Tactical Problem IV-1937-SR
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Captain H.L. Pence
Room 201 30

3448-1591
1/25/37

2110-B

Serial No. 20

Senior Class, 1937

TACTICAL PROBLEM IV-1937-SR.

Estimate of the Situation

Section II

Except Section (h)

BLUE STAFF SOLUTION

Department of Operations
Naval War College
Newport, R.I.
29 January, 1937.

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3448-1591
1/25/37

TACTICAL PROBLEM IV-1937-SR.

BLUE

Section II

SURVEY OF OPPOSING STRENGTHS

(a), (b), (c) - - - - -.

(d) Character of Theater of Operations.

1. Taking the probable theater of operations as the southwest quadrant from CAPE RACE north of 43° and as far west as CAPE SABLE, we find the area as a whole free from navigational obstructions except for SABLE ISLAND and its surrounding shoals. There are several banks to the southward of NEWFOUNDLAND and to the eastward of NOVA SCOTIA. The depths and contours of these banks should aid navigation in thick weather as the area has been well surveyed. In some parts of these banks there are shoal spots which might limit the free use of submerged submarines. It is noted that ST. PIERRE and MIQUELON are French territory and must not be approached within 3 miles nor flown over by aircraft.

All of the area over the banks is shallow enough for planting moored mines.

2. Ice may be expected in the area enclosed by a line from CABOT STRAIT southeastward to latitude 41° in longitude 50' and then north along that parallel to latitude 45°. The movements of the observation submarines off BELLE ISLE may be hampered by bergs and drifting floes. Straits of BELLE ISLE are normally clear by 25 June.

Fog may be expected from 30% to 60% of the time. It is most prevalent near NEWFOUNDLAND and becomes less frequent to the southwestward.

Winds may be expected from any quarter, although southwestly prevail somewhat. Force will rarely be above 4. Gales are improbable but should one occur its approach will be indicated by the usual meterological signs. There is an average of calms varying from 6 to 8%. Fogs are more common with easterly winds and may be expected to lessen with westerly winds.

3. Sunrise is at 0400, sunset at 1930, with two hours twilight both morning and evening.

4. There will be no moon.

5. The distance from the LIZARD to CAPE RACE is 1870 miles while the distance to HALIFAX is about 450 miles farther.

(e) Information and Counter Information.

The Commander of each Fleet is aware that his opponent is at sea and is also cognizant of the general strength and composition of the other Fleet. Further information for either Commander can only be obtained through scouting while the only effective means of denying information is by screening. Both BLUE and RED have the normal communication facilities of the forces afloat supplemented by shore radio stations.

(f) Armed forces.

1 and 2 (see Blueprint data sheets).

A study of the comparison sheets shows the following:

(A) Capital ships

	BLUE	RED
Number	15	15
Battle line speed	17.5	19.5
Main battery guns	24-16" 124-14" 12-12"	18-16" 100-15"
Total Life	255.6	244.2
Torpedoes	0	192 type "A"
VOs	45	30

It should be noted that 3 of the RED ships are battle cruisers with an individual maximum speed of 31 knots and a formation speed of 27 knots. These ships may be used as a fast wing.

CC-2 and 3 have but 6-15" guns each and but two of these can fire astern. RED BB-19 and 20, with 9-16" guns each, can not fire astern.

All of the BBs and CCs can fire up to 23,000 yards except BLUE BBs 34 and 35 whose limit is 22,000 yards.

Even though visibility does not exceed 23,000 yards it is possible that indirect fire may be attempted during the action. We must therefore consider the maximum ranges. All BLUE BBs except 33, 34 and 35 can fire up to 33,000 yards (a few to 34,000).

RED BB 19 and 20 have a maximum range of 38,000; CC-4 29,000, but all other BBs and CCs are reported as having a maximum range of 23,000. This must not be taken as positive because by listing the ranges can be increased. It is also possible that during modernization some if not all of the RED ships have had their gun elevations increased.

Admiral B-1 is not at all positive as to the armor of the enemy capital ships. This is especially true in regard to deck armor. Since most of the ships which will engage in the expected battle have been modernized, it is not at all certain as to what deck armor is installed. There is a similar quandary in regard to projectiles and fuses.

Due to these uncertainties, a factual comparison involving range bands is not attempted.

It is, however, quite evident that the RED CC-2 and 3 have much thinner side armor than BBs and can therefore be considered as soft ships. CC-4 while undoubtedly having heavier armor than CC-2 and 3 will have less than the BBs.

As regards speeds, although those assumed for RED are reasonable and in accord with the latest information, they may prove to be incorrect. The same remarks apply to life.

There now follows a comparison of Battleships by classes:

1. BLUE BBs 45, 46 and 48 are individually (with 8 guns vs 9), from information available, slightly inferior to RED BBs 19 and 20, but as a division should be superior. These BLUE BBs are superior individually to all other RED capital ships as are RED BBs 19, 20 superior to all other BLUE ships.

2. Making due allowance for available information in regard to life, armor, projectiles and gunnery training, it is believed that BLUE BBs 40 to 44 are definitely superior ship for ship to any of RED BB-9 to 18 and to the CCs.

3. Similarly BLUE BB-38 and 39 are believed very slightly superior to RED BB-9 to 18 and CC-4, while BLUE BB-36 and 37 are about on a par with these RED BBs and CC-4.

4. BLUE BBs 33, 34, and 35 are believed to be definitely inferior to any of RED BBs 9 to 18 and also to CC-4.

The secondary batteries of RED capital ships are a little more powerful than those of BLUE, but the latter have much stronger A.A. batteries.

The above comparisons do not take into consideration the relative speeds nor the torpedoes carried by RED capital ships.

A summary of the strength factors would indicate that the BLUE Battle Line is very slightly superior to that of RED. The measure of this superiority is not considered sufficiently large to achieve a decisive victory unless other forces are used to make the superiority a very definite one.

(B) Aircraft Carriers.

BLUE has CV-3 and 4 with maximum individual speeds of 33 and 29.3 knots respectively. CV-3 with 8-8" guns might be of some use as a cruiser in the event that her flight deck is destroyed.

Planes are carried as follows:

CV-3 -	18 VF	CV-4 -	36 VF
	20 VSB		20 VSB
	18 VBF		18 VB
	18 VTB		

RED has CV-2, 3 and 4 with maximum individual speeds of 31 knots. None of these have guns over 5".

Planes are carried as follows:

(Note: These are latest available figures. It is possible that RED has a different organization both as to types and assignment to carriers).

CV-2 - 18 VF; 12 VS; 12 VB; 12 VTB.

CV-3 - 18 VF; 24 VSB; 12 VTB.

CV-4 - 18 VF; 12 VSB; 12 VB; 12 VTB.

Summary Carrier Based Planes:

	BLUE	RED
VF	54	54
VS	-	12
VSB	40	36
VB	18	24
VBF	18	-
VTB	18	36
	148	162

Analyzing the above, we see that both opponents are on a par in fighting planes.

Since many of the other planes are for a dual purpose, we can best compare them by listing the total capacity of 500# and 1000# bombs and torpedoes.

BLUE			RED		
Type and No.	500#	1000#	Type and No.	500#	1000#
VSB-40	40	0	VSB-36	36	0
VB -18	-	18	VB -24	-	24
VBF-18	18				
VTB-18	54 or 18		VTB-36	108 or 36	

Thus BLUE has a capacity of either 112-500# bombs and 18-1000# or 58-500# and 36-1000#, or 58-500#, 18-1000# and 18 torpedoes. RED has the choice of - 144-500# and 24-1000# or 36-500# with 60-1000# or 36-500#, 24-1000# and 36 torpedoes.

Thus the various combinations are as follows:

(a)	500#	1000#	Torpedoes
BLUE	112	18	0
RED	144	24	0
(b)			
BLUE	58	36	0
RED	36	60	0
(c)			
BLUE	58	18	18
RED	36	24	36

RED has a further advantage in having 3 carrier decks. This not only makes it easier for planes to rearm for a second attack but makes it more difficult for BLUE to locate and destroy all of the RED carrier decks.

(C) Heavy Cruisers.

BLUE has six CAs, each with 9-8" guns whereas RED has 7 or 8 each with 8-8" guns. Maximum individual speeds are about equal, being 32.5 for all of BLUE and most of RED, although a few of the latter have but 31.5 knots. In a ship for ship action BLUE is slightly superior due to greater gun power. RED CAs each carry 8 "A" torpedoes, whereas BLUE have none. Each BLUE CA has 4 VSO whereas the REDs have but two.

Summarizing the above, we may assume that if RED has 7 CAs present they will be slightly superior to BLUE, but if they have 8, this superiority will be considerable. BLUE CAs have greatly superior A.A. batteries.

(D) Light Cruisers.

BLUE has 8 of the CL-10 class available in divisions of 4 each in addition to the two of the same class with the destroyers. These ships have an individual speed of 33 knots (29 knots formation speed), have 10-6" guns each (7 on a broadside) and each carries 10 type G torpedoes and 2 VSO.

In addition, BLUE has 5 of the new CL-40 class of 32.5 knots and 15-6" guns, but no torpedoes. Each of these carry 6 VSO. These are powerful ships and should be a ble to hold their own against RED CAs.

The exact numbers and types with RED Fleet are uncertain. The report stated there were about 7 or 8. For the purposes of comparison it is well to assume that they are of late design and that half of them are of the CL-69 class with a top speed of 32.5 knots, 12-6" guns and 4 VSO each. They also carry 8 "A" torpedoes.

The remaining RED cruisers will be assumed to be the next most powerful group or the CL-57 class. These have a top speed of 32.5 knots, 8-6" guns, 8 "A" torpedoes and 2 VSO.

There will also undoubtedly be a cruiser with each destroyer squadron, but in line with RED practice these will probably be small old ships with but little combatant value and with no VSO.

Analyzing the opposing light cruisers, it would appear that BLUE has a considerable advantage. Although individually the old BLUE CLs are probably inferior to RED CLs. BLUE CLs have more powerful A.A. batteries.

(E) Destroyers and Destroyer Leaders.

BLUE has a total of 40 DDs with 4 DLs. Of this number 24 are of the new 1500 ton class with 36.5 knots speed (32.5 knot formation speed), 5-5" guns and 8 to 12 type G torpedoes (a total of 256 for the 24 DDs). The remaining 16 DDs are of the older type with 4-4" guns, 12 "C" type torpedoes each and a maximum formation speed of 28 knots. The four DLs have a maximum speed of 36.5 (32.5 in formation), 8-5" guns and carry 16 type G torpedoes each with 12 tubes on a broadside. Thus the total Destroyer Force torpedoes are 512 of which number 480 can be fired without reload. This is exclusive of the two CLs acting as Destroyer Flotilla flagships mentioned above under cruisers.

The exact number of RED DDs is uncertain. All that is known is that when the RED Fleet passed the LIZARD there were about 2 desrons present. From a knowledge of RED's normal organization we believe that each squadron has two or more flotillas of one DL and eight DDs each. Thus the minimum number (with 2 Flotillas per Desron) would be 4 DL and 32 DD, while the maximum number (with 4 Flotillas per Desron) would be 8 DLs and 64 DDs.

The lower figure appears too low considering the size of the RED Fleet. We may be overestimating by using the higher figure but will be on safer ground if we do so.

Let it be assumed then that RED has 8 DLs and 64 DDs. A study of the characteristics of these ships shows that the DLs have a top speed of 36 knots, 4-4".7 guns and 8 type A torpedoes. They are actually less powerful vessels than the BLUE 1500 ton DDs. The RED DDs have a maximum individual speed of 35-36 knots (31-32 formation), 4-4".7 guns and 8 type A torpedoes. Thus we may assume that the RED Destroyer Force carries a total of 576 torpedoes (with no reloads). The type A torpedoes reported as carried by RED are of 26 knot speed, 17,000 yard range, whereas a large proportion of BLUE torpedoes are of the variable speed type G. Too much reliance cannot be placed on this, however, as RED may be using improved torpedoes. In addition, RED will undoubtedly have a small CL with each Destroyer Squadron. These CLs will probably have not more than 5-6" guns and 8 torpedoes each.

Summarizing the opposing Destroyer Forces, it would appear that RED will have the greater number, will have a greater total number of torpedoes, although possibly of older design, and will be inferior in individual gun power if opposed to new BLUE DDs. It cannot be said, in advance, that either opponent has an unquestioned advantage in Destroyers.

(F) Submarines.

BLUE has 8 submarines of modern design. All of them have 4 bow and 2 stern tubes and carry a total of 129 G and 32 H torpedoes. Included in these vessels are SS-167 and 168 which, due to their great size and length, maybe restricted in operations in the shoaler parts of the various banks. Surface speeds vary from 17 to 19 and submerged from 8 to 8.5 knots.

Nothing definite is known in regard to the submarines accompanying the RED Fleet either as to numbers or to type.

It is believed that their latest vessels, which are capable of proceeding to sea with a fleet, have a maximum speed of about 17.5 knots surface and 9 knots submerged, and that most of this class have 6 bow and 2 stern tubes. Some have no reload

torpedoes while others have four. It is believed that these carry type G torpedoes.

Relative gun power is of no value in a problem of this kind.

(G) Anti-submarine measures.

BLUE destroyers and DLs carry a total of 832 Depth Charges. All of the DLs and newer DDs have underwater listening devices but operators are not really expert in detecting submarines.

RED DLs and DDs carry 12 Depth Charges each, so that there would be a possible total of 864.

It is known that the RED Navy has devoted much attention to sound detection of submarines and it may be assumed that in this connection RED is superior to BLUE.

The murkiness of the water in the theater of operations will make the detection of submerged submarines, from aircraft, very difficult.

(H) Aircraft have been discussed under the various types of ships upon which they are based. It will be well, however, to make a final summary herewith:

(a) Seaplanes.

	BLUE	RED
VOS	45	30
VSO	74	34 to 40

(b) Landplanes (carrier based).

VF	54	54
VS	--	12
VSB	40	36
VB	18	24
VBF	18	--
VTB	18	36

Thus it would appear that BLUE is considerably superior in observation and scouting planes, which can also be used with 116# bombs to strafe destroyers.

RED, as mentioned previously, has the advantage in 500#, 1000# bombs and torpedoes.

(I) Mines.

It is noted that neither BLUE nor RED have apparently any mine layers. RED may have some submarine mine layers.

3. Condition: All units on both sides will be assumed to be in equally good condition.

4. Disposition: Nothing will be known of enemy's disposition until scouting forces make contact.

(g) Logistic Support.

Although neither BLUE, nor apparently RED, has any tankers in company, necessary fuelling of destroyers can be done at sea. RED has the base at HALIFAX and can also send DDs and light craft to ST. JOHNS, N.F. for fuel. BLUE has his bases in NEW ENGLAND.

In the event of serious damage to several ships, BLUE has greater repair facilities within a reasonable distance than has RED. HALIFAX has but limited resources for repairing damaged ships.

TAC. PROB. IV-1937 SR.

RED SHIPS DATA

TYPE		BB	BB	BB	CC	CC	CV	CV	CA	CL	CL	DL	DD	SS
SHIP NO.		9-13	14-18	19,20	2,3	4	2,3	4	?	?	?	?	?	?
SPEED		23.5	21.5	23	31.5	31	31	31	31.5 32.5	32.5	29	36	36 35	17.5 9
LIFE		16.6	16.1	19	12.5	17.7	7.2	7.2	4.6	3.7 4.3	2.7	1.3	1.3	.8
MAIN BATTERY	No./Cal.	8-15"	8-15"	9-16"	6-15"	8-15"			8-8"	8-6" 12-6"	5-6"	4-4.7"	4-4.7"	
	One Side	8	8	9	6	8			8	8 12	5	4	4	
	Max Range	23	23	38	23	29			27	23	23	14	14	
SECONDARY BATTERY	No./Cal.	12-6"	12-6"	12-6"	15-4"	12-5.5		10.5						
	One Side	6	6	6	12	6		5						
	Max. Range	22	22	23	14	16		16						
ANTI-AIR BATT.	No./Cal.	4-4"	4-4"	6-4.7"	4-4"	4-4"	16-4.7"	6-4"	4-4"	4-4"	2-3"	1-3"	1-3"	1-4"
	Range	15	15	18	15	15	18	15	15	15	11	11	11	14
TORPS	Total No.	12A	12A	12A	24A 12A	12A			8A	8A 6A	8A	8A	8A	12G 8G
TORPEDO TUBES	On Broadside	1	2	1	*	3			4	4	4	8	8	Bow 6
	Deck				*	4			8	8	8	8	8	Stern 2
	Submg'd	2	4	2	*	2								8
DEPTH CHARGES							CV 2 3					12	12	
AIRCRAFT	VF(L)						18	18 18						
	VB(L)						12	12 12						
	VTB(L)						12	12 12						
	VOS(S)	2	2	2	2	2								
	VSO(S)								2	2 or 4				
	VSB(L)							24 12						
	VS (L)						12							

L land Planes
S Sea "

* See BLUE & RED Fleets for details.

TAC. PROB. IV-1937 SR.
BLUE FLEET

UNIT		BATDIV 1	BATDIV 2	BATDIV 3	BATDIV 4	AIRDIV 1		CRUDIV 2	CRUDIV 3	CRUDIV 4	CRUDIV 5	CRUDIV 6	CRUDIV 7	DESFLO ONE				DESFLO TWO				SUBDIV 1	SUBDIV 2
														CL	DL	DD	DD	CL	DL	DD	DD		
NO. IN UNIT		4 BB	4 BB	3 BB	4 BB	1 CV	1 CV	4 CL	4 CL	3 CL	2 CL	3 CA	3 CA	1 CL	2 DL	12 DD	8 DD	1 CL	2 DL	12 DD	8 DD	4 SS	4 SS
SHIP NO.		33, 34, 35, 37	36, 38 39, 43	40, 41 42	44, 45 46, 48	3	4	9, 11 12, 13	4, 5 6, 10	40, 41, 42	43 46	37, 38 39	32, 34 36	7								163, 164 165, 167	to 171
FORMATION SPEED		17.5	18.0	19.0	19.0	33*	29.3*	29	29	28.5	28.5	28.5	28.5	33*	32.5	32.5	28	33*	32.5	32.5	28	16 19 / 8 8.5	17 / 8 8.5
LIFE		62.4	68.1	51.9	73.2	15.5	5.6	14.8	14.8	14.1	9.4	14.1	14.1	3.7	3.0	16.8	10.4	3.7	3.0	16.8	10.4	3.7	3.2
MAIN BATTERY	No./Cal	12-12" 30-14"	46-14"	36-14"	12-14" 24-16"	8-8"						27-8"	27-8"										
	One Side	42	46	36	36	8						27	27										
	Max. Range	33 23 22	34 33	34	33	30						34	34										
SECONDARY BATTERY	No./Cal	60-5"	48-5"	36-5"	48-5"			40-6"	40-6"	45-6"	30-6"			10-6"	16-5"	60-5"	40-4"	10-6"	16-5"	60-5"	32-4"	3-5" 2-6"	2-6" 1-4"
	One Side	30	24	18	24			28	28	45	30			7	16	60	30	7	16	60	24	5	3
	Max. Range	17 15	17	17	17			22 18	22 18	26	26			22 18	16	17	13	22 18	16	17	13	17 22	22 13
ANTI-AIR BATT	No./Cal	24-3" 8-5"	32-5"	24-5"	32-5"	12-5"	8-5"	16-3"	16-3"	24-5"	16-5"	24-5"	24-5"	4-3"			8-3"	4-3"			8-3"	3-3"	2-3"
	Range	10 14	14	14	14	14	14	10	10	14	14	14	14	10			7	10			7	10	10
TORPS	Total No.							40 G	40 G					10 G	32 G	144 G	96 C	10 G	32 G	112 G	96 C	72 G	57 G 32 H
TORPEDO TUBES	On Broad Side							12	12					3	16	96	48	3	16	96	48	Bow 16	Bow 16
	Deck							24	24					6	16	144	96	6	16	112	96	Stern 8	Stern 8
	Submgd.																					24	24
DEPTH CHARGES															32	192	192		32	192	192		
TOTAL AIRCRAFT	VF(L)					18	36																
	VB(L)						18																
	VTB(L)					18																	
	VOS(S)	12	12	9	12																		
	VSO(S)							8	8	18	12	12	12	2				2					
	VSB(L)					20	20																
	VBF(L)					18																	

* Max. individual speed.

L Land Planes
S Sea "

Captain H.L. Pence
Room 201 20

3448-1591-R
1-25-37

2110-C Serial No. 20

TACTICAL PROBLEM IV-1937-SR.

Estimate of the Situation

Section II

except Section (h)

RED STAFF SOLUTION

Department of Operations
Naval War College
Newport, R.I.
25 January, 1937.

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3448-1591-R
1-25-37

TACTICAL PROBLEM IV-1937-SR.

RED Staff Solution.

II. Summary of Opposing Strengths.

(a) Political Factors.

3. Alliances.

CRIMSON and NEWFOUNDLAND are allied with RED. No naval assistance may be expected, but land forces will endeavor to hold HALIFAX and ST. JOHNS.

(d) Character of the Theater of Operations.

Some preliminary estimate of the probable movements of RED and BLUE must be made to determine the probable theater of operations.

The RED Fleet is in the approximate latitude of HALIFAX, and intends to proceed directly to the westward. A speed made good of 12 knots will be maintained until either logistic restrictions or enemy action permit the speed to be increased.

It is assumed that BLUE sailed at 0400 - 20 June and is maintaining 12 knots with the main body. Under these conditions, the main bodies would be 420 miles apart at 0400 - 23 June. Contact may occur the 23rd or any day thereafter until RED reaches HALIFAX. It is possible that BLUE may project his carriers into the 22 June daylight area of RED.

The theater of operations, therefore, lies along the probable track of the RED Fleet from RED's probable 0400 - 22 June position, or Latitude 44°-20' N, Long. 38°-30' W. Allowing for deviations from the track and the flight of aircraft, the theater may extend about 200 miles to the north and south of the track. The entire theater may be divided into areas, limited in an easterly and westerly direction by the probable positions of the RED Fleet at 0400, or daylight each morning. The daily theaters will be described separately.

22 June area.

Extends from Longitude 38° W to Longitude 45°-30' W and 200 miles to the north and 200 miles to the south of latitude 44-20 N.

In the N.W. corner of this area is FLEMISH CAP with a minimum depth of 28 fathoms.

In the eastern part of the area there is generally less than 20% of fog. In the northwestern part there is as high as 50% of fog. The RED Fleet will probably pass into the area of increased fog about 1600. Winds may blow from any quarter with westerly winds prevailing. The average force is 5. No ice may be expected except in the N.W. corner. If visibility permits, conditions will be suitable for carrier aircraft operations.

23 June area.

Extends from 45°-30'W to 52°-00'W, and 200 miles to north and south of latitude 44-20 N.

The GRAND BANKS occupy the western half of this area north of Latitude 43°N. Except for VIRGIN ROCKS in the northern part of the area there are no shoals to interfere with the navigation of surface ships. Inside the 100 fathom curve, the submerged operations of submarines may be hampered by shoals. If an engagement occurs on the banks the waters will be suitable for moored mines.

This is an area of fogs. In the northwest corner fogs occur about 65% of the time, gradually decreasing toward the southeast.

Winds blow from all quarters but prevail from the westward. Average force is 4.

Icebergs are frequent during June in the northeastern part, north of Latitude 45°-30'N.

In favorable visibility carrier aircraft may operate.

Surface vessels and submarines will be restricted in the northern part by ice.

24 June area.

Extends from Longitude 52°-00 W to Longitude 59°-00 W and 200 miles north and south of Latitude 44-20 N.

The south coast of NEWFOUNDLAND and outlying shoals occupies the northern part of the area above Latitude 46-30. The French Islands of ST. PIERRE and MIQUELON over which belligerent aircraft may not fly are in Lat. 47-00 N. Long. 55-30 W. The RED Fleet should pass into deep water about 0800 and again cross the 100 fathom curve about 2200. Except in the extreme north there are no dangerous shoals.

The high percentage of fog decreases toward the southwest from the northeast corner of the area, but will remain above 40% until the RED Fleet has reached about its 1600 position on its track.

Winds blow from any quarter with an average force of 4. Westerly winds bring clearing weather.

Drift ice of all kinds from the GULF OF ST. LAWRENCE may be expected to the northeast of a line dividing the area from the northwest to the southeast corners.

With suitable visibility carrier aircraft may fly without difficulty. Ship based aircraft may be interfered with by drift ice. Surface vessels and submarines may be restricted by ice conditions also.

25 June area.

Extends from Long 59°-00 W to CRIMSON Coast, and 200 miles north and south of Lat. 44-20 N.

The northwestern part of this area contains NOVA SCOTIA, CAPE BRETON ISLAND and part of the GULF OF ST. LAWRENCE. SABLE ISLAND is in the eastern part of the area about 50 miles south of the RED track. Except in the southern part there is less than 100 fathoms. There are shoals in the vicinity of SABLE ISLAND and near the CRIMSON Coast.

Winds and weather are the same as in the 24 June area.

Ice conditions are not serious.

With good visibility there should be no restriction upon the operations of aircraft or surface vessels. Submerged submarines may have difficulty with shoal spots.

In the entire theater sunrise is at 0400, Sunset at 1930. Twilight exists 2 hours. There is no moonlight.

The advance of the RED Fleet will continually bring it closer to its destination - HALIFAX.

At the nearest point - the BLUE Fleet will be about 600 miles from its nearest base.

HALIFAX has been prepared in every way to receive the RED Fleet.

(e) Information.

1. Information available to either belligerent.

All information of the BLUE Fleet and other vessels of the BLUE Navy is set forth under the Summary of the Situation.

It will be noted particularly that there is no report of the sailing from any BLUE port of an expeditionary force.

The departure of the BLUE Fleet on 20 June is evidence that BLUE is aware of the sailing of the RED Fleet. BLUE probably knows its approximate strength also. The preparations for the reception of the fleet at HALIFAX are probably known, but it is possible that BLUE may be in some doubt as to the destination of the RED Fleet since it is reported that BLUE submarines have been despatched to the STRAITS of BELLE ISLE for observation duty. The fact that no other RED forces are available to support the RED Fleet is probably known to BLUE.

2. Means of obtaining and denying information.

Since both fleets are at sea, it is probable that neither C-in-C will receive information of the enemy fleet except by radio direction finding from ship or shore stations, radio interception

and cryptoanalysis, reports originating from neutral merchant vessels and by scouting operations. If the BLUE Fleet is observed from the CRIMSON Coast valuable information may be reported. RED spies may report the departure of a BLUE expeditionary force. Reports of weather conditions in the vicinity of CRIMSON and NEWFOUNDLAND may be expected.

Foggy weather may prevent the observation of either fleet by the scouting operations of the other, but may increase the probability of radio intelligence. Both fleets will probably use low power and high frequency for radio communication.

3. Communication facilities.

Each fleet has the usual radio and visual communication facilities between ships, and radio between ship and shore. CRIMSON and NEWFOUNDLAND shore facilities are available to RED.

(f) Armed Forces.

1. Composition.

The type and numerical strength of RED and the type and approximate strength of BLUE are listed.

RED	Type	BLUE
12	BB	15
3	CC	
7	CA	About 6
4	CL (large)	4 or 5
6	CL (small)	7 to 10
7	DL	About 4
56	DD	About 48
11	SS	Number not known
3	CV	2
30	VO	45
38	VS (ship)	66 to 80
36	VS (carrier)	40
54	VF	54
36	VB	36
36	VT	18

2. Material characteristics.

The characteristics, except fuel capacity and cruising radius, of the ships of the RED Fleet and of the ships or types of the BLUE Fleet expected to be present, have been tabulated.

The data for the RED Fleet is accurate except for the life factor. That for the BLUE Fleet may be in error, particularly in regard to speed, life and gun ranges.

Available data on fire effect of BLUE on RED and RED on BLUE probably are in error. To use inaccurate data for the determination of the ranges of deck or side penetration would lead to false conclusions. The available fire effect data will, therefore, be disregarded in the comparison of forces.

Capital Ships.

12 RED BB and 3 RED CC are opposed to 15 BLUE BB.

RED battle line speed is limited to 19.5 knots by the formation speed of Batdivs I and II. Batdiv III can maintain a formation speed of 21 knots and Batdiv IV, 21.5 knots. The three CCs, if employed as a detached wing can maintain a formation speed of 27 knots, while individually the CCs can make about 31 knots.

The maximum speed of the slowest BLUE BB is reported to be 19.6 knots, which would limit the BLUE battle line speed to not more than 18 knots. Eight BLUE BB can make about 21 knots, permitting a maximum formation speed of a BLUE detached wing of about 19 knots.

The RED BB and CC have a total life estimated as 244.2 compared with a total estimated life of the BLUE BB of 255.6. CC-2 and 3 with estimated lives of 12.5 each are definitely vulnerable. BLUE BB-33, 34 and 35 are comparatively weak with estimated lives of about 15.5. The remaining RED and BLUE capital ships average 16.9 and 17.4 respectively.

The RED capital ships carry 100-15" and 18-16" in their main batteries. BB-19 and 20 with 9-16" each have a range of 38,000 yards. These two ships have no stern fire. CC-4 has a range of

29,000 yards. All other RED capital ships range 23,000 yards only.

The BLUE BB carry 12-12", 124-14" and 24-16". Twelve BLUE BB range 33 or 34,000 yards. BB-33 with 12" guns and BB-34 and 35 with 14" guns are reported to range about 23,000 yards. Possibly the gun range of BB-34 and 35 has been increased. BB-33, however, being old probably cannot fire beyond 23,000 yards.

Although the visibility in the theater of operations may not exceed 23,000 yards, after fire is established within the range of visibility, BLUE will have 12 or 14 ships that can continue fire with air spot above 23,000, while RED will have only three.

Under 23,000 yards all capital ships can engage, BLUE opposing 160 major caliber guns to RED's 118. BLUE's preponderance in number of guns may be outweighed by RED's superior gun caliber in 13 ships. The weight of metal per broadside compares RED 228,864, BLUE 234,400. Inside of about 22,000 yards, or 1000 yards inside of the visibility, there may be no marked advantage in one side or the other.

Secondary batteries compare as follows:

RED BBs carry 144-6" guns - 72 on a side, with a range of 22-23,000 yards. The CCs carry 30-4", 14,000 yards and 12-5"5, 16,000 yards. The BBs can engage any ship, 1000 yards inside of visibility using top spot. The CCs have the weakest secondary batteries.

The BLUE BB carry 192-5" - 86 on a side, range 15-17,000 yards. Although good batteries for use against light forces within range, they are not as effective against capital ships as the 6" guns of the RED BB and CC.

Thirteen RED capital ships have a standard AA battery of 4-4" with 15,000 yards. BB-19 and 20 have 6-4"7 with 18,000 yards. Twelve BLUE BB have standard AA batteries of 8-5" range 14,000 yards. BB-33, 34 and 35 have 8-3" AA guns 10,000 yards range. The BLUE AA batteries are generally superior to those of RED. Considering AA fire only, RED BB-19 and 20 will be the most difficult target

for BLUE air attack, and BLUE BB-33, 34 and 35 will be the best targets for RED.

RED capital ships carry 192 type A torpedoes. Thirty-eight may be fired on a broadside without reload. BLUE BB carry no torpedoes. If BLUE presents a 45° target angle RED may fire torpedoes at 23,000 yards, or at the probable limit of visibility.

RED capital ships carry 30 VO and BLUE 45 VO. Each will probably have sufficient aircraft for spotting, while BLUE's superiority may permit other employment for these planes.

Summarizing, numbers of capital ships are equal making any concentration artificial. RED probably has a 2 knot battle line speed superiority. RED has ships available for a detached wing. BLUE has a probable superiority in life and RED has two soft ships. Inside of visibility main batteries may be considered equal. If the battlelines draw out of visibility after fire has been established, BLUE has a great superiority in his numerous long range ships. RED secondary batteries are superior in hitting power and range. BLUE has a much superior aircraft defense. RED has a most effective torpedo battery and BLUE has none. BLUE is superior in VO, but at visibility ranges, air spot is not necessary.

Heavy Cruisers.

RED has 7 CA. BLUE has about 6. There may be equality in numbers. The identity of the BLUE CAs is unknown, but they may be considered to be of the latest type.

RED Crudiv I has a formation speed of 28.5 knots and Crudiv II has a formation speed of 27.5 knots. The BLUE cruisers have a formation speed of 28.5 knots.

The lives of the BLUE and RED CAs are approximately equal. The number of ships in the BLUE divisions will determine the relative lives of the CA divisions opposed to each other.

RED CAs carry 8-8" guns - range 27,000, and the BLUE CAs 9-8" guns, range 34,000 yards. The difference in gun range will not affect the relative strength under the probable weather conditions.

Ship for ship BLUE is superior in main battery guns. A RED 4 ship division will be superior to a BLUE 3 ship division.

RED CAs carry 4-4" AA guns - range 15,000 yards to BLUE 8-5" AA guns, 14,000 yards. These are also secondary battery guns. BLUE is, therefore, superior to RED in aircraft defense, and in secondary battery fire, even if 3 BLUE CA oppose 4 RED CA.

RED Crudiv I carries 24 type A torpedoes and Crudiv II carries 32. Crudiv I can fire 12 torpedoes and Crudiv II, 16 torpedoes from each side at a range of 23,000 yards if the target presents a 45° target angle. BLUE CA carry no torpedoes.

The RED CA carry 14 VS while the BLUE CA carry probably 24 or more VS, depending upon the number of CAs present. Adequate aircraft for spotting are available for air spot for the CAs of BLUE and RED. BLUE, however, has a reserve for scouting or other duties.

Summarizing, RED and BLUE CAs may be equal in numbers. They are about equal in formation speed. With equal numbers of CAs, BLUE is superior in main battery guns. A 4 ship division of either force will be superior to a 3 ship division of the other force. BLUE AA and secondary battery fire is superior to RED even with RED superiority in numbers. RED has an effective torpedo battery while BLUE has none. BLUE is superior in aircraft, but all CAs are adequately supplied for spotting. Both BLUE and RED CAs can continue fire established inside of visibility to ranges at which indirect fire is profitable.

Light Cruisers

RED has 4 large and 4 small CLs exclusive of the CLs used as squadron flagships.

BLUE has 4 or 5 large CLs and 7 to 10 small ones.

Two of the latter may be with the destroyer flotillas.

Large CLs

The RED large CLs have a formation speed of 28.5 knots to BLUE's formation speed of 28.5 knots.

Individual lives compare 4.3 for RED to 4.7 for BLUE. BLUE may have a slight advantage if 4 RED are opposed to 4 BLUE CL. If BLUE has 5 CL in divisions of 2 and 3 each, the RED division will be superior to either but not both.

Each RED CL carries 12-6" with 23,000 yards to BLUE's 15-6" with 26,000 yards range. If 5 or 4 BLUE CL are opposed to 4 RED CL, BLUE will be superior. Three BLUE CL will be about equal to 4 RED CL. Four RED CL will be superior to 2 or 3 BLUE CL. BLUE's superior range will permit gunfire to continue with airspot, beyond visibility.

BLUE CL, with 8-5" AA guns are superior in aircraft defense to RED CL with 4-4" AA.

Each RED Crudiv carries 42 Type A torpedoes, with 16 on a side, and the same range advantage as the capital ships and CA.

The RED CL carry 16 VS to the 24 to 30 carried by BLUE. Both RED and BLUE have a useful excess over planes required for spotting, but BLUE's excess is the greater.

Summarizing, BLUE may be superior in the number of large CLs. Ship for ship, lives are about equal. Regardless of the number of BLUE CL, BLUE is superior in 6" guns and AA guns.

BLUE has a range advantage outside of visibility.

RED has an effective torpedo battery while BLUE has none. BLUE has a larger reserve of aircraft.

Small CLs

RED has 4 in one division. BLUE has 7 to 10. Two may be with the destroyers, and it seems probable that there will be 2 divisions of four each.

The RED and BLUE small CLs compare as follows:

RED formation speed 28.5 knots; BLUE 29 knots.

RED individual life 3.7; BLUE 3.7.

RED battery 8-6" - 23,000 yards range; BLUE 10-6" - 18 to 23,000 yards range, but only 7 guns on a side.

RED CL carry 4-4" AA to 4-3" carried by BLUE CL.

RED Crudiv V carries 32 Type A torpedoes with 16 ready on a side, while four BLUE CL carry 40 Type G torpedoes with 12 on a side ready to fire. The RED torpedoes have a range advantage, over the BLUE, but the BLUE torpedoes having variable speed are more effective at short range.

Both RED and BLUE CL carry 2 VS each, which are adequate for spotting. Since aircraft spotting is not essential at the usual gun ranges of these ships, all aircraft may be used for other purposes than spotting.

Summarizing - BLUE will probably be superior in small CL, 2 to 1.

Formation speeds are about equal.

Individual lives are about equal.

A BLUE division of 4 ships is superior in total 6" guns, but has fewer guns on a side than RED. RED has a small range advantage, which probably cannot be used effectively.

RED has the more effective AA batteries.

A RED division has a larger torpedo power on a side and a longer range torpedo.

