1885-6.

NEW SOUTH WALES.

DIAGRAMS AND PLANS.

ROYAL COMMISSION—CONSERVATION OF WATER.

FIRST REPORT OF THE COMMISSIONERS.

8

933—

21 vols 6 3 5 8 9

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1885-86

plan & Supplt

80 vols

DIAGRAMS

COMPARING

HILLY WITH PLAIN PORTIONS

OF

RIVER BASINS,

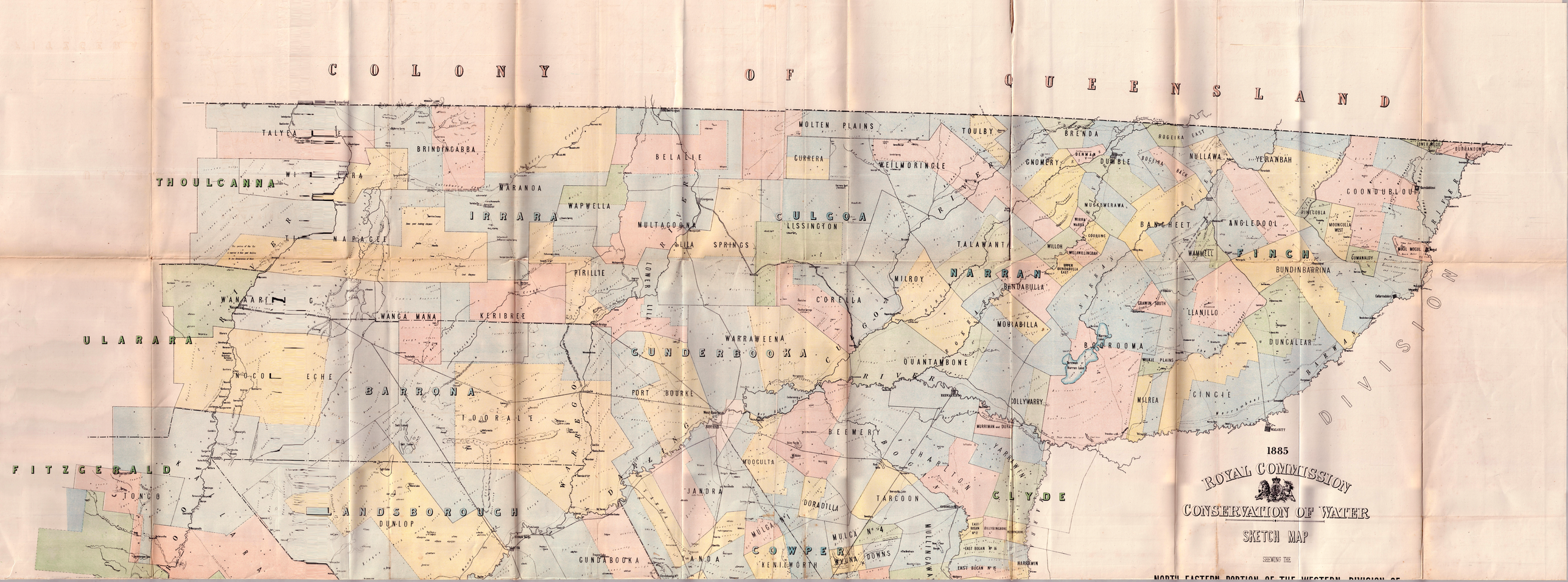
IN REGARD TO

RAINFALL, EVAPORATION, AND TEMPERATURE.

COMPILED BY H. G. M'KINNEY, M.I.C.E.
(From the Records of H. C. Russell, Esq., Government Astronomer.)

REFERENCE.

Sheet 1	*Tenterfield and Bourke.*
Sheet 2	*Tenterfield and Grafton.*
Sheet 3	*Armidale and Port Macquarie.*
Sheet 4	*Mount Victoria and Sydney.*
Sheet 5	*Cooma and Hay.*
Sheet 6	*Cooma and Eden.*
Sheet 7	*Albury and Wentworth.*


COLONY OF QUEENSLAND
THOULCANNA
ULARARA
FITZGERALD
IRRARA
CULGOA
NARRAN
FINCH
BARRONA
GUNDERBOOKA
LANDSBOROUGH
COWPER
CLYDE
DIVISION
TALYEA
BRINDINGABBA
MARANOA
WAPWELLA
BELALIE
MOLTEN PLAINS
CURRERA
WEILMORINGLE
TOULBY
BRENDA
GNOMERY
DUMBLE
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MUCKEWERAWA
BANGHEET
ANGLEDOOL
WAMMELL
BUNDINBARRINA
MULTAGOONA
LILA SPRINGS
LISSINGTON
TALAWANTA
MILROY
BUNDABULLA
MOORABILLA
LLANILLO
DUNGALEAR
BOOROOMA
QUANTAMBONE
COLLYWARRY
MILREA
CINCIE
PIRILLIE
LOWER LILA
CORELLA
WARRAWEENA
WANGA MANA
KERIBREE
NAPAGEE
WANAARI
NOCOLECHE
TOORALE
FORT BOURKE
BEEMERY
MOOCULTA
JANDRA
DORADILLA
TARCOON
CHARLTON
YARRAWIN
DUNLOP
GUNDABOOKA
YANDA
KENILWORTH
MULGA No 1
MULGA No 4
WYUNA DOWNS
MULLINGAWA
EAST BOGAN No 16
HARRAWIN
TONGO
1885
ROYAL COMMISSION
CONSERVATION OF WATER
SKETCH MAP
SHEWING THE
NORTH EASTERN PORTION OF THE WESTERN DIVISION OF

NORTH EASTERN PORTION OF THE WESTERN DIVISION OF

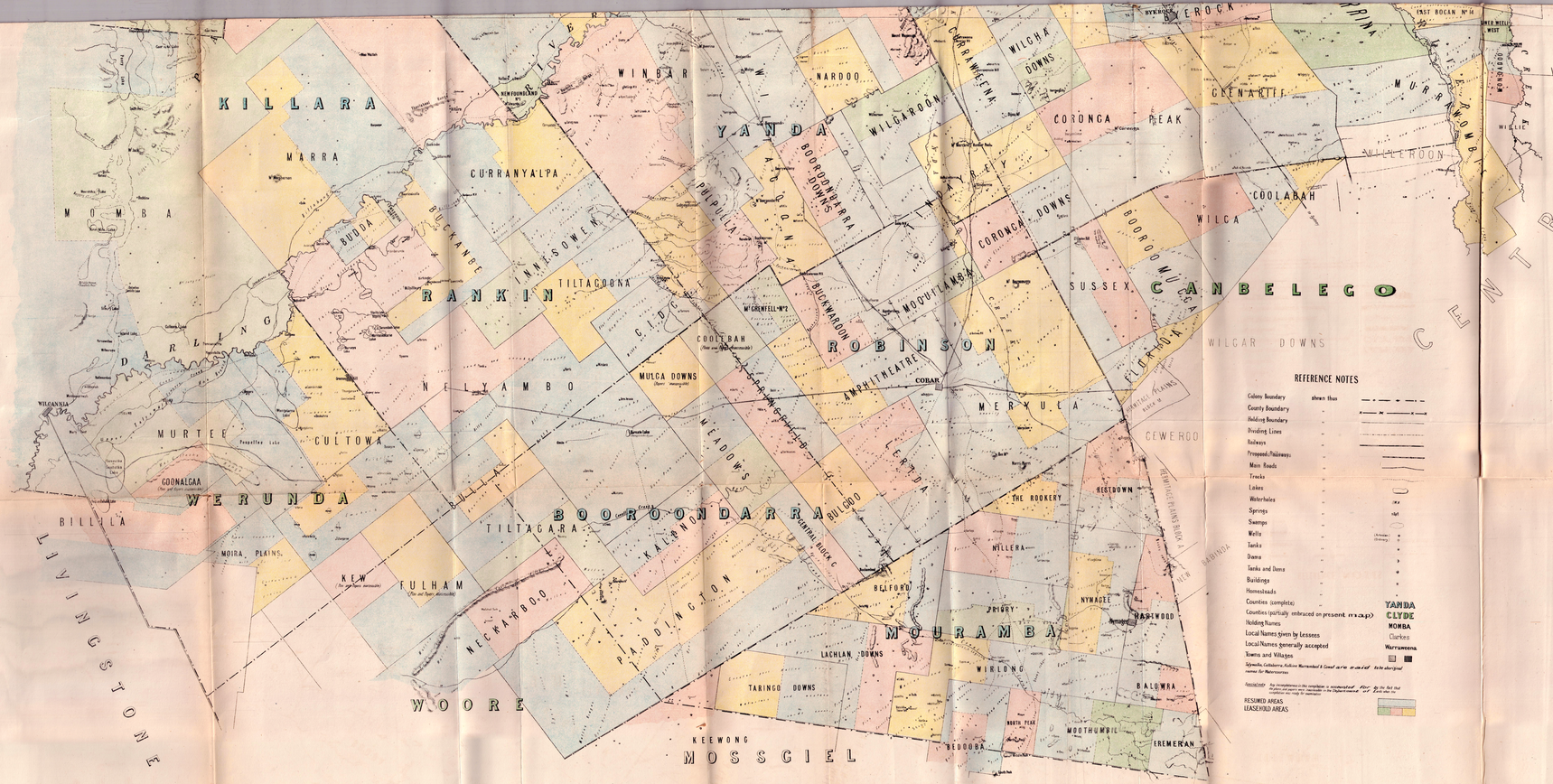
NEW SOUTH WALES

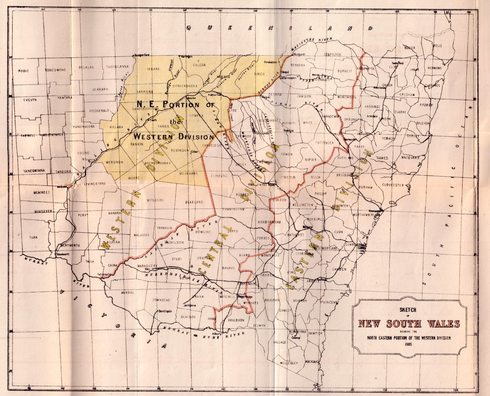
COMPILED FROM

Official Maps and Information supplied to the Department of Lands by the Crown Lessees

1885

Scale





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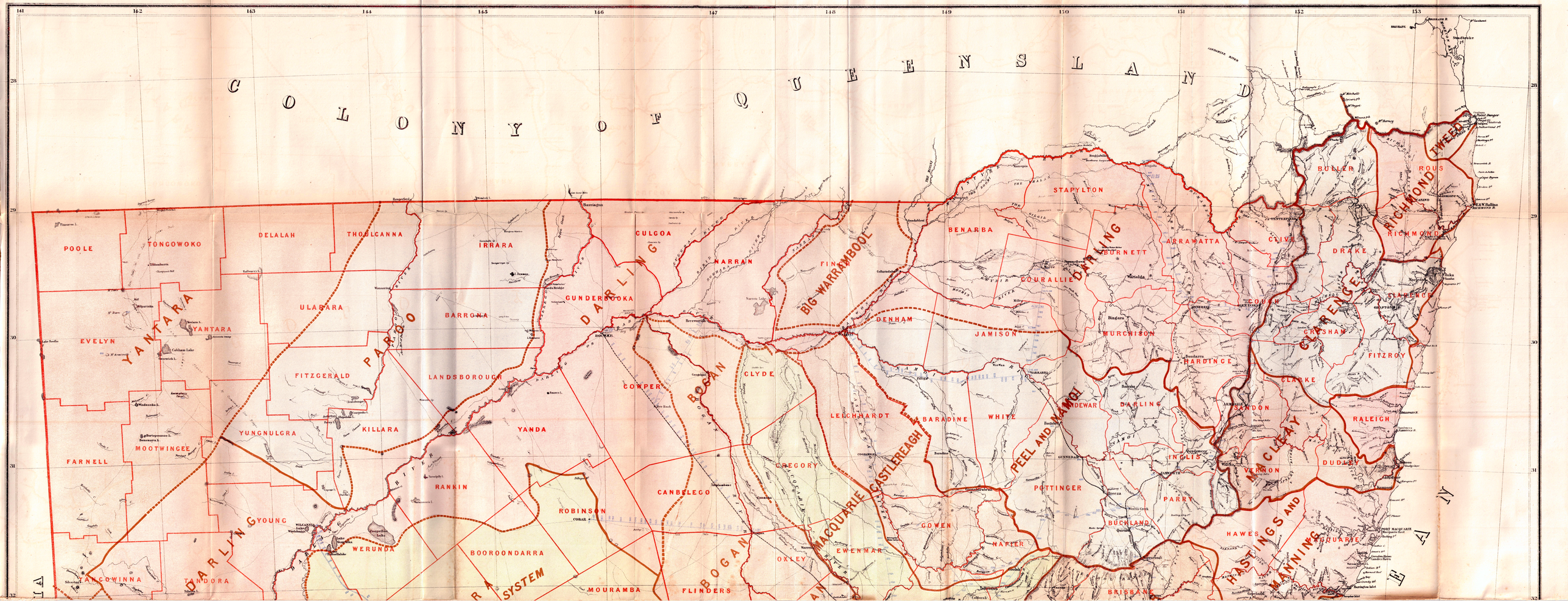


1885

ROYAL COMMISSION

CONSERVATION OF WATER

MAP OF NEW SOUTH WALES

Shewing

PRINCIPAL DRAINAGE AREAS

ALSO

Heights above Sea Level of various Localities

The Boundaries of the Colony are shown thus ——— Main Roads are shown thus ———

" " " of Counties " " " Minor Roads " " "

The Names of Counties - - - CADELL Railways open for traffic are shown thus ——— the centre of construction " " "

Names of Basins and Drainage Areas shown thus DARLING

Watershed Lines as obtained from latest Records

Undefined or Unrecorded Watershed Lines

Level from Survey Department

Do. from other Sources

Compiled for the Commission by H.G.McKinney M.I.C.E. Engineer W.C.Higinbotham Draftsman

SCALE OF STATUTE MILES

Statement of Drainage Areas

GENERAL DESCRIPTION	DETAIL	AREA IN SQ. MILES HILLY	PLAIN	TOTAL AREAS	RUN OFF AREAS	CORRESPONDING MEAN ANNUAL DEPTH OF RUNOFF IN INCHES HILLY PLAIN DISTRICT COUNTRY	
Coast Basins	Richmond			2600			17.58
"	Clarence			6340			34.13
"	Macleay			4300			31.70
"	Hunter			6100			34.92
"	Hawkesbury			6400			34.65
"	Shoalhaven			1940			39.55
"	Minor Coast Basins			17360			41.69
"	Total Area of Coast Basins				50100		30.51
Darling Basin	Source to Walgett	10430	9390	19770		28.17 18.12	23.44
New South Wales	Subsidiary Basin of the Peel & Namoi	4440	11800	16240		27.37 19.28	20.27
"	Darling from Namoi to Macquarie		390	390			15.56
"	Castlereagh	2860	5890	8750		19.10 17.43	18.14
"	Macquarie	9830	5610	15440		23.17 15.67	20.44
"	Bogan Minor Basins		1110	1110		16.83	16.83
"	Bogan	2390	11110	13500		16.13	16.76
"	Darling from Macquarie to Bourke		7190	7190			16.76
"	Total to Bourke exclusive of Area in Queensland				67390		19.54
"	Bourke to junction with the Murray		29510	29510			9.60
"	Paroo		15730	15730	45240		10.73
"	Grand Total of the Darling in New South Wales				128170		16.17
Murray	Lachlan to junction with Murrumbidgee		7300	13460		20.33	13.41
"	Murrumbidgee to junction with Lachlan	11860	3610	15470		21.54	14.53
"	Murrumbidgee from Lachlan to Murray		310	310			19.80
*	Billabong & Edward to junction with Murray	1330	15210	16580		21.55	14.56
"	Murray to junction with Edward	2180	3610	5790		26.17	15.64
"	Murray from Edward to Murrumbidgee		50	50			34.88
"	Murray from Murrumbidgee to Darling		9390	9390			11.42
"	Murray from Darling to Junction		140	140			11.14
"	Total of Murray in New South Wales			26670			17.95
"	Total Area of Western River System			170860			16.61
Areas unconnected with Great Western River or with N.S.W. Coast	Snowy River			3360			34.41
	* Mirool & other Creeks			14380		19.64	16.53
	Lake George			4971		15.62	25.82
	* Manero			13970			9.83
	* Yantara			17030			9.06
	* Tara			6080			9.21
	Total of Miscellaneous Drainage Areas			60190			13.18
	Coast Basins			50100			30.51
	Basin of Great Western River System			170860			16.61
	Area of New South Wales			281150			18.68

Approximate Division of the Darling Basin in Queensland

Darling Basin Queensland	Mean & other tributaries which flow into the Darling above Walgett	7990	6900	15000		34.77	23.97	28.73
	Balonne &c.	10800	40408	50408		27.73	21.93	23.08
	Warrego	6600	16800	24600			21.50	22.05
	Paroo	855	12760	13600			13.11	13.17
Total Area of the Darling Basin in Queensland		23500	76900	103608				

Summary of Divisions of the Darling Basin

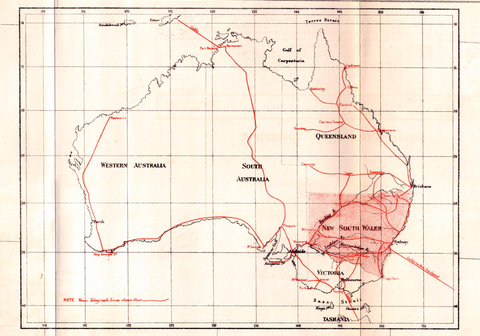
Darling Basin	In Queensland Affluents above Walgett	18001	58900	76900	54726	34.17	23.97	28.73
	In New South Wales do do	18430	9390	19720		28.17	18.12	23.44
	In Queensland Affluents (from Walgett to Bourke	10800	40408	50408		27.73	21.93	23.08
	In New South Wales do do	2870	22490	25310		21.61	16.74	18.32
	Total Area above Bourke	47301	131588		148330	26.15	19.53	21.47
	In Queensland Affluents below Bourke	4500	31800	36730		5	18.01	
	In New South Wales Basin below Bourke		45240	45240			18.01	18.01
	Grand Total of the Darling Basin	54800	177388	232188				

NOTE (a) The Drainage Areas are necessarily given only as close approximations their sum is however almost identical with the mean of the last two calculations of the area of the Colony made by the Survey Department.

(b) The Statement of mean rainfall in the various Drainage Areas is based on the rainfall records prepared for the Government. Approximate.

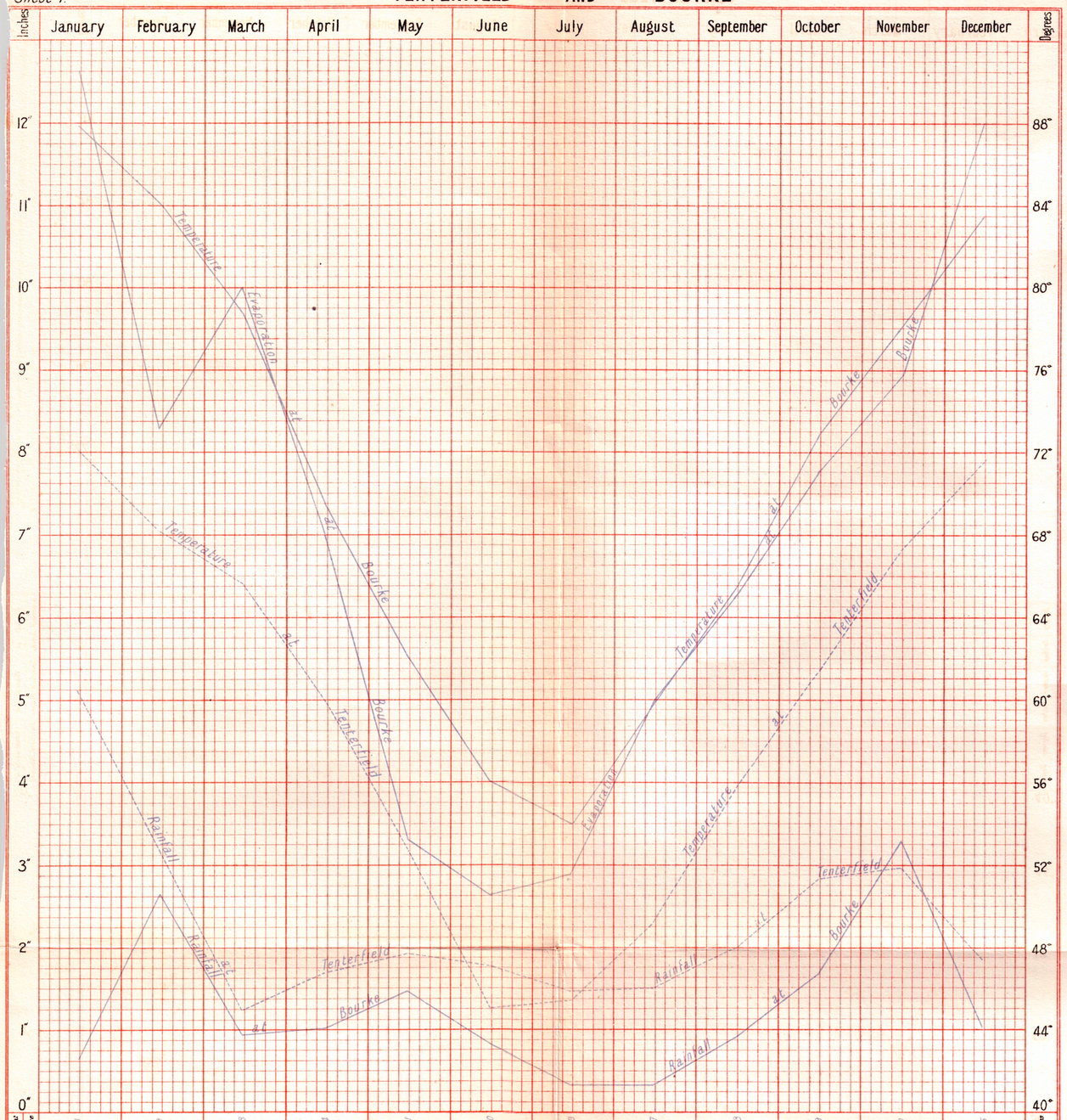
* (c) Each of these tracts of country comprises group of distinct drainage areas. The first three tracts contribute water only in the rivers in extraordinary floods and very often. The boundaries shown indicate the general tendency of the surface drainage to flow from and not towards the rivers in the plain country.

† (d) The area is an undefined basin and is of very doubtful value. In the lower portion it has no well defined boundaries but receives flood water from both the Murray and the Murrumbidgee.



Sheet 1.

TENTERFIELD AND BOURKE

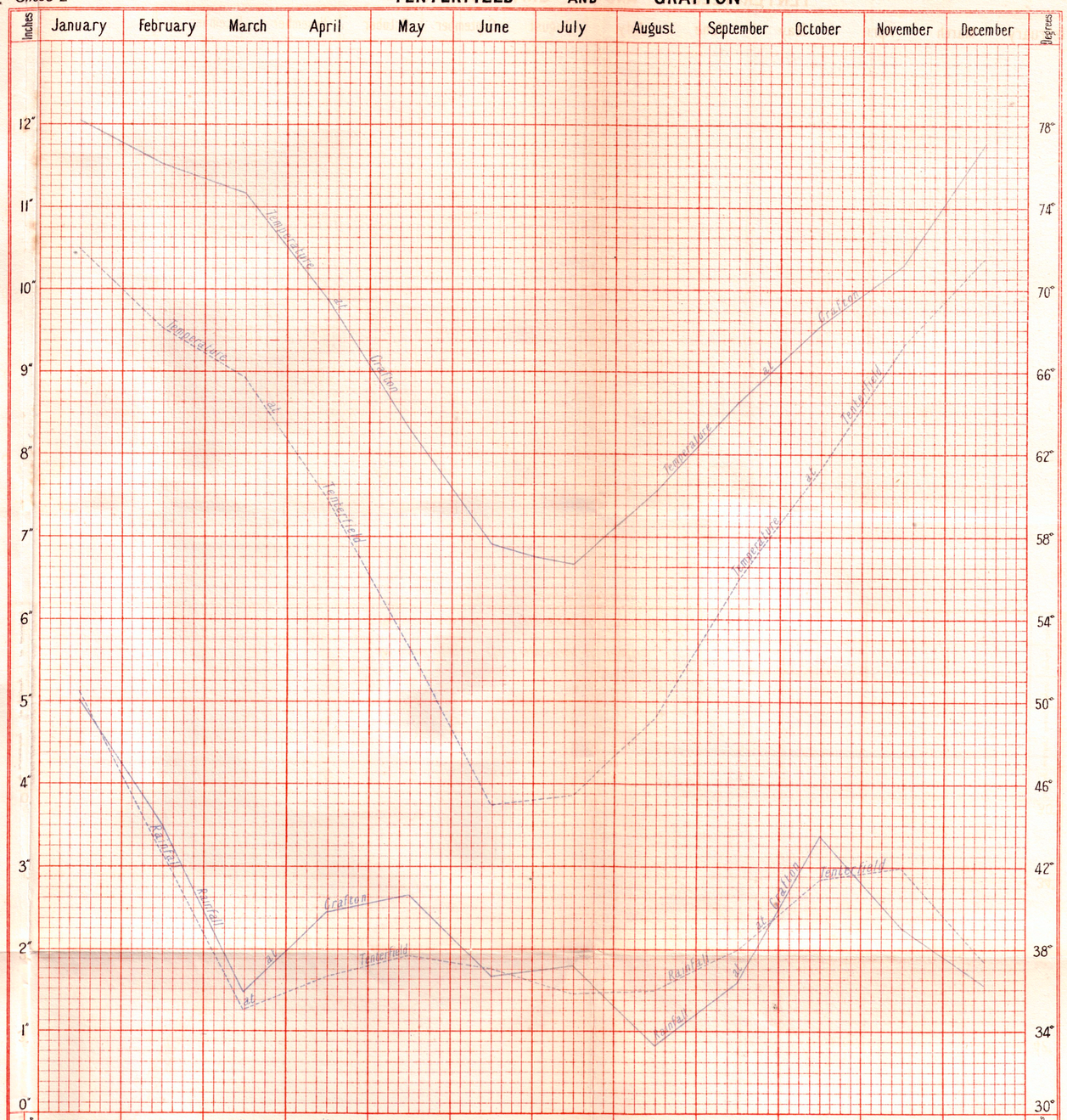


Temperature at Bourke	67.8	73.9	75.8	69.4	62.1	56.0	53.9	59.7	65.3	72.9	78.0	83.5	Degrees
Temperature at Tenterfield	72.0	68.1	65.6	59.9	52.7	45.0	45.4	49.2	53.6	61.3	67.3	71.5	Degrees
Evaporation at Bourke	12.61	8.21	10.02	6.35	3.33	2.64	2.88	4.95	6.23	7.79	8.91	12.00	Inches
Evaporation at Tenterfield	No record kept of the Evaporation at Tenterfield.												Inches
Rainfall at Bourke	0.64	2.65	0.89	1.01	1.46	0.81	0.31	0.32	0.67	1.64	3.29	1.02	Inches
Rainfall at Tenterfield	5.10	3.17	1.29	1.67	1.91	1.14	1.46	1.48	2.01	2.83	2.99	1.83	Inches

Surveyor Generals Office Sydney (No of Lith. D.86.4)

Sheet 2

TENTERFIELD AND GRAFTON

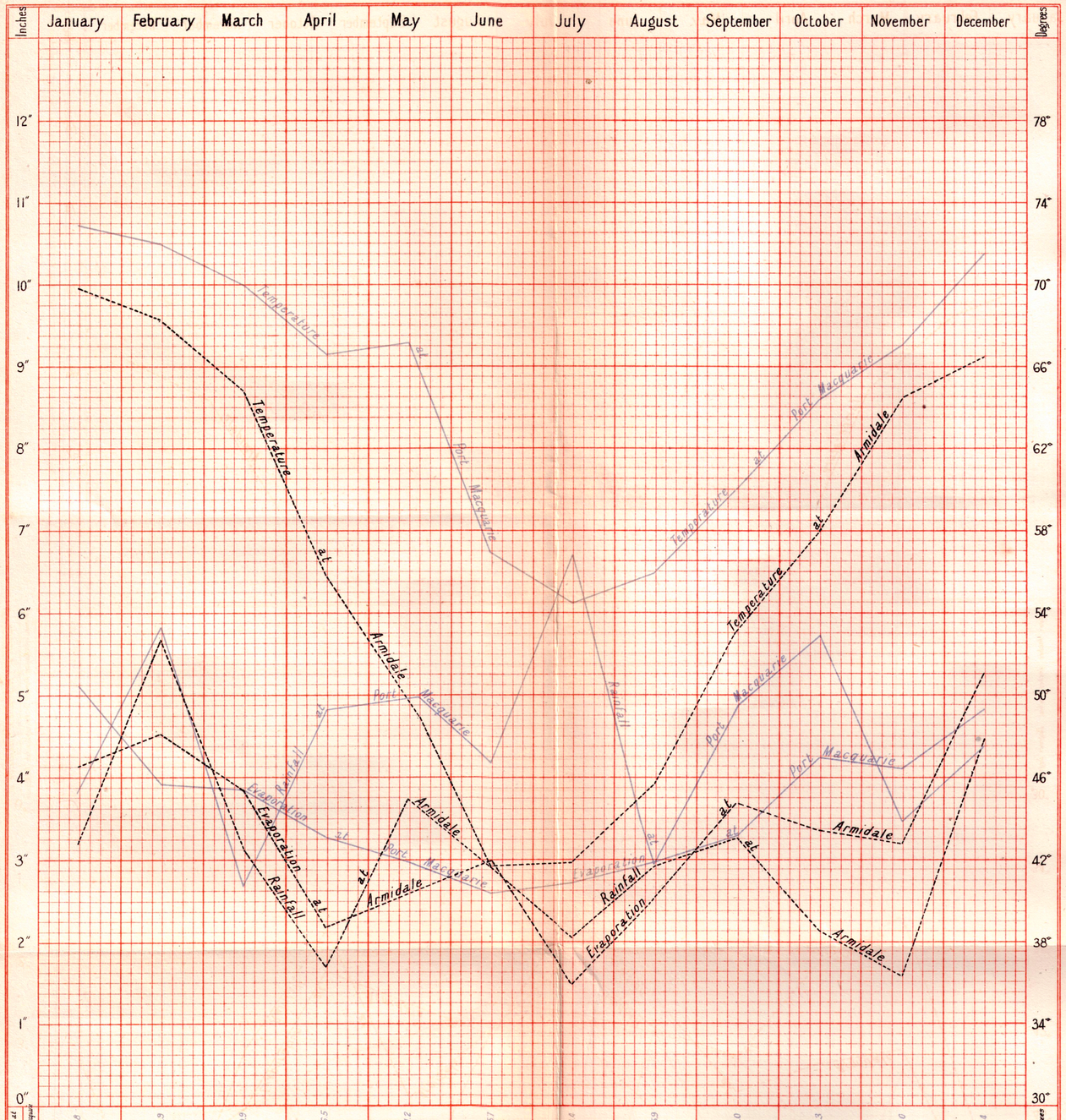


Temperature at Tenterfield	72.0	68.1	65.6	59.9	52.7	45.0	45.4	49.2	53.6	61.3	67.3	71.5	Degrees
Temperature at Grafton	78.2	76.1	74.7	69.6	63.2	57.5	56.7	60.2	64.5	68.3	71.2	77.2	Degrees
Rainfall at Tenterfield	5.10	3.17	1.29	1.67	1.91	1.74	1.46	1.48	2.01	2.83	2.99	1.83	Inches
Rainfall at Grafton	5.02	3.52	1.47	2.47	2.65	1.65	1.78	0.86	1.55	3.37	2.56	1.54	Inches
Evaporation at Tenterfield	No record kept of the Evaporation at Grafton.												Inches
Evaporation at Grafton	No record kept of the Evaporation at Tenterfield.												Inches

Surveyor Generals Office Sydney (No of Lith D.86.5)

Sheet 3

ARMIDALE AND PORT MACQUARIE



Rainfall at Armidale	Inches	3.20	5.69	3.13	1.68	3.74	2.86	2.03	2.90	3.23	2.12	1.54	4.43
Rainfall at Port Macquarie	Inches	3.79	5.86	2.67	4.82	4.97	4.15	6.68	2.91	4.66	5.72	3.45	4.38
Evaporation at Armidale	Inches	4.11	4.51	3.82	2.16	2.53	2.97	1.45	2.59	3.68	3.36	3.19	5.24
Evaporation at Port Macquarie	Inches	5.08	3.92	3.81	3.28	2.96	2.58	2.69	2.95	3.24	4.22	4.09	4.83
Temperature at Armidale	Degrees	63.8	68.3	64.6	55.7	48.9	41.7	41.8	45.7	53.2	57.8	66.4	66.4
Temperature at Port Macquarie	Degrees	72.8	71.9	69.9	66.5	61.2	55.7	59.4	55.9	60.0	64.3	67.0	71.4

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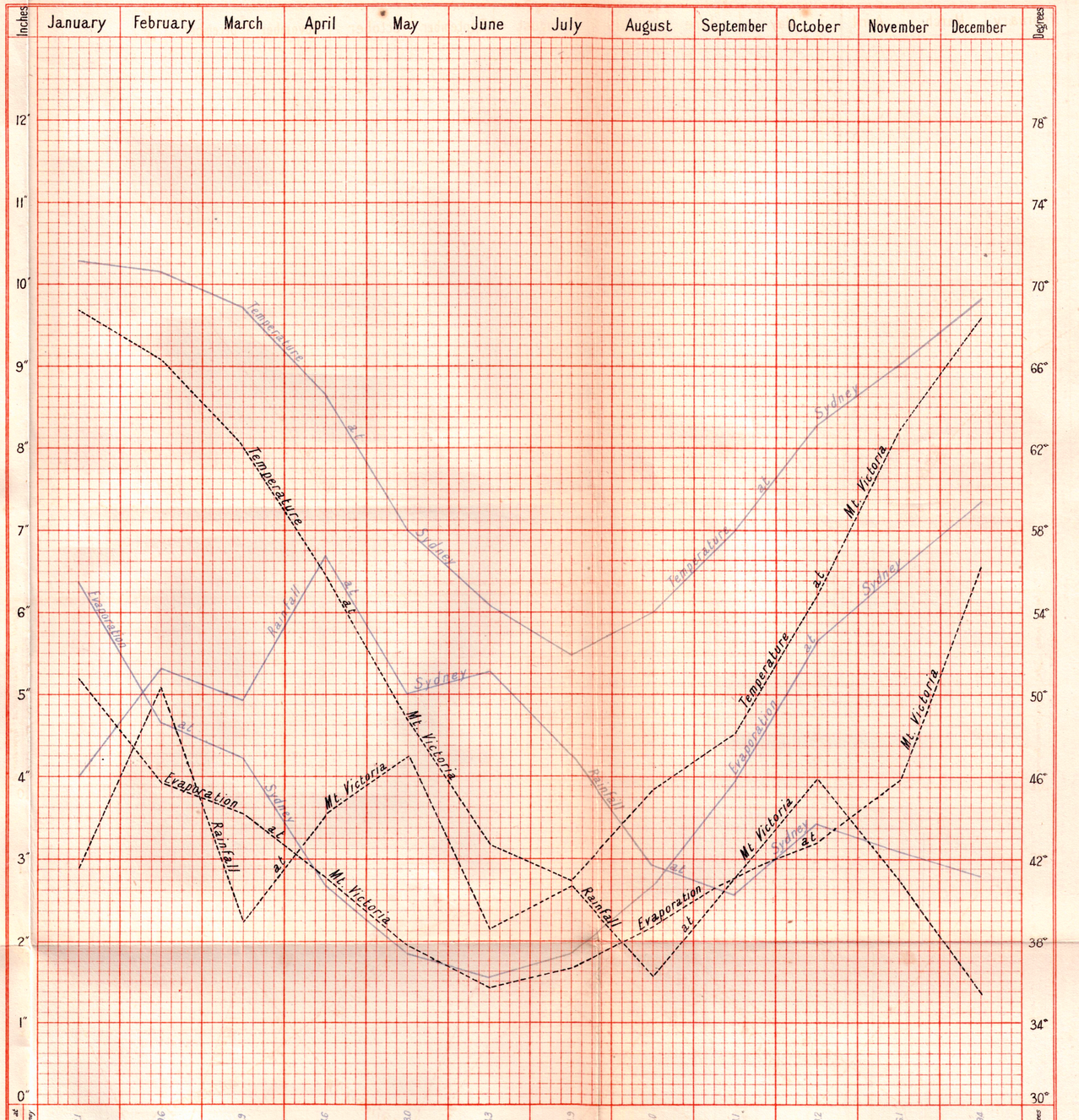
Sheet 4

