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C.O.H.Q. BULLETIN No. Y/1

NOTES ON THE PLANNING AND ASSAULT PHASES OF
THE SICILIAN CAMPAIGN.

by a Military Observer.

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NOTES ON PLANNING AND ASSAULT PHASES OF
THE SICILIAN CAMPAIGN

PART I - INTRODUCTION

This report consists of impressions formed while serving with the VII (U.S.) Army during the detailed planning of Operation "HUSKY" and the subsequent capture by the 15th Army Group of the greater part of SICILY. It does not attempt to give a full or reliable tactical narrative and contains very little of which the writer did not have personal experience or first-hand knowledge. It does, however, represent in many instances, impression rather than fact.

2. I reached North Africa during the second week in May and spent the remainder of that month and the whole of June between H.Q. Force 141 (later 15 Army Group), H.Q. Force 343 (later 7th Army) and H.Q. JOSS Force which consisted of 3 Division, reinforced by approximately half 2 Armoured Division and certain Army troops. The greater part of this time was spent at the planning H.Q. of JOSS force in a cork forest near JEMAPPS and later in an olive grove near FERRYVILLE.

3. I landed with the JOSS Force H.Q. on YELLOW beach at LICATA during the morning of D day, July 10th, 1943. The next three days (D day to D + 2) were spent between JOSS Force H.Q., near LICATA, and the H.Q. of subordinate formations and occasionally with forward Infantry and Armoured elements. Thereafter until August 11th, I was engaged at 7th Army H.Q. on rather nebulous liaison duties which took me to the H.Q. of the 8th Army, 30th (British) and 2nd (U.S.) Corps and to their various Divisions. In the course of these duties I travelled over 10,000 miles by road in SICILY.

4. By far the greater part of the report covers service with United States Forces, and it should, therefore, be read strictly as a British Officer's personal interpretation of the American viewpoint. I was working for the most part with Commanders and Staffs whom I had previously known in LONDON, WASHINGTON and CASABLANCA; I was most hospitably accorded every possible privilege; at all times I had direct access to General Patton, his Chief and Deputy Chiefs of Staff, his subordinate Commanders (with the exception of General Bradley), to all "War Rooms" and, in fact, to every possible source of information regarding situations and intentions; I was privileged with unlimited opportunities to take an active part in the planning, and on no occasion made any suggestion which was not given serious and unduly flattering consideration by a responsible officer.

5. I feel an overwhelming sense of gratitude to the commanders and staffs of the 7th Army for opportunities that were mine and that are not easy to accord to an allied officer. In short, if the impressions I formed and my interpretation of the American viewpoint in respect of the Sicilian operations is at fault, it is due to my lack of perspicacity and not to the circumstances in which my work was done.

6. Finally, the one factor concerning which I was certainly not mistaken, was the astounding development, since the days of the "TORCH" operations, of the formations and units which comprised the 7th Army. This applied as much to those formations which had had no intervening battle experience, such as the 3rd and 45th Infantry Divisions - (the latter was, of course, not employed on "TORCH" or on any previous operation) - and 2nd Armoured Division, as to those Divisions which had been through the Tunisian Campaign, the 1st and 9th Infantry Divisions.

Lessons Learned.

7. The lessons learned were fewer than usual and are summarised in Parts II and III. The amphibious operations, in spite of adverse weather, went according to plan, the plan was made according to "the book", and the

book was proved to be, for the most part, sound. Training of troops and trial of new equipment kept pace, and was well co-ordinated, with the planning of the assaults. The astonishing fact that tactical surprise was achieved, and no very determined opposition was encountered on the beaches, presented our forces with an unexpected bonus which was put to good account. There is no doubt, however, that had resistance been very much more severe, our plan, the forces at our disposal, and their state of training, the equipment available and, above all, the magnificent degree of co-operation achieved between Naval and Military Commanders and staffs (particularly in the case of JOSS Force), would have been adequate for the 7th Army to have secured a sufficient number of bridgeheads for their operations to have continued.

8. As regards the naval and military operations, that which was known to be wrong in advance, and the little that went unexpectedly wrong on the day, could scarcely have been otherwise arranged; and this was probably the first Combined Operation in which Lessons Learned could NOT have been taken direct from the report on any exercise.

The Air Aspect.

9. From an amphibious point of view, there is little to be said about the Air Aspect of the Operation. The naval and military forces left North Africa with very little idea of what part our air forces were to play in the initial assault. They did not know what preparatory "softening" action had been taken against coast defence targets, nor what delaying action had been taken against communications. They had, however, received the gratifying assurance that a marked degree of air superiority had already been achieved.

Planning.

10. Although there were many factors, mentioned specifically in Part II, which at times during the planning phases were thought by commanders and staffs to be far from satisfactory, the fact remains that a sound plan in adequate detail was produced to time. The planning system adopted by the naval and military commanders of JOSS Force (Rear-Admiral Connolly and Major-General Truscott) might well serve as a text book for future operations - except that, in spite of frequent and most urgent requests made for the first time about D - 60, and repeated at least once a week, there was no single air representative on the "Joint Planning Board" which the Force Commanders set up. The Planning system of the JOSS Force Commanders is given in considerable detail in Part II.

The Plan and the Operations.

11. The operations themselves provided fewer lessons than the planning period. They are discussed, together with the Final Plan, in Part III.

Liaison.

12. As regards impressions formed during the phases of the operation subsequent to the assault, I have neither special qualifications nor sufficient previous experience to deduce useful lessons from the liaison part of my duties. I was, however, convinced that the question of inter-allied liaison on a high level is a very real problem requiring much prior thought and action. Officers employed on such duties must be qualified by ample operational experience, should already have the confidence of one Army Commander, and should be capable of rapidly gaining the confidence of the other. It is felt, therefore, that they should be rather more senior than those usually selected for this work.

PART II - PLANNING.

Section 1 - General

Intelligence.

13. It was generally considered that the intelligence was slow in coming and scanty, although it subsequently proved to be for the most part fairly accurate. When it is considered that the vast majority of the population were violently anti-Axis, as demonstrated by the treatment accorded to our isolated detachments and individuals dropped miles behind the enemy lines, it is hard to understand why so many of our questions should have remained unanswered. Corporal Hodgson, of 2nd S.A.S. Regt, for instance, whilst escaping through enemy territory after the remainder of his party had been captured by German troops, was lavishly entertained by the local peasantry and guided across roads used by German transport, Italians reconnoitring the way for him and whistling when it was clear. One would have thought that a few intelligent officers and N.C.Os in Allied uniform - let alone agents - dropped by parachute with wireless sets, could have multiplied by many times the local information that was available. For instance: to the simple question - "Are we going to find German troops in the immediate neighbourhood of Licata?", the answer was - "There is an airfield there, and where there is an airfield there are usually German troops." The Enemy Order of Battle was on the broadest lines, and by D - 5 it was not possible to tell the Commander of JOSS Force with any confidence whether he should expect to encounter ten, twenty, thirty or forty thousand enemy troops on D day. From the user's point of view, the intelligence provided by 15th Army Group Headquarters was not impressive, although its subsequent presentation and dissemination to lower formations within the 7th Army was good.

14. Beach Intelligence. This was proved to be reasonably accurate, with the exception of the assessment of beach exits. The wave velocity method of estimating gradients was, it is believed, sound. It was unfortunate that the Navy and the Army were presented during the last weeks of planning with two quite separate sets of quite different beach intelligence; but as we always planned pessimistically on the least favourable intelligence received, the results were not serious.

15. Air Photographs. Only very small-scale coverage - and that incomplete - was available by the latter part of May when Outline Plans had to be firm. Interpretations supplied by 15th Army Group often differed fundamentally from those made by the interpreter attached to JOSS Force, a most able and experienced British officer - Capt. Butler from 8th Army. In every single instance the latter was proved to be correct. I understand that the S.S. Bde had a similar experience, where most fortunately Lt. Col. Churchill was available to correct the sometimes erroneous and incomplete interpretations received from higher formation.

The paucity of air photographs, and the complete absence of large scale coverage, were serious obstacles to the progress of planning; and one Divisional Commander, who was fortunate in having "influential friends" in the Air Corps, made private arrangements to obtain this very necessary intelligence. Within 24 hours of a telephoned request, 36-inch coverage of a 15-mile stretch of coast was provided by R.A.F. sorties flown from Malta on the request of the U.S. Air Corps.

New Equipment.

16. By the middle of May we were planning the employment of equipment whose limitations and capabilities were virtually unknown to those who had to use it. For instance, the LCI had never been successfully beached in a depth of water practicable for infantry to wade ashore, and it was still the current opinion that troops would have to be disembarked in canvas or rubber boats. The pontoon problem for bridging the water gap was still only half solved. No information was available regarding either the LCT(R) or the LCG., and the craft and troop capacities of the two Belgian LSI allotted to the force were not positively known. No one had the least idea of the number of men who could be packed in an LST, or even in an LCT5 for purposes of the operation. All that was known was the bunk accommodation and it was some weeks before we were able to discover by experiment that the figure of 250 men for an LST could be almost doubled.

