

L.H. 158

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MINISTRY OF SUPPLY,

Information Division,

SHELL MEX HOUSE,

STRAND,

LONDON, W.C.2.

28th November, 1952.

Dear Tommy,

I spoke to your office yesterday about the release of 800 feet of material on the Monte Bello weapon test, and here is the dope sheet for your script writer, with a copy of a story we released about the explosion, which may be helpful. I understand that the release date will be 11 December, but I will confirm this as soon as I possibly can.

I hope that it will not be too late for you to include in your Review of 1952, and that it will solve a part of your problem on that particular item.

With kind regards,

Yours sincerely,


Sam Cotton

Senior Press Officer

G. T. Cummins, Esq.,
Editor,

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103-109 Wardour Street,
W.1.

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NEWSREEL DATA

- 965 For tests of Britain's first atomic weapon the Monte Belle Islands, off
(1) the North West Coast of Australia, were declared a prohibited area by the Australian Government early in 1952. Before then few people had even heard of them as they lay beyond normal shipping routes and were visited only by an occasional pearl fishing boat or by a few sportsmen attracted there by the dangerous fish which abound in these waters. The islands are barren and rocky and clumps of prickly spinifex grass make walking on them very trying and unpleasant. There are no trees to give shade from the continuous strong sunshine except for a few scattered groups of stunted mangroves.
- 570 Many of this group of almost 100 islands are bounded by cliffs of sandstone
(2) made jagged and treacherous by erosion of wind and sea. Here and there, however, there are pleasant coves and long stretches of dazzling white sun-scoured beaches, made, not of sand, but of powdered sea shells and coral, lapped by the clear blue lagoon waters in which swimming had to be forbidden because of poisonous fish.
- 502 Early in March the advance ships of the Royal Naval Special Squadron
(3) reached the islands with officers and men of the Royal Engineers and the Royal Marines. Large quantities of building materials, trucks, bulldozers and cranes were carried by the Royal Engineers and were landed on the islands by the Royal Marines in minor landing craft. British forces joined with the Commonwealth forces, notably the Royal Australian Navy and the Royal Australian Air Force, in constructing roads, landing piers, preparing beachheads, building laboratories and living accommodation required by the scientists who were to arrive later.
- 216 The main force of scientists left England in June in H.M.S. Campania,
(4) the Flagship of Rear Admiral A.D. Torlesse, who was in command of the operation. The ship arrived at Montebello in August with hundreds of tons of valuable scientific equipment on board.

- 320 H.M.S. Narvik was one of the tank landing ships which had arrived
(5) earlier at the site with a detachment of Royal Engineers and Royal Marines. During the operation such ships as this provided living quarters for the forces.
- 239 Main beachheads were established at suitable parts of the islands for
(6) the landing and sorting of the masses of technical equipment. Handling of the stores was aided by the use of up-to-date mechanical aids brought to the site from Gt. Britain and Australia.
- 229 At various stations dotted about the islands, scientists, in the first
(7) few days after their arrival, were themselves unpacking their delicate equipment anxious to find whether it had suffered any damage in transit.
- 279 Australian Commonwealth Forces who were the first to arrive earlier in
(8) the year had done a magnificent job of laying a network of roads on the main islands - a facility which greatly speeded the subsequent building and scientific preparations.
- 274 Vast loads of scientific equipment had to be moved across rough country
(9) to isolated sites but Royal Engineers made light of this task with powerful bulldozers drawing improvised flat bottomed sleds containing the equipment.
- 550 One important feature of this test was to obtain information which would
(10) help the Civil Defence authorities to design structures to withstand the blast from an atomic bomb.
- 551 A Home Office scientist inspects and measures an Anderson Shelter which
(11) will soon be subjected to the powerful blast.
- 554 Specially designed concrete block structures were built at chosen distances
(12) from the centre of the explosion. By studying the damage caused to them by the blast Ministry of Works engineers were to obtain useful information

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on the strength of materials and designed to atomic bomb shelters.

516 After months of intensive preparation and hard work the climax draws near.
(13) On D-1 day, that is the day before the test, scientists on the islands have made final adjustments to their instruments which will automatically record the blast and radioactivity on the morrow, and now they prepare to leave. For the last time they walk down these much used jetties erected by the Royal Engineers. Here are the L.C.M's., manned by men of the Royal Marines, ready to take them back to the refuge of their ships.

