runaway to Wharerata, and inland to the Urewera County. From 1901 onwards he was in private practice in the Gisborne district, as well acting as Engineer for the Gisborne Borough Council from 1900 to 1906.

He was a member of the New Zealand Institute of Surveyors, Authorised Surveyor at Napier - 28th January, 1878. He died at Gisborne on 6th March, 1920.

WOOD, Reader Gilson (1821 - 1895)

Born at Highfields, Leicestershire and educated at Merchants Taylor's School, London. He served six years with William Flint, Architect and surveyor, and then went to Australia, and in 1844 came to New Zealand where he became involved in the war in the North as a Lieutenant of Militia. He took part in the assault on Ohaeawai and was mentioned in despatches. After the war he engaged in private practise in Auckland but was appointed Superintendent of Works in 1848 and Colonial Architect in 1849. He did much of the work on roads with Maori Labour.

In 1852 he became Deputy Surveyor General and in 1855 Commissioner of Waste Lands at Auckland. On 4th August 1856 he resigned to enter private practice in partnership with James Baber, and also engaged in share-broking. He entered politics as representative of Auckland Suburbs in the Auckland Provincial Council and served two periods on that body, 1857 to 1861 and 1871 to 1876, when Provincial Government was abolished.

He entered Colonial politics in 1861 when he defeated Theophilus Heale for the Parnell electorate in the General Assembly. Six months later he attained Ministerial rank as Colonial Treasurer and Commissioner of Customs in the Fox administration. He retained these or until 1864, serving in the Domett and Whitaker-Fox administrations. In 1863 he was an advocate for the confiscation of the land of Maori rebels to help to pay for the war and in 1864 he resigned from office and went to England where he acted as Government Agent for Immigration. He returned to Colonial politics in 1871 as a member of the Auckland Provincial Council and also member of the General Assembly from 1871 to 1881. In 1877 he was chairman of a Commission set up to report on the running of the newly constructed railways radiating from Auckland, vide, Appendices to Journals of the House of Representatives, 1877, E 2A.

He died on 22nd August, 1895.

Details of his career can be found in Scholefield's "Dictionary of New Zealand Biography".

WRAY, Charles Allen

Licensed under the Native Lands Act, 1865 on 10th January, 1867. He took part in the New Zealand Wars (Waikato Campaign) and was awarded the New Zealand medal. Associated with S. Percy Smith and G. W. Williams he surveyed confiscated land in Taranaki (Urenui, Tikorangi, and Patea) from 1865 to 1868. During survey operations in the Patea district his party were fired on by the Maoris who retreated when the survey party returned the fire.

He was Commissioner of Crown Lands for the West Coast (North Island) 1880-1884 constituted under "The West Coast Settlement Act (North Island) 1880. See also New Zealand Gazette 1880 p.1325. Captain C.A. Wray was a member of the committee which founded the Auckland Provincial Surveyors Association in 1865. Vide "Daily Southern Cross" 23rd June, 1865.

Note: The Commissioner of Crown Lands for the West Coast (North Island) dealt with the land acquired in South Taranaki as the result of the confiscations following the wars of 1860-1870 and the subsequent West Coast Royal Commission set up in 1879 to enquire into the land question in southern Taranaki. During the settlement of the confiscated land in southern

Taranaki Land District of Patea, which was part of the Taranaki Land District, was established with C.A. Wray as District Lands Officer, his appointment dating from 16th May, 1877.

See "New Zealand Gazette" 1877 p.568,

WRIGG, Harry Charles William (1842 – 1924)

Born at Wexford, Ireland, 5th January and educated at Preston Grammar School. In 1856 he was articled to a Civil Engineer in the north of England and was engaged on the construction of railways and waterworks. In 1859 he joined the Dragoon Guards but: soon after left to go to New Zealand with his father, Henry Wrigg, and other members of the family, arriving in New Zealand in 1863. He worked for a time with his father who was engaged in fixing the permanent levels for streets in Auckland.

He took part in the Waikato and East Coast campaigns of the Maori Wars. For carrying dispatches through enemy territory at the risk of his life, he was awarded the New Zealand Cross.

He was licensed to carry out surveys under the Native Lands Act, 1865 and under the Land Transfer Act. Appointed a Goldfields Surveyor and mining surveyor, Auckland Provincial Gazette, 1868. He served in the General Government Survey Department, 1868-1870 and with the Southland Provincial Council survey staff, 1870-71. On 24th July, 1871 he was appointed Chief Draughtsman (virtually Designing Engineer) with the Public Works Department and stationed at Wellington, and subsequently at Auckland. In 1907 he joined the Auckland City Council staff and resigned in 1917, but he returned in 1918 and continued to 31st March, 1924 He died at Auckland 30th June, 1924.

