

Class of 1923

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Thesis

# TACTICS

Submitted by

~~COMMANDER C.W. NIMITZ, U.S.N.~~

Room W - 13

Naval War College

Newport, R. I.

28 April, 1923

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## PART I

### NAVAL TACTICS

War has as its ultimate objective the destruction of the enemy's military and naval strength which can be accomplished only thru battle. Strategy dictates when and where battles are to be fought, while Tactics employs the available forces in battle. "There is no sharp dividing line between Strategy and Tactics and they merge one into the other, the main difference being that the strategist sees with the eye of the mind while the tactician sees with the eye of the body. The elementary principles governing them are the same" (Fiske). Strategy assembles the utmost force at the right time and place. Tactics, still governed by the same elementary principles, culminates the efforts set in motion when Policy, failing to secure its objective through Diplomacy, resorts to War.

At no time in our history has the BLUE naval tactician been confronted with a problem so difficult of solution as that imposed by the restrictions of the Treaties limiting naval armament and the use of submarines. Although the Treaty for the Limitation of Naval Armament permits BLUE to have a navy equal to that of RED and 1.67 times that of ORANGE, based on capital ship strength, BLUE statesmen have deemed it wise further to limit our naval strength by withholding the funds and authorization of the numbers and types of subsidiary craft so essential to a well balanced fleet, and so necessary to maintain a status of equality with RED and the permitted superiority over ORANGE.

The Washington Conference, as successful as it was in composing the problems of the Pacific, did not entirely remove



the possibility of war between BLUE and ORANGE. It did effectually bar BLUE as a naval power in the Western Pacific without, however, making her secure from ORANGE aggression in the Philippines. On the other hand, ORANGE, not having important interests in waters under BLUE's control, is made fairly safe from BLUE aggression.

Although RED and BLUE are now on the best of terms and are bound together by racial, sentimental, and economic ties, our naval tacticians cannot on that account ignore the possibility of a meeting of the RED and BLUE fleets in a general action in the future. RED's existence as a great nation is dependent upon her maritime commercial supremacy. Should BLUE in the future threaten that supremacy it is not unreasonable to predict that the present amicable relations will give place to a state of tension and possibly war.

It is because RED and ORANGE are the only two nations that have navies capable of opposing BLUE that the possibilities of war with those countries is referred to in this paper. It is beyond the province of our naval tacticians to speculate on the likelihood of war with this or that nation. It is their duty to plan the employment of available forces in battle against any possible opponent, and to ensure that the utmost strength is developed at the crucial time and at the decisive point.

To accomplish this task the tactician has available not only such experience as he can bring to bear on the problem, but in addition, he can draw on the lessons to be learned from the innumerable examples of failure and the comparatively few instances of decisive victory recorded in history. A study of the mistakes of the past will usually yield a better harvest than a study of the successes. In most instances, it has been the errors of the vanquished rather than the



brilliant tactics of the victor that brought success to the latter.

History is a continuous record of battles, which, though fought at widely different times and with a wide variation in the types of weapons, were governed by one unchanging factor-HUMAN NATURE. From the successes and failures of the past it has been possible to deduce general principles of warfare which like human nature, are unchangeable. Changes and advance in technique of weapons has brought about changes in minor tactics, or tactics of types, and has confirmed rather than altered general principles. While a knowledge and application of general principles will not necessarily insure victory, their disregard will almost certainly tend to disaster.

The main and unchanging principles of warfare are:

- FIRST: To employ all the forces which can be made available with the utmost energy. (This does not necessarily imply the offensive with its attendant advantages.)
- SECOND: To concentrate superior forces against the enemy at the point of contact or where the decisive blow is to be struck.
- THIRD: To avoid loss of time.
- FOURTH: To follow up every advantage gained with utmost energy.

The first three subdivisions of principle may be condensed into tabloid form in the phrase "Superiority of force at the point of contact". (Laning.) Its successful accomplishment requires the employment of all the available forces with the utmost energy and with a full realization of the value of the time element. The fourth principle is of the greatest importance. Its disregard has on more than one occasion permitted a beaten force to retire to the safety of its harbors and to refit for further operations.

Auxiliary to the main principles set forth above, but



no less important are the following minor principles:

- (a) Attempt to surprise and deceive the enemy as to the plan of battle, and method and point of attack.
- (b) Endeavor to isolate a portion of the enemy battle line and crush it before it can be supported.
- (c) Maneuver on interior lines to save time, increase mobility, and facilitate concentration.
- (d) Plan the attack to threaten the enemy lines of communication while at the same time covering your own lines. (In naval warfare this means to plan the battle so as to cut off retreat in case your force is the stronger, or to facilitate breaking off the action if your force is the weaker.)
- (e) As well in Tactics as in Strategy, adhere to the Plan and do not lose sight of the objective.
- (f) Modern fleets cannot be handled in single line by one officer. They must be in subdivisions, all within supporting distance of each other, each subdivision controlled by a subordinate upon whom must be imposed authority, responsibility, and great freedom of initiative in accomplishing the end in view.
- (g) Make all practicable use of such natural advantages as may be obtained from the direction of the wind, the state of the sea, direction of the sun, fogs and reduced visibility, smoke, and smoke screens.
- (h) As a general rule, great results cannot be accomplished without a corresponding degree of risk. Efficient fleets are never perfectly ready for action. The leader who awaits perfection of plans, material, or training, will wait in vain, and in the end will yield the victory to him who employs the tools at hand with the greatest vigor.

No discussion of Tactics can be complete without a reference to the relative importance and value of the offensive and defensive forms of battle. As between two fleets, numerically unequal, but manned by personnel equally alert and active, the defensive is usually imposed upon the weaker fleet by the mere fact of inferiority in numbers. However, when morale is taken into account in calculations of strength for fighting, the weaker fleet numerically is not necessarily the fleet to take the defensive. There can be no question of the advantage to be derived from the



offensive operation in battle. It carries with it not only the initiative but increased morale. It makes the enemy conform to your plan and reduces the chances for being surprised. While a well conducted defensive action may save a force from defeat, it is only an active offensive that will win a battle.

A force though placed on the defensive thru inferiority in strength or position should not passively await and ward off the attacks of the enemy. The BLUE Fleet in the BLUE-RED SITUATION and the ORANGE Fleet in the BLUE-ORANGE SITUATION, though operating on the strategical defensive, will find many opportunities for temporary seizure of the initiative in making offensive strokes. In each case the weaker fleet while employing tactics of attrition in an endeavor to bring about a condition of equality in numbers, will find favorable opportunities for attacks in force. According to Clausewitz, "A swift and vigorous assumption of the offensive, the flashing sword of vengeance, is the most brilliant point in the defensive."

The tactical offensive requires to a higher degree than the defensive, trained and experienced leaders, well trained units, mobility, and a superiority in strength at the point of contact. Without these qualities the initiative and the effect of the surprise must be largely discounted, and the cooperation which is necessary for concerted action between fleet components will be lacking. It is at this point that the tactician in the weaker fleet can see hope. By hard conscientious training, not only of fleet units in minor tactics, but of prospective fleet commanders-in-chief in grand tactics, there is a very good chance of meeting on equal terms a fleet numerically superior, but in which those items have not received such serious attention. At any rate,



such training will greatly stiffen the defense, when forced to so operate, and may possibly catch unawares an enemy who has somewhat neglected to train along the same lines.

There is a wide difference between the statement and understanding of tactical principles and their successful application. The best maxims applied blindly may result in nothing but disaster. What steps can we take to insure correct application of principles? The answer is obvious. We must first of all perfect ourselves in the tactics of types, that is, in Minor Tactics. Then we must develop the means and become proficient in coordinating the different types in a fleet action. In our Minor Tactics we must particularly take into account and evaluate correctly all advances in the technique of weapons.

The coordination of the efforts of the various types in battle lies in the realm of Grand Tactics which is the special field of the Commander-in-Chief. Concerted action from separated forces or different types requires the highest form of leadership. Unless there is perfect cooperation, unless the separate forces act in perfect unison, unless the subordinate leaders display the utmost initiative and resolution, there cannot be the full development of the power inherent in each type at the right place and at the right time. Only in this way, and not by mere proximity is concentration effective.

The most difficult problem that now confronts the BLUE naval tactician is how, under the existing Treaty of Limitation, the BLUE navy can be handled to defeat the RED navy. That the probability of a war with RED is happily remote in no way alters the problem for BLUE. Although the Limitations Treaty places BLUE and RED navies on an equal basis as regards capital ship tonnage, there is actually a considerable

margin of superiority in favor of RED, which, together with RED's possession of suitable bases in numerous strategic points, will place BLUE on the defensive in the early phases of a campaign if RED vigorously utilizes the initiative which is in his grasp.

That the theatre of operations in the BLUE-RED SITUATION will be in the Western Atlantic is obvious. The lack of BLUE interests in the Eastern Atlantic, and the existence of large RED interests in the Western Atlantic in Canada, Nova Scotia, Bermuda, Jamaica, New Foundland etc., further limits the probable theatre of operations to the western part of the North Atlantic. Although BLUE has outlying interests in the West Indies and in the Panama Canal area which are vulnerable to raiding attacks by RED, the center of activity must be the sea area between the Chesapeake Capes and New Foundland until a decisive fleet action definitely determines which fleet controls the vital sea area.

#### COMPARISON OF BLUE-RED FIGHTING STRENGTHS.

##### Strength of Position.

A comparison of RED and BLUE fighting strengths is essential in order to indicate the tactics BLUE should or could follow in a fleet action. Such a comparison, with the exception of capital ships is possible only in very general terms. It should begin with a consideration of the possible area of operations and should take into account the strength of position from a strategic standpoint of BLUE in the Western Atlantic. BLUE Navy Yards from Norfolk to Portsmouth will make available ample repair facilities close aboard to care for the volume of work incident to the upkeep of a large fleet. For this purpose RED has available only the inadequate facilities at Halifax and at Bermuda. Both of these



possessions will be the object of early attack by BLUE and they may fall before they can be of any assistance to RED. In general therefore, it may be assumed that strategically BLUE has the advantage of position and that RED must open the campaign by offensive operations in order to support Bermuda and Halifax. BLUE, on the other hand, starts the campaign on the strategic defensive but with offensive-defensive operations against important RED positions in the Western Atlantic. With this background we may proceed with a comparison of fighting strengths afloat.

#### Aircraft.

Assuming that both RED and BLUE have completed the carrier tonnage permitted by the Limitations Treaty, the two fleets will meet on terms approximately equal and the advantage will lie with that fleet that can efficiently utilize its air strength at the earliest time. Under the present conditions however, RED has an overwhelming superiority in carriers as BLUE has only the Langley while RED has 2 CV and 5 OCV. Should an action be fought within plane radius of BLUE air bases, any superiority that RED may possess will be counterbalanced.

#### Submarines.

Fighting strengths approximately equal. BLUE's probably greater number of submarines in the theatre of operations will be counterbalanced by the higher speed submarines with RED. If we deal with vessels actually in commission or ready to go into commission, RED has a large advantage as there are ready for use 7 SF, 32 SS and 6 OSF against about 45 SS which can be gotten ready by BLUE within a short time. As yet BLUE has no SF ready to cruise with the fleet.

#### Light Forces.

Assuming that the light forces present with the fleets

will be limited to CLs, DLs, DDs, and DMs, and that vessels exist as shown on the data sheets, RED will have a large superiority in CLs so far as numbers are concerned, having 42 against BLUE's 10. Even if only 30 of RED's CLs can be present, the superiority will be great. The BLUE CLs, however, are superior in every respect to those of RED, having more speed than all except two, and being superior in gun power to all of RED CLs.

BLUE will have a considerable superiority over RED in DDs, having 282 against RED's 205 (21 of which are DLs). When it is considered that a large proportion of RED's DDs may be guarding a train at the time an action is fought, the BLUE superiority in this respect will be further increased. If BLUE strategy can impose upon RED the necessity of conveying a large train to the Western Atlantic, RED CL superiority will be reduced somewhat.

CAs, OCAs, OCLs, and heavy minelayers are not considered as they will probably not figure in a fleet action. Such vessels, less the latter type, will be necessary for guarding RED's lines of communication against possible BLUE raiding forces.

In light minelayers (DMs), BLUE has a slight advantage, having 14 against RED's 11. The potentialities of this type are great and may well determine the course of the battle.

A very important element of RED strength which must be considered in connection with the light forces is the support which light forces will receive from the battlecruisers of which type RED has four against none for BLUE. These vessels can operate successfully and fairly safely against all BLUE surface craft except battleships. Their high speed will enable them to support light force attacks or to repel similar attacks, and then to support the line; or viceversa, they



may leave the line and proceed quickly to the support of any part of the engaged fleet. Lack of this valuable type constitutes a serious weakness to BLUE Fleet, and against RED's advantage in this respect, BLUE can oppose only DDs, submarines, or aircraft.

Capital Ships.

In heavy ships RED has a real superiority which may be evaluated in the following comparison of fighting strengths, it being assumed first, that the battleship fire is ship for ship, while the four RED battlecruisers concentrate against the four leading BLUE battleships; and second, that the CCs support the light forces.

Fighting Strengths (RED CCs supporting BBs.)

	<u>20,000 yards</u>	<u>15,000 yards</u>
BLUE	69	78
RED	100	100

Fighting Strengths (RED CCs supporting light forces)

	<u>20,000 yards</u>	<u>15,000 yards</u>
BLUE	89	94
RED	100	100

It will be noted that BLUE gains in comparison at the shorter ranges. With RED superiority of one knot in fleet speed, and free from such hampering influences as a train, it will be impossible for BLUE to close the range so long as RED refuses to close. BLUE must therefore bring about a situation that will require RED to advance with a train, or at least to guard a train of transports or supply ships on the last leg of a voyage westward. This, BLUE strategy can and must accomplish early in the war by military operations against Canada, Halifax, and Bermuda. BLUE's tremendous military superiority on the North American continent will force RED to send reinforcements to prevent the loss of important possessions. Such reinforcements must be guarded

and convoyed by practically the entire RED Fleet in order to prevent their destruction as they near their destination, and therein will lie BLUE's opportunity to nullify the RED Fleet's speed superiority. Under these circumstances BLUE can reasonably hope to have the initiative and such advantages as may exist from weather conditions, wind, sea, sun, visibility, etc.

If RED escapes attack while hampered with a train BLUE can never hope to engage except on terms acceptable to RED. In such a case BLUE's best tactics will consist in containing the RED Fleet with the BLUE Fleet, less a strong detachment of DDs and CLs, which force must attack the RED Fleet from windward or other favorable direction at about the same time that the two fleets are engaging. In either case BLUE submarines and airforces must do their utmost with the realization that it is upon them that the BLUE C-in-C is relying to nullify the RED heavy ship superiority, either by damage inflicted with torpedo hits, or by making the RED Fleet maneuver at critical times. The coordination of such separated forces will present the greatest difficulty, but we must solve such difficulties if we are to be successful against RED.

The RED battlecruisers are a greater element of strength than is indicated by their gun power. As a support to light forces both in the attack and in the defense, they are invaluable; as a fast independent wing they are capable of taking advantage of favorable opportunities and of forcing BLUE line to maneuver under gunfire.

The various elements of RED strength in a general engagement may be summarized as follows:

- (a) Moderate to large superiority in heavy ships, dependent upon how the battlecruisers are employed.
- (b) A fast and powerful independent wing of four battle



cruisers.

- (c) A superiority of one knot in fleet speed if not hampered by the presence of a train.
- (d) A moderate superiority in light cruisers, it being assumed that a number of these vessels are engaged in protecting lines of communication.
- (e) Until BLUE plane carriers are completed, a large superiority in carriers and consequently in air strength in battle.

RED's principal disadvantages are as follows:

- (f) A marked inferiority in destroyers, it being assumed that a considerable number of RED destroyers are employed on convoy and other duties.
- (g) Owing to the distance of the probable theatre from suitable repair bases of RED, any losses suffered in operations leading up to and including battle will make the damaged units unfit for long periods, or liable to the dangers of a long voyage in damaged condition, whereas BLUE ships crippled may be repaired within a short time at bases close aboard.
- (h) If encumbered by a train the destination will be known within narrow limits and the westward advance will be in the direction of BLUE's greatest strength.

Of the above advantages, (a) and (b) are the most important and their effect must be neutralized before the two lines of heavy ships come into action. To accomplish this BLUE must rely on light forces, aircraft and submarines. The only way in which BLUE can nullify (c) is to impose upon RED the necessity for a train as previously described.

Disadvantages (f) and (g) will probably influence RED to bring about a general action to be fought to a finish in as short a time as possible, in order to reduce the effect of attrition, and in order to realize immediately the superiority in heavy ships. RED Mission (To destroy or contain BLUE Fleet) is best accomplished by a decisive major action brought about at the earliest possible moment, and it is not unreasonable to estimate that RED will forego some of the advantages which come from superior speed in order to



speed up the decision. With this background, and assuming that BLUE will face RED under the most unfavorable situation, that of RED Fleet unhampered by a train, we can now discuss in brief terms the

BATTLE PLAN.

The BLUE Plan must make the most of RED's disadvantages and BLUE's advantages. It must permit the bomb and torpedo from aircraft and the torpedo from submarines and destroyers to reduce RED superiority in heavy ships; or by detached light force operations, to separate the battle cruisers from the RED battle line before the two lines of heavy ships come within gun range.

These requirements impose upon the BLUE Fleet retiring tactics until the favorable opportunity arises, or until the separated BLUE forces are in position to coordinate their attacks. It may be expected that the RED Fleet will lose no time in bringing about an engagement, and that with the advantage of superior speed, RED will gain the advantage of position with reference to the wind, sun, sea, etc. Only a blunder on the part of RED will permit such advantage to pass to BLUE.

In regard to the time of action, it will be to RED's advantage to bring it on early in the day in order to reach a decision before dark. If the decision is not reached by darkness, BLUE may bring about an extremely favorable situation by night destroyer attacks before continuing the engagement next day.

For these same reasons it is to BLUE's advantage to accept an early morning engagement only if unavoidable or if BLUE destroyers have successfully attacked during the preceding night. While BLUE cannot open or close the battle range at will owing to RED's speed superiority, the latter's



superiority of one knot is insufficient to impose a general action on BLUE unless the latter so desires, provided that BLUE has knowledge of RED's presence before the two Main Bodies are within thirty miles (60,000 yards) of each other. With reasonable care in the organization of the cruising formation, and by plane scouting, BLUE should certainly have at least that much warning of RED's presence, even in conditions of low visibility. RED can close the distance separating the two fleets at a maximum rate of one knot (2000 yards) per hour, and in a twelve hour day, can gain only twelve miles, leaving the two fleets still outside of gun range at the end of the day. It is evident therefore that BLUE, with warning, can avoid a general action on the first day of contact and can thereby give the destroyers an opportunity to attack during the night preceding the main action.

In case of contact during fog or very low visibility, the conditions may be right for a gun action at short range in which case BLUE should open the action with the utmost vigor. Under such conditions it may be expected that neither fleet can develop its maximum strength and that the action will be ship for ship. Here BLUE has nothing to gain by delaying tactics and RED cannot utilize heavy ship superiority.

If contact is made just outside of gunrange, BLUE Fleet should employ retiring tactics in order to give the light forces a chance to reach their positions. Once within gun range, every effort must be made to close the range to within 15,000 yards in order that all BLUE guns may become effective. Any retiring tactics on the part of RED at this stage of the engagement must be countered by submarines, aircraft, or light mine layers. In fact, once the action



opens, it is to BLUE's advantage to have the submarines, aircraft, and light mine layers operate on RED's disengaged side in the effort to make RED turn towards BLUE and close the range.

From the beginning of the contact until after action is opened, BLUE Air Force must

- (a) Keep enemy under constant air observation while at the same time denying the enemy a similar advantage.
- (b) Attack as soon as practicable in sufficient strength to insure the air control in subsequent stages of the battle; the first objectives being enemy plane carriers, to prevent their getting up planes.
- (c) Coordinate bomb attacks, and torpedo attacks on disengaged bow of enemy with the opening of the gun action, in order to make enemy turn towards BLUE and thereby close the range.
- (d) Reserve sufficient plane strength for spotting.

Submarines on account of their low speeds must be weapons of opportunity and their attacks cannot be coordinated with any degree of success. The cruising and approach formation must be so arranged that no matter on what bearing the contact is made, nor in which direction the deployment for battle, one or more groups of submarines will be in contact with the enemy battle line, where they are expected to attack effectively. Retiring tactics on the part of the BLUE Fleet will favor the chances of more distant submarine groups reaching the scene of action. Submarines must attack when and where the opportunity offers having as their objectives large plane carriers, battleships, battle cruisers, and light cruisers in the order mentioned, except that torpedoes are not to be expended on light cruisers unless better targets are lacking. As a submarine can reach a favorable torpedo position with reference to a suitable target only with the greatest difficulty, every such opportunity is to be utilized except for good reason. Not the



least of BLUE submarines mission will be to destroy crippled enemy heavy ships, and for this reason they should follow the course of the main action even though their speed is very much lower than the fleet speeds. A countermarch of the enemy line will quickly change a seemingly hopeless situation from the submarine's standpoint into an excellent opportunity for doing further damage.

While this discussion contemplates action with RED Fleet when the latter is unhampered by a train, it should be noted that the presence of a RED train would give BLUE an opportunity of attacking from windward with light forces in full strength; and that with RED unhampered, such attack can be made only by detaching a portion of the BLUE light forces and sending them out to attack RED from windward, at about the time the main action opens. Such coordination of separated forces will present the greatest difficulty, but again it must be remembered that if we are to defeat the superior RED Fleet we must be prepared to overcome all sorts of difficulties. It is assumed that RED will either take the windward position or attempt to deny such a position to BLUE light forces for torpedo attacks.

To meet this condition the BLUE light forces should be divided as nearly as possible into three equal groups; one for the van of the battle line; one for the rear of the line; and the third group, with the fastest destroyers, to be prepared to take a station to windward of the enemy battle line and from that position to launch a torpedo attack simultaneous with the opening of the main action. To counter such a threat RED must either detach battle cruisers from the support of the RED battle line, or must meet it defensively by turning towards or away from the coming torpedoes. In either case BLUE will be benefitted. The range will be

closed or RED will lose fire effect while turning. RED CLs and DDs without the support of battle cruisers cannot deny BLUE special duty group the windward position as the BLUE CLs are equal to or superior in speed, and superior to RED CLs in gunpower, while the BLUE DDs can hold their own with RED DDs. If weather conditions are favorable to smoke screen tactics, the success of such a maneuver is advanced. Should it appear impracticable to carry out such a maneuver, the third group of light forces will operate with the van light forces.

The light mine layers are like submarines in that they are weapons of opportunity. They must not lay their mines too early in the approach unless the resulting situation can be correctly forecast. Normally they should await the orders of the C-in-C to begin laying mines, but in any event they should take care that their mines are not as much a source of embarrassment to own forces as to those of the enemy. They may be used to cause the enemy battle line to countermarch, or to maneuver under fire, or to deflect the enemy into submarine waters. They are also useful in covering the BLUE retreat in case it should be necessary to break off the action.

The BATTLE PLAN may be summarized as follows:

1. Main Body employ retiring tactics to delay main action until the following morning; then engage decisively at ranges between 15,000 and 16,000 yards. For low visibility contact the existing circumstances must decide whether to engage decisively at once or to employ retiring tactics, remembering that in low visibility RED must fight ship for ship and lose the effect of superiority.
2. Light forces develop enemy formation and maintain contact. Attack enemy heavy ships as opportunity offers during the night. Rejoin Main Body at daylight. During daylight action operate in accordance with doctrine. SPECIAL DUTY GROUP take station to windward of enemy and attack battle



line as main action opens. Light mine layers lay mines in accordance with orders.

3. Air Force develop enemy formation and maintain contact. Deny enemy air observation of BLUE Main Body. Attack enemy carriers in force as soon as practicable after contact. Secure air control. Attack enemy main body with torpedoes on disengaged side as main action opens. Spot gunfire for main body.
4. Submarines advance to attack at once as soon as enemy main body is developed, with heavy ships as primary objective and with CLs as objective if no better target is in prospect.

#### Role of Subdivisions of the Fleet.

Battleships form the main body of the fleet and have as their objective the heavily armed and armored ships of the enemy battle line. The big gun still reigns supreme as the most destructive and decisive factor in sea warfare and for this reason the main body is the backbone of the fleet in a general action. The dispositions of other types are subsidiary to and center about the main body, their object being to increase the effectiveness of the gunfire from the heavy ships and at the same time to decrease that of the enemy. The fleet is brought into action with the main body guarded from surprise attacks or contacts, and on such courses as to gain the maximum benefit from wind, sea, etc., in the coming big gun action. A windward position is selected to give the main body greater protection from enemy torpedo attacks, even though it might involve difficulties from funnel gases.

During the approach the battleships remain concentrated, and the line of bearing of division guides is kept at right angles to the bearing of the center of the enemy main body, or if the enemy is not yet in sight, to the bearing on which it is expected the enemy battle fleet will appear. At the proper time the battleships will be deployed on a course at right angles to the bearing of the enemy main body

center, so that the maximum fire of own battle line is developed. Deployment will be made as late as consistent with gaining tactical advantage, but not so late that deployment cannot be completed before coming in range of the enemy guns. In a battle with RED Fleet, in order to minimize the disadvantage of some of the BLUE 12" gun ships, the battle ranges will be kept as low as is consistent with safety from torpedoes fired from enemy battleships.

