

H.M. DOCKYARD, CHATHAM

ADMIT BEARER

to view the Launch of

H.M.C.S. OKANAGAN

Saturday, 17th September, 1966

Please have this ticket
ready to show at the
Dockyard Gate

The colour of this ticket
is the colour of your
ENCLOSURE

Please read the instructions on the back of this ticket

H.M. DOCKYARD
CHATHAM

LAUNCH OF
H.M.C.S. OKANAGAN

By Madame L. Cadieux

17 SEPTEMBER 1966

H.M.C.S. OKANAGAN

Facts and Figures

Length	295 ft.
Breadth	27 ft.
Height	46 ft.
Accommodation	72 bunks
Engines	1840 brake horse power each
Batteries	448 cells
Air conditioning	400,000 BTU per hour
Sister ships	OJAWA (Commissioned 23rd September, 1965) ONONDAGA (Launched 25th September, 1965)

LAUNCHING CEREMONY

Her Majesty's Canadian Submarine OKANAGAN will be launched today by Madame Cadieux, the wife of the Associate Minister of National Defence for Canada.

SCHEDULE OF ACTIVITIES

The following timetable is given as a guide to help visitors follow the sequence of events.

- 1300 Dockyard gates open to admit launch spectators who should proceed to their allotted places as shown on their invitation cards.
- 1425 Visitors are requested to be in their places at No. 7 Slip.
- 1444 Madame Cadieux arrives at No. 7 Slip and inspects the Naval Guard mounted by H.M.S. PEMBROKE.
- 1450 The ceremony of the launch will begin with a religious service (see centre pages). The order "Stand by to launch" will be followed by the report "Ready for launch" when Madame Cadieux will name the ship. General Manager will then invite Madame Cadieux to launch the ship, following which Admiral Superintendent will call for three cheers for Madame Cadieux, who in turn will call for three cheers for the men who built the ship. Visitors are requested to remain in their places until this part of the service concludes with the National Anthem followed by 'O Canada'.
- 1500 Launch
- 1513 Guard and band march past.

N.B. For security reasons it is regretted that visitors cannot be permitted to tour the Dockyard beyond the building slip.

SUBMARINES AND CHATHAM

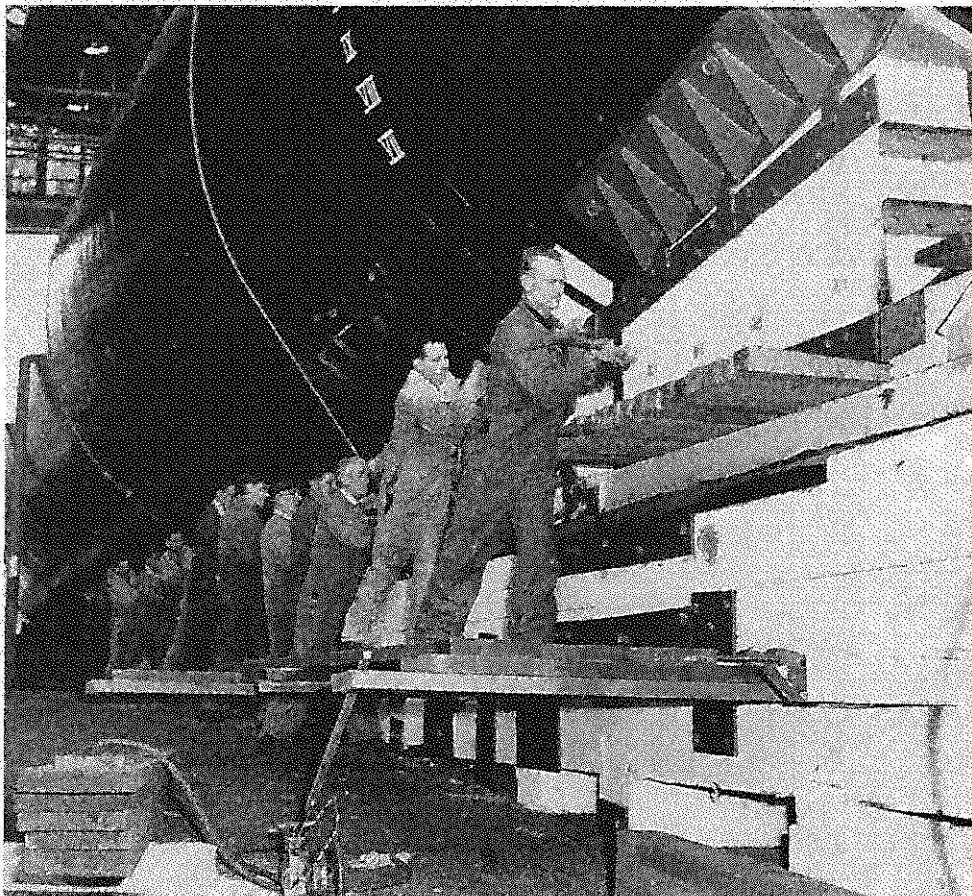
Today we are witnessing a milestone in the construction of the third and last of the present series of Oberon Class Submarines for Canada. It also notes a chapter in the history of submarine construction at Chatham—a story which goes back nearly six decades.