A RED and BLUE division are equal in VS.

BLUE CL are sometimes equipped with mines.

Destroyers

The RED destroyer force consists of 2 CL, 7 DL and 56 DD. BLUE is reported to have about 4 squadrons of destroyers.

A squadron of BLUE DD normally consists of one DL and three 4 boat divisions. Squadrons frequently have only two divisions, and occasionally have 4. There are known to be 2 CL with the BLUE destroyer force during peacetime. The type of BLUE DD were not reported.

To have some basis of comparison, it will be assumed that the BLUE destroyer force consists of 2 small CL, 4 DL, 24 new DD and 24 World War type DD.

The characteristics of the BLUE CL are as given under Light Cruisers. The RED CLs are small vessels, 29 knots, life of about 2.7, 5-6" guns, 23,000 yards range, a small AA battery, 4 Type A torpedoes on a side, and no aircraft. They are much inferior to the BLUE CL, and are probably inferior at short range to the BLUE DD. Except for having no aircraft, however, they are suitable for their assigned duties.

Six RED DD will be assigned as carrier plane guards. It is probable the BLUE will assign 4 old DD to the same duty. It seems profitable, therefore, to compare the DL and DD of the RED First Squadron, less 6 DD, with 2 squadrons of new BLUE DL and DD, and to compare the RED Second Squadron with 2 squadrons of old BLUE DD.

	RED 1st Squadron	BLUE(New)	RED 2nd Squadron	BLUE (Old)
Number	4 DL - 26 DD	2 DL - 24 DD	3 DL - 24 DD	2 DL - 20 DD
Form.Speed	32	32.5	31	28
Life	39.0	33.6	35.1	29.0
Guns - Range	120-4"7(14000)	136-5"(16000) (high angle)	108-4"7(14000)	16-5"(16000) 80-4"(13000)
Torpedoes-Type	240 Type A	320 Type G	216 Type A	24 G - 240 C
Tubes - one side	240	208	216	144

Both BLUE and RED DL and DD have effective 50 cal. AA batteries, and all carry a moderate number of depth charges for anti submarine screening.

Summarizing - the RED first Squadron and the new BLUE DD squadron are about equal in speed. RED probably has superior life. BLUE is superior in gun battery and range. BLUE has more torpedoes but the RED squadron has longer range torpedoes by 2,000 yards.

The RED Second Squadron is superior to the squadrons of old BLUE DD in numbers and speed.

Lives are about equal.

RED has a superior number of guns, and except for the 5" guns of the BLUE DL have larger guns and a small range advantage. BLUE has a superior number of torpedoes, but RED has longer range torpedoes - exceeding the type G by 2,000 yards and the Type C by 3,500 yards.

RED has more torpedoes that may be fired simultaneously, unless BLUE is able to fire curved fire ahead.

The new BLUE squadrons are generally superior to either RED Squadron, while either RED squadron is generally superior to the old BLUE Squadron.

Considering torpedo power only, RED DDs have 456 long range torpedoes which may be fired on either broadside. BLUE has 352 of shorter range which may be fired on either broadside, and 584 which may be fired with curved fire ahead.

Although no light mine layers were reported with the BLUE Fleet, it is possible that some of the DDs reported may be light mine layers.

Submarines

RED has 11 submarines.

BLUE has submarines present, but the type and number are unknown. A sufficient number may be expected to be present to offer a constant threat to RED. The actual number is not important.

The type of RED submarines present compare with the most modern BLUE types as follows:

RED		BLUE
11	Number	?
17.5/9	Speed	19/8
.8	Life	.8
1-4"	Guns	1.3"
14	Range	10
8 Type G	Torpedoes	16 Type H
6	Bow Tubes	4
2	Stern Tubes	2

Although the RED submarines appear to have slightly greater submerged speed and more torpedoes ready to fire than BLUE, the relative strength of the submarines in a general engagement depends upon their tactical employment, and superiority may rest with either fleet.

Aircraft

It is assumed that the BLUE Carriers present are one of the SARATOGA class and the RANGER.

BLUE CV-3, with 8-8" guns, a life of 15.5 and a speed of 33 knots may be an effective heavy cruiser after her aircraft are expended. She also has an AA battery of 8-5", with 14,000 yards range.

BLUE CV-4 has only 29.3 knots, a life of 5.6 and the same AA battery as the CV-3.

The three RED CV, are inferior in speed by 2 knots to BLUE CV-3, and superior by nearly 2 knots to BLUE CV-4. RED CV-2, 3 have an AA battery of 16-4"7 guns and no other secondary battery. These are unusually strong AA batteries, and are far superior to that of RED CV-4, which has only 6 4"7 AA guns, although it has 10-5"5 secondary battery guns.

RED Carrier superiority lies in the fact that 3 flight decks are available to two for BLUE. Its weakness lies in the weak AA battery of CV-4.

It is not known definitely what aircraft squadrons are embarked on the BLUE Carriers, but it is assumed that they are the same as are usually embarked in peacetime.

On this basis, carrier planes compare as follows:

BLUE		RED	
54	VF	54	(18 F2F-1, 18 F3F-1, 18 FF-1)
	VS	12	SU-4
40	VSB	36	SBU-1
18	VB	24	(12 BM-2, 12 BG-1)
18	VBF		
18	VTB	36	(24 TG-2, 12 TBD-1)
148		162	

Models of BLUE planes are unknown, but it is assumed that they will have adequate fuel capacity and speed; that the VSB may carry 1-500 lb bomb, that the VBs may carry 1-1000 or 1-500 lb bomb;

that the VBF may carry 1-500 lb bomb and that the VTB may carry one torpedo, 3-500 lb bombs or 1-1000 lb bomb. Any of these may be replaced with gas bombs or sprayers.

The BLUE large planes may be loaded as follows:

112-500 lb bombs

or

40-500 lb and 36-1000 lb bombs

or

40-500 lb, 18-1000 lb, and 18 torpedoes

or

any of the above may be replaced by 116 lb bombs or gasbombs or sprayers.

The RED large planes may be loaded as follows:

168-500 lb bombs

or

36-500 lb and 60-1000 lb

or

36-500 lb, 24-1000 lb and 36 torpedoes.

Any of these may be replaced by 116 lb bombs or gas bombs or sprayers.

Summarizing - In Carrier based aircraft therefore RED appears to have an advantage of carrier decks, and air striking power.

An advantage that will accrue to BLUE lies in the comparatively weak AA batteries of the 13 RED capital ships, all RED cruisers and the RED CV-4.

In ship based aircraft the fleets compare as follows:

RED		BLUE
30	VO	45
38	VS	about 64.

Both forces have adequate aircraft for spotting. If an engagement is fought inside of visibility air spot may not be necessary. BLUE has a preponderance of VS and VO available for anti submarine patrol, tactical scouting, straffing light vessels or other combat purposes.

3. Condition.

The RED Fleet is in good material condition and ships bottoms are clean. Lacking contrary information, it must be assumed that the BLUE Fleet is in like condition.

4. Disposition.

The RED Fleet is now in a cruising disposition with a defensive screen. Since there is a possibility of BLUE air activity against the RED Fleet on 22 June, a change in the disposition to provide for that contingency will be taken on 22 June. On 23 June and after, the RED Fleet must be disposed for the possibility of fleet action.

It must be assumed that BLUE carriers possibly supported by heavy cruisers may be in a position to search for and attack any exposed units of the RED Fleet on 22 June. It appears probable that the BLUE Main Body will be in a cruising disposition to the westward of RED 0400 - 23 June position. BLUE submarines may be encountered any time after that.

(g) Logistic Support.

1. Availability and Adequacy.

The RED Fleet is endeavoring to make 12 knots good on the passage to HALIFAX. The run is well within the cruising radius of all forces at that speed. However, a southerly course rather than a great circle course has been chosen partly to permit the refueling of destroyers at sea enroute. This practice has been pursued since departure and will continue through 22 June. All ships will have ample fuel by 23 June to employ high speeds during a day action, and reach HALIFAX. Ample fuel is available in both HALIFAX and ST. JOHNS.

The BLUE Fleet probably has no serious fuel problem to consider.

Ammunition and other military supplies are adequate.

Necessary shore base facilities are available at HALIFAX.

2. Limitation imposed by Logistics.

The freedom of action of the RED Fleet will not be restricted by logistic requirements.

Tac. Prob. IV-1937-SR

BLUE SHIPS DATA

TYPE		BB	BB	BB	BB	BB	BB	BB	CV	CV	CA	CL	CL	DL	DD	DD	SS
NO		33	34,35	36,37	38,39	40,41, 42	43,44	45,46, 48	3	4	?	?	?	?	?	?	?
SPEED		20.4	19.7 20.2	20.2 19.6	20.8 20.7	21	21	21	33	29.3	32.5	33	32.5	36.5	36.5	32	14-19 8-8.5
LIFE		15.3	15.5	16.1	17.2 17.1	17.3	17.7	18.5	15.5	5.6	4.7	3.7	4.7	1.5	1.4	1.3	.7 to 1.0
MAIN BATTERY	No/Cal.	12-12"	10-14"	10-14"	12-14"	12-14"	12-14"	8-16"	8-8"		9-8"						
	One Side	12	10	10	12	12	12	8	8		9						
	Max. Range	23	22	33	33	34	34	33	30		34						
SECONDARY BATTERY	No/Cal.	16-5"	16-5"	12-5"	12-5"	12-5"	12-5"	12-5"				10-6"	15-6"	8-5"	5-5"	4-4"	4" to 6"
	One Side	8	8	6	6	6	6	6				7	15	8	5	3	
	Max. Range	15	15	17	17	17	17	17				18 22	26	16	17	13	13 to 22
ANTI-AIR BATT	No./Cal.	8-3"	8-3"	8-5"	8-5"	8-5"	8-5"	8-5"	12-5"	8-5"	8-5"	4-3"	8-5"			1-3"	3"
	Range	10	10	14	14	14	14	14	14	14	14	10	14			7	10
TORPS Total No.												10 G		16 G	12 G	12 C	12 to 36 G
TORPEDO TUBES	On Broad-side											3		8	8	6	Bow 4
	Deck						# Some have 8 tubes					6		8	12#	12	Stern 2
	Submgd																6
DEPTH CHARGES														16	16	24	
AIRCRAFT	VF(L)								18	36							
	VB(L)									18							
	VTB(L)								18								
	VOS(S)	3	3	3	3	3	3	3									
	VSO(S)										4	2	6				
	VSB(L)								20	20							
	VBF(L)								18								

L land planes
S sea

Tac. Prob. IV - 1937 - SR

RED FLEET

UNIT		BATDIV I	BATDIV II	BATDIV III	BATDIV IV	BATCRURON I	CRURON I	CRURON II	CRURON IV	CRURON V	AIRONS			SUBFLO I	SUBFLO III	FIRST DESRON			SECOND DESRON		
No. in Unit		3BB	3BB	3BB	3BB	3CC	3CA	4CA	4CL	4CL	1CV	1CV	1CV	6SS	5SS	1CL	4DL	32DD	1CL	3DL	24DD
Ship No.		13, 14, 15.	16, 17, 18.	19, 20, 9.	10, 11, 12.	2, 3, 4.	47, 48, 49.	43, 44 45, 46.	69, 70, 71, 72.	57, 58, 59, 60.	2	3	4	47, 48, 49, 50, 51, 52.	53, 54, 55 56, 57.	19	22, 23, 24, 25.		24	20, 21, 26.	
FORMATION SPEED		19.5	19.5	20	20.5	27	28.5	27.5	28.5	28.5	31*	31*	31*	17.5/9	17.5/9	29*	32	32	29*	32	12-32 12-31
LIFE		48.8	48.3	54.6	49.8	42.7	13.8	18.4	17.2	14.8	7.2	7.2	7.2	4.8	4.0	2.7	5.2	41.6	2.7	3.9	31.2
MAIN BATTERY	No/Cal	24-15"	24-15"	18-16" 8-15	24-15"	20-15"	24-8"	32-8"													
	One Side	24	24	26	24	20	24	32													
	Max. Range	23	23	38 23	23	23 29	27	27													
SECONDARY BATTERY	No/Cal	36-6"	36-6"	36-6"	36-6"	30-4" 12-5.5"			48-6"	32-6"			10-5.5"	6-4"	5-4"	5-6"	16-4.7"	128-4.7"	5-6"	12-4.7"	96-4.7"
	One Side	18	18	18	18	30			48	32			5	6	5	5	16	128	5	12	96
	Max. Range	22	22	23 22	22	14 16			23	23			16	14	14	23	14	14	23	14	14
ANTI-AIR BATT.	No/Cal	12-4"	12-4"	12-4.7 4-4"	12-4"	12-4"	12-4"	16-4"	16-4"	16-4"	16-4.7"	16-4.7"	6-4"			2-3"	4-3"	32-3"	2-3"	3-3"	12-3"
	Range	15	15	18 15	15	15	15	15	15	15	18	18	15			11	11	11	11	11	11
TORPS	Total No	36A	36A	36A	36A	48A	24A	32A	32A	32A				72G	40G	8A	32A	256A	8A	24A	192A
TORPEDO TUBES	On Broad-side	5	6	3	3	9	12	16	16	16				36 Bow	30 Bow	4	32	256	4	24	192
	Deck					12	24	32	32	32				16 Stern	10 Stern	8	32	256	8	24	192
	Submgd	10	12	6	6	8								48	40						
DEPTH CHARGES																	48	384		36	288
AIRCRAFT	VF(L)										18	18	18								
	VB(L)										12		12								
	VTB(L)										12	12	12								
	VOS(S)	6	6	6	6	6															
	VSO(S)						6	8	16	8											
	VS(L)										12										
	VSB(L)											24	12								

*Max. Sp

L land planes
S sea "

Complete Set 2110-D

3448-1591
2-8-37

TACTICAL PROBLEM IV-1937-SR.

MANEUVER DETAIL

Director		Captain Spruance
Assistants for:		
Operations and Moves		Comdr. C.J. Moore
Master Plot, Torpedoes		Comdr. McMillin
Aide		Mr. Wilson
Air		Captain Turner
Aide		Major Kunz, U.S.A.
Communications and History		Comdr. Burrough
Umpires		
Moves:	BLUE	Comdr. Hoogewerff
	RED	Lt.Col. Peck, U.S.M.C.
Communications and Gunfire		
Recorders:	BLUE	Comdr. Gibson
	RED	Major Bruce, U.S.A.
Chief Scorer		Lt.Comdr. Thurber
Assistants		Capt. Van Patten (SC)
		Capt. Hartigan
		Major Pfeiffer, U.S.M.C.
		Lt.Comdr. Schumacher (CC)
		Comdr. Helm (MC)
		Comdr. Umsted
		Major Kendall, U.S.M.C.

3448-1591
2-8-37

TACTICAL PROBLEM IV-1937-SR.

BLUE PLAYER DETAIL - Section I.

		Room No.
O.T.C. and Combatline	Capt. Beauregard	254
Chief of Staff	Comdr. Bryan	254
Aide for Communications	Comdr. Eaton (MC)	254
Aide for Plotting	Comdr. Thomas	254
Comdesrons Three, Five less Desdiv 14.	Comdr. Powell	254
Comdr. R.F. Cruisers & Crudiv 2	Comdr. Van Metre	153
Comcrudiv 6	Comdr. Williams	153
Comdr. L.F. Cruisers & Crudiv 3	Comdr. ~~Capt.~~ Underwood	154
Comcrudiv 7	Lt.Col. James, U.S.M.C.	154
Comdr. Center Cruisers & Crudivs 4, 5	Comdr. Ramsey	155
Comdr. R.F. Destroyers	Comdr. Magruder	153
Comdr. L.F. Destroyers	~~Comdr.~~ Capt. Smeallie	154
Comdr. Air Force and C.O. CV-3 & DDs 222, 223	Comdr. Dresel	250
Aide	Lt.Col. King, U.S.A.	250
C.O. CV-4 & DDs 224, 225	Comdr. Causey	246
Aide	Major Goodman, U.S.A.	246
Comdr. Subs	Comdr. Read	242

The game will commence as a chart maneuver.

Weather: Wind NW, Force 2, Barometer 29.20. Visibility 20,000 yards, increasing to 22,000 yards by 0600. Ceiling unlimited.

Movements of all surface craft present with the O.T.C. will be covered by the flimsy submitted by the O.T.C.

Aircraft flight forms and air flimsies will be submitted by each task force, whether present with the O.T.C. or detached which has aircraft in the air. (See memorandum of 4 January,1937).

Each CV will submit flight forms and flimsies for aircraft in the air.

Aircraft moves will be lettered, and surface vessel and submarine moves numbered. They may or may not, be of the same length.

Each submarine unit will submit a flimsy.

Moves 1 and A will be 2 hours in length; from 0400 to 0600 24 June.

Chart H.O. Miscel. 2838 will be used for plotting. This chart with the position of the task force concerned plotted on it will be furnished in the assigned rooms. On account of the layout of the maneuver board, minutes of latitude and minutes of longitude will be equal.

3448-1591
2/8/37

TACTICAL PROBLEM IV-1937-SR

File
SECRET

BLUE - SECTION I

BLUE Fleet
BB-38; Flagship

Battle Plan
No. 1

Latitude 45-00 N.
Longitude 58-00 W
23 June 19--; 1900

TASK ORGANIZATION

(a) Battle Line (4)
Batdivs One, Two, Three, Four
Desron Three, less Div. Eight, Desron Five less
Desdiv Fourteen

(b) Cruisers Right Flank (5) Vice Admiral B5
Crudivs Two, Six

(c) Cruisers Left Flank, (6) Rear Admiral B-11
Crudivs Three, Seven

(d) Destroyers Right Flank (7) Rear Admiral B21
Desflo One less Desron Three, Desdiv Six

(e) Destroyers Left Flank, (8) Rear Admiral B32
Desflo Two less Desron Five, Desdiv Twelve

(f) Center Force (9) Rear Admiral B24
Crudivs Four, Five
Desdiv Six, Eight, Twelve.

1. Information. No further information.
Assumptions. That RED Battle Line will have superior speed. That RED submarines will operate independently. That visibility may not be over twenty-three thousand. That BLUE Battle Line may find favorable range band between twenty-three thousand and thirty-three thousand. That indirect fire is practicable. That RED capital ships have torpedoes. That RED may employ Detached Wing.

2. This Force will:-
Phase One- Reduce the strength of the enemy battle line and detached wing by gunfire at ranges between twenty-three thousand and thirty-three thousand.
Phase Two - Destroy enemy battle line and detached wing at ranges between seventeen thousand and twenty-three thousand by gunfire of capital ships supported by light force and air attack
in order to defeat RED Fleet and in order to contribute to destruction of RED Fleet.

3. (a) Battle Line (Four) Phase One - Engage enemy battle line and detached wing by gunfire at ranges between twenty-three and thirty-three thousand. Use indirect fire with plane control as necessary.
Phase Two - Engage enemy battle line and detached wing at ranges between seventeen and twenty-two thousand. Plane spot. Deny by movement of detached division undue threats of enemy detached wing.
(b) Cruisers Right Flank - Phase One - Repel enemy
(c) Cruisers Left Flank
light force attack. Phase Two - Support destroyer attack on enemy battle line. In both phases engage enemy cruisers that expose themselves. Planes scout tactically and bomb enemy destroyers.

RED has more torpedoes that may be fired simultaneously, unless BLUE is able to fire curved fire ahead.

The new BLUE squadrons are generally superior to either RED Squadron, while either RED squadron is generally superior to the old BLUE Squadron.

Considering torpedo power only, RED DDs have 456 long range torpedoes which may be fired on either broadside. BLUE has 352 of shorter range which may be fired on either broadside, and 584 which may be fired with curved fire ahead.

Although no light mine layers were reported with the BLUE Fleet, it is possible that some of the DDs reported may be light mine layers.

Submarines

RED has 11 submarines.

BLUE has submarines present, but the type and number are unknown. A sufficient number may be expected to be present to offer a constant threat to RED. The actual number is not important.

The type of RED submarines present compare with the most modern BLUE types as follows:

RED		BLUE
11	Number	?
17.5/9	Speed	19/8
.8	Life	.8
1-4"	Guns	1.3"
14	Range	10
8 Type G	Torpedoes	16 Type H
6	Bow Tubes	4
2	Stern Tubes	2

Although the RED submarines appear to have slightly greater submerged speed and more torpedoes ready to fire than BLUE, the relative strength of the submarines in a general engagement depends upon their tactical employment, and superiority may rest with either fleet.

(d) Destroyers Right Flank Phase One - Repel enemy
(e) Destroyers Left Flank destroyer attack. Phase Two - Attack enemy battle line with torpedoes.
(f) Center Force - Join flank forces as may be directed by O.T.C. upon deployment as per Battle Disposition. Annex A.On order lay airplane smoke curtains.
(x) Smoke will be used when directed by OTC, except that destroyers attacking in Phase Two may use smoke at discretion of attacking commander. This plan will be placed in effect by despatch. The beginning of Phase Two will be indicated by despatch. Phase One begins with opening of capital ship gun fire. Battle Disposition in Annex A. Commander Cruisers each flank coordinate after deployment activities all light forces that flank.

4. ------

5. Communication Plan "A". O.T.C. in BB-38 with Battle Line.

Admiral BLUE Navy
Commander-in-Chief.

ANNEXES
A Battle Disposition
B Communication Plan "A"

Distribution:

By despatch boat prior to 2100, 23 June
To all Units Commanders and C.O. in company with flag.
Excerpts by radio to
Commander AIR FORCE
Commander Submarines.

Commander, Flag Secretary.

3448-1591
2/8/37

TACTICAL PROBLEM IV-1937- SR.

BLUE

File
SECRET

BLUE Fleet
BLUE BB-38, Flagship

Operation Order
No. 2

Latitude 45-00 N.
Longitude 58-00 W
23 June 19--; 1900

TASK ORGANIZATION
(a) Air Force (1) Rear Admiral B-10
CV-Three, Four
Desdiv Fourteen
(b) Main Body
Batdivs One, Two, Three, Four
Crudivs Two, Three, Four, Five, Six, Seven
Desflos One, Two less Desdiv Fourteen
(c) Submarines, Captain DC
Subdivs One, Two.

1. RED Fleet may be contacted in force on twenty-four June.

2. This force will reduce the strength of the enemy battle line by bombing immediately after it has been located, will attack enemy carriers, will attack enemy heavy ships with submarines at every opportunity, and will engage the enemy Main Body by a decisive daylight action with all forces, in order to destroy the RED Fleet.

3. (a) Air Force reduce speed of battle line by bombing immediately after it has been located. Destroy flight decks of enemy carriers. Support light force attack on enemy battle line. Deny or minimize enemy air attack with force available at the time.
(b) Main Body destroy enemy battle line and detached wing by decisive daylight action. Battle Plan Number One in Annex A. Locate RED Fleet by scouting in accordance with Scouting Plan - Annex B. Be in position Latitude forty-five degrees thirty minutes North, Longitude fifty-eight degrees at zero four hundred on twenty-four June, speed nine course one hundred twenty. Cruising Disposition - Annex C. Approach Disposition - Annex D.
(c) Submarines report information of enemy until dawn. After dawn avoid detection and attack enemy heavy ships, primary objective battleships or battle cruisers. If unable to gain position ahead of enemy battle line, follow enemy battle line to be in position should enemy make radical changes of course. Be in position on scouting line two hundred ten degrees true, northernmost scout in Latitude forty-five degrees forty minutes North, Longitude fifty-seven degrees West at zero four hundred on twenty-four June, course one hundred twenty, speed ten, distance five.
(x) Commander-in-Chief will keep task forces informed of position of enemy battle line and advise of commence of Phase Two.

4. -------

5. Communication Plan "A". Submarines will fire green smoke bomb as recognition signal. Plus three zone time. Rendezvous A - NARRAGANSETT BAY; B- NEW YORK; C- HAMPTON ROADS. Commander-in-Chief in BB-38 with Main Body.

Admiral, BLUE Navy
Commander-in-Chief.

3448-1591
2/8/37

Tac.IV-1937-SR.

Annexes:
A - Battle Plan Number 1
B - Scouting Plan
C - Cruising Disposition
D - Approach Disposition.

Distribution
All Unit Commanders and Commanding Officers
in company by despatch boat prior to 2100, 23 June
Commander Submarines, excerpts by despatch

B

Flag Secretary.

3448-1591
2-8-37

TACTICAL PROBLEM IV-1937-SR.

BLUE - SECTION I

ANNEX B TO BATTLE PLAN NO. 1.

SECRET

PART II - RADIO COMMUNICATIONS

1. Battle Radio-Frequency Plan, Appendix 1 hereto, effective with Battle Plan No. 1 and Operation Order No. 1.

2. Radio Direction Finders. For use with:

Air Force 1800 kcs

HB
Rear Admiral, BLUE Navy
Chief of Staff

Appendix 1. Battle Radio Frequency Plan.

Distribution: All Task Force and unit commanders and commanding officers.

TACTICAL PROBLEM IV-1937-SR.

(a) Task Force Commanders' Frequencies
For use between Commander-in-Chief and Task Force Commanders.

6323 kcs
7196 kcs
4105 and harmonics 8210, 12315, etc.

(b) Task Force Frequencies
For use between Task Force Commanders or Unit Commanders or Commanding Officers in their respective forces. (Alternate frequencies to be used in case of enemy interference).

Task Forces		Alternate
Battle Line	5195 kcs	5215 kcs
Center Force	5235 kcs	5255 kcs
Cruisers Right Flank	5275 kcs	5295 kcs
Cruisers Left Flank	5315 kcs	5335 kcs
Destroyers Right Flank	5355 kcs	5375 kcs
Destroyers Left Flank	5395 kcs	5415 kcs
Air Force	5435 kcs	5455 kcs
Submarines	5475 kcs	5495 kcs

(c) Unit Frequencies.
For use within units indicated. (Alternate frequencies to be used in case of enemy interference).

Units		Alternate
Battle Line		
Batdiv One	2000 kcs	2025 kcs
Batdiv Two	2050 kcs	2075 kcs
Batdiv Three	2100 kcs	2125 kcs
Batdiv Four	2150 kcs	2175 kcs
Desron Three less Desdiv Eight	2200 kcs	2225 kcs
Desron Five less Desdiv Fourteen	2250 kcs	2275 kcs
Center Force		
Crudiv Four	2300 kcs	2325 kcs
Crudiv Five	2350 kcs	2375 kcs
Desdiv Six	2400 kcs	2425 kcs
Desdiv Eight	2450 kcs	2475 kcs
Desdiv Twelve	2500 kcs	2525 kcs
Cruisers Right Flank		
Crudiv Two	2550 kcs	2575 kcs
Crudiv Six	2600 kcs	2625 kcs
Cruisers Left Flank		
Crudiv Three	2700 kcs	2725 kcs
Crudiv Seven	2750 kcs	2775 kcs
Destroyers Right Flank		
Desflo One less Desron Three and Desdivs Six, Eight	2650 kcs	2675 kcs
Destroyers Left Flank		
Desflo Two less Desron Five and Desdiv Twelve	2800 kcs	2825 kcs
Air Force		
CV Three	2850 kcs	2875 kcs
Four	2900 kcs	2925 kcs
Desdiv Fourteen	2950 kcs	2975 kcs
Submarines		
Subdiv One, Two	5000 kcs	5050 kcs

(d) Aircraft Frequencies
For use between Forces indicated and airplanes.

		Alternate
Battle Line	6575 kcs	6600 kcs
Center Force	3000 kcs	3025 kcs
Cruiser Right Flank	3050 kcs	3075 kcs
Cruiser Left Flank	4000 kcs	4025 kcs
Air Force	4050 kcs	4075 kcs

3448-1591
2-9-37.

TACTICAL PROBLEM IV-1937-SR

COMMUNICATION DISTRIBUTION

BLUE Fleet.

Distribution I - All Task Force Commanders and C-in-C, BLUE.

		Rm No
(a) C-in-C BLUE and Comdr Battle Line	Capt.Beauregard	252
(b) Comdr Cruisers Right Flank	Comdr Van Metre	153
(c) Comdr Cruisers Left Flank	Comdr Underwood	154
(d) Comdr Cruisers Center Force	Comdr Ramsey	155
(e) Comdr Air Force	Comdr Drexel	250
(f) Comdr Submarine Force	Comdr Read	242
(g) Comdr Destroyers Right Flank	Comdr Magruder	153
(h) Comdr Destroyers Left Flank	Capt. Smeallie	154
(i) C.O.- CV-4	Comdr Causey	246

Distribution II -

(a) C-in-C & Comdr Battle Line	Capt. Beauregard	252
(b) Comdr Right Flank Forces	Comdr Van Metre	153
(c) Comdr Left Flank Forces	Comdr Underwood	154
(d) Comdr Center Forces	Comdr Ramsey	155
(e) Comdr Air Force	Comdr Drexel	250
(f) Comdr Submarine Force	Comdr Read	242

Distribution III

(a) C-in-C & Comdr Battle Line	Capt.Beauregard	252
(b) Comdr Right Flank Forces	Comdr Van Metre	153
(c) Comdr Left Flank Forces	Comdr Underwood	154

Distribution IV

(a) C-in-C & Comdr Battle Line	Capt.Beauregard	252
(b) Comdr Air Force	Comdr Drexel	250
(c) Comdr Submarine Forces	Comdr Read	242

3448-1591
2-9-37.

TACTICAL PROBLEM IV-1937-SR

BLUE - Section I

REFERENCE BATTLE PLAN NUMBER ONE COMMA OPERATION ORDER NUMBER ONE COMMA SCOUTING PLAN PARAGRAPH SUBSIDIARY DIRECTIVES SCOUTING TRUE BEARING SECTOR ASSIGNMENTS CONTINUE FOR AIRCRAFT UNTIL ORDERS TO BEGIN TACTICAL SCOUTING ARE RECEIVED COLON PROVIDE AIRCRAFT LINKING PLANES WITHIN RADIO RADIUS AND HAVE SCOUTS INFORM ADJACENT SCOUTS OF ENEMY INTELLIGENCE BEFORE BEGINNING REPORT TO TASK FORCE COMMANDERS PERIOD EXPEDITIOUS RECOVERY RESERVICING SCOUTS IN LEAST VULNERABLE POSITIONS DESIRED PERIOD SCOUTING BEYOND LONGITUDE CAPE RACE NOT DESIRED DESTROYERS COLON SEEK ALL PRACTICABLE COVER OF CRUISERS AGAINST ENEMY GUN FIRE PRIOR TO COMMENCING ATTACKS PERIOD AVOID ENFILADE BY OPLN ORDER WHEN PRACTICABLE CRUISERS COLON IN ENGAGING ENEMY CRUISERS WITHOUT AIR SPOT RANGES OF TWENTY THOUSAND OR LESS IS DESIRED PERIOD CARRIERS COLON WHEN PRACTICABLE SMOTHER DECKS IN SMOKE TO DENY TARGET TO BOMBING ANTI SUBMARINE COLON PRIOR TO DEPLOYMENT PRIMARY DESTROYER MISSION DENY ENEMY SUBMARINE ATTACK AGAINST OTHER SURFACE VESSELS SEMICOLON DURING APPROACH FLANK DESTROYERS COVER FLANK APPROACH COURSES AGAINST BATTLE LINE AS WELL AS FLANK CRUISERS PERIOD TACTICAL SCOUTS ZOOM TO MARK SUBS SMOKE IF AIR CURTAINS BY CARRIER PLANES BECOMES PRACTICABLE LAY CLOSE TO ENEMY BATTLE LINE VAN DURING PHASE TWO AIRCRAFT SCOUTING ALTITUDE ONE THOUSAND FEET OR LESS

2156

3449-1591
2/20/37

TACTICAL PROBLEM IV-1937-SR

BLUE - SECTION I

BLUE Fleet
BB-38, Flagship

Latitude 45-00 N
Longitude 58-00 W.
19 June 19--

MEMORANDUM FOR TASK FORCE COMMANDERS

1. Time has precluded setting forth incidental features and instructions concerning the Operation Order and the Battle Plan and the diagrams furnished in connection therewith. The despatch boat leaves at 2100. To compensate for the lack of official communications the following notes are furnished for information and guidance:

   (a) Search areas based as per the scouting diagram on geographical features will continue in force until further orders and will apply as well to tactical scouting when required.

   (b) Referring to the Cruising Disposition, Commanders of Cruisers in the three sectors will be the sector commanders.

   (c) Referring to the Scouting Diagram, the various forces referred to are the forces as set forth in the Cruising Disposition. The Commanders of the sectors will coordinate the use of the planes of the destroyer flagship of their sector when required to assist in the scouting or operations.

   (d) During the search and other scouting operations, it is important to consider the possible necessity of utilizing a liaison plane to insure rapid communication and efficient communication between scouting planes and the ship to which they report. Scouting planes must have the means of having their reports actually received. Also scouting planes have the main mission of securing information very promptly and they should not be diverted from this task except in exceptional circumstances as the search of area to which assigned is primary. Upon receiving report of important contact, the sector commander sends out additional planes for maintaining contact and tactically scouting.

   (e) Scouting planes making a contact should not only make the required contact report but also by phone communicate the fact to the nearest scout plane on either flank. This insures the report eventually getting through even though the plane making the contact is attacked and destroyed. Adjacent scouting planes not hearing the report being made will assume something wrong and make the report themselves as a relay.

   (f) It is considered desirable that the Center Force recovering planes in the Cruising Disposition drop down to their assigned position in the Approach Disposition in order not to be surprised while recovering planes without adequate support.

(g) Our Force has a superiority in seaplanes. The Battle Order gives seaplanes of cruisers the task of attacking destroyers while our light forces are attacking. There is no offensive employment provided before phase two. In order to utilize our superiority in cruiser planes and overcome the superiority of the enemy in destroyers it is considered desirable that Light Force Commanders utilize our superiority in cruiser planes to reduce the enemy destroyer strength by bombing in force enemy destroyers under favorable conditions at all times when this can be done without prejudice to tactical scouting. The Battle Plan will be considered modified accordingly.

(h) Submarines will make every endeavor to interpose between own battle line and the enemy without detection.

(i) Flank Force Commanders will bear in mind the desirability of protecting own destroyers as they advance to the attack. The possibility of their advancing behind the cruisers for protection should not be lost sight of if this does not hamper too much the attack on account of the direction of the fire being directed against the attacking force.

(j) While the Cruising, Approach and Battle Dispositions do not direct the reduction of enemy forces in early phases, it will be considered a policy to attack and destroy any enemy forces under favorable conditions when this does not militate against the general plan of attack.

(k) In the cruising or approach dispositions, light forces may be directed to establish anti-submarine patrol of airplanes with bombs ahead of light forces in order to keep enemy submarines down. This may be particularly necessary if enemy is located bearing on fleet axis. If not located on fleet axis one flank force may be designated to establish anti-submarine air-patrol. In any case such patrols will be recalled or relieved by sector commanders as per circumstances that develop. Advance notice of deployment will be given by O.T.C. if possible.

(l) Scouts contacting light forces should bear in mind that it might be important to the O.T.C. to know the total number of destroyers and cruisers more or less in company and the type of cruisers. Discreet development of this should be made. The importance of knowing the location and strength of any flank force may have a bearing on where to expect enemy submarines and where the main body might be.

Admiral, BLUE Fleet.

3448-1591
2-8-37

TACTICAL PROBLEM IV-1937-SR.

RED PLAYER DETAIL

Section II

		Room No.
C.T.C. Comdr. Battle Line	Capt. Brainard	253
Chief of Staff	Comdr. Cary	253
Aide (Relative Plot)	Comdr. Linsley	253
Communication Officer	Lt.Col. Shepard, USMC.	253
Comdr. BatLine AntiSub Screen	Comdr. S.N. Moore	253
Comdr. Fast Wing, Combatcruron I	Capt. Kidd	253
Comdr. Fast Wing Anti-Sub Screen	Capt. Kidd	253
Comdr. Right Flank Force and Comcruron V	Comdr. Early	149
Comdr. Desflo III	Col. Fegan, USMC.	149
Comdr. Left Flank Force and Comcruron IV	Comdr. Beary	143
Comdr. Desflo IV	Lt.Cd. Van Deusen, USA	143
Comdr. Center Force and ComcruronII	Capt. Lofquist	141
Comcruron I	Comdr. Steinwachs	141
Com Desflo I, C.O., CL-19	Lt.Col. Candee USA.	141
Comdr. Desflo II, C.O., CL-24	Comdr. McClung	141
Com Air For and C.O., CV-2	Comdr. Morrison	251
Aide and C.O. DD-136, 132	Capt. Baldwin (SC)	251
C.O. CV-3	Comdr. Dudley	241
Aide and C.O. DD-128, 124	Comdr. Helm (MC)*	241
C.O. CV-4	Comdr. Bailey	151
Aide and C.O. DD-120, 114	Major Kendall, USMC*	151
Comdr. Submarines and Subflo I	Comdr. Cooper	251
ComSubflo II	Comdr. Hall	241

* Comdr. Helm and Major Kendall act as aides to C.O. CV-3 and CV-4 until gunfire commences, then as gunscorers.

The game will commence as a chart maneuver.