17. In fact, the dissemination of technical knowledge, both within the theatre and from the United States and England, was bad and was only offset by the implacable resolve of the American Navy to master for themselves problems which had already been partly solved elsewhere - but whose solutions had not been conveyed to the Training establishments abroad. I was surprised to find that, coming fresh from C.O.H.Q. in England, I was able on occasions to contribute technical information regarding naval equipment constructed in America. This is not necessarily a reflection on the Naval authorities in the United States, since experiments were being carried out concurrently in many different theatres and it is obvious that the rate of progress could not be universal in all respects. It does, however, suggest that a high priority should be given to the inter-theatre exchange of technical information, and that it should never be presumed that users of new equipment have found out for themselves all that has been discovered by trials in experimental and training establishments elsewhere. Such details as, for instance, the best speed of beaching a new craft, its capacity and draught with different loads, or the method evolved in one establishment for the handling of a new type of ramp or pontoon, could in most cases be profitably ' flashed round the world ', regardless of whether or not the trials in question are complete.

Naval and Military Co-operation.

18. Coming from London last April, it was most refreshing to meet the Naval Staff of Admiral Connolly's headquarters in North Africa. The attitude there was not one of educating the Army to an understanding of Naval limitations, regarding new equipment, navigation and the state of training of naval personnel - all of which, it is sometimes represented, must dictate the landing plan; it was rather a complete and generous appreciation that the Army had the ' sticky end ' of the job, and that somehow or other the Navy would find ways of seeing them through and of implementing any landing plan dictated by the tactical needs of the military tasks. As a result of this co-operative attitude, the Army was assured that when the Navy said that something could not be done, it was in fact impossible; and the military planners responded very readily with tactical concessions that tended to simplify the naval plan and ease the naval problem. In fact, however monstrous the military demands, I can recall no single instance where they were flatly rejected, the most unpromising response being: " I very much doubt its practicability, but we'll try it out and see. "

... Shore to Shore and Ship to Shore -- (Some planning difficulties peculiar to the 7th Army).

19. The 7th Army, under command of Lieut-General George S. Patton, Junr., consisted of :-

- | | |
|---|--|
| (a) <u>II Corps</u>
(Lt. Gen. Bradley) | 45th Division, or Cent Force, assaulting on the right of the Army next to 1st Canadian Division (Maj. Gen. Middleton). 1st Division, less one Inf. Regt. Dime Force, assaulting in the centre (Maj. Gen. Terry Allen). |
| (b) <u>3rd Inf. Division</u>
<u>Reinforced</u>
(Maj. Gen. Truscott) | Joss Force, assaulting on the extreme left of 15th Army Group. This Force included C.C. 'A', approximately the half of 2nd Armoured Division under command of Brig. Gen. Rose. |
| (c) <u>Floating Reserve</u> | 2nd Armoured Division, less C.C. 'A' One Regt. of 1st Inf. Division. |
| (d) <u>General Reserve</u> | 9th Inf. Div. |

20. The particular difficulty of planning this operation was that, from the point of view of 7th Army, it fell into neither of the two categories which had been specifically studied. In the first place, it could not be called "Shore to Shore" since 45th Division had to be tactically loaded in the United States before the Outline Plan was firm. Further, troops of all Forces had, in many instances, to be embarked for upwards of a week before D day, thus introducing many of the "Ship to Shore" limiting factors, in particular those of command and unit-loading. On the other hand, many of the craft allotted in bulk to the Army were of types specifically designed for the "Shore to Shore" technique which, it is believed, had scarcely been studied in the United States, and about which there was available no U.S. official literature corresponding to our "Combined Operations" pamphlets.

21. In the second place, there was not a sufficient number of any category of craft for Forces within the 7th Army to be similarly equipped. 45th Division, coming direct from the United States, was loaded on the old pre-Torch principle of "Trans Divs", consisting of AP and AK ships, unit-loaded. 1st Division, executing a "Shore to Shore" operation had, for the most part, "Ship to Shore" ships and craft, with the bulk of their vehicles loaded into AK (or MT) ships. Joss Force, alone, was provided with an adequate number of "Shore to Shore" craft entirely suitable for its task.

22. There is little comment to be made on the 1st Division plan which was realistic and simple and which probably made the best possible use of a not very suitable allotment of craft and shipping. Again, this is no criticism in any way of the 7th Army's sub-allotment of available resources. There was, quite simply, not enough to go round; and it was unquestionably sound to concentrate in one selected sector - that of Joss Force - the means to put ashore rapidly a powerful armoured force which could, and did in fact, have in the initial phases a very material effect on the whole of the subsequent Sicilian campaign. (I refer to the capture, by C.C. 'A' on D + 2, of the vital communication centre of Gannicatti.) It is also probable that, when deciding his sub-allotment of craft and armour, General Patton felt that one of the most vital, if least spectacular, of the tasks assigned to the 7th Army, was the protection of the left flank of the whole Allied Forces against counter-attacks by German formations known to be in the Western part of the Islands.

NOTE:-/...

NOTE:- C.C.'A' (Combat Command 'A') consisted of approximately half the 2nd. Armoured Division: 2 battalions of medium tanks, one battalion of light tanks, 2 battalions of armoured Infantry, one battalion of artillery (16 S.P. 105 mm. Guns), and engineers and services.

23. As regards the 45th Division landing plan, this was made in the United States and the Division had to be embarked before the Outline Plan was even firm. The U.S. Amphibious Force Standard Operating Procedure, (S.O.P.), providing for the embarkation in semi-independent "Trans-Divs" of Regimental Combat Teams, was therefore adopted. The great advantage of this system is its elasticity; and it is probably the only semi-satisfactory method whereby a Division embarked for an assault landing, could be more or less tactically stowed in ships before anyone had really decided where, and in what circumstances, it was to get out of them. The real weakness of the U.S. Amphibious Force "S.O.P." has its source in the fact that in certain important respects the wrong lessons were drawn from "Torch". After this operation it was stated by the Amphibious Force that "the S.O.P. was found to be basically sound", an assertion which very few soldiers who took part in the North and West African landings were able to endorse.

24. Briefly, the general criticism of the Amphibious Force S.O.P. is derived from the fact that, for the sake of unit loading, the assault battalion of each RCT is embarked in only one of the 5 AP and AK ships which constitute the "Trans-Div" in which an RCT is carried. This necessitates the concentration at the one transport which is carrying the assault battalion - 4 or 5 miles off a hostile coast and probably in the dark - of the landing craft from most of the remaining ships of the Transport Division. This must be done in order that means may be provided for the assaulting infantry to be put sufficiently rapidly ashore, since AP ships, like LSI cannot yet hoist sufficient craft to land more than a proportion of the personnel that they carry. When sufficiently well trained and well rehearsed crews are available, as was the case in this instance, the S.O.P. just works under exercise conditions. It just worked - but only just, I was reliably informed by those who were present - off the Sicilian coast, where the transport area did NOT come under hostile fire from batteries or aircraft, at least until the assault battalions were landed. It does seem probable, however, that this system whereby landing craft grope their way in the dark from one ship to another before assault battalions can go in to land, can never work under the adverse conditions of wholehearted enemy interference. A satisfactory solution is thought to lie in the partial sacrifice of the principle of unit-loading, and the distribution by companies of Assault Battalions throughout several or all of the AP ships of a trans-div. By these means ships would work in a way similar to the accepted method of operating British LSIs, transports coming into line abreast in the assembly area, manning their craft and sending them in simultaneous and parallel waves direct from ship to beach.

25. The Commanding General, 7th Army, did, in fact, give serious consideration to a recommendation which he allowed me to put to him urging the partial reloading of transports after their arrival in North Africa, so as to enable craft to be sent direct from parent ship to shore in the initial assault. He decided, however, that a last minute change would be the worst of all resorts and I am now convinced that my recommendation was unsound, since it would have involved a complete change of methods which had been practised and rehearsed for many months. Furthermore, fortunately for the Sicilian operations although perhaps unfortunately for the future, my forebodings were proved to have been unduly pessimistic, since the landings carried out by 45th Division were, although an hour late, highly successful after some slight initial confusion had been overcome. Nevertheless, it cannot be too strongly stressed that the "general post" of landing craft in the transport area was not impeded by hostile fire off the Sicilian coast.

The Air Aspect.

26. The one criticism of the Husky U.S. planning, with which I am quite confident the great majority of U.S. Military and Naval Commanders would very heartily concur, was the almost complete lack of participation by the Air Force. An Air Plan ultimately arrived, and was described by an American General as "the most masterful piece of uninformative prevarication, totally unrelated to the Naval and Military Joint Plan, which could possibly have been published." It gave Military Commanders no concrete information of what air support might be expected on the day, although it did provide - for instance - for the daily landings of quantities of supplies, considerable numbers of men, and items of mammoth equipment whose weight, shape, dimensions and purpose were unknown and unspecified. This presented the 'Q' Branch (G 4) with an insoluble problem since convoys were scheduled to arrive at best every four days - certainly not daily, and since no air planner or adviser could be induced to visit the remote areas of cork forest and olive grove where planning was proceeding.

27. As regards targets for pre-D-day bombing, I was informed that Army Headquarters had originally been asked to submit a list of requirements. This was done but was in course of time returned with the bald comment that the targets were unsuitable, for unspecified reasons, and that a further list was to be sent as a matter of urgency. A new list was thereupon contrived, but this again met with a similar response. Finally, on about D - 25, a reasonably senior air officer was sent to Army Headquarters to make suggestions and to assist in the production of still another list of targets. It may be said that in many respects he was unable to understand why the previous lists were considered unsuitable.