He achieved success as an artist and received numerous awards in Australia and New Zealand. By special warrant he was appointed draughtsman to the Duke of

Edinburgh when the latter visited New Zealand in 1868. He was a foundation member of the King Empire Veterans, and was Vice President of that body for five years in succession. A memorial plaque was placed by the association in the vestibule of the Auckland Town Hall.

WRIGG Henry (1824 – 1879)

Born at Preston, England where he trained as a civil engineer and became an Associate of the Institution of Civil Engineers.

He came to New Zealand in 1863 and was engaged in surveying and fixing the permanent levels of streets in Auckland as well as waterworks and drainage works for the Municipal Council. In 1867 he was engaged on reconnaissance surveys for railways in Nelson Province, and subsequently, on surveys for drainage purposes in Canterbury Province. In 1871 he was surveying for the Auckland to Mercer railway. Later he was Provincial Engineer for Auckland and also Goldfields Engineer, until the abolition of the Provinces in 1876. In 1877 he was appointed Borough Engineer at Timaru. He became an Authorised Surveyor at Christchurch, 17th December, 1878. He died at Timaru on 20th May, 1879.

WRIGG, Frederick Augustus

Of Auckland - licensed to survey under the Native Land Act, 1865. Gazetted 25th April 1867.

WRIGHT, Arthur Blundell (1852 - 1925)-

Born at Singapore 3rd November, 1852. He was educated at Madras College and St. Andrew's University, Scotland. He was trained in civil engineering under Messrs. Sang and for mechanical engineering under Messrs. Douglas and Smart.

He came to New Zealand in 1876 and was employed as an overseer on Western Springs Waterworks, Auckland. In March 1877 he became a draughtsman in the Lands and Survey Department at Auckland and in March, 1880, he was transferred to the Public Works Department as a Road Surveyor. In April, 1891, when a move was being made to abolish the Public Works Department, he was transferred back to the Survey Department, with the same designation. Then the Roads Department was organised on 1st April, 1901, he was posted to that Department, and two years later promoted to District Road Engineer at Auckland. On 1st May, 1909, he became Inspector of Roads with headquarters at Wellington. Soon afterwards the Roads Department was abolished, and he was again in the Public Works Department. On 12th April, 1912 he was appointed Resident Engineer at Blenheim in charge of all Public Work in Marlborough. Authorised Surveyor at Auckland, 13th September, 1881.

He retired on 12th August, 1917, and died on 7th November, 1925 in Blenheim. He was a foundation member of the New Zealand Institute of Surveyors.

WYLDE, Harry James (c.1850 - 1933)

Born in Renfrew Scotland, he was a son of James Wylde a former surveyor and civil engineer in Canterbury. He was at Christ's College, Christchurch from 1862 to 1864. Evidently he was trained as a surveyor by his father who, in 1871 went to the West Coast on the Government Service and was stationed at Greymouth.

H.J. Wylde was practising on the West Coast when he became a foundation member of the New Zealand Institute of Surveyors in 1888. He published very useful

little pocket-book entitled "Tables for surveyors and Civil Engineer" comprising a very complete set of tables for use in the field.

In 1891 he was in Hobart, Tasmania, and he returned to New Zealand in 1892 and set up practice in Palmerston North, where he died in 1933.

He was a keen supporter of the Institute of Surveyors and contributed articles to the "New Zealand Surveyor". He served on the Council of the Institute continuously from 1896 to 1912.

Photo in Cyclopaedia of New Zealand at page 1176.

WYLDE James (1824 – 1908)

He was born in Hertfordshire, England on 29th November, 1824. Having been trained as a civil engineer he served under Brunel as a Resident Engineer on the construction of the Great Western Railway, and subsequently on the construction of the Crystal Palace. He came to New Zealand in 1852, and settled in the Kaiapoi district, where he took up land and also practised as a surveyor and engineer.

In January, 1862 he was appointed Assistant Provincial Engineer for the northern districts of Canterbury. In that year also he became a member of the Provincial Council on which he served two terms, 1862-64 and 1866-67. He resigned from Council employment in May 1864 and practised privately. He entered the Government Service in 1871 and was stationed at Greymouth. He then became Engineer and Secretary to the Grey Valley Tramway Company Limited. In 1877 he moved to Kumara, which was then a thriving gold mining town, and he became Town Clerk and Engineer. He retired in 1900 and died at Kumara on 18th May, 1908. He was a member of the Canterbury Philosophical Institute and in 1868 he published in question and answer form, the first geography and history of New Zealand.

See also references in "Beyond the Waimakariri" by Hawkins, 1957.

WYLIE Andrew

Was the son of a minister at Inverness, Scotland. He came to New Zealand as an assistant Surveyor on the staff of the New Zealand Company -

He arrived at Port Nicholson in the BROUGHAM on 9th February, 1842. His first work was to take levels for streets in Wellington. Then he was employed in laying out sections in various parts of the district surrounding Wellington.

