was attacked by gunfire at 7,000 yards. The Carmarthenshire returned the fire and putting on speed escaped. Three hours later, at 8.30 a.m., in 48° 41' N., 10° 10' W., when she torpedoed without warning the British S.S. Petridge (1,712 tons), bound for London, taking the master prisoner. At 10.50 a.m., in about 49° N., 10° W., the British S.S. Umvoti (2,616 tons), Durban to London, followed her to the bottom, being torpedoed without warning, without a chance of using her 12-pdr. gun. Her next victim supplied another notorious instance of Wilhelm Werner's barbarity. This was the British S.S. Torrington (5,597 tons), from Gibraltar to Barry Roads. At 11.20 a.m., April 8, in about 49° 11' N., 9° 58' W., in sight of the boats of the Umvoti, she was struck by a torpedo, and immediately began to sink. U.55 came to the surface and opened fire with shrapnel, took the master prisoner, and ordered the men in the two boats on board the submarine. Nothing more was ever heard of any of the 34 officers and men, and there can be little doubt that Wilhelm Werner dived, leaving them most barbarously to drown. The master, Anthony Starkey, was taken prisoner.¹

Some three days later, on April 11, at 6 p.m., in 49° 10' N., 10° W., the British S.S. Cyclops was missed by a torpedo. This was probably fired by U.55. About the same date the British S.S. Vine Branch (3,442 tons) from Valparaiso to Liverpool, disappeared, and, as nothing more was heard of any of her 46 officers and men, it looks as if they became victims of another piece of useless barbarity. On April 12, at 1 p.m., in 48° 30' N., 10° W., U.55 torpedoed without warning and with a loss of 14 lives, the British S.S. Toro (3,066 tons). from Alexandria to Hull. It may have been U.55 that on April 13, at 5.10 p.m., in 48° 30' N, 11° 28' W., torpedoed and sank the British S.S. Kariba (3,696 tons) from Dakar to Falmouth. She seems to have gone down at once. Of the crew of 30, nine were picked up by the S.S. Kench the next day, 10 in a precarious condition on April 22 off Belle Isle, and 13 were never again heard of. On April 15, at 3 p.m., in 48° 55' N., 10° 50' W., U.55 sank the Danish S.V. Astraæ (260 tons), bound from Martinique to Havre. She, too, disappeared without any trace of her crew, and the master of the Torrington, who saw her stopped, thought that Werner had played once again the inhuman trick of taking them aboard and submerging.²

Two days passed before she got, on April 17, another ship, this time the British S.S. *Cairnhill* (4,981 tons), from New York with war stores and ammunition. At 8.20 a.m., in 52° 30' N., 13° 30' W., she was missed by a torpedo, and U.55 rose and opened fire at $3\frac{1}{2}$ miles. The ship was not armed, and, after being hit, was stopped and abandoned. While the Germans were putting bombs on board, H.M. sloop *Lavender* came in sight, and they had to hurry the work. U.55 was then on her way home, and was back on April 23.

> ¹ His account in I.D., Vol. 639. ² I.D., Vol. 639.

having sunk some 10 vessels of 29,568 tons, with the loss of 100 lives, whose inhuman sacrifice gave Wilhelm Werner an unenviable place in the list of "atrocity" commanders.

316. **Cruise of "U.86."**—With the exception of U.46 (March 12-April 11) (S.225), only one other High Sea Fleet submarine worked off the south or west Irish coast during the first twelve days of April. This was U.86, which was off the Skelligs on April 5 and 6. On April 5 she sank the French S.Vs. La Dunkerquoise (127 tons)¹ and Marie Celine (142 tons),² and torpedoed the S.S. Siberier and was attacked by the A.T. Guillemot (S.226); on April 6, at 4.40 p.m., in 51° 39' N., 14° 20' W., she sank the British steamer Rosalind (6,535 tons,) bound from Texas to Queenstown with oil. She seems to have suffered another attack.

On April 6, at 8.45 p.m., the steamer *Ethelaric* was attacked in 51° 35' N., 14° 5' W., by a submarine, which fired a torpedo and missed. The submarine came to the surface, showing the upper part of her conning tower, and the steamer opened fire with her 12-pdr. at 800 yards, and claimed two direct hits. This attack may possibly have damaged or startled *U.*86, for she sank no more ships in the South-West Approach. She arrived at Emden on April 19, sinking, on her way home on April 18, in 56° 33' N., 4° 18' E., the Swedish steamer *Atalanta* (1,064 tons), bringing her total sinkings for the cruise to four vessels and 7,868 tons.

317. Minelaying Cruise of "U.78."—In the meanwhile the large minelaying submarine U.78 (Kaptlt. Dröscher) had been working off the Orkneys and Shetlands, and on the north coast of Ireland. On April 2 she sank³ in the North Sea about 100 miles east of Mousa (South Shetlands) the Norwegian sailing ship Sagitta (1,981 tons), bound from Savannah to Killandborg, in Denmark. Two days later, on April 4, at 10.30 a.m., she torpedoed without warning the Danish steamer Vladimir Reitz (2,128 tons), bound from Galveston (Texas) to Aarhus, in a position 40 miles north-west by north of Foula Island.⁴ The Vladimir Reitz sank immediately with the loss of two lives, and without having seen the submarine. Next afternoon, April 5, at 2.9 p.m., U.78 opened fire in 58° 50' N., 6° 26' W., on the small homeward bound Danish schooner Bris (101 tons), killing the cook and the ship's boy. The Bris was at once abandoned, and sank about an hour later.

After sinking the Bris, U.78 steered to the south through the North Minch, and for the next four days she was busy laying her mines. On April 7, she laid a field of nine mines about 3 miles south

¹ In 52° 19' N., 11° 32' W. I.D., Vol. 689, also gives 51° 52' N., 11·40 W. ² In 52° 10' N., 12° 05' W. ³ In 60° N., 2° E.

4 60° 32' N., 3° 10' W.

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of Neist Point, in the Little Minch, in 57° 22.7' N., 6° 46.7' W. None of these mines appears to have been discovered during April. Continuing her passage southwards, U.78 reached the Cairns of Coll next day, April 8, and laid a field of six mines in 56° 43' N., 6° 23.2' W. That very day, April 8, at 2.5 p.m., the Admiralty had ordered "all ships" to use the Passage of Tiree, passing within 12 miles of the Cairns of Coll.1 U.78 laid her mines athwart this route, but whether she had intercepted and decyphered the Admiralty's telegram or whether the choice of position was a mere coincidence is not known. It is remarkable that no ships struck any of the six mines in April, and that this field, too, remained undiscovered during the month. On April 10, U.78 laid the last minefield of her cruise. It consisted of ten mines laid off Lough Swilly, and was discovered on April 15. At 7.10 p.m. that day the S.N.O., Buncrana, reported that moored mines had been seen, and suggested that the entrance to Lough Swilly should be published as dangerous.² The sweepers got to work, and swept up eight mines, and at 10.5 p.m. on April 24 the area was reported clear.³

After her visit to Lough Swilly, U.78 returned northwards, and on April 13, at 5.45 p.m., in 59° 35′ N., 5° 49′ W., sank with gun and bombs the British S.S. *Strathcona* (1,881 tons), taking prisoners her Captain and chief and third engineers. The chief officer and eight men were cast adrift in a boat, which was probably swamped, for it was never seen again; the other boat containing the second officer and seven men was picked up by the steam trawler *Elbe*, some 4 miles west of North Rhona at 4 p.m. on April 14. U.78's final victim was the British fishing vessel *Andromache* (313 tons), returning from Iceland to Hull with fish, which she sank on April 14 about 8 a.m. in 60° 20′ N., 4° 40′ W., after taking prisoner the skipper, Mr. William Cutsforth. On April 19, U.78 reached Heligoland. On her cruise she had destroyed five vessels, totalling 6,404 tons, and had laid three fields, totalling 25 mines.

318. Minelaying Cruise of "U.79," April 1-21.—The next submarine leaving Germany for the Irish coast was U.79, which sailed from Heligoland on April 1, and on April 8 laid a field of eight mines between 55° 23.8′ N., 7° 15.7′ W., and 55° 25.3′ N., 7° 15′ W., south of Inishtrahull. Having completed this task, U.79 broke off her cruise under stress of bad weather, and reached Heligoland on April 21. Her field was discovered on April 14, and the area declared dangerous.¹ The Lough Swilly minesweepers were busy clearing the Lime Burner Rock area², and it was not until April 24 that they were able to start work in Inishtrahull Sound.³ This field gave considerable trouble, and it was not till April 27 that the Sound was reported clear.⁴

319. Cruise of "U.84."—Two submarines, U.67 and U.84, sailed from Emden on April 5 to operate in the South-West Approach.

U.84 (Kaptlt. Röhr) was the first to claim a victim in the defensively armed British S.S. *Argyll* (3,547 tons) bound from Port Kelah to Middlesbrough, which she torpedoed without warning on April 13, at 7.45 a.m., in 49° 23' N., 9° 7' W., 110 miles west from Bishops Rock.

The Argyll saw nothing of her aggressor, and sank in four minutes with the loss of 22 lives, leaving only eleven survivors. U.84 was not seen again for five days. Then, on April 18, at 4.30 a.m., in 49° 10' N., 7° 40' W., the British S.S. Frankier (3,836 tons), Halifax to Falmouth, sighted the conning tower of a large submarine 5 miles to the south-eastward; at 6 a.m. the destroyer Brisk came up to escort her, and about 6.45 a.m., when the Frankier was zig-zagging, the submarine fired a torpedo, which missed 20 yards ahead. The Brisk, which was some distance off, circled round at full speed, but could see nothing of the submarine or the torpedo track.⁵ U.84's next victim was the defensively armed British S.S. Rowena (3,017 tons) bound from Alexandria to Hull, which she torpedoed without warning on April 18, at 1 p.m., in 49° 3' N., 8° 25' W. The Rowena sank at 2 p.m., and the survivors were adrift for three days and nights, being finally picked up by a patrol vessel at noon on April 21 and landed at Plymouth.

After sinking the *Rowena*, U.84 made a cast of some 60 miles to the south-south-west, and on April 19, at 9 p.m., in 47° 36' N., 9° 32' W., torpedoed, once again without warning, another defensively armed British steamer, the *Elswick Manor* (3,943 tons), outward bound from the Tyne to Naples with coal. There were no casualties. The crew took to the boats, and were picked up $21\frac{1}{2}$ hours later by the Belgian S.S. *Albertville* and brought into Falmouth.

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¹ Q.982 in H.S.B.145.

² Q. Tel., April 15, 1917, 1910.

³ Q. Tel., April 24, 1917. The German statement of mines laid by High Sea Fleet Submarines gives the position of U.78's minefield (O.U.6020A/ page 24) as 55° 20' N., 7° 34' W., a position some 5 miles to the south-eastward of the line on which the mines were discovered. Except the mines laid by U.84 in 55° 16½' N., 7° 36.6' W, on January 24, 1917, which sank the Laurentic, and had been swept up, no other mines had been laid in the vicinity.

¹ Q.998, April 14, 1730, and 2345.

² See Section 317.

³ Q. telegram, April 24, 1917, 10.5 p.m.

⁴ See Telegrams 791 and 3074Q in H.S.B.146, dated April 27 and 28.

⁵ Brisk's report in M.05987/17 gives position of torpedo attack as 49° 24' N., 7° 28' W.

Two days later, on April 21, at 8.15 a.m., in 47° 58' N., 11° 19' W., H.M.S. Q.16 (the *Heather*), flying the Norwegian flag and with *Pronto*, *Norge*, and the Norwegian flag painted on her side, sighted a submarine, which was U.52, not U.84, 7 miles off on the starboard bow. The submarine was careful to approach in the rays of a bright sun, and the Captain of Q.16, Lieut.-Commander William W. Hallwright, was unable to manœuvre her out of them. The submarine opened fire with shrapnel at a range of 6,000 yards. " Panic stations and abandon ship" were carried out, but the submarine continued to fire, using two guns, and with the sixth round killed the gallant captain of the *Heather*, who was struck on the head by a piece of shell. The submarine then prepared to dive, and Q.16 opened rapid fire, claiming two hits. The submarine dived, and was seen no more.¹ A week later, on April 28, U.84 reached Emden, having sunk three vessels totalling 10,507 tons.

320. Cruise of "U.67."-Meanwhile, U.67 (Kaptlt. Nieland), which had sailed on April 5, had been working some 150 miles west of the Skelligs. On April 17, at 3 a.m., in 51° 40' N., 14° 28' W., she had chased for over two hours the defensively armed British S.S. Kish (4,928 tons), Newport News to Newport (Mon.). At 6.50 a.m., the Zinnia, which had been picking up the survivors of the Queen Mary (s. 314), and had taken in the Kish's S.O.S., arrived on the scene, and, after escorting her for two hours to the eastward, left her to go to the assistance of the Cairnhill (s. 315). At 9.25 a.m., the Kish had reached a position in 51° 54' N., 13° 46' W.,² when a torpedo fired by U.67 struck her, and she sank in 16 minutes, with a loss of six men out of 44. U.67 seems to have followed the Zinnia, for at 12.48 p.m., in 51° 41' N., 13° 17' W., the latter sighted a submarine 11,000 yards ahead, and fired a ranging shot at it. At 1.18 p.m., the submarine went down, and at 1.37 p.m. (April 17) the Zinnia dropped a depth charge, with no visible result.3

Two days passed before U.67's next attack. On April 19, at 8.45 a.m., in 51° 25' N., 15° W., the British S.S. Bristol City (2,511 tons), steering S.E. by E. $\frac{1}{2}$ E., sighted a torpedo, which she avoided by the use of helm; the submarine came up 2,000 yards astern, but submerged when the ship opened fire. The Bristol City went on, but at noon (April 19) in 51° 20' N., 14° 15' W., was again attacked by a torpedo, which again missed. The submarine apparently followed her, for at 3.48 p.m. she reported being chased.⁴ This was U.67, who was joined by U.60 at 5.12 p.m.

¹ H.S.648/234. Vice-Admiral Sir Lewis Bayly's report. This was U.52.
 ² Zinnia gives 51° 43' N., 13° 47' W., H.S.650/202.
 ³ H.S.650/201.

⁴ E.1 log, F.19/8 and F.19/10. No report in "Ships Attacked." According to Marine-Archiv no torpedoes were fired.

After chasing the Bristol City, she appears to have gone off to the southward, for at 5.25 p.m. that afternoon in 51° 4' N., 13° 52' W., some 25 miles from the 3.48 p.m. position of the Bristol City, H.M.S. Narwhal sighted a periscope about 500 yards off on her port beam. Lieut.-Commander Hudson, her captain, turned to port, increased to full speed, and dropped a depth charge on the spot where he estimated the enemy to be. Five minutes later he dropped another half a mile away, and, after searching the vicinity for some time, he went off to the assistance of the S.S. Thermidor, which was being chased by a submarine1 some 60 miles off to the northward,2 and on her way north met the Bristol City steering east.³ The Narwhal's attack was ineffective, for next day, April 20, at 10 a.m., in 51° 13' N., 14º 10' W., U.67 torpedoed without warning the British S.S. Portloe (3,187 tons), bound from Bougie to Glasgow. The Portloe foundered at once, carrying 27 of her crew of 30 down with her. The three survivors were picked up by the S.S. Kenmore after being 21 hours in the water, and were taken into Liverpool.

Eight days passed⁴ before U.67 claimed her next victim, the British barque *Port Jackson* (2,309 tons), homeward bound from Buenos Ayres, which, before the war, had been employed by Messrs. Devitt and Moore as a training ship for mercantile marine officers.⁵ At 6.5 p.m., April 28, 1917, she had reached a position in 50° 56' N., 14° 12' W., when a torpedo fired by U.67 blew off her bow. Two minutes later she had gone down with 14 of her crew of 28.⁶

In the meanwhile the *Narwhal* had taken in signals of distress from the British S.S. *Terence*, which was being chased by U.81 in 51° 28' N., 14° 19' W.⁷ and was hurrying to her assistance. At 6.5. p.m., she had reached a position in 50° 56' N., 14° 8' W., when she saw the explosion in the *Port Jackson* about 6 miles away on the port bow, and rushed to pick up the survivors.

On closing the wreckage, Lieut-Commander Hudson sighted the two periscopes of U.67 some 500 yards off on his port bow, and, making for them, dropped a depth charge. Nothing more was seen of the submarine, and, after picking up the survivors of the *Port Jackson* and searching the vicinity at high speed, Commander Hudson went off again to the assistance of the *Terence*.⁸

U.67 sustained no serious damage, and reached Emden on May 7, having sunk three vessels totalling 10,424 tons.

¹ Apparently U.60.

² From 52° N., 14° W. to 52°13' N., 14°13' W. ; I.D. E.I. log F.19/11, 16.

³ H.S. 650/207 and I.D. E.I. log F.19/17. ⁴ It may have been U.67 that was seen by the *Swanmore* with U.50 on

April 16 at 4.30 p.m. See U.50, S. 323.

⁵ Lloyd's Register 1915–16.

⁶ One man also died later.

7 See U.81, below. S.329.

⁸ H.S.650/241. See S.329. See Appendix K3.

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321. Cruise of "U.C.33."-U.C.33 (Kaptlt. Schelle) sailed from Emden on April 7 to lay mines off the south coast of Ireland. Proceeding through the Channel, she laid, on April 13, her first field, consisting of four mines close to Conningbeg light vessel1 in an area already declared dangerous owing to the discovery on March 25 of mines laid on March 17 by U.C.482 which had led to ships being warned to keep at a distance of at least 5 miles from Conningbeg light vessel.3 The strong and very variable tides made sweeping difficult, but on April 10 two more mines were swept up. Another two were accounted for on April 13, and the area was considered clear.⁴ At 4.10 p.m. (April 13), in 51° 56' N., 7° 36' W., the British S.S. Bandon (1,456 tons), going from Liverpool to Cork, was blown up and sank in two minutes with a loss of 28 out of 32, due either to a torpedo or possibly to one of U.C.33's mines. Shortly afterwards two mines from U.C.33's minefield were destroyed approximately 1¹/₂ miles south-east of Conningbeg light vessel,⁵ and at 10.50 p.m. that night (April 13) ships were again warned to keep over 5 miles from the light vessel.6 The warning was taken in by wireless by the British S.S. Hermione (4,011 tons), bound from Buenos Avres to Liverpool with 4,000 tons of general cargo and 57 horses, and at 7.15 a.m. on April 14, the commanding officer of H.M.S. Daffodil, seeing the Hermione on a course which would take her close to the Conningbeg light vessel, signalled to her to give the light vessel a wide berth owing to mines. The signal was acknowledged, but was taken in as "keep close to Conningbeg light vessel," with unfortunate results. At 9.10 a.m., the Hermione had reached a position 11 miles south of the light vessel when she struck a mine. After firing her gun to attract attention, her crew abandoned ship in a panic. The Daffodil approached, and, taking the damaged vessel in tow. proceeded to Dunmore Bay.7

After laying her four mines off Conningbeg, U.C.33 proceeded to Waterford, and on April 14 laid six mines off the entrance, three in 52° 7' N., 6° 56' W., and three in 52° 8' N., 6° 58¹/₂' W., and the same day she laid five mines off Ram Head in 51° 54' N., 7° 41¹/₂' W. The mines off Waterford were discovered on April 20 by two unhappy losses. At 10.35 a.m. an armed trawler *Guillemot* was blown up with the loss of seven of her 15 hands.⁴ About noon the six trawlers sweeping the Conningbeg area were returning to Dunmore when the

¹ In approximately 52° 1.52′ N., 6° 39.12′ W. ² H.S.B.170/495. ³ Q.925. ⁴ H.S.B.170/546. ⁵ Ibid. ⁶ H.S.408/634. ⁷ H.S.408/808. H.S.409/19. Further details in M.65034/17 and N.L.16105/21. ⁸ H.S.410/631. armed trawler Loch Eye, which was just about to anchor, struck a second mine¹, and sank, curiously enough, with precisely the same loss of seven of her 15 hands.

The area off Hook Point, which had been swept the previous day without result, was swept again. The bottom was very foul, and several wrecks in the fairway balked the sweeping, but one mine was found.² U.C.33 laid the last minefield of her cruise off Ballycotton on April 15. It consisted of three mines laid in 51° 48' N., 7° 55 $\frac{1}{2}$ ' W., and was discovered on May 5, when the British S.S. Lodes (396 tons) struck one and sank with the loss of her master and six of her crew. The paddle sweepers got to work in this area between May 8 and May 14, and swept up the two remaining mines.³

That morning (April 15), at 7.35 a.m., in 51° 10' N., 8° 35' W., Q.4 (*Carrigan Head*) sighted a submarine bearing N.E. about 5 miles, which opened fire at 7.50 a.m. at a range of about 8,000 yards. Opening fire again at 8.27 a.m., the submarine hit the bridge deck and as she was evidently not going to close, Q.4 returned the fire at 9.4 a.m., when the submarine (probably U.C.33) submerged.

On April 17, at 11.30 a.m., in $51^{\circ} 30'$ N., $8^{\circ} 22'$ W., H.M.S. *Poppy* sighted a submarine on the surface, and opened fire, driving her down.⁴ This seems to have been m U.C.33's area.

Her work off the south coast of Ireland completed, U.C.33 returned home northabout. Shortly after 6 a.m. on April 21, she encountered the two steam trawlers *Jedburgh* and *Yeovil*, of Grimsby, fishing⁵ together some 35 miles N.N.W. from Foula Island, Shetlands, and sank them both. She reached home safely on April 25.

322. Cruise of "U.43."—On April 8, the day after U.C.33 had left Emden, two more submarines, U.43 and U.50, left Germany for Irish waters.

On April 16, at 6.30 a.m., U.43 (Kaptlt. Jürst) had reached a position in 53° 30' N., 16° W., when she met her first victim. This was the Russian S.V. *Endymion* (1,345 tons), bound from Birkenhead to Mobile with a cargo of wood. The *Endymion* carried neither gun nor wireless, and no other vessel was in sight. She was quickly abandoned, and U.43 sank her by gunfire. This done U.43 steered south, and that afternoon, April 16, at 3.20 p.m., torpedoed in 52° 10' N., 16° 16' W., the British steamer *Towergate* (3,697 tons), homeward bound from Galveston, U.S.A., to Liverpool with a cargo of cotton. As in the case of the *Endymion*, the *Towergate* had neither gun nor wireless, and nothing was in sight. The survivors took to their boats, and were eventually rescued.

¹ 52° 8' N., 6° 59' W. H.S.410/583.

² H.S.B.170/599.

³ H.S.B.170/661, 663, 721.

⁴ H.S.650/194; E.1 Log F.17/10. Marine-Archiv says " not U.C.33."

⁵ Approximately 60° 22' N., 2° 25' W.

That night at 10 p.m., U.43 sank the small Danish sailing vessel Anne (240 tons).1 On April 18 the British S.S. Clan Sinclair was chased and engaged at 6.45 p.m. by a submarine in 50° 39' N., 15° 13' W., but returning the fire escaped.2 This was U.43. Two days later U.43 destroyed her largest victim. On April 20, at 4.45 a.m., in 50° 55' N., 16° 28' W.,3 the British tank steamer, San Hilario (10,157 tons), bound from Puerto Mexico, to Queenstown with petroleum in bulk, was steering N. 85 E. (true) at 101 knots. The weather was fine and clear. There was a light breeze and moderate sea. The captain was on the bridge, and when U.43, 5 miles away on the starboard quarter, suddenly opened fire, he turned to port and brought her right astern, at the same time opening fire with his 12-pdr. gun and pushing on at full speed. The submarine, however, gained steadily, and continued firing until at the end of 70 minutes she scored her first hit at a range of 4 miles. The shell struck the base of the funnel, reducing the speed of the steamer and wounding five of her crew. U.43 then kept at a distance of 3 to 4 miles, firing shrapnel. The San Hilario fired about 90 rounds, but her small, low range gun was quite inadequate to oppose U.43. All her shells fell short, and at 6.20 a.m. her captain decided to abandon ship. Some shells fell near the boats, but as they pulled away from the ship firing ceased. U.43 then submerged and fired a torpedo into her. The San Hilario, however, remained afloat, and U.43 had to come up again and fire 18 rounds into her before she sank at 9.30 a.m. Her captain was taken on board U.43, but the survivors in the two boats were adrift 240 miles from land for four days and nights, and saw seven ships pass by without being seen by them. Eventually they were picked up by the S.S. Maxton on April 24 at 5 a.m., and landed at Liverpool. With a longer range gun the San Hilario might easily have escaped since it took U.43 no less than 70 minutes to score her first hit.4

An hour after she had gone down U.43 sank with bombs, on April 20, at 10 a.m., in 50° 20' N., 16° 54' W., the Russian S.V. August, (1,596 tons), bound from Orange, Texas, to Sharpness with a cargo of wood.

Then making a cast of 130 miles to the north-westward on April 22, at 7.10 p.m., in a position 400 miles west (true)⁵ from the Fastnet, she stopped the U.S.A. sailing vessel *Woodward Abrahams* (744 tons), bound from Pensacola to Liverpool. The ship, which was, of course, unarmed, was at once abandoned, and was sunk with bombs. The survivors took to their boats, and on April 24 were picked up by the

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Norwegian schooner Anne Marie. The Anne Marie herself was sunk by U.70 on April 29, and the survivors were finally rescued by H.M.S. Delphinium.

After sinking the Woodward Abrahams, U.43 returned eastward, and next day, April 23, at 9 a.m., in 51° N., 18° W., fired two torpedoes at H.M.S. Courageous, which passed harmlessly astern.¹

After this unsuccessful attack, U.43 continued eastward, and next day, April 24, at 5 p.m., sank with bombs in 51° 8' N., 15° 14' W., the Swedish S.V. *Cordelia* (603 tons), bound from the Gulf of Mexico to Cardiff with a cargo of pitch pine.

Two hours later, U.43 torpedoed without warning, April 24, at 7.15 p.m., in 50° 42′ N., 15° 12′ W., the defensively armed British S.S. *Abosso* (7,782 tons), bound from Lagos to Liverpool with 127 passengers. Nothing was in sight when the *Abosso* sent out by wireless a signal of distress; it was taken in by the destroyer *Magic*, which came hurrying to the rescue, and picked up 189 survivors.²

U.43 had meanwhile moved 80 miles to the northward, and next afternoon April 25, at 3 p.m. in 52° 11' N., 15° 26' W., fired a torpedo at the White Star liner *Baltic* (23,876 tons), which the latter avoided by a quick turn of her helm. She was bound from New York to Liverpool, and carried a 6-in. gun, but saw nothing of the submarine. Steaming (N. 81 E.) at $15\frac{3}{4}$ knots, she was quickly out of range, leaving U.43 baffled by her quickness and her speed. She had missed a big prize, for had her torpedo hit, the *Baltic* would have been the second largest ship sunk by this weapon in the war.

U.43 made her next appearance the following day, April 26, at 7.15 a.m., 90 miles away to the westward in 51° 49' N., 17° 49' W.,³ when she set on fire the small Russian schooner *Ehrglis* (238 tons), bound from Pensacolo to Fleetwood with a cargo of wood. The crew of seven took to their boats, and were rescued next day by the *Magic*.

After burning the *Ehrglis*, U.43 moved 90 miles southward, and the same evening, April 26, at 6.30 p.m., torpedoed in 50° 38' N., 18° 40' W., the Norwegian S.S. *Hektoria* (5,002 tons), bound from Philadelphia to Birkenhead with barrels of oil and petroleum and gas oil in bulk. The crew left the ship in three boats, and were picked up on April 28 in 51° 35' N., 17° 26' W., by the *Magic*, which was kept busy in the work of rescue.

This completed the April cruise of U.43. She reached home safely on May 4, having sunk ten vessels aggregating the very respectable total of 31,404 tons.

¹ In 51° 38' N., 17° 15' W. (Marine-Archiv). No further details.

² Torpedo missed.

 ³ She has been given a rendezvous in 51° N., 14° W. H.S.408/136.
 ⁴ M.65840/17.

⁵ 51° 23' N. 19° 50' W. German report says 10 p.m. in 50° 24' N., 18° 53' W.

¹ M.05268/17. On passage from Plymouth to Scapa; two destroyers of 2nd Flotilla had escorted her out on April 21. H.S.410/716.

² On board, passengers 127, crew 173; "Merchant Vessels Sunk" gives "Lives lost 65."

³ See S.328. Baltic had been given a rendezvous in 52 N., 14° W.

The Baltic's1 smartness had robbed her by a narrow margin of another 23,000 tons, for her torpedo missed by only 20 feet.

323. Cruise of "U.50."-The second German submarine that sailed from the Ems on April 8, U.50 (Kaptlt, Gerhard Berger) sank her first victim in the North Sea on April 11. This was the Norwegian barque Sarvsfos (1,158 tons), bound from Savannah to Odensee with a cargo of cottonseed cake, which she sank by gunfire at 6.45 a.m. in a position about 58° 33' N., 0° W. The crew of 18 took to their boats, and were picked up by a British destroyer.²

U.50 next appeared on April 19, at 9.30 a.m., in 51° 27' N., 12° 15' W., when she was sighted on the port quarter by the British S.S. Avocet (1,219 tons), bound from Lisbon to Liverpool with a cargo of cork wood and general merchandise. The weather was overcast with a moderate north-west wind and choppy sea. The Avocet, which was steering due east, turned south-eastward to bring U.50 astern, and made off at full speed. The submarine at once opened fire at 8,000 yards, while the Avocet replied with her 6-pdr. Nordenfelt gun, whose 44 rounds all fell short. An hour later, at 10.30 a.m., the ship had reached a position in 51° 19' N., 12° 3' W., and had been hit four times. Nothing was in sight. Her crew could do nothing more, and she was abandoned and sunk by torpedo at 12.45 p.m., her survivors being picked up by the S.S. Tudor Prince and brought into Falmouth. Again an ineffective gun had led to the loss of a good ship.

After sinking the Avocet, U.50 moved 115 miles to the southwestward, and next day, April 20, at 1.30 p.m., torpedoed without warning in 49° 55' N., 14° 4' W., the British S.S. Emma (2,520 tons), bound from Baltimore to Glasgow. The third engineer and one fireman were killed by the explosion. For 78 hours the 23 survivors proceeded in one boat under sail and oars towards the Irish coast before they were picked up by the S.S. Amatonga and landed at Liverpool on April 25.

U.50's next appearance was some 95 miles away in a southeasterly direction, where she torpedoed without warning on April 21. at 9.50 a.m., in 48° 37' N., 12° 40' W., the British steamer Diadem (4.307 tons), bound from Dakar to Falmouth with a cargo of rice.

Returning 155 miles to the north-westward, the next day, April 22, at 11.55 p.m., in 51° 2' N., 14° 4' W., U.50 torpedoed without warning the British steamer Dykland (4,291 tons), bound from Halifax to Falmouth with a cargo of wood. The ship, which carried a 4.7-in. gun, was at once abandoned. U.50 rose to the surface to ask the nature of her cargo, and then submerged again.

> ¹ Master-Captain William Finch. ² M.64956/17.

At 1.40 a.m. (April 23), the British submarine H.5 (Lieutenant Cromwell Varley)¹ sighted the Dykland on fire in 51° 2' N., 14° 4' W., and closed her with torpedo tubes ready. Seeing nothing, however, he made a detour, and stopped 1 mile due west to wait for daylight. At 4.12 a.m., just as dawn was breaking, he dived, and almost simultaneously U.50 came to the surface close to the Dykland, and fired 40 rounds into her. At 4.45 a.m. Varley closed the Dykland, and seeing U.50 firing on her from the eastward, steered to cross her stern, arriving just in time to see the "U" boat disappearing to westward across her bows. Turning across the Dykland's stern again, he sighted U.50 on her bow, and at 5.49 a.m. fired a torpedo, which missed just astern. His periscope dipping prevented him from firing a second shot, and U.50, turning end on, made off and dived. In the meanwhile, the Dykland's survivors had been lying by the ship throughout the night in two boats. At 7.16 a.m., H.5 picked up 12 of them and sent the remaining 21 back on board their ship to try to save her.2

Later in the day the ubiquitous Magic, coming up, took her in tow, handing her over to the Snowdrop at 5.55 p.m. (April 23), who crawled with her at 11 knots towards Bantry Bay till April 26, when the tow parted. The Primrose took over the laborious work, and got her in tow again, but the damaged steamer was labouring heavily, and at 6.35 p.m. turned slowly over to port, and in 51° 20' N., 11° 10' W., sank, when she was still 30 miles short of the Bull.³

In the meanwhile, U.50 had gone off to the north-westward, and that morning, April 23, at 10 a.m., torpedoed without warning in 51° 17' N., 14° 30' W.,4 the British steamer Oswald (5,185 tons), bound from Pensacola to Liverpool. The Oswald sank quickly, but had time to send out an S.O.S., which was taken in by H.M.S. Camellia.

U.50 rose to the surface, and for 20 minutes questioned some of the 58 survivors, then went off to the westward under water. At noon⁵ (April 23) she was on the surface, and had reached a position in 51° 18' N., 14° 43' W., when she encountered the Camellia coming down to the Oswald's assistance ; the Camellia opened fire, and U.50 dived. The Camellia picked up the survivors of the Oswald, then went back to the help of the Dykland and took aboard the twenty-one men whom H.5 had left behind.

Two days later, on April 25, at 3.49 p.m., in 50° 30' N., 16° 33' W., the British S.S. Swanmore (6,373 tons), from Baltimore to Liverpool,

¹ See Home Waters VII/51 for sinking of U.51 by Lieutenant Varley on July 14, 1916.

² H.S.650/216.

³ H.S.650/213. Her bows remained above water for some hours. The reports of the case contain several discrepancies of time and position.

⁴ She had been given a rendezvous in 51° 20' N., 14° W.
⁵ "At Noon " in I.D., E 1 Log. F23/7. " At 2.45 p.m." in H.S.650/226.

was suddenly hit on the counter by a shell from a submarine astern. The weather was fine and clear, and the sea smooth, and the ship made off at full speed of 12 knots, sending out an S.O.S., which was taken in by $Q.14^1$ (the *Viola*). At 3.51 the *Swanmore* opened fire with her 4.7-in. gun at 6,500 yards, and was firing at 4.30 p.m. when a second submarine (probably U.70) appeared on the quarter. At 6 p.m. the first submarine dived, and 20 minutes later, in 50° 57' N., 16° 16' W., the second followed her, after firing between them 200 rounds and hitting the *Swanmore* four times.

The latter was congratulating herself on having beaten off the attack when, at 9.25 p.m., in $51^{\circ} 11' \text{ N}.$, $15^{\circ} 37' \text{ W}.$, she was torpedoed without warning on the port side aft, and sank at once, taking down 11 of her crew of $60.^{\circ}$ Her assailant was U.50 once again. On April 26, at 3 a.m., in $52^{\circ} 30' \text{ N}.$, $15^{\circ} 47' \text{ W}.$, the British S.S. *Manchester Citizen* (4,251 tons), armed with a 13-pdr., was sunk by a torpedo, which may have been the work of U.50. By April 27 she was on her way home, reaching Emden on May 1, having sunk seven ships of 25,353 tons.

324. Cruise of "U.53."—The next High Sea Fleet submarine that put to sea to operate in the South-West Approach was U.53(Kaptlt. Rose). She sailed from Heligoland on April 10, and on April 17, at 8.50 a.m., was somewhere in 52° 30′ N., 13° 30′ W., and may have shelled the British steamer *Benguela* (5,520 tons).³

Moving southward, next day, April 18, at 1.30 p.m., in $52^{\circ} 5'$ N., $13^{\circ} 26'$ W., she sank without warning the British steamer *Scalpa* (1,010 tons), bound from Valencia to Liverpool. That evening, at 7.40 p.m., in 52° N., 13' W., she torpedoed, again without warning, the defensively armed British steamer *Sculptor* (2,346 tons), bound from New Orleans to Liverpool with a general cargo of grain, steel, and cotton. The *Sculptor* was abandoned almost immediately, but remained afloat until U.53 came to the surface and sank her with gunfire. The three boats containing her 44 survivors were picked up by the *Peyton*, *Bluebell*, and *Acton*, and landed in Ireland.

The next day, April 19, at 4.30 p.m., in $51^{\circ} 45'$ N., $12^{\circ} 58'$ W., U.53 torpedoed without warning the defensively armed British steamer *Tempus* (2,981 tons), bound from Carthage to Garston (Lancs.) with 4,800 tons of iron ore and 300 tons of fruit. The *Tempus* was quickly abandoned, and U.53, rising to the surface, finished her off with four rounds and a second torpedo. Her 27 survivors pulled in an easterly direction until they were picked up at 7.30 p.m. the next day, April 20, by H.M.S. *Jessamine*.

