



The official opening of the Bostock Reservoir by the Hon. Clive Phillip Stoneham, M.L.A. (Minister of Water Supply) at Ballan, Victoria December 15th, 1954

AUTHOR(S)

Geelong Waterworks and Sewerage Trust

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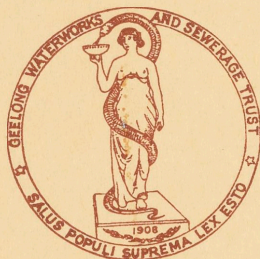
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GEELONG WATERWORKS



AND SEWERAGE TRUST

THE OFFICIAL OPENING
OF
THE BOSTOCK RESERVOIR

BY
THE HON. CLIVE PHILLIP STONEHAM, M.L.A.
(MINISTER OF WATER SUPPLY)

AT BALLAN, VICTORIA

DECEMBER 15TH, 1954

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Geelong Waterworks and Sewerage Trust

PROGRAMME

15/12/1954

SPEAKERS :

Cr. W. H. ROFFEY

President, Shire of Ballan.

Mr. J. W. CARR

Chairman, Geelong Waterworks and Sewerage Trust.

Mr. J. M. MACINTYRE

Engineer-in-Chief, Geelong Waterworks and Sewerage Trust.

Mr. H. W. McCAY

Deputy Chairman, State Rivers and Water Supply Commission.

Mr. L. F. C. D'ARCY, M.L.A.

The Hon. the Minister of Water Supply

C. P. STONEHAM, Esq., M.L.A.

INSPECTION

AFTERNOON TEA

GEELONG WATERWORKS AND SEWERAGE TRUST

1908 - 1954

COMMISSIONERS

J. W. CARR, Esq., J.P., Chairman

B. E. PURNELL, Esq., M.B.E., J.P., Vice-Chairman - City of Geelong

F. H. WALLACE, Esq., O.B.E., J.P. - City of Geelong

G. NEUNHOFFER, Esq. - City of Geelong West

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Secretary :

B. C. HENSHAW, A.A.S.A., A.C.I.S.

Assistant Engineer-in-Chief :

A. W. COOKE, A.I.M.E. Aust.

Assistant Secretary :

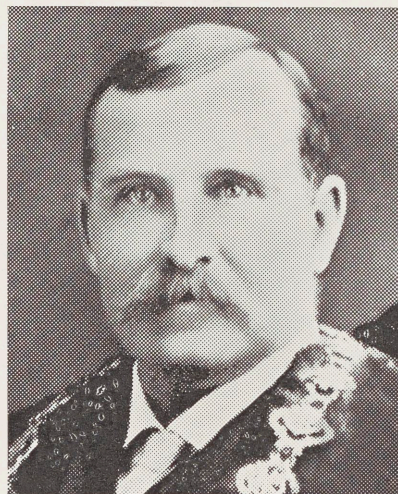
S. W. BIRRELL

Project Superintendent - Bostock Reservoir :

V. SEITZ

Assistant Project Superintendent - Bostock Reservoir :

R. S. LUCAS



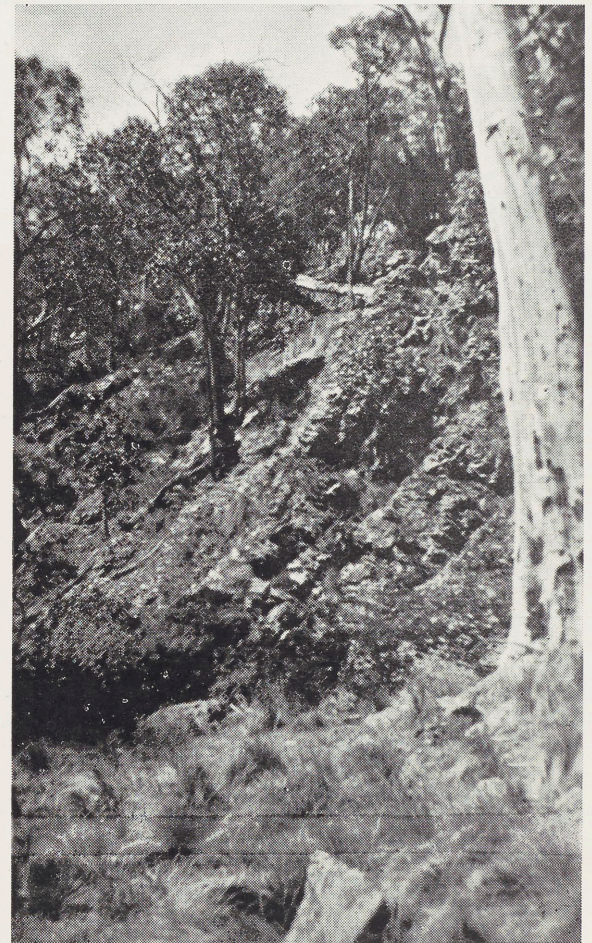
T. E. BOSTOCK, Esq.

