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EXHIBIT LIST

Case No. 3AWS 89-7217 CR 89-7218 CR  Pretrial Hearing  Trial

State of Alaska vs. Joseph Hmelwood

Name of Party: State of Alaska  Pltf.  Def.  
 (There must be a separate exhibit list for each party.)

Party's Attorney: Brent Cole, asst DA

COURT USE ONLY

Exhibit No. Marked for ID (Write No.)	BRIEF DESCRIPTION OF EXHIBIT	Off.	Ad.	With- drawn Date	To Jury	From Jury	To From Ex. Stor.
1	crew list		1		1	1	DB
2	Course recorder		2		2	2	DB
3	Bell Logger		3		3	3	DB
4	Bell log (Tally Book)		4		4	4	DB
5	official log Book		5		5	5	DB
6	<del>Tally log Book</del>		6		6		
7	maneuvering chart		7		7	7	DB
8	Marsat phone calls		8		8	8	DB
9	night order Book (partial)		9		9	9	DB
10	night order Book (complete)		10		10	10	DB
11	RPM Table		11		11	11	DB
12	Gauging Report		12		12	12	DB
13	Ships Policy on alcohol use		13		13	13	DB
14	Bridge Manual		14		14	14	DB
15	Budge chart - 16708		15		15	15	DB

I certify that the exhibits checked in the "To Jury" column on this and all attached pages were given to the jury for deliberation.  
 Date 3-20-90 In-Ct. Clerk [Signature]

I certify that the exhibits checked in the "From Jury" column on this and all attached pages were received from the jury after the verdict.  
 Date 3-22-90 In-Ct. Clerk [Signature]

I certify that the exhibits checked in the "To Exhibit Storage" column on this and all attached pages have been placed in exhibit storage.  
 Date 3/30/90 Exhibit Clerk [Signature]



**EXHIBIT LIST CONTINUATION SHEET**

Case No. 3AUS 89-7217 CR.

Name of Party: State

**COURT USE ONLY**

Exhibit No. Marked for ID (Write No.)	BRIEF DESCRIPTION OF EXHIBIT	Off.	Ad.	With- drawn Date	To Jury	From Jury	To Ex. Stor.
X 16	Course recorder - Blow-up		16		16	16	DG
X 17	Bell Logger Blow-up	17	17		17	17	DG
X 18	Maneuvering Chart Blow-up		18		18	18	DG
X 19	Photo of Exxon Valdez <sup>Chart</sup>		19		19	19	DG
20	Chart 16708	x					/
21	Chart 16707		21		21	21	DG
22	Bridge Diagram chart		22		22	22	DG
23	City of Valdez Photo chart		23		23	23	DG
<del>24</del>	<del>Diagram of Pipeline chart</del>		<del>24</del>		<del>24</del>	<del>24</del>	<del>DG</del>
25	Chart - 16700		25		25	25	DG
26	Chart 16708 with overlays		26		26	26	DG
27	Fiddle Board chart		27		27	27	DG
28	Diagram of Hull Damage			2-23-90 by Cole-			X
29	Exhibit 15 Blow-up		29		29	29	DG
30	Exhibit 29 - Blow-up		30		30	30	DG
31	Murphy immunity letter		31		31	31	DG
X 32	Guard Logs		32		32	32	DG
33	Coast Guard Regulations re Valdez	x					/
34	Pilotage regulations	x					/
35	Photo of independent	x					/
36	9x14 Photo of Sailing Board	x					/
37	9x14 Photo of Deck		37		37	37	DG
38	9x14 Photo of Starboard Bridge		38		38	38	DG



EXHIBIT LIST CONTINUATION SHEET

Case No. 3A0550-7217/721802

Name of Party: Stata

COURT USE ONLY

Exhibit No. Marked for ID (Write No.)	BRIEF DESCRIPTION OF EXHIBIT	Off.	Ad.	With- drawn Date	To Jury	From Jury	To Ex. Stor.
39	9x14 Photo - Port Bridge		39		39	39	DS
40	9x14 Photo - Steering console		40		40	40	DS
41	9x14 Photo - collision avoidance Radar		41		41	41	DS
42	9x14 Photo - Bridge		42		42	42	DS
43	9x14 Photo - chart Room (Starboard)		43		43	43	DS
44	9x14 Photo Bridge Bulkhead		44		44	44	DS
45	9x14 Photo - Course recorder		45		45	45	DS
46	9x14 Photo - chart room		46		46	46	DS
<del>47</del>	<del>9x14 photo - cargo control panel</del>		<del>47</del>		<del>47</del>	<del>47</del>	<del>DS</del>
48	9x14 Photo - cargo control panel (Stem)		48		48	48	DS
49	9x14 - Photo - Loran		49		49	49	DS
50	9x14 photo - Fathometer		50		50	50	DS
51	9x12 Photo - Starboard Bridge		51		51	51	DS
52	7x12 Photo - Steering control		52		52	52	DS
53	7x12 Photo - Bridge		53		53	53	DS
54	7x12 Photo - Bridge Head						/
55	7x12 Photo - Bridge Radios		55		55	55	DS
56	7x12 Photo - Bridge Books		56		56	56	DS
57	7x12 Photo - chart room		57		57	57	DS
58	7x12 Photo - Bridge radios + Loran		58		58	58	DS
59	7x12 Photo - Bridge radios		59		59	59	DS
60	7x12 Photo - Fathometer		60		60	60	DS
61	7x12 Photo - Loran		61		61	61	DS



**EXHIBIT LIST CONTINUATION SHEET**

Case No. BAW589-7217 / 7218 CR

Name of Party: State

**COURT USE ONLY**

Exhibit No. Marked for ID (Write No.)	BRIEF DESCRIPTION OF EXHIBIT	Off.	Ad.	With- drawn Date	To Jury	From Jury	To Ex. Stor.
62	7x12 Photo - Chart table		62		62	62	DS
63	7x12 Photo - Radio room		63		63	63	DS
64	7x12 Photo - Marsat Phone		64		64	64	DS
65	<del>7x12 Photo - Engine Room</del> 7x12 Photo - Engine Room telgraph		65		65	65	DS
66	7x12 Photo - Engine room controls		66		66	66	DS
67	7x12 Photo - Bell Log		67		67	67	DS
68	7x12 Photo - Engine room console		68		68	68	DS
69	7x12 Photo - Captain's office		69		69	69	DS
<del>70</del>	<del>7x12 Photo - Captain's stateroom</del> <del>forward</del>		<del>70</del>		<del>70</del>	<del>70</del>	<del>DS</del>
71	7x12 Photo - Captain's <sup>Stateroom</sup> Stateroom		71		71	71	DS
72	7x12 Photo - Propeller sander		72		72	72	DS
73	Photo - Haywood		73		73	73	DS
74	Dentist apt record		74		74	74	DS
75	VTS user manual		75		75	75	DS
76	Vessel Data Sheet		76		76	76	DS
77	Cassette Tape -						✓
78	Transmittal letter concerning 74		78				DS
78 A	Transcript of tape Ex # 77		78A				DS
79	Cassette Tape - <sup>detached</sup> conversations		79		79	79	DS
80	Model of ship's bridge <sup>returned to DA</sup>		80		80	80	NP
81	Cousins 2nd mate license		81		81	81	DS
82	Compass observation book		82		82	82	DS
83	Chart drawing - Cousins		83		83	83	DS



EXHIBIT LIST CONTINUATION SHEET

Case No. 3AVS89-7217ca 7218 cr

Name of Party: Joseph Hazelwood

COURT USE ONLY

Exhibit No. Marked for ID (Write No.)	BRIEF DESCRIPTION OF EXHIBIT	Off.	Ad.	With- drawn Date	To Jury	From Jury	To Ex. Stor.
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X 84	USCG - master license (Kunkel)			84		84	84	D5
X 85	oil record book <sup>12-1-86</sup> 4-8-89			85		85	85	D5
X 86	Diagram by Kunkel			86		86	86	D5
X 87	Federal Express Document USCG - TO Chemwest			87		87	87	D5
X 88	Compu Chem Lab report results on Hazelwood 3-28-89			88		88	88	D5
X 89	CompuChem Lab report results on Kagan 3-29-89			89		89	89	D5
X 90	CompuChem Lab report results on Cousins 3-29-89			90		90	90	D5
X 91	CompuChem Lab report results on Jones 3-28-89			91		91	91	D5
X 92	<del>Boat trial location</del>			<del>92</del>		<del>92</del>	<del>92</del>	<del>D5</del>
X 93	Hazelwood's master license			93		93	93	D5
X 94	VER Tape by dawn			94		94	94	D5
X 95	Sounding chart			95		95	95	D5
X 96	SRP operating manual (copy)			96		96	96	D5
X 97	Schematic Steering module			97		97	97	D5
X 98	<sup>photo-drawings</sup> Page from CRT display			98		98	98	D5
X 99	<sup>drawings/PHOTO of:</sup> Alarm & Heading module			99		99	99	D5
X 100	Key Pad Schematic			100		100	100	D5
X 101	Status module (Photo)			101		101	101	D5
X 102	Cassette tape interview of Hazelwood (Fox + Delouis)			102		102	102	D5
X 103	Exxon vessel - Damage to Hull Schematic Drawing - Photos (most)			103		103	103	D5
X 104	immunity grant to myself			104		104	104	D5
X 105	oil record book (copy)			105		105	105	D5
X 106	chart by Faulkenstein	106	NOT AD					D5



**EXHIBIT LIST CONTINUATION SHEET**

Case No. 3AN589-7217 / 7218 cc

Name of Party: State of Alaska

**COURT USE ONLY**

Exhibit No. Marked for ID (Write No.)	BRIEF DESCRIPTION OF EXHIBIT	Off.	Ad.	With- drawn Date	To Jury	From Jury	To Ex. Stor.
X 107	Copy of 46 USC 8502			107	107	107	DS
X 108	Port orders 1-80			108	108	108	DS
X 109	areal view of Seward Sawmill Bay			109	109	109	DS
<del>110</del>	<del>areal view</del>			<del>110</del>	<del>110</del>	<del>110</del>	<del>DS</del>
111	areal Balamouge / Exxon Valdez			111	111	111	DS
112	Graphs of oil progress 3-30-89			112	112	112	DS
113	" " " 3-29-89			113	113	113	DS
114	" " " 3-26-89			114	114	114	DS
<del>115</del>	<del>" " " 3-24-89</del>			<del>115</del>	<del>115</del>	<del>115</del>	<del>DS</del>
116	" " " 3-24-89			116	116	116	DS
117	Cassette tape - inboard			117 <small>rec'd w/0 5/16/90</small>	117	117	DS
118	Video cassette (oil on beaches)			118	118	118	DS
119	Bottle of Moussey Beer			119	119	119	DS
120	Cassette tape			120	120	120	DS
X 121	Cassette tape			121	121	121	DS
X 122	3-23- 3-24, (Course by Vaidy Ship) reconstruction by Greene (Chart)			122	122	122	DS
X 123	3-24- tide table -			123	123	123	DS
124	3-23 Tide table -			124	124	124	DS
X 125	Photo vessel damage 11-A			125	125	125	DS
126	" " " 9-7-A			126	126	126	DS
127	Photo vessel damage 1-A			127	127	127	DS
128	Photo vessel damage (7-271)			128	128	128	DS
129	Photo vessel damage 9			129	129	129	DS



EXHIBIT LIST CONTINUATION SHEET

Case No. 3AVS 89-7217 CR  
3AVS 89-7218 CR

Name of Party: State of Alaska

COURT USE ONLY

Exhibit No. Marked for ID (Write No.)	BRIEF DESCRIPTION OF EXHIBIT	Off.	Ad.	With- drawn Date	To Jury	From Jury	To Ex. Stor.
130	Photo Vessel Damage (23)			130	130	130	D5
131	" " " (19)			131	131	131	D5
132	" " " (15)			132	132	132	D5
<del>133</del>	<del>" " " (10)</del>			<del>133</del>	<del>133</del>	<del>133</del>	<del>D5</del>
134	" " " 3A			134	134	134	D5
135	" " " (21A)			135	135	135	D5
136	" " " (23A)			136	136	136	D5
137	Photo Vessel Damage (25A)			137	137	137	D5
<del>138</del>	<del>Photo Vessel</del>			<del>138</del>	<del>138</del>	<del>138</del>	<del>D5</del>
139	" " " 19A			139	139	139	D5
140	" " " 13			140	140	140	D5
141	" " " (21)			141	141	141	D5
142	" " " 32A			142	142	142	D5
143	" " " 26			143	143	143	D5
144	" " " (34-A)			144	144	144	D5
145	" " " (32)			145	145	145	D5
146	" " " 37A			146	146	146	D5
147	" " " (20)			147	147	147	D5
148	" " " (36)			148	148	148	D5
149	" " " (5)			149	149	149	D5
X 150	Vessel Damage Photo (9)			150	150	150	D5
151	Exxon Shipping Company - 4-26-51-87.			151	151	151	D5
X 152	Memorandum 4-4-89 TO: HR Rouse FR: D.K. Walker			152	152	152	D5



EXHIBIT LIST CONTINUATION SHEET

Case No. 3AUS 89-7217  
3AUS 89-7218 CR.

Name of Party: State of Alaska

COURT USE ONLY

Exhibit No. Marked for ID (Write No.)	BRIEF DESCRIPTION OF EXHIBIT	Off.	Ad.	With- drawn Date	To Jury	From Jury	Ex. Stor.
153	Kagan's personal file (copies)	by stip	Sealed				DG
154	Model of Exxon Valdez <sup>Returned to DA</sup>			154	154	154	YMP
155	Spread sheet prepared by Gheiner			155	155	155	DG
<del>156</del>	<del>Exxon Valdez</del>			<del>156</del>	<del>156</del>	<del>156</del>	<del>DG</del>
157	drawing of Damage to bottom of Exxon Valdez	✓					DG
158	Statistics of wildlife killed			158	158	158	DG
159	Diagram Shell of Hull craft			159	159	159	DG
160	Stability Diagram chart	x					✓
<del>161</del>	<del>Stability Diagram</del>	<del>x</del>					<del>✓</del>
162	Buoyancy diagrams chart	x					✓
163	" " chart	x					✓
164	" " chart	x					✓
165	Diagram Predicted oil loss <sup>chart</sup> computer graph results			165	165	165	DG
166	" " chart			166	166	166	DG
167	" " " chart			167	167	167	DG
168	CT inert Gas System diagram <sup>chart</sup>			168	168	168	DG
169	charts on Stability - Profession x 0	x					✓
170	" times 15	x					✓
171	" times 30	x					✓
172	times 50	x					✓
173	times 65	x					✓
174	Shirous Walker Resume	x					✓
175	Document Summary of conversation <sup>Paul</sup> Myers	x					✓











EXHIBIT LIST

Case No. 24889-7217 / 7218  Pretrial Hearing  Trial 1990

State of Alaska vs. Joseph Handwood

Name of Party: State of Alaska -  Pltf.  Def.  
(There must be a separate exhibit list for each party.)

Party's Attorney: Brent Cole, Asst DA

COURT USE ONLY

Exhibit No. Marked for ID (Write No.) BRIEF DESCRIPTION OF EXHIBIT Off. Ad. Date With-drawn To Jury From Jury To Ex. Stor.

Exhibit No. Marked for ID (Write No.)	BRIEF DESCRIPTION OF EXHIBIT	Off.	Ad. Date	With-drawn To Jury	From Jury	To Ex. Stor.
<u>A</u>	<u>Pilotage Slip -</u>		<u>A</u>		<u>A</u>	<u>NO</u>
<u>B</u>	<u>Pilotage Regulation Change. (Bob Arts - letter)</u>		<u>B</u>		<u>B</u>	<u>NO</u>
<u>C</u>	<u>Credit card Slip</u>		<u>C</u>		<u>C</u>	<u>NO</u>
<u>D</u>	<u>Phone Slips -</u>		<u>D</u>		<u>D</u>	<u>NO</u>
<u>E</u>	<u>Diagram Pipeline Club (8x11)</u>		<u>E</u>		<u>E</u>	<u>NO</u>
<del><u>F</u></del>	<del><u>Check</u></del>					<del><u>NO</u></del>
<u>G</u>	<u>Copy of VTS operating Manual</u>	<u>x</u>				<u>NO</u>
<u>H</u>	<u>Copy one page VTS (1-2)</u>	<u>x</u>				<u>NO</u>
<u>I</u>	<u>Copy - VTC manual Promulgation 11-2-88</u>		<u>I</u>		<u>I</u>	<u>NO</u>
<u>OK J</u>	<u>Photo - various stored Slips</u>		<u>J</u>		<u>J</u>	<u>NO</u>
<u>K</u>	<u>Photo -</u>		<u>K</u>		<u>K</u>	<u>NO</u>
<u>L</u>	<u>Photo Assess Handwood 1-30-90</u>		<u>L</u>		<u>L</u>	<u>NO</u>
<u>M</u>	<u>Photo Temp Handwood 2-3-90</u>		<u>M</u>		<u>M</u>	<u>NO</u>
<u>N</u>	<u>Photo Handwood 6-13-89</u>		<u>N</u>		<u>N</u>	<u>NO</u>
<u>O</u>	<u>Photo Handwood 2-11-90</u>		<u>O</u>		<u>O</u>	<u>NO</u>

I certify that the exhibits checked in the "To Jury" column on this and all attached pages were given to the jury for deliberation.  
Date 3-20-90 In-Ct. Clerk [Signature]

I certify that the exhibits checked in the "From Jury" column on this and all attached pages were received from the jury after the verdict.  
Date 3-22-90 In-Ct. Clerk [Signature]

I certify that the exhibits checked in the "To Exhibit Storage" column on this and all attached pages have been placed in exhibit storage.  
Date 3/30/90 Exhibit Clerk [Signature]



**EXHIBIT LIST CONTINUATION SHEET**

Case No. RA 89-7217  
89-7218

Name of Party: Joseph Hayward

**COURT USE ONLY**

Exhibit No. Marked for ID (Write No.)	BRIEF DESCRIPTION OF EXHIBIT	Off.	Ad.	With- drawn Date	To Jury	From Jury	Ex. Stor.
P	Drawing by Deppe		P		P	P	NO
Q	RTC Log (copy of)		Q		Q	Q	NO
R	Chart - Form Vaden Review (Scale - 1:20,000)		R		R	R	NO
S	Statute AK - Pilotage		S		S	S	NO
T	Federal Register 46 CFR <sup>6-24-85</sup> Part 10157	T					NO
U	Federal Register 46 CFR <sup>6-6-88</sup> Part 1015	U					NO
V	29-May-89 Request for info. TO: USCG - From Greene	X					/
W	29 May 89 - Request inform. TO USCG - FBI Greene	X					/
X	20 July 89 Request for info. TO USCG - FBI Greene	X					/
Y	Facsimile Transmission 8-16-89 From MEC Greene to Cole	X					/
Z	TO Greene re USCG - 18 OCT 89	X					/
AA	Voice ass. msg. To Cole - 9-11-89	X					/
AB	Chart of vessel - soundings	X					/
AC	Statute		AC		AC	AC	NO
AD	Chart		AD		AD	AD	NO
AE	Procedure - Chart		AE		AE	AE	NO
AF	Manual		AF		AF	AF	NO
AG	Ship equipment	X					/
AH	Ship equipment	X					/
AI	Inventory	X					/
AJ	Memorandum		AJ		AJ	AJ	NO
AK	Memorandum		AK		AK	AK	NO
AL	Memorandum from Sam Adams To Bill	X					/



**EXHIBIT LIST CONTINUATION SHEET**

Case No. 2017-0017 / 2018-001 Name of Party: State of Michigan

**COURT USE ONLY**

Exhibit No. Marked for ID (Write No.) **BRIEF DESCRIPTION OF EXHIBIT** Off. Ad. Date With-drawn To Jury From Jury To Ex. Stor.

Exhibit No. Marked for ID (Write No.)	BRIEF DESCRIPTION OF EXHIBIT	Off.	Ad.	Date	With-drawn To Jury	From Jury	To Ex. Stor.
AM	Letter to ... 2-12-96	X					
AN	Blow-up ...		AN		AN	AN	NO
AO	Blow-up ... System		AO		AO	AO	NO
AP	Blow-up		AP		AP	AP	NO
AQ	Blow-up		AQ		AQ	AQ	NO
AR	Type ...		AR		AR	AR	NO
AS	Telephone ...		AS		AS	AS	NO
AT	Am Telephone record	AT					NO
AU	affidavit John Kane American Express	X					
AV	Blow-up photos (Bulldozer ...)		AV		AV	AV	NO
AW	" " " (Bulldozer ...)		AW		AW	AW	NO
AX	Blow-up photos (Change rate of Turn)		AX		AX	AX	NO
AY	Blow-up photos (Bridge area)		AY		AY	AY	NO
AZ	Large sheet ...		AZ		AZ	AZ	NO
BA	Large sheet ...		BA		BA	BA	NO
BB	Hoffman - Report of Damage -	BB					NO
BC	Letter ...		BC		BC	BC	NO
BD	Large sheet ...		BD		BD	BD	NO
BE	Large sheet ...		BE		BE	BE	NO
BF	Large sheet ...		BF		BF	BF	NO
BG	Large sheet ...		BG		BG	BG	NO
BH	Large sheet ...		BH		BH	BH	NO
BI	Large sheet ...		BI		BI	BI	NO



EXHIBIT LIST CONTINUATION SHEET

Case No. 3A0589-7217 CR  
3A0589-7218 CR

Name of Party: Herrera

COURT USE ONLY

Exhibit No. Marked for ID (Write No.)	BRIEF DESCRIPTION OF EXHIBIT	Off.	Ad.	With- drawn Date	To Jury	From Jury	To Ex. Stor.
BJ	10° right rudder overlay			BJ	BJ	BJ	NO
BK	20° right rudder overlay			BK	BK	BK	NO
BL	overlay			BL	BL	BL	NO
BM	Large Diagram w/ overlays - Abraham Busby Island - Chart			BM	Bm	Bm	NO
BN	overlay transparency			BN	BN	BN	NO
BO	overlay 3° right rudder			BO	BO	BO	NO
BP	overlay 4° right rudder			BP	BP	BP	NO
BQ	overlay - 5° right rudder -			BQ	BQ	BQ	NO
BR	overlay 10°			BR	BR	BR	NO
BS	Overlay 20° right rudder - 23:55			BS	BS	BS	NO
Bt	Chart Exxon Valdez Course accident chart			Bt	Bt	Bt	NO
Bu	Chart Surrounding chart (she.)			Bu	Bu	Bu	NO
Bv	Surrounding chart (2 tabs)			Bv	Bv	Bv	NO
Bw	Photo of photos			Bw	Bw	Bw	NO
Bx	Computer data + Shimano!	x					/
By	cover letter by Martineau			By	By	By	NO
Bz	Photo			Bz	Bz	Bz	NO
CA	Photo			CA	CA	CA	NO
CB	Photo			CB	CB	CB	NO
CC	Report on ...	x					/
CD		x					/
CE		x					/
CF	Report on ...	x					/







SECTA

EXHIBIT LIST

Case No. 3AUS 89-7217 CR  Pretrial Hearing  Trial

State of Alaska vs. Joseph Hapelwood

Name of Party: State of Alaska  Pltf.  Def.  
(There must be a separate exhibit list for each party.)