After sinking the *Tempus*, *U*.53 made a cast of some 130 miles to the south-eastward, and on April 21, at 9 a.m., in latitude 50° 30' N.,

⁸ E.1. Log F.17/6. H.S.409/718 and Merchant Shipping (Losses), p. 140. No details. Probably U.55. longitude 10° 5' W., torpedoed without warning the defensively armed British steamer *Pontiac* (1,698 tons), bound from Queenstown to Gibraltar. In fine weather and a calm sea, the *Pontiac* went down in two minutes. Two members of her crew were killed by the explosion, but the remainder, 21 all told, escaped in one boat. About 15 minutes later U.53 came to the surface, and, after refusing to tow the boat towards the land, moved off eastward on the surface; nothing was in sight, and 26 hours elapsed before the survivors were picked up by the S.S. *Valeria* and landed at Liverpool.

That evening (April 21) at 7.25 p.m., in 50° 34' N., 8° W., Q.8 (Vala) sighted a submarine 5,000 yards off, which opened fire and made off when Q.8 returned the fire at 7.30 p.m. This may have been U.53 (H.S. 648/204).

U.53's next appearance was some 75 miles away to the southsouth-eastward. On April 22, at 7.20 a.m., in 49° 10' N., 9° 20' W., the Canadian steamer Neepawah (1,799 tons), chartered by the French Government, bound from Huelva to Rouen, and steering N. 72 E. (true) at 8 knots, sighted a periscope 200 yards off moving rapidly through the water. The weather was fine with a gentle swell and light easterly wind, and the ship opened fire at once with her 3-pdr. gun. The submarine made off, and then, coming to the surface at 8.30 a.m. (April 22), returned the fire at a range of about 6 miles; at 9 a.m. the crew took to their boats, and the ship, subsequently hit several times, sank at 1.20 p.m., while her 24 survivors were eventually picked up by the Portuguese schooner Humberto. That same day, April 22, at 11.50 a.m., in 49° 17' N., 9° 26' W.,1 U.53 fired two torpedoes at the Admiralty transport Karroo (6,127 tons), bound from Halifax to Devonport with a large and valuable cargo of munitions, Government stores, and 234 mules. They both missed, and U.53, coming to the surface, opened fire, and began a running fight. The submarine was able to keep out of range of the Karroo's 12-pdr. gun, and at 9,000 yards fired some 180 to 200 rounds, hitting her a great many times and killing 14 of the mules. The Karroo, heavily handicapped by lack of ammunition and the small range and size of her gun, made a poor reply with some 35 rounds at extreme range.

Fortunately, about 3 p.m., in 49° 28' N., 8° 39' W., the Karroo met her escorts, the Leonidas and another destroyer, who attacked U.53 at a range of 6,000 yards, forcing her to dive. A depth charge was dropped on her estimated position,² but it did no damage, for the next day, April 23, at 11 a.m., in 48° 28' N., 9° 40' W., she torpedoed the defensively armed British steamer *Eptapyrgion* (4,307 tons), bound from Montevideo to Cherbourg with a cargo of oats and tinned meat. Nothing was in sight, and in fine weather

¹ H.S.648/221. She attacked Q.14 on April 26 at 1 p.m. (see Appendix N).

² M.65640/17 and M.65780/17. For Manchester Citizen, see Appendix N).

¹ The Karroo had received orders to proceed to 49° 10' N., 10° W. (H.S.409/507) so was really past her rendezvous.

² H.S.411/269. M.05095/17.

and a smooth sea the crew took to their boats, and saw, about noon, their ship sink and U.53 disappear in a westerly direction.

Next morning, April 24, at 4.5 a.m., the defensively armed British steamer Anglesea (4,534 tons), bound from Boston to Le Havre with oats and steel, was in 48° 56' N., 10° 17' W., steering N. 57 E. (mag.) at 81 knots, when she, too, was torpedoed without warning by U.53. No help was at hand, and the ship was abandoned in fine weather and a smooth sea. U.53 then rose to the surface, and, after missing her several times, finally placed two bombs on board, which sank her at 7 a.m.

The Anglesea had been given a rendezvous1 in 49° 10' N., 10° W., and that day, April 24, at 12.15 p.m., H.M.S. Orestes sighted her wreckage, and half an hour later picked up her survivors some 7 miles to the eastward of it. At 2.6 p.m. she was steering west at 15 knots with the Medina in company some 4 miles off when she sighted a submarine on the surface 3 miles W.S.W. in 48° 53' N., 10° 22' W. The submarine dived, heading south, and the Orestes, going on to full speed, dropped a depth charge as near as she could estimate. The Medina followed suit, and dropped another about 100 yards to the eastward. In the meanwhile the Orestes had got out her paravanes, and for two hours swept out the position and another some 7 miles southward of it.

The submarine was U.53, but she suffered no damage, for that evening, April 24, at 8 p.m., in 49° 3' N., 10° W., she torpedoed the defensively armed British S.S. Ferndene (3,770 tons), bound from Table Bay to London. She was proceeding N. 62 E.² at her full speed of 7 knots when the torpedo struck her on the starboard side, wrecking her stokehold and engine room and destroying her wireless installation. The Ferndene carried a 12-pdr. 12-cwt. gun, but had no chance to use it. In fine weather, with nothing in sight, the ship was abandoned at 8.20 p.m., and five minutes later sank. The chief officer thought that he might have saved the master and four men who were drowned had not the submarine compelled his boat to come alongside.3 The 26 survivors were picked up by Q.10 (the Begonia) on April 25 and landed at Penzance.

After sinking the Ferndene, U.53 turned homeward. By next day, April 25, at 4.30 p.m., she was some 190 miles on her way home northabout, when she met and set fire to the small British schooner Laura⁴ (335 tons), bound from Halifax to Birkenhead. U.53 then

proceeded south-eastward, and at 6.30 p.m. the same day, April 25, stopped the Danish barquentine Elizabeth,1 and sank her with bombs and gunfire.

Continuing her voyage homeward, U.53 next day, April 26, at 7.30 a.m., in 53° 8' N., 12° 30' W., set on fire the Danish sailing vessel Hekla (169 tons), bound from Darien to Fleetwood. This was her last victim, but on her way home she herself was to have a narrow escape. J.6 (Commander Max Horton) had been ordered to a position on the track of returning submarines, and on April 30, after attacking U.61 at 3.28 p.m., was in 58° 13' N., 3° 29' E., at 6.24 p.m., when he sighted another submarine $2\frac{1}{2}$ miles to the northward going at high speed and zig-zagging. J.6 was canting owing to a defective hydroplane, but got a sight on, and at 6.35 p.m. fired the port beam torpedo at a range of no more than 25 yards. It passed under, and U.53 passed safely on.2 She reached Emden on May 1, having sunk 11 vessels totalling 24,666 tons.

325. Cruise of "U.61."-U.61 (Kaptlt. Dickmann) set out from Heligoland on April 11. Six days later, on April 17, at 6.45 a.m., in 56° 15' N., 11° 30' W.,3 she torpedoed without warning the defensively armed British steamer Aburi (3,730 tons), bound from Liverpool to Dakar and the west coast of Africa with a general cargo. The sea was rough, and the Aburi was sinking slowly, when U.61 rose to the surface and opened fire. Under heavy fire the ship was abandoned, and about 8 a.m. a second torpedo sank her with the loss of 25 lives4 by the swamping of two boats.

Next day, April 18, at 1 p.m., in 56° 20' N., 10° 45' W., U.61 torpedoed without warning the British steamer Castilian (1,923 tons), bound from Liverpool to Genoa. " Half a gale " was blowing from the west, with a visibility of only 1 mile, and nothing in sight. The Castilian carried a 3-pdr. gun, but sank in two minutes without having a chance to use it, carrying with her 10 of the 33 persons on board.

The following day, April 19, at 7.45 p.m., in 54° 54' N., 12° 11' W., a torpedo missed by 10 ft. the bow of the British steamer Annapolis (4,567 tons), bound eastward from St. Johns, Newfoundland, to Liverpool with a general cargo. The weather was fine with a heavy north-westerly swell and a rough sea. No patrols were in sight, and for the next two hours the ship zig-zagged in a great effort to escape, while a double bank of firemen increased her speed by half-a-knot.

Then at 9.45 p.m., in 54° 55' N., 11° 55' W., a torpedo fired by U.61 struck her forward. At 9.47 p.m., a second torpedo struck her

¹ H.S.409/507.

² True.

³ I.D. Vol. 641.

⁴ Laura gives position 51° 30' N., 13 . 30' W., but the Elizabeth which was destroyed by U.53 at 6.30 p.m. gives 51° 2' N., 12° 5' W. (60 miles in less than one hour and a half). To conform, Laura has been plotted in 51° 22' N., 13° 9' W., and the Elizabeth in 51° 12' N., 12° 42' W.

¹ For position, see footnote on Laura, page 420.

² H.S.A.126/208.

³ M.65385/17.

^{4 54} persons were on board including 3 stowaways, natives of Sierra Leone.

amidships, and at 9.49 p.m. a third struck her aft on the water line. Her bows and stern were blown off, and at 10 p.m. she sank. In view of the heavy weather, the lateness of the hour, and the ferocious nature of the attack it is remarkable that there were no casualties among the 39 persons on board.

On April 20, the defensively armed British steamer *Terek* was attacked in 52° 45′ N., 11° 55′ W., by a submarine, which may have been U.61, but when she opened fire the submarine disappeared. Next day, April 21, at 3.20 a.m., in 51° 41′ N., 14° 37′ W., U.61 opened fire on the Norwegian barque *Skjold* (1,592 tons), bound from New York to Glasgow with a cargo of oil and wax. In what was practically a flat calm the *Skjold*, moving at only 1 knot, had no chance of escape. She was quickly abandoned, and U.61 closed and fired over 30 rounds into her before she sank.¹

Seven hours later, at 10.20 a.m. (April 21), in 51° 18' N., 14° W., U.61 torpedoed without warning the defensively armed British steamer *Telena* (4,778 tons), bound from Philadelphia to Queenstown with a cargo of benzine. The weather was calm and clear, with H.M.S. *Camellia* and the S.S. *Roumanian Prince* in sight. The survivors, forced to take to their boats on account of gas from the cargo, some hours before their ship sank, were picked up by the *Camellia*.² The *Roumanian Prince* (4,147 tons) was attacked, too, that day, April 21, by gunfire, and escaped through speed.³

Fifty minutes after her torpedo had struck the Telena, in 51° 18' N., 14° W., U.61, at 11.10 a.m. (April 21), in 51° 10' N., 14° W., chased the British steamer Crown of Toledo (5,806 tons), without success. That evening April 21, at 5.15 p.m., on the surface in 50° 52' N., 14° 0' W., she was sighted again by the sloop Camellia, but submerged. U.61 then made a long cast to the southeastward, and two days later, on April 23, displayed again the ferocity of her earlier attacks, when she sank without trace, with the loss of 25 lives, the British steamer Lena (2,463 tons), bound from Huelva to Bristol.4 That same day, April 23, at 5.45 p.m. in 48° 51' N., 8° 38' W., she sank with gunfire and bombs the Danish sailing vessel Calluna (1,418 tons), bound from Cardiff to New York. Then, moving south-westwards, she was sighted next day, April 24, at 7.40 a.m. in 48° 17' N., 10° 40' W., on the port quarter by the British S.S. Thirlby (2,009 tons), bound from Gibraltar to Dunkirk. The *Thirlby*, which was steering E. by N. $\frac{1}{2}$ N. at $6\frac{1}{2}$ knots, at once manœuvred to bring the submarine astern, and apparently made off to the eastward. U.61 gave chase, and fired three torpedoes, which missed, and about 150 shells, of which only one hit, while the Thirlby

¹ Master's deposition in M.65835/17.

* Lena was sunk April 23, 5.5. p.m., in 48° 45' N., 8° 30' W.

replied bravely with 57 rounds from her 3-pdr. gun. At 1.50 p.m., U.61 gave up the chase, and steered back to the westward.

That afternoon, at 2.14 p.m., in 48° 20' N., 11° 10' W., she chased the British S.S. *Drumcliffe* (4,073 tons), which seems to have been steering west (true) at 9 knots.¹ The *Drumcliffe's* distress signals were taken in at 3.20 p.m. by the *Medina* and *Orestes*, two Devonport destroyers patrolling on Approach Route "A," and the *Medina*, leaving the *Orestes*, made at full speed to her rescue.

While the *Medina* was on her way, U.61, at 4.45 p.m., in 48° 30' N., 11° 15' W., destroyed with bombs the Norwegian sailing vessel *Metropolis* (1,811 tons), bound from Philadelphia to Le Havre with a cargo of lubricating oil. At 5 p.m., in 48° 23' N., 11° 28' W., the *Medina* picked up the *Thirlby* and *Drumcliffe*, steering N. by W., and after obtaining their reports swept south, and at 6.30 p.m., in 48° 13' N., 11° 22' W., picked up two boats containing the survivors of the *Metropolis*. The *Medina* continued her search, and at 7.35 p.m. sighted a submarine on the surface on the port bow some 3 or 4 miles off, and opened fire at 7,000 yards. Down went the submarine, leaving the *Medina* to drop a depth charge in its estimated position.²

U.61 then proceeded home, sinking on April 30, in the North Sea, the Norwegian sailing vessel Jarstein (198 tons). As she neared home, she, too, narrowly escaped destruction. J.6 (Commander Max Horton), on patrol in the North Sea, had been ordered to a position, which turned out to be right on the track of U.61's homeward path. On April 30, at 3.32 p.m., in 58° 19' N., 3° 21' E., proceeding east, she sighted a German submarine, bearing 57° port, steering S. 45 E., and brought both bow tubes to the ready at $3.36\frac{1}{2}$ p.m. Unfortunately, owing to a defective hydroplane aft, J.6 was canting up and down, and when, at 3.39 p.m. Commander Horton fired all bow tubes at a range of about 2,800 yards, none of them hit.³ When J6 broke surface, U.61 was steaming off at full speed, and got safely home on May 2, having sunk nine vessels of 20,669 tons and destroyed 60 lives.

326. Cruise of "U.69."—U.69 (Kaptlt. Ernst Wilhelms) left Emden for the west coast of Ireland on April 11, but nearly a fortnight passed before there was any sign of her presence off the Irish coast. On April 24, at 6.45 a.m., in 51° 55′ N., 13° 35′ W., H.M.S. *Crocus* sighted a submarine, which submerged when she was still 5 miles off. This was probably U.69, for next day, April 25, at

² M.65820/17.

³ No further details.

¹H.S.411/1026, 1068. The positions given by H.M.S. Medina, Thirlby and Drumcliffe do not fit in. No details of Drumcliffe.

² M.05228/17, C.-in-C., Devonport, April 28, 1917.

⁸ J.6's report in H.S.A.126/207, *Titania* (Blyth) May 3rd, 1917. Report by U.61 of having been attacked in $58^{\circ} \cdot 15'$ N., $3^{\circ} \cdot 45'$ E. in War Diary April 30/1608, I.D., Vol. 3027.

6.30 p.m., some 20 miles to the eastward, in 52° N., 13° 5' W., she torpedoed without warning the British steamer *Hesperides* (3,393 tons), bound from St. Vincent, Cape Verde, to Liverpool. The *Hesperides* carried no gun, and was soon abandoned, with a large four-masted steamer in sight 5 miles ahead. At 7 p.m., *U.*69 rose to the surface, and, firing two or three shells into her, sank her at 7.15 p.m.

Some two and a half hours later, at 9.46 p.m. (April 25), in $51^{\circ} 28' \text{ N.}$, $12^{\circ} 44' \text{ W.}$, 35 miles to the southward, U.69 torpedoed without warning the British steamer *Vauxhall* (3,629 tons), bound from Sfax, in Tunisia, to Dublin, which sank in a quarter of an hour with the loss of two lives.

An hour and a half later, at 11.30 p.m. (April 25), 15 miles further north, in 51° 44' N., 12° 42' W.,¹ she was sighted by the Portuguese S.S. *Peniche*, and very early next morning, April 26, at 1.10 a.m., in 51° 38' N., 12° 52' W., U.69 torpedoed without warning the defensively armed British steamer *Rio Lages* (3,591 tons), bound from Cuba to Queenstown, with a cargo of sugar, and, rising to the surface sank her by gunfire at 5 a.m. This completed the cruise of U.69. She reached Emden safely on May 6, having sunk in April three British steamers, totalling 10,613 tons, and two more steamers in May.

327. Cruise of "U.93."—U.93 (Kaptlt. Freiherr Spiegel zu Speckelsheim), in defiance of superstition, sailed from Emden, on her maiden voyage, on Friday, April 13.

Two days later, on April 15, in the North Sea, in $56^{\circ} 54'$ N., $2^{\circ} 24'$ E., she sank by gunfire the small Danish sailing vessel *Fram* (200 tons). On April 18, at 5.45 a.m., she was west of the Orkneys in $60^{\circ} 28'$ N., $2^{\circ} 11'$ W., when she sighted the Norwegian four-masted barque *West Lothian* (1,887 tons), bound from Buenos Aires to Christiana with a cargo of oil cake. Ordering the *West Lothian* to abandon ship immediately, she sank her with a torpedo.

U.93 then moved towards Sydero, and that same day, April 18, at 1.45 p.m., chased in 60° N., 4° 18' W., the Norwegian steamer *Troldfos* (1,459 tons), bound from New York to Christiana. Nothing was in sight, and at 3.30 p.m. she was sunk by gunfire in 60° N., 4° 10' W.

For more than a week U.93 disappeared, and then on April 26, at 0.45 a.m., off the west coast of Ireland in 51° 44′ N., 13° 13′ W., the Portuguese steamer *Peniche* was attacked by a submarine, which may have been U.93,² but got away, losing sight of it at 2.45 a.m.

Two days later, on April 28, at 7 a.m., in 49° 40' N., 13° 44' W., U.93 sank by gunfire the Danish schooner *Diana* (207 tons), bound

¹ E.1 Log. F.28/10.

² U.53 and U.69 were also within cruising range at the time.

from Brunswick, Georgia, to Newport (Mon). After this, she made a long cast to the south-east, and next day, April 29, at 7.30 p.m., in 48° 6′ N., 10° 45′ W.,² torpedoed without warning the defensively armed British steamer *Comedian* (4,889 tons), bound from St. John, New Brunswick, to Falmouth with ammunition, which the torpedo set on fire. The weather was clear, there was nothing in sight, and she sank about 9.30 p.m. after a few more rounds had been fired into her.¹

Some miles astern of her was the British S.S. *Ikbal* (5,434 tons), also loaded with ammunition. She had sailed with the *Comedian*, but, being the slower of the two, had fallen astern. She knew that the *Comedian* was ahead of her, but on April 29, about 7.30 p.m., when she sighted a ship on fire ahead, she made no attempt to alter course. At 10 p.m. she was some 5 miles from the burning ship when a torpedo fired by $U.93^2$ struck her in No. 3 hold. Within 10 minutes she was abandoned. Shortly afterwards U.93 rose to the surface, and, after firing a few rounds into the *Ikbal*, took prisoner her master and gun's crew. It was not till the next morning, April 30, that she sank.

She was still afloat when U.93, that same morning, April 30, at 12.40 a.m., in approximately 48° 43′ N., 12° 35′ W., torpedoed without warning the defensively armed British steamer *Horsa* (2,949 tons), bound from Oran to Cardiff. The *Horsa* sank almost immediately, taking with her the master and 11 of her crew of 25. The survivors clung to the keel of an upturned boat for about an hour, and were then picked up by U.93, where their treatment "left nothing to be desired."

After sinking the Horsa, U.93 made a cast to the eastward, and that same morning, April 30, about 6.30 a.m., in 49° 12' N., 10° 20' W., was sighted by the Russian sailing vessel Borrowdale (1,268 tons), bound from Newport, Mon., to Port Nolloth (S.A.) with 1,299 tons of coke. The submarine was on the surface about two points before her port beam, and 2 or 3 miles off, and two other steamers were also in sight—the defensively armed Italian S.S. Ascaro and the British S.S. Huntsmoor. At 7.5 a.m., in 49° 4' N., 10° 24' W., the S.S. Ascaro (3,245 tons), bound to Ardrossan, was struck by a torpedo, probably fired by U.93,³ and sank in 60 seconds with the loss of 24 of her crew of 30. The other steamer, the British S.S. Huntsmoor (4,957 tons), on her way to Devonport, opened fire at 7.10 a.m. at 7,000 yards,

¹ Three men were drowned and one of the gun's crew, an R.N.V.R. rating, was taken prisoner.

² Again the usual discrepancy of positions. *Ikbal* gives 48° 30' N., 11° 15' W. and *Comedian* 48° 6' N., 10° 45' W. They have been charted as 48° 34' N., 11° 50' W. and 48° 30' N., 11° 40' W. to conform to *Ikbal*'s report and *Horsa's* position.

³ U.93 claims to have sunk on April 30, the American s.s. *Ecuator*, but no such vessel existed.

and then a few minutes later sighted a second submarine astern. H.M.S. *Begonia* (Q.10) was 9 miles away from the *Huntsmoor*, and, seeing her open fire, proceeded at full speed to her assistance, while the second submarine, which was U.21, opened fire at 9 a.m. on the *Borrowdale*, which was abandoned and sunk before the *Begonia* could reach the scene.

U.93 had meanwhile come to the surface, and, after semaphoring to U.21, transferred to the *Borrowdale's* boats the survivors of the *Horsa*. At 9.40 a.m. she opened fire on the *Begonia*, which immediately returned the fire, driving U.21 down. U.93, however, remained on the surface until the *Begonia* had closed the range to $1\frac{1}{2}$ miles, when she, too, dived* with shots falling close.

After her encounter with Q.10, U.93 made to the westward, and that evening, April 30, at 5.30 p.m., in 49° 34' N., 11° 45' W., torpedoed without warning the Greek steamer Parthenon (2,934 tons), bound from New York to Le Havre, flying the Greek ensign and with her name and two flags painted on each side. Nothing was in sight, and she sank in five minutes. Three hours later she met a more formidable foe. At 8.35 p.m. (April 30), the "Q" ship, H.M.S. Prize, Lieutenant W. E. Sanders, R.N.R., a schooner of 227 tons armed with two 12-pdrs. and a Lewis gun, was in 49° 44' N., 11° 42' W., weather fine and clear, wind N.N.E., sea calm ; she was steering N.W. under all sail, making about 2 knots, when a large submarine was sighted in the port beam two miles off, steering a parallel course. At 8.45 p.m. it opened fire with both its guns (one 8.8 cm., two 2-pdrs.). The ship was brought into the wind and the " panic party " got away in the boats. U.93, for it was she, approached very cautiously from right astern, keeping up a heavy fire. Shot after shot struck the Prize, putting one motor out of action, wrecking the wireless room and living quarters and holing the lubricating tank. At 9.5 p.m., when she was only 80 yards off, 3 points abaft the beam, Lieutenant Sanders ran up the White Ensign, dropped his screens, and opened fire with both his guns. Freiherr Spiegel put his helm hard a port, intending to ram; but it was too late; the Prize was too close. Almost the first shot hit the base of the conning tower ; the next blew the foremost gun and all its crew into the air and Freiherr and his navigator overboard. The Lewis gun was sweeping the upper deck as the submarine turned and made off at full speed. The Prize chased for a short hundred yards when the second motor gave out. The submarine stopped for a short time 600 yards off with shot after shot hitting till at 9.9 p.m. she seemed to settle down and disappear, apparently sunk. A boat was lowered and picked up three survivors, the captain, the navigator and a stoker. The Prize

* Owing to a confusing disparity in the times given by the Ascaro, Borrowdale, Huntsmoor and Q. 10, it is difficult to follow exactly their respective movements. Q.10's report is in H.S.648/268. herself was in a sorry state. Water was pouring in and though the pumps were set to work continued to gain. By listing the ship, ranging the cables and emptying tanks the shot holes were got above water, and with bailing, pumping, and calm weather the gallant *Prize* managed to reach Kinsale on May 2. Meanwhile U.93 had managed to dive and though badly shattered, with conning tower damaged and diving tanks holed, was able to crawl home northabout and reached List about May 10. She had sunk nine vessels, aggregating 23,302 tons. Her captain, her navigator (Warrant Officer Wilhelm Knappe) and a stoker (P.O. Walter Deppe) became prisoners. In the *Prize* three men had been wounded. "This was an action most skilfully and gallantly fought," and Lieutenant W. E. Saunders, R.N.R.,¹ was awarded the Victoria Cross and promoted to Lieutenant-Commander. Lieutenant W. D. Beaton, R.N.R., was awarded the D.S.O.²

328. **Cruise of "U.70."**—U.70 (Kaptlt. Wünsche) sailed from Emden on April 15, and started her operations in the Atlantic six days later, when, on April 21, at 11.10 a.m., in 56° 12′ N., 12° 20′ W., she torpedoed without warning the defensively armed British steamer *Sebek* (4,601 tons), bound from Liverpool to Gibraltar. The ship sank in three minutes. Nothing was in sight, and the survivors reached Tory Island in their own boats 71 hours later.

Moving south-westward, U.70, three days later, on April 24, sank four neutral vessels. At 10.20 a.m., in $52^{\circ} 28' \text{ N}$, $14^{\circ} 2' \text{ W}$, she sank by gunfire the Norwegian sailing vessel *Clan Galbraith* (2,168 tons), bound from Philadelphia to Birkenhead; at 2.30 p.m. (April 24), in $52^{\circ} 12' \text{ N}$, $15^{\circ} 15' \text{ W}$, the Norwegian sailing vessel *Vestdal* (1,690 tons), bound from Pensacola to Greenock, was steering south at 3 knots with the Swedish topsail schooner *Valkyrian* (233 tons), bound from Pensacola to Fleetwood, 2 or 3 miles away on her port beam, when U.70 suddenly appeared between the two vessels, and destroyed them both by gunfire, the *Vestdal* at 2.30 p.m., and the *Valkyrian* at 3 p.m.³

U.70 then proceeded north-eastward, and that evening, April 24, at 5.30 p.m., in 52° 40′ N., 14° 38′ W., opened fire on the Danish sailing vessel *Eos* (179 tons), bound from Florida to Fleetwood, which sank at 6 p.m. The survivors were picked up next day by the *Baltic*, and brought to Liverpool.

¹ Minute, First Sea Lord. Lieutenant-Commander Saunders was lost with all hands in the *Prize* when she was sunk by U.B.48 on August 13, 1917.
 ² M.05543/17, Vice-Admiral Charles Dare, Milford Haven, May 6, 1917

(with Plan). Prisoners account in ID., Vol. 547A.

³ In 52° · 12' N., 15° · 12' W.

Next day,¹ April 26, at 1 p.m. in 52° 8' N., 16° 25' W., the British steamer Harflete (4,814 tons), bound from Cuba to Queenstown, had two torpedoes fired at her, which missed ahead and astern. The submarine, which may have been $U.70^2$ (or U.81), rose and opened fire, which the Harflete at 1.10 p.m. returned at 5,000 yards with her 12-pdr. gun. After firing 21 rounds, she lost sight of the submarine at 3 p.m. in 52° 8' N., 16° 5' W., and thought she had escaped. That night, however, April 26, at 11 p.m., in 51° 54' N., 14° 48' W., a torpedo struck her without warning, and after being abandoned she was last seen with decks awash at 9.30 a.m. on April 27.

U.70 then moved northwards, and on April 29, at 7 a.m., in 52° 35' N., 14° 53' W., sunk by gunfire the Norwegian sailing vessel Anne Marie (441 tons), bound from Fray Bentos, in South America, to Silloth, in Cumberland. Her survivors were picked up next day by the H.M.S. Delphinium.

That day, April 29, at 3 p.m., in 52° 22' N., 14° 18' W., U.70 torpedoed without warning the British steamer Daleby (3,628 tons), from Huelva to Carston with copper ore. The Daleby sank in three minutes with the loss of her master and 25 of her crew, leaving only two survivors, Gunner Wilson and a fireman, to be picked up by. S.S Romney the next day.

After sinking the Daleby, U.70 made a cast of some 90 miles to the south-eastward, and next day, April 30, at 11 a.m., in 51° 4' N., 13° W., torpedoed without warning the defensively armed British steamer Delamere (1,525 tons), bound from Dakar to Liverpool, which sank in six minutes with the loss of 10 lives. That afternoon, at 2 p.m., U.70, in 51° 4' N., 13° 5' W., fired a torpedo at the British steamer Sutlej (3,549 tons). It missed, and an hour and a half later the Sutlej picked up the 20 survivors of the Delamere and brought them into Queenstown. This attack completed the cruise of U.70. She reached Emden on May 5, having sunk nine ships, aggregating 19,279 tons.

329. Last Cruise of "U.81."-U.81 (Kaptlt, Raimund Weissbach) sailed from Emden on April 17. On April 24 she was some 50 miles N. by E. from Tory Island, when, at 5 p.m., in 56° 10' N., 8° 40' W., she sank the British steamer Amulree (1,445 tons), bound from Liverpool to Santos with a cargo of coal.

Coming south-westwards, U.81 next day, April 25, at 6.30 a.m.,³ in 54° 40' N., 11° W., sank by gunfire and bombs two sailing vessels. the British barque Invermay (1,471 tons), bound from Buenos Aires to Londonderry with a cargo of maize, and the Norwegian barque

3 S.A.T.

Glenesk (1,369 tons), bound from the Clyde to New York in ballast. U.81 went on to the south, and on April 25, at 1.30 p.m., in 54° 8' N., 11° 35' W., opened fire on the British S.V. Heathfield (1,643 tons), bound from "Gulf Port" to Liverpool, and sank her by bombs at 4.50 p.m.

Proceeding on her way south-westwards, U.81 two days later, on April 27, at 9.30 a.m., in about 51° N., 14° W., met the defensively armed Italian S.S. Uranus (3,978 tons), bound from Genoa to Glasgow. The submarine opened fire, firing at least 120 rounds, The steamer replied with 87 rounds, but was hopelessly outranged, and after being abandoned at 10.30 a.m., sank in five minutes, having been hit about 13 times.

After this one-sided action U.S1 turned north-eastwards, and next day, April 28, at 2.5 p.m., in 51° 32' N., 13° 20' W., torpedoed without warning the defensively armed British S.S. José de Larrinaga (5,017 tons), bound from Galveston to Manchester, which sank in a few minutes with the loss of her master and 11 of her crew.

The same day, April 28, at 1.20 p.m., in 51° 28' N., 14° 19' W., the British steamer Terence1 (4,309 tons), bound from Buenos Aires to Liverpool, sighted an "object" about 2 miles off on her port bow which had the appearance of a large caterpillar, and fired at it with her 13-pdr. gun, until it finally disappeared into the haze.

At 4.55 p.m., in 52° N., 13° 30' W., the Terence sighted a torpedo approaching from the starboard quarter, and shortly afterwards a submarine, which seems to have been U.81, came to the surface on the starboard quarter about 11 miles away.

A running fight followed to the north-eastward, in which the Terence fired 74 rounds and the enemy more than twice that number.

About 7.9 p.m. a second submarine, which may have been U.69, appeared some two miles off, and shortly afterwards a torpedo passed under the Terence, and a second torpedo also missed her. The second submarine then came to the surface, and both submarines continued to shell the Terence. At 8.15 p.m. (April 28), in the approaching darkness both submarines disappeared, but at 11.5 p.m.,² somewhere about 52° 40' N., 12° 55' W., a torpedo fired by U.81 struck the ship, which was abandoned, and finally sank. For his gallant resistance the master, Mr. William Frodsam, received a D.S.C., and his crew were awarded clasps to their mercantile marine medals. This was the last ship sunk by U.81.

330. The End of "U.S1."-On April 29, the day following the Terence's encounter with U.81, the British submarine E.54

¹ U.70 may, on April 25, have made a long cast to the southward and been the submarine which the Swanmore attacked on April 25 at 4.30 with U.50, q.v.

 $^{^{2}}$ U.43 and U.50 were also within cruising range at the time. Harflete reported two submarines.

¹ No submarine is known definitely to have been in the vicinity at the time, but it was possibly U.69 or U.82. Her distress signals were taken in by by H.M.S. Narwhal (see S.320.)

² The times and positions given in the various reports do not agree. N.66201/17, M.65963/17, M.06141/17.

(Lieutenant-Commander Robert Raikes, D.S.O.) one of the Vulcan's flotilla under the orders of the Vice-Admiral, Queenstown,¹ was in 50° 28' N., 9° 23' W., at 8.40 a.m., when she sighted a submarine which may have been U.21 some 6 or 7 miles to the north-north-westward. Commander Raikes dived to attack immediately, but it was 8.59 a.m. before he could see the enemy through the periscope. At 9.30 a.m. the range was 1,500 yards, and at 9.42 a.m. had opened to 2,500, when E.54 fired a torpedo, which missed. Commander Raikes renewed his attack, and at 9.59 a.m. gave the order to fire both bow tubes, but owing to a misunderstanding only the starboard tube was fired. The enemy then altered course and disappeared, while E.54 continued her course to the north-westward towards her patrol area.

Two days later, on May 1, at 11.8 a.m., in $51^{\circ} 34'$ N., $13^{\circ} 12'$ W., Commander Raikes sighted an enemy submarine, which was probably U.70, but which may also have been U.67 or U.82, and dived to attack. He manœuvred until 1.52 p.m., when he fired two torpedoes, and the enemy, turning away, disappeared.

After making this attack, E.54 moved to the west, and that same afternoon, May 1, at 3.40 p.m., in 51° 33' N., 13° 38' W., when steering north, heard an explosion, and sighted a steamer ahead blowing off steam. Commander Raikes closed her at 11 knots on the surface, and discovered that the steamer was down by the bow and stopped. At 4.22 p.m. when still about 31 miles away. E.54 dived and continued to close. At 4.50 p.m., Commander Raikes sighted U.81 on the starboard bow moving towards the steamer, and proceeded to attack. For 21 minutes he manœuvred for position, and then, just after 5.11 p.m., fired both bow torpedoes at a range of 400 yards. One hit U.81 midway between the conning tower and bow and the other midway between the conning tower and stern. As U.S1 sank there was a third explosion. Commander Raikes picked up seven survivors,² and having satisfied himself that the steamer, the British S.S. Dorie (3,264 tons), which U.81 had torpedoed, was able to make her own way to Bantry Bay, returned to Queenstown to replenish torpedoes and land his prisoners. For his success he received a bar to his D.S.O., and a number of decorations and " mentions " were also awarded to his officers and men.³ The new submarine patrol initiated less than three months before4 had not been long in proving its value.

331. Cruise of "U.82."—U.82 (Kapt.-Lt. Hans Adam) sailed from Kiel on April 17, and six days later, on April 23, at 10.30 a.m., in 58° 9' N., 10° 56' W., sank by gunfire the Norwegian sailing vessel Marita (1,759 tons), bound from Buenos Aires to Aarhus. Moving

¹ See Section 248.

⁴ Section 248.

southwards, the next day, April 24, at 11.40 a.m., in $55^{\circ} 10' \text{ N.}$, 12° W. , she torpedoed and sank without warning the British steamer *Thistleard* (4,136 tons), bound from Chile to Glasgow with a cargo of nitrate.

Continuing to the south-westward, U.82 the following day, April 25, at 10.30 a.m.; in 51° 40′ N., 14° 23′ W., torpedoed without warning the defensively armed British steamer Stephanotis¹ (4,060 tons), bound from Halifax to Queenstown. The Stephanotis had on board the survivors of the Valkyrian and Vesdal² and was quickly abandoned. At 11.30 a.m. the sloop Crocus took her in tow and towed her until she sank next morning, April 26, at 3.30 a.m. This attack completed the work of U.82 in April. She reached Emden on May 9.

332. Cruise of "U.21."—U.21 (Kaptlt. Hersing) sailed from Borkum on April 19, and three days later, April 22, was somewhere off the Shetlands, where she sank the Norwegian steamers *Theodor William* (3,057 tons)³ and *Gisko* (1,643 tons). The *Gisko* had left Bergen on April 21 with a cargo of lumber for London, and appears to have been sunk at 2.30 p.m. (April 22) some 60 miles east of the Shetlands.⁴

Five days passed before U.21 was off the south-west of Ireland; on April 27, at 9.15 a.m., Q.11 (*Tamarisk*) received an S.O.S. from the British S.S. Quantock (4,470 tons), torpedoed at 8.30 a.m. off Brow Head in 51° 24' N., 9° 58' W. At 10.15 a.m. the *Tamarisk* sighted a submarine alongside the steamer, and, opening fire drove her down. This was not U.21, but U.C.66 (see S.346), who also attacked at 9.12 a.m. the British S.S. *Headcliffe* which took refuge in Berehaven. The *Quantock* was towed into Berehaven and beached. U.21 may have been the submarine attacked on April 29 at 8.40 a.m. in 50° 28' N., 9° 23' W. by E.54,⁵ for a few hours later, at 1 p.m., in 49° 48' N., 9° 35' W., 40 miles away to the southward, she sank by bombs and gunfire the Norwegian steamer *Askepot* (1,793 tons), bound from Cork to Philadelphia in ballast.

