

# SUPPLEMENT To The London Gazette

Of TUESDAY, the 10th of FEBRUARY, 1948

# Published by Authority

Registered as a newspaper

# WEDNESDAY, 11 FEBRUARY, 1948

THE ATTACK ON THE TIRPITZ BY MIDGET SUBMARINES ON 22ND SEPTEMBER, 1943.

The following Despatch was submitted to the Lords Commissioners of the Admiralty on the 8th November, 1943, by Rear Admiral C. B. Barry, D.S.O., Admiral (Submarines).

# 8th November, 1943.

# Report on Operation "Source ".

Be pleased to lay before the Lords Commissioners of the Admiralty the following report on operations by X-craft in 1943 against the German main units in their protected anchorages on the Norwegian coast (Operation "Source").

#### Preliminary.

2. The X type of small submarine was evolved as a result of a study of the problem of how enemy main units could be attacked in their heavily defended and inaccessible anchorages.

3. On completion of the successful trials of the prototype X-craft (X.3), a contract was placed with Messrs. Vickers Armstrong, Limited, on 12th May, 1942, for the construction of six X-craft of a new and improved design, built for the purpose of attacking capital ships in harbour and surrounded by net defences.

4. At the same time, volunteers were called for for special and hazardous service and training commenced, using the prototype X-craft (X.3) and the second prototype (X.4).

5. The six operational X-craft (X 5-X.10) were delivered from Messrs. Vickers Armstrong between the 31st December, 1942, and 16th January, 1943, and preliminary, plans were put in hand and advanced training commenced with a view to attacking the German main units on the Norwegian coast in the Spring of 1943, before the hours of darkness became too short. The latest date for such an attack was considered to be the 9th March, 1943.

6. Unfortunately the time in hand proved insufficient to allow of the crews and craft being worked up to the high standard required for such an operation, and this was aggravated by a number of teething troubles in the craft themselves—troubles which were to be expected in a new design of weapon but which it had optimistically been hoped would not occur. Nor had the vital problem been solved of how to transport the X-craft to within striking distance of their target. Various methods had been tried before it was proved that the only profitable way was to tow them there by operational submarines. I was thus reluctantly compelled to inform the Vice Chief of Naval Staff on the 11th February, 1943, that the operation must be postponed until the Autumn.

7. The time gained proved invaluable, and that the decision to postpone the operation was the correct one, was proved beyond doubt by subsequent events: it ensured that, when the time came, both the crews and the craft were trained and perfected to that concert pitch so vital to such an operation.

8. On the 17th April, 1943, the 12th Submarine Flotilla was formed under the command of Captain W. E. Banks, D.S.C., R.N., to coordinate, under Admiral (Submarines), the training and material of the special weapons, including X-craft, and Acting Captain P. Q. Roberts, R.N., assumed command of H.M.S. BONAVENTURE, the depot ship for X-craft, under Captain (S), 12th Submarine Flotilla. The officer in charge of training was Commander D. C. Ingram, D.S.C., R.N.

9. On completion of preliminary trials and training, X.5-X.10 joined H.M.S. BONA-VENTURE for advanced training and working up at Port HHZ (Loch Cairnbawn, close north of Loch Ewe), where from the 4th July until the commencement of the operation full scale exercises and attacks against capital ships were carried out. This period was also devoted to perfecting the towing of X-craft by submarines.

I should like to place on record the great assistance given by the Commander-in-Chief, Home Fleet, in providing capital ships of his Fleet to act as target ships at Port HHZ during this period, and also to mention the part played by the Boom Defence organisation in surrounding these ships with nets and providing net defences and equipment for the necessary trials.

#### Planning.

to. In the meantime detailed plans for carrying out the operation were prepared by my Staff and operation orders were drawn up. The officer mainly responsible for this work was Commander G. P. S. Davies, R.N., of my Staff.

II. It was decided that the attack should take place at the earliest date the hours of darkness allowed, so as to complete the operation before the weather conditions deteriorated. It was also desirable to have a certain amount of moon, to assist the X-craft in their passage by night up the fiords. The period 20th-25th September, 1943, with the moon in the last quarter, was therefore selected, and Day D, the day on which the X-craft were if possible to be slipped from their towing submarines to proceed for the attack, was provisionally fixed for the 20th September, 1943.

12. To allow for the attack to be carried out at any of the protected anchorages used by German main units on the Norwegian coast it was necessary to provide operation orders for attacks on Alten Fiord, the Narvik area and on Trondheim, and Operation "Source" was divided into three operations, as follows:

			Operation
Operations	north of 70	o°N.	" Funnel "
Operations	between 67	° and	
-69° N.			" Empire
Operations	between 63	° and	•
65° N.	۰		"Forced ".

It was thus possible to direct operations against the enemy in whichever of these three areas he might be detected.

#### Photographic Reconnaissance.

. 13. Preliminary photographic reconnaissance of the anchorages, with special reference to net defences, was considered most necessary for the success of the operation, and last minute reconnaissances, to give the disposition of targets, essential.

14. This presented difficulties for the Alten area, which was outside the range of homebased P.R. aircraft. In May, 1943, I discussed this question with the Commander-in-Chief, Home Fleet, who was fully in agreement with me on the importance of establishing reliable P.R. cover for the area. On 12th May, 1943, he addressed a signal to Admiralty and repeated to Admiral (Submarines) and Headquarters, Coastal Command, in which he proposed that the necessary British air crews and photographic, personnel should base sent to North Russia for this most important duty.

15 Agreement was reached with the Air Ministry by 30th July, and Admiral Fisher (in Moscow) was asked for his views after consultation with the Russian authorities. 16. As a result, and after agreement with the Russians, it was agreed to send a British photographic unit to Murmansk by destroyer, to run a shuttle service between the United Kingdom and North Russia by Mosquito aircraft for the preliminary reconnaissances, and to base Spitfires at Vaenga for the last-minute sorties. In addition, Catalina aircraft would be available to run a shuttle service to and from North Russia with photographs.

17. All preliminary arrangements for putting this into operation had been made by the 18th August and negotiations concluded with the Russians on the question of visas. On the 27th August, H.M. Ships MUSKETEER and MAHRATTA sailed from Faroes with R.A.F. photographic personnel and stores and arrived im Kola Inlet on the 31st August.

18. The weather was still to be reckoned with, however, and although the Mosquito aircraft for the preliminary reconnaissances had been ready to leave the United Kingdom from the 21st August, weather conditions were never satisfactory for this aircraft to carry out her part of the plan.

19. The three Spitfires, however, arrived at Vaenga on the 3rd September, exactly eight days before Operation "Source" was due to sail from Port HHZ, and the first sortie was flown on the 7th September.

20. The subsequent reconnaissances flown by this unit were invaluable to the operation. Full details of the dispositions of the enemy units and net defences were signalled from Russia and given to all the personnel taking part before they left harbour. No actual photographs of the preliminary reconnaissances were available for the final briefing as, in spite of every effort to obtain them in time, the first photographs taken by this unit did not arrive until a few hours after the X-craft had sailed, but this did not in fact matter as the relevant information was complete in the signalled report.

#### Preliminary Movements.

21. For security reasons it was decided that the operation should sail from Port HHZ (Loch Cairnbawn), where the X-craft taking part had been working up from H.M.S. BONAVEN-TURE since the 4th July, 1943.

22 H.M S. TITANIA was sailed for and arrived at Port HHZ on the 30th August to act as depot ship to the submarines taking part, and H M. Submarines THRASHER, TRUCU-LENT, STUBBORN, SYRTIS, SCEPTRE and SEANYMPH arrived between the 31st August and 1st September. These submarines had all been fitted with special towing equipment.

23. In addition, H.M. Submarines SATYR and SEADOG, also specially fitted for towing, were held at 24 hours' notice at Scapa as reserves.

24. Towing trials, and trials of changing over passage and operational crews between X-craft and submarines at sea, were carried out between the 1st and 5th September; then, after final swinging for compasses, all X-craft were hoisted inboard of H.M.S. BONAVEN-TURE for the fitting of side charges, storing, final preparations and the full briefing of crews

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and the Commanding Officers of the submarines.

This briefing was carried out by the officer of my Staff (Commander Davies) who had been responsible for the planning.

#### Security.

25. Special security measures at Port HHZ were increased as from the 1st September. No leave was allowed, none but specially selected officers and ratings were permitted to leave the area, and all ships present were retained in the port until the completion of the operation. It is considered that the security of the operation was well maintained.

#### Departure for the Operation.

26. Soviet reconnaissance on the 3rd September had shown that TIRPITZ, SCHARN-HORST and LUTZOW were present in the Alten area, and it appeared likely therefore that the operation would be carried out in that area (Operation "Funnel"). On the 7th September, however, the first Spitfire sortie showed only LUTZOW present, and the TIRPITZ and SCHARNHORST were later reported off Ice Flord, Spitzbergen.

27. In order for Day D to be the 20th September in the case of Operation "Funnel," It was necessary for the X-craft to be sailed from Port HHZ on 11th-12th September. Furthermore it was not desirable to postpone Day D by more than two or three days owing to the waning moon. It was therefore vital to obtain the re-disposition of the main units as soon as possible.

28. However, visual reconnaissance at 1000A on the 10th September confirmed the return of the TIRPITZ and SCHARNHORST to Alten Fiord, and the SB.N.O, North Russia that evening signalled the exact positions of both ships in their berth in Kaafiord. LUTZOW was not seen.

29. I arrived at Port HHZ on the morning of the 10th September, to see the crews before they sailed and to witness the start of this great enterprise.

30. On the following morning I signalled to Admiralty, Commander-in-Chief, Home Fleet, and Admiral Commanding Orkney and Shet-lands, my intention to carry out Operations "Source" and "Funnel", Day D being 20th September.

31. Submarines, each with an X-craft in tow, 

1600Z, 11th September—
TRUCULENT and X 6.
SYRTJS and X 9.
1800Z, 11th September—
THRASHER and X.5.
2000Z, 11th September—
SEANYMPH and X.8.
2130Z, 11th September—
STUBBORN and X.7.
1300Z, 12th September—
SCEPTRE and X.10.

