

DENIBOOTA

The Deniboota Domestic and Stock Water Supply and Irrigation District is the fourth large scheme of its kind undertaken by the Water Conservation and Irrigation Commission to make use of the stored waters of the River Murray.

The three other similar Districts, Wakool, Berriquin and Denimein are already in operation.

Deniboota District contains an area of 304,321 acres and there are some 150 holdings within it. With the completion of works for Deniboota an assured water supply will have been made available to approximately 1,500 holdings covering 1,726,320 acres in the Riverina area of New South Wales.

The word "Deniboota" is a combination of the names of two towns—Deniliquin at the northern end and Wamboona at the extreme southern end of the District.

The "Proposal" for the constitution of the District was published in the *Government Gazette* of 1st April, 1938, and the Provisional District was proclaimed on the 16th December, 1938.

Work commenced early in 1939 and continued until February, 1942, when the serious war position left no alternative but to suspend operations and transfer men and plant to defence work. In 1946 work at Deniboota was re-commenced.

The works include a siphon and about 185 miles of channels together with associated structures, such as bridges, regulators, outlets, etc. Work on the siphon was completed in April, 1955.

The Lawson Siphon

The whole work, which conveys the Mulwala Canal under the Edward River and across low country subject to flooding, includes:—

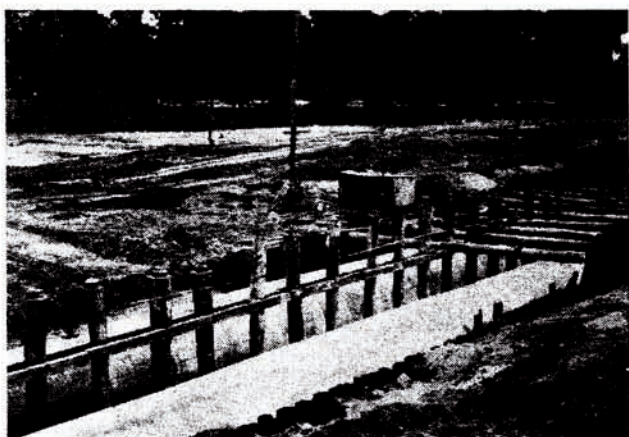
Twin siphons, 2,300 feet long, under the Edward River and adjacent billabongs.

A length of open canal.

Twin siphons, 450 feet long, under Aljoes Creek.

Because of the sandy nature of the soil the open canal has been lined with clay.

GENERAL VIEW OF THE TWIN BARREL SIPHON ACROSS THE FLOOD PLAIN OF THE EDWARD RIVER



LOOKING ACROSS EDWARD RIVER ALONG SIPHON SITE, PRIOR TO BEGINNING OF CONSTRUCTION WORK

Fundamental to it all is the fact that, as with Wakool, Berriquin and Denimein, drought will not again be experienced within the boundaries of Deniboota.

Water has come to a thirsty land.

THE LAWSON SIPHONS

CONSTRUCTION DETAILS

Length of Siphons (barrels and transitions)—5,500 l.ft.
Length of Channel (between siphons)—3,611 l.ft.
Diameter of Siphons—12 feet.
Thickness of Siphon Barrel—15 inches.
Maximum Head on Siphons—60 feet.
Flow Capacity—1,000 cusecs.
Concrete: Quantity in Siphons—22,000 c.yds.
Concrete: Quantity in Structures—9,000 c.yds.
Concrete: Weight in Siphons—39,000 tons.
Concrete: Weight in Structures—17,000 tons.
Reinforcement (siphons and structures)—1,000 tons.
Excavation (for siphon trenches)—140,000 c.yds.
Steel Sheet Piling (driven trenches)—130,000 l.ft.
Steel Sheet Piling (driven coffer dam)—74,000 l.ft.
Timber Piling (driven)—12,000 l.ft.
Timbering (total)—38,000 c.ft.

Issued under the authority of the
Honourable E. WETHERELL, M.L.A., Minister for
Conservation
by the

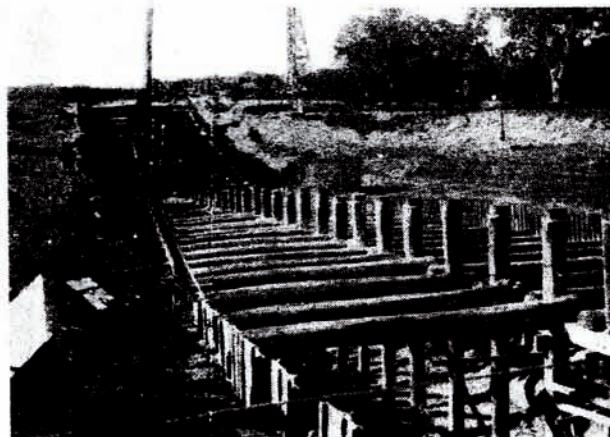
Water Conservation and Irrigation Commission of
New South Wales.

C. C. CORBETT, Chairman.

John MESSNER,
Commissioner.

R. A. YOUNG,
Commissioner.

SIPHON TRENCH, 52ft. WIDE, IN EARLY STAGE OF CONSTRUCTION



total length of the work is approximately 7,000

work forms part of the Mulwala Canal System from the point of diversion from the River Murray rawonga Weir to the inlet to the siphon is 75 miles

map on the reverse side of this pamphlet gives idea of the extent of the lands which benefit from supply of water conveyed by this canal.

Supply of water from Mulwala Canal into the siphon is controlled by segmental gates discharging into the twin barrels of the siphon itself.

Each of the twin barrels of the siphon is 12 feet in diameter and the pair are designed for a total flow of 1,000 cubic feet of water per second, or 540,000 gallons per day.

The channels within the District have been designed for a supply of 210,000 acre-feet, based on an irrigation season of 210 days.

Use of the New Work

Investigations initially undertaken by field officers of the Commission's service, which were later amplified by Commonwealth Scientific and Industrial Research Commission, were considered by a committee consisting of representatives of the Commission, the Council for Scientific and Industrial Research (now the C.S. & I.R.), the Department of Agriculture, and the Rural Research Commission. The committee found that a large area of the Deniboota District was suitable for irrigation.

There were originally 147 holdings within the boundaries proclaimed. Some subdivision has already taken place.

It was assumed that with more intensive development possible by an assured water supply many other holdings will be subdivided. Thus additional farms will be available and the State will derive direct benefit from increased production.

Within the area now covered by the Districts of Wakool, Berriquin, Denimein and Deniboota there were, prior to irrigation, about 1,000 holdings. This has increased now to approximately 1,500.

Provision has been made in the capacity of the supply system for an anticipated further substantial increase in number.

The supply system at Deniboota is planned on the basis that the principal primary industry carried on there is fat lamb production with, possibly, some dairying.

WING THE STEEL REINFORCEMENT WITH STEEL FORMS IN POSITION FOR POURING CONCRETE