The first submarine built at Chatham known as C17 was launched in 1908. It was propelled by the primitive petrol engines of the period with their associated hazards.

In 1911 petrol engines were replaced by diesels, and engine building has gone hand in hand with submarine construction at Chatham ever since. At one period in 1918 there were four submarines on the slip simultaneously, a feat which has not since been repeated.

In the 1920's Chatham know how was used in the development of the first Oberon. This displaced 1500 tons, carried three guns and eight torpedo tubes but her speed reached only nine knots. She was due to be launched on 23rd September, 1926, almost 40 years ago to the day, but she stuck fast and missed the tide. Intense activity followed during the next 24 hours but she eventually took the water the following day. Such is the excitement, apprehension and drama that the launching of a ship can provide.

Setting up—the men who built the submarine





*Tracing section
—the feminine
touch*

THE OKANAGAN STORY

H.M.C.S. OKANAGAN is to be named in honour of an Indian people, a branch of the Interior Salish nation of British Columbia and Washington State. Their name has already been given to the lake around which many of them lived, also to the river that drains the lake, the valley in which the river flows, and a neighbouring range of mountains.

The spelling of the name has varied considerably in the past and two versions are now in use: OKANAGAN in British Columbia and OKANOGAN where the river flows through Washington to join the Columbia. The United States fleet includes an attack transport bearing the name in this latter form.

The Okanagans were not a long-house people, but built individual family dwellings—pits roofed with wood and turf for winter and light frame lodges covered with rush mats for summer.

The Okanagan Indians lived by hunting and fishing and their principal foods were salmon, venison, bear meat and other game, their only crop being tobacco. Their most remarkable handicraft was basketry, for their ware was watertight; in fact they used baskets as cooking pots, dropping in heated stones until the contents boiled.

Both dug-out and bark canoes were used by the Okanagans, but they did most of their travelling on foot because of the violent rapids on the rivers of the mountain region where they lived. The bark canoes were of an unusual design, being longest at the keel and shortest at the gunwale, giving the craft a ram-like stem and stern.

The Indians' first contact with the white man was in 1811 with the traders of John Jacob Astor's fur brigades exploring the interior from their base at the mouth of the Columbia. The Okanagan valley gave access to the whole of the interior of New Caledonia—now called British Columbia. In 1826 the Hudson's Bay Company started using the same route and continued to do so until the international boundary was established and the United States began collecting customs duties on furs. This forced the company to transfer its west coast base to Fort Camosun (now Victoria, B.C.) in 1847.

Some gold was discovered in the valley in 1860, but it was not until the late 1880's that Europeans moved into the region to settle after the Canadian Pacific Railway line had been built, bringing them close to the north end of the valley.