Battle Cruisers having big guns as their primary weapons but lacking the defensive qualities of a battleship have as their objectives not only the heavy ships of the enemy battle line, but also the enemy light forces. They can best operate against the enemy heavy ships by taking a position well ahead of their own line and by concentrating on the leading enemy ships, can either force a knuckle in the enemy line or make the enemy submit to telling punishment with no opportunity of making effective reply. Their high speed enables them to operate most effectively as a "fast wing" either against light forces or against the head of the battle line, where they can take a capping position. In order to quickly reach the capping position on an enemy fleet, the battle cruisers are stationed ahead of and slightly on the engaged bow of own fleet on deploying to action stations. Here they are fairly safe from the heavy fire of the opposing battle line and need fear only the guns of the opposing battle cruisers, if there are any.

Lack of battle cruisers constitutes a serious weakness in the BLUE Fleet. During the approach, and particularly during the early stages of the development of the enemy fleet, the battle cruisers are invaluable. They can on account of their strength and speed pierce screens and get information from a fleet that has no such valuable types. They can break up destroyer attacks even though the attacking



destroyers are supported by light cruisers. BLUE can only counter this powerful type by opposing submarines, mines, or aircraft.

Light Cruisers have as their mission in action the support of their own destroyer attacks, and the breaking up of the enemy light force attacks. They have an auxiliary but no less important function of keeping the C-in-C informed of the enemy movements from the time of contact until the end of the battle. For this reason we see them placed in the outer screens or closely in support thereof in the approach formations.

Their action stations are also determined by their mission. In order to protect their own destroyers from attack and interference while the latter are attacking, from one third to one half of the available CLs are placed at the extreme flanks of the battle line, just outboard of the destroyers to be supported or protected. Those in the van of the battle fleet are to be found slightly on the engaged bow of their own battle line and far enough ahead to cover the areas from which enemy destroyers can deliver torpedo attacks.

Those in the rear occupy a similar position with reference to the enemy line, except in the case where the enemy has no light craft astern of his battle line when our CLs will form astern of the battle line of the enemy but out of gunrange. The rear CLs are only about three or four miles astern of the battle line and are usually in an excellent position to transmit information of the enemy's movements, as may be also the van CLs.

It will be noted that in the plan of battle against RED Fleet it is proposed to use a portion of the BLUE light forces in an attack from windward at the time the main



action opens. While such an attack will present unusual difficulties in coordination, its successful accomplishment cannot help but contribute materially to BLUE's advantage. As said before, if we expect to defeat the superior RED Fleet, we must be prepared to overcome all manners of difficulties in handling separated forces.

Destroyers and Light Mine Layers have as their principal objective the heavy ships of the enemy battle line. Like all the rest of the subsidiary types their operations have as their mission the embarrassment of the enemy battle line and consequent reduction of fire while the fire of own battle line remains undiminished. Aside from the torpedo danger inflicted on the enemy battle line by destroyer attacks, a most important advantage is gained by making the enemy battle line maneuver while under fire in the early stages of the action. Such attacks again require the highest degree of coordination, which we must be prepared to accomplish.

In the defense, destroyers are fairly effective in warding off enemy destroyer attacks provided they are not too heavily supported by heavier ships. As a rule however, destroyers are essentially weapons of attack and should not be exposed to destruction by mere defensive tactics. An exception to this is the role of the destroyer in the anti-submarine defense of the main body. Here the destroyers, being excellent antisubmarine vessels, are formed in a cordon around the main body or the ships to be protected, at a distance of about 2500 yards. In a prolonged action, the destroyers forming the antisubmarine screens around the main body and air plane carriers should be relieved by destroyers that have already fired all their torpedoes.

In the approach formation destroyers are usually found



in the outer screen, closely supported by CLs. On this duty destroyers should be kept concentrated as much as possible in order to be in position to attack battle cruisers or other heavy ships that may attempt to pierce the screen. The action stations of destroyers are on the flanks of the battle line, just inside the stations of the light cruisers, with from one half to one third of the total number in the van and about the same number in the rear. As noted under Light Cruisers, it is proposed in an action with RED Fleet to use about one third of the destroyers in a coordinated attack from windward as the battle lines engage.

The Light Mine Layers are formed up near the van and rear light cruiser and destroyer groups in action stations and operate as outlined in the Battle Plan. In carrying out attacks on the enemy battle line neither destroyers nor light mine layers must allow themselves to be deflected from their objective by enemy light craft, although the prospects of a light force action may appear attractive.

Submarines have as their objective the enemy heavy ships and their role in battle has already been indicated in the discussion of the battle plan. During the approach they are stationed well outside the screen of surface vessels and distributed over the entire arc covered so that on contact some submarines will soon be within torpedo range of enemy heavy ships. As long as the two fleets remain in the area of the contact the remaining submarines have good prospects of getting within torpedo range before the action is decided. Their ability to penetrate enemy screen with safety determines their location in the outer screen.

The difficulties of coordination are so great when we consider the submarines, on account of their low speed, that



for the present we must be content to consider them weapons of opportunity which will be very effective in retiring tactics, and in disposing of cripples on the field of action. Should the submarines succeed in attacking at about the time the main action opens, the result is bound to be advantageous, even if no hits are made.

From their stations in the approach formation the submarines will usually make the first contacts with the screen of the approaching enemy. Here their mission is primarily that of scouts, to furnish information to own C-in-C. Even under such circumstances a submarine should never lose any opportunity of attacking an important enemy unit such as a battle cruiser when encountered in the screen.

Aircraft role in action has already been fully covered in the discussion of the Battle Plan. Their carriers should be stationed on the disengaged side of the Main Body when deployed for action and should be screened against submarine attack. As carriers are very fast and have more powerful armaments than CLs it may be desirable or necessary at times to employ them to assist the light forces or to repel the attacks of enemy light forces. Such use should only be made of them after their value as airplane carriers has ended, as might be the case if all the planes are gone from the fleet, or if the decks are too badly damaged to permit of landing or sending up planes.

In concluding this section, attention is again invited to the necessity for effective coordination of auxiliary types with the main battle line. The primary mission of every type of weapon in battle is to contribute directly to the success of the main attack of the battleships. Such coordination can only result if we are proficient in the



Minor Tactics of each type, and if our leaders are experienced in the Grand Tactics of the subdivisions of the fleet.

FLEET FORMATION DURING THE ADVANCE.

In figure 1 appended is shown the FLEET FORMATION to be used during the advance. It is devised to comply with the following requirements:

- (a) To afford sufficient warning of the proximity of enemy fleet to permit main body to take up any desired formation.
- (b) To guard main body from surprise contact or from attack without warning.
- (c) To permit of developing enemy formation, either by submarines, surface craft, or aircraft, before deployment is necessary.
- (d) To permit all forces to reach their action stations on deployment, no matter on which bearing the contact is made or in which direction the deployment takes place.

The FLEET FORMATION as shown is a Low Visibility formation which can be easily expanded into a High Visibility formation by increasing the distances of the screens and linking vessels from the Main Body, being guided therein by the cardinal principle of having every ship in visual touch with the Main Body, either thru visual contact or by linking up ships, so that stations can be kept, and reports of contacts accurately plotted in the Fleet Flagship.



ORGANIZATION OF THE BLUE FLEET (War College #984/7-22)

BLUE FLEET

Fleet Flagship ..... OCA-11 (Admiral A)  
Tenders and Screen .... Desdiv 5 (DD-63, 64 and 70)

MAIN BODY

Flagship ..... BB-38 (Admiral B)

Battleship Force .... Weak Squadron, Batdiv One.  
(2 Wyomings and  
2 Floridas)

Inter. Squad. Batdiv Two  
(2 New Yorks and  
2 Nevadas)  
Batdiv Three.  
(2 Idahos and 1 Arizona)

Strong Squad. Batdiv Four.  
(2 Tennessees and  
1 New Mexico)  
Batdiv Five.  
(3 Marylands)

Anti-Sub. Screen Desron 1. (19 DD)

Air Force ..... Airon Two (3 OCV and 2 CVT)

Anti-Sub Screen Desron 2, less Desdiv  
5 (12 DD)

VAN LIGHT FORCE

Flagship .... CL-9 (Rear Admiral DB)

Crudiv Five ..... (4 CL)  
Desrons 7 to 11 inc... (95 DD)  
Mindiv Four ..... (7 DM)  
Subdiv Twelve ..... (6 SF)

REAR LIGHT FORCE

Flagship .... CL-10 (Rear Admiral DA)

Desrons 3 to 6 inc.... (76 DD)  
Mindiv Five ..... (7 DM)

SPECIAL DUTY LIGHT FORCE

Flagship .... CL-12 (Rear Admiral CA)

Crudiv Six ..... (4 CL)  
Desrons 12 to 15 inc.. (76 DD)

SUBMARINE DIVISIONS

Subdiv Four.....	(11 SS)	Commander	SM
Subdiv Nine.....	(10 SS)	"	SH
Subdiv Ten.....	(10 SS)	"	SG
Subdiv Eleven.....	(10 SS)	"	SF



TACTICAL SCOUTING

The general doctrine will be to obtain sufficient information of the enemy to avoid surprise and to give ample time for deployment while at the same time denying a similar advantage to the enemy.

At night and at other times when weather or visibility conditions will prevent the use of planes for scouting, the tactical scouting for the fleet will be done by the vessels of the screens in accordance with the following general procedure.

So long as the C-in-C lacks definite information of the enemy it will be the primary duty of any vessel making contacts to report such contacts before taking advantage of the opportunity to attack, no matter how attractive the opportunity may appear. This applies particularly to submarines, which vessels are located in the outer screen and for that reason the vessels which will make the first contacts. This rule must have only one exception, and that is when a submarine makes a close contact at night or in low visibility with an important enemy unit. In such a case the submarine must dive at once to avoid attack or detection, and being favorably disposed, she should attack and make report afterwards.

All contacts being broadcasted, all BLUE units will know the situation as well as the C-in-C. Submarines making the first contact will after reporting, dive under the enemy screen and search for enemy main body. When sighted, the enemy main body will be reported before submarines may attack. It is only after the enemy main body has been definitely reported that all submarines may leave their stations in the formation and concentrate in the direction to intercept the enemy. Also, it is only when the C-in-C has definite information of the enemy main body that submarines closing in on the enemy main body can drop their role of scouts. It is therefore incumbent on all submarines to keep close watch



on intercepted contact reports in order to determine whether they should report what they see or to attack.

Surface vessels in the vicinity of the ship making the first contact report will concentrate in that direction and will pierce enemy screen as far as possible to seek information without risking fights against overpowering odds. While it is expected that our surface craft seeking information will have to fight to get it, aggressive tactics should be carried out only to the extent necessary without bringing on a light force engagement against a superior force. The gaps left in the screen by the departure of ships seeking information will be filled by closing in from the adjacent flanks and by vessels sent out by the nearest Admiral commanding light forces. Until the enemy main body is definitely located the screen must be kept intact to avoid being surprised.

When weather will permit, and when the visibility conditions are not unfavorable, the scouting by surface and subsurface types will be supplemented by plane scouting. Normally, every contact of every sort will at once be investigated by planes. When not in waters where the enemy is likely to be found, the plane strength will be conserved and all scouting will be done by the surface and subsurface craft. When in waters where the enemy may be expected, planes will be sent up in the early morning to cover the advance, flanks, and rear, for possible contacts on the surface during the day's steaming. During the afternoon, another flight will investigate in a similar manner the area to be covered during the night run. This flight will cover to the rear the maximum radius of the planes in order to cover the possibility of fast enemy vessels making surprise contacts with our rear guard of submarines.

While there will be a strong temptation to use planes



for scouting at all times, it must be remembered that it is upon our planes that we count to a large extent in countering the enemy superiority in heavy ships, and that for this reason we must conserve our plane strength until a fleet action is in immediate prospect. Our surface and subsurface screens will normally prevent our main body from surprise contacts and will give sufficient time for forming the fleet for battle.

After contact with enemy main body the Commander, Airon Two will keep the enemy under constant air observation and will take care that groups of enemy planes approaching our main body for a similar purpose are at once attacked and driven off.

#### CHANGING THE FLEET COURSE

There will be two methods of changing the fleet course as follows:

- (a) First Method. A simultaneous change to the new course by every ship of the fleet.

As the fleet formation is practically symmetrical, this method is well adapted to gaining distance to the flanks without changing the fleet front, and without weakening the readiness of the fleet to deploy in any direction.

- (b) Second Method. A change of the fleet front to the new course. All units arranged symmetrically with the formation PIVOT (see sketch, Fig. 1) change course at once to the new course. Units astern of the PIVOT steam up to the point occupied by the PIVOT at the signal of execution, and then change to the new course. Other units conform.

As the formation is nearly symmetrical a change of the fleet front is almost as simple a maneuver as that indicated in the First Method. The Second Method is useful when the enemy has been definitely located and it is necessary to place the fleet on a favorable course for interception and deployment.



DEPLOYMENT TO BATTLE STATIONS

The deployment will normally be delayed as long as is consistent with safety in order to keep the enemy in doubt as to our intentions. The maneuver must however be underway by the time the two main bodies are within 30,000 yards of each other.

On receiving the first reliable contact report of the enemy main body the Battleship Force will take a Preparatory Cruising Formation. As soon as reliable information of the enemy disposition is received, the Batfor will take an Approach Formation (Single line of bearing of division guides) whose axis is normal to the bearing of the center of the enemy main body. At about 30,000 yards the Batfor will take a Battle Formation.

The Airfor will maneuver to keep on the disengaged side of the Main Body and by the time the action opens should be about 3000 yards from the Main Body center.

The Anti-Submarine Screens of the Batfor and the Airfor will conform to the movements of the forces which they are to screen, those of the Batfor keeping sufficiently distant from the line of battleships to avoid being hit by salvos that are short or over. About 2500 yards on each side of the line of battleships is considered safe. A very important duty of the destroyers in the Batfor Screen is to warn the Batfor of approaching torpedoes and also of enemy destroyers that are approaching good torpedo water. Both of these screening units must stand by to be relieved early in the action by squadrons that have exhausted their torpedoes in the attack.

As indicated in preceding paragraphs describing the role of light forces in battle, their battle stations are governed by the areas from which enemy destroyers can launch their longest range torpedoes. As a guide to the stations to be



occupied, the following information regarding effective ranges of the longest range enemy torpedoes is of value:

Target Speed or speed of own battle line.	Position of enemy on battle line bow	Effective Range
20	15 degrees	31950
	30	28550
	45	24950
	60	20250
	75	15450
	90	11450
	105	8350
	120	6450
	135	5250
	150	4600
	165	4200

The VAN LIGHT FORCE will take station about 20,000 yards ahead of and slightly on the engaged bow of own battle line, with the CLs in the lead or towards the enemy. From this position they will be able to counter enemy light forces attempting to reach torpedo water against the BLUE Fleet, and they will be able to reach good torpedo water against RED Fleet in a very short time. Of course if the enemy van light forces are supported by battle cruisers these vessels must be attacked thru a smoke screen or our light forces must retire. It is expected however that the activities of our SPECIAL DUTY LIGHT FORCE will contain the enemy battle cruisers in a position far enough to windward to keep them out of the main action.

The REAR LIGHT FORCE will take station about 6000 yards astern of and slightly on the engaged quarter of our battle line, with CLs advanced towards the enemy. From this position they will not only be able to deny the enemy good torpedo water, but they will be in position to track and report the enemy main body movements to the C-in-C. In case the battle line reverses course the REAR LIGHT FORCES will move ahead and operate in the same manner as laid down for the VAN LIGHT

FORCE. If the enemy has no light forces covering the rear of his battle line, our REAR LIGHT FORCE will take station just outside of gun range of his rear ships and in position to make torpedo attacks at once in case his line counter marches.

If the weather is unfavorable to smoke screen tactics, the SPECIAL DUTY LIGHT FORCE will take station near the VAN LIGHT FORCE and operate in conjunction therewith.

If however the weather is favorable to smoke tactics, the C-in-C will, as soon as the enemy main body has been definitely located, detach the SPECIAL DUTY LIGHT FORCE with orders to gain a position to windward of enemy main body and from there to attack the head of the enemy battle line thru a smoke screen as the main action opens. As emphasized several times before such attack will require the highest form of cooperation in order to be successful, but if we cannot beat our enemy in this respect we will lose the battle thru mere force of numbers. In order that the SPECIAL DUTY LIGHT FORCE may have time to reach a suitable station to windward, the C-in-C must be prepared to employ retiring tactics until ready to have the range closed.

The light mine layers are with the VAN and REAR LIGHT FORCES and their activities must be governed by the orders of the C-in-C until the battle is well under way, after which mine laying may be covered by such a general doctrine as to rely on the initiative of the Mindiv commanders to carry out the general plan. These units must not be exposed to the risks involved in a general light force engagement between the two battle lines and must keep out of danger until called for by the C-in-C.

Subdiv Twelve being the only submarine division with enough speed to accompany the fleet after speeding up should take station with the VAN LIGHT FORCE, being advanced in the



direction of the enemy from our leading CL's. In this position they will be an effective counter to the enemy battle cruiser threat and in fact, about the only deterrent which BLUE has to prevent the RED Van Light Forces from receiving the battle cruiser support. Until the battle has developed Subdiv Twelve should have as its objective the enemy battle cruisers, and if they are not present, the leading ships of the enemy battle line. In this role concealment by submergence is not desirable nor possible owing to the low submerged speed. These submarines should stay on the surface as long as possible in order to accomplish their mission.

The other submarine divisions being too slow to reach assigned stations for battle are to leave the formation as soon as the first reliable reports of the enemy main body are received. Their objective being the enemy heavy ships, they will make the best of their way to the attack, remembering that if the engagement is a prolonged affair, they will still have an opportunity of striking the deciding blows. In the effort to reach the vicinity of the enemy battle line the storage battery power must be conserved in order not to be helpless at the crucial time.

An alternative plan of deployment is indicated in Figure I in which all light forces in the "A" sector always take station in the Van of the Battle Fleet in deployment, whereas these in sectors "B" and "C", take stations in the Van or Rear dependent upon the direction of deployment.

#### FLEET FLAGSHIP AND HER STATION IN BATTLE.

In order that the C-in-C may properly direct the entire fleet during the approach and in the subsequent battle it is essential that he have an independent flagship, free to move about without weakening any portion of the fleet. While it would be acceptable for the Fleet Flagship to be powerfully

armed, such is not necessary. Any such vessel carrying a heavy armament will be better employed elsewhere.

The ship selected should be speedy enough to enable the C-in-C to reach any portion of the area in a short time but she should not possess so much strength as to be a conspicuous object of attack or to be missed from the line of battle. These qualifications rule out battleships, plane carriers, and the fast light cruisers, in which type we are already deficient without diverting one to independent flagship duty. An acceptable compromise will be the selection of one of our old armored cruisers and the assignment to her of at least three destroyers as tenders, for screening, and for the purpose of conveying the C-in-C to distant parts of the theatre during the battle.

The OCA-11 and the tenders, DD-63, 64, and 70, will answer the requirements, and are therefore selected. This group will not attract sufficient attention to be the object of special attack, which is a point of no mean advantage.

In a modern battle the C-in-C can never hope to occupy any one position from which the entire theatre of action is visible. He must therefore rely largely on reports made either by radio or signal or by returning planes for the necessary information on which to base future action. As the Main battle line will be closest to the enemy main body, he should be in easy visual signal distance from the main body. As a considerable portion of the information to be gained under modern conditions will come by way of planes, he should be quite near to the plane carriers in order to communicate freely. A location near the Airfor, either ahead or astern will permit the C-in-C to control that important unit, and will also keep him in touch with the Main Body. We therefore decide to station the Fleet Flagship about 1000 yards ahead



of the Airfor during the action.

The position of the Fleet Flagship while cruising is not of such importance as above and it will be no disadvantage to remain near the Airfor even at that time on account of ease of communication. She should however remain free to move about at will without causing confusion during maneuvers.

#### GENERAL.

Before leaving the BLUE-RED situation it is in order to consider again the increased advantage to BLUE of having the RED Fleet embarrassed by the presence of a train, and the necessity for bringing about that situation in the event of war.

Under such circumstances the RED Fleet would not necessarily have the advantage of the weather gauge, and it is more than probable that this advantage would fall to BLUE. With BLUE's great strength in destroyers, and with a reasonable certainty of attacking from windward, BLUE chances of success reach their maximum.

#### COMPARISON OF BLUE-ORANGE FIGHTING STRENGTHS.

##### Strength of Position.

In order to secure a proper background for a tactical estimate and comparison of strengths for battle we must first consider the relative strengths of position of BLUE and ORANGE in the Pacific. If past performances are of value in predicting future events, we may be certain that in the event of war between BLUE and ORANGE, the latter will be fully prepared at the outbreak of trouble and that BLUE will be but indifferently prepared. It is not improbable that the war will result at a time best suited to ORANGE as the result of carefully planned acts of aggression calculated to provoke a declaration of war on the part of BLUE.



It may also be safely assumed that by the time BLUE has mobilized and is ready to advance westward, ORANGE has either captured Guam and Manila, or has so invested those places that they will be of little use to BLUE as bases during the advance. Also that ORANGE Mandated Islands in the Carolines, Marshalls, and the Pelews, will have been fortified, strengthened, and manned by troops, aviation and mining units to such an extent that the passage of a fleet near those places will be very hazardous. ORANGE control of the Pacific will extend eastward to the Marshalls-Kamchatka line while the BLUE control will extend westward to the line Dutch Harbor-Oahu-Samoa.

To bring such a war to a successful conclusion BLUE must either destroy ORANGE military and naval forces or effect a complete isolation of ORANGE country by cutting all communication with the outside world. It is quite possible that ORANGE resistance will cease when isolation is complete and before steps to reduce military strength on ORANGE soil are necessary. In either case the operations imposed upon BLUE will require a series of bases westward from Oahu, and will require the BLUE Fleet to advance westward with an enormous train, in order to be prepared to seize and establish bases enroute.

This requirement places BLUE under a severe handicap from the outset as has been indicated in the BLUE-RED situation. The BLUE Fleet, until it is safely established in a Far Eastern base must cruise at a low speed, hampered by an enormous train; the initiative in the hands of the enemy, who, possessing a fleet which though inferior to BLUE in numbers, is superior in every type in speed; and which thru its speed is free to attack with comparative safety during the BLUE advance westward. The possession by ORANGE of



numerous bases in the western Pacific will give to her fleet a maximum of mobility while the lack of such bases imposes upon BLUE the necessity of refuelling enroute at sea, or of seizing a base from ORANGE for this purpose, in order to maintain even a limited degree of mobility.

#### General Assumptions.

It is assumed that the BLUE Fleet will be mobilized at Lahaina Roads in about the strength indicated in Tactical Problem V., and that the Train will be equipped with planes and catapults as described in that Problem. It is further assumed that the ORANGE Fleet will be completely ready and in possession of Guam by the time the BLUE Fleet is ready to advance westward. Also that during the westward advance a major action will become imminent.

#### Aircraft.

So long as the BLUE Fleet is not divided, and so long as it remains outside of plane radius of ORANGE shore air stations, the BLUE Fleet will have an overwhelming advantage over ORANGE in fighting planes; a slight superiority in observation planes; a slight inferiority in torpedo planes; and a considerable superiority in scouting planes.

Assuming that when a major action becomes imminent, the Train Guard and Train will proceed as a separate force to a place of safety in the area on the disengaged side of the BLUE Battle Fleet, the air situation will still be favorable to BLUE. Each force will have a decided superiority over ORANGE in fighting planes. ORANGE will have a slight superiority over each BLUE force in observation planes; a large superiority over the Train Guard and Train in torpedo planes; and a slight superiority over the BLUE Battle Fleet in torpedo planes. While BLUE has the advantage in scouting planes,



they will not be effective until BLUE has established a base and can therefore be omitted in a fleet action enroute.

In general the air superiority rests with BLUE until within plane radius of ORANGE bases when we may expect the superiority in every type to pass to ORANGE.

#### Submarines.

In this type of vessel the advantage will rest entirely with ORANGE, not only in numbers and speeds of vessels, but also in the possession of the initiative. With more or less accurate information of BLUE's slow progress across the Pacific, ORANGE submarines can concentrate and attack in designated areas, and what is very important, can reach a designated area in time to participate in a general engagement, while at the same time the BLUE submarines will be too much scattered and too slow to be sure of reaching battle stations. The BLUE submarine role during the advance is primarily that of scouts, while that of ORANGE is not only that of scouts but of attackers as suitable objectives become available.

#### Light Forces.

In old armored cruisers there is no advantage to either side except that ORANGE vessels are free to attack with a maximum of mobility while BLUE ships will be forced to remain with the Train as a part of the Train Guard, and with practically no mobility.

In light cruisers and old light cruisers ORANGE has a decided superiority so far as numbers are concerned. Ship for ship, the BLUE light cruisers are more powerful, having not only a more powerful battery but a longer life. In speed, ORANGE has four ships that can make as high as 37 while the speed of the BLUE ships is 33.

In destroyers BLUE has an overwhelming superiority in numbers but barely enough when measuring strength against



task. The necessity of guarding the entire BLUE Fleet against surprise, and the anti-submarine measures necessary, will limit the number of destroyers immediately available to take part in an action. Ship for ship ORANGE destroyers are superior to BLUE destroyers.

