

Huge S.S. Manhattan Nears Completion for Ice Voyage

PHILADELPHIA, July 20—The six-month conversion of the S. S. Manhattan, largest merchant ship under the American flag, to an experimental ice breaking tanker capable of challenging the Arctic ice fields is almost complete.

When welders at the Sun Ship Building and Dry Dock Company yard finish attaching the Manhattan's new bow this week, they will have been part of "a ship-building effort that hasn't been seen since World War II," says Sun's project engineer.

Toward the end of July a specially trained crew from Humble Oil & Refining Company will take the vessel from here on a mission that could lead to construction of giant ice breaking supertankers carrying some of Alaska's North Slope oil through the Northwest Passage to U. S. East Coast refineries—at 60 cents per barrel less than other means of transport.

To equip the ship for its task, Humble had it converted into the world's largest icebreaker weighing 151,000 tons.

Much of the ship's effectiveness hinges on this new bow which has been designed to break thick ice faster. Set at a sharp eighteen-degree angle to the water surface, rather than at the thirty-degree angle of traditional icebreaker bows, the new bow protrudes farther out over the ice.

Armed with this hard-nosed prow, the Manhattan's captain will be going against every seaman's instinct as he rams the vessel into ice varying from several feet thick to pressure ridges sometimes as much as 100 feet deep.

But Humble's crew doesn't expect the Manhattan to get through extremely thick, tough ice; their job is to find out how to build 250,000 deadweight ton ships that will crush through a

100-foot pressure ridge in the Arctic Ocean with ease.

So the Manhattan was designed to be at once the world's toughest and most sensitive ship. Hundreds of tiny pressure gauges along the hull will tell engineers what forces were at work when the ship pushed into various types of ice at varying speeds.

At the same time, technicians will be flown by helicopter back to marked locations along the route to take core samples of the ice for analysis on ship. Then all of this information will be analyzed in small computers on the Manhattan and stored for later study at Humble's headquarters in Houston, Texas.

Engineers and marine experts then can begin to answer the big question: How much engine power and steel is required to get a ship through the worst possible ice conditions and still have room left for carrying oil?

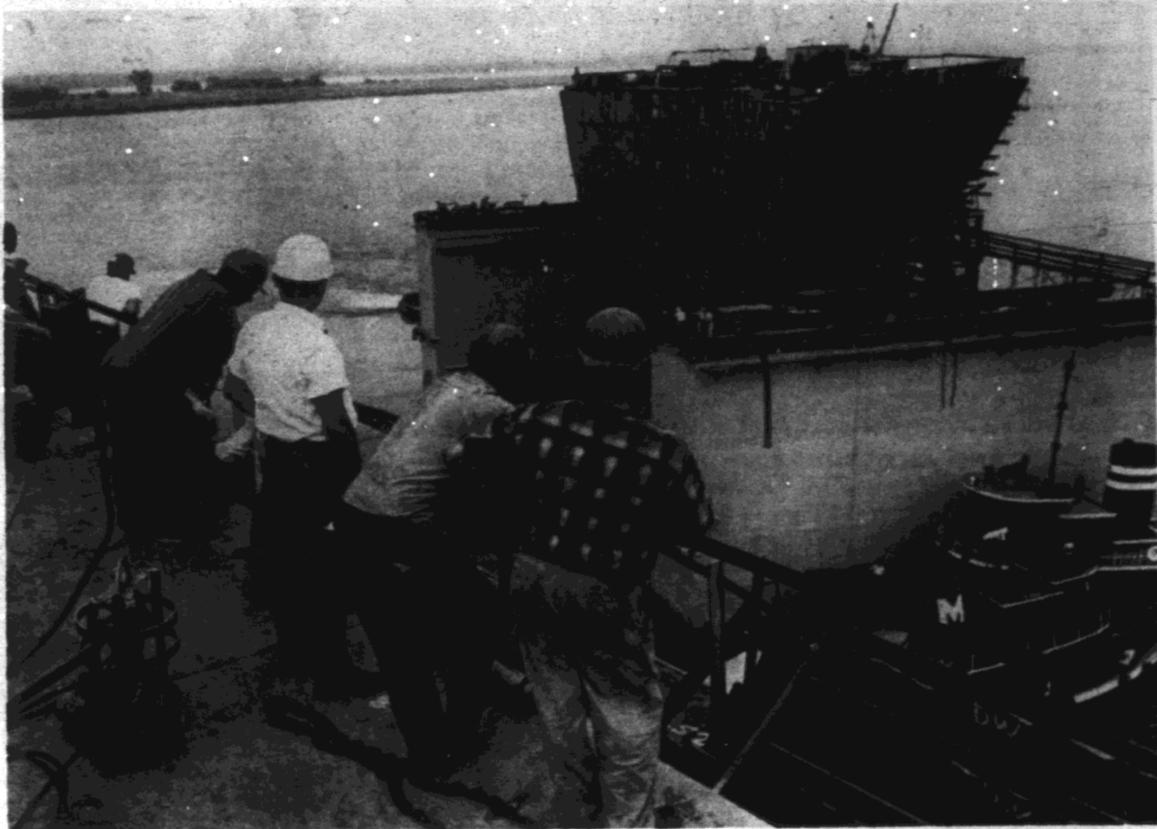
The success of the Manhattan's maiden voyage through the Northwest Passage depends on its returning with a shipload of information, not oil.