28. As regards targets for D day bombing, these had not been even provisionally published by the time that Military Commanders finally embarked (I have been given to understand that they were still being discussed); and on our level the military forces were not informed at any time what bombing support, if any, could be expected. The best that was at that time offered was a statement in the Air Plan to the effect that Military Commanders in the field might, after D day, submit their requirements for the consideration of a "Target Committee" sitting in North Africa, but that no request would be considered at less than 12 hours' notice. Subsequent enquiries suggest that this proviso regarding targets concern the employment of the Strategic and not the Tactical Air Force; and that the weakness of direct support accorded was the result of a general failure of all communications throughout most of the force.

29. As regards fighter cover, no indication of the degree of protection to be expected was given, and the forces again sailed without any idea of when, where, under what circumstances and in what numbers they would see their own fighters.

30. On the best interpretation of the facts, there was clearly a considerable misunderstanding during the initial phases between the Air and Ground forces employed on the operation. Since the U.S. Army Air Force had quite definitely failed to participate in the joint planning, in spite of repeated invitations to send at least an adviser or liaison officer, the blame for any misunderstanding that arose, and that resulted in the most regrettable loss of aircraft, was at least partly their own.

31. However, in spite of all that has been said and all that seemed unsatisfactory at the time, it must be most strongly emphasised that our casualties from enemy air action were very light, and that large numbers of ships and craft were able to lie off the beaches by day and night with very little serious interference and only negligible damage.

Section 2 - Joss Force Planning

32. The process whereby the Joss Force Plan was produced, complete, simple, practicable and to time, was so far in advance of anything that I had experienced during the previous two years' of uninterrupted planning and mounting of combined operations, that I was left with the impression that a perfect technique had been evolved at last. It is in this conviction, which still persists, that the subject is treated in considerable detail.

33. In this section it is proposed first to set out the conditions under which the plan was made, then to describe in detail the crucial fifteen days during which the detailed landing and loading plans were simultaneously produced, and finally to sum up, in the form of "Lessons Learned", the factors which enabled the work to be done in such a satisfactory manner.

34. It must first however be said that the example of cordial and whole-hearted co-operation set by the Naval and Military Commanders of JOSS Force proved most infectious, spread rapidly through the staffs and subordinate commanders concerned, and resulted in an unsurpassed spirit of co-operation which could at once overcome the many obstacles which beset all planners for every operation.

Conditions under which Planning was started.

35. By May 12th a very disappointed 3rd (U.S.) Division found itself to the West of Bizerta deprived, by the sudden collapse of the German forces, of its first chance of action since the landings at Casablanca seven months earlier. In the few months that Major-General Truscott had commanded the Division it had been put through the most intense course of training on what might be called "Commando" or "Ranger" lines; and immediately the Division was withdrawn from the forward area, this training was resumed and augmented with further amphibious training, under the direction of Brigadier-General Eagles, the Assistant Divisional Commander.

36. By May 16th, General Truscott and a skeleton planning staff had arrived at 7th Army Headquarters, (then known as I Armoured Corps Reinforced), in MOSTAGANEM, conveniently close to the American amphibious training establishment at ARZEW. General Truscott had already had discussions with Admiral Connolly, the Joss Force Naval Commander, who now sent members of his staff to join the military planners at MOSTAGANEM. At this time, intelligence was very scanty and only an incomplete series of extremely small-scale air photographs was available. However, the 7th Army Outline Plan had been made, forces and craft had been allotted - and were subsequently scarcely changed in any material respect - and 3rd Division had been ordered by 15th Army Group (or Force 141) to concentrate in a cork forest near JEMAPPS which proved to be a training area more suitable for jungle warfare than for the operations in hand. During the next four days, General Truscott and his skeleton staff made their Appreciation and produced their own Outline Plan which, although frequently changed during the next week or so, ended up very much as it had started.

37. It must here be appreciated that, although General Truscott was fully conversant with British theories of "Shore to Shore" assault, since he had served at Combined Operations Headquarters in London during the first part of 1942 and had attended the Dieppe raid, his staff had never previously studied this type of operation, or some of the types of craft involved, and there was no U.S. official literature available on the subject. All the published amphibious text books that were to hand were based on a "Ship to Shore" technique employing exclusively AP and AK ships hoisting LCVs. and LCM. Furthermore, no assault or light scales of MT and equipment were in existence; and one of the first tasks confronting the Joss force planners was the complete revision of all

staff/...

staff tables of all the units involved in the operation. When it is remembered how many months of labour and argument were devoted to this work in England, the magnitude of the task confronting the Joss Force staff may be partly appreciated.

38. Furthermore, we were planning with equipment which had never before been tried out under either operational or even exercise conditions, and which had not even been seen by the military staffs concerned. In particular, the LST2 hoisting 6 LCVs and employed in the first instance as a British LSI, and in the second as an LST proper, turned out to be a craft demanding a technique completely different from anything that had been previously considered. (It was proved to be highly successful and it is strongly recommended that all LST should be modified in this way).

Preliminary Period.

39. General Truscott's force consisted, in all, of some 56,000 men including many units which he had never seen and which were scattered all over French North Africa and even French Morocco. Admiral Connolly's bulk allotment of craft included 2 Belgian LSI., 70 LCT(5), 10 LCT(3) and (4), 50 LCI, and 40 LST, of which 30 each hoisted 6 LCV and the remainder carried pontoon equipment. In addition, a number of British LCG and LCF were scheduled to join the force at a later date.

40. Communications were slow and most unreliable, and many seemingly vital signals never reached their destination. The difficulties of travel and transport, and the distances involved in North Africa, are not generally appreciated in this country. Joss Force Headquarters was over 600 miles by road, and $2\frac{1}{2}$ days in time, from 7th Army Headquarters; and all intelligence and other planning material had to make a total trip of 1,000 miles - first westwards from ALGIERS to MOSTAGANEM, and then back again through ALGIERS and CONSTANTINE to JEMAPPS, before it reached the users. Naval Headquarters at BIZERTA was a further 250 miles East of JEMAPPS. Under these conditions, not only had the plan to be made to a target date which allowed under a month, from the conclusion of the Tunisian Operations when the Division was in reserve in the BIZERTA area, until the time when final loading tables were required; but, furthermore, the force had to be concentrated and trained, and urgent contact had to be made with the Commanders and staffs of the many strange units and formations allotted for the Operation..

41. It was, of course, appreciated that the first task to be undertaken concurrently with the production of Assault Scales, Light Scales and Staff Tables, was the final settlement of an Order of Battle for the Assault. On the craft allotment, only half of the total force could be lifted in the D day convoy, although even this figure could not be reached until the Assault scales had been roughly computed. Furthermore, it was not much use working on an Order of Battle before the Outline Plan was firm; and at this stage Beach intelligence was too scanty for final decisions to be taken, even on the broadest lines. There was no "Book" to go on, and if there had been it could not have catered for existing conditions; and for two or three days the planning staff found itself in a vicious circle, chasing its own tail and - since every decision that was required depended on another decision which could not be taken in default of still a third - unable to lay down even so much as a system and time programme on which planning could be seriously started.

42. This is a situation which is apt to arise in the planning of many operations. A state of inertia is reached and has to be overcome by positive decisions suited to the particular dilemma. In this case it was decided, after three or four days of unproductive work, that two alternative plans should be simultaneously developed. They were both to be based on a single order of battle and a single "craft allotment chart" and the decision as to which plan should be finally selected was to be withheld pending the receipt of further beach intelligence. At the same time the C.O.H.Q. Handbook was adopted as a planning "Bible" for the operation;

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and a complete planning programme was evolved and subsequently adhered to throughout. Once these steps had been taken, detailed planning proceeded remarkably smoothly, and few staff officers had to work hours which would be considered inordinately long on Whitehall standards.

Planning Staff.

43. The American organisation and S.O.P. does not provide for the appointment of a P.M.L.O., M.L.O. and staffs as allowed by British procedure. The work of P.M.L.O., although undefined, is presumably supposed to be done by the Commander of the Regiment of Shore Group Engineers allotted to the Division for the assault; while the duties of M.L.O. are supposed to be performed by the Engineer Battalion Commander on each Beach. (Note :- A Regiment of Shore Group Engineers consists of three battalions, each of which can handle an RCT - or Brigade Group - Beach). This is a serious weakness in the American system, and one which, it was hoped, might be rectified for future operations.

44. In any case, the Force Commander had now to decide what portion of his divisional staff should be divorced from all other work for the sole purpose of planning, in less than a month, a Combined operation involving a Force of at least a Corps in numerical size. An American Divisional staff is roughly four times the size of its British equivalent, and is therefore well furnished for this type of emergency. Where a British Divisional Commander has only two Lieut-Colonels (his G.S.O.1 and his A.Q.M.G.), the American Divisional Commander has :-

- A Brigadier General Assistant to the Divisional Commander.
- A full Colonel Chief of Staff.
- A Lieut-Colonel G.1 ("A" matters, excluding those dealt with by the Adjutant-General).
- A Lieut-Colonel G.2 (Intelligence).
- A Lieut-Colonel G.3 (Operations and Training).
- A Lieut-Colonel G.4 ("Q" Matters).
- A Lieut-Colonel Adjutant General.
- A Lieut-Colonel Inspector General.

Finally, each of the above officers has several assistants of the rank of Major or Captain.

45. It is freely admitted by most American officers that, in normal times, the above staff is not always fully employed. On this occasion, however, it enabled the Divisional Commander to apportion out work in a way which would probably be impracticable in British formations.