In the possession of 14 fast light mine layers BLUE has a considerable advantage whereas ORANGE at the present has no such types. As floating mines can play an important part in the western advance, and in a fleet action we may expect ORANGE to convert some of his light cruisers or destroyers to this use.

Owing to the impossibility of predicting how and in what combinations the opposing light forces may engage each other, we can not make a calculation to show the relative fighting strengths of BLUE and ORANGE light forces. Assuming that after providing cruiser and destroyer protection to the Train, there are left with the Battle Fleet 6 light cruisers and 132 destroyers to engage 14 ORANGE light cruisers and 65 destroyers, the relative fighting strengths will be as follows:

	<u>Hitting Power</u>	<u>Life</u>	<u>Fighting Strength</u>	<u>Ratio</u>	<u>Remarks</u>
BLUE	45.576	195.0	8887	100	Range 5000; target angle 45: destroy- ers fight destroy- ers and light cru- isers fight light cruisers.
ORANGE	47.864	120.0	5744	65	

An important element of ORANGE light force strength is the probable support which the light forces will receive from the battle cruisers, of which type ORANGE has four and BLUE none. These important vessels are fast enough to participate in light force actions and still get back to support the battle line.

Capital Ships.

In capital ships BLUE has a great superiority in numbers and in types but is inferior in speed. The three Marylands and the California and Tennessee are fitted to shoot at ranges of 30,000 and over, while in the ORANGE Fleet only the two Mutsos have this advantage. On the other hand, in the two Arkansas and the two Utahs, there are only 12" guns whereas in the ORANGE Fleet there are no guns smaller than 14".

The initiative and speed lying with ORANGE, the latter may make such divisions of force as appear desirable. It is not unlikely that the four battle cruisers may accompany a raiding force of light cruisers and destroyers having as their objective the BLUE Train, while the ORANGE battleships either operate to contain the BLUE Battle Fleet, or to support the raiding force. Such a possibility will require strength with the Train to meet this danger. If a division of 14" gun ships is attached to the Train Guard, there will be a counter to the battle cruisers and there will still remain in the BLUE Battle Fleet sufficient strength to overwhelm the entire ORANGE Battle Fleet. The following comparisons of fighting strengths are based on the assumption that a general engagement, if it takes place, will find the sides opposed as follows:

Condition 1. Four ORANGE battle cruisers against four battleships of Train Guard, as for instance, the two Nevadas and the two New Yorks.

Condition 2. Entire ORANGE Battle Fleet (10 heavy ships) against the remainder of the BLUE Battle Fleet of 14 battleships.

It will be noted that all other conditions will probably fall in between the above two extremes. It is not contemplated that the BLUE Battle Fleet will ever be drawn far



enough away from its Train in order to permit the entire ORANGE Battle Fleet to attack the Train without themselves being brought to action by the BLUE Battle Fleet, before the Train can be brought under ORANGE fire.

Condition 1.

Four Kongos opposing two Nevadas and two New Yorks. Ranges 20,000, 15,000 and 10,000. Target angle 75. Top spot. No concentrations.

	<u>Hitting Power</u>	<u>Life</u>	<u>Fighting Strength</u>	<u>Ratio</u>
<u>Range 20,000</u>				
BLUE	2.920	61.6	180	100
ORANGE	1.280	46.4	59	32
<u>Range 15,000</u>				
BLUE	8.920	61.6	549	100
ORANGE	5.536	46.4	257	47
<u>Range 10,000</u>				
BLUE	23.040	61.6	1419	100
ORANGE	18.432	46.4	855	60

Condition 2.

Assumptions: Three Marylands concentrating on two Mutsos; California, Tennessee, and 1 Idaho, on 2 Fusos; two Pennsylvanias against two Kongos; two Arkansas and two Utahs against the two remaining Kongos; Target angle 75, plane spot. At 25,000 yards the three Marylands, California, and Tennessee are the only BLUE ships with effective fire, while at the same time ORANGE has only the two Mutsos, which must divide their fire.

	<u>Hitting Power</u>	<u>Life</u>	<u>Fighting Strength</u>	<u>Ratio</u>
<u>Range 25,000</u>				
BLUE	1.542	227.7	351	100
ORANGE	.666	149.8	100	28



	<u>Hitting Power</u>	<u>Life</u>	<u>Fighting Strength</u>	<u>Ratio</u>
	<u>Range 20,000</u>			
BLUE	7.712	227.7	1756	100
ORANGE	3.776	149.8	566	32
	<u>Range 15,000</u>			
BLUE	35.870	227.7	8168	100
ORANGE	14.311	149.8	2144	26
	<u>Range 10,000</u>			
BLUE	94.494	227.7	21516	100
ORANGE	52.702	149.8	7895	37

From an inspection of these strength ratios it is apparent that ORANGE cannot afford to bring on a general engagement except under circumstances extremely abnormal or favorable to ORANGE. That bad weather conditions might bring about a separation of BLUE forces is always a possibility. That such a separation will be planned by BLUE is unthinkable.

In the matter of fleet speed in an action ORANGE has the advantage and will therefore be able to fight at own selected range unless BLUE light forces can prevent ORANGE maneuvers. The detachment of Batdiv Two from the Battle Fleet for the Train Guard will increase the BLUE Fleet speed by one knot, a very desirable accomplishment. BLUE will then be able to make 19 knots in formation as against ORANGE speed of 20.

At this point it will be in order to discuss the possibility and desirability of utilizing a division of fast BLUE battleships as a Fast Wing. There can be no question of the desirability of such a unit. To be of value such a unit should have an excess of at least five knots speed over the fleet speed in order to support light force attacks at the beginning of an action, and still be able to reach a position in support of the battle line in time to open the big gun



fight. Not having sufficient speed, a division of battle-ships operating as a fast wing runs the risk of being isolated and defeated in detail, particularly in an action with a faster fleet. A so called fast wing which is not fast enough cannot efficiently support the attacks of light forces, and once separated from the battle line, can regain its position only with the greatest difficulty.

### BATTLE PLAN

ORANGE probable intentions during BLUE's westward advance requires a plan of battle that will comply with the following conditions.

1. Provide a Main Body of sufficient strength in forces of all types to successfully combat the entire ORANGE Fleet should it be encountered and accept action.
2. Provide a Train Guard of sufficient strength in forces of all types to successfully resist attack by strong ORANGE raiding forces composed of light forces, submarines, and possibly supported by battle cruisers, such attacks being made at the same time that the rest of the ORANGE Fleet threatens the BLUE Main Body.
3. Provide against the attack of the Train Guard and Train by the entire ORANGE Fleet while the BLUE Main Body is out of supporting distance.
4. Guard Main Body, Train Guard, and Train, against daylight attacks from the air, and from submarines.
5. Guard Main Body, Train Guard, and Train, against night attacks by submarines and light forces.

Conditions 1. and 2. will be provided for in the Organization of forces which will follow. Condition 3 will be met by the resolution to abstain from a division of forces. Conditions 3, 4, and 5, are met partly by the Organization, and partly by the Formation, which will be described later.

The plan of battle in case of daylight attack by the entire ORANGE Fleet is briefly as follows:

- (a) BLUE Main Body advance at once to meet the attack, the light forces and submarines in the screens concentrating at battle stations enroute.



- (b) The Train Guard with the Train maneuvers to the disengaged side of the Main Body and maintains that position until the action is over.

The above procedure presupposes a daylight attack by the entire ORANGE Fleet. A night general engagement while usually to the advantage of the inferior fleet, is considered too remote a possibility owing to the overwhelming odds against ORANGE.

The plan of battle in case of daylight attack by divided forces of the ORANGE Fleet is as follows:

- (c) BLUE Main Body advances at once to meet the ORANGE battle ships or the strongest ORANGE detachment.
- (d) The Train Guard with the Train proceeds to the disengaged side of the Main Body and proceeds, the four battleships and the destroyers of the Train Guard concentrating on the threatened side of the Train, to meet the attack. The Train, with the remainder of the Train Guard consisting of armored cruisers, large mine layers, light mine layers, and mine sweepers, keeps clear of the action. The Train Air Detachment remains with the Train but supplies planes as directed by the Train Guard Commander.

To meet daylight air attacks the Air Detachments with the Main Body and Train will send up planes as required.

For all night attacks, the formation will hold its course and speed, counting on the anti-submarine screens and gunfire for protection. Individual ships will maneuver to avoid torpedoes whenever seen.

At all times it is the Mission of the Main Body to destroy the ORANGE Main Body, should it be encountered, bearing in mind the necessity of guarding the Train until a safe base is secured.

At all times it is the Mission of the Train Guard to ensure the safety of the Train, and it should avoid engagement unless such action will further the mission.

The Train and Train Guard forms a complete defensive unit in itself, powerful enough to protect itself from attacks from the air, surface, and sub-surface, from all ORANGE forces



not containing more than four heavy ships. Under these circumstances the BLUE Main Body need only concern itself with the ORANGE major strength and maneuver to prevent such strength from reaching the Train. In action all forces will operate in accordance with doctrine.

Organization of the BLUE Fleet.

Fleet Flagship .... OCA-11 (Admiral A)  
Tenders and Screen DDs-334,335.

MAIN BODY

Flagship ..... Pennsylvania (Admiral B)

Battleship Force ... Weak Sq. Batdiv 1 and 3, (2 Arkansas, 2  
Utahs, Idaho, Mississippi, & Arizona)

Int. Sq. Batdiv 4, 2 Tennessee and New Mex.)

St. Sq. Batdiv 5, 3 Marylands.

Air Force. Airdiv 1, less OCV-1.  
Airdiv 4.

Anti-Submarine Screen ... Desron 8, less Desdiv 22.

Linking Ships ..... Desdiv 22 (Action stations with Van  
Light Force)

VAN LIGHT FORCE.

Flagship .... CL-11 (Rear Admiral CH)

Crudiv Five ..... (4 CL)  
Desrons Nine, Ten, and Eleven .. (57 DD)

REAR LIGHT FORCE.

Flagship .... CL-9 (Rear Admiral DB)

CL-9, 10 (2 CL)  
Desron Twelve (19 DD)

SUBMARINE DIVISIONS

Subdiv Three (13 SS) Commander SN  
Subdiv Seven ( 9 SS) Commander SJ

TRAIN GUARD AND TRAIN.

Flagship .... BB-34, (Rear Admiral BD)

Batdiv Two.  
Crudivs Eight and Nine, less OCA-9 & 11.  
Minron Two and Three, Mindiv Three  
Airdiv Five, plus OCV-1.  
Desron Six and Seven, including OCL-3.



### TRAIN.

The TRAIN is divided into seven sections of about equal strength in numbers, with the TRAIN guide leading the First Section. The Sections are disposed symmetrically in the form of a circle, the Guide and First Section occupying the center while the remaining Sections have their column heads or sub-guides equally disposed along the circumference of the circle. Each Section has three columns of ships, 1000 yards between columns, and 500 yards distance between ships in the same column. The center column has at its head the guide for the section. The wing columns of each section have their heads broad off the quarters of the Section guide. The Circle has sufficient radius to permit the Sections to clear each other when changing course.

All changes of course in the Train are made by head of column movements, the leaders or subguides of each Section changing course simultaneously with the TRAIN GUIDE. In this way the Subguides or heads of Sections maintain a constant bearing and distance from the TRAIN GUIDE. In changing course thru a large arc, the change will be made in increments not exceeding 45 degrees. There is ample space between Sections to permit freedom of individual ship movement in maneuvering to avoid torpedoes. For arrangement of the TRAIN see Figure 2.

### ROLE OF SUBDIVISIONS OF THE FLEET.

Except where changes are or have been indicated in the discussion of the BLUE-ORANGE Situation, the role of subdivisions of the Fleet are the same as indicated in the BLUE-RED Situation. The presence of the TRAIN and the necessity of securing a safe base in the Western Pacific or in Eastern Adriatic Seas imposes on BLUE Fleet a defensive role for the time being. Under such circumstances, submarines and some of the light forces have a primary role of scouts before taking up their real mission as attackers. As the changes of the



roles of the various forces due to the presence of the TRAIN are obvious it is not considered necessary to discuss this point at great length.

#### FLEET FORMATION DURING THE ADVANCE

In Figure 2 appended is shown the FLEET FORMATION, arranged for LOW VISIBILITY, to be used by BLUE Fleet in the advance westward with the TRAIN. It is devised to comply with the following requirements:

1. To afford sufficient warning of the proximity of enemy forces to permit Main Body and TRAIN Guard and Train to take up any desired formation.
2. To guard important subdivisions of the Fleet against surprise contacts with powerful enemy forces.
3. To permit of developing enemy formation, either by submarines, surface craft, or aircraft, before deployment is necessary.
4. To permit the various forces to reach their action stations in time to be effective.

As in Fig. 1 a cardinal principle of the formation is the maintainance of visual contact thruout the Fleet during daylight thru the aid of linking up ships, so that contact reports received by the Flagship can be accurately plotted.

The linking up ships and the vessels forming the protective screen take stations with the Main Body on deployment, as do also the submarines. The TRAIN GUARD AND TRAIN, being a complete defensive unit in itself proceeds to the disengaged side of the Main Body and remains at such distance as the circumstance warrants.

#### TACTICAL SCOUTING

This will be performed in the same manner as indicated in the BLUE-RED Situation with such exceptions as are obvious due to the presence of the TRAIN and the necessity of guarding the same.

In the BLUE-ORANGE Situation submarines as well as other units other than those in the vicinity of the contact will

remain in their cruising formation stations until ordered to advance. The presence of the Train imposes upon BLUE a purely defensive role.

Until a suitable base is secured in Eastern Asiatic Seas or in the Western Pacific the BLUE Fleet must follow a policy of evasion whenever possible, and due to the increasing lines of communication, must conserve aircraft material as much as possible without endangering the safety of the Fleet.

#### CHANGING THE FLEET COURSE

The general procedure indicated in the BLUE-RED Situation will be followed, except that the TRAIN GUARD and TRAIN will always proceed to the pivot and then execute the change as previously described for the TRAIN. The Train Guard, being symmetrically disposed about the TRAIN, each unit changes simultaneously when the Section leaders in the TRAIN change.

#### DEPLOYMENT TO BATTLE STATIONS.

Except as modified below and in the BATTLE PLAN, the procedure will be the same as described in the BLUE-RED Situation.

The linking up ships and the vessels forming the protective screen take stations with the Main Body on deployment, as do also the submarines. The TRAIN GUARD AND TRAIN, being a complete defensive unit in itself proceeds to the disengaged side of the Main Body and remains at such distance as the circumstance warrants.

An alternative plan of deployment is indicated in Figure 1 in which all light forces in the "A" sector always take station in the Van of the Battle Fleet on deployment, whereas



those in sectors "B" and "C", take stations in the Van or Rear dependent upon the direction of deployment.

FLEET FLAGSHIP AND HER STATION IN BATTLE

See the arguments and conclusions with reference to this subject under the BLUE-RED Situation, there being no change for the situation under discussion.

PART II

THE BATTLE OF JUTLAND

"They are too near to be great,  
But our children shall understand,  
When and how our fate,  
Was changed, and by whose hand." - Kipling.

A modern naval battle between two powerful fleets, with every type represented on the field of action, will, under the best of visibility conditions, present to the opposing high commanders problems which require for their correct solution complete and accurate information. If to poor visibility conditions we add the natural smoke of battle, not to mention the covering smoke purposely emitted, it will be little short of miraculous if those in high command can reach decisions during the fog of battle that are criticism-proof to close students after the event. Such hindsight criticism based on information that was not available during the event cannot fail to uncover errors, and in justice to those who passed thru the ordeal of Jutland, let it be said that few, if any, of us could have equalled their performance under similar stress.

It is only because such close analysis yields a rich harvest of lessons that we as novices and students are warranted in making critical comment. It is only by a close study of such lessons that we may avoid similar errors should we find ourselves confronted in the future with similar problems. For such a study, the Battle of Jutland, on account of the magnitude of the forces and the stakes involved, and because of the conditions under which fought, has no equal in history. While in future battles we may find a greater variety of types, it is doubtful if the total



forces engaged in the Battle of Jutland will be exceeded, at any rate during our time.

In the following discussion it will be assumed that the reader is familiar with the main incidents of the Battle and has access to the excellent graphic account prepared by Lieut.-Commander H.H. Frost, U.S. Navy, a copy of which is appended.

### MISSIONS

The task of the Grand Fleet in the exercise of the control of the sea for the Allied Naval Forces was to destroy the High Seas Fleet, or at least to limit its operations to the Baltic. In case the High Seas Fleet or any of its detachments entered the North Sea, it was the duty of the Grand Fleet to destroy such forces or to drive them back into the refuge of their bases, before they could interfere with troop or food shipments. It was in the execution of its MISSION: TO DESTROY OR BLOCKADE THE HIGH SEAS FLEET, that the Grand Fleet was operating in the North Sea at the time that the contact with the Scouting Detachment of the High Seas Fleet developed into the Battle of Jutland. The term "BLOCKADE" is used in preference to the term "CONTAIN", which implies the activities of an inferior force in holding the attention and effort of a superior force.

The task of the High Seas Fleet was to reduce the superiority of the Grand Fleet without itself incurring serious losses until such operations had brought about a condition where the High Seas Fleet could risk a major engagement with fair prospects of success. This task required an offensive-defensive campaign of attrition which up to the date of the Battle had yielded but little result, and which, under the circumstances under which the Grand Fleet could operate, gave but little prospect of success. So long as the



Grand Fleet maintained a degree of concentration superior to that of the High Seas Fleet, and refused to put to sea in inferior detachments, such a campaign could not succeed. With the strategical dispositions available to the British, the High Seas Fleet was doomed to rot in port or to meet the enemy in much superior force at sea.

Where two countries are within easy steaming distance of each other, so that each fleet may operate in the enemy's water without a train and without loss of mobility, the weaker fleet is foredoomed, other factors being equal. The German Admiral's task, impossible as it was, is expressed in the MISSION: TO REDUCE THE SUPERIORITY OF THE GRAND FLEET BY A CAMPAIGN OF ATTRITION LOOKING TO A MAJOR ENGAGEMENT UNDER FAVORABLE CIRCUMSTANCES, and it was in accordance with this mission that the High Seas Fleet left its bases just before the battle.

#### Preliminary Dispositions.

From information now at hand it appears that on the day of the battle, before contacts were made, Jellicoe knew of the presence of the High Seas Fleet in the North Sea, while Sheer, hoping and expecting to find only a detachment of the Grand Fleet out, had not the advantage of knowing the full strength of the enemy. The disposition of the forces under Jellicoe and Beatty (Figures 1,2,3) were well conceived in that Beatty, although in an advanced position, could be supported by the Grand Fleet, and having superior speed, could contain superior enemy forces encountered and hold them until the arrival of the Grand Fleet.

The German dispositions prior to the battle (Figures 3, 6) were good except that it is believed the submarines would have been more useful had they been kept with or closer to the High Seas Fleet. As they were stationed, the U-boats



were employed not only as scouts but also as attackers. As scouts, the poor visibility conditions usually prevalent in the North Sea seriously reduced their efficiency, and as it turned out permitted the transmission of faulty information that lead to incorrect conclusions on the part of Sheer.

As attackers they were forced to meet the enemy when the latter was best prepared to meet submarines, with anti-submarine screens in position and functioning. The British Fleet on leaving port could always expect to find enemy submarines in the vicinity and accordingly took the necessary precautions. Had Sheer been content to have proceeded with less speed, the submarines could have accompanied the High Seas Fleet, and could have participated in the battle, where Sheer's retiring tactics would have favored their operations. Certainly in the first phase of the Battle, during the battle cruiser action, the Germans would have profited by a delay in the appearance of the High Seas Fleet, as they had already sunk two of Beatty's ships, and were not seriously menaced by the Fifty Battle Squadron, which was practically out of supporting distance. As it happened, submarines were present in the battle only in their moral effect on Jellicoe.

#### The Approach.

The Grand Fleet approach formation is subject to the criticism that it failed to guard the heavy ships from a surprise contact with the High Seas Fleet, made on the star-board bow of the formation when the enemy was expected ahead. (Figure 17). Even when making allowance for errors in navigation, the failure of light forces with the Grand Fleet to locate and report the position of the High Seas Fleet before it was seen by the Grand Fleet is inexcusable. Figures 16 and 17 show the lack of an approach formation as we now understand the term, with linking up or reference

vessels. The disposition shown in figure 4 was changed before it had served its purpose. On the other hand, Beatty's force seems to have been better provided with protection against surprise. (Figure 5)

It is not clear what dispositions were made by Sheer in this respect and it appears that he relied largely on the accuracy of the navigational data and bearings of his battle cruisers. Here again there was no approach formation to give information based on bearings and reference vessels. Furthermore it seems that approach of the High Seas Fleet in column formation lost Sheer the opportunity to bring the maximum number of guns to bear on Beatty's ships before the latter retired. (Figures 13, 14, 15). Had Sheer's battle-ship divisions been in an approach formation instead of being already deployed, it is likely that the British battle cruisers and the Fifth Battle Squadron would have been under the fire of the entire German Fleet for a few critical minutes, instead of receiving the fire only of the two leading divisions of the High Seas Fleet.

Deployment. (Figures 16, 17, 18)

The High Seas Fleet being already deployed for battle, avoided the attendant confusion that is bound to result when large forces take new stations, but as pointed out, the early deployment was dearly paid for by having the enemy on a sharp angle on the bow of the formation instead of abeam, when gunfire was opened. Also it lead to the capping of Sheer's battleships when the Grand Fleet completed its deployment. While it is desirable to deploy as early as practicable, there is always danger that too early deployment will result in a situation similar to that in which Sheer found himself, both on contact with Beatty's battle cruisers and with Jellicoe's battleships.



The early detachment of light forces from their approach stations ahead of the Grand Fleet to stations at the flanks lead to the surprise contact already mentioned and in addition caused some interference with the battleship deployment which took place some time later. The late deployment of the battleship divisions enabled them gain the capping position on Sheer's battleships, and had the visibility conditions been better, the High Seas Fleet must have been overwhelmed. The much discussed Grand Fleet deployment on the more distant flank instead of on the nearest flank is believed to have been correct, as the alternative deployment would have enabled the High Seas Fleet to secure a heavy concentration on the leading British ships, and possibly a capping position. Deployments on other than flank divisions were at that time not provided for. Such a deployment made on the Iron Duke's division, for instance, would have retained all the advantages of the more rapid deployment with the capping position. Such plans for deployment were not developed until after the battle had shown their necessity.

#### The Engagement.

The division of forces on both sides in the opening engagement was in accordance with the plans of the opposing chiefs and in both cases there was little chance of a detached force being cut off and defeated in detail, although the early appearance of the High Seas Fleet broke off an engagement between Hipper and Beatty that was proving more damaging to the latter than to the former. As the high speed of the southerly movement of the opposing battle cruisers was taking Beatty away from the support of his battleships (Fifth Battle Squadron), and as two of his battlecruisers had already been sunk, it is interesting to contemplate the result if the High Seas Fleet had been delayed in arrival.



It is probable that Beatty's impetuosity in pursuing five German battle cruisers with only four British battle cruisers would have lead to the destruction of the latter, particularly as the Germans had the better of the visibility conditions at this time.

The lack of coordination between Beatty's battle cruisers and the Fifth Battle Squadron both during the southerly movement and during the retreat before the advance of the High Seas Fleet is a prominent feature of this phase of the action. Also, the apparently smooth joining up of the two German forces forms a striking contrast with the failure of the two British forces to join up promptly and to coordinate their efforts. Had the Grand Fleet deployed on the right flank, Beatty's battle cruisers could have lead the battle ship formation without the run across the front of the Grand Fleet. (Figures 17, 18).

During the battle cruiser action the high speed of the heavy ships made torpedo tactics by light forces a very difficult matter owing to the difficulty in reaching firing positions. During the southerly movement, it appears that German flotillas did advance to attack the British battle cruisers, whereas a British Flotilla, favorably positioned (13th Flot. Fig. 12) to attack the German battle cruisers failed to do so. Referring to Figures 10, 11, and 12, it appears that the German Flotillas were better placed to attack the Fifth Battle Squadron than they were for attack against the battle cruisers, particularly as there were no British destroyers in the vicinity of the Fifth Battle Squadron to help counter the attack.

Thruout the engagement there was apparent in the movements of the British Flotillas a lack of the offensive spirit and a general lack of plan for utilizing the torpedo



weapon in coordination with the big gun in bringing about the destruction of the German Fleet. It appeared that the British light forces were being used to ward off attacks of similar types and to guard against submarines rather than to put the enemy under a torpedo threat. In this respect the German light forces operated more in accordance with the doctrine now held for their use, and still it seems that they should have accomplished more damage than they actually did, even when the British turn away at about 7:15 is taken into consideration. This turn away enabled Sheer to break off an engagement from which he otherwise would have escaped only with the most serious losses. Many other favorable opportunities were presented to German destroyers which they failed to accept, as for instance, the certain retreat of Beatty when sighting the High Seas Fleet. In the handling of light forces to secure a maximum of the offensive value which they potentially possess lies one of the most difficult problems that confronts the U.S. Fleet.