Mt. VICTORIA AND SYDNEY

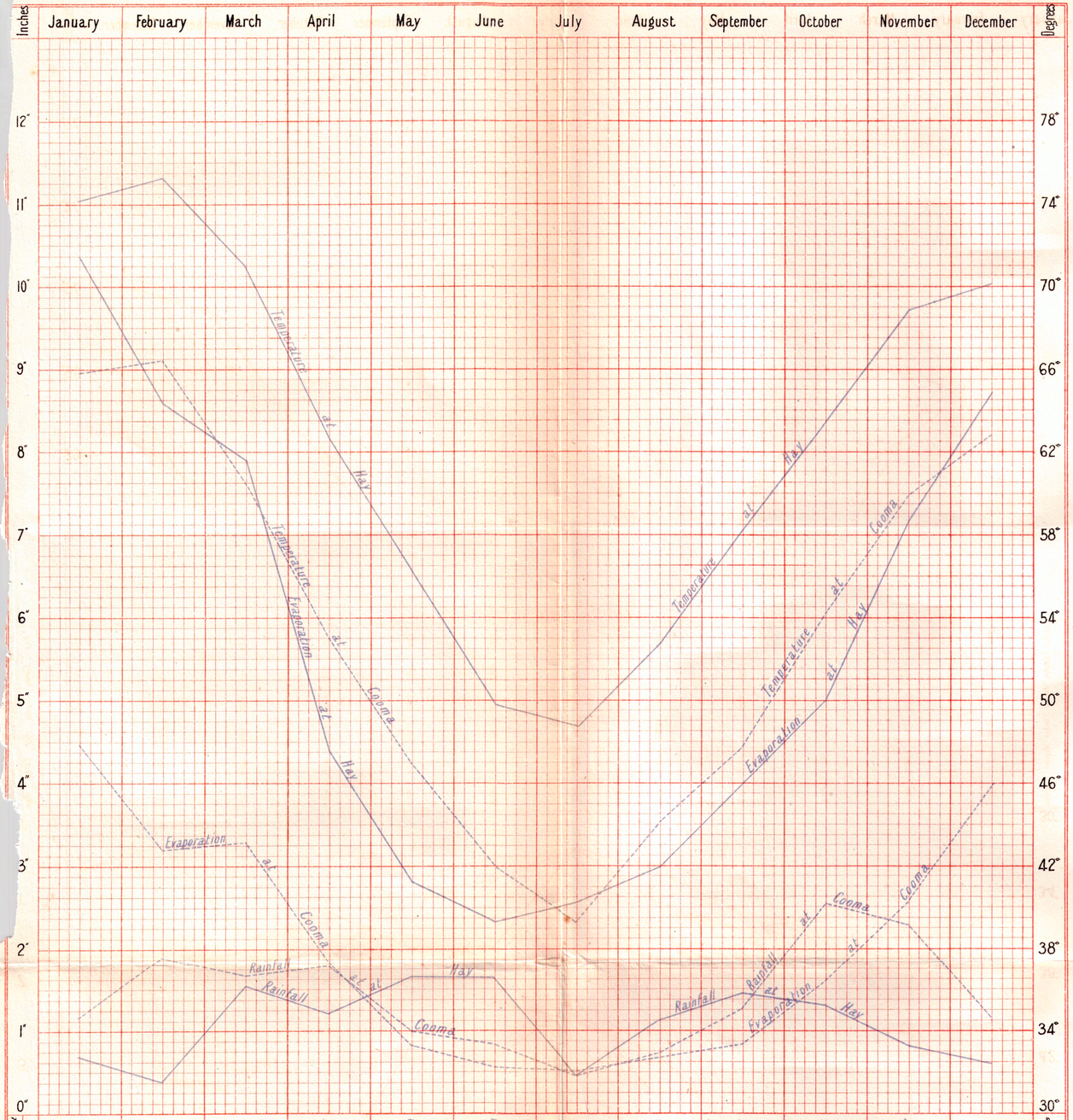


Rainfall at Mt. Victoria	Inches	2.98	5.11	2.27	3.59	4.23	2.13	2.76	3.98	2.72	1.34	1.82
Rainfall at Sydney	Inches	4.03	5.30	4.91	6.70	5.05	5.08	6.28	3.44	3.11	2.76	2.92
Evaporation at Mt. Victoria	Inches	5.17	3.96	3.53	2.76	1.95	1.41	1.63	3.17	3.95	6.53	2.16
Evaporation at Sydney	Inches	6.39	4.69	4.21	2.69	1.04	1.54	1.84	5.65	6.55	7.37	2.66
Temperature at Mt. Victoria	Degrees	68.6	66.3	62.0	55.7	48.7	42.7	51.9	54.7	62.7	68.3	45.3
Temperature at Sydney	Degrees	71.1	70.6	68.9	68.6	58.0	54.3	61.9	63.2	66.1	69.4	54.0

Surveyor Generals Office Sydney (N° of Lith. D.86.7)

Sheet 5

COOMA AND HAY

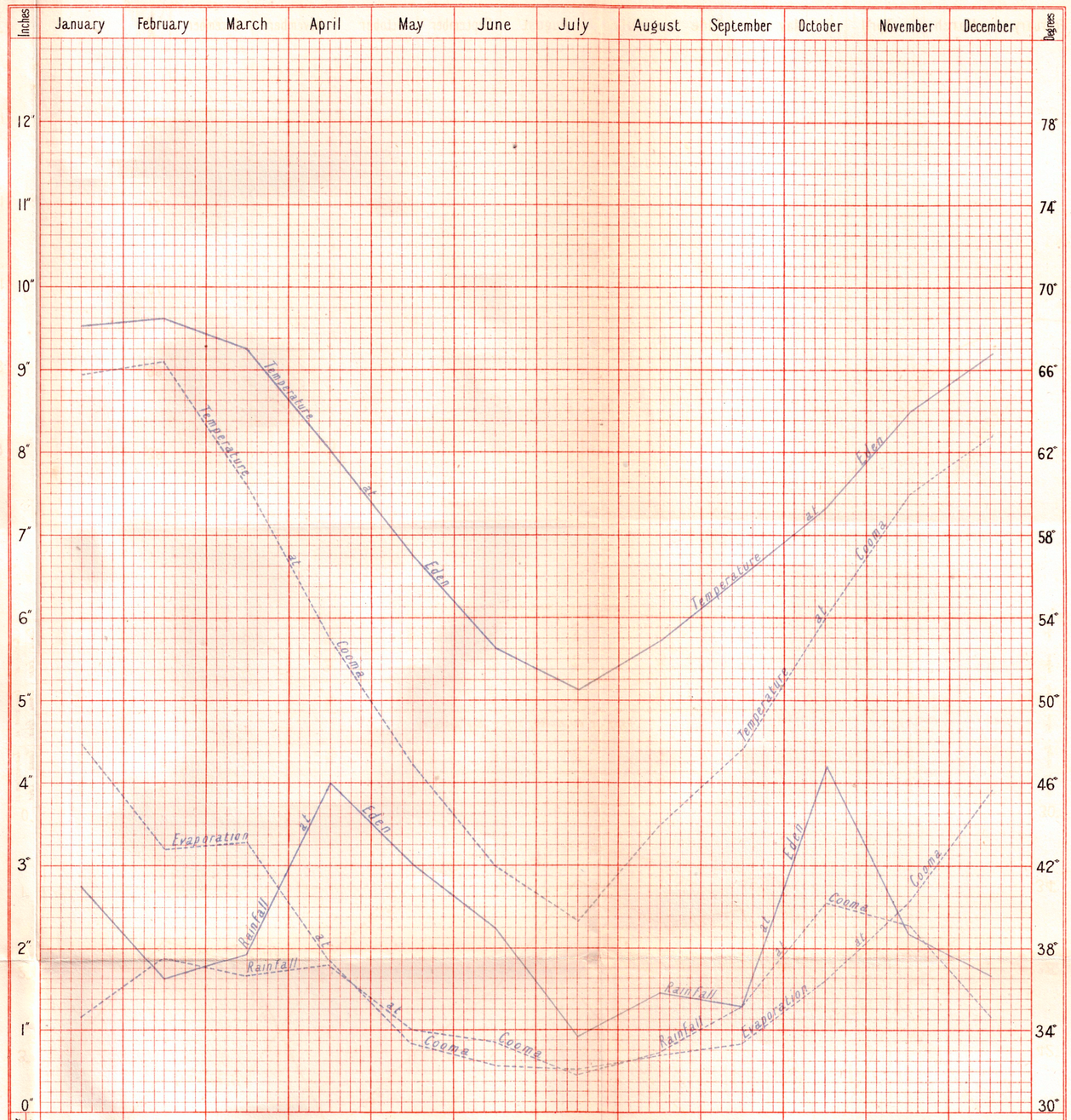


	Rainfall at		Evaporation at		Temperature at	
	Hay	Cooma	Hay	Cooma	Hay	Cooma
	Inches	Inches	Inches	Inches	Degrees	Degrees
January	0.68	1.15	5.49	4.49	78.1	65.8
February	0.39	1.91	3.21	3.21	75.3	66.4
March	1.53	1.65	3.29	3.29	70.9	60.4
April	1.21	1.78	1.84	1.84	62.7	53.0
May	1.64	1.00	0.85	0.85	56.3	46.8
June	1.61	0.85	0.58	0.58	49.8	42.0
July	0.45	0.44	0.54	0.54	48.7	39.2
August	1.11	0.75	0.72	0.72	57.6	44.1
September	1.45	1.23	0.86	0.86	58.3	47.7
October	1.30	2.53	1.59	1.59	63.4	54.2
November	0.86	2.31	2.57	2.57	68.7	59.9
December	0.61	1.14	3.96	3.96	70.2	62.8

Surveyor Generals Office Sydney (N° of Lith 086.2)

Sheet 6

COOMA AND EDEN



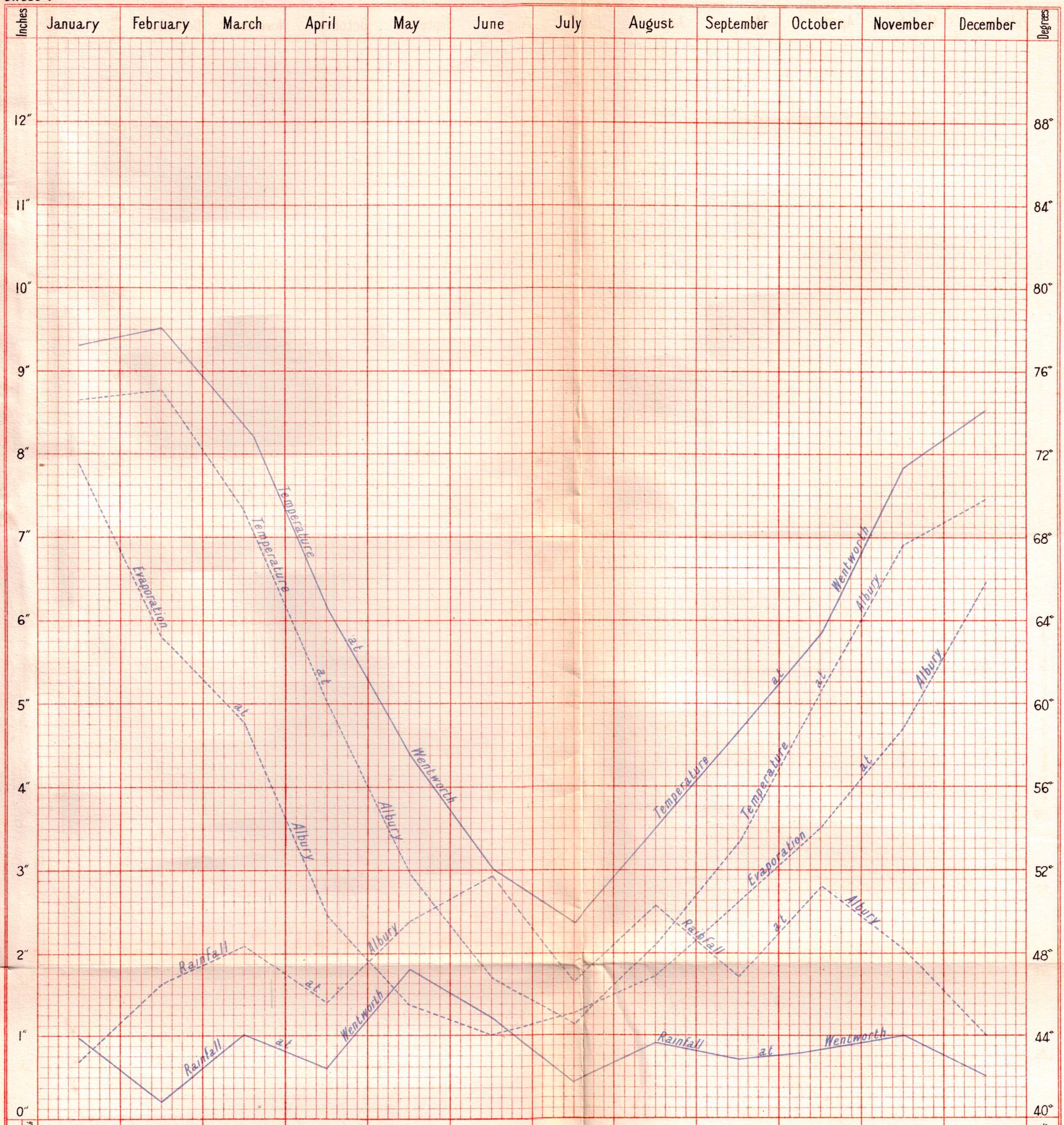
	Rainfall at		Evaporation at		Temperature at	
	Cooma	Eden	Cooma	Eden	Cooma	Eden
	Inches	Inches	Inches	Inches	Degrees	Degrees
January	1.15	2.77	4.49		65.8	68.1
February	1.91	1.61	3.21		66.4	68.5
March	1.65	1.92	3.29		60.4	67.0
April	1.78	4.01	1.84		53.0	62.1
May	1.00	3.08	0.85		46.8	51.0
June	0.85	2.25	0.58		42.0	52.5
July	0.44	0.94	0.54		39.2	50.5
August	0.75	1.40	0.72		44.1	52.9
September	1.23	1.26	0.86		47.7	56.1
October	2.53	4.23	1.59		54.2	59.4
November	2.31	2.20	2.57		59.9	64.0
December	1.14	1.66	3.96		62.8	66.9

No record kept of the Evaporation at Eden.

Surveyor Generals Office Sydney, (N° of Lith 086.3)

Sheet 7

ALBURY AND WENTWORTH



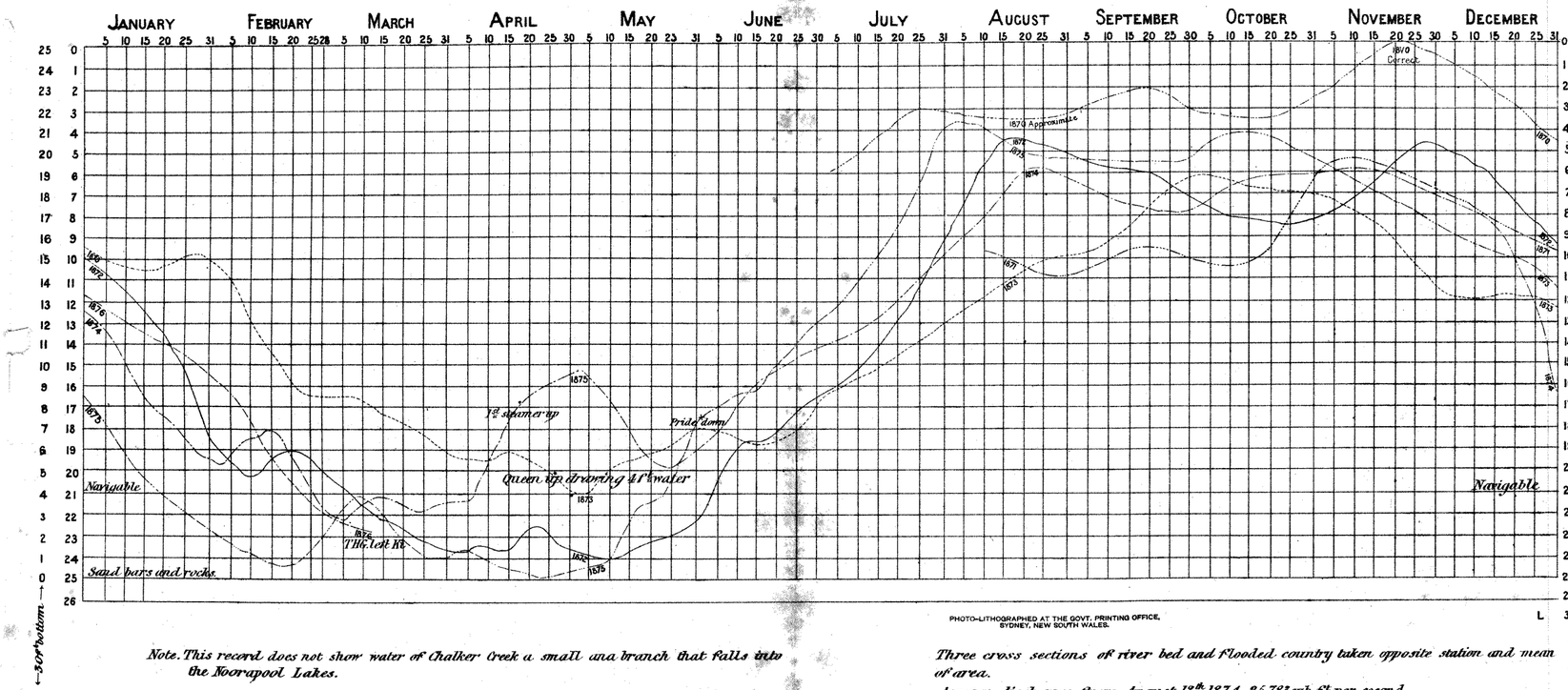
		January	February	March	April	May	June	July	August	September	October	November	December	
Rainfall at Albury		0.63	1.59	2.08	1.37	2.36	2.91	1.62	2.56	1.70	2.75	2.06	1.02	Inches
Rainfall at Wentworth		0.94	0.17	1.00	0.60	1.79	1.22	0.41	0.93	0.73	0.84	0.99	0.50	Inches
Evaporation at	Albury	7.87	5.76	4.78	2.45	1.33	0.99	1.23	1.71	2.61	3.47	4.68	6.43	Inches
	Wentworth	No record kept of the Evaporation at Wentworth												Inches
Temperature at	Albury	74.5	75.0	69.2	59.8	51.8	46.7	44.5	48.4	53.3	60.5	67.5	69.7	Degrees
	Wentworth	77.2	78.0	72.7	64.5	57.5	51.9	49.4	54.1	58.6	63.3	71.2	74.0	Degrees

Surveyor Generals Office Sydney (N°of Inch D 86.8)

No 2.

OBSERVATIONS ON THE MURRAY RIVER TAKEN ABOUT LAT. 34.40 LONG 143.20 BY P.H.GELL.

THE YEARS 1870, 1871, 1872, 1873, 1874, 1875 & 1876.



Zero highest known Flood.	Area of water way in	Maximum Velocity Time in seconds taken by float to pass 4 chains	Mean Velocity in feet per second Max. x .85 obtained after many observations.	Cubic feet per second discharged.
5	16.000 SQUARE FEET	55	4.08	
6	13.000	60	3.74	59.840
7	12.580	65	3.40	44.200
8	12.240	70	3.20	
9	11.900	75	2.99	
10	11.560	80	2.80	33.320
11	11.220	85	2.62	30.287
12	10.880	90	2.49	
13	10.545	95	2.36	
14	10.205	100	2.24	
15	9.865	110	2.04	20.818
16	9.525	115	1.95	
17	9.185	122	1.83	
18	8.850	130	1.72	
19	8.520	140	1.59	
20	8.278	150	1.49	
21	7.938	160	1.40	11.589
22	7.600	170	1.31	
23	7.260	180	1.24	
24	6.781	200	1.13	
25	Sand bars and rocks.	280	.97	
26		260	86	6.577
L 30	8.376			

Approx. Area 43.870 Sq. ft.

Max. Velocity 5 ft 28 per. Sec.
Mean " 4.60 probably too little.
Probable discharge 204.000 Cub. ft per. sec.

5 ft 5 in bottom of river for 20 chains opposite to Station.

PHOTO-LITHOGRAPHED AT THE GOVT. PRINTING OFFICE, SYDNEY, NEW SOUTH WALES.

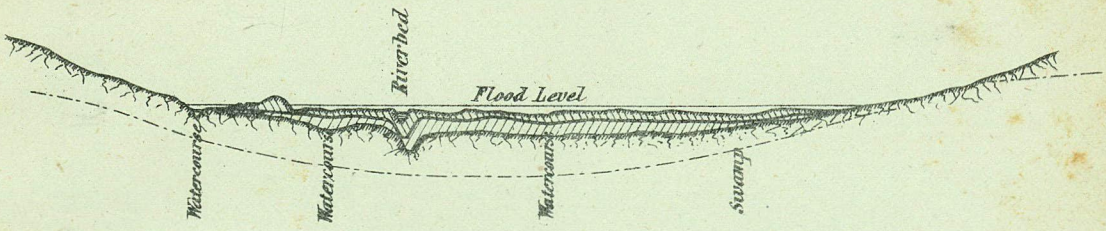
Note. This record does not show water of Chalker Creek a small ana branch that falls into the Noorapool Lakes.

Three cross sections of river bed and flooded country taken opposite station and mean of area.

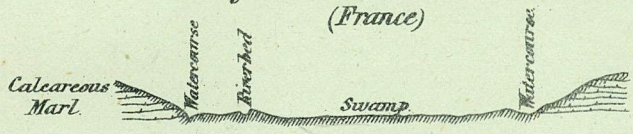
Average discharge from August 12th 1874, 25.783 cub. ft per second.

(Sig: 933.-)

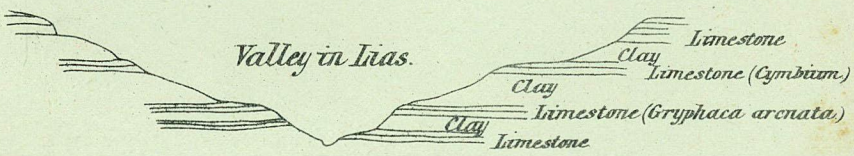
VALLEY OF MURRUMBIDGEE RIVER AT NARRANDERA.

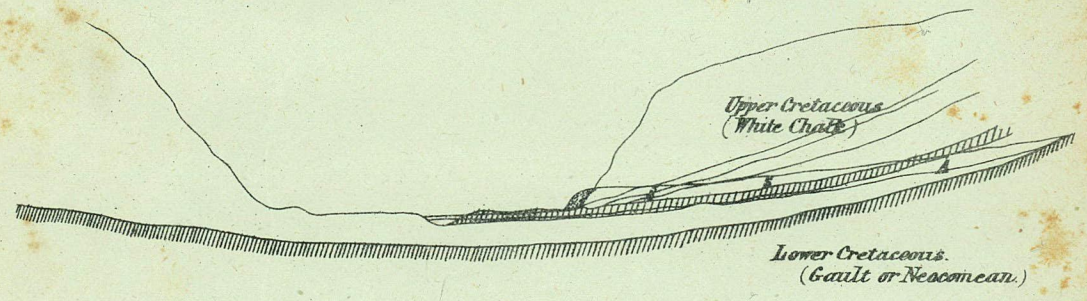


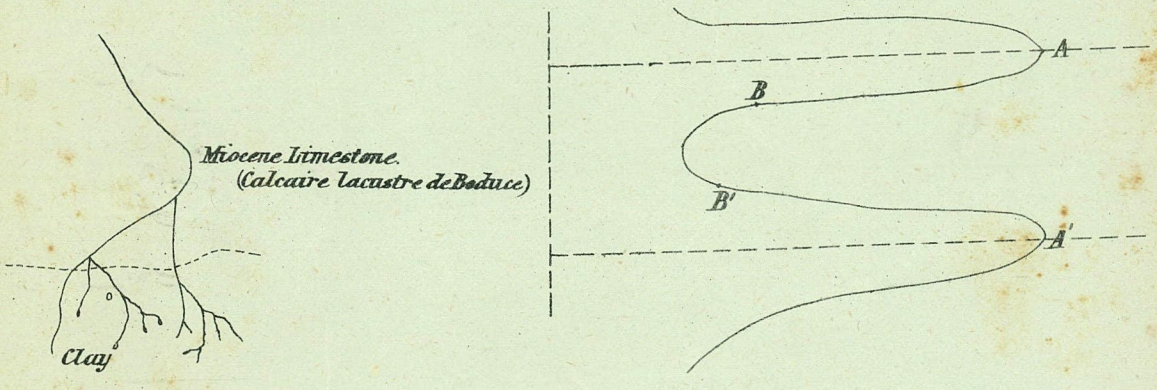
Valley of River Ource at Riel-les Eaux.
(France)



(Oxford Marl)



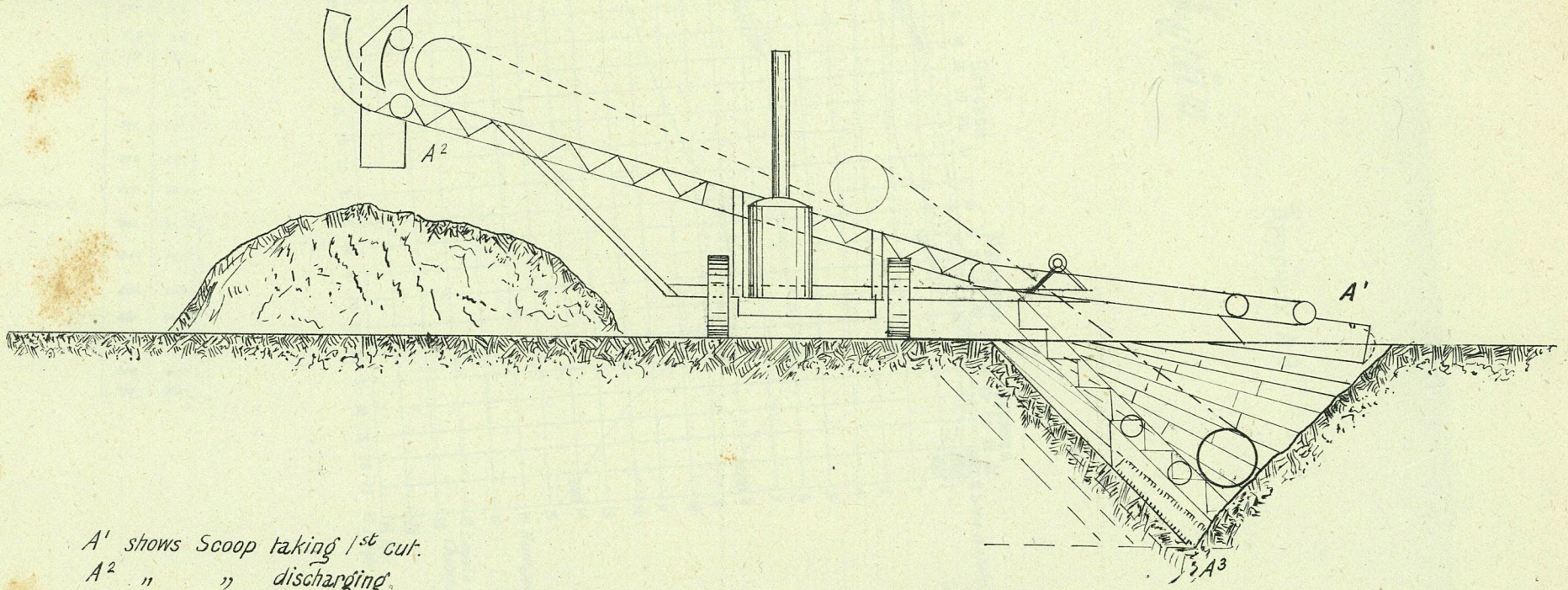




Sig. 933.

Sydney 28th July 1881

Waugh's Canal Excavator.



A' shows Scoop taking 1st cut.
A² " " discharging.
A³ " " at full depth.

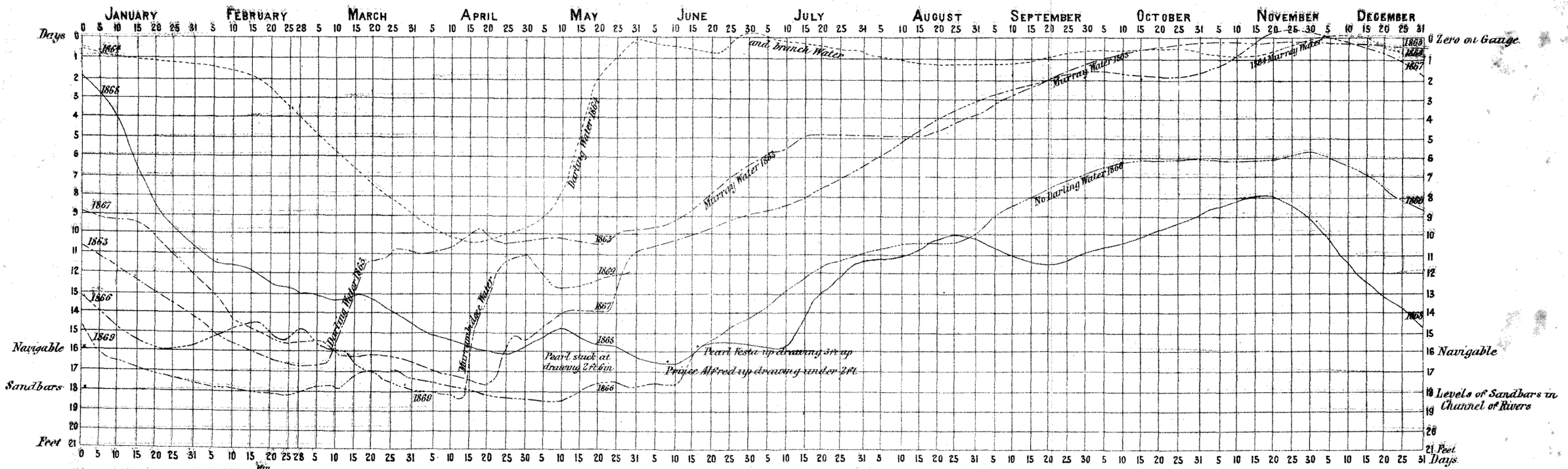
(Sig. 933.)

No 1

Register of Water Gauge Murray River at Lake Victoria Lat: about 34° 10' Long 141° 10'

for the years 1863. 1864 - 1866 - 1867 and part of 1868. by

PHILLIP. H. CELL.



Max Velocity April 8th 1869 3 min 5 s = 100 yards

April 18th 1869 2.54-100

No observations of Velocity at High Water

PHOTO-LITHOGRAPHED AT THE GOVT. PRINTING OFFICE, SYDNEY, NEW SOUTH WALES.

PLAN

shewing cross section of

PROPOSED DAM ON THE NAMOI RIVER

in the

PARISH OF KEEPIT COUNTY OF DARLING

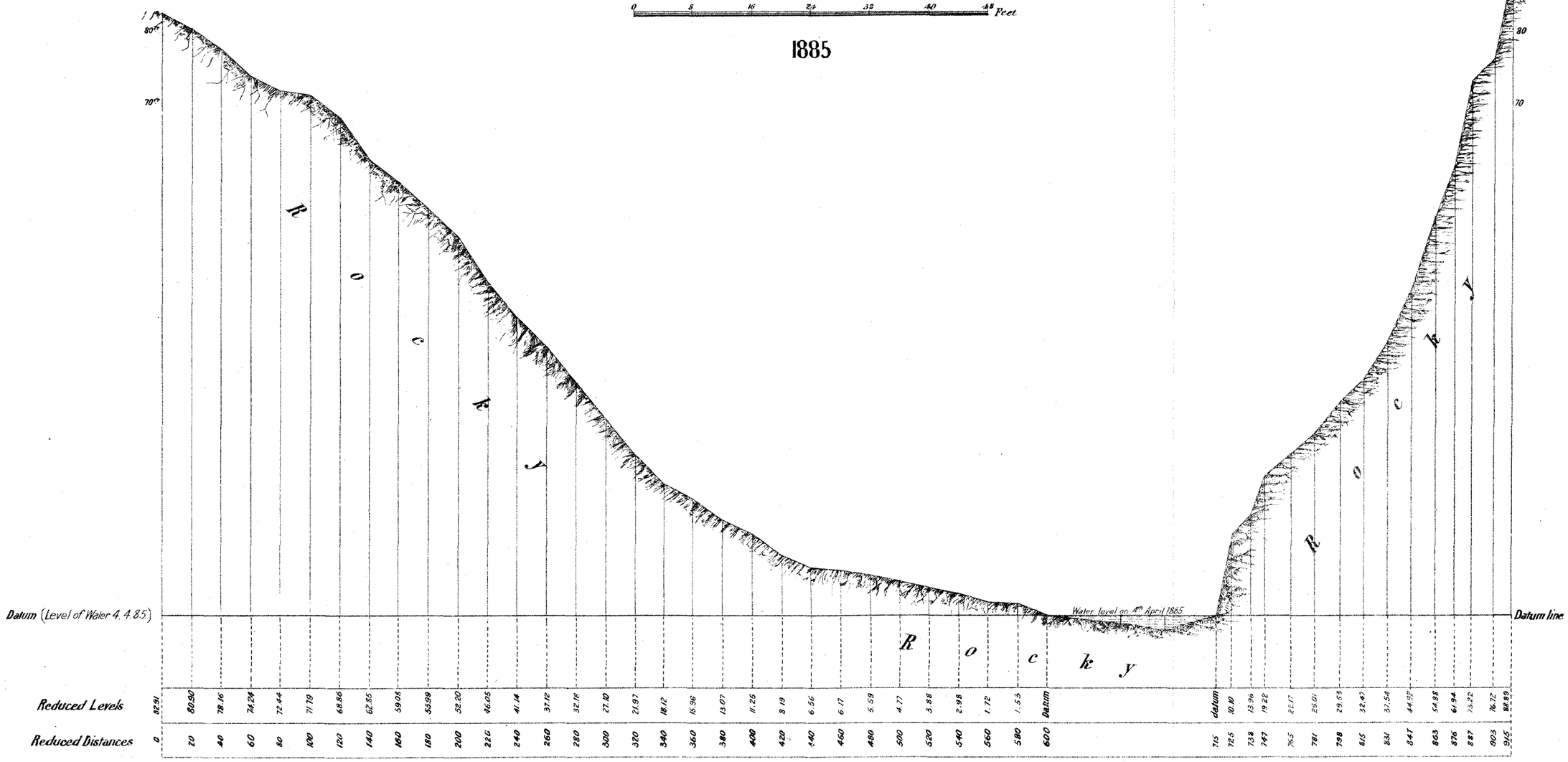
Horizontal Scale

0 40 80 120 160 200 240 Feet

Vertical Scale

0 8 16 24 32 40 48 Feet

1885

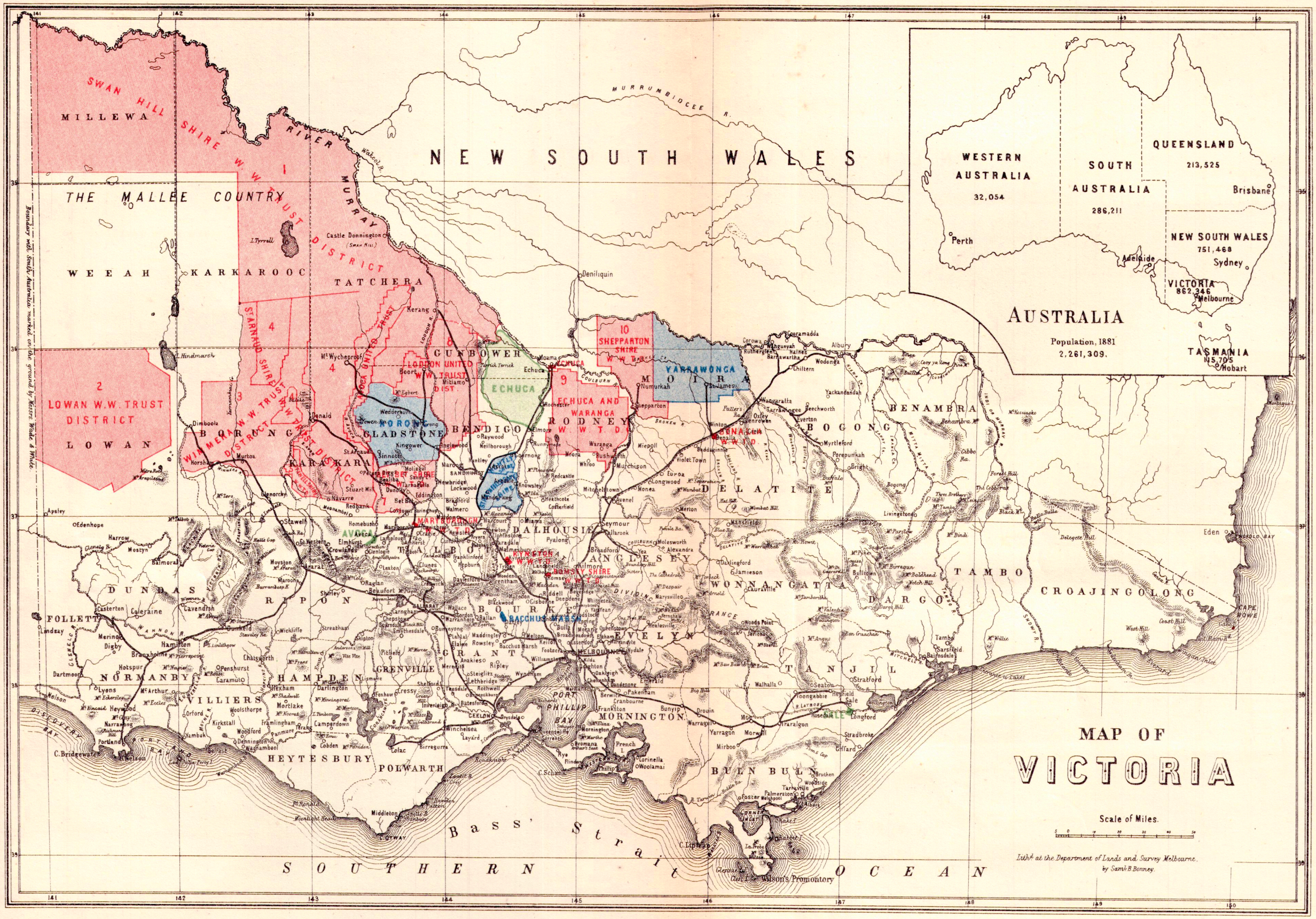


CROSS SECTION

Sig. 933.