The operational crews of the X-craft were embarked in the towing submarines and the A 2

X-craft were manned for the passage by passagè crews.\*

#### The Passage.

32. The passage was uneventful from the 11th to 14th September. Good weather was experienced and all submarines made good speed with their X-craft dived in tow. X-craft surfaced to ventilate three or four times every 24 hours for approximately 15 minutes during which time speed was reduced. The average speed made good over this period was approximately:

10 knots.

 $8\frac{1}{2}$  knots.

33. With the arrival of photographs, flown to this country from Russia by Catalina, of the preliminary Spitfire sorties, a detailed interpretation of the net defences was carried out and on 15th September the results were signalled to the submarines taking part in the operation. The presence of LUTZOW in Langford was confirmed by P.R. on the 14th September which also showed TIRPITZ and SCHARNHORST in Kaafiord, and the geographical positions of these ships were signalled to the submarines and Target Plan No. 4 ordered.

Target Plan No. 4 allocated X.5, X.6 and X.7 to attack TIRPITZ, X.9 and X 10 to attack SCHARNHORST, and X.8 LUTZOW.

#### 15th September.

34. At 0400Z on the 15th September, when X.8 was being towed by SEANYMPH at 8 knots, the tow parted X 8, who was dived at the time, surfaced five minutes later, but, although the visibility was estimated at 5 miles, there was no sign of the SEANYMPH X.8's estimated position at that time was latitude  $69^{\circ}$  04' N. 08° 14' E. At 0430Z, X 8 set course 029°, speed 3 knots, on main engines.

35. The fact of the tow parting was not immediately apparent to the SEANYMPH, and it was not until ofooZ, when X.8 was due to surface to ventilate, that it became apparent.

Admiratty footnote -

\* The Commanding Officers of the towing submarines, and of the operational and passage crews of the X-craft were

TRUCULENT		Lieut R. L. Alexander, D.S.O., R N
X. 6	(Passage)	Lieut. D Cameron, R N R, Lieut A Wilson, R N V R.
Syrtis		Lieut M H. Jupp, DSC, R N.
Х9	(Passage)	Lieut T L Martin, R N.; Sub-Lieut E Kearon, R N V.R.
THRASHER		Lieut. A R. Hezlet, D.S.C., R N.
X. 5		Lieut. H Henty-Creer, R.N V.R.:
	(Passage)	Lieut J. V Terry-Lloyd, S.A N.F.
Seanymph		Lieut J P H. Oakley, DSC, R.N.
X. 8		Lieut B M McFarlane, R A N.,
	(Passage)	Lieut. J Smart, R N V.R.
Stubborn X. 7		Lieut A. A. Duff, R N. Lieut. B. C. G. Place, D.S.C. R.N.
	(Passage)	Lieut. P. H. Philip, S A N.F.
Sceptre		Lieut. I. S McIntosh, M.B E, D S C, R.N.
X. 10 , 7 ;		Lieut K. R. Hudspeth, R.A N.V.R.,
<b>.</b> '	(Pāssage)	Sub-Lieut. E. V. Page, R N.V.R.

SWIS 70.1

SEANYMPH thereupon turned back on her track and set course 209° to search. The weather at 1200Z, 15th September, was reported as: Wind S. to S.E. 4, sky 0, sea 4-5, visibility 7.\*

36. At 1213Z STUBBORN, towing X.7, and on the adjacent route to SEANYMPH and X.8, sighted what was at that time believed to be a U-boat in an estimated position 68° 51' N. 8° 34' E. and dived, surfacing at 1323Z.

37. At 1550Z, while proceeding at 7 knots, X.7, in tow of STUBBORN, broke from her X.7 surfaced immediately and the tow. tow was passed. At 1700Z auxiliary STUBBORN again proceeded with X.7 in tow

38. At 1630Z, X.8 sighted and closed STUBBORN who was at that time getting X.7 in tow again, and at 1718Z STUBBORN, with X 7 in tow and X.8 in company, proceeded to look for SEANYMPH. No contact was made, however, and at dusk (1900Z) STUB-BORN proceeded northwards with X.7 and X 8. STUBBORN reported the situation by W/T to Admiral (Submarines) at 1954, who passed the information to SEANYMPH.

39. Meanwhile, SEANYMPH, having searched the area unsuccessfully, passed a signal to Admiral (Submarines) at 2045Z informing him of the loss of X.8. At 2151 she received Admiral (Submarines') signal referred to in paragraph 38 and proceeded to intercept.

40. X 8 proceeded in company with STUB-BORN and X.7 until 2359, when contact was lost.

## Thth September.

The reason was explained at 0400Z, when it was found that since ooo1Z, X.8 had been steering 146° instead of 046° (the result of a phonetic error in passing orders for the course).

41. At 0300Z, dawn showed to STUBBORN that there was no X.8; but at 0315Z a submarine was sighted and identified as SEA-NYMPH, in position 69° 35' N. 10° 16' E. All relative information was passed to SEANYMPH who proceeded to look for her errant charge, STUBBORN and X.7 proceeding to the northward.

42. Between 1200 and 1350Z, SEANYMPH sighted and spoke SCEPTRE, and at 1700Z she made contact with X.8. By 2005 she had her once more in tow and, as the weather was favourable, transferred to her the operational crew.

43. In the meantime there had been another case of tow-parting which was not to have such a happy ending. Until o145Z on the 16th, in estimated position  $70^{\circ}$  49' N. 11° 40' E., SYRTIS and X.9 had had an uneventful passage. At 0120Z, X.9 dived after her period on the surface for ventilating and charging. Speed was then gradually increased to  $8\frac{1}{2}$  knots. SYRTIS reports the weather at 0001Z/16 as: Wind S.S.E. 3, sea and swell 2-3.† SYRTIS decided not to bring X 9 to the surface at 0300 after so short a spell dived but continued until o855Z, when speed was reduced to 5 knots.

Admiralty footnote -

- \* Wind force 4-moderate breeze (11-15 m p h ) Sky o-overcast

At 0907Z, three signals-underwater-exploding were fired to surface X.9. X.9 did not surface and at 0920Z the tow was hauled in and found to have parted. SYRTIS turned to the reciprocal course at 0955Z, to return as soon as possible to the vicinity of where it was thought X.9 might have broken adrift. From the log readings and fuel consumption this was estimated to have been between 0145 and 0300Z. However, no contact was made with X.9; but at 1545Z SYRTIS sighted a well defined oil track which it was considered might have come from an X-craft, running in a direction 088°-090°, which was the direct course for the slipping position, 200 miles distant.

44. Subsequent search revealed no sign of X.9 and no further news has been received of her. It can only be hoped that the Passage Commanding Officer (Sub-Lieutenant E. Kearon, R.N.V.R.) made the Norwegian coast, (Sub-Lieutenant scuttled his craft, and made his way ashore with his crew. It is not considered that X.9 took any part in the attack. The passage crew were not trained for it, neither did they have sufficient information to carry it out.

#### 17th September

45. The regrettable loss of X.9 was not known to Admiral (Submarines) until some days later, as at the time the loss was dis-covered, SYRTIS was in an area where, by the orders, it was forbidden to break W/Tsilence. At o143Z therefore, having aban-doned the search, SYRTIS proceeded north to pass a signal by W/T from north of 73° North.

46. Meanwhile the remaining five submarines were proceeding with their X-craft in tow, and TRUCULENT and THRASHER, neither of which had had any difficulties, both made their landfalls from the vicinity of their ordered landfall positions during the day. At approxi-mately o600Z STUBBORN and SEANYMPH sighted each other in the vicinity of position 71° 04' N. 15° 56' E., and later, between 1447 and 1508Z, STUBBORN and SEANYMPH were again in contact and spoke to each other by S.S.T.‡ It was comforting to STUBBORN to learn that X.8 had been met.

47. At 0725Z X.8 experienced some difficulty in maintaining trim. Trim became worse as the day went on, air could be heard escaping from the starboard side charge and the craft took up a list to starboard. It was apparent that the buoyancy chambers of the starboard charge were leaking. At 1630Z, with the compensating tank dry and No. 2 main ballast fully blown, and trim still difficult to hold, the Commanding Officer of X.8 (Lieutenant B. M. McFarlane, R.A.N.) decided to jettison the starboard charge, and this was set to "safe" and released at 1635Z in about 180 fathoms. In spite of the "safe" setting, however, the charge exploded at 1650Z, about 1,000 yards astern of X.8, in tow of SEANYMPH. Both vessels were dived at the time. The explosion was loud but caused no damage.

48. Although this charge had been released, X.8 still had difficulty in maintaining trim and now had a list to port, indicating that the port charge also had flooded buoyancy chambers; and the Commanding Officer decided he must jettison it too. Before doing so X.8 surfaced and, distrusting the "safe" setting, set the

‡ S.S.T.—submarine sound signalling apparatus.

Admiralty footnotes —

charge to fire 2 hours after release. It was released at 1655Z, as was verified by the Commanding Officer. At  $1840Z-1\frac{3}{4}$  hours after release—by which time, from log readings and revolutions taken by SEANYMPH, X.8 was distant  $3\frac{1}{2}$  miles from the position of release, the charge detonated astern with tremendous force. This caused such damage to X.8 as to flood the "wet and dry" compartment, distorting the doors to this compartment, fracturing pipes, and generally causing such damage to the craft that she was no longer capable of diving. The explosion also caused a number of lights to be broken in SEANYMPH.

49. It is not clear why the second explosion caused such damage at an apparent range of  $3\frac{1}{2}$  miles while the first explosion, only 1,000 yards away, did none. Both charges had been dropped in approximately the same depth of water (180 fathoms). It may be that only partial detonation occurred in the first charge, which had been set to "safe." Whatever the reason the force of the second explosion would appear to have illustrated the efficiency of the charges. I find it hard to believe that the explosion was in fact  $3\frac{1}{2}$  miles away; but whatever the horizontal range was, there is no doubt about the depth of water, so that in any event the result of the explosion was indeed remarkable.