Next day, April 30, she sank the *Borrowdale*, and was attacked by $Q.10.^{6}$ These encounters seem to have completed her work during April, and after sinking three vessels in May she reached Emden safely on May 18.

⁴ Telegram in H.S.413/620 giving position 60 miles west of Shetlands is clearly wrong. *Gisko* was making for the rendezvous and could not have been westward of the Shetlands. She probably sailed from Bergen at dusk (April 21) and at 8 knots would have been, on April 22 at 2.30 p.m., some 60 miles east of the Shetlands.

⁵ See Section 330.

² The Captain, Kapt. Leut. Weissbach, two other officers and four ratings.

³ Report in M.05473/17.

¹ Ex Hackensack.

² See Section 328.

³ Theodor William at 1.15 p.m. in 60° 35' N., 0° 35' E.

⁶ For details, see Section 327.

333. Cruise of "U.58."—U.58 (Kaptlt. Wipperm) sailed from Heligoland on April 21, and four days later was at work some 50 miles north of Cape Wrath. That day, April 25, at 1.40 p.m., in 59° 30′ N., 5° 27′ W.,¹ she sank by gunfire the unarmed Danish three-masted barque *Havila* (1,421 tons), bound from Buenos Aires to Svendborg with 2,330 tons of maize.

About three hours later, on April 25, at 4.30 p.m., in 59° 23' N., 5° 42' W., she sank by gunfire the Danish four-masted barque Sokoto (2,259 tons), bound from Baltimore to Aarhus² with a cargo of superphosphate. The attack was seen by another Danish sailing vessel, the Hawthorn Bank (1,369 tons), some 4 miles away, bound from Buenos Aires to Svendborg with 2,200 tons of maize. She, too, at 6.45 p.m., came under U.58's fire, and was sunk some '15 minutes later in 59° 30' N., 4° 58' W.

Two days passed before, on April 27, at 9.30 a.m., in 56° 30' N., 11° 40' W., U.58 torpedoed without warning and sank the defensively armed British steamer *Dromore* (4,398 tons), bound from Liverpool to Baltimore. At the time two other vessels were in sight, but were too far off to render any help. An hour later, at 10.40 a.m., U.58 missed with two torpedoes the Norwegian steamer *Langford* (1,097 tons), bound from Liverpool to Iceland with coal, then, coming to the surface, sank her with gunfire.³

Next day, April 28, at 6.50 a.m., in 56° 30' N., 11° 20' W., U.58 torpedoed without warning the defensively armed British oiler *Bullmouth* (4,018 tons), bound from the Clyde to Hampton Roads in ballast. The *Bullmouth* was accompanied at the time by the armed trawler *Lord Leicester*, and was zig-zagging to adjust her speed to that of her escort. She was severely damaged, and sank at 9.50 a.m.⁴

This completed the work of U.58 in April. In May she sank one British and three Norwegian steamers, and reached home safely on May 11.

334. Cruise of "U.62."—U.62 (Kaptlt. Ernst Hashagen) sailed from Heligoland on April 21. Six days later, on April 27, at 11 a.m., in 56° 12′ N., 12° W., she sank without warning the defensively armed British steamer *Dunmore Head* (2,293 tons), bound from Manchester to Genoa.

Three days later, on April 30, a beautiful spring day, at 1.30 p.m.,⁵ in 52° 10′ N., 14° 20′ W., she torpedoed without warning H.M.S. *Tulip* (Q.12). Q.12 had sailed from Queenstown on April 25 to cruise between 52° 30′ N. and 52° N. and 11° W. to 17° W. She had been directed to proceed to 17° W. to divert shipping to north of 52° N

² Called at Stornoway for εxamination April 23 to 24.
³ No position is given in I.D., Vol. 642.
⁴ M.65831/17.

⁵ Hashagen, U-Boote Westwarts/98.

and south of 51° N., and was steering N. 78 W. at 12 knots, when a periscope was sighted on the starboard bow 200 yards away. Before she could open fire a torpedo hit the ship, breaking her back, killing one officer and eight ratings, and preventing her offering any serious resistance. She was quickly abandoned, and U.62, coming to the surface some 400 yards away, opened fire on the ship, which was then nearly under water amidships. After sinking her with 15 or 20 shots, U.62 approached the boats and took prisoner the Captain of Q.12, Commander Norman Lewis, R.N. (ret.). The 80 survivors were picked up by the destroyer *Mary Rose* at 6.45 a.m. next morning after they had pulled and sailed eastward for over 47 miles.¹.

Eight hours after she had sunk the *Tulip*, U.62, on April 30, at 8.30 p.m., in 52° 11' N., 14° 22' W., sank the Italian steamer *Fortunata* (3,348 tons), bound from Savona to Glasgow.

This completed her work in April, though she continued to cruise, and sank five more vessels between May 1 and May 10, reaching Heligoland on May 18.

334A. Cruises of "U.44" and "U.C.75."—U.44 (Kaptlt. Paul Wagenführ) left Borkum on April 23 to work off the west of Scotland. Five days later, on April 28, at 11.18 a.m., in 57° 20′ N., 10° 10′ W., she sank by torpedo and gunfire the defensively armed American steamer *Vacuum* (2,551 tons), bound from Birkenhead to New York, leaving the crew to get into three lifeboats, of which two were swamped, with the loss of 25 lives. The 18 survivors landed in South Uist, Hebrides.

On May 2, at 7 p.m., in 61° N., 3° 40' W.,² U.44 sank the Norwegian barque *Natuna* (1,121 tons). This completed her cruise, and she reached Hubert Gat on May 7, having sunk only two vessels, aggregating 3,672 tons.

U.C.75 sailed from Heligoland on April 28 for the south coast of Ireland and Bristol Channel. She sank her first ship, the Russian sailing vessel *Alide*, on May 1, to which month her cruise belongs. Among her victims was H.M.S. *Lavender*. She reached Heligoland on May 18.

On April 30 there were four submarines in the South-West Approach—U.93, U.21, U.58, and U.62, of which U.93 was badly damaged and was crawling home.

¹ H.S.648/273. Details in telegram in H.S.442/123 are clearly incorrect. ² 70 miles N.W. of Esha Ness (Shetlands).

¹ I.D., Vol. 642.

proceeding with coal from Swansea to Falmouth to join a convoy for Brest. At 4.15 p.m. she caught another small French sailing vessel going from Rochelle to Cardiff which had got separated from its convoy by bad weather. On her way home on April 9, at 5.30 p.m., off Havre, she sank a third small French sailing vessel, the *St. Maudez* (299 tons), from St. Malo to Tréport. She was back at Zeebrugge on April 10, having sunk five vessels of 3,155 tons.

337. "**U.B.36**," **March 24 to April 5.**—*U.B.*36 left Zeebrugge on March 24 to work in the West Channel. On April 1, at 6 p.m., she was off the Raz de Sein (Brest), and in 47° 56' N., 4° 50' W., sank two small French fishing boats, the *Providence de Dieu* (15 tons) and the *Jolie Brise* (18 tons). She was back at Zeebrugge on April 5 with only 33 tons to her credit.

338. "U.B.32," March 28 to April 7.—U.B.32, after torpedoing on March 31 the hospital ship *Gloucester Castle*,¹ (7,999 tons), which managed to reach Southampton, was working off Cape Barfleur, where, at 8.45 p.m., she torpedoed the British transport *Queen Louise* (S.239), and on April 1 at noon in 50° 5′ N., 3° 22′ W., sank the British S.V. *Endymion* (67 tons), which was never heard of again.

On April 3, at 11.30 p.m., in 49° 51' N., 1° 16' W., 10 miles north of Cape Barfleur, she torpedoed and sank the Brazilian S.S. *Parana* (4,461 tons), proceeding from Santos to Havre with 3,800 tons of coffee. The ship was sunk without warning; three men were killed, the remainder had to take to the boats in a heavy sea and blinding snowstorm, an incident which drew a strong protest from the Brazilian Minister at Berlin.³

On April 5, at 12.50 p.m., the destroyer Sandfly attacked a submarine prowling on the Southampton to Havre route, dropping a depth charge near it, and some two hours later the Derwent attacked one off the Owers, and drove it down. This was probably U.B.32, which then proceeded towards the Isle of Wight, where, at 5.15 p.m., in 50° 30' N., 1° 25' W., she torpedoed the French S.V. Ernest Legouve (2,246 tons), proceeding under tow from Northfleet (Thames) to Buenos Aires with cement. This was her last ship, and she was back at Zeebrugge on April 7, having sunk in April three ships, of 6,774 tons.

339. "U.C.71," March 28-April 13.—U.C.71 left Zeebrugge on March 28, passing Dover barrage that night in thick weather and laid mines on March 29 and 30 off Treport, Dieppe, and St. Valery.⁴

¹ See S. 263 for "Hospital Ship" question in Channel; see Adm. Tel., March 28, H.S.392/1261, H.S.393 156.

⁴ O.U.6020B. Field 361, 361a, 361b; the French barque Sarcelle was sunk by them March 30, noon.

CHAPTER XVI.

APRIL, 1917.

SUBMARINES, FLANDERS. (Plan 40).

335. Flanders Submarines.—During April, 20 Zeebrugge submarines appeared in the Channel, of which three made two cruises, making 23 cruises in all. The number out at a time varied considerably. On April 1 there were only five, a figure maintained till the middle of the month, when it gradually increased to six and seven, and at the end of the month on April 28, to 10. The. submarines out during the month were :—

U.B.39 March 21-April 10.	U.C.21 April 16-April 28.
U.B.36 (I) . " 24– " 5.	U.C.36 , 18-May 2.
U.B.32 ,, 28- ,, 7.	U.B.31 ,, 22- ,, 3.
U.C.71 ,, 28- ,, 13.	U.B.32 ,, 22- ,, 2.
U.C.30 ,, 30- ,, 19.	U.B.38 (II) ,, 25-,, 7.
(sunk).	THE SAME IN THE PROPERTY AND THE
U.C.26 April 7- " 20.	U.C.65 ,, 25- ,, 12.
U.B.38 (I) ,, 8- ,, 16.	U.C.69 ,, 25- ,, 11.
U.B.36 (II) ,, 13- ,, 17.	U.C.72 ,, 25- ,, 9.
U.B.40 " 14– " 21.	U.C.48 ,, 26- ,, 7.
U.C.47 ,, 14- ,, 28.	U.C.61 ,, 28- ,, 15.
U.C.66 ,, 15-May 3.	U.B.39 ,, 23 (sunk)
U.C.70 ,, 15- ,, 2.	

The highest figures of tonnage sunk were : U.B.32, 19,816 tons ; U.C.71, 15,812 tons ; U.C.21, 14,855 tons ; U.B.31, 12,350 tons ; U.B.40, 11,272 tons.*

A summary of their cruises follows.

336. "**U.B.39**," **March 21 to April 10.**—On April 1, U.B.39 was off Beachy Head, where, at 11.30 a.m., she sank with bombs a small British sailing vessel, the *Silvia* (164 tons). For four days nothing was seen of her, till on April 5 she turned up off Brest, and at 7 a.m., in 47° 56' N., 4° 55' W., sank the Norwegian S.S. *Dicto* (2,363 tons), proceeding from Aguilas to Newport with ore. The *Dicto* had left Belle Isle for Brest in a convoy of 28 ships with four escorts, but had fallen 3 miles astern, when she saw a submarine fire a torpedo at the Danish S.S. *Varing* at the tail of the convoy. It missed, and *U.B.39*, coming up in sight of the two French escorts, *Gabion* and *Rosemonde*, who opened fire at long range, stopped the *Dicto* and sank her with a torpedo.

The next day (April 6) she was off Lands End, where at noon she sank a small French sailing vessel, the *Perce Neige* (141 tons),

* One ship, the P.O. Medina.

² " Tatigkeit " Marine-Archiv.

³ E.1 Log, A.9/2.

She was south of the Scillies on April 3, where at midnight, in $49^{\circ} 20' \text{ N}., 6^{\circ} 18' \text{ W}.$, she sank with bombs the Italian S.S. *Pensiero* (2,632 tons), going from Genoa to Barry in ballast. She then proceeded to the Bay, sinking a small British sailing vessel, *Ellen James* (165 tons), off Ushant on April 4. On April 5, at 5 p.m., in 46° 5' N., 3° 25' W., she sank the Spanish S.S. *San Fulgencio* (1,558 tons), on the way from Newcastle to Barcelona with coal. A whole day passed without a ship; then, on April 7 at 9 a.m., in 45° 52' N., 2° 37' W., she sank by gunfire the Portuguese S.S. *Caminha*¹ (2,763 tons), going to Rochefort with 4,000 tons of maize.

On April 9, off Brest, on her way home she succeeded in sinking two ships which had just left their convoy—one was the Norwegian S.S. Valhall (749 tons), with chalk from Manchester to Cadiz, which was torpedoed at 1 a.m. in 47° 51′ N., 5° 37′ W.²; the other, the Greek S.S. Themistocles (1,895 tons), going from Cardiff to Algiers with 2,220 tons of coal, was followed and sunk at 6 a.m. in 47° 31′ N., 6° 23′ W., by gunfire and a torpedo.

U.C.71 seems to have cruised for a day or two off Ushant for on April 10, at 5.40 p.m., in 47° 58' N., 5° 56' W., she stopped and sank the Norwegian S.S. Ranvik (5,858 tons) on the way from Buenos Aires to Cherbourg with 9,200 tons of grain. Then she turned home, sinking her last ship off Barfleur, on April 12, at 12.10 p.m., in 49° 50' N., 1° 8' W.—a small French sailing vessel, the *Edelweiss* (192 tons), going from the Bay to Treport with 250 tons of macadam. She passed Dover in the night of April 12–13, south of the barrage on the Calais side, and was back in Zeebrugge on April 13. She had sunk eight ships, of 15,812 tons.

340. "**U.C.30**," **March 30-April 19 (sunk).**—U.C.30 (Lieut.-Commander Heinrich Stenzler) sailed on March 30 for his first—and last—cruise in the Channel. On April 4, at 4.30 p.m., off the Scillies, in 49° 35′ N., 6° 38′ W., he sank by bombs the Argentine S.V. *Monteprotegido* (281 tons), going from Monte Video to Rotterdam. Then came a stroke of bad luck. U.C.30's port engine broke down completely ; her starboard engine was damaged, and she could only crawl along at 3 to 4 knots. But she could still attack, for in bright moonlight, at 10.30 p.m., in 49° 50′ N., 7° 40′ W., she got a torpedo into the British S.S. *Hunstanton* (4,504 tons), proceeding with a cargo of wheat from Australia to Falmouth. Abandoning the task of laying her mines, which had probably been intended for the south coast of Ireland, she made for home north about, and, meeting U.50 on April 13 off St. Kilda, got provisions from her. U.50's signal was intercepted by the Admiralty, and at 11.24 p.m. information went

¹ The *Caminha* reported two submarines were present, I.D., Vol. 639. ² 27 miles S. 80 W. of Ar Men (Études); the position in I.D., Vol. 639 (40° 9' N., 5° 59' W.) is considered incorrect. out to the Commander-in-Chief that a submarine badly damaged going 3 knots was west of St. Kilda in the forenoon.¹ The *Mounsey* and six destroyers hastened off to hunt for her, and the *Kempenfelt* and four more were sent out to reinforce them ; but their search was handicapped by a bitter northerly gale and a very heavy sea, which forced them to take shelter in Lerwick.

On the 16th, the Kempenfelt had 14 destroyers with her, spread to the westward of Fair Island Channel, in a fierce gale of snow and sleet. A submarine was seen for a few moments off Sumburgh Head at 3 p.m. on April 16, but dived as soon as she was sighted. U.C.30's position was again located on April 17 by radio in the North Sea, and as the Battlefleet had only 11 destroyers remaining at the base, the Battle Cruiser Force was ordered, on April 18, to send a division to 56° 40', 4° 22' E. by 3 p.m., April 18, to sweep 318° to search for her.² Again the search was unsuccessful. Passing to the north and east, she escaped them, but ill fortune was still dogging her path. Her last signal sounded on April 19 at 8 p.m. in 57° 25' N., 5° E. and though Zeppelins and destroyers were searching busily for her for the next three days, she was never seen again. She probably perished on one of the mines laid in the Bight, either by the Princess Margaret on March 29 or by the Royalist on April 18.3 She had sunk two vessels, of 4,785 tons.

341. "U.C.26." April 7-20.-U.C.26 (Lieut.-Commander Mathias Graf von Schmettow) left Zeebrugge on April 7. Off Boulogne at 1 a.m. on April 9 she fired a torpedo at the British S.S. Neto (1,696 tons), which missed 10 ft. ahead, and then opened fire at the French S.S. Paraciers, which got away. That night she laid mines off Boulogne and Havre.⁴ The minesweepers going out on their usual morning task found the mines off Havre at 8.45 a.m., and a warning signal was sent out at 9.10 a.m. A gale was blowing ; the sea was very rough, and three hospital ships were due at 1 p.m. H.M.S. Hornet, escorting the Salta (7,284 tons), took in the signal on the way across, and after telling her of the mines, turned her over, off the entrance, to the French examination vessel, but instead of following the instructions of a trawler to "Follow me," she hung about outside, apparently waiting for a pilot, drifted down on the minefield, and, turning round to follow the Lanfranc at 10.45 a.m., struck a mine and sank in four minutes with a heavy loss of life. P.26, one of her escorts, went courageously to her aid, but was also mined and sunk. In the Salta, 79 lives were lost; in P.26, two officers and 17 men. The loss was all the more regrettable as the two other vessels, the Panama and Lanfranc both got safely in.

1 H.S.645/245.

⁴ O.U.6020B, Fields 352, 352a.

² H.S.645/248, 249, 260. See, too, S.366.

³ See Leith's History of British Minefields, chapter VIII.

U.C.26 had meanwhile gone off to Cherbourg to lay mines there on April 11, and at 12.30 a.m., in bright moonlight, sent a torpedo into the British S.S. Duchess of Cornwall (1,707 tons), proceeding from London to Havre, which sank in two minutes with the loss of all her crew of 22 with the exception of one solitary survivor. Lurking about there for a few hours, she got a torpedo into another ship at 3 a.m.-the British S.S. Branksome Hall (4,262 tons), from Cork to Cherbourg, which was kept afloat, however, by her cargo of hay and managed to reach port. U.C.26 went on to the Bay, sinking a small French sailing vessel¹ there on April 13. On April 14, at 10 a.m., some 40 miles south of the Gironde, in 46° 48' N., 2° 27' W., she attacked a convoy of 15 vessels coming up the coast, and torpedoed the Spanish S.S. Tom2 (2,409 tons), from Bilbao to Cardiff, which sank in 30 seconds, only five men being saved out of a crew of 25. U.C.26 got back safely on April 20, passing up Channel on April 18 and 19. She had sunk three ships, of 4,150 tons, and her mines off Havre had sunk the Salta.

342. "**U.B.38 (I),**" April 8-16.—U.B.38, sailing on April 8, carried out an insignificant cruise towards Portland and the Start. The first sign of her was on April 11, when, at 11 a.m., in 50° 19' N., 3° 13' W., off Berry Head she sank a British fishing smack, the *Precedent* (36 tons), with bombs. On April 12, she was off Havre, and at 8 p.m., in 49° 48' N., 0° 19' W., torpedoed the British S.S. *Lismore* (1,305 tons), going from Rouen to the Bristol Channel. She went off again towards the English coast, and the next day (April 13), at 4.50 p.m., in 50° 10' N., 2° 30' W., 25 miles to south of Portland, sank with bombs the British S.V. *Maria* (175 tons). She was back on April 16, passing Dover barrage between buoys 1 and 2,³ having sunk three ships, of 1,516 tons.

343. "**U.B.36**," **April 13–17.**—*U.B.*36 sailed for her first cruise on April 13, with orders to remain out for only four days. Passing the Dover barrage by night under the French coast, on April 16, at 5.30 a.m., in 50° 52′ N., 1° 27′ E., off Cape Grisnez she sank with gunfire the British S.V. *Rochester Castle* (106 tons), and at noon in 50° 55′ N., 1° 27′ E., the British S.S. *Marden* (297 tons). She passed the barrage again that night, and was back in Zeebrugge on April 17, having sunk only 403 tons.

344. "**U.B.40**," April 14–21.—*U.B.40* (Lieut.-Commander Howaldt) left Zeebrugge on April 14 for a cruise in the Channel East. On April 15, at 6.30 p.m., in 50° 38' N., 0° 15' W., she stopped the

Norwegian S.S. Mohlenpris (637 tons), going from Falmouth to Treport with coal, and sank her with bombs. That night, at 11.45 p.m., in 50° 38' N., 0° 23' W., she torpedoed another collier, the British S.S. Cairndhu (4,019 tons), bound from South Shields to Gibraltar. The weather was fine and the night very dark; the ship was armed with a 13-pdr. Vickers, and had switched her lights on for about 10 minutes to avoid passing steamers. As the boats were being got out the submarine ran into one them, and several of the crew were washed off, succumbing to cold and exposure. U.B.40went to the southward, and at 4.30 a.m., April 16, in 50° 18' N., 0° 10' W., sank a small British sailing vessel, the Victoria (165 tons), with bombs.

At 6.28 a.m. (April 16), in $50^{\circ} 35' \text{ N.}$, $0^{\circ} 20' \text{ W.}$, she chased the British S.S. *Highcliffe* (3,238 tons), proceeding from Bilbao to Tyne, but the *Highcliffe* opened fire with a 13-pdr. Vickers-Maxim, and drove her down.

She continued to cruise about on the Havre route, and on April 17, at 8.40 p.m., in 50° 11' N., 0° 12' E., torpedoed and sank the British hospital ship Lanfranc (6,287 tons), proceeding under an escort of two destroyers from Havre to Southampton with wounded. The Lanfranc was carrying 234 British wounded and 167 German, and was flying the Red Cross flag and carrying the prescribed marks of a hospital ship, but there is something to be said on the other side. The German Government had announced definitely that hospital ships would be attacked in the Channel and the War Cabinet had decided, on April 11, that cross-Channel hospital ships based on Southampton were no longer to be run as hospital ships, and were to be painted grey and called "wounded carriers." The Lanfranc's name had been removed, therefore, from the list of hospital ships. and on April 13 the British Minister at the Hague had been asked to notify the German Government of the cancellation. It seems clear that technically she no longer possessed the international status of a hospital ship, and ought not to have been carrying the lights of one.1 There were lost in her-wounded-British officers, 2; men, 11. German officers, 2; men, 13. R.A.M.C., 1; and crew, 5. Total, 34. The Badger, P.37, Jackal, and the French patrol vessel Roitelet picked up the remainder to the number of 570, and brought them safely to Portsmouth.²

U.B.40 then went back to the Owers area, and on April 19, at 5.24 a.m., her periscope was seen in $50^{\circ} 30' \text{ N.}$, $0^{\circ} 32' \text{ W.}$, close to the American S.S. *Mongolia* (15,638 tons), New York to London, which opened fire with her 6-in. guns at 1,000 yards, and drove her down. At 3 p.m. she was up again, and in $50^{\circ} 34' \text{ N.}$, $0^{\circ} 16' \text{ W.}$, sank

¹ Possibly the Gambetta, 39 tons, off the Ile d'Yeu.

² Fourth ship in the port line.

³ C.B.01370/28. That is somewhere between barrage buoys 2A and 5A. The Germans used the designation of the old Area Buoys.

¹ M.52164/18; N.L.1. 66822, see too H.S.409/874.

² H.S.409/949, 964. Enseigne de Vaisseau R.M.J. Sagnier of the *Roitelet* received Their Lordships thanks. He had already been given a D.S.C. (A.628/1917).

with gunfire the British S.V. C.S.72, formerly Senator Danziger (164 tons), going from Dublin to Dieppe. At 7 p.m. that evening (April 19), in $50^{\circ} 40' \text{ N.}$, $0^{\circ} 23' \text{ W.}$, she saw the British oiler Limeleaf (7,338 tons), coming up Channel escorted by two armed trawlers, and sent a torpedo into her, but the ship managed to get into St. Helens.

Not far off, on April 20, at 7.50 a.m., in $49^{\circ} 57\frac{1}{2}'$ N., $0^{\circ} 16'$ W., a submarine opened fire on the Q ship *Glen*. About half an hour was spent in getting the *Glen's* boat out, and the submarine meanwhile closed to about 1,400 yards, firing seven rounds. As the peak halyards were stranded by a shot, and were threatening to fall on the gunhouse, fire was opened at 8.30 a.m. The first shot from the 12-pdr. seemed to hit the conning tower, and the submarine submerged quickly, and was not seen again.¹ U.B.40 was back in Zeebrugge on April 21, having sunk five ships, of 11,272 tons. She had been driven off by two defensively armed ships, and one ship which she had torpedoed had been towed into harbour.

345. "U.C.47," April 14-28.-U.C.47 left Zeebrugge on April 14 to cruise in the Bristol Channel and its approaches. On April 17 she laid eight mines off Pendeen (Cornwall), and sank a couple of small British sailing vessels.² On April 18 she laid mines off Hartland Point and Trevose Head,³ which were found the next day when one of them blew up the armed trawler Star of Freedom. She attacked. too, at 10.50 a.m. (April 18), the British S.S. Nigaristan (4,345 tons). which returned the fire and escaped. She then went off towards the Tuskar, where, on April 19, at 2.30 a.m., in 51° 53' N., 6° 11' W., she sank with bombs the small British S.V. Jewel (195 tons). Not far off was the British schooner Old Head (160 tons), which was attacked and abandoned at 4 a.m. Two of Admiral Dare's Milford drifters, the Young Mun and Lupina, cruising on the net drifter line between the Smalls and Tuskar, attracted by the firing, came down and drove her off, saving the schooner, which was towed into Rossclare. U.C.47 then went off to the westward, and at 8.50 p.m. (April 19), in 51° 46' N., 7° 28' W., 14 miles from Mine Head (Ireland, South) met the British S.S. Gold Coast (4,255 tons) going from Dakar to Liverpool, and torpedoed her without warning. U.C.47 enjoyed two days in peace, but April 22 brought with it a series of attacks. At 12.25 a.m. the Daffodil, in 51° 44' N., 7° 41' W., dropped a depth charge in the position where a periscope had been sighted (H.S.650/223). Meanwhile Q.22, the Gaelic (Lieutenant George Irvine, R.N.R.), a three-masted barquentine of 174 tons, armed with two 12-pdrs., had come up from Falmouth on the 19th, and on April 22,

¹ M.05125/17. According to later information from Marine-Archiv (H.S./Q²29) the submarine was U.C.16, which suffered no damage. No cruise by U.C.16 in April is mentioned, however, in Marine-Archiv "Tätigkeit."

² S.V.s William Shepherd and Dantzic.

³ Fields 364, 364a, and 364b in O.U.6020B.

at 6.30 p.m., was in 50° 53' N., 8° 3' W.,¹ on a south-easterly course, making 2 knots, on a fine clear day in a calm sea, when a submarine was sighted 4,000 yards to the southward, which opened fire and got in six hits, killing two men of the "panic" party, wounding four, and putting the port motor out of action.

As it was clear that her disguise was detected, Q.22, at 6.50 p.m., opened fire at 4,000 yards, whereupon the submarine fired a torpedo, which was avoided by the use of helm. The fourth shot seemed to hit the submarine, but at that very moment the fire was unfortunately diminished by the fracture of a firing pin at the port forward gun.

At 8 p.m., for some reason or other, the submarine ceased fire, and at 8.10 p.m. Q.22, which had fired 110 rounds, seemed to get another hit. At 8.30 p.m. dusk was falling, and the submarine, some 4,000 yards away, could just be seen going down, and "finally turning over to starboard." The submarine was U.C.47, and, though the claim to have sunk her was not made out, Lieutenant Irvine was awarded a D.S.O. and Skipper George Gray a D.S.C. for the gallant attack.² U.C.47 made off to the eastward, and on April 23, at 4.30 a.m., in her old area off Trevose Head (Cornwall) torpedoed the British S.S. Plutus (1,189 tons), Rouen to Barry. At 8.30 p.m., in 50° 22' N., 5° 17' W., still on the Cornish coast, she attacked the British S.S. Nephrite (270 tons), which opened fire with a 3-pdr., and, making for land, got away. Off the Scillies the next day (April 24), at 2.10 p.m., she sank with bombs a small British fishing vessel, the Heather, of 58 tons. Another "Q" ship, Q.8. the Vala, (Acting Commander L. A. Bernay, R.N.) (1,016 tons), four 12-pdrs., was cruising not far off, but the weather was hazy, and she saw nothing till 4.40 p.m. (April 24), when, in 49° 46' N., 6° 33' W., a shot coming from the port beam pitched over the ship, which was steaming east by north at about 7 knots. The alarm was sounded at once, and a submarine was made out on the port beam heading south. 0.8 altered to south-east, and the enemy fired another round, which hit. At 4.43, Q.8 opened fire at 3,000 yards, and the submarine went down, appearing again on the surface 7,000 yards off to the north-west. But a seaplane, S.P.8664, attracted by the firing, appeared on the scene at 5.55 p.m., and, dropping two bombs, drove the submarine down. This was U.C.47 and Q.8, though she did not do any damage, was instrumental in saving three large ships which were in sight coming westward when she opened fire.3 U.C.47 probably

¹ U.C.47 was in 50° N., 8° W., at 1.30 p.m. April 22. (H.S./Q.28, 29.) E.56 attacked a submarine in 51° 40' N., 7° 15' W. H.S.650/223.

² 13230/1917, Vice-Admiral, Milford Haven, May 22.

³ Queenstown report, H.S.648/215; for air attack, E.1 Log, G.25/3; also H.S./Q.29.

(C 4462)

continued to cruise in the Scillies area, for on April 26, at 6.45 a.m., some 30 miles south of the Lizard, she sank with bombs the Norwegian S.V. John Lockett (842 tons), going from Havre to Jamaica, and off the Start, at noon, a small French sailing vessel, the Aigle, of 172 tons. She was back at Zeebrugge on April 28, having sunk eight vessels of 6.962 tons, of which only one was of any size. She had been attacked twice by "O" ships and once by an aeroplane.

346. "U.C.66." April 15-May 3.-U.C.66 (Lieutenant Herbert Pustkuchen) left Zeebrugge on April 15 for Belfast to present that ancient city with its first baptism of mines. No reports attended her passage down Channel ; she was not seen by any of the Milford patrols entering the Irish Sea and avoided all encounters on her way out. She laid six mines on April 21 off Belfast, one of which was found the same day at 4.30 p.m. by M.L.476.2 The Larne sweepers came down the next day, and on April 23 one of them, the Rose II, was blown up at 6.50 a.m., just as they were beginning to sweep. Meanwhile, U.C.66 had gone on to the northward and laid mines off the Mull of Cantyre, in the Clyde Approach.³ They were found by April 25, and though no more ships were lost, her mines involved the closure of Belfast Lough and the Firth of Clyde for some days, and led to the institution of a swept channel in Belfast Lough. U.C.66 went on, and for the first time made a complete circuit of Ireland. On April 22, at 12.52 p.m., off Torv Island, in 55° 41' N., 8° 14' W., she was sighted by Q.4 (Carrigan *Head*) on the surface $4\frac{1}{2}$ miles ahead. She opened fire on Q.4, and after firing 24 shots kept off to 8,000 yards, giving her no chance to reply, and clinging to her starboard quarter till 4.45 p.m., when the smoke of two patrol vessels was seen, and she made off.⁴ Off Eagle Island on April 23, at 1 p.m., in 54° 23' N., 10° 30' W., she stopped the British S.V. Arethusa (1,279 tons), going from Gulf Port to Greenock. and sank her with bombs. The encounter gave the British submarine D.3 a chance to attack ; she had been following the barque since 11 a.m., and, seeing her attacked, came up, and at 3.28 p.m. (April 23), at 1,300 yards, fired two torpedoes at U.C.66 as she lay alongside the ship. Both, unfortunately, missed, and U.C.66, which D.3 seems to have taken for a second submarine, was seen later going cheerfully off to the southward.⁵ and was sighted twice that evening from the shore. She returned home on May 3 after sinking a small ship off Ushant and another off the Start. During April she had sunk one ship of 1,279 tons, and had been twice attacked.

¹ No details.

² In 54° 43' N., 5° 34' W., M.04987/17, Mines in Belfast Lough.

3 O.U.6020B, Fields 370 to 370d.

4 H.S.648/210. See Appendix K 5.

⁵ M.05461/17. She torpedoed the S.S. Quantock on April 27, off the Fastnet (S. 332).

347. "U.C.70." April 15-May 2.-U.C.70 (Lieutenant Werner Furbringer) left Zeebrugge for her second cruise on April 15, and the next day at 7.45 a.m., off Beachy Head, sank a small British barquentine, the Edouard (476 tons), proceeding from London to the Bristol Channel in ballast. While the bombs were being put on board a second submarine (probably U.B.40) came up, and exchanged signals with her. U.C.70 went on, and the next day (April 17) laid 10 mines 5 miles south of the Nab, and eight off the Owers. The transport Nirvana (6.021 tons) struck one of them at 5.15 a.m., but managed to get back to harbour, and a dangerous area was declared at 7.18 a.m.1 It may have been U.C.70 (or U.C.66) that sank the British S.S. Clan Sutherland (2,820 tons), homeward bound to London with a cargo of tea and rubber, armed with a 13-pdr. Q.F.; at 9 p.m. (April 17), in 50° 12' N., 3° 13' W., off the Channel Islands, she was torpedoed without warning, but remained afloat, and was brought safely into Dartmouth. It says much for the protection of traffic in the Channel that U.C.70 did not get another ship till April 30, when, at 10.40 p.m., in 50° 40' N., 0° 15' W., she torpedoed and sank the Norwegian S.S. Eden (1,304 tons), going from the Tyne to Rouen with coal. U.C.70 was back on May 2, having sunk in April three ships of 3,665 tons.

348. "U.C.21," April 16-28.-U.C.21 (Lieutenant Reinhold Salzwedel) left Zeebrugge on April 16 to cruise in the Bay, passing Dover on the French side.² She reported a large steamer sunk on April 17, which was probably the British S.S. Donegal (1,885 tons). That evening, at 7.43 p.m., in 50° 26' N., 1° W., carrying 612 wounded from Havre to Southampton, she was steaming 151 knots on a course N.W. 1 W., escorted by two destroyers, the Jackal and Liffey, when a torpedo was seen 400 yards off before the port beam. It struck her, blowing up her stern and the 13-pdr. gun, which had only been mounted the day before.3 The weather was fortunately fine, and the destroyers were able to save most of the crew and wounded-52 and 612 respectively-before the ship sank at 8.33 p.m.4 This was probably the work of U.C.21. U.C.21 was off Ushant on April 19, and at 9.45 p.m., 5 miles from Penmarch, in 47° 43' N., 4° 27' W., met a coal trade convoy, and torpedoed the second ship, the British S.S. Cilurnum (3,126 tons), going from Cardiff to La Pallice with 4,800 tons of coal. The ship remained afloat, but in spite of the strenuous efforts of the captain, who returned on board with volunteers to save her, she sank the next morning. U.C.21 must have hung about in the same area for

² C.B.01370, November, 1917, p. 38.

(C 4462)

¹ H.S.409/704, 688.

^{*} She had relinquished the status of hospital ship, see U.B.40 and S.S. Lanfranc.

⁴ M.65314/17 P.N.T.O., Southampton, April 21, 1917. Missing 13 crew and 27 wounded. H.S.409/1228.

the next day, April 20, at 5.40 a.m., in 47° 56' N., 4° 27' W., she sighted another convoy, and torpedoed the Greek S.S. Georgios (3,124 tons), going from Algeria to Middlesbrough. The next day, April 21, she laid six mines off the Ile d'Yeu, sank a small French fishing vessel, the Emile et Charlotte, at 6.50 a.m., and at 7.25 a.m., in 46° 59' N., 2° 29' W., off Ile de Pilier, opened fire on the small French S.S. Union, which made a clever escape by taking refuge under the island. U.C.21 proceeded south, and that evening (April 21), at 7 p.m., in 46° N., 2° W., stopped the Norwegian S.V. Ville de Dieppe (1,254 tons), going from La Pallice to New York. Two planes drove her down for a time, but she came up again and sank the ship with gunfire. That night (April 21-22) she laid six mines off La Rochelle in 46° 6' N., 1° 17' W,1 on one of which the British S.S. Capenor (2,536 tons) was sunk at 9 a.m. U.C.21 lay off the Gironde that day, April 22, and sank two ships, the U.S.S. S.V. Percy Birdsall (1,128 tons) at 11 a.m. and the Norwegian S.V. Valerie (2,140 tons) at 12.30 p.m.² U.C.21 laid her remaining six mines off the Gironde on April 24.3 That afternoon at 1.15 p.m. she met a convoy in 45° 40' N., 2° 12' W., and torpedoed the British S.S. Barnton (1,858 tons), Bilbao to Tyne with 2,950 tons of ore, which sank almost at once with 14 out of the crew of 23. U.C.21 was then on her way home. Off Belle Ile the next day (April 25), in 47° 4' N., 2° 55' W., she met the French S.S. Baigorry (2,161 tons), going from Bayonne to Cardiff with 2,220 tons of pit props; she had lost her convoy, and was sunk by gunfire. U.C.21 was off the Start on April 26, where she sank a British smack, Boy Denis. She passed Dover on April 28, sighting three destroyers, and was back in Zeebrugge that day. She had sunk seven ships and two fishing craft, of 14,855 tons. Of the ships, three were actually in French convoys⁴ and one had lost her convoy. U.C.21 does not appear to have been seriously attacked during her cruise.