BLESSING THE SHIP

The Chaplain of H.M. Dockyard, Chatham, shall say:

Brethren, seeing that in the course of our duty we are set in the midst of many and great dangers, and that we cannot be faithful to the high trust placed in us without the help of Almighty God, let us unite our prayers in seeking His blessing upon this ship and all that shall serve in her, that she may sail under God's good providence and protection, and that there may never be lacking men well qualified to offer in her their work and skill for His greater glory and for the wellbeing of our realm and empire.

Then the people shall sing together the Hymn "Lead us, Heavenly Father"

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| 1. Lead us, heavenly Father, lead us
O'er the world's tempestuous sea;
Guard us, guide us, keep us, feed us,
For we have no help but thee;
Yet possessing every blessing
If our God our Father be. | 2. Saviour! breathe forgiveness o'er us,
All our weakness thou dost know,
Thou didst tread this earth before us,
Thou didst feel its keenest woe;
Lone and dreary, faint and weary,
Through the desert thou didst go. |
| 3. Spirit of our God, descending
Fill our hearts with heavenly joy,
Love with every passion blending,
Pleasure that can never cloy:
Thus provided, pardoned, guided,
Nothing can our peace destroy! | |

Then the Chaplain of the Fleet (P), Royal Canadian Navy shall read:

PSALM 107, VERSES 23-31 AND 43

23. They that go down to the sea in ships: and occupy their business in great waters;
24. These men see the works of the Lord: and his wonders in the deep.
25. For at His word the stormy wind ariseth: which lifteth up the waves thereof.
26. They are carried up to the heaven, and down again to the deep: their soul melteth away because of the trouble.
27. They reel to and fro, and stagger like a drunken man: and are at their wits' end.
28. So when they cry unto the Lord in their trouble: He delivereth them out of their distress.
29. For He maketh the storm to cease; so that the waves thereof are still.
30. Then they are glad, because they are at rest: and so He bringeth them unto the haven where they would be.
31. O that men would therefore praise the Lord for his goodness: and declare the wonders that he doeth for the children of men!
43. Whoso is wise will ponder these things: and they shall understand the loving-kindness of the Lord.

The Dockyard Chaplain will then say:

Let us pray:

O Thou that sittest above the water floods, and stillest the raging of the sea, accept, we beseech Thee, the supplications of Thy servants for all who in this ship, now and hereafter, shall commit their lives unto the perils of the deep. In all their ways enable them, truly and godly to serve Thee, and by their Christian lives to set forth Thy glory throughout the earth. Watch over them in their going forth and in their coming in, that no evil befall them, nor mischief come nigh to hurt their souls. And so through the waves of this troublesome world, and through all the changes and chances of this mortal life, bring them of Thy mercy to the sure Haven of Thine everlasting Kingdom, through Jesus Christ our Lord. *Amen.*

Almighty God, who has given men *vision* and *skill* to *devise* and *construct* all manner of works: we praise Thee for the men who have laboured with *brain* and *hand* to build this ship, and beseech Thee evermore to bless them in their labour: through Jesus Christ our Lord. *Amen.*

The Minister and people shall say:

Our Father, which art in Heaven, Hallowed be Thy Name. Thy Kingdom come. Thy will be done, in earth as it is in Heaven. Give us this day our daily bread. And forgive us our trespasses, As we forgive them that trespass against us. And lead us not into temptation; But deliver us from evil: For Thine is the kingdom, The power, and the glory, For ever and ever. *Amen.*

Then the people shall together sing The Hymn:

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|---|---|
| 1. Fight the good fight with all thy might,
Christ is thy strength, and Christ thy
right;
Lay hold on life, and it shall be
Thy joy and crown eternally. | 3. Cast care aside, upon thy Guide
Lean, and His mercy will provide;
Lean, and the trusting soul shall
prove
Christ is its life, and Christ its love. |
| 2. Run the straight race through God's
good grace,
Lift up thine eyes, and seek His face;
Life with its way before us lies,
Christ is the path, and Christ the prize. | 4. Faint not nor fear, His arms are
near,
He changeth not, and thou art dear;
Only believe, and thou shalt see
That Christ is all in all to thee. |

