



Arctic Development  
Library

***Arctic Vessel Development - Keewatin Arctic  
Char Collector Vessel  
Type of Study: Reference Material  
Author: G.n.w.t. Development Corporation  
Catalogue Number: 3-7-30***

ARCTIC VESSEL DEVELOPMENT - KEEWATIM  
ARCTIC CHAR COLLECTOR VESSEL

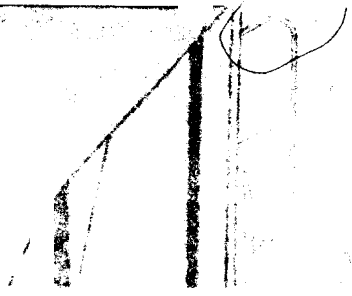
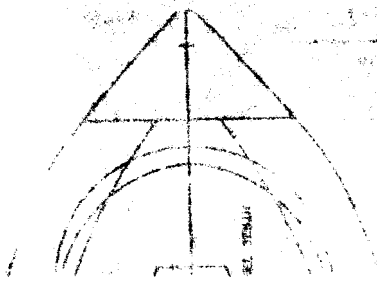
3-7-30 Fisheries  
Reference Material

ARCTIC CHAR COLLECTOR VESSEL  
KEEWATIM

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KEEWATIM

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KEEWATIM

3-7-30



**ARCTIC VESSEL DEVELOPMENT**

**Keewatin Arctic Char Collector Vessel**



**Constructed for N.W.T. Development Corp. by  
Metalcraft Marine, Kingston, Ontario**



## ARCTIC FISHERIES - VESSEL DESIGN STUDY

In July of 1991, the Federal Department of Fisheries and Oceans undertook a preliminary feasibility study into the development of suitable vessel for use in developmental fisheries in the Arctic. The Naval Architecture Division of the University of British Columbia's Engineering Department were engaged to provide the required technical expertise. The initial findings were reviewed at a fisheries technology transfer workshop, co-sponsored by DFO and the Government of the Northwest Territories in October of 1991.

In the fall of 1991, Copro Limited was engaged by the Northwest Territories Development Corporation to develop a business plan for the plant and infrastructure needed to revitalize the Keewatin Arctic Char fishery. That plan recognized the overlapping interests of the two projects. The opportunity for cooperation between the NWT Development Corporation initiatives and the DFO project was identified. In short, collector vessels were required to deliver fish from the harvest camps to the plants in the Keewatin, and the DFO project could be applied to this specific problem, to develop the vessel specifications and building estimates for this particular application.

DFO, through their Fishing Industry Services Branch, were able to work with the NWT Development Corporation to offer expertise to develop the most appropriate and cost effective vessel for this application. They engaged the University of BC Naval Architecture Division to provide the design expertise, and Copro Limited to co-ordinate the project and facilitate the communications between the Development Corp., the Keewatin proponents, and the design **team**.

The final report, provided the Development Corporation not only with a design, but also the competitive bids of tendering that design to three different yards from across Canada. As a result, the Development Corporation have built a vessel at Metal Craft Marine in Kingston Ontario this year. That vessel is depicted on the cover of this package.

The following drawings reflect the design process, from a generic hull designed by UBC, to the specific arrangement arrived at after consultations in the Keewatin. General arrangements for this vessel as configured for Keewatin, as well as a general arrangement with a forward wheel house, as requested by the HTA of Gjoie Haven NWT are also included.

**Design Objectives:**

- To develop the design for two suitable and cost effective collector boats for the char fishery in the Keewatin, with input from the community proponents.

- To provide full working drawings, specifications, and builder's tender documents for the construction of the vessels.

-To provide bids from three separate yards for the construction of the vessels for delivery to the Keewatin.

**Design Consultation Process:**

- Review studies and examples of past collection methods and the vessels used.

- Interviewed those in the region who have been and will be involved in the fishery, to identify their preference in design, and those features of past experiments that have been effective, as well as those that have not.

- The Naval Architect and the Co-ordinator met in Keewatin with proponents, for vessel and client needs assessment. This included the charter of one of the collector boats being used in the region for the 1992 season, to participate in collection during normal operations.

- Developed preliminary designs and specifications with cost estimates. Included will be alternate modifications and cost premiums for additional options.

- Presented in Keewatin the of design options, their rational, and sought community advice and input for final design specifications.

- Finalized design, specifications, and tender documents for final review by regional proponents.

