

GALLOWAY TYPE CATARACT BOAT GLEN
Grand Canyon Boats
Grand Canyon National Park
Grand Canyon
Coconino County
Arizona

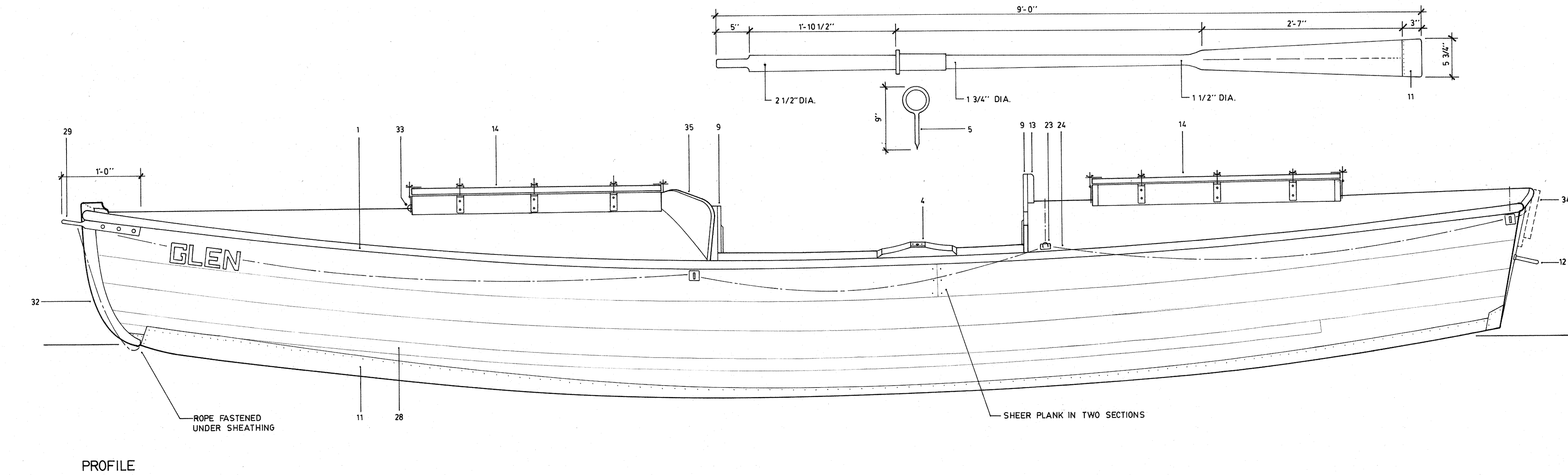
HAER AZ-70
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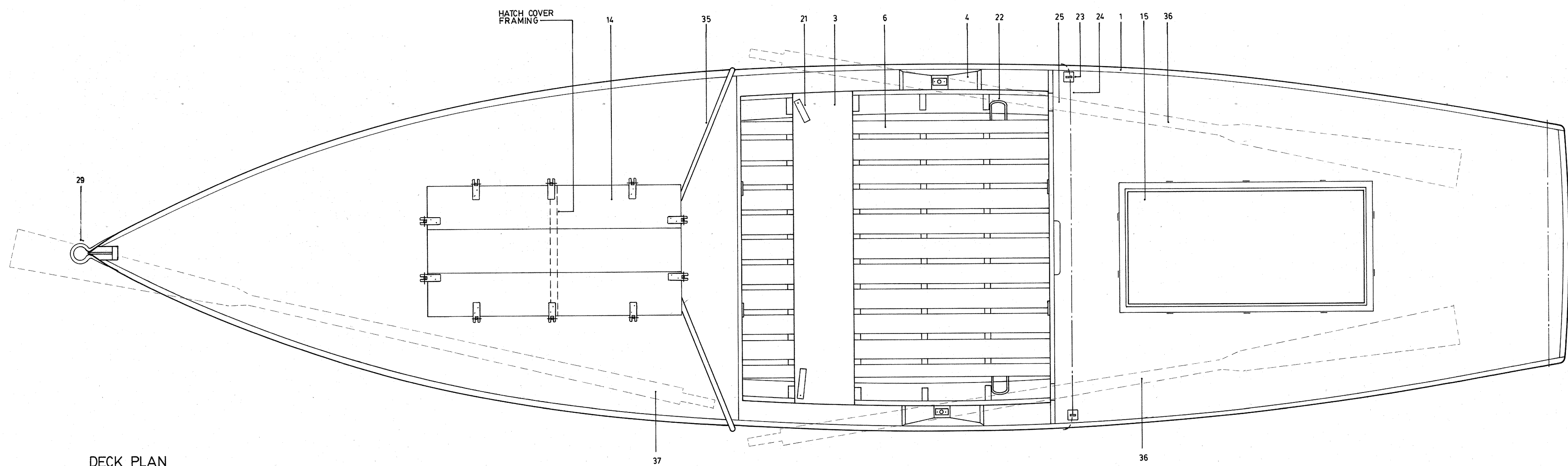
PHOTOGRAPHS