Weather: Wind NW, Force 2, Barometer 29.20. Visibility 20,000 yards, increasing to 22,000 yards by 0600. Ceiling unlimited.

Movements of all surface craft present with the C.T.C. will be covered by the flimsy submitted by the C.T.C.

Aircraft flight forms and air flimsies will be submitted by each task force, whether present with the C.T.C. or detached, which has aircraft in the air. (See memorandum of 4 January,1937).

Each CV will submit flight forms and flimsies for aircraft in the air.

Aircraft moves will be lettered, and surface vessel and submarine moves numbered. They may or may not, be of the same length.

Each submarine unit will submit a flimsy.

Moves 1 and A will be 2 hours in length; from 0400 to 0600 24 June.

Chart H.O. Miscel. 2838 will be used for plotting. This chart with the position of the task force concerned plotted on it will be furnished in the assigned rooms. On account of the layout of the maneuver board, minutes of latitude and minutes of longitude will be equal.

3448-1591
2-8-37

TACTICAL PROBLEM IV-1937-SR.

1937/0602

RED

SECRET

RED Fleet,
BB-19, Flagship.

Battle Plan
No. 3

Lat. 44°-20' N.
Long. 51°-00' W.
24 June 193-, 0000.

TASK ORGANIZATION

(a) Battle Line
Batrons Two, One,
Desflos Six, Seven, less DDs One-two-eight, One-two-four, One-two-zero, One-one-four.

(b) Fast Wing, Vice Admiral R-01.
Batcruron One,
Desflo Five, less DDs One-three-six, One-three-two.

(c) Right Flank Force, Rear Admiral R-18.
Cruron Five,
Desflo Three.

(d) Left Flank Force, Rear Admiral R-17.
Cruron Four,
Desflo Four.

(e) Center Force, Vice Admiral R-02.
Crurons Two, One,
Desflos One, Two, plus CLs Nineteen, Twenty-four.

(f) Air Force, Vice Admiral R-03.
Airrons (CV Two, Three, Four),
DDs One-three-six, One-three-two, One-two-eight, One-two-four, One-two-zero, One-one-four.

(g) Submarines, Captain R-S1.
Subflos One, Two.

1. Information. HALIFAX is vital as a RED Fleet base, defenses have been well strengthened, all necessary stores, ammunition and fuel assembled, and ample provisions as a base made there.

It is intended to operate RED Fleet from HALIFAX as a base and same must be made secure before investment by BLUE.

BLUE Fleet, comprising fifteen battleships, two carriers, six heavy cruisers, twelve to fifteen light cruisers, four destroyer squadrons, and some submarines, departed NARRAGANSETT BAY, in early morning of twenty June.

BLUE has despatched submarines to the area off BELLE ISLE STRAITS.

It is believed that BLUE is determined upon a decisive Fleet engagement,

That BLUE is now making diligent search for RED Fleet,

That upon locating and developing RED Fleet, BLUE will make determined submarine and air attacks as early as practicable to reduce capital ships and destroy carrier decks,

That after establishing hitting range, BLUE will seek his superior range advantage with indirect fire and airplane spotting, by opening the range,

That all BLUE battleships will be in his battle line, with weaker units near the center,

That BLUE will not employ a fast semi-detached battleship wing,

That BLUE Fleet will be encountered enroute HALIFAX.

Assumptions. This plan is formulated on the following three basic assumptions -

That BLUE Fleet will be in the strength reported,

That visibility will probably not exceed twenty-three thousand yards,

That weather will be suitable for flying all types of aircraft, beginning at zero four hundred, twenty-four June.

2. This force will decisively engage BLUE Fleet, with all units of RED Fleet participating, by gunfire, torpedo, and air attacks, in order to destroy BLUE Fleet.

3. (a) Battle Line. Decisively engage and destroy enemy battle line; hold range below twenty-three thousand; battle order of divisions on deployment to right - Three, Four, One, Two, - to left - Three, Four, Two, One. Maintain anti-submarine inner air patrol when ordered. Destroyers maintain inner anti-submarine screen; join respective van or rear destroyer forces when released. Aircraft spot gunfire; attack enemy bombers, if near.
(b) Fast Wing. Decisively engage and concentrate with own leading battleship division upon enemy leading Batdiv; support light forces attacking enemy battle line; drive off enemy cruisers attacking our light forces. Destroyers operate with rear destroyer forces; upon deployment join rear destroyer forces; maintain inner anti-submarine screen until deployment. Aircraft spot gunfire; attack approaching enemy bombers.
(c) Right Flank Force,
(d) Left Flank Force. Destroy enemy light forces; repel enemy torpedo attacks; support own destroyer attacks. Aircraft spot gunfire; attack approaching enemy bombers. Destroyers attack enemy battle line.
(e) Center Force. Destroy enemy light forces; repel enemy torpedo attacks; support own destroyer attacks; Cruron One, plus CL Twenty-four, deploy to rear, other units deploy to van. Aircraft spot gunfire; attack approaching enemy bombers. Destroyers attack enemy battle line; deploy to van.
(f) Air Force. Bomb enemy carriers and three weak battleships; straf fighting tops of enemy battleships; patrol Fleet against submarines; repel enemy bombing attacks; scout protectively; operate as battle-line carriers. Destroyers maintain anti-submarine screen and plane guard.
(g) Submarines. Screen Fleet's advance; report contacts and information of enemy; develop enemy strength and disposition; attack enemy capital ships and carriers only after full information has been transmitted or Fleets are known to be in contact.
(x) This plan will be placed in effect by despatch. Contact Disposition "C" - Annex A. Battle Disposition - Annex B.

4. - - - - - -

5. Battle Radio Frequency Plan "G". Plus four time. Use high frequency. HALIFAX will broadcast urgent flashes. Rendezvous A - HALIFAX; B - CHEDABUCTO BAY; C - ST. JOHNS. Commander-in-Chief in BB Nineteen, normally with Batdiv Three.

R-1
Admiral,
Commander-in-Chief
RED Fleet.

ANNEXES:
A - Contact Disposition "C".
B - Battle Plan.

Distribution:
By Despatch Boat (Destroyer) to -
Task Force Commanders (6).
Division Commanders of Battleships (4).
Squadron Commanders of Cruisers and Destroyers (3)
Flotilla Commanders of Destroyers and submarines (9)
Commanding Officers of Carriers (3).

Z
Commander
Flag Secretary.

3448-1591
2-8-37

TACTICAL PROBLEM IV-1937-SR.

RED

FROM: C-IN-C.
TO : COMAIRONS
INFO: ALL TASK FORCE COMMANDERS

0024 AT ZERO FOUR HUNDRED LAUNCH PROTECTIVE SCOUTING FLIGHT TO COVER A SECTOR TO WESTWARD BETWEEN TWO TEN DEGREES AND THREE FORTY FIVE DEGREES TRUE FROM FLEET GUIDE RADIUS ONE HUNDRED EIGHTY MILES MAXIMUM SCOUTING DISTANCE NOT EXCEEDING TWENTY MILES PERIOD REPEAT OPERATION EVERY THREE HOURS UNTIL ENEMY MAIN BODY STRENGTH AND DISPOSITION IS DEVELOPED 0300

3448-1591
2-9-37.

SECRET

TACTICAL PROBLEM IV-1937-SR

RED

ANNEX "C"

TO RED BATTLE PLAN NO. THREE.

COMMUNICATION PLAN NO. 1.

PART I - GENERAL INSTRUCTIONS.

1. This plan will be placed in effect at 0400, 24 June, 193-.
2. Use plus 4 Zone Time.
3. Except to forward contact and amplifying reports radio silence will be observed.
4. Contact reports will be made direct to the O.T.C.; for information Task Force Commanders.
5. All conditions of radio silence are removed when:
   (a) The battle line or units in visual touch therewith make sight contact with the enemy battle line or Main Body.
   (b) Ordered by O.T.C.
   (c) Any immediate navigational emergency arises.
6. The R or F method of transmission will be used.
7. Transition from Strategical to Battle Frequencies will be on order of O.T.C.

PART II - BATTLE RADIO FREQUENCY PLAN "G".

1. Task Force Commander's Frequencies.

   For use between the O.T.C. and Task Force Commanders and between Task Force Commanders.

Unit	Battle	Strategical
O.T.C.	195 kcs (primary)	4100 kcs
	205 kcs (secondary)	4300 kcs

2. Task Force Frequencies.

   For use between Task Force Commanders and units and units of their several task forces.

Unit	Battle	Strategical
Battle Line	215 kcs	4500 kcs
Fast Wing	225 kcs	4700 kcs
Right Flank Force	235 kcs	4900 kcs
Left Flank Force	245 kcs	5100 kcs
Center Force	255 kcs	5300 kcs
Air Force	265 kcs	5500 kcs
Submarine	275 kcs	5700 kcs

All Task Force Commanders will cover O.T.C. frequency and as many other frequencies as possible preference being given to adjacent forces.

3. Unit Frequencies.

For use between Unit Commanders and ships within their units.

Unit	Battle	Strategical
Batron One	290 kcs	5900 kcs
Batron Two	305 kcs	6100 kcs
Batron Three	320 kcs	6300 kcs
Batron Four	335 kcs	6500 kcs
Batcruron One	350 kcs	6700 kcs
Airon One	365 kcs	6900 kcs
Cruron One	380 kcs	7100 kcs
Cruron Two	395 kcs	7300 kcs
Cruron Four	410 kcs	7500 kcs
Cruron Five	425 kcs	7700 kcs
Desron One	440 kcs	7900 kcs
Desron Two	455 kcs	8100 kcs
Subflo One	470 kcs	8300 kcs
Subflo Two	485 kcs	8500 kcs

4. Aircraft Frequencies.

(a) Call and general purpose frequencies for aircraft - 500 and 2000 kcs.

(b) For use by battleships and respective aircraft.-

515 and 3015 kcs	(9)	WARSPITE
530 and 3030 kcs	(10)	QUEEN ELIZABETH
545 and 3045 kcs	(11)	BARHAM
560 and 3060 kcs	(12)	VALIANT
575 and 3075 kcs	(13)	MALAYA
590 and 3090 kcs	(14)	RAMILLIAS
605 and 3105 kcs	(15)	RESOLUTION
620 and 3120 kcs	(16)	REVENGE
635 and 3135 kcs	(17)	ROYAL OAK
650 and 3150 kcs	(18)	ROYAL SOVEREIGN
665 and 3165 kcs	(19)	RODNEY
580 and 3180 kcs	(20)	NELSON

(c) For use by battle cruisers and respective aircraft:-

695 and 3195 kcs	(2)	REPULSE
710 and 3210 kcs	(3)	RENOWN
725 and 3225 kcs	(4)	HOOD

(d) For use by heavy cruisers and respective aircraft:-

740 and 3240 kcs	(43)	SUFFOLK
755 and 3255 kcs	(44)	BERWICK
770 and 3270 kcs	(45)	CORNWALL
785 and 3285 kcs	(46)	KENT
800 and 3300 kcs	(47)	SUSSEX
815 and 3315 kcs	(48)	STROPSHIRE
830 and 3330 kcs	(49)	DEVONSHIRE

(e) for use by light cruisers and respective aircraft:-

845 and 3345 kcs	(57)	LEANDER
860 and 3360 kcs	(58)	NEPTUNE
875 and 3375 kcs	(59)	ORION
890 and 3390 kcs	(60)	ACHILLES
905 and 3405 kcs	(69)	SOUTHHAMPTON
920 and 3420 kcs	(70)	NEWCASTLE
935 and 3435 kcs	(71)	BIRMINGHAM
950 and 3450 kcs	(72)	SHEFFILLD

(f) For use by aircraft carriers and their respective squadrons:-

965 and 6000 kcs (2) GLORIOUS

980 and 7000 kcs (3) COURAGEOUS

995 and 8000 kcs (4) FURIOUS

(g) Intercept and Search Plan No. 1-B will continue in effect until contact is gained.

PART III - VISUAL COMMUNICATION

1. During daylight visual means of communication will be employed when ever possible.

2. Priority of means: (1) Semaphore, (2) Flag hoist, (3) Searchlight.

3. During darkness visual communications, except for recognition and emergency identification signals will be completely suspended.

4. Recognition Signals:

(a) Between vessels and aircraft: letters U.S. by searchlight.

(b) Between vessels: letters, Challenge R U, Reply O K.

PART IV - CODES AND CIPHERS.

. Use contact code and General Signal Book in all practicable cases.

PART V - DISTRIBUTION

1. Distribution of messages will be in accordance with the following lists.

(a) Distribution A

		Room No.
O.T.C.	Captain Brainard	253
Comdr Fast Wing	Captain Kidd	253
Comdr Right Flank Force	Comdr Early	149
Comdr Left Flank Force	Comdr Beary	143
Comdr Center Force	Captain Lofquist	141
Comdr Air Force	Comdr Morrison	251
Comdr Submarines	Comdr Cooper	241

(b) Distribution B

		Room No.
Comdr Right Flank Force	Comdr Early	149
Comdr Cruron V	Comdr Early	149
Comdr Desflo III	Colonel Fegan	149

(c) Distribution C

Comdr Left Flank Force	Comdr Beary	143
Comdr Cruron IV	Comdr Beary	143
Comdr Desflo IV	Lt.Col.Van Deusen	143

(d) Distribution D

Comdr Center Force	Captain Lofquist	141
Comdr Cruron III	Captain Lofquist	141
Comdr Cruron I	Comdr Steinwachs	141
Comdr Desflo I (CL-19)	Lt.Col. Candee	141
Comdr Desflo II(CL-24)	Comdr. McClung	141

(e) Distribution E

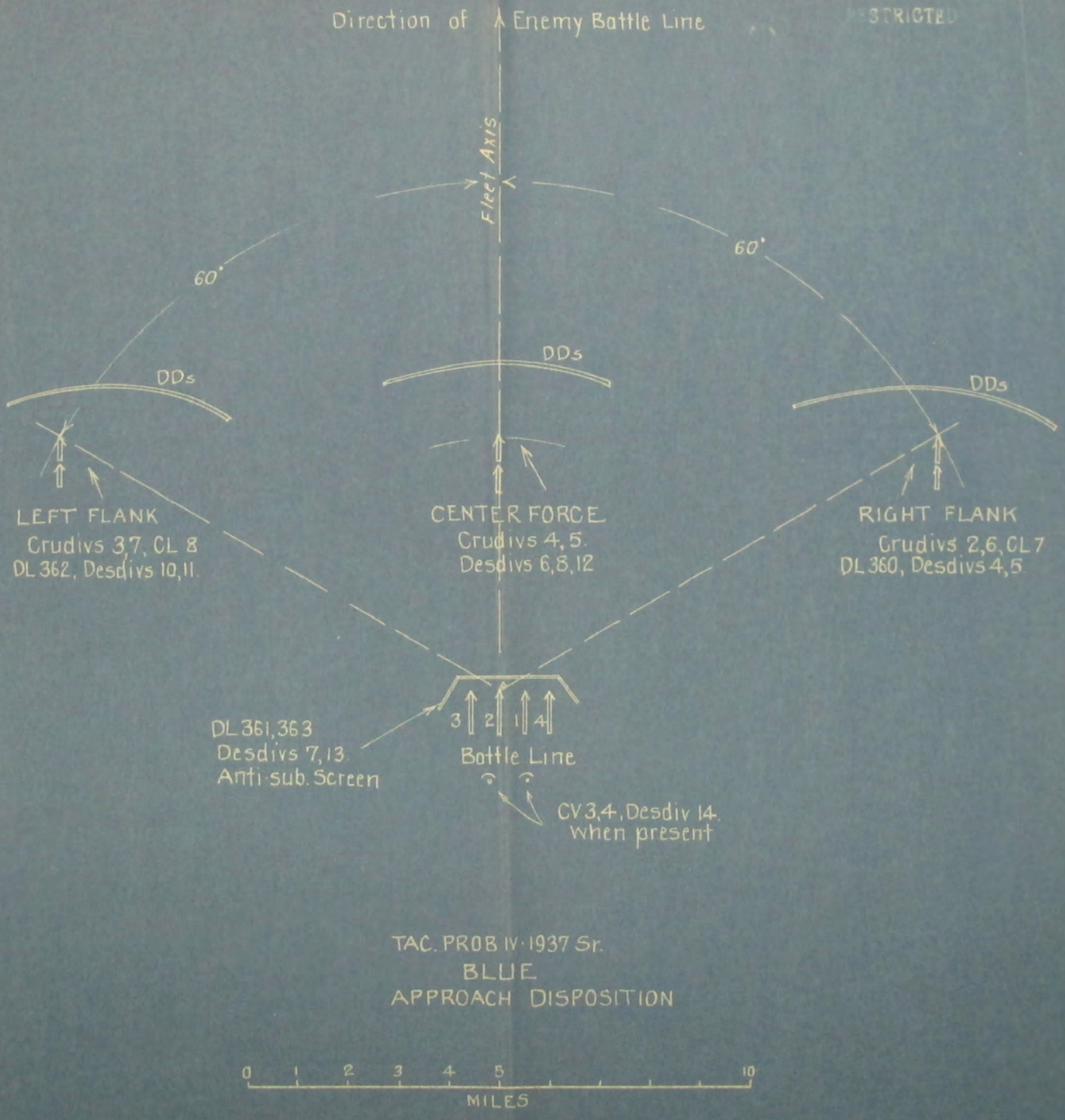
Comdr Air Force	Comdr Morrison	251
C.O. CV-2	Comdr Morrison	251
C.O. DD-136, 132	Captain Baldwin	251
C.O. CV-3	Comdr Dudley	241
C.O. DD-128, 124	Comdr Holm	241
C.O. CV-4	Comdr Bailey	151
C.O. DD-120, 114	Major Kendall	151

(f) Distribution F

Comdr Submarines	Comdr Cooper	251
Comdr Subflo I	Comdr Cooper	251
Comdr Subflo II	Comdr Hall	241

R-1,
Admiral R.N.
Commander-in-Chief RED Fleet.

X.Y.Z.
Flag Secretary.



TAC. PROB IV-1937 Sr.

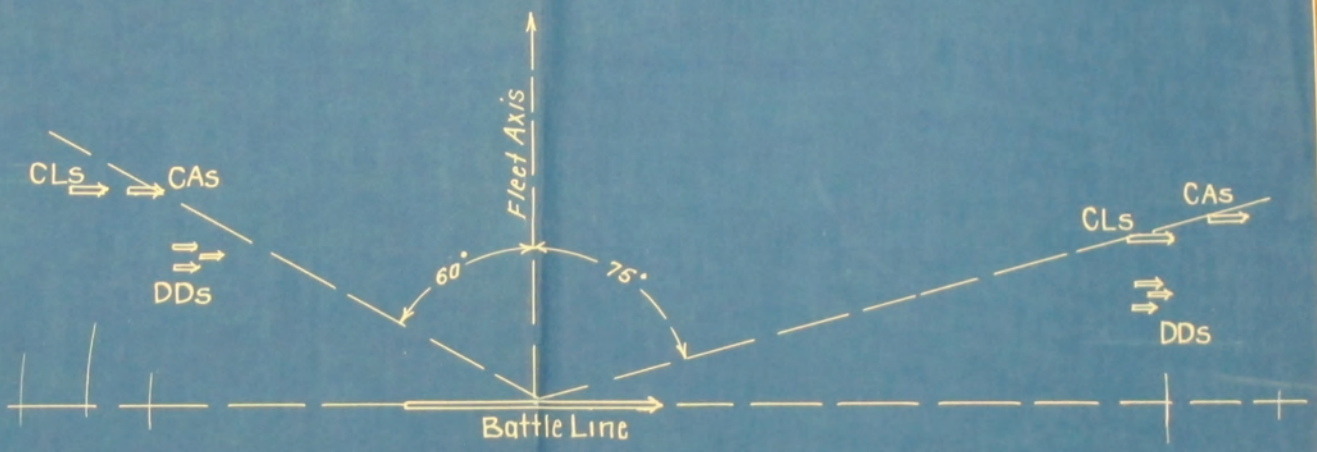
BLUE

APPROACH DISPOSITION

Center Force in the Approach Disposition may be ordered as a whole to reinforce van upon deployment

Battle Disposition (1) Center Forces all in van.
" " (2) " " all in rear.
" " (3) " " divided between van and rear.

Direction of Enemy Battle Line

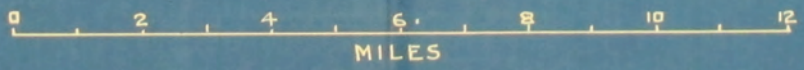


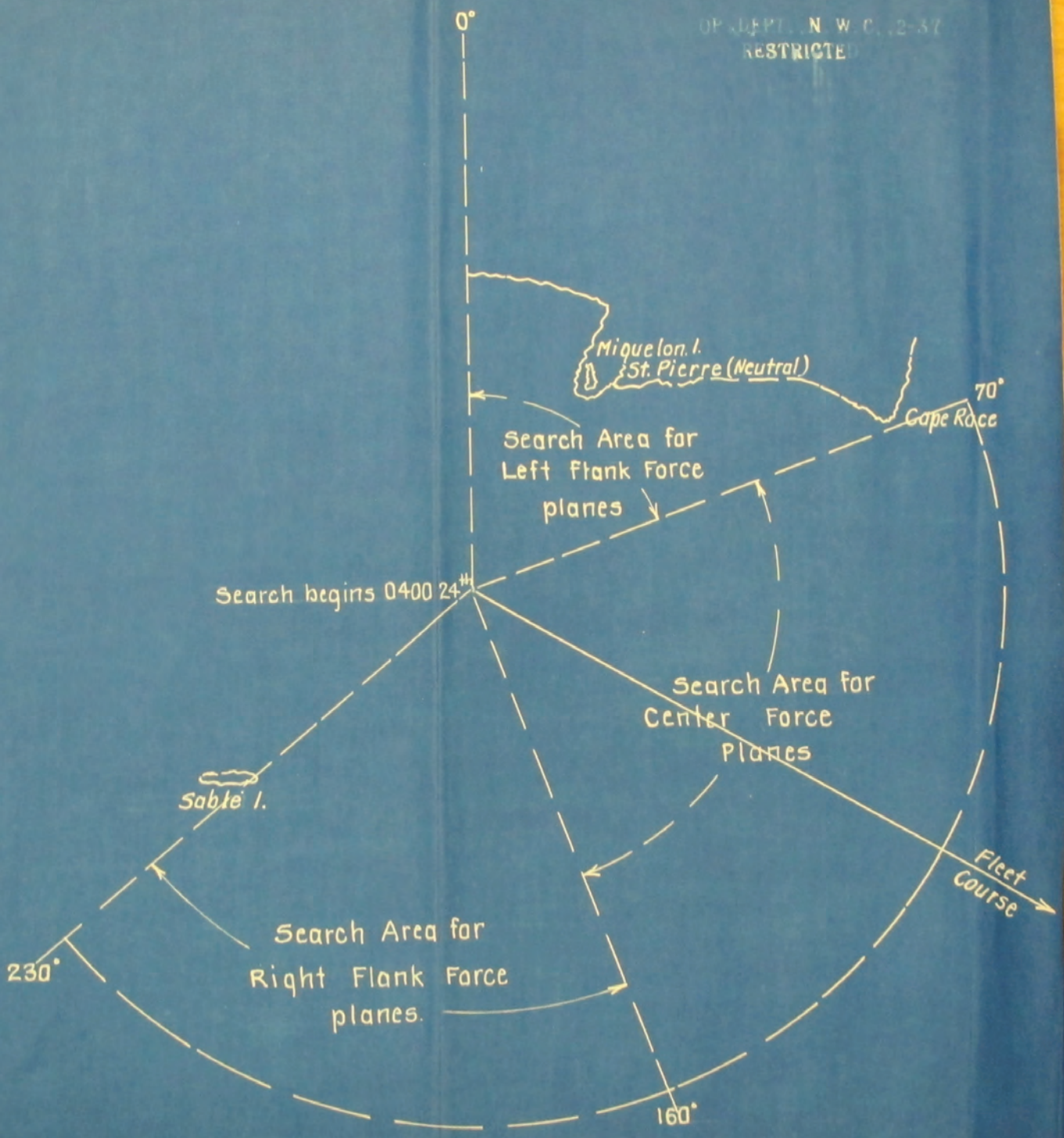
CVs when present.

TAC. PROB IV 1937 Sr.

BLUE

BATTLE DISPOSITION



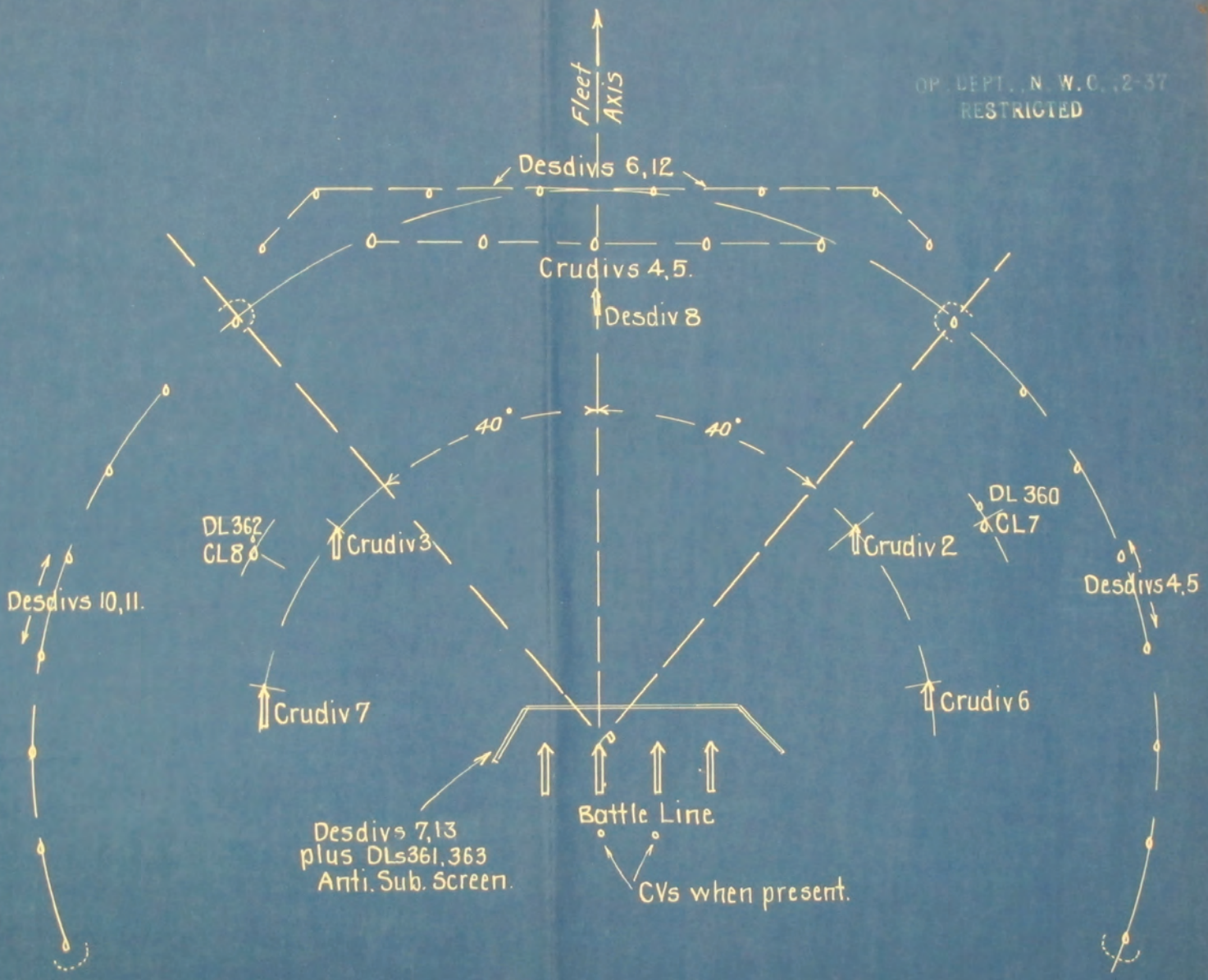


TAC. PROB. IV - 1937 Sr.

BLUE
SCOUTING PLAN

0 50 100 150 200 250
MILES

0400 - 24th.
Fleet Axis and Course 120°.



TAC. PROB. IV · 1937 Sr.

BLUE
DAY CRUISING DISPOSITION

0 1 2 3 4 5 10
MILES

Colonel C.H. Wright, U.S.A.
Room 321 6

2110

3448-1591
1-25-37

Serial No. 6

Senior Class, 1937

TACTICAL PROBLEM IV

BLUE SITUATION

Issued 1330---------- 29 January 1937
Solutions to be handed in by 1230----- 6 February 1937

t o

Academic Section, Room 206

DEPARTMENT OF OPERATIONS
Naval War College,
Newport, R.I.
29 January, 1937.

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TACTICAL PROBLEM IV-1937-SR.

BLUE

GENERAL SITUATION:

Following a period of strained relations war was declared between BLUE and RED on 10 June, 193-. CRIMSON entered the war as a belligerent allied with RED.

During this period of strained relations, the fortifications of HALIFAX were strengthened. An unusual amount of fuel oil and other stores entered HALIFAX and ST. JOHNS, N.F.

BLUE Fleet mobilized in NARRAGANSETT BAY and RED Fleet in Channel ports. Both sides were mobilizing land forces. BLUE was collecting a large force in NEW ENGLAND and assembling transports. RED Army was obviously preparing for overseas operations.

Upon the delcaration of war, BLUE despatched submarines for observation duty off the STRAITS OF BELLEISLE.

On the morning of 17 June a large RED Fleet passed the LIZARD bound West.

On the morning of 20 June the BLUE Fleet put to sea.

TACTICAL PROBLEM IV-1937-SR.

BLUE SPECIAL SITUATION.

BLUE is planning to send a large Expeditionary Force to capture HALIFAX. This force will be ready to sail about 1 July.

The Mission of the BLUE Fleet is "To maintain command of the WESTERN ATLANTIC in order to prevent RED from bringing military assistance to CRIMSON". The BLUE C-in-C, Admiral B-1, decides "To support the attack on HALIFAX and to defeat RED Fleet if it approaches the CRIMSON coast".

Admiral B-1 received word late on the 19th that the RED Fleet had passed the LIZARD bound West at 0800 on the 17th. At that time the RED Fleet was reported to consist of: all BBs and CCs, 3 CVs, 7 or 8 CAs, about the same number of CLs, about 2 desrons (BLUE knows that RED DDs are organized in squadrons of one CL and two or more flotillas of one DL and 8 DD each), and some submarines. Previous reports indicate that no other units of the RED Navy are available to support the RED Fleet.

Having left NARRAGANSETT BAY on the morning of the 20th, and after clearing NANTUCKET SHOAL Light Vessel, the BLUE Fleet headed to the northeastward in order to interpose between the RED Fleet and either HALIFAX or CABOT STRAIT. BLUE SS off STRAIT OF BELLEISLE were relied upon to give information should RED attempt that passage.

Admiral B-1 considers that his immediate objective is the defeat of the RED Fleet. He therefore estimates the situation and draws up several contingent plans for the employment of his force preliminary to and during a decisive engagement. One of these plans is based upon the assumptions that the RED fleet will be in the strength reported, that the visibility probably will not exceed 23,000 yards, and that the weather will be suitable for flying all types of aircraft. (It is upon these assumptions that the student will make his estimate).

Shortly after sunset of the 20th fog set in, which continued intermittently until 23 June, preventing flight operations and scouting. Weather reports indicated that the fog extended as far East as Long. 49° W. and that there had been strong NW winds East of that longitude. At 1900 the 23rd the fog lifted. At that time the wind was NW, force 2, visibility 10,000 yards, unlimited ceiling. The staff aerographer predicted that visibility would gradually improve up to about 23,000 yards.

At 1900 23 June BLUE Fleet Guide was in latitude 45°- 00' N., longitude 58°- 00' W., course 090°, speed 12.

The BLUE C-in-C believes that the RED Fleet may be encountered the next day. He therefore brings his estimate of the situation up to 1900 23 June and issues his contingent plan and the necessary orders to start placing it in effect.

Assumptions:

1. That all BLUE ships have steam for full power and clean bottoms. Submarine batteries are fully charged.

2. That at 1900 23 June, the BLUE Fleet is in a cruising disposition with no ship of the Fleet more than 50 miles from the fleet guide. (Note: This disposition is at the discretion of the officer making the estimate).

3. That the visibility will gradually improve to about 23,000 yards.

4. Sunrise 0400. Sunset 1930. Twilight 2 hours. No moon.

5. That weather conditions will permit flight operations beginning at 0400 24 June.

6. Plus 4 time.

Required:

1. Admiral B-1's Estimate of the Situation for making a contingent plan for the employment of his Fleet prior to and during battle, based on the assumptions specified, and brought up to 1900 23 June. (Note: The student may consider that the estimate is being made as of 1900, 23 June). (Section II of the Estimate with the exception of (h) is furnished to save time for the student).

2. The Contingent Battle Plan. (Typewritten). (Note: It may be assumed that this plan is distributed by despatch boat to all ships by 2100 23 June).

3. Orders issued after 1900 23 June.

4. The position and disposition of the BLUE fleet at 0400 24 June. (Graphic).

5. Approach and Battle Dispositions. (Graphic).

BLUE FLEET

Battleships:

Batdiv One, VO-1 (12-03U-3)
BB-33, 1-0-1,2,3
BB-34, 1-0-4,5,6
BB-35, 1-0-7,8,9
BB-37, 1-0-10,11,12

Batdiv Two, VO-2, (12-03U-3)
BB-36, 2-0-1,2,3
BB-38, 2-0-4,5,6 (Fleet Flag)
BB-39, 2-0-7,8,9
BB-44, 2-0-10,11,12

Batdiv Three, VO-3, (9-03U-3)
BB-40, 3-0-1,2,3
BB-41, 3-0-4,5,6
BB-42, 3-0-7,8,9

Batdiv Four, VO-4, (12-03U-3)
BB-48, 4-0-1,2,3
BB-46, 4-0-4,5,6
BB-45, 4-0-7,8,9
BB-43, 4-0-10,11,12

Cruisers:

Crudiv Two, VS-5, (8-SOC-1)
CL-13, 5-S-7&8
CL-12, 5-S-5&6
CL-9, 5-S-1&2
CL-11, 5-S-3&4

Crudiv Three, VS-6, (8-SOC-1)
CL-10, 6-S-7&8
CL-4, 6-S-1&2
CL-5, 6-S-3&4
CL-6, 6-S-5&6

Crudiv Four, VS-24, (18-SOC-1)
CL-40, 24-S-1 to 6
CL-41, 24-S-7 to 12
CL-42, 24-S-13 to 18

Crudiv Five, VS-25, (12-SOC-1)
CL-43, 25-S-1 to 6
CL-46, 25-S-7 to 12

Crudiv Six, VS-11, (12-SOC-1)
CA-39, 11-S-9 to 12
CA-37, 11-S-1 to 4
CA-38, 11-S-5 to 8

Crudiv Seven, VS-12, (12-SOC-1)
CA-32, 12-S-1 to 4
CA-34, 12-S-5 to 8
CA-36, 12-S-9 to 12

Aircraft:

CV-3, VF-6 - 18F3F-1, 1SBU-1
VS-2 - 18SBU-1
VB-2 - 18BF2C-1, 1SBU-1
VT-2 - 18TBD-1

CV-4, VF-3 - 18F2F-1, 1SBU-1
VF-5 - 18F3F-1, 1SBU-1
VS-1 - 18SBU-1
VB-1 - 18BM-2

Destroyers:

Flotilla One, CL-7 (Flag) - VS-27, SOC-1, 27-S-1&2

Desron Two, DL-360 (Flag)
Desdiv Four DD-376, 377, 378, 379
Desdiv Five DD-372, 373, 374, 375
Desdiv Six DD-368, 369, 370, 371

Desron Three, DL-361 (Flag)
Desdiv Seven DD-206, 207, 208, 209
Desdiv Eight DD-210, 211, 212, 213

Flotilla Two, CL-8 (Flag) - VS-28, SOC-1, 28-S-1&2

Desron Four, DL-362 (Flag)
Desdiv Ten DD-364, 365, 366, 367
Desdiv Eleven DD-352, 353, 354, 355
Desdiv Twelve DD-348, 349, 350, 351

Desron Five, DL-363 (Flag)
Desdiv Thirteen DD-226, 227, 228, 229
Desdiv Fourteen DD-222, 223, 224, 225

Submarines:

Subdiv One SS-163, 164, 165, 167

Subdiv Two SS-168, 169, 170, 171

2110-A

Mr Kozak

3448-1591
1-25-37.

Serial No. 77

Senior Class, 1937

TACTICAL PROBLEM IV

RED SITUATION

Issued 1330----------29 January 1937
Solutions to be handed in by 1230------- 6 February 1937

t o

Academic Section, Room 206

DEPARTMENT OF OPERATIONS
Naval War College,
Newport, R.I.,
29 January, 1937.

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3448-1591-R
1-25-37.

RESTRICTED

TACTICAL PROBLEM IV-1937-SR.