46. It is worth while noting here that the recourse of increasing a British Divisional staff for a specific operation by the appointment of officers from outside would not have the same effect as the steps taken by the Joss Force Commander. All his staff officers, whether engaged in training, concentrating his force, or planning, were thoroughly conversant with the personalities of the Division, its traditions and methods - and American Divisions are quite as individualistic as our own - and its subordinate formations. If it was desired to take similar steps with equal success in a British formation, the majority of the increased staff would have to be drawn temporarily from within the Division itself, or at least appointed many weeks or months before the operation was due to take place.

In the case/...

47. In the case of Joss Force, in addition to the staff listed above, there were temporarily attached a British training team of three officers drawn from units which had formerly been part of 8th Army (these acted as umpires and critics), a British Air Photograph Interpreter from 8th Army, who arrived somewhat late, and a British staff officer from the Planning Section at Combined Operations Headquarters.

48. Although the total staff listed above may seem to be somewhat lavish on British standards, it was found to be just comfortably sufficient for the work in hand.

The Planning Board.

49. The Planning Board selected by the Force Commanders consisted initially of :-

A President - A Lieut-Colonel from the General Staff of the Division.

The G.2 of the Division. (Intelligence).

Two assistant G.4's ("Q" Branch) of the Division, supervised by the G.4 himself who was also responsible for the concentration of the Force, its Maintenance Project, the loading of all convoys including the assault, the establishment of a near-shore base and the composition of follow-up convoys.

The Executive Officer (2 i/c) of the Regiment of Shore Group Engineers.

A Naval Commander, corresponding in appointment to a British S.O.O.

The British Staff Officer from C.O.H.Q.

A Chief Clerk, two assistant clerks and two draughtsmen.

50. Notable omissions were a signal officer (but there was none available at that time as the Divisional Signals were below establishment, the C.S.O. was fully employed on normal duties, and his deputy was with the Naval Communications Officer at Naval Headquarters), and an Air Officer who was frequently requested, sometimes promised, but who never arrived.

51. It will be observed that the 'Q' Branch (G 4) undertook all the movements work which, under British procedure is supposed to be part of the duties of P.M.L.O. There is less magic about "movements" in the U.S. Army - where formations are moved with remarkably little difficulty - and it is not considered necessary for 'Q' Movements to be represented below Army Headquarters. In fact, whereas very little difficulty was experienced by the normal Divisional staff in concentrating and embarking assault and follow-up Units - or in disembarking the follow-up and build-up forces - the need for a P.M.L.O. with tactical knowledge and experience in previous amphibious operations was acutely felt. Fortunately the Planning Board listed above contained several officers who had had wide experience in all the aspects of amphibious assaults; and the work of P.M.L.O. insofar as the assault was concerned, was undertaken by the executive officer of the shore group engineers, the naval commander and British staff officer, working in conjunction. This worked admirably on the planning system evolved at Joss Force Headquarters.

52. The Planning Board had power to co-opt anyone else required from within the Force, and it naturally grew as the plans progressed; but it was at all times protected by sentries and a barbed wire fence, and no one except the Force Commander, his Assistant Divisional Commander, Chief of Staff, C.R.A., C.R.E. and G.3 had the right of uninvited entry. An Air photograph interpreter was found almost at once to be an essential permanent member of the Board, and one was borrowed by private arrangement pending the arrival of the British Officer mentioned above.

Joint Planning.

53. The Force Commander had used every entreaty to obtain permission for the concentration of his Force in the BIZERIA area, where the Joss Force Naval Headquarters was necessarily established. If this had been agreed - which it was not - it would have been possible for a joint planning headquarters to be established at once, and for the Force Commander to be at the same time with his troops, his planning board and his Naval opposite number. In default of this arrangement, the "planning board", with its Naval member - who could be very ill spared from Naval Headquarters at this period - was set up at Divisional Headquarters with orders to move to the Naval Headquarters at BIZERIA as soon as it could produce a Provisional Landing Plan to leave behind it. (In fact, this move was made on June 2nd.).

Sequence of Planning.

54. The Planning of a Combined Operation automatically falls into certain phases which are by no means identical on all occasions. In this instance they might be summarised in four phases.

55. Phase I: Exploratory (May 13th - May 17th). This exploratory phase, often less politely described, is nevertheless inevitable on all levels while Commanders and Staffs of both Services - (it should of course be of three Services) - are studying the nature of their problem, the means that have been put at their disposal and the Intelligence. The duration of this period will usually depend on four factors:-

- (a) The clarity of the directive and outline plan given by higher formation.
- (b) The scope and quality of the Intelligence provided.
- (c) The previous experience of Commanders and Staff in planning similar operations.
- (d) The resolution of all Commanders concerned to make firm decisions and adhere to them.

56. In three out of the four respects mentioned above, Joss Force was fortunate. The Intelligence left a certain amount to be desired, but on the other hand:-

- (a) The directive given by the 7th Army was unequivocal.
- (b) The Military Force Commander had had an unsurpassed experience in Amphibious Operations. He had worked for many months at Combined Operations Headquarters in London and its various training and experimental establishments, had supervised the formation and training of the first Ranger Units, had been present at the Dieppe raid, had been planning deputy in London for General Patton prior to the TORCH operations, and had subsequently commanded the Sub-Task Force which landed at Port Lyautey (French Morocco) and which - alone amongst all the Torch landings - encountered severe and prolonged

opposition/...

opposition. On the basis of this experience, he spared no effort to collect a staff of officers who had enjoyed similar opportunities of studying at first hand the technical aspects of assault landings, and thereafter invariably invited their technical advice on all occasions before taking tactical decisions.

57. Accordingly, after a very brief "exploratory period", during which the Naval Commander was consulted, the Military Commander gave his Staff his first Appreciation or "Estimate" and a general directive. This directive, which concerned not so much the plan as the methods that were to be employed, might be summarised, perhaps inadequately, as follows :-

" I may land on any one, or all of these four beaches; but in any event my first consideration is the very rapid capture of these three key areas, all from 5 - 10 miles inland of the beaches. The keynote is therefore speed and momentum, and the key to speed is simplicity - particularly in the Naval Plan. I want all the Infantry of my Division ashore within 60 - 70 minutes of the assault, I shall want some tanks landed at the same time but I shall retain (in floating reserve) a powerful armoured reserve including armoured infantry who must be prepared to fight on their feet without armour or vehicles. This reserve will be landed as rapidly as possible to exploit success wherever it is obtained by the initial assault, and as soon as it is apparent. Provided I can do this, I may have to accept the complete failure of one, or even more, of my landings."

" In each RCT one infantry battalion with engineer elements incorporated is being trained to assault, and fight till daylight, in the actual detachments in which they are put ashore from landing craft. Their job will be the engagement of beach defences: each detachment, comprising the infantry and engineers carried in a single LCV, will work like a hound, one of a pack of hounds, hunting out beach defences and keeping them occupied whilst the remaining infantry battalions, bypassing resistance, penetrate inland to seize and consolidate the key areas I have indicated. RCTs will retain no reserves afloat: their job is to get inland with the utmost speed and thereafter to patrol forward with vigour in readiness to continue their advance."

" All Infantry are being trained, and will be prepared, to fight their way inland during the greater part of D-day with no transport except the few vehicles essential for radio communications. They will be supported at the earliest possible moment by all the Artillery - Divisional and Army - which can be put ashore. The general priority of landing vehicles throughout the force will be:-

- (a) A Company of medium tanks with each RCT, and at the same time, the vehicles of the beach and shore parties.
- (b) Guns - both A.A. and field Artillery.
- (c) Medium Artillery.
- (d) Infantry vehicles, particularly those required to carry heavy weapons."

58. Phase II: Technical Studies. (May 13th - 23rd, 2 days of which were spent in travelling.) On the above directive it was possible to start the following essential technical studies:-

- (a) Production of Assault Scales.
- (b) Production of an Order of Battle approximating to the capacity of craft allotted.
- (c) An inter-service Appreciation (or "Estimate") of the best amphibious means of implementing the Military Commander's ideas, and of the technical limitations that would necessarily be imposed - (on any one of the plans which might be selected) - by Naval and Amphibious factors: characteristics of craft, state of training of crews, navigational hazards, meteorological conditions, beach gradients, nature of beach, its defences and exits, etc.

59. This last study subsequently proved to be invaluable as a general guide throughout planning. It must be emphasised that it was an essential preliminary to the Commander's full tactical Appreciation, and that it very strongly influenced his selection of a tactical plan. This work might be said to correspond to the P.M.L.O's Appreciation, except in two important respects :-

- (a) It was the first step in the production of a Plan and was preceded only by the Commander's "first thoughts" and by his general directive regarding the methods - not the plan - which he proposed to adopt.
- (b) It had to be undertaken by Naval and Military Staff officers with operational experience, tactical knowledge, and experience in all the amphibious problems of the assault including those of beach organisation. It was NOT primarily a 'Q' (or G 4) study - still less did it primarily concern 'Q' movements.

60. Phase III: Full Outline Plan (May 24th - 26th). Based on the three technical studies described above, the Force Commanders now prepared to issue a firm outline plan allotting to each RCT its Tasks, forces and craft, and laying down a general landing programme which, for the sake of naval simplicity, was to be a framework of all landing programmes throughout the force.