50. The 17th September was the first day (D-3) on which the transfer of crews was to take place if the weather permitted; but the weather had deteriorated and by the evening the wind was from the south-west, force 4, with a sea and swell of 4-5, and it was too rough to make the change-over.

51 The P.R. on the 15th September had shown no change in the disposition of the targets, and submarines were so informed by signal on 17th September, which also confirmed the Target Plan as No. 4. Further information on the nets round LUTZOW and the  $A/S^*$  net across Langford was also passed by signal this day.

# 18th September.

52. X.8 informed SEANYMPH at daylight of the full particulars of her damage; and as she could now serve no useful purpose in the operation and, if sighted on the surface, might Officer, compromise it, the Commanding H.M.S. SEANYMPH, decided to embark her crew and scuttle her. In anticipation of the possibility of just such a situation, Admiral (Submarines) had transmitted a signal on 16th September, informing the Commanding Officer, H.M S SEANYMPH, that if he considered it necessary in the interests of the general security of the operation as a whole to scuttle X.8, such action would have his full approval.

53. By 0345Z the crew had been embarked from X.8 and the craft sunk in position  $71^{\circ}$  41.5' N. 18° 11' E.

54 I consider that the Commanding Officer of X.8 acted correctly in releasing the side charges when it became apparent that they were flooded, and that the Commanding Officer. H.M.S. SEANYMPH's decision to sink X.8, to avoid compromising the operation, was the correct one.

55. After sinking X.8, SEANYMPH proceeded to the north of 73° North to report by W/T.

56. At 0555 SYRTIS, having transmitted the signal reporting the loss of X.9, set course for her patrol area. SYRTIS's signal was never received, and it was not until the 3rd October, when Admiral (Submarines) received SYRTIS's signal timed 2001A/2nd, that is was known that X.9 had broken adrift from her tow and had not been seen since 16th September, and therefore had not taken part in the attack.

57. Weather conditions had improved slightly by dusk on the 18th, and at 2015Z STUBBORN, in position 70° 57' N. 20° 35' E., decided to transfer the operational crew to X.7. The change-over was successfully completed by 2124Z. The remaining submarines with Xcraft in tow—TRUCULENT with X.6, THRASHER with X.5 and SCEPTRE with X.10—decided that the weather was still too bad to effect the transfer.

58. at 2128Z STUBBORN, on going ahead after changing over the crews, parted her tow. The main tow had already parted, on the 15th September, and with the auxiliary tow also parted, it was necessary to use a  $2\frac{1}{2}$ -inch wire spring. Some difficulty was experienced in passing this, but at 2345Z STUBBORN went ahead, only to find that the pin of the screw shackle of X.7's end of the tow had come adrift and the tow had to be passed afresh. It was not until 0125Z on 19th September that STUBBORN was able to go ahead with X 7 in tow.

#### 19th September.

59 At 0855 on 19th September, Admiral (Submarines) received SEANYMPH's signal reporting the scuttling of X.8 and that she was herself returning to Lerwick. Although SEA-NYMPH now had no X-craft to recover, I decided she could still assist in the recovery of other craft or might be required to proceed on patrol to intercept enemy forces should they be "flushed" by the X-craft attack and try to escape to the southward. SEANYMPH was therefore ordered to patrol in the vicinity of position 71° 25' N. 17° 16' E., until the 21st September, when she was to proceed to her patrol sector to assist in the recovery of X-craft. I decided not to inform the other submarines taking part that X 8 had been scuttled, as to do so might have had a slightly dampening effect, nor to alter the Target Plan though it meant that LUTZOW (who was the target for X.8) would not be attacked

60. SCEPTRE and SYRTIS made their landfalls from the vicinity of their ordered landfall positions during the day and THRASHER, TRUCULENT and SCEPTRE (the weather having moderated since the previous evening) all successfully transferred their crews after dark.

61. At 1843Z SYRTIS from position 71° 03' 40" N. 22° 13' E. sighted a submarine bearing 308°, 2 to 3 miles, which dived five minutes later. From an analysis of track charts and other patrol reports, this was probably a U-boat.

# 20th September: Day D.

62. The position now was that the operational crews of the four X-craft still remaining had all been transferred successfully. TRUCULENT,. THRASHER, SCEPTRE and SYRTIS—the latter with no X-craft—had all made successful landfalls and were in their patrol sectors. STUBBORN, who had been delayed by parting tows but with X.7 still in tow with her operational crew on board, was closing the land to make her landfall. SEANYMPH, having sunk X 8, was on patrol some 60 miles to the westward of Alten Fiord.

63. At 0300Z, SYRTIS sighted a submarine on the surface bearing 030° and five minutes later this was identified as a U-boat: position 71° 00' N. 22° 10' E., course 235°, proceeding at about 9 knots at a range from SYRTIS of about 3,500 yards. In order not to compromise the operation in any way submarines had been forbidden to attack anything below capital ships while on passage out to or in their patrol areas off Alten, and the Commanding Officer of H.M.S SYRTIS had no option but to let this tempting target pass by, at 1,500 yards range and a sitting shot. The U-boat, which had originally appeared to be making for the entrance to Soroy Sound, altered to 105° at 0315Z and disappeared in the direction of Tarhalsen Point, presumably entering the Leads round the eastern end of Soroy Island and possibly being bound for Hammerfest

This may have been the same U-boat previously sighted by SYRTIS on the evening of the previous day. It reflects credit on the lookout kept by our submarines that, with six of them in the vicinity and four of them with X-craft in tow, none were sighted. A single sighting might have compromised the operation, or at least led to A/S activity in the area.

64. At 0105Z STUBBORN was in position 70° 45' N 21° 03' E. when she sighted a floating mine. The mine itself passed clear of STUBBORN but the mooring wire caught in the tow astern and slid down the tow until it became impaled on the bows of X.7. This brought the Commanding Officer of X.7 (Lieutenant B. C. G. Place, D S.C., R.N.) on to the casing, where by deft foot-work he was able to clear this unpleasant obstruction, remarking as he did so that this was the first time he had kicked a mine away by its horns.

After this interlude STUBBORN proceeded to make her landfall off Soroy and set course for her slipping position.

65. The weather had by now improved considerably, the wind had dropped to a southeasterly breeze, the sea had gone right down and visibility was good, enabling all submarines to fix their positions accurately. All was now staged to slip for the attack, and between 1830 and 2000Z the four X-craft—X.5, X.6, X.7 and X 10—were slipped from THRASHER, TRUCULENT, STUBBORN and SCEPTRE respectively from their slipping positions and proceeded independently into Soroy Sound. The submarines then withdrew to seaward within their patrol sectors

66. That four out of the six X-craft which set forth from Port HHZ should have made these passages, varying between 1,000 and 1,500 miles, in tow of submarines, without major incident, to be slipped from their exact positions at the time ordered ten days later, was more than I had ever anticipated.

67. The Commanding Officer, H.M.S STUBBORN (Lieutenant A. A. Duff, R.N.), deserves special mention for his determination in the way he battled against the difficulties of parted tows and brought his X-craft to the right position at the right time in spite of everything. 68. The passage crews of the X-craft deserve great credit for the way they stuck the long and weary passage and for the efficient state of the craft when they were turned over to the operational crews. The passage crews played a big part in the subsequent success of the operation.

69. I consider this passage a fine example of seamanship and determination by all concerned.

#### The Attack

70. The crews of all four X-craft were reported to be in great spirits and full of confidence when they parted company with their towing submarines. The Commanding Officers all reported that their craft were in an efficient state when they took over from their passage crews except that X.10 had a defect in her periscope hoist motor and in the motor of her " wet and dry " pump, and a slight gland leak; however, these defects were accepted by the operational crew, who were confident that they could remedy them.

71. As X.5, X.6 and X.7 have not returned from the operation, it is impossible to trace their movements in their approach to and sub-sequent attacks. The target was TIRPITZ in each case. The intentions of the Commanding Officers were, after passing across the declared mined area to the westward of Soroy on the surface during the night 20th/21st September, to proceed dived up Stjernsund during daylight on the 21st September in order to reach Alten Fiord by dusk: then to proceed southward to charge batteries in the vicinity of the Brattholm group of islands, about four miles from the entrance to Kaafiord All three had intended to be at the entrance to Kaafiord shortly after daylight on 22nd September. To give all X-craft ample time to reach their objective, and to guard against loss of surprise through one X-craft attacking before the remainder, X-craft were forbidden by their orders to attack before 0100Z, 22nd September, but were free to do so at any time after that, setting their charges in accordance with the firing rules table given in the operation orders. As all X-craft Commanding Officers had agreed between themselves not to set their charges to fire in the 0400-0500 firing period, it was expected that they would carry out their attacks somewhere between 0500 and 0800Z, laying their charges set to fire about 0830Z on 22nd September, by which time it was hoped that they would have been able to withdraw from the area.

72. That these three very gallant Commanding Officers succeeded in carrying out their intentions and pressing home their attacks to the full, I have no doubt; but what difficulties and hazards they were called on to negotiate in the execution of the attack are not known; nor is it known how some of them (if the German wireless broadcast is to be believed) came to be taken prisoner. It is certain that outstanding devotion to duty and courage of the highest order were displayed The full story of this gallant attack must remain untold for the time being.\*

Admiralty footnote -

\*there further information on the attacks by X 5, X 6 and X 7 see Admiral (Submarines) supplementary despatch dated and February, 1944, compiled from information received from German prisoners subsequently taken and other sources.

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# SUPPLEMENT TO THE LONDON GAZETTE, 11 FEBRUARY, 1948

# Narrative of X.10

73. X.10 (Lieutenant K. R. H R.A.N.V.R.) was slipped from R. Hudspeth, H.M.S. SCEPTRE from the slipping position.... 70° 40' N. 21° 07' E.-at 2000Z on 20th September, and after a trim dive proceeded on the surface at full speed across the declared mined area in the direction of Stjernsund. The en-trance to Stjernsund was identified at 2300Z from a distance of 20 miles, and at daylight (0205Z) on 21st September, X.10 was in a position 5 miles from the west point of Stjernoy Island, when she dived.