Let us pray:

O Lord God Almighty, who blesseth those who put their trust in Thee, let Thy blessing be upon this ship and upon all who serve and sail in her. May good success and Thy protection be with them always, in the name of the Father, Son and Holy Ghost. *Amen.*

The Lord bless us and keep us; the Lord lift up the light of His countenance upon us, and give us peace; now and for evermore. *Amen.*

Then shall prayers be said by the Chaplain of the Fleet (R.C.), Royal Canadian Navy.

PLANNING THE SHIP

Building a ship is in some respects like many other human activities—it relies on a great deal of commonsense and teamwork among the many people involved, and it also needs a large measure of careful preparation, planning and effort before any physical work can commence.

The design of the modern Oberon has evolved over many years and the final product is the result of the co-operation of many different types of skill and expertise—designers and scientists, naval constructors, mechanical and electrical engineers, draughtsmen, estimators, planners and producers.

The order to build is followed by a period of intense activity—ordering raw material such as the special steel plates, and finished equipments such as fans, pumps, electronic units, etc.

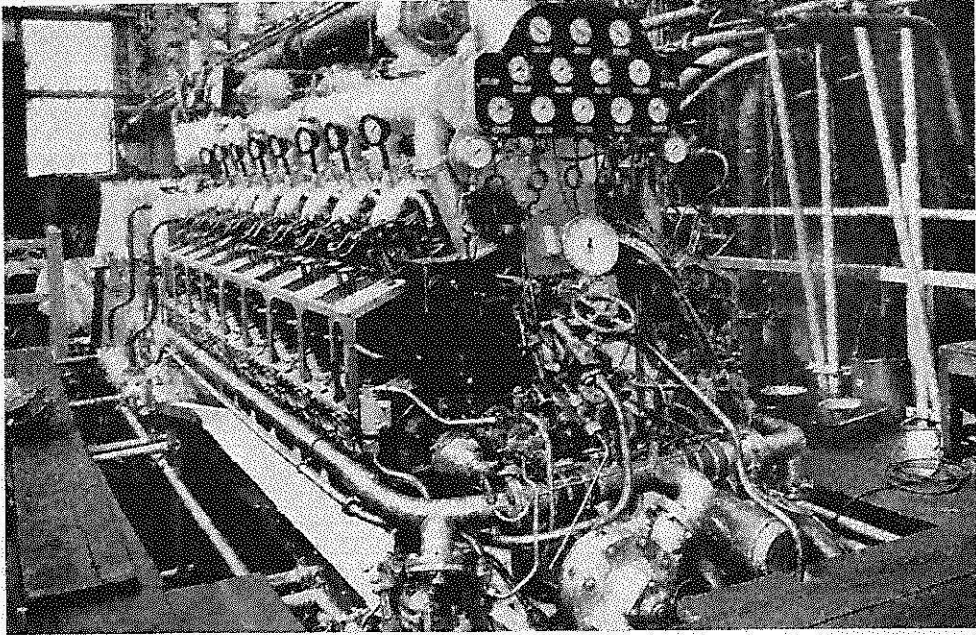
An interesting traditional craft that precedes this activity is “laying off”—a process by which scale drawings of the ship are reproduced full size on a wooden floor as large as the drawing office itself, known as the Mould Loft. It is from the moulds or lines produced here that the ship takes her shape.

THE MOULD LOFT FLOOR (*below*)

As well as producing a two-dimensional representation of the ship by lines on the floor, the Mould Loft is also used to construct full scale wooden models of special compartments—exact replicas of complex machinery, equipment and systems as a planning aid to the solution of three dimensional geometrical problems.