Admiral Sheer's movements to counter the extremely unfavorable position in which he found himself after the deployment of the British Grand Fleet speak volumes for the German "Fleet Skill" under fire. It is doubtful if they would have been successful in the face of a determined move on the part of Jellicoe to keep the range closed, or in other words, if Jellicoe had decided to settle the affair in Nelsonic style at close range. Complete victory was in his grasp. The few remaining minutes of daylight and of good, or even indifferent visibility would have brought the High Seas Fleet under such a concentration that annihilation would have been inescapable. That Jellicoe's turn away was in accord with the expressed British plan to save major units, and had the approval of the Admiralty, is well established. That the



turn away saved Sheer and prolonged the naval war, there is no doubt. Whether complete destruction of the High Seas Fleet or the results as actually attained best served the Allies' cause can only be a matter of conjecture which will be further discussed.

#### The Pursuit.

Although the actual damage inflicted on the German Fleet was less than that suffered by the British forces, it cannot be denied that the German Fleet left the field a beaten enemy. As night fell, the Grand Fleet was in good formation and under excellent control, with Beatty's battle cruisers about eight miles distant and slightly on the engaged bow of the Grand Fleet, an ideal position. The German Fleet, north of Beatty's force and west of the Grand Fleet was absolutely cut off from its bases, was very much disorganized, and had relinquished the initiative to the British Fleet, which also had the advantage in fleet speed. A more difficult situation than that in which Sheer found himself at this time can scarce be imagined (Figure 14), while on the other hand, Jellicoe had attained a position from which the German Fleet could not escape provided contact was maintained during the night, to insure being at close grips at the following dawn. Jellicoe had defeated the enemy and it only remained to make the victory complete by the application of that principle "TO FOLLOW UP EVERY ADVANTAGE GAINED WITH THE UTMOST ENERGY."

Jellicoe's disposition for the night indicate that not only was his force under good control but that no attempt was made to maintain certain contact with the enemy (Figure 25). In spite of the purely defensive disposition of the British destroyers there were sufficient contacts during the night (Figure 24) to indicate that the Germans were crossing



astern of the British forces. Even in the absence of these contacts there were available to Jellicoe sufficient light forces to have conducted a search which must have succeeded in locating the German Fleet. Again were the British light forces utilized in operations that were defensive rather than offensive. Although there were many instances of individual brilliancy in performance of Jellicoe's light forces, there was lacking a determined effort to keep touch with the enemy for the purpose of completing the victory. There was lacking that determination that kept Nelson on the track of Villeneuve until the latter's annihilation was accomplished.

That Sheer made good his escape was due not to his skill after nightfall but to good luck and to Jellicoe's failure to follow up the advantage gained. In the matter of luck the law of averages generally holds true. The British detachment under Sturdee in locating the squadron under von Spee off the Falklands in such a short time after leaving England is an example of the luck that now favored Sheer and permitted his escape from a situation that could not have been made worse had the British planned months and then placed all the forces themselves as on a game board to suit their advantage.

Without attempting a summary of all the tactical principles applied or violated, it may be stated that various subordinate British commanders failed to exercise the initiative necessary to fight an aggressive, determined action to destroy the German forces; and what is also very important, failed to keep the Commander-in-Chief informed of the location of important enemy units. Furthermore, there were several cases of improper use of important units, as in the case of the armored cruisers which were severely handled

without compensating gains; and in the case of the aircraft carrier "Engadine", which after launching and recovering the one plane used in locating enemy forces, spent the rest of the time in towing a comparatively unimportant unit in a vain effort to prevent her loss. Had the Engadine been present in the early hours of the day following the action, a search would have surely revealed the location of the enemy.

The most flagrant misuse of types exists in the defensive role maintained thruout the action by the British light forces, and to some extent, by the German light forces. To their failure to seek and transmit information during the night can Jellicoe attribute his failure to locate and complete the defeat of the Germans the following morning. To Jellicoe had been presented an opportunity to write his name across the pages of history in Nelsonic style. His lack of the will to fight in spite of all risks created a defensive spirit that pervaded the entire Grand Fleet. His failure will forever leave unsettled the debate of "what might have been", had the German Navy been wiped off the sea on that eventful occasion.

#### Results of the Battle.

Aside from the material damages suffered by the two fleets, the British had reasserted their command of the sea and had successfully driven the enemy back to the safety of his minefields, behind which he was successfully blockaded for the remainder of the war. That part of the British Mission "TO BLOCKADE" rather than the more vigorous "TO DESTROY" had been stressed. Whether the Allied Cause would have been benefitted more by a complete destruction of the German Fleet will always be a matter of conjecture. At that



time the Russian Revolution was already on the horizon, and the Russian Army as a real force had been practically eliminated. It is doubtful whether the opening up of the Baltic as the result of a sweeping British naval victory at Jutland would have prevented the collapse of Russia, as is sometimes maintained. The deadly German propaganda ~~at work~~ in the Russian Army was already working, and the Revolution was bound to come as it did in the following spring.

Assuming for the moment that Jellicoe had completely destroyed the German Navy in the Battle of Jutland, it is possible that the unrestricted submarine warfare would have never been started because of the complete lack of naval or trained personnel to man the numerous submarines projected, or at any rate, it might never have reached such serious proportions as to bring the United States into the War. It must be remembered that we had just elected a President on the platform of "He kept us out of war". If the United States had not entered the war it is not unreasonable to imagine a duplication of the situation that existed in Europe in Napoleonic days, with Germany taking the place of France of those days. A naval defeat for Germany at Jutland would not necessarily have prevented her ultimate victory on the Continent. Such a situation, with a victorious Germany on the Continent, consolidated and strengthened in her position, even though Great Britain controlled the sea, might have brought about a more troubled world condition than exists at the present day, and one of more difficult solution by the Allies.

As it resulted, however, the Grand Fleet was forced to resume its vigil from its bases in the North Sea and to continue the expenditure of much effort to contain or blockade the enemy fleet with the attendant expenditure of treasure



and valuable resources. While it was believed that the enemy would not dare to venture out for another trial of strength, there was no assurance to that effect, and there was always the fear that the Germans, in their ingenuity, might contrive to nullify the British naval superiority. Of far reaching consequences was the need for retaining with the Grand Fleet many destroyers on the chance of another battle, when those vessels were so sorely needed to combat the submarine campaign that was now assuming dangerous proportions. Had the entire resources of the British Navy been available to combat the enemy submarines, instead of such a large proportion being necessary to watch the High Seas Fleet, there is no doubt but that the submarine campaign would have been defeated before it grew dangerous. The situation is unique in that a real decision at Jutland might possibly have prolonged the War on the land to the disadvantage of the Allies.

LESSONS FROM JUTLAND FOR THE UNITED STATES.

Of the greatest importance to us is the lesson that offensive types must be used offensively if great results are to be obtained. Our great number of destroyers and our inferiority in light cruisers makes it essential that we develop to the highest degree the offensive qualities in the one type in which we possess a superiority over the only two nations with navies comparable to ours. The need of a balanced fleet is apparent, a fleet complete in all the types necessary, and in the full strength allowed by the Limitations Treaty, and fully manned by experienced personnel.

Then, in order to utilize to the fullest extent the powerful weapon represented in a well trained fleet, we need



leaders indoctrinated in the spirit of the initiative and the offensive, trained to coordinate the efforts of the various parts, and with the will to fight and to win. The defensive state of mind of Jellicoe on encountering the German Fleet and during the battle made escape easy for Sheer and a decisive victory impossible for Jellicoe. While the carefully planned defense may save our fleet in future crises, such tactics can never bring us the victories essential to the maintainance of our high position in world affairs.



*C. M. Nimitz*

# JUTLAND.

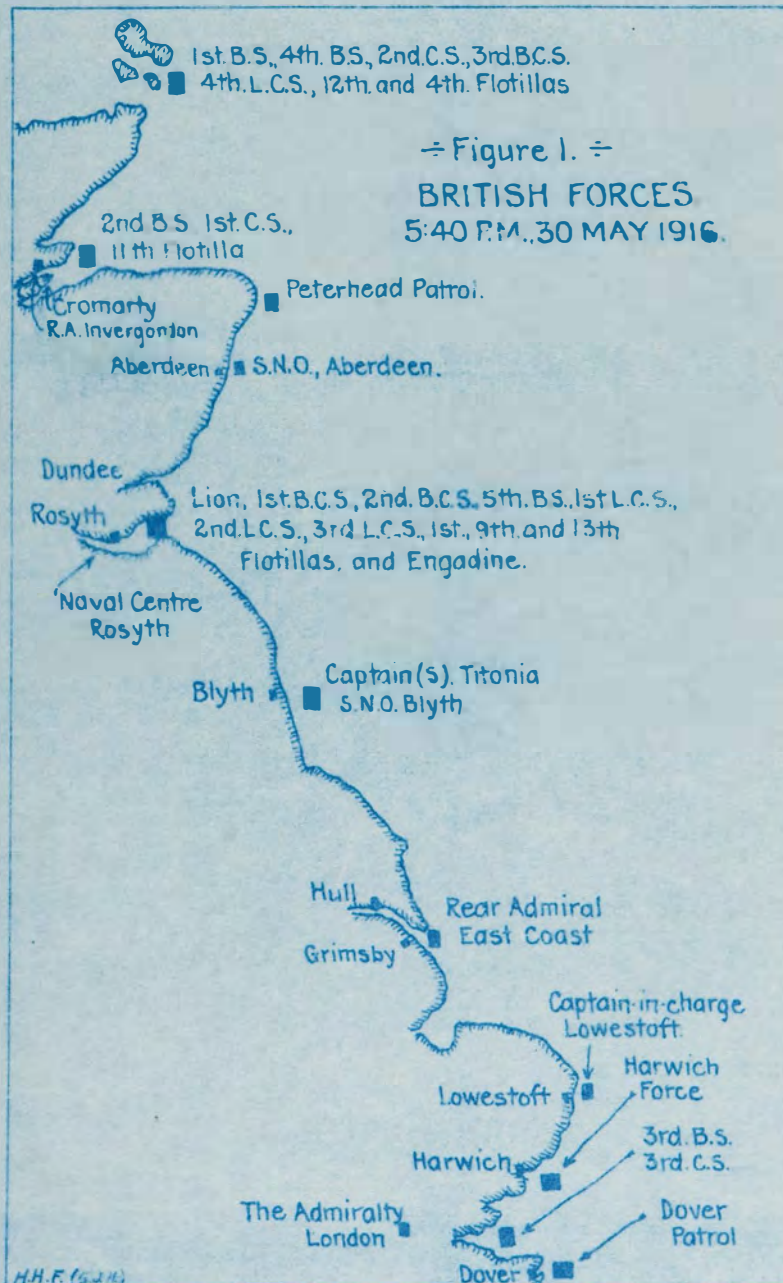
LT. COMDR. H. H. FROST.  
U. S. NAVY.

WAR COLLEGE EDITION

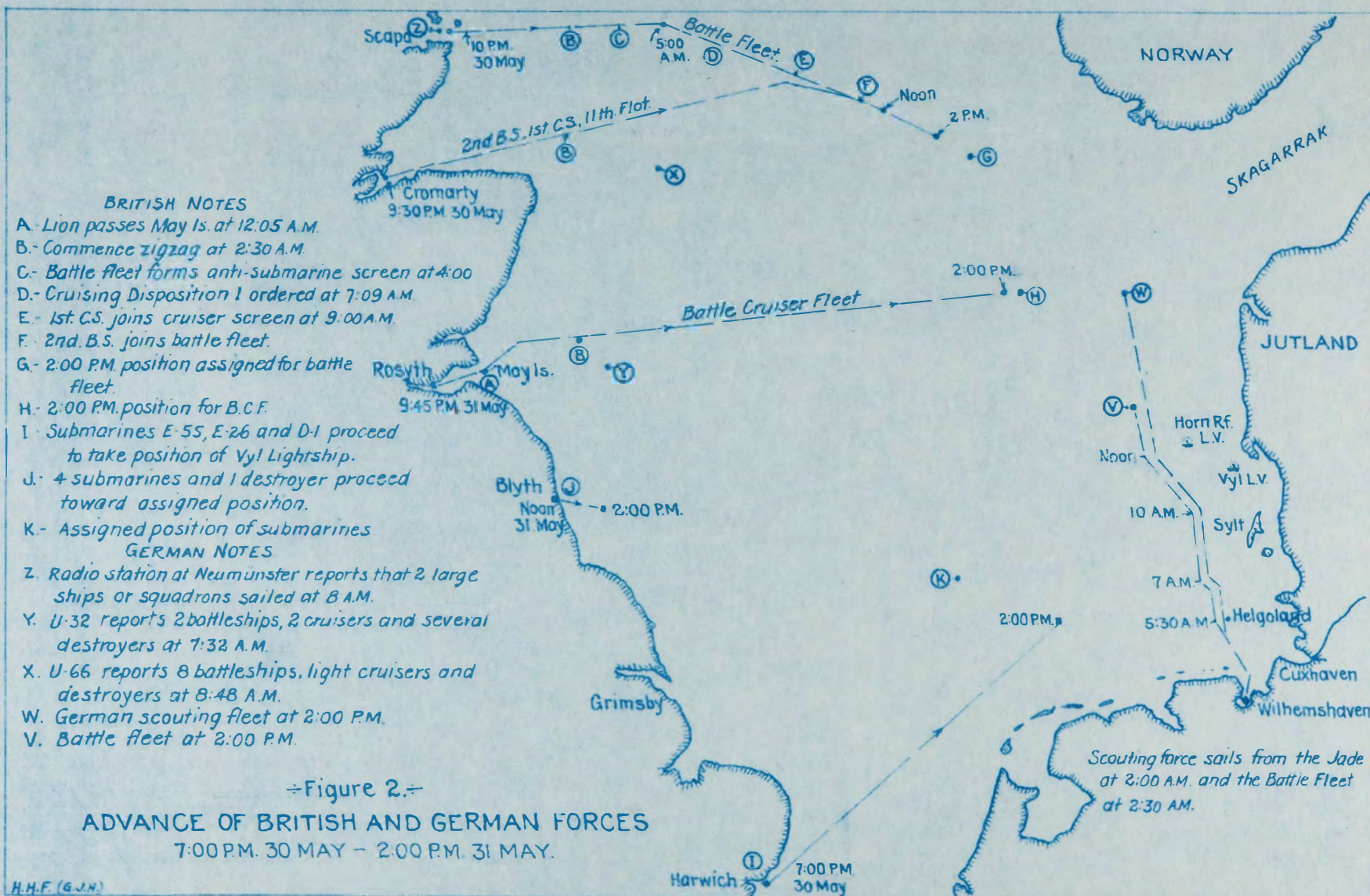


### Orders of British Admiralty - 30 May.

1. On 30 May, probably during the forenoon, the Admiralty received news which pointed to early activity on the part of the High Sea Fleet.
2. About noon the Admiralty ordered the Commander Dover Patrol to send the Harwich destroyers back to Harwich and to recall the Belgian coast patrol; the R.A. East Coast to recall minesweeping sloops; the 3rd B.S. and 3rd C.S. to have steam ready by daylight of the 31st; the submarines of the Harwich Force to be ready on short notice.
3. At 5:40 p.m. the following message was sent to C-in-C, G.F., at Scapa "You should concentrate to Eastward of Long Forties, ready for eventualities."
4. At 5:40, S.O. 2nd.B.S. made "Preparatory signal for leaving Cromarty"
5. At 5:40 C-in-C, G.F. made "Preparatory signal for leaving Scapa."
6. At 5:45 S.O. B.C.F. made signal: "Raise steam for 22 knots"









A. -- Battle Fleet - Jellicoe.

Battleships ..... 24  
 Battle Cruisers ..... 3  
 Light Cruisers ..... 12  
 Cruisers ..... 8  
 Destroyers ..... 51

B. -- Battle Cruiser Fleet - Beatty.

Battleships ..... 4  
 Battle Cruisers ..... 6  
 Light Cruisers ..... 14  
 Destroyers ..... 27  
 Seaplane Carrier ..... 1

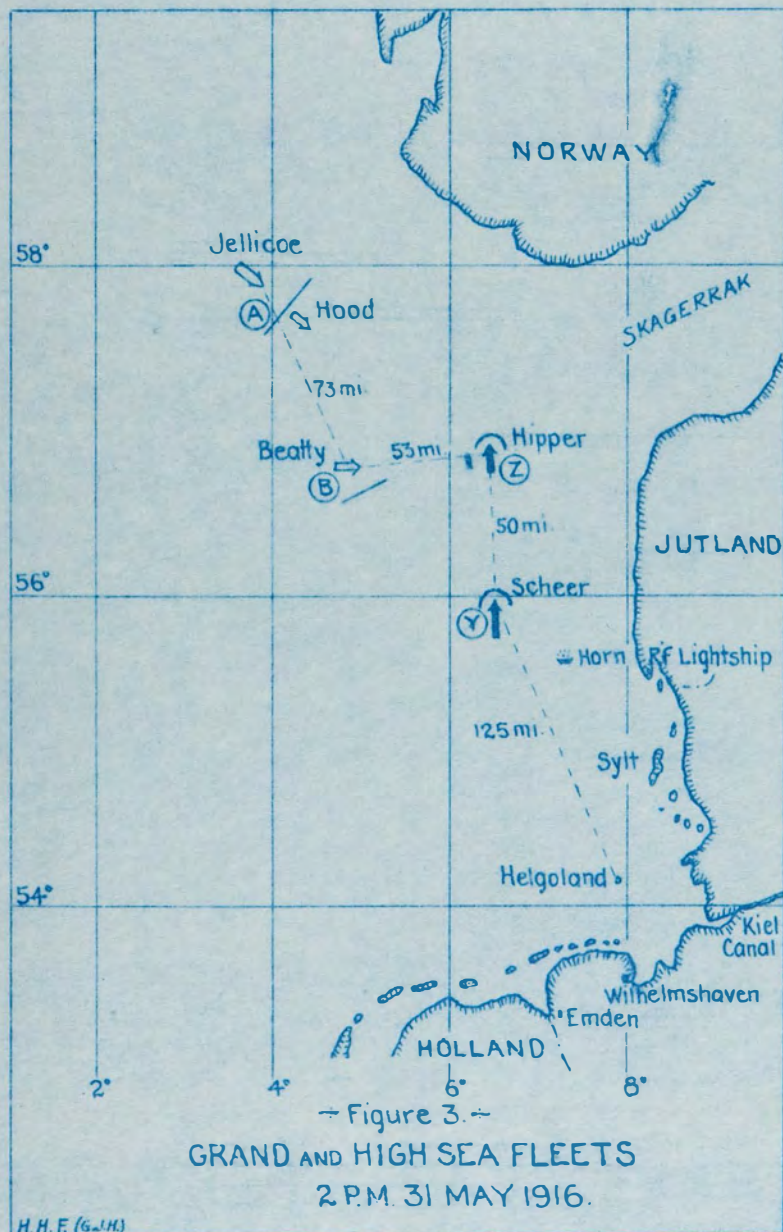
Y. -- Battle Fleet - Scheer

Battleships, 1st. line ..... 16  
 Battleships, 2nd. line ..... 6  
 Light Cruisers ..... 6  
 Destroyers ..... 33

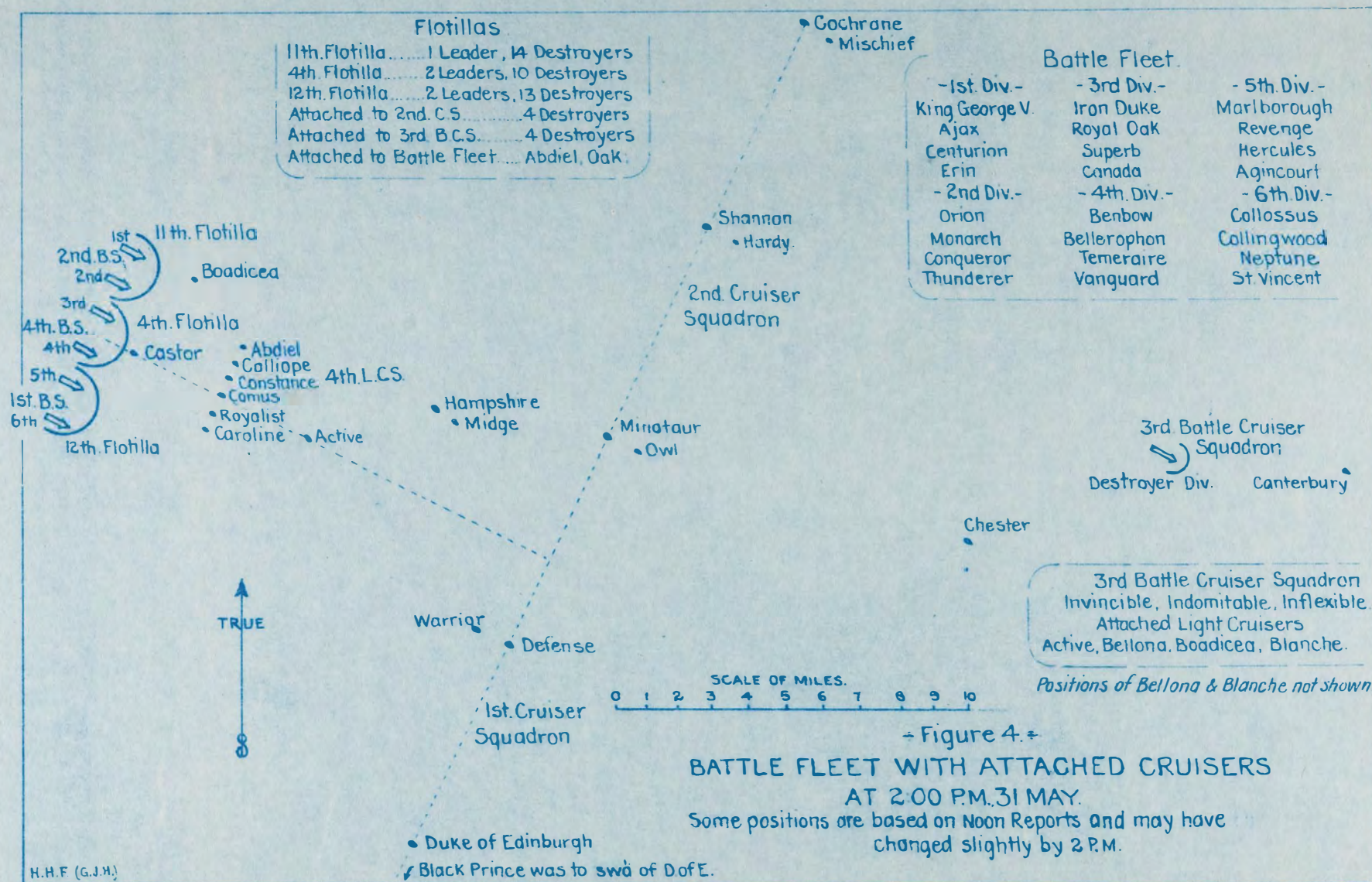
Z. -- Scouting Force - Hipper

Battle Cruisers ..... 5  
 Light Cruisers ..... 5  
 Destroyers ..... 32

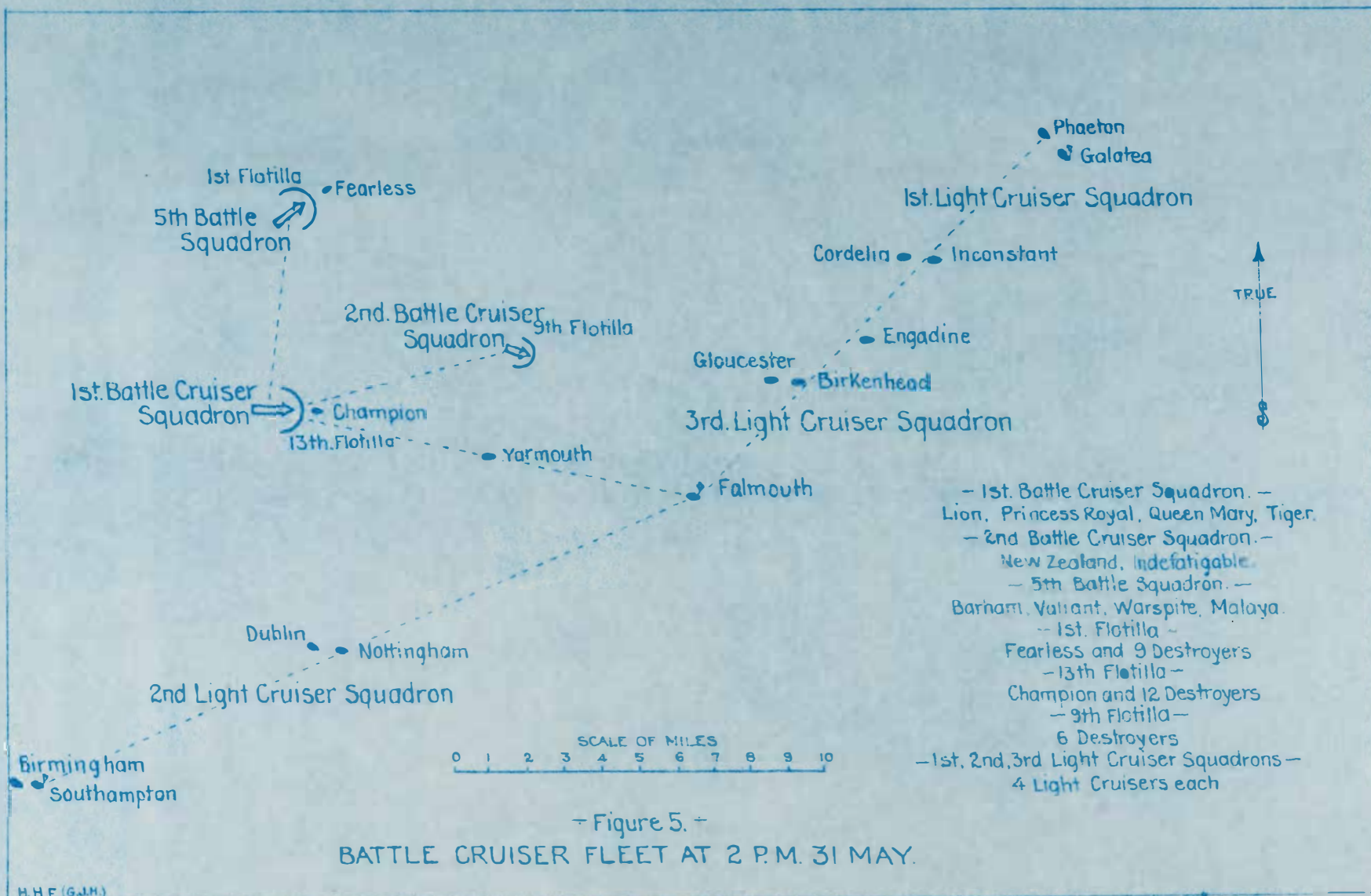
*Note: Adm. Hipper states that the  
 Germans had 65 destroyers in the battle.*