- Tendered for bids from at five yards; three Canadian from BC, Manitoba, and Ontario, and two American yards. The American yards did not return bids. The UBC design was presented as the specification against all yards were to bid, but since the builders were chosen on the basis of their experience in building boats of the size and configuration required, they were asked to include pricing of vessels based on their own standard hull designs.

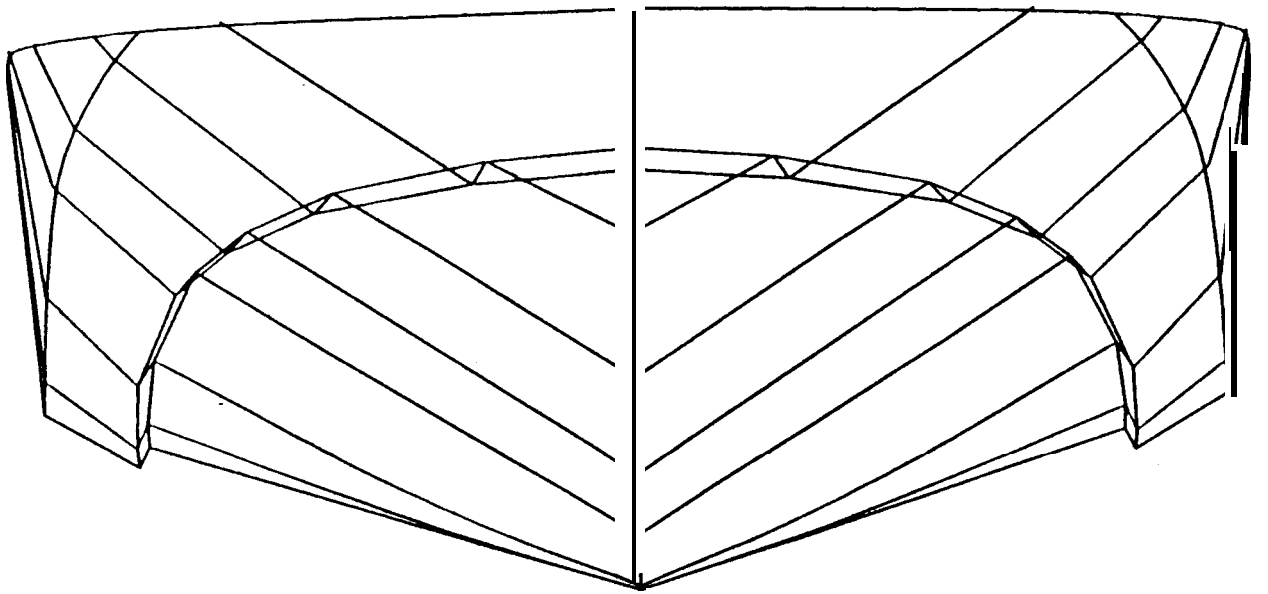
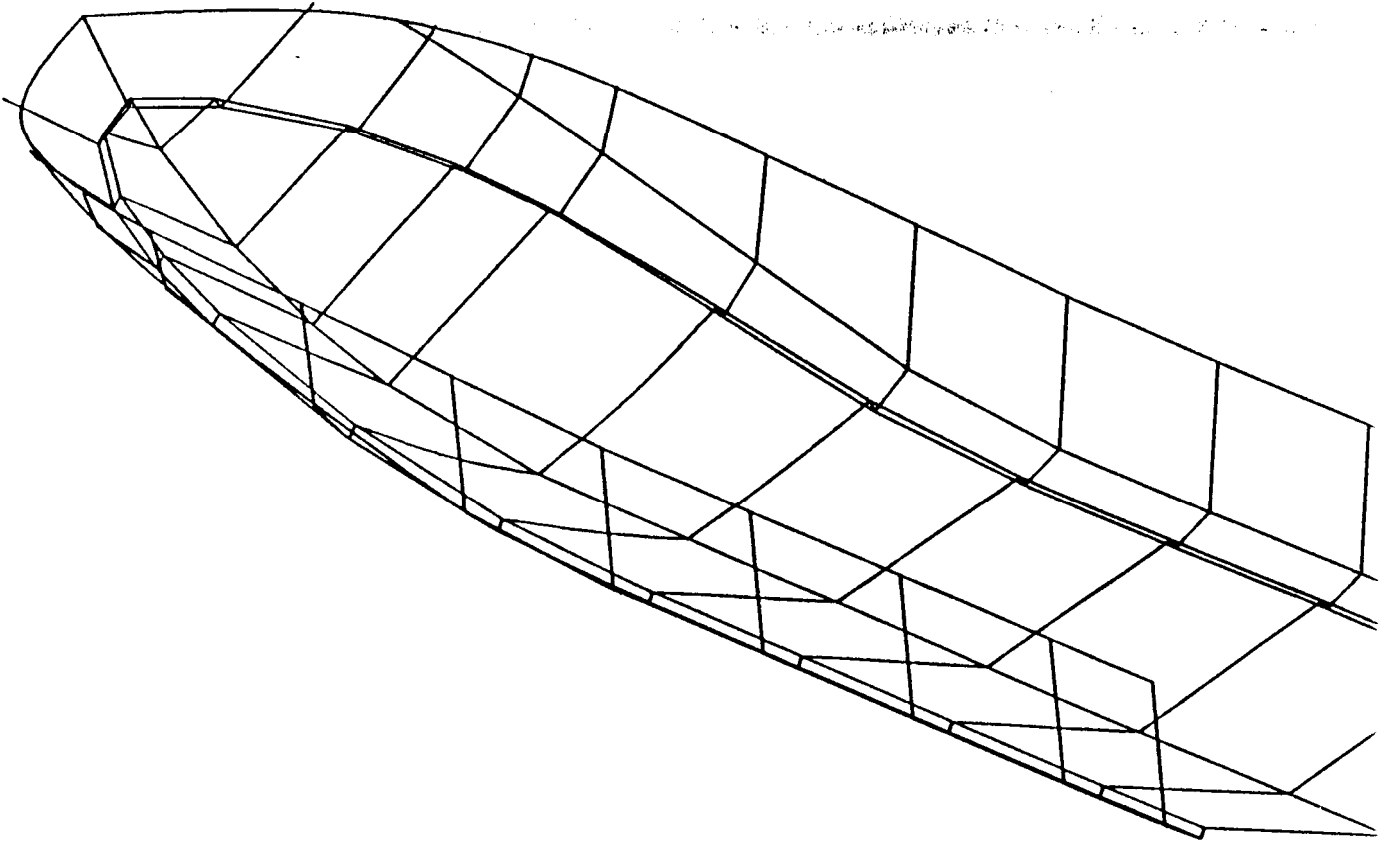