499 The ships of the Squadron now begin the withdrawal and move to safe
(14) positions many miles away from the frigate H.M.S. Fly in which the bomb has been set.

588 All is now still on the islands where so recently there has been so much
(15) activity.

325 Zero hour approaches and in the main control room scientists anxiously
(6) watch their monitors as the minutes run out on the control clock. The completely automatic sequence of operations, switching in cameras and other instruments throughout the islands, is now occurring smoothly as the final seconds pass.

326 The atmosphere is tense with expectation.
(17)

354 A scientist in a control laboratory makes last minute adjustments to
(18) his instruments.

364 Five, four, three, two, one - zero. An intense flash many times brighter
(19)&(20) than the sun heralds successful detonation. No man may look at this with naked eyes without risking blindness. The intense local heat of over a million degrees centigrade generated by this instantaneous conversion of matter into energy, heats the surrounding air to fantastic temperatures, so that it becomes a searing white expanding fireball hundreds of feet

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across. As time passes it loses heat by radiation and by mixing with cold air so that it becomes less bright. Soon thousands of tons of water and mud and sand, hurled upwards at great speed by the blast cut great gashes of black through this inferno.

591 Many miles away, on the bridge of H.M.S. Gambia, Rear Admiral Torless
(21) and Dr. W.G. Penney, of the Ministry of Supply, who was Scientific Director of the operation, face away from the bomb. A few seconds after zero instant they turn to look.

590 In the distance, above the assembled crew of the aircraft carrier, towers
(22) an immense column of water which has been hurled into the air by the force of the blast. Intermixed in the water and spray is radioactive material which is giving off deadly radiations. The top cloud tends to rise because it is a little hotter than the air around it, until at a
580 height of about 2½ miles, it reaches an unusually low inversion layer,
(23) and ceases to rise. Meanwhile radioactive rain is falling from the cloud and the strong differential winds tug and tear the great column into a ragged shape.

584 To Dr. W.G. Penney, responsible for the technical development of the
(24) weapon, and for the conduct of the scientific part of the operation, great credit is due for its spectacularly successful outcome.

As time passes the great atomic cloud is drawn by the winds into a large Z which sprawls across the sky. As dangerous material rained out of this fantastic shape on to the islands, scientists looked up and wondered when they would be able to enter the area safely and recover their valuable records of the test.

(25) H.M.A.S. Hantabury
Many ships of the Royal Australian Navy provided indispensable support to the Royal Navy. River class frigate H.M.A.S. Hantabury was one of the Australian ships which patrolled a wide stretch of sea around the site to ensure continuous reconnaissance of the area, a task for which the Australian Fleet undertook complete responsibility.

This material is provided as background information on the British Atomic Explosion. Any part, or the whole if it, may be attributed to the Ministry of Supply if desired.

It is being issued simultaneously in the United Kingdom and in Australia, and should not be published, broadcast, or used on club tapes before 08.00 hours, 24 October, 1952.

BRITAIN'S ATOMIC WEAPON

THE PLANNING BEHIND THE EXPLOSION

The Monte Bello test of Britain's first atomic weapon has been an outstanding example of a combined operation, in which the Governments of the United Kingdom and Australia have worked in close co-operation.

To enable the Ministry of Supply to stage the test, under the direction of Dr. W.G. Penney, the Royal Navy, the Army, the R.A.F., the Royal Australian Navy, the Royal Australian Air Force, the Australian Defence Department, the Commonwealth Meteorological Research in Melbourne and the Australian Security Intelligence Organisation all played their parts with great efficiency.

About 2 years ago the Royal Navy, through its Deputy Chief of Naval Staff, Vice-Admiral E.N. Evans-Lombe C.B., was asked to start preparing for the operation and to begin the planning. A committee composed of representatives of the Ministries concerned was formed, and Rear-Admiral A.D. Torlesse, who was to be in command at the Monte Bellos, was called in to help prepare the detailed plans - plans which were carried through with little deviation.

The problem of finding a suitable site for the test was resolved when, with the permission and assistance of the Australian Government, the Monte Bello Islands were chosen.