In 1846 as a contract surveyor in partnership Alfred Wills and Edward Jollie, he was engaged in laying out the sections in the districts around the Molyneux, Balclutha, Kaihiku, Puerua, and Waiwera in connection with the Otago Free Church Settlement.

He died at Port Chalmers in 1849.

YOUNG, Henry William (1840 - 1903)

He was born at Camberwell, London on 31st October, 1840 and emigrated to New Zealand with his brother Robert in 1864. He was trained in Dundee, Scotland, as an engineer and architect also previously as a practical carpenter and builder. The brothers, Henry and Robert, q.v., remained in partnership for many years, engaging in mining engineering, general engineering, railway work, surveying and architecture. They designed numerous public and private buildings in Greymouth, Hokitika and New Plymouth. In 1878 they were appointed engineers to the Westport Coal

Company and constructed the famous Denniston Incline, sidings and line from Waimangaroa. In 1880 Henry Young took extensive roadstead and other soundings and did other preliminary work to assist Sir John Goode in making his report on Westport Harbour at the mouth of the Buller River. He was associated with C. Napier Bell, M. I. C. E. in building the Cape Foulwind railway and sidings to facilitate the Westport Harbour Works.

From 1884 to 1886 he was in practice in Wanganui. Following this he was appointed Chief Assistant Engineer to the New Zealand Midland Railway, under C. Napier Bell and later under Robert Wilson. He was elected A. M. I. C. E. in 1889. He resumed private practice in 1896 and his operations, both in architecture and engineering were widespread. As an authorised surveyor he carried out many land surveys in the Greymouth district. He was a member of the Society of Architects, and of the Institute of Mining Engineers England. Authorised Surveyor at Nelson, 5th October, 1881.

He died in Greymouth on 4th August, 1903. He was a foundation member of the New Zealand Institute of Surveyors.

YOUNG, Robert Austin (1842 - 1922)

Born at Camberwell, London, 9th October, 1842 he served his pupilage under William Scott, Architect and Civil Engineer Dundee. In 1864 with his brother Henry he emigrated to Canterbury in the sailing clipper, Brothers Pride.

He was employed for some time on survey work in and near Christchurch, and carried out the original surveys of Addington. The brothers went to the West Coast in the early days of the gold rush and engaged in gold mining. In 1868 Robert was surveying roads, bridge sites and water-races on the West Coast. He was the first engineer to the Westland County Council. In 1871 he was Assistant Engineer in Westland under the General Government under C. Y. O'Connor, and for seven years carried out road, water-race, railway and harbour surveys. His brother Henry then joined him and they worked together for many years, engaging as consultants to the Westport Coal Company and others.

During the period 1891-1894 Robert was again engineer to the Westport Coal Company and carried out the earthwork, formation and tunnels of the Granity Creek inclines. As an authorised surveyor he also carried out many subdivisional land surveys in the Buller district. During the period 1878-1898 he was engineer to the Westport Borough Council. In 1898 he was an

engineer to the Westport Harbour Board and Resident Engineer to the Public Works Department and supervised the surveys and construction of part of the Buller Gorge Railway from Westport to the Nine Mile Ferry. In 1907 he retired from the Public Works Department but continued as engineer to the Westport Harbour Board until 30th September, 1913, when he retired from active work.

For some time afterwards he acted as consulting engineer to the Tauranga Harbour Board. He was elected A. M. I. C. E. in 1889 and M. I. C. E. in 1908.

He died on 27th September, 1922 at Auckland. He was a foundation member of the New Zealand Institute of Surveyors and an authorised surveyor, Westland 12th June, 1878.

See Cyclopaedia of New Zealand Vol. 5 p.568 - photo etc.

YOUNG, William Spearman (1842 - 1912)

Born at Auckland 20th July, 1842 son of William Young, an officer of the 80th Regiment who arrived at Kororareka in H. M. S. "Buffalo" on 16th, 1840 and later became Collector of Customs at Auckland.

William Spearman was educated at Kororareka by the Rev. F. Gould, 1853-56 and then joined the survey party of George Clarke in the Bay of Islands. Then as a cadet he went to Canterbury with Edward Jollie in the years 1857-59 on surveying the Canterbury-Otago Provincial boundary. Young Range River named after him. In 1862 he was a member of Julius von Haast's party exploring the region near Mount Cook in connection with the geological survey. The following year he was a topographical surveyor to von Haast and took part in the expedition that traversed Haast Pass. Afterwards he was engaged in surveying in the Ashburton, Lindis Pass and Geddes Pass districts.

In 1865 he was licensed under the Native Lands Act and in 1866 returned to the North Island and in partnership with Dr. Pollen took up a 10,000 acre cattle run at Kaipara South Heed. He relinquished this in 1881 to take up land at Kaupokonui in Taranaki. In 1898 he moved to Hicks Bay on the East Coast but returned to Taranaki in 1904. he died there in 1912.

Mr V. S. Young M. P. for Egmont (1972) is a grandson.