Mayor of Geelong

1905 - 6 - 7



VIEWS OF SITE
PRIOR TO COMMENCEMENT
OF PROJECT



The proposal to construct a dam on the Eastern Moorabool River, below its junction with the Paddock Creek, was first made in 1923 by Mr. J. S. Sharland, who was then the Trust's Engineer-in-Chief. Designs were prepared and approved by the Government and preparations were made to commence construction.

The Commissioners of the Trust decided to call the dam The Bostock Dam, in honour of Mr. T. E. Bostock, a former Mayor of the Town of Geelong and one of the prominent citizens who had been responsible for the formation of the Trust.

The construction of the Bellarine Water Supply System by the State Rivers and Water Supply Commission, however, caused commencement of work to be postponed, and the project remained in abeyance until it was revived in 1946 by the then Chairman of the Trust, Mr. N. M. Freeman.

The plans and proposals were re-examined by Mr. R. G. Pearce, Engineer-in-Chief, and a new site was decided upon, half a mile down-stream from the original site.

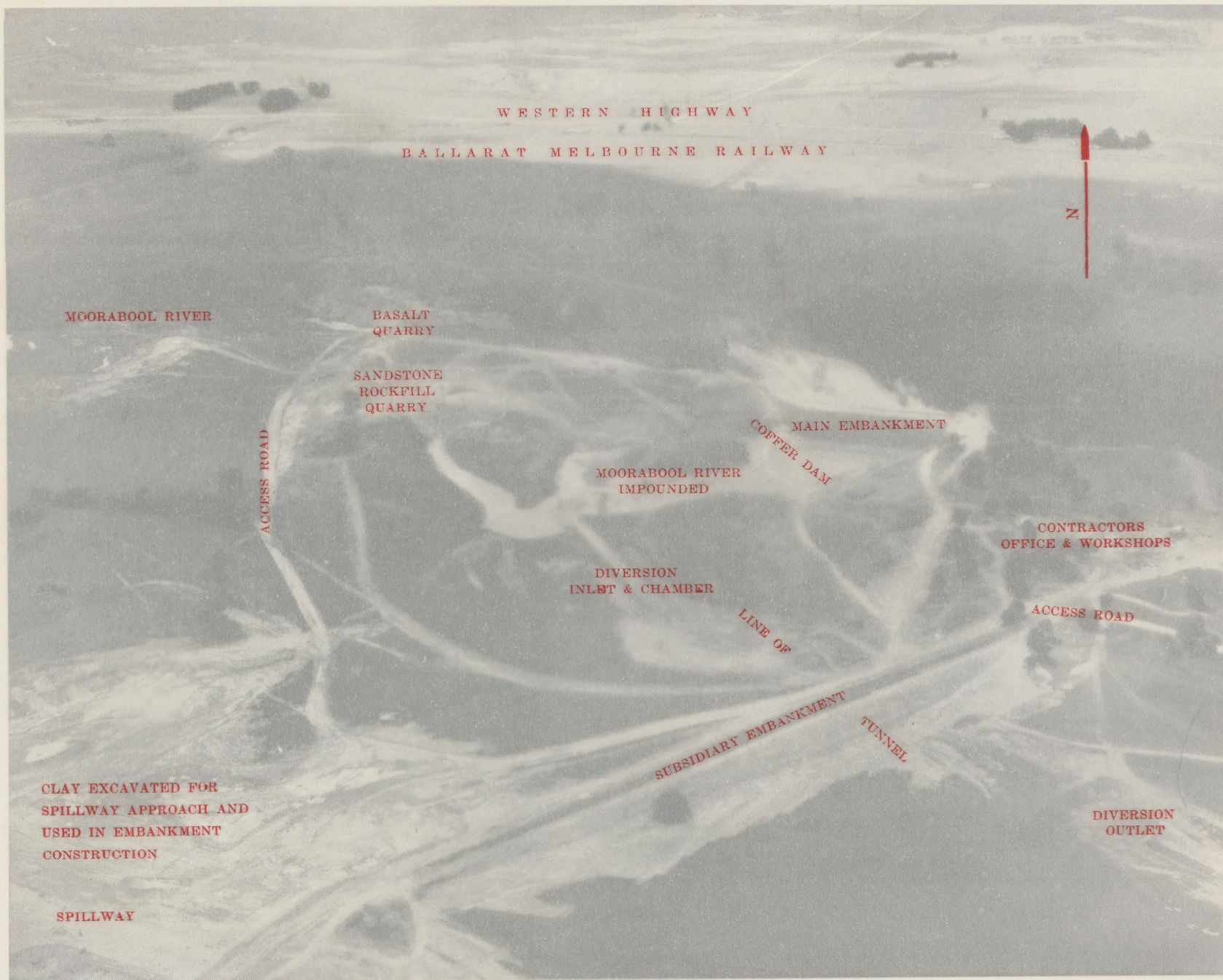
New designs were prepared and approved by the Government on 19th June, 1953.