THE SCIENTIFIC SIDE

The scientific side of the experiment was directed by Dr. W.G. Penney, of the Ministry of Supply, who had as his deputy, Dr. L.C. Tyte, also of the Ministry of Supply. In addition to these and other key scientific personnel from the Ministry, those taking part included Mr. W.A.S. Butement, Chief Scientist, Commonwealth Department of Supply and Development, Professor L.H. Martin, of Melbourne University, Chairman of the Australian Defence Scientific Committee, Dr. E.W. Titterton, Australian National University and Dr. O.M. Solandt, Chairman, Canadian Defence Committee.

The Ministry of Works, who were responsible for a great deal of constructional work, and the Home Office, were closely concerned with civil defence aspects of the test. Much work was also undertaken by, and on behalf of, the Medical Research Council, whose advice was of great value.

NAVY'S MAIN TASK

The Royal Navy shouldered as its main task transport, housing and logistic support of the expedition. This involved provision of a base ship (CAMPANIA) three L.S.T.s and the "weapon ship" (PLYM). Nearly all required conversion to suit them for their special tasks. In the case of CAMPANIA this involved doubling the wardroom and cabin accommodations to house the Ministry of Supply staff who, when at full strength, outnumbered the naval officers by four to one; and the provision of specially fitted workshops, large stores for cased apparatus, numbers of extra boats and additional water distilling plant. Another problem was the civil construction and engineering which had to be undertaken.

The L.S.T.s, two of which were specially fitted to perform important scientific tasks in the test, carried our Army component of about two hundred Royal Engineers and all their stores, building material and plant, besides large quantities of Ministry of Supply technical stores. They also carried the minor landing craft (twelve L.C.A.s and five L.C.M.s) and their Royal Marine crews.

These craft landed the building material, plant and stores on the various islands on which buildings had to be erected and plant installed, and did the lion's share of the daily personnel transport between ships and shore, and between the islands.

The Royal Marines were responsible for running and maintaining these craft; after five months of operating in shallow, rocky and often rough waters all the L.C.M.s and ten out of twelve L.C.A.s were actually running for the trial, a very remarkable achievement and one which amply illustrated the effective design and reliability of these war-time craft.

CAMPANIA carried a naval flight of five aircraft in all, three Dragonfly III helicopters and two "Sea Otter" amphibians. The former were provided to undertake particular duties in connection with the test itself, but were also most useful for rapid transport of passengers and urgent stores between CAMPANIA

and points ashore. The Sea Otters were supplied for air transport between the Monte Bello Islands and the mainland, and were found useful on a number of occasions.

ROLE OF THE ARMY

The Royal Engineer detachment, numbering more than two hundred carried on the troop decks of two of the landing ships, planned and carried out civil engineering work ashore to meet the requirements of the Ministry of Supply, handled the plant and transport, unloaded the stores from the landing craft, distributed them to the various sites, and ran the electric generators, etc. In the course of this work they performed every function which would normally fall to the lot of the Sapper, with the exception of bridge building. Their work was of a high order, in itself providing magnificent training for the detachment.

They lived a fairly rugged existence throughout the operation. The troop accommodation in an L.S.T. is intended to be occupied for a few hours or days only, during passage between main base and objective, and is of a correspondingly spartan character. Not much could be done to improve it for men who would have to live in it for about a year. While at Monte Bello some lived in a tented camp ashore, but the majority lived on board throughout the operation.

R.A.F. AID

Besides providing a small number of personnel for direct participation in the test, and three doctors for radiological medical work, the Royal Air Force provided air transport for personnel and material between the United Kingdom and Australia.

THE ISLANDS

The Monte Bello Islands consist of a group of about 100 small islands, the largest of which are Hermite, Trimouille, North West and Alpha Islands. A coral reef flanks the western coast of the Islands and the waters surrounding them are shallow and rocky in many places and studded with coral "niggerheads".

When it was decided to carry out the trial at Monte Bello, there was nothing whatever at the islands; there was no water supply of any sort nor any building except two ruined huts. Everything required had to be brought to the islands either direct from the United Kingdom or from the nearest supply base at Fremantle 900 miles away to the southward.