APPENDIX

PIONEER SURVEYORS IN THE LEGISLATURE. 1840 - 1925

Predominant among matters concerning the Legislature of the newly founded Colony were the acquisition of land by the Crown; making land available to the settlers; providing access and lines of communication; organized immigration.

In all of these the surveyors were intimately implicated. Consequently some of the leading members of the profession became legislators, firstly by official appointment as members of the Legislative Council and later as elected members of the House of Representatives or of the Provincial Councils.

Listed in alphabetical order below are surveyors who served in the Legislature.

<u>Members of the Legislative Council</u>	<u>Date of Appointment</u>	
Barnicoat, John Wallis	1883 resigned	1902
Heale, Theophilus	1845	1846
Ligar, Charles Why brow	1848	
O'Neill Alan	1852 (New Ulster Leg. Cl.)	
Seymour, Arthur Penrose	1865	
Smith, William Mein	1851	
Stokes Robert	1862	1878

Members of the House of Representatives

	<u>Electorate</u>	<u>Date</u>
Carrington, Frederick Alonzo	Grey & Bell	1876-80
Edie, John	Tuapeka	1922-25
Field, Henry August	Otaki	1896-99
Fitzgerald, Thomas Henry	Hawkes Bay	1860
Heale, Theophilus	Auckland Suburbs	1860
Heaphy, Charles	Parnell	1867-70
Jackson, Henry	Hutt	1880
Jollie, Edward	Cheviot	1859-60
Kettle, Charles Henry	Bruce	1861
Locke, Samuel	East Coast	1884-87
O'Neill, Charles Thomas	Thames Goldfields	1866-69
		1871-75
Richardson, Hon. George Frederick	Mataura	1884-93
Minister of Lands and Agriculture		1887- 93
Minister of Mines		1887-89
Seymour, Arthur Penrose	Wairau	1865-75

	Waimea – Picton	1887-90
Stephens, Samuel	Nelson Settlement	1854
Symonds, John Jermyn	Pensioners Settlements (Auckland)	1858-60
Ward, Joseph	Wairau	1875
Wood, Hon. Reader Gilson	Parnell (Colonial Treasurer and Commissioner of Customs in successive Ministries)	1871-81
<u>Members of Provincial Councils</u>	<u>Province</u>	<u>Date</u>
Barnicoat, John Wallis	Nelson for the whole life of the Council. He was Speaker 1858-1876	1853-76
Bedlington, William	Auckland	1864
Bousfield, Octavius Lawes	Hawkes Bay Woodthorpe	1863-67
Bray, William Bayly	Canterbury	1855-57
Budge, William	Marlborough	1862-64
Burton, George	Hawkes Bay	1874
	Also first Chairman of Wairoa County Council in 1876	
Carrington, Frederick Alonzo	Taranaki Superintendent	1869-76
Carrington, Wellington	Taranaki	1872-73
Cass, Thomas	Canterbury	1863-66
Fitzgerald, Michael	Hawkes Bay	1862-65
Fitzgerald, Thomas Henry	Wellington Hawkes Bay Superintendent	1857-59 1859-61
Gollan, Donald	Wellington (and later Hawkes Bay)	1854
Goulter, Cyrus	Marlborough Speaker 1860-62 and 1865-76	1860-76
Graham, William Australia	Auckland	1873-75
Hamilton, William John	Canterbury	1853-57
	Warburton	
Harman, Richard James Strachan	Canterbury	1857-76

	Deputy Superintendent	1871-76
Hately, George	Southland	1867-70
Heale, Theophilus	Southland	1861
	Deputy Superintendent, he was elected Superintendent but was disqualified on a technicality.	
Hurst house, Charles Wilson	Taranaki	1869-73
Jollie, Edward	Canterbury	1865-76
Locke, Samuel	Hawkes Bay	1866-69
Northcroft, William	Taranaki	1861-65
	Deputy Superintendent	
O'Neill, Allan	Auckland	1853-68
Proudfoot, Peter	Otago	1855
Seymour, Arthur Penrose	Marlborough	1860-76
	Superintendent 1864-66 and 1870-76	
Stephens, Samuel	Nelson	1854
Smith, William Mein	Wellington	1858-65
Stokes, Robert	Wellington	1857-65
Tiffen, Henry Stokes	Hawkes Bay	1859-61 1867-75
Tinline, John	Nelson	1859-69
Triphook, Thomas Dawson	Hawkes Bay	1861-62
Ward, Joseph	Marlborough	1860-76
Wood, Reader Gilson	Auckland	1867-61 1871-76
Wylde, James	Canterbury	1862-64 1866-68

It is noteworthy that Sir Malcolm Fraser, K. C. M. G., who was a pioneer surveyor in New Zealand from 1857 to 1869 achieved prominence in the Legislature of Western Australia where he was a member of the Executive and Legislative Councils from 1870 and was Colonial Secretary in 1883-90 and represented Western Australia at several inter-colonial conferences.