61. Beach Intelligence was not yet adequate to determine whether or not one important landing (subsequently RED Beach) would be found feasible. On the assumption that this beach could, in fact, be used, one outline plan was prepared and published while an alternative plan, not involving the beach in question, was simultaneously developed and got in readiness.

62. Phase IV: Centralised Planning (May 27th - June 10th). The outline Plan was issued to RCTs on about May 26th, ten days after Joss force Commander and his skeleton planning staff had received their initial directive at 7th Army Headquarters. Since loading tables had to be completed by June 10th, there remained only a fortnight for detailed planning.

63. In view of the shortage of time, the proposal was now made to the Force Commander that all Landing and Loading tables for all beaches should be prepared at, and issued by, Force Headquarters, and not by the RCTs concerned. Not only would this save time, but it would also ensure that the most experienced naval and military planners were fully utilised, a most necessary step, particularly in view of the acute shortage of naval staff. It would, further, enable a universal landing time-programme to be adopted throughout the force, would enforce the employment on each beach of the most efficient methods of landing, and above all would vastly simplify the Naval plan. As against this, the planners' proposal offended the principle that "the man who has to do the job can best decide how to do it" - a principle which has much to be said against it when the subordinate commander in question has little experience of either planning generally or of combined operations in particular.

64. Furthermore, in this instance, the Force Commander, after consultation with his Subordinate Commanders, was quite prepared to lay down a considerable number of rules which were to govern all assaults. These would any way restrict individual choice to little more than a variation of non-essential details; and this privilege or right would scarcely confer on the individual military commander a benefit commensurate with the complications it would add to the naval plan. To ensure the protection of subordinate commanders' interests, and to assist in the work, each RCT and other formation was to send one or more staff officers, together with a clerk, to work on the communal plan at Force Headquarters. These Regimental (or Brigade) staff officers could report progress to their own Commanders as often as they thought fit; and they would represent to the Planning Board, the views of their Commanders who, of course, could appeal to the Force Commander at any time if they were not satisfied.

(Note:- It is worth adding here that all the Divisional staff officers who would be concerned with the central production of this plan had previously served in the Division as Artillery or Infantry Battalion Commanders, and that the whole Division was a very happy "family party". This, very naturally, increased the confidence of Regimental Commanders in the plan that was taking shape.)

65. This proposal of the Planning Board was accepted by the Force Commander with the highly successful result that, in the end, RCT Commanders expressed themselves as completely satisfied with the plan, and grateful that, in exchange for the temporary loss of one staff officer and one clerk, detailed assault planning had been taken off their shoulders, leaving them free to concentrate on the training of their troops, and in the planning of operations once their forces were ashore.

Fundamental Rules adopted in the Plan.

66. The following were the "rules" laid down for this operation by the Force Commanders, as applicable to the landing by each RCT on each beach :-

- (a) Each R.C.T. should train one battalion as a "Beach Assault Battalion" whose primary task initially would be the destruction, or at least engagement, of beach defences, so that the second and third battalions in each case could by-pass resistance on the beaches and penetrate rapidly inland. These Beach Assault Battalions were uniformly trained, under Divisional supervision, to operate until daylight in the parties in which they were put ashore (i.e. boat parties of 35 men, some of whom were engineers). A Beach Assault Battalion - selected as the best in each Regiment - was regarded as a pack of hounds, each beach-party being a hound whose job it was to look for trouble, to hunt out defences and engage them until all were destroyed. No attempt would be made to reform as a battalion until this primary task was accomplished, whereupon the Beach Assault Battalion would either perform a secondary task or would come into reserve. (It was these battalions that subsequently carried out the highly successful landings on the North coast of Sicily during the closing stages of the campaign).

(b)/...

- (b) All Beach Assault Battalions would land simultaneously at H hour, preceded by a wave of LCS firing grapnels, the second battalion would land at H plus 45 minutes, and the third at H plus 60. RCTs would retain NO floating reserve.
- (c) Each Beach Assault Battalion would take passage in 6 LST, each of which hoisted 5 LCV and 1 LCS. Each Beach Assault Battalion would take ashore one Force Commander's personal liaison officer equipped with a jeep and a SC 193 wireless set.
- (d) The Regimental Commander would land personally with the second or third battalions and would take passage in the Headquarters LCI which was specially fitted for that purpose.
- (e) Shore and Beach Group reconnaissance parties would be landed partly with Assault and partly with follow-up battalions.
- (f) The first wave of LCTs would beach at H plus 90 (with one particular exception), and would carry mainly Beach Group personnel and vehicles and two Light AA batteries (S.P. guns only) in 7 LCT. 5 more LCT would carry a company of medium tanks towing 57 mm A/Tank guns and followed by the latter's prime movers. All LCT carrying tanks were to be loaded so that as many tanks as possible could fire on to the beach during the final approach.
- (g) The composition and timing of subsequent LCT waves was similarly laid down by Force Headquarters.
- (h) Except in particular cases which had to be referred to the Joint Force Commanders, all landing craft would approach the beach in their normal formations of either 6, 12 or 18 craft. (This rule was fairly often infringed.)
- (j) No wheeled vehicles, except certain specified communications and artillery jeeps, would be landed until the Beach Group personnel and equipment, carried in the first LCT wave, had been ashore for a clear two hours, to allow time for the laying of beach roadway.
- (k) The first artillery units/^{ashore} on each beach would be a battalion of the Divisional Artillery equipped with SP guns (12 guns) on a very reduced scale of transport, carried complete with personnel in 4 LCT, timed to beach two hours after the Shore Groups. (Artillery reconnaissance parties would be carried in earlier waves).
- (l) All units were to be tactically loaded with not more than one battery of guns, or one company of tanks (etc.) in any one ship or craft.

The Mechanics of Planning.

67. Once the principle of centralised detailed planning was adopted, the arrangements were as follows :-

- (a) The preliminary Appreciation described in sub-paragraph 58(c), prepared on an inter-service basis with particular reference to technical aspects of an amphibious operation, was used as a general guide to the tactical possibilities of the assault. To some extent it governed the selection of an outline plan from the many tactical plans that might have been adopted; and later it served as a framework for the development of the Landing Plans for each beach.
- (b) Each craft, LCI, LCT or LST, was given, for planning purposes, a provisional serial number by which it was known up to the time when the navy issued the normal serial numbers of the craft

allotted/...

allotted for each purpose. It would have been very much better if the Navy could have agreed to change their serial numbers for the period of the operation to those used in planning, which could be very easily memorised; but this could not be done. It was quite impossible to plan on Naval serial numbers, not only because craft were frequently going unserviceable or being interchanged for one reason or another, but also because it is extremely difficult, if even possible, to memorise the fact that (for instance) LCI Nos. 377, 244, 189 etc. and LCT Nos. 131, 256 etc. belong to a particular beach.

- (c) Each craft was also given a scale diagram, filed according to its serial number, which indicated its beach and wave.
- (d) Scale templates were cut for all vehicles and were kept by one of the G.4 ("Q") Planners, who also kept the scale diagrams of each craft. As vehicles were fitted into craft by means of adjusting the templates on the diagrams, they were sketched in, and listed down on the side of the sheet.
- (e) A master "skeleton landing table", not prepared in the full detail of a landing table proper, was kept by the planner who most nearly performed the functions of PMLO. This showed, on a single sheet, all the beaches, and all the waves of craft, their timings and the principal units whose vehicles they carried. Every important alteration made by anybody to a detailed landing table had at once to be entered on the master chart.
- (f) As soon as the RCT representatives arrived at Force Headquarters to take their part in the central planning (about May 31st), they were each given a detailed landing table pro forma for their beach, ruled to show the times at which waves were scheduled, together with the scale diagrams of the craft allotted to them and a set of templates.

68. The G.4 (or "Q") planner generally assisted the work of the RCT staff officers in keeping their diagrams revised in accordance with the latest modifications in the plan. Thus: when, for instance, an extra Medium Battalion, a company of light tanks and 30 vehicles of a field hospital were suddenly allotted to Red Beach, together with two extra IST and instructions that the guns, AFVs and vehicles were to be loaded tactically in three separate ISTs, so that not more than one medium battery was embarked in any one ship etc. etc., the RCT staff officer concerned, assisted by the G.4 planner would set to work with models and diagrams to discover graphically if the proposal was practicable and how it could best be worked. By the time he had completed his calculations, the loading plan for those ships and vehicles was automatically at hand in diagrammatic form. The serial numbers of the Red Beach IST would then be shifted round to correspond with the times at which they were to beach under the revised plan, and the full implications of the change would be at once apparent and could be at once communicated to the Force Commander or his Chief of Staff.

69. Personnel were also dealt with on the diagrams at the same time; and it was therefore possible to see at a glance the exact state at any moment of every single ship and craft included in the force. Furthermore, it was possible to implement changes right up to the last minute with the minimum of labour. As a result, when on June 10th it was found possible to include in the force an extra battalion of armoured artillery - (owing to the number of craft which might be expected to go unserviceable during the training period) - this was, on paper, stowed tactically by batteries and distributed between beaches, in accordance with the tactical requirements of the Force Commander, in the space of an hour or two and without interruption to the simultaneous publication and dissemination of the landing and loading tables the following morning.

70. This system, which has probably been adopted on numerous previous occasions, so simplifies the work of the PMLO and "Q" branch that they should be able to produce landing tables, loading tables and diagrams for a division

in a shore/...

in a shore to shore assault, within six days of the final approval of an Order of Battle, "G" landing priorities, and craft allotment chart. There must, of course, be an adequate staff of clear-headed junior officers, and reasonable room in which to spread out diagrams and tables. The principle of centralised planning must have been adopted with the compliance and participation of Brigade Commanders.