Party's Attorney: Brent Cole, asst DA

COURT USE ONLY

Exhibit No. Marked for ID (Write No.)	BRIEF DESCRIPTION OF EXHIBIT	Off.	Ad.	Date	With- drawn Jury	To From Jury	To Ex. Stor.
1	crew list		1		1	1	DS
2	Course recorder		2		2	2	DS
3	Bell logger		3		3	3	DS
4	Bell log (Tally Book)		4		4	4	DS
5	official log Book		5		5	5	DS
<del>6</del>	<del>Deck Log Book</del>		<del>6</del>		<del>6</del>	<del>6</del>	<del>DS</del>
7	Maneuvering chart		7		7	7	DS
8	Marsat phone calls		8		8	8	DS
9	night order Book (partial)		9		9	9	DS
10	night order Book (complete)		10		10	10	DS
11	RPM Table		11		11	11	DS
12	Gauging Report		12		12	12	DS
13	Ships Policy on alcohol use		13		13	13	DS
14	Bridge Manual		14		14	14	DS
15	Budg' chart - 16708		15		15	15	DS

I certify that the exhibits checked in the "To Jury" column on this and all attached pages were given to the jury for deliberation.  
Date 3-20-90 In-Ct. Clerk [Signature]

I certify that the exhibits checked in the "From Jury" column on this and all attached pages were received from the jury after the verdict.  
Date 3-22-90 In-Ct. Clerk [Signature]

I certify that the exhibits checked in the "To Exhibit Storage" column on this and all attached pages have been placed in exhibit storage.  
Date 3/30/90 Exhibit Clerk [Signature]



**EXHIBIT LIST CONTINUATION SHEET**

Case No. 3AUS 89-7217 CR.

Name of Party: State

**COURT USE ONLY**

Exhibit No. Marked for ID (Write No.)	BRIEF DESCRIPTION OF EXHIBIT	Off.	Ad.	With- drawn Date	To Jury	From Jury	To Ex. Stor.
16	Course recorder - Blow-up		16		16	16	DG
17	Bull Logger Blow-up	17	17		17	17	DG
18	Maneuvering Chart Blow-up		18		18	18	DG
19	Photo of Exxon Valdez <sup>chart</sup>		19		19	19	DG
20	Chart 16708	x					/
21	Chart 16707		21		21	21	DG
22	Bridge Diagram chart		22		22	22	DG
23	City of Valdez Photo chart		23		23	23	DG
<del>24</del>	<del>Diagram of Lipton Club</del>		<del>24</del>		<del>24</del>	<del>24</del>	<del>DG</del>
25	Chart - 16708		25		25	25	DG
26	Chart 16708 with overlays		26		26	26	DG
27	Fiddle Board chart		27		27	27	DG
28	Diagram of Hull Damage			2-23-90 4/26/90			X
29	Exhibit 15 Photo - up		29		29	29	DG
30	Exhibit 29 - Blow-up		30		30	30	DG
31	Murphy Community letter		31		31	31	DG
32	Guard Logs		32		32	32	DG
33	Coast Guard Regulations violations*						/
34	Pilotage regulations*						/
35	Photo of incident*						/
36	9x14 Photo of Sailing Board*						/
37	9x14 Photo of Deck		37		37	37	DG
38	9x14 Photo of Starboard Bridge wing		38		38	38	DG



**EXHIBIT LIST CONTINUATION SHEET**

Case No. 94-550-7217 / 721802

Name of Party: State

**COURT USE ONLY**

Exhibit No. Marked for ID (Write No.)	BRIEF DESCRIPTION OF EXHIBIT	Off.	Ad.	With-		To Ex. Stor.	
				drawn	To From		
				Date	Jury	Jury	
39	9x14 Photo - Port Bridge		39		39	39	DS
40	9x14 Photo - Steering console		40		40	40	DS
41	9x14 Photo - collision avoidance RADAR		41		41	41	DS
42	<del>9x14 Photo - Bridge</del>		<del>42</del>		<del>42</del>	<del>42</del>	<del>DS</del>
43	9x14 Photo - Chart Room (Starboard)		43		43	43	DS
44	9x14 Photo Bridge Bulkhead		44		44	44	DS
45	9x14 Photo - Course recorder		45		45	45	DS
46	9x14 Photo - Chart room		46		46	46	DS
<del>47</del>	<del>9x14 Photo - Cargo Control Panel</del>		<del>47</del>		<del>47</del>	<del>47</del>	<del>DS</del>
48	9x14 Photo - cargo control panel (Stem)		48		48	48	DS
49	9x14 Photo - Loran		49		49	49	DS
50	9x14 Photo - Fathometer		50		50	50	DS
51	9x12 Photo - Starboard Bridge		51		51	51	DS
52	7x12 Photo - Steering wheel		52		52	52	DS
53	7x12 Photo - Bridge		53		53	53	DS
54	7x12 Photo - Bridge Head						/
55	7x12 Photo - Bridge Radies		55		55	55	DS
56	7x12 Photo - Bridge Books		56		56	56	DS
57	7x12 Photo - Chart room		57		57	57	DS
58	7x12 Photo - Bridge radies + logs		58		58	58	DS
59	7x12 Photo - Bridge radies		59		59	59	DS
60	7x12 Photo - Fathometer		60		60	60	DS
61	7x12 Photo - Loran		61		61	61	DS



**EXHIBIT LIST CONTINUATION SHEET**

Case No. 370589-7217 / 7218 cc

Name of Party: State

**COURT USE ONLY**

Exhibit No. Marked for ID (Write No.)	BRIEF DESCRIPTION OF EXHIBIT	Off.	Ad.	With- drawn Date	To Jury	From Jury	To Ex. Stor.
62	7x12 Photo - Chart table		62		62	62	DS
63	7x12 Photo - Radio room		63		63	63	DS
64	7x12 Photo - Marsat Phone		64		64	64	DS
65	<del>7x12 Photo - Engine Room</del>		<del>65</del>		<del>65</del>	<del>65</del>	<del>DS</del>
66	7x12 Photo - Engine room controls		66		66	66	DS
67	7x12 Photo - Bell Log		67		67	67	DS
68	7x12 Photo - Engine room console		68		68	68	DS
69	7x12 Photo - Captain's office		69		69	69	DS
<del>70</del>	<del>7x12 Photo - Captain's station</del>		<del>70</del>		<del>70</del>	<del>70</del>	<del>DS</del>
71	7x12 Photo - Captain's <sup>Staircase</sup> Station		71		71	71	DS
72	7x12 Photo - Propeller stand		72		72	72	DS
73	Photo - Haystack		73		73	73	DS
74	Dentist apt record		74		74	74	DS
75	VTS User Manual		75		75	75	DS
76	Vessel Data Sheet		76		76	76	DS
77	Cassette Tape -						✓
78	Transmittal letter concerning 77		78	Not to Jury			DS
78 A	Transcript of tape Ex # 77		78A	Not to Jury			DS
79	Cassette Tape - <sup>Outboard</sup> communications		79		79	79	DS
80	Model of ship's bridge <sup>returned to DA</sup>		80		80	80	NO
81	Cousins 2nd mate license		81		81	81	DS
82	Compass observation book		82		82	82	DS
83	Chart drawing - Cousins		83		83	83	DS



EXHIBIT LIST CONTINUATION SHEET

Case No. 3AUS89-7217ca 7218 cr

Name of Party: Joseph Hazelwood

COURT USE ONLY

Exhibit No. Marked for ID (Write No.)	BRIEF DESCRIPTION OF EXHIBIT	Off.	Ad.	With- drawn Date	To Jury	From Jury	To Ex. Stor.
84	USCG - master license (Kunkel)		84		84	84	D5
85	Oil record Book <sup>12-1-86</sup> 4-8-89		85		85	85	D5
86	Diagram by Kunkel		86		86	86	D5
87	Federal Express Document USCG TO Chemist		87		87	87	D5
88	Compu Chem lab report results on Hazelwood 3-28-89		88		88	88	D5
89	CompuChem Lab report results on Kagan 3-29-89		89		89	89	D5
90	CompuChem lab report results on Cousins 3-29-89		90		90	90	D5
91	CompuChem lab report results on Jones 3-28-89		91		91	91	D5
<del>92</del>	<del>Basin location</del>		<del>92</del>		<del>92</del>	<del>92</del>	<del>D5</del>
93	Hazelwood's master license		93		93	93	D5
94	VCR Tape by dawn		94		94	94	D5
95	Sounding chart		95		95	95	D5
96	SRP operating manual (copy)		96		96	96	D5
97	Schematic Steerms module		97		97	97	D5
98	<sup>photo drawings</sup> Page from CRT display		98		98	98	D5
99	<sup>drawings/photos of:</sup> Alarm & Heading module		99		99	99	D5
100	Key Pad Schematic		100		100	100	D5
101	Status module (Photo)		101		101	101	D5
102	Cassette Tape Interview of Hazelwood (Delon)		102		102	102	D5
103	Exxon varden - Damage to Hull Schematic Drawing - Photos		103		103	103	D5
104	immunity grant to myself		104		104	104	D5
105	oil record book (copy)		105		105	105	D5
106	Chart by Faulkenstein	106	NOT AD				D5



EXHIBIT LIST CONTINUATION SHEET

Case No. 3A0589-7217 / 7218 cc Name of Party: State of Alaska

COURT USE ONLY

Exhibit No. Marked for ID (Write No.)	BRIEF DESCRIPTION OF EXHIBIT	Off.	Ad.	With- drawn Date	To From Jury	From Jury	To Ex. Stor.
107	Copy of 46 USC 8502			107		107	107 DS
108	Port order 1-80			108		108	108 DS
109	areal view <del>areal</del> Sawmill Bay			109		109	109 DS
<del>110</del>	<del>areal view</del>			<del>110</del>		<del>110</del>	<del>110 DS</del>
111	areal Batemange / Exxon Valdez			111		111	111 DS
112	Graphs of oil progress 3-30-89			112		112	112 DS
113	" " " 3-29-89			113		113	113 DS
114	" " " 3-26-89			114		114	114 DS
<del>115</del>	<del>areal view</del>			<del>115</del>		<del>115</del>	<del>115 DS</del>
116	" " " 3-24-89			116		116	116 DS
117	Cassette tape - instrument			117	Ad W/O P/O 5/16/90	117	117 DS
118	Video cassette (oil on beaches)			118		118	118 DS
119	Bottle of Muzzy Beer			119		119	119 DS
120	Cassette tape			120		120	120 DS
121	Cassette tape			121		121	121 DS
122	3-23-3-24, (Course by Vaidy Ship) reconstruction by Greene (Christ)			122		122	122 DS
123	3-24- tide table -			123		123	123 DS
124	3-23 Tide table -			124		124	124 DS
125	Photo: Vessel damage 11-A			125		125	125 DS
126	" " " 9-7-A			126		126	126 DS
127	Photo vessel damage 1-A			127		127	127 DS
128	Photo: vessel damage (7-271)			128		128	128 DS
129	Photo vessel damage 9			129		129	129 DS



**EXHIBIT LIST CONTINUATION SHEET**

Case No. BAVS 89-7217 CR  
BAVS 89-7218 CR

Name of Party: State of Alaska

**COURT USE ONLY**

Exhibit No. Marked for ID (Write No.)	BRIEF DESCRIPTION OF EXHIBIT	Off.	Ad.	With- drawn Date	To Jury	From Jury	To Ex. Stor
130	Photo Vessel Damage (23)		130		130	130	D5
131	" " " (19)		131		131	131	D5
132	" " " (15)		132		132	132	D5
<del>133</del>	<del>" " " (10)</del>		<del>133</del>		<del>133</del>	<del>133</del>	<del>D5</del>
134	" " " 3A		134		134	134	D5
135	" " " (21A)		135		135	135	D5
136	" " " (23A)		136		136	136	D5
137	Photo Vessel Damage (25A)		137		137	137	D5
<del>138</del>	<del>Photo Vessel</del>		<del>138</del>		<del>138</del>	<del>138</del>	<del>D5</del>
139	" " " 19A		139		139	139	D5
140	" " " 13		140		140	140	D5
141	" " " (21)		141		141	141	D5
142	" " " 32A		142		142	142	D5
143	" " " 26		143		143	143	D5
144	" " " (34-A)		144		144	144	D5
145	" " " (32)		145		145	145	D5
146	" " " 37A		146		146	146	D5
147	" " " (20)		147	-	147	147	D5
148	" " " (36)		148	-	148	148	D5
149	" " " (5)		149		149	149	D5
150	Vessel Damage Photo (9)		150		150	150	D5
151	Exxon Shipping Company - 4-26-51-87.		151		151	151	D5
152	Memorandum 4-4-89 TO: HR Rouse FR: D.K. Walker		152		152	152	D5



EXHIBIT LIST CONTINUATION SHEET

Case No. 3AUS 89-7217  
3AUS 89-7218 CR.

Name of Party: State of Alaska

COURT USE ONLY

Exhibit No. Marked for ID (Write No.) BRIEF DESCRIPTION OF EXHIBIT Off. Ad. Date With-drawn To From Ex. Jury Jury Stor.

Exhibit No. Marked for ID (Write No.)	BRIEF DESCRIPTION OF EXHIBIT	Off.	Ad.	Date	With-drawn To	From	Ex. Jury	Jury	Stor.
153	Kagan's personal file (copy of)								— DG
154	Model of Exxon Valdez <sup>Returned to DA</sup>			154		154	154		YHP
155	Spread sheet prepared by Greiner			155		155	155		DG
<del>156</del>	<del>Exxon Valdez</del>			<del>156</del>		<del>156</del>	<del>156</del>		<del>DG</del>
157	drawing of Damage to bottom of Exxon Valdez	✓							DG
158	Statistics of Wildlife Killed			158		158	158		DG
159	Diagram Shell of Hull cross			159		159	159		DG
160	Stability Diagram chart	x							/
<del>161</del>	<del>Stability Diagram</del>	x							/
162	Buoyancy diagrams chart	x							/
163	" " chart	x							/
164	" " chart	x							/
165	Diagram Predicted oil loss <sup>chart</sup> computer graph <sup>integrated</sup>			165		165	165		DG
166	" " " chart			166		166	166		DG
167	" " " chart			167		167	167		DG
168	CT inert Gas System <sup>chart</sup> diagram			168		168	168		DG
169	charts on Stability - Profession x 0	x							/
170	" times 15 "	x							/
171	" times 30 "	x							/
172	times 50	x							/
173	times 65	x							/
174	Shirao Walker Resume	x							/
175	document Summary of conversation <sup>Prul</sup> Myer	x							/

8







EXHIBIT LIST CONTINUATION SHEET

Case No. 3AUS89-7217 CR  
3AUS89-7218 CR

Name of Party: State of Alaska

COURT USE ONLY

Exhibit No. Marked for ID (Write No.)	BRIEF DESCRIPTION OF EXHIBIT	Off.	Ad.	With- drawn Date	To Jury	From Jury	To Ex. Stor.
130	Photo Vessel Damage (23)			130	130	130	D5
131	" " " (19)			131	131	131	D5
132	" " " (15)			132	132	132	D5
<del>133</del>	<del>" " " (10)</del>			<del>133</del>	<del>133</del>	<del>133</del>	<del>D5</del>
134	" " " 3A			134	134	134	D5
135	" " " (21A)			135	135	135	D5
136	" " " (23A)			136	136	136	D5
137	Photo Vessel Damage (25A)			137	137	137	D5
<del>138</del>	<del>" " " (1)</del>			<del>138</del>	<del>138</del>	<del>138</del>	<del>D5</del>
139	" " " 19A			139	139	139	D5
140	" " " 13			140	140	140	D5
141	" " " (21)			141	141	141	D5
142	" " " 32A			142	142	142	D5
143	" " " 26			143	143	143	D5
144	" " " (34-A)			144	144	144	D5
145	" " " (32)			145	145	145	D5
146	" " " 37A			146	146	146	D5
147	" " " (20)			147	-	147	D5
148	" " " (36)			148	-	148	D5
149	" " " (5)			149	-	149	D5
150	Vessel Damage Photo (9)			150	-	150	D5
151	Exxon Shipping Company - 4-26-87-87.			151	-	151	D5
152	Memorandum 4-4-89 TO: HR Rausel FR: D.K. Walker			152	-	152	D5



**PLAINTIFF**

EXHIBIT NO. 1

ADMITTED  *Trial*

324-588-7217/7218

(CASE NUMBER)

**CERTIFIED TO BE A TRUE COPY**  
I have seen the original and  
certified that this is a true and  
correct copy of the original.  
\_\_\_\_\_  
Notary Public for the State of Texas



DATE: 03/13/89  
TIME: 07:26:56 PM

EXXON SHIPPING COMPANY CL1000  
M.V. EXXON VALDEZ PAGE: 1  
CREW LIST - VOYAGE: 004B

FIRST NAME (MI)	LAST NAME	POSITION	RATE CODE	SSN	DATE SIGNED ON
DECK DEPARTMENT:					
JAMES R.	KUNKEL	CHIEF MATE	102	265-15-8799	03/08/89
LLOYD G.	Le CAIN, JR.	2ND MATE	104	228-70-3206	03/12/89
GREGORY T	COUSINS	3RD MATE	105	005-52-2008	02/20/89
JOEL A.	ROBERSON	RADIO OFF.	225	455-84-8547	02/22/89
JOHN P.	PEACOCK 4-8	ABLE SEAMN	442	001-60-4021	01/05/89
CARL	JONES 4-8	ABLE SEAMN	442	141-40-1518	01/05/89
MAUREEN, L.	JONES 12-4	ABLE SEAMN	442	385-88-6116	02/05/89
PAUL R.	RADTKE 10-8-12	ABLE SEAMN	442	391-64-8491	02/05/89
ROBERT M.	KAGAN 12-4	ABLE SEAMN	442	438-64-5051	01/18/89
HARRY L. II	CLAAR 8-12	ABLE SEAMN	442	538-64-5785	01/05/89

ENGINE DEPARTMENT:					
JERZY B.	GLDWACKI	CH. ENGR.	101	131-36-5813	01/18/89
RAY M.	JONES	1ST ASST.	103	458-92-8608	03/12/89
GRAEME K.	OLDHAM	2ND ASST.	107	567-33-4329	03/10/89
KATHERINE R.	HAVEN	3RD ASST.	108	536-72-3209	03/10/89
JOHN W.	STEWART	PUMPMAN	453	550-42-5669	03/08/89
FRANCOIS X.	BOYLE	OILER	463	207-26-0896	03/12/89
MICHAEL M.	EMEL	OILER	463	538-50-0167	01/20/89

STEWARD DEPARTMENT:					
EFRAIN M.	MENESES	FLEET CHEF	476	549-88-5177	02/05/89
MELANIE L.	WRIGHT	SHIP COOK	475	520-66-9049	02/01/89

JOSEPH HAZELWOOD MASTER 071388376

TOTAL PERSONS ON BOARD: 20

**CERTIFIED TO BE A TRUE COPY**  
I have seen the original and compared this copy with it and found it to be a true copy.  
Name/Rank or Title-Duty Station  
Mark J. DeLozier, USCG

**I HAVE SEEN THE ORIGINAL AND COMPARED THE COPY WITH IT AND FOUND IT TO BE A TRUE COPY.**  
26 MAR 89  
MARK J. DELOZIER, CW03, USCG  
MARINE INVESTIGATOR/INSPECTOR  
MARINE SAFETY OFFICE, VALDEZ, AK. USCG



PLAINTIFF'S EXHIBIT

PLAINTIFF'S EXHIBIT  
NO. 2  
DATE: 5/21/78  
CASE NO. 589-7317-7218

<b>PLAINTIFF</b>
EXHIBIT NO. 2
ADMITTED BY <i>[Signature]</i>
DATE: 5/21/78 (CASE NUMBER)



CERTIFIED TO BE A TRUE COPY

~~I have seen the original and compared this copy with it and found it to be a true copy~~

*Way J. Post, USCG*  
Name-Rank or Title-Duty Station

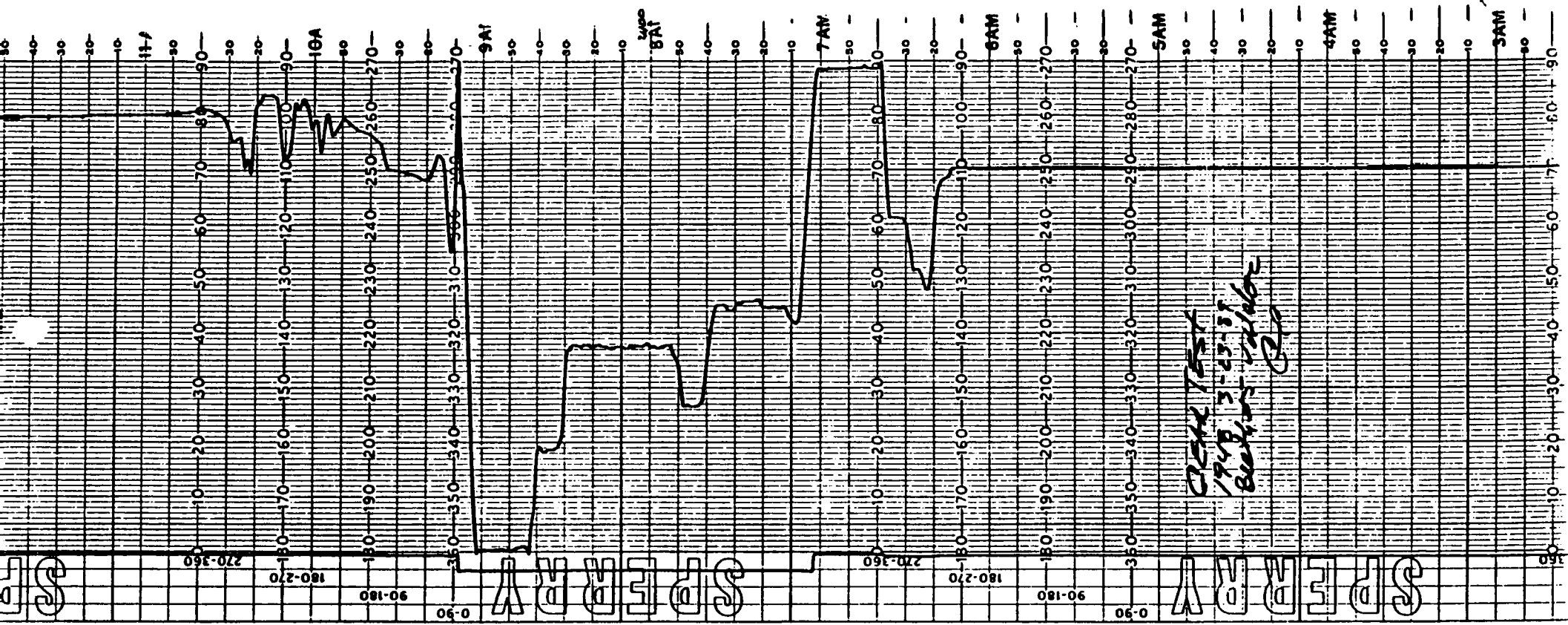
I HAVE SEEN THE ORIGINAL AND COMPARED THE COPY WITH IT AND FOUND IT TO BE A TRUE COPY. MARK J. DELOZIER, CW03, USCG  
MARINE INVESTIGATOR/INSPECTOR