REDUCED COPIES OF MEASURED DRAWINGS

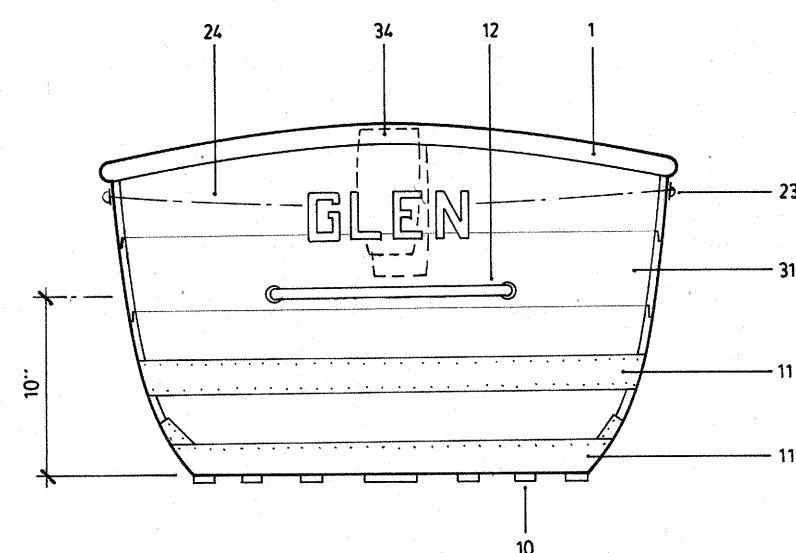
HISTORIC AMERICAN ENGINEERING RECORD
National Park Service
U.S. Department of the Interior
1849 C Street NW
Washington, DC 20240-0001



PROFILE



DECK PLAN



TRANSOM-PROJECTED

NOTES

1. HISTORICAL DOCUMENTATION WAS USED TO DEVELOP SOME RECONSTRUCTIONS AND NOTES. SUCH ITEMS ARE MARKED WITH AN "A".

KEY

- 1 RUBRAIL
- 2 RISER
- 3 THWART
- 4 OARLOCK GRIP AND PAD
- 5 OARLOCK
- 6 FLOOR BOARD
- 7 SHEER CLAMP
- 8 VERTICAL CLEAT
- 9 COAMING/BULKHEAD
- 10 BOTTOM SKID/RUNNER
- 11 COPPER STRIP/SHEATHING
- 12 1/2" DIA. IRON, FOR CARRYING
- 13 BUTT BLOCK
- 14 HATCH, WITH HATCH COVER
- 15 HATCH, HATCH COVER NOT SHOWN
- 16 BOTTOM PLANKING, LIMITED ACCESS FOR MEASURE
- 17 STERN KNEE, NOT ACCESSIBLE FOR MEASURE
- 18 GALV. AIR TANK (ASSUMED FOR BUOYANCY)
- 19 AREA INACCESSIBLE
- 20 METAL REINFORCING STRAP
- 21 METAL STAP, USE UNKNOWN
- 22 1/4" DIA. IRON, USE UNKNOWN
- 23 PAD EYE, FOR SECURING ROPE HANDHOLDS
- 24 ROPE HANDHOLDS
- 25 OAR REST
- 26 AIRTANK SUPPORT - MISC. FRAMING
- 27 JOINT/SEAM BATTEN
- 28 BATTEN SHEATHING 3/8" X 1 3/4"
- 29 METAL RING/STRAP FOR BOWLINE
- 30 OAR LEATHER - LEATHER
- 31 DORY LAP PLANKS AT TRANSOM
- 32 1/4" BRASS HALF ROUND
- 33 "U" BOLT, FOR SECURING SPAR OAR
- 34 UNDATED ALTERATION - OARLOCK GRP AND MOUNTING BLOCK, POSSIBLY FOR SCULLING OR STEERING OAR
- 35 UNDATED ALTERATION - DIAGONAL COAMING MOUNTED WITH GALV. METAL STRAP, ORIGINAL FORWARD COAMING MATCHED COAMING AT AFT BULKHEAD*
- 36 APPROX. POSITION OF SHIPPED OAR
- 37 APPROX. POSITION OF SECURED SPAR OAR

