

While the strategic deployment continued, the logistic units in Saudi Arabia were working intensively to receive and sort the supplies which were arriving, and then deliver them to the front-line units. To facilitate this process, a chain of logistic bases was established between Al Jubayl and the Forward Assembly Area from which 1 (BR) Armoured Division was to launch its offensive. Forward logistic bases had to cater for the anticipated daily consumption of up to 1200 tonnes of ammunition, 500,000 litres of fuel, 400,000 litres of water and 30,000 individual rations. We positioned more than 120 replacement vehicles and some 1600 tonnes of spare parts in the desert, and prepared to carry out running repairs in theatre. Moving all the troops with their vehicles, equipment and supplies was an enormous task. We used 800 vehicles ranging from tank transporters and fuel tankers to Landrovers, driving a total of over 14 million kilometres. The Royal Engineers produced over 12 million maps, moved 850,000 tonnes of soil and dug 160 kilometres of ditching. In a joint project with US forces, they designed, planned and built a fuel pipeline which eventually stretched some 290 kilometres across the desert.

The scale of the logistic operation was huge, as these figures demonstrate. To compare it with a previous, well-known operation, the daily needs of 1 (BR) Armoured Division were of the same order as those for the whole of 21 Army Group in the early part of Operation OVERLORD, the D-Day landings in 1944. I believe that 1 (BR) Armoured Division was probably the best prepared and supported force ever fielded by the British Army.

#### FINAL ALLIED PREPARATIONS

During the autumn of 1990, political pressure on Iraq continued. However, neither economic sanctions, diplomatic measures nor the threat of military action brought about any apparent softening of President Saddam Hussein's attitude. A crucial date for the Coalition was Thursday, 29 November, when the United Nations Security Council approved Resolution 678 calling on Iraq to withdraw from Kuwait by 15 January and authorising the use of "all necessary means" to effect withdrawal if the deadline passed and Iraq had not acceded. Although our forces had to remain vigilant to react to any Iraqi provocation, this date now provided the focal point on which offensive operations by the Coalition could begin. However, we then had to consider other factors which would influence the timing of any allied attack. We realised that the high summer temperatures in the region would place our troops at a disadvantage compared with the indigenous armies, and this indicated that military action should be completed before April. Furthermore, the major Islamic religious festival of Ramadan would begin in mid-March and, with several Arab nations in the Coalition, it would have been inappropriate to be in the throes of war at that time. Finally, some allied forces had been in the area since August and we could not keep them at full war readiness indefinitely. Taking all these factors into consideration, Coalition leaders planned to begin an attack soon after the 15 January deadline if Iraqi forces were still occupying Kuwait. It was anticipated that the campaign would last about six weeks.

Early in December, President Saddam Hussein announced that all foreign hostages would be released. Barring this one concession, his intransigence remained absolute and hostilities seemed increasingly likely; so our soldiers, sailors and airmen reviewed their preparations for war. In addition to individual unit training, a series of large-scale exercises enabled ships, army formations and squadrons to practise their skills with their Coalition allies, with particular emphasis on operating under chemical and biological warfare conditions. The Christmas/New Year period saw a heightened alertness to guard against a pre-emptive Iraqi attack, followed by an increase in the intensity of work-up preparations as the United Nations deadline approached.

This preparation phase was not without cost. During the preparations for the land battle, nine soldiers of 1 (BR) Armoured Division died. Considering the intensity and hazardous nature of the training, the accidents which our land forces suffered were mercifully few. Similarly, there were two accidents to RAF aircraft: a Jaguar crashed while on a low flying sortie on 13 November, killing the pilot, and a Tornado GR1 flew into the ground in Oman on 13 January, killing both pilot and navigator. In addition, a Tornado GR1 was badly damaged in a night landing accident at Tabuk in November; both crew members ejected but were quite seriously injured. Tragic as these accidents were, the fact was that we had put a significant proportion of our armed Services on a war footing in a distant and environmentally demanding theatre in the space of only four months, and had trained and prepared them fully for combat. It reflects well on the professionalism of our forces and on the realism of our peacetime training that our fighting machine was mobilised so quickly and efficiently, and was at the highest state of readiness when the UN deadline expired.