*M.J. DeLozier 26 MAR 89*  
MARINE SAFETY OFFICE, VALDEZ, AK. USCG

EXYON VANDER  
Course & Speed Recorder

t9  
GMT

Received from MASTER  
Joseph J. Hazelwood.  
By: *F.O. M. Pelozin, CW03*





**PLAINTIFF**  
EXHIBIT NO. 3  
ADMITTED  *Trial*  
3AN -  
689-7217/7218  
(CASE NUMBER)

STATUS: GMT *abs*  
89 MAR 25 03:03:27  
STB STB A. + 9 HRS  
BC STOP +ORPM

BC CONTROL LOCATION  
\*\*\*\*\*

CERTIFIED TO BE A TRUE COPY

I have seen the original and  
compared this copy with it and  
found it to be a true copy

*Darryl S. ...*

Name-Rank or Title-Duty Station

STATUS:  
89 MAR 25 03:03:27

STB STB A.  
BC STOP  
+ORPM

BC CONTROL LOCATION  
\*\*\*\*\*

89 MAR 25 00.00:00  
89 MAR 24 20.00:00  
89 MAR 24 16.00:00  
89 MAR 24 12.00:00

STB STB A. 10.41:09  
BC STOP  
-1RPM

STB STB A. 10.41:03  
BC STOP  
+7RPM

STB 10.40:53  
>BC STOP  
+23RPM

STB 10.40:43  
>BC STOP  
+24RPM

STB 10.40:36  
BC STOP  
+43RPM

INDEX VA 2282-048  
50 BOX 122  
RECC NAVINE SVELY OFFICE  
COMBATING OFFICER





AVDEX VIC 88888-0488  
P.O. BOX 188  
NCCO MYBANE 27121A OFFICE  
COMMUNICATING OFFICERS

STB STB A. 08.19:48  
>BC SLOW AHD +35RPM  
@

STB STB A. 08.19:48  
BC SLOW AHD +33RPM  
@

STB STB A. 08.19:35  
>BC SLOW AHD +31RPM  
@

STB STB A. 08.19:30  
BC SLOW AHD +33RPM  
@

STB STB A. 08.19:18  
>BC SLOW AHD +40RPM  
@

STB STB A. 08.19:15  
BC HALF AHD +42RPM  
@

STB STB A. 08.19:06  
BC HALF AHD +49RPM  
@

STB STB A. 08.18:54  
BC HALF AHD +54RPM  
@

STB STB A. 08.05:00  
BC FULL AHD +51RPM  
@

STB STB A. 08.24:24  
BC FULL AHD +56RPM  
@

STB STB A. 08.24:09  
BC FULL AHD +51RPM  
@

STB STB A. 08.24:00  
>BC FULL AHD +31RPM  
@

STB STB A. 08.15:29  
BC SLOW AHD +31RPM  
@

STB STB A. 08.15:27  
BC SLOW AHD +36RPM  
@

STB STB A. 08.15:19  
>BC SLOW AHD +45RPM  
@

08 MAR 24 08.00:00

STB STB A. 07.51:21  
BC FULL AHD +57RPM  
@

STB STB A. 07.47:12  
BC FULL AHD +52RPM  
@

STB STB A. 07.47:02  
>BC FULL AHD +41RPM  
@

STB STB A. 07.45:39  
BC HALF AHD +40RPM  
@

STB STB A. 07.45:28  
>BC HALF AHD +31RPM  
@

STB STB A. 07.44:33



STB STB A. 07.47:02  
>BC FULL AHD  
+41RPM

STB STB A. 07.45:39  
BC HALF AHD  
+40RPM

STB STB A. 07.45:28  
>BC HALF AHD  
+31RPM

STB STB A. 07.44:33  
BC SLOW AHD  
+32RPM

STB STB A. 07.44:22  
>BC SLOW AHD  
+24RPM

STB STB A. 06.58:51  
BC D. SL AHD  
+24RPM

STB STB A. 06.58:34  
>BC D. SL AHD  
+31RPM

STB STB A. 06.56:15  
BC SLOW AHD  
+33RPM

STB STB A. 06.56:04  
>BC SLOW AHD  
+41RPM

STB STB A. 06.53:30  
BC HALF AHD  
+41RPM

STB STB A. 06.53:15  
BC HALF AHD  
+47RPM

STB STB A. 06.53:05  
>BC HALF AHD  
+57RPM

STB STB A. 06.27:27  
BC FULL AHD  
+55RPM

STB STB A. 06.27:00  
BC FULL AHD  
+50RPM

STB STB A. 06.26:50  
>BC FULL AHD  
+41RPM

STB STB A. 06.25:57  
BC HALF AHD  
+40RPM

STB STB A. 06.25:40  
>BC HALF AHD  
+33RPM

STB STB A. 06.22:51  
BC SLOW AHD  
+31RPM

STB STB A. 06.22:37  
>BC SLOW AHD  
+25RPM

STB STB A. 06.21:33  
BC D. SL AHD  
+28RPM

STB STB A. 06.21:27  
BC D. SL AHD  
+22RPM

STB STB A. 06.22:37  
>BC SLOW AHD  
+25RPM

STB STB A. 06.21:33  
BC D. SL AHD  
+28RPM

STB STB A. 06.21:27  
BC D. SL AHD  
+22RPM

STB STB A. 06.21:13  
>BC D. SL AHD  
+0RPM

>STB STB A. 05.53:54  
BC STOP  
+0RPM

>STB STB A. 05.53:52  
BC STOP  
+0RPM

05.53:32  
>BC CONTRL LOCATION  
05.51:12

CRC STOP  
BACK SLOW AST -1RPM  
05.51:00

CRC STOP  
BACK SLOW AST -8RPM

89 MAR 24 04.00:00

89 MAR 24 00.00:00

89 MAR 23 20.00:00

89 MAR 23 16.00:00

89 MAR 23 12.00:00

>FWE FWE A. 08.38:01  
CRC STOP  
ACK SLOW AST +0RPM

>FWE FWE A. 08.37:59  
CRC STOP  
ACK SLOW AST +0RPM

08.37:50  
>CRC CONTRL LOCATION

89 MAR 23 08.00:00

STB STB A. 07.44:54  
BC STOP  
+0RPM

STB STB A. 07.44:45  
BC STOP  
-5RPM

STB STB A. 07.44:35  
>BC STOP  
-31RPM

STB STB A. 07.44:33  
BC D. SL AST  
-32RPM

STB STB A. 07.44:27  
BC D. SL AST  
-17RPM

STB STB A. 07.44:16  
>BC D. SL AST  
+0RPM

STB STB A. 07.43:36  
BC STOP  
-1RPM



BC D. SL AST  
@ -17RPM  
STB STB A. 07.44:16  
>BC D. SL AST  
+0RPM  
STB STB A. 07.43:36  
BC STOP  
@ -1RPM  
STB STB A. 07.43:30  
BC STOP  
@ +11RPM  
STB STB A. 07.43:21  
>BC STOP  
+33RPM  
STB STB A. 07.43:15  
BC D. SL AHD  
@ +21RPM  
STB STB A. 07.43:02  
>BC D. SL AHD  
+0RPM  
STB STB A. 07.42:21  
BC STOP  
@ +0RPM  
STB STB A. 07.42:15  
BC STOP  
@ +8RPM  
STB STB A. 07.42:05  
>BC STOP  
+33RPM  
STB STB A. 07.42:00  
BC D. SL AHD  
@ +23RPM  
STB STB A. 07.41:47  
>BC D. SL AHD  
+0RPM  
STB STB A. 07.40:51  
BC STOP  
@ +0RPM  
STB STB A. 07.40:45  
BC STOP  
@ -9RPM  
STB STB A. 07.40:36  
>BC STOP  
-34RPM  
STB STB A. 07.40:30  
BC D. SL AST  
@ -23RPM  
STB STB A. 07.40:17  
>BC D. SL AST  
+0RPM  
STB STB A. 07.39:06  
BC STOP  
@ +1RPM  
STB STB A. 07.39:00  
BC STOP  
@ +13RPM  
STB STB A. 07.38:52  
>BC STOP  
+32RPM  
STB STB A. 07.38:51  
BC D. SL AHD  
@ +33RPM  
STB STB A. 07.38:45  
BC D. SL AHD

STB STB A. 07.38:52  
>BC STOP +32RPM  
STB STB A. 07.38:51  
BC D. SL AHD  
@ +33RPM  
STB STB A. 07.38:45  
BC D. SL AHD  
@ +21RPM  
STB STB A. 07.38:31  
>BC D. SL AHD  
@ +0RPM  
STB STB A. 07.35:24  
BC STOP  
@ +0RPM  
STB STB A. 07.35:15  
BC STOP  
@ -5RPM  
STB STB A. 07.35:05  
>BC STOP  
-25RPM  
STB STB A. 07.34:48  
BC D. SL AST  
@ -25RPM  
STB STB A. 07.34:36  
BC D. SL AST  
@ -33RPM  
STB STB A. 07.34:30  
BC D. SL AST  
@ -23RPM  
STB STB A. 07.34:17  
>BC D. SL AST  
+0RPM  
STB STB A. 07.33:42  
BC STOP  
@ +1RPM  
STB STB A. 07.33:36  
BC STOP  
@ +8RPM  
STB STB A. 07.33:26  
>BC STOP  
+32RPM  
STB STB A. 07.33:21  
BC D. SL AHD  
@ +20RPM  
STB STB A. 07.33:08  
>BC D. SL AHD  
+0RPM  
STB STB A. 07.25:45  
BC STOP  
@ -1RPM  
STB STB A. 07.25:39  
BC STOP  
@ -10RPM  
STB STB A. 07.25:30  
>BC STOP  
-26RPM  
STB STB A. 07.24:09  
BC D. SL AST  
@ -25RPM  
STB STB A. 07.24:00  
BC D. SL AST  
@ -35RPM



STB STB A. 07.25:39  
>BC STOP  
@ -10RPM

STB STB A. 07.25:30  
>BC STOP  
-26RPM

STB STB A. 07.24:09  
BC D. SL AST  
@ -25RPM

STB STB A. 07.24:00  
BC D. SL AST  
@ -35RPM

STB STB A. 07.23:54  
BC D. SL AST  
@ -23RPM

STB STB A. 07.23:41  
>BC D. SL AST  
+0RPM

STB STB A. 07.23:03  
BC STOP  
@ +1RPM

STB STB A. 07.22:57  
BC STOP  
@ +8RPM

STB STB A. 07.22:47  
>BC STOP  
+33RPM

STB STB A. 07.22:39  
BC D. SL AHD  
@ +22RPM

STB STB A. 07.22:28  
>BC D. SL AHD  
+0RPM

STB STB A. 07.19:33  
BC STOP  
@ -1RPM

STB STB A. 07.19:27  
BC STOP  
@ +6RPM

STB STB A. 07.19:16  
>BC STOP  
+25RPM

STB STB A. 07.14:36  
BC D. SL AHD  
@ +24RPM

STB STB A. 07.14:27  
BC D. SL AHD  
@ +34RPM

STB STB A. 07.14:21  
BC D. SL AHD  
@ +23RPM

STB STB A. 07.14:07  
>BC D. SL AHD  
+0RPM

STB STB A. 07.10:12  
BC STOP  
@ -1RPM

STB STB A. 07.10:06  
BC STOP  
@ +12RPM

STB STB A. 07.09:57  
>BC STOP  
+26RPM

@ -1RPM  
STB STB A. 07.10:06  
BC STOP  
@ +12RPM  
STB STB A. 07.09:57  
>BC STOP  
+26RPM  
STB STB A. 07.00:15  
BC D. SL AHD  
@ +23RPM  
STB STB A. 07.00:03  
BC D. SL AHD  
@ +34RPM  
STB STB A. 06.59:57  
BC D. SL AHD  
@ +20RPM  
STB STB A. 06.59:45  
>BC D. SL AHD  
+0RPM  
STB STB A. 06.48:57  
BC STOP  
@ -1RPM  
STB STB A. 06.48:51  
BC STOP  
@ -12RPM  
STB STB A. 06.48:41  
>BC STOP  
-40RPM  
STB STB A. 06.47:09  
BC HALF AST  
@ -36RPM  
STB STB A. 06.46:57  
>BC HALF AST  
-29RPM  
AUT. RPM-PRINTOUT OFF  
STB STB A. 06.46:27  
BC D. SL AST  
@ -29RPM  
STB STB A. 06.46:21  
BC D. SL AST  
@ -21RPM  
STB STB A. 06.46:15  
BC D. SL AST  
@ -28RPM  
STB STB A. 06.46:06  
BC D. SL AST  
@ -23RPM  
STB STB A. 06.45:57  
BC D. SL AST  
@ -29RPM  
STB STB A. 06.45:48  
BC D. SL AST  
@ -23RPM  
STB STB A. 06.45:39  
BC D. SL AST  
@ -30RPM  
STB STB A. 06.45:30  
BC D. SL AST  
@ -21RPM  
STB STB A. 06.45:21  
BC D. SL AST  
@ -37RPM  
STB STB A. 06.45:15



STB STB A. 06.45:30  
BC D. SL AST  
-30RPM

STB STB A. 06.45:21  
BC D. SL AST  
-21RPM

STB STB A. 06.45:15  
BC D. SL AST  
-37RPM

STB STB A. 06.45:01  
>BC D. SL AST  
-17RPM  
+0RPM

STB STB A. 06.32:54  
BC STOP  
+4RPM

STB STB A. 06.32:30  
BC STOP  
+10RPM

STB STB A. 06.32:18  
BC STOP  
+16RPM

STB STB A. 06.32:08  
>BC STOP  
+27RPM

STB STB A. 06.31:54  
BC D. SL AHD  
+27RPM

STB STB A. 06.31:33  
BC D. SL AHD  
+22RPM

STB STB A. 06.31:24  
BC D. SL AHD  
+27RPM

STB STB A. 06.31:15  
BC D. SL AHD  
+21RPM

STB STB A. 06.30:51  
BC D. SL AHD  
+27RPM

STB STB A. 06.30:27  
BC D. SL AHD  
+22RPM

STB STB A. 06.29:48  
BC D. SL AHD  
+27RPM

STB STB A. 06.29:39  
BC D. SL AHD  
+22RPM

STB STB A. 06.29:24  
>BC D. SL AHD  
+31RPM

STB STB A. 06.25:54  
BC SLOW AHD  
+32RPM

STB STB A. 06.25:43  
>BC SLOW AHD  
+41RPM

STATUS:  
89 MAR 23 06.20:47

BC SLOW AHD +41RPM

STATUS:

89 MAR 23 06.20:47

STB STB A.  
BC HALF AHD +41RPM

BC CONTROL LOCATION

\*\*\*\*\*

STB STB A. 06.18:09  
BC HALF AHD  
@ +44RPM

STB STB A. 06.17:58  
>BC HALF AHD +57RPM

STB STB A. 05.53:12  
BC FULL AHD  
@ +54RPM

STB STB A. 05.53:03  
>BC FULL AHD +41RPM

STB STB A. 05.49:54  
BC HALF AHD  
@ +45RPM

STB STB A. 05.49:45  
>BC HALF AHD +55RPM

STB STB A. 05.19:36  
BC FULL AHD  
@ +59RPM

STB STB A. 05.06:06  
BC FULL AHD  
@ +54RPM

STB STB A. 05.05:57  
>BC FULL AHD +42RPM

STB STB A. 04.59:57  
BC HALF AHD  
@ +42RPM

STB STB A. 04.59:46  
>BC HALF AHD +32RPM

STB STB A. 04.58:39  
BC SLOW AHD  
@ +31RPM

STB STB A. 04.58:29  
>BC SLOW AHD +24RPM

STB STB A. 04.57:30  
BC D. SL AHD  
@ +27RPM

STB STB A. 04.57:24  
BC D. SL AHD  
@ +37RPM

STB STB A. 04.57:18  
BC D. SL AHD  
@ +29RPM

STB STB A. 04.57:04  
>BC D. SL AHD +0RPM



STB STB H. 04.57:18  
>BC D. SL AHD  
@ +29RPM

STB STB A. 04.57:04  
>BC D. SL AHD  
+0RPM

STB STB A. 04.56:51  
BC STOP  
@ +2RPM

STB STB A. 04.56:42  
>BC STOP  
-20RPM

STB STB A. 04.56:29  
>BC D. SL AST  
+0RPM

STB STB A. 04.56:18  
BC STOP  
@ -2RPM

STB STB A. 04.55:48  
BC STOP  
@ +8RPM

STB STB A. 04.53:33  
BC STOP  
@ +13RPM

STB STB A. 04.52:00  
BC STOP  
@ +18RPM

STB STB A. 04.51:45  
>BC STOP  
+24RPM

STB STB A. 04.50:45  
BC D. SL AHD  
@ +24RPM

STB STB A. 04.50:34  
>BC D. SL AHD  
+31RPM

STB STB A. 04.49:54  
BC SLOW AHD  
@ +30RPM

STB STB A. 04.49:43  
>BC SLOW AHD  
+41RPM

STB STB A. 04.47:54  
BC HALF AHD  
@ +42RPM

STB STB A. 04.47:43  
>BC HALF AHD  
+56RPM

STB STB A. 04.37:15  
BC FULL AHD  
@ +58RPM

STB STB A. 04.27:21  
BC FULL AHD  
@ +63RPM

STB STB A. 04.16:15  
BC FULL AHD  
@ +68RPM

STB STB A. 04.06:18  
BC FULL AHD  
@ +73RPM

89 MAR 23 04.00:00  
89 MAR 23 03.51:00

STB STB A. 04.06:18  
BC FULL AHD  
@ +73RPM

89 MAR 23 04.00:00

89 MAR 23 03.51:00

STATUS:

89 MAR 23 02.57:11

STB STB A.  
BC FULL AHD  
+78RPM

BC CONTRL LOCATION  
\*\*\*\*\*

>STB STB A. 02.30:06  
BC FULL AHD  
+79RPM

>STB 02.30:02  
BC FULL AHD  
+78RPM

89 MAR 23 00.00:00

89 MAR 22 20.00:00

89 MAR 22 16.00:00

89 MAR 22 12.00:00

89 MAR 22 08.00:00

89 MAR 22 04.00:00

89 MAR 22 00.00:00

89 MAR 21 20.00:00

89 MAR 21 16.00:00

89 MAR 21 12.00:00

89 MAR 21 08.00:00

89 MAR 21 04.00:00

89 MAR 21 00.00:00

89 MAR 20 20.00:00

89 MAR 20 16.00:00

89 MAR 20 12.00:00

89 MAR 20 08.00:00

89 MAR 20 04.00:00

89 MAR 20 00.00:00

89 MAR 19 20.00:00

89 MAR 19 16.00:00

89 MAR 19 12.00:00

89 MAR 19 08.00:00

89 MAR 19 04.00:00

89 MAR 19 00.00:00

22.27:41

BC FULL AHD  
@ +79RPM

22.17:44

BC FULL AHD  
@ +74RPM

22.06:47

BC FULL AHD  
@ +69RPM



20.17:20  
BC HALF AHD  
@ +40RPM  
20.17:11  
>BC HALF AHD  
89 MAR 19 00.00:00  
22.27:41  
BC FULL AHD  
@ +79RPM  
22.17:44  
BC FULL AHD  
@ +74RPM  
22.06:47  
BC FULL AHD  
@ +69RPM  
>STB STB A. 22.00:37  
BC FULL AHD  
+64RPM  
>STB 22.00:30  
BC FULL AHD  
+65RPM  
21.55:14  
BC FULL AHD  
@ +64RPM  
21.46:11  
BC FULL AHD  
@ +59RPM  
21.36:44  
BC FULL AHD  
@ +54RPM  
21.36:38  
BC FULL AHD  
@ +46RPM  
21.36:32  
>BC FULL AHD  
+29RPM  
21.29:08  
BC SLOW AHD  
@ +32RPM  
21.28:58  
>BC SLOW AHD  
+41RPM  
21.27:50  
BC HALF AHD  
@ +40RPM  
21.27:26  
BC HALF AHD  
@ +45RPM  
21.27:16  
>BC HALF AHD  
+56RPM  
20.19:17  
BC FULL AHD  
@ +56RPM  
20.18:59  
BC FULL AHD  
@ +51RPM  
20.18:51  
>BC FULL AHD  
+41RPM  
20.17:20  
BC HALF AHD  
@ +40RPM

16 +71RPM

18.31:59

>BC CONTRL LOCATION

STATUS:

89 MAR 18 18.27:57

CRC FULL AHD  
ACK SLOW AST +76RPM

CRC CONTRL LOCATION

\*\*\*\*\*

STATUS:

89 MAR 18 18.26:43

CRC FULL AHD  
ACK SLOW AST +75RPM

CRC CONTRL LOCATION

\*\*\*\*\*

STATUS:

89 MAR 18 18.26:00

CRC FULL AHD  
ACK SLOW AST +74RPM

CRC CONTRL LOCATION

\*\*\*\*\*

STATUS:

89 MAR 18 18.24:11

CRC FULL AHD  
ACK SLOW AST +71RPM

CRC CONTRL LOCATION

\*\*\*\*\*



From 11/26/88

To

# Tally Book



EXON Valdez

Official # 692 766

**CERTIFIED TO BE A TRUE COPY**

**I have seen the original and  
compared this copy with it and  
found it to be a true copy**

Ray J. Stock, LCDR, USCG  
Name-Rank or Title-Duty Station

11/26/88

1012 SCHEDULE TO 70 RPM IN  
HEAD SEA; WIND, ✓  
1408 LPD 44 MANUV

11/27/88

1800 LPU 65 RPM S

11/28

1850

0820 LPU to 100% APC

11/29

0824 LPD to 60 RPM for  
timed arrival @ SF Bar

11/30

0835 SBE Fog

0900 LPD

1024 ✓

27 ✓

30 LD for timed arrival

1240 LD Fog Lifts

1632 ✓ for Timed Arrival



11/30/88  
Arrival S.F.