PHOTO-LITHOGRAPHED AT THE GOVT. PRINTING OFFICE,
SYDNEY, NEW SOUTH WALES.

APPENDIX D!



REFERENCE.

Areas of Water Works Districts

Areas applied for

Areas applied for & suspended

APPENDIX D 4

Plan Nº 4 to accompany the 11th Report.

WATER SUPPLY TO THE NORTHERN PLAINS

WIMMERA SCHEME.

Scale

4 3 2 1 0 4 8 12 Miles

REFERENCE

Shire Names and Boundaries shown in Red
Main Channel shown in Blue thus ———
Secondary Channels ----------
Rivers & Creeks touched by the scheme Blue thus — —
Height of surface of ground above sea level in feet thus. (550')
Boundaries of scheme thus. +—+—+—+
Existing Weirs shown thus —||— *Proposed Weirs* —|—

Sig. 933.

LOWAN

DUNMUNKLE

WIMMERA

STAWELL

ST ARNAUD

AVOCA

LEXTON

ARARAT

The Grampians

The Pyrenees

To Lake Learmonth

To be continued to the Mallee North of Karyrie

Dimboola

Jeparit

Nhill

Kewell

Warracknabeal

Jung Jung

Horsham

Purtaboi

Donald

Cape Cope

Lake

Korokube

Navarre

Boro of St Arnaud

Boro of Stawell

Dam and Weir

Dunmunkle Weir

Proposed Regulating Works

Horsham Weir

Yarrambiack Weir

Weir

Creek

River

Extension

Branch

Channel

Railway

Plan No 2 to accompany Reports 6.7.8 & 10.

WATER SUPPLY
TO THE NORTHERN PLAINS

LODDON, CAMPASPE, HUNTLY, AND CUNBOWER SCHEMES.

Scale
0 4 8 12 16 MILES

REMARKS
Shire Names and Boundaries shown in Red
Main Channel shown in Blue thus
Secondary Channels thus
Height of surface of ground above sea level in feet thus (311)
Rivers & Creeks touched by the scheme thus
Boundaries of schemes thus
Existing Weirs shown thus — Proposed Weirs thus

PHOTO-LITHOGRAPHED AT THE GOVT. PRINTING OFFICE, SYDNEY, NEW SOUTH WALES.

MURRAY RIVER
GUNBOWER CREEK
PYRAMID CREEK
GUNBOWER SCHEME
CUNBOWER CREEK
Deep Cr.
HEAD WORKS
Box Creek
WEIR A
Gunbower Creek
HEADWORKS & CUTTING
CHANNEL TO LAKES
WEIR
Dry L.
TRAGOWEL WEIR
MALORNA CHANNEL CUTTING
PENNY ROYAL CREEK
SWAN HILL
LODDON RIVER
NINE MILE CREEK
CALIVIL CREEK
LEACHUR WEIR
LODDON SCHEME
KINYPANIEL CR.
KINYPANIEL WEIR
SERPENTINE CREEK
EAST LODDON
SERPENTINE WEIR
ALTERNATIVE LINE
BULLOCK CREEK
MT HOPE OR PYRAMID CREEK
CAMPASPE SCHEME
ECHUCA
Boro of Echuca
Rochester
KORONG
CHANNEL
Boro of Inglewood
BRIDGEWATER WEIR
Boro of Raywood
Heilborough
MYERS Cr
MARONG
HUNTLY
HUNTLY SCHEME
Boro of Eaglehawk
City of Sandhurst
Proposed Race
GRASSY FLAT RESERVOIRS
SPRINGHULLY RESERVOIR
STRATHFIELDSAYE
CAMPASPE WEIR
Sandy Creek
Yankee Creek
Five Mile Creek
CHANNEL

(Sig. 933.)

Plan No 3 to accompany the 9th Report.

WATER SUPPLY TO THE NORTHERN PLAINS

LOWER AVOCA SCHEME

Scale

0 4 8 12 16 MILES

REFERENCE

Shire Name and Boundaries shown thus
Main Channel shown in Blue thus.
Secondary Channels
Height of surface of ground above sea level in feet, thus. (100)
Rivers & Creeks touched by the scheme thus.
Boundaries of sheme thus.

PHOTO-LITHOGRAPHED AT THE GOVT. PRINTING OFFICE, SYDNEY, NEW SOUTH WALES.

TYRRELL CREEK

WATER SUPPLY TO THE NORTHERN PLAINS

LOWER AVOCA SCHEME

S! ARNAUD

(324)

LAKE BULOKE (350)

TYRRELL CREEK

LALBERT CREEK

AVOCA RIVER

MOSQUITO CREEK

WEIR (388)

(326) East Charlton

SWAN HILL

Gunbower Scheme

Loddon Scheme

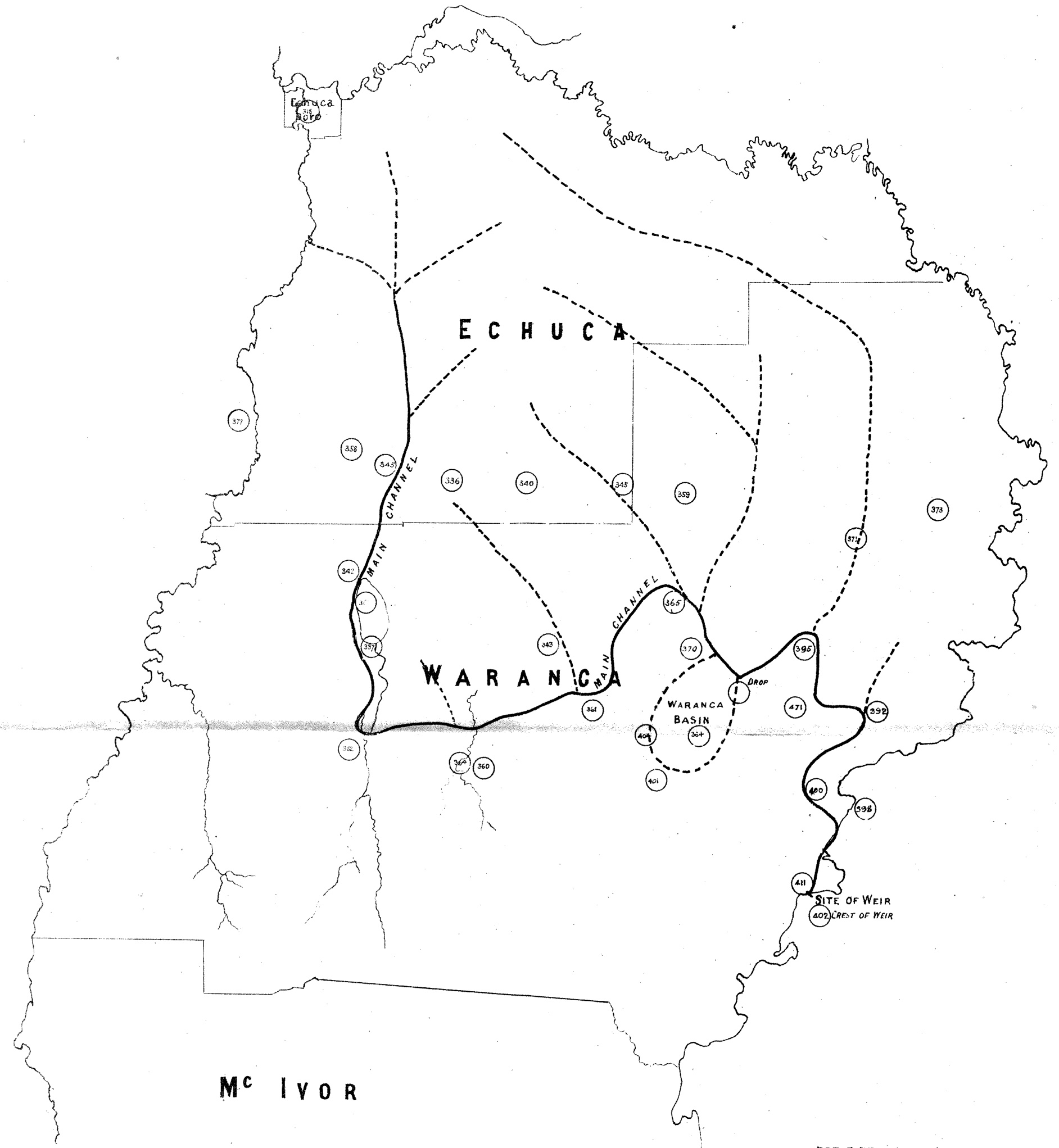
KORONG

(784)

(Sig 933.)

APPENDIX D"

Plan No. 1 to accompany the 4th Report.



Shire Names and Boundaries shown in Red
Main Channel shown in Blue thus ———
Secondary Channels - - - - -
Height of surface of ground above sea level in feet thus (401)
Boundaries of schemes, thus —x—x—

WATER SUPPLY
TO THE NORTHERN PLAINS
COULBURN SCHEME.

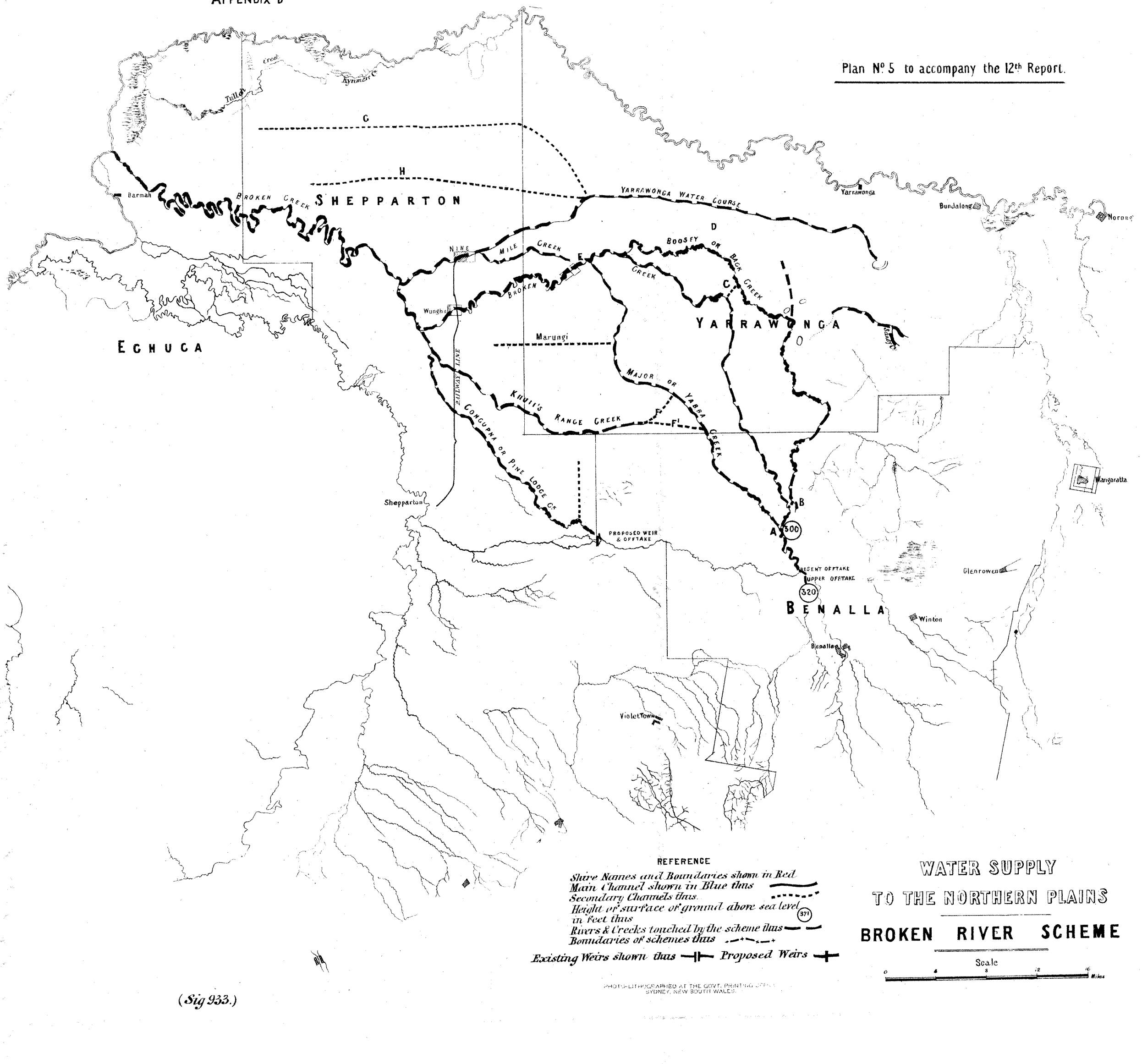
Scale
0 4 8 12 16 miles

PHOTO-LITHOGRAPHED AT THE GOVT. PRINTING OFFICE, SYDNEY, NEW SOUTH WALES.

Sig. 933.

APPENDIX D[12]

Plan No. 5 to accompany the 12th Report.



REFERENCE

Shire Names and Boundaries shown in Red
Main Channel shown in Blue thus ——
Secondary Channels thus. - - - -
Height of surface of ground above sea level in feet thus (371)
Rivers & Creeks touched by the scheme thus — — —
Boundaries of schemes thus — · — · —
Existing Weirs shown thus —|— *Proposed Weirs* —+—

WATER SUPPLY TO THE NORTHERN PLAINS

BROKEN RIVER SCHEME

Scale
0 4 8 12 16 Miles

PHOTO-LITHOGRAPHED AT THE GOVT. PRINTING OFFICE SYDNEY, NEW SOUTH WALES.

(Sig 933.)

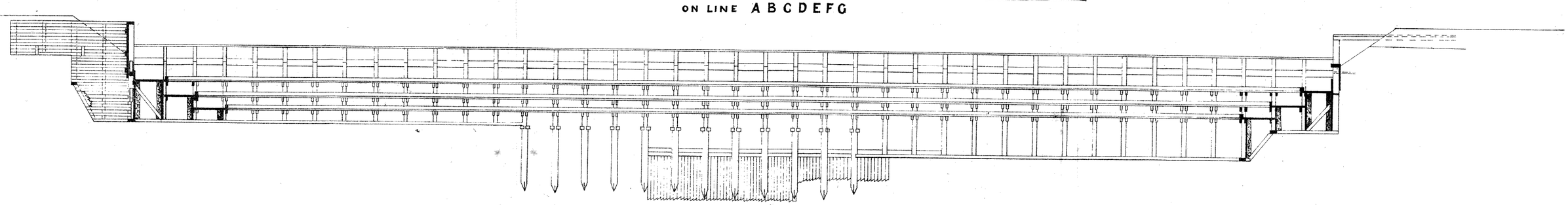
WIMMERA UNITED WATER WORKS TRUST

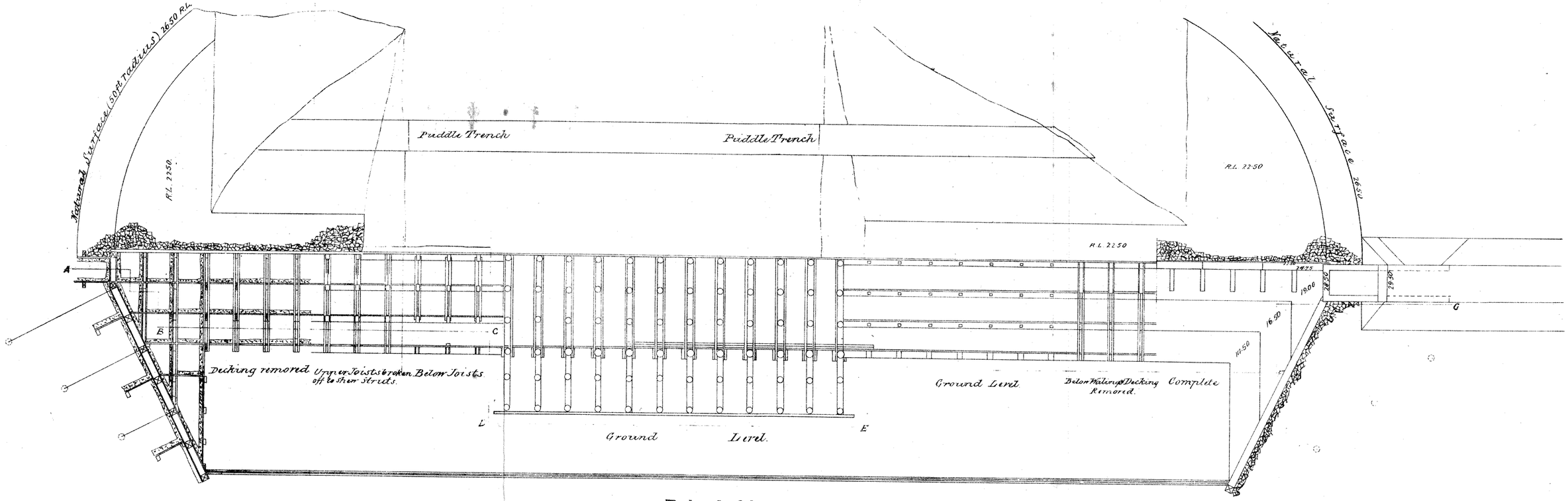
WEIR
ACROSS THE
WIMMERA AT DOOEN RESERVE

LONGITUDINAL SECTION
ON LINE A B C D E F G

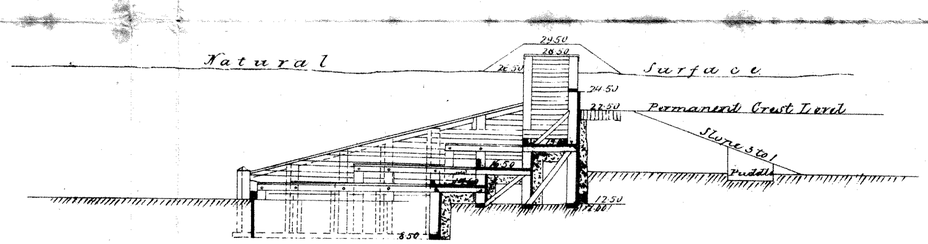
APPENDIX D[13] (9)
3 Sheets #

Cost £3300





PLAN



(Sig. 933)

SECTION ON G H

PHOTO-LITHOGRAPHED AT THE GOVT. PRINTING OFFICE,
SYDNEY, NEW SOUTH WALES.

AVOCA WATER TRUST

PROPOSED

WEIR

ON THE

AVOCA RIVER

PARISH OF COONOOER

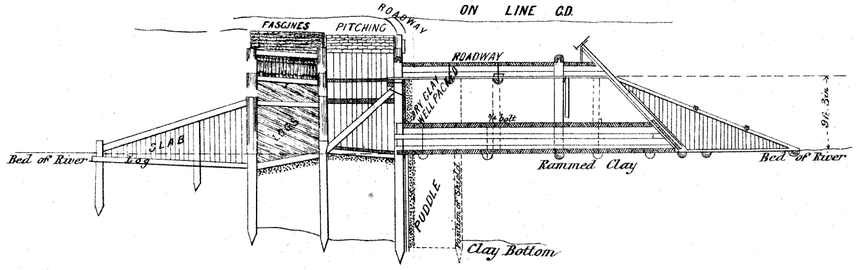
Note
This Flat continues a gradual rise until it becomes level with Western bank at about 10 Chains, then there is a depression of one foot and again a rise of about 4 Feet in 6 Chains width.

Probable Cost £900 or £1000.

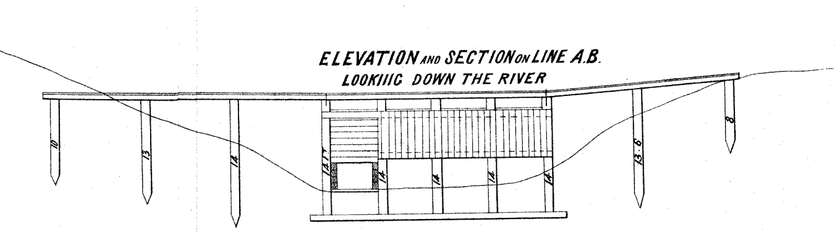
This Weir is not yet constructed but it has been designed on the principles which have been found to be succesful in other Weirs on the same River which have been tested by several Floods.

G.G.

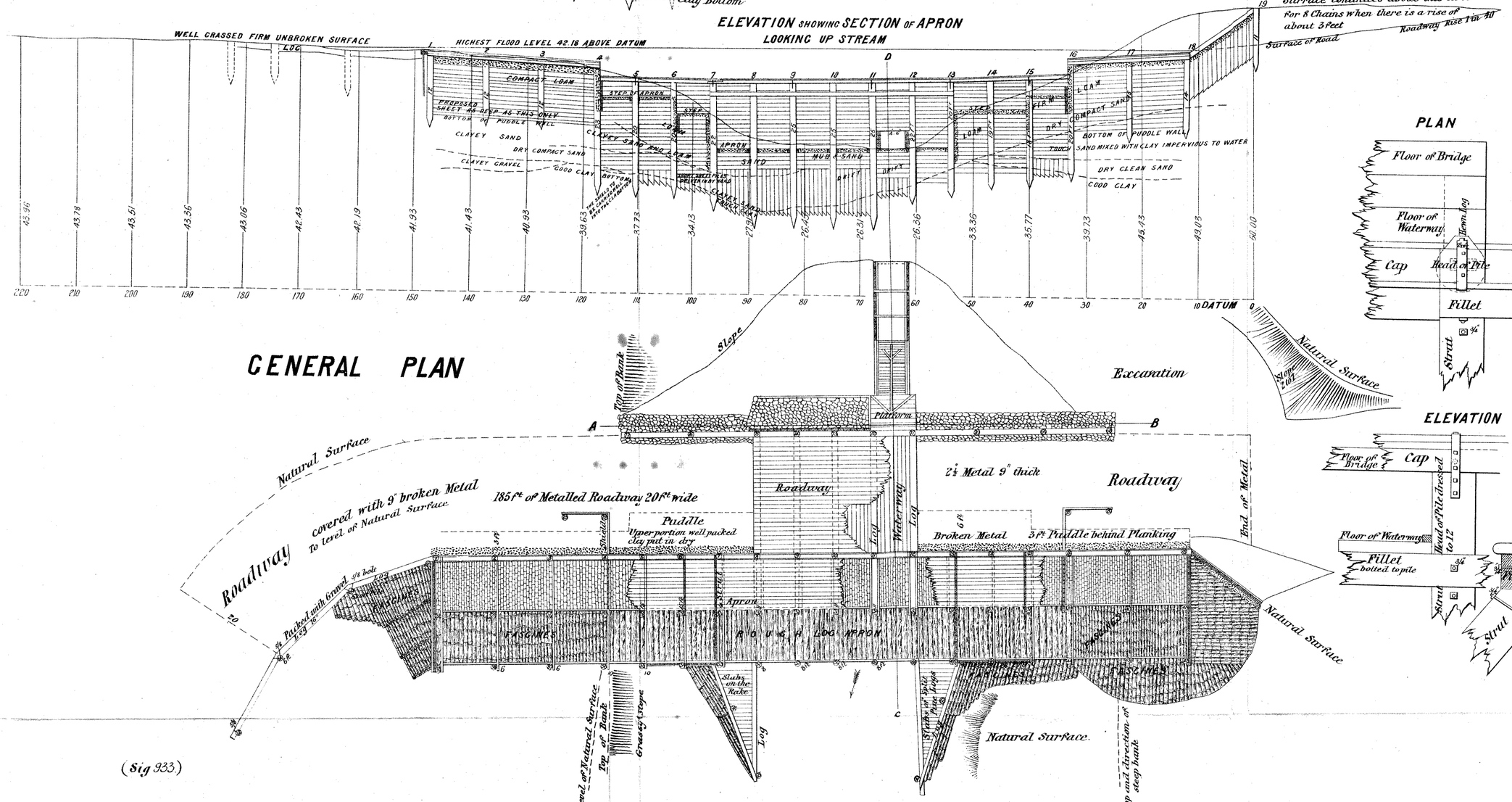
SECTION ON LINE CD.



ELEVATION AND SECTION ON LINE A.B. LOOKIIIC DOWN THE RIVER



ELEVATION SHOWING SECTION OF APRON LOOKING UP STREAM



PLAN

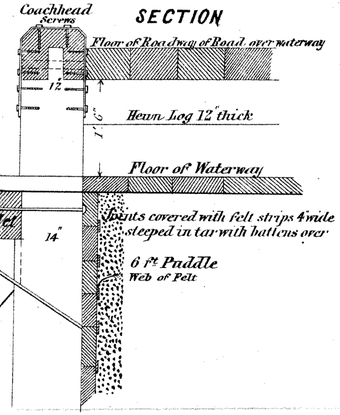
DETAILS AT HEAD OF PILE No 11

SCALE.

GENERAL PLAN

ELEVATION

SECTION



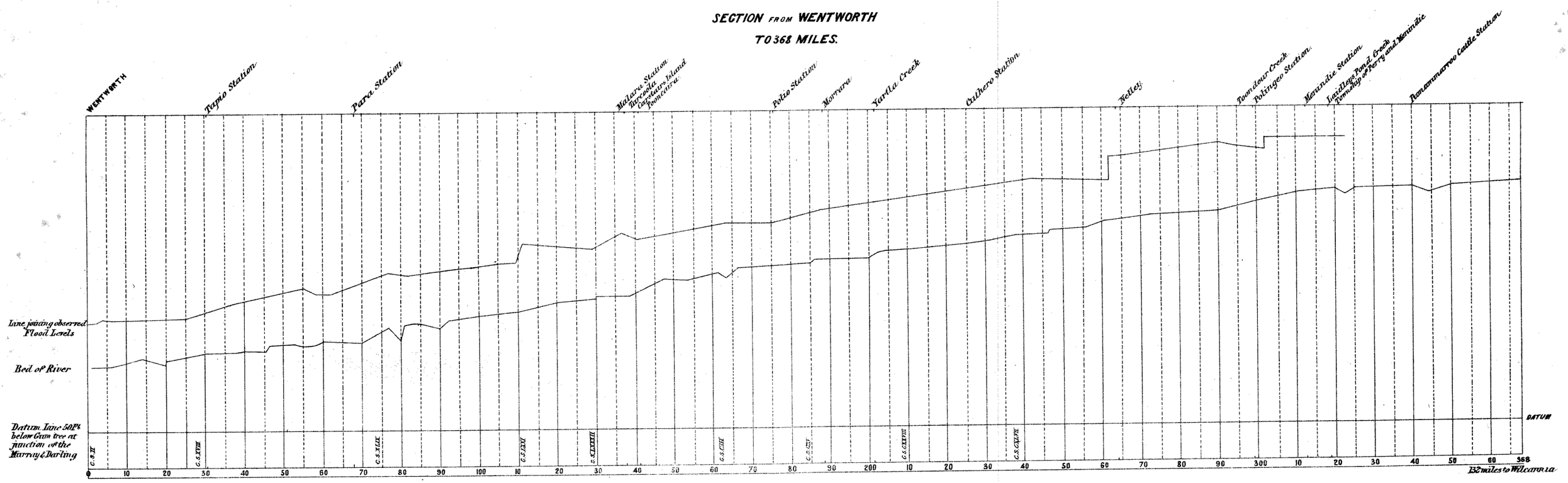
(Sig 933)

PHOTO-LITHOGRAPHED AT THE GOVT. PRINTING OFFICE, SYDNEY, NEW SOUTH WALES.

THE DARLING NAVIGATION

SECTION FROM WENTWORTH

TO 368 MILES.



Horizontal Scale.

10 5 0 10 20 30 40 50 Miles

Vertical Scale.

20 10 0 20 40 60 80 100 Feet

(Sig. 933.)

PHOTO-LITHOGRAPHED AT THE GOVT. PRINTING OFFICE,
SYDNEY, NEW SOUTH WALES.

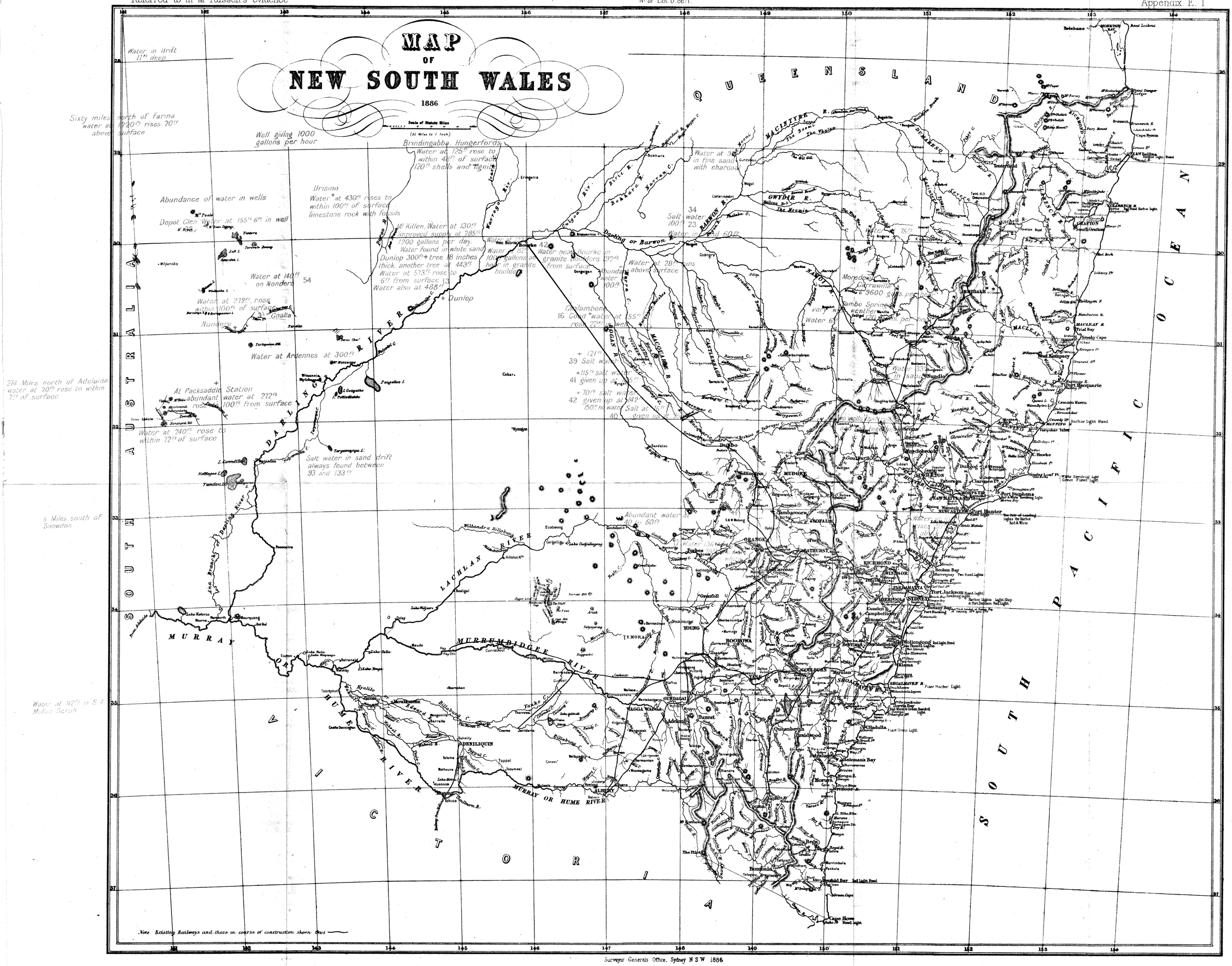
Referred to in Mr Russell's evidence

Water on Cooper's Creek in two Wells at 60 and 90ft

Abundant water at 91ft on the Thompson River

No of Lith. D. 86.1.

Appendix E. I



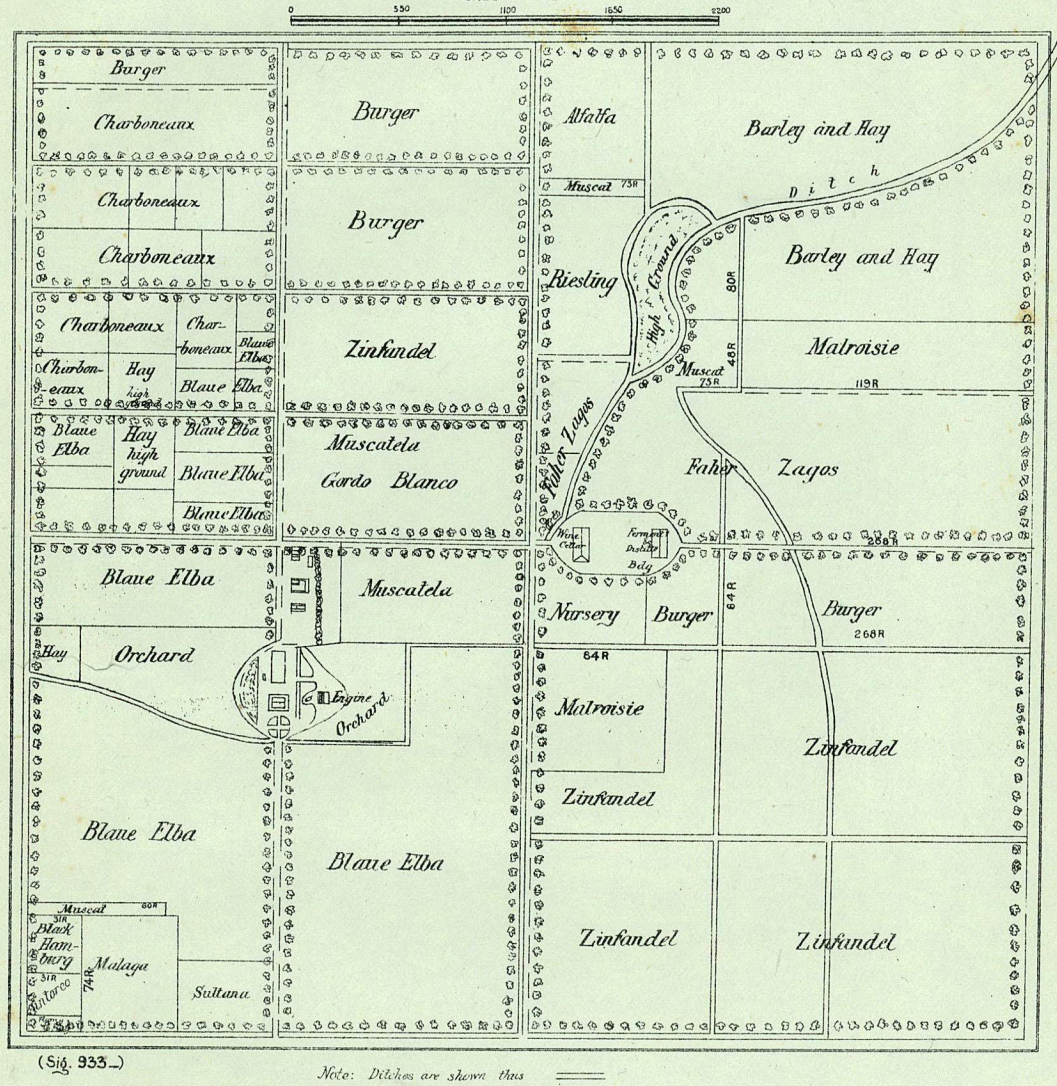
Surveyor Generals Office, Sydney N S W 1886

APPENDIX J²

PLAN OF Mr BARTON'S VINEYARD

NEAR FRESNO

CALIFORNIA U.S.A.



(Sig. 933_)

Note: Ditches are shown thus
Roads
Road around grounds.
Grounds are 1 mile square

PHOTO-LITHOGRAPHED AT THE GOVT. PRINTING OFFICE, SYDNEY, NEW SOUTH WALES.

SKETCH MAP OF NEW SOUTH WALES

SHOWING APPROXIMATELY

The position of the water bearing formation referred to in the Report of the Government Geologist published in the, "Report of Inquiry into the State of the Public Lands, &c. 1883.

Railways shown thus ——— Proposed Extensions thus - - - -
Postal Roads do. do. ——— Telegraphs ——— do ———
Pastoral District Boundaries ———

SCALE OF MILES 0 10 20 30 40 50 60 70 80 90 100

Nº 1	Alluvial deposits occurring more or less along all rivers & creeks & swampy hollows. Not defined on Map.
Nº 2	Pleistocene deposits in places overlying older formations Nos 3, 4 & 5,
Nº 3	Miocene marine deposits chiefly covered by Nº 2.
Nº 4	Cretaceous formations in places covered by Nº 2.
Nº 5	Older Mezozoic, Paleozoic, and Igneous formations, in many places covered by Nº 2, especially on the western flank of the Dividing Range, in the Gwydir, Liverpool Plains, Bligh, Wellington Albert, Lachlan, and Murrumbidgee Districts, Artesian water exceptional in these formations, and well water generally more or less brackish.

(Sig 933.)

APPENDIX F.2.

GEOLOGICAL SKETCH MAP OF NEW SOUTH WALES

DEPARTMENT OF MINES—NEW SOUTH WALES

COMPILED FROM THE ORIGINAL MAP of the late REVD W. B. CLARKE, M.A. F.R.S. F.G.S. &c. BY C. S. Wilkinson, L.S. F.G.S. Government Geologist

SCALE OF STATUTE MILES

Miles 10 5 0 10 20 30 40 50 60 70 80 90 100 Miles

Scale 1/63360 of Nature; 16 Miles = 1 Inch

NOTE

The numbers 1, 2 & 3 indicate Territorial Divisions (boundaries shewn thus —o—o—) adopted for the purpose of the Inquiry into the state of the Lands, instituted January 1883.