Lessons Learned from Joss Force Planning and Mounting.

71. Planners must be divorced from all other duties in connection with training and mounting the operation until such time as the Landing and Loading tables are firm. To enable this to be done, staffs must be augmented for the planning period, and the increase should come, as far as possible, from within the formation concerned. Knowledge of personalities and units may be of greater importance than staff training, especially if planning is to be centralised.

72. Planning should be centralised at least to a degree where a uniform time programme can be laid down for all formations landing on a common front. In this respect, the expression "common front" should be given a wide interpretation and should not necessarily imply contiguous beaches.

73. Landing and loading tables should be prepared simultaneously and graphically from the start of planning.

74. Ships and craft should be given serial numbers indicative of their role, beach and wave in the Landing Table. These should be painted on the actual ships and craft - when finally sub-allotted - for the period of the operation.

75. A preliminary Appreciation made by a PMLO and a naval staff officer, both of whom must be primarily "experts" in the technicalities of amphibious assaults, is an essential preliminary to the Force Commander's final appreciation and selection of a Plan.

76. One of the most important roles of the PMLO is that of adviser on assault technique in the very earliest phases of planning. Primarily he must be a tactical, or 'G' staff officer and not a 'Q' expert. The 'Q' movements' duties which a PMLO is sometimes expected to perform could be better undertaken by the ordinary 'Q' staff augmented by a Grade II or Grade III 'Q movements' specialist. They should be no part of the PMLO's essential work.

77. Air planners must be appointed to participate in joint planning from the very start, down to the level of sub-Task Force or Divisional Headquarters.

78. 36-inch air photographic coverage of the entire coastline to be assaulted must be provided as a matter of course with initial intelligence. This is required as much for its topographical information as for its disclosure of prepared defences.

79. An air photograph interpreter is an essential ingredient of a planning team. Only the best are worth employing; the less skilful are very dangerous.

80. The complete period of planning for a Division employed in a shore-to-shore assault, from the time when the Commanders are first confronted with the Corps or Army Outline Plan, and with full intelligence and photographs, up to the final production of Landing Tables, Loading Tables and Loading diagrams, could well be reduced in an emergency to 16 days. This would be possible, and might even be reduced, provided no major changes of plan had to be considered by the planning staffs after the 5th or 6th day of planning and providing a firm basis of inter-service goodwill and co-operation had been previously established. Even on this programme the joint commanders would be allowed from 6 - 10 days for the final production of a firm outline plan.

31. A world-wide system for the rapid dissemination and interchange of Combined Operations technical information, as between theatres, users, experimenters and trainers, is an urgent need. Such information should not be withheld until trials and experiments are complete, but should be designed to help establishments engaged on similar trials and experiments to jump steps which have already been taken elsewhere.

PART III - THE FINAL PLAN & THE OPERATIONS

Section 1 - The Plan

7th Army Plan.

82. The 7th Army Plan was straightforward, simple, and as ambitious as circumstances of craft and shipping allowed. Within the limits of the Allied Plan, General Patton had few, if any, alternatives to the course which he adopted. He had to assault with three divisions (plus) on a 50 mile front; and events proved that he could not have afforded a floating reserve greater than the half of an Armoured Division and one Infantry Regiment which he did in fact retain.

II Corps Plan ("CENT" and "DIME" Forces).

83. The only comments that I am able to make on the plans of 1st and 45th Divisions are included in Part II of this report.

JOSS Force Plan.

84. The plan of JOSS Force, which I watched take shape in detail and finally saw executed with conspicuous success, was interesting in that it embodied almost all the important principles which have at one time or another been laid down as essential for a Combined Operation: Naval simplicity; speed, coupled with a due allowance of time for the beach group to develop the beaches uninterrupted; surprise (apart from the general tactical surprise achieved by 15th Army Group as a whole), in that a substantial proportion of our infantry were ordered to by-pass resistance and effect with utmost speed a deep penetration into the high ground that commanded the prospective bridgehead and its approaches; the mobilisation and concentration of every possible means of fire support for the initial landings; the provision of specially equipped and specially trained assault troops prepared to fight in the organisation in which they disembarked, and the temporary sacrifice of normal military organisation to this end; the retention of a very powerful floating reserve; adequate and carefully planned rehearsal with a due allowance of time for the correction of faults; planning in minute detail with the resultant feeling of confident elasticity which can only come when every man has a thorough understanding of what is required of him, and the strict employment of craft and equipment in the role for which it was primarily designed.

85. It is an illuminating comment on the plan, especially when its success is liable to be deprecated on the score of the moderate resistance which was initially encountered, that a week before embarkation the Military Force Commander had remarked that he was fully prepared for failure on at least two beaches; and that if only one of his main landings was successful, he would instantly commit the whole of his floating reserve to that beach and felt confident that he could still secure a bridgehead for the accomplishment of his primary task - the protection of the left flank of the 15th Army Group. Since his floating reserve consisted of the half of an armoured division and two battalions of combat engineers, this confidence cannot be considered unduly optimistic. Nevertheless, it is interesting to recall that an earlier British "Appreciation" of the tasks ultimately allotted to JOSS Force had required a force of not less than three Divisions.

86. As it turned out, JOSS Force accomplished all its missions, and far more, in a space of time that was almost inconceivable under exercise conditions.

Missions of JOSS Force.

87. The missions assigned to General Truscott were :

- (a) The protection of the left flank of the 15th Army Group.
(Owing to the rapid advance of 3rd Division the Allied left flank was never for a moment in danger from attack within the JOSS Force boundaries).

(b)/...

- (b) The capture of LICATA town, port, and airfield, all of which were in our hands by noon on D day;
and
- (c) The establishment by D + 1 of a certain perimeter, which was duly secured by nightfall on the day of the assault and from which we continued to advance at daylight the next morning.

Method.

88. Right from the start, General Truscott appreciated that against determined opposition, the fulfillment of his tasks depended upon the early capture of CAMPOBELLO and PALMA DI MONTECHIRA. There were a number of courses open to him, and in fact the one that he finally selected was the first to be rejected in an "Appreciation" (or American "Estimate") that I was required to write for him in the middle of May.

89. The dominant topographical features of the LICATA plain were: first, the semi-circle of high ground which enclosed the town and all possible beaches to either side of it, and which completely commanded the whole area; and, second, the River Salso, which bisected our front and which could only be crossed by the adjacent road and railway bridges of LICATA. A further isolated hill feature complete with fort rose steeply from the sea and completely dominated the town which straggled up its Eastern slopes. On the original intelligence, the beaches to the East of the Salso River and the LICATA hill were capacious and, except for their shallow gradient, excellent; whereas those to the West of the River were very narrow and backed by low but vertical cliffs, with only one exit suitable for vehicles.

90. Assuming determined opposition and the defence, and ultimate destruction, by the enemy of the LICATA bridges, it had to be decided whether to commit the whole of the force to the Eastern beaches and risk its temporary confinement within the narrow limits of River, hill and sea; or whether to land in strength on both sides of the river, and to risk the isolation of the Western force, which it would be hard to reinforce by sea on account of the indifferent beaches. General Truscott chose the latter and less cautious course, since it offered the best opportunity for the rapid capture of the inland hills and for a quick advance on CAMPOBELLO and PALMA; and his choice was confirmed when we were subsequently able to obtain, by private arrangements, a set of large-scale (36") air photographs which proved the original intelligence regarding the exits from the Western beach to be inaccurate.

Outline Plan.

91. Accordingly, our Outline Plan provided for the landing of two RCTs (Brigade Groups), less one battalion, on the adjacent Blue and Yellow beaches to the East of the town and river; and for the landing of a third RCT on Red Beach, some 10 miles to the West. In addition, a force consisting of a Ranger Battalion, an infantry battalion, and a few self-propelled guns, was to be put ashore in the centre on Green beaches - two small coves at the Western end of the LICATA hill - with the object of seizing the high ground which, with its fort and battery, dominated not only the town but Yellow beach and its approaches.

92. All forces were to be supported on shore by the maximum weight of field and medium artillery for which accommodation could be found in the assault convoy. This was made possible by the ample allotment made to JOSS Force from 7th Army resources.

Sub-Allotment of Tasks:-

93. The tasks, reading from East to West, were as follows :-

- (a) Blue Force, 30th RCT was to land on Yellow Beach and establish a perimeter defence from the high ground

overlooking/...

overlooking the Salso Valley to the sea - a 7 mile front. As soon as possible, it was to contact 1st Division, Dime Force, on our right.

- (b) Yellow Force, 15th RCT (less one battalion), was to land on Blue beach, wheel left and attack LICATA across the River Salso from the East. Subsequently it was to advance North towards CAMPOBELLO.
- (c) Green Force, 3rd Ranger Battalion, one battalion of 15th Infantry Regiment, a battery of field guns (4 S.P. 105 mm), and a platoon of a Canon Company, all under command of the Executive Officer (2nd i/c) of 15th Infantry, was to land on Green Beach, move Eastwards along the high ground and attack LICATA from the west. After the capture of the town this force would revert to command of 15th RCT.
- (d) Red Force, 7th RCT, was to land at Red Beach and then split; one battalion advancing North-West to secure the high ground that commanded the way to PALMA; and a Second Battalion advancing North East to the high ground traversed by the CAMPOBELLO road. This second battalion was to be relieved by 15th RCT when LICATA town and airfield were in our hands.