1800 Test Gear  
1830 ✓

12/1/88

0441 ✓  
49 ✓

0500 Arrival LNB 110°  
4.2 m/o

03 ✓  
14 ✓

0542 PILOT Roberts ✓  
44 ✓  
46<sup>3</sup>/<sub>4</sub> ✓

0604 Enter Channel  
BN 122

08 BN 304  
12 BN 526  
16 BN 728

36 St. Bonita @ 337 @ 1.1 m/o  
48 Golden Gate Bridge  
58<sup>1</sup>/<sub>2</sub> ✓ BN "HR"

0703 ✓  
14<sup>1</sup>/<sub>2</sub> ✓  
17<sup>1</sup>/<sub>2</sub> ✓  
21 ✓

0732 Bay Bridge  
42 ✓  
44 ✓  
56 0

0810 ✓  
12 0  
17<sup>1</sup>/<sub>2</sub> ✓  
18 0  
19 ✓  
20 ✓

12-1-88  
Cont'd

0823 - ✓ EXON 0  
22. Go side ✓

0840 - Anchor Hitched - 8 shots  
in water

0850 - Pilot Away  
0905 - EXON GALVESTON OFF  
Port Side

0910 - 1st Line

0930 - SPILL SPOILER A/S

0938 - ALL FAST FWD:  
5A 1st HOSE UAPER  
1006 1st CARGO  
1B LAST HOSE

1036 START CARGO  
GALVESTON DEPARTING

12-1-88

1700 LAST HOSE OFF  
30 - START TETHERING EXON GALVESTON

1750 LAST TETHERING  
450-4 BARGE 12/1

1830 MONOSIDE TAGS SAA KING  
30 1st LINE PT. THOMPSON

1954 450 ALL FAST

2023 8" HOSE CONNECTED C-RISER  
12/2

2720 SHUT DOWN CARGO  
PER E/R

0942 START CARGO  
1012 FINISH CARGO  
1030 HOSE OFF 450 TO  
REMAIN A/S JOL

12-2-88

0804 Steering Gear on. Tested

0808 Bridge Control - Engine  
Rolled on Air.

0810 Galveston Approaching.

0820 First Line

0845 E/R Control  
Galveston All Fast.

1548  
1648 E/R notification for Galveston  
Departure. Bridge Control.  
282

12-06-88

0355 Steering Gear on + Tested

0404 Bridge Control

0526 Finis W/E. E/R control.

12-06-88 Light Galveston

1250 Steering Gear on + Tested

1257 Bridge Control

1350 E/R Control

282

12-07-88 Light Galveston

1310 Steering Gear on + Tested

1333 Bridge Control.

1438 Secure Steering Gear

1438 E/R Control

282



12-08-88

0410 Gear Test  
 0410 Pilot Abd Anderson  
 0448 Start Heavy  
 0452 Side Control tilted and  
 + Gate - 535.  
 0530 ANCHOR AWEIGH  
 0530 LD  
 33 ✓  
 43 ✓  
 0551 44 2/32  
 0608 1/2 SF OAK BAR BR.  
 18 "BR" 0.3%  
 23 1/2 ANCHOR LT  $\phi$  220 43%  
 27 PT BLUM  $\phi$  025 26%  
 31 BEGIN LPU TO 65 RPM  
 37 1/2 HARDING REC.  
 42 3/4 G.G. BEAUF  
 47 PT DIABLO  $\phi$  335 55%  
 54 1/2 PT BANTA  $\phi$  338 86%  
 0710 7 1/2 SF BAR CM.  
 BEGIN LPU TO MAX.  
 14 5 1/2 SF BAR CM.  
 21 1 1/2 SF BAR CM.  
 21 1/2 ✓  
 25 ✓  
 0731 Pilot Away ✓  
 35 ✓  
 410 LPU to full sea speed.  
 0742 Departure. MS

12/8/88

2244 LPU to 75 RPM IN INCREASING HEAD SEAS

12/09/88

0445 LPU TO 78 RPM. CONDITIONS MODERATED.

0822 SBE IN REDUCED VISIBILITY

1311 4 Improved Visibility

1436 SBE Reduced Visibility

1605 4 Improved Visibility

1930 SBE REDUCED VIS.

2035 IMPROVING VIS.

2100 SBE

11 IMPROV VIS

12/10/88

1742 RED. VIS. SBE

2006 IMPROV. ✓

23 SBE

35 VIS IMPROVING USUAL STATE

2151 SBE IN RED. VIS.

2237 VIS IMPROVING ✓

12/11/88

1915 LPU 75 RPM - SEAS

12/12/88  
ARRIVE C. HINCHINBROOK

1122	BEGUN LPD
1130	GRAPH TEST 2RC
1207	Asteron Test
1212	Finish Test
1218	LPU
1310	Finish LPU
1436	Arrival Cape Hinchinbrook
1558	SMITH IS c/c
1624	LPD TO SS RPM
1651	GLACIER IS c/c
1714	FINISH LPD
1720	BUSBY IS $\rightarrow$ 1.7 mi
23	L
28	L
29	0
29 1/2	L
30	L
30	L
34	L P. 1.5 M. O'HANRAHAN
35	L
1814	FSD 50 RPM
19	ENTRANCE PT $\rightarrow$ 0.25 mi
21	L
22	MIDDLE PK $\rightarrow$ 0.25
27	ENTRANCE IS
30	CREW S/BY
41	L
45	L
58	$\emptyset$
1903	TUGS: FEAFLYER A/S STB
07	L
11	STALWART F PT/QTR
12	PATHFINDER F PT/BOB
13	$\emptyset$

12/12/88 COST.  
DOCK NO - BERTH #3

1921	L
24	$\emptyset$
32	L
34	$\emptyset$
42 1/2	L
44	$\emptyset$
46	OFF DOCK
52 1/2	L
53 1/2	$\emptyset$
55 1/2	L
56 1/2	$\emptyset$
2000	L FIRST LINE
00 1/2	$\emptyset$
06	L
06 1/2	$\emptyset$
08	IN POSITION
2057	By Station Log
2100	F.W.E. only am control.
2105	All fast start 500 ft
	Berth 3



12-13-88

1836 Last Arm  
1846 Gear Test  
1850 Tuys Stalwart & Path Finder  
A/S 242

1855 Tuys Sea Flyer A/S  
1921 Finish Graving  
1924 Graving Ashore  
1925 S.E. Bicy Control  
1930 START LET GO

1954 LAST LINE  
1957 LT  
2000 CLEAR OF BERTH  
2000 LT, LT  
2000 PATHFINDER LET GO  
09 LT

2045 LT  
46 LT INT MED 16362 RPM  
49 LT MED 2037 RPM  
2112 LT FINE 2960 RPM  
14 MIDDLE RC  $\phi$  315 24 m/s  
23 FINE RT  $\phi$  125° 29 m/s  
30 LT  
32 PORT RT  $\phi$  210° 33 m/s  
38 3/4 LT

2200 LT  
2209 4th P.L.T. Army  
2217 LT  
48 LT  
2311 LT

20 GEAR 3 LT  $\phi$  307 298 m/s  
23 LPU  
20 A/C to 186 24 m/s

12/14 DEPART UNDER  
0006 STOP LOAD PGM

12-13-88  
(cont)

0205 LPO 75  
0218 Departure LPO 70 RPM  
0334 LPO 65

282

12/14/88

0700 LPO 60 RPM

12-14-88

1450 SBE Reduced Visibility  
1530 4th 55 Improved Visibility  
1552 LPU 60 RPM  
1830 LPU 65 RPM  
1900 LPU 70 RPM  
1936 LPO 65 RPM  
1942  
2340 LPO to 60 RPM

12/15/88

1330 LPO 55  
1551 LPU 57  
1912 LPO/FINE SET 50 RPM

12/16/88

0822 55 RPM  
0905 LPU to 60  
1023 LPU to 65  
1111 LPU to 70  
1338 LPU 75 RPM  
1541 LPU 79 RPM Full Sea Speed

12/18/88

EDUCATION LB

1100 O FOR E/R

01 ✓

01 1/2 ✓

02 ✓

4 1/2 ✓

8 LPU 300

12/20/88

1630 TEST GEAR

12/21/88

0110 LPD

0211 ✓

0213 L

0216 ✓

0218 ✓

0219 ✓

0226 ✓

0229 L

0230 105

0232 O

0240 ✓

43 ✓

44 ✓

47 O

49 ✓

51 ✓

51 O

59 ✓

03010 Tony J Alay Sub

0307 ✓

08 O

12 ✓ Tony J Army

0315 ✓

0322 ✓

0329 L.P.U. to Fuel Sea Fed.

12-25-88

2358 F50 Due to Weather



ARRIVE DTP  
12/28/88 BERTH #1

0824	GEAR TEST
1100	BEGIN LPD
1212	Arrival
20	L
31 1/2	L
33	Ø
37	Ø ASTERN TEST
39	Ø
40	L
42 1/2	L
51	L
54	PILOT J. LOWE ABD
56	L
1300	TUG 'MARIA ISABEL I' F/A
✓	'MARIA LOUISA II' F/F
10	'BRIGADEER' F/PROP
10	L
13	Ø
17 1/2	L
33	Ø
35	L
38	Ø
46	—, —
48	Ø
50	—
52	Ø
54	FIRST LINE
58	— CH — DI, Ø
1404	L
04	Ø
10	IN POSITION
26	'BRIGADEER' SHIFT FWD
41	GANGERS ABD
48	CLEARANCE

ARRIVE DTP (cont)  
12-28-88

1506	FWE. ENGINE down	Central
	port side Berth 1.	MS

12-29-88

DEPART PTP

- 1150 Gear Test
- 1156 Last Arm, FIN GAUGING
- 1203 Slow Turn Engine
- 1206 ✓ SBE Bridge Control  
START LETTING GO
- 20 LAST LINE
- 21 ✓
- 23 ✓
- 24 CLEAR OF BERTH
- 32 ✓ PLIT AWAY
- 36 ✓
- 42 DEPARTURE *MS*
- 1436 ✓ Bridge control - Turbine work  
complete - L.P.V.  
252



1-04-89

1535 Gear Test

2221 B&W LPD

2300 TR  $\phi$  072' .72%

10 L

15 L

17 1/2 L

19 1/2 L

20 1/2 L

27 H

24 ARRIVAL

3550 1.7% LB

20 PILOT

JMBUKA ABD

39 L

44 L

IF 5457

"LB" ARR MOD 16dB

.5% CUL ON 12139

H<sub>2</sub>O 325

50 LB BKWATER

51 1/2

2356 Tug Spartan A/S + MF.  
1-05-89

0001 O

0007 H

0010 H

0012 Let Go Port Anchor

0012 H

0013 O

0015 L

0015 1/2 H

0017 Fetched up O

0022 Fire

24 Tug Spartan Arry

26 Pilot Arry

0115 US Custom Abd

0205 Clear Customs

0225 Tug + Bunker Barge  
A/S

0230 Stores Barge A/S + MF

0245 Bunker Barge MF

0310 Bunker Hose

0335 Start Bunkers

232

DEPART L.B.  
1-5-88 09 JRC

1038 PILOT ASD F. LUKOWSKI  
1045 TEST GEAR  
1108 BKR BARGE AWAY  
1054 BKR HOSE OFF  
1035 FIN BKPS } LATE  
1112 START HEAVING II  
1114 BKR CNL / SBE  
26 ANCH AWEIGH / CLEAR  
26 LT  
42 LD DANGER SIGNAL  
43 LT  
48 ENTER B/W  
50 CLEAR B/W  
1203 1/2 ← FOR PILOT  
05 PILOT AWAY LT  
10 LT  
18 DEP L/B SEA BOOBY  
19 LPU SEA SPD. (N.C.)

at sea

AT SEA  
1/5/88 09 JRC

2019 LPU TO 75 RPM  
IN HEAVY SEAS  
223A LPU TO 72 RPM

1/06/88

1636 LPU TO 75 RPM  
2042 LPU TO 72  
2150 LPU TO 70 DEC

1/7/89

0808 LPU TO 7  
1028 LPU TO SEA SPD. JRC

1-08-89

1335 Reduce to 75 RPM  
No Building NW Sea (N.C.)

1455 Reduce to 70 RPM  
BUILDING NW SEAS SWELL (N.C.)

1-9-89

2218 LPU TO 65 RPM

1-10-89

0824 LPU TO 70 RPM  
1118 LPU TO 72 RPM DEC

1340 Reduce to 70 RPM TO  
BASE VESSEL (N.C.)

1620 LPU TO 73 RPM

1920 LPU TO 76 RPM CH

2044 LPU TO 78 RPM DEC



1/11/89  
ARRIVE C. HUNTON BROOK

1030 TEST GEAR LPD  
1111 REVERSE TEST  
1117 START LPU  
1604 REDUCED VIS -  
1736 CH. LT  $\rightarrow$   $\phi$  013° @ 2.4 mi  
1742 CH LT  $\phi$  046° @ 2.1 mi  
1742 ARRIVAL  
1908 SMITH IS  $\phi$  255 @ 8.8  
1925 WARE IS  $\phi$  278 @ 8.3  
1937 START LPU  
2036 BUSBY I  $\phi$  1.6°  
✓  
2040 ✓  
2041 ✓  
2042 ✓  
2043 ✓  
2046 ✓  
2046 ✓  
2044 PILOT ABOARD CAPT. BRADLEY  
2049 ✓  
2124  $\Delta$  TONGUE Pt. @ 1'  
2128  $\Delta$  POTATO Pt. @ .4'  
2131  $\Delta$  ENTRANCE Pt @ .3'  
2140 RT.  $\rightarrow$  080°  
55 ✓  
58 ✓  
59 ✓  
2204  $\phi$   
10 TUGS A/S: STALWART FWD  
- PATHFINDER AFT, SEAFLYER M.  
12 1/2 ✓  
14  $\phi$   
18 APT TUG FAST  
20 FWD TUG FAST

1/11/89 CONT  
DOCKING VALDRE #3

2226 ✓  
26 1/2 ✓  
31 APT TUG FAST  
33  $\phi$   
37 ✓  
41  $\phi$   
44 ✓  
46 1/2  $\phi$   
54 ✓  
55 ✓  
57  $\phi$   
57 1/2 ✓  
58  $\phi$   
59 1/2 ✓  
2300 1/2  $\phi$  OFF DOCK  
10 IN POSITION  
12 FIRST LINE  
1/12/89  
2007 ALL FAST, FWE

1-12-88<sup>89</sup> <sup>dec</sup>

1818 TEST GEAR  
 25 PILOT BRADLEY  
 30 LAST ARM -  
 40 FINISH GARGING  
 42 TUGS PULLING STALANT. & Sea Flyer.  
 48 G'WAY OFF  
 48 B'CTL, SBE  
 50 START LETTING GO  
 1911 LAST LINE  
 14 ✓  
 14 ✓  
 14 1/2 ✓  
 15 ✓  
 18 CLEAR OF BIRTH  
 20 ASTERN TEST ✓  
 22 1/2 ✓  
 27 ✓  
 57 ✓  
 2005 ✓  
 24 MIDDLECK → .25<sup>u</sup>/<sub>10</sub>  
 33 FORWARD CPT .27<sup>u</sup>/<sub>10</sub>  
 35 1/4 ✓  
 37 ✓  
 38 1/2 FORWARD PT → .37<sup>u</sup>/<sub>10</sub>  
 2110 PILOT AWAY  
 14 ✓  
 15 ✓ BRIN TURBO WASH  
 22 ✓  
 43 1/2 ✓  
 45 1/2 ✓  
 2200 ✓ FINISH TURBO WASH  
 02 ✓ ICE  
 2300 ✓  
 12 START LPU

1-12-89

2312 WARD I → 6.3<sup>u</sup>/<sub>10</sub> ✓  
 0633 Abn Schwaan RIC  
 0048 Departure. Cape Hink. ✓  
 1-15-89 AT SEA  
 1300 LPD TO 70 RPM  
 FOR ARRIVAL (N.C.)  
 1-16-89  
 0818 LPD TO 65 RPM  
 SPEED FOR TIMED ARRIVAL  
 1636 LPU TO 68 RPM  
 1-17-89  
 1314 Auto Show down  
 39 RESUME 68 RPM L.P.U. (N.C.)  
 0820 SLOW TO 60 RPM  
 FOR TIMED ARRIVAL  
 0857 LPD TO 55 RPM  
 1040 GEAR TEST  
 1505 ✓ FOR ARRIVAL (N.C.)  
 1805 ✓  
 1938 ✓  
 42 1/2 ✓  
 46 ✓  
 48 ✓ ASTERN TEST  
 50 N BUOY ✓  
 52 ✓  
 2014 1/2 ✓  
 10 1/2 ✓  
 17 ✓  
 18 ARRIVAL LNS @ 123 27<sup>u</sup>/<sub>10</sub>  
 30 PILOT FORWARD ASD. e



1-17-89  
ARRIJE SF (cont)

2049 1/2 BUOYS 1 1/2 SF BAR COL  
 SA 3 1/4  
 2101 7 1/2  
 2119 BORTA RYG .87 m/b  
 39 1/2 HARDING @ 25  
 41 1/2 H  
 43 ALCAZAR @ 201 483 1/2  
 51 1/2 BLOSSOM @ 237 52 1/2  
 2201 ✓  
 2211 D ← O → C Bay BELOGE  
 2211 LD  
 2217 ⊗ POSING FOR ANCHORAGE  
 2232 ~~||||~~ ~~||||~~ ~~||||~~ ~~||||~~  
 2236 ⊗  
 2237 LD  
 2242 L  
 2245 LD  
 2250 ⊗  
 2254 LD  
 2254 ⊗  
 55 ~~~~~  
 55 +~~~~~  
 57 ~~~~~  
 57 ~~NET~~ 910 D ANCHOR  
 58 +~~~~~  
 59 ~~~~~  
 2300 ⊗  
 2315 ↓  
 17 0  
 2323 fetched up 10 photos on desk  
 still on desk MS  
 2325 Phil Army  
 2330 Galveston Approaching MS  
 2340 PWR E/A control

1-19-89

0020 Bridge Control  
 0956 E/R CONTROL  
 ENGINE DISABLED FOR  
 TURBO INSPEC.





1-25-89  
ARRIVAL CAPE HANCH

F 28-02  
A 37-09

1430 COMMENCE LPD  
TO MAN SP. FOR GEAR  
TEST

1518 COMPLETE LPD TO  
MAN SP.

24 L

26 1/2 L

29 LD

30 O

33 ~~DI~~ O ASTERN TEST

33+ LD

33 1/2 ~~L~~ NE. L

34 1/4 L

34 1/2 L

35- COMMENCE LPU TO  
SEA SP. (NE)

2048 ARRIVAL

2054 ~~TO~~ SCHEDULED 3.1

2210 ~~TO~~ ~~UNKND ISLAND~~ ON CRSS 058 PGC  
AT 8.2 NH

2223 BEGIN LPD

2254 ~~TO~~ BUGH REEF BONG

2318 L

25 L

26 LD

32 PUT OUT CAPT. CHRISTIE

33 L

35 L

45 ~~TO~~ ROCKY PT. 1 MILE @ 030°  
1-26-89 CONT'D

0011 POTATOE PT. @ 0.4 MILES

00 Middle PK @ 0.2 MILES

35 STAY FOR GEAR

41 L

0047 ✓

49 LD

49 ~~O~~

55 Tug Stalwart A/S SB

0104 ~~LD~~

04 1/2 O

09 1/2 ~~LD~~

12 3/4 ✓

14 Tug Stalwart A/F SB

16 O

16 1/4 ~~LD~~

24 O

38 Tug Pathfinder AFSQ,  
online

48 off dock

51 ~~LD~~

51 1/2 O

52 1/4 ~~LD~~

53 1/4 O

58 A/S dock

0205 1st line, after spinning

06 Tug Seaflyer A/S SB

14 In position

19 Tug Stalwart away  
fuel.

32 accommodation ladder  
down.

42 A/F fuel

48 A/F F&A, FWE

0305 Tugs away

DEPART VALDEZ  
1-26-88

2100 GEAR TEST  
 2122 PILOT CAPT. W. C. G. (47) ASD  
 2150 Finish Gaging  
 2152 Bridge Control SBE  
 2155 Shore Gaging Away  
 2200 Start getting go,  
 Tug Stulwaert ASSB,  
 Tug Sea Flyer ASSQ.  
 16 All clear fwd.  
 18 All clear aft, last  
 line  
 22 ✓  
 25 ✓, tugs away,  
 clear ahead  
 26 ✓  
 31/4 ✓  
 54 ✓  
 57 ✓  
 2308 ✓  
 19 ENTRANCE CLEAR. 5.5 MI CRS 223 POC  
 21 ✓  
 29 MIDDLE ROCK 25 MI. 00 CRS 223 POC  
 40 ENTRANCE PT. 27 MI. 00 @ 208°  
 41 ✓  
 46 ✓  
 48 POTATO PT. 27 MI. 00 @ 208°  
 0007 ✓ MANEUVER FOR ICE  
 13 ✓  
 21 ✓  
 24 PILOT AWAY  
 45 ✓  
 54 ✓  
 57 ✓  
 59 ✓

0125 LH  
 31 LH  
 38 LH  
 44 COMMENCE LPU  
 0209 STOP LPU FOR BOOSTER WASH  
 0225 LPU RESUMED  
 0430 Departure. MS  
 1-28-89 1028 BROW LPD TO 76 RPM  
 1612 LPU to Sea Juc. GK  
 1-29-89 1018 SBE-FOG  
 1100 SECURE FROM STANBY,  
 VISIBILITY 1/4 MILES  
 1230 Reduced Visibility -  
 Rules & Regs Complied  
 with Master of Bridge  
 Ongoing. Security  
 Signal (V.C.)  
 1540 Reduced Visibility  
 Rules & Regs Complied  
 with (V.C.)  
 1630 Visibility improved,  
 secure whistle. GK  
 1-30-89  
 0850 BROW LPD 74 RPM  
 2148 BROW LPD TO 69 RPM  
 70 RPM



ARRIVAL 1-31-89  
SAN FRANCISCO

1000 GEAR TEST

1036 Load Down to 55 RPM

1212 Complete LPD to 80 (e)

1545 Increase to 58 RPM  
ft arrival

1824 Pt. Reyes @ 035° @  
5.9 nm by radar A/C  
to 120° PG.

40 Load program down  
to min. speeds.

42 Bay "N" ~~to~~ 1.0 nm CRS 110  
GK

54 LH

56 LH

57 ⊗

59  $\downarrow$  BURN ASTERN TEST

2000 ⊗ ARRIVAL

01  $\downarrow$

01 LH

02 LH

09 LH

11  $\downarrow$

14 ⊗

17  $\downarrow$  PILOT ABOARD

17 LH CAPT.

18 LH CROWELL

19 LH

38 ENTER S.F. BODY CHANNEL

43 3  $\leftrightarrow$  4

50 COMMENCE LPD TO 60 RPM

50 7  $\leftrightarrow$  8

2110  $\rightarrow$  MUG ROCK .5 MILES

10 COMMENCE LPD TO MANSUETI

30 ~~HARD~~  $\rightarrow$  .1 NM CRS 093

2119 UNDER G.L. BRIDGE @ 058°

32 LH

37 LH

38 LH

42 LH

48.5 LH

49 LH

2201 LH

05 "C-D" SPAD 346 BRIDGE

06  $\downarrow$

29 ⊗

32  $\downarrow$

33 LH

36 ⊗

36 LH

36 LH

38 ⊗

38  $\downarrow$

38 LH

40 LH

43 LET GO STBD ANCHOR

44  $\downarrow$

46 ⊗

51  $\downarrow$

52 ⊗

53 LH

54 ⊗

55  $\downarrow$

56 ⊗

2300 FWE

ANCHORAGE #9

10 SHOTS ON WILD CAT

DEPARTURES  
2-6-89  
SAN FRANCISCO

2/1	1254 Ex Galv Approach	0710	GEAR TEST
	58 - 1st Line	0815	PILGOTA W/CONSER ABD
	1312 A/F	0820	Bridg Land S' SE-
	2140 Start Letting Go	0920	Start hearing SP/ Aches
	56 Last Line	22	↘
	2200 Ex Galv All Clear	24	0
2/2	1005 Bunker Barge A/S	36	↘
	16 A/F	37	0
	1530 Bunker Barge Away	43	↘
2/3	2222 Galv Appr.	43½	0
	31 1st Line	50	↘
	54 All Fast	52	0
	1018 Start Letting Go	58	Aches away ✓
	38 Last Line	1003	↘
	41 Galv All Clear	1006	↘
2/4	0805 Galv Approach	25	"B-E" SPAN Bay BRIDGE
	16 1st Line	1048	HOOD R. B. BOUY ↘
	32 Last Line	50	BROW LPU TO GO RPK
	1610 Start Let Go Galv	1100	GOLDEN CANTON BR.
	27 Last Line	1111	MILE R. ↘ 9.5M CBS 245 PGC
	32 Galv All Clear	24	BROW LPU ↘
	2024 Baytown Approach	28	"7" ↘ "8"
	49 1st Line	37	"1" ↘ "2"
	2122 All Fast	37	↘
2/5	0944 Start Let Go Baytown	39	✓
	1001 Last Line	47	Pilot Away
	08 Baytown Away	48	↘ ↘
		51	↘
		58	LPU TO SEA SP.
		1200	DEP SF LNB
		45	Complete LPU to Sea of the