Existing Railways & those in course of construction, shewn thus, ——

EXPLANATION OF COLORS

Cainozoic
- T Tertiary
- Cr Cretaceous

Mesozoic
- J Clarence Series
- W Wianamatta Series
- H Hawkesbury Series

Palæozoic
- C Coal Measures (Permian—Upper Coal Measures; Upper Carboniferous—Lower Coal Measures; Lower Carboniferous) (Upper Marine Series, Lower Marine Series)
- D Devonian
- L Limestone
- S Silurian

Not Geologically examined.

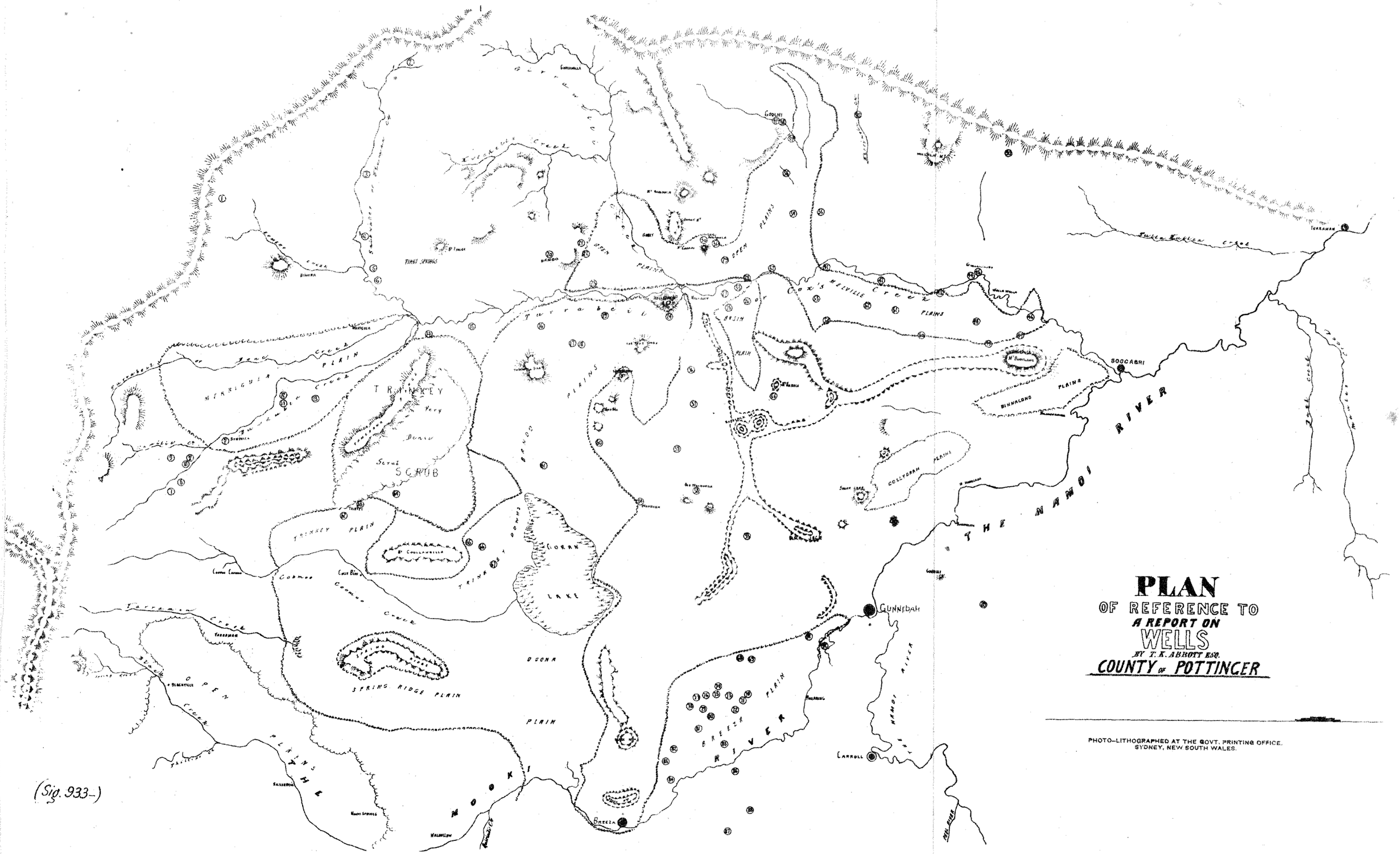
Metamorphic and Igneous
- M Serpentine
- V Diorite and Basalt (Volcanic and Supposed)
- P Porphyry
- Gr Granite

Recent Surveys by Mess.rs E. F. Pitman, Assoc. R.S.M. and Lamond H. G. Young Assoc. R.S.M. F.G.S. of the Geological Staff have been inserted on this Map

Sig. 933.

PHOTO-LITHOGRAPHED AT THE GOVT. PRINTING OFFICE, SYDNEY, NEW SOUTH WALES.

APPENDIX K²



PLAN
OF REFERENCE TO
A REPORT ON
WELLS
BY T. K. ABBOTT ESQ.
COUNTY OF POTTINGER

(Sig. 933–)

PHOTO-LITHOGRAPHED AT THE GOVT. PRINTING OFFICE,
SYDNEY, NEW SOUTH WALES.

A COMPANION MAP to this one, showing longitudinal sections, may be found in the Annual Report of the Department of Mines for the Year 1884.

COLONY OF QUEENSLAND

SOUTH AUSTRALIA

COLONY OF VICTORIA

SOUTH PACIFIC OCEAN

NEW SOUTH WALES

HYDROGRAPHICAL MAP

SHEWING POSITION OF WELLS

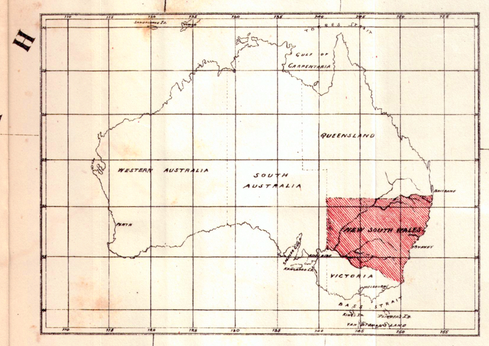
SCALE

COMPILED BY

W. B. Henderson,
Superintendent of Drills
1885

EXPLANATION OF COLORS

- Shows Fresh Water
- Shows Salt Water
- Shows Brackish Water
- Shows Fresh Artesian Water
- Shows where No Quality of Water is given

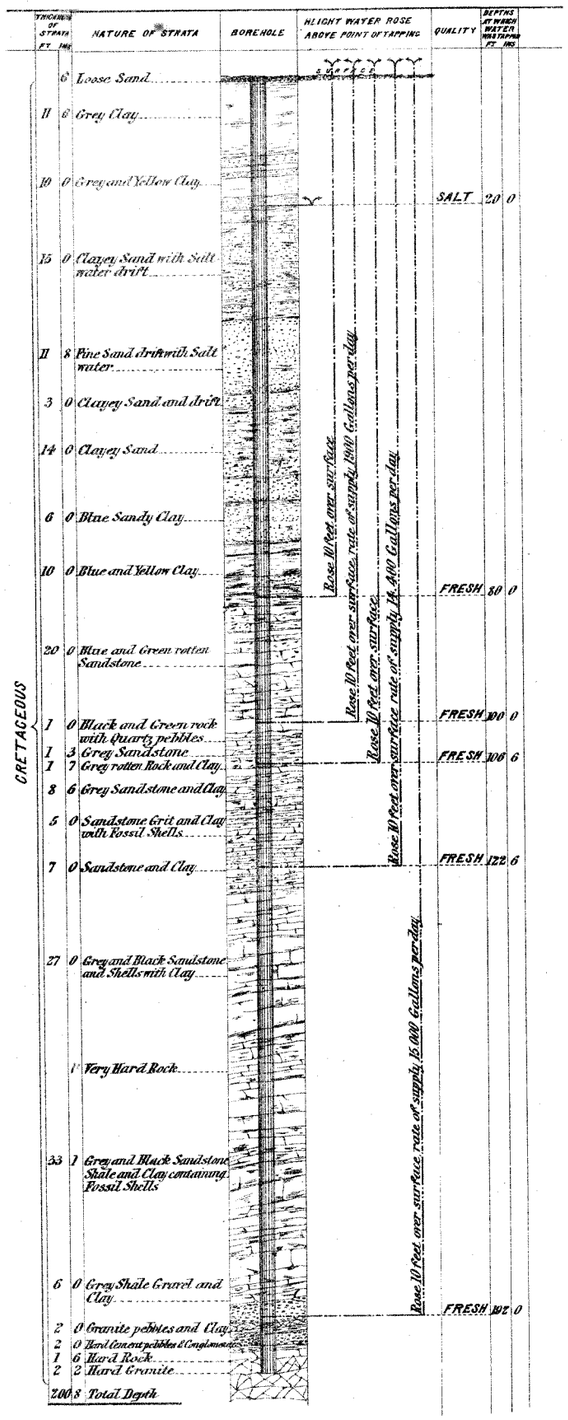


(Sig. 933.)

Gibbs, Shallard, & Co. Lith. Sydney.

APPENDIX L¹

SECTION OF BORE Nº B³
Nº 2 WATER AUGER
AT 5¼ MILES WEST OF BOURKE



REMARKS

SALT WATER Tapped at 20 Ft. Stood at 20 Ft below surface.

FRESH WATER	.	80 Ft.	Rose 10 Ft. over surface, rate	Gals per day	
.	.	100 Ft.	. . .	1900	. .
.	.	106 Ft 6 Ins.	. . .	.	. .
.	.	122 Ft 6 Ins.	. . .	14.400	. .
.	.	192 Ft.	. . .	15.000	. .

At 116 feet passed through Layer of Fossil bivalve shells

EXPLANATION The lines drawn across the Section of Bore and carried upwards with arrow at top represent the levels that the several layers of water were tapped, and the height each rose above the depth tapped.

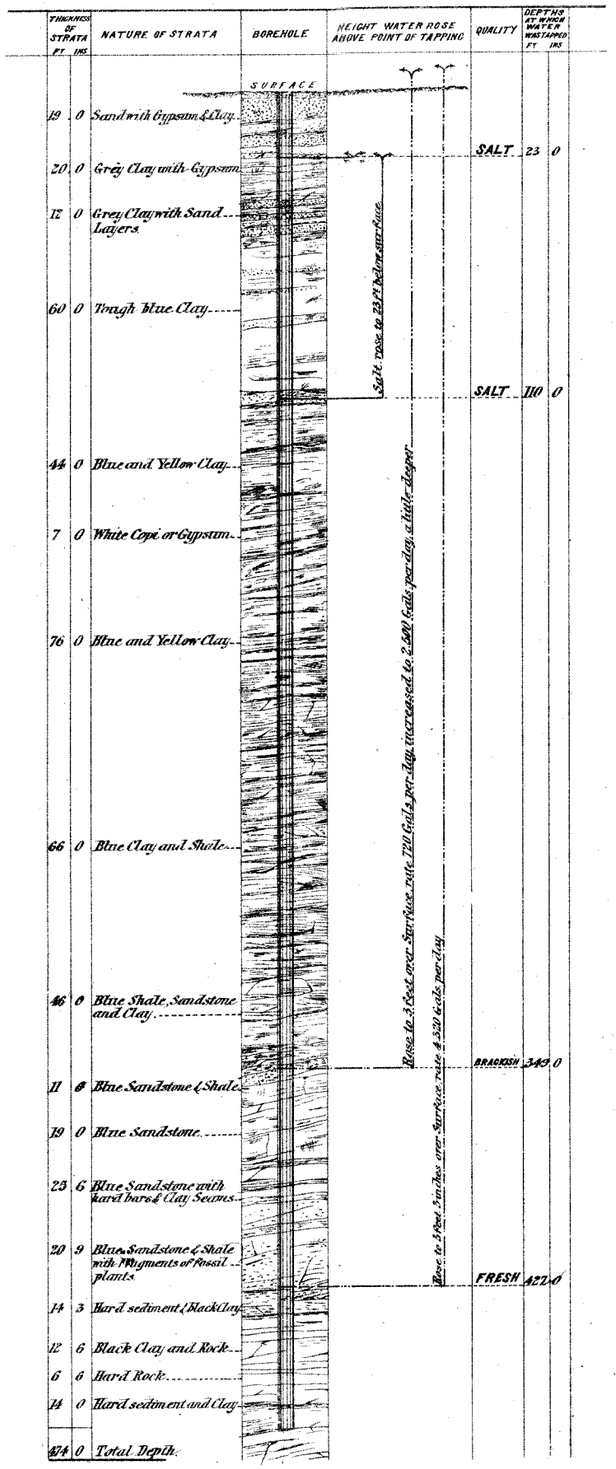
The supply per diem is according to measurements made at time the water was tapped.

The supply is being tested at stated periods since discovered, to ascertain if any diminution or variation during change of Seasons exist.

Sig 933.

APPENDIX L²

SECTION OF BORE Nº D.
Nº 2 WATER AUGER
AT 57 MILES WEST OF BOURKE.



REMARKS

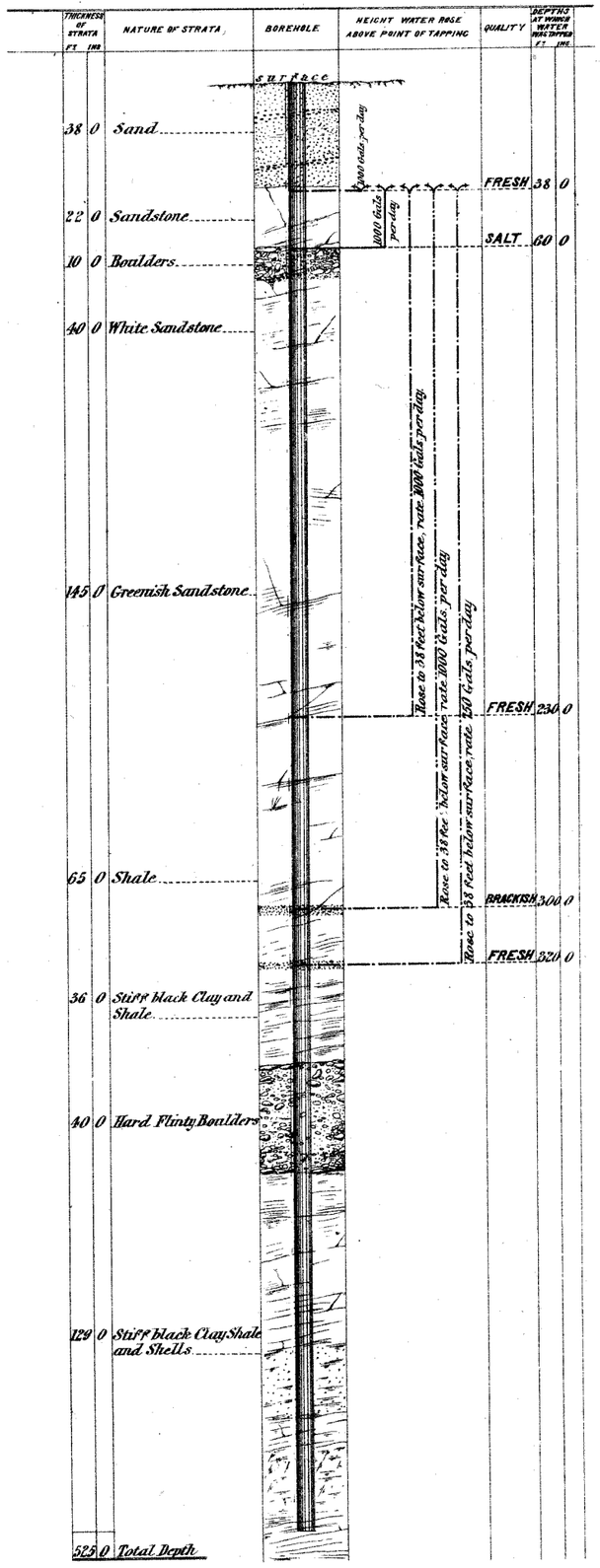
SALT WATER Tapped at 23 feet. stood at 23 Ft below surface.
SALT . . 110 feet rose to 23 Ft below surface.
BRACKISH . . 349 Feet rose to 3 Ft over surface rate 720 Gals per day increased to 2,500
FRESH . . 427 Feet rose to 3 Ft 3 inches over surface rate 4320 Gals per day

During course of testing the supply of Water met with, the Salt and Fresh Water were made to flow over the surface each distinctly,—the fresh issuing from the 4 inch tubes and the Salt from the 5 inch.

PHOTO-LITHOGRAPHED AT THE GOVT. PRINTING OFFICE, SYDNEY, NEW SOUTH WALES.

APPENDIX L³

SECTION OF BORE
AT WEELAMURRA STATION
WARRECO DISTRICT



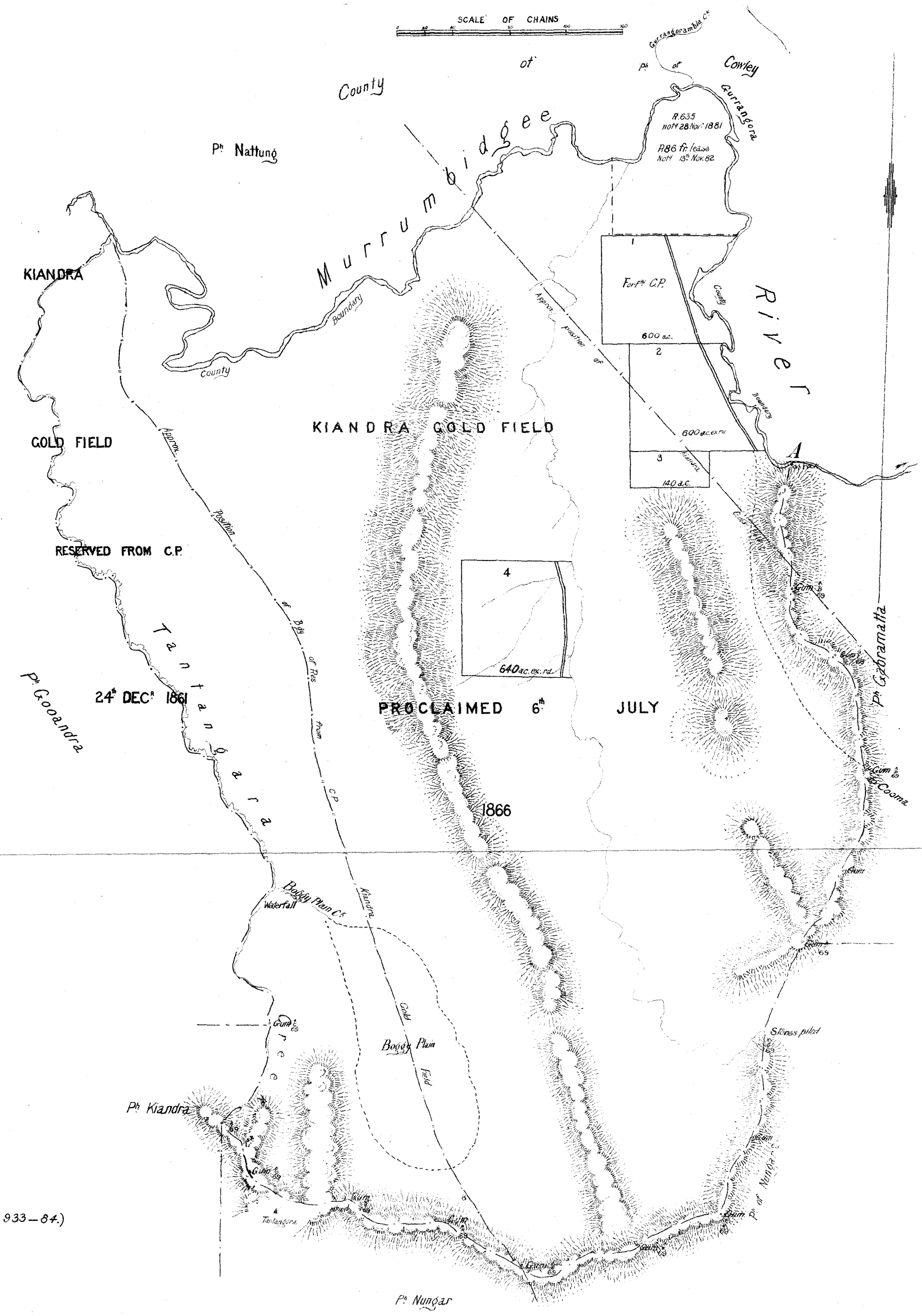
REMARKS

FRESH WATER Tapped at 38 feet. stood at 38 below surface. rate 1000 Gals per day

SALT	.	.	60 feet rose to 38 Ft	.	.	1000	. .
FRESH	.	.	230	.	38 Ft	1000	. .
BRACKISH	.	.	300	.	38 Ft	1000	. .
FRESH	.	.	320	.	38 Ft	750	. .

APPENDIX. P

PLAN
of the
PARISH OF TANTAGARA
COUNTY of WALLACE



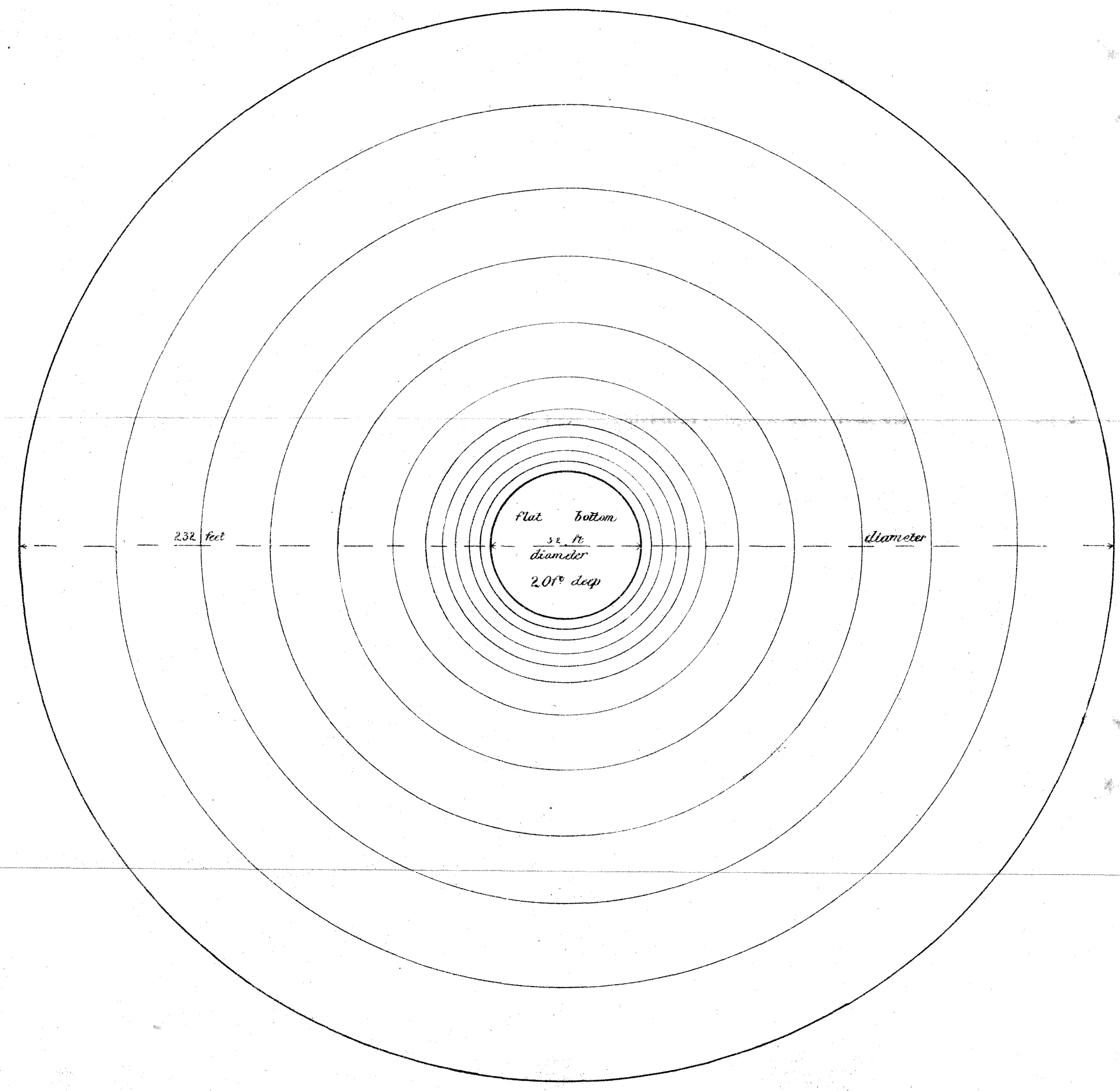
(Sig. 933—84.)

SKETCH ACCOMPANYING APPENDIX Q!

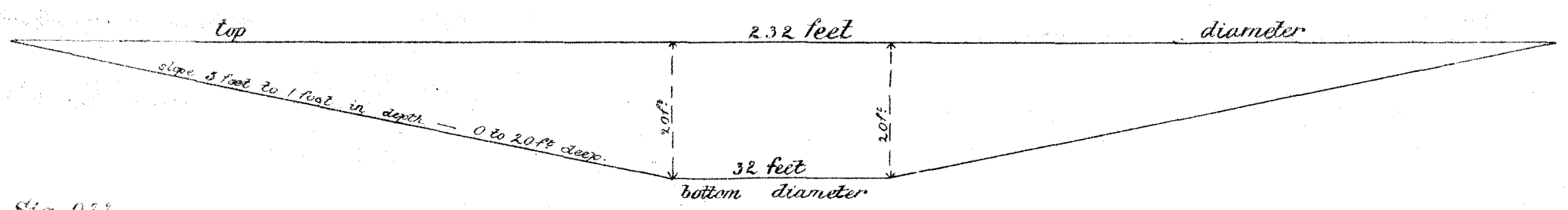
shewing dimensions of a 12.076 yards circular tank with a slope of 5 feet to 1 in depth and ranging from 0 to 20 ft deep

SCALE OF FEET

20 0 20 40 60



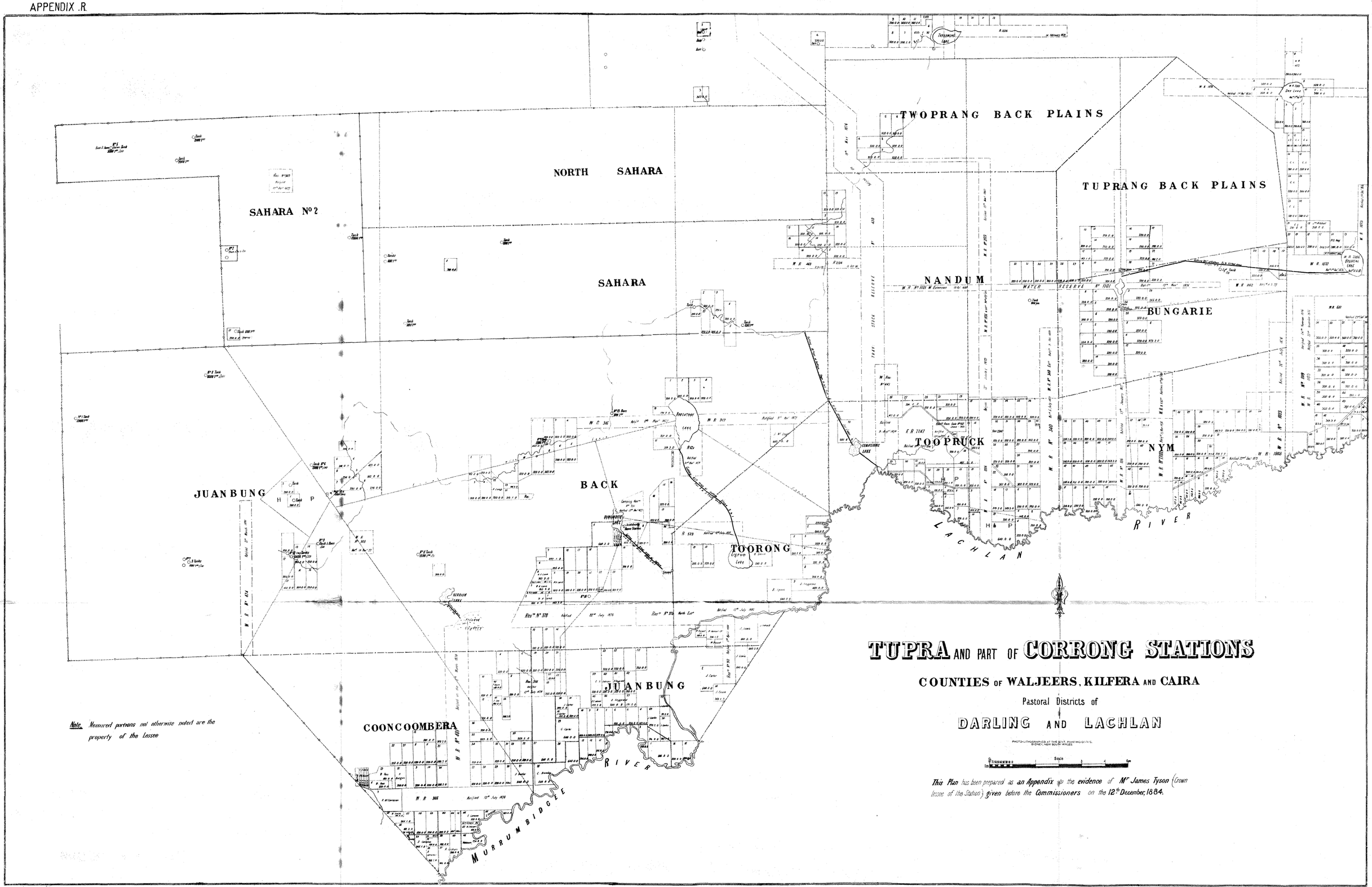
CROSS SECTION



Sig 933–

PHOTO-LITHOGRAPHED AT THE GOVT. PRINTING OFFICE,
SYDNEY, NEW SOUTH WALES.

APPENDIX .R.


NORTH SAHARA
SAHARA Nº 2
SAHARA
TWOPRANG BACK PLAINS
TUPRANG BACK PLAINS
NANDUM
WATER RESERVE Nº 1101
BUNGARIE
TOOPRUCK
NYM
BACK
JUANBUNG
TOORONG
COONCOOMBERA
JUANBUNG
TARAMPING LAKE
BOOLATHER
BOOMAHOLT
SERRIGOR LAKE
TOORONG LAKE
LACHLAN RIVER
MURRUMBIDGEE RIVER
STOCK RESERVE
W R 1101 W Extension
W R 1101 Extension
W R 1102
W R 1103
W R 1070
W R 1072
W R 1073
W R 1076
W R 1077
W R 1078
W R 1079
W R 1080
W R 1081
W R 1082
W R 1083
W R 1084
W R 1085
W R 1086
W R 1087
W R 1088
W R

APPENDIX T¹

B

W R 577

to Wilcannia

Notd 26 Nov 1883

From Speculation Lake

To Menindee

W R 574

Parish of

Notified 26th Nov 1883

PAMAMAROO LAKE

(Area abt 26 sq Miles)

Parish of Hume

W R 17

3 August 1866

TS R 355 Extn

Notified 26 Nov 1883

3

H B Hughes

1P

640 a

Notified 29 Sept 1877

to Wilcannia

Notd W R 18 3rd August 1866

TANDURE LAKE

W R 575

Titabaira

Notified 26th Nov 1883

(Area abt 7½ sq miles)

Boundary

Parish

1

E Palmer

CP

640 a

RIVER DARLING

3

A L Harvey

CP

640 a

From Menindee

TRACING FROM SKETCH
WITH MISC 83-18986
Shewing approximate position of
PAMAMAROO AND TANDURE LAKES
Parishes of Titabaira and Hume
COUNTY OF TANDORA
Scale of Chains
0 40 80 120 160

Sig. 933.

APPENDIX AA.

[To evidence of Mr. C. H. Fitzhardinge.]



FLOOD ON THE MACQUARIE RIVER, AT DUBBO, IN 1879.