GENERAL SITUATION:

Following a period of strained relations war was declared between BLUE and RED on 10 June, 193-. CRIMSON entered the war as a belligerent allied with RED.

During this period of strained relations, the fortifications of HALIFAX were strengthened. An unusual amount of fuel oil and other stores entered HALIFAX and ST. JOHNS, N.F.

BLUE Fleet mobilized in NARRAGANSETT BAY and RED Fleet in Channel ports. Both sides were mobilizing land forces. BLUE was collecting a large force in NEW ENGLAND and assembling transports. RED Army was obviously preparing for overseas operations.

Upon the declaration of war, BLUE despatched submarines for observation duty off the STRAITS OF BELLEISLE.

On the morning of 17 June a large RED Fleet passed the LIZARD bound West.

On the morning of 20 June the BLUE Fleet put to sea.

TACTICAL PROBLEM IV-1937-SR.

RED SPECIAL SITUATION.

The RED Government plans to apply pressure on BLUE through CRIMSON. With this end in view a large Army force is being assembled for transportation to CRIMSON. This force will be ready to sail from RED early in July. Reports from RED agents in BLUE indicate that the latter is preparing a strong Expeditionary Force. All signs point to the capture of HALIFAX as the objective of this force.

It is vital to RED that HALIFAX be retained as a fleet base. For some time prior to the declaration of war the necessary stores, ammunition and fuel have been assembled at HALIFAX, so that it is amply provided to function as a base for the RED Fleet. Fuel oil has also been stored at ST. JOHNS, N.F.

Since it appears probable that a strong BLUE force, moving by sea, can invest HALIFAX before sufficient troops from RED can reenforce the garrisons, it becomes imperative to take prompt action.

Accordingly, Admiral R-1, the C-in-C of the RED Fleet, is given the Mission, "To gain control of the WESTERN ATLANTIC north of Latitude 43° N., in order to assist in denying BLUE operations against the MARITIME PROVINCES".

Admiral R-1 decides to operate the RED Fleet in CRIMSON waters from a base at HALIFAX.

After passing the LIZARD at 0800, 17 August, the RED Fleet proceeds toward HALIFAX.

At noon on 21 June the RED Fleet is in Latitude 44-20 N., Longitude 33-50 W., course 270° speed 12 knots. Admiral R-1 receives a message from the Admiralty advising him that a BLUE Fleet has left NARRAGANSETT BAY on the morning of 20 June. This fleet is reported to consist of: 15 BBs, 2 CVs, about 6 CAs, from 12 to 15 CLs, of which 4 or 5 are of latest type, about 4 desrons and some submarines. Previous reports indicate that the remaining vessels of the BLUE navy will not be in a position to support this BLUE Fleet.

Admiral R-1 decides to destroy the BLUE fleet if it is encountered while the RED Fleet is enroute to HALIFAX.

In view of his probable immediate objective, Admiral R-1 estimates the situation and draws up several contingent plans for the employment of his force preliminary to and during a decisive engagement. One of these plans is based upon the assumptions that the BLUE fleet will be in the strength reported, that the visibility probably will not exceed 23,000 yards and that the weather will be suitable for flying all types of aircraft. (It is upon these assumptions that the student will make his estimate).

At 0000 24 June the RED fleet guide is in position by dead reckoning Latitude 44-20 N., Longitude 51-00 W., course 270°, speed 12 knots. There has been fog for the last 24 hours. However, meterological reports from CRIMSON and NEWFOUNDLAND indicate clearing weather and a probable daylight visibility not exceeding 23,000 yards. At midnight visibility and ceiling have improved. The wind is NW force 2, barometer normal. The RED C-in-C believes that BLUE forces may be encountered on 24 June. He therefore brings his estimate of the situation up to midnight 23-24 June and issues his contingent plan and the necessary orders to start placing it in effect.

ASSUMPTIONS:

1. That all RED ships have sufficient fuel, clean bottoms, and steam for full power. Submarine batteries are fully charged.

2. That at 0000 24 June the RED fleet is in a cruising disposition. (This disposition is at the discretion of the officer making the estimate).

3. That visibility will gradually improve to about 23,000 yards.

4. Sunrise 0400 -- Sunset 1930. Twilight 2 hours. No moon.

5. That weather conditions will permit flight operations beginning at 0400, 24 June.

6. Plus 4 time.

REQUIRED:

1. Admiral R-1's estimate of the situation for making a contingent plan for the employment of his fleet prior to and during battle, based on the assumptions specified, and brought up to 0000 24 June. (Note: The student may consider that the estimate is being made as of 0000 24 June. Section II of the estimate with the exception of (h) is furnished to save time for the student).

2. The Contingent Battle Plan. (Typewritten). (Note: It may be assumed that this plan is distributed by despatch boat to all ships prior to 0400 24 June).

3. The orders issued to be effective at or after 0400 24 June. (Typewritten).

4. The position and disposition of the RED fleet at 0400 24 June. (Graphic).

5. Approach and Battle Dispositions. (Graphic).

RED FLEET

Main Body:

Batron I.

Batdiv I VO-1 (6-O3U-3)
BB-13, 1-O-1&2
BB-14, 1-O-3&4
BB-15, 1-O-5&6

Batdiv II VO-2 (6-O3U-3)
BB-16, 2-o-1&2
BB-17, 2-O-3&4
BB-18, 2-O-5&6

Batron II.

Batdiv III VO-3 (6-O3U-3)
BB-19, 3-O-3&4
BB-20, 3-O-5&6
BB-9 , 3-O-1&2

Batdiv IV VO-4 (6-O3U-3)
BB-10, 4-O-1&2
BB-11, 4-O-3&4
BB-12, 4-O-5&6

- - - - - - - - - - - - -

Batcruron I VO-5 (6-O3U-3)
CC-2, 5-O-1&2
CC-3, 5-O-3&4
CC-4, 5-O-5&6

Cruron I VS-1 (6-SOC-1)
CA-47, 1-S-1&2
CA-48, 1-S-3&4
CA-49, 1-S-5&6

Cruron II VS-2 (8-SOC-1)
CA-43, 2-S-1&2
CA-44, 2-S-3&4
CA-45, 2-S-5&6
CA-46, 2-S-7&8

Cruron IV VS-4 (16-SOC-1)
CL-69, 4-S-1 to 4
CL-70, 4-S-5 to 8
CL-71, 4-S-9 to 12
CL-72, 4-S-13 to 16

Cruron V VS-5 (8-SOC-1)
CL-57, 5-S-1&2
CL-58, 5-S-3&4
CL-59, 5-S-5&6
CL-60, 5-S-7&8

Airons

CV-2, VF-2, 18F2F-1
VS-2, 12SU-4
VB-2, 12BM-2
VT-2, 12TG-2

CV-3, VF-3, 18F3F-1
VS-3, 12SBU-1
VB-3, 12SBU-1
VT-3, 12TBD-1

CV-4, VF-4, 18FF-1
VS-4, 12SBU-1
VB-4, 12BG-1
VT-4, 12-TG-2

Subflo I, SSs 47, 48, 49, 50, 51, 52

Subflo II, SSs 53,54, 55,56, 57

First DD Squadron; CL-19 Flag (No planes)

First Flot. DL-25 (F); 1st Half, DD-165, 166, 167, 168
2nd Half, DD-161, 162, 163, 164

Second Flot. DL-24 (F); 3rd Half, DD-157, 158, 159, 160
4th Half, DD-153, 154, 155, 156

Third Flot. DL-23 (F); 5th Half, DD-149, 150, 151, 152
6th Half, DD-145, 146, 147, 148

Fourth Flot. DL-22 (F); 7th Half, DD-141, 142, 143, 144
8th Half, DD-137, 138, 139, 140

Second DD Squadron; CL-24 Flag. (No planes)

Fifth Flot. DL-21 (F); 9th Half, DD-133, 134, 135, 136
10th Half, DD-129, 130, 131, 132

Sixth Flot. DL-20 (F); 11th Half, DD-125, 126, 127, 128
12th Half, DD-121, 122, 123, 124

Seventh Flot. DL-26 (F); 13th Half, DD-117, 118, 119, 120
14th Half, DD-111, 112, 113, 114

NOTE: Shortly before war was declared, both BBs 19 & 20 were fitted with one catapult, and assigned two VO airplanes instead of one.

Colonel C.H. Wright, U.S.A.
Room 221

3448-1629
2/16/37

2110-E

Serial No. 6

Senior Class, 1937

TACTICAL PROBLEM IV-1937-SR.

BLUE STAFF SOLUTION

Naval War College
Newport, R.I.
February, 1937.

- -

3448-1629
2/16/37

TACTICAL PROBLEM IV-1937-SR.

BLUE

STAFF SOLUTION

I. THE MISSION.

(a) Summary of the Situation.

The westward advance of the RED Fleet, and the impossibility of immediate support by BLUE Army in operations against the MARITIME PROVINCES have created a situation that requires action on the part of Admiral B-1.

(b) The Formulation of the Mission.

Upon the declaration of war on 10 June, Admiral B-1 was informed by his Navy Department that a BLUE Army would leave NEW ENGLAND waters about 1 July for the purpose of capturing HALIFAX. Admiral B-1 was given the mission, "To maintain command of the WESTERN ATLANTIC north of Latitude 40° in order to prevent RED from bringing military assistance to CRIMSON."

At the time Admiral B-1 received this mission, BLUE had command of the WESTERN ATLANTIC north of Latitude 40°, since RED had no forces in that area to dispute its control. RED did, however, have a suitable base at HALIFAX, from which to operate a fleet. The capture of HALIFAX by BLUE could be effected most readily by a joint expedition, and such capture would make the operation of a RED fleet in CRIMSON waters a much more difficult task. If RED failed to send his fleet to CRIMSON, the task of Admiral B-1 (to maintain command of the WESTERN ATLANTIC north of Latitude 40°) would be assisted by his support of the attack on HALIFAX, since this attack, if successful, wouldddeny the RED fleet the use of HALIFAX as a base.

The support of the attack on HALIFAX is not of the same scope as the basic Task (To maintain command of the WESTERN ATLANTIC), in that the support of the attack on HALIFAX does not conclusively support the Task. It is true, however, that the capture of HALIFAX by BLUE would deny RED a base in CRIMSON and to this extent would contribute to BLUE's exercise of command in the WESTERN ATLANTIC.

On the other hand, if RED did dispatch a fleet to CRIMSON before the landing for the capture of HALIFAX could be effected, the BLUE joint expedition could not go forward until the RED fleet had been defeated.

Therefore, upon receiving word that the RED Fleet had passed the LIZARD on 17 June, Admiral B-1's immediate concern became the RED Fleet. He commenced the preparation of several Battle Plans, based upon different assumptions, in order to carry out his previous decision, "To defeat the RED Fleet if it approaches the CRIMSON coast."

The assumptions upon which this particular estimate are based are:

(a) Visibility will not exceed 23,000 yards.

(b) Weather conditions will permit flight operations between sunrise and sunset.

This estimate is being made in order to arriwe at a proper Battle Plan and will have as its immediate objective the defeat of the RED Fleet as it approaches the CRIMSON coast. The immediate Task is therefore, "To defeat the RED Fleet as it approaches the CRIMSON coast" and the Purpose, "In order to maintain command of the WESTERN ATLANTIC."

II. SURVEY OF OPPOSING STRENGTHS.

(a) to (g) issued separately.

(h) Summary of Strength and Weakness Factors.

BLUE

Strength	Weakness
Capital Ships	
Battle line slightly superior in fighting strength and life.	Battle line is about 2 knots slower than RED.
12 BBs have a maximum range of 33,000.	2 BBs have a maximum range of 22,000.
Powerful anti-aircraft batteries.	No torpedoes carried.
No particularly soft ships.	
Heavy Cruisers	
Individually superior.	Probably fewer total.
Superior A.A. batteries.	Carry no torpedoes.
Light Cruisers	
Greater total number.	Older CLs less powerful individually than any RED CLs (except DD flagships).
Newer CLs capable of stand-up action with RED CAs, and stronger than new RED CLs.	New CLs do not carry torpedoes.
Destroyers and DLs	
More individually powerful ships.	Fewer in number.
Presumably more effective torpedoes.	Fewer total torpedoes.
	Older DDs have but 28 knots formation speed.
	Inferior in torpedo range.
Submarines	
	Each submarines can fire fewer torpedoes at same time.
	Large SS may be hampered if diving in certain areas.
	Less effective anti-submarine measures.

Aircraft Carriers and Aircraft.

Advantages	Disadvantages
CV-3 can be used as a cruiser if deck is destroyed.	One less CV than RED.
More observation and scouting planes.	Fewer bombs and torpedoes can be carried in one flight.

RED

Strength	Weakness
Capital Ships	
Superior Battle Line speed.	Two soft ships with thin side armor.
CCs available for detached wing.	Inferior A.A. batteries.
All capital ships carry torpedoes.	Probably inferior life.
Slightly superior secondary battery.	
Heavy Cruisers	
Superior in numbers.	Individually inferior to BLUE CAs and probably to BLUE new CLs.
All carry torpedoes.	Inadequate A.A. batteries.
Light Cruisers	
CLs superior to old BLUE CLs individually.	Fewer in number.
All carry torpedoes.	Less effective A.A. batteries.
Destroyers and DLs	
Probably greater number.	Individually inferior to BLUE DLs and 1500-ton DDs.
Superior in speed to older BLUE DDs.	Cruiser flagships weaker than those of BLUE.
Greater number of guns.	
Submarines	

Strength	Weakness
Aircraft Carriers and Aircraft.	
One extra flight deck.	Fewer observation and scouting planes.
Greater bomb and torpedo capacity.	CV-4 has a weak A.A. battery.

Summary: Summarizing the above:

(a) Capital Ships. BLUE has a slight margin of superiority in fighting strength but a battle line speed about 2 knots less than RED. The latter has 3 CCs which can be used as a detached wing. RED has generally stronger broadside but inferior anti-aircraft batteries. All of RED ships carry torpedoes whereas none of BLUE ships have them.

(b) Cruisers, Heavy. If RED has seven to BLUE's six RED will be slightly superior, but if RED has 8 he will be considerably superior. Although individually BLUE CAs are superior, yet RED's all carry torpedoes whereas BLUE's does not. BLUE has much stronger A.A. batteries. Speeds are about equal.

(c) Cruisers, Light. BLUE has a considerable advantage in numbers - 13 to 8 (not counting cruisers with destroyers). This much more than balances the individual superiority of RED CLs over older BLUE CLs. Moreover, the new BLUE CLs are more powerful than newest RED CLs. All RED CLs have torpedoes but only the older BLUE CLs. Speeds are about the same.

(d) Destroyers and DLs. Although BLUE DLs and 1500-ton DDs are superior individually to RED DLs and DDs, yet the probable greater total number of RED ships and torpedoes gives the latter an advantage in torpedo attack. The BLUE cruisers with the destroyers are much more powerful than those of RED.

(e) Submarines. Lacking information as to the number of RED submarines, an intelligent summary is not possible.

(f) Aircraft Carriers and Aircraft. RED has a considerable advantage in having three carriers as opposed to BLUE's two as not only will this facilitate re-arming for repeated air attacks but will make it more difficult for BLUE to locate and destroy

all RED carrier decks. RED can deliver a stronger attack with 500#, 1000# bombs and torpedoes than can BLUE. BLUE has a superiority in observation planes which should insure adequate air spot and in scouting planes (cruiser based) which can not only scout but attack enemy DDs with 116# bombs.

III. ENEMY COURSES OF ACTION.

(a) Enemy Mission.

A large RED Fleet passed the LIZARD bound West on 17 June. The destination of this Fleet is uncertain. The fact that no train was reported with the Fleet would seem to indicate that its destination was a well supplied base at no great distance. This assumption would make HALIFAX the Fleet's probable destination. Although it is possible that a large train will rendezvous at sea with the RED Fleet, or proceed independently, to some other base, this assumption is unlikely in view of reports from BLUE agents, and will not be considered in this Estimate. It is possible that RED Fleet will proceed initially to some harbor in NEWFOUNDLAND or the MARITIME PROVINCES via CABOT STRAIT.

It must be assumed that the C-in-C of the RED Fleet has been made aware of the departure of the BLUE Fleet from NARRAGANSETT BAY and the approximate time it sailed. He should therefore assume that the BLUE C-in-C, at the time of the latter's departure, was aware that the RED Fleet was at sea.

The RED C-in-C may have one of several possible missions such as:

(1) To occupy HALIFAX (or some other harbor) in order that it may be used as a base for operations against BLUE Fleet, or

(2) To gain control of the North WESTERN ATLANTIC in order

to prevent BLUE from seizing HALIFAX by sea, or

(3) To gain control of the NORTHWESTERN ATLANTIC in order to assist RED and CRIMSON armies in denying BLUE operations against the MARITIME PROVINCES.

Whatever RED's basic mission may be, his immediate concern will be the BLUE Fleet, as soon as the RED C-in-C knows that the BLUE Fleet is at sea. RED C-in-C must now determine his immediate objective. It might be (1) To evade the BLUE Fleet; (2) To search for and destroy the BLUE Fleet, or (3) To proceed to HALIFAX or other base if unmolested but to destroy BLUE Fleet if it attempts to intervene.

Evasion, with RED at present size, would be difficult if BLUE is alert. Furthermore, unless RED has ships which need port facilities, it would appear unlikely that the RED Fleet would go direct to HALIFAX, in its present strength as, with the BLUE Fleet at sea, RED can have no freedom of action unless the BLUE Fleet is destroyed. A mere defeat of BLUE would not suffice as the proximity of BLUE bases and air fields would render a defeat of BLUE Fleet a mere temporary success. It thus appears that RED's most probable immediate objective will have as its Task, - "To destroy the BLUE Fleet" with the purpose, "In order to gain control of the NORTHWESTERN ATLANTIC".

This also involves the utmost effort on the part of RED and should therefore, as it involves the greatest threat, and necessity for counter measures on the part of BLUE, be the safest assumption for BLUE C-in-C.

(b) Statement and Analysis of Enemy Courses of Action.

Since the immediate Task of the RED C-in-C has been assumed to be "To destroy the BLUE Fleet", this then becomes the only suitable Course of Action. It may be considered as feasible, although, in view of BLUE's strength, it will be difficult.

This Course of Action could be accomplished by two general methods:

(1) To destroy BLUE Fleet by a Fleet action using a concentration of all forces, or

(2) To destroy BLUE Fleet by a Fleet action preceded by attrition attacks.

Both of these are suitable and feasible and will be more fully discussed in Section V.

The various routes, speeds and destinations of the RED Fleet will now be discussed.

In coming to CRIMSON waters, RED has two main courses, either south of NEWFOUNDLAND or via the STRAITS OF BELLE ISLE. The latter route, although slightly more direct to the northern parts of the MARITIME PROVINCES on the GULF OF ST. LAWRENCE, has the disadvantages of possible ice restricted waters which would hamper maneuvers against submarines and much more steaming in more or less restricted waters if it is intended to reach HALIFAX. Should RED choose BELLE ISLE, the BLUE submarines on observation duty may be relied upon to report in time for BLUE to bar the way through CABOT STRAIT. Thus it appears most unlikely that RED will attempt the northern route via BELLE ISLE but will pass south of NEWFOUNDLAND. It is probable that, in crossing the ATLANTIC, a track will be chosen to the southward of the regular steamer lanes, both to avoid merchant shipping and ice bergs and to allow plenty of sea room in the vicinity of CAPE RACE. BLUE will be able to interpose between RED and either HALIFAX or CABOT STRAIT unless contact is missed due to continued fog.

The time that RED Fleet passed the LIZARD was reported as "0800 - 17 June".

If the guide passed the LIZARD at 0800, 17 June, then at 0400, 24 June the guide will be -

(a) At 10 knots - 1640 miles from the LIZARD.

(b) At 12 knots - 1968 "

(c) At 14 knots - 2296 "

(d) At 16 knots - 2624 "

If the prevailing westerly winds, the necessity for conserving fuel, tho probable need for refueling destroyers at sea

and the prevalence of fog West of 49° W., are considered, it does not seem probable that the RED Fleet has made good its advance at a greater speed than 12 knots, so that at 0400 of 24 June they should be in about the longitude of CAPE RACE. This does not preclude an advanced screen consisting of CCs, CVs, CAs or CLs from advancing at a much higher speed, but these would presumably remain within supporting distance of their own Main Body and would probably be no more than 200 miles in advance, if that much, although it is possible for them to be much farther to the westward.

Although HALIFAX has been chosen as the most probable destination of the RED Fleet, it is possible that one of the harbors on the GULF of ST. LAWRENCE is the destination. In either case the BLUE Fleet is in a position to interpose.

Whether or not the RED Fleet has an advanced screen, there can be but little doubt that active scouting or screening operations, both by ships and aircraft, will be undertaken as soon as the weather clears sufficiently.

IV. COMMANDER'S OWN COURSES OF ACTION.

(a) Appreciation of the Mission.

The Mission of Admiral B-1 is, "To maintain command of the WESTERN ATLANTIC north of Latitude forty degrees in order to prevent RED from bringing military assistance to CRIMSON".

Upon learning that the RED Fleet was at sea, heading westerly, Admiral B-1 put to sea with the BLUE Fleet and took, as his immediate objective the defeat of the RED Fleet. Thus the task confronting him was, "To defeat the RED Fleet as it approaches the CRIMSON Coast", and its purpose, "In order to maintain command of the WESTERN ATLANTIC".

(b) Statement and Analysis of Possible Courses of Action.

The motivating Task, "To defeat the RED Fleet as it approaches the CRIMSON Coast" was derived as the Decision of a previous Strategical Estimate. This Task, as stated appears to be an entirely suitable course of action for developing a Battle Plan by providing the "how", "when" and "where". This course will be analyzed and amplified below. It is feasible although difficult.

The term "defeat" requires some amplification at this point. One of the definitions of the verb "defeat" is, "to check, disperse, or ruin by victory; to overthrow".

An enemy may be said to be defeated after the infliction of damage sufficient to force him to give up his objective. This damage may vary from something comparatively minor in nature on the one hand to annihilation on the other. The amount of damage required to defeat an enemy will depend in large degree upon his will to fight and to accept losses in pursuit of his objective. The difference between this amount, which the victor must inflict if he is to defeat his enemy, and the annihilation of the latter, will depend upon the will, the energy and the capability of the victor.

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Admiral B-1, in his present perplexity, although he has the energy and possibly the capability to annihilate RED, may not have the will to do so. That is, he can carry out his Mission by defeating RED. BLUE's own losses, or the costs of victory, should be less if defeat rather than destruction is taken as the objective. If RED is defeated he must retire, thereby leaving "the control of the WESTERN ATLANTIC" with Admiral B-1.

Most of RED forces will no doubt attempt to reach their home land. If BLUE is victorious he can prevent the major part of the remaining RED Fleet from reaching HALIFAX, so there should be no potential threat of a "Fleet-in-being". Badly damaged RED ships attempting to re-cross the ATLANTIC will be susceptible to submarine attack and loss by stress of weather.

Should BLUE initially decide to annihilate the RED Fleet, with the consequent heavy losses to the BLUE Fleet, it would achieve the BLUE Mission, but only at a great cost and with the danger that the results would in the end be unfavorable.

The total RED forces not engaged in the battle, including naval and merchant marine vessels capable of being armed, are greatly in excess of similar BLUE vessels.

Thus, if BLUE can defeat RED, without undue loss, and still maintain command of the WESTERN ATLANTIC, it is to BLUE's advantage to do so, rather than to attempt complete destruction if such destruction would involve too great losses to himself.

BLUE can defeat RED by a simultaneous coordinated attack with all forces or by a series of blows culminating in a Fleet action. Either of these is suitable and feasible and will be more fully discussed in Section V.

The Courses to be considered are then:

(1) "To defeat RED Fleet by coordinating all forces in a daylight action."

(2) "To defeat RED Fleet in a daylight action preceded by attrition attacks."

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(1) "To defeat RED Fleet by coordinating all forces in a daylight action."

(2) "To defeat RED Fleet in a daylight action preceded by attrition attacks."

BLUE's general procedure prior to making contact with RED will now be discussed.

Upon departure from NEWPORT, it was Admiral B-1's intention to proceed to a position where he could cover RED advance to either HALIFAX or CABOT STRAIT and then sweep Eastward, remaining 50 to 100 miles in the rear of a scouting line - the latter not to advance eastward of 54°, due to prevalence of fog and icebergs. The thick weather has delayed Admiral B-1 so that at 1900, 23 June, the Fleet guide has only reached Latitude 45°-00' N., Longitude 58°-00' W. Admiral B-1 expects that the opposing fleets will make contact on the 24th unless the fog shuts down again.

The BLUE Fleet is in a low visibility cruising formation with Crudivs 2 and 3 and Subdivs 1 and 2 - fifty miles east of the Fleet guide.

Course at 1900 is 090°, speed 12.

V. DETERMINATION OF COMMANDER'S BEST COURSE OF ACTION.

(a) Analysis and Comparison of Opposing Suitable Courses of Action.

In Section III it was stated that two Courses of Action were probable for RED. These were:

(1) To destroy BLUE Fleet by a fleet action using a concentration of all forces, and

(2) To destroy BLUE Fleet by a Fleet action preceded by attrition attacks.

Similarly in Section IV there were two Courses reserved for final consideration:

(1) To defeat RED Fleet by coordinating all forces in a daylight action, and

(2) To defeat RED Fleet in a daylight action preceded by attrition attacks.

The opposing Courses of Action are similar in outline but differ somewhat in scope. Whereas BLUE will be satisfied with a defeat of RED, the latter is assumed to desire the former's destruction. This does not imply that BLUE will be any less determined than RED nor that he will fail to press home advantages, but it does perhaps imply that BLUE will not take as many chances in the endeavor to "win all or nothing".

Taking up first the second course listed above for each commander, the attrition attacks may consist of one or more of the following:

(1) Night Torpedo attacks.

(2) Submarine attacks.

(3) Air attacks.

Night destroyer attacks, although they might be successful in foggy weather, if the position of the enemy were exactly known, might be a blow in the air if the enemy were not located. If the fog were thick, effective cooperation of the attacking units would be difficult. An even greater deterent would be that the prevailing foggy weather might cause a scattering of forces

and prevent the destroyers from being present during an ensuing daylight engagement - (this is particularly true for BLUE with fewer DDs initially).

Even should the weather be clear, the few hours of darkness would greatly hamper a night attack. Finally, since this estimate is being made as of 1900, 23 June, and since the enemy has not been located, but is expected to be brought to action on the morrow, a night destroyer attack preceding the battle does not appear feasible for BLUE. Since RED has apparently not located BLUE it will probably also be infeasible for RED.

Submarines, being vessels of opportunity, will no doubt attack at every available opportunity both prior to and during a Fleet action.

Aircraft will probably attempt to make as many repeated attacks as possible before the carrier's flight decks are destroyed. This will be more fully discussed below.

Comparing the first BLUE and the first RED courses listed above, although they are considered feasible, they do not offer as attractive possibilities as the second courses. This is for the reason that the coordinated attack requires aircraft, possibly from a distant carrier, and slow submerged submarines to coordinate their efforts with surface ships in an area where visibility is not of the best and where fog may close in.

The above considerations lead to the conclusion that, while either course may be adopted by RED, course (2) - to destroy the BLUE Fleet in a fleet action preceded by attrition attacks - is the more advantageous to RED and the more difficult for BLUE to counter. Since action taken by BLUE to meet this course should also cover course (1), course (2) will be reserved for further consideration, and re-stated:

"To destroy the BLUE Fleet in a fleet action preceded by submarine and air attacks."

In the case of BLUE, the previous discussion indicates that his course (2) - to defeat the RED Fleet in a daylight action preceded by attrition attacks - is the more advantageous. This will be reserved for further consideration and re-stated:

"To defeat the RED Fleet in a fleet action preceded by submarine and air attacks."

(b) Final Evaluation of Commander's Courses of Action.

There will now be considered the detailed development of the Course of Action which Admiral B-1 believes will be adopted by the enemy, i.e., "To destroy the BLUE Fleet in a Fleet action preceded by submarine and air attacks".

In this study the tasks of the various types will be considered in sufficient scope to indicate the manner in which each type may assist in the effect desired, taking up first the pre-battle tactics.

(a) Aircraft and Carriers

RED's first use of his aircraft will probably be for scouting. For this purpose he has from 34 to 40 cruiser based VSO seaplanes. If these have the same characteristics as BLUE SOC-1 type they will have a reliable range of 720 miles at 80 knots. If they are older planes, comparable to BLUE O3U-3, they will have a reliable range of 416 miles. If each CA retains one plane for spotting, there will remain for scouting from 27 to 32 planes.

RED has also 12 carrier based VS land planes with a reliable range of 496 miles. Thus with from 39 to 44 planes available for scouting, RED should be able to reserve all of his other carrier based planes for combat duty. Some of these scouting planes may be armed with 116# bombs for attacks on destroyers.

With three carriers RED has considerable freedom of action in that the carriers can be operated separately at some distance apart from each other and from the fleet. This not only makes their detection and destruction more difficult for BLUE, but

renders it much easier for RED planes to have several bases to which they may return to refuel and rearm.

While security of the carrier decks is an important item, their safety must be balanced against their utility. If carriers are too far removed, their planes will have insufficient range to reach the enemy and return.

Thus the distance that carriers are from their own main body will depend largely upon the range of the planes.

The planes with least range, using same characteristics as for BLUE types, are the VTBs. These have a maximum economical range, when fully loaded, of from 300 to 350 miles depending upon the type, (reliable range 240 to 280 miles) at a speed of 75 to 110 knots (again dependent upon the type). With smaller bomb loads, their reliable range is 390 to 570 miles. To allow for navigation errors, maneuvering for attack and return of planes to carriers, it is not believed that any RED carrier will plan to be more than 200 miles and probably not more than 100 miles from its Main Body at the beginning of a day when bombers are to be used during a major action. However, there is always the possibility that one or more RED CVs will be kept back for action late in the day.

With the high percentage of fog in the probable theatre of operations, and a possible wide distribution of BLUE forces, the enemy would not be expected to risk his carriers in advance of nor directly on the flanks of his fleet where an unexpected lifting of the fog might expose them to destruction by suddenly-appearing BLUE forces. In clear weather they could be more readily located by BLUE scouting forces if they were in the van or on the flanks. On the other hand, low visibility offers a very favorable opportunity for RED carriers to get around in rear of BLUE for the express purpose of evading discovery.

It is thus reasonable to believe that RED carriers will be not more than 200 miles and probably not more than 100 miles from the Fleet and that the relative bearings of the three will

be approximately 135°, 180° and 225° respectively from the Fleet guide. This, of course, is no certainty as carriers may be anywhere, within reason, and BLUE cannot afford to neglect to make a protective search of his own flank and rear.

RED may decide to employ all of his combat aircraft initially to destroy BLUE CV decks and then to concentrate on the BLUE battle line after rearming. On the other hand he might use part of his aircraft to bomb carrier decks and part to make an early attack on BLUE battle line, or he might disregard the carriers and concentrate on an early heavy air attack on the BLUE battle line, or he might choose to attack BLUE CA and CL instead of BBs.

Were the first of the above courses - (i.e. to employ all combatant aircraft against CVs) adopted, he would have more offensive strength than needed to destroy the two BLUE flight decks, and would thus be using a poor apportionment of forces.

If the second method, i.e., a simultaneous attack on BLUE carriers and the battle line were attempted, RED might well employ 16 VSB (possibly protected by some VF) against each carrier and the VB and VTB and VF against the BLUE battle line. 16 VSB each armed with one 500# bomb (dive bombing), should be able to make 2 bomb hits on a carrier, thus destroying its flight deck, even though opposed by VF and A.A. batteries.

To attack BLUE battle line, RED would then have 36 VB, 36 VTB, and 54 VF (provided none are with the VSBs). It would be reasonable to suppose that the VFs would engage enemy flights and strafe prior to bombardment and that the VBs would each carry a 1000# bomb. Some VF may also be used to guard the battle line. Whether RED will arm his VTBs with bombs or torpedoes is uncertain. Intelligence reports indicate that RED apparently favors the use of torpedoes from aircraft. There would be 4 VSB available for smoking in case torpedoes are used. However, torpedo attacks would be much more effective after battle lines are engaged. The above attacks should considerably damage at least one BB.

The third alternative, i.e., for RED to disregard the carriers and concentrate on the battle line would allow RED a greater concentration with consequent greater damage, but has the disadvantage, from RED's point of view, of allowing BLUE planes a good chance to deliver early attacks and return to their own carriers to refuel and rearm for a second attack.

Finally RED may choose to direct his air attacks on BLUE cruisers, the one type in which BLUE has an undoubted superiority.

All of the above discussion is premised on air activities prior to the battle lines engaging each other. It is to be expected that RED aircraft will return to carriers to refuel, rearm and then repeat attacks so long as flight decks are undamaged.

The above possibilities for RED aircraft indicate the following points which should be kept in mind by the BLUE C-in-C:

(a) The early destruction of the RED CVs is of major interest.

(b) Scouting plans, if CV are to be discovered, must provide for covering a large area in all directions.

(c) Consider the practicability of employing some VF to defend against air attacks, combined with lookout pickets from surface vessels and aircraft.

(d) The greatest practicable numbers of A.A. guns should be within the immediate vicinity of each carrier.

(e) If practicable, the Battle Line should be covered by A.A. batteries in addition to those of the BBs themselves.

(f) Battle Line Division Commanders should be free to maneuver their divisions individually to avoid air attacks.

(g) BLUE CVs should be so stationed, if practicable, as to make their discovery difficult.

(h) All forces must be alert to counter air attacks at all times.

(b) Submarines.

RED has an unknown number of submarines. Attacks may be expected at any time, even before the RED Fleet has been located, as the submarines may be well in advance.

The chief element in the successful use of submarines is surprise. To obtain surprise submarines must submerge before they are detected. When encountering other types of vessels in moderate or high visibility, the submarine, because it lies close to the water, is usually able to submerge before the other vessel has seen it. The extensive use of aircraft, however, alters things. In this case, an airplane usually sees a submarine first. Once the position of a submarine, or of a line of submarines, has been determined, they can be forced to submerge, and the opposing forces may be maneuvered so as to keep clear of the danger area. If they cannot be so maneuvered, steps can be taken to minimize the danger from the submarines.

Should submarines be stationed in an area and submerged during daylight, the chances of their detection by aircraft are greatly reduced. Where the water is at all discolored, as it usually is where rivers enter the ocean, the chances of detection are so reduced as to be almost nil.

RED submarines present a difficult problem to RED. To maintain any position relative to the rest of the Fleet, they must continue on the surface, as their submerged speed and radius is too low to keep up with the advance of the Fleet. Once BLUE has been located, however, RED can submerge his submarines and then maneuver the rest of his Fleet, so as to draw the BLUE Fleet over them. To do this successfully involves the necessity of RED obtaining information of BLUE and submerging his submarines before BLUE can locate the submarines. RED may obtain prior information of the BLUE Fleet itself, or he may try to screen his submarines with surface ships or aircraft in order to permit them to submerge without detection. A surface screen would involve considerable dispersion of forces, especially if the submarines were disposed at any distance from the battleships

A screen of aircraft might be effective, but their communications would have to be carefully worked out.

RED submarines might initially be placed within or near the Fleet disposition, and the Fleet then maneuvered with reference to them as soon as they submerged; or they might be placed at a distance from the Fleet disposition, either ahead of the Fleet or toward the direction from which enemy attack was expected. They might be stationed in a single line, or in two or more lines.

Regardless, however, of the actual location of the RED submarines relative to their Fleet, the problem for BLUE to avoid them can best be solved by detecting them, forcing them to remain submerged, and then keeping the BLUE surface forces out of the danger area.

In addition, the following precautions would serve to minimize the danger to BLUE from RED submarines, if the latter are not detected:

(1) Zigzagging during daylight.

(2) A speed not less than 12 knots to afford proper maneuverability.

(3) Destroyer anti-submarine screens.

(4) If practicable, aircraft anti-submarine screens.

(5) Avoidance of apparent submarine traps.

(6) Extra submarine lookouts.

Having discussed some possible RED operations prior to the actual battle, it now becomes necessary to consider how the RED C-in-C may dispose and coordinate his forces for a Fleet action.

His initial dispositions will, of course, be unknown until contact is established and his subsequent dispositions must be observed by constant tactical scouting.

It is reasonable to suppose that at the first contact reports of BLUE Fleet, RED will form an approach disposition in general similar to those used by BLUE. If at the first contact RED has an advanced screen, every effort will probably be made

to effect a prompt concentration.

Since RED has CCs capable of performing as a fast wing, it is likely that some or all of the CCs will be stationed ahead of the BBs during their approach in order to drive in BLUE light forces. RED may choose to keep CC-4 with the BBs as she is comparable to a BB in armament and life, while using CC-2 and 3 as the fast wing. Upon deployment the fast wing will probably take station in the van or rear of the battle line, although one CC might be stationed at each end of battle line. It is possible, however, that the fast wing will remain tactically concentrated with the battle line without being a part of it.