SCANTLINGS

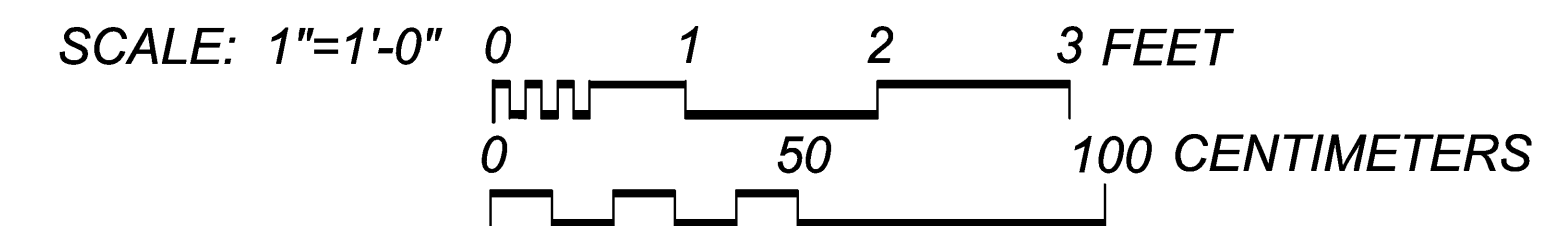
PLANKING, SIDES - 1/2" FIR
 PLANKING, BOTTOM - 5/8"
 DECK - +/- 3" X 1/2" CEDAR
 FRAMES - 1 1/4" X 7/8" FIR AT ±9" OC
 FLOORS - 1 1/4" X 7/8"
 CHINE - FROM 2 1/2" X 1 1/2"
 TRANSOM - OAK
 STEM - OAK
 DECK BEAMS - X 7/8" FIR
 RUBRAIL - 1 1/4" X 3/4" OAK
 CLAMP - 3" X 1 1/4"
 RISER - 2 1/4" X 3/4"
 THWART - 7/8"
 FLOOR BOARDS - 3" X 5/8"
 BOTTOM RUNNERS - X 3/8" LOCATED OVER EACH JOINT
 HATCH COVERS - X 1" FIR