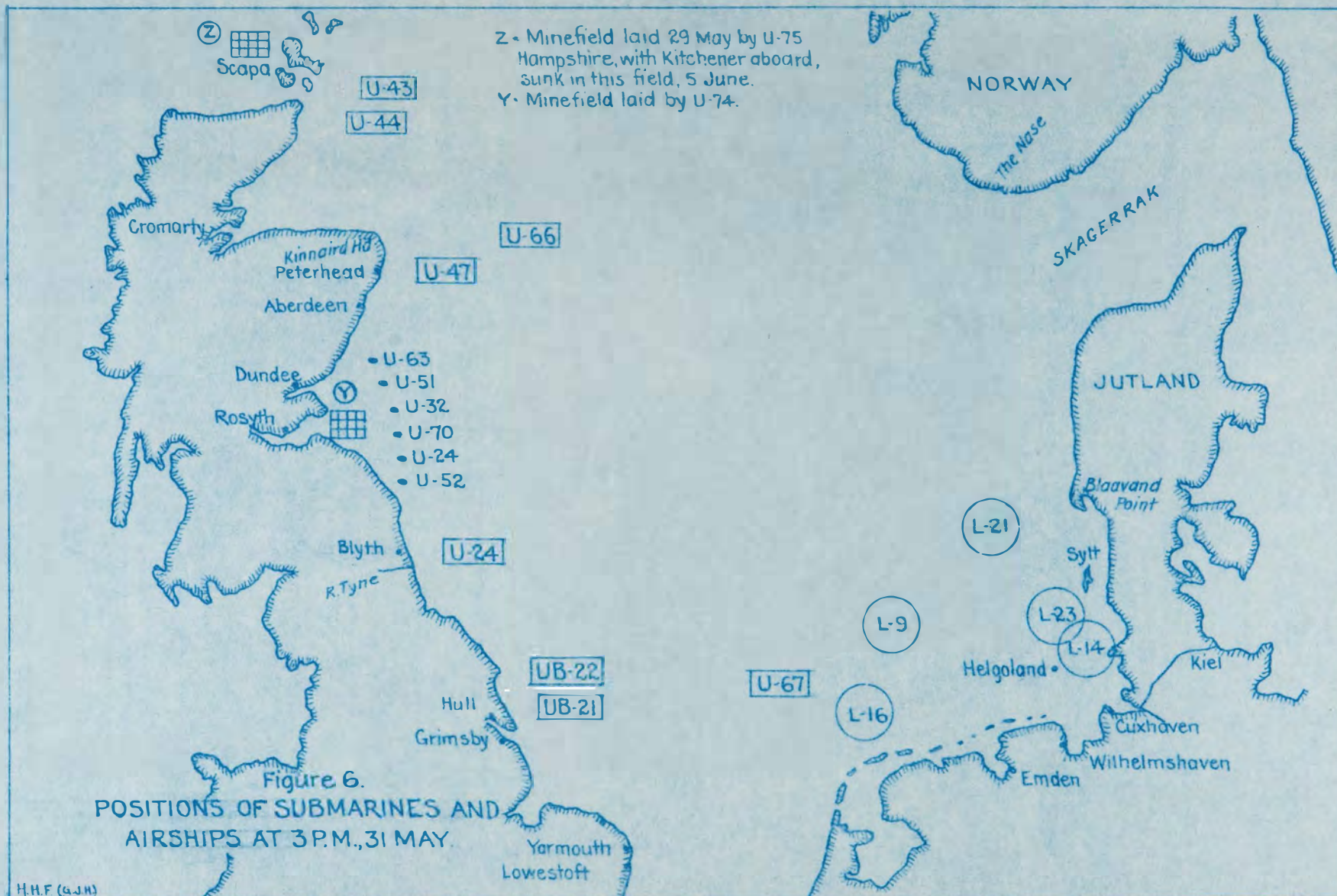
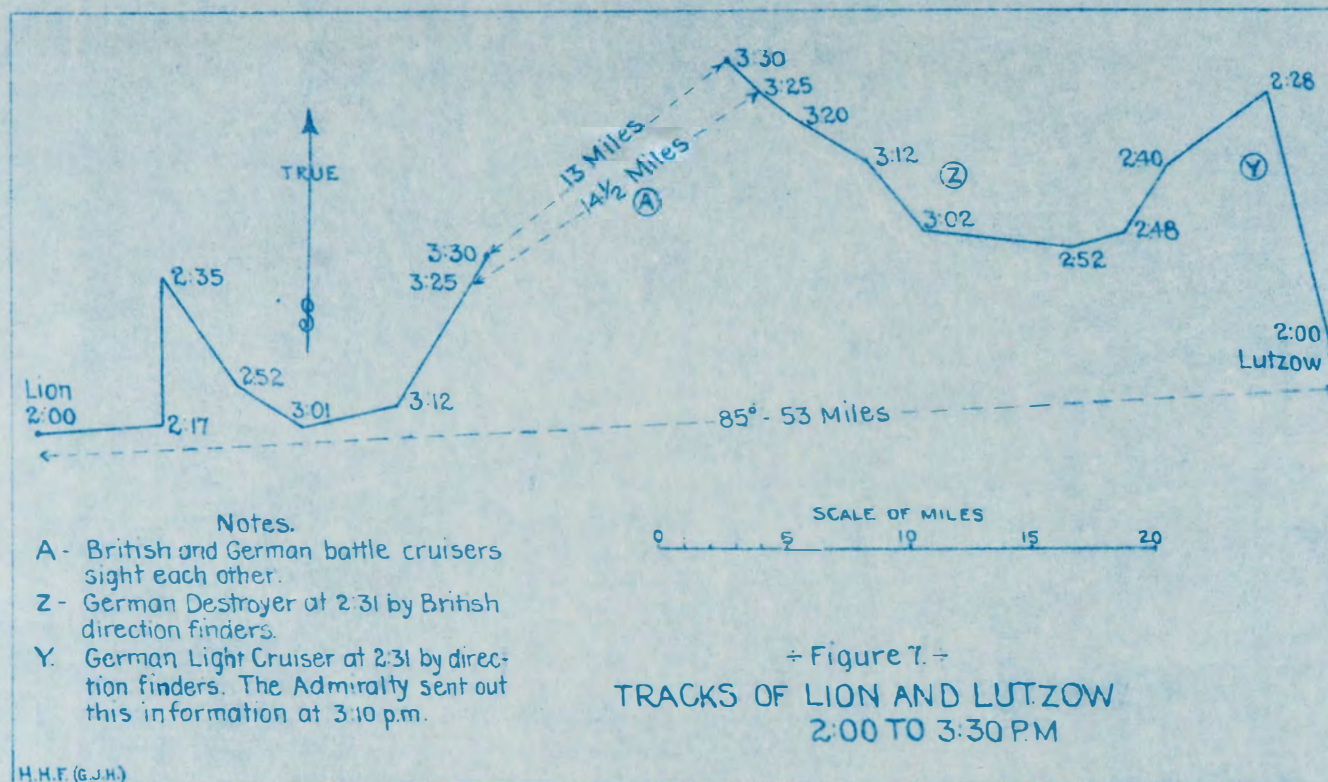
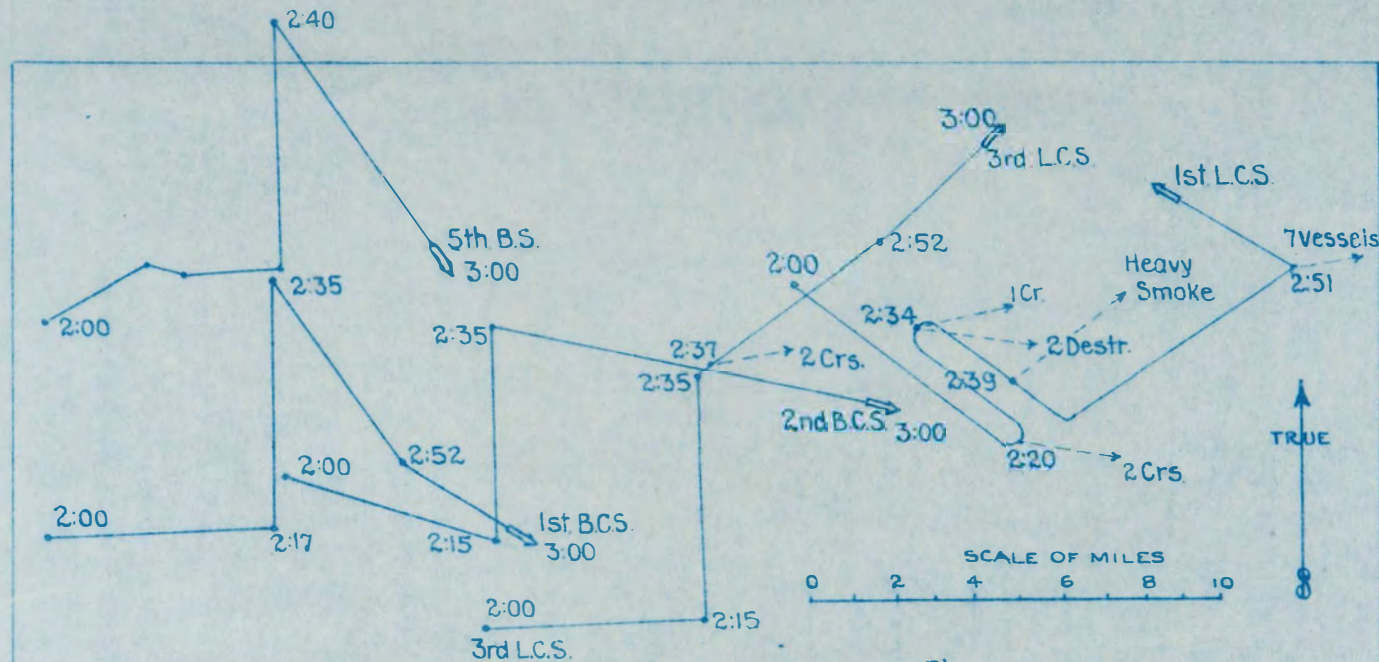


Figure 6.  
 POSITIONS OF SUBMARINES AND  
 AIRSHIPS AT 3 P.M., 31 MAY.



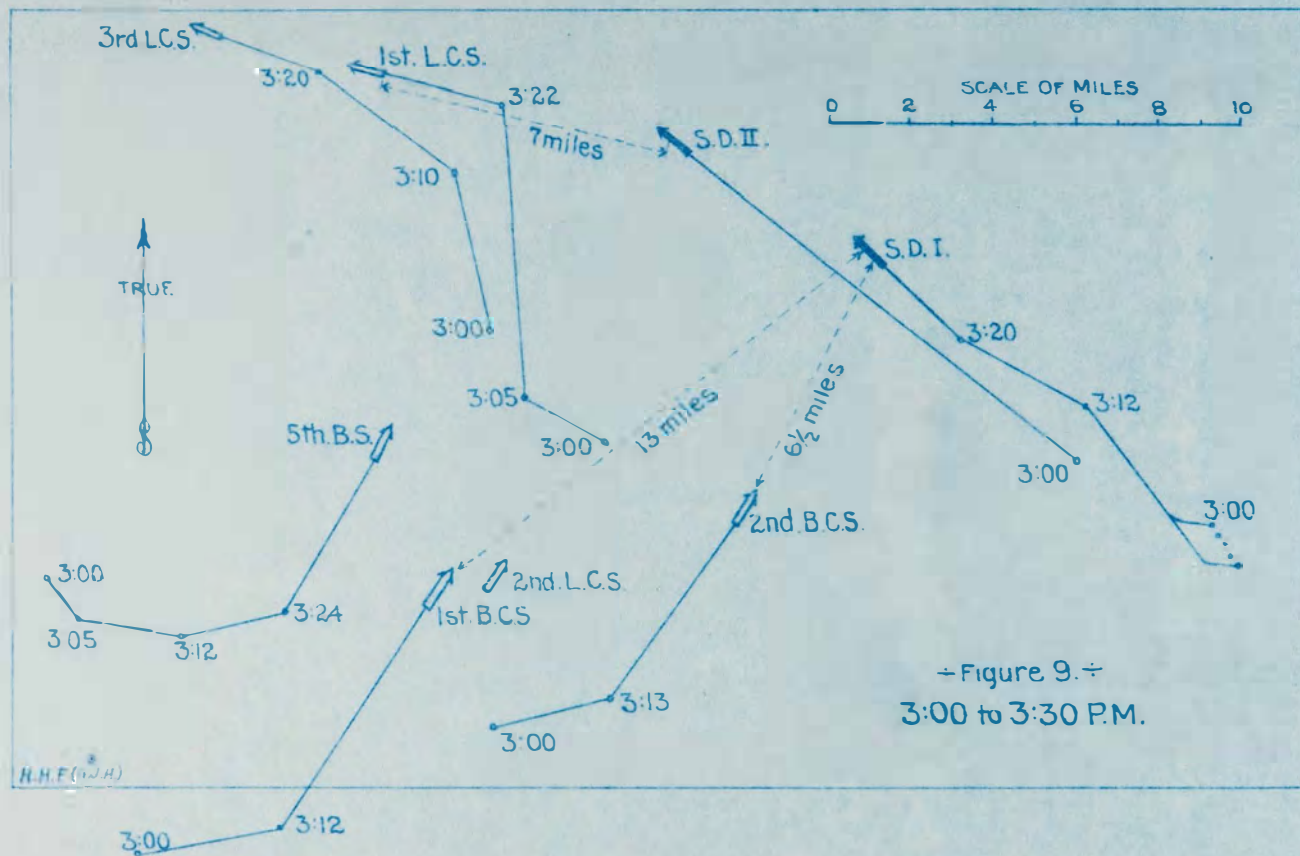


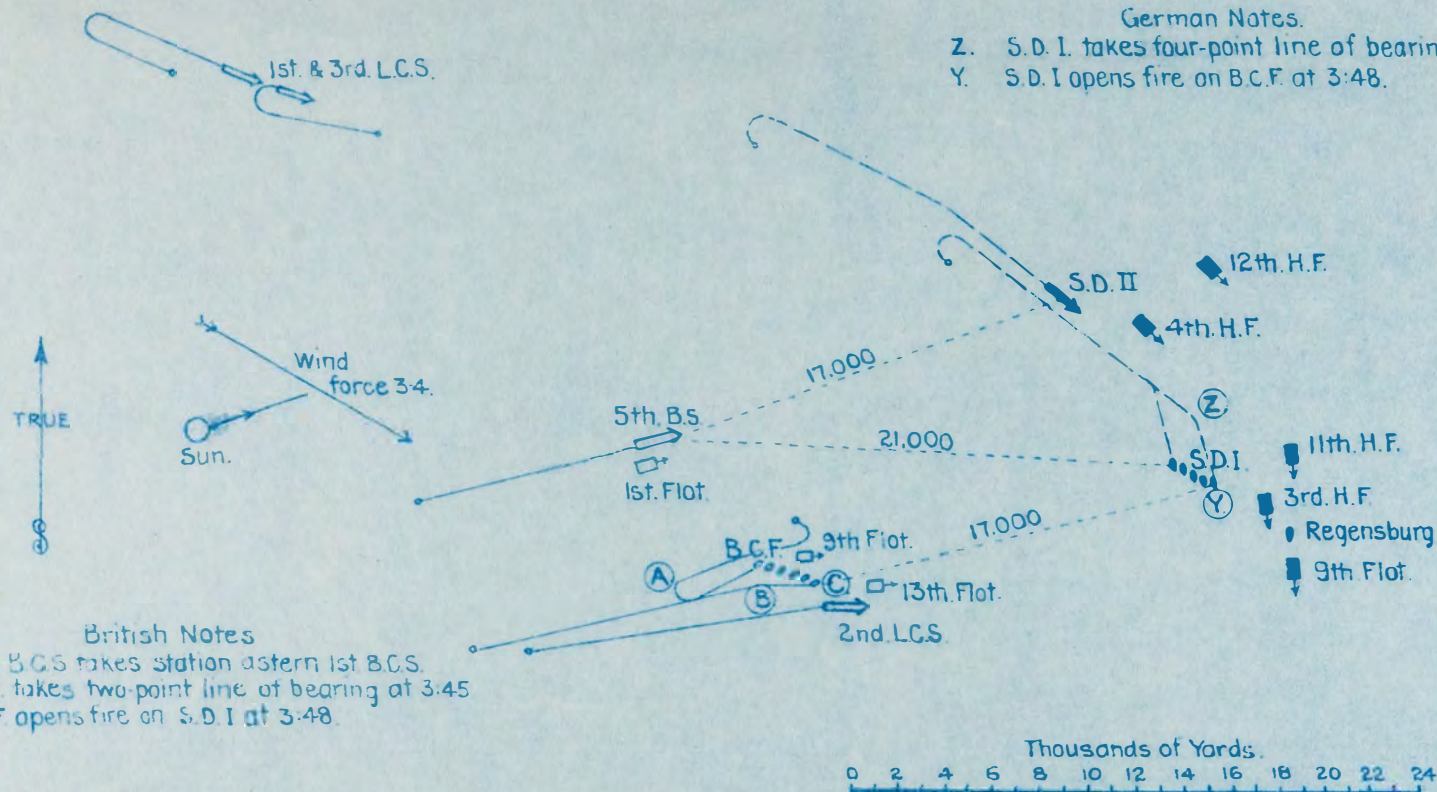




÷ Figure 8. ÷  
DEPLOYMENT OF THE BATTLE CRUISER  
FLEET 2:00 TO 3:00 P.M.

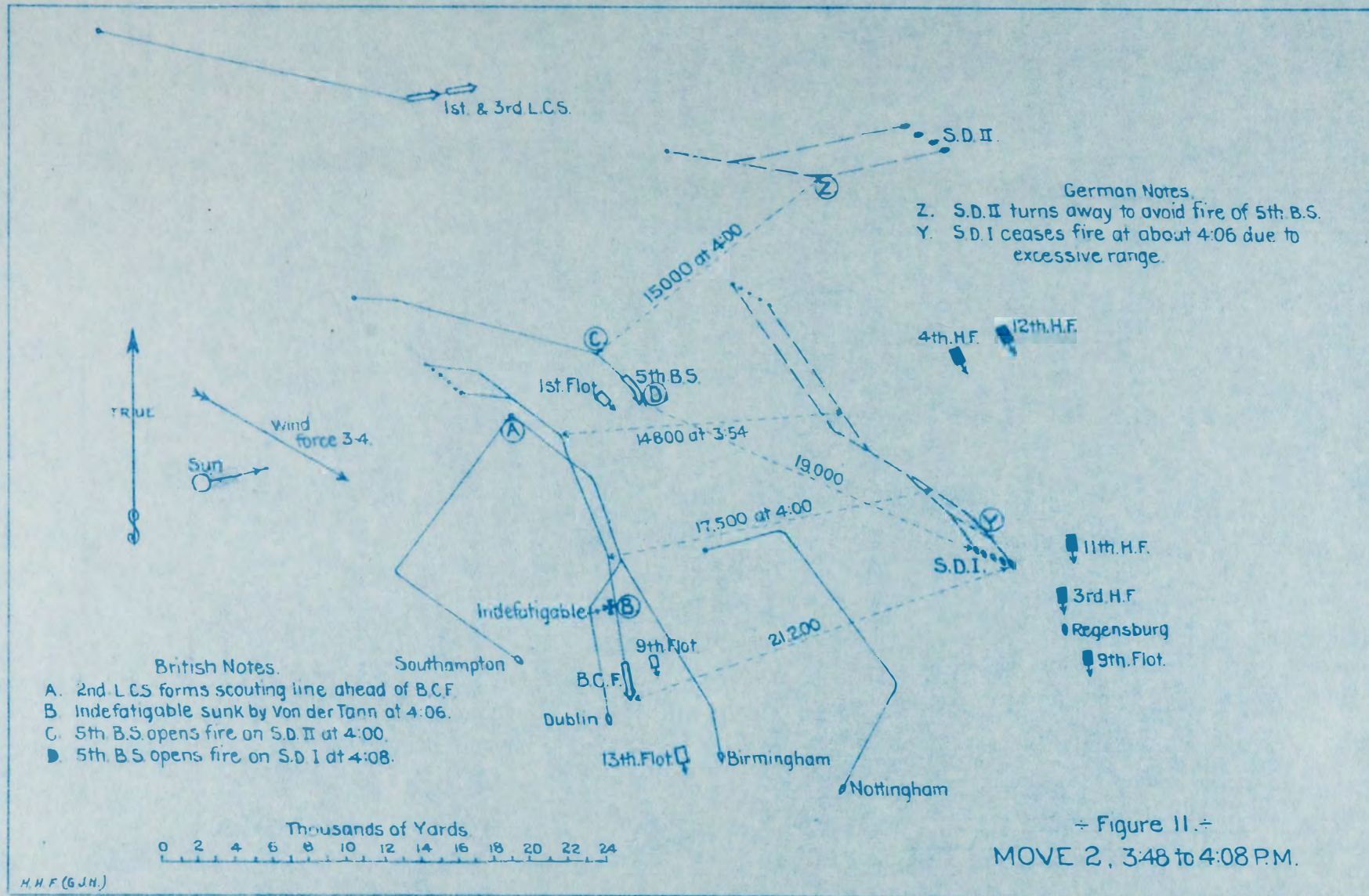






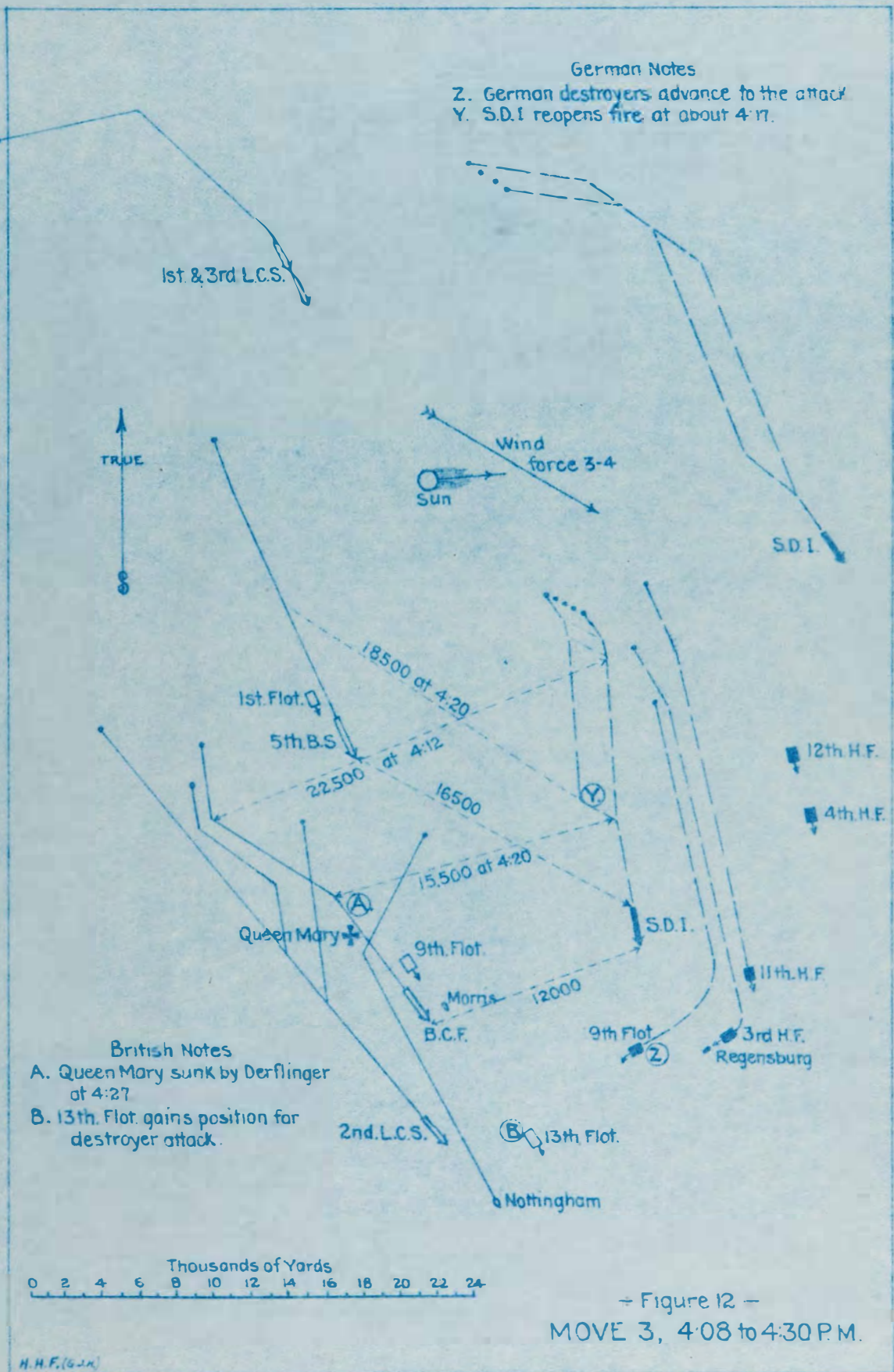
÷ Figure 10 ÷  
MOVE I, 3:30 to 3:48 P.M.