A tunnel was first constructed, to divert river water away from the site of the dam. This was completed, and the river was diverted on 15th December, 1953.

On the same day excavation of the foundations of the main embankment in the river bed was started.

The main embankment attains a height of 84 feet at its maximum and is designed to impound 1,500,000,000 gallons.

The spillway capacity is 24,000 cusecs, while the aqueduct can transmit 5 million gallons of water per day from the dam to the city.



WESTERN HIGHWAY

BALLARAT MELBOURNE RAILWAY

N

MOORABOOL RIVER

BASALT
QUARRY

SANDSTONE
ROCKFILL
QUARRY

ACCESS ROAD

MAIN EMBANKMENT
COFFER DAM

MOORABOOL RIVER
IMPOUNDED

DIVERSION
INLET & CHAMBER

CONTRACTORS
OFFICE & WORKSHOPS

ACCESS ROAD

LINE OF

SUBSIDIARY EMBANKMENT
TUNNEL

CLAY EXCAVATED FOR
SPILLWAY APPROACH AND
USED IN EMBANKMENT
CONSTRUCTION

DIVERSION
OUTLET

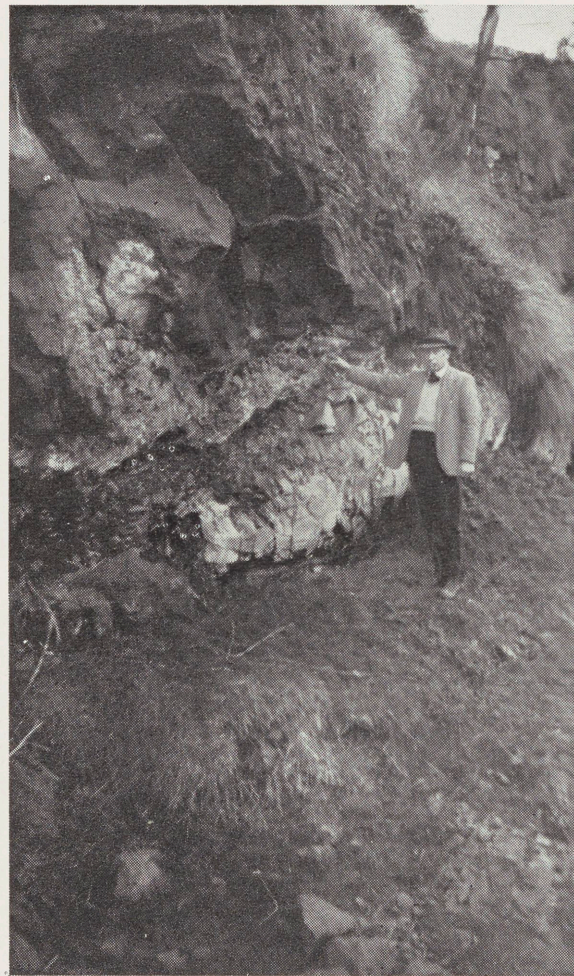
SPILLWAY



PRELIMINARY INVESTIGATIONS



GAUGING STEAM FLOW



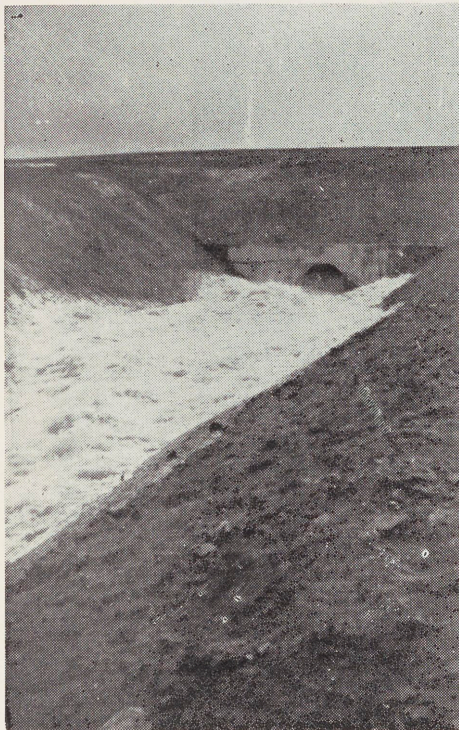
INVESTIGATING BASALT
OVERLYING SANDSTONE FORMATION
FOR ROCK FILL

DIVERSION TUNNEL

CONTRACTORS—Sainrapt and Brice (Aust.) Pty. Ltd., Melbourne

Length of Tunnel including Gallery - - - - -	930 feet
Volume of Excavation for approaches - - - - -	11,500 cub. yards
Volume of Tunnel Excavation through sandstone and shale - -	1,434 cub. yards
Volume of R. Concrete in Tunnel Lining - - - - -	1,113 cub. yards