APPENDIX B.

The Truck System

The payment of wages to workmen in kind or in any other way than unconditional payment in money, a practice known as the truck system, which also includes payment in portion of that which the workman helped to produce; and also the payment in money but with the express or the tacit understanding that the Payee resort for such goods as he needs to shops or stores owned by his employer.

Owing to grave abuses that occurred the practice was made illegal in Great Britain by the passing of the Truck Acts (1831 , 1887 and 1896) under which wages must be paid in current coin of the realm without stipulation on how or where it is to be expended.

It was inevitable that the truck system should be practised in New Zealand during the early colonizing days. The whaling companies, land companies, early mining companies and some of the station owners had virtually no other recourse.

In New Zealand the system was abolished by the passing of "The Worker's Wages Act, 1893" which was on similar lines to the Truck Acts of the British Government.

GLOSSARY OF MAORI TERMS

Kainga	An unfortified Maori village
Kaka	A New Zealand parrot, prized by the Maoris and early settlers as food. Once found in abundance but now protected by law.
Kereru	The native pigeon. Once profusely abundant but now protected by law.
Kumara	The sweet potato. (<i>Ipomaea batatas</i>). Introduced to New Zealand during the early Polynesian immigrations
Kuri	The native dog. Introduced to during the early Polynesian immigrations.
Kuri Kuri	See Speargrass and Wild Spaniard
Mana	Prestige, influence, importance
Marae	An enclosed ground used as a meeting place. Generally the open space in front of the whare runanga (meeting house).
Matagouri	See Wild Irishman
Mokihi	Boat shaped raft made of korari, the buoyant dried flower stalks of the New Zealand flax (<i>phormium tenax</i>) (harakeke). These stalks are up to fifteen feet in length and two inches in diameter.
Pa	Fortified Maori village or stockade
Pakihi	An open expanse of marshy country within a forest. Generally the area is waterlogged and there is an iron impregnated hard

	pan impervious subsoil. The vegetation cover is usually limited to low scrub, rushes and umbrella fern.
Parera	The grey duck, one of several species of native ducks. It is a game bird, common throughout New Zealand.
Pukeko	The swamp hen or bald coot. It is a game bird.
Putangitangi	The Paradise Duck. A native duck found throughout South Island and the southern districts of North Island.
Puwaha	The edible sow thistle or green vegetable
Rahui	Sign or mark of warning to trespassers especially against infringement of tapu. Often it was a temporary prohibition with the force of tapu.
Speargrass	Aciphylla (Kuri Kuri) Shrub with long hard needle-sharp spines.
Spaniard	(Aciphylla colensoi) (also Kuri Kuri). Shrub with masses of long needle-sharp spines. Growing in extensive thickets it often proved a barrier to man and beast. It has now been almost entirely eradicated. Also known as wild spaniard or Spanish bayonet.
Tapu	Sacred, sacrosanct, forbidden, inaccessible, not to be defiled.
Taro	Food plant (colocasia antiquorum) introduced to New Zealand during early Polynesian immigration.
Urupa	Burial ground, cemetery.
Weka	Woodhen Once plentiful and prized as a game bird but now protected by law.
Whare	House or shed, the purpose of which is generally stated, e.g. Whare runanga, a meeting house; whare puni, a sleeping house; etc.
Wild Irishman	(discaria toumatou) (matagouri), a thorny shrub, generally growing in extensive thickets in a tangled mass.

BIBLIOGRAPHY

In the following bibliography are listed some of the more important sources on which this work is based and also some of the publications that have a bearing on the work of the early surveyors.

C. A. Lawn.

The following abbreviations are used:

N. A.	National Archives
A. T. L.	Alexander Turnbull Library
V. & P.	Votes and proceedings of the House of Representatives
A. J. H. R.	Appendices to Journals of the House of Representatives
J. A. P. C.	Journals of the Auckland Provincial Council
V. P. P. C.	Votes and proceedings of Provincial Councils, with appendices

O. L. C. Old Land Claims
 L. & S. Dept. Department of Lands and Survey
 L. & D. Dept. Department of Land and Deeds
 N. Z. C. New Zealand Company Archives.

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I. OFFICIAL SOURCES

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Foreign Office and Colonial Office correspondence and dispatches relative to New Zealand from 1839. Minutes of evidence before Select Committee on the Islands of New Zealand - House of Lords - 1838. (Relevant Excerpts are to be found in Files A & B in connection with the Royal Commission on the Surplus Lands, 1946j lodged in the Maori Land Branch, Lands and Survey Department, Auckland).

New Zealand Parliamentary Papers

Votes and Proceedings of the House of Representatives.

Appendices to the Journals of the House of Representatives.

Votes and Proceedings of the Provincial Councils, with appendices.