APPENDIX T 2

TRACING

Shewing section & cross sections taken at the

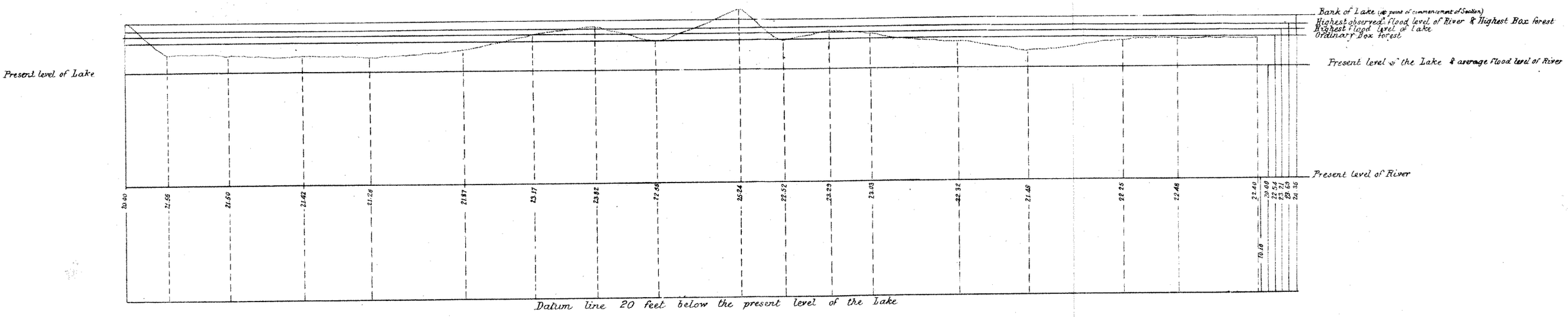
Lake Creek

PARISH OF GURANGULLY

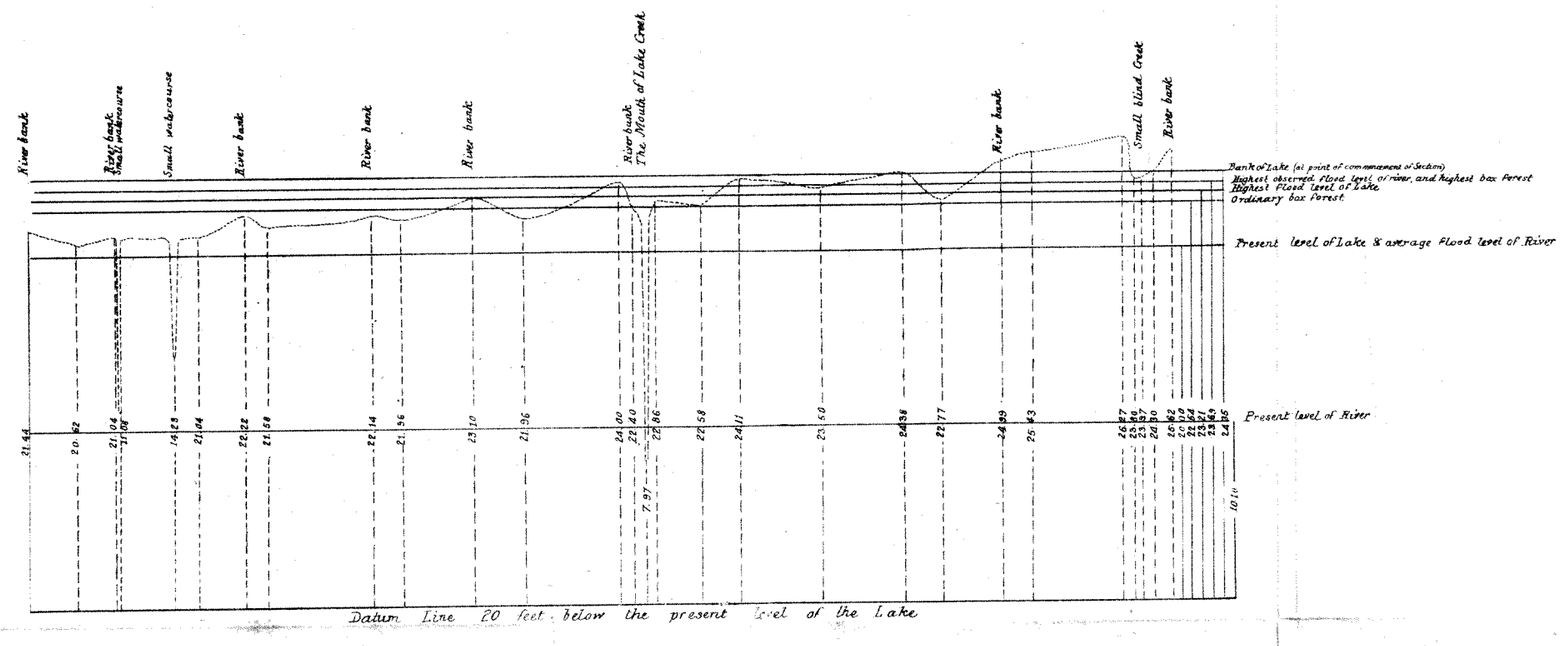
County of Dowling

Horizontal Scale 10 ch: to 1 in. Vertical Scale 4 ft to 1 in:

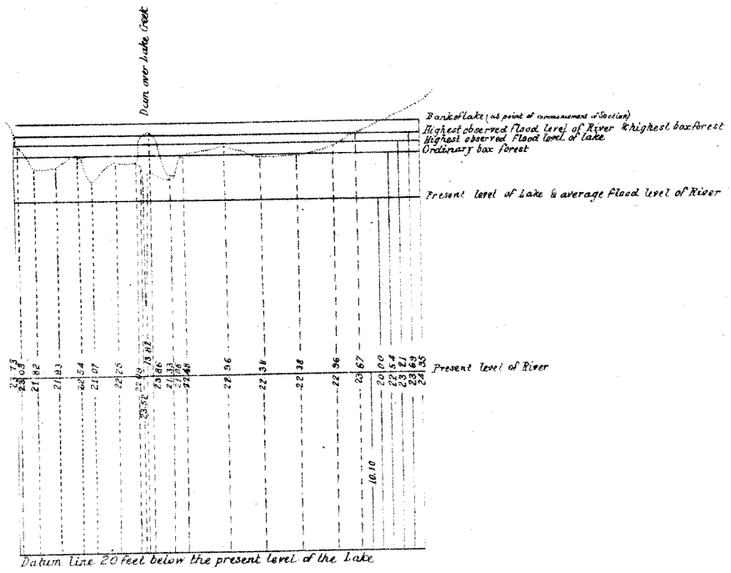
Section from Cargelligo Lake to the River



Gross section at mouth of Lake Creek

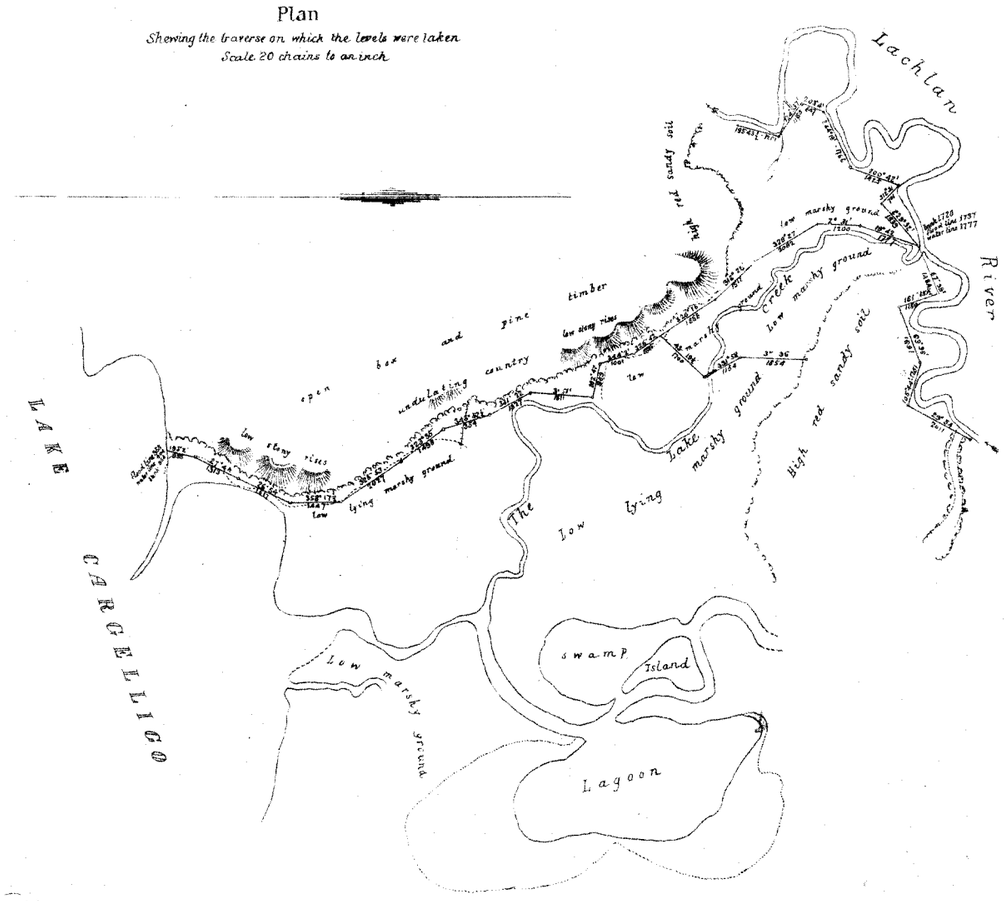


Cross section on Dam



Plan

Shewing the traverse on which the levels were taken
Scale 20 chains to an inch



Sig. 933

Transmitted to the Surveyor General with my letter of the 30th July 1880 No 80/a

J K Watt
Govt Surveyor

APPENDIX T³

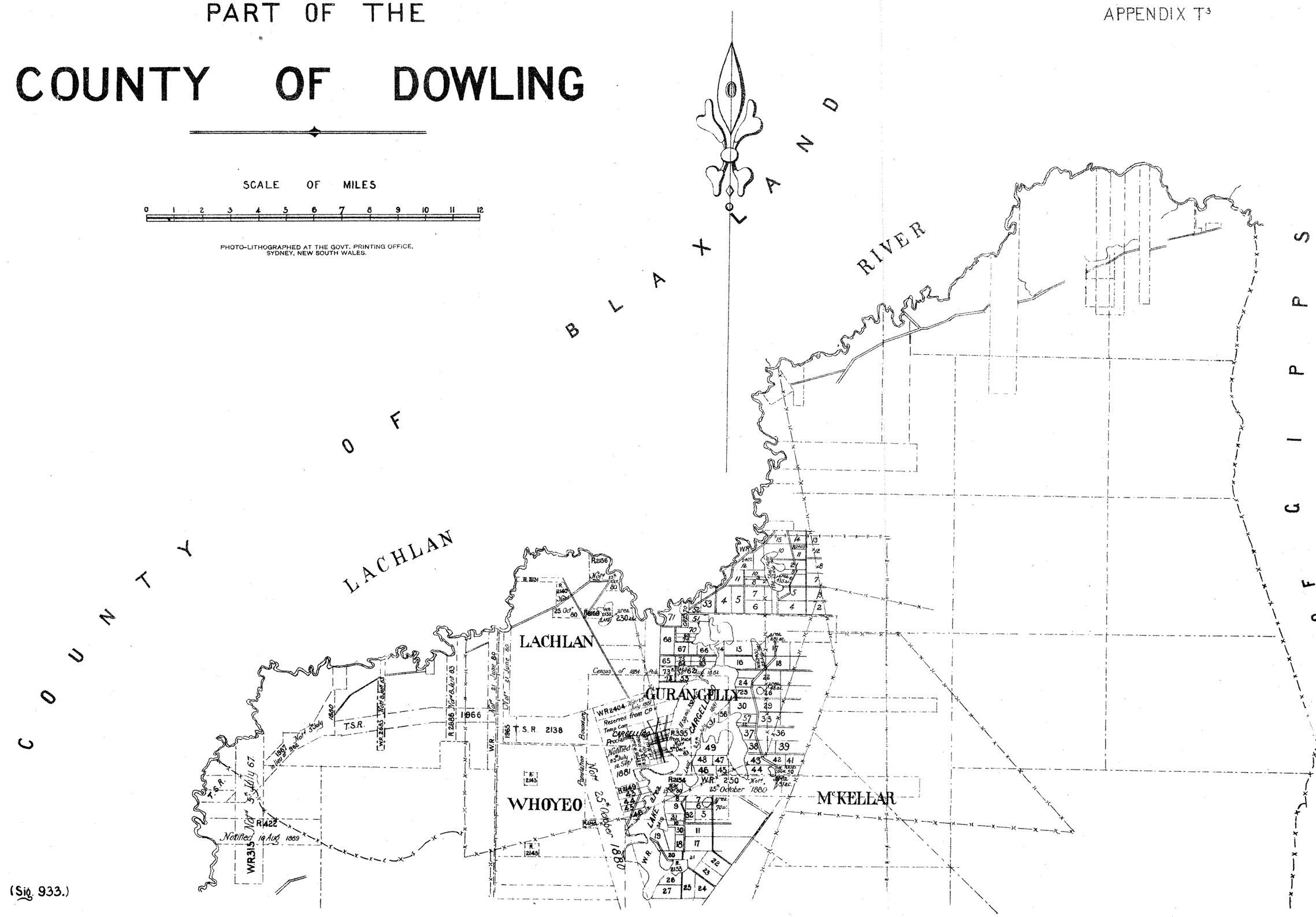
PART OF THE

COUNTY OF DOWLING

SCALE OF MILES

0 1 2 3 4 5 6 7 8 9 10 11 12

PHOTO-LITHOGRAPHED AT THE GOVT. PRINTING OFFICE,
SYDNEY, NEW SOUTH WALES.



(Sig. 933.)

PLAN

shewing the positions of the

LEILA and KULLYNA MUD SPRINGS

County of Gunderbooka

Scale 40 Chains

Appendix X 1

W.R.№ 77 Ext^n from Sale
Notified 8th Feby 1880
100 ac.
100 ac. ex rd
Mud Spring
Yard
House
Permanent Spring
Intermittent Spring
Creek
Track to Eringonia
5868
6400
1560
67
3

W. R. № 77 from Sale
Notified 23rd February 1889
Reserve № 11 from Lease
Permanent Spring

PARISH OF LEILA

Appendix X 2

to Eringonia
from Eringonia
East 8326
8172
45 mile peg
Red sandy soil, good grazing land
Res: 63 from Lease 773 from Sale
Ramp
Saltbush Mulga Budtha, Box & L. Scrub
Post 44 M 12 M
to Nelly's Spring
Notified 7th May 1883
640 ac. ex Portion 1
Stony Ridge
Mulga & low Scrub
Poor Grazing Land
Woolshed
40 ac.
Kullyna Spring
Mud Springs
45 mile peg 5961
Yard Stock
Mulga and low Scrub
Spur
from Lira Station
to Bourke
to West Bourke
2485
2000
3559
2 1

PLAN

showing the position of the

BARLUNGMA WELL on W.R.161

County of Irrara

Scale 40 Chains

Appendix X 3

8000
Barlungma Well
COONBILLY
PARISH OF
W R № 161
5000
17500
9500
13000
N 29° 29' E
13014
265° 01'
1812
N 29° 29' E
3758
251° 00'
174° 11'
2815
180°
4000
Notified 18th November 1874

(Sig. 933—)

PHOTO-LITHOGRAPHED AT THE GOVT. PRINTING OFFICE, SYDNEY, NEW SOUTH WALES.

Appendix EE

With letter to the Royal Commission Conservation of Water
dated 31st December 1884 No 84-2

Signed

Fritz Solling
Licensed Surveyor



Scale

40 35 30 25 20 15 10 5 4 3 2 1 0 40 80 120 Chains

(Sig. 933.)

PHOTO-LITHOGRAPHED AT THE GOVT. PRINTING OFFICE,
SYDNEY, NEW SOUTH WALES.

Appendix to the evidence of Mr H.A. Cilliat

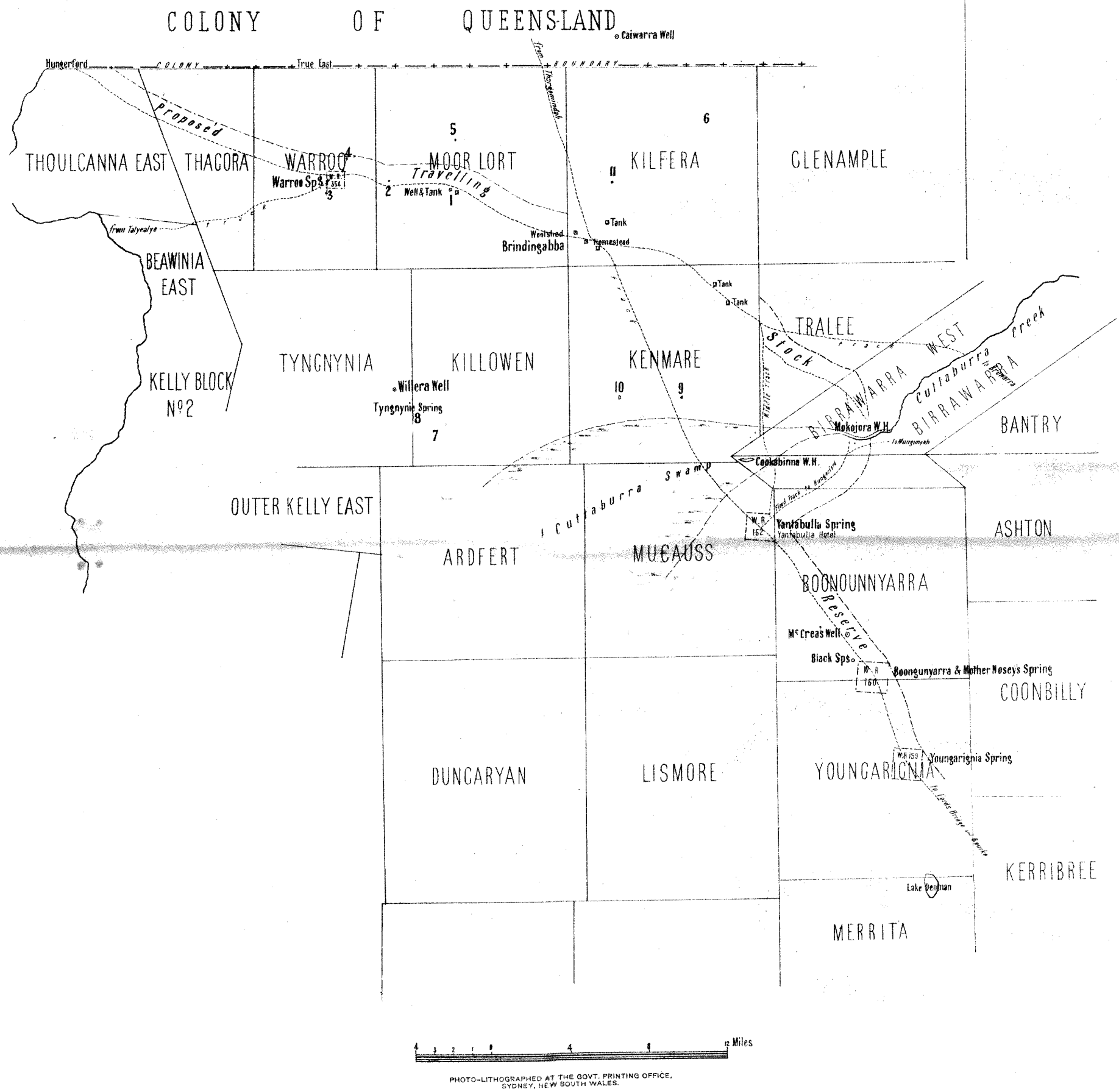


PHOTO-LITHOGRAPHED AT THE GOVT. PRINTING OFFICE,
SYDNEY, NEW SOUTH WALES.

SECOND EDITION

MAP OF NEW SOUTH WALES

SHEWING THE BOUNDARIES OF RUNS

COMPILED AND DRAWN AT THE
Occupation of Lands Office, Sydney.
Ecclestone Du Faur Chief Draftsman

Scale 8 miles to 1 inch.

SOUTH AUSTRALIA

COLONY OF VICTORIA

MURRAY RIVER

MURRAY RIVER

MURRAY RIVER

SECOND EDITION

(Appendix CC2)

To the evidence of Mr H.A. Gilliat



Sig. 933

PHOTO-LITHOGRAPHED AT THE GOVT. PRINTING OFFICE, SYDNEY, NEW SOUTH WALES.

APPENDIX. FF.

PLAN OF

TOGANMAIN STATION

CENTRAL DIVISION

COUNTY OF BOYD

Scale of Chains

This Plan has been prepared as an ***Appendix*** *to the* ***evidence*** *of* ***Mr Thomas Robertson*** *(Crown lessee of the Station) given before the* ***Commissioners*** *on the 31st July, 1885.*

PHOTO-LITHOGRAPHED AT THE GOVT. PRINTING OFFICE, SYDNEY, NEW SOUTH WALES.

MULBURRUGA

TOGANMAIN

SINGORAMBAH

EILGINBAH

WADDADURI

EUNANBRENNAN

MACLEAY

GUNDADALINE

DOWAL

CLIFFORD

WANGABAWGUL

GUMBLEBOGIE

MALEY

Murrumbidgee River

Polygonum Creek

Resumed Area

Leasehold Area

(Sig. 933_)

1885-6.

NEW SOUTH WALES.

DIAGRAMS AND PLANS.

ROYAL COMMISSION—CONSERVATION OF WATER.

SECOND REPORT OF THE COMMISSIONERS.

621—

RODNEY

VICTORIA

Scale Two Miles to an Inch

ROYAL COMMISSION CONSERVATION OF WATER NEW SOUTH WALES 2ND REPORT

Lithographed & Printed at the Surveyor General's Office, Sydney, N.S.W. Sept. 1886
(N° of Lith. D.86.36)

L 141+

GUNBOWER

MURRAY RIVER

MOIRA

ECHUCA

KANYAPELLA

ECHUCA NORTH

WYUNA

ECHUCA SOUTH

KOYUGA

TONGALA

TARIPTA

EASTERN CHANNEL

COOMBOONA

LINDERA

GOULBURN RIVER

No 2 BRANCH

MOOROOPNA WEST

MOOROOPNA

KYABRAM EAST

KYABRAM

NANNELLA

SUMMERING

ROCHESTER

CAMPASPE RIVER

MAIN CHANNEL

Shire Boundary

BONN

CROP

CARAGCARAG

GIRGARRE

GIRGARRE EAST

TOOLAMBA WEST

TOOLAMBA

NORTHERN MAIN CHANNEL

MOOROOPNA CHANNEL

No 1 BRANCH

BURNEWANG

Lake Cooper

BURRAMBOOT EAST

RUNNYMEDE

WANALTA

COLBINABBIN

CAMPASPE

MAIN CHANNEL

TAATURA CHANNEL

EMBANKED CHANNEL

NORTH MURCHISON

WARANGA

MOORA

Marked line of Railway from Goornong to Albury

MURCHISON

Pumping Site

WHROO

MUSKERRY

TOOLLEEN

CORNELIA

GOBARUP

SOORLIM

DARGALONG

STATE FOREST

BALIESTON

WAHRING

WIRRATE

CHERRINGTON

AXEDALE

WESTON

CROSBIE

REDCASTLE

KNOWSLEY

KNOWSLEY EAST

DARGILE

GOULBURN

DALHOUSIE

ROYAL COMMISSION ON WATER-SUPPLY

Echuca and Waranga Water Works Trust

GENERAL PLAN OF WORKS

Scale 2 miles to an Inch

Boundaries of Water supply district shown thus —|—|—

Boundaries of proposed extensions " " +—+—+

Outline of works constructed or to be constructed ~~~

Outline of works surveyed only – – – –

Position of Tanks constructed by Shire shown thus ⊙

" " " " " Trust " " ◎

ROYAL COMMISSION CONSERVATION OF WATER NEW SOUTH WALES
2ND REPORT.

GRASSY FLAT RESERVOIRS

VICTORIAN WATER SUPPLY.

CASTLEMAINE & SANDHURST DISTRICT

GENERAL PLAN

SHEWING

LINES OF AQUEDUCT, RESERVOIRS &c.

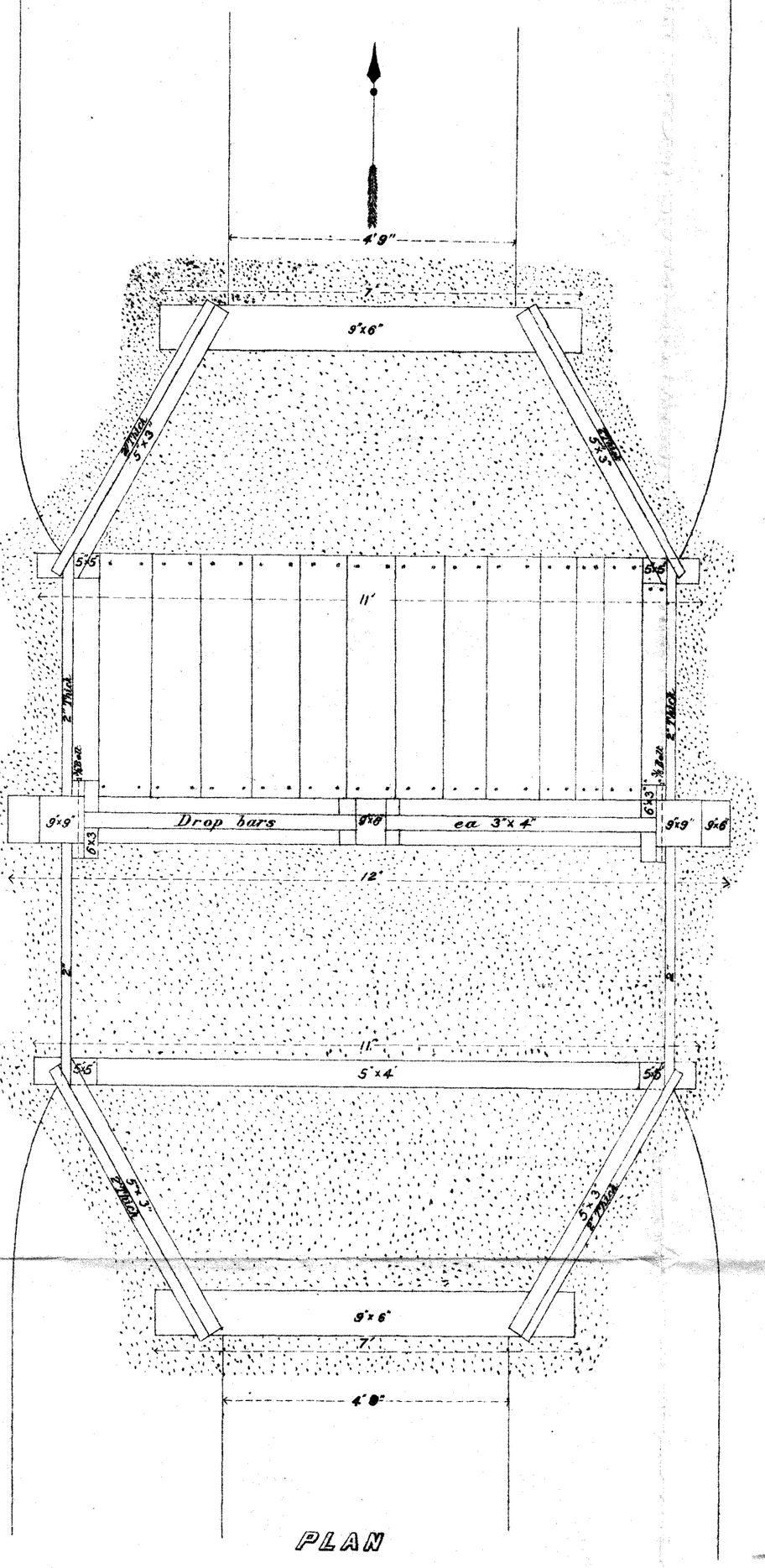
Lithographed & Printed at the Surveyor General's Office, Sydney, N.S.W.
September, 1886. — No. of Lith: D-86.20.

SCALE. HALF INCH TO ONE MILE.

WATER AREA 610.466 ACRES

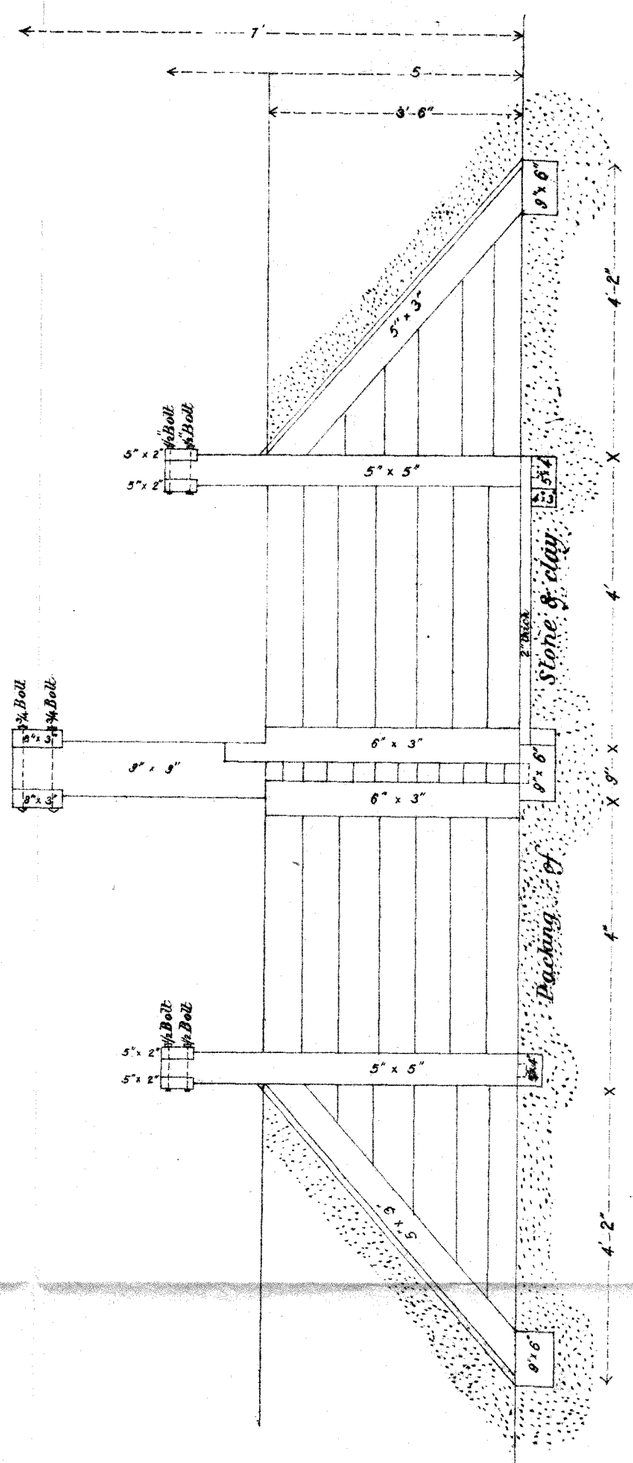
NOTE: — CHANNELS MARKED THUS ~~~~ NOT CONSTRUCTED. CHANNELS MARKED THUS ~~~~ IN COURSE OF CONSTRUCTION.

Present Capacity of Flumes in Main Channel from Malmsbury Reservoir to 18.m Junction about 13 Million Gallons per 24 hours.



CROSS SECTION AT CENTER

LIFTING HOOK FOR DROP BARS



LONGITUDINAL SECTION

ROYAL COMMISSION CONSERVATION OF WATER NEW SOUTH WALES 2ND REPORT

Lithographed & Printed at the Surveyor General's Office Sydney N.S.W.
September 1886
(No of Lith. D-86-24)

UNITED ECHUCA and WARANGA WATERWORKS TRUST

(VICTORIA)

DROP BAR FRAME AND BARS ETC

In Main Channel between Wanalta and Cornella Creeks

Scale 2 ft to 1 inch.

Average Cost £17-0-0

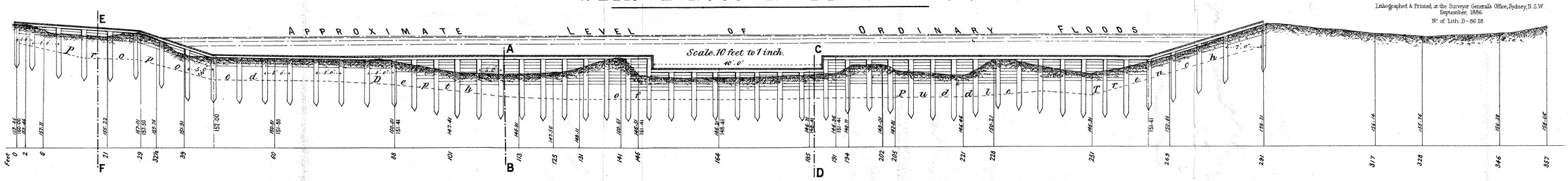
Approximate Cost £800.—

YARRAMBIACK WATER SCHEME. (VICTORIA.)

WEIR ACROSS RIVER WIMMERA.

Lithographed & Printed, at the Surveyor Generals Office, Sydney, N.S.W.
September, 1886.
No of Lith: D-86-28.

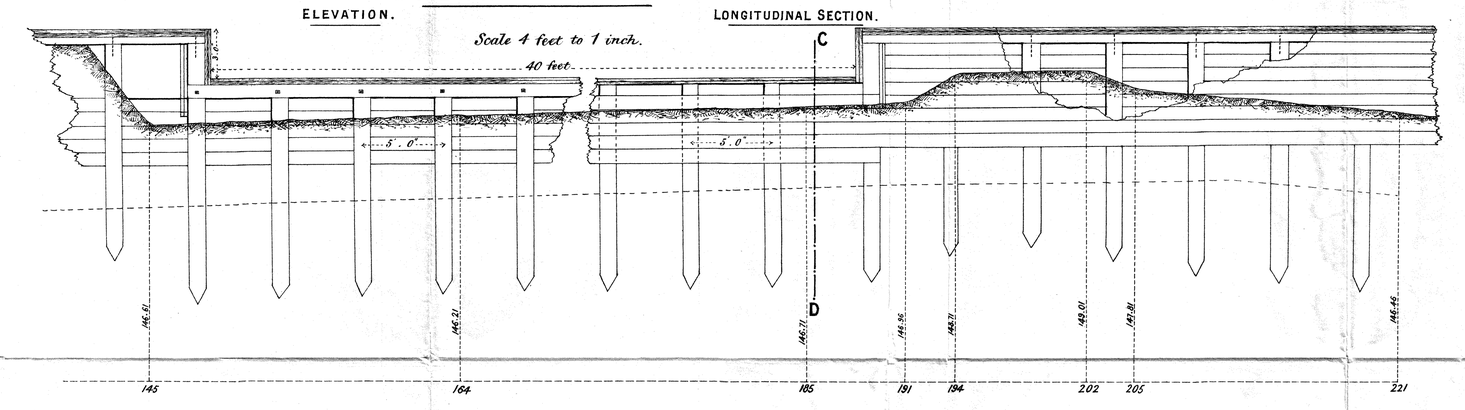
RIVER COMMISSION CONSERVATION OF MURRAY, MURRUMBIDGEE & LOWER-NEW SOUTH WALES-RIVERS
2ND REPORT.



ELEVATION.

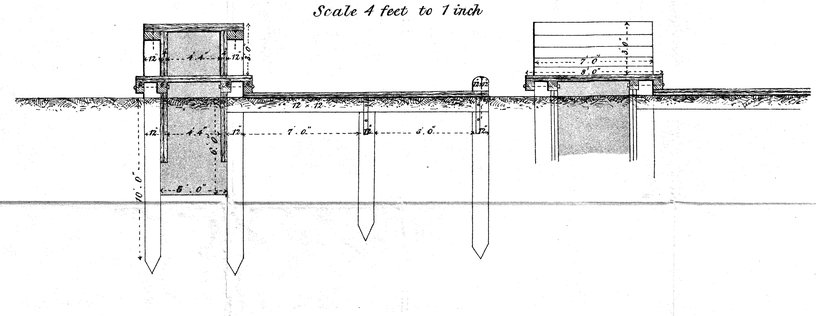
Level of water hole near mouth of Creek. 147.16
Level of highest point at mouth of Creek. 147.61
Level of water in bed of River at do 147.31

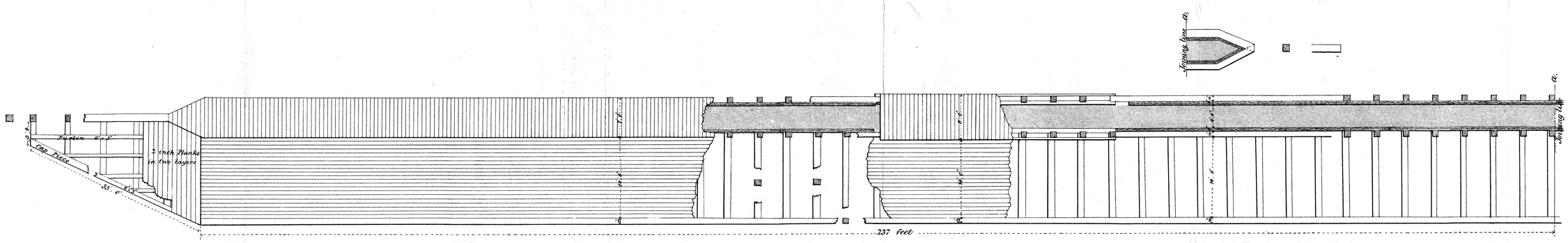
BREAK IN WEIR.



CROSS SECTIONS ON LINE C.D.

Scale 4 feet to 1 inch



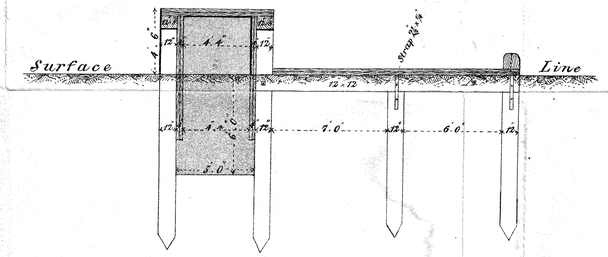


PLAN

Scale 8 feet to 1 inch.

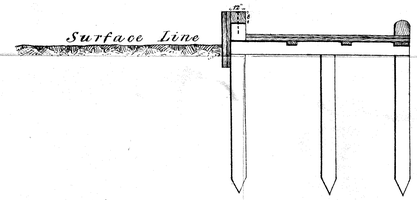
CROSS SECTION ON LINE A.B.

Scale 4 feet to 1 inch.



CROSS SECTION ON LINE E.F.

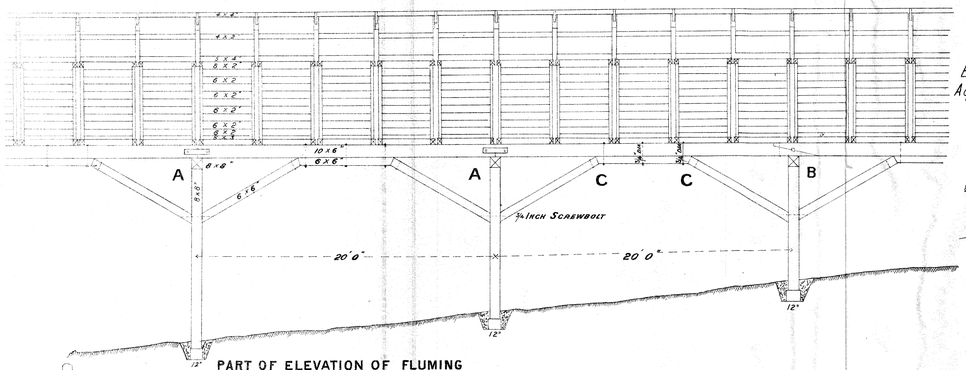
Scale 4 feet to 1 inch.



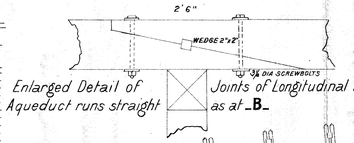
BALLAARAT & BALLAARAT EAST WATER SUPPLY (VICTORIA)

UPPER GONG GONG RESERVOIR – CONNECTING CHANNEL – DESIGN FOR FLUMING –

COMMISSION CONSERVATION OF RIVERS NEW SOUTH WALES SYDNEY
2ND REPORT
Lithographed & Printed at the Surveyor Generals Office Sydney
September 1886
N°of Lith. D86 22



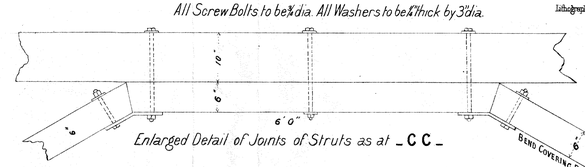
PART OF ELEVATION OF FLUMING



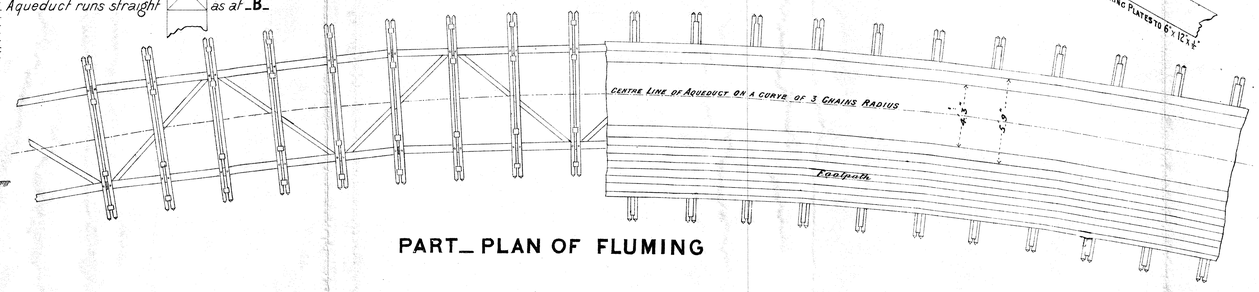
Enlarged Detail of Aqueduct runs straight

Joints of Longitudinal Bearers where the as at – B –

All Screw Bolts to be ¾ dia. All Washers to be ¼ thick by 3" dia.