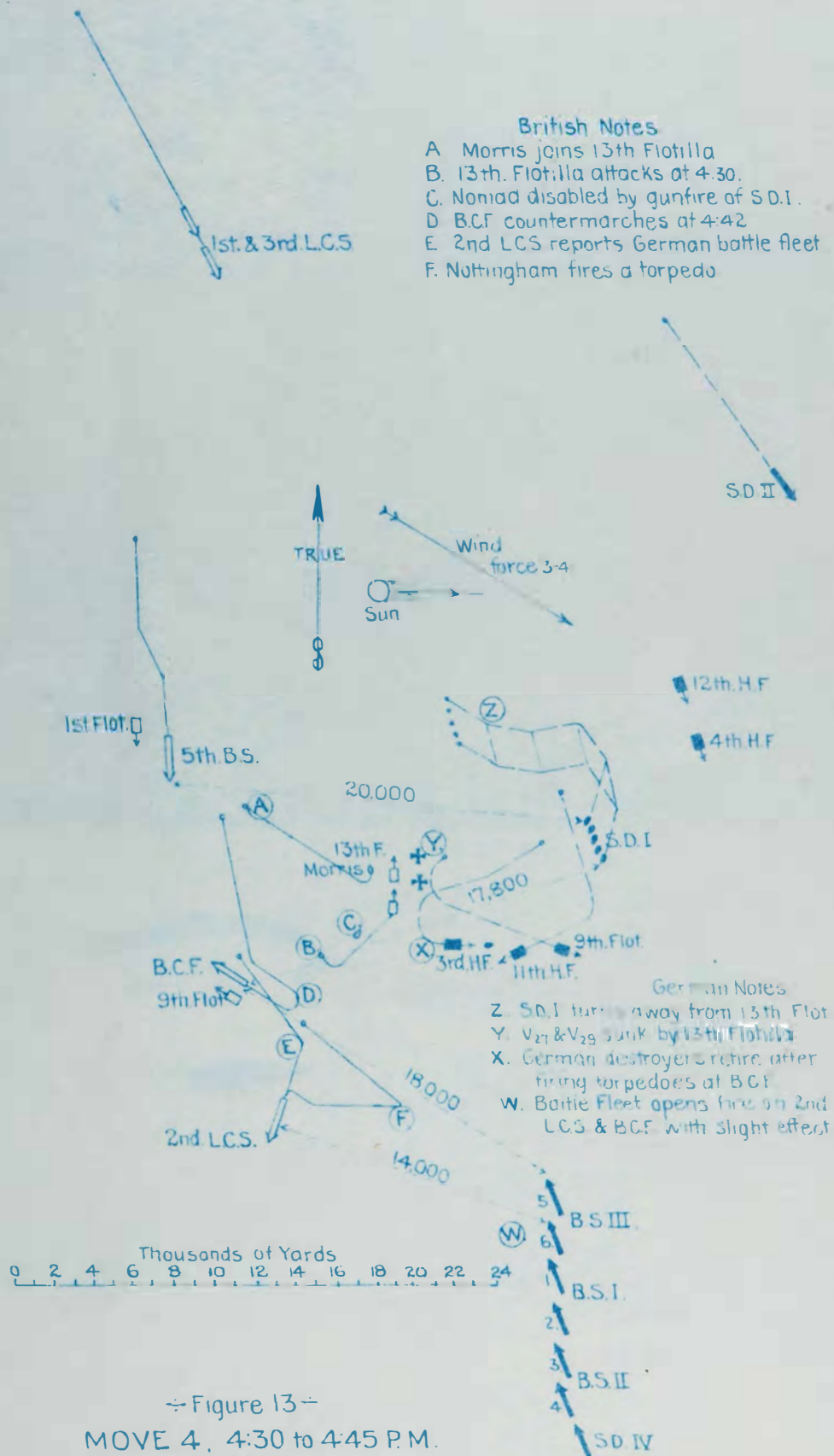


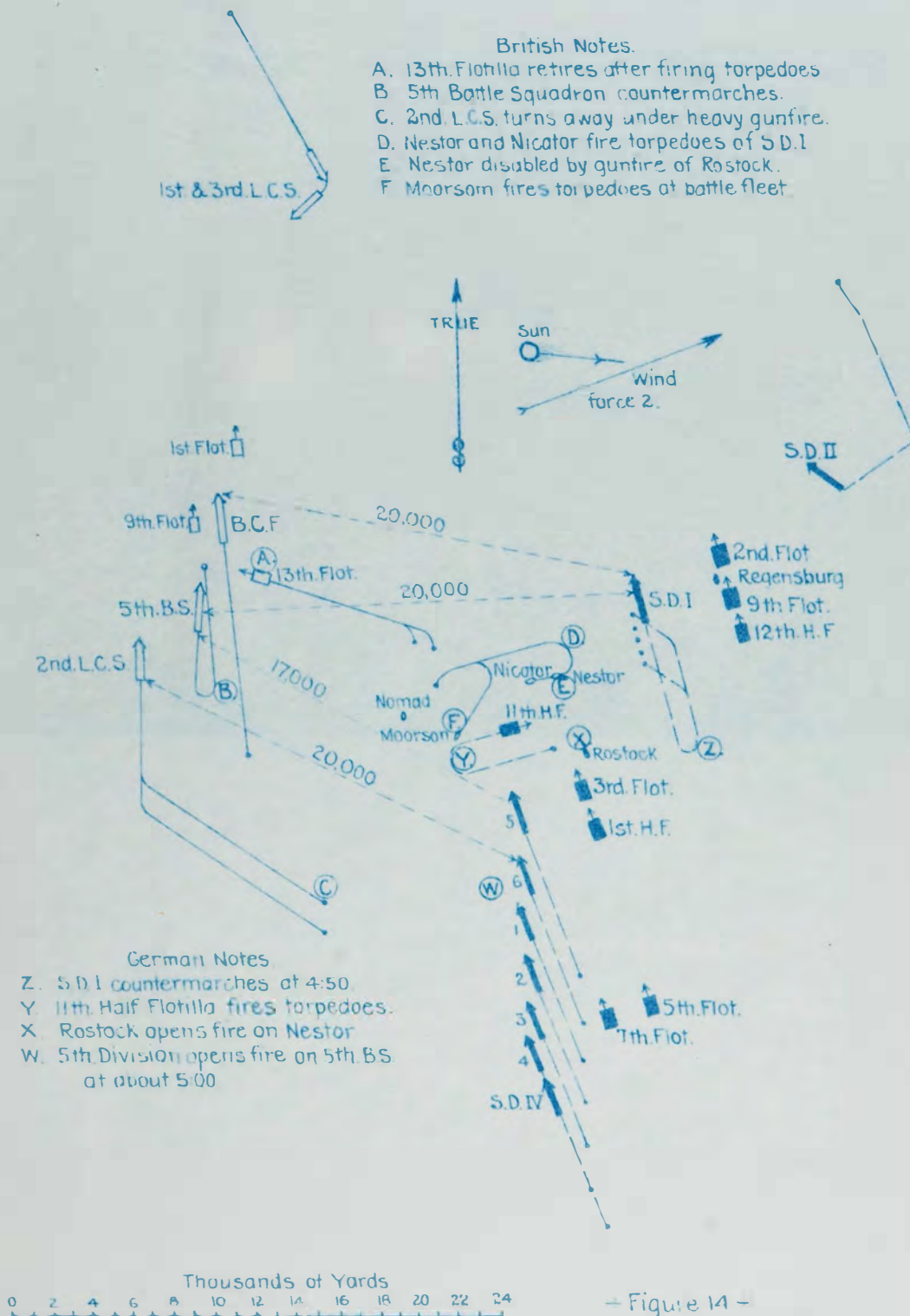
÷ Figure 11.÷  
 MOVE 2, 3:48 to 4:08 P.M.











- Figure 14 -  
 MOVE 5, 4:45 to 5:00 PM



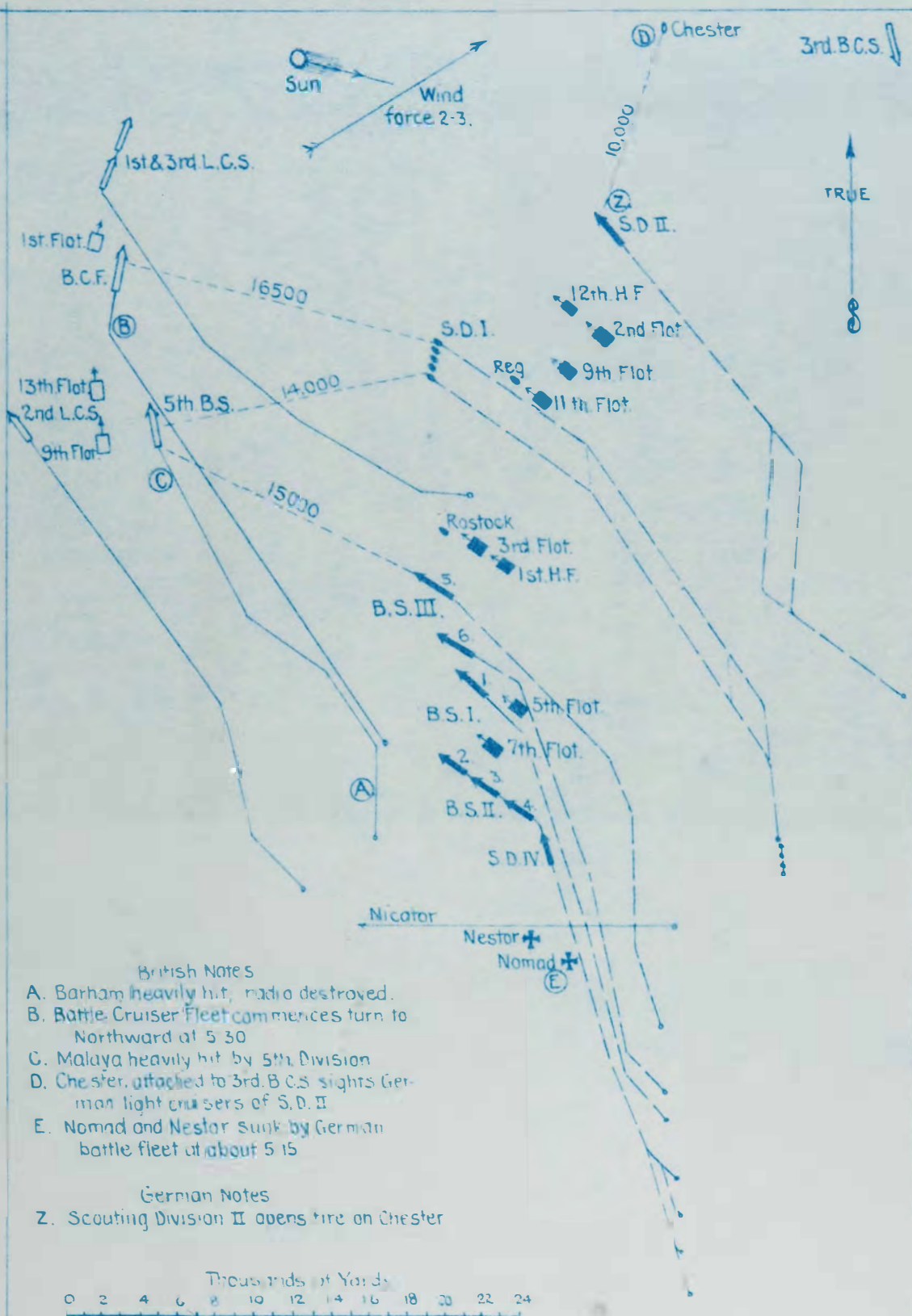


Figure 15--  
MOVE 6, 5:00 to 5:35 P.M.

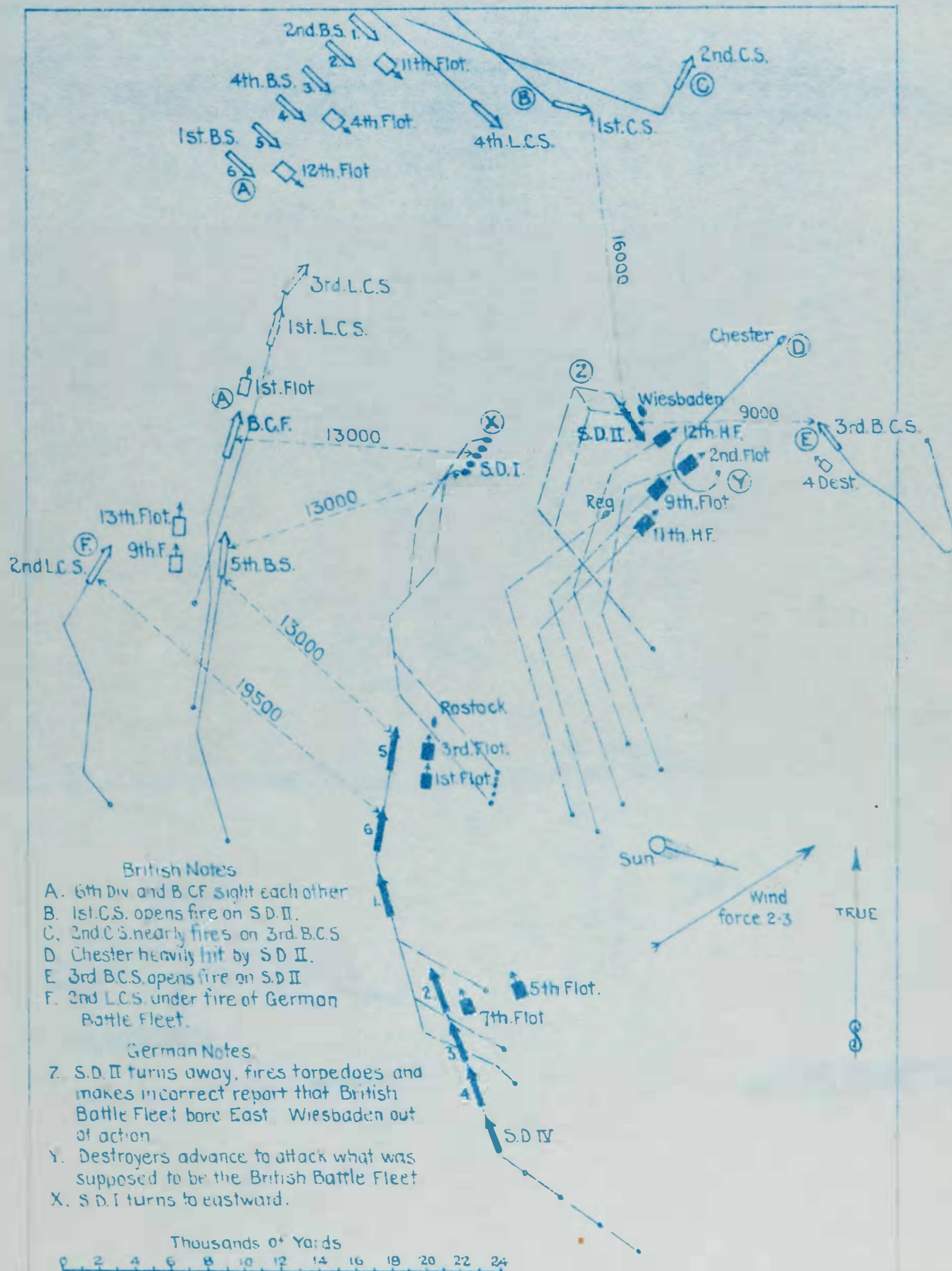
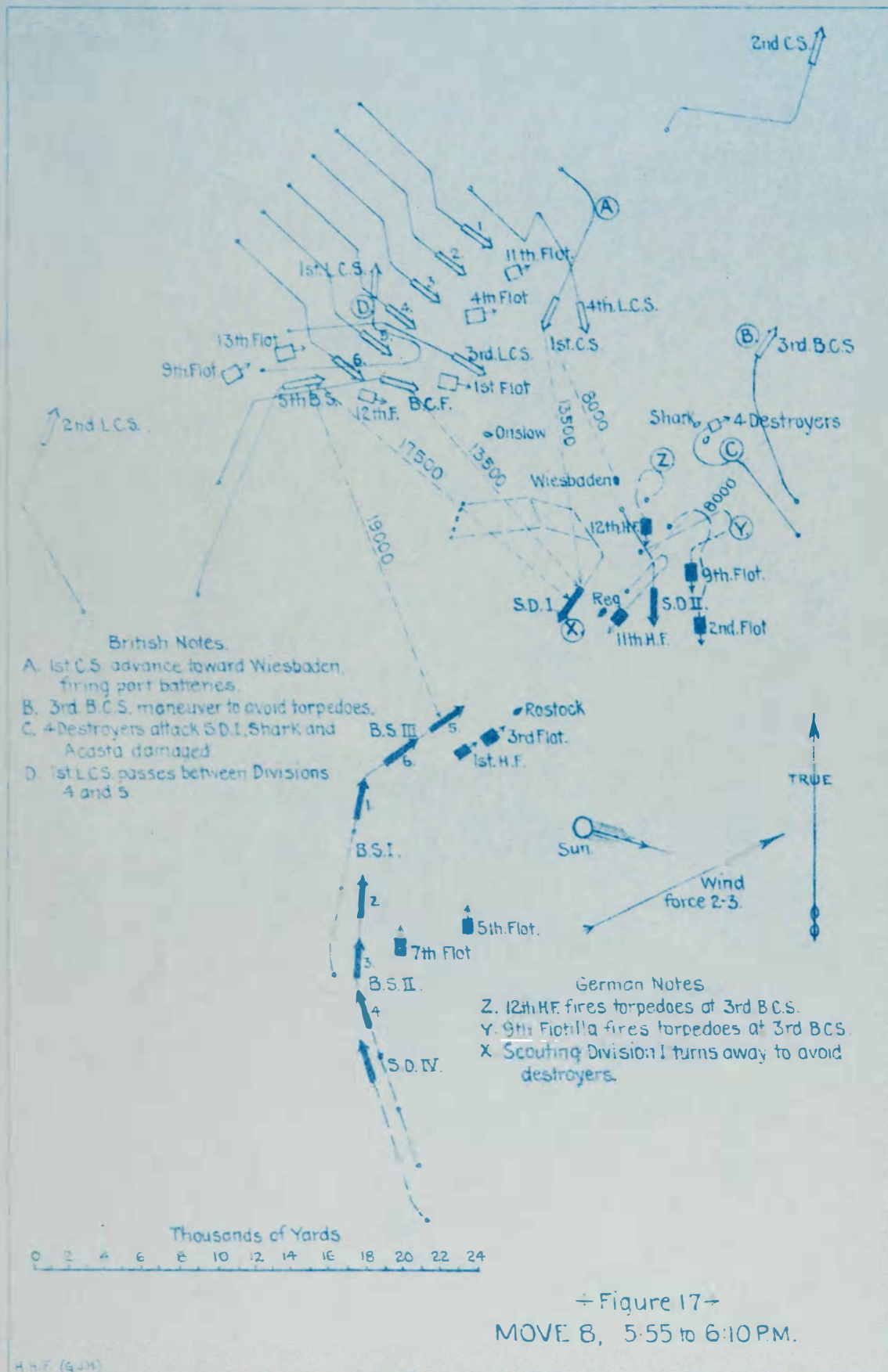


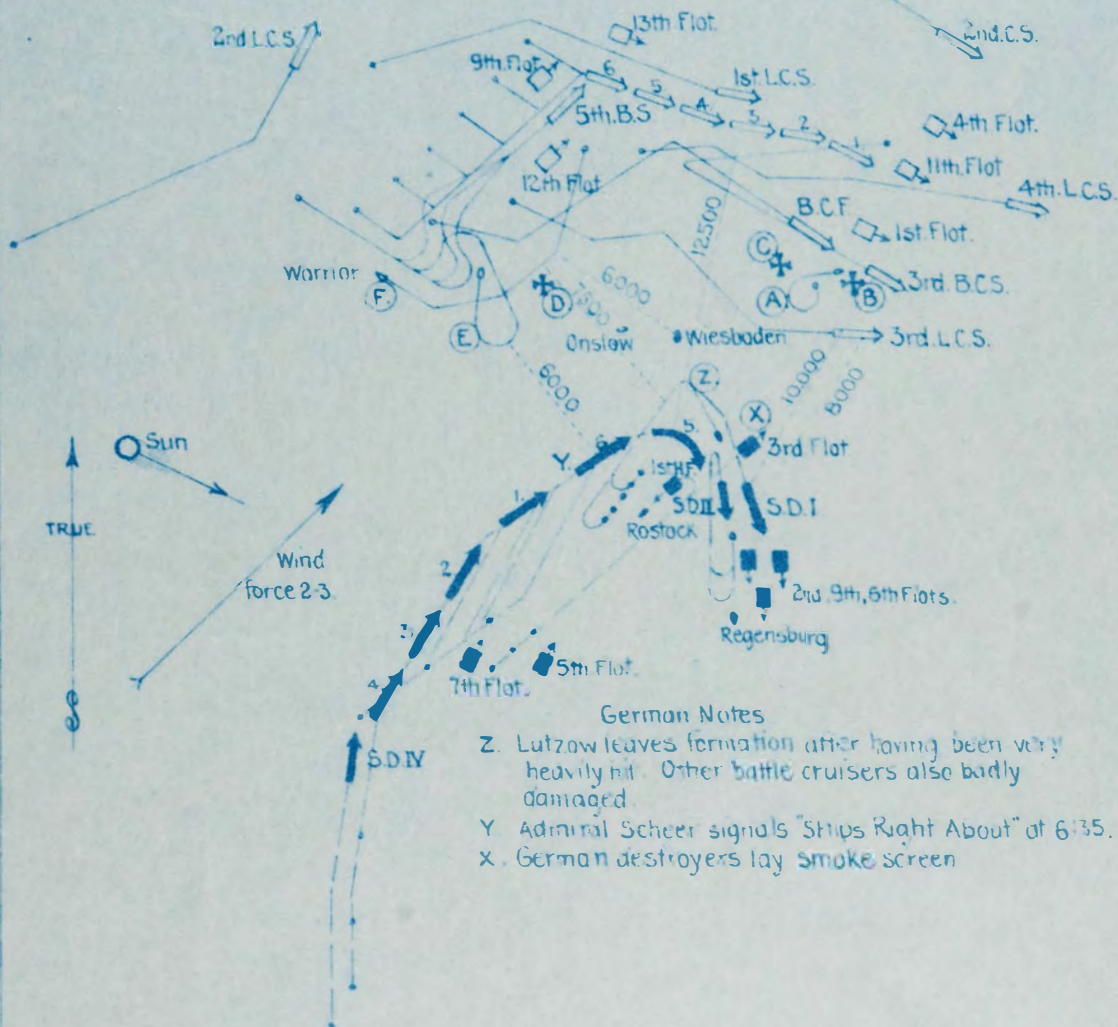
Figure 16  
MOVE 7, 5:35 to 5:55 PM





# British Notes

- A. Acasta fires torpedo at S.D.I. range 4500 yards
- B. Invincible sunk at 6:33 by S.D.I.
- C. Shark sunk about 6:35
- D. Defense sunk at 6:46, probably by S.D.I.
- E. Warspite heavily hit by battle fleet.
- F. Warrior escapes after being heavily hit.