Official Publications

Ordinances of the Legislative Council

New Zealand Statutes and Statutory Regulations

Provincial Ordinances

New Zealand Government Gazettes

Provincial Government Gazettes

Survey Records, Department of Lands and Survey

Archives of the New Zealand Company (National Archives, Wellington) Reports of the Directors of the New Zealand Company, Nos. 1 to 35

Letters from the Company's Survey Staff, 1840-48 (2 vols.).

Adjustment of Land Questions 1848

Relevant Documents and Reports

A Compendium of Official Documents relating to Native Affairs in the South Island edited by Alexander Mackay, 1872-73 (2 vols). Nelson and Wellington.

Maori Deeds of Land Purchases in the North Island of New Zealand

Edited by H. H. Turton 1877-78 (2 vols.) Wellington.

Important Judgments delivered in the Native Land Court 1866-79

by Judge F. D. Fenton, Auckland, 1879. Also by the same author. The Kauwaeranga Judgment, in The Daily Southern Cross, Auckland.

Speeches and Documents on New Zealand History Edited by W. D. McIntyre and W. J Gardener 1971 Oxford University Press

Report of the Land Purchase Department A. J. H. R., C. No. 1, 1861 and C. No. 1, 1862

Report of the Land Claims Commission A. J. H. R., D. No. 10 1862

Report on the state of the surveys in New Zealand By Major H. S. Palmer R. E. See A. J. H. R., H. No. 1, 1875

Report of Commissioner of Land Claims, 1877

Report of Land Commissioners, 1893

II. JOURNALS, DIARIES AND REMINISCENCES OF EARLY SURVEYORS AND PUBLICATIONS BASED ON THEM

Founding of New Zealand. From the journals of Felton and Sarah Mathew. Edited by Professor J. Rutherford, 1940

Narrative of a Residence in New Zealand By Charles Heaphy, 1842

The Six Colonies of New Zealand By Sir William Fox, 1851

The Torlesse Papers 1848-51 Edited by P. B. Maling, 1958. Based on the letters and journals of C.O. Torlesse.

Journal 1841-44 J. W. Barnicoat (Typescript, A. T. Library).

Journal and Correspondence F. A. Carrington (Typescript A. T. Library).

Letters and Journals of .Samuel Stephens 1842-55, 3 vols. (Typescript, A. T. Library)

Journal of William Davison 1844-48, N. Z. C. 264 Dominion Archives.

Data on surveyors an surveyor's diaries N. Z. C. 263 Dominion Archives.

Contributions to Early History of New Zealand by Dr. T. M. Hocken, 1898, which gives an account of Frederick Tuckett's expedition of 1844 and the subsequent surveying of the Otago Block directed by Charles Kettle, 1846-48 based on Tuckett's Journals.

The Life and Works of Charles Kettle, By Margaret J. Martin, an unpublished thesis in Hocken Library, Otago University.

Adventures of a Surveyor in New Zealand, By John Rochfort, London, 1853.

The Journal of Ensign Best 1837-43, Edited by Nancy M. Taylor 1966, a Government Printer production. Best was associated with Dr. Ernst Dieffenbach and Captain W. C. Symonds in the exploration of the Waikato and Rotorua districts in 1841.

Travels in Zealand, By Dr. Ernst Dieffenbach, 1843 2 vols.

The Exploration of New Zealand W. G. McClymont, Second edition -1959. There are numerous references to early surveyors and on p.116 is listed source material, including the hydrographical surveys of Captain Stokes and J. W. Hamilton of H.M.S. Acheron.

The Pioneer Explorers of New Zealand, J. Elder 1929 The work of a number of early surveyors is cited and references to their reports and journals are given.

Early New Zealand, Edited by Nancy Taylor 1959. This important work includes some of the explorations of four early surveyors and reproduces extracts from their journals. These are as follows :

Charles Heaphy 'Account of an Exploring Expedition to the South-West of Nelson'. Nelson Examiner 7 and 14th March, 1846 'Notes of an expedition to Kawatiri and Araura, on the western coast of the Middle Island'. Nelson Examiner 5 September and 17 October, 1846.

Thomas Brunner 'Journal of an Expedition to Explore the Interior of the Middle Island, New Zealand'. First edited by Charles Elliot, Nelson, in 1848 and later reproduced in the Journal of the Royal Geographical Society, vol. XX 1851 and also in Parliamentary Papers of Great Britain 1850. 'The Great Journey' edited by John Pascoe and published by Pegasus Press, Christchurch, is based on, and reproduces, most of Brunner's journal.

Stephenson Percy Smith 'Notes of a journey from Taranaki to Mokau, Taupo, Rotomahana, Tarawera and Rangitikei'. Taranaki News, New Plymouth, 1858.

John Turnbull Thomson 'Extracts from a journal kept during the performance of a reconnoissance (sic) survey of the southern districts of the province of Otago, New Zealand' vide, Journal of the Royal Geographical Society, 1858, vol. xxviii, pp. 298-329.