74. Difficulty was experienced in trimming, and the defect to the periscope motor which was present on taking over from the passage Further electrical crew had become worse. defects also developed and the gyro compass failed. Lieutenant Hudspeth therefore decided to proceed into Smalfiord on the north coast of Stjernoy to remedy these defects. The choice of Smalfiord was made as it was considered there was less risk of detection there than in one of the small fiords in Stjernsund in which it had been the original intention to bottom during daylight on 21st September.

75. X.10 arrived in Smalfiord at 0700Z on 21st September, bottomed at the head of the fiord on a sandy bottom and spent the day making good defects. By 1750Z the defects had been sufficiently overcome to warrant proceeding-though they were by no means cured -and X.10 proceeded out of Smalford and at 2035Z entered and proceeded up Stjernsund, keeping close to the north shore. The only sign of activity was a small ship of fishing craft type which was sighted with navigation lights burning at 2135Z. She appeared to enter Storelokker Fiord.

76. Alten Fiord was reached by 2320Z on 21st September, and intending to press on so as to be close to the entrance of Kaafiord by daylight on 22nd September, course was shaped to the southward, keeping to the eastern side of the fiord.

77. At 0110Z on 22nd September it was realised that the gyro compass was wandering. At 0135Z, the steaming lights of a vessel were sighted ahead, approaching X.10; and at 0140Z, X.10 dived to avoid being sighted. On diving it was found that the damping bottles of the gyro compass were not working, and on raising the magnetic compass the light refused to function. As this light can only be replaced by taking off the top cover from outside, the result of these two defects was to leave X to with no compass whatsoever. At 0150ZX.10 came to periscope depth; but on attempting to raise the periscope a brisk fire developed from the periscope hoisting motor, filling the craft with smoke, and Lieutenant Hudspeth was forced to come to the surface to ventilate and clear the craft of fumes. Dawn was then breaking and X.10 was almost within sight of the entrance to Kaafiord.

78. Lieutenant Hudspeth then decided that, with the craft in its then condition, with no compass and no means of raising or lowering the periscope, he was in no state to carry out his attack. He therefore decided to bottom before daylight set in, in the only possible position within reach at the time. At 0215Z on 22nd September he bottomed in 195 feet

half a cable S.E. of Tommerholm Island, 41 miles from the entrance to Kaafiord, and took immediate steps to make good defects.

79. At 0830Z-the exact time at which an explosion of charges might have been expected from the other craft attacking-two very heavy explosions were heard at a few seconds inter-Five minutes later-at 0835Z-nine val. further heavy explosions were heard at short and irregular intervals. These were followed between 0,000 and 1000Z by a burst of about twelve lighter explosions, which were repeated. but this time louder and closer, at about 1100Z.

80. The two heavy explosions at 0830Z would appear undoubtedly to have been one or more of the X-craft charges detonating, while the lighter explosions between 0000 and 1000 and at 1100 would seem probably to have been depth charges. It is difficult to understand the nine heavy explosions at 0835Z. They might have been some form of controlled mine, either in the nets or in the entrance, or depth charges: though it does not seem probable that craft carrying depth charges could have been got under way in so short a time. The possibility of their having been other X-craft charges should not be discounted, echoes and a possible miscounting of the number of explosions heard being responsible for the figures given.

81. After spending the whole of daylight on 22nd September on the bottom, the defects in X.10 had still not been overcome; and Lieutenant Hudspeth reluctantly decided to abandon any idea of attacking and to withdraw. His decision was influenced by the explosions he had heard during the day, which convinced him that other craft had carried out their attack. At this time he still thought that all five of the other X-craft had been able to attack: he had no knowledge of the sinking of X.8 or the loss of X.9.

82. I consider Lieutenant Hudspeth's decision to abandon the attack was in every way correct. To have made the attempt without a compass, and with a periscope which could not be operated and must remain in the fully raised position, would have made any chance of success remote indeed. With the attack already compromised it would have been doomed to failure from the outset and would merely have been an unnecessary loss of valuable lives.\*

on 22nd 83. X.10 surfaced at 1800Z September and made for deep water. At 1825Z both charges were jettisoned in 135 fathoms, set to "safe". X.10 then proceeded on main engines out of Alten Fiord. A darkened vessel was sighted at about 2100Z off the entrance to Langfiord but was lost to sight in a snow squall. The western end of Stjernsund was reached by 2350Z. As it was impossible to cross the declared mined area before daylight, X.10 proceeded into Smalfiord, where she arrived at 0215Z on 23rd September. As the fiord was completely deserted and snow

Admiralty footnote — \* It is now known that on the morning of 22nd September, SCHARNHORST was returning to her anchorage in Kaafiord, after carrying out gunnery exercises in Alten Fiord, when she received a signal stating that TIRPITZ had been torpedoed She there-upon put about and proceeded to Langford, so it is clear that in any case X to would not have found-her quarry her quarry

squalls frequent, X.10 secured alongside the shore with her grapnel, considering the risk of detection negligible with shore and craft covered with snow. The opportunity was taken to get some rest and try to make good some of the defects.

84. At 1100Z on 23rd September after the light in the projector compass had been replaced and with the periscope lashed in the "up" position, X.10 proceeded out of Smalford and dived towards the southern end of the minefield. Surfacing at 1800Z, she crossed the declared area at full speed on the engines towards the recovery position, where it was hoped a submarine would be encountered.

85. Recovery position F.B. was reached about 2300Z on 23rd September and a search was carried out. X.10 patrolled in the vicinity of the recovery position all day 24th September, spending some time on the surface in the hope of being sighted; and that night she carried out a further search. At 0430Z on 25th September, when no contact had been made, X.10 set course for Sandoy Fiord, on the northern coast of Soroy Island. This was reached at 1200Z and by 1525Z X.10 was secured alongside the beach in Ytre Reppafiord, on the northwest of Sandoy Fiord. This bay was completely deserted and here the crew got some much needed rest.

86. X.10 remained in Ytre Reppafiord until the morning of 27th September, when Lieutenant Hudspeth decided to move to O Fiord, which it was expected a submarine would close that night. O Fiord was reached at 1550Z on 27th September and a search was carried out across the entrance after dark.

87. At 0100 on 28th September contact was made with STUBBORN, and at 0150 X.10 was in tow. It was by this time too late for her crew to be taken on board STUBBORN and the weather was none too good for the transfer, and it was not until 2200Z on the following day that the crew were taken off and the passage crew from X.7 took over X.10. By this time the crew of X.10 had been on board their craft for almost exactly ten days. They had been subjected to much hardship and disappointment, but were none the worse for their experience.

88. Apart from the sighting of the three vessels mentioned, two of which (since they were burning navigation lights) may have been fishing vessels or small coasting craft, no patrol activity was encountered either on the inward passage up the fords or, after the attack, on the way out; nor, apparently, was there any A/S activity or counter-measures in Alten Fiord directly subsequent to the attack.

89. X.10 also reports that all shore navigation lights were burning normally and showing norma' characteristics, and that the weather on the 22nd September was ideal for X-craft attack, with the sky dull and overcast and a fresh breeze raising white horses to assist an unseen approach.

90. From these facts there appears to be no reason to doubt that other X-craft, free from defects, should have experienced no difficulty in making the passage to the entrance to Kaafiord.

91. X.10 also reports that before diving in the vicinity of Tommerholm Island at 0215Z on the 22nd September, and again on surfacing that evening at 1800Z, lights were observed in the entrance to Kaafiord which appeared to be of the nature of low powered flood lights, possibly for illuminating the net across the entrance to the fiord.

92. The Commanding Officer expresses the highest opinion of all his crew throughout the whole time they were on board. They worked long and arduously in the face of ever-growing disappointment, and at no time did their zeal or enthusiasm fail. I consider that the Commanding Officer himself showed determination and high qualities of leadership in a gallant attempt to reach his objective. He was frustrated by defects for which he was in no way responsible and which he made every endeavour to overcome. He showed good judgment in coming to his decision to abandon the attack, thereby enabling the craft to be recovered and bringing back valuable information.

#### Movements of Submarines after Slipping X-craft.

20th September

93. After slipping X-craft to proceed to the attack, THRASHER, TRUCULENT, STUB-BORN and SCEPTRE withdrew within their patrol sectors and assumed patrol. SYRTIS remained on patrol within her sector, and SEA-NYMPH was patrolling in the vicinity of  $70^{\circ}$  25' N. 17° 16' E.

## 21st September

94. I had decided to order SEANYMPH to patrol off Andoy in order to intercept any main units endeavouring to escape to the southward, and in my signal at 1205—which could be read by all submarines taking part—I ordered SEA-NYMPH to patrol in the vicinity of position 69° 11' N. 15° 27' E., proceeding so as to arrive after dark on 22nd September, her object being to attack main units proceeding from Alten to Narvik. I also informed all submarines taking part that X 8 had had to be sunk.

SEANYMPH proceeded towards her patrol area at 1856Z, 22nd September.

## 22nd September

95. As no reports had been received, other than SEANYMPH's, to indicate that any X-craft apart from X.8 were out of the running, it was assumed that the remaining five had proceeded according to plan. It was therefore confidently hoped that some would be attacking in the early hours of the 22nd September and that the "bang" would occur about o830Z.

96. Senior British Naval Officer, North Russia, had been asked to fly a P.R. over the area p.m. on 22nd September if possible. LUTZOW at least was not likely to have become a casualty: with the loss of X.8 she was not liable to attack: and it was possible that this reconnaissance might show signs of a moveof main units southwards, having been "flushed" by the attack. In anticipation of such a movement I ordered SCEPTRE to leave her patrol sector and proceed to patrol in position 69° 44' N. 17° 43' E. to arrive as soon as possible after daylight on 23rd September.