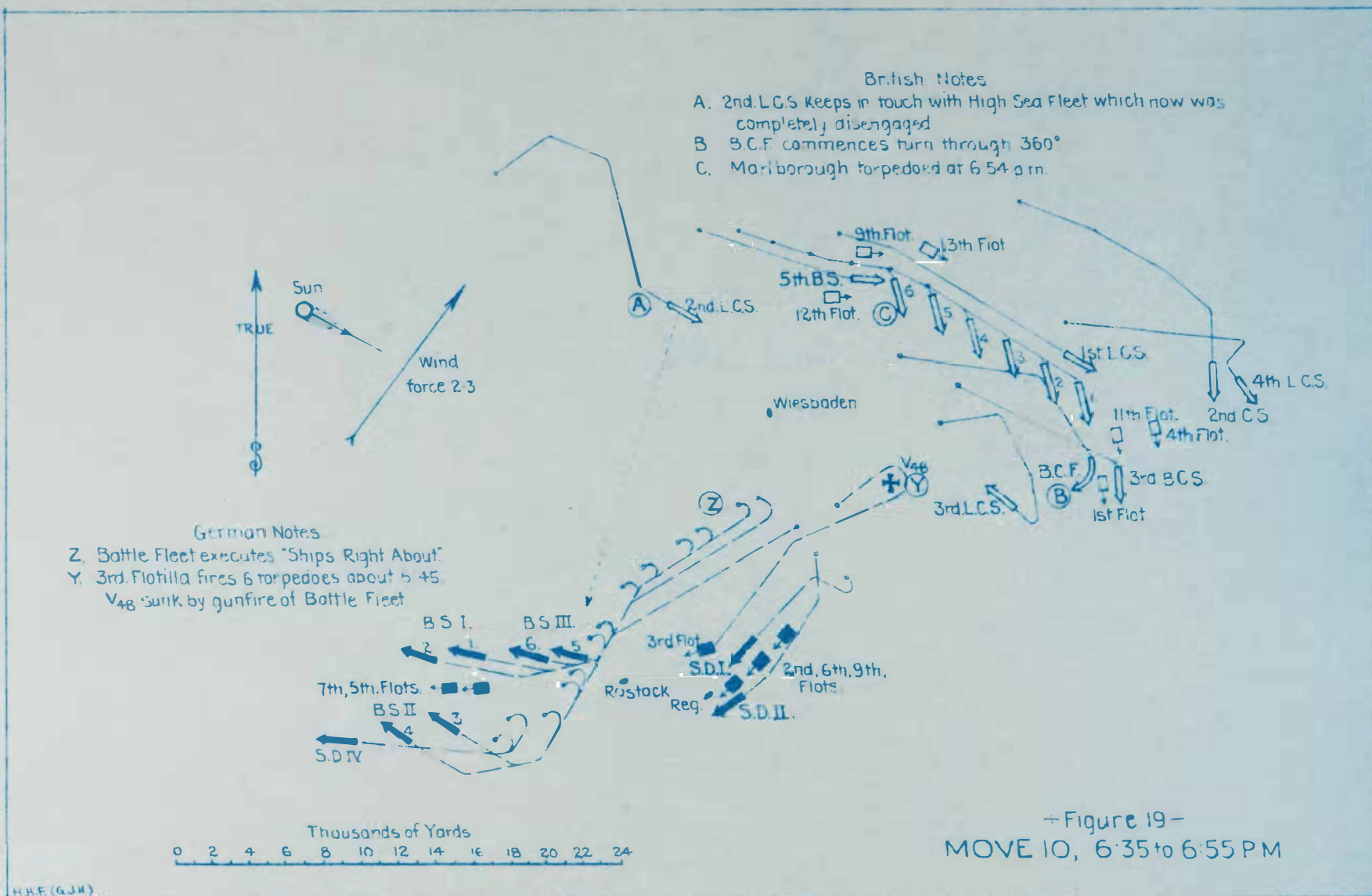
## German Notes

- Z. Lutzow leaves formation after having been very heavily hit. Other battle cruisers also badly damaged.
- Y. Admiral Scheer signals "Ships Right About" at 6:35.
- X. German destroyers lay smoke screen

— Figure 18 —

MOVE 9, 6:10 to 6:35 P.M.



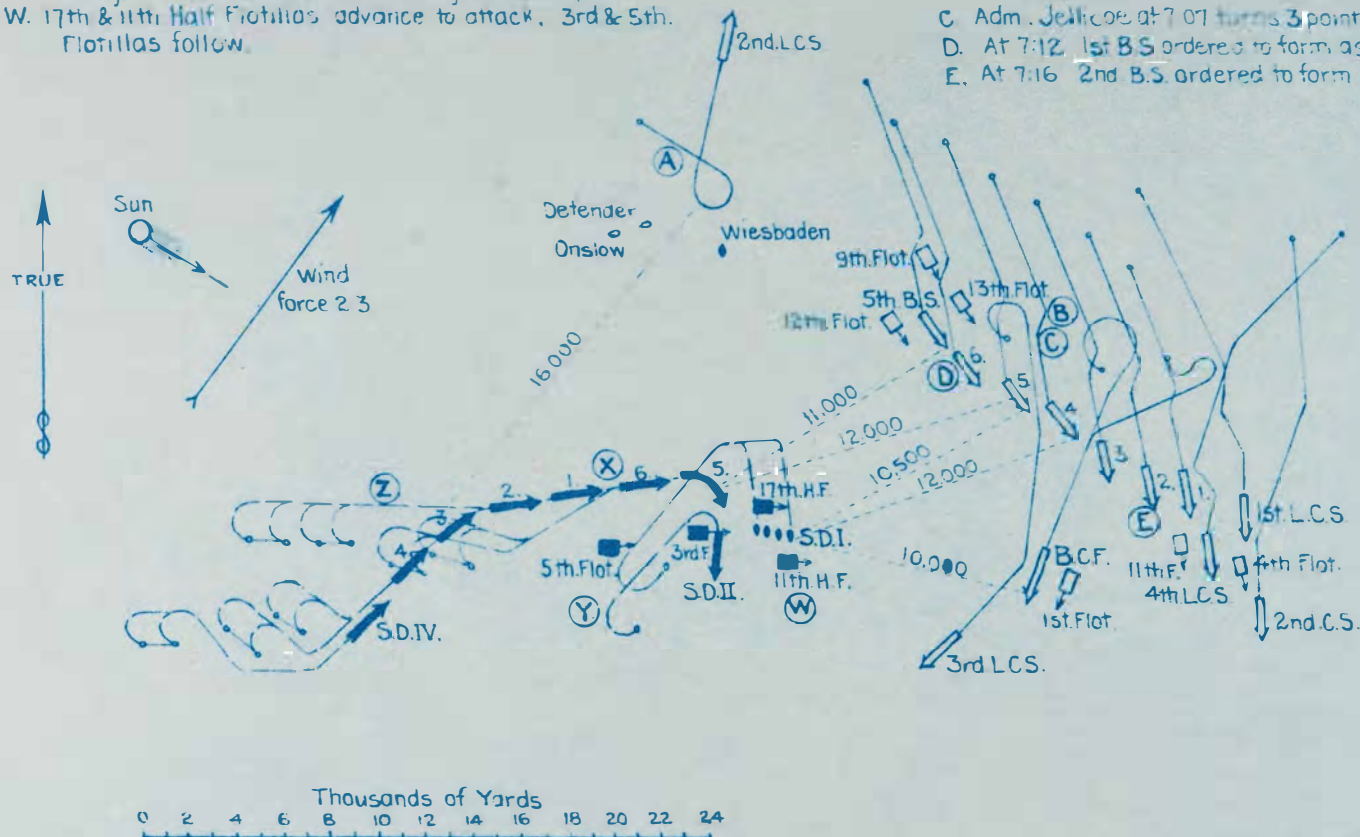


### German Notes

- Z. Battle Fleet goes "Ships Right About." S.D. IV follows
- Y. Scouting Divisions I & II counter-march to Northeastward.
- X. German battle fleet under heavy fire. Derfflinger, Seydlitz, Konig, Grosser Kurfurst and Markgraf heavily hit
- W. 17th & 11th Half Flotillas advance to attack. 3rd & 5th Flotillas follow.

### British Notes

- A. 2nd LCS reports German turn to the eastward. Time of report 7:04
- B. Adm. Jellicoe at 7:05 changes course 3 points to westward
- C. Adm. Jellicoe at 7:07 turns 3 points to eastward
- D. At 7:12 1st B.S. ordered to form astern of 4th B.S.
- E. At 7:16 2nd B.S. ordered to form ahead of 4th B.S.



÷ Figure 20 ÷  
MOVE II, 6:55 to 7:15 P.M.

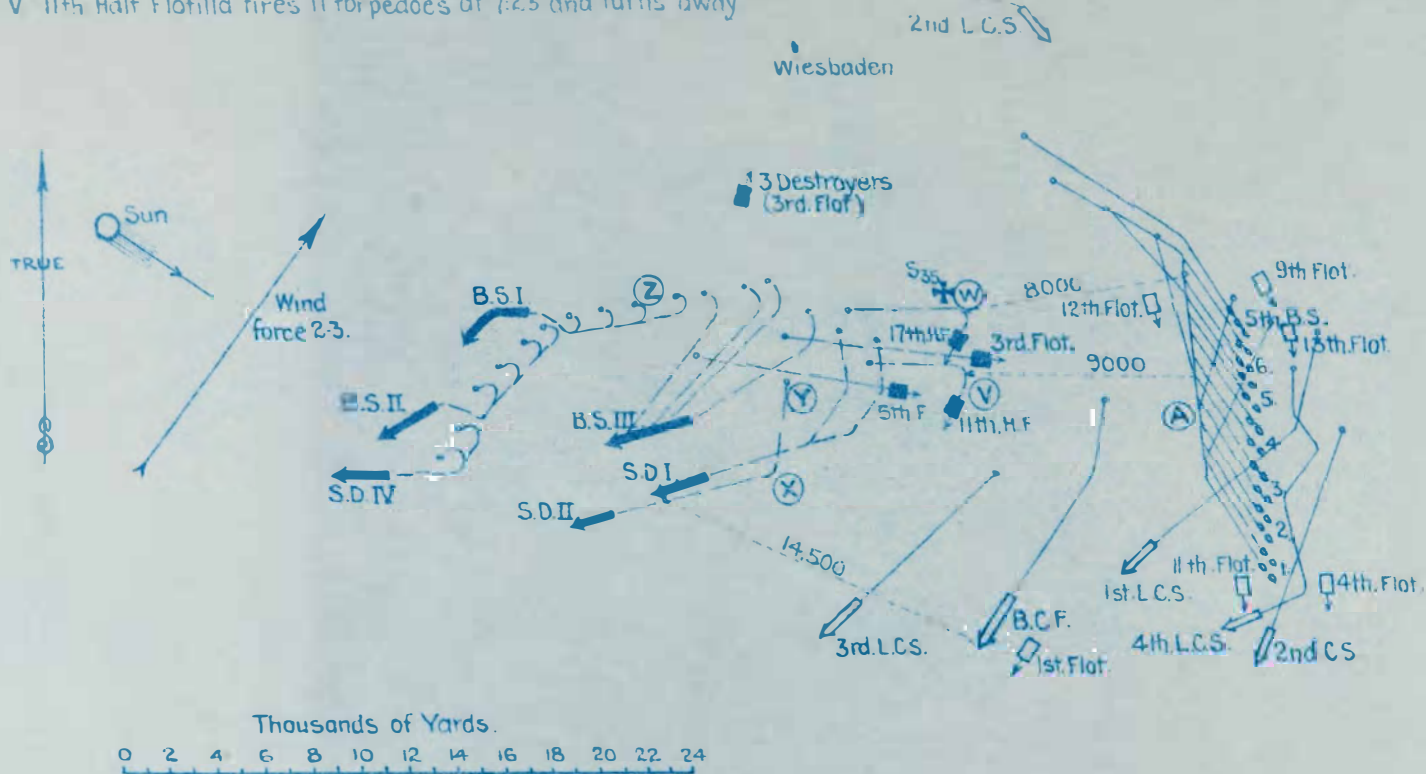


# German Notes

- Z. At 7:17 the Battle Fleet goes "Ships Right About."
- Y. Scouting Division I is heavily hit and turns away
- X. Scouting Division II turns away
- W. 17th Half Flotilla fires 10 torpedoes at 7:25 and turns away.
- V. 11th Half Flotilla fires 11 torpedoes at 7:23 and turns away

# British Notes

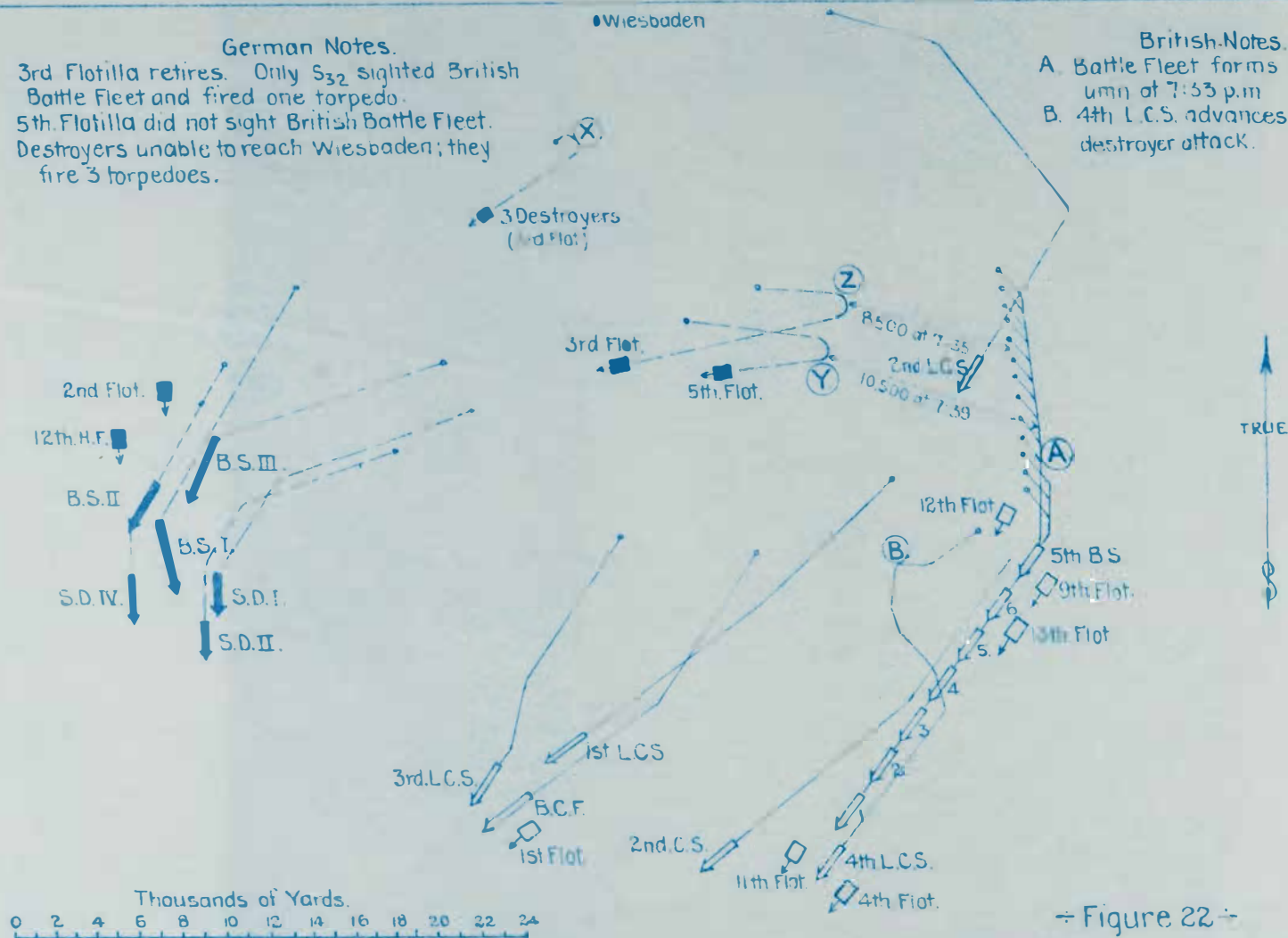
- A. The Battle Fleet having formed single column, turns away two points by sub division at 7:22. At 7:25 an additional change of two points is made.



- Figure 21 -  
MOVE 12, 7:15 to 7:30 P.M.

- German Notes.
- Z. 3rd Flotilla retires. Only S<sub>32</sub> sighted British Battle Fleet and fired one torpedo.
  - Y. 5th Flotilla did not sight British Battle Fleet.
  - X. Destroyers unable to reach Wiesbaden; they fire 3 torpedoes.

- British Notes.
- A. Battle Fleet forms single column at 7:53 p.m.
  - B. 4th L.C.S. advances to repel destroyer attack.



— Figure 22 —  
MOVE 13, 7:30 to 8:00 P.M.

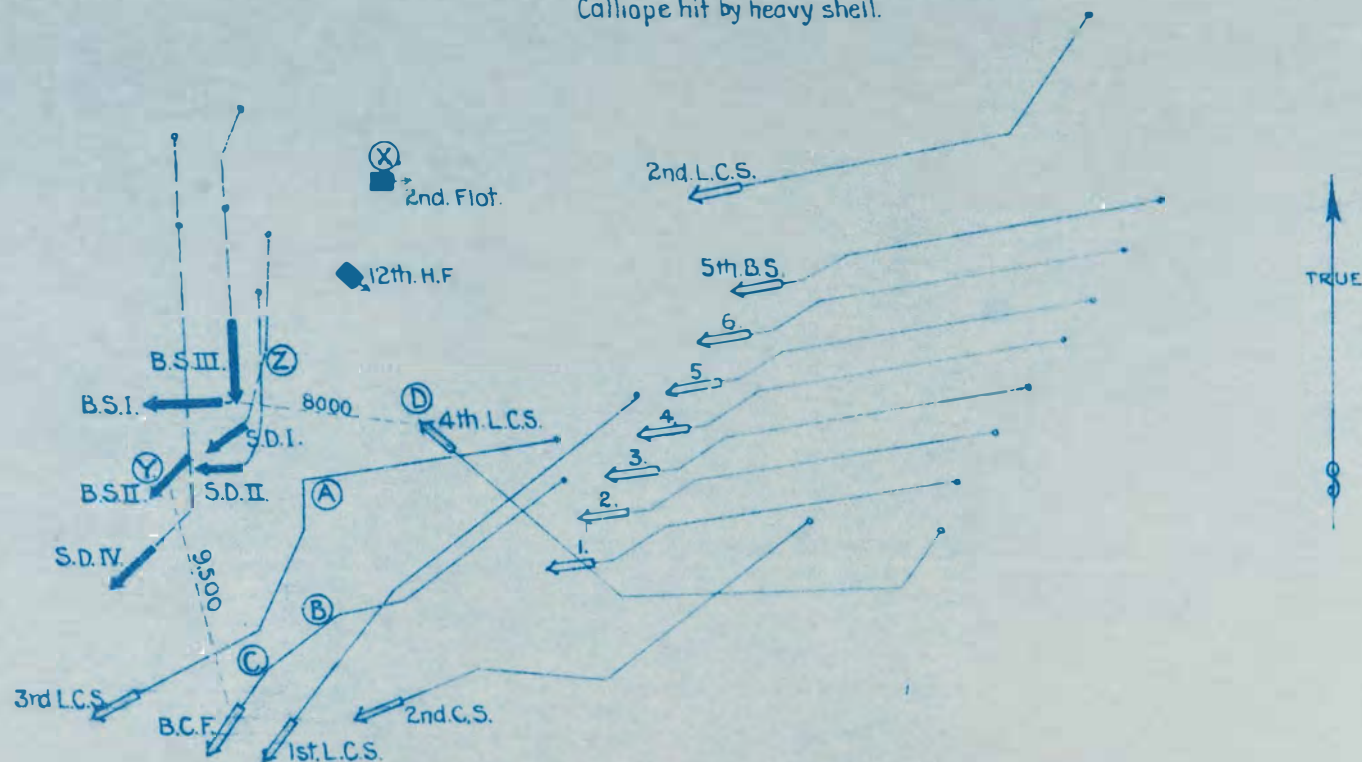


### German Notes

- Z. Scouting Division I engages B.C.F.
- Y. Battle Squadron II engages B.C.F.
- X. 2nd. Flotilla returns via Skaggerak after making this attack.

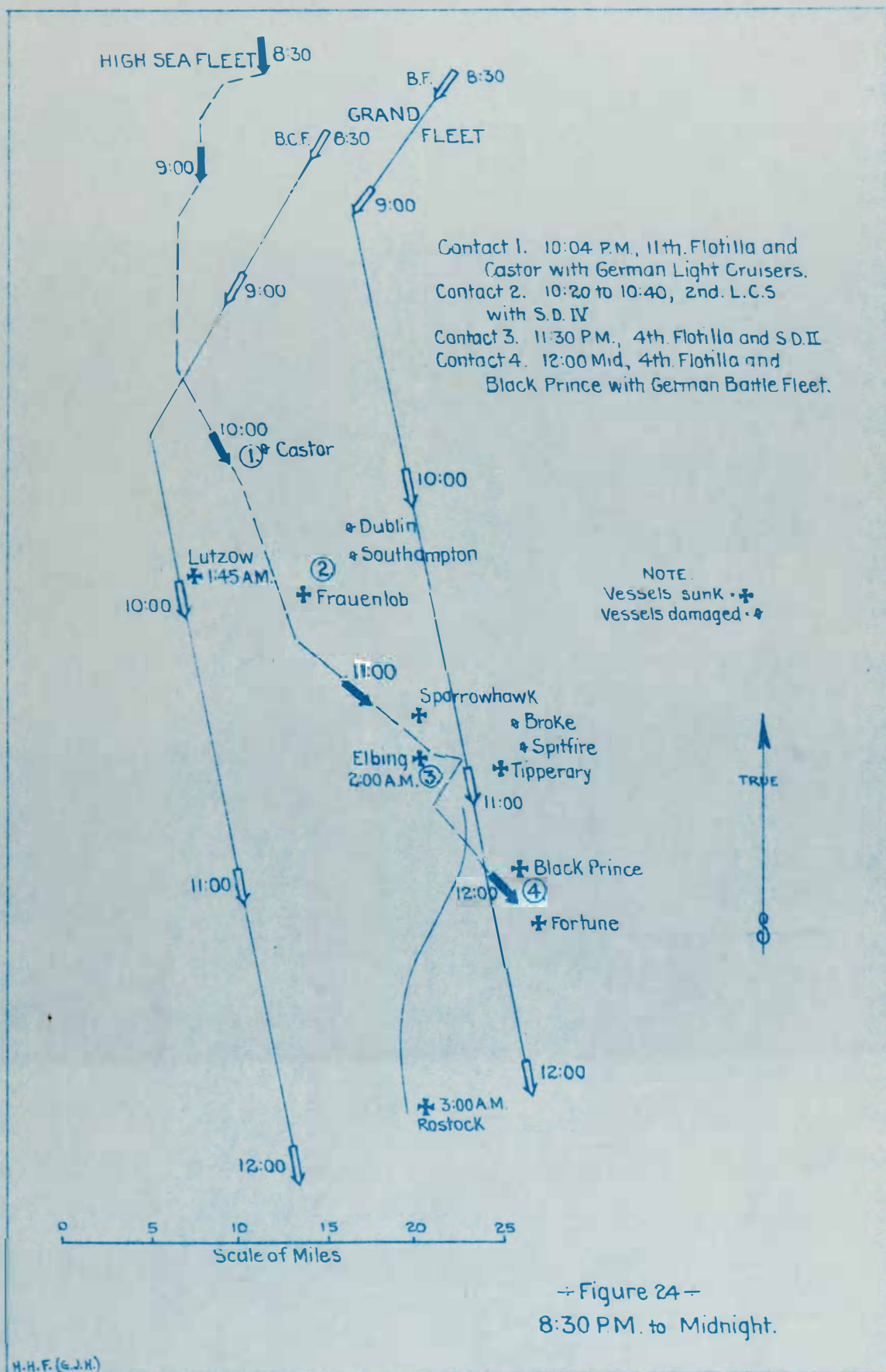
### British Notes

- A. 3rd.L.C.S. sights High Sea Fleet at about 8:18. At 8:00 this squadron had searched to Westward in scouting line in accordance with instructions of S.O., B.C.F.
- B. B.C.F. engages S.D.I.
- C. B.C.F. engages B.S.II.
- D. 4th.L.C.S. makes contact with German battleships. Calliope hit by heavy shell.