Weather reports indicate that there will probably be light northwesterly breezes and a smooth sea. This being the case the weather gauge is of doubtful value. It would facilitate laying smoke screens, but would penalize gun fire due to gas interference, and would thus be more of a hindrance than a help.

If RED chose to delay action until late afternoon he might, with his superior speed, maneuver so as to silhouette BLUE after sunset with considerable gunfire advantage.

It has been assumed that RED will attempt to destroy BLUE Fleet. This concept involves a resolve on the part of RED to fight a determined action to the finish. It is therefore reasonable to suppose that, after deployment, RED will endeavor to use the excess speed of his battle line to close to close ranges. Although RED may not know the exact thickness of BLUE armor, he does know that his CC-2 and 3 have much thinner armor than any BB. This being the case it would be to BLUE's advantage to stay at longer ranges so that the armor of CC-2 and 3 can be penetrated while that of the BLUE BBs is still impervious. Hence, if battle lines are at such a range that all side armor can reasonably be expected to be penetrated, this is to RED's advantage. Another advantage RED has at short ranges is that all RED capital ships have torpedoes of 17,000 yards range. Thus, if the RED battle line can draw ahead with its excess speed,

there will be favorable target angles for torpedo fire on the BLUE battle line. RED may be expected so to maneuver his fleet as to present target angles as close to 45° as possible.

RED will probably dispose his light forces in the van and rear with the preponderence in the van, although he might have them equally divided, particularly if there is a CC at each end of the battle line. An equal division of light forces might facilitate RED destroyer attacks if the RED C-in-C chooses to fight a reverse action.

One possibility RED has is to use his fast wing to drive in BLUE center forces and force them to deploy to one flank or the other.

If no aerial torpedo attack develops before the action begins, it is possible that RED will attempt an aerial torpedo attack from the disengaged BLUE side at about the same time that a destroyer attack is developing.

The above considerations indicate the following points which the BLUE C-in-C should consider prior to and during the action:

(1) BLUE light forces must fall back before superior RED forces.

(2) There is a disadvantage in having the weather gauge while sea is smooth.

(3) It is to BLUE's advantage to have the range as high as visibility and the maximum ranges of all his ships will allow.

(4) It will be a disadvantage to have the direction of deployment dictated by premature movements of own light forces.

(5) It is possible that RED will launch an aerial torpedo attack at about the time a destroyer attack is developing.

(6) If engagement is prolonged after sunset BLUE must avoid being silhouetted.

(7) BLUE must be alert that RED does not suddenly turn a normal action into a reverse action.

RED's use of his Fleet by types will now be considered.

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(c) Capital Ships.

The use of CCs as fast wing has already been considered. The battleships may be in two squadrons, with two divisions of three ships each in a squadron, or may operate independently by divisions. It is probable that the battle line will be flexible with considerable latitude allowed division commanders. The CCs may form one division in the van or rear, or, if CC-4 is in the battle line, CC-2 and 3 may take station in van or rear or one in the van and one in the rear, or the CCs may not be in the battle line although tactically concentrated with it. Except for BB-19 and 20 all RED BBs are practically of equal strength so that there is not the disparity of types that BLUE has. It is probable that BB-19 and 20 will be in the van of the battle line.

The question of RED fire distribution is a matter of pure conjecture. It is not believed that RED will attempt divided fire with BB-19 and 20 and CC-2 and 3, as all of these are three turret ships. From available information, it is not believed that RED will attempt any artificial concentration.

As previously stated, it is believed that RED battle line will close to short ranges and will use torpedoes.

One possibility RED has is to use indirect fire. If intelligence reports are correct, this can only be done by listing all except BB-19, 20 and CC-4, but reports may be incorrect.

Indirect fire could be used in various ways, such as by early deployment to gain the advantage of opening fire first, while confusing BLUE during its deployment, or to retire temporarily while continuing fire.

(d) Cruisers.

By the time the Fleet action begins it may be expected that any of RED cruisers which may have been scouting will have rejoined the Fleet formation. RED C-in-C may have his cruisers equally divided on each flank or may have one flank stronger. This must be determined by tactical scouting. The cruisers will

probably play the usual roles of driving off attacking light forces and protecting their own destroyers when these attack.

(e) Destroyers.

The same general remarks apply as to cruisers in regard to distribution. The time and methods of attack will depend on relative positions.

Having considered possible RED operations, it now becomes necessary to determine how Admiral B-1 may best carry out his selected course of action, "To defeat the RED Fleet in a daylight action preceded by submarine and air attacks".

Before taking up the detailed study by types, a discussion of BLUE's general possibilities will be of value.

An adequate scouting plan is, of course, essential and will be discussed later in detail.

In the first place, assuming that RED Fleet is located on the 24th what should be Admiral B-1's reaction?

If, as has been previously assumed, the RED Fleet is no farther West than the longitude of CAPE RACE at 0400 of the 24th, there will remain a run of some 540 miles if HALIFAX is its destination. This assumption, however, may be wrong, and RED Fleet may be farther West. Taking the longest run of 540 miles into consideration, it would be possible, if visibility became very poor, for RED to proceed toward HALIFAX and, at sunrise of the 25th, be between BLUE Fleet and HALIFAX, and approximately 100 miles from the latter. This would be an advantage for RED, as, if he desired, he could with his superior speed retire on HALIFAX. If a battle ensued, he would be well placed to send damaged ships into HALIFAX.

Thus, with the uncertain weather conditions, it is to BLUE's advantage to press for an action during daylight of the 24th. If this procedure is carried out, it would preclude BLUE from using, initially, evasive tactics, which require much time, in an endeavor to lead RED through a submarine trap or to give BLUE carrier planes opportunity to make two or more air attacks prior to the battle.

In other words, BLUE should endeavor to pin down RED Fleet as early as possible, while remaining between RED Fleet and HALIFAX so as to cut off escaping damaged RED ships.

What should be the movement of the BLUE Fleet between 1900, 23rd and the time that RED Fleet is located?

Although it is assumed that visibility will continue to improve, BLUE is not positive of this and can never lose sight of the fact that the fog may close in at any time as at dawn the next morning, or that tho weather while clear near the BLUE Fleet may be thick near the RED Fleet.

The factors which will influence BLUE's course and speed between 1900, 23rd and 0400 the 24th, are:

(1) Uncertainty as to RED Fleet's destination.

(2) Uncertainty as to RED Fleet's speed of advance.

(3) Possibility that one or more enemy CV have reached BLUE's rear and can operate their planes from that area.

(4) Possibility that RED SS are trailing BLUE Fleet.

Thus, if BLUE advances too far to the Eastward, RED might be discovered in the morning to be to the Westward, or have a clear path to CABOT STRAIT. Also, if BLUE is being trailed by SS, a continuation of present course and speed might result in a concentration of RED SS at dawn. If BLUE does not advance far enough to the Eastward, there is the possibility that the fleets will not come into action during daylight of the 24th, or that, if there is a CV to the westward, the BLUE Fleet will be bombed more readily from that quarter.

A long run to the southward would uncover CABOT STRAIT, while running too far north might cause damage to light scantling ships from drift ice coming through CABOT STRAIT.

Thus the courses and speeds for the night must be in the nature of a compromise.

A study of the foregoing factors results in the following procedure:

(1) At 2000 change fleet course to 000°, fleet axis retained at 090° - speed 12 (zigzag to make 10 knots good until 2130, then cease zigzagging).

(2) At 2200 change fleet course to 060°, no change in speed or axis.

(3) At 2400 change fleet course to 120°, no change in speed or axis.

(4) At 0200 begin zigzagging - axis still 090°, fleet speed 12 knots; making good 10 knots. (Have boiler power for maximum speed).

This provides for a moderate Easterly advance, requires no change of course in excess of 60° while ships are darkened, should confuse trailing submarines if any are present, and covers approaches to CABOT STRAIT.

If the BLUE Fleet stands on, with aircraft scouting starting at 0400, Admiral B-1 can have a reasonable expectancy, if scouting plan has been properly prepared and conducted, of getting a report by 0800, 24 June.

If no report has been received by this time it will indicate that basic assumptions as to speed or destination of the enemy are in error, or visibility is less than anticipated. Thus, if Admiral B-1 has had no reports of the enemy by 0800, it is probable that he will check his eastward advance at that time and revamp his scouting plan. This cannot be foretold with any exactitude in advance as it depends to a large measure on the weather.

Let us now determine operations of the forces to be used in attrition attacks prior to the Fleet action, i.e., submarines and aircraft.

(f) Submarines:

At 1900, 23 June, the eight submarines were 50 miles east of Fleet guide. Admiral B-1, when he determined the movements of his fleet during the night 23-24 June, considered whether or not he would order the submarines to conform to the movements of the Fleet. The following factors had to be considered:

(1) The probability that if submarines were to remain undetected by the enemy they would have to submerge at the first streak of dawn - 0200.

(2) Once submerged, the submarines would be restricted to very low speeds in order to conserve their batteries for attacks later in the day.

(3) With submarines submerged communication with them would be uncertain.

If submarines conformed to the Fleet they would at 0200 be 50 miles East of the Fleet guide and considerably nearer to the vessels in the van of the Fleet formation. After 0200, with Fleet advancing at 10.0 knots and the submarines at about 4, the former will overtake the latter at about 1000. Thus, if the BLUE Fleet went much to the Eastward of 55° to engage RED, the BLUE SS would be out of the picture.

On the other hand, if the SS are projected too far to the eastward, they may over-reach and be unable to return in time to attack.

With but 8 submarines all possible lines of approach can not be covered, nor is it wise to make the density too great even along the most probable line of approach.

Assuming SS get orders by 2000 - 23rd, then to 0200 the 24th is 6 hours. At 14 knots (sustained speed of SS) they can cover 84 miles. If submarines proceed so that at 0200 they are on the arc of a circle of 84 miles radius from their 2000 position, at 12 miles distance, with southern SS in longitude 55° W., they cover the most probable line of advance to HALIFAX by RED. Their position in longitude is a fair compromise between being too far east or west. Being on the arc of a circle the westernmost SS will have a better chance of getting in an attack than if all SS were on a line normal to the Fleet axis.

SS can receive information at stated hours, at periscope depth, as the search for RED develops. Upon reaching stations SS should maintain steerageway only - thus conserving batteries.

Their task should be to attack enemy ships at every opportunity, with priority of objectives CV, BB, CC. Only if the situation develops so that there is no chance to attack the above types, should attacks be made upon CA or CL.

Submarines must remain unobserved.

Before continuing with a study of the operations of the various types, it is necessary to discuss the Scouting Plan. Unless the total numbers of vessels and aircraft engaged in scouting are accurately known, it will be impossible to determine the numbers available for combat use.

It is first necessary to determine what areas are to be searched.

It was assumed that at 0400 24 June the RED Fleet would not be west of the longitude of CAPE RACE. It was also assumed that the RED carriers would not be more than 200 miles from their Fleet and probably not more than 100 miles.

At 0400 the guide of the BLUE Fleet, should be in latitude 45°-21', longitude 56°-23', course 120°, speed of advance 10 knots. This will be considered as the Point of Origin.

Search in the following areas will cover the most probable positions of the Main Body and of the CVs. It does not cover <u>all</u> of the possible positions of the CVs, if the latter are 200' from RED Main Body, but does include even some of these. To cover all possible positions would, with the expected visibility, require more scouting units than BLUE can afford.

Thus, the area to be searched is as follows - using Point of Origin given above:

(1) In NE quadrant radially for 240', investigating bays in NEWFOUNDLAND but not, if planes are used, flying inland.

(2) In SE quadrant for radius of 300' but not covering area south of 41°-30'.

(3) In SW quadrant for radius of 100'.

(4) In NW quadrant for radius of 100', avoiding FRENCH territory but investigating FORTUNE BAY.

It is now necessary to decide how, and with what forces, the scouting will be conducted.

Excluding submarines, for which a task has been selected, the necessary scouting can be conducted in the following general ways:

(1) By surface ships only.

(2) By aircraft only.

(3) By a combination of surface ships and aircraft.

(1) To scout by surface ships only would require a large number of ships, in order to cover the various possible destinations and speeds of the RED Fleet. The weather again enters here. With a maximum expected visibility of 23,000 yards, a scouting distance of greater than 20 miles would be unsafe for detecting single vessels. We must, however, always bear in mind that the visibility may be patchy. Thus even if looking for a large formation it would be unsafe to have the scouting distance much over 20 miles.

With the maximum visibility 23,000 yards, it would not be surprising if one of the scouts suddenly encountered enemy vessels of much superior strength, with resulting damage before she could escape.

If all the scouting were to be done by surface vessels, the scouting line should be at least 50 miles from the Fleet guide in order to give timely information and allow BLUE Fleet time to interpose if the enemy is picked up on an unexpected bearing.

With any extensive scouting line it would be doubtful if the most distant scouts could rejoin the Fleet for battle.

One other point to consider is that RED has an uncertain number of submarines. If there are many of the latter they might well attempt to fire torpedoes at lone scouts instead of saving them all for battleships.

It is true that BLUE is superior in cruisers, but that is no reason for needlessly dispersing and risking them, if it is not essential.

BLUE could, of course, use DDs, but as there is already a deficiency in this type BLUE could not afford to disperse a considerable number.

(2) As to the second choice, of scouting solely with aircraft, there should be considered the number of planes available.

There are a total of 74 cruiser based VSO. If one is retained for each CA and new CL (a total of 11) for spotting, there would still be 63 for scouting. All of these planes are of the SOC-1 type with characteristics as follows. Ranges are "reliable", i.e., 80% of the listed figures without bombs.

	Speed	Range
Maximum	140	360
Cruising	105	640
Economical	80	720

In addition to the above each CV has available 18-SBU-1 planes with the following reliable characteristics without bombs.

	Speed	Range
Maximum	175	296
Cruising	130	512
Economical	100	584

Although the carrier-based planes have greater speed, the fact that they can each carry a 500# bomb dictates that they be reserved for combat work. Therefore, scouting should be done by the SOC-1's. The latter are seaplanes, but every indication points to smooth enough seas for handling them without damage.

Planes should be so allotted that scouting distance at outer limit of scouting is not over 20 miles. Planes should fly at cruising speed on outward leg and will return to ships by most direct route.

(3) Coming now to the third possibility, i.e., scouting with a combination of surface vessels and aircraft.

This could be considered in two general ways. It might be desired to assign certain areas to surface ships and to supplement these with aircraft. On the other hand, the whole area

might be covered with aircraft, with scouting by surface ships super-imposed upon the areas in which the enemy is most likely to be found. This provides for covering the most probable areas if flight operations are impossible.

Summarizing the above scouting methods it appears that, for the present problem it will be best to cover the whole area with aircraft, while eight cruisers cover the most probable lines of enemy approach.

The reasons for adopting the above procedure are that no scouting plan which is composed solely of aircraft can be relied upon, particularly in uncertain weather, while if any great numbers of surface ships are disposed for scouting it is doubtful if all can return to take part in the impending Fleet Action.

Accordingly, cruiser planes will cover the areas discussed above. In addition Crudivs 2 and 3, which at 1900 were 50' east of the Fleet Guide will be directed to form a scouting line 50' east of the above-mentioned Point of Origin at 0400 - 24th - scouting distance 20' - scouting line bearing south from northern scout in latitude 46° - speed of advance 10 knots - Course 090°. One VSO from each of these cruisers will join in scouting plan for Cruiser planes. Each CL will retain one plane to take up contact scouting. Cruisers will guard all scouting plane frequencies. Upon the first definite contact report of enemy Main Body all cruisers will rejoin Fleet at best speed, launching remaining planes which will take up contact scouting. Only in this way can there be any hope of all Cruisers returning for the battle.

The older CLs were chosen for this duty rather than CAs or new CLs (DDs could not be spared) for the following reasons:

(1) They are the least valuable.

(2) They are the fastest.

(3) They make the smallest target.

TAC. PROB. IV-1937 SR.

RED SHIPS DATA

TYPE		BB	BB	BB	CC	CC	CV	CV	CA	CL	CL	DL	DD	SS
SHIP NO.		9-13	14-18	19,20	2,3	4	2,3	4	?	?	?	?	?	?
SPEED		23.5	21.5	23	31.5	31	31	31	31.5 32.5	32.5	29	36	36 35	17.5 9
LIFE		16.6	16.1	19	12.5	17.7	7.2	7.2	4.6	3.7 4.3	2.7	1.3	1.3	.8
MAIN BATTERY	No./Cal.	8-15"	8-15"	9-16"	6-15"	8-15"			8-8"	8-6" 12-6"	5-6"	4-4.7"	4-4.7"	
	One Side	8	8	9	6	8			8	8 12	5	4	4	
	Max Range	23	23	38	23	29			27	23	23	14	14	
SECONDARY BATTERY	No./Cal.	12-6"	12-6"	12-6"	15-4"	12-5.5		10.5						
	One Side	6	6	6	12	6		5						
	Max. Range	22	22	23	14	16		16						
ANTI-AIR BATT.	No./Cal.	4-4"	4-4"	6-4.7"	4-4"	4-4"	16-4.7"	6-4"	4-4"	4-4"	2-3"	1-3"	1-3"	1-4"
	Range	15	15	18	15	15	18	15	15	15	11	11	11	14
TORPS	Total No.	12A	12A	12A	24A 12A	12A			8A	8A 6A	8A	8A	8A	12G 8G
TORPEDO TUBES	On Broadside	1	2	1	*	3			4	4	4	8	8	Bow 6
	Deck				*	4			8	8	8	8	8	Stern 2
	Submg'd	2	4	2	*	2								8
DEPTH CHARGES							CV 2	CV 3				12	12	
AIRCRAFT	VF(L)						18	18	18					
	VB(L)						12	12	12					
	VTB(L)						12	12	12					
	VOS(S)	2	2	2	2	2								
	VSO(S)								2	2 or 4				
	VSB(L)							24	12					
	VS (L)						12							

L land Planes
S Sea "

* See BLUE & RED Fleets for details.

AIRCRAFT CARRIERS AND AIRCRAFT

With a well indoctrinated Air Force Commander, Admiral B-1 would of course not go into the details of which squadrons to use on particular objectives. Before he issues orders to the Air Force Commander, however, Admiral B-1 must assure himself that the means allotted are sufficient to accomplish the assigned tasks.

Since the position of the carriers with respect to the fleet is dependent, to some extent, upon the ranges of the planes, it will be well to tabulate the latter. Ranges are reliable i.e. 80% of listed.

		Max.		Cruis.		Econ.		
Type	Load	Sp.	Range	Sp.	Range	Sp.	Range	Number
FSF-1	fighter	195	272	150	472	95	624	36
FSF-1	2-116#	190	264	145	448	95	592	
F2F-1	fighter	200	280	150	492	95	656	18
SBU-1	1-500# or 2-116#	170	208	125	336	100	376	40
BF2C-1	fighter	195	352	195	560	105	600	18
BF2C-1	1-500# or 2-116#	190	240	140	368	105	400	
BM-2	1-1000# or 1-500#	125	168	95	272	80	288	18
TBD-1	Torpedo	175	168	130	272	110	280	
TBD-1	3-500# or 12-116#	175	224	135	384	110	416	18
TBD-1	2-500# or 1-1000#	175	312	135	528	110	576	

Thus the BM-2s and, if torpedoes are used, the TBD-1s are the limiting planes - with a maximum radius of some 280 miles. Accordingly, to allow for maneuvering of planes the carriers should be not over 100 miles from the position where planes are to attack. They could, however, be much farther initially and then steam in at full speed.

If, however, the TBD-1s are armed with 1000# bombs instead of torpedoes, then the planes based on CV-3 having the least radius will be the SBU-1s with a maximum range of 376 miles. This carrier could thus be placed 150 miles from the point of desired contact.

In order to decide whether to arm the VTBs with bombs or torpedoes several factors must be considered. A torpedo attack to be effective during a fleet action must normally be made behind a smoke screen, which is always difficult to lay at the desired point and in a correct direction. Furthermore such an attack will be most effective if made from the disengaged side of the enemy battle line while the latter is engaged with own battle line and preferably while a destroyer torpedo attack is being made. Although a successful torpedo attack would probably do more to slow the enemy battle line than a bombing attack, yet the small number of VTBs (18), the inherent difficulties of making a properly conducted serial torpedo attack, and above all the fact that, if 1000# bombs are carried in lieu of torpedoes, the range of the planes is doubled, leads to the conclusion that in this problem bombs would be more useful than torpedoes. It is noted that the VTBs can carry 3-500# or 1-1000# bombs - the former would be more effective.

The next point for consideration is to determine what aircraft are suitable for use against the decks of enemy carriers. For this purpose 500# bombs are as effective as 1000# bombs.

Suitable planes are:

SBU-1, each with 1-500# bomb - 40 available
BF2C-1, " " 1-500# " - 18 "
TBD-1, " " 3-500# " - 18 "

The last are restricted to horizontal bombing while the other two can dive bomb. TBD-1, however, carry 3 times the bomb load.

The SBU-1s have the lowest speed and least radius. Thus the TBD-1s and BF2C-1s are most desirable.

If two groups of 9 TBD-1s each escorted by 9 VF are sent to attack two CVs they should have no trouble in destroying their flight decks. For the remaining CV there will be 18 BF2C-1s (with SBU-1) which should not require accompanying VFs and should be able to destroy a flight deck.

Therefore VF-6, VB-2, and VT-2, all from CV-3, will have as their primary task "to bomb enemy carrier decks".

There will be available for other duty, the remaining squadron from CV-3 (VS-2) and all the planes from CV-4 or a total of 36 VF, 36 VSB (500# bombs), 18 VB (1000# bombs). If this force less 18 VF is concentrated on not more than one enemy BB, at earliest possible time, considerable damage should result. BBs would be chosen rather than CCs, as damage to former would slow battle line while damage to latter might not. No specific BB is chosen, the Commander in the air will preferably choose one of the slower ones (BB 14-18) which is least defended by other ships.

Both the carrier and battle line attack groups should of course return, rearm and attack battle line or cruisers as directed.

There will be 18 VF available to defend own battle line from air attacks. With ranges involved, attack on spotting planes

would not be vital.

Thus the Task for Commander Air Force would read "Bomb carrier decks and one BB at earliest opportunity, re-arm with heavy bombs and attack as directed. Defend own battle line with one squadron fighters. Report results, casualties, time and in what strength second attack can be launched."

The CVs will be ordered to leave the Fleet formation and take station, CV-4 about 150' to westward and CV-3 about 100' to southwest. The former when RED Main Body is located can come in at full speed and launch planes for attack. The latter planes will be primarily used against enemy CVs.

To give additional AA guns, 2 of the 1500 ton DDs, each with 5-5" double purpose guns, will be assigned to each carrier with the purpose of anti-submarine screening, plane guard, and A.A. defense.

Provisions have now been made for attrition attacks by submarines and aircraft and it becomes necessary to provide for a Fleet action by means of which Admiral B-1 may defeat the RED Fleet.

The general nature of the action will be considered first.

BLUE's first action must be taken at the first contact report of RED Fleet. Let us assume that at this contact RED is reported as in a cruising disposition. BLUE may hope that this report will include specific details as to numbers and dispositions of all RED Forces, except submarines, but all of this information may not be included in the early contact reports.

BLUE will adjust his axis to accord with the report. He may or may not take up an Approach Disposition depending upon the distance from the enemy.

As shown previously, the weather gauge with a smooth sea, is undesirable. It is not of sufficient moment, with high speed ships, to cause much concern nor to cause a battle plan to be built around it.

Unless the BLUE attrition attacks succeed in slowing the RED Battle Line, the latter will have a considerable speed advantage.

Points for BLUE to consider are:

(1) Priority of opening fire,

(2) Most effective fire distribution,

(3) Remaining at maximum range consistent with visibility and range of all his BBs,

(4) Possibility that RED CCs, if used as fast wing, can be lured into range of BLUE BBs while RED battle line is beyond range.

(5) Avoid deploying too late with possibilities that fire of some ships will be blanketed,

(6) Maintain line of bearing of division guides of battle line normal to the general bearing line,

(7) Consider best use of superiority in cruisers,

(8) Determine best distribution of destroyers, remembering that RED probably has about 50% more,

(9) Maintain target angles as near 45° as possible,

(10) If circumstances permit, draw RED Fleet over BLUE submarines.

BLUE will probably not know in advance whether he will fight a normal or reverse action. This will depend partly on RED's disposition. Should the latter deploy first with his CCs well in the van, BLUE might find it to his advantage to begin the battle as a reverse action.

A discussion of the functions and tasks of the various types will now be undertaken.

Battle Line. It is necessary, with as many different classes of battleships as BLUE has, to consider their best distribution in the battle line. The lack of any high speed battleships would render the formation of a detached wing to counter RED's, if he has one, not only rather futile but even dangerous, as this detached wing might come under a concentration before it could, with its low speed, retire to the protection of its own battle line.

It would be of tremendous value to BLUE to receive early reports as to the disposition of the RED Battle Line. He will wish to have his Batdiv 4 opposed to RED BB-9 and 10 without the necessity of cross fire. Since the remainder of the RED BBs are about on a par, the disposition of his other BBs is not so great a problem.

Until the enemy's disposition is revealed by tactical scouting Admiral B-1 can do no better than to adopt a standard battleship cruising disposition with divisions in line of bearing in order from the right 4, 2, 1, 3. As information develops, if it is timely, the divisions can be interchanged as necessary.

Fire distribution will be made by signal when the situation develops, but in the meantime the following considerations will be noted by Admiral B-1; to be carried into effect if possible without too much cross fire.

(1) Batdiv 4 (BBs 43, 45, 46, 48) should fire double concentration on BBs 19 and 20.

(2) Two of the 12-gun 14" ships, preferably from Batdiv 3 with newest fire control gear, fire divided fire at the 3 CCs and an adjacent RED BB.

(3) Remainder of the BLUE BBs fire ship for ship.

In the above distribution BLUE has considered concentrating first on the CCs as they are the softest ships. It seemed best however to concentrate on the strongest two for, if one or both of these is quickly disabled, it will not only give BLUE a tremendous physical advantage, but will affect RED morale much more seriously than would the loss of their admittedly weak CCs.

If BLUE Battle Line can secure priority of effective fire, it will be of great value. This, of course, does not mean the first salvo, but does mean the first straddle. It might be argued that using indirect fire, at ranges beyond visibility, would be an advantage. With a long enemy battle line of 15 targets and with 15 firing ships all opening fire by the indirect method, it is very doubtful that indirect fire would quickly establish effective fire, although it might somewhat harass the enemy. It would probably waste ammunition. At this stage of the action the enemy would probably still be in an approach formation so that, added to the inherent difficulties of indirect fire, would be added the penalty of very rapid change of range. Indirect fire might however be valuable later in the action after range is established due to lowered visibility, retirement or smoke screens.

As a means then of establishing early <u>effective</u> fire superiority, the indirect method will be discarded.

The following factors affecting effective gunfire should be taken into consideration:

(1) Checking directors as early on the 24th as visibility permits.

(2) Securing upper air data at 0400 and as often as possible thereafter and furnishing data to battle line for ballistic corrections.

In visibility not exceeding 23,000 yards there is an even greater disadvantage in deploying too late. A late deployment, if enemy battle line is already in battle formation, lays one open to damage from enfilade fire and to masking of much of own gunfire.

In a problem of this type, therefore, tactical scouting is of extreme value. If the C-in-C can get a clear picture of the enemy formation before he sights them, signals can be hoisted and then executed the moment the enemy is sighted. It would be well if a member of the C-in-C's staff were in a plane to furnish the latter with accurate and timely information.

Another reason why Admiral B-1 would wish early deployment is that in the approach the Batdivs may be closing the enemy at considerable speed with line of bearing of division guides 90°. In this case, wishing to fight at ranges 17,000-20,000 yards, he must place his BBs in battle formation promptly, or the range will be very much less by the time he deploys.

Admiral B-1 has considered the various tangibles with his reaction to them. There remain now the intangible factors for which alertness to profit by the enemy's mistakes, training and doctrine are the answers.

The battleships, each with 3 VOs, have ample spotting planes. This is especially true since, at the ranges contemplated, air spot, although giving a slight advantage over top spot, is by no means essential, unless later phases of the action involve indirect fire. Considering the above, 2 VOs per ship are sufficient for spotting. The C-in-C will use the third flagship plane for his staff. The remaining 14 planes will be used for anti-submarine patrols prior to and during the battle and to assist the VF in defending against air attacks.

The Task of the Battle Line is as follows: "Engage enemy battle line and detached wing at ranges seventeen to twenty thousand yards."

Before discussing cruisers and destroyers in detail a few remarks will be made on light forces in general.

BLUE must determine the general distribution of his forces during the approach and upon deployment.

During the approach there will be forces on the right and left flank. In high visibility, especially with aircraft scouting tactically, a center force might not be needed.

With visibility not in excess of 23,000 yards and the possibility that tactical air scouts may be shot down some forces are needed in the center as a measure of security. As described under battle line, it is of the greatest importance that BLUE be in battle formation at the moment RED Fleet is within the limits of visibility.

A strong center force allows a certain flexibility in that it can be quickly thrown to either flank upon deployment and thus counter any dispositions the enemy may have taken in advance. It has the disadvantage of possible congestion which will interfere with the fire of the battle line and the danger that suddenly appearing enemy ships will force the vessels in the center to retire on one flank or the other and thus leave the O.T.C. with no choice as to direction of deployment.

In case a strong center force is required due to uncertainty as to distribution of enemy light forces, then it is worth while to consider placing some of the center force ships in rear of the battleships. In this position although it would take a greater time to run to battle stations than if they were

ahead, if O.T.C. can send out signal "Intend to deploy to right (or left)," this delay would not be great. Being closer to the BBs than would be the case if they were ahead, the anti-aircraft batteries of the Center Force ships could assist in repelling air attacks made prior to deployment. In this problem, however, time is so essential that all will be placed ahead.

The combined destroyer and cruiser forces in the van could be organized into one command, with a similar assignment for the rear, or destroyers and cruisers can be in separate commands. The latter arrangement is chosen for this Plan.

The detailed Tasks and assignments of Cruisers and Destroyers will now be considered.

Cruisers. BLUE has presumably a superiority in numbers of cruisers. To maintain this superiority it is essential that, particularly during the approach, BLUE cruisers fall back promptly before superior forces. It is possible that RED CC's will be used as a fast wing. Due to the high speed of the latter, BLUE cruisers must be especially alert to avoid coming under CC fire. If the cruisers can reach their battle stations intact, there will be much less danger from the CC's thereafter, as the latter will undoubtedly be engaged with BLUE battle line.

BLUE can then have, with 8 OMAHAs (not including destroyer flagships), 6 CAs and 5 new CLs, a choice of dividing his cruisers about equally on both flanks, or of placing a preponderance of strength in the van with a comparatively weak force in the rear.

Due to BLUE's deficiency in destroyers, the latter cannot be wasted, except in an emergency, in repelling RED destroyer attacks. This work will therefore fall upon the cruisers - particularly the 6" gun cruisers with their more rapid rate of fire. It is of course assumed in this discussion that Crudivs

2 and 3 have returned from scouting in ample time to take battle stations.

The CAs will find their greatest use in repelling enemy cruisers.

Since all RED cruisers have torpedoes, BLUE cruisers in the van must endeavor to keep the former from gaining favorable positions for firing torpedoes at own battle line.

To determine definitely the allocation of cruisers in advance would be futile, as this will depend in such a large measure upon the enemy dispositions, which can only be ascertained by tactical scouting.

The framework can, however, be laid. A judicious arrangement for the Approach would appear to be as follows:

Right Flank Cruisers - Crudivs Two and Six

Left Flank Cruisers - Crudivs Three and Seven

Center Cruisers - Crudivs Four and Five.

The Center cruisers will be about 10 miles ahead of the Battle Ships with one div on each side of axis to assist in Tactical Scouting. Upon deployment both Crudivs 4 and 5 could be sent to the van or, if a more even division of strength were desired, Crudiv 5 (2 ships) could be ordered to the rear and Crudiv 4 to the van.

No mention has been made of the important role the cruisers have in assisting their own destroyers in delivering torpedo attacks. It is of course axiomatic that the destroyers must be Given every assistance within the capabilities of the cruisers. If the opportunity permits, CLs with torpedoes should fire them to form a criss cross with those fired by destroyers.

Regardless of how closely cruisers may be engaged with surface ships, they must keep AA batteries manned and lookouts

for aircraft alert. Not only may the cruisers themselves be the targets of enemy aircraft, but the latter may be enroute to BLUE battle line, so that prompt AA fire might considerably reduce the effectiveness of the attack.

Most of the cruisers planes will be initially employed in scouting. Such of these as return prior to deployment will be taken aboard, armed with 2-116# bombs, and, upon deployment, catapulted for attacks on enemy destroyer leaders and for use as pickets. One VSO has been reserved for spotting for each CA and new CL.

The tasks are as follows:

Left flank cruisers)
) Defend battle line against
Right Flank cruisers)

destroyer and cruiser torpedo attacks. Repel light forces interfering with own destroyer attacks on enemy battle line. CLs fire torpedoes to augment destroyer attacks. Avoid superior enemy forces during approach. VSOs after return from scouting establish pickets - 25' radius.

Center force join and conform to forces in van or rear as directed. Aircraft after return from scouting arm with bombs and strafe enemy DD and DL.

Destroyers. The distribution and proper use of destroyers presents a greater problem than is the case with the cruisers, since BLUE is believed to have fewer destroyers than RED.

To summarize the available destroyers, remembering that 4-1500 ton DD (Desdiv 4) have been assigned to the CVs, by reason of their double-purpose AA guns, there are remaining for use with the fleet;

Flotilla One - CL-7

Desron Two - DL-360 and Desdivs 5 and 6 (8 new DDs)

Desron Three - DL-361 and Desdivs 7 and 8 (8 old DDs)

Flotilla Two - CL-8

Desron Four - DL-362

Desdiv 10, 11, 12 (12 new DDs)

Desron Five - DL-363

Desdivs 13,14 (8 old DDs)

The first consideration is protection of the battle line prior to deployment. With 15 BBs in 4 Divisions, the minimum requirement for an efficient anti-submarine screen is considered a 3-division squadron, or a total of 13 ships. Although the older BLUE DD might be a little handier in an anti-SS screen, the fact that the newer ones have guns that can be used against aircraft more than offsets this. The newer ones are also considerably faster.

This, then, points to Desron Four as the most effective group for duty with the battleships. Normally the screen destroyers, upon deployment, would leave the immddiate vicinity of the battle line with two-thirds going ahead and one-third going astern.

With a strong probability that air torpedo or bombing attacks will be made on the battle line, the maximum number of anti-aircraft guns should be in the battleship area. It is therefore proposed to retain Desron Four with the battle line even after deployment. They will be on the bows and the disengaged side of the battle line: about 2500 yards distant to avoid enemy overs - and can thus render effective gunfire against aircraft while those on the bows can also act as anti-

submarine patrol.

This squadron can be directed to join forces in the van or rear for torpedo attacks or go through the battle line with the same end in view.

The rest of the destroyer force will be disposed as follows: 1 CL, 2 DL, 8 new DDs and 8 old DDs in the van with one CL, 1 DL and 8 old DDs in the rear. This may appear to be a very weak force for the rear, but it is chosen for the following reasons: (1) The chances of rear DDs being in a favorable position for attack on a battle line faster than one's own are remote, except in a reverse action.

(2) Desron Four, with the Battle Line, can quickly drop back to reinforce the rear destroyers, should this become desirable.

The proposed dispositions offer one difficulty when the approach is considered.

If the ships mentioned are desired in the van and rear, then during the approach they must be so disposed as readily to reach their battle stations. This would presuppose a knowledge of the direction of deployment which is obviously impossible to foretell at an early hour. It would be confusing to have the Flotillas exchange positions before deployment.

The difficulty can be solved as follows: It is noted that the difference in the van and rear is composed of the one DL and 8 new DDs of Desron Two (less Desdiv 4). If the DL and one division of this Desron were placed in the center, about 10,000 yards ahead of the BBs they could, during the approach act as outer anti SS screen and use their dual purpose guns to defend against aircraft. The other division would form A/S screen for Center Cruisers. Upon deployment they would then

join forces in the van which would result in the desired distribution of DDs - van and rear. This might of course result in Desron Two being in the van with Flotilla Two instead of its own. This, however, with a well indoctrinated Destroyer Force is not an insuperable objection.

The destroyers should be reserved for attack, leaving the repulse of onemy destroyer attacks to the cruisers.

The order for destroyers to attack, may, in general, be given by the OTC or be left to the initiative of the Flotilla Commanders.

In a fleet action which begins at the extreme limits of high visibility and closes in gradually by phases, the OTC will usually wish to initiate the order for attack. In an engagement, such as the one under consideration, with maximum visibility of 23,000, a very long battle line and an expected heavy atmosphere which will not clear smoke quickly and will interfere with flag hoists, it is considered best to allow the Flotilla Commanders to initiate attacks if conditions are unusually favorable. This of course presupposes a very high degree of indoctrination in the Flotilla Commanders.

The tasks will be as follows:

Right Flank Destroyers)
) Attack enemy battle line, after
Left Flank Destroyers)

battle lines are engaged, when directed or whenever conditions are particularly favorable.