94. Each RCT was given a Company of Medium Tanks (17 Shermans) from C.C.'A'; and the floating reserve thus consisted of the remainder of C.C.'A' (one medium tank battalion, one light tank battalion, two battalions of armoured infantry, and one armoured artillery battalion of 16 Self-propelled 105 mm. guns). In addition, two battalions of Combat Engineers were embarked in LCI, prepared to fight as infantry if required. (N.B. Combat Engineers are trained and equipped for this purpose as well as for their technical work.)

95. Generally speaking, then, the JOSS Force picture was of an assault by an infantry division on four beaches within a 10-12 miles front and a subsequent fanning out, Eastwards towards GELA - the first objective of DIME Force, Northwards to CAMPOBELLO, and westwards to PALMA.

Section 2 - The Operations

The Allied Operations.

96. The Assault Phase: The progress of the campaign is better known to any student of the Press at home than to the majority of officers serving in the theatre. The landings were uniformly successful, and the only serious threat to our rapid progress in the initial phases was an enemy counter-attack on D+ 2 against the American centre, which brought German armour down the GELA plain to within 1,000 yards of the 1st Division beaches. The retrieval of this situation, under the personal supervision of General Patton, and the destruction of numbers of Mark IV and Mark VI tanks just short of the coastal road, was one of the notable features of the operations.

97. Initial Advances: In the meanwhile the 8th Army had made rapid progress in the face of moderate resistance, until brought to a halt by German infantry on the plain of CATANIA. Commandos played an important part in this initial advance, and generous tribute was paid by all the Commanders concerned to the work of Special Service troops whose more spectacular exploits included the capture of AUGUSTA by 250 men and its retention until relieved by an 8th Army Division. At the same time, in the American sector, 45th Division achieved its objectives, the 7th Army floating reserve was landed behind II Corps which resumed its advance, and 3rd Division on the left captured, and left behind it, the towns of RIESI, SOMMATINO, CAMPOBELLO, CANNICATTI, NARO and PALMA, all of which were in our hands by the morning of D + 3.

98. The Capture of CANNICATTI: History may well show that the German plans might have been frustrated if the advance of JOSS Force, on the extreme left, could have been allowed to continue Northwards after D + 3. This would have required the introduction behind them of sufficient reserves to secure their bridgehead against counter-attack from the West, a step which the shipping situation rendered impossible. General Truscott had finally fulfilled his task - of protecting the Allied left flank - by the capture on D + 2 of CANNICATTI, a vital communications centre through which any serious threat would have to develop. The occupation of this town was, without doubt, contrary to the intentions of the Germans, who defended it with armour and 88 mm guns. They were, however, hustled northwards in the course of an afternoon by the very rapid deployment of two battalions of medium tanks, and one of armoured Infantry, supported by three battalions of artillery disposed within three or four thousand yards of the enemy positions.

99. After watching this attack and entering CANNICATTI with General Truscott immediately after its capture, I was able that evening to see the majority of the forward elements along the whole of the JOSS Force front, a perimeter of nearly 50 miles; and I am certain that if it had only been possible to land a single Regimental Combat Team at LICATA, to constitute a central reserve, nothing could have prevented our capture of CALTANISSETTA, and ENNA as well, within the next two or three days. By noon on D + 3, the situation on this front was not only secure, but three battalions of tanks and two armoured Infantry had been withdrawn into general reserve at CAMPOBELLO; ample artillery was deployed in forward positions; the supply situation was more than satisfactory; efficient line communications had been established; and the Regiments of 3rd Infantry Division were in a fit state for further advances by that evening.

JOSS FORCE: The Assault Phase.

100. The Landings: The JOSS Force Assault can be briefly and accurately described by the bald statement that, with a very slight delay caused by very bad weather, it went according to the plan described in Part II and Part III, Section 1. All the landings were successful, and in spite of the adverse weather, and of artillery fire which persisted for some hours on Red Beach, our infantry were put ashore with remarkable accuracy and to the planned time schedule, set back by less than an hour (in most cases) by the Force 5 to 6 sea which compelled the reduction of speed of landing craft. LOT were, in fact, reduced to $2\frac{1}{2}$ knots for a considerable portion of the

passage; but by some miracle the flotillas arrived complete and beached accurately in their proper order, the maximum delay being only 90 minutes, and the average delay considerably less.

101. Infantry carried in LCI, the two follow-up battalions beaching at H + 45 and H + 60 minutes respectively on each of Blue and Red Beaches, suffered severely from sea-sickness during the passage. Conditions in the troop compartments were odorous and airless, and the craft were extremely lively. On the whole, troops carried in open LCT were better situated for Mediterranean weather, although they were soaked through for many hours before landing. Nevertheless, troops for the most part disembarked quickly from LCI, without mishap and under cover of darkness, heavy equipment being towed ashore (it is believed) in rubber or canvas boats.

Rate of Landing.

102. The adverse weather did, however, have a considerable effect on the rate of landing vehicles. Those embarked in LCT - some 500 - were put ashore without mishap and with probably less difficulty than had ever been experienced on an exercise, although artillery fire was still directed against Red Beach and there was some air interference on Blue and Yellow Beaches. But unfortunately this was by no means the end of the LCTs' assault functions: for they were required to ferry ashore vehicles from LST which, by reason of the shallow gradient, could not discharge direct on to the beach.

103. JOSS Force was equipped with 5 pontoons for the 37 LST which were serviceable on the day of sailing. This was inadequate, and in any event the pontoons were not very satisfactory under the weather conditions encountered. Accordingly, it was provided in the plan that the majority of vehicles should be unloaded by LCT(5) ferry; and for this purpose a section, corresponding in size to an LST ramp, was cut out of each side of all LCT. The LCT could then be brought broadside across the LST ramp and at right angles to it, and the vehicles driven from ship to craft with little difficulty. To reduce the time taken to secure the LCT crosswise to the LST bows, the first LCT in each instance was firmly lashed as a platform, or extension, to the ramp, others coming alongside in rotation to take their quota of vehicles. Thus each vehicle was driven from the LST across the first LCT and into the second. As soon as the second was full, it headed for the beach, and a third came alongside the first. It was calculated that, by this method, an allotment of 4 LCT, including the one secured to the ramp, could empty in $2\frac{1}{2}$ - 3 hours an LST anchored 1,000 yds from the beach - the minimum distance which would allow sufficient sea room for the handling of LCT.

104. The bad weather interfered with these calculations in two ways; first it made the handling of craft very much more difficult; and, more important still, by the time LCT had beached, their crews were in a state of utter exhaustion. They had been $2\frac{1}{2}$ days at sea, much of that time in a wind that occasionally touched 40 m.p.h.; some of them had beached under shell fire, others under air attack; and none were in any condition to face a long spell of work off the beaches in a rough sea. Nevertheless, the work, although retarded, did continue; but it was not until the evening of D + 1 that all assault vehicles were ashore.

Naval Support.

105. Every possible provision had been made for naval support, including:-

- (a) Bombardment by "Support Groups" of Cruisers and Destroyers, both at call on a pre-arranged series of targets, and on opportunity targets occurring within a series of pre-arranged zones which shifted, like a bomb line, on a time programme.
- (b) LCS on opportunity targets.
- (c) LCS firing grapnels in advance of the first assault wave.
(This was successful).

(a)/...

- (d) LCG, decentralised under Support Groups, but also capable of central control under a British Naval officer on board the Headquarters Ship, U.S.S. DISCAYNE.
- (e) All possible infantry weapons mounted in LCV of assault battalions.
- (f) The partial sacrifice of economy in the loading of LCT so that tanks and S.P. guns could fire during the approach.
- (g) The mounting of the maximum possible number of AA guns - 40 mm., 37 mm., and 20 mm., - on the upper decks of LST which were thereby converted into auxiliary Flak ships.
- (h) The decentralisation to "Support Groups" of LCF.

Air Support

106. Those enemy air attacks which developed were not in strength, and it was rare to see as much as a whole enemy squadron over the bridgehead at any one time. This was no doubt due to the preliminary measures taken to achieve air superiority.

107. Faulty communications were probably responsible on many occasions for the failure of our fighters to coincide with enemy bombers over the beaches; the latter arriving regularly on the hour, whereas our fighters seemed to arrive with equal regularity 15 or 20 minutes later.

Enemy Opposition.

108. U.S.S. DISCAYNE, the Headquarters Ship, in which were embarked the staff of Admiral Connolly and a reduced operational staff of General Truscott (about 10 officers), took up station opposite Yellow Beach at about H - 2. An air raid on GELA, the Dine Force objective, was clearly visible; but there was no other sign of activity on the coast until a number of searchlights opened up, four of them very quickly concentrating on our ship. These must have been operated by RDF, and we had a very uncomfortable twenty minutes, during which it was possible to read a book on deck, and the scout boats and P.C. between us and the coast were very clearly visible. Although we were 4 miles offshore it was impossible to believe that we had not been seen, but the expected salvos never arrived, and in the end the searchlights shifted elsewhere.

109. Except for the leading support wave, fire was not, in fact, opened on any beach until the first waves of landing craft had touched down. On Blue and Yellow Beaches opposition was quickly silenced; on Green beach the considerable defences were not even manned; and on Red beach there was little or no opposition until daylight when accurate artillery fire from unidentified batteries was opened on the beaches and continued for an hour or more. This was ultimately silenced by Naval bombardment which was also directed successfully against the town and defences of LICATA.