Figure 1.10.10

# Specifications

LDA 28'0"  
 Beam 10'  
 Draft 2'  
 Disp. 10,000lbs.  
 Freebd. 5'8"  
 Power 180-230hp  
 Outboards  
 Payload 2 Tonnes  
 Fuel 200 gal.  
 Material Alum.

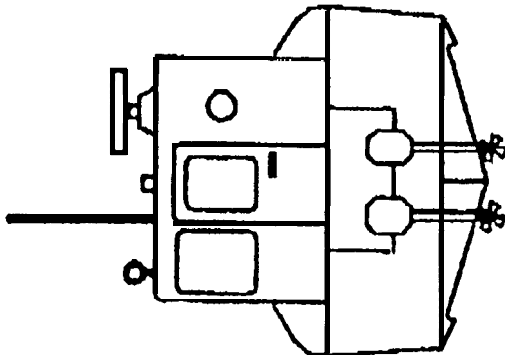
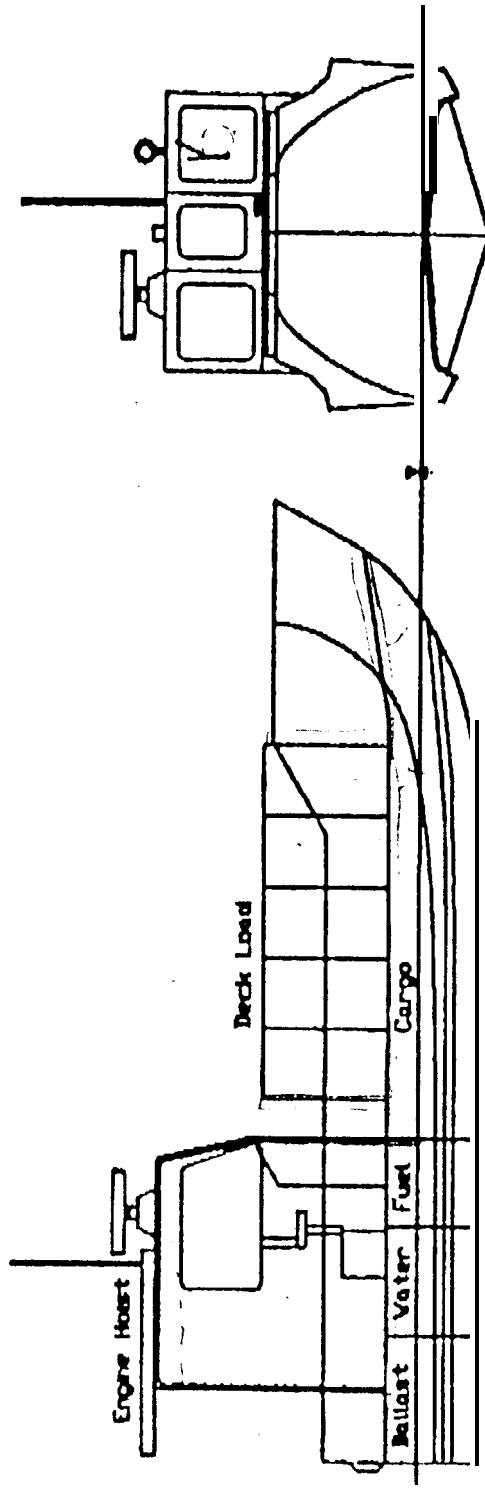
# Options