349. "U.C.36," April 18-May 2.—U.C.36 (Lieut.-Commander Gustav Buch) left Zeebrugge on April 18 to work off Belle Ile, and laid three minefields off Brest on April 21 and 22^5 ; on one of them just north of the entrance, the British S.S. *Kenilworth* (2,735 tons) ran, and was sunk on April 24. U.C.36 sent on to the southward, and on April 23, at 8.30 a.m., in 47° 3' N., 43° W., stopped the Italian ship Savio (1,922 tons), going from Glasgow to Genoa with 3,100 tons of coal, and sank her with bombs. Some 15 miles to the northward the next day (April 24) at 8 p.m. she sank the small French

¹ Field 365a, O.U.6020B. Note misprint (45° for 46°). Position should be near that of 365b, viz., 46° $6 \cdot 4'$ N., 1° 17 $\cdot 4'$ W.

² Etudes (French report), p. 101, says they were "en convoi assez dispersé."

³ Field 365b, position 45° 42.8' N., 1° 19.2' W. (misprint in O.U.6020B).
 ⁴ These attacks on French convoys do not appear to have been counted in the French Coal Trade statistics.

⁵ Field 366, 366a, 366b in O.U.6020B.

S.V. Providence (272 tons), carrying coal from Swansea to La Rochelle. On April 25 she met a convoy of 14 ships escorted by three patrol vessels, and at 8.55 p.m. torpedoed the British S.S. *Hirondelle* (1,648 tons), London to Bordeaux, which went down in five minutes. On April 27, off Ushant, in 48° 38' N., 5° 8' W., she met another convoy of 11 ships, and at 7.30 a.m. torpedoed the Norwegian S.S. *Verjo* (1,002 tons), going from Newport to Nantes; the ship went down in $1\frac{1}{2}$ minutes, and only six men were saved out of 16. On April 28, at 7.45 a.m., in 48° 28' N., 7° 30' W., she sank the Russian S.S. *Condor* (3,562), on the way to Gibraltar with coal, which went down with all hands. This was her last ship. She got back to Zeebrugge on May 2, having sunk five ships, of 8,406 tons; but this was the last time she was to see home.

350. "**U.B.31**," April 22-May 3.—U.B.31 left Zeebrugge on April 22. All that is known of her is that she was off the Start on April 28, where she caught the biggest ship of the month. This was the P. & O. S.S. Medina (12,350 tons), on her way from Australia to London. She had put into Plymouth, and had just left that port when, at 6 p.m., 3 miles E.N.E. of the Start, in 50° 15' N., 3° 30' W., she was torpedoed without warning not far from where the Rotorua had been sunk a month before. The ship was not under escort, and the 4.7 Q.F. gun with which she was armed had nothing to fire at.¹ The torpedo struck the engine room, and by 6.28 p.m. she had gone down. Dartmouth was only 6 miles off, and the survivors reached it safely with a loss of only five men out of 421. This was the work of U.B.31, and it was probably she, that at 10.15 p.m., in 50° 22' N., 3° 26' W., attacked the French S.S. Denise.² She was back in Zeebrugge on May 3, having sunk one ship of 12,350 tons in April.

351. "U.B.32," April 22-May 2.—U.B.32 (Lieut.-Commander Viebeg) left Zeebrugge on April 22 for her second cruise during the month. Off Cherbourg on April 24, at 5 a.m., she sank the French S.V. Marie Blanche, of 359 tons. The next day, off the Scillies, she achieved a big success. The British P. & O. S.S. Ballarat (11,120 tons), with 1,760 troops from Melbourne to Plymouth, was coming up Channel, escorted by the Phoenix, which was zig-zagging at 13½ knots, one mile ahead of her. The Ballarat was also zig-zagging at 10½ knots, when, at 2.30 p.m. (April 25), in 49° 33' N., 5° 45' W., about 40 miles from Falmouth, a torpedo struck her the starboard side aft. Her S.O.S. reached Plymouth at 2.30 p.m., and five destroyers were sent out, which arrived on the scene between 3 p.m. and 5 p.m., by which time all the troops and crew had been taken aboard destroyers and trawlers, and were landed safely at Falmouth and Plymouth. By 6.30 p.m. the Midge had got her in tow, and two tugs escorted by

> ¹ M.65774/17 and M.65879/17. ² E1 Log, A.29/7.

the *Bittern* were on their way, but, unfortunately, the *Bittern* and her tugs overran her position, and did not find her till 1.25 a.m., when they were told to remain handy till daylight. They were going alongside about 4.20 a.m. when the ship, at 4.30 a.m., in 49° 51' N., 5° 16' W.,¹ settled and sank.

U.B.32 remained in the area, and on April 27, at 2.30 a.m., torpedoed and sank the British S.S. *Beemah* (4,750 tons), Cardiff to Montevideo with coal. She had a 12-pdr. gun, but had no chance to fire, and sank in five minutes. With the exception of three, her crew of 43 were saved.

It was possibly she (or U.B.39) and U.C.65 that the A.T. Lysander III (Falmouth) sighted on April 27 at 10.15 a.m. in 49° 47' N., 5° 44' W. The trawler opened fire at 2,000 yards on the nearest, which was steaming awash, and got off four rounds, securing what seemed to be two hits.² On April 27, at 5.7 a.m., in 49° 15' N., 6° 20' W., U.B.32 sank the British S.S. Alfalfa (2.993 tons), which was lost with all her thirty hands and 4,400 tons of coal. On April 28, at 12.30 p.m., she was off Plymouth, where she sank a small British fishing vessel, the Pursue, and the next day (April 29), was in the Portland area, where she sank two more small British sailing vessels. The French S.S. Port Bail (378 tons), Swansea to Havre, was lost with all hands in this area about 11 p.m. on April 29, somewhere about 50° 5' N., 0° 55' W., and a submarine was sighted and fired at by the A.T. Monarch III the next day at 1 p.m. in 50° 3' N., 1° 23' W., both of which may be attributed to U.B.32. She was back at Zeebrugge on May 2, having sunk eight vessels, of 19,816 tons-a very respectable total, the highest for the month.

352. "**U.B.38**," **April 25–May** 7.—U.B.38 left Zeebrugge on April 25. On April 26 she was off Havre, and at 8.30 p.m. torpedoed the Norwegian S.S. Kong Oscar II (840 tons). It was a beautiful calm night with the moon in its first quarter; the ship was loaded with timber, and though U.B.38 sent another torpedo into her, she did not sink till April 27. Three hours later, 11.20 p.m., in the same area, she attacked with gunfire the British S.S. Karnak (3,171 tons) and the Polzeath (882 tons), but they both escaped.

U.B.38 then proceeded to Portland, where her periscope was sighted by Seaplane 8555³ at 9.10 a.m., and at 2.40 p.m. (April 27) she sank the British S.V. *Jessie* (108 tons), with coal to Dieppe, though she seems to have been sighted and depth charged by A.T. *Resparko.*⁴ There were no attacks in the area on April 28, and she seems to have returned to Havre, though on April 30 there were

² M.05370/17. But U.B.32 said nothing of any such encounter. H.S./Q.29, ⁸ E.1 Log, A.27/7. attacks off Portland again on the British S.S. *Oilfield* (4,005 tons) and the British S.S. *Vestalia* (5,528 tons), both of which escaped. These have been allotted to U.C.61 (q.v. S. 357). U.B.38 was back in Zeebrugge on May 7, having sunk 948 tons in April.

353. "U.C.65." April 25-May 12.-U.C.65 (Lieut.-Commander Otto Steinbrinck) left Zeebrugge on April 25 to follow U.C.66 through the Irish Sea and lay mines off the Clyde. She was off the Owers on April 26, and at 8.10 a.m. sank by gunfire a small motor barge, the British S.V. Athole (150 tons), going from Havre to Shoreham. That evening at 4.30 p.m., off Alderney, in 49° 48' N., 2° 8' W., she sank with bombs another British S.V., the Agnes Cairns (146 tons) and a small French S.V., the Bretagne et Vendée (79 tons). The next day (April 27) at 6 p.m., off the Scillies, in . 49° 34' N., 7° 54' W., she got a bigger ship, the British S.V. Burrowa (2,902 tons), going from Bordeaux to Newport. By April 28 she was round in St. George's Channel, off the Tuskar, where, at 7.45 p.m., in 52° 7' N., 5° 55' W., she sank with bombs the Spanish S.S. Alu Mendi (2.104 tons), going from Bilbao to Glasgow with ore. She must have passed with great caution through the Irish Sea, for no sightings of her were reported, and on April 30 and May 1 she dumped her mines right up the Firth of Clyde, off Little Cumbra and the coast of Arran.¹ Three mines were found there on May 1, and all shipping was held up in the Clvde, but, though swept channels had been announced by May 9,2 on May 22 the A.T. Merse was blown up off Garroch Head with all hands while screening the Ramillies into the Clyde.3

U.C.65 did not follow U.C.66 round Ireland, but came back by the Irish Sea, where she was active up to May 6. She was back in Zeebrugge on May 12, having sunk in April four ships and one fishing vessel of 5,381 tons. She does not appear to have been attacked.

354. "U.C.69," April 25–May 11.—U.C.69 (Lieut.-Commander Erwin Wassner) sailed on April 25 for the Bay of Biscay. On April 29 she laid her mines in three fields of six off Belle Ile and the approach to Quiberon.⁴ She sank 10 ships in the Bay (all neutral except one, Italian) in the first week of May, but had nothing to show for April. She returned on May 11.

355. "U.C.72," April 25-May 9.—U.C.72 sailed the same day as U.C.69, and was out for the last five days of April.⁵ She laid nine

¹ M.05229/17.

⁴ E1 Log, A.27/22.

¹ Fields 376 to 376d in O.U.6020B between 55° 41' N. and 55° 19' N.

^{2 3095}Q, 3131Q.

³ H.S.448/236.

⁴ O.U.6020B, field 378, 378a.

⁵ In returning from her cruise in March (March 3 to April 4) she had sunk on April 1, at 10 a.m., in 50° 9' N., 1° 42' W., the British ketch *Eastern Belle*, 160 tons.

mines off the Royal Sovereign and nine off Beachy Head on April 26^1 ; sank a small British F.V., the *Good Hope*, of 77 tons, off C. Barfleur the next day at 11.30 a.m., and then went on to the Bay, where, on April 29, she sank four small French fishing craft off the Brittany coast. On April 30, at 5 p.m., in $45^\circ 26'$ N., $1^\circ 37'$ W., off the Gironde, she sank the British S.S. *Gretaston* (3,395 tons) without trace, and remained in the Bay till May 4, returning to Zeebrugge on May 9. During April she sank one steamer and four fishing vessels of 3,566 tons.

356. "U.C.48," April 26-May 7.—U.C.48 (Lieut-Cdr. Ramien) sailed from Zeebrugge on April 26, and laid mines on April 29 off Dartmouth and Berry Head. They were found by motor launches that day,² and as soon as the report came in the port of Dartmouth was closed and danger areas announced. U.C.48 proceeded to cruise on the Cornwall coast and Bristol Channel, sinking four steamers in May, but nothing in April.

357. "U.C.61," April 28-May 15.-U.C.61 (Lieut.-Commander George Gerth) sailed on April 28, passing Dover under the French coast. On April 30 she laid six mines off the Needles (found on May 1) and six off St. Albans Head, which were found the same day.³ and one of which sank the trawler minesweeper Arfon with a loss of 10 hands. U.C.61 had meanwhile gone south, and sank by bombs at 7.30 a.m. a small British S.V., Little Mystery (114 tons), some 25 miles south of Portland. Going north again at 11.4 a.m. (April 30), off Swanage, in 50° 26' N., 1° 55' W., she may have engaged the British S.S. Vestalia (5,528 tons), which returned the fire, and U.C.61 was driven down by patrols.4 She went off to Lyme Bay where, at 3.50 p.m., in 50° 36' N., 2° 53' W.,⁵ she sank by bombs the Uruguayan S.S. Gorizia (1,957 tons), going from New York to Havre. At 5.15 p.m., in 50° 27' N., 2° 42' W., she may have chased the British S.S. Oilfield (4,005 tons), which managed to escape.6 That night she laid six mines off Portland, and then went off to the Bay, returning to Zeebrugge on May 15. During April she had sunk two vessels of 1,871 tons.

357A. "U.B. 39," April 23 (date Sunk).—U.B.39 (Lieut. Heinrich Küstner) sailed on April 23 to operate in the Channel West and the

¹ Field 380 and 380a.

 8 3081Q. A.T. Willet sighted a submarine at 27/0700 in 50° 29' N., 0° 54' W. (A.28/9).

⁴ U.C.61 was in this area on April 30 and reports having chased a steamer, but gives the time as 11 p.m. Marine-Archiv in H.S.Q.29. A.T. Royalo engaged a submarine at 30/0945 in 50° 15' N., 1° 45' W. (A.30/25).

⁵ Portland report, H.S.675/145, states that the *Gorizia* was in line between Portland Bill and Start Point and not on inshore traffic route, which would place her in about $50^{\circ} 26' N$.

⁶ No details.

Bay. She never returned and does not seem to have sunk anything. She appears to have fallen a victim on April 24 to an attack by S.P.8655 and H.M.S. Ambuscade some 15 miles south of Portland. At 10 a.m. S.P.8655 (Lieutenant Scott) in 50° 16' N., 2° 21' W., sighted a submarine on the surface a mile ahead and dropped two 100-lb. bombs on her as she went down which appeared to explode 5 feet off the conning tower. About 11 a.m., in 50° 17' N., 2° 19' W., H.M.S. Ambuscade (4th Flotilla), Lieutenant Reginald Nash, R.N., going S. 16 W., 25 knots, sighted a submarine rising 3,000 yards off on the port bow, which began to dive "very slowly." The Ambuscade, racing up, could see the wash moving slowly along and dropped two D depth charges 20 yards ahead with a 40-foot setting, both of which detonated. A third charge, dropped accidentally while being got ready, also detonated. The submarine was regarded by the Admiralty as having been sunk, and

358. North Sea, German Submarines.—The work of the German submarines in the North Sea can be only briefly described. It fell into the usual five catagories :—

Lieutenant Nash was awarded a D.S.C.¹

- I.—The work of the High Sea Fleet boats on their way to and from the Atlantic.
- II.—The work of High Sea Fleet boats on the Lerwick-Bergen route and the coast of Norway.
- III.—The work of the U.C. and U.B. boats of the High Sea Fleet on the East Coast between Flamborough Head and the Shetlands.
- IV.—The minelaying of the Flanders boats, south of Flamborough Head.
- V.-The work of the Flanders boats against the Dutch traffic.

During April, 17 High Sea Fleet submarines (U.B. and U.C.) were working on the East Coast, from four to six at a time. Thus on April 7 there were two, on April 14 five, on April 21 six, on April 28 four.

359. High Sea Fleet Submarines, East Coast.—The cruises of the High Sea Fleet submarines on the East Coast were as follows :—

March 22–April 4 . . U.C.75 laid mines¹ off the Tees on March 29, but sank no ships in April.

March 25–April 3 . . U.C.42 laid mines off Auskerry (Orkneys) on March 29.

 1 M.05593/17 titled B.745/1917. Though the case was marked as a "known," it was not allotted to a submarine, and U.B.39 was allotted in C.B.01292 to the *Glen* (May 17, 1917). Marine-Archiv thinks the *Glen's* case improbable for U.B.39, on account of the long interval, U.B. boats rarely remaining out over 16 days (H.S./Q.23). The *Glen's* submarine is considered to have been more probably U.B.36 or U.C.36.

² For latitude and longitude of these fields, see O.U.6020A.

² H.S.B.170/715; fields 373, 373a, O.U.6020B; Tel.3078Q,

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- March 30-April 12. U.B.35 was working off Kinnaird Head and Moray Firth, and sank six ships and two fishing vessels.

April 1-April 18 ... U.C.31 laid mines on April 4 off Blyth, and on April 5 off St. Abbs Head, and, working off the Firth of Forth, sank eight ships.

April 9-April 21 . U.C.76 laid mines on April 13 off Noss Head (Scotland, North-East). On April 17, a large British ship, the Winifredian (10,422 tons), struck one of these mines, but managed to get into Cromarty. U.C.76 laid mines on April 14 and 16 off Lerwick, and on April 18 at 6 a.m., in 58° 18' N., 1° 16' W., off the Moray Firth, sank the Norwegian S.S. Bergensgut (2,029 tons) in convoy. She sank altogether eight fishing vessels, two steamers, and stated in her report¹ that she had thrice been chased by destroyers, which may have referred to the Grand Fleet destroyers looking for U.C.30 (s. 368a).

April 10-April 21.. U.C.45 laid mines on April 13 off Rattray Head, one of which, on April 17, sank the British S.S. Charles Goodanew (791 tons) in 57° 39' N., 1° 45' W. She also sank on April 17 the Danish S.S. Bretagne (1,110 tons), and on April 18 the Danish S.S. Louisiana (3,015 tons).

April 11-April 26.. U.C.41, on the coast of Scotland, laid mines on April 18 off St. Abbs Head, which sank the A.T. Orthonna on April 20 and the A.T. Repro² with all hands on April 27. She also sank six fishing vessels and three Norwegian steamers.

- April 12-April 25.. U.C.44 laid mines on April 16 and 18 off Sunderland, one of which sank the British S.S. Poltava (945 tons) on April 19. She cruised between Holy Is. and the Forth and sank five fishing and five other vessels. On April 21 at 7 p.m. off Holy Is. the Norwegian S.S. Bruno was attacked by a submarine, but was saved by the appearance of the A.T. Slieve Bernagh,3 who drove the submarine, probably U.C.44, down.
 - 1 C.B.01370/36. ² H.S.412/1154. ³ E.1 Log, C.21/16.

- April 14-April 19. U.C.51 in an exercise cruise in the Bight sank two vessels.
- April 15-April 30. . U.C.55 laid mines on April 18 off Copensay (Orkneys), and on April 23 off Noup Head ; on April 21 sank the Norwegian S.S. Gerda (979 tons) off the Shetlands.
- April 15-April 24. U.B.41, working off Scarborough, sank the Norwegian S.S. Ellida (1,124 tons) on April 19.
- April 16-April 28. U.B.34, working on the Scottish coast on April 25 sank the Danish S.V. Este (1.420 tons), with all hands.
- April 16-April 28. U.C.50 laid mines off Hartlepool on April 19 (Fields 175-179), one of which sank the A.T. Ruthin Castle on April 21. Working some 40 miles from the coast, she sank four British fishing vessels and the Norwegian S.V. Telefon (777 tons).
- April 22-May 4 .. U.C.29 laid mines off Coquet Island on April 25-26, one of which sank the Norwegian S.S. Nidelvin (1,262 tons) on April 27. On April 27, at 8.30 a.m., 6 miles off Coquet Island, she torpedoed the Norwegian S.S. Ragnhild1 (1,117 tons), one of a convoy of nine ships from the Tyne, and on April 29, a Danish S.S. CarboI (1,379 tons).
- April 26-May 9 .. U.B.21, working off the Yorkshire coast, sank the British S.S. Victoria (1,620 tons) on April 29 off Scarborough, and at 5 p.m. dropped some shots near Scarborough signal station.² She was engaged at 6 p.m. by the British S.S. Princess Helena (779 tons), and dived when destroyers arrived on the scene.
- April 26-May 9 .. U.B.22 was cruising off Peterhead, and in April sank two trawlers. On April 30, at 10.55 p.m., in 57° 36' N., 1° 20' W., H.M.S. Noble sighted a submarine³ close to and passed apparently right over her as she dived, releasing a depth charge, which exploded.

¹ The Ragnhild was attributed to a mine, but Marine-Archiv states she was torpedoed by U.C.29.

- 2 H.S.413/607.
- ³ Marine-Archiv says " not U.B.22."

April 29-May 10 . . U.C.77 sailed on April 29, and laid mines on May 2 off Dundee and on May 3 off Aberdeen. On April 30 at 10 p.m. off May Island, a submarine fired a torpedo at H.M.S. Nepean.¹

360. Flanders Submarines, Minelaying, East Coast.—During April, 1917, U.C.1, U.C.4, U.C.6, U.C.11, U.C.14 laid 14 fields of 168 mines (as compared with 19 fields of 228 in March) on the East Coast, chiefly off the Thames, as follows²:—

Apri	il 4,	U.C.6.				 Off Margate.
,,	6,	U.C.1 .				 Shipwash.
,,,		U.C.11				 Shipwash.
,,	6,	U.C.4.				 Aldeburgh.
,,	8,	U.C.14				 Lowestoft.
,,,	16,	U.C.6.				 Margate.
,,	16,	U.C.11				 Shipwash.
,,	16,	U.C.4.				Sizewell Bank.
,,		U.C.1 .		1914		Shipwash.
		U.C.6 .			1.0	Margate.
		U.C.4 .				Gabbard.
		U.C.11	A			Sunk Light.
,,		U.C.1				Lowestoft.
,,		U.C.6			2 - C k	Margate.
"						 ouro.

The only vessel sunk was the A.T. Agile, which, on April 27, ran on a mine, off the Sunk L.V. in 51° 52' N., 1° 40' E., evidently one of those laid by U.C.11 on April 25.³

361. Flanders Submarines, Dutch Traffic.⁴—In the south, six cruises were made by Flanders boats with small enough success.

March 29–April 4, U.B. 23 was out; on March 31 she sank the Norwegian S.S. Lisbeth (1,621 tons), and on April 4, about 8 a.m., the Belgian S.S. Trevier (3,006 tons). The latter was a Belgian Relief ship, and was found on April 5 at 5.30 p.m. still afloat in 52° 5' N., 3° 43' E., with her engine room and stokeholds flooded. She was anchored by H.M.S. Lightfoot, and a Dutch tug towed her towards Ymuiden, only to be stopped by a German submarine and sunk. Another Belgian Relief ship, the Norwegian S.S. Camilla (2,456 tons), had been stopped and sunk by U.B.35 on April 1, at 12.25 p.m. in 56° 32' N., 3° 59' E., off Norway inside the war zone. Her crew were seven days in an open boat, and six of them perished from cold and hunger. The remainder were reduced to killing a dog and eating it raw to keep themselves alive, and the first officer died in hospital.¹

A still worse fate attended another Belgian Relief ship, the Norwegian S.S. Anna Fostenes (2,577 tons). She was torpedoed at 11 p.m. in 54° 33' N., 4° 38' E., caught fire, and went down in half an hour. A heavy sea was running, and one of the boats with eight men foundered; the other was able to keep afloat, and her crew of 13 were picked up on April 3 by the British submarine $E.46.^2$

April 5-April 12. U.B.31 attacked the eastward-bound Dutch traffic on April 9, and though it was escorted by five destroyers, managed at 1.30 p.m., in 52° 15′ N., 3° 18′ E., to torpedo and sink the British S.S. *Kittiwake* (1,866 tons). H.M.S. *Sharpshooter* saw the torpedo track, and rushing up it, dropped three depth charges round about without success.³

April 8–April 11. U.B.20 was out, and on April 10 attacked the westward-bound Dutch traffic, escorted by five Harwich destroyers, and at 9.8 a.m., in 52° 19' N., 2° 31' E., sank the British S.S. *Pluto* (1,266 tons).⁴

April 14-20. U.B.23 sank a Belgian tug and two lighters.

April 19-April 22. U.B.16 sank a Dutch motor cutter.

April 23-April 26. U.B.10 on April 24 sank the Dutch S.S. Minister Tak van Poortvliet (1,106 tons).

362. "U.30," April 5–18.—U.30, working on the Lerwick to Bergen route, sank, between April 11 and 15, twelve ships of 13,600 tons, dealing a nasty blow at the provisional measures of escort instituted by the Commander-in-Chief and Vice-Admiral Brock early in the month (see s. 286). On April 15, G.7 sighted her, and, shadowing her all the afternoon, came up in the dark and fired a torpedo at her, which, unfortunately, missed; then opened fire on her at 100 yards range, and drove her down, saving two Norwegian ships, on one of which, the Svanfos, was the German boarding party, whose work G.7 had rudely interrupted. The attack seems to have damped U.30's ardour, for she sank no more ships, and was back in Emden on April 18.

4 M.04434/17 ut supra.

¹ H.S.442/32. Not identified by Marine-Archiv.

² For latitude and longitude, see O.U.6020B. German Statement of Mines. ³ Field 359 in 51° 55′ N., 1° 43′ E.

⁴ See Case 661, Protection of ships trading between United Kingdom and Holland, 1916–18.

¹ I.D., Vol. 639.

² H.S.A.273/413.

³ M.04434/17 in box, Dutch Traffic Patrol. The date April 10, in C.B.1292 is incorrect.

CHAPTER XVII.

STATISTICS AND MEASURES.

APRIL, 1917.

363. **Statistics, April, 1917.**—The figures for April were alarming. In the different areas,¹ the total gross tonnage sunk of merchant shipping, Allied and neutral, was :—

	Агеа	i.		Ships.	Tonnage.	Per cent. of whole.	March. Per cent. of whole.
South-West Atlantic	Approa	ach		91 28	281,783	40.9	41
Channel and	Bay an	nd Irisl	h Sea	85	133,231	16.0	34.6
Mediterrane				107	271,657	32.2	10.4
North Sea				74	85,331	10.4	13.5
Arctic	**			2	2,945	0.3	-
Unknown	••	••	••	2	1,884	$0\cdot 2$	- ×
				389	838,606		

The increase over March was :---

	March.	April.	Increase. Decrease.	
South-West Approach and Atlantic.	213,971	343,558	+ 60 per cent.	
Channel and Bay	179,918	133,231	- 27 ,,	
Mediterranean	53,423	$271,657^{2}$	+410 ,,	
North Sea	69,527	85,331	+ 23 "	

In the South-West Approach and Atlantic the increase in sinkings was 60 per cent. over March, which may be attributed partly to a big increase in the number of submarines and cruising days as follows :—

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3	outn-	VV	est	A	DI	roa	lcn°	ana	AU	lantic.

	March.	April.	Increase.
Submarines to westward	 18	24	33 per cent.
Submarine cruising days .	 307	427	39 "
Tons per day per submarine .	695	805	11.5 "

¹Names of ships lost are in (a) Merchant Shipping (Losses) British Admiralty, August, 1919 (print) and in (b) Foreign Vessels Sunk or Damaged, Naval Staff, January 1, 1919 (print). The total tonnage for April taken from them viz., 838,606 tons differs from that given in the Statistical Review of War against Merchant Shipping, Admiralty, December 23, 1918, which gives 834,549 tons, but the discrepancy is not very great—4,057 tons.

² This includes the sinkings of U.35 (Mediterranean) West of Gibraltar.
³ West of 7° W.

There was a marked decrease in the Channel, Irish Channel, and Bay amounting to nearly 30 per cent. In the North Sea there was an increase of 23 per cent. The increase in Home Waters, though bad enough, was nothing to the figures in the Mediterranean, where the sinkings rose fivefold under its threefold command.

364. Measures, North Sea.—In the North Sea, the principal issue was the protection of Scandinavian traffic, and the principal measure was the institution of Scandinavian convoy. The Grand Fleet lent its help, and on April 3 four of Admiral Beatty's destroyers were patrolling the area off Rattray Head.¹ By April 6 the congestion of neutral ships in Lerwick was growing serious; there were 41 vessels lying there, and to get them off Vice-Admiral Sir Frederick Brock started an escort on April 10 from Lerwick down the Scottish coast. U.30 was busy on the Bergen route, and on April 13 sank four Norwegian vessels there, though G.11 (10th Submarine Flotilla, *Lucia*), who was patrolling there from April 5 to 13, saw nothing of her. G.10, on patrol from April 5 to 14, caught sight of only one submarine on April 7,² which was some 7 miles off and was evidently keeping a good look out.

The lot of the British submarine on submarine patrol was a chancy one. E.44, working off St. Kilda, was fired on by armed trawlers on April 5, but at 6,000 yards remained untouched and unperturbed. G.10, too, on April 6, on her way north, was greeted with 20 rounds by two armed trawlers protecting the fishing fleet, though she was flying her colours and making the challenge with lamp and water jet.3 On April 17, Admiral Brock stopped sailings from Norwegian ports,4 and on April 18 the Admiralty suspended all mercantile traffic between Lerwick and ports south of Kinnaird Head.5 Admiral Brock had arranged on April 17 for 25 Norwegian ships to sail along 61° 30' N. under trawler escorts reinforced by four destroyers, and four days later (April 21) orders were issued to extend this escort down to the Humber ; there were some 21 ships waiting then in the Tyne area⁶ to sail for Scandinavian ports, and on April 24 the Admiralty gave authority for a convoy system right up the East Coast and across to Norway (s. 287). The first convoy sailed from Lerwick on April 29.

365. IXth (Harwich) Flotilla—" C.7" sinks "U.C.68," April 5.— The principal success of the month fell to the patrol of "C" submarines, proposed by D.A.S.D. in February, 1917 (s. 82). In April,

15' N., 1° 27' W.

¹ H.S.405/696
² At 1.10 p.m. in 61°
³ H.S.A.125/169.
4 H.S.409/844.
^b H S 412/384/577.

⁶ H.S.411/919. There were 40 on April 26. H.S.412/384.

⁷ C.3. C.7, C.16, C.19, C.21, C.22, C.23, C.24, C.25, C.34.

these "C" boats, working from Harwich under Commodore A. K. Waistell, made 12 trips, patrolling, three or four out at a time, off the Schouwen, Maas, and North Hinder. Submarines were sighted on five occasions, and torpedoes were fired twice. This patrol had originally been aimed at the small minelaying craft, but C.7 (Lieutenant Arthur Walter Forbes, R.N.) was fortunate enough to secure a bigger prize. She left Harwich on April 4 with orders to cruise within 12 miles of and between the bearings of north-east and east from Schouwen Gas Buoy.¹

The night was very dark and misty on April 5, when, at 3.32 a.m., in 51° 42' N., 3° 17' E., some 15 miles from the Dutch coast, a submarine loomed up suddenly on the port quarter, steering north. range, 400 yards. C.7 was ready for it. Port tube fire! The torpedo went on its way, and hit forward with a loud explosion. A great column of water rose in the air, and in some 10 seconds everything had disappeared, leaving not a trace behind. The submarine was U.C.68 (Lieutenant Hans. Degetau) making her first cruise. For this fine piece of work Lieutenant Forbes received a D.S.O.² The next day, April 6, C.16, at 5 a.m., in 52° 10' N., 2° 43' E., sighted a large submarine, and C.21, off the Maas at 9.50 a.m. in 51° 57' N., 3° 37 E., sighted a "U.B." boat 700 yards on port bow. Putting on full speed, C.21, closed to 350 yards, and let go a torpedo, which the "U.B." boat avoided just in time by putting her helm hard a port, leaving C.21, after an ineffectual attempt to ram, to open fire with rifles as the German boat dived.3

366. Grand Fleet Destroyers and "U.C.30," April 13-17.— Constantly present in the mind of the Admiralty was the hope of cutting off a damaged submarine with the help of information derived from intercepts, and during the month a force of Grand Fleet destroyers sallied out on this task. On April 13 there came in an intercept made at 9.31 p.m.⁴ by U.50, saying that she had met U.C.30 off St. Kilda homeward bound with engines damaged, and able to go only 3 knots. The Commander-in-Chief⁵ was informed at 11.24 p.m., and six destroyers, under the *Mounsey*, sailed at 4.30 a.m. to search for her. They had orders to be in latitude 59° N., 6° 10′ W., at noon, April 14, then to spread and sweep as far as the Flannan Islands, turning so as to be off North Rona at daylight, Sunday, April 15; then, after hunting the area until noon, four were to proceed toward Fair Island Channel and two to Muckle

³ H.S.A.273/421.

⁵ Admiral Beatty was away at the time for signals are marked A.C. 1st B.S. (Admiral Sir Charles Madden). Flugga.¹ On hearing from the Admiralty on April 14 that the situation was favourable for the free use of destroyers for hunting

situation was favourable for the free use of destroyers for hunting submarines, Admiral Madden despatched nine more destroyers and an oiler to Lerwick to operate against submarines off Muckle Flugga and Fair Island. The results were disappointing.

On April 14, at 1.40 p.m., between Flannan Island and North Rona, in 58° 33' N., 7° 19' W., the Mounsey sighted a submarine steering N.N.E., which immediately dived, and which, from the 10th Submarine Flotilla reports, seems to have been G.9 watching for the same quarry.² About 4.45 p.m., some 8 miles to the southwestward of the spot, they passed the A. T. Walpole (10th Cruiser Squadron), and at 5.10 p.m., in 58° 28' N., 7° 20' W., north-east of Flannan Islands, the Walpole sighted the conning tower of a submarine on the surface, and fired 13 rounds at it at about 3,000 yards.3 This seems to have been G.9 once again, for she reported an armed trawler coming suddenly out of a snowstorm and plumping several shots down by her, two of which fell within 10 yards. By the time the Mounsey and her destroyers had come back again, G.9 had executed a discreet dive. Meanwhile, some 60 miles to the northward, in 59° 30' N., 7° 8' W., at 4.48 p.m., April 14, G.13 had sighted six miles off a German submarine4 steering north-east, which dived.

The next day, April 15, the destroyers were struggling against a very heavy sea with a northerly gale and snow, and saw nothing. The weather was as bad as it could be, and the *Kempenfelt* and six more destroyers which had been sent out to reinforce the *Mounsey* had to take shelter in Lerwick; orders were sent for the whole force of 14 destroyers to be westward of Fair Island at 6 a.m. on April 16 (Monday), and it was expected that U.C.30, delayed by the gale, would hardly be there before noon. The assumption turned out correct.

U.C.30 seems to have been able actually to make about 4 knots, and to have passed Fair Isle Channel about 11 a.m. on April 16. She (or perhaps U.C.76) was sighted off Sumburgh Head (Shetlands) at 3 p.m.⁵ and was hunted all that night without result. On April 17 she was located by directionals at 8.35 p.m. in 58° 24' N., 1° 24' E., and at 1.11 a.m., April 18,⁶ the Admiralty instructed the Commander-in-Chief to send a division of destroyers to 56° 40' N., 4° 22' E., by 3 p.m. to intercept her. This position, some 250 miles from Scapa, was easily attainable at a speed of 20 knots, but Admiral Madden had only 11 destroyers left, and had already decided

⁵ H.S.645/258.

⁶ H.S.645/266, 259.

¹ Commodore (S) April 3, H.S.A.273/415.

² H.S.A.273/429. Marine-Archiv states that U.C.68 left Zeebrugge on March 10, 1917, to lay mines off Dartmouth and Plymouth. She never returned. Marine-Archiv thinks the position not very probable (too far north) as Flanders boats usually made direct for Zeebrugge (H.S./Q.23).

⁴ This is possibly M.E.T. War Diary, April, 1917, I.D., Vol. 302/43.

¹ H.S.A.39, Tel. Secret A.C. 1st B.S. to C.-in-C., April 14, 1917/1204.

² H.S.627/60.

⁸ M.05359/17 titled X.3819/1917 and H.S.627/60. It is just possible that the submarine was U.C.30.

⁴ H.S.627/59. From its position it might have been U.C.30 but from its appearance (large and two masts) it was probably U.78 which passed Muckle Flugga about 8 a.m. April 16.

he could send no more. Had they gone they would have searched in vain, for U.C.30, located by directionals on April 19 in 57° 38' N., 4° 42' E., was following a course some two points eastward of that assumed by the Admiralty. She was never seen or heard of again, and it is supposed in Germany that she ended her career on a mine.

In 1917, there were some who advocated as preferable to convoy a more extensive use of Grand Fleet destroyers in hunting submarines. Grand Fleet destroyers hunted submarines on many occasions, and this particular one illustrates the difficulty of an intensive search in heavy weather for a damaged submarine which is still able to dive.