FASTENINGS

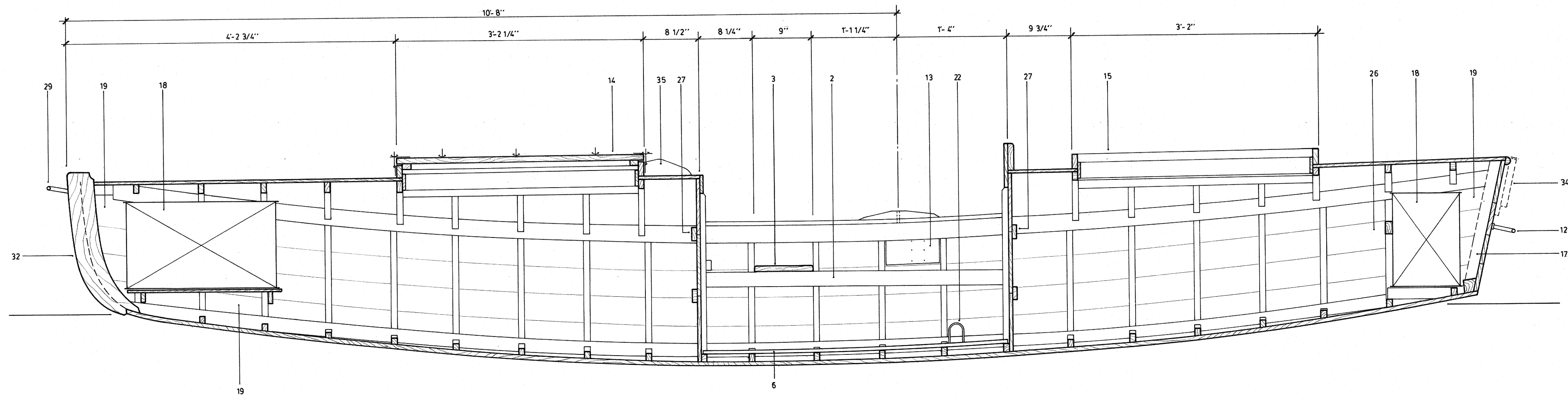
PLANKING TO FRAMES - COPPER RIVETS

"GLEN"
 GALLOWAY TYPE CATARACT BOAT
 BUILT BY FELLOWS & STEWART (attributed), c.1921
 WILMINGTON, CA

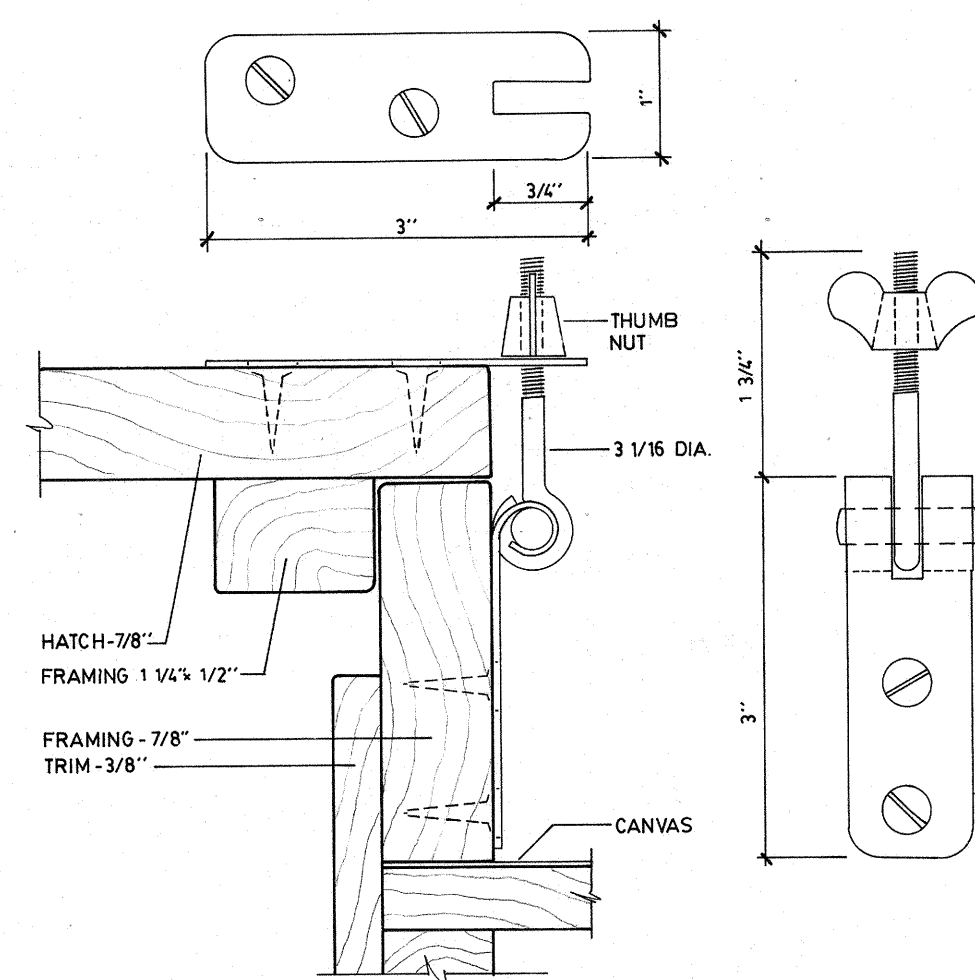
DRAWN AND DELINEATED BY TODD BLOCH



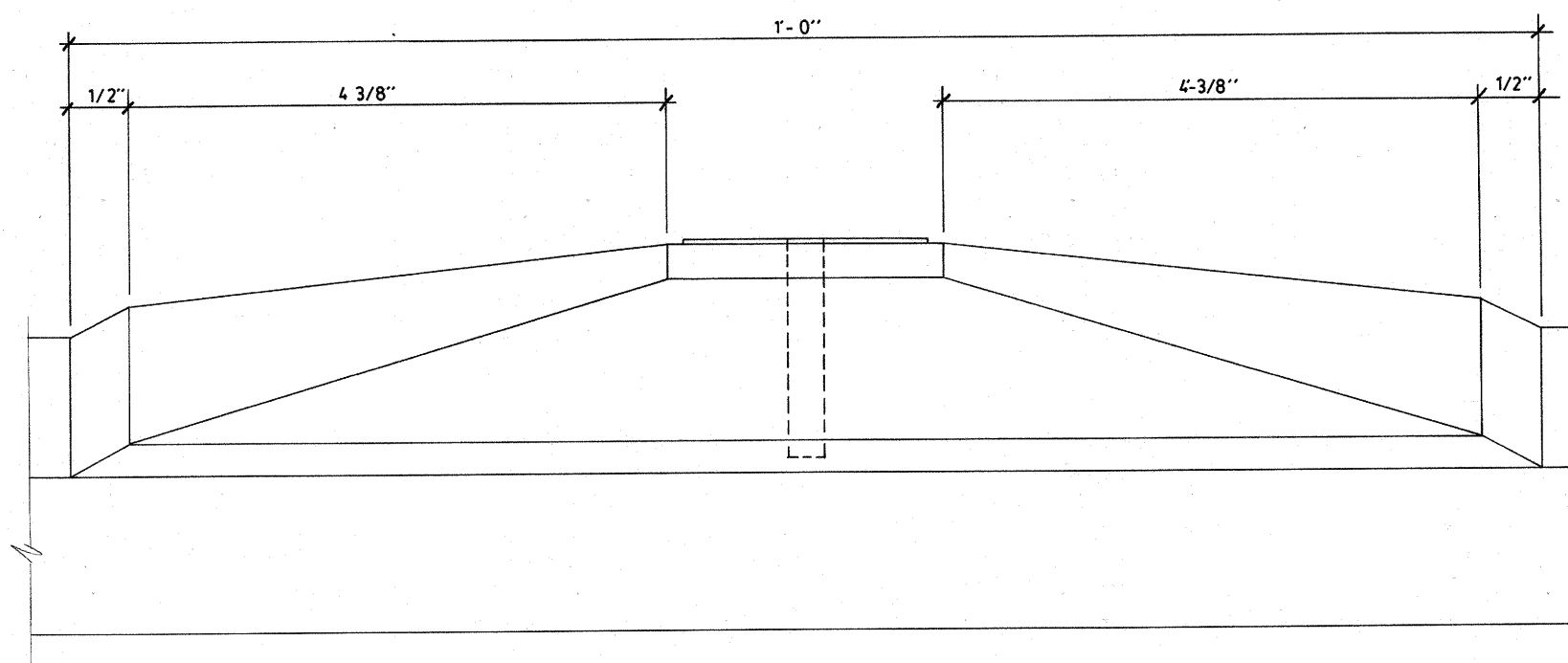
Note: These drawings were scanned from original pencil drawings donated by Todd Bloch and rescaled to the HAER format.