Hydraulic Crane  
 Radar  
 Satellite System  
 Depth Sounder  
 Engine Hoist  
 Custom Interior  
 Fresh Water System  
 Porta Potti  
 Propane Stove  
 Refrigerator  
 Foldable Beds

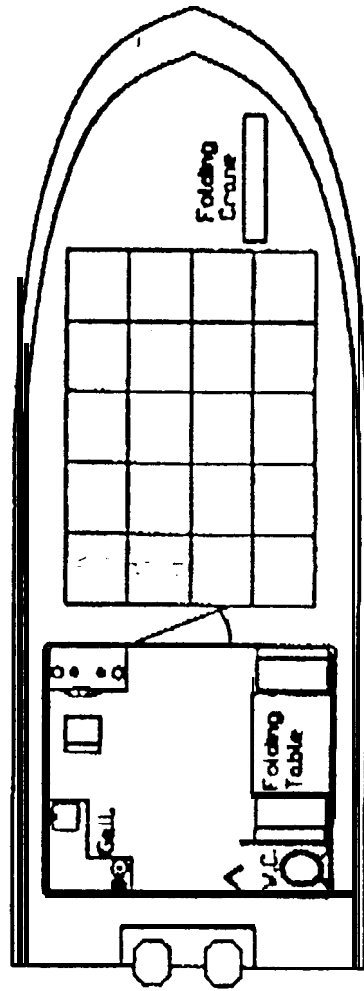
# TRANSTAR

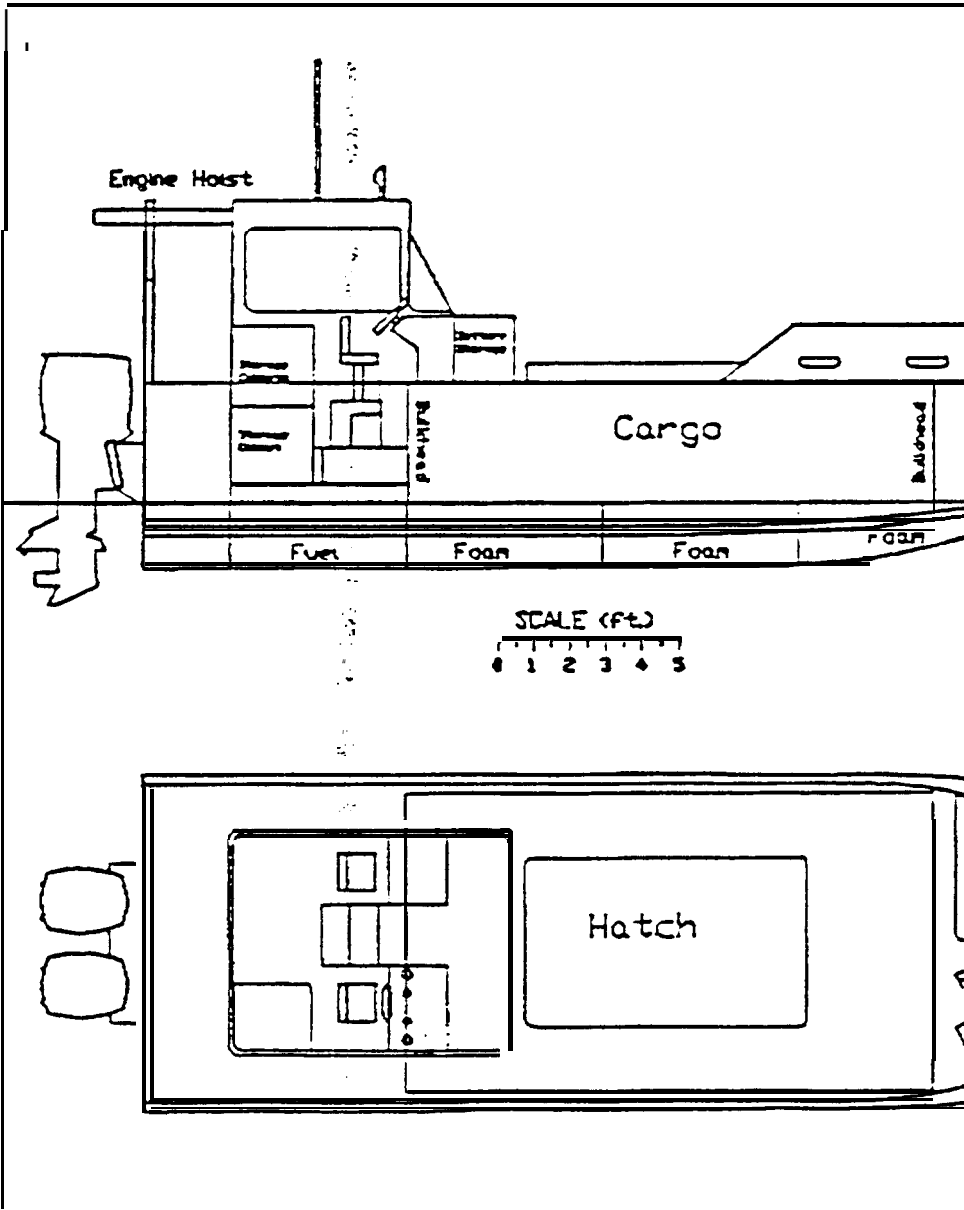
Hudson Bay Arctic  
 Char Carrier Vass.