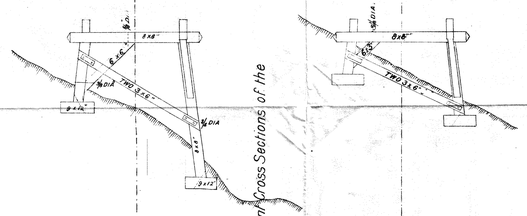
Enlarged Detail of Joints of Struts as at – C C –

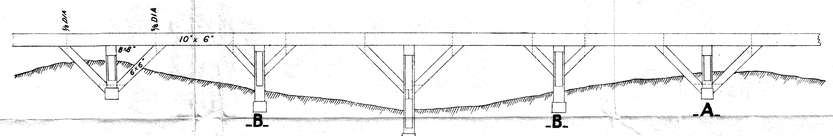


PART – PLAN OF FLUMING

General Scale 4 Feet to 1 Inch

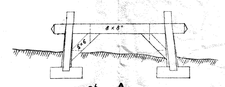
CROSS SECTIONS OF PIERS OF FLUMING

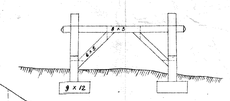


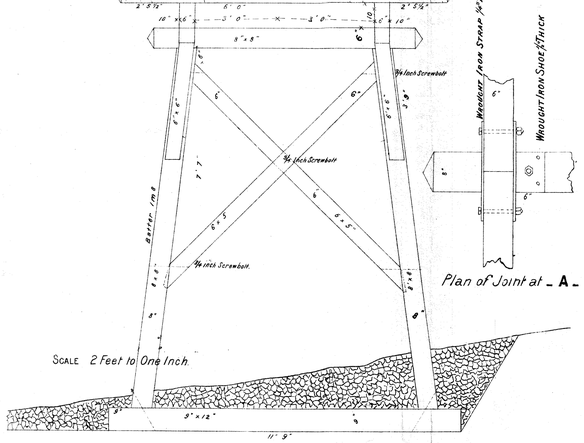


Assumed Section of Piers Under Girder Where the Ground does not admit of Struting

CROSS SECTIONS

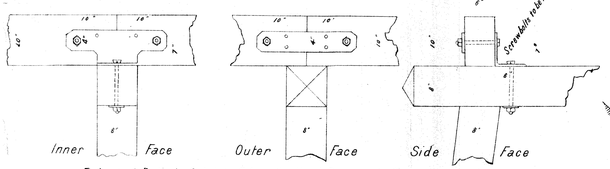






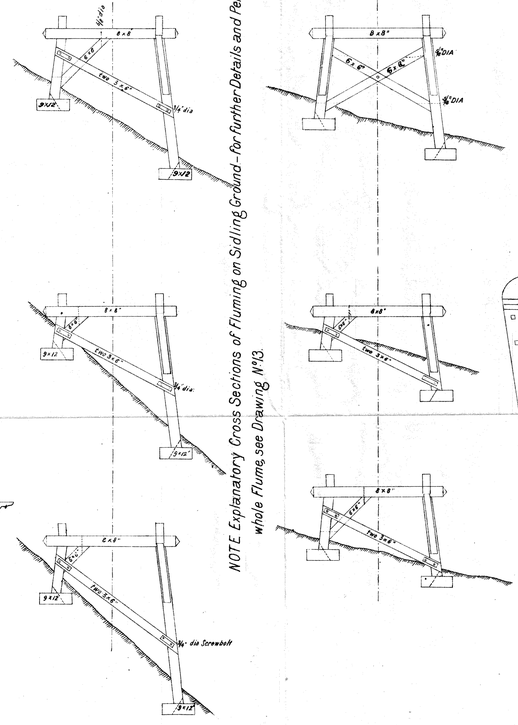
Plan of Joint at – A –

GENERAL CROSS SECTION OF FLUMING



Enlarged Detail of Joint of Longitudinal Bearers in Curves as at – A –

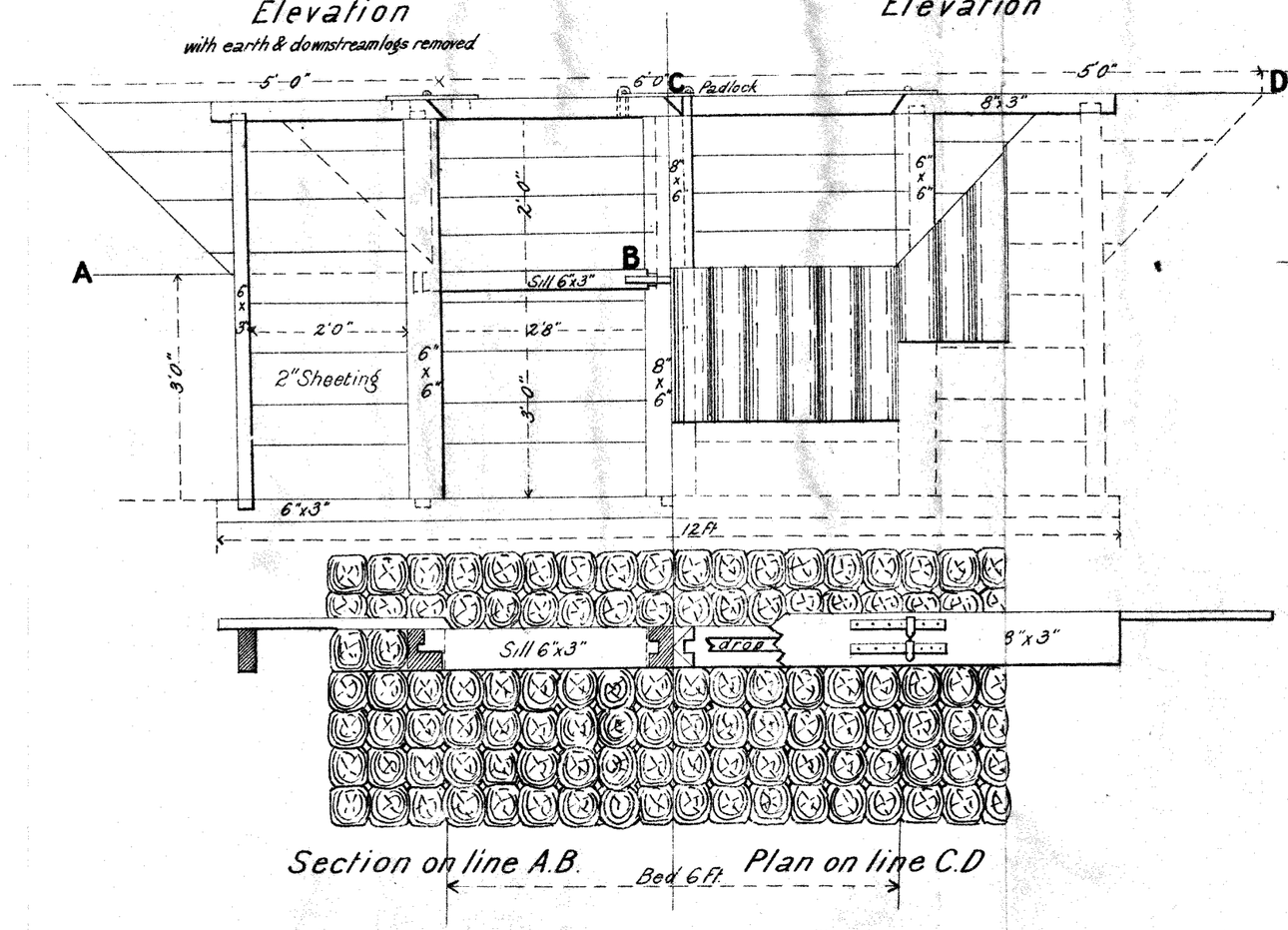
NOTE. Explanatory Cross Sections of Fluming on Sliding Ground – for further Details and Permanent Cross Sections of the whole Flume, see Drawing N°13.

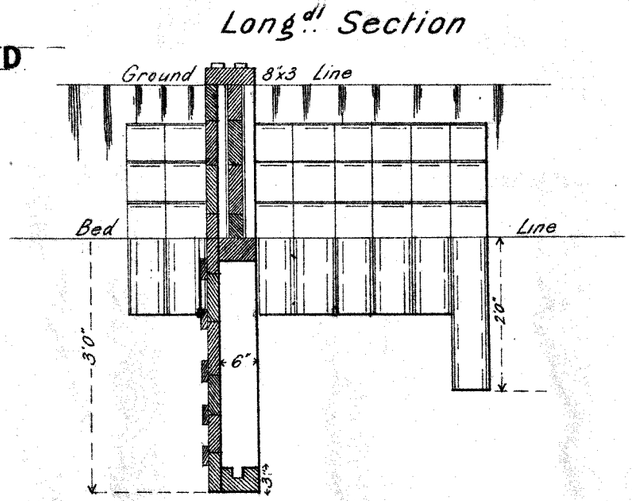


WIMMERA UNITED WATER WORKS TRUST

Regulating Stop for Channels

(VICTORIA)





Scale - 2 Feet to One Inch.

Cost from £7 to £10.

ROYAL COMMISSION CONSERVATION OF WATER NEW SOUTH WALES
2ND REPORT

Lithographed & Printed at the Surveyor General's Office Sydney N.S.W.
September 1886

(No of Lith. D-86-33)

WIMMERA UNITED WATER WORKS TRUST (VICTORIA)

REGULATOR &c

For Longerenong and Dooen.

COST £274.2.9 EACH

COMMISSION CONSERVATION OF WATER NEW SOUTH WALES 2ND REPORT

Lithographed & Printed at the Surveyor Generals Office Sydney N.S.W.
September 1886
(No of Lith D86-28)

SCALE

12 6 0 5 10 15 20 25

HALF ELEVATION
of Downstream Side

SECTION ON C C

SECTION ON A A
crest of Embankment 15 Ft

QUARTER PLAN
with roadway removed

QUARTER PLAN (as finished)

HALF SECTIONAL PLAN ON E F

SECTION ON B B

SECTIONAL PLAN BELOW FLOORING

Gravel Consolidated

Copied for Water Conservation Commission N.S.W

Stuart Murray.
Sec. Roy. Wat. Sup. Victoria 3/1/95

WIMMERA UNITED WATER WORKS TRUST.

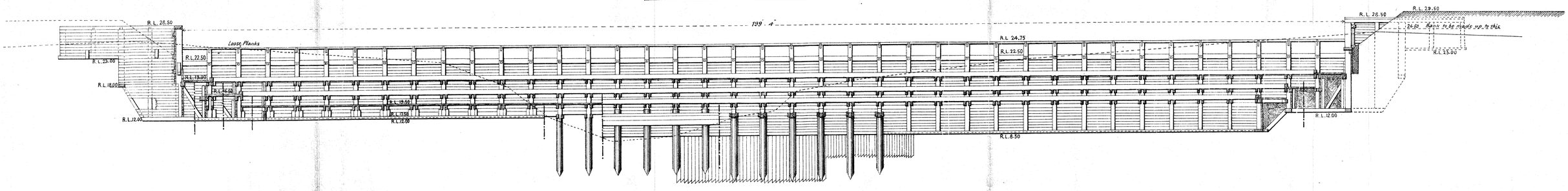
WEIR ACROSS THE WIMMERA AT DOOEN RESERVE. (VICTORIA.)

Cost £1707 14.2

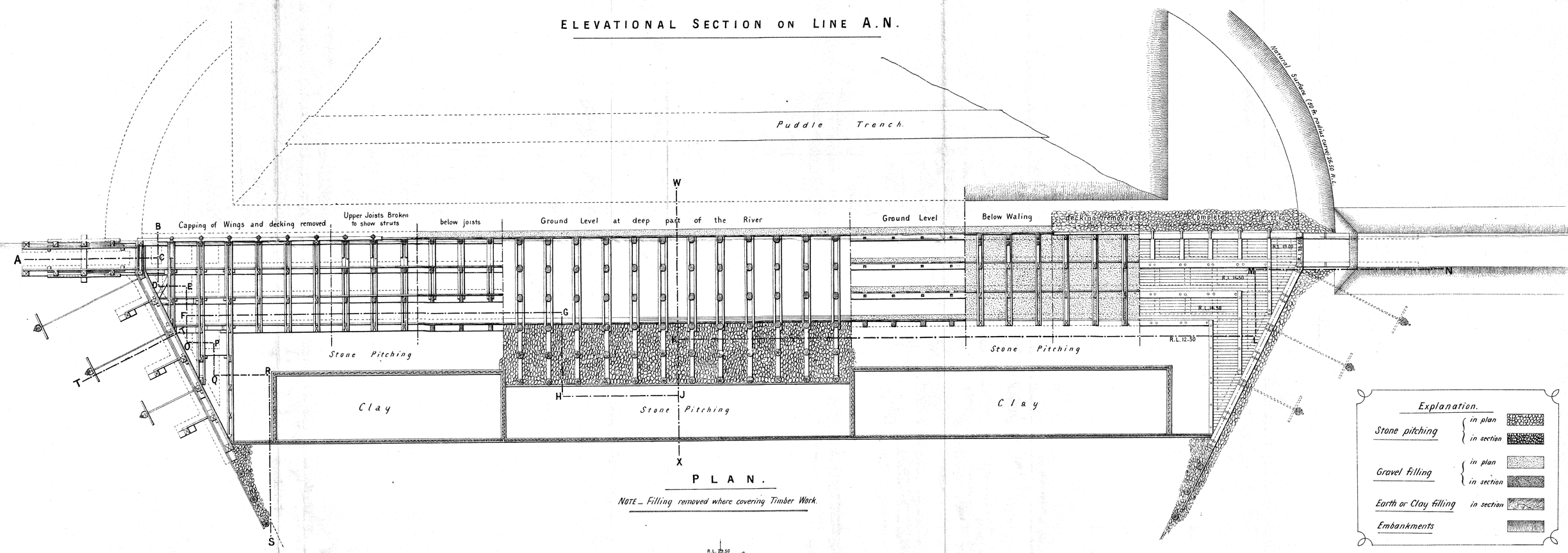
Lithographed & Printed in the Surveyor Generals Office, Sydney, N.S.W.
September, 1886.
No of Lith. D-86.27.

Scale ⅛ inch = 1 foot.

0 5 10 15 20 25 30 35 40 F^t

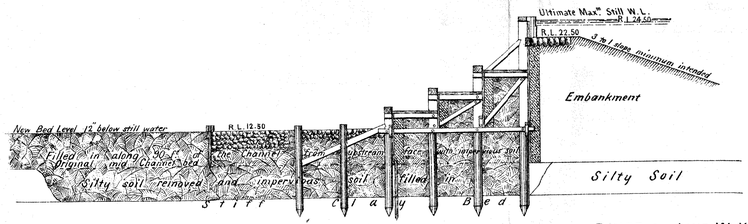


ELEVATIONAL SECTION ON LINE A.N.

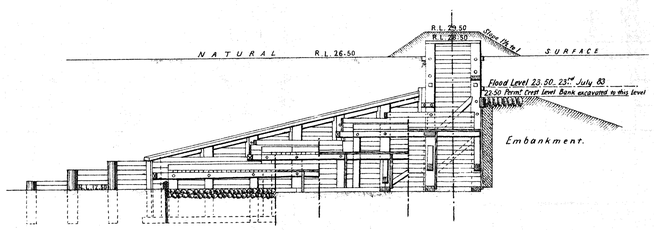


PLAN.

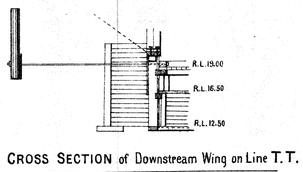
NOTE_ Filling removed where covering Timber Work.



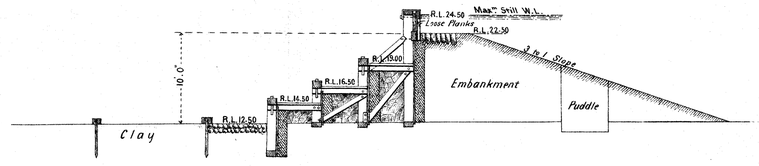
CROSS SECTION OF WEIR AT DEEP PART OF RIVER ON LINE W.X.



SECTION ON LINE B.S.



CROSS SECTION of Downstream Wing on Line T.T.



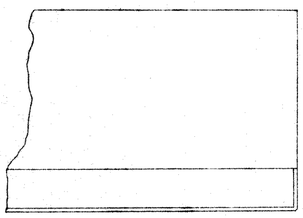
GENERAL CROSS SECTION OF WEIR.

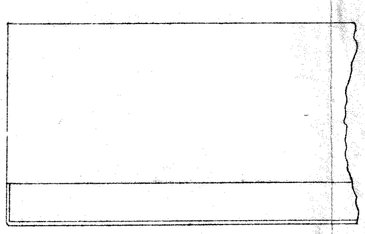
except at deep part of river.

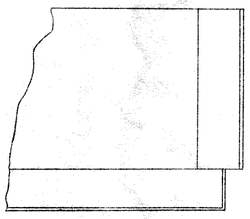
BRIDGEWATER WEIR (VICTORIA)

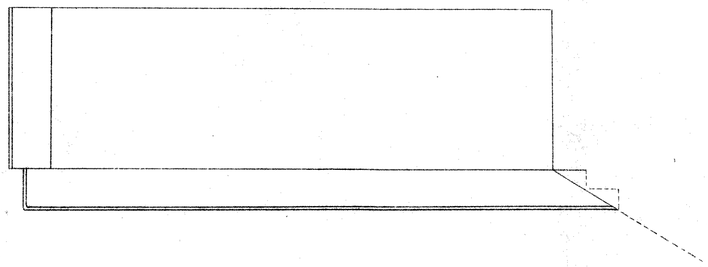
DETAILS

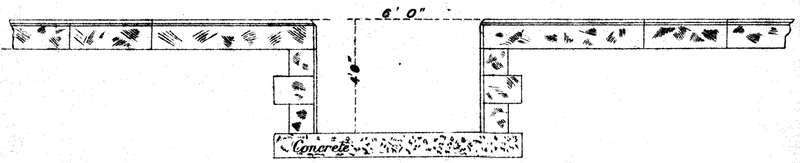




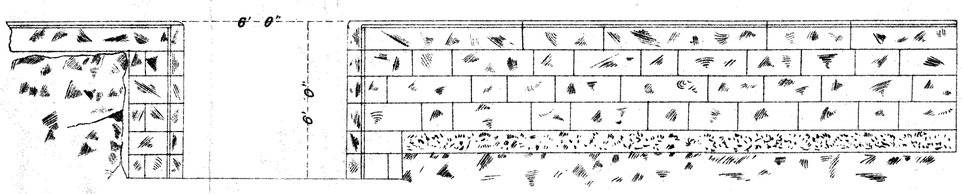




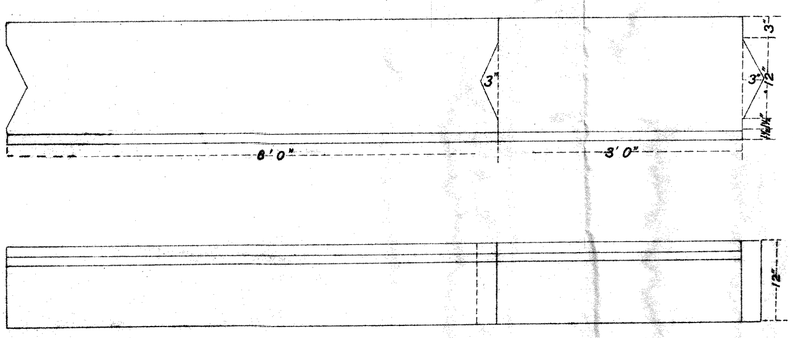




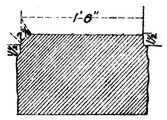
COMPENSATION CHANNEL

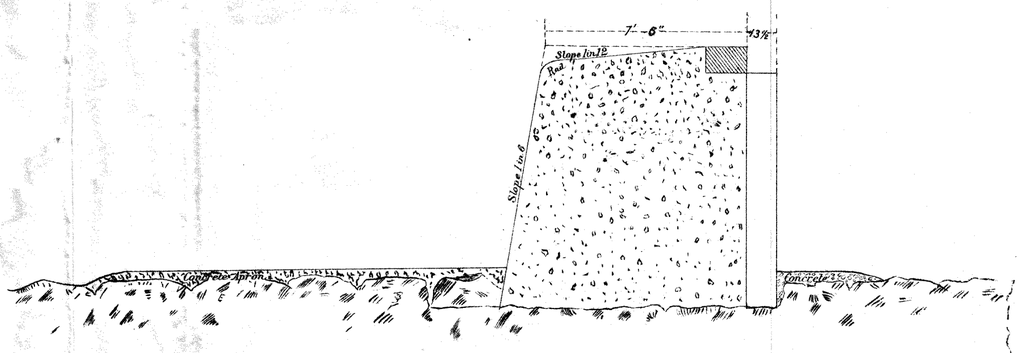


MILL RACE



COPING





SECTION

ROYAL COMMISSION CONSERVATION OF WATER NEW SOUTH WALES 2ND REPORT

Lithographed & Printed at the Surveyor General's Office Sydney N.S.W.
September 1886

(N°of Lith: D-86 26)

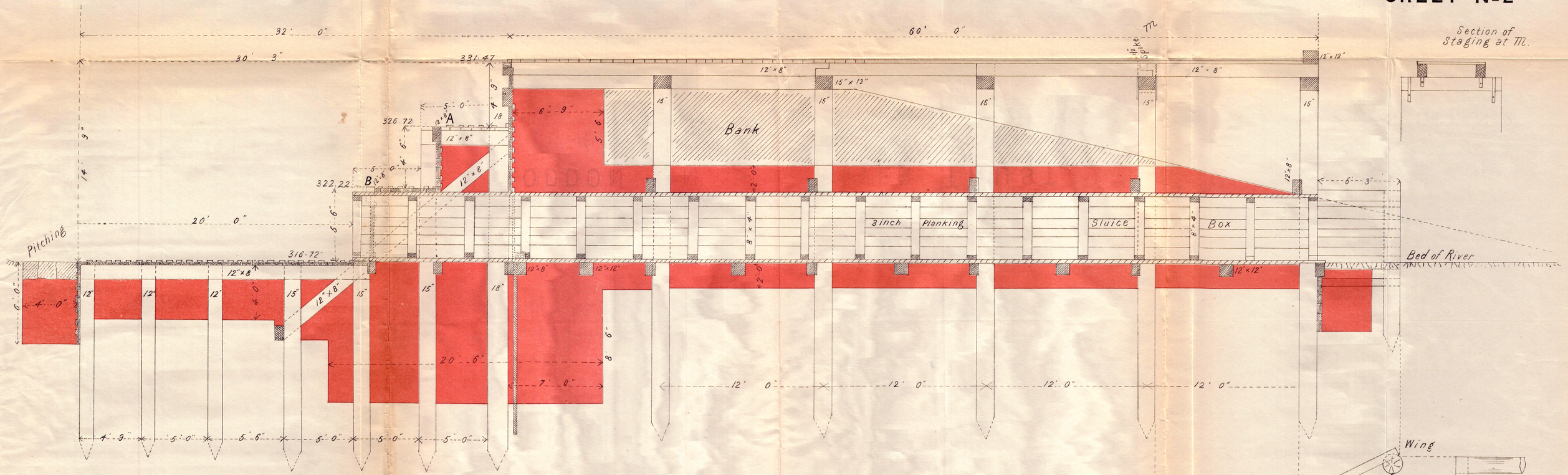
LODDON UNITED WATER TRUST. (VICTORIA)

Kingpaniel Weir Works.

COMMISSION CONSERVATION OF WATER — NEW SOUTH WALES — 2ND REPORT

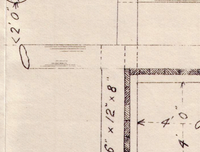
Lithographed & Printed at the Surveyor Generals Office Sydney NSW.
September 1886
(No of Lith D-86-23)

SHEET No 2

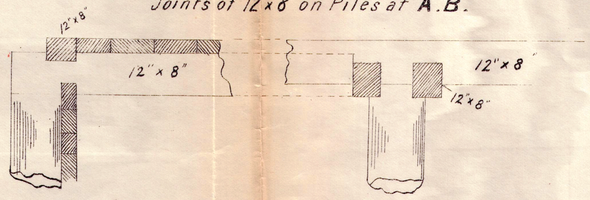


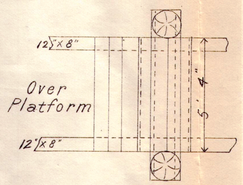
Section
Through Centre of Weir
Scale 4 feet = One Inch.

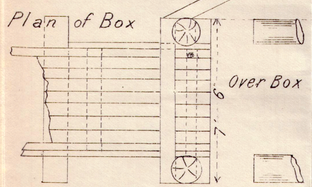
Section of Staging at M.



Joints of 12"x8" on Piles at A.B.







ROYAL COMMISSION CONSERVATION OF WATER NEW SOUTH WALES 2ND REPORT

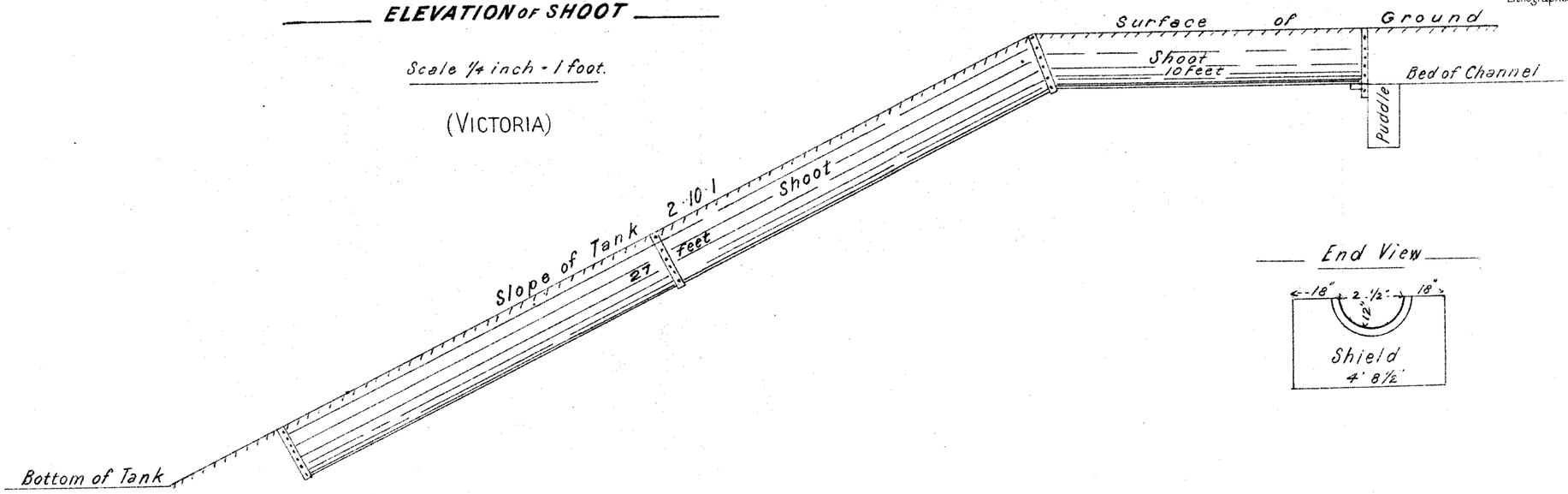
Lithographed & Printed at the Surveyor General's Office Sydney N.S.W.
September 1886.

(N°of Lith: D-86-32)

ELEVATION of SHOOT

Scale ¼ inch = 1 foot.

(VICTORIA)



End View

WIMMERA UNITED.

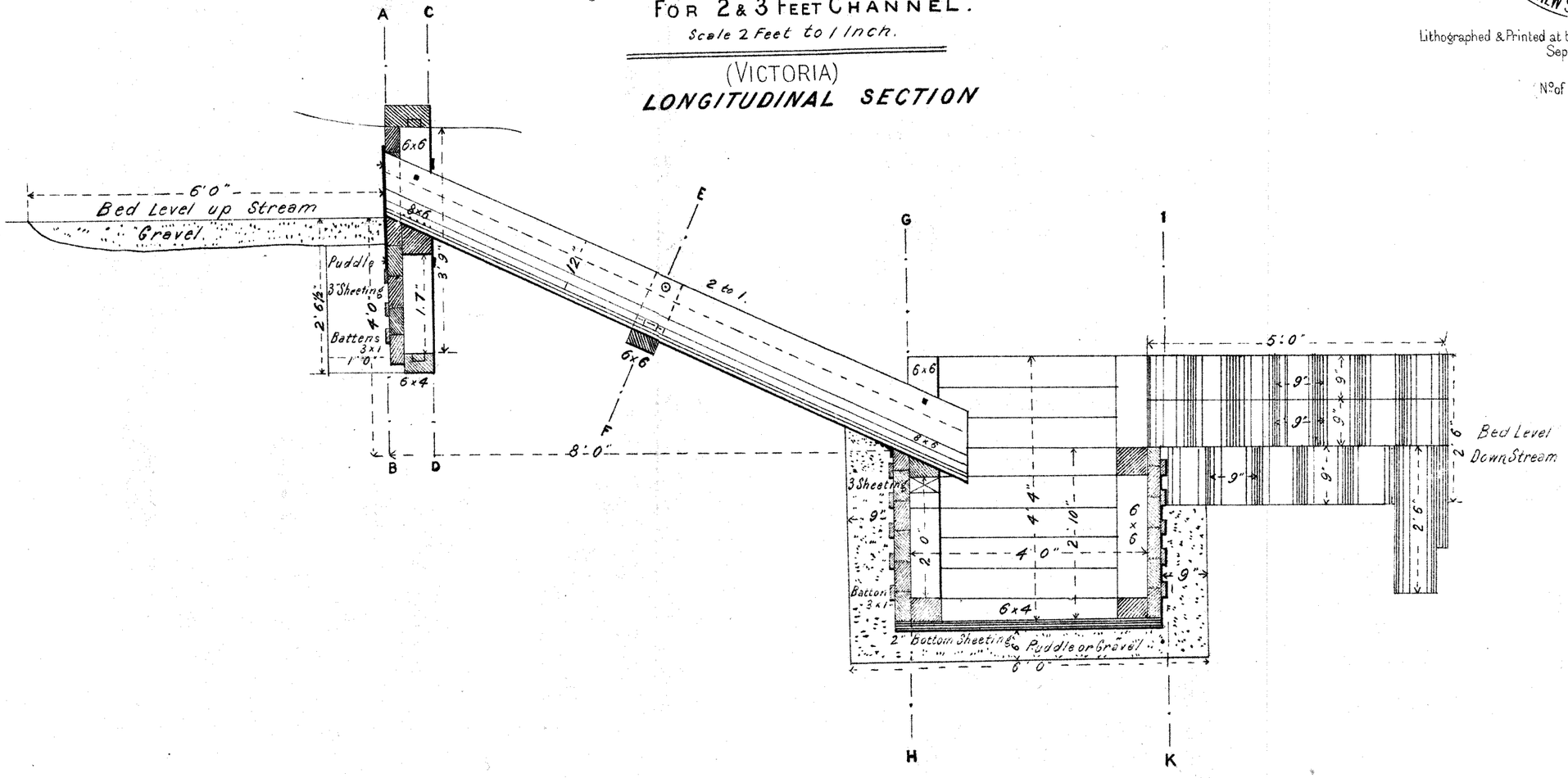
General Plan of Drops.

FOR 2 & 3 FEET CHANNEL.

Scale 2 Feet to 1 Inch.

(VICTORIA)

LONGITUDINAL SECTION



ROYAL COMMISSION CONSERVATION OF WATER
2ND REPORT
NEW SOUTH WALES

Lithographed & Printed at the Surveyor General's Office Sydney, N.S.W. September 1886.

(No of Lith: D-86-30)

Sketch Plan

of a

PART OF ETAWAH BRANCH OF THE GANGES CANAL

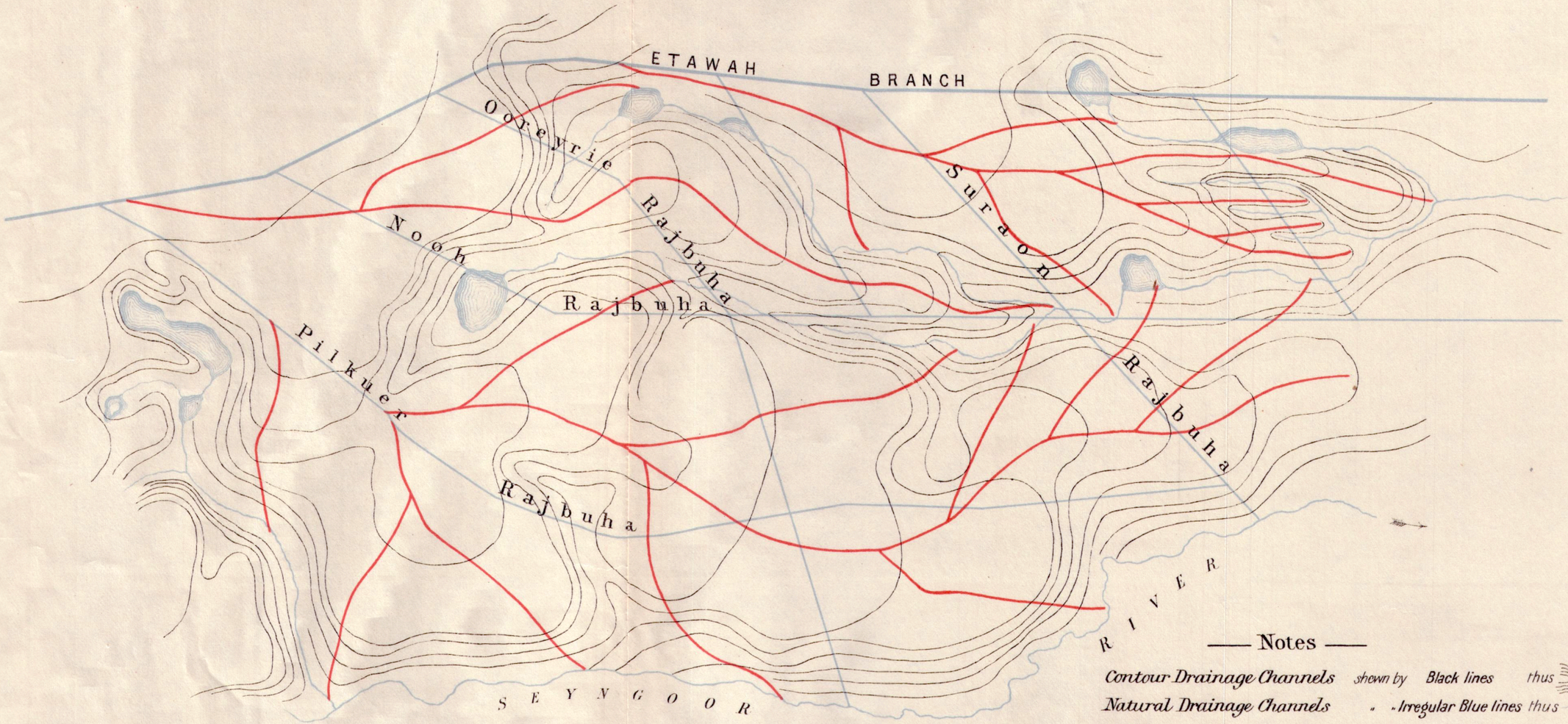
shewing

THE FAULTY AND CORRECT SYSTEMS OF DISTRIBUTION.

ROYAL COMMISSION CONSERVATION OF WATER · NEW SOUTH WALES · 2ND REPORT

Lithographed & Printed at the Surveyor General's Office
Sydney. N.S.W. — 1886.

Nº of Lith: D-86.38.



Notes

Contour Drainage Channels	*shewn by*	*Black lines*	*thus*
Natural Drainage Channels	"	*Irregular Blue lines*	*thus*
Existing Distributaries	"	*Firm Blue lines*	*thus*
Proposed Distributaries	"	*Firm Red lines*	*thus*

ROYAL COMMISSION CONSERVATION OF WATER
NEW SOUTH WALES
2ND REPORT

Lithographed & Printed at the Surveyor General's Office, Sydney, N.S.W.
October 1886
(No of Lith: D-86-35)

Water Supply to the Northern Plains

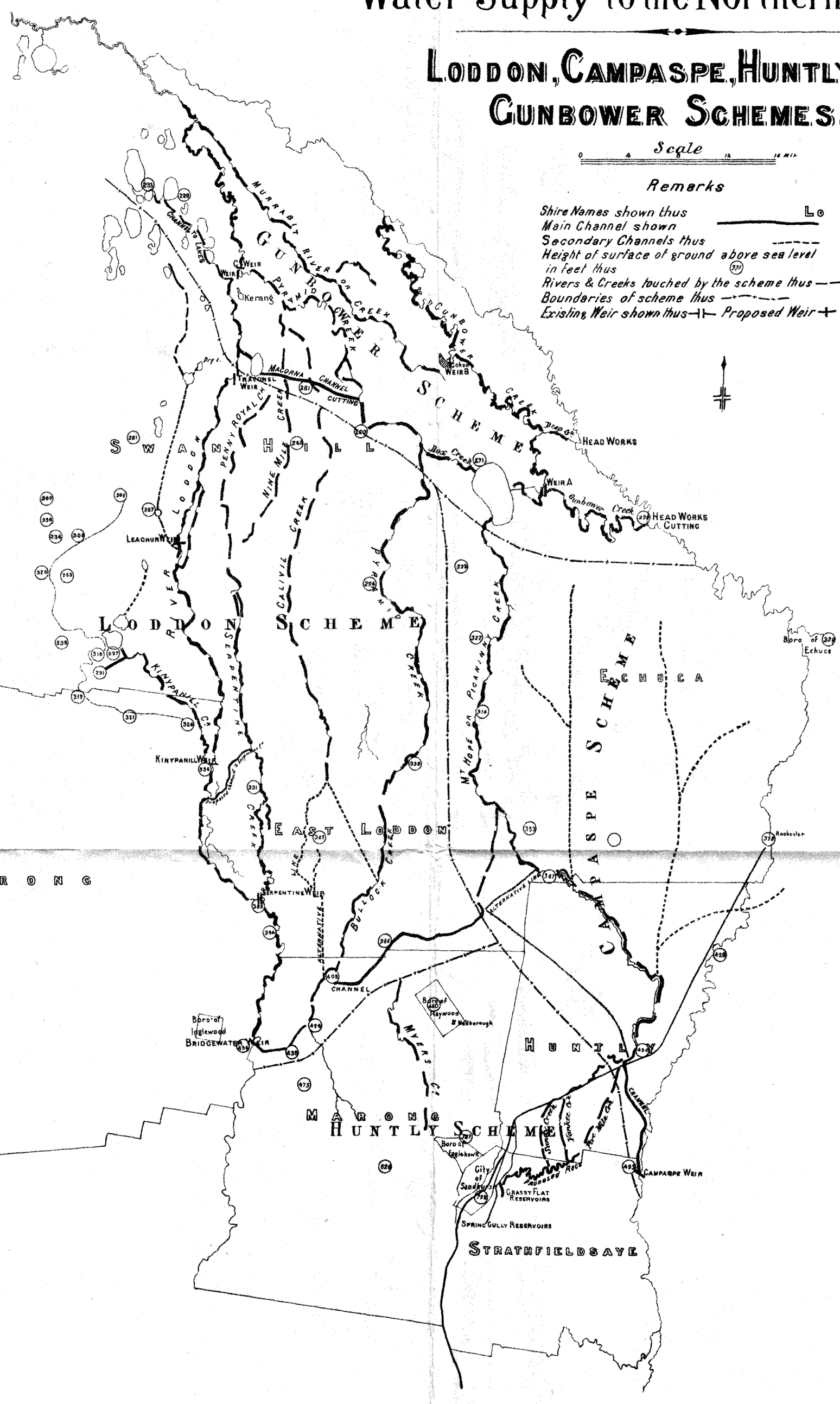
LODDON, CAMPASPE, HUNTLY, & GUNBOWER SCHEMES.