367. Loss of "C.16." April 19.—The success of C.7 was clouded by the loss of C.16 (Lieutenant Harold Boase, R.N.) a week or so later. She was exercising with H.M.S. Melampus off Harwich on April 16, and the latter was steering S. 65 E., 16 knots, when, at 9.48 a.m., 3 inches of periscope was sighted a point on port bow, only 25 yards off crossing her bows.¹ The Melampus went full speed astern and hard-a-starboard, but a collision was unavoidable. C.16's conning tower struck the Melampus, slid off, and never rose again. She sank in 7 fathoms some three-quarters of a mile north of the Rough Wreck light vessel,² near the Shipwash. The hull was located at 4.10 p.m., but the sea was too rough to send divers down. In the subsequent enquiry the Melampus was acquitted of all blame. When C.16 was salved it was found that the conning tower lid had been wrenched half open, probably sending the boat to the bottom, where she lay on an even keel. From the position of the bodies and the state of dress, the drill for leaving the boat had been carried out in an orderly and disciplined manner. Most of the men with boots off and belts on were under the fore hatch, which had been unclipped and had had the strong backs removed all ready for opening. It seems probable that a number of them would have escaped, for she was lying in only 16 ft. of water,3 but, unfortunately, a coir fender jamming on top of the hatch between it and the casing frustrated the attempt to open it, and in fateful addition a small pig of lead attached to the fender slipped under the rim, preventing the closure of the hatch and occasioning the loss of the airlock. The First Lieutenant had made a manful but unsuccessful effort to get to the surface through the tube.4 A note was found tied to the wrist of the second coxswain :---

"We are in 16 ft. of water. The way to get us out is to lift the bows by the spectacle and haul us out of the boat through the tubes.

H. BOASE."

1 H.S.A.273/435.

² Some seven miles east of Harwich in 51° 541' N., 1° 311' E.

³ Lieut. Boase, but Commodore (S) says $7\frac{1}{2}$ fathoms. Rise and fall about 12 feet.

⁴ It was observed by submarine officers at the Salvage Enquiry that it was a pity that the port tube had not been fired with a message attached.

The officers and the coxswain had remained fully dressed with boots on and no life belts, and a note, terrible in its pathetic simplicity, shows the courage and calmness of a British sailor face to face with death. It runs :—

"From Stan.¹ to Mother, Father, May, and all friends. Best of luck to you all. Thought of you till last moment. Let my girl know at 60, Cuthbert Street. Was rammed by destroyer or something 10.30 a.m. Writing this seven hours after having given up all hope. Mr. Anderson,² our Second Captain, was blown through tube."

368. "E.50" collides with German Submarine, April 19.—E.50, another IXth Flotilla submarine, had an exceptional experience and a narrow escape. She left Harwich on April 19 at 5.30 a.m. for the Terschelling patrol, and at 5.15 p.m., in 52° 11′ N., 2° 27′ E., some 9 miles from the North Hinder, was diving at 25 ft. on the gauge on a course 90° when she struck with great force and overrode another submarine in the act of diving. It came aft the port side, and its periscope and conning tower appeared for a time on the port quarter, apparently much down by the bows and sinking. E.50 (Lieutenant Michell) got back with some heavy dents and the port hydroplane carried away, leaving the German submarine, which was U.C.62, to congratulate itself on a narrow escape.³

Five days later, E.42 (Lieut.-Commander I. G. Bower), cruising off Brown Ridge,⁴ got an opportunity for attack. On April 24, at 6.45 a.m., in 52° 41' N., 3° 25' E., he sighted an "U.B." boat (probably U.B.10) south-east, 2 miles away, steaming in a figure of eight while charging. The sea was smooth with a long westerly swell, but the German's evolutions made it difficult to get a shot. The opportunity came, and at 8.23 a.m. Lieut.-Commander Bower fired both her bow tubes at a range of 300 yards two points before the beam of the enemy, then heading east. The attack was unsuccessful; one torpedo passed underneath and the other probably ahead, while the two submarines passed close to one another in grim defiance on opposite courses.⁵

369. Xth Submarine Flotilla (Tees).—The success of G.13 in March led to the despatch of submarines to patrol off the lonely islet of St. Kilda. E.44 seems to have been the first to arrive there on April 4, and was attacked the next day, April 5, at 11.30 a.m. by two armed trawlers of the 10th Cruiser Squadron, who, in spite of her challenge, opened fire at 6,000 yards, and dropped a couple of

⁵ H.S.A.273/492.

Alfred Stanley Humphreys, A.B.
 Mr. Samuel Anderson, Mate. H.S.A.273/455, 432.
 H.S.A.273/511.
 Between Yarmouth and Holland.

shots "very close." On April 6, in 58° 15' N., 7° 59' W., she was again attacked by armed trawlers, evidently the A. T. *Tenby Castle* and *Walpole*, of the 10th Cruiser Squadron, who claimed to have sunk an enemy submarine that day, firing at the exceptional range of 7,800 yards.¹

On the Lerwick-Bergen patrol, G.11, cruising from April 5 to 13, saw the wreckage of the victims of U.30, but got no chance to attack. G.10, on April 7, at 1.10 p.m., 30 miles north of Muckle Flugga, on surface patrol, trimmed down, sighted the conning tower of a submarine, which saw her and dived.² G.7 (Lieut.-Commander Geoffrey Warburton), patrolling on the Bergen route, was more fortunate, and got a shot at U.30. He was on surface patrol at noon on April 15 in 60° 4' N., 1° 58' E., and at 2.42 p.m. sighted a submarine 3 miles off on the starboard beam, and dived east to get in touch with her.

It was dark at 7.50 p.m., and he came to the surface. Twenty minutes later he sighted a submarine between two steamers,³ and, after standing by all tubes, fired the port bow tube, which missed astern. U.30 was under way by that time, so, increasing to full speed, G.7 opened fire at 100 yards, and attempted to ram. A shot seemed to hit, but U.30, returning the fire and crossing G.7's bow 50 yards ahead, went down. G.7 dived, reloaded, and coming up cruised about till daylight. The attack, if it did not sink U.30, saved the two steamers; one, the Norwegian S.S. Svanfos, with a German officer and three men still on board, proceeded to Bergen during the night; the other, the Norwegian S.S. Borgila⁴ (1,434 tons) was lying abandoned. G.7 got a party on board under E.R.A. George Cromarty, R.N.R., who got the water under control, lit up six furnaces, and had the main engines running by 1 p.m.

At 2.20 p.m. the Norwegian destroyer *Draug* appeared on the scene and took the *Borgila* in charge. U.30 seems to have remained off the Norwegian coast another day, but made no more attacks, and was back at Emden on April 18 after sending out a warning to look out for British submarines on the Bergen-Lerwick route.⁵

¹ D.S.C. to Sub Lieut. J. H. Arnold, R.N.R., *Tenby Castle* and £200 award. Time according to *E.44* was 2.30 p.m. (H.S.627/55) and according to *Tenby Castle* (M.05119/17) 5.50 p.m. and 6.35 p.m. It is just possible that a German submarine may have been there for *U.24*, *U.66*, *U.46*, *U.57* and *U.59* were all on their way home at the time, but no submarine was destroyed or damaged.

² Possibly U.57 or U.24 homeward; or U.67 or U.84 outward.

³ Position was 59° 58' N., 4° 18' E. according to Svanfos in Norwegian Court of Enquiry, April 17, in I.D., Vol. 640 sub verbo Svanfos.

⁴ The name also appears as *Borghild* (another Norwegian vessel of Bergen), but *Borgila* is name given by G.7 (H.S. 627/63) and in Norwegian Enquiry (I.D., vol. 640).

⁵ Intercept, April 16/0030, in I.D., Vol. 3027.

On April 30, G.6 (Commander E. C. Boyle), at 8.50 a.m., in 56° 13' N., 0° 13' E., off the Forth, sighted a periscope (probably U.B.22) 2,000 yards on the port bow, and dived for two hours, but saw nothing more.¹

370. XIth Submarine Flotilla (Blyth).—Elsewhere in the North Sea submarines of the XIth Flotilla were equally watchful. This flotilla, consisting of twelve "G" and "J" boats, carried out eight cruises in the North Sea during the month, sighting submarines on three and firing on two occasions. G.1, on April 19, in 57° 48′ N., 1° 34′ E., sighted the conning tower of a submarine, which dived² before she could attack.

A week later, on April 27, J.6 (Commander M. K. Horton) got an opportunity to attack. Leaving Blyth on April 24 she had received orders³ to proceed to "Aa" billet, but was unfortunate enough to lose her port after hydroplane that forenoon, which made it difficult to keep level. His position, however, was well chosen, for on April 30, at 3.32 p.m., in 58° 19' N., 3° 21' E., course east, he sighted a submarine 57° port, 2,200 yards on a course S. 45 E., and brought his bow tubes to the ready. Unfortunately, J.6 was diving particularly badly at the time, taking cants of 6° and 8° owing to increasing speed, and when he fired at 3.39 p.m. at 2,800 yards both torpedoes missed, and the submarine, which was U.61 returning home, caught sight of him as he came up to note the result of the shot.

At 6.24 p.m., in 58° 13′ N., 3° 29′ E., course S. 20 E., another submarine was sighted coming up astern, $2\frac{1}{2}$ miles off, crossing from port to starboard, going at high speed and zig-zagging as if forewarned. J.6 steered north-west, and met the enemy on a parallel and opposite course, remaining unseen till he was able to let fly the port beam torpedo at 25 yards, which, unfortunately, missed, passing under the enemy.⁴ This was U.53, and she and U.61 were therefore saved that day by the providential loss of J.6's hydroplane. In the North Sea, where intercepts⁵ were frequent from submarines returning home, British submarine patrols worked with a good chance of success. In the Channel and in the South-West Approach the conditions were very different, and will now be reviewed.

¹ H.S.627/70.

² Possibly U.79 (big minelayer) returning. She was located by intercepts at 8.32 p.m. in 57° 45′ N., 2° 5′ E.

³ From her subsequent position this was somewhere about $58^{\circ} 20'$ N., $3^{\circ} 20'$ E. A signal had been intercepted from U.60 on April 24 at 2200 in this area. I.D., Vol. 3027.

⁴ H.S.A.126/207, Comdr. Horton's report.

⁵ In the North Sea, in April, submarines were located by intercepts or directionals on some 108 occasions. Of these some 60 per cent. were North of 56°. It should be noted that submarine sightings by British submarines do not appear on the I.D. charts.

371. Channel, Statistics.—In the Channel during April, 22 cruises were made by 20 German submarines, with a sinkage of 62 vessels and 15 fishing vessels, a reduction of 27 per cent. from the tonnage sunk in March (179,918 tons). The average tonnage sunk per submarine per day was 700. The decrease in sinkings was not due to diminished activity, for the number of "submarine-days" was rather more, viz., 190 against 174, but there was a distinct reduction in attacks in the first part of the month, possibly due to increased caution arising from the loss of U.C.46 and U.C.18 in February.

Nine attacks on submarines may be mentioned :-

- April 19.-A. T. Young Mun, off Tuskar, U.C.47; saved schooner.
 - " 20.—Q.ship (Glen), off Cape d'Antifer, U.C.16; result nil.
 - " 22.—Q.22, south coast, Ireland, U.C.47; result nil.
 - " 24.—S.P.8655, off Isle of Wight; result nil.
 - " 24.-Q.8, Scillies, U.C.47; saved three ships.
- " 26.—S.P.8655, Isle of Wight; result nil.
- " 27.-A. T. Lysander III, U.B.32; result nil.

Of these attacks there were, by "Q" ships, three; by armed trawlers, two; by aircraft, two.

Of ships that escaped destruction there were in the Channel ten, of 44,882 tons.

The agency of escape was—

By gunfire, defensively armed	 6, of 34,352 tons.
By gunfire and making for land	1, of 270 tons.
By making for land	 1, of 102 tons.
By salvage after being torpedoed	 2 of 10,158 tons.

372. Measures, Channel.—Traffic in the Channel fell into three categories: the up and down Channel traffic; the military cross-Channel traffic; the cross-Channel French coal trade, which had been running since February 10. A set of general instructions—the "Routes in English Channel "1—approved on March 12, came into force on April 8; but nothing very new was to be found in them. Vessels were given strict injunctions to hug the coast as closely as safe navigation would permit; to show no navigation lights except where distinctly specified and if bound up Channel to call at Falmouth for instructions. The principal measure of protection was the Patrolled Lane,² which had been established in January 21, 1917,³ and towards the end of the month it was disposed so as to give better protection to inshore traffic.⁴ The Devonport and Portsmouth areas may be considered in greater detail.

¹ M.02787/17 of March 12, 1917, in Case 636, Vol. I; Admiralty telegram, April 4, H.S.405/1125. See S.246. ² See S.27.

4 H.S.675/143.

373. Measures, Devonport.—At Devonport (Admiral Hon. Sir Alexander Bethell), the principal task was the convoy of valuable ships and transports into port. This work was done by the 2nd Flotilla, which consisted of 16 destroyers (of which six were under repair on April 16). The 4th Flotilla, of 17 destroyers (including *Lennox* and *Leonidas*, who came from Harwich on April 7), was chiefly engaged in hunting and searching. On April 1, *U.B.*36 was working off Brest, and her operations led, on April 2, to a French order forbidding sailings between the Ile d'Yeu and Gironde without convoy. Two destroyers were patrolling off Devonport on April 3, and some five were patrolling regularly in the latter part of the month,¹ which probably contributed to the immunity enjoyed in the Devonport area between April 6 and 26.

On April 8, the day the "English Channel Routes" instructions came into force, the *Ambuscade* (4th Flotilla) sighted a submarine in the Channel Islands area, and six destroyers were hunting there for a time,² without success.

In the last week of April, the immunity of the waters close to Devonport was rudely broken, when two large ships were torpedoed in it—the transport *Ballarat* (11,120 tons), with 1,760 troops, by U.B.32 on April 25, and on April 28 the P. & O. Medina (12,350 tons) off the Start by U.B.31.³ The *Ballarat* was being escorted in by the *Phoenix*, while the Medina, which was unescorted, was sunk in much the same position, and under the same circumstances as the Rotorua on March 22, whose loss had been regarded as so regrettable by the New Zealand Government. Both these cases pointed to the undesirability of large vessels bound up Channel calling at any intermediate port on their way.

On the report of the *Medina* coming in, Commander-in-Chief, Devonport, at midnight, April 28, held up all traffic east of Falmouth for some 12 hours, and for the next two days five destroyers were scouring the area between Eddystone and Tor Bay, without any visible result. These incidents happened close to the coast. Further out, Devonport destroyers were patrolling Approach Route A,⁴ which had been instituted early in March.

On April 24 the *Medina* and *Orestes* were patrolling there, and at 2.10 p.m., in 48° 20' N., 11° 10' W., drove a submarine down, and saved the S.S. *Drumcliffe*. The Admiralty that very day (April 24) had recommended the patrol to be strengthened, and the Commanderin-Chief, Devonport, was trying to maintain four destroyers there,

¹ April 7, 4 destroyers; April 12, 2; April 13, 5 patrolling off Lizard, Eddystone and Start; April 16, 5; April 22, 6.

2 H.S.407/173, 459.

³ For details, see Cruises of U.B.32 and U.B.31, S.350 and 351.

⁴ Approximately 245° from Scillies. Approach routes, M.02567/17 of March 5, in Case 636, Vol. I; A.T.2/3/17, 1835. H.S.654/53. See S.247.

³ See S.27.

and had four there on April 26.¹ Devonport's principal task was the escort of valuable ships. On these, 80 were reported from North America to Devonport during the month; 15 (or 19 per cent.) were attacked, and five (6.3 per cent.) were sunk. A brief survey will show the arduous nature of this work. On April 1, six destroyers of the 2nd Flotilla were told to meet the *Calgarian's* convoy from Halifax to Liverpool, and five were escorting the *Orcoma's*. On April 4, four Devonport destroyers were convoying Portuguese troops from Lisbon to Brest; on April 11, of the 17 destroyers of the 2nd Flotilla, two were escorting the *S.S. Leasowe Castle*, two were off to Liverpool to escort the *Calgarian* in from Halifax, two were returning from escort, four were with the *Swiftsure's* convoy from Sierra Leone, four refitting, one cleaning, and two ready.²

The Irish Sea was clear till U.C.66 entered it on April 21, and she sank nothing there.

That very day Devonport was told to send four destroyers to Queenstown to be ready to meet the Antrim, Canada, and Carpathia from Halifax on April 19.³

Every day the Commander-in-Chief, Devonport, reported the disposition of his flotillas; the 4th were usually engaged hunting and patrolling; the 2nd escorting valuable ships from 48° N., 10° W., or thereabouts, and then rushing off to Liverpool or Queenstown to do it, so to speak, all over again. Nor was Admiral Bethell helped very much by the *Ariel* and *Lennox* colliding off the Eddystone on April 22, and badly damaging one another.⁴

As for the French coal traffic, it was passing nightly from Falmouth to Brest under escort of armed trawlers, and five of its ships were sunk by U.C.21, going down the French coast under convoy between April 19 and 27.

Commodore John Denison, at Falmouth, asked for nine more armed trawlers to keep the Patrolled Lane intact and provide escort, but was told that his request could not be complied with.⁵

374. Measures, Portsmouth.—At Portsmouth (Admiral the Hon. Sir Stanley Colville), the principal task was to get the transports safely across, and there were usually a couple of destroyers (*Hind*, *Ferret* or *Forester*) out hunting as well. There were only 18 transports crossing on the night of April 1,⁶ though the number increased later

4 H.S.411/422.

⁵ H.S.405/295.

⁶ H.S.407/183. From April 4 to 10, the sailing of troops and remount transports was suspended from Southampton. H.S.405/642, 643.

in the month. Portsmouth was affected, too, by the important question of the status and protection of hospital ships¹ which cropped up in April. On the plea that hospital ships were being used for extraneous purposes, Germany had announced that she could not recognise them between lines drawn from Flamborough Head to Terschelling and Ushant to Lands End.

The Gloucester Castle had been torpedoed off Portsmouth on March 31, and on April 1 the Admiralty issued orders that all sailing of hospital ships in the Channel was to cease until further orders.² Malta was informed on April 7 that no homeward bound hospital ships were to cross the line joining Ushant to Lands End.³

It was under these circumstances that the War Cabinet decided on April 10 to remove hospital ships employed in the Channel service from the list of ships under the protection of the Hague Convention, and to permit them to sail without lights and without distinguishing marks.⁴ It was decided to paint them grey, arm them, and call them ambulance transports.⁵ The mining of the hospital ship *Salta* off Havre that day, April 10, added to the difficulties of the situation by the closure of the port ; it was still closed on April 13, and further delays must have arisen, for on April 17 the First Sea Lord instructed Captain Kelly, at Paris, to ask for French concurrence for the D.N.T.O. to sail all British ships on his own responsibility.⁶

The Havre route received another blow on April 17 when the big hospital ship *Lanfranc* was sunk by U.B.40 and the *Donegal* by U.C.21; both were under escort, but the former was flying a red cross flag and still carrying the markings of a hospital ship.⁷ Admiral Colville thereupon gave orders on April 18 for hospital ships to be run by night with two escorts, and to discontinue empty fast transports returning by daylight.⁸

The French policy was different. They decided to place distinguished prisoners on board each hospital ship, and to convoy them.⁹ For ships bound up and down Channel, the coast line gave a certain degree of security. Thus, on April 30, the S.S. Vestalia (5,528 tons) was attacked at 11.4 a.m. a mile off Anvil Point, but

⁸ H.S.410/883, also W.C., April 18, 122 (9).

⁹ H.S.406/273, April 5.

¹ H.S.411/1160, 412/130.

² H.S.407/1033. *Calgarian* had five troop transports with her. Her sailing orders are in H.S.654/567; the S.S. *Leasowe Castle* seems to have been engaged in experiments of some sort.

⁸ H.S.408/201. It had been suggested by Ottawa on March 22 that not more than 3 convoys a month should sail from Canada. H.S.C.21. Antrim's sailing orders from Halifax were the same as *Calgarian*'s, H.S.654/567.

¹ See U.B.40 and Lanfranc.

² H.S.405/324. A reprisal air attack for the torpedoing of the hospital ship *Asturias* was made on Freiburg on April 14.

³ H.S.509/104.

⁴ April 10, 1917, 116 (9).

⁵ T.23035/17, in M.01610/19; the question whether the *Lanfranc* on April 17 was to be regarded as a hospital ship or an ambulance ship is discussed in the latter paper.

⁶ H.S.409/668.

⁷ White hull, green band, red crosses fore and aft, and large red cross amidships, illuminated by night.

with the help of her 4.7-in. gun and of patrols which hurried to the spot, was able to take refuge in Poole Bay. The number of transports that crossed to France during the month with troops, horses, communications and stores was 884, of which three had been sunk. It is not possible to maintain that the Admiralty did not believe in convoy, for these transports were all convoyed. The doubtful point was not the efficacy of the medicine, but whether there was enough of it to go round.

375. Measures, Queenstown.-The main attack of the submarines developed to the west of Ireland, and the brunt of it fell on Approach Route B. This approach route, instituted early in March, was shaped like a cone with sides running approximately 282° from the Blaskets and 242° from the Fastnet.1 It remained fairly quiet up to April 17, when a heavy attack on it was opened by four submarines—U.43, U.55, U.67, and U.53, reinforced on April 19 by U.60 and U.61. Their presence was soon felt, and on April 21, at 12.35 a.m., Rear-Admiral Webb (Director, Trade Division), informed Vice-Admiral Bayly, at Queenstown, that in view of the large number of vessels attacked on Approach Route B, between 51° 30' N., and 52° 10' N.,2 Reporting Officers abroad should not give routes crossing 14° W. between these latitudes. This was followed at 12.5 p.m. by a telegram from the First Sea Lord to Vice-Admiral Bayly : " Losses between parallels of 51' N. and 52' N. have been most serious since the 18th, and several submarines are working in that area. Have you diverted traffic to north and south of danger area? If not, this should be done at once by 'Q' ships and sloops." To which Admiral Bayly replied at 8.7 p.m. that he had sent sloops and destroyers to warn ships to keep north of 52° and south of 51°.3 Behind these telegrams there lies an interesting field of study.

It has already been pointed out that the routeing system in operation in March, 1917, was a two-fold one, comprising, firstly, Western Routes for outward bound ships, which were controlled by the Trade Division, and, secondly, Approach Routes for inward bound "valuable" ships. In 1916 and up to 1917 the latter had received their routes and confidential rendezvous from the Operations Division,⁴ and were met by destroyers from Queenstown and Devonport. In February, 1917, however, when the new Blaskets route, outward bound, appeared to be compromised, it was decided to increase the area of dispersion which led to the institution of Approach Routes on March 2. In this new system the task of appointing a rendezvous and landfall⁵ was transferred to the British

³ H.S.410/967 (Admiral Jellicoe's holograph) : H.S.416/1165.

Consuls in the United States, who had instructions to give each successive ship a different rendezvous and landfall. These were then wired to the Admiralty, who informed Devonport and Queenstown of the rendezvous, and ships with wireless reported their approach to Devonport and Valentia. In this system, however, it is possible to discern a flaw. In the Western Route system used by outward ships the routes were opened and closed by the Trade Division in accordance with the latest reports of submarine activity. But in the Approach Route system there was no means of doing this, or at least it was considerably more difficult. Trade Division was in close touch with the Intelligence Division, and the routeing of outward bound ships could, therefore, be controlled in accordance with the latest intelligence. But the Consuls at Philadelphia, Boston, and Newport could not be in close touch with the Intelligence Division, and there were no adequate means for quickly altering the routes they issued. The Western Route system was based, indeed, on the principle of dispersion, but the dispersion had the Intelligence Division behind it. The Approach Route system, on the other hand, rested on a basis of dispersion alone. Nor was there much room for dispersion. Approach Route B ended in a 60-mile stretch of coast on the south-west of Ireland between the Skelligs and Fastnet. On the meridian of 12° W. it was only 90 miles wide. If a concentration of submarines took place in this area it would be difficult to deflect traffic, and even if the Consuls abroad were informed, some days must elapse before the new orders began to take effect.

376. Homeward Bound and Outward Bound.—If this difficulty were one of the causes of losses then the heaviest loss would be found among homeward bound ships, and this is exactly what occurred.

To the westward of Ireland there were sunk in April, 1917-

Homeward bound	 	1.2	84
Outward bound	 		21

Further, in Approach Route B, where the heaviest losses took place, only one outward bound vessel was sunk, viz., the Norwegian S.V. Marion,¹ and she was only there presumably because she could not be anywhere else, as she sailed from Limerick. The cause of the immunity of outward bound vessels is not difficult to explain. None of them entered the most dangerous area, for all routes to the westward from the Skelligs and Fastnet were closed for outward bound ships during the whole month of April.²

¹ Between 53° 30' N., and 50° N. in longitude 14° W.

² H.S.410/803.

⁴ Nearly all signed by Captain H. W. Grant who was A.D.O.D.

⁵ Blaskets, Skelligs, Dursey Head, Mizen Head or Fastnet.

¹ Sunk by U.60, April 6.

² Viz., routes 15, 16, 27, 28, 44, 56, 76, 77, 87, 88, 13, 14, 23, 24, 41, 71, 73, 82, 83. For routes in force in April, see H.S.405/1126, 406/709, 408/285, 410/620, 411/1024, 413/638. For details of routes, see M.02787/17, in Case 504, Vol. II.

Moreover, their conformance with these instructions is confirmed from German reports. U.60, cruising between March 26 and April 26, observed uninterrupted traffic going *eastward*. U.57 and U.49 sighted only *inward bound* traffic, and the High Sea Fleet instructions to submarines, dated April 23, stated that no outgoing traffic had been observed recently off the couth coast of Ireland.¹

It seems evident, too, that the Germans were intercepting steamers' signals, for they were quoting the lettering and approximate position of several rendezvous.²

There can be little doubt, then, that one reason for the heavy loss in April was that homeward bound ships were being route-ed through Approach Route B (which was closed to outward bound ships), and that when the crisis of German concentration occurred it was not possible to divert them.

An effort was made to do so on April 21 by Admiral Bayly, who, in accordance with the First Sea Lord's directions, at once sent out orders to this effect by "Q" ships and sloops.

The sloop *Crocus* was one of the vessels instructed to perform this duty, and as Lieut.-Commander G. M. Skinner was specially commended by Admiral Bayly and received an expression of Their Lordships' appreciation for the efficiency of his patrol, his experience of the difficulty of patrol work may be taken as representative of the cruise of a "very well worked ship in a very disturbed area."³

She was on patrol April 23–29, and sighted a submarine only once, which went down 10 minutes before she reached the spot and let go a depth charge there.

Nor did ships always obey the orders given them. The British S.S. Oswald (5,185 tons) was sunk on April 23, and the Admiralty asked if she had been warned to keep clear, and Admiral Bayly replied that she had received the warning signal but was making for her rendezvous at the time⁴ and did not obey it.

Trade Division was evidently alive to the danger, for when U.53and U.61 appeared in Approach Route A⁵ on April 24 an order was sent, at Captain Webb's suggestion, to Devonport to warn incoming vessels to cross 10° W. between 46° N. and 47° 30′ N. as submarines were active between 48° N. and 49° N., and the warning went out and was repeated by the destroyers⁶ patrolling the route that day the day that the Admiralty gave their approval for the Scandinavian convoy system (s. 287). 377. Destroyers from Grand Fleet.—In April, Queenstown was informed in advance of the sailings of 131 ships from America. Of these, 30 (or 23 per cent.) were attacked and 14 were sunk, representing the large figure of 10.7 per cent., whereas between February 22 and March 9 there had sailed 110 valuable ships, of which six had been sunk, six (5.5 per cent.), and four unsuccessfully attacked (3.6 per cent.).

The seriousness of the situation was fully appreciated. On April 26, Admiral Duff put forward his recommendation for convoy, and Admiral Jellicoe, who approved it the next day, sent a "Most Secret " message to the Commander-in-Chief, informing him that the heavy shipping losses, amounting to an average of eight ships a day, made it essential to give further protection to the coast of Ireland, and directing him to send four more destroyers to Queenstown as soon as possible; "the necessity is greatly regretted, but the action must be taken at the cost of immobilising a portion of the Grand Fleet."1 The same day, the meridian for rendezvous for valuable ships was altered from 14° to 15° W., and all officers abroad were given orders that ships from ports north of Norfolk, Virginia, were to be given rendezvous between 52° 20' N., and 55° 30' N. (then to Blaskets and Skelligs), and ships from ports south of Norfolk, Virginia, were to be given rendezvous between 49° 20' N. and 50° 40' N. (then to Dursey Head, Mizen Head, and Fastnet). In this way the dangerous area between 50° 40' N. and 52° 20' N. was cut out, and on April 30 Queenstown was told once again to send a sloop to patrol out to 17° W. between 51° N. and 52° N. to divert traffic from it.

The withdrawal of destroyers from the Grand Fleet seriously affected its mobility, and on May 3 the Commander-in-Chief pointed out that only three squadrons and the B.C.F. could put to sea properly screened, and received a reply from the First Sea Lord that the risk was justified by the conditions then prevailing.²

378. Measures, North of Ireland.—While a big German concentration was being made on the South-Western Approach, two of the big minelayers, U.78 and U.79, were attacking the northern route with mines. The fields laid by the former off Tiree and Coll in February were still causing trouble, and on April 3 the minesweeping gunboat Jason³ struck a mine off Coll and sank with a loss of 30 men, which led to the closure of the Minches on April 6. This loss was aggravated within the next two days by the mines laid by U.C.65off Liverpool on March 22 (S. 156).

¹C.B.01370, War against Commerce, November, 1917, pp. 41, 31, 45, 59.

² Viz., Q, V, W, X, Y, Z. C.B.01370, pp. 59, 60.

³ Vice-Admiral, Queenstown, May 10, in M.05819/17.

⁴ H.S.411/759, 1072.

⁵ Approach to Scillies.

⁶ H.S.412/386 signed Richard Webb, initialled J.R.J. H.S.412/413.

¹ H.S.412/475, 581, 1st S.L. to C.-in-C.

² C.-in-C., May 3, 1.19 a.m., H.S.442/877, 1048, 1157.

³ At 11.10 a.m. in 56° 35' N., 6° 28' W., H.S.405/738. Field 83 laid by U.78 on February 12, 1917. Minches closed, April 6, 1.45 p.m., H.S.406/524.

On April 7, at 3.20 a.m., the British S.S. Lapland (18,565 tons) ran on one, and on April 9, about 8 p.m., the U.S. S.S. New York (10,798 tons) ran on another, so that the first thing that struck Admiral Sims on his arrival in England was one of U.C.65's mines.¹ Both ships, fortunately, got into harbour, but Liverpool, which had already been closed for a week in the end of March, had to be closed again, with the usual dislocation of traffic. The routes to the north of Ireland were open till April 4, when they were closed for three days, apparently on account of the discovery of U.78's old mines, and were opened on April 7, just as U.78 and U.79 were arriving on the scene with further cargoes.²

U.78 had left Heligoland on March 30, and, proceeding northabout round the Shetlands, laid her mines on April 7 off Sleat Sound (nine), off the west of Skye (nine), off the north end of Coll (six), and on April 10 off Lough Swilly (10). She returned by the same route, and was back on April 19, having sunk two steamers, two sailing ships and a fishing vessel, altogether 6,091 tons.³ The survivors of one, the Norwegian S.S. Sagetta were 62 hours in their boats before reaching Udsire (Norway) ; in the Danish S.V. Bris two men were killed by shells ; one of the Strathcona's boats with nine men in it was never seen again, and the same fate befell the British F.V. Andromache on its way back from Iceland.

U.79 started on April 1, and on April 8 began to lay her mines off Inishtrahull, but after laying eight out of 36, had to abandon her task on account of damage to her engines.⁴ Her mines were found on April 12 in the afternoon by an armed trawler, the *Helcia*—not a moment too soon, for S.S. *Olympic* with Mr. Arthur Balfour and the mission to the United States was due to sail that night. Orders were sent at once to stop her, and the north of Ireland route was closed.⁵ By April 14 the route was clear enough for the *Olympic* to sail, escorted by the *Michael, Sable,* and *Marmion,* and she got away, in a westerly gale which swept the bridges of the destroyers completely away.⁶

¹ H.S.407/523.

² H.S.406/709, A.T., April 7/0008.

³ April 2, 7.45 p.m., Norwegian S.V. Sagetta, 1,981 tons, in 60° N., 2° E.; April 4, 10.30 a.m., Danish S.S. Wladimir Reitz, 2,128 tons, 60° 28' N., 3° 10' W.; April 5, 2.10 p.m., Danish S.V. Bris, 101 tons, 58° 50' N., 6° 26' W.; April 13, 5.45 p.m., British S.S. Strathcona, 1,881 tons, in 59° 35' N., 5° 50' W.; April 14, F.V. Andromache, somewhere about 60° 30' N., 3° W.

⁴ O.U.6020A, Field 153; intercepted April 13, 2150, in I.D., Vol. 3415. Marine Archiv says "on account of bad weather."

⁵ H.S.408/198 (mines discovered); H.S.408/219. To S.N.O., Buncrana, A.S. Clyde, 5 p.m. "Stop *Olympic* sailing. If sailed recall her." H.S. 408/285.

6 H.S.409/223.

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The north of Ireland routes were opened the next day (April 15)¹ and remained open till April 20, when Commodore, Larne (Commodore Sir Alfred Paget), held shipping up, apparently on account of an S.O.S. made by some vessel² to the westward on April 18. His action was supported by the discovery of U.C.66's mines the next day, April 21, off Belfast. As reports of U.C.66's mines the next day, April 21, off Belfast. As reports of U.C.66 were coming in for the next three days from the Tory Island area and the mines she laid off the Mull of Cantyre were found on April 24, the north of Ireland routes remained closed till April 26, though the *Drake* was ordered to proceed in by that route on April 22, on account of the submarine activity in the south-west.³ It was opened on April 26,⁴ and though the Commodore, Larne, held up traffic on April 27 to 29,⁵ it was open when the month closed on the very day that U.C.65was busy (April 30) laying mines in the Firth of Clyde.

379. The End of April, 1917 .- But the Olympic had reached America ten days before,6 and six United States destroyers were already cleaving their way eastwards.7 On April 25 Admiral Bayly was summoned to the Admiralty to discuss the subject of co-operation, and the next day was a day of big decisions. It was known for certain then that 24 United States destroyers were coming across, and Admiral Duff put in his recommendation for a system of general convoy the same day. It was approved by Admiral Jellicoe within 24 hours (S. 211), and on April 28 the S.N.O., Gibraltar, was told to make all arrangements for the sailing of the first convoy.8 The imminence of a great disaster had been looming ahead, but by the end of the month the measures which were to avert it had been taken. The principal one was convoy, but from the doings of the month on Approach Route B a big interrogative arises. May not the efficacy of convoy have lain rather in its power of evasion and its greater power of control than in its power of actual protection by escort ? The question is one which should stand beside us in the further study of convoy.

Convoy was not the only big task confronting the First Sea Lord. The time was ripe for a reorganisation of the War Staff. This—and not convoy—was the principal subject of discussion when the

¹ H S.409/33, April 15, 0415.

² H.S.410/408, vessel unidentified.

³ H.S.410/1198 (mines off Belfast); H.S.411/912 (Mull of Cantyre); H.S.411/140.

4 H.S.411/1024.

⁵ H.S.413/648.

⁶ Arrived April 20.

7 They left April 24, H.S.411/379, 380.

⁸ H.S.412/597.

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Prime Minister visited the Admiralty on April 30, and remained there the whole day in conclave. The subject was one on which the First Lord, the First Sea Lord, and the Prime Minister were in entire agreement. When Admiral Jellicoe came to the Admiralty in December, 1916, he had brought with him a strong effusion of new blood from the Grand Fleet,* and had carried out a preliminary reorganisation. April had brought the lesson that a more drastic reorganisation was necessary. It is in the light of these decisions that the month of April, 1917, stands out as a month of fruitful measures, whose harvest was to be the salvation of the Empire and the overthrow of the German submarine campaign.

* See Appendix P.

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APPENDIX A

(Section 2.)

COMMANDER-IN-CHIEF, GRAND FLEET, AND STAFF, DECEMBER 1916

Commander-in-Chief.-Admiral Sir David Beatty, G.C.B., K.C.V.O., D.S.O.

Secretary .- Frank T. Spickernell, D.S.O.

Flag Commander.-Sidney R. Bailey.

Flag Lieut.-Commander.-Ralph F. Seymour.

Chief of Staff.—Rear-Admiral Osmond de Beauvoir Brock, C.B., C.M.G. Captain of the Fleet.—Captain Hon. Hubert G. Brand, M.V.O. (Commodore, 1st Class).

Flag Captain.—Captain Alfred E. M. Chatfield, C.V.O., C.B., C.M.G. Master of the Fleet.—Captain Oliver E. Leggett.

APPENDIX B

HARWICH FORCE, JANUARY 23, 1917

(Section 69.)