Mould Loft Floor





Engine Test-Bed

BUILDING THE SHIP AND ENGINES

The first visible stage in the creation of a submarine is laying the keel—a pre-fabricated section of the pressure hull weighing several tons. Other sections are then welded on sequentially followed by the end domes and external structure. By the time the vessel is ready for launch various fittings and internal equipments have also been added.

When OKANAGAN leaves the slip, she will go to her fitting-out berth where a large number of craftsmen of various skills and trades will pack her with a complex of equipment, pipe work, wiring systems, furnishings and finishing materials until she is a fully self-supporting unit. Shipwrights, fitters, electricians, plumbers, copper-smiths, joiners, patternmakers, foundrymen, sailmakers, colourmakers, hosemakers, painters, welders, caulkers, skilled and unskilled labourers are some of the many trades, men and women who have contributed their know how and energy to the construction of this vessel.

OKANAGAN will also take with her the products of a very wide range of British industry—the “bought out” and sub contract items which all have to be incorporated into the ship in a planned and pre-determined pattern.

THE RCN TODAY AND TOMORROW

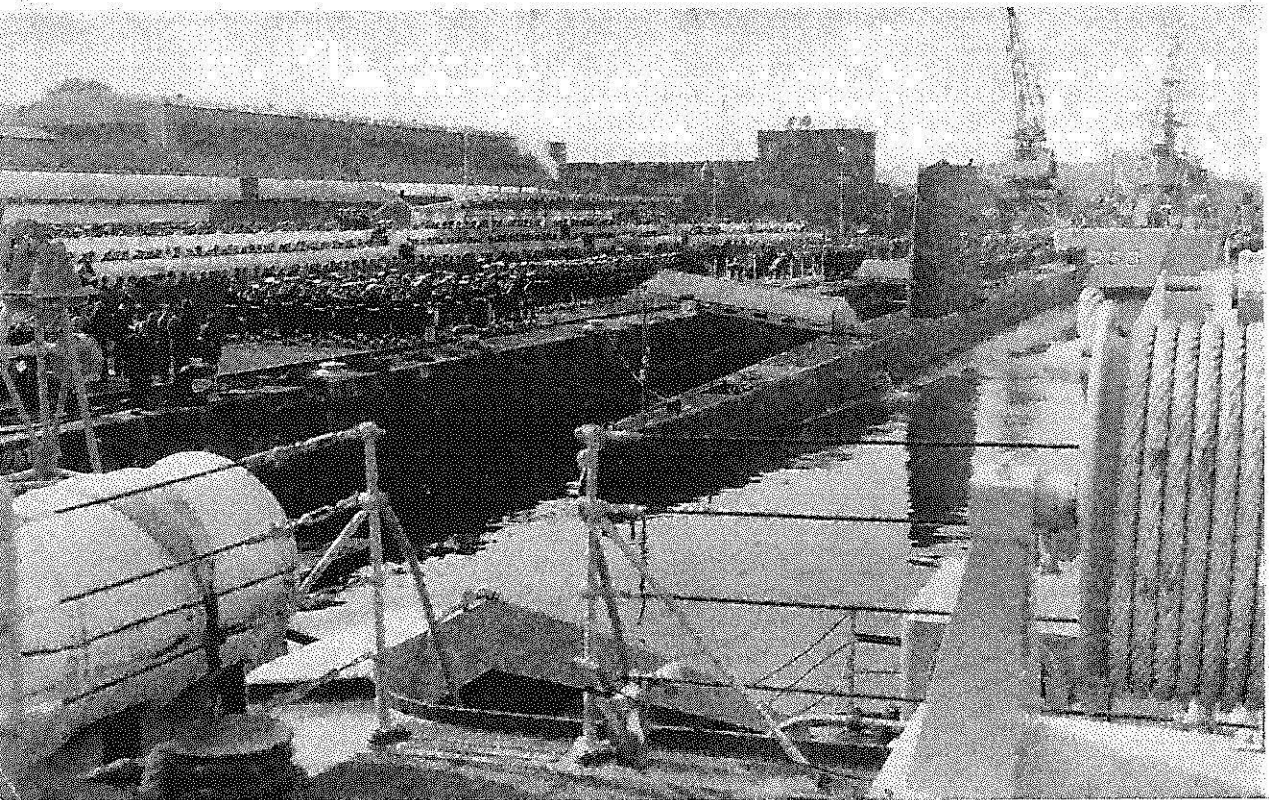
The Royal Canadian Navy's 43 warships consist of an aircraft carrier, helicopter-destroyers operating heavy all-weather Sea Kings, destroyer escorts, two submarines and support ships.