(VICTORIA)

Scale 0 4 8 12 16 MILES

Remarks

Shire Names shown thus — Lo
Main Channel shown
Secondary Channels thus - - - - -
Height of surface of ground above sea level in feet thus (371)
Rivers & Creeks touched by the scheme thus — —
Boundaries of scheme thus — · — · —
Existing Weir shown thus —|— Proposed Weir —+—

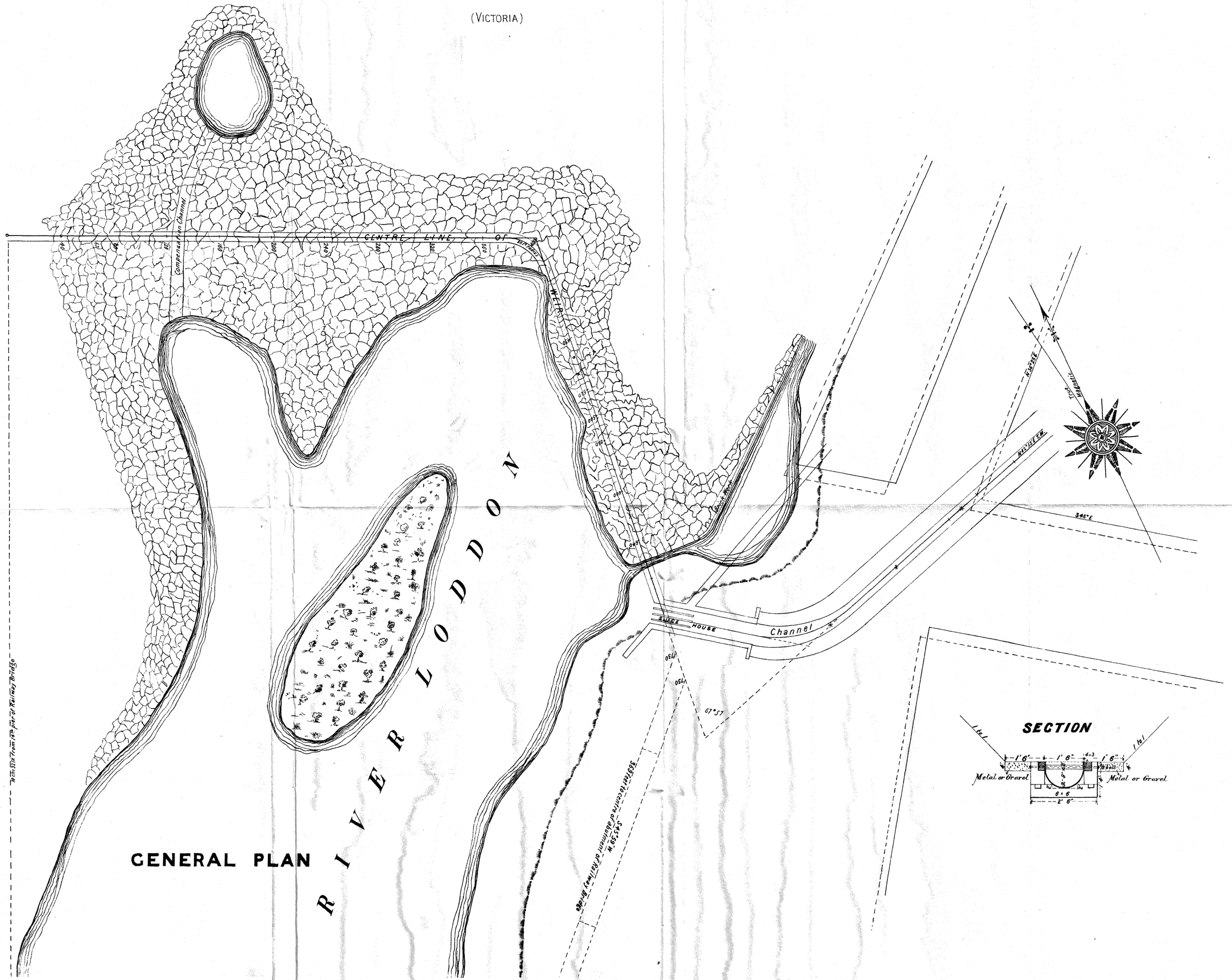


LODDON UNITED WATER TRUST

BRIDGEWATER WEIR

SCALE

(VICTORIA)



GENERAL PLAN

SECTION

COMMISSION CONSERVATION OF WATER NEW SOUTH WALES 2ND REPORT

Lithographed & Printed at the Surveyor Generals Office Sydney NSW
September 1886

(No of Lith. D-86-25)

ROYAL COMMISSION CONSERVATION OF WATER NEW SOUTH WALES

2ND REPORT

Lithographed & Printed at the Surveyor General's Office Sydney N.S.W.
September 1886
(No of Lith. D-86-37)

LAKE HINDMARSH

BATCHICA

WARMUR

NARRAPORT

BORUNG

WARRACKNABEAL

YARRAM BIACK CREEK

BANGERANG AREECRA

WATCHEM

CORACK

SAMMY'S LAKE

CANNUM

WERRICAR

WARRACKNABEAL

HITTON SWAMP

Bangerang Shire Dam.

Chalambra Dam.

Horse Shoe Dam

CARRON

LAKE BULOKE

CARROW

WITCHIPOOL

BANYENONG

PART OF ST ARNAUD TRUST DISTRICT

Cal Swamp

Dumb Bluy Dam & Over Fall

Whillon Swamp

WA-WA-CACHE Dam

AREECRA BRANCH

DUNMUNKLE

WALLUP

KELLALAC

WEIR No4

SHEEP HILLS BRANCH

MINYIP EXTENSION

NULLAN

MT PLEASANT

DUNMUNKLE

LAEN

DONALD WEIR

DONALD

BIG ONE

WEIR No3

KEWELL WEST

KEWELL EAST

MARRA WARA

MINYIP

ROPE'S Dam.

KARA-KARA

RICH AVON WEST

RIVER

KEWELL

DUNMUNKLE Dam

BARRERED

RICH AVON EAST

PATERSON'S Dam

STUART'S Dam

SHANAMANS 10 Mile Dam

WAIL

VERANDAH Swamp

12 Mile Dam

KALKEE

DOGEN KALKEE

WEIR No2

JUNG JUNG

JUNG JUNG EXTENSION

MINYIP BRANCH

Toorong Swamp

BANYENA WEIR

BANYENA

PIMPINIO

GREEN HILLS Dam & Overfall

ASHENS

RUPANYUP

13 Mile Dam

LALLAT

BURRUM BURRUM

WEIR No1

Jung-Jung Swamp

MURTOA

LAMARMA

Marma Swamp

10 Mile Dam

RUPANYUP

RICHARDSON

MARNOO

DOGEN

SUMMIT RESERVOIR

PUMP

REGULATOR

MARMA SWP

CREEK

QUANTONG

VECTIS EAST

LONGERENONG

Saw Pit Swamp

DAM & REGULATOR

DOGEN WEIR

ARRAMBEYCK WEIR

HORSHAM

WEIR

WIMMERA

MARMA

LUBECK

WERCHILILLEBA

LAEN CHANNEL

DUNMUNKLE

ASHENS CHANNEL

ASHENS WEIR

SWEDE'S CREEK

RIVER WEST BRANCH

GLENORCHY

CUT

REGULATORS

DUNMURKLE WEIR

CAMPBELL'S BRIDGE

LAKE LONSDALE

STAWELL

CRAMPIANS

Fyan's Creek

Creek

PYRENEES

DISTRICT OF
THE WIMMERA UNITED
WATERWORKS TRUST.
(VICTORIA)

Reference

The Continuous Black Lines denote the boundaries of the Trust District

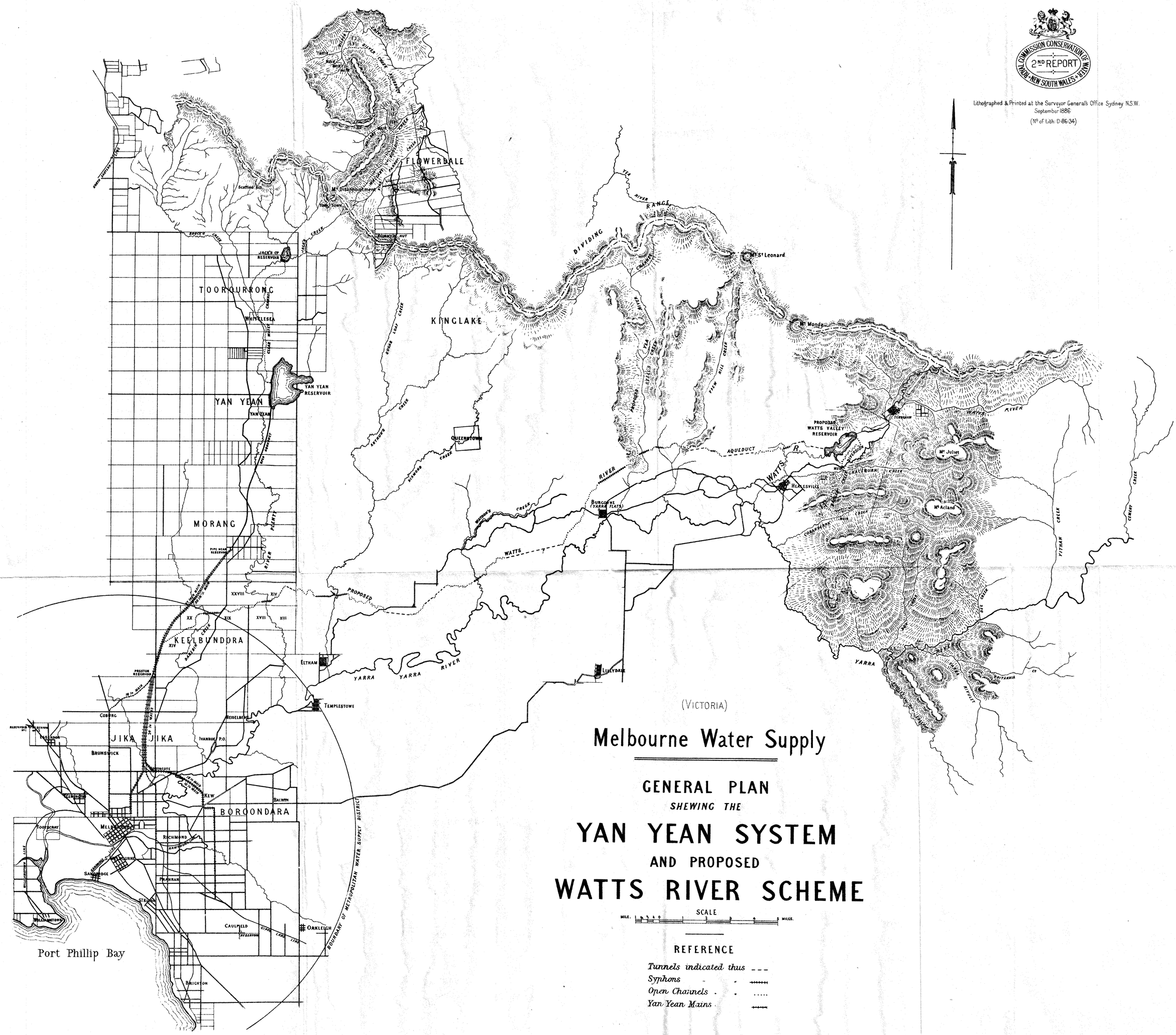
The Continuous Red Lines denote Channels supplied with water from the Wimmera

The Hatched Red Lines show Channels now in course of Construction

The dotted Red Lines show line of Channel Surveyed

Scale 4 Miles to 1 Inch

MILES 10 5 0 10 MILES


ROYAL COMMISSION CONSERVATION OF WATER
2ND REPORT
NEW SOUTH WALES
Lithographed & Printed at the Surveyor General's Office Sydney N.S.W.
September 1886
(No of Lith: D-86-34)
(VICTORIA)
Melbourne Water Supply
GENERAL PLAN
SHEWING THE
YAN YEAN SYSTEM
AND PROPOSED
WATTS RIVER SCHEME
SCALE
MILE. 1 ¾ ½ ¼ 0 1 2 3 4 5 MILES.
REFERENCE
Tunnels indicated thus
Syphons
Open Channels
Yan Yean Mains
FLOWERDALE
KINGLAKE
TOOROURRONG
YAN YEAN
MORANG
KEELBUNDORA
JIKA JIKA
BOROONDARA
Port Phillip Bay
Mt Disappointment
Mt St Leonard
Mt Monda
Mt Juliet
Mt Acland
Healesville
Burgoyne (Yarra Flats)
Lilydale
Eltham
Templestowe
Oakleigh
Caulfield
Brighton
Melbourne
Richmond
Kew
Brunswick
Coburg
Ivanhoe P.O.
Heidelberg
Queenstown
Yan Yean Reservoir
Jack's Cr Reservoir
Whitelesea
Proposed Watts Valley Reservoir
Yarra River
Dividing Range
Watts River
Aqueduct
Proposed
Boundary of Metropolitan Water Supply District

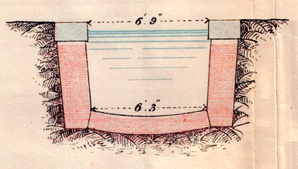
(VICTORIA.)

ROYAL COMMISSION CONSERVATION OF WATER NEW SOUTH WALES 2ND REPORT.

Lithographed & Printed at the Surveyor Generals Office, Sydney, N.S.W.
September, 1886.
N° of Lith. D-86-21.

BRICK AQUEDUCT MORANG

1874-5



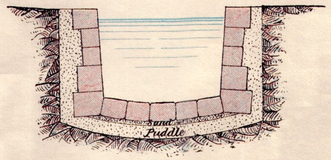
Fall 3'.10" to the mile.

Figured dimensions to be taken in preference to scale.

YAN YEAN-MORANG AQUEDUCT.

Bluestone Ashlar.

1874-5.

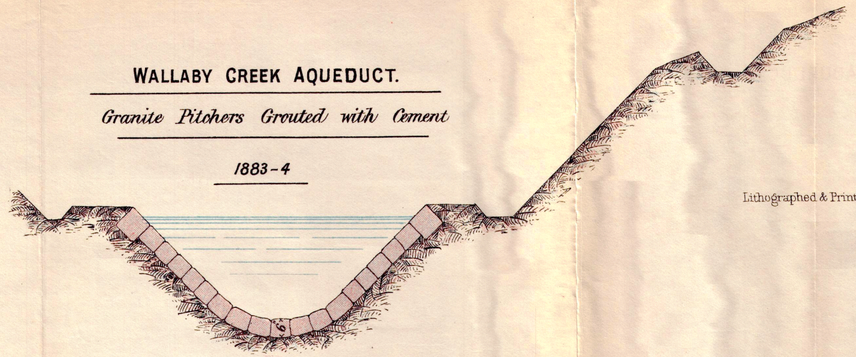


Fall 7.6" to the mile

WALLABY CREEK AQUEDUCT.

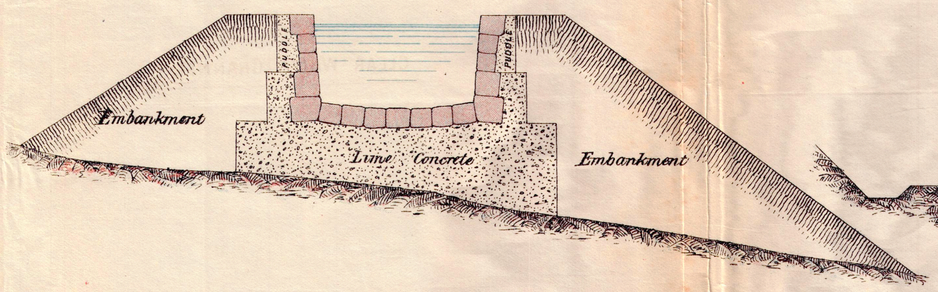
Granite Pitchers Grouted with Cement

1883-4



Fall 3 feet to the mile.

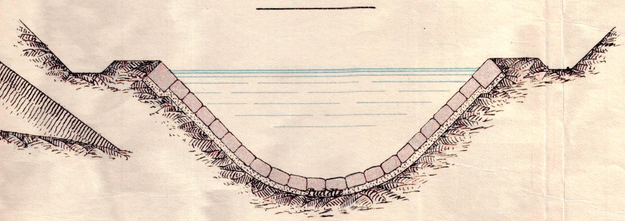
YAN YEAN-MORANG AQUEDUCT.



Scale. 4 feet to an inch.

CLEAR WATER CHANNEL.

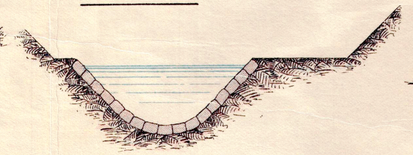
1883-4



Fall 8 feet to the mile.

SILVER CREEK AQUEDUCT

1885-6

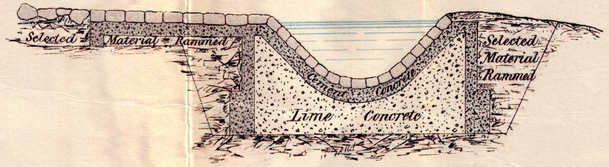


Fall 3 feet to the mile

SILVER CREEK AQUEDUCT.

Section

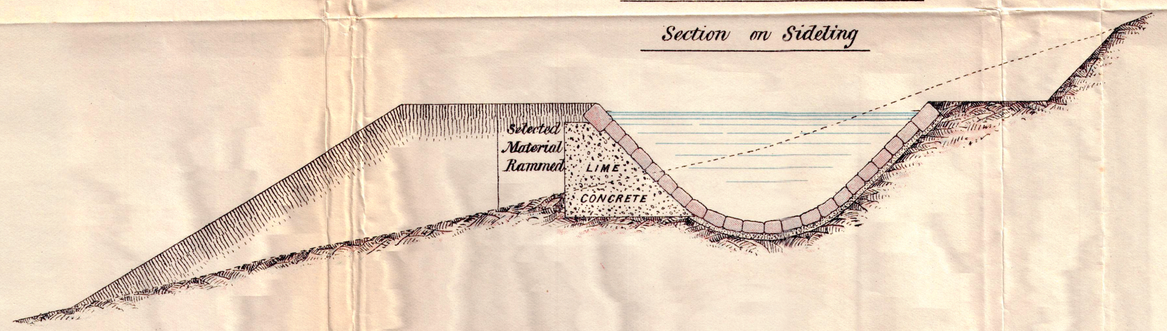
Through Wet granite detritus.

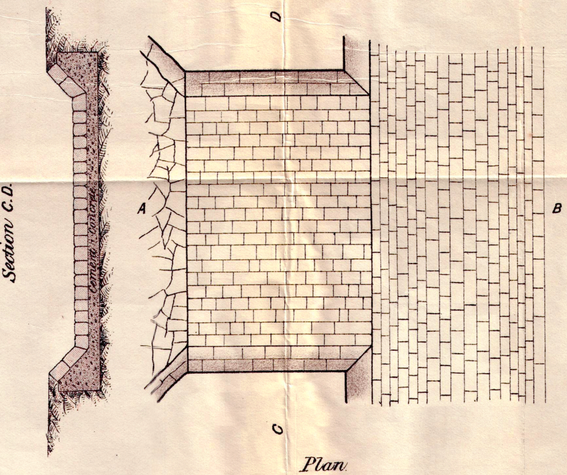


Section A.B.

CLEAR WATER CHANNEL.

Section on Sideling





Plan

1885-6.

NEW SOUTH WALES.

DIAGRAMS AND PLANS.

ROYAL COMMISSION — COLLIERIES.

THIRD REPORT OF THE COMMISSIONERS.

991—

No I.

DISTRICT PLAN

SHEWING POSITIONS OF

THE COLLIERIES ADJACENT TO FERNDALE,

LINES OF SECTIONS, AND BORES.

Scale

Chains 0 5 10 20 30 40 Chains

DRAWN FOR PHOTO-LITHOGRAPHY BY W. CLAUDE WILSON.

1886.

PHOTO-LITHOGRAPHED AT THE GOVT. PRINTING OFFICE, SYDNEY, NEW SOUTH WALES.

HUNTER RIVER

ISLAND

CREEK

BULLOCK

THROSBYS

Land Reclaimed

A. A. P. Tighe

about 270 ac.

M.L.175.

T. Garrett

about 640 ac.

M.P. 130.

440 ac.

W.A. Steele

about 200 ac.

STOCKTON

W.A. Hutchinson

about 530 ac.

Nobbys Head

OCEAN

M.P. 174.

Franck & Garrett

2516 ac.

M.P. 159.

J. Gregson.

2560 ac.

M.P. 132.

C.E. Merewether.

1280 acres.

A. A. COAL COS RY.

G. N. R. EXTENSION

GREAT NORTHERN RAILWAY

PUBLIC WHARVES

MARYVILLE COLLIERY

WICKHAM

FERNDALE

THE DOCK

BULLOCK ISLAND BRANCH RAILWAY

NEWCASTLE

CITY OF

AUSTRALIAN AGRICULTURAL COAL COMPANY

NEWCASTLE COAL MINING COMPANY

BURWOOD COAL COMPANY

BURWOOD

Lagoon

SWAMP

Shepherds Hill

PACIFIC

SOUTH

OUTCROP OF BURWOOD COAL

SUPPOSED LINE OF OUTCROP

From Hexham

Tunnel

Glass Works

Cricket Ground

Sea or F Pit

Q.8 Pit

Q.A Pit

Q.M2 Pit

Yard Shed

Line of Section

Line of Outcrop

Line of Seam

Land Reclaimed

(Sh. 991a)

Plan No 2

Shewing Outcrop of Borehole and Burwood Coal Seams

Goat Island

Shortlands Islands

Low water

Waratah Coal Co 126 ac

Waratah Coal Co 126 ac

Ferndale Coal Company 211 ac 3r 10 pch

Ferndale Coal Co

Tighes Hill

Tighes Hill

Creek

Outcrop Borehole Coal Seam

Fambton Coal Company 61 ac

Stockton Coal 1160 ac (approx) Company

S.A.M.Co

Borehole 235 ft to Borehole (No 6) Coal Seams 10 feet

Stockton Coal Company 7000 ac (approx)

Coal Company

Big Ben Rock

NOBBY'S Hd

HUNTER RIVER

OCEAN

Wallsend

Wallsend Tunnel

Adit

Adit to Borehole (No 6) Coal Seam . 8 ft worked

WALLSEND

Outcrop Borehole Coal Seam

Waratah

LAMBTON

Lambton Tunnel

Outcrop Borehole Coal Seam

Hamilton

Australian Agricultural Company

776 ft to Borehole No 6 Coal Seam 30'6"

Agricultural Co 2703 ac (approx)

130 ft to No 6 (Borehole) Coal Seam 30'6"

NEWCASTLE

ADAMSTOWN

Stuart Pit Borehole (Tubular)

Australian Agricultural Co

Globe 35 ac

Sea

Adit

Outcrop Borehole No 6 Coal Seam 5'6"

Newcastle Coal Company

1415 ac (approx)

SOUTH PACIFIC

(991 ac)

PHOTO-LITHOGRAPHED AT THE GOVT. PRINTING OFFICE, SYDNEY, NEW SOUTH WALES.

PLAN Nº 3

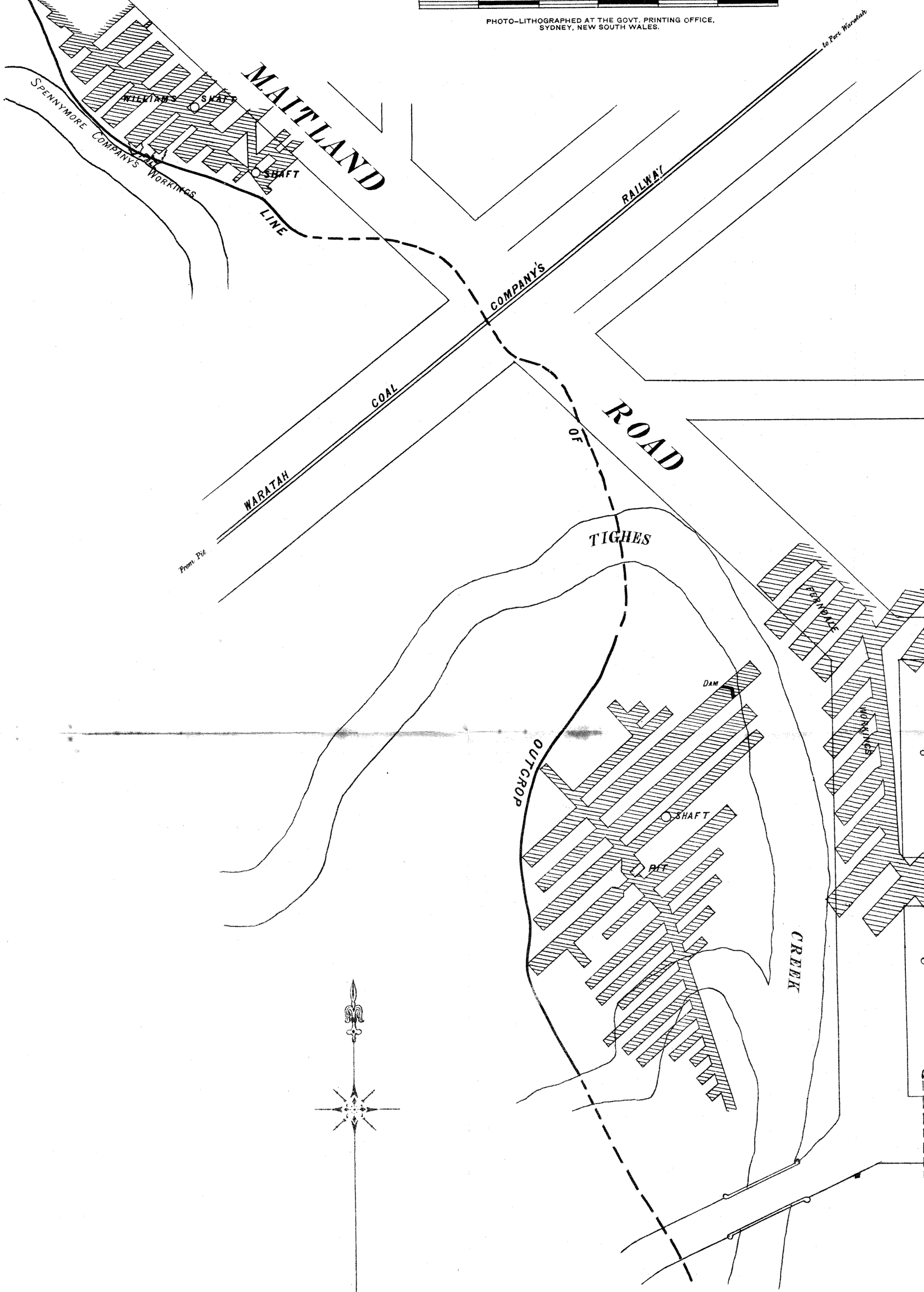
COAL WORKINGS

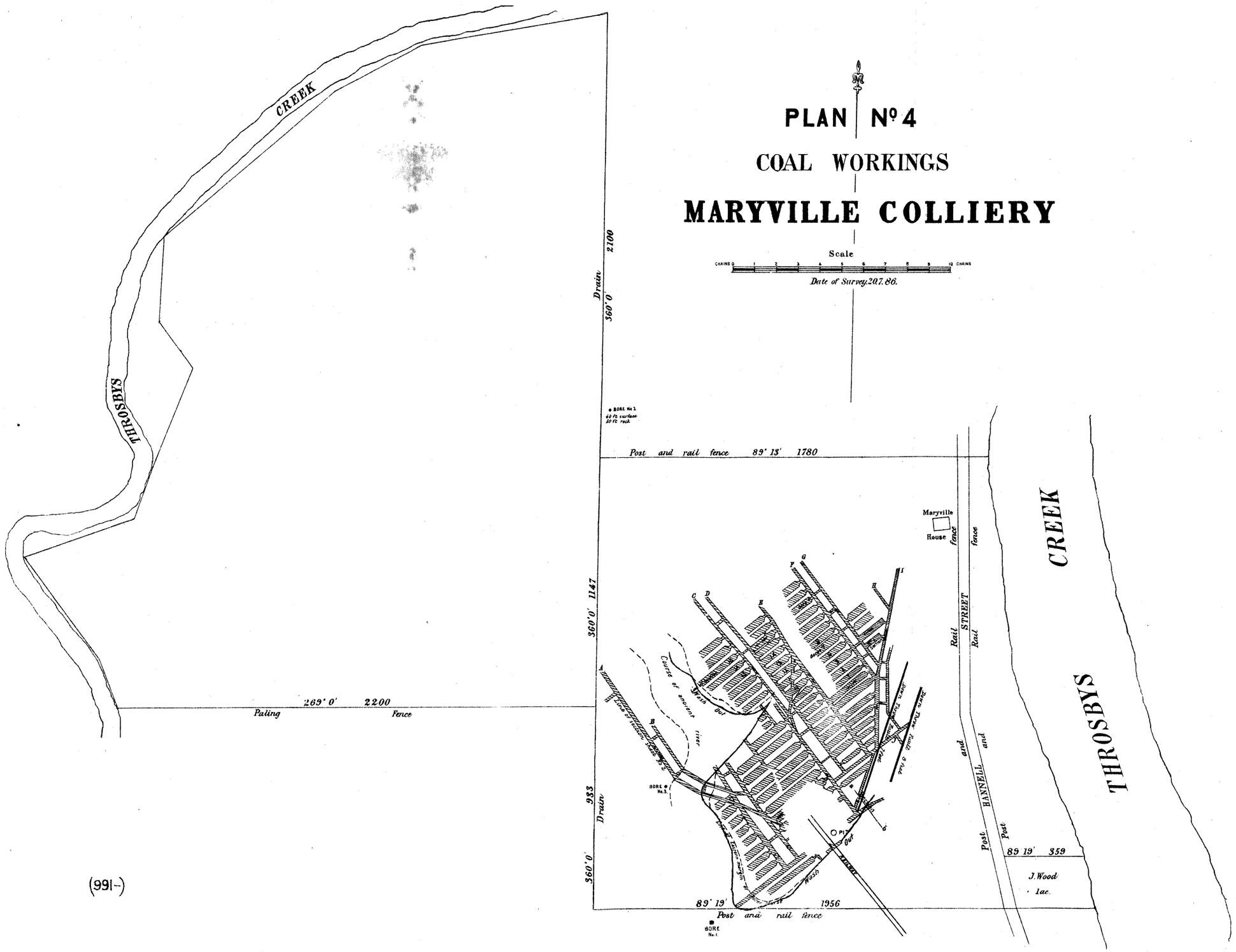
BROUGHALL & GRIFFITHS COLLIERY

Scale

CHAINS 0 1 2 3 4 5 6 CHAINS

PHOTO-LITHOGRAPHED AT THE GOVT. PRINTING OFFICE,
SYDNEY, NEW SOUTH WALES.




PLAN Nº 4
COAL WORKINGS
MARYVILLE COLLIERY
Scale
CHAINS 0 1 2 3 4 5 6 7 8 9 10 CHAINS
Date of Survey 20.7.86.
THROSBYS CREEK
Drain
360° 0' 2100
Post and rail fence 89° 13' 1780
Maryville House
Rail fence
Rail STREET
Post and HANNELL
Post and Rail fence
Post
89 19' 359
J. Wood
1ac.
THROSBYS CREEK
360° 0' 1147
Course of ancient river
Wash Out
Drain
933
360° 0'
89° 19' 1956
Post and rail fence
BORE No. 1
BORE No. 2
BORE No. 3
269° 0' 2200
Paling Fence

(991-)

PLAN No 5

COAL WORKINGS

WICKHAM & BULLOCK Isd Cos COLLIERY

Scale

CHAINS 10 8 6 4 2 0 10 20 30 40 50 60 70 80 90 100 CHAINS

PETER FLEMINGS PROPERTY

(991–)

PHOTO-LITHOGRAPHED AT THE GOVT. PRINTING OFFICE, SYDNEY, NEW SOUTH WALES.

PLAN Nº6

COAL WORKINGS

STOCKTON COLLIERY

Scale

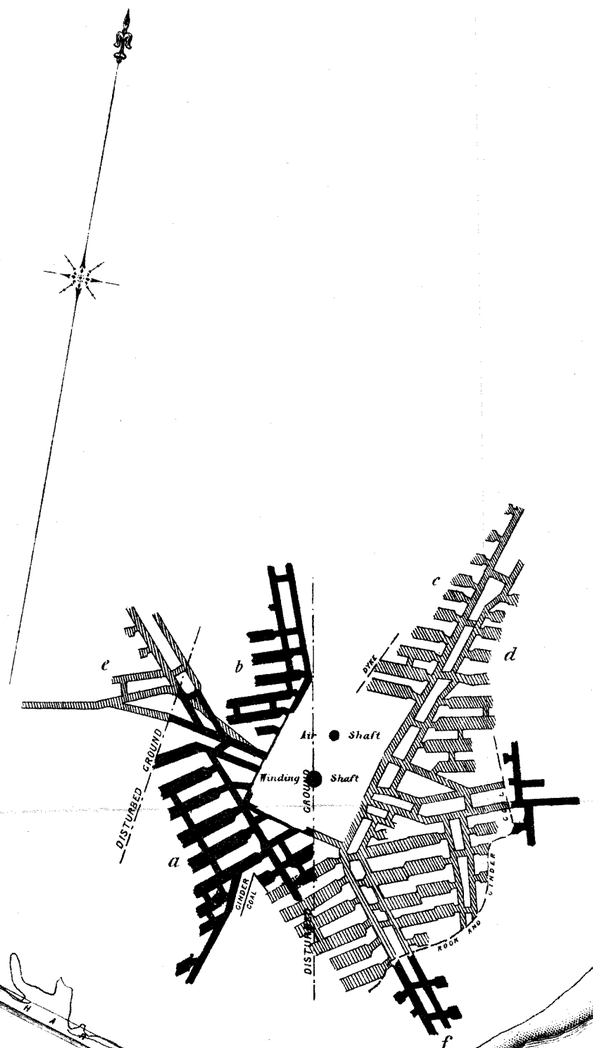
Chains 0 1 2 3 4 5 6 7 8 Chains

PHOTO-LITHOGRAPHED AT THE GOVT. PRINTING OFFICE,
SYDNEY, NEW SOUTH WALES.