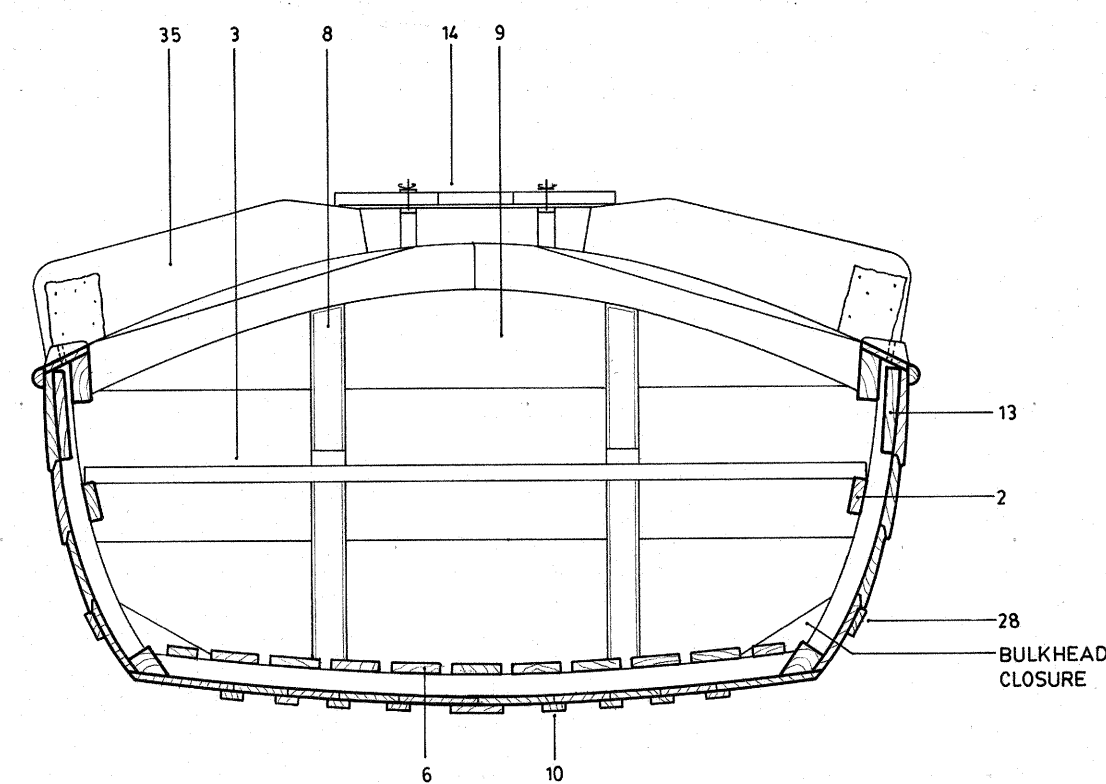
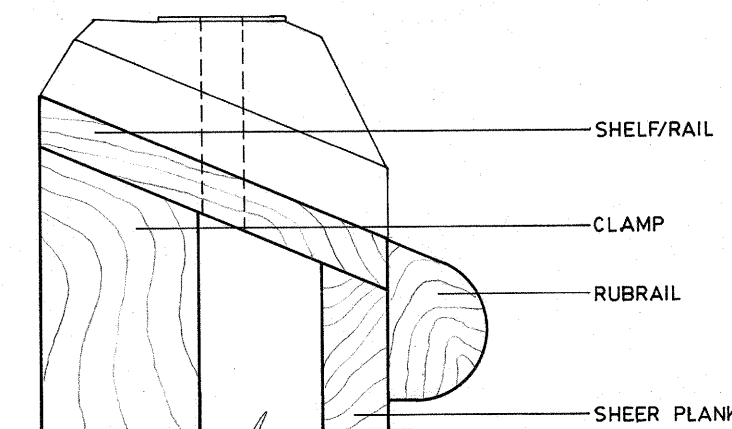
LONG SECTION