COST—£47,100



FLOOD DISCHARGE AFTER
COMPLETION OF TUNNEL
AND DURING
CONSTRUCTION OF DAM

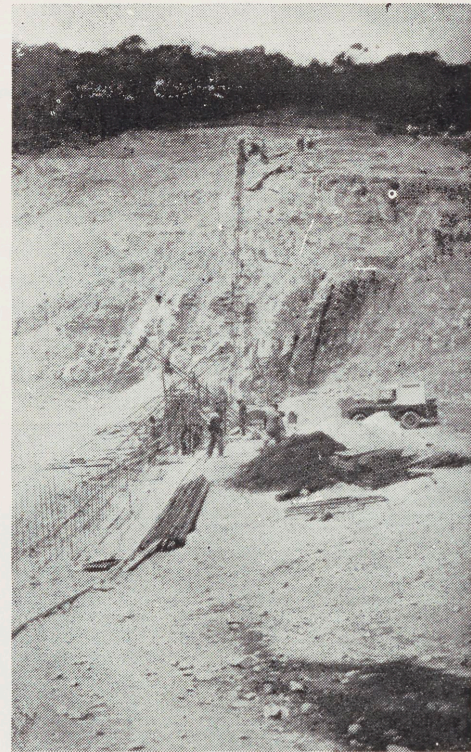


EXCAVATION OF TUNNEL ENTRANCE



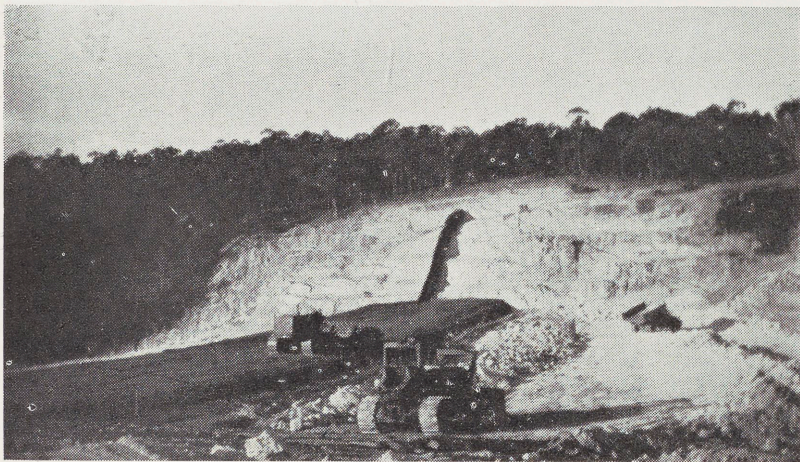
FIRST STAGE OF CONSTRUCTION

Clearing Site of Embankment



2nd STAGE

Constructing Concrete Core



3rd STAGE

Concrete Core Wall Completed

Compacting Clay Inner Zone, Transition and Rock Zone Visible



4th STAGE

Bank at Full Supply Level showing Upstream Rip Rap

MAIN EMBANKMENT - SUDSIDIARY EMBANKMENT - SPILLWAY

CONTRACTOR—Thiess Bros. (Vic.) Pty. Ltd., Brisbane, Queensland

MAIN EMBANKMENT :