97. I also decided that should sufficient information of a major movement be received in time I would send one of the "T" class submarines into Soroy Sound, accepting the risk of crossing the declared mined area. I therefore ordered THRASHER to close to the southeast of her area, and to charge her batteries full out after dark. For the same reason I ordered TRUCULENT to proceed from Sector

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FFF into Sector FDD—which was left vacant by SEANYMPH-so that she should be closer at hand if required.

98. SCEPTRE received my signal referred to in paragraph 96 at 1203 22nd September, and at once set course for the patrol as ordered. At the time of receipt SCEPTRE found herself to have been set some 15 miles to the eastward of her patrol area, and this delayed her arrival in her new patrol position just sufficiently to make her miss sighting LUTZOW on her passage south.

99. STUBBORN had also experienced a set. At 0813Z on 22nd September she found herself inside the declared mined area, having been set 13 miles, 117°, in 24 hours. The S.T.U.\* was operated but no contacts were gained, and STUBBORN regained safer waters

100. The P.R. of the Alten area on the 22nd September failed.

#### 23rd September onwards

101. Four submarines were now left to patrol off Alten Fiord for the recovery of X-craft, and I signalled ordering THRASHER to cover the two westernmost recovery sectors (FAA and FBB), TRUCULENT to cover Sector FDD and Sector FEE west of 22° East, and SYRTIS Sector FEE east of 22° East and Sector FFF. STUBBORN continued in Sector FCC.

102. These four submarines patrolled without incident on the 23rd, 24th, 25th and 26th September, encountering no A/S or air activity. This would appear to be a clear inducation that the enemy were unaware how the X-craft had been transported or how they had made the passage.

103. Senior British Naval Officer, North Russia has stated in a monthly report of proceedings that there was an enemy air raid on Polyarnoe on the 24th September, apparently directed against the submarine base. This may have been in connection with Operation "Source", and it is considered not unlikely that the enemy thought the X-craft were operated from Kola Inlet.

#### Recovery of X-craft

104. X-craft who were able to withdraw after the attack were to endeavour to contact a submarine patrolling in one of the sectors off Alten If unable to make contact, they were Fiord. to make for one of the bays off the north coast of Soroy, which, circumstances permitting, would be closed and examined by certain of the patrolling submarines on the nights of the 27th/28th and 28th/29th September.

105. Submarines were ordered by signal on 25th September that if no contact had been made with X-crait by daylight on the 27th September, they were to assume patrol as follows: SYRTIS in Sector FFF, TRUCU-LENT in Sector FEE and STUBBORN in Sector FDD. These submarines were then to act in accordance with the orders for recovery.

106. SYRTIS closed the coast off Soroy during daylight on the 27th September and at 1835Z surfaced between Bondoy Island and Store Kamoy. At 2149Z she sighted and spoke TRUCULENT, who was also searching for X-craft in the vicinity of Bondoy, and then proceeded into Finn Fiord. Sighting nothing,

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SYRTIS withdrew and patrolled to seaward during the day of the 28th September. That<sup>.</sup> night she again searched Finn Fiord and the islands of Bondoy and Store Kamoy. When by 0215Z on the 29th September nothing had been sighted, SYRTIS withdrew to seaward and set course to return to base.

107. Similarly TRUCULENT closed Staalet Point and Presten Leads at 1822Z on the 27th Nothing was sighted, and she September. passed through the Bondoy-Kamoy passage, speaking SYRTIS at 2151Z. The following night TRUCULENT again closed Staalet Point to within  $2\frac{1}{2}$  miles, but the weather was so bad that it was considered that it would have been impossible to have recovered any X-craft or her crew. At 2030Z on the 28th September TRUCULENT withdrew to return to base.

108. However, the recovery plans were fruit-ful in the case of STUBBORN. She had set course to close O Fiord at 2200Z on the 27th September, and by 0055Z on the 28th had closed to within half a mile of the entrance to the Fiord. Here she sighted "X"s\_the prearranged identification signal for X-craft-being made on a blue lamp. A few minutes later X.10 closed and, STUBBORN being short of towing gear after her outward passage, an extemporised tow was passed. By 0150Z on the 28th September X.10 was in tow and both withdrew to seaward.

109. STUBBORN had still not covered Sandfiord which was on her beat, and during the day she attempted to communicate with TRUCULENT, to request her to cover Sandfiord that night: but she failed to get in However, the weather, wind force 6 touch. from the west and sea and swell 5-6,\* decided STUBBORN against attempting to close the land once more: it might have meant losing X.10: and at o600Z on the 20th September STUBBORN with X to in tow proceeded by the route ordered to return to base at slow speed.

110. It seems unlikely that any other X-craft were able to withdraw after the attack, and the recovery of the sole survivor must be regarded as a fine piece of seamanship on the part of the Commanding Officer, H.M.S. STUBBORN. The Commanding Officers of TRUCULENT and SYRTIS also made close approaches to an unknown coast in darkness and in bad weather to try to locate any missing X-craft. They withdrew their submarines safely to seaward in accordance with their orders when they had satisfied themselves that a proper search had been carried out.

III. As a further alternative should they not be recovered from the vicinity of Soroy, Commanding Officers of X-craft had the opportunity to proceed to Kola Inlet. Here the Senior British Naval Officer, North Russia, maintained a minesweeper on patrol off the entrance from the 25th September until the 3rd October to intercept any X-craft who had decided on this course. However, no X-craft arrived.

#### The Return Passage.

112. THRASHER, TRUCULENT, SYRTIS and STUBBORN—the latter with X.10 in tow —proceeded a.m. on the 29th September to

Admiralty footnote ... \* Wind force 6—strong breeze (21-26 m p h). Sea and swell 5-6—very rough to high sea...

return to base by the reverse of their outward routes. SCEPTRE and SEANYMPH remained on patrol off Andoy.

TRUCULENT 113. THRASHER, and SYRTIS arrived without incident at Lerwick on 3rd and 5th October.

114. At about 1700A on the 3rd October a weather forecast was received from the Admiralty that weather was expected to deteriorate and liable to reach gale force 8\* from the south-west in the vicinity of STUBBORN's position. Realising that darkfrom ness was approaching and that should STUBBORN, with X.10 in tow, meet this gale during the night it might be impossible to take off the crew, and that there would be little chance of regaining contact with X.10 if the tow parted, I decided that the passage crew should be embarked in STUBBORN while there was still time. I informed STUBBORN to this effect, instructing him to scuttle X.10 at his discretion, since the chances of being able to tow her the 400 miles to base without a crew on board were slight and should she break adrift she might drift into the enemy's hands.

115. STUBBORN was in fact already having trouble with her tow, for at 1230Z on the 3rd October the tow had parted in a heavy astern swell and considerable difficulty had been experienced in getting X.10 in tow again. The last wire on board was already in use and this had had to be recovered and passed again, using the still serviceable portions; and it was not until 1700Z that STUBBORN had been able to proceed, at dead slow speed as the swell showed no signs of going down. The operational Commanding Officer and First Lieutenant of X.10 had been transferred back to their craft to relieve the seaman and stoker passage crew while this operation was taking place.

116. On receipt of my signal (see paragraph 114), STUBBORN decided to sink X.10 after the crew had been recovered. The crew were embarked by 2040Z and at 2045Z X.10 sank in position 66° 13' N. 04° 02' E. STUBBORN then proceeded and arrived at Lerwick at 1330Z on the 5th October.

117. Whether X.10 could have been brought into port is doubtful. The expected gale did not materialise until the 6th October. Even so, at the slow speed at which X.10 had to be towed, STUBBORN could not have arrived at Lerwick by that time. The loss of X.10, after all she had done and all the efforts to bring her safely home, is very much regretted however.

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120. The success of this operation is the culmination of many months spent in develop-ing and perfecting the new weapon, in the intensive training of the crews for the hazardous enterprise, and in detailed and careful planning for the actual operation.

Admiralty footnotes -

\* Wind force 8—fresh gale (34-40 m p.h). † The portion of this despatch in which considera-tion is given to the extent of success achieved on the information then available has been omitted in view of the Admiral (Submarines) later despatch, dated and February 1044, which is an encoded and February, 1944, which is appended.

121. The officers and men under my command who have been responsible for the technical development in its early stages and for the preparation of the craft immediately prior to the operation have shown skill and persever-. ance in overcoming the many difficulties which have arisen. That so many of the craft were able to reach their destination in such good condition after so long a passage is a credit to all those concerned with their material and equipment. In this they have received every assistance from the Admiralty Departments concerned.

122. The operation involved the strictest and most intensive training. By his leadership and ability, Commander D. C. Ingram, D.S.C., R.N., as officer in charge of training inspired all officers and ratings alike and achieved that high standard of training and fitness which was so essential. He was responsible that the crews were at the peak of their efficiency at the time the operation began.

123. The skill and seamanship shown by the Commanding Officers of the towing submarines played a most important part in the operation, and the safe and timely arrival at the slipping positions of four X-craft of the six which set out is in no small measure due to the skill with which these officers handled the submarines I would like to pay under their command. special tribute to the Commanding Officer of H.M.S. STUBBORN, Lieutenant A. A. Duff, R.N., for the determination and fine seamanship he displayed both on the outward passage with X.7 and in the recovery of X.10 and his later efforts to bring her safely to port.

124. The part played by the passage crews of the X-craft contributed to a large extent to the final success of the operation. During the long and arduous passage these crews kept their craft in a high state of efficiency by constant care and attention, so that with one exception when the time came for the operational crews to take over, the craft were in an efficient state for the final stages of the operation. They showed fine seamanship, determination and endurance. The one exception was X.10, and her passage crew were in no way responsible for the defects which developed on passage.