New construction over the next several years will add four larger helicopter-destroyers, two more operational support ships, and a modernisation program under way involves the aircraft carrier, seven Restigouche class destroyer escorts and Tracker Anti-submarine aircraft.

Current construction includes the Oberon Class Submarines ONONDAGA and OKANAGAN in HM Dockyard, Chatham, completing respectively in 1967 and 1968. An experimental fast hydrofoil escort (FHE 400) to be named Bras d'Or will be completed this year. She will undergo extensive evaluation to determine, first, her ability to operate on the open sea, then her capability as an anti-submarine ship.

The four helicopter-carrying destroyers (DDH's) are extensions of the nine helicopter destroyers currently in the RCN, seven of which are conversions of the original postwar St. Laurent class. Placing of a nine-ton helicopter into a destroyer and equipping the ship at the same time with variable depth sonar towing down to

(Below) H.M.C.S. OJBWA commissioning on 23 September 1965



600 feet has greatly improved the anti-submarine capability of the St. Laurent class. These conversion destroyers are as modern in concept and execution as any warships afloat devoted to ASW.

The new warships, however, will be 45 feet longer and some 800 tons heavier and will be able to carry two big helicopters and their advanced equipment will include an anti-aircraft missile system. They will be propelled by gas turbine engines—two main engines of about 25,000 horsepower each and two cruise turbines of about 4,000 hp each. The main engines will drive the ship at more than 30 knots, the others up to 16 knots. The new DDH's will continue the accent on anti-submarine warfare but retain a destroyer's versatility. They will have five-inch guns for anti-ship and bombardment roles and will be equipped to land armed parties trained in light weapons and demolition. The helicopter capability enhances this destroyer role.

Construction of the two follow-on versions of the 22,000-ton operational support ship HMCS PROVIDER will begin within a year and complete in 1971. These new ships will, like the PROVIDER, refuel and reprovision fighting ships but will also carry some 200 vehicles to meet the needs of a 1,000-strong army battalion.

The aircraft carrier BONAVENTURE in April began a half-life refit which in 12 months' time will have extended her life for upwards of ten years. More than 50 Tracker Aircraft are being modernized to ease the pilot's tasks in tactical situations. The turbojet, all-weather Sea King, assembled in Canada, is used in the carrier and helicopter-destroyers. With the refurbished carrier and Trackers as well as the Sea Kings, the BONAVENTURE is expected to remain "modern" until about 1975.

The Restigouche class, all commissioned in 1958 and 1959, is about to get a sonar system well advanced over any previous system and the U.S. Navy's ASROC. The VDS incorporated in the new sonar kit and the ability to engage contacts with the anti-submarine rocket more than five miles away, puts a new dimension to the ability of the class. Direct control of steering and main engines will come both from the bridge and the operations room, another interesting development.

The hydrofoil completing late this year is the result of more than eleven years of experimentation and may result in quite a new generation of fighting ships. Propelled by a 30,000 hp gas turbine engine and with the hull riding fourteen feet above the water on fixed foils, this ship is expected to be capable against nuclear submarines. With a crew of less than 30, a cost but a quarter that of a destroyer, a speed of 60 knots, a high degree of invulnerability, this ship if successful will be a milestone in progress, not only in ASW.