Volume of stripping from Embankment seat and quarries -	-	-	64,200	cub. yds.
Volume of clay in Inner Zone -	-	-	47,700	„ „
Volume of sand in Transition Zone -	-	-	17,600	„ „
Volume of rockfill Zone (Sandstone) -	-	-	81,600	„ „
Volume of Igneous Rock Rip-Rap -	-	-	7,700	„ „
Volume of concrete in cut off wall -	-	-	600	„ „

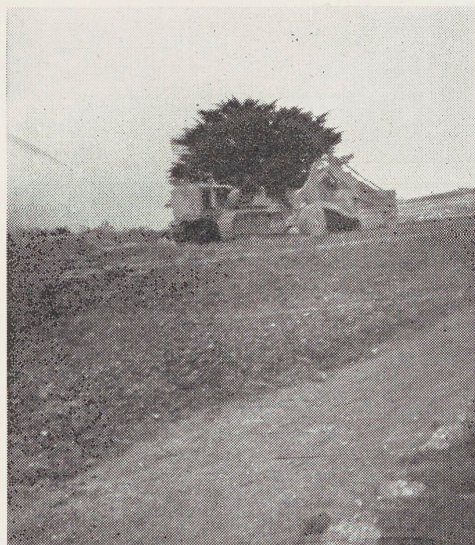
SUBSIDIARY EMBANKMENT :

Volume of stripping from Embankment seat -	-	-	5,000
Volume of clay in Inner Zone -	-	-	20,000	„ „
Volume of sand in Transition Zone -	-	-	2,000	„ „
Volume of Igneous Rock Rip-Rap -	-	-	3,000	„ „

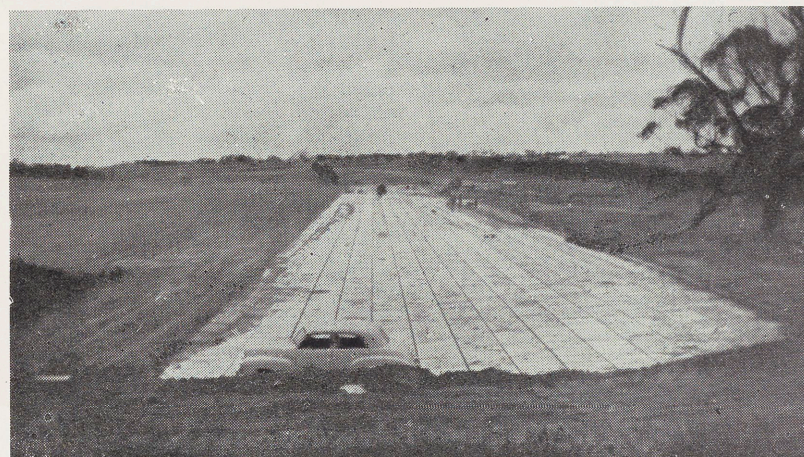
SPILLWAY :

