

in constructing some 390 miles of railway line elsewhere in Egypt, Palestine, and Syria, as well as a Depot at Kantara East, a swing bridge over the Suez Canal, and two railway bridges in Syria.

#### *Works Services.*

44. The considerable achievements of the Works Services are in no small measure due to my Director of Works, Major General E. F. Tickell.

Constructional work has proceeded steadily, though hampered somewhat by a certain shortage of materials on the sites. The rate of delivery of engineer stores has improved, but is still limited not only by the amount of shipping available but also by restricted transportation facilities in Egypt. These could not be adequately supplemented by service transport because it was necessary to meet the deficiencies of operational and maintenance units. The transport problem will be considerably easier when these deficiencies have been made up.

Works Services have taken over responsibility for the construction of all docks and harbour works.

Preliminary work has been put in hand for deep water quays at Suez and Safaga. The lighter wharf programme has been continued and about one mile of additional wharf has been completed since June.

A pipe line carrying a thousand tons of oil a day from Suez to Port Said has been laid. The Desert water pipe line has been completed as far as Matruh and is being extended. A large number of additional filtering plants have been built in the Delta. Well boring has been continued throughout the Middle East and many hundreds of miles of distribution pipe have been laid.

Work on a large number of roads in Egypt, the Western Desert, Syria and Palestine has continued, and much road maintenance has been carried out in Syria, the Sudan, Eritrea and Abyssinia.

Many aerodromes and landing grounds have been constructed in the Western Desert and elsewhere. Work on a large number of others is continuing.

The programme for building hospitals, as originally planned, has been completed, and many camps have been erected in Egypt and Palestine.

Increased local production has done much to supplement shipments from abroad.

#### *Vehicle Assembly.*

45. By far the greater number of wheeled vehicles arriving from overseas come cased and partly dismantled. The work of assembly has been shared by the Royal Army Service Corps and the Royal Army Ordnance Corps with valuable assistance from the South African personnel sent up by the Union for this purpose.

#### *Middle East Provision Office.*

46. This is now established under the Eastern Group Supply system and provision forecasts for the period 1st April to 31st December, 1942, have been forwarded to the Central Provision Office, New Delhi. A plan for co-ordinating and stimulating local production is now being prepared.

#### RE-EQUIPMENT AND REORGANISATION

47. Large consignments of war material of every description made it possible to carry out

re-equipment on a large scale. Various tables showing this are set out in Appendix "C."

Vehicles of all types came in a steady stream from Great Britain, Canada, Australia, and the Union of South Africa, and in July tanks and trucks began to arrive in increasing volume from the United States of America. Between the 1st July and the 31st October we received in all almost 34,000 trucks and lorries and 2,100 armoured vehicles. Considerable consignments of artillery and small arms were also received. Among these were 600 field guns, 200 anti-tank guns, 160 light and 80 heavy anti-aircraft guns. Shipments of small arms included approximately 3,700 Bren guns, 900 mortars, and 80,000 rifles, and quantities of ammunition and equipment.

Yet, large as they were, these consignments, necessarily limited in quantity by the amount of shipping space available, were insufficient to replace all the wastage which had occurred or to enable reserves of many important items of equipment to be built up.

48. Limitations of shipping space were much more severely felt in connection with personnel, making it necessary to choose between fighting troops and administrative units, and between complete formations or units and drafts. It seemed best to ask for the greater part of the available space to be allotted to fighting formations, as this brought a greater increase in fighting strength than would have resulted from accepting a preponderance of drafts. Against 27,300 men arriving with units we received 17,000 in drafts. However one half of the number arriving in drafts were absorbed by new units which it was found necessary to form in the Middle East.

A serious shortage of personnel and administrative units had to be accepted as the inevitable consequence of this policy. The shortage of personnel extended to every arm of the Service but the rearward services suffered most. In many cases there were insufficient men to make even units in contact with the enemy up to full establishment. At the beginning of July the overall deficit in personnel, the deficit compared to war establishments plus first reinforcements, was 16 per cent.; by the end of October, when the strain on reserves was increased by the number of complete units received, the deficit was slightly larger. Nevertheless, by disposing personnel to the best advantage and by increasing their efforts all arms contrived to fulfil their functions with great efficiency, and I wish to record my appreciation of the manner in which they overcame this serious handicap.

#### *Armoured Formations.*

49. The armoured formations presented the most striking example of the extent to which it was possible to carry out re-equipment and re-organisation. At the beginning of July I could put into the field only two armoured car regiments and the 7th Armoured Division, whose range and mobility was seriously restricted by the fact that one Brigade was equipped with infantry tanks owing to the shortage of cruisers. At the end of October I had at my disposal the 7th Armoured Division, the 22nd Armoured Brigade, the 1st Army Tank Brigade complete, and the 32nd Army Tank Brigade complete except for one battalion. I was also able to re-equip a third British armoured car regiment and to complete the equipment of two South African armoured car regiments.