125. Finally, I cannot fully express my admiration for the three Commanding Officers, Lieutenants H. Henty-Creer, R.N.V.R., D. Cameron, R.N.R. and B. C. G. Place, D.S.C., R.N., and the crews of X.5, X.6 and X 7, who pressed home their attack and who failed to return. In the full knowledge of the hazards they were to encounter, these gallant crews penetrated into a heavily defended fleet anchor-There, with cool courage and determinaage. tion and in spite of all the modern devices that ingenuity could devise for their detection and destruction, they pressed home their attack to the full and some must have penetrated to inside the  $A/T^*$  net defences surrounding the TIRPITZ. It is clear that courage and enterprise of 'the very highest order in the close presence of the enemy were shown by these very gallant gentlemen, whose daring attack will surely go down to history as one of the most courageous acts of all time.

> (Signed) C. B. BARRY. Rear Admiral. Admiral (Submarines).

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The following Despatch was submitted to the Lords Commissioners of the Admiralty on the 2nd February, 1944 by Rear Admiral C. B Barry, D.S O., Admiral (Submarines).

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#### 2nd February, 1944.

With reference to my submission of 8th November, 1943, be pleased to lay before the Lords Commissioners of the Admiralty the following further report on operations by Xcraft against the German main units (Operation " Source ").

2. It is now possible to reconstruct the attacks carried out by His Majesty's midget submarines on the battleship TIRPITZ on 22nd September, 1943, and to make some assessment of the damage sustained by this ship as the result of the attacks.

3. Three X-craft, X.5 (Lieutenant H. Henty-Creer, R.N.V.R.), X.6 (Lieutenant D. Cameron, R N.R.), and X.7 (Lieutenant B. C. G. Place, D.S.C., R.N.), failed to return as a result of the operation, and, while it was known that one or more of these craft succeeded carrying out a successful attack in on TIRPITZ, at the time of my previous report no information was available as to which of the craft had succeeded in this daring attack, nor were there details of how it was accomplished.

4. It was the intention of each of the three Commanding Officers, all of whom had TIRPITZ as their target, to close the entrance to Kaafiord at first light on the morning of the 22nd September, having fully charged up their batteries during the night. Having negotiated the  $A/S^*$  net at the entrance to Kaafiord they would then attack TIRPITZ by passing under the  $A/T^{\dagger}$  nets surrounding her, drop their charges set to detonate at approximately 0830 G.M.T., and then retire to seaward, hoping to be well clear of the fiord by the time of the explosion.

5. P.R.U. photographs had shown that the close A/T nets around TIRPITZ consisted of three lines of nets. The flotation indicated that the nets were for anti-torpedo protection, and it was considered unlikely that they would reach the bottom in the depth of water, twenty fathoms In fact it was estimated they would only extend downwards about fifty feet.

6. The following is a reconstruction of the movements of these three X-craft in their attacks, as far as is known at present.

#### X 6 (Lieutenant D. Cameron, R N.R.)

7. At some time unknown the periscope of X.6 became flooded. The Commanding Officer was therefore completely "blind" with no means of conning his craft when dived.

Having negotiated the A/S net at the entrance to Kaafiord and entered the fleet anchorage, Lieutenant Cameron, with a complete disregard for danger, proceeded on the surface in broad daylight astern of a small coaster through the boat gate entrance in the nets, situated only two hundred yards away from TIRPITZ.

After passing safely through the entrance on the surface, X 6 dived, and steering straight for TIRPITZ, proceeded to attack.

8. X.6 had, however, been sighted from TIRPITZ off the port bow, as Lieutenant

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Cameron must have realised that he would be. The time of sighting is reported as o800 G.M.T. The alarm was raised, and hand grenades thrown at him from the deck of TIRPITZ, and a pinnace started to drop depth charges.

9. Lieutenant Cameron continued to carry out his attack, and on passing under the bridge of TIRPITZ, he probably released one charge. Having passed under the ship, X 6 failed to turn to starboard in time and ran into the nets on the starboard side of TIRPITZ before he could carry out the second run of the attack.

Finding himself foul of the nets Cameron was obliged to go astern to clear himself, and in so doing went astern into TIRPITZ.

10. Lieutenant Cameron, realising that he had been sighted, released his second charge, and surfaced his ship almost alongside the TIRPITZ. Cameron then saw all his crew safely out of the craft before scuttling her.

Lieutenant Cameron and the crew of X.6 (Sub-Lieutenant J. T. Lorimer, R.N.V.R., Sub-Lieutenant R. H. Kendall, R.N.V.R., E.R.A.4 E. Goddard, C/MX 89069) were picked up and taken on board, the time being then approximately 0805.

#### X.7 (Lieutenant B. C. G. Place, D.S.C., R.N.)

II. In the meantime X.7 had also attacked. Proceeding according to plan, X.7 penetrated safely past the A/S nets at the entrance to the fiord, and Lieutenant Place decided to attack by passing under the close A/T nets.

Here he met unexpected difficulties, for instead of the expected gap under the nets he found that they extended to 120 feet, which, with a depth of water of only twenty fathoms, meant that the nets were almost, if not quite, down to the bottom.

Lieutenant Place was not to be deterred, and at the third attempt he managed to worm X.7 along the bottom under the nets to carry out a successful attack, dropping one charge under the funnel and one under the after turret.

12. In negotiating the A/T nets he was able to ascertain its details which were fine wire 4' mesh-a most formidable type of A/T net.

13. Having completed the attack undetected, Place was then faced with the difficulty of getting through under the nets again to make his escape. To add to his difficulties the tide was by then ebbing, which meant that the nets would be even nearer to the bottom than before.

. Once again X 7 found herself foul of the nets; and as they were only 170 feet from TIRPITZ and from the line on which the charges had been laid, and with the time for the explosion drawing nearer every minute, the feelings of those on board while they were struggling to extricate themselves may well be imagined.

As it was, X 7 cleared the nets with only a few minutes to spare, as at 0830, when the explosion took place, X 7 was only some 400  $\,$ yards to seaward of the nets.

Even at this distance the force of the explosion so damaged X.7 that she was put out of action, and Lieutenant Place decided to remain on the bottom for the next hour and await events.

Around about 0930, when depth charges were being dropped indiscriminately about the fiord, although they did no damage to the craft, Lieutenant Place realised that owing to damage

Admiralty footnotes — \* A/S—anti-submarine † A/T—anti-torpedo

sustained nothing further could be done and that the operation was by now compromised. He therefore decided to surface the craft to give his crew the chance of escaping.

X.7 was brought to the surface, but was immediately hotly engaged by gunfire and sunk. Place was left swimming when she sank, and Lieutenant Aitken, the 3rd Officer, escaped by using D.S.E.A.\*

Of the other two members of the crew nothing is known, nor, apparently, have their bodies been discovered.

## X.5 (Lieutenant H. Henty-Creer, R.N.V R.)

14. The information so far available is insufficient to show what part X.5 took in the attack.

Wreckage, presumably from this craft, was discovered by divers either on the day of or the day after the attack, about one mile to seaward of TIRPITZ' berth, about halfway between TIRPITZ and the entrance to Kaafiord. Some of the wreckage from this craft was also flung to the surface.

No bodies or personal gear have been found, and there is no knowledge of any survivors from X.5.

15. X.5 may therefore already have attacked and laid her charges and have been on the way out when depth-charged and destroyed, or she may have been waiting to attack at the next attacking period after 0900.

# The Explosion

16. At 0830 a huge explosion took place, and TIRPITZ was heaved five or six feet out of the The explowater before settling down again. sion extended from amidships to aft, and a large column of water was flung into the air on the port side. The explosion appeared to be caused by two or more simultaneous detonations.

Members of the ship's company on deck aft were hurled into the air, and several casualties resulted. The ship took on an immediate list to port of about five degrees; this was later adjusted by trimming. All the ship's lights failed temporarily, but lighting was soon restored. Oil fuel started to leak out from amidships.

17. Panic seems to have reigned for a short time immediately following the explosion.

More than 100 casualties were caused by panic firing, and destroyers and small craft went into action up and down the fiord.

18. Meanwhile, the survivors from X.6 were being questioned by officers from the Admiral's staff.

Prior to the explosion it is reported that the crew of X.6 were seen looking anxiously at their watches.

They were joined about an hour after the explosion by Lieutenants Place and Aitken from X.7.

All of them were well treated and given hot coffee and schnapps.

Everyone on board TIRPITZ expressed great admiration of their bravery.

#### Salvage of Craft

19. X.7 was salvaged eight days after the attack, being recovered from a position some 400 yards off the starboard bow of TIRPITZ, outside the nets. She was taken in tow and The whole of her bow beached in Kaafiord. was missing, probably caused either by the gunfire or depth charges.

Although divers made a thorough search, no signs of X.6 could be found inside the A/Tnets, and it is presumed that she was totally destroyed by the explosion. which must have taken place very close to where she was scuttled.

The wreckage of, presumably, X 5 was found, as previously stated, about a mile to seaward from TIRPITZ, but there was insufficient of the craft left to make salvage worth while.

# Damage to TIRPITZ

20. The explosive charges (of which at least two detonated, the others possibly being destroyed by their close proximity to each other) badly buckled and possibly holed the hull in two places, causing flooding and loss of oil fuel.

The harbour boiler and turbo generator rooms were affected, with consequent effect on lighting system and forward turret the machinery.

Damage aft was also caused, and one report states that all four turrets were damaged, the guns put out of alignment, and that the shaft tunnel was stove in in parts.

A further report assesses the damage as follows: ---

"The upper bridge is awry and the guns On the after deck, aft rendered useless. especially, there are large dents and bulges. The engine room area was particularly badly 'damaged.'

The fact that a large proportion of the 50-60 victims among the crew, who were later buried on Norwegian soil, were engineers, stokers, etc., seems to confirm this last statement.

21. Several hundreds of workmen have been transported to Alten Fiord to effect temporary repairs with the aid of repair ships which have been seen alongside, and there is a repair hut on deck, and welding is in progress. On 10th January, 1944, a 100 ft. raft with superstructure had been towed alongside, apparently for divers.