General Arrangement

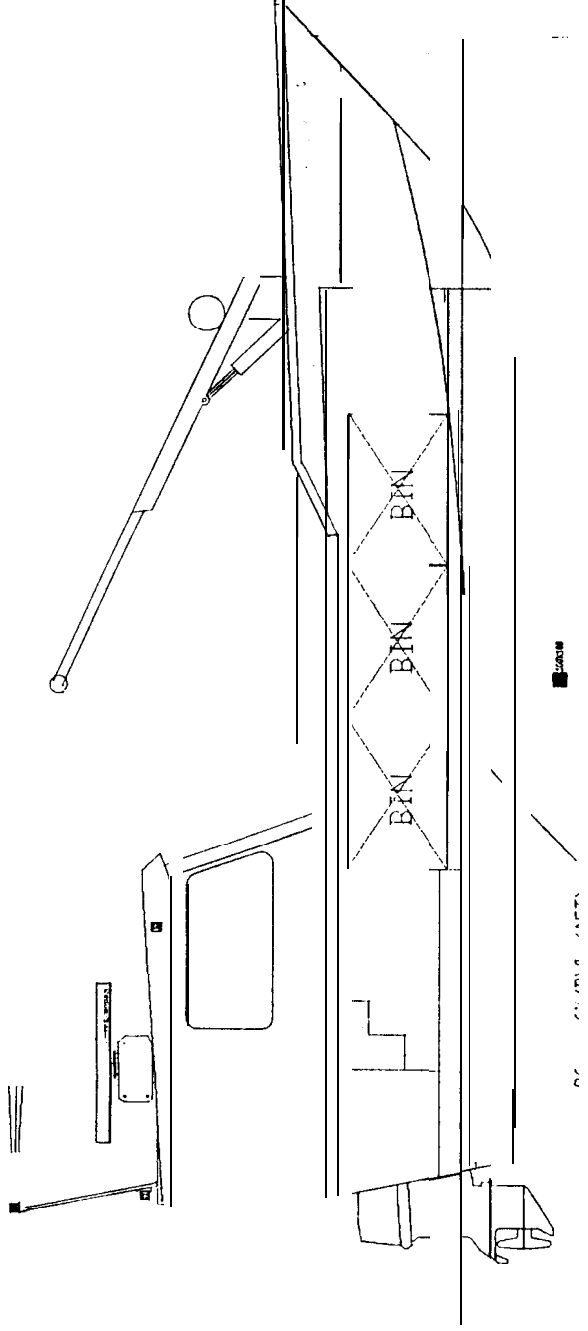


SCALE (ft)  
 1 2 3 4 5





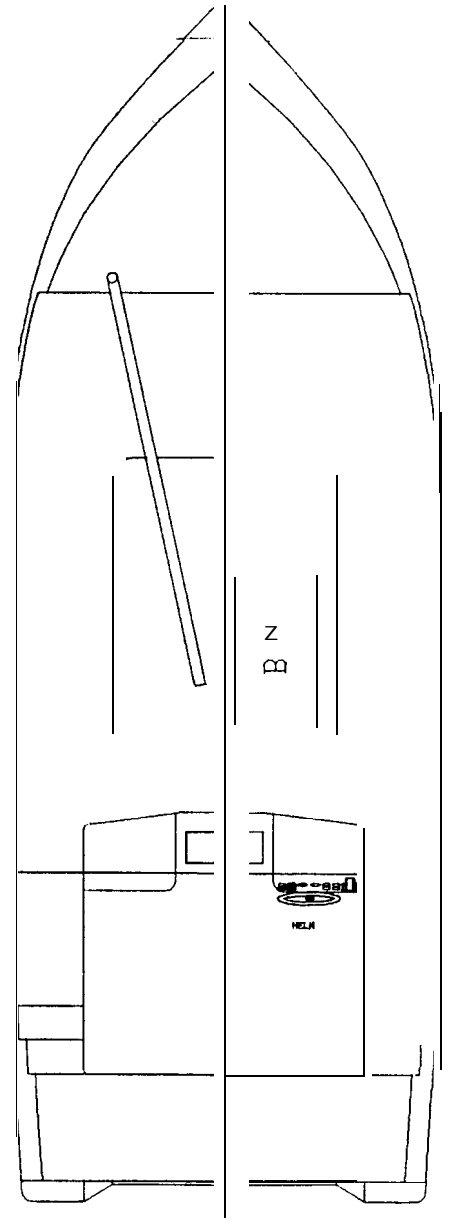


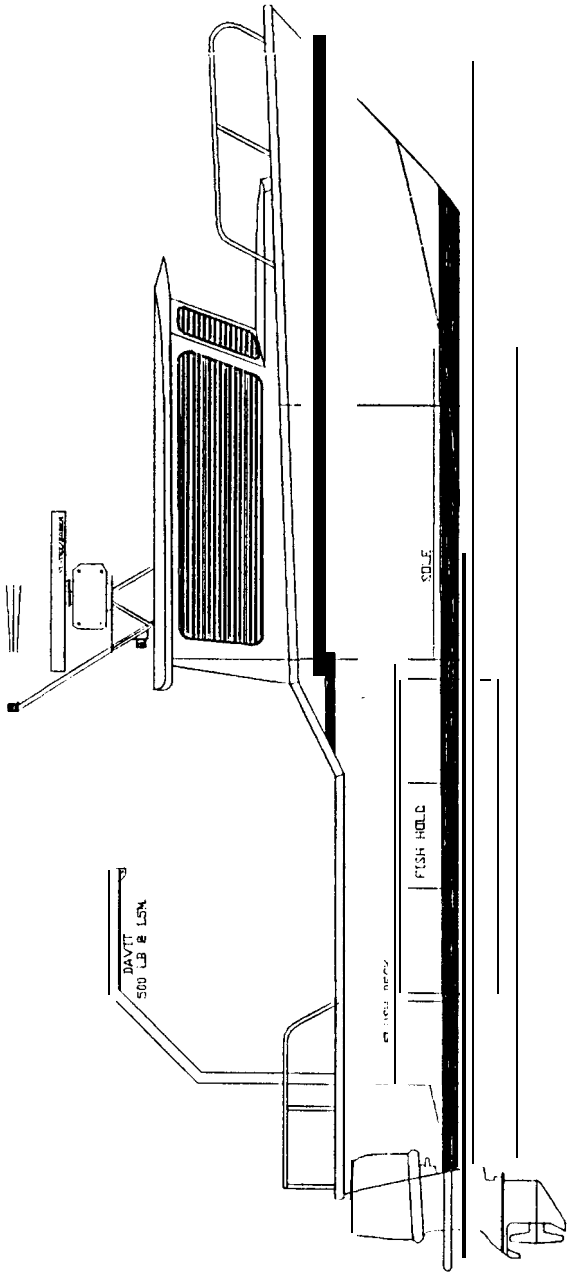


# KINGSTON 28

LOA 28'-3" (8.61M)  
 BEAM 10'-8" (3.25M)  
 DEPTH OF HULL 17" (43CM)  
 DISPLACEMENT 4300 KG.  
 CONSTRUCTION WELDED ALUMINUM  
 POWER TWIN MERCURY 150 H.P.  
 SPEED 40 KNOTS

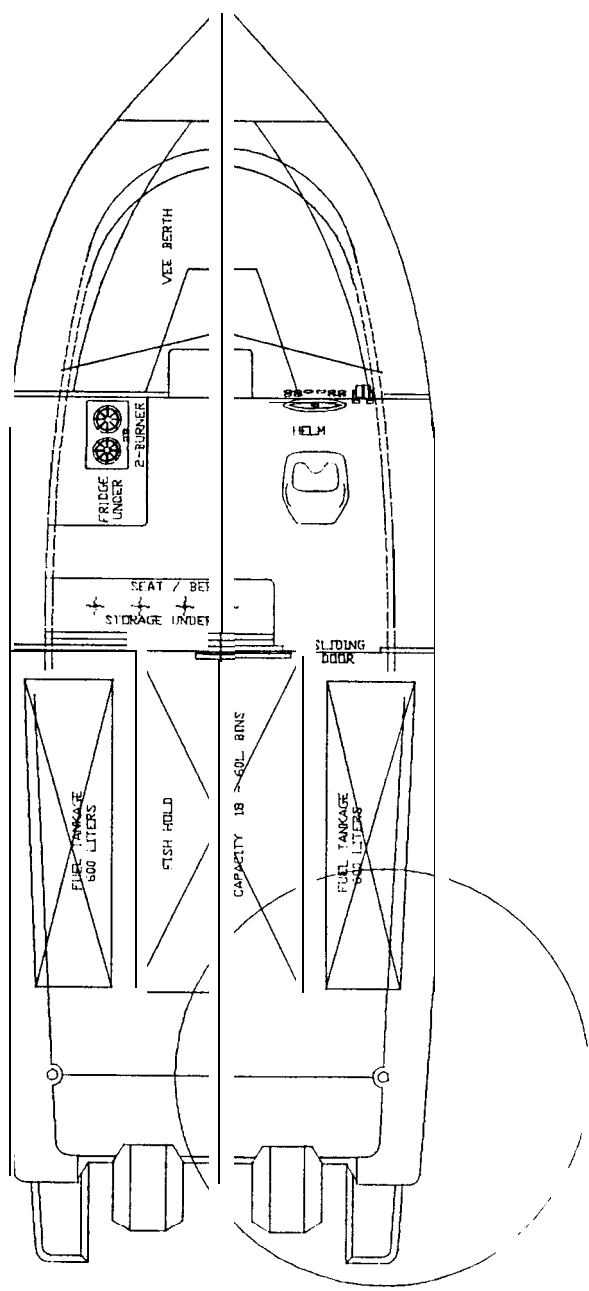
PROJECT	COLLECTOR BOAT		
OWNER	N.W.T. DEV. CORP. RANKIN INLET, N.V.T.		
BUILDER	METALCRAFT MARINE INC.		
DATE	SEPT. 12/93	NO.	96-GA
SCALE	1" = 20'	APPROVED	





# KINGSTON 28

LDA 29'-3" (8.51M)  
 BEAM 10'-8" (3.25M)  
 DEPTH (of Hull) 17' 4.43M)  
 DISPLACEMENT 4300 KG  
 CONSTRUCTION WELDED ALUMINUM  
 POWER TWIN MERCURY 150 HP  
 SPEED 46 KNOTS



PROJECT	COLLECTOR BOAT		
OWNER	GJOAHAVEN H. & T. ASSOC. GJOAHAVEN N.V.T.		
DESIGNER	METALCRAFT MARINE INC.		
DATE	OCT. 18 / 95	NO.	GJOA-28
SCALE	1" = 20'	APPROVED	