HUNTER RIVER

PACIFIC OCEAN

SOUTH


a
b
c
d
e
f
DISTURBED GROUND
Air Shaft
Winding Shaft
DISTURBED GROUND
DISTURBED GROUND
DISTURBED GROUND

PLAN Nº 7

COAL WORKINGS

A.A.Cos Nº 2 PIT

Scale

CHAINS 10 5 0 10 20 CHAINS

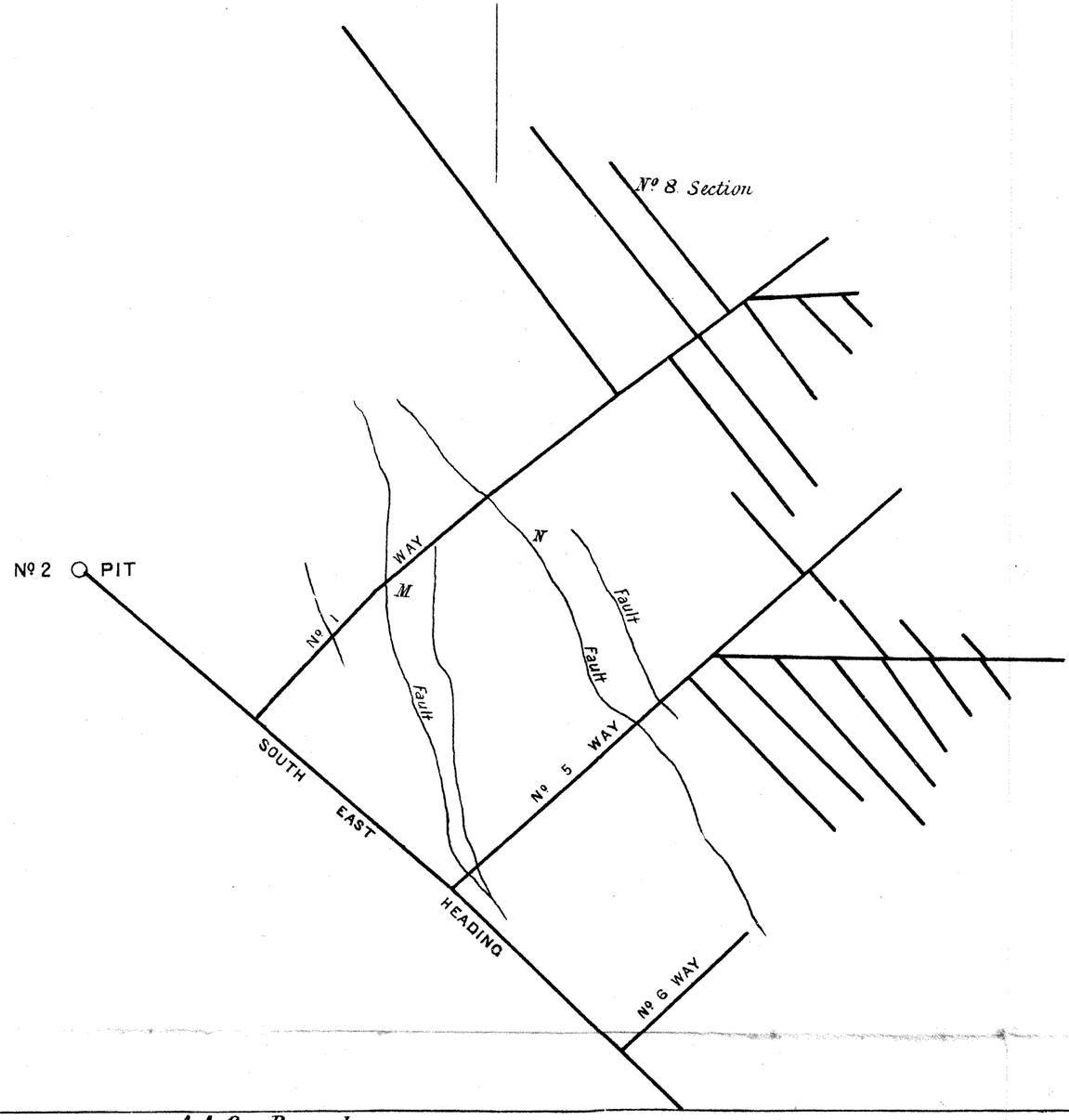


PHOTO-LITHOGRAPHED AT THE GOVT. PRINTING OFFICE,
SYDNEY, NEW SOUTH WALES.

A.A. Cos Boundary

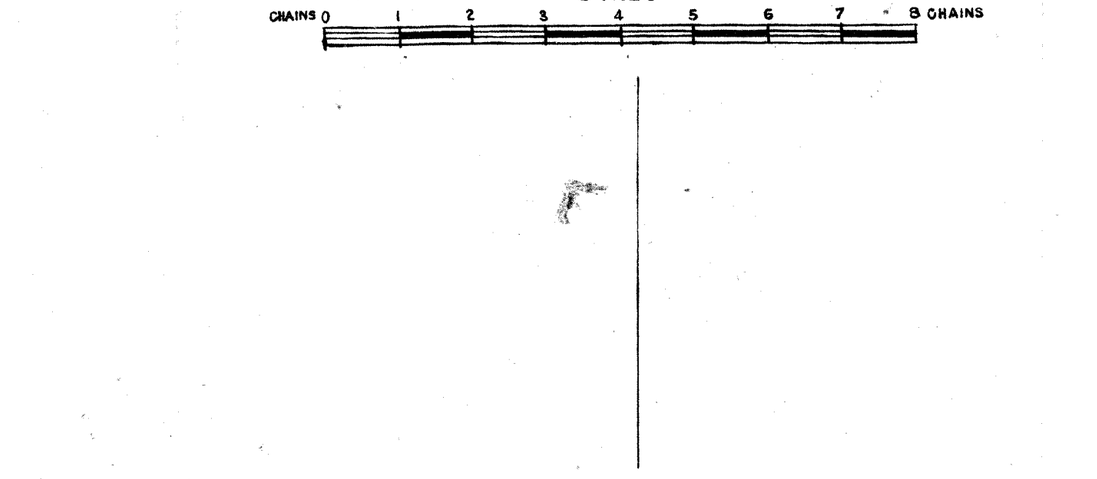
PLAN No 8

COAL WORKINGS

N.C.M.Cos B PIT

Scale

CHAINS 0 1 2 3 4 5 6 7 8 CHAINS



(991_)

PHOTO-LITHOGRAPHED AT THE GOVT. PRINTING OFFICE,
SYDNEY, NEW SOUTH WALES.

PLAN Nº9

COAL WORKINGS

BURWOOD COLLIERY

Scale

Chains 0 1 2 3 4 5 6 7 8 9 10 Chains

L A G O O N

287½ ac.

SHAFT

19

50 ac.

18

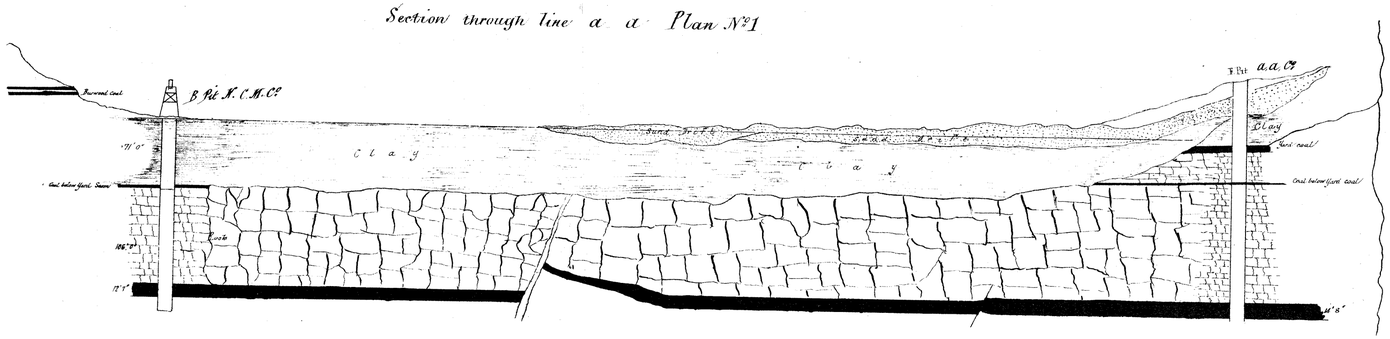
50 ac.

(991—)

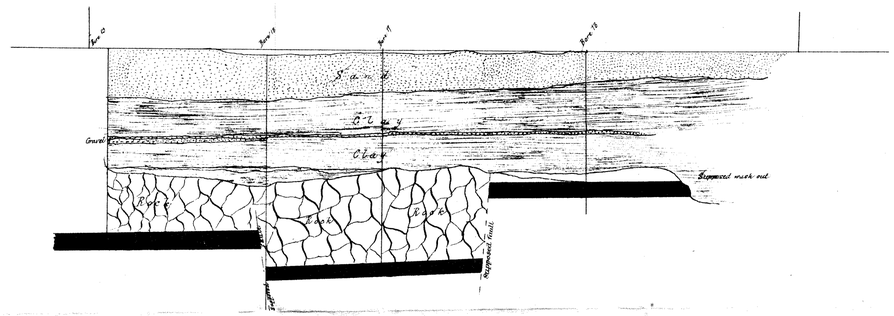
Plan No. 10

Scale
Vertical 100 feet = 1 inch
Horizontal 528 " . . . 8 chains

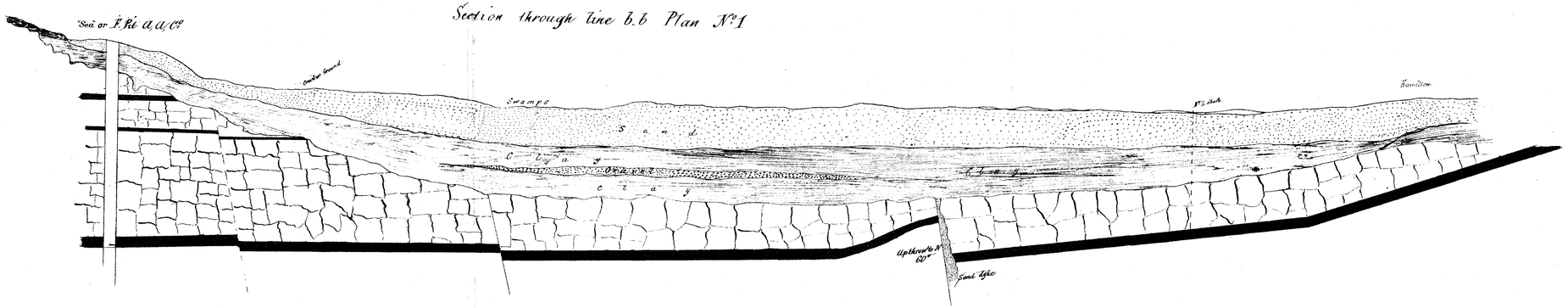
Section through line a a Plan No 1



Section through line d d Plan No 1



Section through line b b Plan No 1



Section through line c c Plan No 1

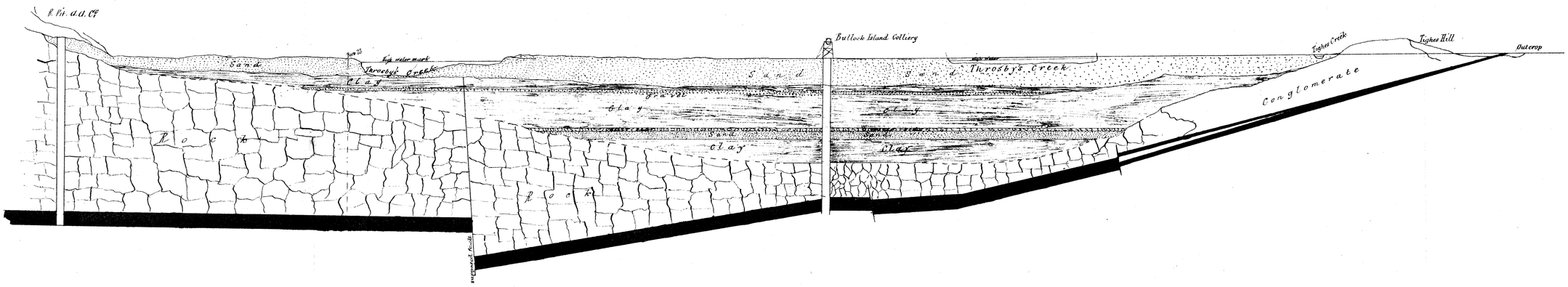


PHOTO-LITHOGRAPHED AT THE GOVT. PRINTING OFFICE,
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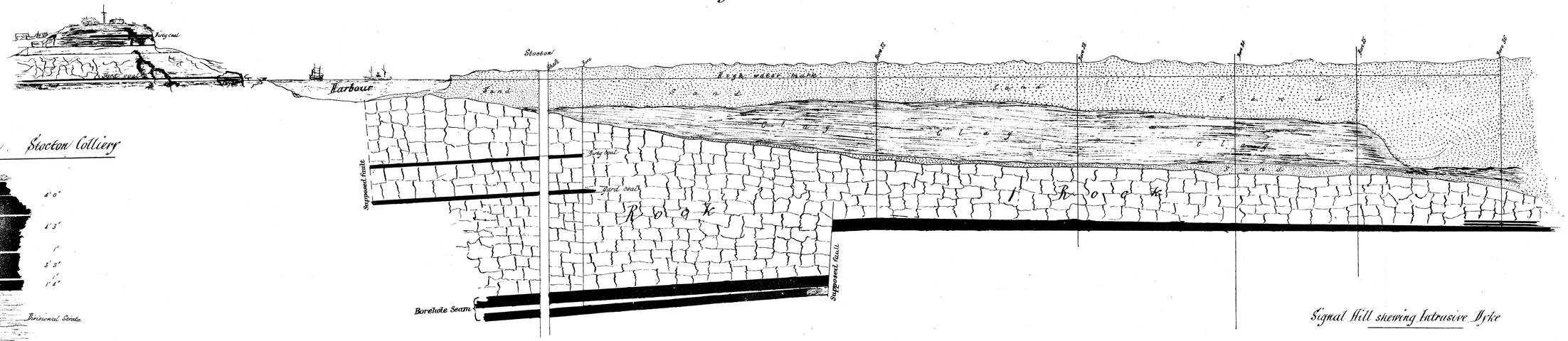
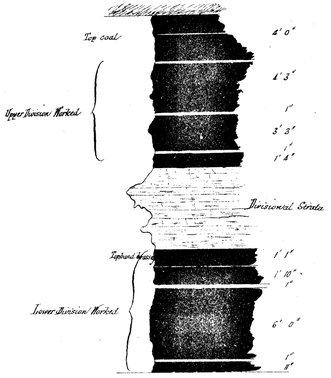
Plan N°11

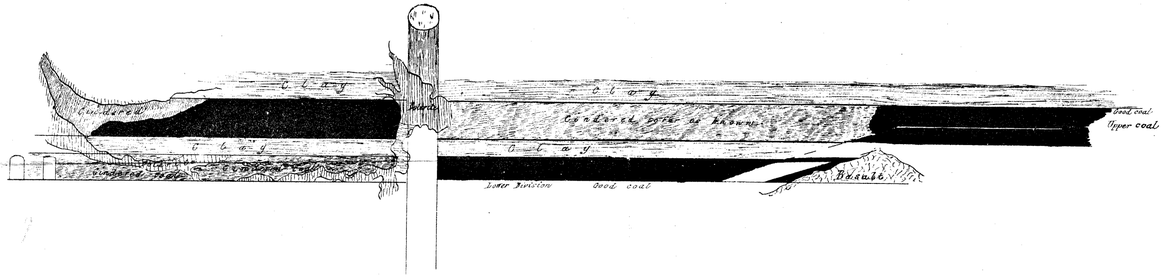
Section through e e



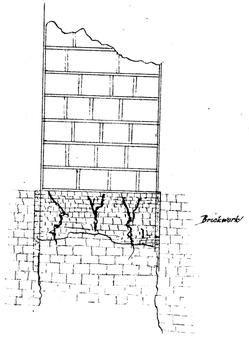
Section of Borehole Seam Stocton Colliery



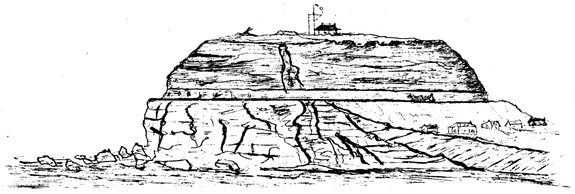
Section N & W through Stocton Colliery shewing occurrence of Basalt



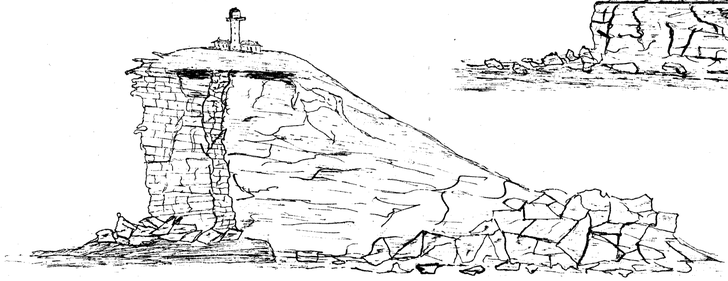
Lower Segments of Tubbing — Brickwork below —



Signal Hill shewing Intrusive Dyke



Nobby's shewing Intrusive Dyke



On S.E. angle of Signal Hill shewing thickening of Conglomerate bed



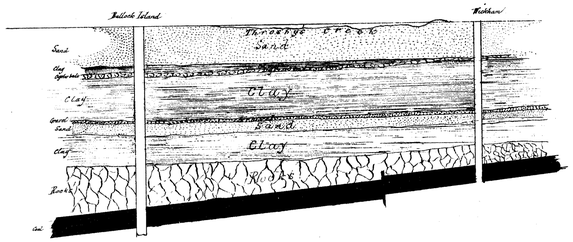
Scale
Vertical 100 feet - 1 Inch
Horizontal 528 , , , , - 8 chains

Plan №12

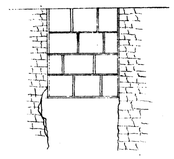
Sections in connection with report of Collieries adjacent to Ferndale

Scale
Vertical 100 feet 1 Inch
Horizontal 528 . . . . 8 Chains

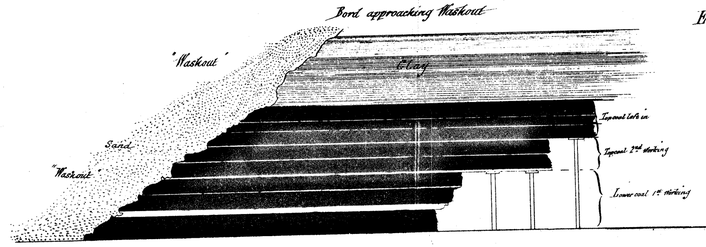
Section of Strata & Surface Deposits between Bullock Island Colliery and Wickham Shaft



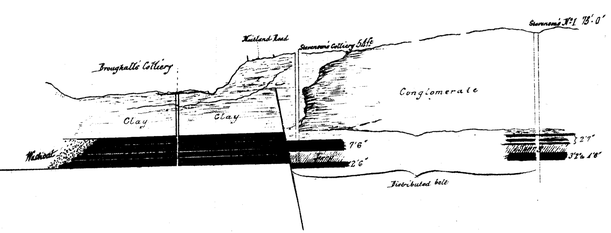
Showing lower Segments of Tubbing Bullock Island Colliery



№1 Broughall & Griffiths Colliery

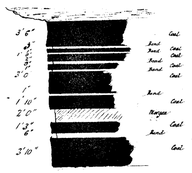


E & W. Section through Tighes Hill shewing influence of Fault in Stevensons Colliery

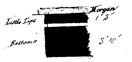


Maryville Colliery

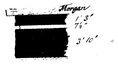
Bullock Island Colliery Section in Wallaces Heading



A. N. of Straight in Heading



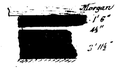
B of Lax in Munns Heading



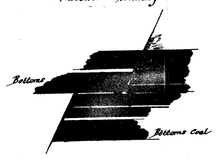
C



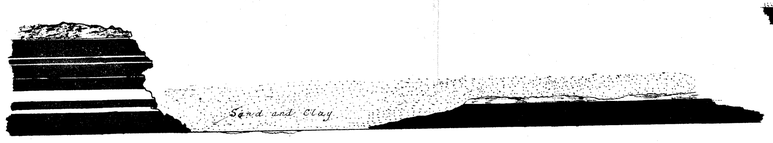
Face of South Dip Road



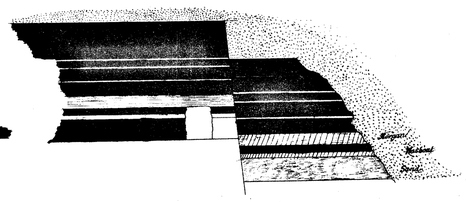
Section Fault & overlapping Wallaces Heading



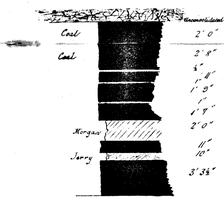
№2 Section across Washout in A and B Headings



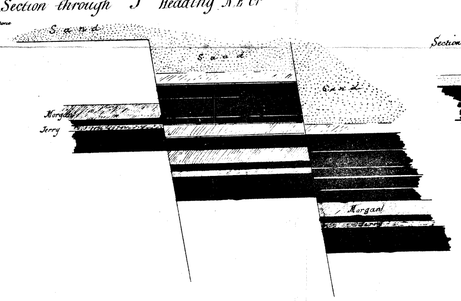
№2 Section across Level East of Shaft



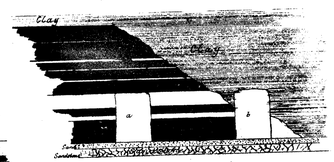
Section in G Heading



Section through J Heading N.E Cr.



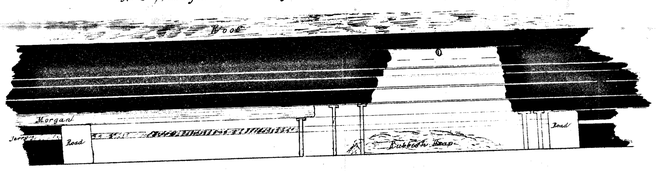
Section through A. B Eastside



Face at №6 Bord. C Heading



№3 Shewing mode of Working Dropping Top Coal coming back



№4 Shewing new Method of Working Tops going in

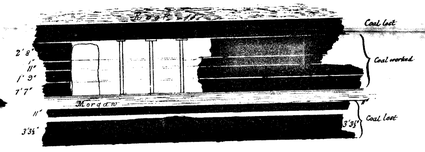


PHOTO-LITHOGRAPHED AT THE GOVT. PRINTING OFFICE,
SYDNEY, NEW SOUTH WALES.

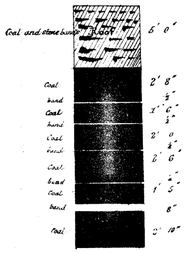
No 13

— Royal Commission on Collieries —

Sections of Coal Seams taken during the investigation into the condition of Collieries adjacent to Ferndale

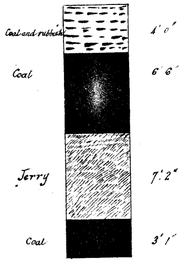
Scale 8 feet = 1 Inch

Broughall & Griffiths' Colliery

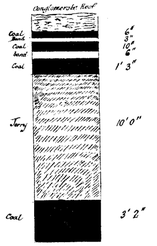


Stevenson's Colliery

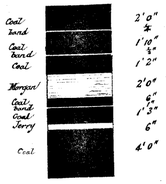
Section of shaft No 2



Stevensons No 1 shaft East of No 2

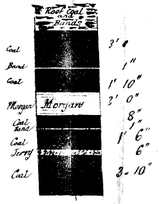


Wickham shaft

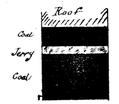


Bullock Island

N of fault Wallaces Heading



North Heading

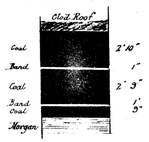


South Side Dips



Burwood Colliery

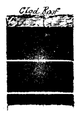
Section at 1



Section at 3

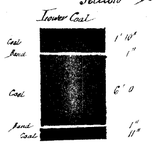


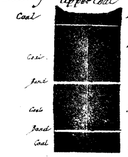
Section S Main narrow Bord



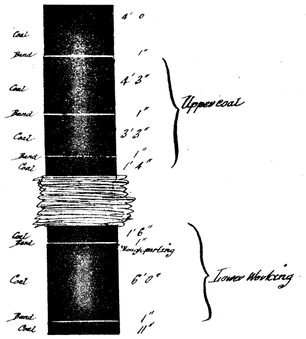
Stockton Colliery

Section Bord of North Heading



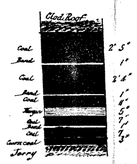


Stockton



Burwood Colliery

Section 2 Right hand Heading

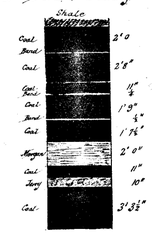




Maryville Colliery

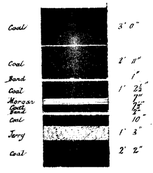


No 1 Bord & Heading

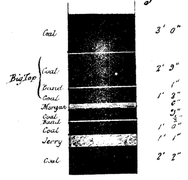


B Pit Glebe Colliery

Section Bord Main N Heading

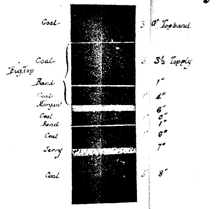


Section S Heading

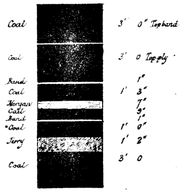


A A Co Colliery

Section of No 8 Plan Tophand Heading



Section at face



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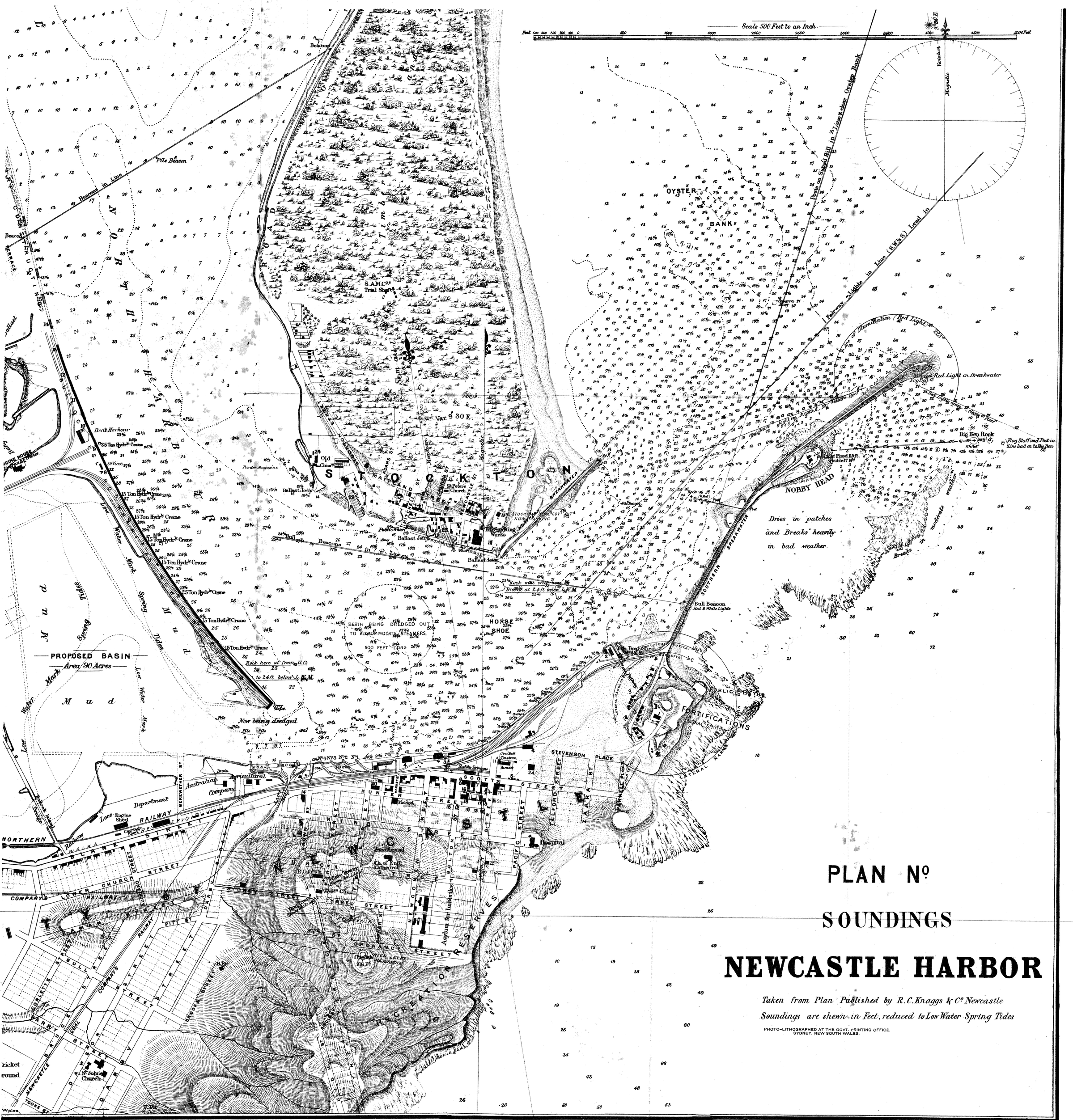

PLAN Nº

SOUNDINGS

NEWCASTLE HARBOR

Taken from Plan Published by R.C. Knaggs & Cº Newcastle

Soundings are shewn in Feet, reduced to Low Water Spring Tides

PHOTO-LITHOGRAPHED AT THE GOVT. PRINTING OFFICE, SYDNEY, NEW SOUTH WALES.

Stephenson and Party's Colliery.

	ft.	in.	ft.	in.
Clay	10	0		
Soft Post	13	6		
Blue Shale	7	0		
Post (broken)	6	0		
Blue stiff Clay	2	6		
Coal (broken)	4	3		
			43	0
Coal and bands	7	6		
Jerry	7	6		
Coal	2	6		
			17	6
			60	6

Broughall and Griffiths' Colliery.

	ft.	in.	ft.	in.
Sand	5	0		
Clay and Sand	18	0		
			23	0
Coal and bands	5	0		
Coal	2	6		
Band				
Coal	3	6		
Band				
Coal	3	0		
Band				
Jerry	0	8		
Coal	3	0		
			17	8
			40	8

Maryville Colliery.

	ft.	in.	ft.	in.
Sand	31	0		
Shell bed	1	0		
Clay, strong	101	0		
Gravel	2	6		
			135	6
Coal	2	8		
Band	0	1		
Coal	0	11		
Band	0	1		
Coal	1	9		
Band	0	0½		
Coal	1	7		
Mangan	2	0		
Coal, Little, Tops	0	11		
Jerry	0	10		
Coal, Bottoms	3	3½		
			14	2
			149	8

Wickham Colliery.

	ft.	in.	ft.	in.
Sand	40	0		
Oyster-bed	3	0		
Strong Blue Clay	42	0		
Chert (hard)	0	9		
Strong Blue Clay	15	2		
Coarse Sand and Gravel	2	6		
Strong Blue Clay	8	0		
Oyster Shells and Mud	3	6		
Blue Clay	4	6		
Boulder	0	6		
Blue Clay	8	0		
Blue Smulty	3	0		
Brown Sandstone	2	6		
Clay Smulty	3	6		
Strong Clay	2	3		
Sand	0	6		
Clayey Sandstone	1	0		
Conglomerate	8	3		
Soft Sandstone	1	0		
Sandstone	12	0		
Coal	1	2		
Band	0	5		
Coal	4	4		
Clay	0	0½		
Coal	4	2		

Bullock Island Colliery.

	ft.	in.	ft.	in
Surface Clay and Sand	4	0		
White Sand and Shells	44	0		
Hard Blue Clay	9	0		
Oyster-bed	2	0		
Soft Grey Sandstone	2	0		
Brown Clay	20	0		
Black Clay and Shells				
Sand and Gravel	1	0		
Strong Brown Clay	4	0		
Sand and Gravel	15	0		
White Clay	19	0		
Yellow Clay	7	0		
Clay with boulders	6	0		
			163	0
Rock (strong)	45	0		
			45	0
Coal	7	0		
Band	0	0½		
Coal	3	4		
Mangan	1	2		
Coal	3	0		
Jerry	0	6		
Coal	4	0		
			19	0½
			227	0½

Stockton Colliery.

	ft.	in.	ft.	in
Sand	58	6		
Stiff Blue Clay	18	0		
Coarse Hard Sand	2	0		
Loose Rock, with Clay	10	1		
Soft White Rock	0	11		
			89	6
Fine Conglomerate	9	6		
Shaley Sandstone	2	0		
Fine Conglomerate	3	6		
White Clay	2	9		
Shaley Sandstone and Coal	4	0		
Fire-clay	6	2		
			27	11
Coal (Dirty)	4	8		
			4	8
Black Shale	29	0		
Coal (Yard)	2	0		
Sandstone	148	11		
Blue Shale	17	0		
Coal	11	0		
Black Shale	6	0		
Coal	8	0		
Freestone	4	0		

No. 2 Shaft, A.A. Co.

	ft.	in.	ft.	in.
Sand and Clay	99	0		
Rock	27	0		
Shale	24	0		
			150	0
Coal	9	6		
			9	6
			159	6

B Pit, No. C.M. Co.

	ft.	in.	ft.	in.
Hard Yellow Clay	30	0		
Yellow Clay	10	0		
Soft Clay	31	6		
			71	6
Coal (Soft)	1	6		
Blue Shale (Soft)	11	0		
Blue Shale	36	5		
Hard Grey Post.	24	1		
Blue Shale	1	6		
Hard Grey Post.	3	6		
Blue Shale	5	8		
Hard Grey Post.	0	10		
Blue Metal	7	6		
Grey Post	6	5		
Blue Metal	4	7		
Dark Metal and Sandstone	1	1		
Coal	1	3		
Shale	1	1		
			177	11
Coal (Top Band)	2	10		
Coal (Big Tops)	2	8½		
Coal (Band)	0	1		
Coal	1	3		
Coal (Morgan)	0	6		
Coal	0	10		
Coal (Band)	0	0½		
Coal	0	10		
Coal (Jerry)	1	3		
Coal	2	3		
			190	6

Burwood Bore, near Lagoon.

	ft.	in.	ft.	in.
Loose Rock	42	0		
Blue Shale				
Shale	9	0		
Sandstone and Chert	10	0		
Clay	1	0		
			65	0
Coal (Burwood)	6	6		
Sandstone and Chert	26	0		
Shale and Coal	2	10		
Shale	1	0		
Sandstone and Conglomerate	5	0		
Blue Shale	33	0		
			142	4
Coal (Dirty)				
Blue Shale	13	0		
Grey Conglomerate	18	0		
Blue Shale	35	0		
Coal-yard				
Grey Post and Shale	77	0		
Borehole Seam				

Sandstone

Sections of Coal in above Shafts.

Roof Sandstone

Roof Sand & Clay

Roof Sand & Clay

Roof Sandstone

Section see above

Roof Sandstone

Roof Sandstone

Section see above

Roof Sandstone

Scale of Sections 10 feet to one Inch

(Sig 991)

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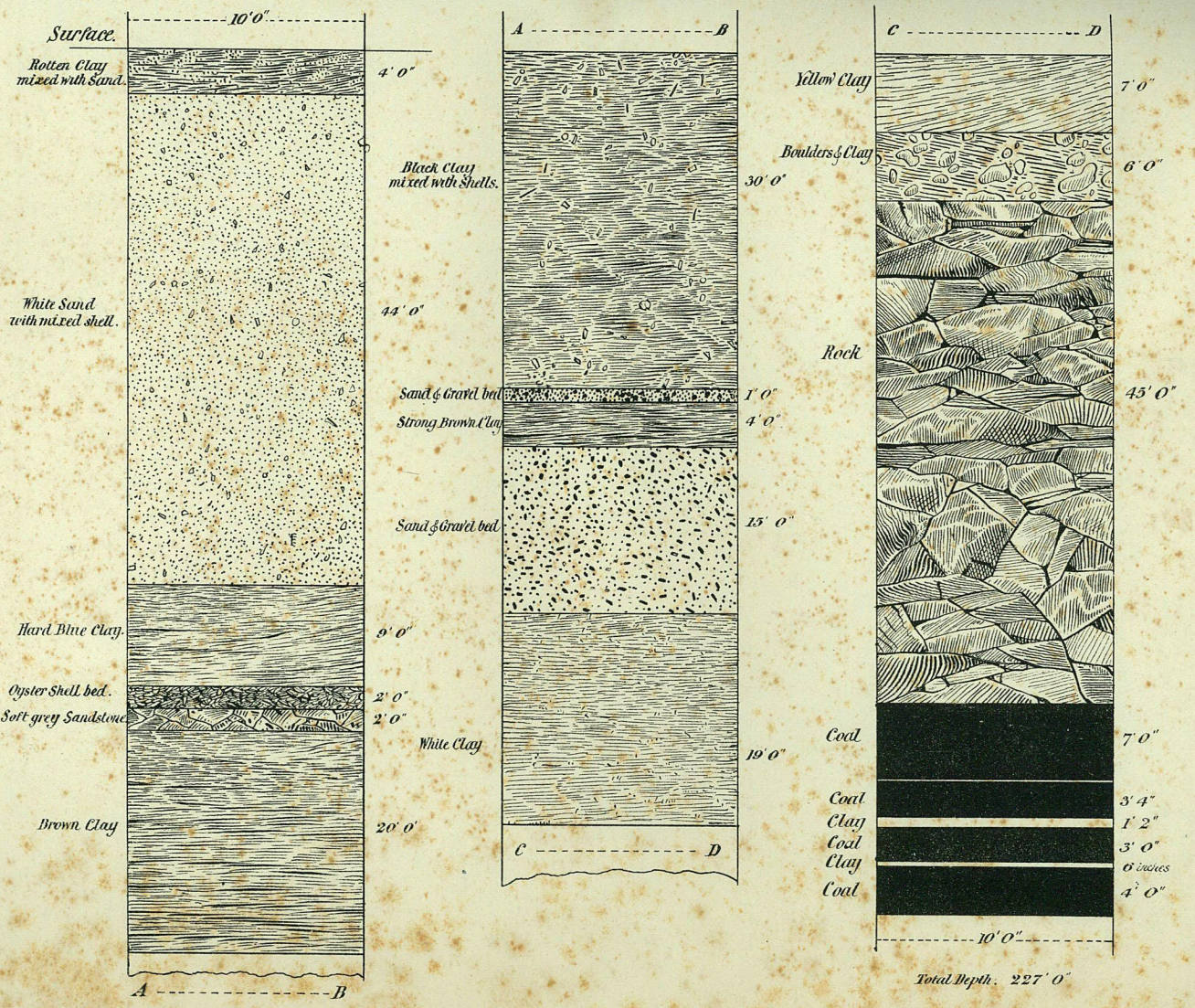
SHEET No. 14.

SECTION OF B PIT. BULLOCK ISLAND.



(Sig. 991—)

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