22. It would appear conclusive that TIRPITZ has sustained considerable damage to the hull, machinery and armament as a result of the attack. Temporary repairs are result of the attack. still being carried out in Kaafiord which it is estimated will not be completed for a further one or two months, and the ship cannot be made effective for prolonged operations without docking at a German port.

23. With the full story of this very gallant attack now unfolded, my admiration \* for Lieutenant D. Cameron and Lieutenant Place and their crews is beyond words. I take special note of the complete disregard for danger in the immediate vicinity of the enemy shown by Lieutenant Cameron in taking X.6 through the net defences in broad daylight on the surface with the full knowledge that he must be

Admiralty footnote — \* D S E A — Davis Submarine Escape Apparatus, a form of diving equipment.

sighted, and the cool and calculated way in which he carried out his attack and then ensured the safety of his crew.

Lieutenant Place, undaunted by encountering unexpected obstacles, carried on with cool determination to worm X.7 under the nets under the very eyes of those on board TIRPITZ to carry out his successful attack. Then, when again caught in the nets and with the time drawing close for the explosion to take place, rather than bring his craft to the surface and so compromise the operation and thereby jeopardise the chances of other craft who might be attacking, he proceeded coolly to extricate his craft and remained submerged after the explosion, although fully aware of the danger, for sufficient time to ensure that other craft who might be attacking were clear of the area.

The acts of these two officers speak for themselves. They can seldom have been surpassed in the history of the Royal Navy. The proceedings of the two Commanding Officers would have been of no avail had they not been supported by the undaunted spirit of their crews.

24. It is very much regretted that insufficient evidence is available to assess the part played by Lieutenant Henty-Creer and the crew of X.5, but, from the position in which their craft was found, it is clear that they, too, showed courage of the highest order in penetrating the fleet anchorage, and that they lived up to the highest traditions of the Service.

> (Signed) C. B. BARRY. Rear Admiral. Admiral (Submarines).

The following Despatch was submitted to the Lords Commissioners of the Admiralty on the 26th July, 1945 by Rear Admiral G. E. Creasy, C.B., C.B.E., D.S.O., M.V.O., Admiral (Submarines).

26th July, 1945.

FINAL REPORT ON OPERATION "SOURCE".

Be pleased to lay before Their Lordships the following final report on operations by X-craft against the German main units (Operation Source '').

The return from Germany of the Com-2. manding Officers of X.6 (Lieutenant D. Cameron, V.C., R N.R.) and X.7 (Lieutenant B. C. G. Place, V.C., D.S.C., R.N.), and the receipt of their patrol reports, together with the release of certain information from captured German documents (notably the deck log of TIRPITZ and portions of the German High Command War Diary), have brought to light new facts which, as is to be expected, are in some cases different from those that had been inferred in my predecessor's submission of 2nd February, 1944.

The opinions expressed by my predecessor in paragraphs 23 and 24 of that report, however, <sup>,</sup> remain with added force.

3. Whilst further knowledge of then total damage inflicted on TIRPITZ by X.6 and X.7 damage inflicted on TIRPITZ by X.6 and X.7 was the fitting of the spare exhaust pipe, the may yet become available from German official discovery that it did not fit, and its eventual documents, it is considered fit to forward this a "make do and mend" with the aid of tape,

report in continuation of my predecessor's submission of 2nd February, 1944.

4. The following is the sequence of events from the time of slipping the X-craft from their parent submarines to the conclusion of No reference has been made to the attack. X.10, as her movements were fully covered in my predecessor's report of 8th November, 1943, and have no bearing on the approach and attack of the other three X-craft.

20th September, 1943 (All times are G M.T.)

All three X-craft slipped from their towing submarines between 1845 and 2000, all being in good heart and trim. X.6's starboard charge had flooded since 11th September, but experiments with stores and spare gear had put the ship into a working trim, provided that the inland waters of the fiords were sufficiently saline.

The minefields reported off Soroy were negotiated on the surface successfully, although X.6 sighted a patrol vessel at 2200.

At 2315 X.7 sighted another X-craft and exchanged shouts of good luck and good hunting. Although not definitely identified, the other X-craft was certainly X.5. X.5 now, unfortunately, passes out of the picture until her sighting and destruction on 22nd September.

#### 21st September

X.6 and X.7 both dived between 0145 and 0215, each finding trimming difficult.

During the passage through Stjernsund, X.7 had to dodge several vessels and X 6 started a defect on her periscope which was to prove a major handicap throughout, but a triumph of mind over matter to her crew.

The advance through the fords toward the agreed waiting and charging positions in Alten Fiord went according to plan, neither X-craft experiencing any difficulty in the calm weather prevailing, and at 1245 X.7, taking advantage of a freshening breeze, was able to ventilate the boat through the induction trunk.

An occasional A/S patrol vessel, and a solitary aircraft had to be dodged, but at 1630 X.7 sighted a large vessel in the lee of Aaroy Island. This vessel is noted in X 7's report as "believed to be SCHARNHORST" and was thereafter disregarded. All thoughts were centred on TIRPITZ, which, under Plan No. 4, was the target for X.5, X.6 and X.7.

X.6 was first into her waiting billet, arriving at 1845 I mile north of Brattholm where she spent a rather disturbed night, charging, making good defects (particularly to her periscope) and dodging traffic. This traffic became so trying that the Commanding Officer surfaced to continue his charge at 2145, endeavouring to make contact with other X-craft during the night.

On inspecting the clock settings of his fuzes at 2300, it was discovered that the port (un-flooded charge) clock was defective. To guard against any hold up, both 10 point plugs were released and the charges set to fire at one hour from release.

X.7 had also reached her waiting position and spent the night charging and making good defects. Among this "making good defects" canvas and chewing gum. X.7 also suffered some inconveniences due to small boats and minor war vessels.

# 22nd September

#### Phase 1

X.7 left the lee of the Brattholm group of islands at 0045 to commence the penetration of the known and unknown defences of Kaafiord, followed an hour later by X.6; neither boat having made friendly contact during the night. Operationally such contact was not necessary and it had not been allowed for in the plan.

At 0340, X.7, first in the field, straightened up for the entrance through the A/S boom defence gap at the entrance to Kaafiord and by 0400 was through, only to be put deep by an M.L. outward bound. As a result of this temporary blindness X.7 got caught in the un-occupied square of A/T nets, once used to house LUTZOW but now empty. X.6 following later, and having increasing trouble with her periscope, dodged a small ferry boat and an A/S patrol vessel and at 0505 also passed through the A/S boom gap.

Meanwhile, life in Kaafiord in general and TIRPITZ in particular pursued its normal Hands were called, normal A/A course. defence and anti-sabotage watch ashore and afloat were set, the boat-gate in the A/T nets was opened for boat and tug traffic, and the hydrophone listening office ceased work, all at 0500.

#### Phase II

X.6, suffering from a flooded periscope, went to 60 feet to strip and clean it, while proceed-ing by D.R.\* towards the western end of the fiord. On coming to periscope depth again she found she was so close to NORDMARK that she had to alter course to avoid the mooring To add to her difficulties, the periscope buoy. again clouded over and the periscope hoisting motor brake burnt out resulting in manual control of the brake being necessary when raising • or lowering the periscope.

By 0705 X.6 had closed the A/T shore net defence of TIRPITZ and was through the boat entrance, and within striking distance of the target.

X.7 having got caught in the unoccupied A/Tdefences in the middle of the fiord spent a busy, if cautious, hour in getting clear at the expense of breaking surface, unseen, and putting the trim pump out of action. The violent action required to break free of the nets also put the gyro compass off the board. By 0600, having had another incident with a wire across the periscope standard, X.7 was clear, though precariously trimmed at periscope depth, and headed for the target.

At 0710, having decided in favour of passing under the TIRPITZ A/T net defences, X.7 endeavoured to do so at 75 feet and got caught.

Up to this point no suspicions had been aroused in TIRPITZ and normal harbour routine was in progress.

#### Phase III

After passing through the gate X.6 ran. aground on the north shore of the enclosure and broke surface. This was observed in TIR-PITZ but, although reported as a "long black

Admiralty footnote ----\* D R ---dead reckoning of navigational position.

submarine-like object " there was a five minute delay passing the information on to higher authority as it was thought that the object sighted might be a porpoise.

Five minutes later, X.6 in backing and filling to get clear of the ground and to get pointed in the right direction to close TIRPITZ, · in again broke surface about 80 yards abeam of • TIRPITZ and was sighted and correctly identified.

X.6 by this time had no gyro compass, as this had been put out of action by the grounding and subsequent violent angles on the boat, and the periscope was almost completely flooded. She was therefore taken blindly in what was imagined to be the target's direction, hoping to fix her position by the shadow of the battleship.

After five minutes X.6 got caught in an obstruction which she took to be the A/T net on the far (starboard) side of TIRPITZ but which was probably something hanging down either from TIRPITZ or one of the craft alongside. Lieutenant Cameron straightened his craft up, manoeuvred clear of the obstruction, and surfaced close on the port bow of TIRPITZ when a brisk fire from small arms and hand grenades was opened on the submarine. The submarine was too close to the ship for any of the heavy A/A or main armament to hear.

Realising that escape was hopeless, Cameron destroyed the most secret equipment, backed his craft down until the stern was scraping TIR-PITZ hull abreast "B" turret, released his charges and scuttled the craft. X.6 started to sink as a power boat from TIRPITZ came alongside, picked off the crew of four and vainly attempted to take X.6 in tow, but X.6 followed her explosives to the bottom followed her explosives to the bottom.

On board TIRPITZ and in Kaafiord the alarm had now been properly raised, and it is clear from the entries in the battleship's log that complete surprise had been achieved by our forces.

Although the first sighting had been made at about 0707 (a note in the log states that times between 0705 and 0730 are inaccurate) it was not until 0720 that the order was given to close watertight doors, and the A/A guns' crews closed up. A power boat "manned by one officer and equipped with hand grenades" left the ship at about 0715, and was the one which took off the crew of X.6, having used her hand grenades, happily to no effect.