1st Division	Centaur	Captain Reginald Y. Tyrwhitt (Commodore, 1st Class).
	Conquest	Captain Joseph Charles W. Henley.
	Aurora	a transfer 1 (Translands
2nd Division	Penelope	Captain Hubert Lynes.
	Cleopatra	Captain Frederick P. Loder-Symonds.
	Undaunted	LieutCdr. Christopher J. F. Wood* (for Captain, sick).
		and the second second of the second base

Off the Maas

Grenville	 Cdr. Harold V. Dundas.	
Radstock	 Cdr. Richard M. King.	
Sorceress	 LieutCdr. Henry R. James.	
Rigorous	 LieutCdr. Desmond Maxwell.	
Rob Roy	 Lieut. Ambrose T. N. Abbay.	
Meteor	 Cdr. Robert A. Hornell.	
Melpomer	Lieut. Daniel H. Rainier.	

* Lieut.-Cdr. Christopher J. F. Wood was First and Gunnery Lieutenant (for Flotilla). His signature in M. 0879/17 was printed as J. J. G. Lane.

(C4462)

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Off Schouwen Bank

To Westwar	d.		To 1
Simoom*	•••	Cdr. Edward T. In- man.	N
Starfish	••	Lieut. Terence A. Longford.	M
Surprise	••	Cdr. Wilfred A. Thompson.	M
Milne		LieutCdr. Hugh R. Troup.	Ph
			14

 Nimrod .. Captain Rafe Rowley-Conwy.
 Moorsom.. Cdr. John C. Hodgson.
 Morris .. Lieut.-Cdr. Edward S.-Graham.
 Matchless.. Cdr. George L. D. Gibbs.
 Phoebe .. Lieut.-Cdr. Ralph M. Mack.
 Manly .. Lieut.-Cdr. Ernest W. Kirby.
 Mansfield Cdr. Alan F.W.Howard.

APPENDIX C Re SIMOOM, JANUARY 23, 1917

(Section 73.)

The Simoom's movements are obscure in the official reports. The diary of an officer in the Starfish is very useful. It states that the Simoom at 4.3 a.m. turned south at 30 knots, proceeded south "for a few minutes," then turned 16 points to starboard and made signal "reduce to 20 knots."

"The Simoom started on the northerly course and almost at once opened fire, but what at could not be seen." . . . "Some ships away to starboard started firing and these were presumed to be Nimrod's force. . . "Simoom continued firing for about a minute or two, then there was a terrific explosion. . . " "Starfish put helm hard-a-port and turned to starboard and Surprise did the same. . . " "Starfish passed just astern of the Surprise."

It seems probable from this report that at 4.3 a.m. the Simoom caught a glimpse of the tail of the German 6th Flotilla going south and proceeded south at full-speed for a few minutes, then turned and, coming north, sighted S.50 and opened fire. In Plan 13, the Simoom is shown as turning to port and being torpedoed on a south-east course. This is in accordance with S.50's report, but it seems possible that she was on a northerly course, the Starfish and Surprise turning to starboard when she was torpedoed (diary version). Or it is possible that the Simoom turned round under S.50's stern and was torpedoed after turning, the Surprise and Starfish turning eastward (German version).

* Torpedoed by S.50, sunk by British gunfire.

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APPENDIX D

DISPOSITION OF 10th CRUISER SQUADRON, JANUARY 24, 1917

REAR-ADMIRAL REGINALD TUPPER

(Section 77.)

The ships of the 10th C.S. took up patrols as follows :--

"A" Patrol.—Seven ships on a line 30° from a position in 62° N' 5" 30 W steering 110° and 290°, 30 miles apart; from South—Ebro, Champagne, Andes, Moldavia, Virginian, Motagua, Orvieto.

"C" Patrol.—Four ships on a line 345° from a position in 58° 20' N. 14° 10' W, steering 70° and 250°, 30 miles apart; from South—Hilary, Patuca, Changuinola, and Hildebrand.

" D " Patrol.—Avenger, patrolling between Rockall and $10^\circ~30'\,{\rm W}$ to support armed trawlers off St. Kilda.

West of Faroes—Alsatian, patrolling in Meridian of 8° 30' W between Lat. 61° 20' N and 63° N.

On January 25 a south-easterly gale was blowing with heavy seas.

(H.S.A. 115/52, Proceedings of 10th C.S.)

APPENDIX E

MERCHANT SHIP LOSSES, JANUARY, 1917

(Section 119.)

With regard to Merchant Ship Losses in January, 1917, Table (A), the figures in "Statistical Review" issued by the Director of Statistics in 1918, p. 22, are :--

Total	losses b	y submarine	••	••	 291,459 to	ons.
	22	mines	÷.		 40,007	
		Tot	al		 331,466	,,

The "Statistical Review" made no distinction between losses from mines laid by surface craft and losses from mines laid by submarines.

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APPENDIX F ANTI-SUBMARINE MEASURES (D.A.S.D. IN FEBRUARY, 1917, H.S. 1273–527) (Section 133.)

(1) Officer instructors appointed to defensively armed merchant ships.

(2) Extensive smoke trials carried out and smoke apparatus ordered.

(3) Auxiliary patrols in the English Channel strengthened and reorganised on a definite scheme which provides a patrolled lane.

(4) Air stations established on South coast and air patrol started.

(5) More decoy ships taken up or ordered.

(6) Schemes for using submarines to hunt submarines have been prepared.

(7) Scheme for escorting a merchant ship with a submarine has been prepared.

(8) Bomb howitzers are on order.

(9) Experiments with hydrophones are being pressed on.

(10) Hunting patrols of T.B.D.s have been instituted.

(11) Many more guns have been obtained for merchant ships.

(12) Large orders have been placed for mines of an improved type.

APPENDIX G Re U.C. 46

U.C.46 (Section 166.)

On February 2, at 10.30 a.m., in 50° N 7° 40' W, it was probably U.C.46 that sank with bombs the British S.V. Isle of Arran, 1,918 tons, going from Queenstown to Spithead. The submarine returned about four hours later and towed the boat for five and a half hours towards the Scilly Isles. (I.D., Vol. 631, and Marine-Archiv H.S./Q.28.)

APPENDIX H SOUTH COAST OF IRELAND ROUTE, JANUARY, 1917 (Section 99.)

Vice-Admiral, Queenstown, to Secretary, Admiralty. January 16, 1917 (M. 0589/17 in H. S.533/29) :---

"An immense quantity of traffic to and from the English Channel and Irish Sea is now passing along the south coast of Ireland. This route and the Atlantic route between 51° 30' N and 52° as far west as 14° W is being systematically patrolled, all ships with specially valuable cargoes being escorted. No ship has been attacked on the patrolled route during the past week. In the preceding week ended January 6, the only ship attacked in this route was a special service ship who sank the submarine. I consider that arrangements should be made to divert the traffic from the English Channel from the south coast of Ireland *immediately* should a raid on this route commence. At present the amount of shipping is so great that amount of damage before they could be stopped."

APPENDIX J

"ROUTES IN FORCE" TELEGRAMS, JANUARY 26, 1917, TO FEBRUARY 7, 1917

(Section 156.)

For Routes, see Case 504, M. 09748/16, issue December 26, 1916, and February 5, 1917

January 26, 0515 (H. S.353/47, 48). "Western Trade Routes. In Routes 23, 24, 51, 62, 82, 83, 92, 93, for longitude 10° W read longitude 11° W. Routes in Force, 1, 3, 5, 12, 22, 31, 41, 51, 61, 71, 82, 91."

February 5, 2123 (H. S.356/580). "Western Trade. Cancel my 05157 of January 26. Routes in Force, 1, 3, 5, 12, 22, 31, 42, 51, 61, 75, 82, 91. In Routes 22 for longitude 10° W read 12° W and join Ocean Route, keeping north of latitude 49° N till west of 15° W. In Routes 51 and 82 for longitude 10° W read longitude 14° W, and then to cross 45th parallel to west of longitude 17° W."

Note.—The effect of this message was to close south coast of Ireland route for traffic from Clyde, Irish Sea and Bristol Channel to North Atlantic (Route 41, 71) and send it round north of Ireland (Routes 43, 75).

February 7, 1145. "Western Trade Routes. Cancel my 2123 of February 5. Routes in Force, 1, 3, 5, 31, 43, 61, 75, 91."

Note .- This closed south coast of Ireland route for all traffic.

APPENDIX K

GERMAN SUBMARINES

1. The following attacks may be regarded as the work of U.C.46 (Section 166) :--

On February 4, at 10 a.m., 20 miles south (true) of the Lizard (49° 37' N 5° 10' W), the French s.v. Anna Maria, 140 tons, bound from Seville for Saint Servan with a cargo of wine and salt was sunk with bombs.

On February 4, at 4 p.m., 28 miles south of the Lizard (49° 30' N 5° 0' W), the French s.v. Coquette, 167 tons, bound from Swansea to Bordeaux, with a cargo of coal was sunk with bombs.

On February 5, at 2.10 p.m., $2\frac{3}{4}$ miles S 45 W of Start Point (50° 10' N 3° 44 W), the defensively armed British s.s. Argyllshire, 12,097 tons, bound from London to Australia, was struck by a torpedo, but subsequently reached Devonport.

The cruise of U.C.46 may be reconstructed as follows :-January 25. Left Zeebrugge.

January 30/1326. Attacked by Q.11 off the Smalls; laid mines off Cardiff.

February 1/1430. South of Ireland, sank Dutch s.s. Gamma.

February 2/1030. Off Scillies, sank British s.v. Isle of Arran.

February 4/1005. Off the Lizard, sank French s.v. Anna Maria.

February 4/1615. Off the Lizard, sank French s.v. Coquette.

February 5/1400. Off the Start, torpedoed Britishs.s. Argyllshire (salved).

February 6/1615. Off the Scillies, sank British s.s. Crown Point.

February 8/0309. SUNK by H.M.S. Liberty off Dover.

She had sunk 2 s.s. and 3 s.v. of a total tonnage of 9,558 tons.

2. U.53 and Q.24, March 8 (Section 217).

On March 8, at 7 p.m., off Ballycotton Island, in 57° 46' N 7° 50' W, Q.24 (the Laggan) sighted a submarine steering NW. This was U.53, who followed the Laggan and twice prepared to attack, but was hampered by the moon, which enabled Q.24 to see her conning tower and wake showing up clearly against the moonlight. U.53 went down when Q.24 opened fire at 9.30 p.m. (H.S. 650/82 and Marine-Archiv, H.S./Q.18).

3. U.C.61 (Section 240) made a second cruise in March (March 17-22), from which she was forced to return on account of serious damage sustained in diving to avoid a destroyer. She dived to 197 feet and the stuffing boxes gave out, forcing her to come to the surface at a steep angle. She was driven down by the fire of a sloop, the electric motors fused, and when she came up the motors were found to be useless. The destroyer may have been the H.M.N.S. Spitfire. On March 19, at 8.40 a.m., in 49° 47' N 5° 20' W, she sighted a submarine steering east, which dived. (I.D. Vol. 589/87 and H.S./Q.28.)

4. On April 29, 1917, at 9.5 a.m., in 50° 52' N 10° 56' W, H.M. destroyer Parthian (Lieut.-Cdr. Chas. H. Jones, R.N.) sighted the conning tower of a submarine breaking surface about 21 cables off, in the rays of the moon. Parthian increased to full-speed, altered course to ram, and opened fire at 200 yards, passing close to and obtaining apparently three hits. The Parthian dropped two depth charges as the submarine disappeared only ten yards off abeam. Not identified by Marine-Archiv. Possibly U.67 (Section 320) or U.81 (Section 330).

5. It was probably U.C.66 that, on April 22, at 12.15 p.m., in 55° 15' N. 8° 40' W, stopped the Norwegian s.v. Vestelv, 1,729 tons, and sank her with bombs (Queenstown report in H.S. 650/225), S. 346.

APPENDIX L

DOVER BARRAGE

(Section 302.)

In January, 1917, the Dover Barrage was strengthened by deep mines, laid on January 6-18, half a mile to westward of it. These mines were recognised as a danger to British ships when the Trinity House tender Alert was sunk on them on April 15, 1917. By the end of May the mines were dragging, fouling the nets and had become a serious danger (Lockhart Leith, 118). It was decided then to sweep up all the mines, which was done in May and June (May 6-June 28). At the same time the barrage was shifted 3 miles to the southward between Buoys 0 A and 10 A, thus smoothing out the angle at Buoy 10 A.

See Barrage Committee's report 29/11/17, Appendix A; Captain Bird's report M. 05502/17 of 3/5/17; Bird's letter of 26/6/17 in H.S. 845/195 and Plan in H.S. 863/49.)

APPENDIX M

NOTE ON PLAN 37, 38, 39. SWIFT AND BROKE, APRIL 20, 1917

The difficulty in this plan is in the interval that seems to have elapsed between the sighting of the leading group (V.71) and the ramming of G.42(with the torpedoing of G.85). The German report gives 12.44 a.m. for the commencement of the action and 12.50 a.m. as the time of G.85 being torpedoed, that is 6 minutes. Commanders Peck and Evans agree in the commencement of the action at 12.45 a.m.; Mr. Henry Turner saw the Swift's second torpedo fired at 12.50 a.m.; the Active and Afridi (in the Downs) reported gun flashes at 12.50 a.m., and the Mentor from Dover reported flashes at 12.45 a.m. It seems therefore clear that the action took place between 12.45 a.m. and 12.50 a.m. It is not easy, however, to fit in the movements in these five minutes. The first burst seems to have been against the leading group and was over by 12.46 a.m. If the Swift and Broke maintained a more or less steady course for a couple of minutes, they would cover at least 1,000 yards; this would make the German rear group nearly 2,000 yards, or about a mile in rear of this leading group, which, of course, is quite possible.

It seems possible, however, from the inquiry that the Swift and Broke were under helm while engaging the leading group before it made off to the north-west.

(Compare Enquiry, Question 3 (Commander Peck), "Mostly under full helm"; Lieut. Hickman (Broke), Q.193, "Starboard," "Port," order "to Starboard," "Port," and thought "Starboard" just before ramming.)

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APPENDIX N

Re Q. SHIP VIOLA, U.50 AND S.S. MANCHESTER CITIZEN, APRIL 26, 1917

(Section 323.)

The S.S. Manchester Citizen, sunk April 26, 3 a.m., is not mentioned in German reports. If she was sunk by U.50 it means that the latter went some 80 miles in 5 hours, that is 16 knots, which is unlikely. Possibly her antagonist was U.70, but the Manchester Citizen is not mentioned in the list of ships sunk by U.70; here again it is possible that as she did not sink till noon, U.70 did not note her as a ship sunk. U.81 is another possibility, but the Manchester Citizen is not mentioned in the otherwise correct list supplied by her prisoners (ID., Vol. 547 A). U.82 is another possibility.

On April 26, at 1 p.m., in 51° 2' N 15° 22' W, Q.14 (the *Viola*, 14-in., two 12-pdr.) was missed by a torpedo, sighted a periscope and dropped two depth charges. Her antagonist was evidently U.50 (U.50 gives the position as 51° 10' N 15° 33' W) who missed a ship with a torpedo at this time and heard the detonation of two depth charges.

APPENDIX P

(Section 379.)

To the Admiralty in December, 1916.

Admiral Sir John Rushworth Jellicoe, G.C.B., O.M., G.C.V.O., First Sea Lord.

Fleet Paymaster Hamnet H. Share, C.B., Secretary to First Sea Lord. Admiral Sir Cecil Burney, G.C.M.G., K.C.B. (from *Marlborough*), Second Sea Lord.

Captain Lionel Halsey, C.B., C.M.G., AdC. (Captain of the Fleet and Commodore, 1st Class), Fourth Sea Lord.

Rear-Admiral Alexander Ludovic Duff, C.B. (from *Emperor of India*), Director Anti-Submarine Division.

Captain Frederic Charles Dreyer, C.B., (from *Ivon Duke*), Assistant Director, Anti-Submarine Division, then Director of Naval Ordnance.

Commander Reginald Guy Hannam Henderson (from Erin), Anti-Submarine Division.

Commander John W. Carrington, D.S.O. (from King George V), Anti-Submarine Division.

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APPENDIX Q

PRINCIPAL COMMANDS, JANUARY 1917.

GRAND FLEET

Flagship Commander-in-Chief Admiral Sir David Beatty, G.C.B., K.C.V.O., D.S.O. .. Iron Duke. Second-in-Command Admiral Sir Charles E. Madden, K.C.B., K.C.M.G., C.V.O. First Battle Squadron Admiral Sir Charles E. Madden, K.C.B., K.C.M.G., C.V.O. Marlborough. .. Emperor of India. Rear-Admiral William C. M. Nicholson, C.B. .. Second Battle Squadron .. King George V. Vice-Admiral Sir John M. de Robeck, K.C.B. ... Rear-Admiral William E. Goodenough, C.B., M.V.O. .. Orion. Third Battle Squadron Vice-Admiral Herbert L. Heath, C.B., M.V.O. Dreadnought. .. Hibernia. Rear-Admiral Cecil F. Dampier Fourth Battle Squadron Vice-Admiral Sir Frederick C. D. Sturdee, Bt., K.C.B., Hercules. K.C.M.G., C.V.O. Rear-Admiral Ernest F. A. Gaunt, C.B., C.M.G. ... Colossus. Fifth Battle Squadron .. Barham. Rear-Admiral Hugh Evan-Thomas, K.C.B., M.V.O. Battle Cruiser Force Rear-Admiral William C. Pakenham, K.C.B., M.V.O. .. Lion. First Battle Cruiser Squadron .. Renown.* Rear-Admiral Richard F. Phillimore, C.B., M.V.O. First Light Cruiser Squadron Captain Edwyn S. Alexander-Sinclair, C.B., M.V.O., AdC. Galatea. (Commodore, 1st Class) Second Battle Cruiser Squadron .. Australia. Rear-Admiral Arthur C. Leveson, C.B. Second Light Cruiser Squadron Captain Cecil F. Lambert (Commodore, 1st Class) .. Southampton. Third Light Cruiser Squadron Rear-Admiral Trevylyan D. W. Napier, C.B., M.V.O. .. Chatham. Second Cruiser Squadron Rear-Admiral Sydney R. Fremantle, M.V.O. Minotaur. Fourth Light Cruiser Squadron Captain Charles E. Le Mesurier, C.B. (Commodore, 2nd Class) Tenth Cruiser Squadron .. Alsatian. Vice-Admiral Reginald G. O. Tupper, C.B., C.V.O.

* R.A.'s Flag transferred to Repulse, January 29, 1917.

HOME FLEET'S DESTROYER FLOTILLAS

Fifth Light Cruiser Squadron (Harwich) Ship. Captain Reginald Y. Tyrwhitt, C.B., D.S.O. (Commodore, 1st Class) Centaur. Ninth Flotilla (Harwich) Captain Francis G. St. John, M.V.O. (temporary) .. Undaunted. Tenth Flotilla (Harwich) Commander Rafe G. Rowley-Conwy Nimrod. First Flotilla (Harwich) (For services with Third Battle Squadron) Eleventh Flotilla (Scapa) Captain Edward O. Gladstone Seymour. Twelfth Flotilla (Scapa) Captain Anselan J. B. Stirling, C.B. Saumarez. Thirteenth Flotilla (Rosyth) Captain James U. Farie Chambion. Fourteenth Flotilla (Scapa) Commander Brien M. Money Botha. Fifteenth Flotilla (Scapa) Captain Arthur B. S. Dutton Parker. SUBMARINE FLOTILLAS Eighth and Ninth Flotillas (Harwich) Captain Arthur K. Waistell, C.B. Maidstone, Tenth Flotilla (Tees) Captain Leonard A. B. Donaldson Lucia. Eleventh Flotilla (Blyth) Captain Stanley L. Willis Titania. FLEET SWEEPING FLOTILLAS Captain Lionel G. Preston, C.B. (Captain-in-Charge, Fleet Minesweepers) Lupin. COASTAL COMMANDS Area I.-Stornoway Rear-Admiral The Hon. Robert F. Boyle, M.V.O. (R.A., Stornoway) Iolaire.* Areas II and III .- Shetlands and Orkneys Vice-Admiral Sir Frederick E. E. Brock, K.C.M.G., C.B. (V.A., Orkneys and Shetlands) Cyclops. Area IV.—Cromarty Rear-Admiral Edmund R. Pears (R.A., Invergordon) .. Thalia. Area V.-Peterhead Captain R.N.R. Sir James E. C. Goodrich, K.C.V.O. (Commodore, 2nd Class, R.N.R.) (Admiral, Retired) (Commodore, Peterhead) Thalia.

* Borne on books of.

Areas VI and VII .- Granton Shib. Admiral Sir Frederick T. Hamilton, K.C.B., C.V.O. (C.-in-C., Coast of Scotland) ... Crescent. Captain R.N.R. James Startin, C.B. (Commodore, 2nd Class, R.N.R.) (Admiral, Retired) (S.N.O., Granton) Gunner.

Area VIII. (Tyne) and Area IX (Humber) Rear-Admiral Stuart Nicholson, C.B., M.V.O. (R.A., Commanding, East Coast of England). Captain Alan C. Bruce, Captain (D), Seventh Flotilla .. Wallington.

Area X .- Yarmouth Captain A. A. Ellison, C.B. (Commodore, 2nd Class) (Commodore-in-Charge, Lowestoft) Halcyon.

Harwich Local Area Captain G. C. Cayley, C.B. (Commodore, 2nd Class) (Commodore-in-Charge, Harwich) Ganges.

Nore Local Area Admiral Sir George A. Callaghan, G.C.V.O., K.C.B. (C.-in-C., Nore) Pembroke.

Area XI.-Dover and the Downs Vice-Admiral Sir R. H. S. Bacon, K.C.B., K.C.V.O., D.S.O. (V.A., Dover Patrol) Arrogant. Captain Percy Withers, Captain (D), Sixth Flotilla. Captain George N. Tomlin, M.V.O. (S.N.O., Ramsgate) .. Ceto.

Area XII.—Portsmouth Admiral The Hon. Sir Stanley C. J. Colville, G.C.V.O., K.C.B. (C.-in-C., Portsmouth) Victory.

Area XIII.-Portland Captain Richard M. Harbord (Commodore in Charge and King's Harbour Master).

Area XIV.-Falmouth

Admiral The Hon. Sir Alexander E. Bethell, K.C.B., K.C.M.G. (C.-in-C., Devonport) Vivid. Captain R.N.R. John Denison (Commodore, 2nd Class, R.N.R.) (Admiral, Retired) Dreel Castle.

Bristol Channel Area

Vice-Admiral Charles H. Dare, M.V.O. (Milford Haven). Idaho. Commander W. L. Down (S.N.O., Swansea) Shikari.

Area XV.-Milford Haven

Vice-Admiral Sir Lewis Bayly, K.C.B., C.V.O. (A.C.,

Area XVI.-Kingstown

Vice-Admiral Sir Lewis Bayly, K.C.B., C.V.O. (A.C., Coast of Ireland), Queenstown Colleen. Captain Herbert Chatterton (Kingstown) . . . Boadicea II.

Liverpool.-Local Area

Rear-Admiral Harry H. Stileman (S.N.O., Liverpool) .. Eagle.

Area XVII.—Lough Larne Ship. Vice-Admiral Sir Lewis Bayly, K.C.B., C.V.O. (A.C., Coast of Ireland), Queenstown. Captain R.N.R. Sir Alfred Paget, K.C.B., K.C.M.G. (Commodore, 2nd Class, R.N.R.) (Admiral, Retired) (Commodore, Larne Harbour) Thetis.

Clyde.-Local Area

Admiral Sir Frederick T. Hamilton, K.C.B., C.V.O. (C.-in-C., Coast of Scotland) Crescent. Commander Alexander G. Wright (S.N.O., Ardrossan) . . Pactolus.

Area XVIII.—Lough Swilly Vice-Admiral Sir Lewis Bayly, K.C.B., C.V.O. (A.C., Coast of Ireland), Queenstown. Captain R.N.R. Frank Finnis, C.V.O. (Admiral, Retired) (S.N.O., Buncrana) Colleen.

Area XIX.—Killybegs Vice-Admiral Sir Lewis Bayly, K.C.B., C.V.O. (A.C., Coast of Ireland), Queenstown. Captain Arthur P. James (S.N.O., Killybegs) ... Colleen.

Area XX.—Galway Bay Vice-Admiral Sir Lewis Bayly, K.C.B., C.V.O. (A.C., Coast of Ireland), Queenstown.

Commander F. W. Hanan (S.N.O., Galway) Colleen.

Area XXII.—Holyhead

Captain Henry F. Aplin Amethyst III.

Beauty Calify My In and Au-

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- Chatburn (British S.S.). Sunk in convoy, by U.B.18, Mar. 1, 231.
- Chatham (L.C.). Sweeps for raider, Jan. 24, 77.
- Cherwell (T.B.D.). Rescues Red Rose, Dec. 16, 1916, 47, 59; attacks U.C.17, Dec. 15, 1916, 58.
- Chester (L.C.). Sweeps for raider, Jan. 24, 77.
- Chinto Maru (Japanese S.S.). Sunk by U.79, Jan. 4, 85.
- Chorley (British S.S.). Sunk by U.C.17, Mar. 22, 237. Christopher (T.B.D.). Hunts submarines off the Scillies, Jan., 102, 106, 115.
- Chrysea (armed trawler). Attacks a submarine, probably U.80, Mar. 12, 269. Cigale (French patrol boat). Saves Eastgate, Jan. 5, 105.
- Cilurnum (British S.S.). Torpedoed in convoy by U.C.21, Apr. 19; sinks, Apr. 20, 348.
- Circe (French S.S.). Sunk by submarine, probably U.70, Mar. 15, 211.
- City of Carlisle (armed trawler). Attacks U.53, Feb. 5, 143.
- City of Memphis (U.S.A. S.S.). Stopped by U.53, Feb. 4, 143; sunk by U.C.66, Mar. 17, 232.
- City of Oran (British S.S.). Encounters submarine, probably U.B.39, Dec. 31, 1916, 49.
- City of Tampico (Norwegian S.S.). Sunk by U.C.18, Jan. 16, 109.
- Clan Galbraith (Norwegian S.V.). Sunk by U.70, Apr. 24, 328. Clan Macmillan (British S.S.). Sunk by U.B.39, Mar. 23, 239.
- Clan Shaw (British S.S.). Sunk by mine, Jan. 23, 116.
- Clan Sinclair (British S.S.). Chased by U.43, Apr. 18, 322.
- Clan Sunderland (British S.S.). Torpedoed by U.C.66 or U.C.70, Apr. 17, 347. Claymore (French T.B.). Rescues Taxandrier, Dec. 4, 1916, 37.
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- Coath (British S.V.). Sunk by U.B.38, Dec. 12, 1916, 43.
- Cochrane (cruiser). Sails with gold for Halifax, Jan. 18, 102, 118.
- Cockatrice (T.B.D.). Arrives at Lisbon, Jan. 27, 101.
- Collingwood (Norwegian S.V.). Sunk by U.62, Mar. 12, 219. Colville, Admiral The Hon. Sir Stanley C. J., G.C.V.O., K.C.B. (C.-in-C., Portsmouth). Opinion re control of routes, Dec., 1916, 25; on sending transports across Channel in moonlight, 174; his anti-submarine measures, Apr., 374.
- Comedian (British S.S.). Sunk by U.93, Apr. 29, 327.
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- Comus (L.C.). Chases Gamma (German S.S.) ashore, June 2, 5; sweeps for raider, Jan. 24, 77; sweeps off Norwegian coast, Feb. 7, 135.
- Conch (British S.S.). Sunk by U.B.23, Dec. 7, 1916, 36, 60.
- Condor (Russian S.S.). Sunk without trace by U.C.36, Apr. 26, 349.
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- 133; at Rosyth, Feb. 12, 136; at Longhope, Mar. 30, 279; at Longhope, Apr. 4, 280; at Washington, Apr. 11, 282; at Rosyth, Apr. 14, 284, 285; at Admiralty, May 15, 295; on Dover Shore Defences, Apr. 21, 310.

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- Connaught (British S.S.). Sunk by U.48, Mar. 3, 216.
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- Cornelia (British S.S.). Sunk by submarine, probably U.C.43, Mar. 6, 214,

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- Dimitrios Goulandris (Greek S.S.). Sunk by U.C.37, Jan. 2, 88 f.n.
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- Donstad (Norwegian S.S.). Captured by U.43, Jan. 23; sunk, Jan. 27, 92.
- Dorie (British S.S.). Torpedoed by U.S1, May 1; salved, 330.
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- Drina (British S.S.). Sunk by mine, Mar. 1, 250. Dromore (British S.S.). Sunk by U.58, Apr. 27, 333.
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- Drumcliffe (British S.S.). Chased by U.61, Apr. 24, 325, 373.
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- Duncan (H.M.S.). Attacked by submarine, Mar. 5 (see Plan 30).
- Dundee (armed boarding steamer). Sinks Leopard, Mar. 16, 196. Dundee (British S.S.). Sunk by U.55, Jan. 31, 96.
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- E.29 (submarine). Attacks German T.B.Ds., Jan. 29, 79.
- E.32 (submarine). Attacks U.46, Apr. 5, 225; on patrol off Eagle Island, Feb. 19-27, 248A.
- E.36 submarine). Lost in collision with E.43, Jan. 19, 68.
- E.38 (submarine). Sent to the Canaries, Dec., 1916, 50.
- E.39 (submarine). Off Horns Reef, Jan., 102.
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- E.43 (submarine). Collides with E.36, Jan. 19, 68.
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- E.49 (submarine). Sunk, Mar. 12, 267.
- E.50 (submarine). Collides with U.C.62, Apr. 19, 368.
- E.54 (submarine). On patrol off Eagle Island, Feb. 19-27, 248A; sinks U.81, May 1, 248A, 330.
- E.56 (submarine). On patrol, Jan. 29, 79; attacks a submarine, Apr. 22, 345 f.n.
- Eagertun (Norwegian S.S.). Sights Prinz Friedrich Wilhelm, Dec. 16, 1916, 11. Eastern Belle (British S.V.). Sunk by U.C.72, Apr. 1, 240.
- Eastgate (British S.S.). Saved from U.B.39 by French patrols, Jan. 5, 105.
- East Point (British S.S.). Collides with U.48, Mar. 9, 194, 216, 242.
- Eavestone (British S.S.). Sunk by U.45, Feb. 3, 141. Ebenezer (Danish S.V.). Set on fire by U.57, Apr. 5, 225A, 227.
- Ebenezer (Danish S.S.). Sunk by U.82, Jan. 5, 87.
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- Eddystone (British S.S.). Attacked by submarine, probably U.62, Mar. 11, 211, 219, 242.
- Edelweiss (French S.V.). Sunk by U.C.71, Apr. 12, 339.
- Eden (Norwegian S.S.). Sunk by U.C.70, Apr. 30, 347.
- Edinburgh Castle (A.M.C.). Sights Moewe, Feb. 16, 7, 55 f.n.
- Edna (Danish S.S.). Stopped by U.C.18, Dec. 13, 1916, 42.
- Edouard (British S.V.). Sunk by U.C.70, Apr. 16, 347.
- Edward Greig (Norwegian S.S.). Sunk by U.61, Mar. 2, 218.
- Edwards, Commander Graham Richard. Commanding Hoste, sunk in collision, Dec. 21, 1916, 19.
- *Eemland* (Dutch S.S.). Sunk by U.21, Feb. 22, 149. *Efeu* (Norwegian S.V.). Sunk by U.C.66, Mar. 22, 232.
- Egenaes (Norwegian S.S.). Sunk by U.C.45, Mar. 22, 275.
- Eggesford (British S.S.). Torpedoed by U.C.21, Nov. 29; salved, Nov. 30,
- 1916, 39.
- Egret (Russian S.S.). Sunk by mine, Jan. 28, 117.

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- Hazel Park (British S.S.). Sunk by U.C.66, Mar. 20, 232.
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- H.C.G. (British F.V.). Sunk by U.C.17, Mar. 24, 237 f.n.
- Headley (British S.S.). Sunk under escort of Martin by U.60, Feb. 19, 147.
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- Hermine (French S.S.). Sunk by U.C.17, Feb. 16, 168, 173.
- Hermione (British S S.). Damaged by mine, Apr. 14, 234, 243, 321.
- Hero (British tug). Sunk by mine, Mar. 28, 276. Hero (Norwegian S.V.). See under "Seeadler."
- Hesperides (British S.S.). Sunk by U.69, Apr. 25, 326.
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- Hestia (Dutch S.S.) Sunk by submarine, Mar 30, 276.
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- Hindustan (British S.S.). Sunk by U.46, Mar. 21, 225.
- Hirondelle (British S.S.). Sunk in convoy by U.C.36, Apr. 25, 349.
- Hirondelle (French S.S.). Attacked by submarine, possibly U.C.66, Mar. 14, 232.
- Hirondelle (French S.V.). Sunk by U.70, Dec. 18, 1916, 51 f.n.
- Hitterov (Norwegian S.S.). Sunk by U.B.29, Dec. 2, 1916, 40.
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- Langford (Norwegian S.S.). Sunk by U.58, Apr. 27, 333.
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- Largo Law (British S.S.). Attacked by submarine, possibly U.B.40, Feb. 24, 170.
- Lark (T.B.D.). In Dover Raid, Mar. 18, 207.
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- Lars Fostenes (Norwegian S.S.). Sunk by U.53, Mar. 9, 217. Lars Kruse (Belgian relief ship). Sunk by U.B.18, Feb. 4, 158.
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- Laurel (T.B.D.). In Dover Raid, Feb. 25, 137.
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- Leca (Portuguese S.S.). Sunk by U.C.18, Dec. 14, 1916, 42.
- Le Coq (British S.S.). Attacked by U.46, Mar. 28, 225.
- Le Lamentin (French S.V.). Sunk by U.C.17, Feb. 26, 168.
- Le Mesurier, Captain Charles E., C.B. (Commodore, 2nd Class). Commanding 4th Light Cruiser Squadron, sweeps for Prinz Friedrich Wilhelm, Dec. 13, 10.
- Lena (British S.S.). Sunk without trace, by U.61, Apr. 23, 325.
- Lennox (T.B.D.). Attacks U.B.10, Mar. 12, 270; severely damaged in collision with Ariel, Apr. 22, 373.
- Lent Lily (British F.V.). Sunk by U.C.47, Mar. 12, 228 f.n.
- Leon (French S.V.). Sunk by U.B.39, Jan. 1, 105.
- Leonara (Spanish S.S.). Stopped by U.43, Jan. 23, 92.
- Leonidas (T.B.D.). Saves Karroo from U.53, Apr. 22, 324.
- Leontine (French S.V.). Sunk by U.C.21, Jan. 21, 112.
- Leontine (French S.V.). Sunk by U.C.36, Mar. 25, 234.
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- Liberté (French S.V.). Sunk by U.C.37, Jan. 3, 88 f.n.
- Liberty (T.B.D.). Rams and sinks U.C.46, Feb. 8, 166, 173.
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- Lincolnshire (British S.S.). Sunk by U.57, Mar. 29, 227.
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- Liverpool (British S.S.). Sunk by mine, Nov. 4, 1916, 176.
- Liverpool (British S.S.). Sunk by mine, Dec. 19, 1916, 46.
- Livingstone (Norwegian S.S.). Saved from U.B.37, by Maid of Honour, Jan. 14, 107; taken into Cuxhaven by U.66, Mar. 3, 213, 267, 278.
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- Lord Collingwood (British F.V.). Sunk by U.C.42, Feb. 22, 188. Lord Leicester (armed trawler). Bullmouth, sunk under escort of, Apr. 28, 333. Lorton (Peruvian S.S.). Sunk by U.67, Feb. 5, 144.
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- Louisiana (Danish S.S.). Sunk by U.C.45, Apr. 18, 286, 359.
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- Lusitania (British S.S.). Stopped by submarine, Dec. 1, 1916, 40. Lusitania (British S.S.). Sunk by U.21, May 7, 1915, 123, 152. Lux (British S.S.). Sunk by U.55, Jan., 96. Lycia (British S.S.). Sunk by U.C.65, Feb. 11, 162, 173. Lydia (British S.S.). Transport, escapes from U.C.65, Feb. 27, 171.
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- Mabella (Norwegian S.V.). Sunk by U.C.43, Mar. 1, 214. Macbain (British S.V.). Sunk by U.48, Mar. 4, 216.
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- Manicia (Norwegian S.V.). Stopped by U.53, Feb. 4, 143.
- Manly (T.B.D.). In action, Jan. 23, 69.
- Manningham (Swedish S.S.). Sunk by U.C.17, Feb. 21, 168.
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" U" Submarines (German).