110. Sporadic attacks by aircraft developed soon after daylight growing rather more frequent and more intense as the day wore on. Only one LST suffered a direct hit, and work on the beaches was never seriously interrupted.

111. LCG were employed on a number of occasions but were usually so slow "off the mark" that destroyers closing the beach to 1,000 yds, had engaged the target before gun craft could be brought into action. The British Naval Officer in charge was not favourably impressed with the discipline and training of the crews.

Naval Crews.

112. On the other hand everyone was full of admiration for the training and discipline of the U.S. Naval crews, and in fact, of all the Naval personnel involved in the operation. Their coolness, discipline and general cheerfulness was quite outstanding and could never be forgotten by any of the soldiers taking part in that operation.

Progress Ashore.

113. Progress ashore was very rapid and reflected the intense cross-country training undertaken by the Division during the previous months, and the remarkably high standard of physical fitness of all its units. By noon, when General Truscott and a detachment of his staff went ashore on Yellow Beach, the town was in our hands - its commanding heights were occupied by 8.30 - all beachheads had been secured, and Blue Force was consolidating its perimeter. Yellow and Red Forces were well on their way to their D day objectives. By that night, a secure bridgehead had been established, with an average radius of about 9 miles from LICATA, a substantial proportion of our armour was ashore, and our infantry were preparing to resume the advance by first light the next morning. During that night contact was gained with Lime Force on our right, and all Regiments carried out vigorous patrolling, in many instances to a depth of 4 or 5 miles beyond their outposts. The next morning, 7th Infantry Regiment pushed well to the westward of PALMA, their landing infantry avoiding roads and travelling very rapidly across an extremely rugged country; 15th Infantry captured CAMPOBELLO against resistance which included some German element; 30th Infantry sent patrols into RIESI; and C.C.'A', after occupying NARO, 20 miles from LICATA, pushed leading elements towards CANNICATTI.

114. Reports were now received of German Armoured elements approaching us in strength from the North and North West of the Island. The most promising line of tank attack was down the vale that ran from the South of NARO into the LICATA plain; and General Truscott accordingly ordered 7th Infantry Regiment to dispose itself, and consolidate, on the high ground about PALMA - flanking any German advance from the North West, and the bulk of his artillery to prepare concentrations on the probable avenues of approach. At the same time he decided to capture CANNICATTI; and generally advance Northwards, with a view to eliminating the threat from this direction by the occupation of the main centres of communication. Whether or not the reports of German armour were inaccurate or wrongly interpreted, the attack, when it came, was down the GELA plain, on our right, and not against our positions.

Communications.

115. Every possible step was taken to triplicate and quadruplicate our means of wireless communication; nevertheless our system for the most part failed us during the morning of D day. It would scarcely be an exaggeration to say that, during the first few hours, more vital information reached us through the 'J' system of interception (supervised by a British officer) than by way of normal channels. This failure of communications appeared to be almost universal; we were completely out of touch with Red beach for almost the whole of the morning, although we sent two officers (including a Brigadier-General) ashore with S.C. 193 sets, and the DISCAYNE actually streamed to a position where the disembarkation of tanks and vehicles could be clearly seen through glasses; one message only was received from Green Force during that period, and not more than 2 or 3 from Yellow; Blue Force alone kept us fairly well in touch with their progress. At the same time, although hourly progress reports were sent by us through Naval channels to 7th Army, only two of our signals - both very much delayed - ever reached their destination.

116. Throughout the whole of the campaign, a layman was left with the impression that wireless was a totally unreliable means of communication; and that we should do much better to regard it as a luxury and resort to other means, including visual, for vital signals. When acting as Liaison Officer, I would not infrequently leave a Divisional Headquarters, in both 7th and 8th Armies, with information regarding our latest progress, travel for two or three hours to Corps or Army Headquarters and find that I was "first with the news" when I got there. On the other hand, the 7th Army line communications were often astonishingly rapid in their establishment, and subsequently reliable. Wireless communications, of course, improved as the campaign went on, and much of the initial trouble was due to inefficient waterproofing equipment and to the inordinately rough weather of our passage.

Beach Organisation.

117. Beaches were well and speedily organised; and the policy of allowing beach groups a clear 2 hours before landing wheeled vehicles was amply repaid in terms of beach roadway, mine and wire clearance, the organisation of dumps, fuel and water points, medical aid stations and P.W. reception. Military and Naval personnel, most of whom had suffered acutely from the rough weather in open craft, or, worse still, cooped up in LCI, earned the highest praise for their vigour and persistence in spite of fatigue and enemy air interference.

Beachmasters.

118. Only very junior naval officers were available in the first instance as beachmasters, and these were at times incapable of handling the situation created by surf, swell, wind and crews in a state of intense fatigue. LCT which were always magnificently handled, were apt to get out of control, and the whole process of landing stores and vehicles sometimes faltered. Pontoons were frequently coming adrift, usually at the shore end, and their steep "ramps" were too much for many vehicles in the surf that was breaking.

119. In some instances Transport Quartermasters had not religiously followed the loading diagrams and had put jeeps with trailers, and other wheeled vehicles, ahead of tracked vehicles on LST tank decks. On one beach there was an agonising half-hour, during a protracted dive-bombing attack, while a jeep and trailer (probably containing somebody's bedding roll), lying stuck at the shore end of a pontoon, blocked the way of 3 Sherman Tanks on the pontoon itself, with 14 more waiting in the LST to follow.

120. That afternoon, however, the port was opened and - more important still - the Naval Commander, aware of a situation which he had to a large extent foreseen, was able to withdraw senior naval officers from command of the various naval assault forces and send them on to the beaches. With tired men, this worked a miraculous change very quickly.

121. The need for a PMLO - MLO organisation was evident. While the Beachmaster was responsible for beaching craft, and the local Shore Group Commander was responsible for unloading them as they arrived, it was nobody's duty to know what vehicles were carried where, or to have a comprehensive view of the landing plan, even of his own beach. Furthermore, it was quite clear that the PMLO - MLO must be an officer of quite outstanding ability, forceful character and great powers of command. At the very least he should be of a calibre equal to that of a first-class Battalion Commander.

Beach Maintenance.

122. "DUKWS" proved to be invaluable equipment and, chiefly by their use, all expectations and calculations were exceeded in the quantity of stores that were handled over the beaches after D day. Even this quantity could be vastly increased by the provision of mechanical means for handling stores in LST, of slings for "DUKWS", and of mobile cranes at beach dumps. By the employment of such methods it seems very probable that our whole conception of the force that can be maintained over specified beaches might be revolutionised.

123. Finally, it is necessary to pay a very high tribute to the unsurpassed and unsurpassable spirit of co-operation and joint endeavour permeating the naval and military forces. It was exhilarating beyond measure to find the two services genuinely fused into a single force with a complete singleness of purpose.

Lessons Learnt from the Operation.

124. Each LCT flotilla or division should be provided with a depot ship, possibly an LST which could still carry a proportion of military vehicles, to fulfil the following functions:-

- (a) Carry 100% reserve crews.
- (b) Provide a Command Ship for the flotilla commander and thus facilitate control, particularly off the beaches.

(c)/...

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- (c) Carry spare parts and technicians for the repair of minor mechanical faults which occur to LCT on passage.

125. Our ideas regarding beach maintenance require revision. At present we under-rate the possibilities which could be greatly increased by the provision of :-

- (a) Mechanical equipment for shifting stores in LST.
- (b) Lavish numbers of "DUKWS", whose immense value does not seem to be fully appreciated in England.
- (c) Slings.
- (d) Mobile crews for Beach dumps.

126. Communications during the assault phase should be improved by:-

- (a) The introduction on a much larger scale of visual methods for both naval and military personnel.
- (b) The provision of sea-borne "spies" in landing craft equipped with wireless and visual aids.
These could lie off beaches, or even go temporarily ashore, to seek and send back general news of the progress of events. They would fulfil the functions of a sea-borne Phantom ('P') service.

127. We have been much too pessimistic in the past regarding rough weather.

128. Naval Beachmasters must be senior officers with a wide experience of handling tired men. They should preferably be bad-tempered, and certainly dictatorial by nature. (An old lesson).

129. Never shoot at searchlights until you are actually under effective fire. (An old lesson).

130. It pays handsomely to allow a Beach Group 2 hours ashore before landing wheeled vehicles.

131. All landing craft should beach in the flotillas, divisions, or sub-formations in which they are accustomed to work. The smallest practicable formation is one commanded by a responsible naval officer equipped with communications.

132. The FMLO and MLO are essential ingredients in an amphibious assault. They must be officers with operational experience, tactical knowledge, and wide experience of all aspects of Combined Operations. Above all they must be men of commanding personality.

133. The particular features of U.S. troops, their equipment, extraordinary mobility, and general artillery methods, require special study if they are to be employed to the best advantage together with, and alongside, British troops in an Allied operation. It cannot be assumed that the armies of both Nations will fulfil similar tasks equally well: each has its peculiar characteristics suiting it, on the one hand, for wide and very speedy manoeuvre across difficult country, great elasticity and powers of improvisation, and extremely rapid concentration of fire power; and, on the other hand, for dogged fighting, resolute attack against prepared positions, stubborn defence, and the maintenance of close contact.

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