ARRIVAL  
CAPE HINCHERBROOK  
2-10-89

1100 ~~GEARTEST~~  
~~BEFORE L.P.D.~~

1312 ARRIVAL CAPE HINCH.

34 SCOOTER R.K.  $\rightarrow$  3.1 MILES

1445 BEGIN LPD

1445 NAKED IS.  $\rightarrow$  8.7 MILES

1533 LPD STOP FOR MANEUVERING SPOT

36 BULLW. IS. BODY  $\rightarrow$  015° - 1.3 MILES

1605  $\checkmark$

09  $\checkmark$

12 PILOT ABOARD  $\otimes$  CAPT. O'HARA

13  $\checkmark$

14  $\otimes$   $\checkmark$

15  $\checkmark$

16 LH

18 FSU  $\rightarrow$  60 RPM

48 RETURN TO 55 RPM

50 POTATO PT  $\rightarrow$  .4 MILES 029°

1700 MIDDLE ROCK  $\rightarrow$  044° <sup>WRONG</sup> CRSE PGC

1706  $\checkmark$ , awaiting teqs

1709  $\checkmark$

44/4  $\circ$

1813 1/2  $\checkmark$

19 3/4  $\circ$

1845 STAND BY FOR TUG

1902 STEWARD ALS

15 STEWARD AFSS

16  $\checkmark$

24  $\circ$

24 PATHFINDER ALLFAST QTR. <sup>SYD</sup>

40 FLYER AS M/S S

43  $\checkmark$

46  $\circ$

Cont'd

Arrival Valdez  
2/10/89  
Continued

2001  $\checkmark$

02  $\circ$

11  $\checkmark$

12  $\circ$ , off dock

14  $\checkmark$

18 3/4  $\circ$

23 1st line

25 In position

53 Tug Stewart let go,  
for A/F

2106 FWE. All Inst. MS

2/11/89 Departure  
Valdey Voy 03-89

1530 Gear test  
 1540 Pilot AWAY CAPT. VAJETH COOPER  
 1609 Tug Pathfinder AFSD  
 17 Accommodation ladder  
 away, SIB, Tugs  
 Sea Flyer ASSB  
 Stalwart ASM/S.  
 17 Start letting go F&A  
 33 All clear F&A  
 37 ✓  
 37 1/2 0  
 38 ✓  
 39 1/2 0  
 40 Tugs Sea Flyer & Stalwart  
 away.  
 41 1/2 ✓, Tug Sea Flyer  
 ASPB.  
 44 1/2 Tug Sea Flyer away  
 44 1/2 ✓  
 44 Tug Pathfinder away,  
 clear of dock  
 45 0  
 45 1/4 ✓, astern test  
 45 1/2 G.K.  
 46 ✓  
 48 ✓  
 53 ✓  
 1721 ✓  
 31 ✓  
 34 ✓  
 50 MIDDLE ROW @ 227° - 2 miles  
 50 ✓

1759 ENTRANCE Pt. @ 211° .27 miles  
 1806 ✓  
 07 PORT Pt. @ 204° - .44 miles  
 09 ✓  
 12 TONGUE Pt. @ 219° - .94 miles  
 34 ✓  
 39 ROCKY Pt. @ 219° - 1.7 miles  
 40 PILOT AWAY  
 40 ✓  
 57 ✓ START TURBO WASH  
 58 ✓  
 1900 ✓  
 08 BUSBY Is. @ 206° - 2.3 miles  
 21 ✓  
 22 ✓  
 24 ✓  
 50 LPU TO SEA SPEED  
 2012 STEP LPU TO WASH PROSE  
 27 LPU TO SEA SPEED  
 30 WAKEDIS @ 6.4 NM ON 120 DEG  
 55 1/2 TO 156 SI 6.7 NM  
 2157 SCHOONER Rk @ S 1.7 NM  
 2230 DEPARTURE @ 230 CAUCH @ S  
 2.0 NM ON CRS 125° PC

2-15-89

1315 LPU TO 72 For ARR.  
 34 COMPLETE LPU (N.C)



ARRIVAL  
 SAN FRANCISCO  
 V07003-89  
 15 FEB '89

2300 GSA TEST  
 2/16/89

0521 Pt. Reyes  $\leftarrow$  036° PG @ 5.5 NM  
 A/C to 120° PG.  
 55 Start Engine Load down.  
 0624 "N" By  $\leftarrow$  830° @ 0.75 NM  
 A/C 110° PG.

37 ✓

41 ✓

42 Arrival S.F.S/B  
 $\phi$  123° @ 2.7 NM, 0

42½  $\nabla$ , astern test

43 0,  $\nabla$

44 ✓

48 ✓

52 Pt. Vilas Abd ✓

0123 EXIT S.F. BODY CHANNEL 068°

41 Pt. BONITA  $\leftarrow$  060° - .9 MILES

48 Pt. DIABLO  $\leftarrow$  060° - .6 MILES

51 G.L. BRIDGE :C 047°

57 ✓

02 HARDWARE Pt. Bay  $\rightarrow$  .15 NM

0810 PLUMMER 10 SW, 200° PG

34 C-D SPAN Bay BRIDGE

35 ✓

41 (X)

51 ✓

55 ✓

56 ✓

0901 (X)

02 ✓

03 ✓

04 (X)

0905 ✓

05 ✓

06 LET GO STBD ANCHOR

06½ ✓

08 (X)

10 ✓

12  $\emptyset$

13 ✓

15  $\emptyset$

0930 Fetched by ETR control  
 Htd when 10 dots in dead MS

0930 PLOT AWAY -

2-17-89

EXXON BAYTOWN DEPARTS

0415 - STRIKING GRAN TESTED  
 ER MANUED

0425 - START LIFTING EXXON  
 BAYTOWN 90

0454 LAST LINE

0500 BAYTOWN CLEAR  
 2-18-89

EXXON BAYTOWN RETURNS

0850 - BAYTOWN OFF PORT SIDE

0856 - 1st Line from BAYTOWN

0910 - In POSITION

0930 - EXXON BAYTOWN ALL FAST  
 Split Spollen FAST ASTERN  
 U.S.C.G. NOTIFIED

2-20-89 ± #9 S.F.

0815 E. CALVESTON A/S

0820 1<sup>st</sup> Line

0845 E. CALVESTON A/S

0905 VAPOR hose conn.

25 CARGO hose conn.

40 LAST hose conn.

48 VAPOR transfer

55 COMMENCE LIGHTERING TO  
E CALVESTON VTS  
NOTIFIED

1017 Spill spoiler fast

2-20-89 ± #9 San Fran.

1630 crew S/B

E/R MANNED-

STEERING GEAR ON

38 Lost hose

50 Stand letting go

1707 A/C fwd

08 Lost line

10 Spill Spoiler away

2-21-89 ± #9 S.F.

1135 GEAR tested

2030 FINISH LIGHTERING TO  
E CALVESTON USCG  
NOTIFIED

45 1<sup>st</sup> hose off

2115 2<sup>nd</sup> hose off

29 3<sup>rd</sup> hose off

2-22-89 ± #9 SF

1025 E. CALVESTON A/S

1955 TEST ENG. AHEAD OF  
ASTERN GC

2/23/89 ± #9 S.F. BAY

0615 REDUCED VISIBILITY, SOUND  
SIGNALS. STARTED

0700 Test Gear

0900 Pilot Abel A. CARLIER  
piloting

1147 START HEAVING ANCHOR

1200 BRIDGE CONTROL OF ENG.

19 ✓

21 0

26 ± Aweigh

27 ✓

29 ✓

31 ✓

36 "I" buoy depart ± 9

50 "D" - "E" span Bay Bridge @ 315°

1306 ALCAZAR Pt. DIABLO 1/2 mile @ 290°

15 "HR" buoy @ 235°

25 G.L. BRIDGE @ 245°

30 PT. DIABLO → .4 MILES @ 245°

37 PT. BOVINA → .6 MILES @ 245°

56 ENTER S.F. BAY CHANNEL @ 232°

1408 DEPART S.F. BAY CHANNEL @ 257°

10 ✓

13 ✓

17 PILOT'S AWAY ✓

18 ✓

28 LNB ← 7 MILES @ 305°

1430 DEPARTURE SAN FRANCISCO

6



2/23/89 DEPART SAN FRAN  
(CONT'D)

1437 COMMENCE LPO TO 72 RPM  
1500 "N" BOUY  $\rightarrow$  305°  
10 STOP LPO @ 72 RPM  
1704 Reduced visibility,  
Whistle sounded,  
Lookout posted, man  
overboard  
50 Visibility improved,  
secure whistle &  
Lookout. GK  
1815 Visibility reduced,  
whistle sounded,  
lookout posted, man  
overboard. GK  
52 Visibility improved,  
secure whistle GK  
2009 Reduced vis, signals  
sounded Rules & Regs  
Complied with.  
2115 Visibility Improved GK

2/27/89

2200 GEAR TEST  
2/28/89  
0330 C/C TO 315 @ 13.3  
0420 ABEAM CAPE ST. ELIAS  $\rightarrow$   
0600 C/C TO 293° CAPE ST. ELIAS  $\phi$   
108° @ 29.8 NM  
0826 C. Hinch  $\rightarrow$  2.02 NM off  
0830 ARRIVAL C. Hinch  $\rightarrow$  2.01 off  
1008 A/C 006  
1023 Waked IS  $\leftarrow$  7.8 NM  
1033 START LPO  
1108 LPO STOPPED @ 55 RPM  
1110 A/C 035  
1115 L  
1117 ✓  
119 ✓  
121 ✓  
125  $\rightarrow$  Asteron test  
126  $\rightarrow$   
127 ✓  
128 L  
129 LH  
128/2+ L FOR PILOT CC  
135 PILOT ABOARD LH  
CAPT. J. WRIGHT  
1200 F.S.W. TO 60 RPM  
14 Rocky Pt. W.  $\rightarrow$  1.5 MILE  
43 Tongue Pt.  $\rightarrow$  1 MILE - 028°  
46 Potato Pt.  $\rightarrow$  .42 MILES - 028°  
48 REDUCE TO 55 RPM  
51 ENTRANCE R.  $\rightarrow$  .26 MILES - 042°  
57 Middle Rock  $\rightarrow$  .3 MILES - 045°

Arenum Valdez Cont'd

Voy 4 - 89

2/28/89

1302 ENTRANCE ls. → .42 min 070°  
 17 ✓  
 21 ✓  
 23 ✓  
 35 ∅  
 40 ✓  
 43 PATHFINDER FAST FWD  
 45 STALWART FAST AFT  
 48 ✓  
 50 ✓  
 51 ∅  
 54 ✓  
 59 ∅  
 1403 ✓  
 4 ∅ ✓  
 7 ∅  
 9 ✓  
 12 ∅  
 14 ✓  
 15 ∅  
 23 ✓  
 25 ∅  
 37 ✓  
 38 ∅ FIRST LINE  
 38½ ✓  
 39 ∅ IN POSITION  
 1500 ACCOM. LADDER AWAY  
 05 ALL FAST FWD  
 10 PATHFINDER AWAY  
 12 STALWART AWAY  
 19 ALL FAST AFT  
 21 FWE

DEPART Valdez

3-1-89

1045 Pilot Abd Capt K Elche  
 Pilotwip  
 1103 1<sup>st</sup> ARM off  
 1115 LAST ARM  
 GEAR TEST  
 1140 ENGINES SLOW TURNED  
 90 FINISH BOAGE  
 AWAITING TUGS &  
 LINE HANDERS & TO  
 REMOVE EXHAUSTION BOOM  
 1305 TUGS STANDING BY  
 AWAITING BOOM  
 REMOVAL -  
 40 Boom removed  
 42 Bridge control: SBE  
 43 Tug Stalwart A/S M/S  
 44 " Pathfinder A/S S/B  
 46 " Sea Flyer A/S S/B  
 50 Start letting go F&A  
 53 Stalwart away  
 56 Stalwart A/S A/B  
 59 A/C fwd  
 1400 Last line ✓  
 01 Pathfinder away  
 03 Stalwart away ✓  
 06½ ✓  
 10 Clear of lock  
 11 ✓  
 36 ✓  
 47 ✓  
 48 ✓ FOR NARROWS  
 57 ENTRANCE ls. → .39 min - 225°



DEPART VALDEZ (cont'd)

3/01/89

1502 ✓  
06 Middle Rock → .24M - 224°  
16 ENTRANCE Pt. 20 .27M - 217°  
18 ✓  
24 ✓  
24 1/2 POTAB Pt. → .4M - 219°  
27 TONGUE Pt. 20 1.03M - 218°  
1552 - PILES AWAY CA  
BEGIN TURBO WASH  
1612 ✓  
16 ✓  
20 ✓  
23 COMMENCE LPU TO SEA SPEED  
50 STOP LPU FOR TURBO WASH 67 RPM  
1706 COMMENCE LPU TO SEA SPEED  
1725 FINISH LPU  
45 Naked Is → 276° @  
5.9 NM by radar  
1802 Smith Is @ 2490 @  
6.9 NM by radar C/C  
to 156° PG.  
1908 Schooner Rk LT → 246° PG  
@ 1.3 NM  
25 Cape Hickenbrook LT  
@ 097° PG @ 4.3 NM,  
C/C to 119° PG.  
43 Cape Hickenbrook LT  
← 029° PG @ 1.98 NM  
2000 DEPARTURE

3/4/89 At Sea

0706 Reduce to 74 RPM  
for building SE'ly  
seas.  
0835 Reduce to 70 RPM to  
ease landing  
1028 Reduce to 62 RPM  
1750 Windy seas moderating  
veering to WSW.  
Increase to 67 RPM.  
1820 Increase to 72 RPM.  
1906 Increase to 77 RPM GK  
2233 Reduce to 72 RPM  
to vessel in SEAWAY

3/5/89 At Sea Cont'd

0700 Increase to 77.0 RPM,  
Wind & seas decreasing,  
visibility reduced,  
sound whistle post  
lookout GK  
3-05-89 AT SEA

1530 Reduced visibility  
All Rules & REGS COMPLIANT  
(NC)  
1604 Visibility improved,  
secure whistle.

3/6/89 At Sea

0514 Fog, sound whistle,  
all regs complied with GK  
0803 BEGIN LPU TO 62 RPM  
1330 CLEARING SECURE  
FOR SIGNALS (NC)  
3-06-89

1505 Reduced visibility  
RULES & REGS COMPLIANT  
WITH

3/6/89 At Sea Continued  
1645 Increase to 67 RPM for  
planned arrival.  
3-07-89 AT SEA

0020 VISIBILITY IMPROVING  
RESUME WATCH COND A  
SECURE TCG SIGNALS (M)  
3-7-89 SANTA BARBARA STR.

0700 CEAR TEST

1710 START LPD

53 Pt. Fernin @ 000° @  
4.1 NM by radar

1805 ~~CGK~~

1800 Arrival, Pt Fernin  
φ 343° @ 4.2.

05 ~~CGK~~

11 0 start astern test

14 ~~CGK~~

15 ~~CGK~~

16 L.B. West Behrt Lt  
φ 010° PG @ 5.3 NM  
CGK to 025° PG

1832 Piles CAP. COMMINS ASD.

33 ~~CGK~~

40 ~~CGK~~

44 ~~CGK~~

59 ~~CGK~~

1900 ~~CGK~~

01 ~~CGK~~ BREAKWATER @ 325°

02 ~~CGK~~

02 1/2 ~~CGK~~

03 ~~CGK~~

04 ~~CGK~~

05 1/2 0

07 ✓

07 1/2 ✓

09 1/2 Pt. FERNIN  
CGK SIBO BOW

10 φ ✓

10 1/2 ✓

11 Philip W. FAST ART

11 1/2 0

12 Pt. VICENTE PORT BOW

13 ✓

14 0

14 1/2 ✓

16 ✓

18 ✓

18 1/2 ✓

25 ✓

34 ✓

34 1/2 ✓ ✓

35 1/2 ✓

37 0

41 1/2 ✓

42 ✓

42 1/2 ✓

43 0

46 1/4 ✓

48 0

52 T. P. Vicente let go

57 T. P. Vicente AF SQ

2000 ✓

01 0

03 ✓

04 0

Cont'd



3/7/89 Long Beach Cont'd

2007   
08 0  
11   
12 0  
13 1st line  
20   
22 0  
30 In position  
2145 A/F fwd.  
48 FWE  
50 Accomodation ladder  
aboard.  
2200 A/F aft, Allfast.  
Tugs away  
02 Gangway abnd.  
3-8 89 ARCO #121  
0700 GEAR TEST  
0746 Pilot Abd Capt J. Strong

3-08-89  
SHIFT 121 - 86

1500 TEST GEAR  
1500 TUGS PT FERMIN -  
San Pedro - PHILIP W S/B  
1520 Pilot Capt NESS  
ABO  
1540 Crew S/B  
1600 SBE  
09 Tug Pt. Fermin fast  
Stbd. Bow 2 lines  
20 Tug Philip Shifts to  
Port QTR.  
20 Tug San Pedro ~~fast~~ A/  
Stbd QTR. ~~jack~~  
36 Last line  
36 Tug San Pedro to Port Bow  
36   
41 1/2 0  
42 San Pedro (Tug)  
fast Port Bow 1 line  
45   
47 0  
50 1/2   
52 0 Clean off dock  
53 0  
56 0  
57  Tug Phillip A. Away  
58 0  
1701   
17 Tug San Pedro Away  
20 Pilot Station Abzan   
29 mid channel By.  
35 Dredge Florida   
39   
43 Connolly Pacific Gar

3/8/89  
LB → LA shift Cont.

1745 4  
48 BN3  
1753 Long Beach Breakwater  
1804 LB Sca Bouy  $\phi$  135° @ .47  
m/o  
10 Bouy "B"  
11 1/2  $\downarrow$   
24 LA SB  $\phi$  273° @ 0.8 m/o  
28 0  
28 LA SB  $\phi$  259° @ 0.4 m/o  
1836 Enter L.A. Breakwater  
41  $\downarrow$   
42 4  
42 1/2 0  
45  $\downarrow$   
46 Tug Philip W. fast  
Port Bow 2 lines  
47 0 Enter Tanker Chanel  
50 Tug San Pedro fast  
Stbd Bow 1 line  
52 1/2  $\downarrow$   
53 1/2 0  
56  $\downarrow$   
56 1/2 Pt. Vincante fast  
Port ATR  
57 0  
57 1/2  $\downarrow$   
58 0  
1902  $\downarrow$   
03 1/2 0  
07  $\downarrow$   
08 Let go Stbd Tug  
09  $\downarrow$  ~~0~~  
10  $\downarrow$

3/8/89  
Shift. Cont.

1911 0  
15  $\downarrow$   
15 1/2 0  
17  $\downarrow$   
18 1/2 0  
25  $\downarrow$   
25 off The Dock  
26 0  
33 1  
33 1/2 0  
36 1 1st line  
37 0  
41  $\downarrow$   
41 Then 0  
42  $\downarrow$  Then 0  
43  $\downarrow$  Then 0  
56 In Position L.B  
Dock #46.  
2022 Tugs Away A/T  
36 Let go Tug FWA. Layin  
A/S  
40 All Fast  
42 FWE  
3-9-89 Depart S. Pedro  
0730 GEAR test  
0848 Tugs Pt. Vicente &  
Pt. Fermin A/S  
0853 Pilot Abd Capt Nowel.  
0854 SBC Bridge Control  
0918 Gangway Abd  
21 Pt. Vincante fast Port  
Bow  
24 Start Letting Go  
32 Last line



Dept. San Pedro  
3/9/89

0933 0  
 0936 Clear of the Dock  
 43 $\frac{1}{2}$  0  
 45 $\frac{1}{2}$  LD  
 47 $\frac{1}{2}$  0  
 48 Clear of old pylon  
 (Red Bovy)  
 49 After Tug Away  
 52 LD  
 53 Fwd Tug Away  
 54 Heading outbound in  
 Tanker Channel  
 54 L  
 1003 4  
 11 L  
 13 LA Ent.  
 16 Pilot Away  
 16.5 4  
 28 START LPU  
 1115 Finish LPU SEA SP  
 1030 Late entry Departure  
 3-9-89  
 L 35-06.1 N R 121-28.5 W  
 2130 GEAR TEST  
 VIS. IMPROVED  
 2314 Reduced Vis. GC  
 3/10/89 Cont'd  
 2715 Reduced visibility,  
 whistle sounded,  
 lookout posted, helm  
 manned. GK  
 0720 Start Main Engine  
 load down.  
 0807 Finish LPO

0809 4  
 28 L  
 29 P  
 30 0  
 32 LD Test AsterN  
 32.5 LD  
 33.5 L  
 0900 ARRIVAL  
 17 Pilot Abd. MCBACHAN  
 18 4  
 23 4  
 33 "1" & "2" Launches  
 1002 mile RK  $\rightarrow$ , 62 nm  
 07 Pt Diablo  $\rightarrow$ , 58 nm  
 10 Golden Gate Bridge  
 21 Harding R.K.  $\rightarrow$ , 26  
 21.5 4  
 26 Pt. Blunt  $\rightarrow$   
 30 L  
 32 Alcatraz  $\rightarrow$ , 71 nm  
 49 Oak Bay Bridge = C-D sp  
 50 LD  
 55 0  
 1100 Entering  $\rightarrow$  #9  
 11 LD  
 18 Tug Silver Eagle A/S  
 Port bow  
 20 0  
 21 L  
 25 0  
 27 LD  
 31 L  
 44 LD  
 45 0

Annual S.F.  
3/10/89

N45 1/2 →

46, +

47 1/2 L<sup>W</sup> L<sup>H</sup>

48 LET GO STBD T<sub>1</sub> D

50 1/2 0

58 + D

1201 0 1210 PLOTS AWAY

08 FETTERED HP STBD T

1220 Exxon GALVESTON Appr.

30 1<sup>st</sup> Line

58 Exxon GALVESTON

ALLEAST - Spill Special

A/S FWE

1300 Tug SILVER EAGLE A/S

ER COURAGE

1854 Tug MARIN Twilight w/

bunker barge A/S

1900 1<sup>st</sup> Line from MARIN

Twilight

15 MARIN Twilight A/F

stbd side

47 Bunker hose conn.

2002 Start loading MDO

2000 Finish Lightering - USCC  
Notified

35 1<sup>st</sup> hose off

50 2<sup>nd</sup> hose off

2105 LAST hose

2110 Finish Load MDO

2115 Start Letting Go - Exxon  
GALVESTON

2135 Last Line OFF

40 Exxon GALVESTON Clean

3-10-89

2155 Bunker hose Shifted

2205 Start loading Heavy Fuel

2225 Exxon WASHINGTON  
Approaches

2250 Exxon WASHINGTON 4

2305 1<sup>st</sup> Line

3-11-89

0015 WASHINGTON HI FMT

0950 Finish Discharge - USCC

1025 1<sup>st</sup> hose off

1042 LAST hose

1206 Start Letting Go E. WASHING

36 Last Line

40 E. WASHINGTON Clean

48 Spill Spoiler

Delway

(NC.)