Center Destroyers: Join and conform with destroyers in van. During approach guard battle line against submarine and air attacks. VSO scout tactically when directed.

NOTE: Desron Four will be in same Task Organization with Battle Line.

Summarizing the various detailed courses of actions of the various types.

(a) Submarines attack enemy ships at every opportunity - priority of objectives CV, BB, CC. Attacks on other types should be made only if the situation develops so that there is no chance to attack the above mentioned types. Submarines must remain unobserved.

(b) Air Force. (Carriers and attached planes). Destroy all enemy carrier decks and bomb one BB. Rearm with heavy bombs and attack as directed. Report casualties, results and time and in what strength second attack can be launched. Defend own battle line with one squadron of fighters.

(c) Battle Line. Engage enemy battle line and detached wing, maintain range over seventeen thousand. Early reduction of BB nineteen and twenty is desired.

One squadron of new DDs guard BBs against submarine and air attacks. Attack enemy battle line or join forces in van or rear as directed.

Establish and maintain anti-submarine air patrol around Battle Line to radius of fifteen miles using one plane from each BB except Flagship, when directed.

Cruisers. Defend Battle line against destroyer and cruiser torpedo attacks. Support own destroyer attacks on enemy battle line. Aircraft search for enemy Main Body and carriers. After aircraft return from scouting establish pickets for 25 mile radius, and strafe enemy BL and DD.

Destroyers. Attack enemy battle line when directed or under exceptionally favorable circumstances. VSO scout tactically when directed.

These courses of action of the various types may then be integrated into a single Course of Action for the Fleet as a whole as follows: "To defeat the RED Fleet by locating it by

a search conducted with cruisers and cruiser aircraft and by reducing its strength and speed with early and repeated submarine and air attacks on BBs and CVs and finally by fighting a normal Fleet action at ranges over seventeen thousand yards."

VI. The Decision.

In a problem of this character the Task of the Decision becomes the Task of the Immediate Objective as amplified by the selected Course of Action. The purpose of the Decision is identical with the Task of the basic Mission.

The Decision may be stated as "To defeat the RED Fleet by locating it by cruiser and cruiser aircraft search, by reducing its strength and speed with early and repeated submarine and air attacks on battleships and carriers and by fighting a normal fleet action at ranges over seventeen thousand yards in order to maintain command of the Western Atlantic north of latitude forty."

Special Orders as follows:

From: Comsubs (in BB-38)

To: Comsubdivs One Two.

(sent by plane which carries Battle Order.)

0023 PROCEED TO ARRIVE AND SUBMERGE AT ZERO TWO HUNDRED TWENTY FOURTH ON ARC OF CIRCLE NINETY EIGHT MILE RADIUS FROM LATITUDE FORTY FIVE LONGITUDE FIFTY SIX FIFTY SCOUTING DISTANCE TWELVE SOUTHERN SHIP IN LONGITUDE FIFTYFIVE PERIOD SUBDIV ONE TO NORTHWARD PERIOD COURSE EAST SPEED TWO PERIOD

1900

SCOUTING PLAN

TO: CRUDIVS TWO- THREE VIA PLANE THAT TAKES BATTLE PLAN 0023 AT ZERO FOUR HUNDRED CRUDIVS TWO COMMA THREE FORM SCOUTING LINE BEARING SOUTH FROM NORTHERN SCOUT AT LATITUDE FORTYSIX DEGREES LONGITUDE FIFTYFIVE TEN DISTANCE TWENTY MILES SPEED ADVANCE TEN COURSE EAST CRUDIV TWO TO NORTH PERIOD EACH SHIP LAUNCH ONE PLANE AT ZERO FOUR HUNDRED SEARCH FOR ENEMY MAIN BODY AND THREE CVS ON COURSE ZERO NINETYNINE DEGREES TO POSITIONS TWO HUNDRED FORTY MILES FROM LAUNCHING POINT THEN RETURN TO SHIPS REFUEL AND ARM WITH BOMBS PERIOD AIRCRAFT FROM CRUDIVS FOUR TO SEVEN WILL SEARCH IN ADJACENT AREAS CRUDIVS GUARD THEIR FREQUENCIES PERIOD AS SOON AS MAIN BODY HAS BEEN DEFINITELY LOCATED LAUNCH REMAINING PLANES TO SCOUT TACTICALLY AND ALL CRUISERS REJOIN MAIN BODY AT BEST SPEED

1900

- V -

To: COMAIRFORCE (VISUAL)

0023 DIRECT CARRIERS PROCEED TO ARRIVE AT ZERO FOUR HUNDRED TWENTY FOURTH CV THREE LATITUDE FORTY FOUR LONGITUDE FIFTYEIGHT COMMA CV FOUR LATITUDE FORTYFIVE LONGITUDE SIXTY THEREAFTER OPERATE AT DISCRETION TO FACILITATE PLANE OPERATIONS AND TO AVOID ENEMY ATTACKS

1930

By Visual

TO CRUDIVS FOUR COMMA FIVE COMMA SIX COMMA SEVEN PERIOD 0024 BEGINNING 0400 - TWENTY FOUR JUNE CRUISER PLANES SEARCH FOR ENEMY MAIN BODY AND CARRIERS AT CRUISING SPEED IN SECTORS FROM PT "O" LATITUDE FORTY FIVE DASH TWENTY LONGITUDE FIFTY SIX DASH TWENTY THREE PERIOD CRUDIV FOUR ONE HUNDRED TWENTY DEGREES DASH ONE HUNDRED SEVENTY SEVEN DEGREES FOR THREE HUNDRED MILES BUT NOT SOUTH OF FORTY ONE DASH THIRTY SEMICOLON CRUDIV FIVE ONE HUNDRED EIGHTY THREE DEGREES DASH TWO HUNDRED EIGHT FOUR DEGREES FOR ONE HUNDRED MILES SEMICOLON CRUDIV SIX TWO HUNDRED NINETY SIX DEGREES DASH ZERO ONE FIVE DEGREES FOR ONE HUNDRED MILES AVOID NEUTRAL TERRITORY INVESTIGATE FORTUNE BAY; CRUDIV SEVEN ZERO THIRTY FIVE DEGREES DASH ZERO EIGHTY FOUR DEGREES FOR TWO HUNDRED FORTY MILES INVESTIGATE BAYS BUT DO NOT FLY INLAND. PERIOD RETAIN ONE PLANE EACH SHIP FOR SPOTTING PERIOD AFTER PLANES RETURN ARM WITH BOMBS PERIOD CRUDIVS TWO COMMA THREE AND THEIR PLANES WILL COVER SECTOR ZERO NINETY DEGREES DASH ONE HUNDRED FIFTEEN DEGREES AND FURNISH PLANES FOR TACTICAL SCOUTING .

2000

SECRET

BLUE Fleet,
B.S., BB-38, Flagship.
W.,
Lat. 45°-00' N. Long.58°-00'
23 June 193-, 1900.

Battle Plan
No. 3.

TASK ORGANIZATION

(a) Air Force, Vice Admiral B3.
CV-Three, Four,
Desdiv-Four.
(b) Submarines, Captain B150 (in BB-Thirty-eight)
Subdivs-One, Two.
(c) Battle Line, Vice Admiral B4.
Batdivs-One, Two, Three, Four,
Desron-Four.
(d) Right Flank Cruisers, Rear Admiral B15.
Crudivs-Three, Six.
(e) Left Flank Cruisers, Rear Admiral B16.
Crudivs-Two, Seven.
(f) Center Cruisers, Rear Admiral B17.
Crudivs-Four, Five.
(g) Right Flank Destroyers, Rear Admiral B18.
Desflo-One less Desron -Two.
(h) Left Flank Destroyers, Rear Admiral B19.
Desflo-Two less Desron-Four.
(i) Center Destroyers, Captain B60
Desron-Two less Desdiv Four.

1. Information.. It is believed that RED Fleet: (a) consists of all capital ships, three CVs, about eight CAs, ten CLs, eight DLs, sixty four DDs and some submarines; (b) is probably proceeding toward HALIFAX although possibly to CABOT STRAIT; (c) will attempt to destroy BLUE Fleet in a Fleet action preceded by submarine and air attacks if the BLUE Fleet is encountered; (d) will be encountered on twenty four June; (e) at sunrise twenty fourth will not be west of CAPE RACE but that CVs may be anywhere within two hundred miles of RED Main Body.

BLUE submarines will be in area between forty four and forty five twenty latitude and fifty four thirty to fifty five longitude. Scouting for enemy main body and CVs will begin at zero four hundred with cruiser planes and Crudivs Two, Three. At same time CV Three will be in latitude forty-four longitude fifty-eight and CV-Four in latitude forty-five longitude sixty.
Assumptions. That visibility will gradually improve to but will not exceed twenty-three thousand yards. That weather will permit flight operations beginning at zero four hundred twenty fourth.

2. This force will defeat the RED Fleet by reducing its strength and speed with early and repeated submarine and air attacks on carriers and battleships and by fighting a normal daylight Fleet action at ranges over seventeen thousand yards, in order to maintain command of the WESTERN ATLANTIC north of latitude forty degrees.

3. (a) Air Force destroy all carrier decks and bomb one battleship at earliest opportunity. Report results, rearm with heavy bombs. Report time and strength second attack can be launched. Defend own battle line with one squadron VFs.
(b) Submarines attack enemy ships at every opportunity Priority of objectives CV, BB, CC. Avoid detection. Listen in at maximum periscope depth for orders from OTC at zero two thirty and half hourly thereafter.
(c) Battle Line engage enemy battle line and detached wing. Maintain range above seventeen thousand. Early reduction of BBs nineteen, twenty is desired.
Desron Four guard BBs against submarine and air attacks. Attack enemy battle line or join forces in van or rear as directed.
Establish and maintain anti-submarine air patrol around Battle Line to radius fifteen miles using one plane from each BB except BB-Thirty-eight, when directed.
(d) Right Flank Cruisers)
Left Flank Cruisers) Defend Battle Line against destroyer and cruiser torpedo attacks. Support own destroyer attacks on enemy battle line. After aircraft return from scouting, establish pickets twenty five miles radius in right and left semicircles respectively from Fleet axis.
(f) Center Cruisers on deployment join cruisers in van unless directed to rear. After aircraft return from scouting, strafe enemy DLs and DDs.
(g) Right Flank Destroyers)
(h) Left Flank Destroyers) Attack enemy battle line, when directed or under exceptionally favorable circumstances.
Aircraft Scout tactically when directed.
(i) Center Destroyers join destroyers in van.
(x) This plan will be made effective by despatch. Approach Disposition Annex A, Battle Disposition Annex B.

4. ----------

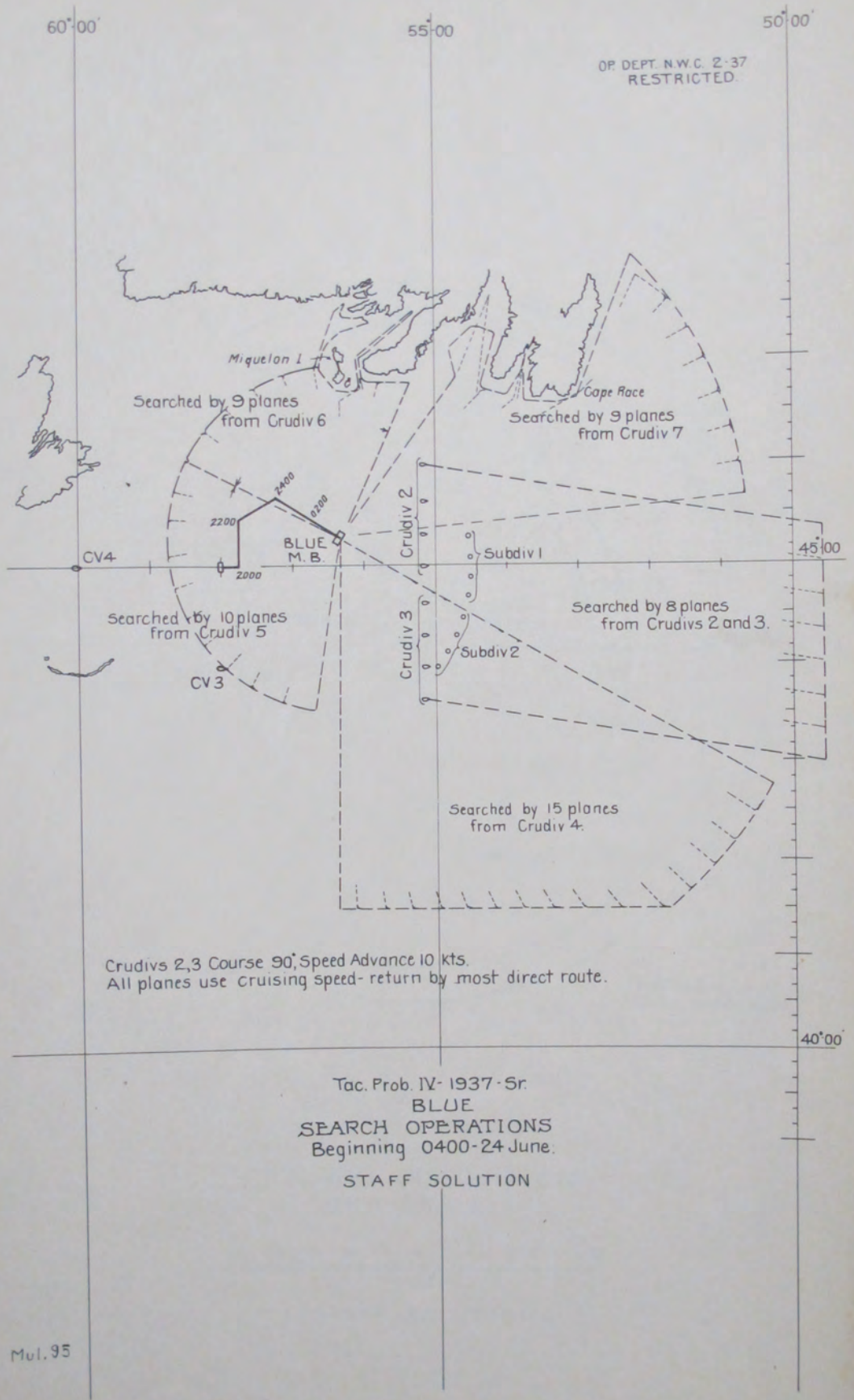
5. Plus four time. Maintain radio silence except for vital reports. Communication Plan C, Battle Frequency Plan Q previously issued. Rendezvous A - latitude forty six longitude fifty eight, B - latitude forty four longitude sixty-three. Commander in Chief, in BB-Thirty eight with Battle Line.

B-1
Admiral, BLUE Navy,
Commander-in-Chief.

ANNEXES
A - Approach Disposition.
B - Battle Disposition.

Distribution:
By despatch boat;
to: All Task Force and Unit Comdrs Present.
By plane to:
Comcrudivs Two, Three, Comsubdivs One, Two

B- 400
Commander, BLUE Navy,
Secretary.



Tac. Prob. IV- 1937-Sr.

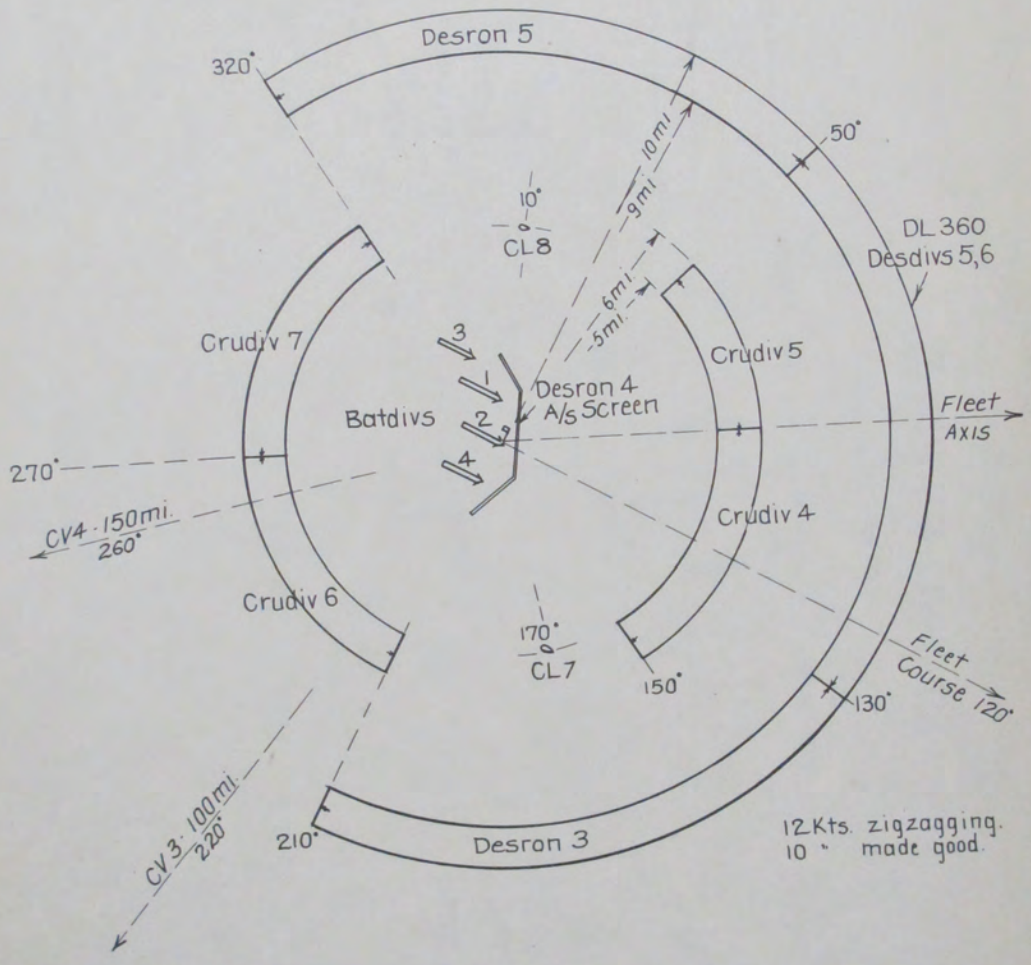
BLUE

SEARCH OPERATIONS

Beginning 0400-24 June.

STAFF SOLUTION

Mul. 95



Tac Prob. IV-1937 Sr.

BLUE

CRUISING DISPOSITION

0400 - 24 June

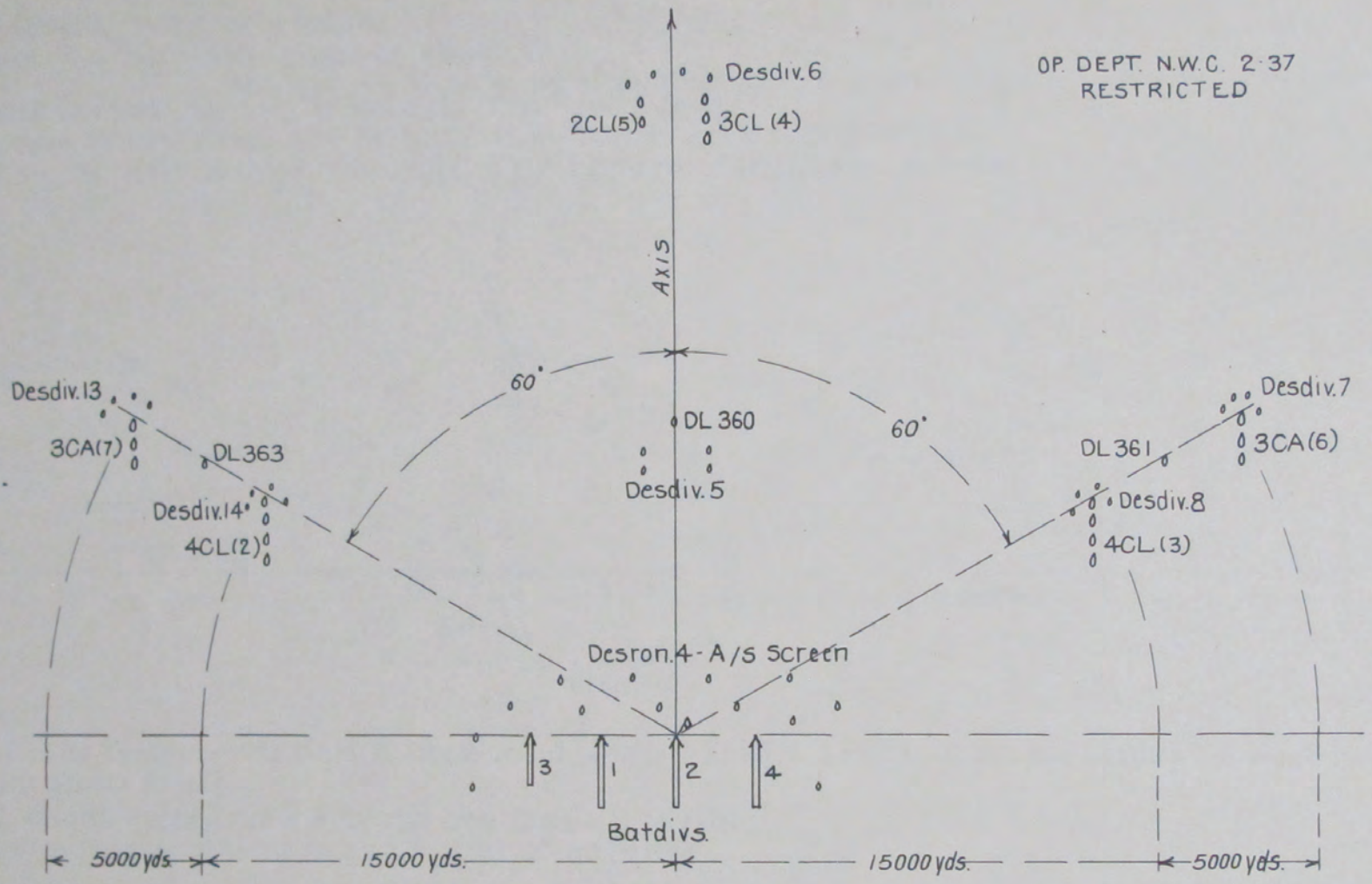
0 1 2 3 4 5 10

MILES

STAFF SOLUTION

Mul. 95

OP. DEPT. N.W.C. 2-37
RESTRICTED



Tac. Prob. IV · 1937 Sr.
BLUE
APPROACH DISPOSITION

0 1 2 3 4 5 10
MILES

STAFF SOLUTION

Mul. 95

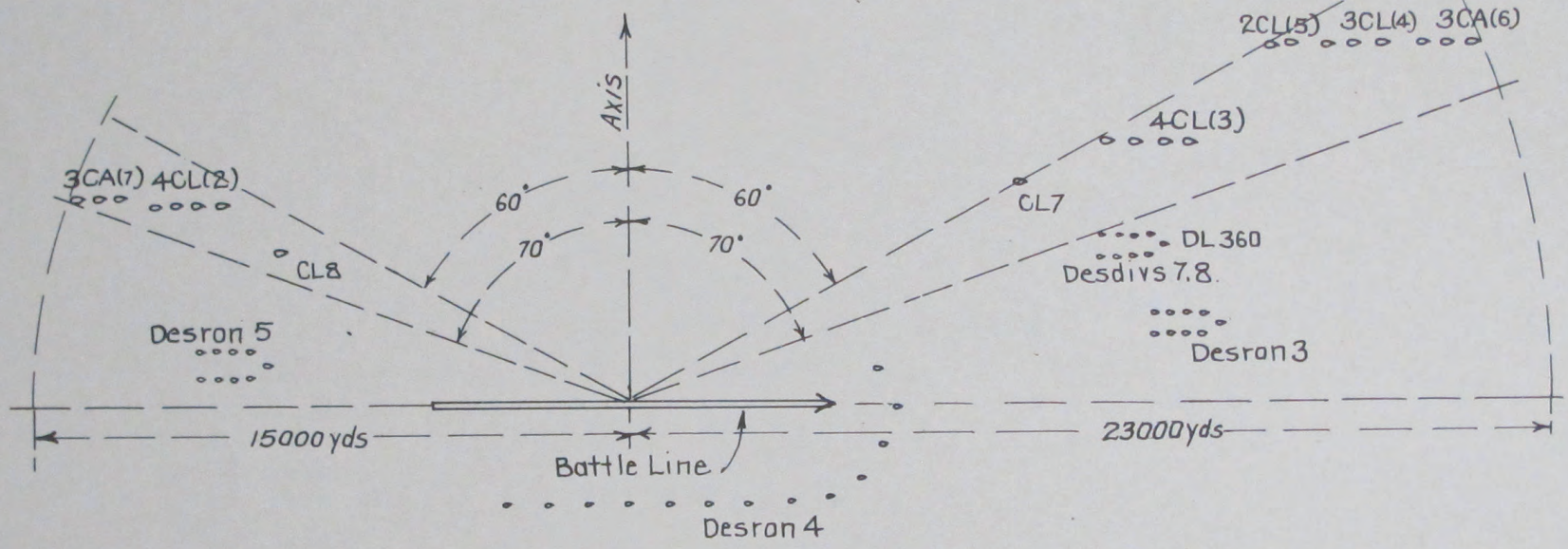
The following Dispositions may be ordered:

A. Deployment to right - strong van - as shown.

B. " " " - stronger rear than A - as shown except that Crudiv 5 takes station in rear between Crudivs 2 and 7, with Crudiv 2 opening to 18000 yds. from Batline Center.

C. Deployment to left - strong van - Reverse arrows - Center Force moves to left.

D " to left - stronger rear than C. Crudiv 5 to rear takes station between Crudivs 3 and 6.



Note:

Above is for Deployment to right. If Deployment is to left Crudivs 3 and 4, DL 360, and Desdivs 5,6 would have moved from center to left.

O.T.C. might order Crudiv 4 to van and Crudiv 5 to rear.

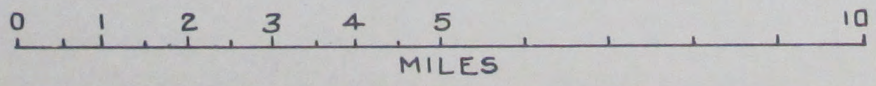
Desron 4 may be ordered to van or rear at any time.

OP. DEPT. N.W.C. 2-37
RESTRICTED

Tac. Prob. IV - 1937 Sr.

BLUE

BATTLE DISPOSITION



STAFF SOLUTION

Mol. 85

~~Colonel C.H. Wright, U.S.A.~~
~~Room 321~~ 6

3448-1630
2/16/37

2110-F

Serial No. 6

Senior Class, 1937

TACTICAL PROBLEM IV-1937-SR.

RED STAFF SOLUTION

Naval War College
Newport, R.I.
February 1937

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TACTICAL PROBLEM IV-1937-SR.

RED STAFF SOLUTION

Estimate of the Situation (Made on 21 June)

I. THE MISSION

(a) Summary of the Situation.

Strained relations have existed between RED and BLUE for a considerable period.

In anticipation that these strained relations may lead to hostilities the RED government has (1) decided to apply pressure on BLUE through CRIMSON, (2) strengthened the fortifications of HALIFAX, (3) built up a supply of fuel, stores and ammunition in HALIFAX and fuel in ST.JOHNS, N.F., (4) assembled, for transportation to CRIMSON, a large army force which will be ready to sail from RED ports early in July.

It is vital that RED retain HALIFAX as a base.

It is known that during the period of strained relations, BLUE has mobilized most of the BLUE fleet in NARRAGANSETT BAY, collected a large Army force in NEW ENGLAND and assembled transports in that area.

On 10 June war was declared. CRIMSON and NEWFOUNDLAND are allied with RED. Report was immediately received that BLUE had despatched submarines to the STRAITS OF BELLEISLE, presumably for observation duty.

The RED Admiralty, seeing the danger of the investment of HALIFAX by BLUE before the HALIFAX garrisons could be reenforced, directed the RED C-in-C, Admiral R-1, to proceed to sea with the RED fleet and assigned him a mission -

"To gain control of the WESTERN ATLANTIC north of latitude 43°-00' N. in order to assist in denying BLUE operations against the MARITIME PROVINCES".

The RED C-in-C decided:

"To operate the RED Fleet in CRIMSON waters from a base at HALIFAX, in order to gain control of the WESTERN ATLANTIC north of latitude 43°-00' N."

Accordingly, the RED Fleet sailed and passed the LIZARD at 0800, 17 June, and proceeded toward HALIFAX.

At noon on 21 June Admiral R-1, when the RED Fleet was in position Latitude 44°-20' N., Longitude 33°-50' W. and on course 270°, speed 12, received a message from the Admiralty advising him that the BLUE Fleet had left NARRAGANSETT BAY on the morning of 20 June. The strength of the BLUE Fleet was reported to be 15 BB; 2 CV; about 6 CA; from 12 to 15 CL, of which 4 or 5 are of the latest type; about 4 desrons and some submarines.

(b) Formulation of the Mission.

RED C-in-C's mission is -

"To gain control of the WESTERN ATLANTIC north of latitude 43°-00' N., in order to assist in denying BLUE operations against the MARITIME PROVINCES".

The information of the BLUE Fleet received on 21 June presents an altered situation to the RED C-in-C. He considers his mission, and the decision he has previously reached. The task of this decision is "to operate the RED Fleet in CRIMSON waters from a base at HALIFAX". In executing this task he intended to proceed first to HALIFAX, and then operate as necessary in order to carry out the task of his mission. With the BLUE Fleet at sea, evidently intent upon maintaining command of the approaches to CRIMSON, the RED C-in-C sees an opportunity to accomplish the task of his mission more promptly and with less difficulty than by proceeding first to HALIFAX. He also considers that the intention of BLUE is probably to prevent his arrival at HALIFAX and that a fleet engagement may be inevitable.

To search extensively for the BLUE Fleet and thus to divert the RED Fleet far from its direct route to HALIFAX might present logistic difficulties. The destruction of the BLUE Fleet might, in these circumstances, require a longer delay and be more difficult than proceeding to HALIFAX first, and then seeking an engagement with BLUE.

He therefore decides that his immediate objective is the destruction of the BLUE Fleet, if it is encountered while the RED Fleet is enroute to HALIFAX, and takes as his subsidiary task and purpose -

"To destroy the BLUE Fleet if it is encountered while the RED Fleet is enroute to HALIFAX in order to gain control of the WESTERN ATLANTIC north of latitude 43° N".

He uses this task and purpose in estimating the situation to draw up a contingent plan to attain his immediate objective.

For this plan he assumes -

(1) That the BLUE Fleet will be in the strength reported.

(2) That visibility will probably not exceed 23,000 yards.

(3) That the weather will be suitable for flying all types of aircraft.

SECTION II less (h) of this estimate was issued with the statement of the problem.

SECTION II (continued)

(h) Summary of Strength and Weakness Factors.

RED will have no advantage in a fleet action with BLUE due to RED's allies in NORTH AMERICA other than their communication facilities, and possibly the use of a CRIMSON air field at HALIFAX.

The proximity of a well prepared base at HALIFAX to the probable scene of action is an advantage that RED will hold over BLUE, whose nearest bases are much further from the probable theater of action.

Fog and no moonlight will probably be a hindrance to BLUE in locating RED.

Depths suitable for moored mines are to RED's disadvantage.

There appears to be no advantage to either side in securing information.

The armed forces are summarized as follows:

RED

Strength	Weakness
Capital Ships	
2 knots superior battle line speed.	Inferior total capital ship life.
Fast detached wing.	2 soft ships.
3 long range ships.	12 ships with only 23,000 yards range.
Superior secondary batteries.	Inferior AA batteries.
Effective torpedo battery.	Inferior in VO.
CA	
Possible superiority in numbers.	Inferior number of 8" guns per ship.
Superior torpedo battery.	Inferior in AA batteries.
	Inferior in VS.

RED (cont'd)

Strength	Weakness
Large CL	
Superior in torpedo battery.	Possible inferiority in numbers.
	Inferior in 6" guns per ship.
	Inferior in AA batteries.
	Inferior in range.
	Inferior in VS.
Small CL	
More 6" guns on a side.	Inferior in numbers.
Superior in AA batteries.	Inferior in total torpedoes.
Superior in torpedoes per division.	
Superior torpedo range.	
Destroyer Forces	
2 squadrons stronger in gun power than old BLUE DD.	Inferior in CL strength.
More torpedoes ready to fire on one side.	2 squadrons weaker in gun power than new BLUE DD.
Superior torpedo range.	Inferior in total torpedoes.
	No VS.
	No mines.
Submarines	
More torpedoes per boat ready to fire.	Possible inferiority in numbers.
Carriers	
3 flight decks to 2.	Poor AA battery of CL-4.
Strong AA battery of CV-2, 3.	
Carrier Aircraft	
Superior in VS and VSB.	Inferior in VBF.
Superior in VB and VT.	
Superior in bomb and torpedo capacity.	
Ship-based Aircraft	
	Inferior in VO and VS.

BLUE (cont'd)

Strength	Weakness
Submarines	
Possible superiority in numbers.	Fewer torpedoes per boat ready to fire.
Carriers	
One CV suitable for use as a CA.	Only two flight decks available.
Carrier Aircraft	
Superior in VBF.	Inferior in VS, VSB, VB and VT.
	Inferior in bomb and torpedo capacity.
Ship-based Aircraft	
Superior in VO, VS.	

BLUE is probably better supplied with fuel, but after an engagement RED has nearby sources of fuel at HALIFAX and ST.JOHNS.

Conclusions

Generally, RED strength for a fleet action lies in -

(1) Superior battle line speed.

(2) Strong capital ship secondary batteries.

(3) A fast detached wing available.

(4) Superior torpedo power considering all types.

(5) Superior number of flight decks.

(6) Superior air striking power.

(7) The proximity of a RED base.

RED weakness lies in -

(1) 2 comparatively vulnerable capital ships.

(2) Short gun range of 12 capital ships.

(3) Generally inferior AA batteries.

(4) Superior AA batteries of BLUE ships.

(5) Inferiority in number and strength of cruisers.

(6) Inferiority of ship-based aircraft.

(7) Inferiority of total destroyer torpedoes.

III. ENEMY'S COURSES OF ACTION

(a) Enemy's Mission.

In the many years of peace between BLUE and RED there has been no military threat against BLUE by CRIMSON. Strained relations between BLUE and RED have tended to change this situation. Without support from RED no military effort by CRIMSON could be made very effective, any such effort could be handled by the BLUE Army. RED, however, is assembling troops with the evident intention of furnishing military support to CRIMSON. Large RED reenforcements landed in CRIMSON might subject BLUE to invasion and would tend to lengthen the war which has now been declared.

The BLUE Navy furnishes the means to the BLUE government to prevent the reenforcement of CRIMSON by RED. This would seem to be the purpose of any BLUE naval operations.

The purpose of the BLUE mission may therefore be -

"To prevent the reenforcement of CRIMSON by RED".

BLUE has been in undisputed control of the WESTERN ATLANTIC.

BLUE'S control has first been threatened by the preparation and supply of HALIFAX as a fleet base. To counteract this threat, BLUE has assembled troops and transports with the evident intention of seizing HALIFAX.

The sudden departure of the RED Fleet, evidently before BLUE troops are ready to move, has presented a second threat to BLUE'S command of the WESTERN ATLANTIC.

If the situation which has been favorable to BLUE is to be maintained, this second threat requires the action of the BLUE Navy to carry out the purpose of the mission as it has been assumed.

The task of BLUE'S mission, therefore, appears to be -

"To maintain command of the WESTERN ATLANTIC".

The BLUE mission may therefore be -

"To maintain command of the WESTERN ATLANTIC, in order to prevent the reenforcement of CRIMSON by RED".

Since no troops have sailed from NEW ENGLAND, according to latest reports, the movement of the BLUE Fleet on 21 June cannot be for the purpose of supporting an expeditionary force in the capture of HALIFAX, and such capture cannot be accomplished by a fleet alone. It appears, therefore, that the BLUE Fleet's physical objective must be the RED Fleet.

To maintain control of the WESTERN ATLANTIC BLUE must prevent the RED Fleet both from occupying the base at HALIFAX, and from operating in the WESTERN ATLANTIC. To permit it to do either would jeopardize the task of BLUE'S mission.

BLUE'S objective may be the diversion of the RED Fleet so that BLUE troops may land near HALIFAX to commence their investment, unmolested by the RED Fleet. Realizing that RED must occupy a base at HALIFAX or in some harbor adjacent to the ATLANTIC, BLUE certainly would not consider such a course feasible.

The objective may be the driving back of the RED Fleet to the EASTERN ATLANTIC or the defeat of the RED Fleet to prevent its exercising control of the WESTERN ATLANTIC, or it may be the destruction of the RED Fleet.

Any one of these three objectives would lead to a fleet action. "To destroy the RED Fleet" would be the most harmful to RED, and is therefore selected as the probable subsidiary task of BLUE.

The purpose of this task would be -

"To maintain control of the WESTERN ATLANTIC".