- U.21. In 3rd Flotilla at Emden, Mar. 5, 124; returns from Mediterranean, Feb. 17-Mar. 4, 139, 149; statistics, Feb., 115; in South-West Approach, Apr. 19-May 18, 327, 332.
- U.22. In 3rd Flotilla at Emden, Feb., 124.
- U.23. In 3rd Flotilla at Emden, Feb., 124.
- U.24. In 3rd Flotilla at Emden, Feb., 124; in South-West Approach, Mar. 12-Apr. 9, 224.

- " U" Submarines (German)-continued.
 - U.28. In 4th Flotilla at Emden, Feb., 124.
 - U.30. In 4th Flotilla at Emden, Feb., 124; attacks Lerwick-Bergen route, Apr., 286; encounters G.7, Apr. 15, 369.
 - U.32. Sinks Cornwallis, Jan. 9, 120; at Pola, Feb., 124.
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 - U.34. At Pola, Feb., 124.
 - U.35. At Pola, Feb., 124.
 - U.38. Bombards Funchal, Madeira, Dec. 3, 1916, 50 ; at Pola, Feb., 124.
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 - U.43. In the Bay, Jan. 11-Feb. 13, 92, 98, 101, 139, 140; in 3rd Flotilla at Emden, Feb., 124; statistics, Feb., 155; west of Ireland, Apr. 8-May 4, 322.
 - U.44. Off Spanish coast, Jan. 1-25, 89; in 3rd Flotilla at Emden, Feb., 124 ; off west coast of Ireland, Feb. 24-Mar. 24, 212 ; statistics, Mar., 242; west of Scotland, Apr. 23-May 7, 334A.
 - U.45. Off west coast of Ireland, Jan. 14-Feb. 12, 94, 139, 141, 174; in 3rd Flotilla at Emden, Feb., 124; statistics, Feb., 155.
 - U.46. Off Finisterre, Dec., 1916, 51; in 3rd Flotilla at Emden, Feb., 124; in the Bay, Mar. 12-Apr. 11, 225.
 - U.47. Off the Canaries, Nov., 1916, 50; at Pola, Feb., 124.
 - U.48. Off Spain, Dec. 27, 1916-Jan. 26, 1917, 83, 98, 99, 101; in 3rd Flotilla at Emden, Feb., 124; damaged in collision with East Point, Mar. 9, 194, 216 ; reaches home, Mar. 16, 195 ; in the Channel, returns home northabout, Mar. 1-15, 216; statistics, Mar., 242; hunted by 11th Flotilla, Mar. 15, 254.
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 - U.50. Off Finisterre, Nov., 1916, 55; in 3rd Flotilla at Emden, Feb., 124; in the Bay, Feb. 12-Mar. 7, 139, 152; statistics, Feb., 155; west of Ireland, Apr. 8-May 1, 323.
 - U.52. Torpedoes Suffren, Nov. 26, 1916, 50 ; at Pola, Feb., 124 ; returns to Germany from Mediterranean, Apr., 313.
 - U.53. In Channel Approach and Bay, Jan. 20-Feb. 10, 95, 139, 143: in 2nd Flotilla at Heligoland, Feb., 124; statistics, Feb., 155; in South-West Approach, Mar. 1-17, 217; statistics, Mar., 242; in South-West Approach, Apr. 10-May 1, 324; probably submarine attacked by J.6, Apr. 27, 370.
 - U.54. In 2nd Flotilla at Heligoland, Feb., 124; in South-West Approach, Jan. 29-Feb. 13, 139, 145; 174; statistics, Feb., 155; in South-West Approach, Mar. 8-Apr. 3, 223.
 - U.55. In Bristol Channel, Jan. 20-Feb. 11, 96, 139, 142, 174; in 2nd Flotilla at Heligoland, Feb., 124; statistics, Feb., 155; in South-West Approach, Mar. 30-Apr. 23, 315.
 - U.57. In South-West Approach, Jan. 9-Feb. 7, 93, 98; in 2nd Flotilla at Heligoland, Feb., 124; off South Ireland, Mar. 20-Apr. 9, 227.
 - U.58. In 2nd Flotilla at Heligoland, Feb., 124; off north-west coast of Scotland, Feb. 26-Mar. 14, 215; off north-west coast of Scotland, Apr. 21-May 11, 333.
 - U.59. In the Bay, Jan. 5-Feb. 3, 91, 101; in 2nd Flotilla at Heligoland, Feb., 124; off south-west Ireland, Mar. 18-Apr. 11, 226; sunk by mine, May 14, 298.
 - U.60. In 2nd Flotilla at Heligoland, Feb., 124; in South-West Approach, Jan. 21-Feb. 28, 139, 147, 174; statistics, Feb., 155; in South-West Approach, Mar. 26-Apr. 26, 314.
 - U.61. In 2nd Flotilla at Heligoland, Feb., 124; off Irish coast, Mar. 1-18, 218; in South-West Approach, Apr. 11-May 2, 325; probably was submarine attacked by J.6, Apr. 27, 370.

"U" Submarines (German)-continued.

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- U.64. At Pola, Feb., 124.
- U.65. At Pola, Feb., 124.
- U.66. Escorts Wolf, Dec. 1, 1916, 9; in the Cattegat, Dec. 11-14, 1916, 53; in 4th Flotilla at Emden, Feb., 124; off Shetlands, Feb. 24-Mar. 3, 213; off south coast of Ireland, Mar. 13-Apr. 11, 225A.
- U.67. In Finisterre area, Jan. 23-Feb. 26, 97, 101, 139, 144; in 4th Flotilla at Emden, Feb., 124; statistics, Feb., 155; in South-West Approach, Apr. 5-May 7, 320.
- U.69. In 4th Flotilla at Emden, Feb., 124; off west coast of Ireland, Apr. 11-May 6, 326.
- U.70 (minelayer). In the Channel, Dec. 18, 1916, 34, 45, 57 f.n.; statistics, Dec., 1916, 58; in the Bay, Jan., 83, 84; off Orkneys, Jan. 9, 116; in 4th Flotilla at Emden, Feb., 124; off Irish coast, Feb. 23-Mar. 20, 211, 255; statistics, Mar., 242; west of Ireland, Apr. 15-May 5, 328.
- U.71 (minelayer). In 1st Flotilla at Wilhelmshaven, Feb., 124
- U.72. At Pola, Feb., 124.
- U.73. At Pola, Feb., 124.
- U.75 (minelayer). In 1st Flotilla at Wilhelmshaven, Feb., 124.
- U.76 (minelayer). Sunk, Jan. 26, 122.
- U.78 (minelayer). In 1st Flotilla at Wilhelmshaven, Feb., 124; on north of Ireland route, Feb. 2-22, 139, 151, 174; statistics, Feb., 155; minelaying cruise of, Apr. 2-19, 317, 378.
- U.79 (minelayer). Passes through the Channel, Dec. 26/27, 1916, 34, 48; statistics, Dec., 1916, 58; towed home by Nanna, Jan. 24, 77, 116; off Spain, Dec. 24, 1916–Jan. 27, 1917, 83, 85; in 1st Flotilla at Wilhelmshaven, Feb., 124; lays mines south of Inishtrahull, Apr. 8, 318, 378.
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- U.81. In 4th Flotilla at Emden, Feb., 124; in South-West Approach, Jan. 29-Feb. 16, 139, 146; statistics, Feb., 155; in South-West Approach, Mar. 6-27, 222; statistics, Mar., 242; sunk by E.54, May 1, 248A, 330; last cruise of, Apr. 17-May 1, 329.
- U.82. Off the Fastnet, Dec. 26, 1916, 33, 34; in the Channel Approach, Jan., 83; in the Bay, Dec. 20, 1916–Jan. 18, 1917, 87, 101; in 4th Flotilla at Emden, Feb., 124; west of Ireland, Apr. 17–May 9, 331.
- U.83. In 4th Flotilla at Emden, Feb., 124; in South-West Approach, Jan. 31-Feb. 17, 139, 174; sunk in action with Q.5, Feb. 17, 148; statistics, Feb., 155.
- U.84. In Scillies Approach, Jan. 1-25, 90, 98, 99; in 4th Flotilla at Emden, Feb., 124; off south Irish coast, Feb. 15-28, 139, 153; severely damaged by Q.7 and chased by Alyssum, Feb. 22, 153; statistics, Feb., 155; in South-West Approach, Apr. 5-28, 319.
- U.85. In 4th Flotilla at Emden, Feb., 124; in South-West Approach, Feb. 1-16, 139, 150, 174; statistics, Feb., 155; sunk by Q.19, Mar. 12, 221, 252; statistics, Mar., 242, 243.
- U.86. In 4th Flotilla at Emden, Feb., 124; off the Skelligs, Apr. 5 and 6, 316.
- U.93. In South-West Approach, Apr. 13-May 14, 327.

- " U.B." Submarines (German).
- U.B.1. Sold to Austria, 124 f.n.
 - U.B.6. Off the Maas, Dec. 8, 1916, 53; in Flanders Flotilla, Feb., 124; stranded and interned, Mar. 12, 252, 271.
 - U.B.10. In Flanders Flotilla, Feb., 124; damaged by Lennox, Mar. 12, 270; in North Sea, Apr. 23-26, 361.
 - U.B.12 (minelayer). In Flanders Flotilla, Feb., 124.
 - U.B.15. Sold to Austria, 124 f.n.
 - U.B.16. In Flanders Flotilla, Feb., 124; in North Sea, Apr. 19-22, 361.
 - U.B.17. In Flanders Flotilla, Feb., 124.
 - U.B.18. In the Channel, Nov. 22-Dec. 5, 1916, 34, 35; in the Channel, Dec. 27, 1916-Jan. 9, 1917, 34, 49, 83, 103, 104, 115; statistics, Dec., 1916, 58; statistics, Jan., 114; in Flanders Flotilla, Feb., 124; in the Channel, Jan. 30-Feb. 11, 157, 158; in the Channel, Feb. 27-Mar. 5, 157, 172, 231; statistics, Feb., 173; in the Channel, Mar. 10-20, 231.
 - U.B.20. In North Sea, Apr. 8-11, 361.
 - U.B.21. In 2nd Flotilla at Heligoland, Feb., 124; in North Sea, Feb.1-7, 177, 178; in North Sea, Feb. 13-24, 184; off Scarborough, Mar. 29, 276; in North Sea, Apr. 26-May 9, 359.
 - U.B.22. Sunk by mine, Jan. 19, 1918, 81; in 2nd Flotilla at Heligoland, Feb., 124; in North Sea, Feb. 1-9, 177, 179; in North Sea, Apr. 26-May 9, 359.
 - U.B.23. Off the Fastnet, Dec. 2-4, 1916, 33; in the Channel and off the Fastnet, Nov. 26-Dec. 10, 1916, 34, 36, 57 f.n., 60; statistics, Dec., 1916, 58; in the Channel, Jan. 2-15, 83, 103, 106, 115; statistics, Jan., 114; in Flanders Flotilla, Feb., 124; in the Channel, Feb. 1-4, 157, 160; statistics, Feb., 173; in North Sea, Mar. 29-Apr. 4, and Apr. 14-20, 361.
 - U.B.27. In 2nd Flotilla at Heligoland, Feb., 124.
 - U.B.29. Lost in the Channel, Dec., 1916, 34, 40, 57 f.n.; statistics, Dec., 1916, 58.
 - U.B.30. In Flanders Flotilla, Feb., 124.
 - U.B.31. In Flanders Flotilla, Feb., 124 ; in the Channel, Apr. 22-May 3, 335, 350 ; in North Sea, Apr. 5-12, 361.
 - U.B.32. In Flanders Flotilla, Feb., 124; torpedoes Gloucester Castle, Mar. 30, 263; in the Channel, Mar. 28-Apr. 7, 335, 338; in the Channel, Apr. 22-May 2, 335, 351.
 - U.B.34. In 2nd Flotilla at Heligoland, Feb., 124 ; in North Sea, Feb. 1-10, 177, 180 ; statistics, Feb., 190 ; in North Sea, Apr. 16-28, 359.
 - U.B.35. In 2nd Flotilla at Heligoland, Feb., 124; in North Sea, Feb.1-10, 177. 181; statistics, Feb., 190; in North Sea, Mar. 30-Apr. 12, 359.
 - U.B.36. In Flanders Flotilla, Feb., 124; in the Channel, Mar. 24-Apr. 5, 335, 337, 373; in the Channel, Apr. 13-17, 335, 343.
 - U.B.37. In the Channel, Nov. 26-Dec. 9, 1916, 34, 38, 56 f.n., 57 f.n.; statistics, Dec., 1916, 58; sunk by Q.7, Jan. 14, 103, 107, 115; statistics, Jan., 114.
 - U.B.38. In the Channel, Dec. 11-22, 1916, 34, 43; statistics, Dec. 1916, 58; on south Irish coast route, Jan. 19, 98; Scillies to Ushant, Jan. 11-24, 103, 108; statistics, Jan., 114; in Flanders Flotilla, Feb., 124; off the Scillies, Feb. 8-22, 157, 165; statistics, Feb., 173; in the Channel, Apr. 8-16, 335, 342; in the Channel, Apr. 25-May 7, 335, 352.
 - U.B.39. In the Channel, Nov. 29-Dec. 11, 34, 37, 57 f.n.; in the Bay, Dec. 27, 1916-Jan. 11, 1917, 34, 49, 83, 103, 105, 115; statistics, Dec. 1916, 58; statistics, Jan., 114; in Flanders Flotilla, Feb., 124; in the Bay, Jan. 30-Feb. 14, 157, 159; statistics, Feb., 173; in the Channel and Bay, Mar. 21-Apr. 16, 239, 335, 336; sunk, probably by S.P.8655 and Ambuscade, Apr. 24, 357A.

- " U.B." Submarines (German)-continued.
 - U.B.40. Off the Maas, Dec. 8, 1916, 53; in Flanders Flotilla, Feb., 124; in the Channel, Feb. 21-28, 157, 170; statistics, Feb., 173; in the Channel, Mar. 17-31, 236; in the Channel, Apr. 14-21, 335, 344.
 - U.B.41. In 2nd Flotilla at Heligoland, Feb., 124; in North Sea, Apr. 15-24, 359.
 - U.B.42. At Constantinople, Feb., 124.
- " U.C." Submarines, Minelayers (German).
 - U.C.1 (minelayer, et sic all "U.C." boats). Lays mines, Dec. 1, 7, and 27, 1916, 52, 116; lays mines, Jan. 14, 117; in Flanders Flotilla, Feb., 124; lays mines, Feb. 1 and 15, 191; lays mines, Apr. 6, 19, and 26, 360.
 - U.C.4. Lays mines, Dec. 1, 7, 15, and 27, 1916, 52, 116, 117; in Flanders Flotilla, Feb., 124; lays mines, Feb. 1, 11, 21, and 28, 191; lays mines, Mar. 11, 269; lays mines, Apr. 6, 16, and 23, 360.
 - U.C.6. Lays mines, Dec. 16 and 28, 1916, 52, 53; in Flanders Flotilla, Feb., 124; lays mines, Feb. 3, 10, and 16, 191; lays mines, Apr. 4, 16, 23, and 29, 360.
 - U.C.11. Lays mines, Dec. 8, 16, and 27, 1916, 52, 53; in Flanders Flotilla, Feb., 124; lays mines, Feb. 2, 10, and 16, 191; lays mines, Apr. 6, 16, and 25, 360.
 - U.C.14. In Flanders Flotilla, Feb., 124; lays mines, Feb. 25, 191; lays mines, Apr. 8, 360.
 - U.C.16. In the Channel, Dec. 20-27, 1916, 34, 46, 47; statistics, Dec., 1916, 58; in the Channel and Bay, Jan. 16-Feb. 1, 103, 110; statistics, Jan., 114; in Flanders Flotilla, Feb., 124; in the Channel, Feb. 26, 157, 171A; statistics, Feb., 173; in the Channel, Mar. 10-16, 230.
 - U.C.17. In the Channel, Dec. 14-30, 1916, 34, 45, 46, 47; statistics, Dec., 1916, 58; in the Channel, Jan. 18-Feb. 1, 103, 111; statistics, Jan., 114, 117; in Flanders Flotilla, Feb., 124; in the Channel and Bay, Feb. 15-28, 157, 168; statistics, Feb., 173; in the Channel, Mar. 18-26, 237, 259.
 - U.C.18. In the Bay, Dec. 10-24, 1916, 34, 42, 46, 56, 57 f.n.; statistics, Dec., 1916, 58; in the Bay, Jan. 11-25, 103, 109; statistics, Jan., 114; in Flanders Flotilla, Feb., 124, in the Channel, Feb. 16-19, 157; sunk by 0.18, Feb. 19, 169, 173; statistics, Feb., 173.
 - U.C.19. Lost in the Channel, Dec., 1916, 34, 40, 57 f.n.; statistics, Dec., 1916, 58.
 - U.C.20. Off the Canaries, Nov., 1916, 50; at Pola, Feb., 124.
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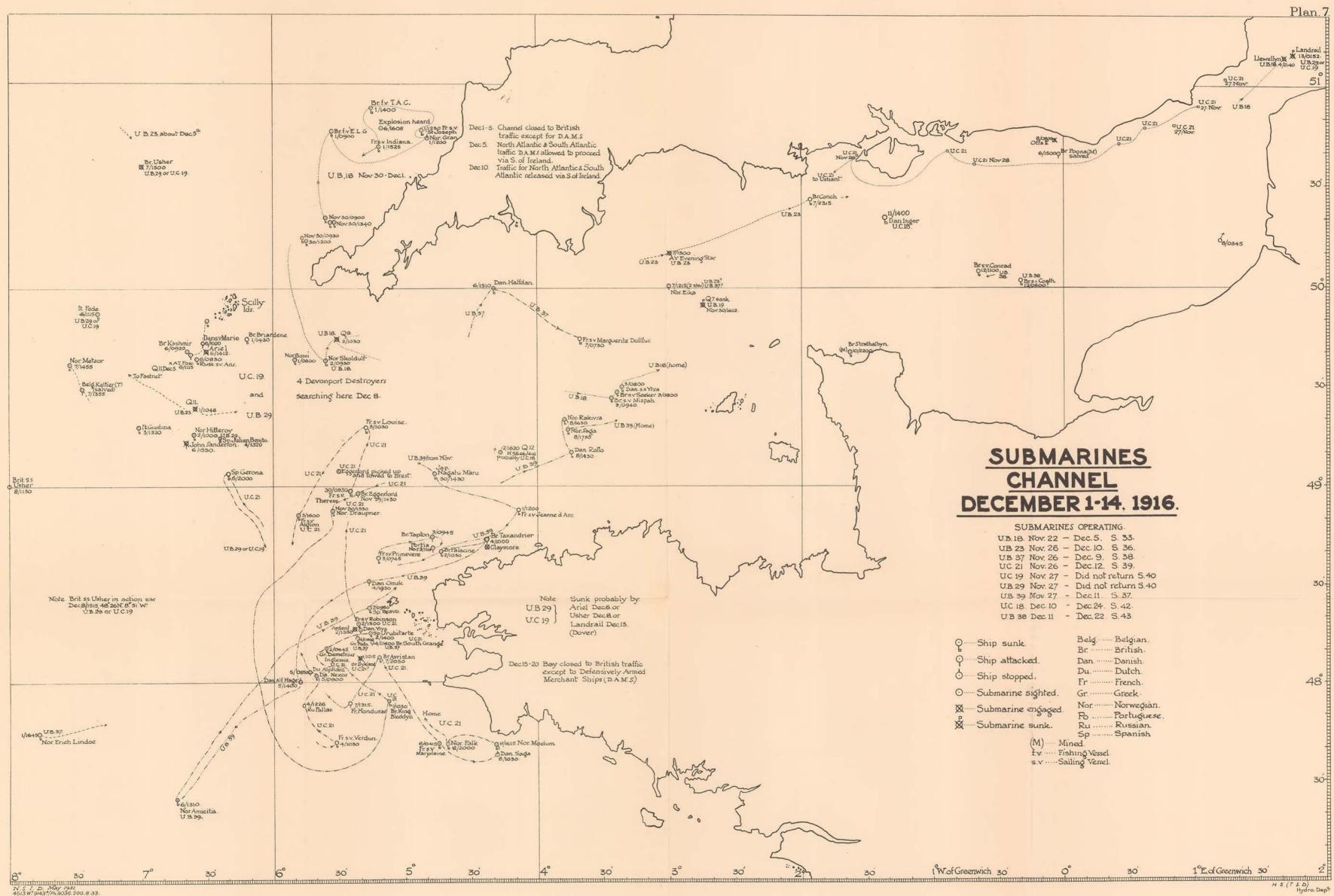
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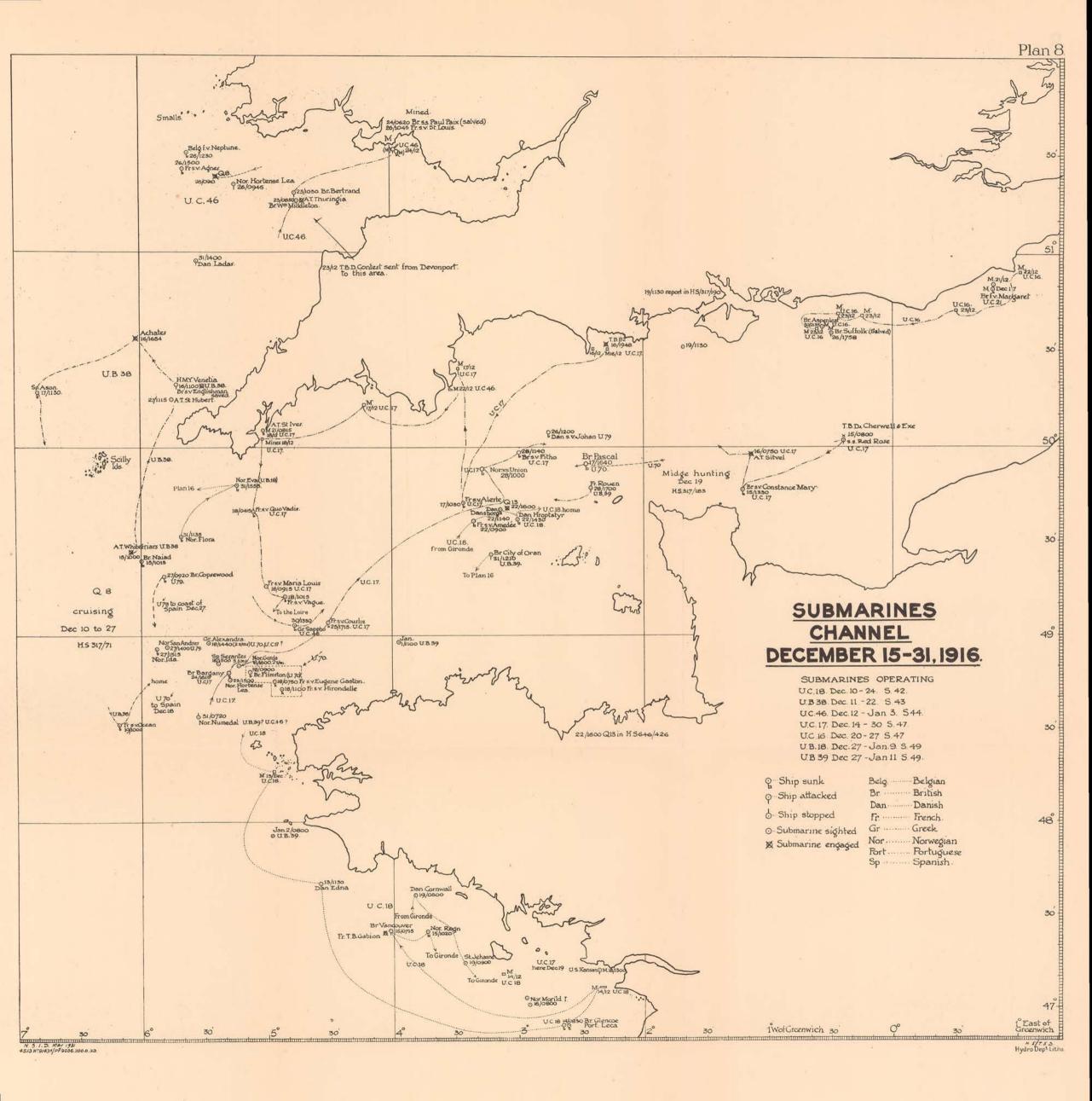
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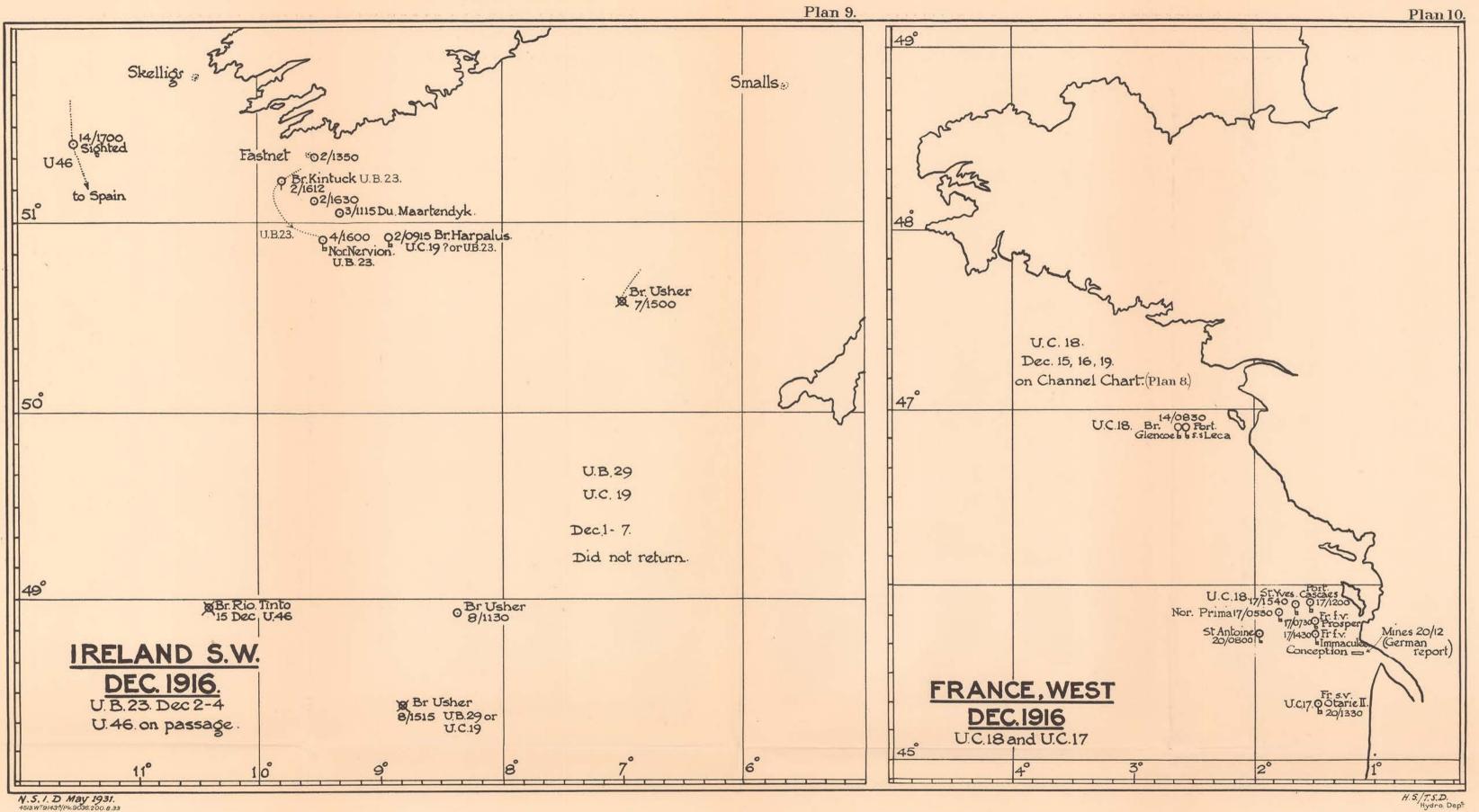
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- 12. Harwich Force and German 6th Flotilla, January 23, 1917.
- 15. Submarines, Ireland, S.W., and Bay, January, 1917.
- 16. Submarines, Channel, January, 1917.
- 21. Submarines, Channel, February, 1917.
- 22. Submarines, Ireland, S.W., February, 1917.

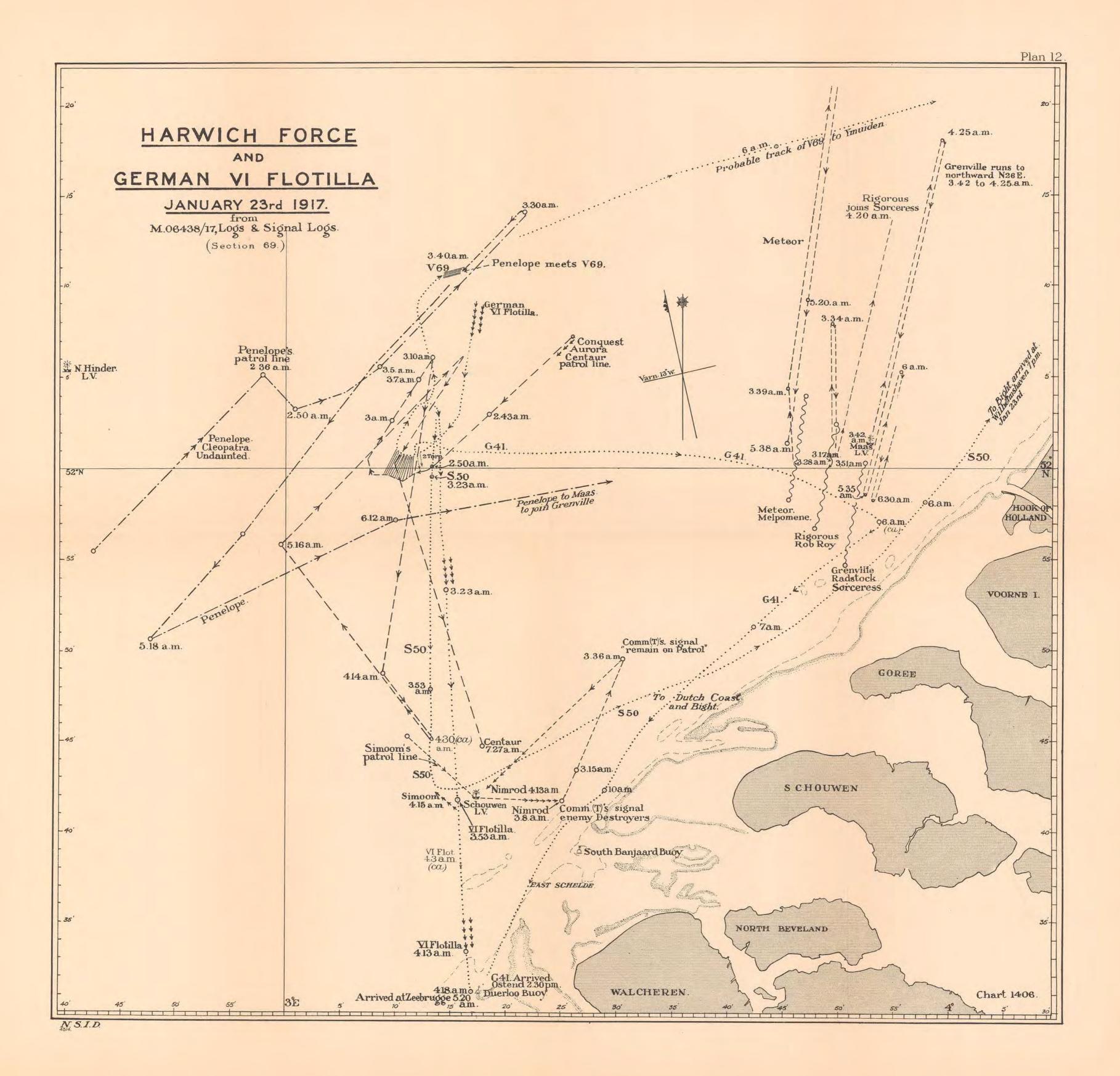
25. Action, H.M. Ships Achilles, Dundee, and Raider Leopard, March 16, 1917.

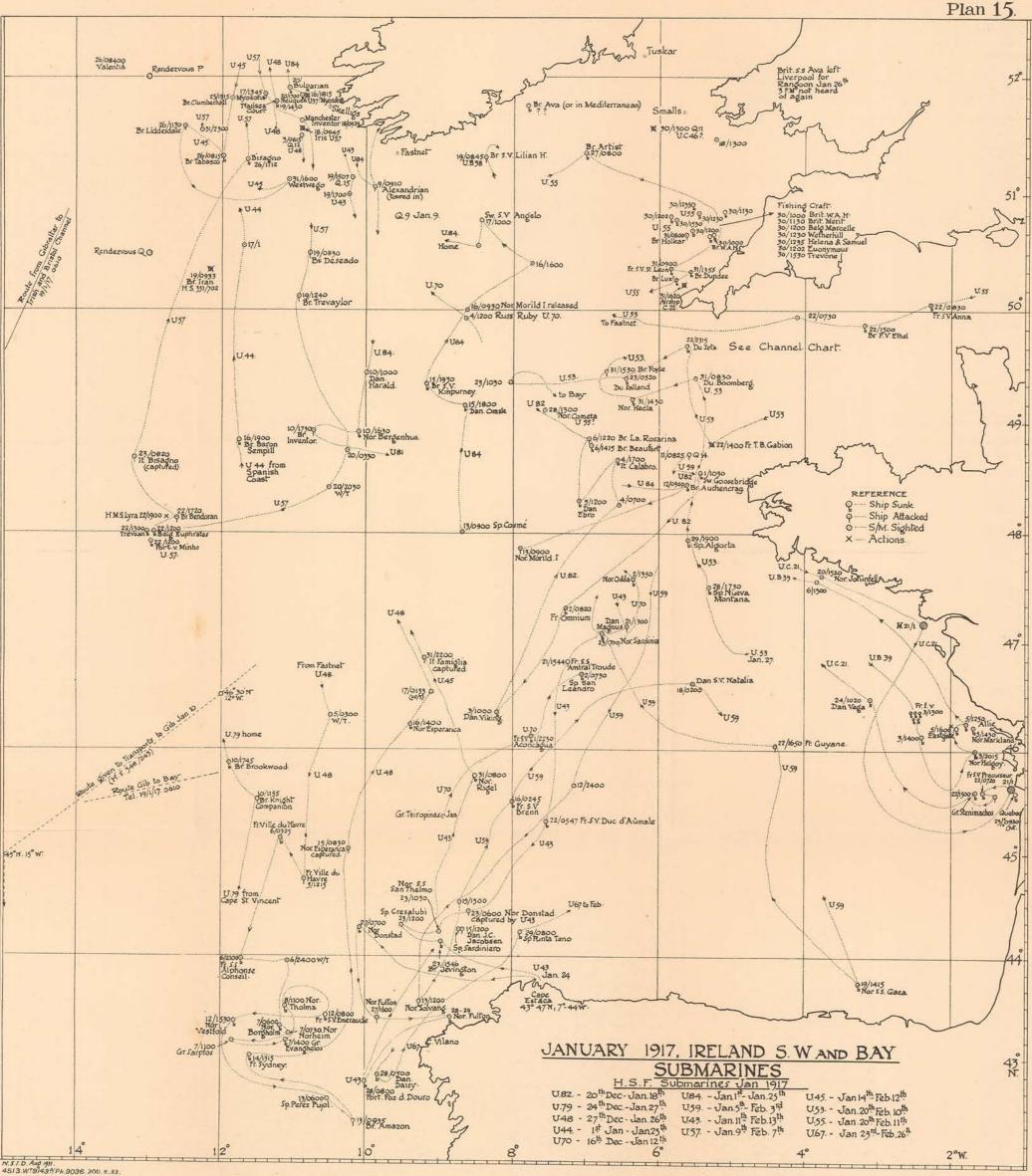
- 28. Submarines, Channel, March 1-19, 1917.
- 29. Submarines, Channel, March 14-31, 1917.
- 30. Submarines, Ireland, S.W., March 1-14, 1917.
- 31. Submarines, Ireland, S.W., March 14-April 6, 1917.
- 34. 2nd L.C.S. and 13th Flotilla, April 8-9, 1917.
- 40. Submarines, Channel, April, 1917.
- 41. Submarines, Ireland, S.W., April 1-20, 1917.
- 41A. Submarines, Ireland, S.W., April 1-20, 1917.
- 42. Submarines, Ireland, S.W., April 21-30, 1917.
- 42A. Submarines, Ireland, S.W., April 21-30, 1917.