Sir Donald Maclean (1820-77) James Cowan, 1940. This biography deals largely with Maclean's founding and direction of the Land Purchase Department, and his subsequent activities as Native Minister and Minister of Defence.

The Reminiscences of A. D. Dobson Sir, Arthur Dobson, 1930.

Frontier Life in Taranaki, LS. Brookes, 1892

Reminiscences of a Taranaki Surveyor, W. H. Skinner, 1946

My Dear Bannie Edited by M. V. Mueller, 1958. Based on Gerhard Mueller's letters from the west Coast – 1865-66.

Mr. Explorer Douglas, By John Pascoe, 1956. Based on the reports and letters of Charles Edward Douglas.

The Life and Times of Julius von Haast, By H. F. von Haast, 1948

Surveying in New Zealand 1857-1896, The recollections of John Holland Baker (1841 -1930). Edited by Noeline Baker, 1932. His diary is now lodged in Turnbull Library.

Mr. Surveyor Thomson By J. Hall Jones, 1971 . A biography of J. T. Thomson.

Over the Whitcombe Pass Edited by John Pascoe, 1960. Based on the narrative of Jakob Lauper. Reprinted from the Canterbury Provincial Gazette of 1863, Vol. X, No. X, pp. 64-74

This Stern Coast J. O' C. Ross, 1969. Rear Admiral Ross, C. B., C. B. E., former Chief of Naval Staff, New Zealand in outlining the history of the hydrographical surveys of New Zealand, mentions a number of the early surveyors who were associated with this work.

III. BIOGRAPHIES

A Dictionary of New Zealand Biography, G. E. Scholefield, editor, 1940. Two volumes. A number of early surveyors are included.

Cyclopaedia of New Zealand Six volumes, published between 1897 and 1908, contain much biographical material on early surveyors.

The Defenders of New Zealand (Also known as Heroes of New Zealand) Compiled by T. W. Gudgeon, 1887. Short biographies of several of the early surveyors are included.

Early New Zealand Engineers, F. W. Furkert, 1953. This has many short biographies of early engineer-surveyors.

IV. RELEVANT DEPARTMENTAL PUBLICATIONS

History of Land Legislation and Settlement in New Zealand

W. R. Jourdain. Department of Lands and Survey, 1925 The work of the early surveyors in the field and as administrators is included.

The New Zealand Geological Survey, 1865-1965 Peggy Burton, 1965. Department of Scientific and Industrial Research Information series No. 52 This concise history contains much biographical material on the early surveyors.

New Zealanders and Science, S.E. Jenkinson, 1940 Published by the Department of Internal Affairs. A New Zealand Centennial publication This has biographical material on several of the early surveyors.

V. JOURNALS OF THE PROFESSIONAL INSTITUTIONS

The New Zealand Surveyor, The official organ of the New Zealand Institute of Surveyors. Commenced in 1889, over the years it has included much historical and biographical material about the early surveyors and their activities.

Proceedings of the N. Z. Society of Civil Engineers An annual publication which commenced in 1914 the first twelve volumes contain historical and biographical material about a number of the early engineer-surveyors. The Society is now incorporated in the New Zealand Institution of Engineers.

Year Book of the Engineers and Assistants Association. That for 1955 contains an article by J. T Lee on the exploration and survey of the Marton-Te Awamutu section of the North Island Main Trunk Railway and that for 1956 has an article by the same author on the Raurimu Spiral and the investigations into routes for the line in the central plateau region. Many useful references to sources are given.

VI. ASSORTED HISTORICAL WORKS

Crown Colony Government in New Zealand A.H. McLintock, Parliamentary Historian, 1958. Constitutional history covering the first years of European settlement. It has an exhaustive bibliography covering a wide range of source material.

Adventure in New Zealand from 1839 to 1844 with some account of the beginning of British colonization of the Islands. E. J. Wakefield, 1845 Two volumes, recounting the advent and activities of the New Zealand Company officials.

The Treaty of Waitangi T. L. Buick, 1914 A complete coverage of events leading to the appointment of Captain William Hobson, R. N. as British Consul in 1839 and subsequent events. The activities of the land speculators and the work of the Land Claims Commission are fully reported.

The New Zealand Bubble Michael Turnbull, 1959. An historian's view of the New Zealand Company's activities in colonizing New Zealand.

The Amazing Career of Edward Gibbon Wakefield A. J. Harrop, 1928. His theories about colonization and his efforts in connection with the colonization of Canada, South Australia and New Zealand, etc. etc.

England and New Zealand, A. J. Harrop, 1926. Describes the relations between these two countries up to the time of the Taranaki War and the rise and fall of the New Zealand Company. Also accounts of the French and German projects for the colonization of New Zealand.

Early Victorian New Zealand, A study of racial tension and social attitudes 1839-1852. John Miller 1958. An important reference work with an excellent bibliography including works by, or relating to, some of the early surveyors.