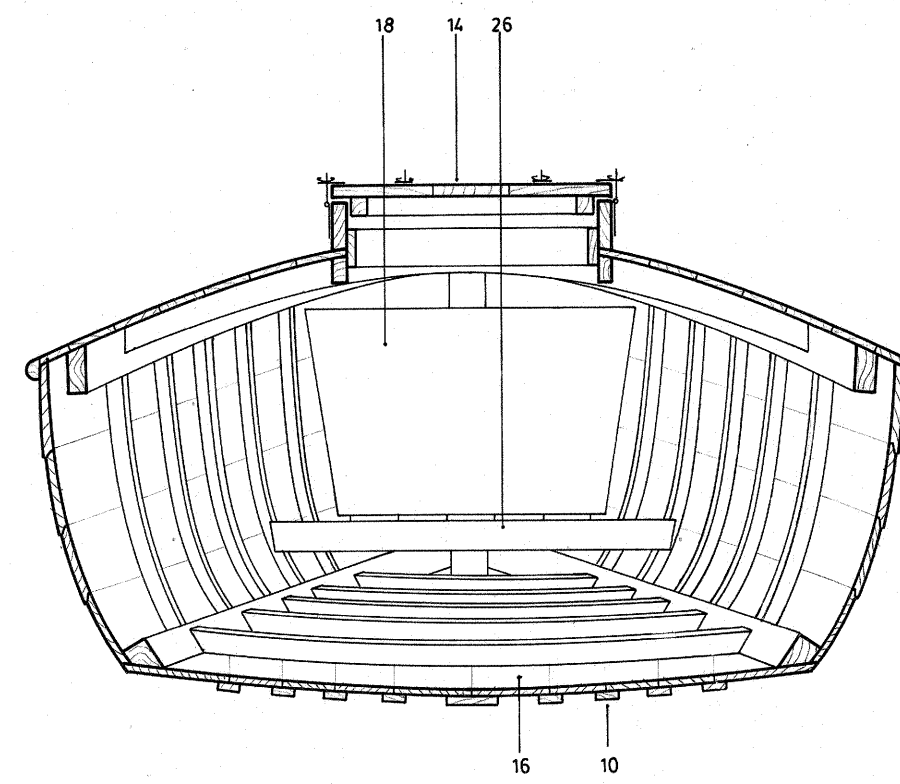
HATCH DETAILS



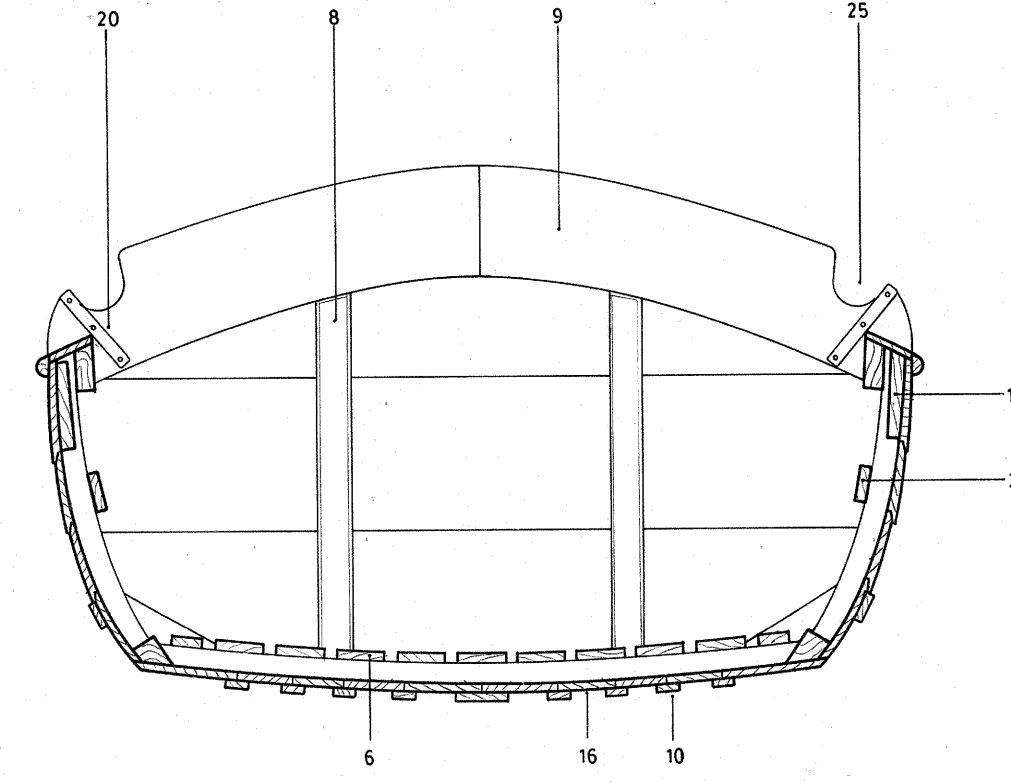
OARLOCK PAD DETAILS



MID-SHIPS SECTION LOOKING FORWARD



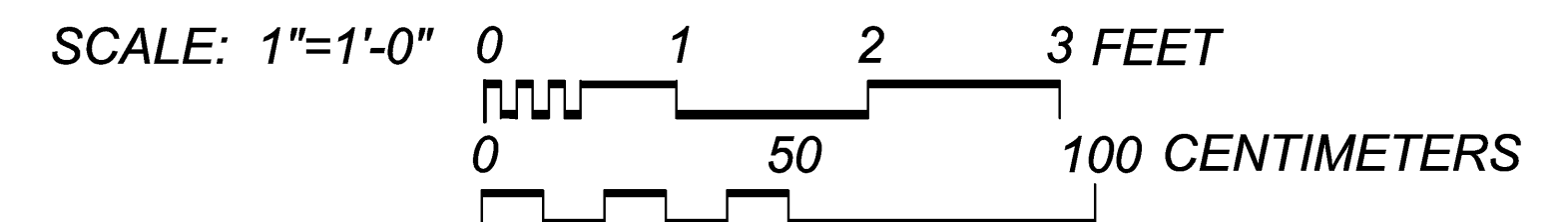
SECTION AT HATCH



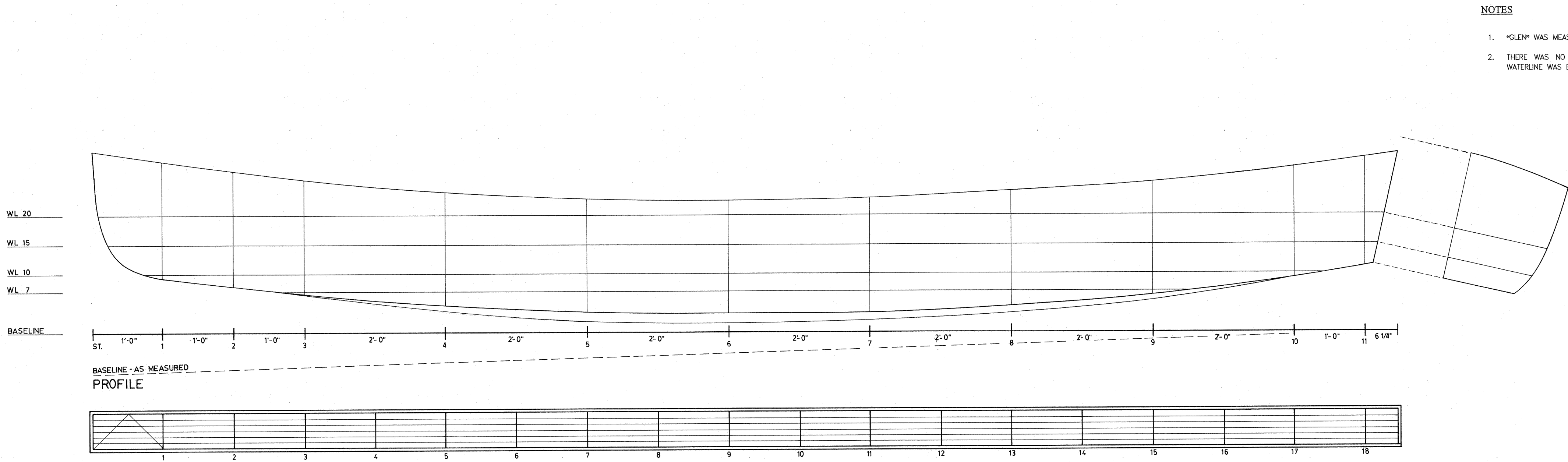