The nearest mainland port was the small town of Onslow (about 400 inhabitants), 90 miles away, where there was a wooden pier, an airfield and road communication. Even here, however, there was no water supply for ships.

Provisions had to come from Fremantle by State Shipping Line, either direct to the islands or to Onslow and fetched from there. Mails came to Onslow by air and were collected there by tender. The Royal Australian Navy provided a small vessel, the WARREEN, as tender to run between Onslow and the island, and two self-propelled lighters for refrigerated stores and water respectively, which were of the greatest value in keeping the force supplied.

THE FIRST PHASE

The programme for refitting and commissioning of ships, and the dates of departure from the United Kingdom and arrival at the site were settled as early as August 1951, and were adhered to almost exactly.

A brief public announcement about the trial by the Government coincided with the departure of the advance party consisting of H.M.S. ZEEBRUGGE and H.M.S. NARVIK, under the command of Captain G.C. Colville, O.B.E., R.N., from Portsmouth, on 19 February, 1952. The force arrived at the Monte Bello Islands on 26 April to inaugurate the first phase of the operation - the build-up in the islands - which lasted until August.

A further government announcement coincided with the hoisting of the flag of Rear Admiral Torlesse as Flag Officer Special Squadron, in H.M.S. CAMPANIA on 14 May. By then a considerable programme of technical trials had been carried out by the Ministry of Supply in the ships and in conjunction with the ships, and CAMPANIA, TRACKER AND FLYM were all at Chatham busy loading stores.

TRACKER sailed independently on 5 June proceeding via Suez, while CAMPANIA called at Portsmouth to embark aircraft and some 90 Ministry of Supply scientific and technical staff, and sailed with FLYM on 10 June, proceeding via the Cape. These three ships arrived at the islands on 8 August, and commenced the installation period which ended with the test itself on 3 October, exactly eight weeks later.

AUSTRALIAN CONTRIBUTION

Many Departments of the Australian Government played an essential part in ensuring the success of the experiment.

Royal Australian Air Force participation included the basing of 7 Lincoln aircraft at a camp specially constructed at Broome Civil Airport.

Meteorological research work was carried out by the Commonwealth Meteorological Service in Melbourne, who seconded two Senior Officers to the main force from the time of its arrival in Australia.

Security arrangements for the operation in Australia were implemented by the Australian Security Intelligence Organisation.

Besides the five ships of the Royal Navy the test took place in the presence of eleven ships of the Royal Australian Navy, while the leading scientists present included the three Australians previously mentioned.

The Royal Australian Navy ships were H.M.A.S. SYDNEY, wearing the flag of Rear-Admiral J.W.M. Easton, D.S.O., D.S.C., Flag Officer Commanding the Australian Fleet, TOBRUK, SHOALHAVEN, CULGOA, MURCHISON, MACQUARIE and HAWKESBURY, and a small fleet train comprising KOALA, WARREEN, LIMICOLA, the motor water lighter 251 and the motor refrigerator lighter 252.

H.M.A.S. WARREGO and H.M.A.S. KARANGI performed indispensable services in the early preparations for the test. WARREGO carried out a detailed survey of the treacherous waters round the islands in July last year. KARANGI, in November 1950, made the preliminary survey which indicated that the Monte Bello group would be suitable as a weapon-testing site.

The R.A.N. ships present at the test assembled at the Monte Bello Islands on 27 September. All the ships of the Royal Navy had reached there earlier.

24 HOUR PATROLS

Several days before H.M.S. CAMPANIA, TRACKER and PLYM arrived at the islands from England, H.M.A.S. HAWKESBURY began a close patrol over a wide stretch of sea, to ensure continuous daylight reconnaissance from 1 September onwards.

From the time that the other ships of the Australian Fleet arrived until the time of the explosion of the weapon, they kept up a day and night patrol. The oil tanker WAVE KING, arriving from Colombo, provided them with fuel.

THE AFTERMATH

Re-entry to the islands is now in progress and has to be conducted with great care. Elaborate arrangements have been made to obviate the risk of danger to health of personnel through radio-active contamination. The task of recovery of records and salvage will take several weeks, after which the Royal Naval Squadron will visit Fremantle for replenishment and a brief run ashore in civilisation before commencing the long passage home.

Ministry of Supply.
Information Division.