It may therefore be considered that the subsidiary task and purpose of BLUE, in estimating the situation from BLUE'S point of view, is -

"To destroy the RED Fleet in order to maintain control of the WESTERN ATLANTIC".

(b) Statement and Analysis of Enemy Courses of Action

The tactical attitude of BLUE will undoubtedly be offensive. He must locate RED and force an action. If he does not, RED will probably be able to drive off any raids and continue to HALIFAX.

BLUE does not know RED'S route or speed and cannot be sure of the time RED may reach CRIMSON waters nor his destination. BLUE does know, however, that RED will pass south of CAPE RACE, or through the STRAITS OF BELLEISLE. BLUE will probably endeavor, therefore, to occupy a position from which he can intercept RED on the first clear day after RED reaches the vicinity of CAPE RACE, and from which he can cut RED off in the GULF OF ST.LAWRENCE if BLUE submarines report RED in the STRAITS OF BELLEISLE. RED will arrive on the GRAND BANKS on 23 June. BLUE will therefore have three days in which to find suitable weather for a day action, if RED continues on direct to HALIFAX.

The time of day BLUE may select for an engagement will depend upon the weather, scouting operations and his general plan of action.

BLUE may endeavor to remain interposed between RED and HALIFAX, in order to prevent the faster RED Fleet from breaking off the action and seeking port.

With this general background of BLUE'S probable attitude and strategic situation, his probable courses of action may now be considered.

It has previously been considered that BLUE'S attitude will be offensive. BLUE may desire to delay the engagement until late in the day in order to follow with a night destroyer attack as the RED Fleet continues toward port. It will be to BLUE'S advantage to remain between the RED Fleet and HALIFAX, although considerations of wind, sun and sea may outweigh this advantage.

In view of the probability of fog, BLUE will probably endeavor to engage RED on the first clear day after the RED Fleet has been located.

The courses of action open to BLUE appear to be:

(1) To destroy the RED Fleet in a day engagement in which all forces are employed simultaneously.

(2) To reduce the strength of the RED Fleet by air or submarine attacks, or both, and then to destroy the RED Fleet by a

coordinated day engagement of all forces.

(3) To precede a day engagement as in courses (1) or (2) by a night destroyer attack.

(4) To follow a day engagement as in courses (1) or (2) by a night destroyer attack.

Course (1) is suitable.

Its feasibility is doubtful. BLUE may have difficulty in locating RED. If BLUE is forced to move his force over considerable distance to engage RED, it is doubtful if his submarines can be brought into action at the same time as his surface ships. Unless his carriers are unusually well concealed or guarded it will be doubtful if they can be preserved from RED attack while the BLUE main body is maneuvering for position. With the BLUE forces disposed as they probably will be, to intercept RED, their tactical concentration and their coordination for a simultaneous attack by all forces does not appear feasible. If the visibility is poor, any part of the BLUE force may make surprise contact with RED. A simultaneous engagement of all forces would then be most difficult. This course is therefore discarded as not being feasible.

Course (2) is suitable.

Except in very low visibility, this course appears feasible. All of BLUE'S physical objectives for the attrition attacks may not be located promptly, and these attacks may be delayed until the main bodies are engaged. However, this course is so stated, that if the attrition attacks are not effected or if they are unsuccessful, the objectives may be attained during the coordinated attack. This course is reserved for further consideration.

Course (3) is suitable if preceding course (2).

A night attack by destroyers preceding a day action raises questions of feasibility and consequences as to cost.

Such an attack would probably involve the employment of supporting cruisers as well as destroyers. BLUE is strong in

cruisers, and although half of his destroyer units are assumed to be strong, his total destroyer force is probably numerically inferior to RED'S. Such an attack would involve early scouting operations to locate the RED Fleet, and trailing operations or a night search preceding the attack. Under the weather conditions and possibility of fog such operations might not be successful and might result in a dispersion of the BLUE Fleet making assembly for the day action difficult. If the attack could be successfully initiated its results would be doubtful so far as damage to the RED Fleet is concerned, and might result in so great a reduction of the BLUE cruiser and destroyer strength that they would be a source of weakness in the day action following.

This course is not considered feasible, and is discarded.

Course (4) is of doubtful suitability.

Bearing in mind that the task of the BLUE Fleet is probably "to destroy the RED Fleet", there could probably be no assurance that the night attack would complete this task. To have a prospect of success, the night attack would have to be made in strength, and probably would have to be supported by cruisers. To assure this strength, BLUE would have to conserve his destroyer and cruiser strength during the day engagement. The extent that this might safely be done would be indeterminate.

This course is therefore discarded as both not suitable and not feasible. In discarding it, however, it must not be completely dismissed as a possibility. Circumstances developing during the day action may make a night attack by BLUE probable. It is dismissed here as not relating to the situation so far as it can be foreseen at present.

IV. COMMANDER'S OWN COURSES OF ACTION

(a) Appreciation of the Mission.

The RED C-in-C's mission is -

"To gain control of the WESTERN ATLANTIC north of latitude 43° N. in order to assist in denying BLUE operations against the MARITIME PROVINCES".

The subsidiary task and its purpose is -

"To destroy the BLUE Fleet if it is encountered while the RED Fleet is enroute to HALIFAX, in order to gain control of the WESTERN ATLANTIC north of latitude 43° N".

The security of HALIFAX is still essential to RED control of the WESTERN ATLANTIC. It is also essential to the RED Fleet as a haven after a fleet engagement, since RED has not sufficient fuel in all vessels to return to RED homeland, and ST.JOHNS is not adequately equipped to serve the entire RED Fleet.

The RED C-in-C therefore has decided that he will continue his course toward HALIFAX and only engage BLUE if BLUE encounters RED. He will not seek an engagement and will not be diverted far from his route if BLUE endeavors to divert him.

(b) Statement and Analysis of Possible Courses of Action.

If BLUE does bring on an engagement, it may present the only opportunity RED will ever have of destroying the BLUE Fleet. RED will take every advantage of that opportunity, and not sacrifice the initiative once BLUE indicates his intentions.

RED will not be particularly distrubed if BLUE chooses to remain between him and HALIFAX. He certainly will sacrifice no advantage to prevent such a situation. He may endeavor, however, to occupy, toward the end of the action, a position between BLUE and BLUE'S line of retreat to prevent the escape of BLUE ships.

RED must be prepared for action against BLUE carriers and aircraft on 22 June, and for night attack and fleet action during the first clear weather after reaching the GRAND BANKS.

RED will prefer to engage early in the day so that he may assemble his forces and continue to HALIFAX before dark; also to

have an opportunity to scatter BLUE light forces to prevent a possible night attack after the battle.

The courses of action open to RED appear to be:

(1) To destroy the BLUE Fleet by a day engagement in which all forces are employed simultaneously.

(2) To reduce the strength or speed of the BLUE Fleet by air or submarine attacks or both and then destroy the BLUE Fleet by a coordinated day engagement of all forces.

(3) To follow a day engagement as in courses (1) or (2) by a night destroyer attack.

Course (1) is suitable, in that if successful it would provide for the destruction of the BLUE Fleet.

The feasibility of this course will depend upon circumstances. It is quite possible that the action will develop so quickly under the weather conditions, that the opposing battle lines will be engaged before RED can take any preliminary action. The circumstances for RED will differ from those discussed under the same course of action for BLUE, since RED may be in a disposition designed for security, while BLUE, having the initiative until the engagement is imminent, will be disposed for offensive action. It may not be possible for RED to dispose his submarines for a preliminary attack on BLUE, while BLUE, knowing RED'S destination, may be able to do so. RED carriers must be kept in positions where they will not be exposed to BLUE attack, and they may be so far from BLUE that early attacks could not be made.

This course seems feasible under circumstances which it is hoped will not develop, and it appears that if the weather will permit BLUE to make attrition attacks before the engagement, it should also permit RED to do the same. However, this course will be retained for comparison with other possible courses.

Course (2) is suitable.

If the weather conditions are as assumed in this estimate

this course appears feasible. It will be retained for further consideration.

Course (3) is considered neither suitable nor feasible at the present time for the same reasons stated when this same course for BLUE was considered in Section III. If BLUE should appear to be reserving light force strength for a night destroyer attack, RED would desire either to pursue them or to reserve his light forces for defensive purposes. The situation existing after the day engagement may make this course suitable and feasible. For the present it is discarded.

SECTION V. DETERMINATION OF COMMANDER'S BEST COURSE OF ACTION.

(a) Analysis and Comparison of opposing suitable courses of action.

The Courses of Action retained for further consideration are:

For BLUE

(1) To reduce the strength of the RED Fleet by air or submarine attacks, or both, and then to destroy the RED Fleet by a coordinated day engagement of all forces.

For RED

(1) To destroy the BLUE Fleet by a day engagement in which all forces are employed simultaneously.

(2) To reduce the strength or speed of the BLUE Fleet by air or submarine attacks, or both, and then to destroy the BLUE Fleet by a coordinated day engagement of all forces.

The only course reserved as suitable for BLUE contemplates attrition attacks by air or submarines or both before a general engagement is entered. The early location of RED by scouting operations should permit BLUE to initiate air attacks without difficulty. It may be difficult, however, for BLUE to move his submarines into position for an early attack, although he may anticipate closely the RED line of advance toward HALIFAX, and station his submarines on that line.

Fog or low visibility may interfere with the execution of this course, and it seems probable that BLUE will delay action until favorable weather exists.

For RED, course (1) requires that all of the RED power be reserved until all forces can be coordinated in a simultaneous effort. To effect such coordination requires the concentration of the RED striking forces at the point of contact. The concentration may be planned, or it may be the direct result of fog or visibility conditions requiring a compact cruising disposition.

Under weather conditions assumed in this estimate, the RED Fleet may be subjected to air or SS attacks by BLUE, while waiting for BLUE to close the action, or while RED endeavors to close it. RED'S strength may be seriously reduced in such attacks before BLUE is ready to engage with all forces. RED'S freedom of action may be restricted by BLUE measures, so that neither RED aircraft nor submarines will be able to enter the simultaneous engagement. In this course also, RED will be urable to inflict any damage on BLUE until the combined attack has developed.

In poor visibility, surprise contact at daylight, or if flying is impossible, this course may have many advantages. Under the assumptions for this estimate this course appears suitable for a surprise contact at daylight.

Course (2) will permit greater freedom in the disposition of RED forces both for offensive action and security. RED may be able to maneuver to bring his SS into action early, and may successfully employ his aircraft against the BLUE battle line, light forces, or carriers before the general engagement is joined. If the early attacks of these types are unsuccessful, there may be another opportunity to employ them during the combined action.

In this course as well as course (1) RED will be subjected to attrition attacks by BLUE, but in course (2) compensating damage to BIUE may be effected.

If BLUE should deliberately attack during poor visibility or without aircraft, or if action under these conditions should be brought on by surprise contact at daylight, course (2) would not be feasible. Except for the employment of submarines, however, it would automatically become course (1) in the event of a surprise contact at daylight.

Without going into further details of these courses, it seems apparent that course (2) has an advantage over course (1) in the consequences as to cost. In course (1) the RED Fleet may be subjected to losses before a blow can be struck at BLUE. No corresponding damage can be inflicted on BLUE and RED may enter the engagement severely handicapped.

Since course (2) will practically become course (1) in the only situation under the assumed conditions, that it will not be feasible, course (1) is eliminated from further consideration.

(b) Evaluation of Commander's Courses of Action.

It has previously been considered that operation of BLUE carrier aircraft may be projected into the 22 June area of the RED Fleet. These operations may be restricted to scouting only, or bombing attacks may be directed against RED carriers or vessels of the RED main body.

Extensive screening operations to deny information to BLUE aircraft are not feasible. It is essential, however, to guard the RED Fleet against attacks by BLUE planes. The most effective means of accomplishing this would be to locate and destroy the BLUE carriers. The disposition of RED during daylight on 22 June with this end in view must be considered and the decision put in effect.

(Note: The plan for security against BLUE aircraft, and the destruction of BLUE carriers on 22 June, is the subject of another estimate).

On 23 June, contact with the BLUE Fleet is possible. The details of the probable course of action of BLUE, and of the course of action determined upon for RED must be considered, a decision as to these details for RED must be made, the contingent

plan and the disposition of the RED Fleet determined upon.

BLUE Forces

The general attitude of BLUE and the strategic considerations have been discussed in Section III.

The details of the BLUE course of action will be considered first.

Battle Line.

BLUE's strength and greatest power of resistance lies in his 15 battleships. They are inferior to the RED battle line in speed, have 3 soft ships, no ships suitable for a detached wing, and have inferior secondary batteries. They have 12 long range ships and are adept in indirect fire with plane spot.

The attitude of the BLUE Fleet is expected to be offensive, but this does not mean that the BLUE battle line will press for a close battle line action. He may endeavor to open fire at long ranges using indirect fire, or, after joining action at visibility ranges, he may try to open the range and take advantage of his long range ships by employing indirect fire. However, he lacks the superior speed necessary to ensure his being able to open the range, and it will be to RED's advantage to deny such action to BLUE. If, however, the RED battle line can be slowed by preliminary action such a course for the BLUE battle line would be feasible. Means of slowing the RED battle line will be discussed later. For the present it will be assumed that such effect can be accomplished.

With equal or superior BLUE battle line speed, or speed superior to one or more units of the RED battle line, an effort to open the range on the part of BLUE may leave some RED ships out of action and permit BLUE to employ indirect fire. It may also induce the RED battle line to try to close the range, thus presenting a favorable target angle for attack by BLUE light forces.

If RED refuses to follow BLUE, BLUE may still select and maintain the most desirable battle line gun range. He may have

to accept the threat of RED light force torpedo attack, through presenting a favorable target angle to RED.

If BLUE is not successful in slowing the RED battle line it is probable that the battle line action will take place inside of visibility. Under these conditions it is questionable whether it is to BLUE's advantage to keep at maximum range as long as possible, or accept moderate ranges promptly. BLUE has the greater total life, and greater individual life according to data available. Shorter ranges would permit BLUE's 12" gun ship to be more effective, and the damage on RED's soft CCs would be greater. Such a maneuver could be accomplished by BLUE heading away from RED and slowing down. This would permit RED to close the range, and he would present a favorable target angle for BLUE torpedo attack while doing so.

BLUE is aware of RED's superior torpedo range and of the RED torpedo strength in BB, cruisers and DD. If BLUE attempts to close the range by heading toward RED, he will subject his own battle line to a torpedo menace. It is not probable, but is possible, that BLUE will take such a course.

If BLUE cannot open the range, and does not desire that it be closed, he may accept action on approximately parallel courses with a gradual reduction of the range. Such a course would offer no advantage over RED in the relative position of light forces for torpedo attack, and would require that BLUE present almost continually a 90° target angle to RED's battle line fire. Probably BLUE's only advantage would be the doubtful one of superior life and gun power.

BLUE may choose to engage in a reverse action. If he intends to keep between RED and HALIFAX this will probably not be the case, but if RED tries to cut him off from his bases, he may decide initially for a reverse action, or accept it later.

Considering the probable courses for the BLUE battle line, it appears that it will close to visibility ranges, establish gunfire, and then turn away from RED - first, to present an

unfavorable target angle for RED torpedo fire - second, to open the range to employ indirect fire - or third, to induce RED to close while BLUE reduces speed. If BLUE can open the range, he may again close it after he has reduced RED strength. If he permits RED to close the range, he may later open it, if RED can be slowed by torpedo attack. BLUE may or may not desire a reverse action depending on circumstances. He may endeavor to gain the weather gage, or may prefer position, to weather advantage.

It does not seem probable that BLUE will attempt to use any of his 19 knot divisions as a detached wing. His strong divisions will probably be placed at the ends of his battle line, and his weak divisions in the center.

The possible courses of action of the BLUE battle line may be stated as follows:

(1) To open the engagement using indirect fire - then to continue the engagement inside of visibility ranges.

(2) To open the engagement at visibility ranges, then to increase the range beyond visibility and to reduce the RED battle line strength by indirect fire, and finally to close and continue the engagement at short ranges.

(3) To open the engagement at visibility ranges, and while heading away from RED battle line and reducing speed, to continue the engagement at short ranges.

(4) To open the engagement at visibility ranges and while heading toward the RED battle line to close the range, to continue the engagement at short ranges.

Heavy Cruisers.

BLUE may employ some of his heavy cruisers as carrier guards. This is not likely, since CV-3 has an adequate 8" battery, and BLUE may be inferior to RED in CA strength.

CAs may be employed in scouting, particularly if he considers that flying conditions may not be, or may not, continue favorable. CA aircraft will most likely be used for scouting.

If the CAs are used as scouts it may be expected that they will be withdrawn to join the main body in time for an engagement.

Since BLUE has a superiority in CL, all or some of the CA may be used during the engagement as a detached wing to oppose the RED CC, leaving the defense of the BLUE battle line against DD attack, and the support of the BLUE DDs, to the CLs.

As a detached wing, the CA can use indirect fire, and may be employed on the disengaged side of the RED battle line, to damage the RED BB, or to draw off the RED CC. The visibility conditions, and the high speed of the CA, should make such action feasible.

If none of the CA are employed as a detached wing, it seems that their only other profitable use would be in the defense of the BLUE battle line against RED light forces and to support a BLUE light force attack.

In the discussion of the BLUE battle line, it was indicated that BLUE may deny a RED light force attack by presenting an unfavorable target angle. This maneuver may induce RED to pursue BLUE, and thus give the BLUE light forces a favorable opportunity to attack not long after the engagement is opened.

The employment of the BLUE CA to support a BLUE DD attack by opposing defending RED forces should be most effective. The disposition of the CA will be discussed later.

The possible courses of action of the BLUE CA may be stated as follows:

(1) To reduce the strength of the RED detached wing or battle line.

(2) To support BLUE light force attacks and to oppose RED light force attacks on BLUE battle line.

Light Cruisers.

BLUE has 4 or 5 large CL and probably two 4-ship divisions of small CL.

These ships and particularly their aircraft may be used for scouting.

The ships will undoubtedly rejoin the main body before a fleet action.

These ships are more suitable than the CAs for opposing DDs. They are individually about equal to RED CLs and are inferior to RED CAs which may oppose them.

The small CL are equipped with torpedoes.

In battle there appears to be no course of action for the BLUE CL other than

To support BLUE light force attacks and to oppose RED light force attacks on BLUE battle line.

The probable disposition of all BLUE cruisers may now be considered.

(1) Cruiser strength may be divided equally between the flanks.

(2) In an action in which both fleets are heading in the same general direction, the BLUE light forces in the van will probably be stronger.

(3) In a reverse action, BLUE light forces in the rear may be stronger.

(4) In any of these three cases, BLUE may retain some cruisers near his battle line.

In all four cases, BLUE will endeavor to be superior to the cruiser strength presented by RED.

In case (1) a 4-ship division of small CL, a 3-ship division of CA, and a 2 or 3-ship division of large CL, may be on each flank.

In cases (2) and (3), a 4-ship division of small CL will probably be on each flank, and all but one division of CA and CL will be on the strong flank, with the remaining division on the weak flank.

In case (4) it would seem wise to keep a division of large

CL near the battle line to support any DD attacking from that point.

If the type of retiring action considered as probable for the BLUE battle line is employed, none of the BLUE light forces will be stationed far from the BLUE battle line. They will have a better chance of pressing home an attack on the RED battle line if they are not stationed too far from their own battle line. BLUE must be aware, however, of the danger from the 6" secondary batteries of the RED capital ships to both his cruisers and destroyers, and may attempt to keep his cruisers out of effective range of those batteries.

Destroyers.

Except for the DD used with the carriers as plane guards, all BLUE DDs will probably be used with the main body in the general engagement. Some of them may be used to supplement a scouting line if low visibility and poor flying conditions seem probable.

They will undoubtedly be used in anti-submarine screens for the battle line and possibly other forces, as long as practicable.

The new BLUE DDs with the high angle 5" batteries, may be disposed to oppose RED air attacks on the BLUE battle line.

With the retiring action considered for BLUE, the DDs should be in position to launch attacks as soon as battle line gunfire opens.

In a parallel action most of the BLUE DDs may be in the van. In a reverse action the greater number may be in the rear. The DDs in the battle line anti-submarine screen may be held with the battleships until ready to attack or may move to a flank.

The new BLUE DD may be placed on the strong flank upon deployment, while the old BLUE DD may be used on the weak flank. On the other hand, the new and old DD may be divided between the flanks.

All DD attack squadrons, as has been stated for the BLUE cruisers, will probably be separated from the BLUE battle line only far enough to permit ample sea room for all types to maneuver.

The probable courses of action of the BLUE DDs may be stated as follows:

(1) To oppose RED air attacks on BLUE battle line.

(2) To reduce the strength and speed of the RED battle line, and to oppose RED light force attacks on BLUE battle line.

Submarines.

BLUE will undoubtedly endeavor to get his submarines in a position to attack RED before the general engagement. If he has them favorable placed in his initial disposition, this may occur without difficulty. If they have not been well disposed, he may maneuver to draw RED over them. If this involves a long delay, or RED does not seem inclined to move according to BLUE's wishes, BLUE may attack, hoping to get his SS in at a later time, or he may disregard his submarines.

It would appear to be to BLUE's advantage to place his submarines along RED's line of approach to HALIFAX. The submarine line may be along or normal to RED's probable course. Either way has its advantages.

It is probable that after daylight, they will operate submerged to avoid detection.

RED may expect BLUE submarine attack any time after dawn (0200).

The physical objectives of the BLUE submarines will probably be battleships and cruisers. No submarine will miss a chance to attack a carrier, however, and if there appears to be no prospect of a better target they will attack destroyers.

The probable course of action of the BLUE submarines may be stated as follows:

To reduce the strength and speed of RED battleships or cruisers.

Aircraft.

No suitable bases are available to BLUE for shore-based aircraft in either CRIMSON or NEWFOUNDLAND. No aircraft tenders have been reported as sailing from BLUE ports.

BLUE must search for RED. With good flying conditions cruiser aircraft and carrier aircraft are available. Air scouting operations may have to be supplemented by surface vessels.

BLUE has a large force of ship-based aircraft for scouting. To employ them will permit BLUE to reserve his carrier aircraft for offensive action.

Preliminary to the general engagement, the physical objectives of BLUE carrier aircraft may be the RED carriers, capital ships, light forces or aircraft.

Attack on any of these objectives will probably take place as soon as possible after the objectives have been located by scouting operations. The interval between the location of the objectives and the attacks will depend upon the effectiveness of the BLUE communications and the position of the BLUE carriers.

The BLUE carriers will probably be kept as far as practicable from the expected position of RED, to make their location and bombing by RED difficult. The probable weather and wind conditions would indicate a position of the BLUE CVs to the west of RED, but they may be on any bearing.

A possible disposition of the BLUE CVs which would make the location of one of them difficult, would be to employ one as an arming and refueling station for the other. One might be kept out of probable range of RED scouts while the other might be located within striking distance of the RED objectives. The distant carrier might then be advanced to receive the returning planes.

Since BLUE has only two carriers, and RED has three, it will be most important for BLUE to destroy the decks of all RED carriers, if he is to immobilize the RED air strength. BLUE's search operations will therefore have to be extended, and will

have to continue until all carriers are located. Attack squadrons will have to be assigned to damage each RED carrier. This will reduce the strength of the attack forces which may be assigned to damage the RED capital ships.

Since BLUE's probable objective in attacking the RED capital ships will be to reduce the RED battle line speed, his physical objectives must be considered. To slow the CCs would not slow the battle line. BBs 19 and 20 are the strongest RED BBs, with 16" guns and 38,000 yards range. Damage to them would be a great help to BLUE, but these ships have the strongest AA batteries and greatest lives. Attacks on the weaker BBs would probably be more effective. The BBs of RED Batdivs I and II are the slowest, and would seem to be the best targets for BLUE. Whether BLUE will have sufficient air strength available to slow more than one of these ships cannot be estimated, but such action may be expected.

BLUE is already superior in cruisers, and it is not probable that he will expend any of his air strength in an early attack on these vessels.

Since the RED BB AA batteries are comparatively weak, BLUE may not consider it economical to precede bombing attacks on these vessels by straffing attacks. Two of the RED carriers, having strong AA batteries, may be located at such a distance that the BLUE light aircraft might not be able to accompany the bombers. Thus, BLUE may have available light aircraft to defend their own CV and main body from RED air attack.

Whether BLUE is able to rearm and deliver a second air attack on RED will depend upon whether his carriers can avoid destruction of their decks. If second attacks can be made, they probably will not occur until the general action. Their physical objectives will probably be the RED battle line and light forces. Aircraft torpedoes may be used, and possibly in coordination with BLUE DD attacks.

Since inside of visibility, RED will gain little advantage from air spot, and only three RED ships can engage outside of

visibility with indirect fire, it does not seem probable that BLUE will make any great effort to deny plane spot to RED.

The possible courses of action of the BLUE carrier aircraft may be stated as follows:

(1) To destroy RED carrier decks.

(2) To reduce the speed of the RED battle line.

(3) To oppose RED air attacks.

(4) To gas RED battle line.

(5) To harass RED light forces.

The BLUE ship-based seaplanes will probably be employed in any or all of these courses of action:

(1) To locate RED forces.

(2) To spot gunfire.

(3) To scout tactically.

(4) To guard against submarines.

(5) To harass RED light forces.

The probable course of action of BLUE is repeated:

To reduce the strength of the RED fleet by air or submarine attacks, or both, and then to destroy the RED fleet by a co-ordinated day engagement of all forces.

The possible courses of action of the various BLUE types are:

Battle Line.

(1) To open the engagement using indirect fire, then to continue the engagement inside of visibility ranges.

(2) To open the engagement at visibility ranges, then to increase the range beyond visibility and to reduce the RED battle line strength by indirect fire and finally to close and continue the engagement at short ranges.

(3) To open the engagement at visibility ranges, and, while heading away from the RED battle line and reducing speed, to continue the engagement at short ranges.

(4) To open the engagement at visibility ranges, and while heading toward the RED battle line to close the range, to continue the engagement at short ranges.

Heavy Cruisers

(1) To reduce the strength of the RED detached wing or battle line.

(2) To support BLUE light force attacks and to oppose RED light force attacks on BLUE battle line.

Light Cruisers.

(1) To support BLUE light force attacks and to oppose RED light force attacks on BLUE battle line.

Destroyers.

(1) To oppose RED air attacks on BLUE battle line.

(2) To reduce the strength and speed of the RED battle line, and to oppose RED light force attacks on BLUE battle line.

Submarines.

(1) To reduce the strength and speed of RED battleships or cruisers.

Carrier Aircraft.

(1) To destroy RED carrier decks.

(2) To reduce the speed of the RED battle line.

(3) To oppose RED air attacks.

(4) To gas RED battle line.

(5) To harass RED light forces.

Ship-based Seaplanes.

(1) To locate RED.

(2) To spot gunfire.

(3) To scout tactically.

(4) To guard against submarines.

(5) To harass RED light forces.

(SECTION V (b) continued).

RED Forces.

RED desires a decisive engagement with BLUE. RED will not be diverted far from his direct route to HALIFAX to seek such an engagement. He will not, knowingly, permit himself to be drawn over BLUE submarines, or BLUE minefields, to join a general action. On the other hand, he will not persist in holding his course for HALIFAX, if a tactical advantage may be gained by departing from it, or if he has reason to believe that a submarine or mine menace lies along that route.

RED desires to keep his route to HALIFAX open. He will, therefore, look with some concern on an effort of BLUE to interpose between him and HALIFAX. This will not, however, induce him to seek a reverse action at a disadvantage.

RED may desire to interpose between BLUE and his base. A parallel action, with BLUE to the northward of RED, would best suit this condition. In this case, also, he will not sacrifice other advantages to attain this end. It appears, then, that RED may determine upon the relative position of his main body to that of BLUE, and upon a parallel or reverse action, after the circumstances attending the approach of the fleets have developed on the day of battle. His forces must be so disposed, that he may maneuver for a position of advantage, and deploy for either a parallel or reverse action. In addition to the position of the enemy, these circumstances will depend upon the direction of the wind, state of the sea, visibility conditions, ceiling, navigational hazards, etc.

RED's course of action - the same as that considered probable for BLUE - contemplates early attacks on BLUE by aircraft and submarines, followed by a general engagement.

The courses of action of the various types will now be considered in connection with the possible courses of the BLUE types.

Capital Ships

In numbers RED and BLUE Capital Ships are equal.

To present approximately equal battle line strength to BLUE, all RED capital ships must be employed. If, therefore, the RED CCs are used as a detached wing, they must be kept tactically concentrated with the RED BBs, so that BLUE may not gain a battle line superiority by diverting or destroying the detached wing or by isolating it with smoke.

BLUE is superior in cruisers. To offset this superiority a detached wing of CCs may be useful. Moreover, RED would reap no advantage of the high speed of these ships if they were kept in the battle line. Since two of the CCs are soft, they might be forced to fight at a great disadvantage, if they were in the battle line, and required to engage with the same target angles and at the same ranges as the BBs.

RED CC-4 has sufficient gun power, and life to remain with the battle line. RED CC-2 and 3 might be placed on one flank, or one on each flank. All three RED CC might be placed on one flank, or CC-4 on one flank, and CC-2, 3 on the other.

There seems to be no particular advantage in placing CC-4 in the battle line, and this disposition is discarded. The use of the 3 CC as one, or two separate detached wings, appears to be one of those things which will depend upon the dispositions of BLUE. The CCs may, therefore, be organized into a detached wing, which may be separated upon deployment into two separate forces. They may maneuver to their best advantage while engaging the BLUE battle line.

In the discussion of the courses of action of the battle line, it must be considered as including the CCs.

RED's battle line superiority lies in its speed. This superiority must be maintained. BLUE will endeavor to reduce it, by air and submarine attack. Measures to frustrate BLUE attacks must

be as effective as possible. Anti-submarine screens, and defensive aircraft are suitable, and their availability will be discussed later. Anti-aircraft fire must be used effectively. It may be strengthened by placing the most probable targets for aircraft in the center of the battle line.

The speed superiority of RED may be most effectively maintained by slowing the BLUE battle line. This also will be discussed later.

RED will permit BLUE to initiate the battle line action if possible. If BLUE opens fire before visibility is reached, RED can expect some damage, but it may be decreased by maneuvering or possibly by interfering with plane spot. It will be most difficult for BLUE to establish this fire with his entire battle line, and it seems probable that BLUE will have to reach visibility ranges before any effective fire can be maintained. With good information of BLUE's disposition, RED should be well disposed for action before gunfire opens.

If the BLUE battle line pursues its most probable action - that is - to endeavor to open the range for indirect fire, RED may prevent this with his speed advantage. If BLUE indicates this action by turning away, but actually tries to close the range by reducing speed, RED may accept close range action, slow to maintain the range, or turn away.

If RED accepts close action or slows, he may be in a vulnerable position for BLUE torpedo attack. If he accepts this menace, it appears that RED's best action would be to force the BLUE DD to fire their torpedoes at long range by a strong defense, and then to turn away and endeavor to outrun the torpedoes. This may subject the RED battle line to the indirect fire that BLUE desires, but it may also turn the torpedo advantage to RED, as well as remove to a large extent the BLUE torpedo strength.

If the BLUE battle line employs his third possible course of action - to attempt to close the range by heading toward the RED

battle line, no more advantageous situation could be presented to RED. With superior speed, RED could control the range, present an unfavorable target angle for BLUE torpedoes, and be in a position to employ his own battle line and light force torpedo strength against the BLUE battle line. In such a maneuver, RED would have to guard against the possibility of losing all fire from BB-19 and 20 which have no stern fire, and the possibility that BLUE might avoid RED torpedoes by turning away. It may be noted here that RED torpedoes outrange BLUE torpedoes, and that BLUE battle line secondary battery fire is not as effective as REDs.

It will be to RED's disadvantage to permit BLUE to open the range and employ indirect fire. Whether RED will desire to permit BLUE to close the range or to close it himself is another question. At the shorter ranges, BLUE battle line gunfire will be more effective, particularly the 12" guns of BB-33 and the 14"-45 cal guns of BB-34-39. The RED CC-2 and 3 also will be more vulnerable. The RED 15" and 16" guns will probably be relatively superior to any but the BLUE 16" batteries at the longer ranges. It seems, therefore, that the best ranges for RED will be between about 18 to 23,000 yards, and that the range should be closed only after RED gunfire has considerably reduced the BLUE battle line strength. If RED is forced to use top spot, the range must be closed to about 5000 yards less than visibility to get effective spotting. It does not seem practicable to select a course of action for the RED battle line that will restrict the freedom of action of the battle line after the engagement is opened. The battle line commander must be free to act upon his initiative depending upon the developments at the time. Therefore, the courses of action for the RED battle line are stated as follows:

(1) To engage the BLUE battle line and maintain a range under 23,000 yards.

(2) To close the range and destroy the BLUE battle line after gunfire has reduced its strength.

The Detached Wing or Wings, will have the following courses of action:

To engage the BLUE battle line at best ranges.

To close to short ranges and destroy the BLUE battle line after gunfire has reduced its strength.

To oppose BLUE light forces.

Fire distribution of the RED battle line has yet to be considered. The BLUE 16" gun ships probably have the greatest strength and life. They will do RED the most damage but will be hardest to destroy. BB-33 with 12" guns will do the least damage and will be the easiest to destroy. The 14" gun ships have powerful batteries, but BB-34 and 35 are the weakest of these. The BLUE flagship or the heads of division columns should be good targets for concentration.

The fire distribution will not be determined at this time, but it appears that the leading ship of the 16" gun division would be most suitable for concentration, while fire might be divided on BB-33, 34 and 35.

Heavy Cruisers

RED has 7, and BLUE probably 6 or more.

BLUE CA are generally superior.

If BLUE uses any CA as a detached wing, they must be dealt with by the RED CC.

All RED CA will be required to oppose BLUE light forces and to support RED DD.

The courses of action for the RED CA are

(1) To repel BLUE light force attacks.

(2) To support RED destroyer attacks on the BLUE battle line.

Light Cruisers

RED has 8 in two divisions. BLUE has probably one division of 2 large CL and one of 3 large CL, and 2 divisions of 4 small CL.

The courses of action of the RED CL will be the same as for the CA.

(1) To repel BLUE light force attacks.

(2) To support RED destroyer attacks on the BLUE battle line.

The disposition of RED cruisers will be considered after the courses of action of the RED Destroyers.

Destroyers

Two destroyers will have to be assigned to each carrier as plane guard and AS screen.

The battle line and detached wing will require AS screens as long as possible before deployment. The cruiser divisions should also have AS screens if possible. The DDs in these screens must be used as attack squadrons.

When will they have an opportunity to attack? If the BLUE battle line presents a favorable target angle, it may come shortly after the battle lines are engaged. If the BLUE battle line carries out what seems to be the most probable course, they may not have a chance to attack until after the BLUE battle line has been damaged and slowed. If BLUE persists in heading away from RED, the RED DD may have to press their attack well home and fire their torpedoes at a retreating target.

There is another possibility for the RED DD. Under the visibility conditions, it may be possible to send a force of RED DD to the opposite side of the BLUE battle line from the RED battle line, during the approach. If BLUE turns away from the RED battle line after opening fire, these RED DD, may be able to attack them. If successfully made such an attack may be most effective in damaging the BLUE battle line and forcing it to maneuver. In a movement of this sort, the DDs would have to be supported by cruisers - probably CAs, but they would draw off a number of BLUE cruisers. They would probably be attacked also by BLUE aircraft. The prospects of success both in coordinating the attack with the RED battle line and in overcoming BLUE opposition would not be good. However, the results might be worth the cost. At least

two flotillas of DD and one division of CA should be employed in such a task. This would leave about 8 RED Half-Flotillas and 3 RED Crudivs to face about 11 BLUE Desdivs and 5 BLUE Crudivs, in the orthodox battle disposition. RED inferiority would appear to be too great to risk such a venture. If, however, the BLUE DD and cruiser strength is not as great as anticipated, this course of action may be considered again during the approach.

At the present time, the only course of the DDs that appears suitable and feasible is

(1) To attack the BLUE Battle Line.

(2) To repel BLUE destroyer attacks on the RED Battle Line.

The order in which these courses are carried out, and the time for carrying them out cannot be determined. Their initiation must be left to the destroyer commanders, or the orders of the O.T.C.

The disposition of the destroyers and cruisers upon deployment will now be considered.

The destroyers active as Battle Line and Detached Wing AS screens, will be held near the battle line to attack from that position.

An equal number of DD will be placed on each flank. Remaining DDs will be kept in the center to be sent to the van or rear depending upon the final decision as to a parallel or reverse action.

A heavy cruiser division will be placed on each flank. The light cruiser divisions will be held in the center to be sent - on deployment - to either or both flanks.

The light forces must be disposed so that before or after deployment, they will not come within range of the BLUE battle line before the two battle lines are engaged. They must also be placed so that they may be used for tactical scouting if air scouting fails or is unsatisfactory.

Submarines

RED has 11 submarines. Maximum surface speed 17.5 knots.

The usefulness of the submarines in action depends more on their disposition than their characteristics.

If their position is known to the enemy their value in action may be destroyed, and enemy aircraft may force them to submerge any time after daylight on the day of the engagement.