The Shadow of the Land A Study of British Policy and Racial Conflict in New Zealand, 1832-1852. Ian Wards, 1968. Government Printer.

War and Politics in New Zealand. 1855-1870 B. J. Dalton. The disputes and conflicts over native lands leading to the acts of confiscation and subsequent events are fully discussed.

The Maori King J. E. Gorst. First published by McMillan & Co. 1864 Reprinted 1959, with an introduction by Keith Sinclair. Gorst discusses the Maori land question.

Men Came Voyaging C. Sheffield, 1963. A centennial history of Helensville and district.

History of the River Thames, A. M. Isdale, 1957.

Taranaki Province:

The Establishment of the New Plymouth Settlement in New Zealand 1841-43
Compiled by J. Rutherford and W. H. Skinner, 1940

From Plymouth to New Plymouth R. G. Wood. 1959. This important reference work is dedicated to the memory of William Henry Skinner, one of the pioneer surveyors and historian of Taranaki.

The History of Taranaki, Benjamin Wells, 1878. There are numerous references to the H. Z. Company surveyors, the land Purchase Department Surveyors and the Provincial Surveyors.

The Taranaki Question. Sir William Martin. 1860

Centennial History of Hawera and the Waimate Plains Compiled by C. J. Roberts, 1939.

Te Mōa. 100 years of history the Inglewood Community Compiled by R. W. Brown, 1975.

Hawkes Bay Province:

The Founding of Hawkes Bay. James Gordon Wilson, 1951 Based on the journals of Sir Donald Maclean.

History of Hawkes Bay. Compiled by J. G. Wilson and others, 1939.

The Story of Hawkes Bay A.H. Reed, 1958

The Story of Napier. Dr. M. D. N. Campbell, 1975.

Story of Old Wairoa and East Coast District Thomas Lambert, 1925. Norsewood. A Centennial History. A. L. Andersen, 1972.

Wellington Province:

Early Wellington. Louis E. Ward. 1929. The author, who served many years in the Lands and Survey Department and was the first Hon. Secretary of the N. Z. Geographic Advisory Board founded in 1924 draws heavily on the archives of the N. Z. Company, the L. and S. Department and the Wellington City Council. The work includes numerous biographical sketches and a number of portraits of the early surveyors.

Tawa Flat and the Old Porirua Road. 1840-1955 A.H. Carman, 1956.

Gateway to the Wairarapa. 1857-1957, C. J. Carle, 1957

The Provincial System in New Zealand 1852-76. W. P. Morrell, 1964.

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The New Zealand Wars. James Cowan, 1923. 2 vols. The services performed by a number of pioneer surveyors are mentioned.

Maori Land Law. Norman Smith. (Judge of the Maori land Court) 1960. A comprehensive treatise which includes the history of the origins of the Maori Land Courts.

The Waikato War. 1863-614. John Featon, 1879. A number of the early surveyors who served in this campaign are mentioned.

VII. PROVINCIAL AND LOCAL HISTORIES (A selection).

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Armed Settlers. 1864-1874. H. C. M. Norris, 1963. The founding of Hamilton.

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A Centennial History of Tauranga. W. H. Gifford and H. Bradney Williams, 1940.

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Historical Poverty Bay, and the East Coast, North Island. New Zealand. J. A. Mackay. Second Edition, 1966.

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Old Manawatu T. Lindsay Buick. 1903. This book is dedicated to the memory of Edward Tregear, I. S. O., F. R. G. S., Hist. S., F. N. Z. I. S., surveyor and historian, first editor of the New Zealand Surveyor.

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Progress in our District. J. L. Lambert, 1967. History of European settlement in the upper Rangitikei region, including Hunterville.

Forest Homes G. C. Petersen, 1956. The story of the Scandinavian settlements in the Forty Miles Bush district.

From Bush to Borough Howard J. Jones. A short history of Levin and district.

Nelson Province:

Nelson. A History of Early Settlement Ruth M. Allan, 1965. Edited by J.C. Beaglehole, it includes chapters by Nancy M. Taylor and Pamela Cocks. The period covered is c.1840 to 1860.

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Westport. Struggle for Survival Bruce Macdonald, 1973.

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Marlborough Province:

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Canterbury Province:

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Vol.1 to 1854 General editors, Sir James Hight and C. Straubel. 1957.

Vol. 11 1854-76 Edited by W. J. Gardner. 1971

Vol. 111 1876-1950 By W. H. Scotter, et al., edited by W. J. Gardner, 1965.

History of South Canterbury 1859-1909. J.C. Andersen, 1916. The author was for many years an employee of the Lands and Survey Department in Canterbury and subsequently the first librarian of Alexander Turnbull Library.

The French at Akaroa T. Lindsay Buick. 1928. The story of Akaroa from Langlois' purchase in 1838 to Hamilton's final purchase for the Crown in 1856.

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