MID-SHIPS SECTION LOOKING AFT

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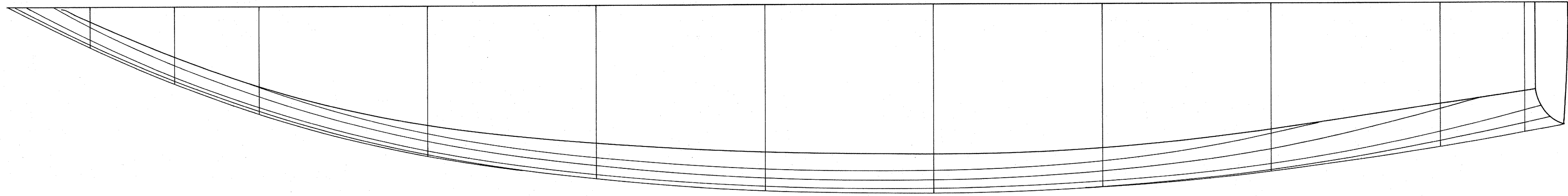


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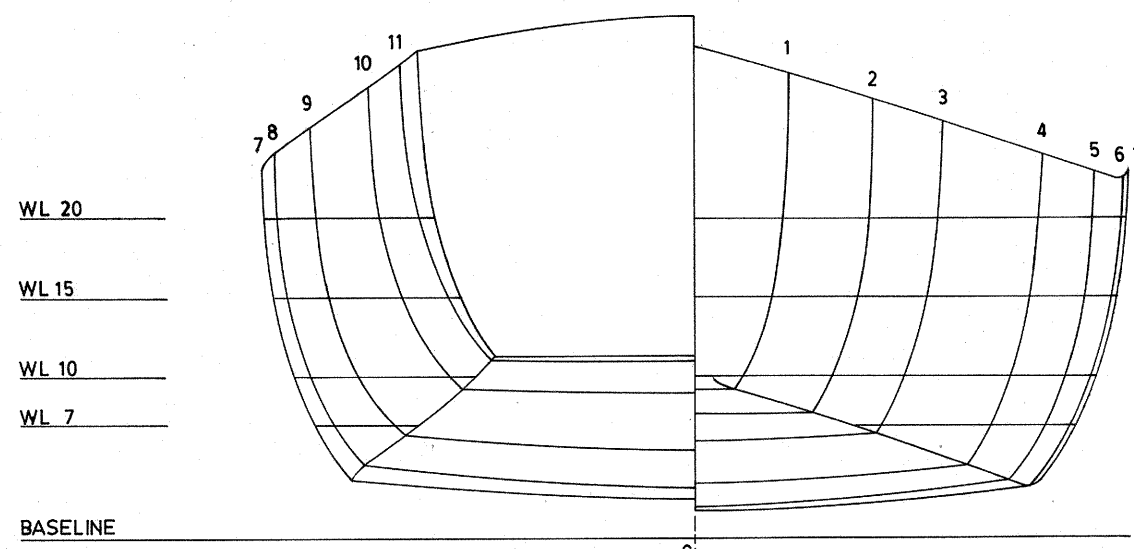