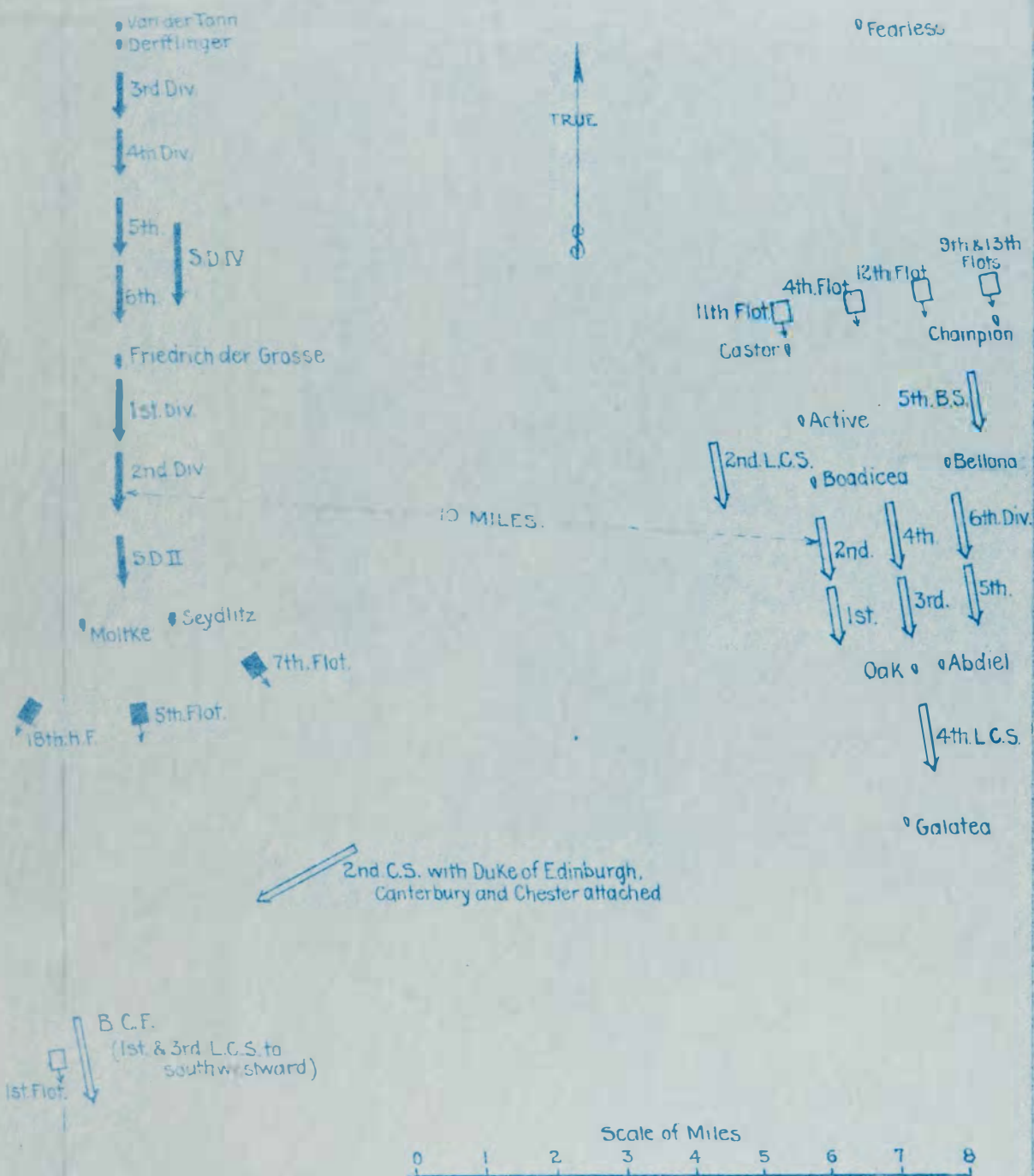


÷ Figure 23 ÷

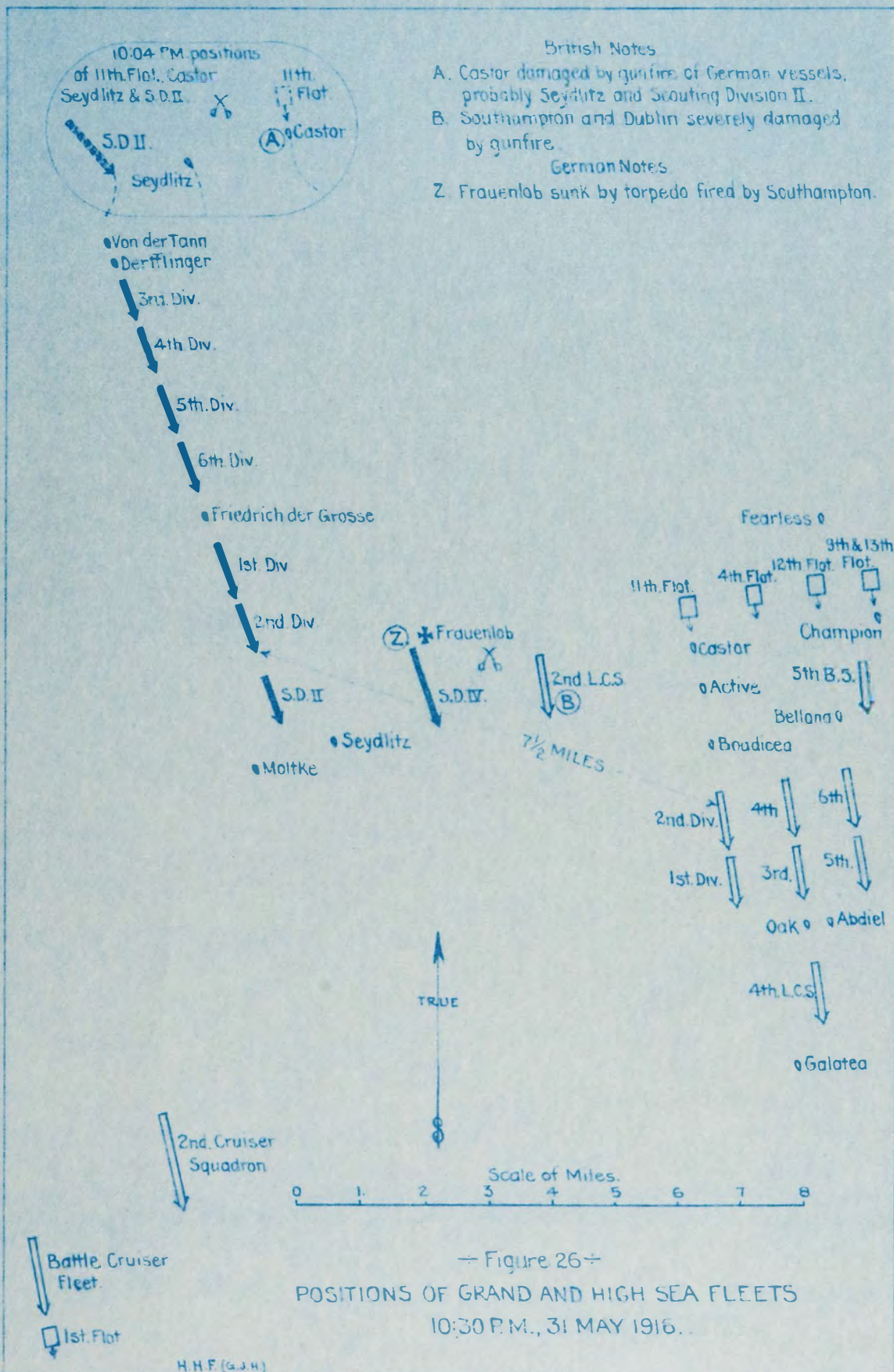
MOVE 14, 8:00 to 8:30 PM.



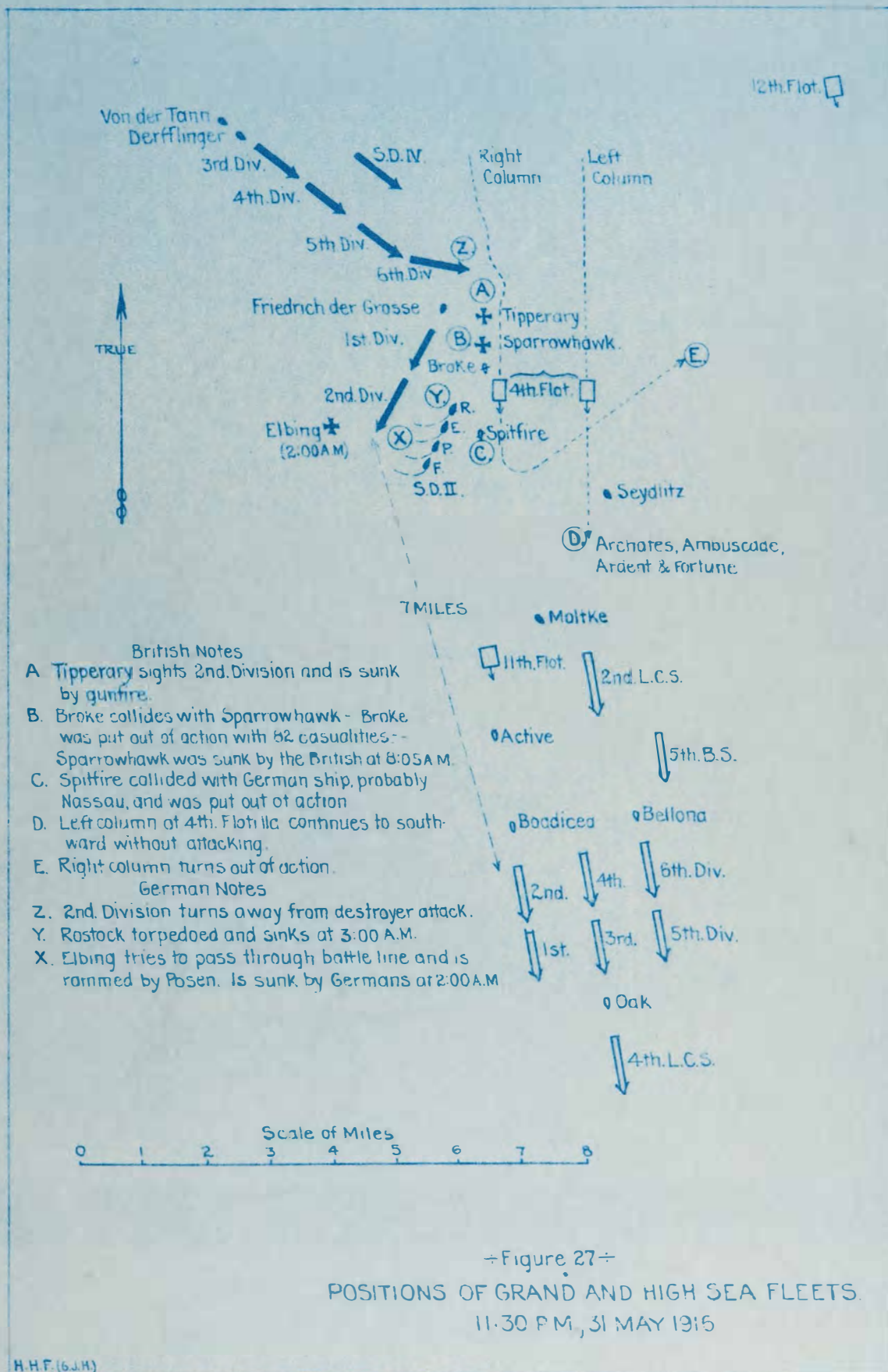


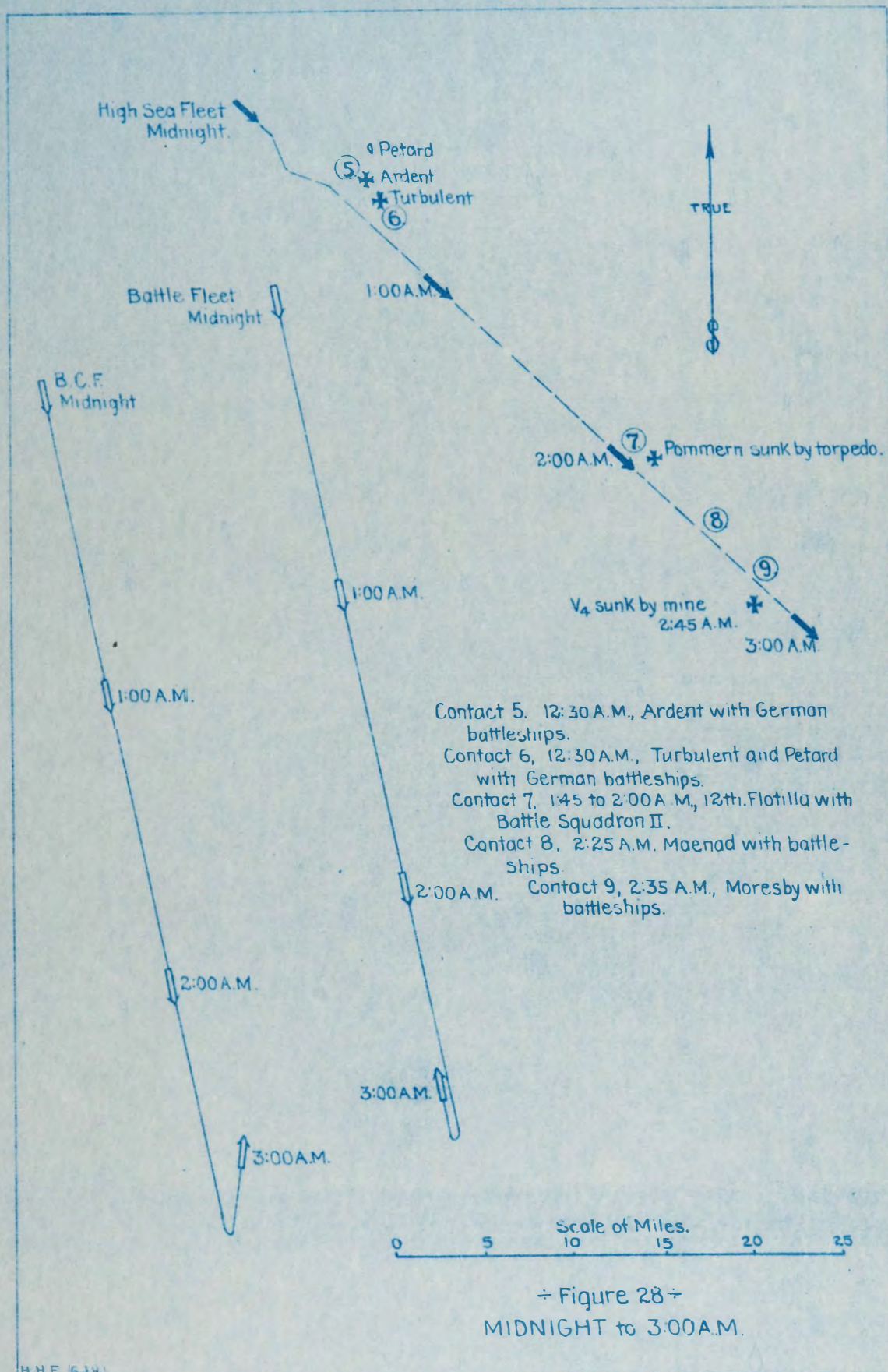


- Figure 25  
POSITIONS OF GRAND AND HIGH SEA FLEETS  
9.30 P.M., 31 MAY 1916

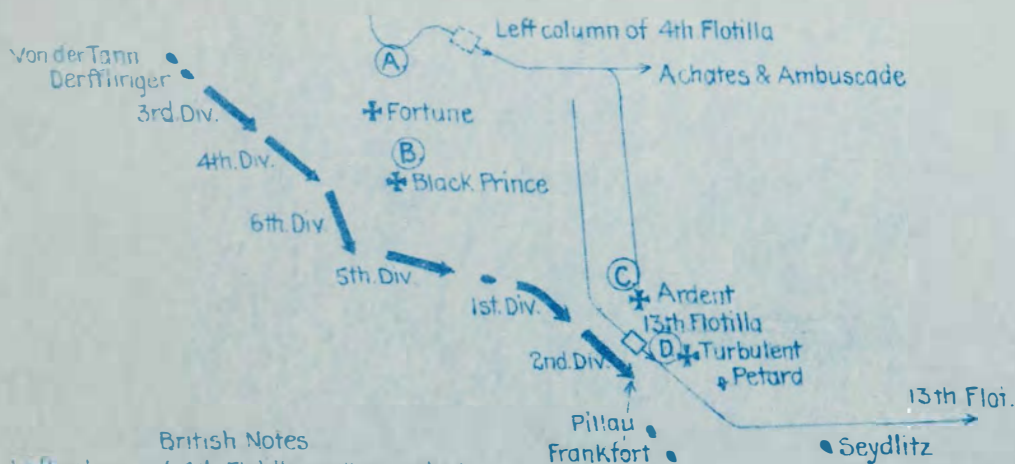












#### British Notes

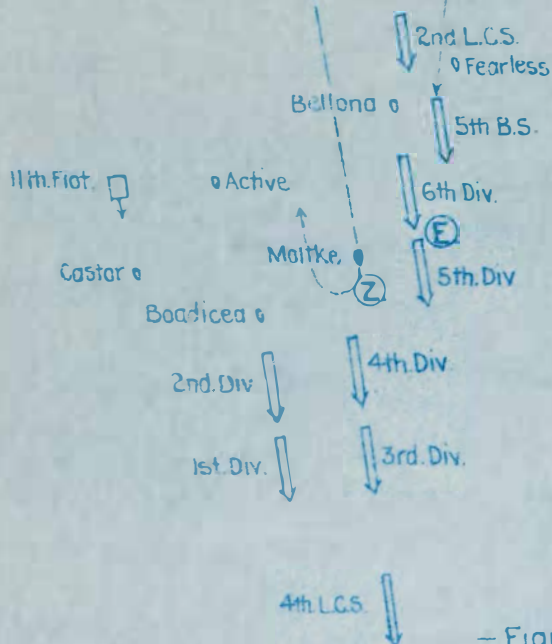
- A Left column of 4th Flotilla makes contact with 2nd Division at Midnight Fortune sunk.
- B Black Prince sunk at Midnight by 1st Division.
- C Ardent, of 4th Flotilla, sunk by 2nd Division.
- D 13th Flotilla makes contact; Turbulent sunk, Petard put out of action.
- E 5th & 6th Divisions fall behind, due to reduced speed of Marlborough.

#### German Notes

- Z Moltke makes contact with 6th Division, but escapes, due to failure of British to open fire.

8½ MILES

Scale of Miles  
0 1 2 3 4 5



- Figure 29 -

POSITIONS OF GRAND AND HIGH SEA FLEETS  
12:30 A.M., 1 JUNE 1916.

- NOTES. A. Minefield laid by the Abdiel 4 May.  
 Ostfriesland struck one of these mines.  
 B. Minefield laid by the Abdiel 31 May  
 C. Stations of British Submarines.  
 D. Zeppelin L<sub>17</sub> reports 8 Battle Cruisers.  
 E. Regensburg and Dublin at 4:10 A.M.

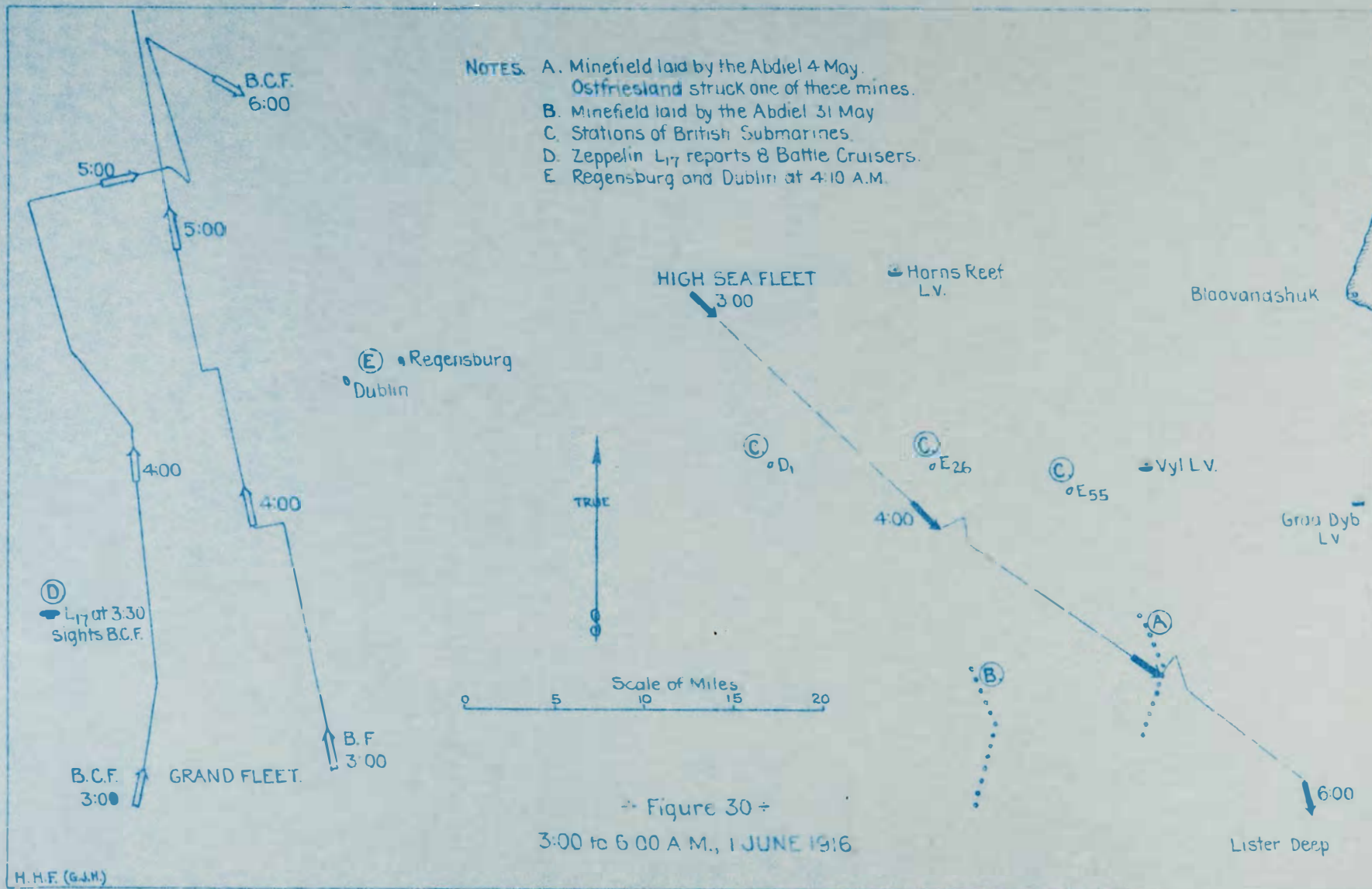
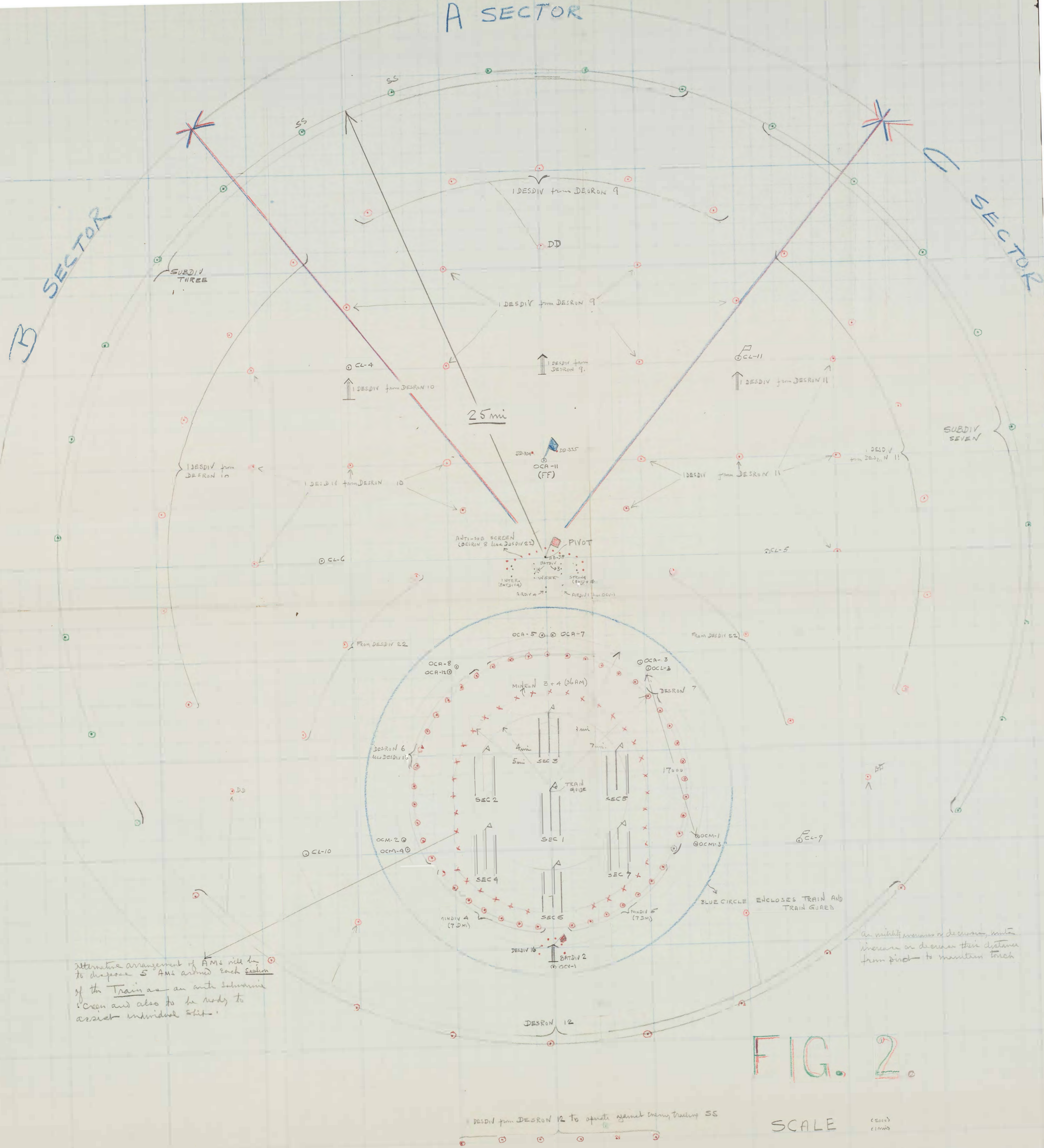


Figure 30 +

3:00 to 6:00 A.M., 1 JUNE 1916











Tactics  
by  
Commander Chester W. Nimitz

The second thesis that Nimitz completed for graduation from the Naval War College in 1923 was on Tactics. In his essay, Nimitz discussed the major and minor principles of naval warfare and the tactics used in battle in a war with England and the United States, as well as a more serious and forthcoming opponent, Japan. Until 1930, Naval War College students studied the Battle of Jutland as it related to future warfare. Nimitz commented on the tactics used in this World War I battle and the lessons learned from it.