But the information had to be available to oil transportation planners by the late fall of 1969. The Manhattan, selected by Humble as the best equipped ship in the world for Arctic testing because of its high ratio of power to weight, had to be cut into four pieces so modification could be done simultaneously in yards from Bath, Maine to Mobile, Alabama.

In January, Sun's shipbuilders sliced the Manhattan into four sections—bow, forward, midship and stern—and farmed out the parts to their own yard and yards in three other states.

Midship and forward sections were towed much like any barge to yards at Mobile, Alabama and Newport News, Virginia respectively.

In Chester, Sun worked on the



ICE BREAKING BOW—Workmen at Sun Shipyard wait for tugs to bring the after-bow section of the S.S. Manhattan's experimental ice breaking bow into position for welding. The huge oil tanker is slated to sail her way through Arctic ice across the Northwest Passage sometime in September.

stern of the 115,000 deadweight ton tanker, strengthening the hull and installing new high strength propellers and tailshafts.

Construction of a new ice-breaking bow was divided between Sun and Bath Iron Works near Portland, Maine. Thus, five sections had to be rejoined before the ship was ready for her task.

During June and July, all of the Manhattan's converted sections—shielded with a wide, steel "ice belt," among other alterations—were returned to the Chester yard and assembled.

At one point in June, Sun reported that all four shipyards were devoting more than 10,000 workers to the conversion of the Manhattan.

The ship's round trip through the Passage will take about 100 days. After it arrives off Prudhoe Bay—near the recently discovered oil—it will continue to Anchorage, Alaska, and then return through the Passage continuing its data collection mission.

It is scheduled to reach the East Coast again on Nov. 10, carrying a small amount of crude oil.

Visitors to UA Museum On Increase

Summer visitors to the University of Alaska Museum increased by 553 persons for the month of June over last year with 9,681 visitors.

A majority of the visitors, 5,602 were from other states, according to a report by Lu Rowinski, museum director. More than a fourth of the visitors, 2,778, were on commercial tours.

Natives pending congressional action also prohibits natives from filing allotments.

The BLM said that claims on allotments are being rejected by their offices. The Tundra Times has also learned that, although applications will be accepted for consideration after the freeze is lifted, the state will be granted 90 days in which to make its selection of land.

In other words, the state will have priority over all other parties, including natives.

Bob Krumm, manager for the BLM, Fairbanks District, said the article might mislead the native people at the present time because allotments can not be awarded while the land freeze exists.

hole has been completed. The hole is now being cased with a steel liner.

The yield of the test will be in the same range as the events of larger yield conducted in Nevada.

The calibration test has been scheduled so any effects of ground motion on the environment can be studied. The experiment is designed to avoid release of radioactivity to the environment.

Two additional emplacement holes are being constructed on Amchitka for possible use after the calibration test.

Publicity on Allotments Shows Discrepancies

The July 11 issue of the Tundra Times contained an article on the procedure for claiming native allotments. The story said that native allotments can be filed on unappropriated public lands and included in procedure for making claims on these allotments.

This article is based upon information which has been provided by the Bureau of Indian Affairs to natives who wish to file on such lands. The Fairbanks office of the Bureau of Land Management has informed the Tundra Times that the story is in error.

The "super freeze" ordered by former Interior Secretary Udall in December of 1968 to protect land claimed by Alaskan

AEC Tentatively Schedules Nuclear Detonation on Amchitka

An underground nuclear detonation to determine the suitability of Amchitka Island in the Aleutians for larger underground nuclear tests is tentatively scheduled for the fall of 1969.

The calibration event will be denoted at the bottom of a 4,000 foot drilled hole. It will be the first nuclear detonation on Amchitka Island by the U. S. Atomic Energy Commission.

An earlier 80-kiloton test, Long Shot, was conducted in October of 1965 under the sponsorship of the Department of Defense.

Drilling of the emplacement

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