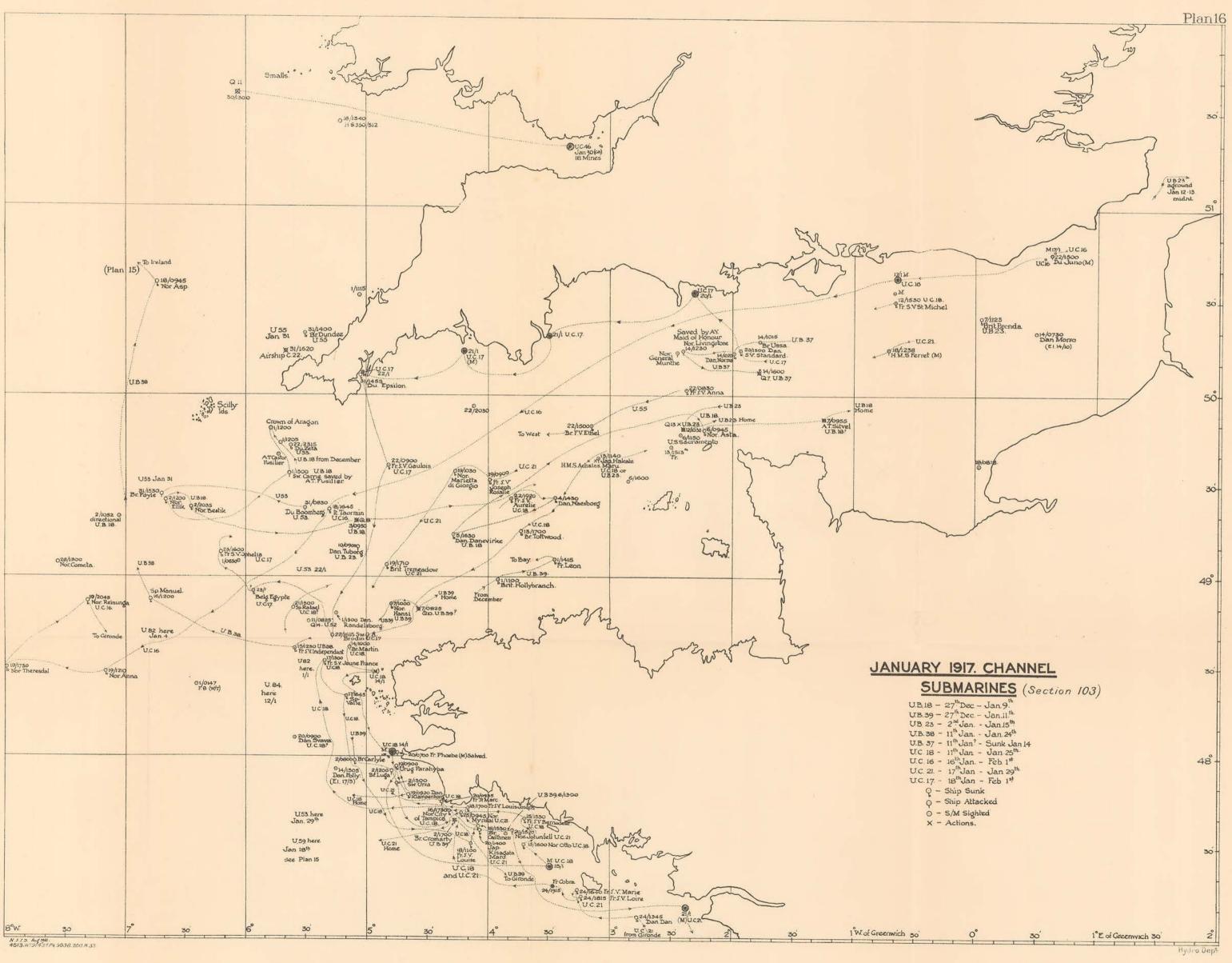


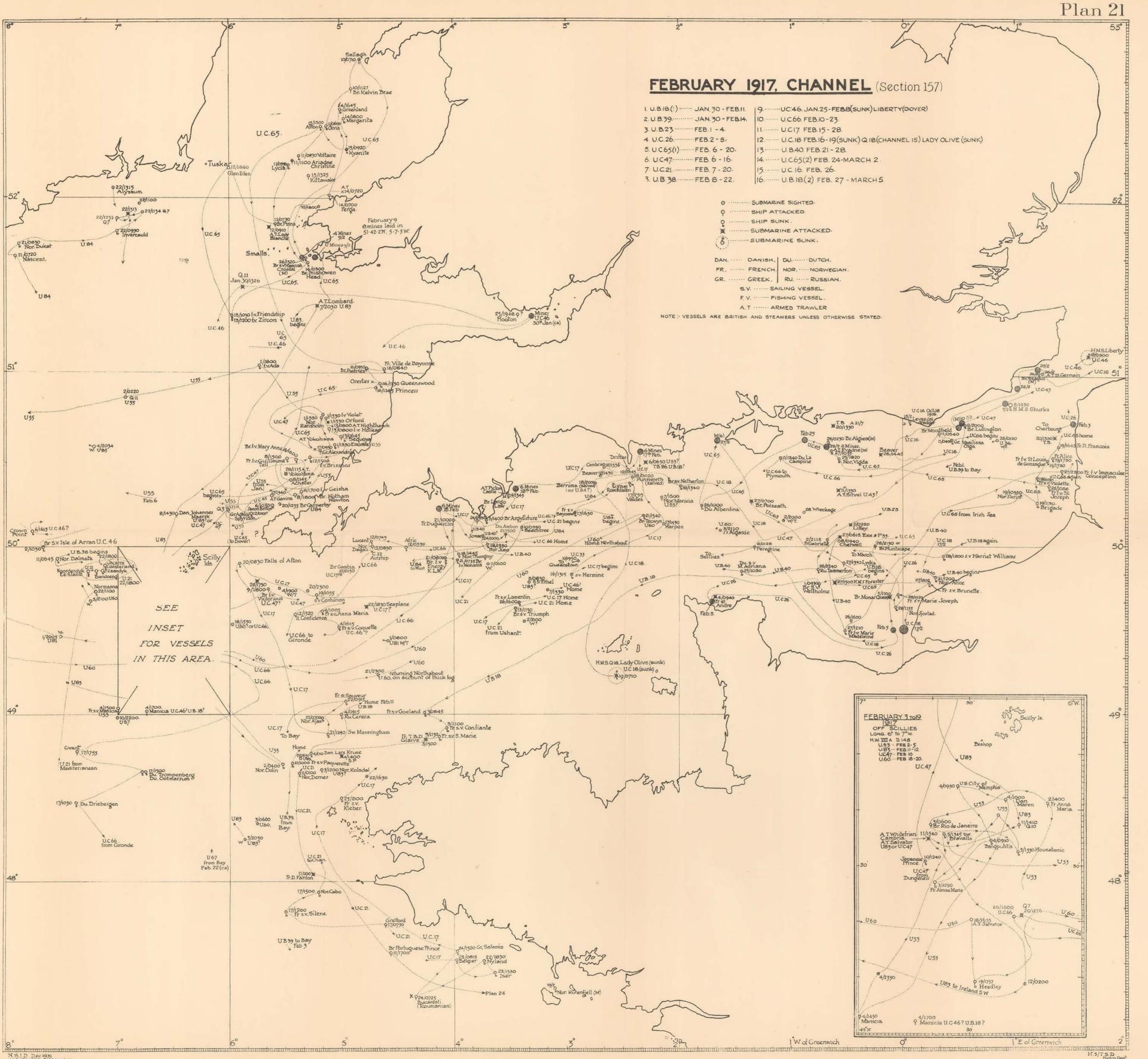






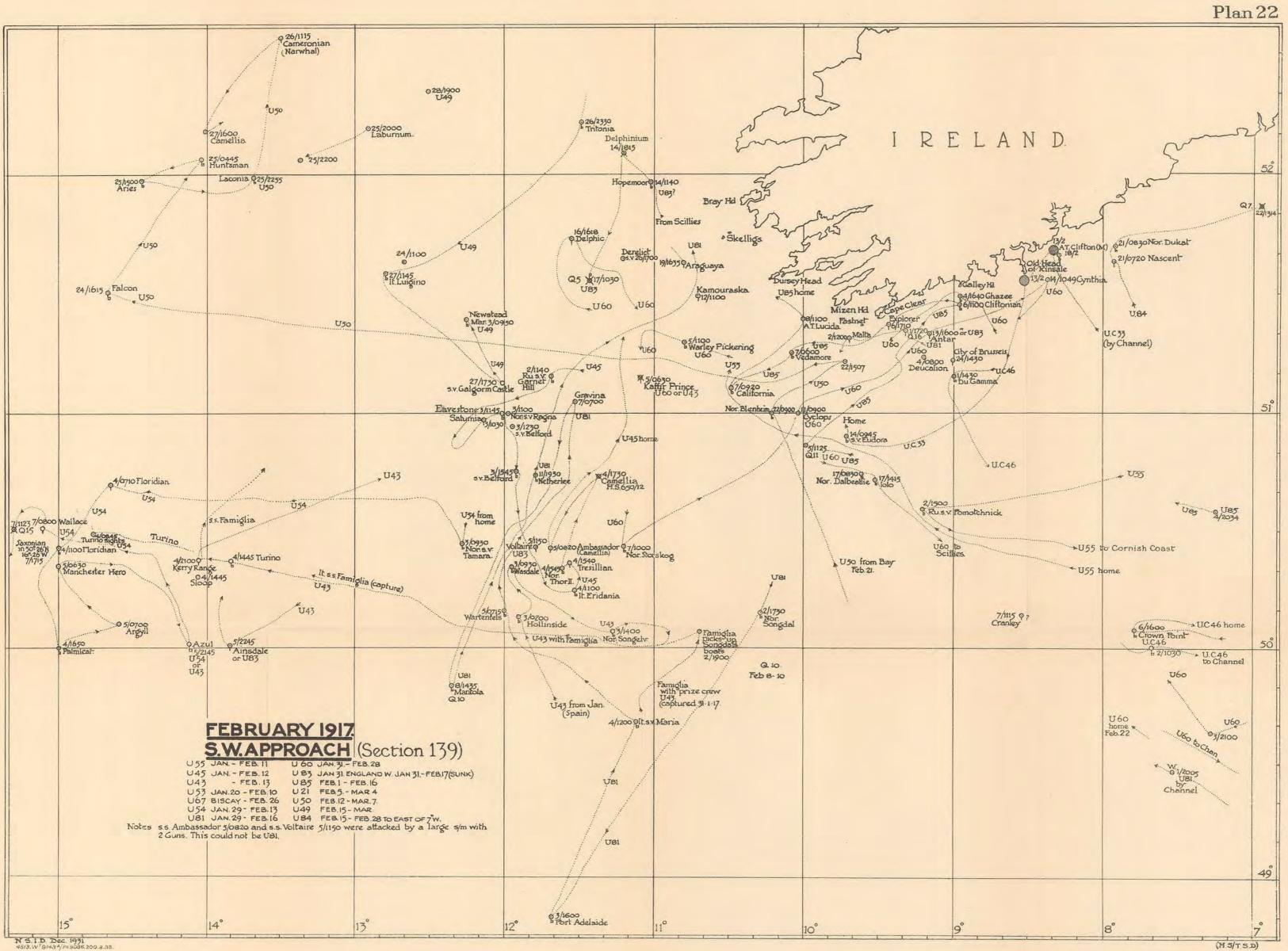
Hydro. Dept

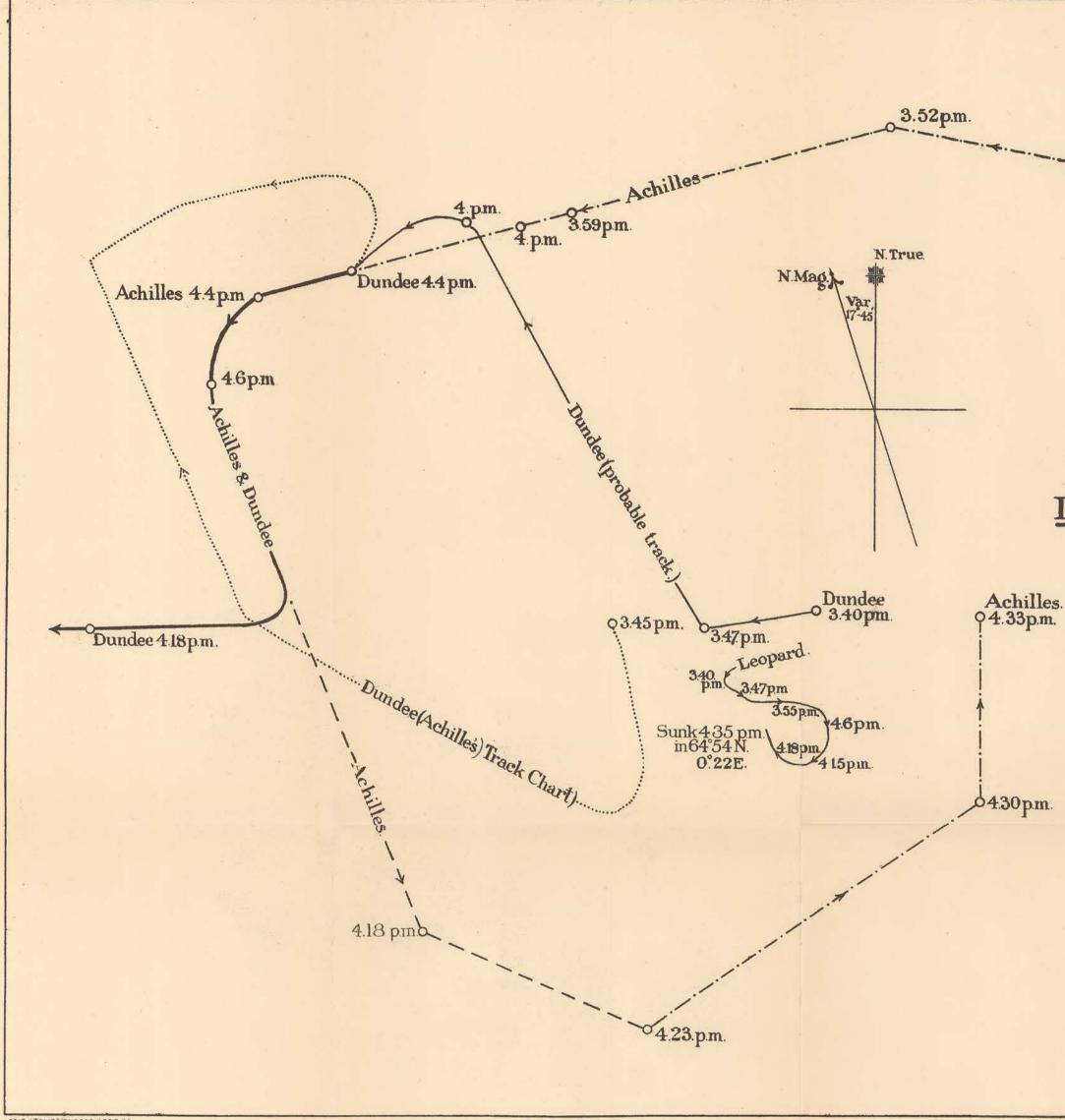




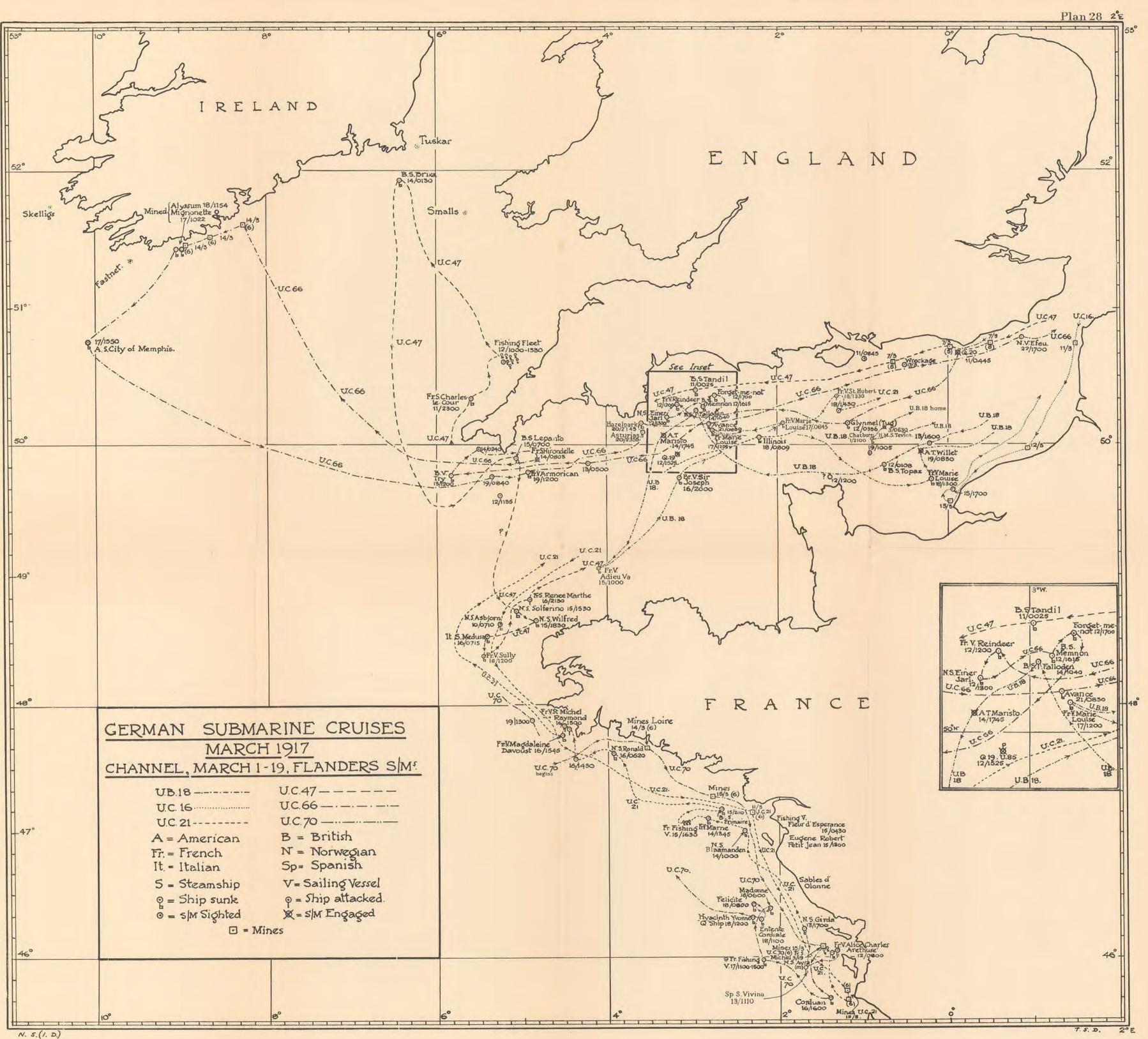
N.S.I.D. Dec 1931 4513.W. 91431/Pk 9036.200.8.33

H.S/T.S.D. Hydro.Dept

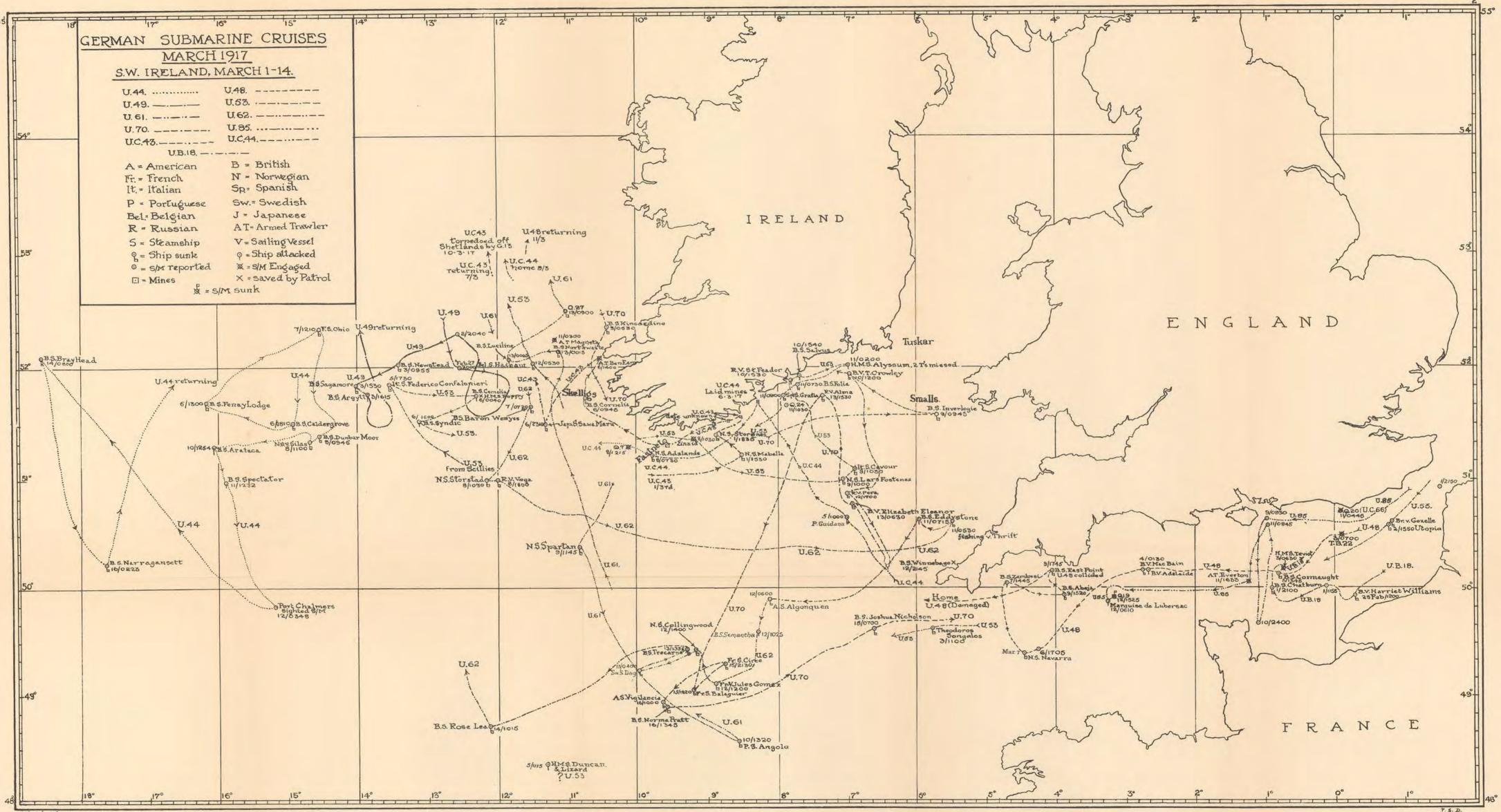




- Plan 25. 3.48p.m. Achilles. 3.40 p.m. 0 ACTION BETWEEN DUNDEE AND LEOPARD (GERMAN RAIDER) MARCH 16, 1917. 64.54N., 0.22E. Based on Track Chart (Achilles) H.S.878/33. Reports (Dundee) H.S.875/66.H.S.A.344/40. ----- Achilles. Dundee, probable track. Dundee's track in Achilles chart, (makes speed of Dundee 24 knots) Wind Scale 2"=1 Mile. Yards HERE 0 1Mile Hydro. Dept



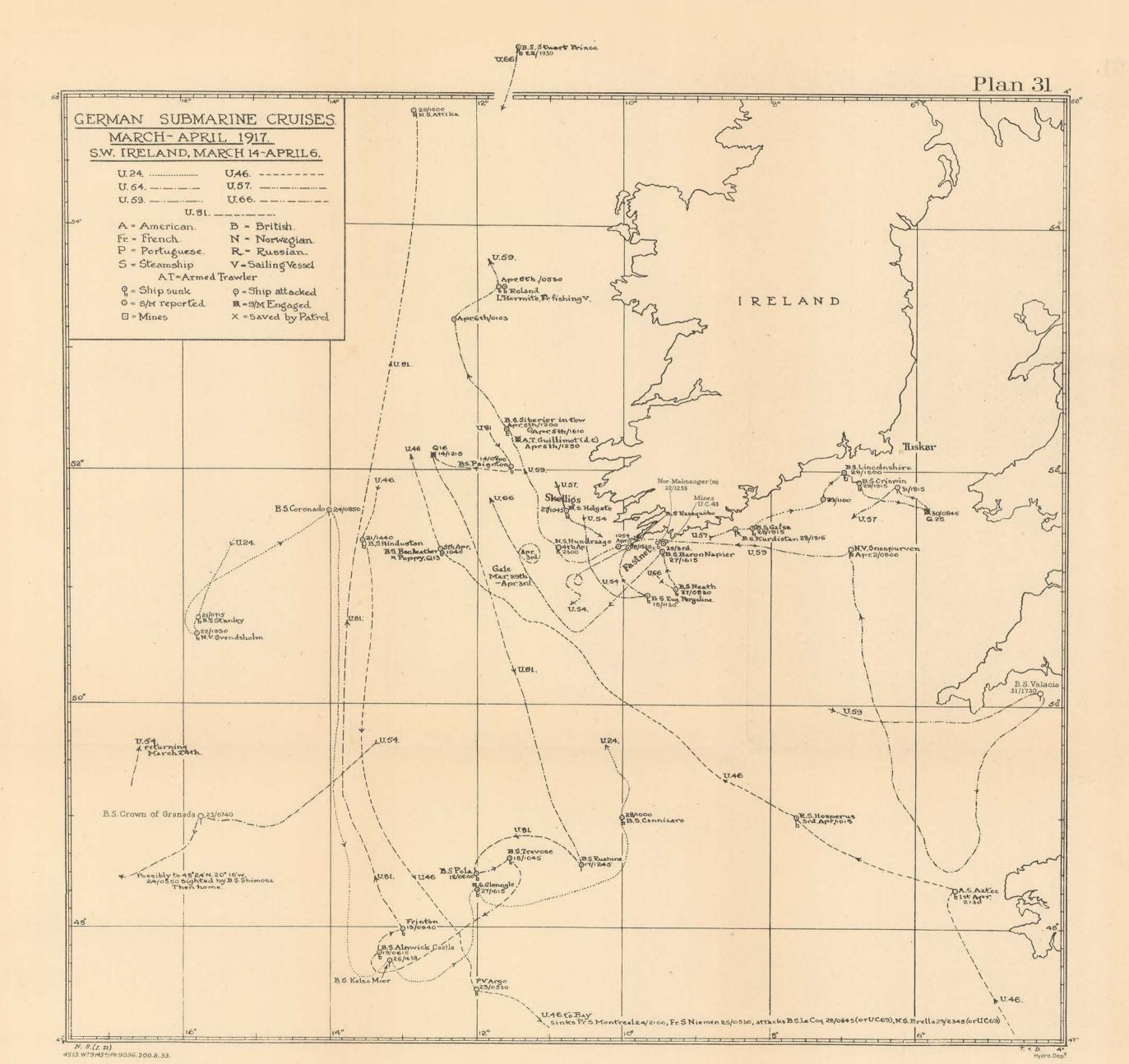


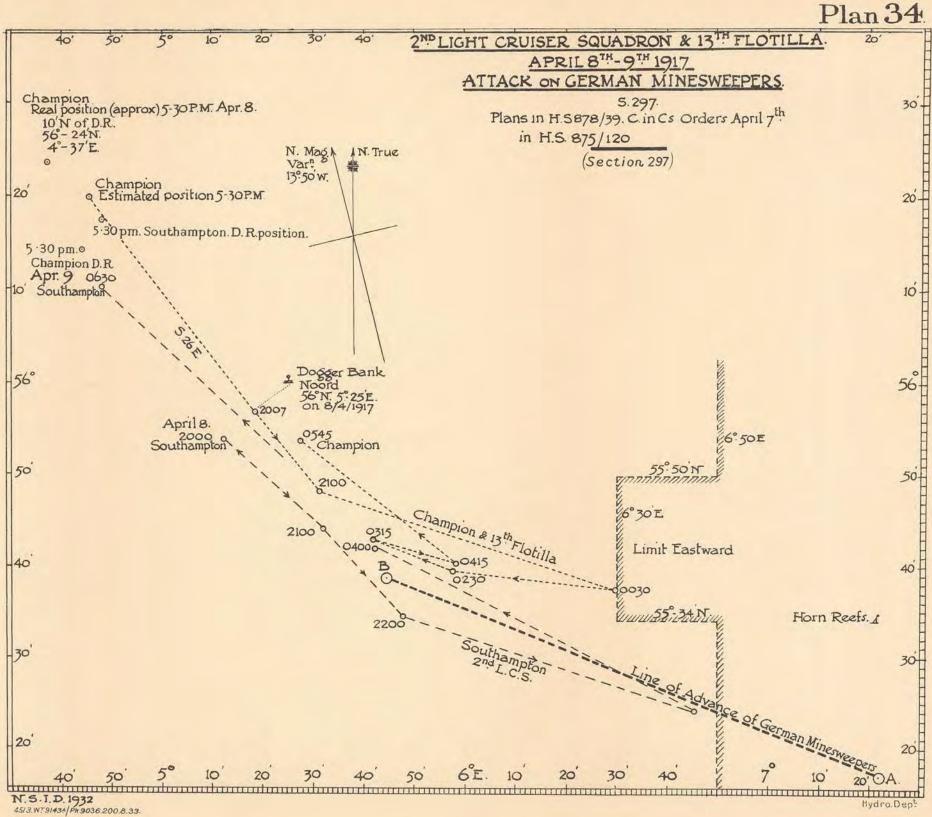


N. S.(I. D.)

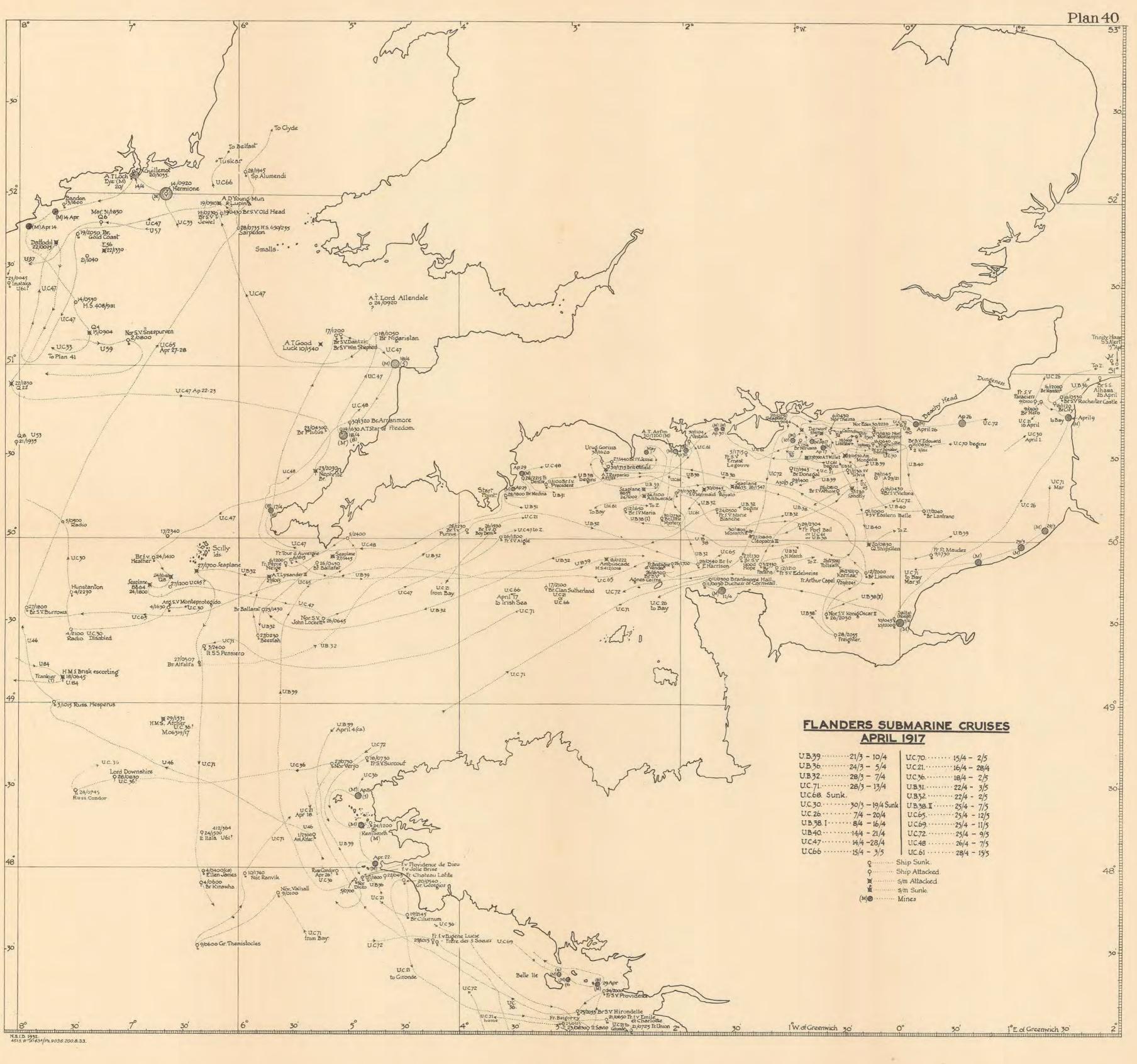
4513 W 191430/PF 9038 200.833

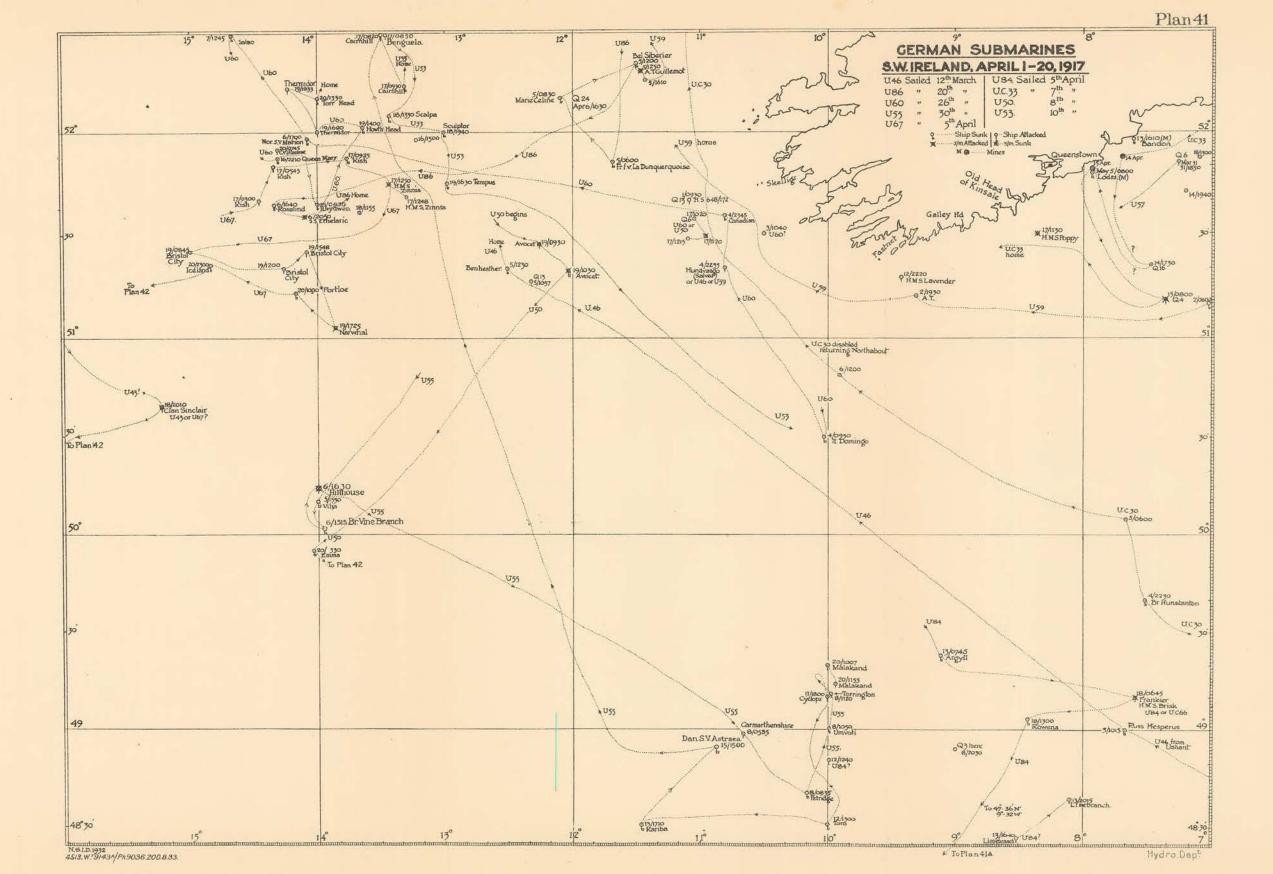






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Plan41A