If the RED fleet is to make any progress toward HALIFAX, the submarines must remain on the surface as long as possible. Provision must be made if possible, then, to warn them of the approach of enemy aircraft. Only friendly aircraft are suitable.

The submarines must not be disposed too far or too close to the main body. The actual theater of action and information or lack of information of the enemy will control the disposition.

Their course of action is

(1) To torpedo BLUE battleships, carriers or cruisers.

Carrier Aircraft

BLUE has 3 carrier decks to BLUE's 2, and is superior in carrier based aircraft.

RED's course of action requires the reduction of BLUE strength by air attacks.

The physical objectives of the RED aircraft may be BLUE carriers, BBs, light forces, or aircraft.

It is not probable that BLUE aircraft will be caught on the BLUE carrier decks, but if these aircraft are to be prevented from rearming and making a second flight, the carrier decks must be destroyed.

If the RED battle line is to be sure of maintaining its speed superiority, the BLUE battle line should be slowed. The submarines cannot be counted on for this, and it must be undertaken by aircraft. BLUE AA batteries are strong, and BLUE may have aircraft available to defend his battle line. Therefore, fighters must accompany RED attacks on the BLUE battle line. Probably the best target would be the leading ship of the 16" gun division.

The old 14" gun ships or the 12" gun ships might not be brought into the action if one of them were slowed.

The urgency of the attack on the BLUE battle line lies in the prompt reservicing of the aircraft employed in the attack. So far as the battle line engagement is concerned, the attack on the BLUE battle line may occur any time before the two battle lines engage.

With this one restriction, the time of the attack and the selection of the battle line target will be left to the Air Force Commander.

It would appear to be best to concentrate the RED air striking power on the BLUE carriers and battle line on the first flight, and not divide the effort by attacking cruisers.

All the RED VF may be employed with the early bombing attacks. It does not seem practicable to count on using any VF to guard the RED battle line, until the general engagement.

It must be expected that BLUE will attempt to destroy all RED carrier decks and that he may be successful in the case of at least two carriers. It may be possible to dispose the third RED carrier so far to the rear, or possibly to hide it in the edge of a fog bank so that it may not be located. Its aircraft may then be reserved for use during the general engagement, and its deck used to rearm and refuel the aircraft from the other carriers. RED CV-4, having the weakest AA battery should be used for this purpose.

If the action does not take place until the RED Fleet nears HALIFAX, it may be possible to base the carrier aircraft there. Fuel and bombs are available. There is no corresponding field in NEWFOUNDLAND. There is a beach at HARBOR GRACE and a small field at QUIDDY VIDDY just north of ST. JOHNS which could be used for aircraft to land if no carrier deck is available. No fuel or bombs are available at these points, however, and the RED fleet probably will be too far away for the fields to be used for this purpose.

After rearming, the RED carrier aircraft may be used to again attack the BLUE battle line, BLUE cruisers, carriers or to straff the BLUE destroyers. The physical objectives and armament may be left to the Aircraft Commander.

Since the RED C-in-C must have ample warning of the position and disposition of the BLUE surface forces, and since the BLUE carriers must be located, there must be extensive scouting operations. The ship based seaplanes are not adequate to do all the scouting, and a large part of it must be done by the carrier aircraft. The areas for scouting must be assigned when they are known.

The use of smoke certains has not been considered. Since they may be useful to the O.T.C. the equipment of some aircraft for laying smoke should be provided for.

The following courses of action must be carried out:

Before the general engagement

(1) To seach for the enemy.

(2) To destroy BLUE carrier decks as soon as located.

(3) To reduce the speed of the BLUE battle line before the battle lines engage.

After rearming

(4) To attack BLUE battle line, cruisers, carriers or destroyers as directed by O.T.C.

(5) To defend the RED battle line.

Ship based seaplanes

RED is comparatively weak in ship based seaplanes. As many as practicable will be used for scouting.

When the general engagement opens, it is hoped that there will be ample ship based planes refueled and ready to spot and scout tactically. These planes should also maintain an anti-submarine patrol after daylight.

The courses of action for the ship based seaplanes will be:

(1) To seach for the enemy.

(2) To scout tactically.

(3) To spot gunfire.

(4) To patrol against submarines.

If planes are available, or when not employed in other courses -

(5) To straf enemy light forces.

The consequences as to cost in carrying out the courses of action considered will be great. It may be expected that at least half of the surface ships and aircraft engaged will be lost. Of those not lost, probably all will be damaged to a serious extent. Submarine losses probably will not be excessive, because only a few will be able to enter the action.

RED, fortunately has a defended base, HALIFAX, near by. All but the most serious damage to the capital ships may be repaired there.

The attainment of the objective is worth the cost.

The general course of action for the RED Fleet is restated as follows:

To reduce the speed of the BLUE battle line by air and submarine attacks, to destroy the BLUE carrier decks by air attacks and then to destroy the BLUE fleet employing all types in a general engagement.

The courses of action of the types concerned preliminary to the general engagement are:

Carrier aircraft

To destroy BLUE carrier decks as soon as located.

To reduce the speed of the BLUE battle line before the battle lines engage.

Submarines

To torpedo BLUE battleships, carriers, or cruisers.

The courses of action of the various types during the general engagement are:

Carrier Aircraft

To attack BLUE battle line, cruisers, carriers or destroyers, as directed by O.T.C.

To defend the BLUE battle line.

Submarines

To torpedo BLUE battleships, carriers, or cruisers.

Battle Line

To engage the BLUE battle line and maintain a range under 23,000 yards.

To close to short ranges and destroy the BLUE battle line after gunfire has reduced its strength.

Detached Wing

To engage the BLUE battle line coordinating action with own battle line.

Oppose BLUE light forces.

Cruisers

To repel BLUE light force attacks.

To support RED light force attacks on BLUE battle line.

Destroyers

To attack the BLUE battle line.

To repel BLUE destroyer attacks on RED battle line.

The following additional courses must be carried out:

Carrier Aircraft

To search for the enemy.

Ship Based Seaplanes

To search for the enemy.

To scout tactically.

To spot gunfire.

To patrol against submarines.

To straf enemy light forces.

The courses of action of the RED Fleet and the various types are integrated into a single course of action as follows:

To locate the BLUE Fleet by air scouting, to destroy the BLUE carrier decks by air attacks as soon as carriers are located, to reduce the speed of the BLUE battle line by air and submarine attacks before the battle lines engage, and then to destroy the BLUE Fleet by air and submarine attacks and gun and torpedo fire in a general engagement.

VI. THE DECISION.

Only one general course of action was retained for RED as suitable and feasible under the conditions assumed. The consequences as to cost are acceptable.

This course of action, therefore, forms the basis of the DECISION which is as follows:

To destroy the BLUE Fleet if it is encountered while the RED Fleet is enroute to HALIFAX, by destroying the BLUE carrier decks as soon as the carriers are located, by reducing the speed of the BLUE battle line by air and submarine attacks before the battle lines engage and then by a general engagement of all forces

in order to gain control of the WESTERN ATLANTIC north of latitude forty three degrees North.

3448-1630
2-16-37

File
SECRET

Battle Plan
No. 1

RED Fleet,
BB-16, Flagship.

Lat. 44°-20' N.
Long. 42°-00' W.
22 June 193-, 1700.

TASK ORGANIZATION
(a) Battle Line, Admiral R-2.
Batron One, Two,
Flotilla Three less Half Flotilla Eight and DD One hundred forty three and One hundred forty four.
(b) Detached Wing, Rear Admiral R-Three.
Batcruron One,
Half Flotilla Fourteen.
(c) Right Flank Force, Rear Admiral R-Four.
Cruron Two,
First Desron less Flotillas Three, Four.
(d) Left Flank Force, Rear Admiral R-Five.
Cruron One,
Second Desron less Flotilla Seven.
(e) Center Force, Vice Admiral R-Six.
Crurons Four, Five,
Flotilla Seven less Half Flotilla Fourteen.
(f) Submarines, Captain R-Seven.
Subflos One, Two.
(g) Air Force, Vice Admiral R-Eight.
CV Two, Three, Four,
Half Flotilla Eight,
DD One hundred forty three, One hundred forty four.

1. Information. BLUE Fleet reported to consist of fifteen battleships, two aircraft carriers, about six heavy cruisers, from twelve to fifteen light cruisers of which four or five are of the latest type, about four squadrons of destroyers and some submarines left NARRAGANSETT BAY on the morning of twenty June. It is belived that no other BLUE forces are available to support the BLUE Fleet. BLUE submarines have been reported in the STRAITS OF BELLE ISLE. It is expected that BLUE Fleet will seek a decisive engagement with RED Fleet. Contact of surface forces may occur any time after daylight on twenty three June. It is expected that BLUE will deliver air and submarine attacks before a general day engagement.
Assumptions. That BLUE Fleet will be in the strength reported. That visibility probably will not exceed twenty three thousand yards. That weather will be suitable for flying all types of aircraft.

2. This force will destroy the BLUE Fleet if it is encountered while the RED Fleet is enroute to HALIFAX, by destroying the BLUE carrier decks as soon as the carriers are located, by reducing the speed of the BLUE battle line by air and submarine attacks before the battle lines are engaged and then by a general engagement of all forces, in order to gain control of the WESTERN ATLANTIC north of latitude forty three degrees North.

3. (a) Battle Line engage BLUE battle line. Open engagement inside of visibility and maintain range less than twenty three thousand yards. Close the range after gunfire has reduced BLUE battle line strength. Destroyers attack BLUE battle line. Aircraft: Search assigned area with aircraft; patrol against submarines in vicinity of main body; spot gunfire.

(b) Detached Wing engage BLUE battle line coordinating action with own Battle Line. Oppose BLUE light forces. Aircraft: Search assigned area with aircraft; patrol against submarines in vicinity of main body; spot gunfire. Destroyers attack BLUE battle line.
(c) Right Flank Force
(d) Left Flank Force Cruisers: support destroyer attack on BLUE battle line; repel BLUE light forces. Destroyers: attack BLUE battle line; repel BLUE light forces; guard cruisers against submarines until deployment. Aircraft: search assigned area with aircraft; scout tactically; spot gunfire; straf BLUE light forces.
(e) Center Force. Aircraft: search assigned area with aircraft; maintain patrol over RED submarines and warn them of approach of BLUE aircraft; scout tactically; spot gunfire; straf BLUE light forces.
Destroyers guard cruisers against BLUE submarines until deployment.
(f) Submarines torpedo BLUE battleships, carriers or cruisers. Remain on surface until forced to submerge to avoid detection. Aircraft patrol will give warning of enemy aircraft.
(g) Air Force. Search assigned areas with aircraft. Reduce BLUE battle line speed by air attack before the battle lines engage. Destroy BLUE carrier decks as soon as carriers are located. Attack BLUE battle line and light forces and guard RED main body against BLUE air attacks during general engagement. Direct three heavy smokers to report to Officer in Tactical Command at beginning of general engagement. The Officer in Tactical Command desires that a particular effort be exerted to maintain the security of CV Four flight deck to permit CV Four airplanes to be employed in the general engagement and to permit reservicing of all carrier aircraft.
(x) Officer in Tactical Command will initiate destroyer attacks or delegate this authority to Flank Force or destroyer commanders.
Approach Dispositions Number One, Two and Three - Annex A.
Battle Dispositions Number One, Two, Three, Four - Annex B.
This Battle Plan will be placed in effect at a time to be designated by the Officer in Tactical Command.
The scouting areas and areas for carrier operations will be assigned by the Officer in Tactical Command before this plan is placed in effect.

4. - - - - - -

5. Restrict use of radio to reports of contact and necessary communication with aircraft until other orders from Officer in Tactical Command.
Communication Plan E.
Plus four zone time.
Rendezvous A - HALIFAX; B - TREPASSY BAY; C - latitude forty three degrees North, longitude fifty eight degrees West.
Officer in Tactical Command in BB Sixteen with Battle Line.

R-1
Admiral, RED Navy,
Commander-in-Chief, RED Fleet.

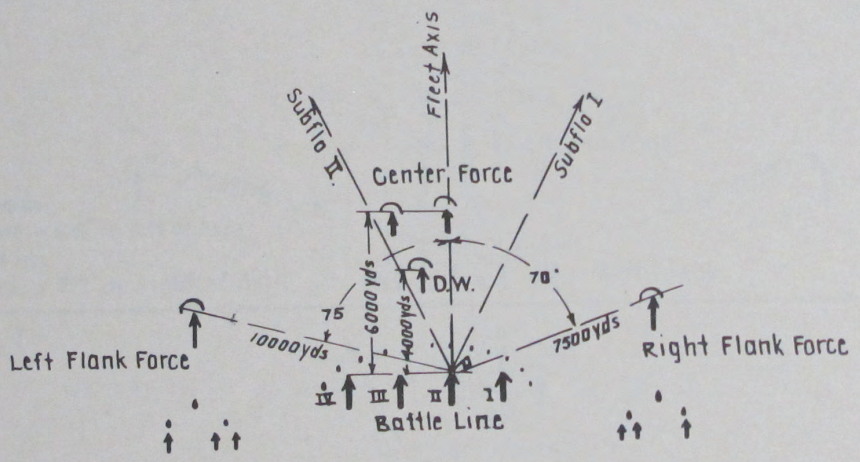
Annexes:
A - Approach Dispositions.
B - Battle Dispositions.

Distribution
All task force and unit commanders,
by despatch boat.

R-100
Commander, RED Navy
Secretary.

Subflo II in column. Distance 4 mi.
Leading SS - 40 mi. from guide - 25° to left of Axis.
Subflo I in column. Distance 4 mi.
Leading SS - 40 mi. from guide - 25° to right of Axis.

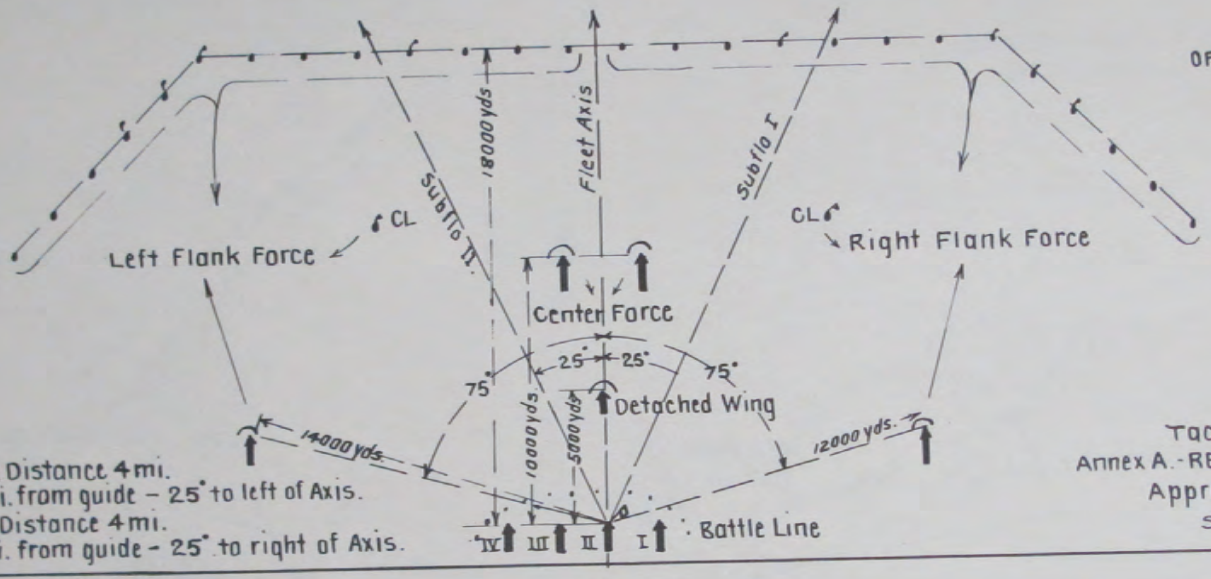
OP. DEPT. N.W.C. 2-37
RESTRICTED



Tac. Prob. IV - 1937 Sr.
Annex A - RED Battle Plan No. One
Approach Disposition No 1.
STAFF SOLUTION.

Dr. S. 75

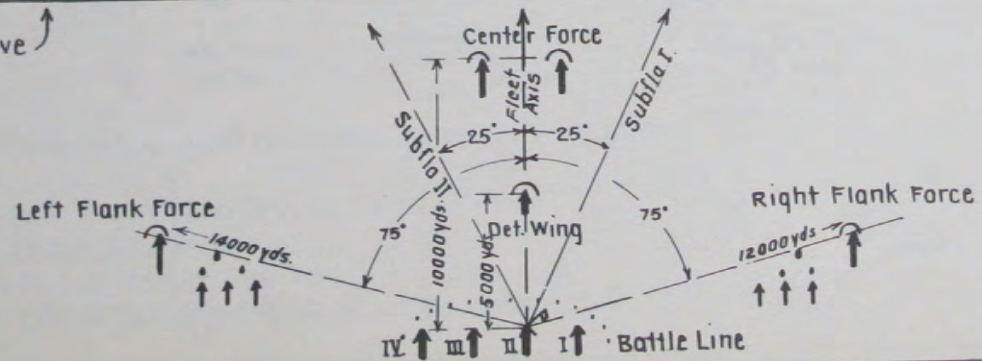
OP. DEPT. N.W.C. 2-37
RESTRICTED



Subflo II in column. Distance 4 mi.
Leading SS-40 mi. from guide – 25° to left of Axis.
Subflo I in column. Distance 4 mi.
Leading SS-40 mi. from guide – 25° to right of Axis.

Tac. Prob. IV 1937 Sr.
Annex A.-RED Battle Plan No. One
Approach Disposition No 2.
STAFF SOLUTION

Subflos I, II same as above

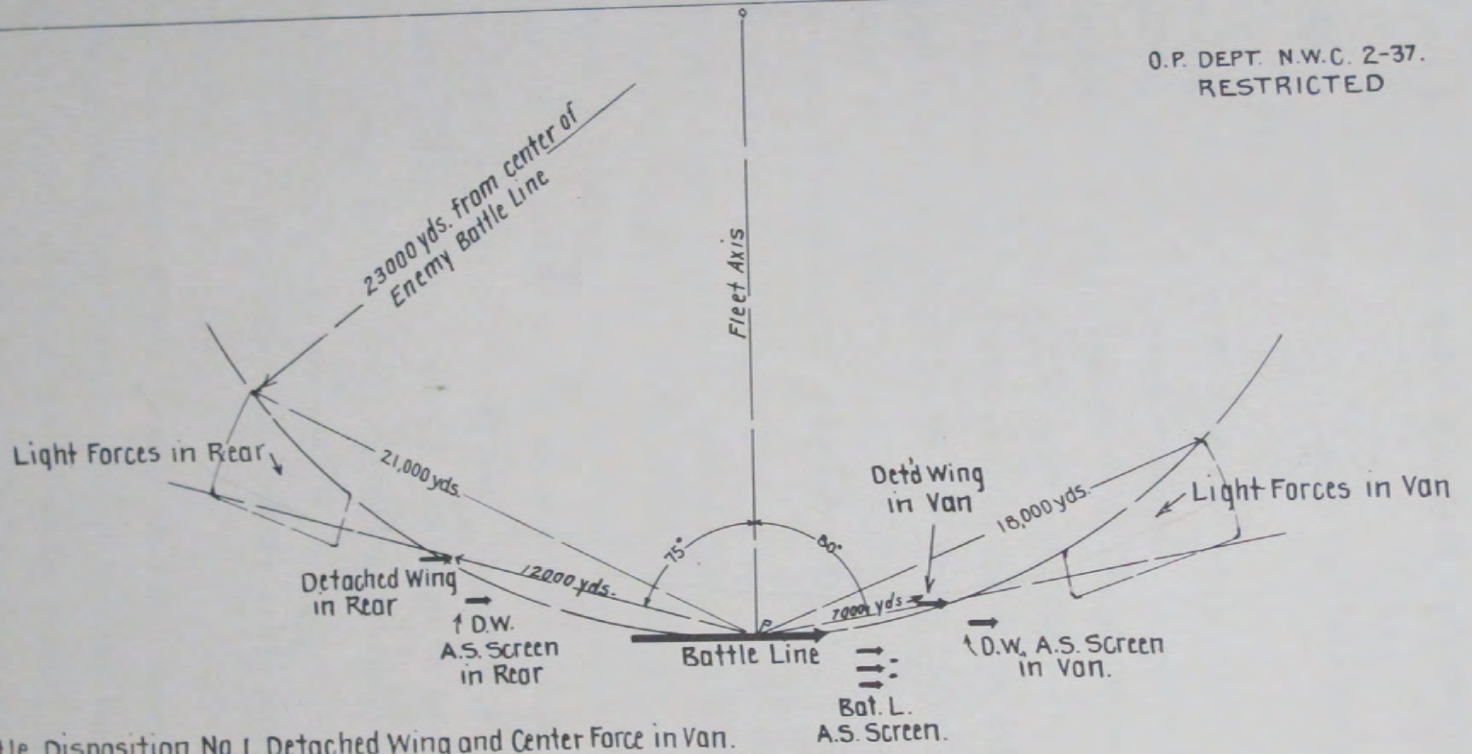


Tac. Prob. IV 1937 Sr.
Annex A - RED Battle Plan No. One
Approach Disposition No 3.
STAFF SOLUTION

MULTILITH
No. 95

Dr. 5.75

O.P. DEPT. N.W.C. 2-37.
RESTRICTED



Battle Disposition No. 1. Detached Wing and Center Force in Van.
" " No. 2 " " " " " " in Rear.
" " No. 3. CC 4, H.F. XIV, Cruron IV, DL 26, H.F. XIII in Van.
CC 2, 3, Cruron V in rear.
" " No 4. CC 2.3. Cruron V in Van.
CC 4, H.F XIV, Cruron IV, DL 26, H.F. XIII in Rear.

Tac. Prob. IV. 1937 Sr.
RED
Annex B to Battle Plan No. 1.
Battle Dispositions.
STAFF SOLUTION.

Dr. S. 75

MULTILITH
No. 95

Running Estimate - 22 June

No fog, wind NE, Force 4, Sea moderate, visibility 20,000 yards. Ceiling unlimited. Good flying weather. Fog reported south of NEWFOUNDLAND, and predicted for 23 June area of RED Fleet.

RED fleet disposed for defense against BLUE carrier aircraft attack.

No attacks developed by 1700. BLUE carriers may be in fog area.

Since fog predicted for 23 June may continue until arrival of RED Fleet in Halifax, it seems advisable to change present disposition to low visibility cruising disposition before dark 22 June. Any time after daylight 23 June the RED Fleet, or any units which may be disposed at a distance from the fleet guide, may encounter BLUE scouts or other forces. In thick fog, there may be little danger to RED units. In a light fog or low visibility, however, a contact between BLUE CAs and a RED CV, for instance, might mean the loss of the CV.

To dispose the RED Fleet in such a disposition may present a serious situation if the fog lifts during daylight and exposes the RED Fleet to discovery and attack before it can be redisposed. The carriers and main body may be exposed to simultaneous attack by BLUE air forces; submarines may have to submerge at once, and this may make it impossible for the RED Fleet to maneuver so as to employ them in an engagement; and screening forces may be engaged before deployment may be accomplished.

Except for the submarines, it appears that these disadvantages must be accepted.

Since the submarines may be able to evade enemy attack by submerging, and since the disadvantage of keeping them as a part of the screen or inside of it is too great to accept, they may be disposed well outside of the screen. They must be placed ahead of the screen, if they are not to be left too far behind if forced to submerge. Considering that contact with the enemy main body may occur immediately after the fog lifts, or any time after that,

the position of the submarines must be determined as a compromise. Forty miles ahead of the fleet guide seems suitable. Formation column - distance 500 yards during low visibility. Distance 4 miles when the fog lifts.

The carriers must be placed where they can clear the formation quickly to fly off their aircraft and to open the distance to the main body. A position in the rear is best.

The screen must be composed of light forces, disposed so that they may proceed promptly to their approach or deployment stations.

The battle line must be able to deploy quickly.

The RED Fleet will therefore be disposed in a low visibility cruising disposition by 2000.

The necessary orders will be issued at 1800.

(Note: This disposition is not shown in this estimate).

Battle Plan No. 1, formulated as a result of this estimate will be distributed by dispatch boat before dark 22 June.

Running Estimate 23 June

Thick fog set in at 0400, 23 June. Wind NE, Force 2. Sea smooth. Visibility 0. Ceiling 0.

No information of BLUE Forces.

At 0000, 24 June, RED Fleet in position Lat. 44-20 N., Longitude 51-00 W., by dead reckoning. Course 270° speed 12. Fleet in low visibility Cruising Disposition. Wind NW, force 2. Sea smooth. Visibility improving. Meterological reports from CRIMSON and NEWFOUNDLAND indicate clearing weather and probable daylight visibility not exceeding 23,000 yards.

Probable weather conditions suit the assumptions of Battle Plan No. 1.

RED cannot be sure that visibility at 0400 will permit flight operations. He must set some time for these operations to begin, however, and will issue orders to commence flight operations at 0400.

If the weather clears as predicted, the RED carriers and battle line may all be located at once if the carriers are within the screen. They must be disposed as soon as possible. Orders can be furnished them by 0200, and approaching daylight will permit them to move from the cruising disposition without danger from their own forces. They will be directed to move at 0200.

At 0145 Battle Line and Detached Wing anti-submarine screens will be stationed, and these units will zigzag.

Visibility permitting, the fleet will be disposed in Approach Disposition No. One at 0330. Fleet course and axis 270°. Surface ships will zigzag so as to make good 12 knots. This disposition will permit quick orientation of the axis before deployment if immediate contact with the BLUE main body is made.

The orders for the scouting plan, and disposition of the carriers will be made by Operation Order. The order will be delivered by destroyers of the battle line anti-submarine screen - to the carriers before 0130, and the unit commanders of all other types except the submarines by 0330. It does not seem advisable to attempt to furnish the operation order to the submarines. Destroyers in their vicinity after daylight might find them submerged or might disclose their presence to the enemy. The information contained in the order, except for time of execution of the Battle Plan, will require no action by the submarines. The presence of an air patrol will indicate to them that the battle plan is effective, and the O.T.C. can give them necessary information and instructions by radio when necessary.

The scouting plan and disposition of the carriers must be considered in connection with possible BLUE positions.

The entire BLUE Fleet or any part of it may have passed to the eastward of RED during the fog. It is most improbable that any but scouts or carriers have done so, however. If any BLUE ships are to the eastward, only the carriers will present a serious threat, and their operations will probably be restricted to an

area south of the fog and ice area of the GRAND BANKS, and to a distance of not more than 250 miles east of the RED Fleet.

If to the westward of the RED Fleet, the BLUE carriers may be as far west as the CRIMSON coast, as far north as NEWFOUNDLAND, and as far south as about Latitude 40°N.

If the BLUE main body expects RED to engage in a decisive action before dark on 24 June, it must commence the action not later than 1500. Considering that RED will continue on a westerly course at 12 knots, and that the BLUE main body can sustain a speed of 18 knots, the BLUE main body at 0400 must lie within a circle 198 miles in diameter centered 132 miles west of RED's 0400 position. This area is included in the possible positions of the BLUE carriers.

The possible positions of the BLUE main body can be covered by scouting operations. The entire area in which the BLUE carriers may be, can not. The scouting plan determined upon provides for the following

(1) To cover an area within a radius of 150 miles from REDs 0400 position immediately - so that the RED main body may have immediate warning if the BLUE main body is very near at daylight.

(2) To cover the possible area of the BLUE main body if it is to intercept RED before 1500.

(3) To cover probable areas of BLUE carriers to the north east and south.

(4) To cover an area of about 60 miles to the westward of the BLUE main body's probable most westerly positions at about 0700.

(5) To reserve ship based seaplanes for a second search if necessary.

(6) To restrict the carrier search operations so that they may have aircraft available for a defensive screen and so that their attack squadrons may be ready to take off with full gas tanks.

(7) To reserve planes to scout tactically after scouts make contact.

The disposition of the RED carriers has necessarily been considered in connection with the RED scouting plan. No areas will be secure against the probable BLUE search. The RED carriers must be placed so that they may be within flying distance of their objectives when they are located, but must be separated from each other and the RED main body. If possible, they must be clear of areas of drifting ice. These requirements indicate a position to the north of the RED main body for one carrier and to the south for one. If the third RED carrier is to be reserved as a spare flying deck, and its aircraft reserved for action after the main bodies engage, it must be kept as far as possible from the probable positions of the BLUE carriers, and still close enough to the RED main body so that its aircraft and flying deck may be available.

The initial areas selected and the assignment of carriers is as follows:

CV-2 - East of AVALON PENINSULA.

CV-3 - South of Latitude 42°-00' N and east of Longitude 52°-00' W.

CV-4 - 200 miles east of the RED main body.

If any of these areas are in fog, the carriers may not reach them, but may be able to use the fog as concealment except when flying planes on or off.

The location of enemy carriers may make the occupancy of these areas impracticable or unnecessary. The carrier commanders will, therefore, be authorized to avoid or leave them at discretion after the BLUE carriers are located.

File
SECRET

RED Fleet,
BB-16, Flagship.

Operation Order
No. 6

Lat. 44°-20' N.
Long. 51°-18' W.
24 June 193-; 0100.

TASK ORGANIZATION
(a) Battle Line, Admiral R-Two.
Batrons One, Two,
Flotilla Three, Four, less Half Flotilla Eight and DD One hundred forty three, One hundred forty four.
(b) Detached Wing, Rear Admiral R-Three.
Batcruron One,
Half Flotilla Fourteen.
(c) Right Flank Force, Rear Admiral R-Four.
Cruron Two,
First Desron less Flotillas Three and Four.
(d) Left Flank Force, Rear Admiral R-Five.
Cruron One,
Second Desron less Flotilla Seven.
(e) Center Force, Vice Admiral R-Six.
Crurons Four, Five,
Flotilla Seven less Half Flotilla Fourteen.
(f) Air Force, Vice Admiral R-Eight.
CV Two, Three, Four,
Half Flotilla Eight,
DD One hundred forty three, One hundred forty four.

1. Weather reports indicate a visibility of not over twenty three thousand yards by daylight twenty four June. It is believed that action with the BLUE Fleet may take place any time after daylight.

2. This force will search for the enemy in areas assigned, in order to carry out provisions of Battle Plan Number One.

3. (a) Battle Line
(b) Detached Wing. Aircraft search sector zero five two degrees dash one five nine degrees from zero four hundred position of fleet guide. Radius of search one hundred fifty miles.
(c) Right Flank Force aircraft search sector three two zero degrees dash zero five two degrees from zero four hundred position of fleet guide. Radius of search one hundred fifty miles.
(d) Left Flank Force aircraft search sector one five nine degrees dash two two zero degrees from zero four hundred position of fleet guide. Radius of search one hundred fifty miles.
(e) Center Force aircraft search sector zero two zero degrees dash three two zero degrees from zero four hundred position of fleet guide. Radius of search three hundred thirty miles. Employ two radio relay planes. Examine FORTUNE BAY. Avoid neutral territory and waters of ST. PIERRE and MIQUELON.
(f) Air Force. CV Two aircraft search PLACENTIA and ST. MARY'S BAYS and area between latitude forty six degrees thirty minutes North, and latitude forty eight degrees North, east of AVALON PENINSULA to longitude forty nine degrees West. Operate initially in an area east of AVALON PENINSULA.
CV Three aircraft search area between latitude forty two degrees twenty minutes North and latitude forty degrees North, east of a line bearing two hundred twenty

degrees from zero four hundred position of fleet guide to longitude forty nine degrees West. Operate initially in an area south of latitude forty two degrees North and East of longitude fifty two degrees West.

CV Four aircraft search area between latitude forty six degrees North and latitude forty two degrees North, to a distance of ninety miles east of longitude forty nine degrees West. Operate initially approximately two hundred miles, zero nine zero degrees from zero four hundred position of fleet guide.

Carriers avoid or leave initial areas at discretion after enemy carriers have been located.

Carriers leave formation and proceed toward assigned areas at zero two hundred.

(x) Battle Plan Number One is effective at zero four hundred twenty four June.

Commence all flight operations at zero four hundred twenty four June.

Zero four hundred position of fleet guide is latitude forty four degrees twenty minutes North, longitude fifty two degrees ten minutes West.

Scouting Areas - Annex A.

Aircraft making contact with enemy scout tactically until relieved.

4. --------

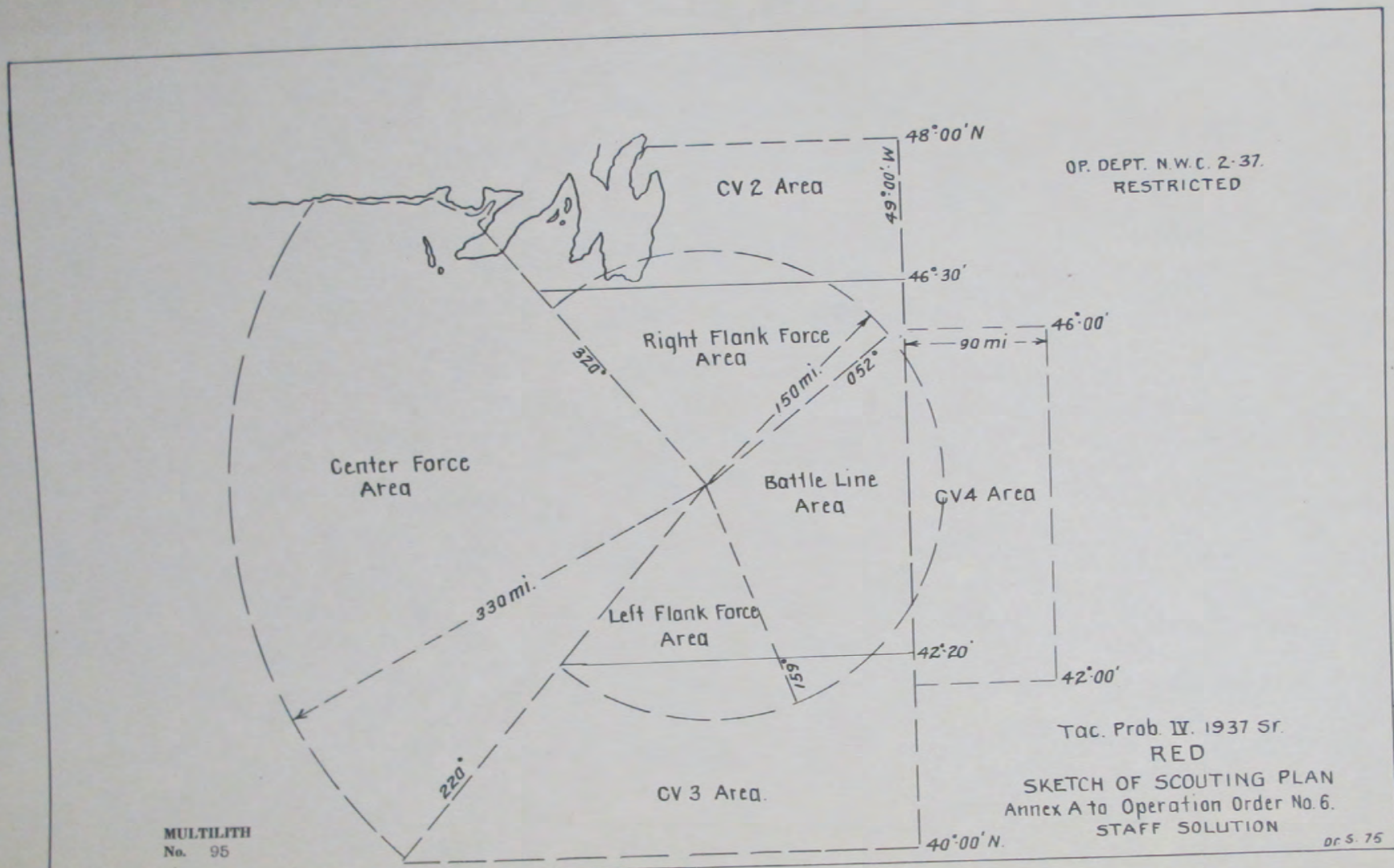
5. --------

R-1
Admiral, RED Navy
Commander-in-Chief, RED Navy.

Annexes:
A - Scouting Areas.

Distribution
By despatch boat prior to 0130, 24 June.
To: Commander Air Force,
Commanding Officers CV-2, 3, 4.
By despatch boat prior to 0330, 24 June.
To: All unit commanders.

R-100
Commander, RED Navy.
Secretary.


48°00'N
49°00'W
CV 2 Area
OP. DEPT. N.W.C. 2-37.
RESTRICTED
46°30'
46°00'
90 mi
Right Flank Force Area
320°
150 mi.
052°
Center Force Area
Battle Line Area
CV4 Area
330 mi.
Left Flank Force Area
42°20'
42°00'
159°
220°
CV 3 Area.
40°00'N.
Tac. Prob. IV. 1937 Sr.
RED
SKETCH OF SCOUTING PLAN
Annex A to Operation Order No. 6.
STAFF SOLUTION
MULTILITH
No. 95