Action stations " was sounded, steam raised and the ship was prepared for sea, in order to get her outside the nets. This order was apparently not given until 0736, when watertight doors were reported closed. Divers were ordered to go down to examine the hull for limpet mines\* but it appears that some form of charge dropped under the ship was also expected, as the extract from the log recording the preparations for sea.reads "in order to leave the net enclosure if possible before the time-fuzed mines detonate ".

Destroyers in the fiord had also raised steam, and were requesting depth charges.

While TIRPITZ was making up her mind how, to deal with the situation, X.7, so far unseen but stuck in the nets ahead of TIRPITZ,

\* Limpet mines-explosives attached to the ship's side or bottom. -----

Admiralty footnote -

was trying to extricate herself. The following is taken from Lieutenant Place's report:

#### September 22nd

"... 0710. Set both charges to one hour and released ten pin plugs. Went to 75 feet and stuck in the net. Although we had still heard nothing it was thought essential to get out as soon as possible and blowing to full buoyancy and going full astern were immediately tried. X.7 came out but turned beam on to the net and broke surface close on to the buoys, going astern to the northward.

We went down again immediately but had to go ahead towards the net to avoid catching our stern and the boat stuck again by the bow at 95 feet. Here more difficulty in getting out was experienced, but after about 5 minutes of wriggling and blowing X.7 started to rise The compass had, of course, gone wild on the previous surface and I was uncertain how close to the shore we were; so the motor was stopped and X.7 was allowed to come right up to the surface with very little way on. By some extraordinary lucky chance we must have either passed under the nets or worked our way through the boat passage, for on breaking surface the TIRPITZ with no intervening nets, was sighted right ahead not more than 30 yards away. 40 ft. was ordered and X.7 at full speed, struck the TIRPITZ at 20 ft on the port side approximately below 'B' turret and slid gently under the keel where the starboard charge was released in the full shadow of the ship. Here, at 60 ft., a quick stop trim was caught—at the collision X.7 had swung to port so we were now heading approximately down the keel of TIRPITZ. Going slowly astern the port charge was released about 150 to 200 ft. further aft—as I esti-mated, about under 'X' turret. I am uncertain as to the exact time of release, but the first depth charges were heard just after the collision, which, from Lieutenant Cameron's report would fix the time at 0722.

After releasing the port charge, 100 ft. was ordered and an alteration of course guessed to try and make the position where we had come in. At 60 ft. we were in the net again. Without a compass I had no exact idea of where we were; the difficulties we had experienced and the air trimming had used two air bottles and only 1200 lbs. were left in the third. X.7's charges were due to explode in an hour—not to mention others which might go up any time after o800.

A new technique in getting out of nets had by this time been developed. The procedure was to go full ahead blowing economically and then go full astern, the idea being to get as much way on the boat as the slack of the nets would allow and thus have a certain impetus as well as the thrust of the screws when actually disengaging from the net. In about the next three quarters of an hour X.7 was in and out of several nets, the air in the last bottle was soon exhausted and the compressor had to be run.<sup>1]</sup> When at about 40 ft., at 0740, X.7 came out while still going ahead and slid over the top of the net between the buoys on the surface. I did not look at the TIRPITZ at this time as this method of overcoming net defences was new

-

and absorbing, but I believe we were at the time on her starboard bow-we had certainly passed underneath her since the attack. We were too close, of course, for heavy fire but a large number of machine gun bullets were heard hitting the casing. Immediately after passing over the nets all main ballast tanks were vented and X.7 went to the bottom in 120 ft. The compressor was run again and we tried to come to the surface or periscope depth for a look so that the direction indicator could be started and as much distance as possible put between ourselves and the coming explosion. It was extremely annoying to run into another net at 60 ft. Shortly after this there was a tremendous explosion (0812). This evidently shook us out of the net and on surfacing it was tiresome to see the TIRPITZ still afloat-this made me uncertain as to whether the explosion we had just heard was our own charges or depth charges, so X.7 was taken to the bottom . . .'

This last excursion into the nets was apparently well on TIRPITZ' starboard bow and from outside. After getting clear X.7 sat on the bottom to survey the damage. Compasses and diving gauges were out of action but there appeared to be little structural damage. The boat was impossible to control, however, and broke surface on several occasions. On each occasion fire was opened on her from TIRPITZ causing damage to the hull, and finally it was decided to abandon the boat. X.7 was brought to the surface rather than use D.S.E.A., owing to the depth charging that was being experienced. The boat surfaced close to a target allowing Lieutenant Place to step on to it, but before the remainder of the crew could escape, X.7 sank at 0835. Sub-Lieutenant Aitken was able to get out by the use of D S E.A. at 1115, but no trace was discovered of the remaining two members of the crew. Both Lieutenant Place and Sub-Lieutenant Aitken were brought on board TIRPITZ and well treated, as had been the crew of X.6.

The first knowledge on board TIRPITZ that more than one midget submarine was attacking came at 0740, when X.7 was seen just outside the A/T nets, having made her escape after dropping her charges. Hand grenades were thrown, fire opened from the 2 cm. and 3.7 cm. armament, and aircraft made ready to take off and carry out a search.

As other craft were outside the nets in unknown numbers, it was decided not to take TIRPITZ out of the enclosure, so the gate was shut, and the ship moved as far away from the position in which X.6 had sunk by heaving in on the starboard cable and veering port. This brought the bows away from both of X.6's charges and the first of X.7's, but left X.7's second charge still under the engine room; those on board TIRPITZ being unaware that a second attack had been carried out.

TIRPITZ' log records at 0.812 "two heavy consecutive detonations to port at 1/10 sec. interval. Ship vibrates strongly in vertical direction and sways slightly between the anchors." The first explosion abreast Section VII ("X" turret) about 6 to 8 yards away from the ship, the other 50-60 yards off the bow in the position where X.6 sank.

The weight of the charge was estimated at 900 lbs, whereas, in fact, each of the four charges weighed 2 tons. It is not clear from this how many of the three charges laid off the port bow actually went off, although subsequent examination of the sea-bed failed to discover any of the charges, or even fragments.

It seems likely, therefore, that all four charges detonated completely and that only the action to move the bows of the ship bodyly to starboard on her cables saved her from far worse damage and even, perhaps, from destruction.

Before dealing with the damage resulting from the attack it remains to be recorded that at 0843 a third X-craft was sighted some 500 yards outside the nets. TIRPITZ opened fire and claims to have hit and sunk this X-craft. Depth charges were also dropped in the position in which the craft disappeared. This was X.5 (Lieutenant H. Henty-Creer, R.N.V.R.) which had last been seen off Soroy on 21st September by X.7.

Nothing is known of her movements, nor was any member of her crew saved.

X.7 was salved, minus her bows, by 1st October, 1943, but there is nothing to substantiate a statement, made to Lieutenant Place by German interrogators, that the bodies of the two missing members of his crew had been recovered and buried with full military honours.

#### Damage to TIRPITZ

According to the first Damage Report-

Port propulsion installation out of action, one generator room flooding and damage to the lower platform deck in Section VIII (Engine Room) and T.S.

In the whole ship nearly all the lighting and electrical equipment as well as the W/Trooms and hydrophone station were put out of action, as well as two aircraft outside the hangar.

By 0833 there were 300 tons of water in the ship, which had increased to 500 tons by 0942.

At 0900, 50 minutes after explosion, pumping out of the middle and port turbine rooms was being successfully accomplished, and the hydrophone office was again in order, but there were oil fuel leaks and No. 2 Generator Room and Dynamo Control Room were still flooded with oil and water.

At 1045 the following report was made on the condition of the TIRPITZ:

" (1) Schiffssicherung (Ship's safety measures)

Approx. 800 cubic m. water in ship. Probable hits on port side in Section VIII. Flooding under control. Ship out of danger.

(2) Propulsion installation

So far, all three main engines out of action. Damage to condenser in port power installation. One boiler lit.

(3) Electrical installation

Generator room 2 flooded and dynamo control installation 2.50 cm. water, electricity out of action.

Forward turbo-generators are brought into operation.

......(4) Gunnery

Turret A and C raised by blast, so far out of action.

A/A control positions out of action. Considerable breakdown of range-finding gear including revolving hoods (Drehhauben), aft position and foretop.

(5) Communications Section

· Communication with W/T room C estab-Breakdown of several transmitters, lished. receivers, radar sets and echo-ranging equipment.

#### (6) Steering

Rudder compartment 2 flooded. Port rudder installation out of action, cannot be examined yet.

In all sections breakdown (probably only temporary) of apparatus and electrical equipment through lack of current, as well as damage to casings and bedplate propellers.

I killed, about 40 wounded, among them the First Lieutenant, slightly injured (concussion)."

#### Final effect of the attack.

According to an entry in the War Diary of the German Naval Staff for September, 1943, it was decided that the repair of TIRPITZ should be carried out in a northern port, and this decision was sanctioned by Hitler and the Commander-in-Chief, German Navy. It was, how-ever, considered that the ship might never regain complete operational efficiency.

Repair ships, equipment and a large staff of dockyard workmen were transferred to Alten Fiord, and the services of a 100 ton crane were requested. The crane never arrived, however, being damaged by weather on passage, and only reaching the Namsos area.

Much time, personnel and work were expended on improving the defences of Kaafiord, and LUTZOW was moved south to Germany. As this ship was overdue for refit in any case, it cannot be claimed that this weakening of the Northern Fleet was altogether due to the Xcraft attack.

On 22nd November, 2 months after the attack, again according to the War Diary, MARINE-GRUPPENKOMMANDO NORD reported to the German Naval War Staff that " as a result of the successful midget submarine attack on heavy units of the Battle Group, the battle cruiser TIRPITZ had been put out of action for months ", and the truth of this is borne out by the fact that not until April, 1944, did the ship move out from her anchorage, only to be further damaged and finally destroyed, by air attack, from which she had been virtually immune in Kaafiord.

#### (Signed) G. E. CREASY.

Rear Admiral. Admiral (Submarines).

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