3-11-89

1800 E/R MANUED For

E. GALVESTON

30 Ex. Galveston approaches

36 Ex. Galveston A/S, 1<sup>st</sup>

line

54 A/F aft

1400 Ex. Galveston A/F

Spill Spoiler A/F

21 1<sup>st</sup> hose

32 2<sup>nd</sup> hose

43 LAST hose

2012 Start Disch to E. GALV

3-12-89

0136 COMPLETE LIGHTER TO

E. GALVESTON - TRAFF

NOTIFIED

0905 1<sup>st</sup> HOSE DISCONNECTED



312-89 Court

0235 2nd Hose Disconnected

47 3rd (Vapor Hose)  
Disconnected

0300 COMMENCE LIGHTING  
GO -

0325 LAST LINE LINE

35 SPILL SPOILER AWAY

35 VESSEL CLEAR (NO)

~~0434~~

1600 Tug Sea Eagle Als  
TO Retrieve Fenders

1615 Fenders Away

1712 Washington Als

1712 1<sup>st</sup> line

1718 Washington in Position

1736 Swing to Ebb

1800 Washington fast

30 1<sup>st</sup> hose

1903 LAST HOSE

2000 START DISCHARGE

USCG NOTIFIED

3-13-89 J9 S.F.

0836 RESUME LIGHTERING

1042 FINISH CARGO

1120 1<sup>st</sup> HOSE OFF

1134 LAST HOSE OFF

1205- COMMENCE LIGHTING GO

EXXON WASHINGTON

1236- LAST HOSE OFF

1240 EXXON WASHINGTON

Clear

#9 Anchorage

3-13-89  
Leaving San Francisco

1255 Tested Gear  
 1335 P. 1st Abd K. J. Carlson  
 1357 Throttle Test  
 1359 Bridge Control  
 1423 Finish Ballast  
 1425 SBE  
 1430 Begain Heaving Anchor  
 1502 Anchor Aweigh  
 1503 L  
 1509 Anchor Home  
 1536 L  
 1540 L Passing Under  
 Oakland Bay Bridge  
 1542 LOS  
 1545 L 2<sup>nd</sup>  
 56 Alcatraz 253° @ 0.7%  
 1608 Harding RK Booy  
 20 Golden Gate Bridge  
 25 Pt. Diablo  
 34 Pt. Bonita  
 54 BN 7  
 1711 L  
 16 L  
 17 L  
 1721 Pilot Booy  
 23 L  
 1726 start LPU  
 1730 Departure  
 1810 20 N Check w/ traffic  
 1820 LPU TO 70 RPMs  
 1840 LPU TO Manuevering  
 Speed  
 1854 Notify Traffic Turbo  
 problems Return S.F.

5/13/89  
Return S.F.

1854 Turning to S.F.  
 Northern exit  
 1920 Southern Lane Southbound  
 2013 "w" buoy  
 27 L  
 36 L - Appro Pilot  
 41 Pilot L  
 2107 "1" & "2" buoy  
 12 "3" & "4" buoy  
 20 "7" - "8" buoy  
 39 Pt. Bonita 8 mi  
 47 Pt. Diablo 4 mi  
 50 Golden Gate Bds  
 224 Harding RK  
 08 L  
 14 Alcatraz 73 mi  
 16 L  
 21 Blossom RK 13 mi  
 34 Oak. Bay Brdg C-D spa  
 36 L  
 42 O  
 55 Entering T<sup>h</sup> S  
 2307 L  
 08 O  
 09 N  
 13 L  
 14 Let GO Stbd T<sup>h</sup>  
 15 O  
 26 9 shots @ home  
 30 Fetched up FWE  
 36. Prot Away - Tug Kate A/S  
 U.S.C.G. Notified  
 39 Tug Kate A/R Port b.



3/14/89  
Dept. S.F.

0642 Test Gear  
 0740 Pilot M. McBride Aboard  
 0802 Bridge Control  
 0830- START HEARING to SAE  
 55 to Ampl  
 58 ~~L~~  
 59 H  
 0905 LH  
 0910 Dept. to 9 "1" bow  
 21 S.F. OAK BAY BRIDGE  
 26 H  
 27 L  
 28 ~~L~~  
 30 O  
 33 H  
 34 H  
 40 H  
 41.5 O  
 42 H  
 43 O  
 43.5 H  
 47 H COMPLETE TURN  
 OFF ALCATRAZ  
 50 ALCATRAZ to 54 N mi  
 51.5 H RETURNING to 9  
 1002 L  
 07 ~~L~~  
 11.5 L  
 15 H  
 16 S.F. OAK BAY Bldg CD  
 21 L  
 23 ~~L~~  
 33 O  
 36 ~~L~~

3-14-89 (cont)

1038 Entering to 9  
 44 O  
 1050 L  
 50.5 O  
 51 L  
 52 H  
 53 H  
 54 H  
 55 H  
 57 O - Let go STAD Anchor  
 108 ~~L~~  
 111 - O  
 12 Fetched-up  
 1130 - Pilot Away  
 34 ER Control CC

3/17/89

Dept SF. Test Turbo

1742 Test Gear

3.17.89 - Test Turbo

@ Anclon S.F. Bay

2232 LD

33 4

38 0 thru #1

36 A thru #1

42 0

2252 Test Complete

3/18/89

Sea Trial S.F.

0600 Test Gear Campbell

0600 Pilot Wallace Abd.

0615 SBE Bridge Control

START HEAVE STRAUBERS

Anclon

0632 D

35 0

39 P

42.8 0

46 P

48 0

50 P

51.5 0

0703 LD

04 0

09 ± running

10 L

11 LT

15 LT

22 Depart ±

35 S.F. Oakland Bay Bridge

44.5 Blossom Rk buoy → .42 mi

49 Alcatraz → .70

50 Start CPU

0800 Harding Rk buoy →

10 Golden Gate Bridge

15 Pt Diablo → .44 mi

21 Pt Bonita → .8 mi

34 Finish CPU

main slip chn. "7" "8"

43 "3" & "4" bouys →

57 LNB →

0919 E/R Control of engine

46 Farallon Is 4.24 → 6.309



3-18-89 SEA trial (cont)

0946 returning to S.F.

1022 "W" buoy  $\rightarrow$  1.8 nm

32 Bridge Control Bridge

40 BEGIN LPD

43 S.F. LNB  $\rightarrow$

56 "1" & "2" buoys  $\rightarrow$

59 "3" & "4" buoys  $\rightarrow$

1101 "5" & "6" buoys  $\rightarrow$

05 "7" & "8" buoys  $\rightarrow$

1118 Engine set down to  
MAN. SPD.

23 Mile RK  $\rightarrow$  .7 nm

~~27~~

26.7  $\leftarrow$

36  $\leftarrow$

39 Golden Gate Bridge  
CC

1153 LOS Begin Transfer

1157 Pilot Abd E Kelso

1205 Pilots Away

1218 Finish Transfer of People  
& Equipment vessel No. 0  
Heading to sea.  $\leftarrow$

1219  $\leftarrow$

1248 Golden Gate Bridge

1255 Mile Rk Lt House

1310 Buoy # 7

1315 Buoy # 5

1318 Buoy # 3

1321 Buoy # 1

1328  $\leftarrow$

1329  $\leftarrow$

1336 Pilot Buoy  $\leftarrow$

1340 LPW

1400 Departure

232

3-20-89 AT SEA

0810 Reduced vis. signals

searched lookout posted

1100 Vis. Improved

1135 Reduced vis. Rules &

Regs. complied with  
CC

Arrival Valdez  
22 March 1989

3/22/89  
cont.

1405	Pre Arrival Test				
1700	Cape Hinchinbrock $\rightarrow$ 20%	2158	Pathfinder fast stabl etc		
1730	ARRIVAL	58	$\checkmark$		
1850	Naked Island $\rightarrow$	2205	Stalwart fast midships		
1854	STARTS LPD	08	0		
1940	Bligh Reef Buoy $\rightarrow$ 1.56 mi.	12	$\checkmark$		
		17	0		
46	4 FINISH LPD	21	$\checkmark$		
48	$\checkmark$	21	Then 0		
49	$\checkmark$	22	$\checkmark$		
50	0	24	0		
55	<del>55</del> ASTERN TEST	30	off the Dock		
55.5	$\checkmark$	31	$\checkmark$ then 0		
56.8	$\checkmark$	33	$\checkmark$		
58	4	34	0		
2004	4H	37	$\checkmark$ Then 0		
14	Pilot	39	$\checkmark$		
18	FINSET-up 60 RPM	40	$\checkmark$ Then 0		
22	Rocky Pt cr $\rightarrow$ .88 mi	41 1/2	$\checkmark$		
43	FINSET-down 55 RPM	42	0		
48	4	43	$\checkmark$ Then 0		
49	Tongue Pt $\rightarrow$ .88 mi	45	1st line		
51	4H	45	In Position		
52	Potato Pt $\rightarrow$ .44 mi	2330	Gangway Aboard		
56	Ent Pt $\rightarrow$ .24 mi	32	MID & Aft Tug Away		
2106	Ent Is. $\rightarrow$ .40 mi	35	Pilot Away FWD Tug Area		
16	4	36	FWF Aft Fast		
24	$\checkmark$		Berth #5		
27	$\checkmark$		3-23-89 DEPART VALDEZ		
30	0	1948	CLEAR TEST		
2142	21 Tugs - Pathfinder Sea Flyer STALWART	2008	LAST ARM		
44	4	2020	Pilot Aft		
46	0	2045	Containment Boom CLEAR		
50	FWD Tug Sea Flyer Fast on stabl BOW	54	Bridge Control SBCF		
		2100	Start Letting Go		



3/23/89  
Cont.

2112 Last Line  
19 1/2       
21       
21 Clear of Dock  
24 Tugs Away Stalwarth  
escort Tug  
25       
51       
54       
57       
2220 Ent IS  $\odot$  .36 nm  
32 Middle RK  $\rightarrow$  .26 nm  
42       
43       
45      Ent. Pt  $\odot$  .26 nm  
53 Potato Pt  $\rightarrow$  .39 nm  
2314       
2324 Pilot off 44  
52 LPU  
0035       
37       
47       
0139       
02004 Grounded Reef Is 95 nm  
 $\phi$  129° Bligh Is. REEF 2700 nm  
 $\phi$  228° Busby Is 2.88 nm  
GC      CC  
0338 USCG boarding  
0448 START lowering stbd  
Anchor 2 shots.  
3-24-89  
1119 HELENKA B approaching  
21 HELENKA B A/S to  
transfer hoses

3-24-89

1141 HELENKA B AWAY

MARK J. DELOIER  
MARINE INVESTIGATOR/INSPECTOR  
CWO3 USCG

1955- Exxon Baton Rouge  
Approaches  
2010 - Exxon Baton Rouge  
off port side  
27 1st Line  
2154 Exxon Baton Rouge  
All fast.  
2210 ER CONTROL  
2215 1st HOSE CONN.  
2300 Begin booming vessel  
38 2nd HOSE CONN. CC  
3-25-89  
0736 COMMENCED lightening  
to E. Baton Rouge  
0743 Up to full rate  
0827 Stop lightening

ORIGINAL

Removed from vessel EXXON VALDEZ  
ON 26 MAR. 1989

*M. J. DeLozier*  
**MARK J. DELOZIER, CW03, USCG**  
**MARINE INVESTIGATOR/INSPECTOR**



CERTIFIED TO BE A TRUE COPY

I have seen the original and compared this copy with it and found it to be a true copy

**ORIGINAL**

*EXON VALDEZ*

*Wayne Stock, USCG, USCG*

(Name of Vessel) Name-Rank or Title-Duty Station

Merchant Marine of the United States



CERTIFIED TO BE A TRUE COPY  
I have seen the original and compared this copy with it and found it to be a true copy  
Name-Rank or Title-Duty Station

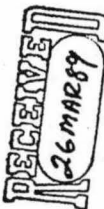
Port Voyage Began VALDEZ, AK.

Date Began 1-12-89

Port Voyage Ended \_\_\_\_\_

Date Ended \_\_\_\_\_  
**COMMANDING OFFICER  
USCG MARINE SAFETY OFFICE  
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DEPARTMENT OF TRANSPORTATION  
UNITED STATES COAST GUARD  
CG 706B (Rev. 6-67) Replaces CG 706C



*M. Delozier*  
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MARINE INVESTIGATOR/INSPECTOR**

Book No. \_\_\_\_\_ of \_\_\_\_\_ Books

**ORIGINAL**

**OFFICIAL LOGBOOK**

# OFFICIAL LOGBOOK

Supplied Gratuitously by the Government of the United States to American  
Vessels in the Foreign Trade and the Trade Between the  
Atlantic and Pacific Ports of the United States

NAME OF SHIP <i>Exon Valdez</i>	OFFICIAL NUMBER <i>692966</i>
PORT OF REGISTRY <i>Wilmington, DEL</i>	NET TONNAGE <i>77814 TONS</i>
NAME OF MASTER <i>MICHAEL A. STALZER</i>	MASTER'S Z/BK NUMBER <i>575 62 7514</i>
NATURE OF VOYAGE OR EMPLOYMENT <i>Foreign</i>	CLASS OF SHIP <i>MOTOR</i>

## TABLE OF CONTENTS

Item	Page
Draft Record	2
Maintenance of Watertight Integrity of the Ship	3
Drills and Inspections	5
Crew List and Report of Character	10
Laws Relating to Log-Books	18
Miscellaneous Entries	20
Slop and Cash Accounts	70

## LOAD LINES FOR VESSELS (46 USC 85)—See Page 2

SEC. 85. Load lines are hereby established for the following vessels: (a) Merchant vessels of one hundred and fifty gross tons or over, loading at or proceeding to sea from any port or place within the United States or its possessions for a foreign voyage by sea, or arriving within the jurisdiction of the United States or its possessions from a foreign voyage by sea, in both cases the Great Lakes excepted. (b) Merchant vessels of the United States of one hundred and fifty gross tons or over, loading at or proceeding to sea from any foreign port or place for a voyage by sea, the Great Lakes excepted.

SEC. 85e. It shall be the duty of the master of every vessel subject to Sections 85-85g of this Title and to the regulations established thereunder . . . before departing from her loading port or place for a voyage by sea, to enter in the official logbook of such vessel a statement of the position of the load line mark applicable to the voyage in question and the actual drafts forward and aft at the time of departing from port as nearly as the same can be ascertained.

SEC. 85g. (b) If the master of any vessel subject to Sections 85-85g of this Title and to the regulations established thereunder, . . . shall fail, before departing from her loading port or place, to enter in the official logbook of such vessel the statement required by section 85e of this Title, he shall for each offense be liable to the United States in a penalty of \$500. (The Commandant, United States Coast Guard may, in his discretion, remit or mitigate any penalty imposed under this paragraph.)

## EXCERPTS OF U.S. COAST GUARD REGULATIONS—See Page 2 Concerning Load Lines and Implementing the International Convention for the Safety of Life at Sea, 1960

The master of any vessel, at the time of departure from a port, on an ocean, coastwise or Great Lakes voyage, shall insert in the official logbook a statement of the position of the load line mark (for cargo vessels) or the subdivision load line mark (for passenger vessels), port and starboard, in relation to the surface of the water in which the vessel is then floating; and the drafts of the vessel, forward and aft.





ENTRIES RELATING TO DRILLS AND INSPECTIONS

(For required entries, refer to pertinent Coast Guard publication as shown on inside front cover)

Date, hour, and place of entry. If at sea, give also latitude and longitude.	Condition of equipment and/or defects noted and corrective measures taken.
<p>1-12-89 1800 18/80                      Yelby AC                      Berth 3                      McCarroll M</p>	<p>GEAR TEST: (IN ACCORDANCE WITH C.F.R. TITLE 33 - SEC. 164.25)                      1818 EXAMINED AND TESTED, PRIMARY AND SECONDARY STEERING GEAR, INTERNAL COMMUNICATION, CONTROLS, ALARMS, WHISTLE, NAV. LIGHTS, TELEGRAPH, RADARS, CAS, SAT. NAV., LORAN, VHF'S, FATHOMETER, RDF, GYRO AND GYRO REPEATERS, SYNCHRONIZED CLOCKS WITH E/R, EMERGENCY GENERATOR, MAIN PROPULSION AHEAD AND ASTERN. ALL FOUND TO BE IN APPARENT GOOD OPERATING CONDITION.</p> <p style="text-align: right;"><i>Michael A. Kelly</i></p>
<p>1-16-89                      167 42-16                      Long: 127-49W                      McCarroll M</p>	<p>15 W IN LAT. _____ LONG. _____ HELD FIRE AND ABANDON SHIP DRILL.                      FIRE DRILL: 2 LENGTHS OF HOSE LED OUT 1118 UNDER FULL PRESSURE.                      BOAT DRILL: CREW MUSTERED AND INSTRUCTED IN THEIR DUTIES. BOAT NO. 2                      LOWERED TO EMBARCATION DECK, RECOVERED AND SECURED. OPERATED BOAT MOTORS AHEAD AND ASTERN. EMERGENCY POWER SYSTEM OPERATED AND INSPECTED, EMERG. LIFEBOAT TRANSMITTER TESTED, 2182 ITAG TESTED WITH NORMAL METER OUTPUT, RADIO ROOM EMERG. BATTERIES, TRANSMITTER, AUTO ALARM AND RECEIVER IN APPARENT GOOD CONDITION, ALL LIFE SAVING AND FIRE FIGHTING EQUIPMENT IN APPARENT GOOD WORKING CONDITION.                      DEMONSTRATION: Survival suits, SECURED FROM DRILL 1555.</p> <p style="text-align: right;"><i>Michael A. Kelly</i></p>
<p>1-17-89 0900                      Lat 38-44N                      Long 127-20W                      McCarroll M</p>	<p>GEAR TEST: (IN ACCORDANCE WITH C.F.R. TITLE 33 - SEC. 164.25)                      1818 EXAMINED AND TESTED, PRIMARY AND SECONDARY STEERING GEAR, INTERNAL COMMUNICATION, CONTROLS, ALARMS, WHISTLE, NAV. LIGHTS, TELEGRAPH, RADARS, CAS, SAT. NAV., LORAN, VHF'S, FATHOMETER, RDF, GYRO AND GYRO REPEATERS, SYNCHRONIZED CLOCKS WITH E/R, EMERGENCY GENERATOR, MAIN PROPULSION AHEAD AND ASTERN. ALL FOUND TO BE IN APPARENT GOOD OPERATING CONDITION.</p> <p style="text-align: right;"><i>Michael A. Kelly</i></p>
<p>1-18-89 0900                      San Francisco                      Anchorage '9'                      McCarroll M</p>	<p>Emergency Power &amp; Lighting System -                      emergency generator operated under load                      all pressures &amp; temperatures normal.                      All equipment in apparent good order.                      Emergency steering tested from steering post                      on track wheel &amp; cam rotation - all ok</p> <p style="text-align: right;"><i>Michael A. Kelly</i></p>



ENTRIES RELATING TO DRILLS AND INSPECTIONS

(For required entries, refer to pertinent Coast Guard publication as shown on inside front cover)

Date, hour, and place of entry. If at sea, give also latitude and longitude.	Condition of equipment and/or defects noted and corrective measures taken.
<p>1-27-59 0700 San Francisco CA Anchorage 9 H. Carr 2/H</p>	<p>GEAR TEST: (IN ACCORDANCE WITH C.F.R. TITLE 33 - SEC. 164.25) 0700 EXAMINED AND TESTED, PRIMARY AND SECONDARY STEERING GEAR, INTERNAL COMMUNICATION, CONTROLS, ALARMS, WHISTLE, HORN, LIGHTS, TELEGRAPH, RADARS, GAS, SAT. NAV., LORAN, VHF'S, FATHOMETER, RDF, CYRO AND CYRO REPEATERS, SYNCHRONIZED CLOCKS WITH E/R, EMERGENCY GENERATOR, MAIN PROPULSION AHEAD AND ASTERN. ALL FOUND TO BE IN APPARENT GOOD OPERATING CONDITION.</p>
<p><i>Walter H. Hays</i> Master</p>	
<p><del>IN LAT. _____ LONG. _____</del>  <del>FIRE DRILL: _____ LENGTHS OF HOSE LED OUT _____</del>  <del>BOAT DRILL: CREW MUSTERED AND INSTRUCTED IN THEIR DUTIES. BOAT NO. _____</del>  <del>LOWERED TO EMBARCATION DECK, RECOVERED AND SECURED. OPERATED BOAT MOTORS AHEAD AND ASTERN. EMERGENCY POWER SYSTEM OPERATED AND INSPECTED, EMERG. LIFEBOAT TRANSMITTER TESTED, 2182 ITAG TESTED WITH NORMAL METER OUTPUT, RADIO ROOM EMERG. BATTERIES, TRANSMITTER, AUTO ALARM AND RECEIVER IN APPARENT GOOD CONDITION, ALL LIFE SAVING AND FIRE FIGHTING EQUIPMENT IN APPARENT GOOD WORKING CONDITION.</del>  <del>DEMONSTRATION: _____, SECURED FROM DRILL _____.</del></p>	
<p>1-27-59 Lat 53-27 Long 136-24 H. Carr 2/H</p>	<p>0700 IN LAT. _____ LONG. _____ HELD FIRE AND ABANDON SHIP DRILL          FIRE DRILL: 2 LENGTHS OF HOSE LED OUT <u>10</u> UNDER FULL PRESSURE          BOAT DRILL: CREW MUSTERED AND INSTRUCTED IN THEIR DUTIES. BOAT NO. _____          LOWERED TO EMBARCATION DECK, RECOVERED AND SECURED. OPERATED BOAT MOTORS AHEAD AND ASTERN. EMERGENCY POWER SYSTEM OPERATED AND INSPECTED, EMERG. LIFEBOAT TRANSMITTER TESTED, 2182 ITAG TESTED WITH NORMAL METER OUTPUT, RADIO ROOM EMERG. BATTERIES, TRANSMITTER, AUTO ALARM AND RECEIVER IN APPARENT GOOD CONDITION, ALL LIFE SAVING AND FIRE FIGHTING EQUIPMENT IN APPARENT GOOD WORKING CONDITION.          DEMONSTRATION: _____, SECURED FROM DRILL _____.</p>
<p><i>As per Navic 3-87 Conducted several demonstrations - EPICBS, Emergency lifeboat radios, line throwing appliances &amp; flares. All equipment in apparent good operating condition.</i></p> <p><i>Walter H. Hays</i> Master</p>	





## ENTRIES RELATING TO DRILLS AND INSPECTIONS

(For required entries, refer to pertinent Coast Guard publication as shown on inside front cover)