NOTES

- "OLEN" WAS MEASURED IN HER CRADLE.
- THERE WAS NO INDICATION OF WATERLINE ON THE BOAT. THE SHOWN WATERLINE WAS ESTABLISHED BASED ON HISTORICAL PHOTOS.



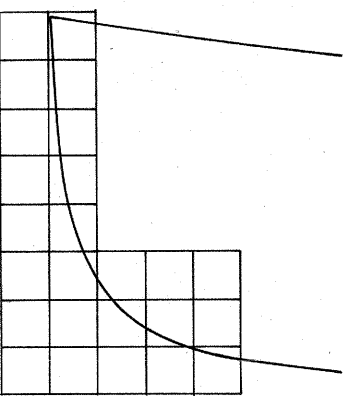
HALF BREADTHS PLAN



BODY PLAN

TABLE OF OFFSETS													
	Stations	Bow	1	2	3	4	5	6	7	8	9	10	Transom
Height Above Base	Sheer	2-6-6	2-5-1	2-3-3	2-2-0	1-11-6	1-10-6	1-10-5	1-11-0	2-0-0	2-1-4+	2-4-1	2-6-5
	Chine	-	0-6-2	0-7-6	0-6-4	0-4-4	0-3-2	0-3-2	0-3-4	0-4-4	0-6-2	0-6-2	0-11-1
	Bottom	-	0-6-2	0-7-6	0-6-2	0-3-3	0-1-6+	0-1-6	0-2-1	0-3-3	0-4	0-6-1	0-11-1
Halfwidths from Centerline	Sheer	-	0-5-6	0-11-1	1-3-3	1-8-5+	2-0-7	2-2-5+	2-3-0	2-2-2	2-0-1	1-8-4	1-6-4
	WL 20	-	0-5-3	0-10-7	1-3-1	1-9-3	2-0-6	2-2-5	2-2-7	2-2-1	1-11-7	1-7-6	1-5-2
	WL 15	-	0-4-6	0-10-1	1-2-3	1-8-7	2-0-3	2-0-3	2-2-3	2-1-4	1-10-7	1-6-2	1-3-4
	WL 10	-	0-2-7	0-8-3	1-1-0	1-7-5	1-11-1	1-11-1	2-1-0	2-0-0	1-9-2+	1-3-2	-
	Chine	-	0-2-3	0-7-2	0-11-2	1-4-7	1-7-3	1-7-3	1-9-4	2-8-5	1-6-1	1-2-4	1-0-5

Offsets are in Feet-Inches-Eighths to outside of plank
Stations are spaced from F.P. as noted
F.P. is face of stem at Sheer
A.P. is face of transom at Sheer at Center Line
Top of stem is 2'-0" above base
L.O.A. is 19'-6"



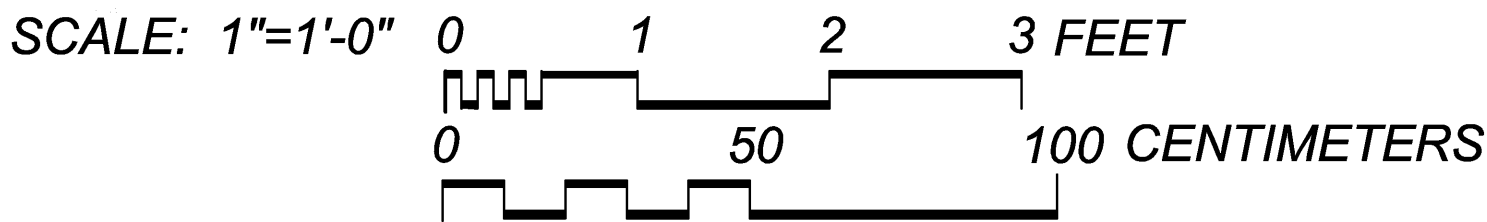
3" SQUARES

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INDEX TO PHOTOGRAPHS

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HAER AZ-70

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Photos taken while boats were located in park curatorial storage.

INDEX TO BLACK AND WHITE PHOTOGRAPHS

Jet Lowe, photographer, 2008

AZ-70-1	3/4 view of port side from bow to stern.
AZ-70-2	3/4 view of starboard side from stern to bow.
AZ-70-3	Detail of cockpit and bow deck hatch.
AZ-70-4	Detail of hatch.





1966 AZ 10-2



HAGR AZ-10-3