Volume of excavation -	-	-	78,000	„ „
Volume of concrete -	-	-	1,600	„ „

COST—£110,000



PLACING
SUDSIDIARY EMBANKMENT
INNER ZONE



SPILLWAY UNDER CONSTRUCTION

OUTLET AQUEDUCT

CONTRACTORS—Messrs A. and F. McLean, Norlane, Geelong



Length of pipes laid in trench	-	-	11,365 feet
Length of channel excavated	-	-	21,000 feet
Length of tunnel excavated and lined	-	-	1,496 feet
Volume of concrete in structures	-	-	300 cub. yds.
Length of fencing along channel	-	-	42,000 feet

COST—£60,750



CHANNEL EXCAVATION AND PIPES AT TUNNEL APPROACH

Supply of Pipes and Fittings

CONTRACTOR—Humes Limited, 114 King Street, Melbourne

Length of 30 inch diameter R.C. Pipes - - - - -	400 feet
Length of 24 inch diameter R.C. Pipes - - - - -	2,200 feet
Length of 21 inch diameter R.C. Pipes - - - - -	7,900 feet
Length of 21 inch diameter Steel Concrete Lined Pipes - - - - -	1,056 feet
Length of 15 inch diameter Steel Concrete Lined Pipes - - - - -	100 feet
Number of special steel fittings - - - - -	56 No.
Valves—2 only 18 inch diameter :	
1 only 12 inch diameter - - - - -	3 No.

All pipes and fittings fabricated by Humes Ltd. 18 inch diameter valves were made by Orton and Burns Pty. Ltd., Melbourne, whilst the 12 inch diameter valve was made by M. B. John Ltd., Ballarat.

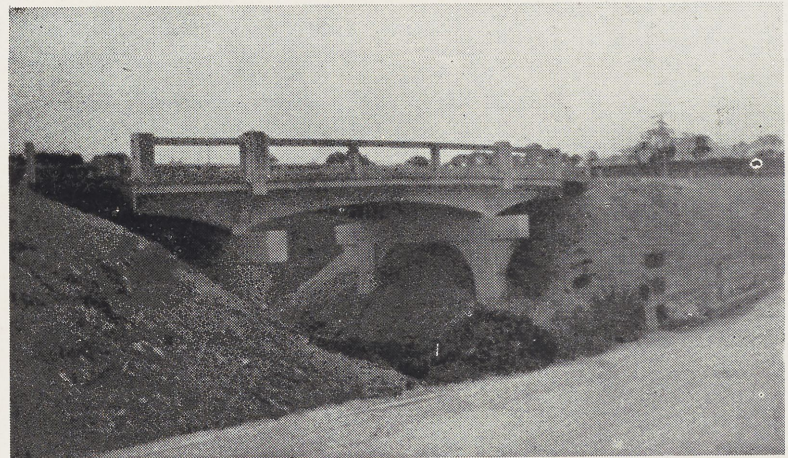
COST—£21,550



No. 2 SIPHON
BOSTOCK AQUEDUCT

Raising of Road Bridge—Western Highway

AT Paddock Creek



WORK EXECUTED BY—Country Roads Board of Victoria
COST—£10,100

1.	Supply of Pipes	-	-	-	-	-	-	-	-	-	-	£21,550
2.	Construction of Bostock Aqueduct				-	-	-	-	-	-	-	£60,750
3.	Diversion Tunnel	-	-	-	-	-	-	-	-	-	-	£47,100
4.	Construction of Main Embankment, Subsidiary Embankment and Spillway	-	-	-	-	-	-	-	-	-	-	£110,000
5.	Raising of Highway Bridge over Paddock Creek					-	-	-	-	-	-	£10,100
6.	Acquisition of Land			-	-	-	-	-	-	-	-	£24,000
7.	Cement, Fencing Materials, Electrical Installation, Reinforcing Steel and other items supplied on site by Trust					-	-	-	-	-	-	£17,500
8.	Preliminary Investigations, Engineering Surveys, Borings, Designs, Fees, Supervision and Administration						-	-	-	-	-	£21,000
	TOTAL EXPENDITURE											£312,000