Date, hour, and place of entry. If at sea, give also latitude and longitude.	Condition of equipment and/or defects noted and corrective measures taken.
1-31-89 1000 Lat 39-03 N Long 124-44 W	<div style="border: 1px solid black; padding: 5px;"> <p>GEAR TEST: (IN ACCORDANCE WITH C.F.R. TITLE 33 - SEC. 164.25)</p> <p>1000 EXAMINED AND TESTED, PRIMARY AND SECONDARY STEERING GEAR, INTERNAL COMMUNICATION, CONTROLS, ALARMS, WHISTLE, NAV. LIGHTS, TELEGRAPH, RADARS, C.A.S, SAT. NAV., LORAN, VHF'S, FATHOMETER, RDF, GYRO AND GYRO REPEATERS, SYNCHRONIZED CLOCKS WITH E/R, EMERGENCY GENERATOR, MAIN PROPULSION AHEAD AND ASTERN. ALL FOUND TO BE IN APPARENT GOOD OPERATING CONDITION.</p> </div>
<i>Edo Jambler 3/04</i>	<i>Michael H. Haff</i> <i>Master</i>
2-1-89 1040 San Francisco, CA Anchorage 9 U. Carrs 2/4	Boats #1 and 2 lowered into the water, released spray curtains, checked overboard in heavy duties. <i>Michael H. Haff</i> <i>Master</i>
2-5-89 1015-1230 San Francisco, CA Anchorage 9 U. Carrs 2/4	Emergency Power & lighting system operated under load. All temperature and pressure normal. All in apparent good working condition. <i>Michael H. Haff</i> <i>Master</i>
2-8-89 San Francisco Anchorage 9 U. Carrs 2/4	<div style="border: 1px solid black; padding: 5px;"> <p>GEAR TEST: (IN ACCORDANCE WITH C.F.R. TITLE 33 - SEC. 164.25)</p> <p>0210 EXAMINED AND TESTED, PRIMARY AND SECONDARY STEERING GEAR, INTERNAL COMMUNICATION, CONTROLS, ALARMS, WHISTLE, NAV. LIGHTS, TELEGRAPH, RADARS, C.A.S, SAT. NAV., LORAN, VHF'S, FATHOMETER, RDF, GYRO AND GYRO REPEATERS, SYNCHRONIZED CLOCKS WITH E/R, EMERGENCY GENERATOR, MAIN PROPULSION AHEAD AND ASTERN. ALL FOUND TO BE IN APPARENT GOOD OPERATING CONDITION.</p> </div>
	<i>Michael H. Haff</i> <i>Master</i>

ENTRIES RELATING TO DRILLS AND INSPECTIONS

(For required entries, refer to pertinent Coast Guard publication as shown on inside front cover)

Date, hour, and place of entry. If at sea, give also latitude and longitude.	Condition of equipment and/or defects noted and corrective measures taken.
<p>2-7-89 1020  <i>Lat 42-36-</i>  <i>Long 127-48 W</i></p>	<p>1020 IN LAT. <i>42-36-</i> LONG. <i>127-48 W</i> HELD FIRE AND ABANDON SHIP DRILL.          FIRE DRILL: <i>1</i> LENGTHS OF HOSE LED OUT <i>100</i> UNDER FULL PRESSURE.          BOAT DRILL: CREW MUSTERED AND INSTRUCTED IN THEIR DUTIES. BOAT NO. <i>2</i>  <del>LOWERED TO EMBARCATION DECK, RECOVERED AND SECURED. OPERATED BOAT</del>          MOTORS AHEAD AND ASTERN. EMERGENCY POWER SYSTEM OPERATED AND          INSPECTED, EMERG. LIFEBOAT TRANSMITTER TESTED, 2182 ITAG TESTED WITH          NORMAL METER OUTPUT, RADIO ROOM EMERG. BATTERIES, TRANSMITTER, AUTO          ALARM AND RECEIVER IN APPARENT GOOD CONDITION. ALL LIFE SAVING AND          FIRE FIGHTING EQUIPMENT IN APPARENT GOOD WORKING CONDITION.          DEMONSTRATION: <i>Softly Mated</i>, SECURED FROM DRILL <i>1105</i>.</p>
<p><i>Sgt. Keane</i>  <i>C/M</i></p>	<p><i>Epinephrine Tested. Test being</i>  <i>indicated in mail operator.</i>  <i>[Signature]</i>  <i>MATE</i></p>
<p>2-10-89 1100  <i>Lat 59-58 N</i>  <i>Long 145-34 W</i></p>	<p>GEAR TEST: (IN ACCORDANCE WITH C.F.R. TITLE 33 - SEC. 164.25)  <del>1100</del> EXAMINED AND TESTED, PRIMARY AND SECONDARY STEERING GEAR,          INTERNAL COMMUNICATION, CONTROLS, ALARMS, WHISTLE, NAV. LIGHTS,          TELEGRAPH, RADARS, CAS, SAT NAV, LORAN, VHF'S, FATHOMETER, RDF,          GYRO AND GYRO REPEATERS, SYNCHRONIZED CLOCKS WITH E/R, EMERGENCY          GENERATOR, MAIN PROPULSION AHEAD AND ASTERN. ALL FOUND TO BE          IN APPARENT GOOD OPERATING CONDITION.</p>
<p><i>M. Carr</i>  <i>C/M</i></p>	<p><i>[Signature]</i>  <i>MATE</i></p>
<p>2-14-89          1520</p>	<p><i>1520</i> IN LAT. <i>45-57</i> LONG. <i>130-24 W</i> HELD FIRE AND ABANDON SHIP DRILL.          FIRE DRILL: <i>2</i> LENGTHS OF HOSE LED OUT <i>100</i> UNDER FULL PRESSURE.          BOAT DRILL: CREW MUSTERED AND INSTRUCTED IN THEIR DUTIES. BOAT NO. <i>1</i>  <del>LOWERED TO EMBARCATION DECK, RECOVERED AND SECURED. OPERATED BOAT</del>          MOTORS AHEAD AND ASTERN. EMERGENCY POWER SYSTEM OPERATED AND          INSPECTED, EMERG. LIFEBOAT TRANSMITTER TESTED, 2182 ITAG TESTED WITH          NORMAL METER OUTPUT, RADIO ROOM EMERG. BATTERIES, TRANSMITTER, AUTO          ALARM AND RECEIVER IN APPARENT GOOD CONDITION. ALL LIFE SAVING AND          FIRE FIGHTING EQUIPMENT IN APPARENT GOOD WORKING CONDITION.          DEMONSTRATION: <i>Life Craft - Survival Suite</i>, SECURED FROM DRILL <i>1552</i>.</p>
<p><i>Sgt. Keane</i>  <i>C/M</i></p>	<p><i>[Signature]</i>  <i>MATE</i></p>
<p style="text-align: center;"><i>Continued on pg 37</i></p>	

## LIST OF CREW AND REPORT OF CHARACTER

	NAME	CAPACITY ENGAGED	REPORT OF CHARACTER <sup>1</sup>		SEE PAGE <sup>2</sup>
			CONDUCT	ABILITY	
1	Stephen Homestead	Ch. Mtr	G	G	
2	Nathan Case	2 mtr	G	G	
3	John Christensen	3 mtr	G	G	
4	Kyle Campese	Deck Cadet	G	G	
5	William Britt	Radio	G	G	
6	John Perneck	AB			
7	George Young	AB	G	G	
8	Capt. Jones	AB			
9	Stephen Parris	AB	G	G	
10	Fredrick Bush-Williams	AB	G	G	
11	Harry Chao	AB			
12	LeRoy Leffler	Ch. Eng	G	G	
13	Joseph Lamoureux	1 Eng	G	G	
14	Grace Oldham	2 Eng	G	G	
15	Timothy Anderson Long	3 Eng	G	VG	
16	Jack Patterson	Pumpman	G	G	
17	Mark Burnett	Oiler	G	G	
18	John Martin	Chief	G	G	
19	Tagvaline Dempsey	Cook/Utii	G	G	
20	Brian Ackerman	Eng Cadet	G	G	
21	Guy Kleess	Chief Mtr	VG	VG	
22	William Masciarelli	SM	G	G	
23	Robert Kagan	AB			
24	John Oswald	Ch. Eng			
25	Jack Oswald	AB			
26	Walter Sandoz	2 Eng	VG	VG	
27	Michael Emel	MOA			
28	Maureen Jones	AB			
29	Paul Riedke	AB			
30	ETAIN MENSES	Chief			
31	MELAINIE WRIGHT	Cook/Utii			
32	Vern Deakert	Radio	VS	VS	
33	Gary T. Cousins	2 <sup>nd</sup>			
34	Tom A. Robinson	Radio Off.			
35	Jack STEWART	Pumpman			

<sup>1</sup> VG for Very Good, G—Good, M—Middling, and I—Indifferent. The master may also insert particulars of ability or conduct; thus "Helm"—Good, or "Sobriety"—Indifferent. If he declines giving any opinion he must so state opposite the man's name.

<sup>2</sup> If there is any entry in the log relating in any way to the crew, the page numbers in the log where the entry appears should be written in the column opposite the man's name.



## LIST OF CREW AND REPORT OF CHARACTER

NO.	NAME	CAPACITY ENGAGED	REPORT OF CHARACTER <sup>1</sup>		SEE PAGE <sup>2</sup>
			CONDUCT	ABILITY	
36	James A. Kunkle	Ch. M <sup>o</sup> .			
37	Katharine R. Haorn	3AE			
38	Garret H. Oldham	2AE			
39	Francis X. Boyle	Oiler			
40	Lloyd E. L. Catw	2 <sup>nd</sup> Mate.			
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<sup>1</sup> VG for Very Good, G—Good, M—Middling, and I—Indifferent. The master may also insert particulars of ability or conduct; thus 'Helm'—Good, or 'Sobriety'—Indifferent. If he declines giving any opinion he must so state opposite the man's name.

<sup>2</sup> If there is any entry in the log relating in any way to the crew, the page numbers in the log where the entry appears should be written in the column opposite the man's name.

## OFFICIAL LOG of the \_\_\_\_\_

Date, hour, and place of entry. If at sea, give also latitude and longitude (See Section 202 on p. 19)	REQUIRED ENTRIES (See Pages 18 and 19) (Include the amount of any fine or forfeiture inflicted)
1-13-89 0048 Cape Hinchinbrook, Ak. M. Carr 2/M	Took departure off of Cape Hinchinbrook, Ak. bound for San Francisco with a partial load of ANSC. Fuel on departure. IFO 15493 BALS. MDO 1428 BALS. M. Carr 2/M Master
1-17-89 2018 San Francisco, Ca. LNB M. Carr 2/M	Took arrival off of San Francisco LNB. bound for anchorage 9 & discharge to lighter vessels. Fuel on arrival MDO 1215 BALS. IFO 13336 BALS. M. Carr 2/M Master
1-21-89 1100 San Francisco, Ca. LNB W. J. Smith 3/M	Took departure off of San Francisco LNB. bound for Ketchikan, AK in ballast. Fuel on departure IFO 17950 BALS. MDO 2534 BALS. MDO 1215 BALS. Fuel received. IFO 5013 BALS. MDO 12, 7.4, 239, 8.5, 337, 250 MDO 1482 BALS. W. J. Smith 3/M Master
1-25-89 2048 Cape Hinchinbrook W. J. Smith 3/M	Took arrival off of Cape Hinchinbrook, Ak. bound for Ketchikan. Berth 5 TAPS. partial load of ANSC. Fuel on arrival IFO 15620 BALS. MDO 2401 BALS. W. J. Smith 3/M Master

N.B.—Every entry in this logbook required by the act must be signed by the master and by the mate or some other of the crew; and every entry of any illness, injury, or death must also be signed by the surgeon or medical practitioner on board (if any); and every entry of wages due to, or of the sale of the effects of a seaman or apprentice who has died must be signed by the master, the mate, and some other member of the crew.

## OFFICIAL LOG of the

Date, hour, and place of entry. If at sea, give also latitude and longitude (See Section 202 on p. 19)	REQUIRED ENTRIES (See Pages 18 and 19) (Include the amount of any fine or forfeiture inflicted)
1-27-89 0430 Cape Horn, Alaska	Took departure off of Cape Horn, Alaska bound for San Francisco with a partial load of A.W.S.C. Fuel on departure
W. Carr 2/14	IFO. 15202 536 MIDO 2337 536. Michael J. Hofer Master
1-31-89 2000 San Francisco, Ca 'LNB'	Took arrival off of San Francisco, Ca 'LNB' bound for anchorage '9' for discharging partial load of cargo. Fuel on arrival
W. Carr 2/14	IFO. 12854 MIDO 2180 536. Michael J. Hofer Master
2-2-89 1200 San Francisco, Ca Anchorage 9	Received Fuel IFO 4910 - 536 <sup>12.0</sup> APR 31.2 Flash 249.8 Gravity .9861 Visc 342 MIDO 965 536 APR 31.2
W. Carr 2/14	Michael J. Hofer Master
2-6-89 1200 San Francisco, Ca 'LNB'	Took departure off of San Francisco 'LNB' bound for Valley, Alaska in ballast Fuel on departure IFO 16750 536
W. Carr 2/14	MIDO 2935 536. Michael J. Hofer Master
2-10-89 1312 Cape Horn, Alaska	Took arrival off of Cape Horn, Alaska bound for Valley, Alaska 4 TAPS to load A.W.S.C. for 50' San Francisco.
W. Carr 2/14	Fuel on arrival IFO 14508 536 MIDO 2788 536. Michael J. Hofer Master

N.B.—Every entry in this logbook required by the act must be signed by the master and by the mate or some other of the crew; and every entry of any illness, injury, or death must also be signed by the surgeon or medical practitioner on board (if any); and every entry of wages due to, or of the sale of the effects of a seaman or apprentice who has died must be signed by the master, the mate, and some other member of the crew.



## OFFICIAL LOG of the

Essex Valdez

Date, hour, and place of entry. If at sea, give also latitude and longitude (See Section 202 on p. 19)	REQUIRED ENTRIES (See Pages 18 and 19) (Include the amount of any fine or forfeiture inflicted)
2-11-89 2230 Cape Hinchinbrook, Ak. W. J. [Signature]	Took departure off of Cape Hinchinbrook, Ak. bound for San Francisco, Ca. with a partial load of ANSC. Fuel on board IFO 14134 BBLs MDU 2729 BBLs. [Signature]
2-16-89 0642 San Francisco, Ca LNB [Signature] W. J. [Signature]	Took arrival off of San Francisco SB LNB bound for Anchorage for lightering Fuel IFO 11857 BBLs MDU 2506 BBLs [Signature]
2-16-88-1400L San Francisco, Ca. Anchorage [Signature]	CAPTAIN T. HAZELWOOD - P-212125 CAPTAIN M. STALZEN - 2A 575-62-7504 [Signature] Joseph J. Hazelwood [Signature]
2-23-89-1430L San Francisco Bar	DEPARTED OFF OF SAN FRANCISCO BAR - DESTINATION Cape Hinchinbrook - ALASKA. Fuel on board - 12,138 H2S BBLs IFO/380, MDU - 2260 H2S BBLs, WATER - 230 TONS. Joseph J. Hazelwood / MASTER [Signature] / CH. MATE
2-28-89-0730L Cape Hinchinbrook Ak.	Took arrival OFF OF Cape Hinchinbrook - bound Alaska - to TRANSIT PRINCE WILLIAM SOUND to Valdez Alaska to land North Slope Crude Oil Fuel on board at arrival IFO/380 15,118 BBLs MDU 2,107 H2S BBLs 260 TONS Joseph J. Hazelwood / MASTER [Signature] / CH. MATE

N.B.—Every entry in this logbook required by the act must be signed by the master and by the mate or some other of the crew; and every entry of any illness, injury, or death must also be signed by the surgeon or medical practitioner on board (if any); and every entry of wages due to, or of the sale of the effects of a seaman or apprentice who has died must be signed by the master, the mate, and some other member of the crew.

## OFFICIAL LOG of the

LUXON VARD 32

Date, hour, and place of entry. If at sea, give also latitude and longitude (See Section 202 on p. 19)	REQUIRED ENTRIES (See Pages 18 and 19) (Include the amount of any fine or forfeiture inflicted)
3.1.89 - 2002 Cape Hinchinbrook Alaska	- DEPARTED OFF OF CAPE HINCHINBROOK ALASKA AFTER LOADING A CARGO OF ALASKAN NORTH SLOPE CRUDE OIL - DESTINATION LONG BEACH CA. - FUEL ON BOARD IFO/380 14,688 NET MDO 2050 bbls, WATER 265 TONS Joseph J. Hazelwood / MASTER Ch. Mate
3.7.89 - 1800L Long Beach Breakwater	ARRIVED OFF OF LONG BEACH BREAKWATER FOR DISCHARGE PART LOAD OF CARGO - FUEL ON BOARD IFO/380 11,903 NET MDO 1862 bbls, WATER 380 TONS Joseph J. Hazelwood / MASTER Ch. Mate
3.9.89 - 1030L Los Angeles Breakwater	TOOK DEPARTURE OFF OF LOS ANGELES BREAKWATER - DESTINATION SAN FRANCISCO GRA. FUEL ON BOARD IFO/380 11,435 NET MDO 1,782 NET bbls, WATER 310 TONS Joseph J. Hazelwood / MASTER Ch. Mate
3.10.89 - 0900L San Francisco Bay	ARRIVED OFF OF SAN FRANCISCO BAY TO PRO- CEED TO SAN FRANCISCO BAY TO DISCHARGE RE- MAINING CARGO INTO LIGHTNING VESSELS - FUEL ON BOARD IFO/380 10,919 NET, MDO 1754 NET WATER 300 TONS Joseph J. Hazelwood / MASTER Ch. Mate
3.10.89 - 1800L San Francisco Bay Anchorage #9.	RECEIVED FUEL OIL VIA BARGE - IFO/380 7570 NET bbls, MDO 946 NET bbls MDO - API GRAVITY - 32.7, - FLASH 43.2° F IFO/380 API GRAVITY - 11.9, FLASH 244.4° F Joseph J. Hazelwood / MASTER Ch. Mate

N.B.—Every entry in this logbook required by the act must be signed by the master and by the mate or some other of the crew; and every entry of any illness, injury, or death must also be signed by the surgeon or medical practitioner on board (if any); and every entry of wages due to, or of the sale of the effects of a seaman or apprentice who has died must be signed by the master, the mate, and some other member of the crew.

## OFFICIAL LOG of the

EXXON VALV32

Date, hour, and place of entry. If at sea, give also latitude and longitude (See Section 202 on p. 19)	REQUIRED ENTRIES (See Pages 18 and 19) (Include the amount of any fine or forfeiture inflicted)
3-13-89-1255L San Francisco Bay Anchorage #9	
3-13-89-1720L San Francisco Bay	DEPARTED FROM SAN FRANCISCO BAY DESTINATION Cape Hinchinbrook Alaska FUEL ON BOARD IFO/380 12,933 NET MDO 2,581 NET, WATER 266 TONS
	Joseph J. Hazelwood / MASTER / Ch. M.T.
3-13-89-1854L Lat: 37.9° North Long: 122.9° West	Experienced possible malfunction of MAIN Engine Turbo-Charger (FWI) RETURNING to San Francisco Anchorage No. 9 to investigate further, with possibility of repairs.
	Joseph J. Hazelwood / MASTER / Ch. M.T.
3-14-89-0602L San Francisco Bay Anchorage #9	Repairs (REPAIRS OF BEARINGS) COMPLETED to Forward Turbo Charger - Proceeding to SEA.
	Joseph J. Hazelwood / MASTER / Ch. M.T.
3-14-89-0820L San Francisco Bay	Reoccurrence of vibration problems in Forward Turbo Charger - Returning to Anchorage #9. to embark vibration specialists
	Joseph J. Hazelwood / MASTER / Ch. M.T.
3-18-89-0750L-0950L San Francisco Bay	Conducted Vibration SEA TRIAL OF BOTH Turbo Chargers at full SEA speed. All test results within acceptable results. Dropping Technicians off SAN FRANCISCO WATER front thence proceeding to SEA.
	Joseph J. Hazelwood / MASTER / Ch. M.T.

N.B.—Every entry in this logbook required by the act must be signed by the master and by the mate or some other of the crew; and every entry of any illness, injury, or death must also be signed by the surgeon or medical practitioner on board (if any); and every entry of wages due to, or of the sale of the effects of a seaman or apprentice who has died must be signed by the master, the mate, and some other member of the crew.





OFFICIAL LOG of the

*Exxon Vally - Entries Relating to Drills, Inspections*

Date, hour, and place of entry. If at sea, give also latitude and longitude (See Section 202 on p. 19)	REQUIRED ENTRIES (See Pages 18 and 19) (Include the amount of any fine or forfeiture inflicted)
2-15-89 2300	<i>Continued From Pg 9</i>
Lat 39° 01'	GEAR TEST: (IN ACCORDANCE WITH C.F.R. TITLE 33 - SEC. 164.25)
Long 122° 41' W	EXAMINED AND TESTED, PRIMARY AND SECONDARY STEERING GEAR,
ROR	INTERNAL COMMUNICATION CONTROLS, ALARMS, WHISTLE, NAV. LIGHTS,
Worked under 3/4	TELEGRAPH, RADARS, CAS, SAT. NAV., LORAN, VHF'S, FATHOMETER, RDF,
	GYRO AND GYRO REPEATERS, SYNCHRONIZED CLOCKS WITH E/R, EMERGENCY
	GENERATOR, MAIN PROPULSION AHEAD AND ASTERN. ALL FOUND TO BE
	IN APPARENT GOOD OPERATING CONDITION.
	<i>[Signature]</i>
	<i>Master</i>
2-23-89 - 0700Z	GEAR TEST: (IN ACCORDANCE WITH C.F.R. TITLE 33 - SEC. 164.25)
San Francisco, CA.	EXAMINED AND TESTED, PRIMARY AND SECONDARY STEERING GEAR,
	INTERNAL COMMUNICATION CONTROLS, ALARMS, WHISTLE, NAV. LIGHTS,
	TELEGRAPH, RADARS, CAS, SAT. NAV., LORAN, VHF'S, FATHOMETER, RDF,
	GYRO AND GYRO REPEATERS, SYNCHRONIZED CLOCKS WITH E/R, EMERGENCY
	GENERATOR, MAIN PROPULSION AHEAD AND ASTERN. ALL FOUND TO BE
	IN APPARENT GOOD OPERATING CONDITION.
	<i>[Signature]</i>
	<i>Master</i>
2/24/89 - 1200Z	IN LAT. _____ LONG. _____ HELD FIRE AND ABANDON SHIP DRILL
Lat: 41-3° North	FIRE DRILL: 2 LENGTHS OF HOSE LED OUT A/C UNDER FULL PRESSURE
Long: 126.5° West	BOAT DRILL - CREW MUSTERED AND INSTRUCTED IN THEIR DUTIES. BOAT NO. _____
	LOWERS TO EMERGENCY DECK, RECOVERED AND SECURED. OPERATED BOAT
	MOOR AHEAD AND ASTERN. EMERGENCY POWER SYSTEM OPERATED AND
	INSPECTED, EMERG. LIFEBOAT TRANSMITTER TESTED, 2182 ITAG TESTED WITH
	NORMAL METER OUTPUT, RADIO ROOM EMERG. BATTERIES, TRANSMITTER, AUTO
	ALARM AND RECEIVER IN APPARENT GOOD CONDITION, ALL LIFE SAVING AND
	FIRE FIGHTING EQUIPMENT IN APPARENT GOOD WORKING CONDITION.
	DEMONSTRATION: _____, SECURED FROM DRILL.
	<i>Conducted (as per Navic 3/82) - Demonstration of</i>
	<i>Fire Extinguishers, and Halon fixed fire fighting</i>
	<i>system. Conducted demonstrations of window breathing</i>
	<i>apparatus. All in apparently good working order.</i>
	<i>[Signature]</i>
	<i>Master</i>

N.B.—Every entry in this logbook required by the act must be signed by the master and by the mate or some other of the crew; and every entry of any illness, injury, or death must also be signed by the surgeon or medical practitioner on board (if any); and every entry of wages due to, or of the sale of the effects of a seaman or apprentice who has died must be signed by the master, the mate, and some other member of the crew.