#### IRAQI MILITARY STRENGTH

Despite the huge allied military build-up and our clearly stated intention to eject the Iraqi forces from Kuwait if Saddam Hussein refused to withdraw in compliance with UN Security Council Resolution 660, President Saddam Hussein elected to reinforce his troops rather than withdraw them. Iraq mobilised its reserve forces and formed new divisions to protect Baghdad, while the majority of the army was deployed into Kuwait and south-eastern Iraq. The force in this area opposing the Coalition armies as the UN deadline approached was estimated as being over 600,000 men formed into over 40 divisions, with some 4,500 tanks and 3,250 artillery pieces. A substantial defensive barrier of minefields, sand walls, razor wire fences and oil-filled ditches was built along the border of Kuwait and southern Iraq with Saudi Arabia to obstruct our forces and attempt to channel them into areas favourable for Iraqi counter-attack. A further 20 divisions with 1,000 tanks and a similar number of artillery pieces were retained in central and northern Iraq, bringing the total number of Iraqi ground troops to an estimated 1.2 million. By comparison, the Iraqi Navy was less impressive, being equipped with only about 15 surface-to-surface missile armed fast attack craft, some 5 of which had been captured from the Kuwaiti navy, and a number of miscellaneous small craft many of which could be used for minelaying. The shore-based Silkworm anti-ship missile system also posed a significant threat.

The Iraqi Air Force fielded about 750 fixed-wing combat aircraft capable of operating in a variety of roles. Their inventory contained almost 50 MiG 29 Fulcrum air superiority fighters and 30 MiG 25 Foxbat interceptor/reconnaissance aircraft as well as 170 older generation air defence aircraft. Their 70 Mirage F1s could be used in the air defence or ground attack role with a diversity of weapons, and were supplemented in the attack role by a squadron of long-range SU-24 Fencers and 300 Flogger, Fitter and Frogfoot aircraft. Iraq had also recently acquired an air-to-air refuelling and airborne early warning capability and had a small air transport fleet. In addition, they had a diverse fleet of over 500 assault, attack and troop-lifting helicopters shared between the Air Force and Army Aviation. The Iraqi Air Force was deployed on more than 60 airfields, some of which were vast constructions with very considerable runway and taxiway redundancy. Over 600 hardened aircraft shelters had been built on the main operating bases. Defensively, Iraq had an extensive arsenal of surface-to-air missile and anti-aircraft artillery batteries. For command and control of its forces, a vast network of deep and hardened bunkers had been constructed throughout the country.

#### THE FREEING OF KUWAIT BEGINS

On the night of 16 January, at 2336 hours GMT, the Coalition forces began their attack against Iraq. The opening bombardment came from the air, with American F-117 stealth fighters and cruise missiles, fired from surface ships and submarines, being used to attack key command and control and air defence centres. They were followed shortly afterwards by formations of allied aircraft attacking a variety of targets from numerous directions. In addition to their significant contribution to air operations, naval forces began the task of gaining sea control of the Northern Gulf and thereby posing the threat of an amphibious landing. On land, half a million ground troops were poised along the 200 miles of Saudi border with Kuwait and Eastern Iraq. The objectives of the first phase of the campaign were to establish air superiority, to paralyse the enemy's command, control and communications system, to destroy his nuclear, chemical and biological warfare facilities, and then to begin the process of attrition of Iraqi ground forces from the air to prepare the way for the coalition armies to liberate Kuwait quickly and with minimum allied casualties.

This was a combined arms, multi-national assault with General Norman Schwarzkopf of the United States Army nominated as the overall commander. United Kingdom forces were involved in all aspects of the campaign and I will describe their activities under single-Service headings which, to maintain a logical sequence, will begin with air operations, then cover naval operations and finish with the land offensive. I reiterate that we were part of a large Coalition force and that the delineation by Service is for clarity only; for the operations of all three arms were interdependent throughout the hostilities. The total number of British servicemen and women in theatre was about 45,000 which made us the third largest contingent after the United States and Saudi Arabia. The Coalition force numbered over 700,000 men and women drawn from 30 nations. The United States provided the majority of the personnel—some 540,000 people—and consequently took the lead in formulating the operational plans.

#### AIR OPERATIONS

On that first night, as part of a complex, highly co-ordinated air campaign, twenty Royal Air Force Tornado GR1 aircraft, each