OFFICIAL LOG of the *Ennis Relating to Drills; Inspecting*

Date, hour, and place of entry. If at sea, give also latitude and longitude (See Section 202 on p. 19)	REQUIREMENTS FOR REQUIRED ENTRIES (See Pages 18 and 19) (Include the amount of any fine or forfeiture inflicted)
27 2-28-89 Lat 58° 26' North Long. 143° 26' West P-3 Annual Nav. 9:20 AM 135T	GEAR TEST: (IN ACCORDANCE WITH C.F.R. TITLE 33 - SEC. 164.25) 2200L EXAMINED AND TESTED, PRIMARY AND SECONDARY STEERING GEAR, INTERNAL COMMUNICATION, CONTROLS, ALARMS, WHISTLE, NAV. LIGHTS, TELEGRAPH, RADARS, CAS, SAT. NAV., LORAN, VHF'S, FATHOMETER, RDF, GYRO AND GYRO REPEATERS, SYNCHRONIZED CLOCKS WITH E/R, EMERGENCY GENERATOR, MAIN PROPULSION AHEAD AND ASTERN. ALL FOUND TO BE IN APPARENT GOOD OPERATING CONDITION.  Joseph J. Hazelwood / MASTER J. H. M. S.
3-1-89 1115 Local Kaktovik, Alaska P-3 - DEPARTURE Nav. 9:20 AM 135T	GEAR TEST: (IN ACCORDANCE WITH C.F.R. TITLE 33 - SEC. 164.25) 1115Z EXAMINED AND TESTED, PRIMARY AND SECONDARY STEERING GEAR, INTERNAL COMMUNICATION, CONTROLS, ALARMS, WHISTLE, NAV. LIGHTS, TELEGRAPH, RADARS, CAS, SAT. NAV., LORAN, VHF'S, FATHOMETER, RDF, GYRO AND GYRO REPEATERS, SYNCHRONIZED CLOCKS WITH E/R, EMERGENCY GENERATOR, MAIN PROPULSION AHEAD AND ASTERN. ALL FOUND TO BE IN APPARENT GOOD OPERATING CONDITION.  Joseph J. Hazelwood / MASTER J. H. M. S.
3-3-89 - 1520 Local Lat 50° 44' N Long 135° 35' West	1520 IN LAT. _____ LONG. _____ HELD FIRE AND ABANDON SHIP DRILL FIRE DRILL: _____ LENGTHS OF HOSE LED OUT _____ UNDER FULL PRESSURE BOAT DRILL: CREW MUSTERED AND INSTRUCTED IN THEIR DUTIES. BOAT NO. 2 LOWERED TO EMBARCATION DECK, RECOVERED AND SECURED. OPERATED BOAT MOTORS AHEAD AND ASTERN. EMERGENCY POWER SYSTEM OPERATED AND INSPECTED, EMERG. LIFEBOAT TRANSMITTER TESTED, 2102 ITAS TESTED WITH NORMAL METER OUTPUT. RADIO ROOM EMERG. BATTERIES, TRANSMITTER, AUTO ALARM AND RECEIVER IN APPARENT GOOD CONDITION, ALL LIFE SAVING AND FIRE FIGHTING EQUIPMENT IN APPARENT GOOD WORKING CONDITION. DEMONSTRATION: Monthly Safety Meeting Secured FROM DRILL
	Fire Simulated in upper machinery space following boarder drill - Shipboard Monthly Safety Meeting Held - with all hands in attendance.  Joseph J. Hazelwood / MASTER J. H. M. S.

N.B.—Every entry in this logbook required by the act must be signed by the master and by the mate or some other of the crew; and every entry of any illness, injury, or death must also be signed by the surgeon or medical practitioner on board (if any); and every entry of wages due to, or of the sale of the effects of a seaman or apprentice who has died must be signed by the master, the mate, and some other member of the crew.



OFFICIAL LOG of the *ENTRIES RELATING TO DRILLS & INSPECTIONS*

Date, hour, and place of entry. If at sea, give also latitude and longitude (See Section 202 on p. 19)	REQUIRED ENTRIES (See Pages 18 and 19) (Include the amount of any fine or forfeiture inflicted)
<p>3-2-88 - 0600 Lat: 34° 3' North Long: 120° 2' W Pasadena, CA</p>	<p>GEAR TEST: (IN ACCORDANCE WITH C.F.R. TITLE 33 - SEC. 164.25) EXAMINED AND TESTED, PRIMARY AND SECONDARY STEERING GEAR, INTERNAL COMMUNICATION, CONTROLS, ALARMS, WHISTLE, NAV. LIGHTS, TELEGRAPH, RADARS, CAS, SAT. NAV., LORAN, VHF'S, FATHOMER, RDF, GYRO AND GYRO REPEATERS, SYNCHRONIZED CLOCKS WITH E/R, EMERGENCY GENERATOR, MAIN PROPULSION AHEAD AND ASTERN. ALL FOUND TO BE IN APPARENT GOOD OPERATING CONDITION.</p>
<p><i>Joseph J. Hazelwood</i></p>	<p><i>Joseph J. Hazelwood</i> J.C.M.T.</p>
<p>3-9-89 - 0730 Los Angeles, CA Pasadena, CA No. 3200</p>	<p>GEAR TEST: (IN ACCORDANCE WITH C.F.R. TITLE 33 - SEC. 164.25) EXAMINED AND TESTED, PRIMARY AND SECONDARY STEERING GEAR, INTERNAL COMMUNICATION, CONTROLS, ALARMS, WHISTLE, NAV. LIGHTS, TELEGRAPH, RADARS, CAS, SAT. NAV., LORAN, VHF'S, FATHOMER, RDF, GYRO AND GYRO REPEATERS, SYNCHRONIZED CLOCKS WITH E/R, EMERGENCY GENERATOR, MAIN PROPULSION AHEAD AND ASTERN. ALL FOUND TO BE IN APPARENT GOOD OPERATING CONDITION.</p>
<p><i>Joseph J. Hazelwood</i></p>	<p><i>Joseph J. Hazelwood</i> J.C.M.T.</p>
<p>3-9-89 - 1520 Lat: 34° 0' North Long: 115° 43' West</p>	<p>1520 IN LAT 34° 00' LONG 115° 43' HELD FIRE AND ABANDON SHIP DRILL FIRE DRILL: 2 LENGTHS OF HOSE LED OUT UNDER FULL PRESSURE. BOAT DRILL: CREW MUSTERED AND INSTRUCTED IN THEIR DUTIES. BOAT NO. LOWERED TO EMBARCATION DECK, RECOVERED AND SECURED. OPERATED BOAT MOTORS AHEAD AND ASTERN. EMERGENCY POWER SYSTEM OPERATED AND INSPECTED, EMERG. LIFEBOAT TRANSMITTER TESTED, 2182 ITAG TESTED WITH NORMAL METER OUTPUT, RADIO ROOM EMERG. BATTERIES, TRANSMITTER, AUTO ALARM AND RECEIVER IN APPARENT GOOD CONDITION, ALL LIFE SAVING AND FIRE FIGHTING EQUIPMENT IN APPARENT GOOD WORKING CONDITION. DEMONSTRATION: MIA - ESCAPE PAS, SECURED FROM DRILL 1600.</p>
<p><i>Joseph J. Hazelwood</i></p>	<p><i>Joseph J. Hazelwood</i> J.C.M.T.</p>

N.B.—Every entry in this logbook required by the act must be signed by the master and by the mate or some other of the crew; and every entry of any illness, injury, or death must also be signed by the surgeon or medical practitioner on board (if any); and every entry of wages due to, or of the sale of the effects of a seaman or apprentice who has died must be signed by the master, the mate, and some other member of the crew.

OFFICIAL LOG of the *Envi33 Relating to Sales; Inspections*

Date, hour, and place of entry. If at sea, give also latitude and longitude (See Section 202 on p. 19) REQUIRED ENTRIES (See Pages 18 and 19) (Include the amount of any fine or forfeiture inflicted)

3-9-89- 21302  
 Lat: 35.1° North  
 L: 124.3° West  
 Pre-Departure Navigation  
 Gear Test

GEAR TEST: (IN ACCORDANCE WITH C.F.R. TITLE 33 - SEC. 164.25)  
 21302 EXAMINED AND TESTED, PRIMARY AND SECONDARY STEERING GEAR, INTERNAL COMMUNICATION CONTROLS, ALARMS, WHISTLE, NAV. LIGHTS, TELEGRAPH, RADARS, CAS, SAT. NAV., LORAN, VHF'S, FATHOMETER, RDF, GYRO AND GYRO REPEATERS, SYNCHRONIZED CLOCKS WITH E/R, EMERGENCY GENERATOR, MAIN PROPULSION AHEAD AND ASTERN. ALL FOUND TO BE IN APPARENT GOOD OPERATING CONDITION.

*Joseph J. Hazelwood / MASTER*  
*JCh. WT.*

3-13-89- 1255 LOCAL  
 San Francisco Bay  
 Anchorage #9  
 Pre-Departure Navigation  
 Gear Test

GEAR TEST: (IN ACCORDANCE WITH C.F.R. TITLE 33 - SEC. 164.25)  
 1255 EXAMINED AND TESTED, PRIMARY AND SECONDARY STEERING GEAR, INTERNAL COMMUNICATION CONTROLS, ALARMS, WHISTLE, NAV. LIGHTS, TELEGRAPH, RADARS, CAS, SAT. NAV., LORAN, VHF'S, FATHOMETER, RDF, GYRO AND GYRO REPEATERS, SYNCHRONIZED CLOCKS WITH E/R, EMERGENCY GENERATOR, MAIN PROPULSION AHEAD AND ASTERN. ALL FOUND TO BE IN APPARENT GOOD OPERATING CONDITION.

*Joseph J. Hazelwood / MASTER*  
*JCh. WT.*

3-14-89  
 San Francisco Bay  
 Anchorage #9  
 Pre-Departure Navigation  
 Gear Test

GEAR TEST: (IN ACCORDANCE WITH C.F.R. TITLE 33 - SEC. 164.25)  
 0479 EXAMINED AND TESTED, PRIMARY AND SECONDARY STEERING GEAR, INTERNAL COMMUNICATION CONTROLS, ALARMS, WHISTLE, NAV. LIGHTS, TELEGRAPH, RADARS, CAS, SAT. NAV., LORAN, VHF'S, FATHOMETER, RDF, GYRO AND GYRO REPEATERS, SYNCHRONIZED CLOCKS WITH E/R, EMERGENCY GENERATOR, MAIN PROPULSION AHEAD AND ASTERN. ALL FOUND TO BE IN APPARENT GOOD OPERATING CONDITION.

*Joseph J. Hazelwood / MASTER*  
*JCh. WT.*

N.B.—Every entry in this logbook required by the act must be signed by the master and by the mate or some other of the crew, and every entry of any illness, injury, or death must also be signed by the surgeon or medical practitioner on board (if any); and every entry of wages due to, or of the sale of the effects of a seaman or apprentice who has died must be signed by the master, the mate, and some other member of the crew.



OFFICIAL LOG of the *41 98* ENTRIES RELATING TO GEAR'S DILLS - INSPECTIONS

Date, hour, and place of entry. If at sea, give also latitude and longitude (See Section 202 on p. 19) REQUIRED ENTRIES (See Pages 18 and 19) (Include the amount of any fine or forfeiture inflicted)

*2-18-89 - 0600L*  
*SAN FRANCISCO BAY*  
*ANCHORAGE #9 - SAILING NAV.*  
*220125*

GEAR TEST: (IN ACCORDANCE WITH C.F.R. TITLE 33 - SEC. 164.25) -  
 EXAMINED AND TESTED, PRIMARY AND SECONDARY STEERING GEAR, INTERNAL COMMUNICATION, CONTROLS, ALARMS, WHISTLE, NAV. LIGHTS, TELEGRAPH, RADARS, CAS, SAT. NAV., LORAN, VHF'S, FATHOMETER, RDF, GYRO AND GYRO REPEATERS, SYNCHRONIZED CLOCKS WITH E/R, EMERGENCY GENERATOR, MAIN PROPULSION AHEAD AND ASTERN. ALL FOUND TO BE IN APPARENT GOOD OPERATING CONDITION.

*Joseph J. Hazelwood / MASTER*  
*1 Ch. Mate*

*3-20-89 - 1020L*  
*Lat: 47°53.6' North*  
*Lon: 132°23.0' West*

*1020L* IN LAT. *47°53.6'* LONG. *132°23.0'* HELD FIRE AND ABANDON SHIP DRILL. FIRE DRILL: LENGTHS OF HOSE LED OUT UNDER FULL PRESSURE. BOAT DRILL: CREW MUSTERED AND INSTRUCTED IN THEIR DUTIES. BOAT NO. *2* LOWERED TO EMBARKATION DECK, RECOVERED AND SECURED. OPERATED BOAT MOTORS AHEAD AND ASTERN. EMERGENCY POWER SYSTEM OPERATED AND INSPECTED. EMERG. LIFEBOAT TRANSMITTER TESTED, 2182 ITAG TESTED WITH NORMAL METER OUTPUT, RADIO ROOM EMERG. BATTERIES, TRANSMITTER, AUTO ALARM AND RECEIVER IN APPARENT GOOD CONDITION, ALL LIFE SAVING AND FIRE FIGHTING EQUIPMENT IN APPARENT GOOD WORKING CONDITION. DEMONSTRATION: *Distress Signals* *Line Throwing* SECURED FROM DRILL *1045*

*Later in a fine simulated in Radio Room.*

*Joseph J. Hazelwood / MASTER*  
*1 Ch. Mate*

*3-22-89 - 1406L*  
*Lat: 59.5° North*  
*Long: 145.2° West*  
*Pie Arrival Nav. Gear*  
*1255*

GEAR TEST: (IN ACCORDANCE WITH C.F.R. TITLE 33 - SEC. 164.25) -  
 EXAMINED AND TESTED, PRIMARY AND SECONDARY STEERING GEAR, INTERNAL COMMUNICATION, CONTROLS, ALARMS, WHISTLE, NAV. LIGHTS, TELEGRAPH, RADARS, CAS, SAT. NAV., LORAN, VHF'S, FATHOMETER, RDF, GYRO AND GYRO REPEATERS, SYNCHRONIZED CLOCKS WITH E/R, EMERGENCY GENERATOR, MAIN PROPULSION AHEAD AND ASTERN. ALL FOUND TO BE IN APPARENT GOOD OPERATING CONDITION.

*Joseph J. Hazelwood / MASTER*  
*1 Ch. Mate*

N.B.—Every entry in this logbook required by the act must be signed by the master and by the mate or some other of the crew; and every entry of any illness, injury, or death must also be signed by the surgeon or medical practitioner on board (if any); and every entry of wages due to, or of the sale of the effects of a seaman or apprentice who has died must be signed by the master, the mate, and some other member of the crew.



OFFICIAL LOG of the *ENTRIES RELATING TO SAFETY INSPECTIONS*

Date, hour, and place of entry. If at sea, give also latitude and longitude (See Section 202 on p. 19) REQUIRED ENTRIES (See Pages 18 and 19) (Include the amount of any fine or forfeiture inflicted)

3-23-89 - 1948L

VALDIZ ALASKA.

PLS. DEPART ON 21T

NAV. GEAR TEST

GEAR TEST: IN ACCORDANCE WITH C.F.R. TITLE 33 - SEC. 164.25), EXAMINED AND TESTED, PRIMARY AND SECONDARY STEERING GEAR, EXTERNAL COMMUNICATION, CONTROLS, ALARMS, WHISTLE, NAV. LIGHTS, TELEGRAPH, RASERS, CAS, SAT, NAV, LORAN, VHF'S, FATHOMETER, RDF, GYRO AND GYRO REPEATERS, SYNCHRONIZED CLOCKS WITH E/R, EMERGENCY GENERATOR, MAIN PROPULSION AHEAD AND ASTERN. ALL FOUND TO BE IN APPARENT GOOD OPERATING CONDITION.

*Joseph J. Hazen* MASTER  
1/Ch. 10.

11

... AND ADVANCE SHIP DRILL ... UNDER FULL PRESSURE ... AND SHOWN OPERATED ... SYSTEM OPERATED AND ...

... ACCORDANCE WITH C.F.R. TITLE 33 - SEC. 164.25) ... EXAMINED AND TESTED ... NAV LIGHTS ...

N.B.—Every entry in this logbook required by the act must be signed by the master and by the mate or some other of the crew; and every entry of any illness, injury, or death must also be signed by the surgeon or medical practitioner on board (if any); and every entry of wages due to, or of the sale of the effects of a seaman or apprentice, who has died must be signed by the master, the mate, and some other member of the crew.

RECEIPT FOR NET WAGES PAID BY MASTER  
TE: 01/12/89  
TIME: 09:42:18 PM

M. V. EXXON VALDEZ

PR2000  
PAGE: 1

PERIOD: 89/01/01 TO 89/01/15

LAST NAME	FIRST NAME (MI)	SOCIAL SECURITY	NET WAGE	RECEIVED NET WAGE INDICATED
BRITT	WILLIAM C.	377446066	133.31	<i>W.C. Britt</i>
BURGETT	MARK L.	539480288	56.34	<i>Mark L. Burgett</i>
BUSH-WILLIAMS	FREDRICK	435355691	478.39	<i>Fredrick B. Williams</i>
CARR	NATHAN	004362616	135.59	<i>Nathan Carr</i>
CLAAR	HARRY L. II	558645785	166.55	<i>Harry L. Claar</i>
JONES	CARL	141401518	89.61	<i>Carl Jones</i>
MOUREUX	JOSEPH R.	018548499	93.86	<i>Joseph R. Moureux</i>
OLDHAM	GRAEME K.	567334329	142.50	<i>Graeme K. Oldham</i>
PRINCE	STEPHEN L.	264847839	75.71	<i>Stephen L. Prince</i>
*** TOTAL ***			1371.86	

THE ABOVE NET WAGES WERE PAID TO  
EMPLOYEES WHOSE SIGNATURES APPEAR ABOVE

*Michael H. Hoff*  
CAPTAIN

RECEIPT FOR NET WAGES PAID BY MASTER  
DATE: 01/27/89  
TIME: 10:34:34 PM

M.V. EXXON VALDEZ

PR2000  
PAGE: 1

PERIOD: 89/01/16 TO 89/01/31

LAST NAME	FIRST NAME (MI)	SOCIAL SECURITY	NET WAGE	RECEIVED NET WAGE INDICATED
ACKERMAN	BRIAN M.	053565572	112.66	<i>B. Ackerman</i>
BRITT	WILLIAM C.	377446066	170.62	<i>W.C. Britt</i>
CAMPEAU	KYLE A.	516985453	162.66	<i>Kyle A. Campeau</i>
CARR	NATHAN	004362616	127.70	<i>Nathaniel Carr</i>
CLAAR	HARRY L. II	558645785	205.98	<i>H. L. Claar</i>
GOULET	JAY M.	016486681	73.53	<i>Jay M. Goulet</i>
JONES	CARL	141401518	109.12	<i>Carl Jones</i>
KL S	GUY G.	220563476	62.24	<i>Guy G. Kl S</i>
PRINCE	STEPHEN L.	264847839	67.76	<i>Stephen L. Prince</i>
*** TOTAL ***			1092.27	

THE ABOVE NET WAGES WERE PAID TO  
EMPLOYEES WHOSE SIGNATURES APPEAR ABOVE

*Michael A. Hays*  
CAPTAIN



RECEIPT FOR NET WAGES PAID BY MASTER  
DATE: 03/14/89  
TIME: 08:04:57 PM

M. V. EXXON VALDEZ

PR2000  
PAGE: 1

PERIOD: 89/03/01 TO 89/03/15

LAST NAME	FIRST NAME (MI)	SOCIAL SECURITY	NET WAGE	RECEIVED NET WAGE INDICATED
CLAAR	HARRY L. II	558645785	178.50	<i>H. Claar</i>
HAVEN	KATHERINE R.	536723209	53.65	<i>Katherine R. Haven</i>
JONES	CARL	141401518	90.10	<i>Carl Jones</i>
JONES	MAUREEN, L.	385886116	41.21	<i>Maureen L. Jones</i>
JONES	RAY M.	458928608	223.64	<i>Ray M. Jones</i>
MENESES	EFRIN M.	549885177	313.39	<i>Efrin M. Meneses</i>
OLDHAM	GRAEME K.	567334329	121.55	<i>Graeme K. Oldham</i>

\*\*\* TOTAL \*\*\* - 1022.04

THE ABOVE NET WAGES WERE PAID TO  
EMPLOYEES WHOSE SIGNATURES APPEAR ABOVE

*[Signature]*  
CAPTAIN

RECEIPT FOR NET WAGES PAID BY MASTER  
DATE: 02/27/89  
TIME: 04:43:46 AM

M. V. EXXON VALDEZ

PR2000  
PAGE: 1

PERIOD: 89/02X16 TO 89/02/28

LAST NAME	FIRST NAME (MI)	SOCIAL SECURITY	NET WAGE	RECEIVED NET WAGE INDICATED
ACKERMAN	BRIAN M.	053565572	214.76	<i>E. H.</i>
CAMPEAU	KYLE A.	516985453	214.76	<i>Mike Campeau</i>
CARR	NATHAN	004362616	127.70	<i>Nathan Carr</i>
CLAAR	HARRY L. II	558645785	179.74	<i>H. L. Claar</i>
GOULET	JAY M.	016486681	64.97	<i>J. M. Goulet</i>
JONES	CARL	141401518	112.46	<i>Carl Jones</i>
JONES	MAUREEN, L.	385886116	58.57	
KLEESS	GUY G.	220563476	59.27	<i>Guy Kleess</i>
ESES	EFRIN M.	549885177	321.98	<i>Efrin M. Eses</i>

\*\*\* TOTAL \*\*\* 1354.21

THE ABOVE NET WAGES WERE PAID TO  
EMPLOYEES WHOSE SIGNATURES APPEAR ABOVE

*W. J. F. [Signature]*  
\_\_\_\_\_  
CAPTAIN

SUMMARY OF LOGBOOK ENTRIES WHEN ON FOREIGN OR INTERCOASTAL VOYAGES

F O R O F F I C I A L L O G B O O K

W E E K L Y

FIRE AND ABANDON SHIP DRILL (35.10-5)  
EMERGENCY LIGHTING PLUS POWER SYSTEM FOR RADIO ROOM (35.10-15)  
LIFE BOAT RADIO TRANSCEIVER (35.10-20)

M O N T H L Y

LIFE BOAT EQUIPMENT INSPECTION (35.10-5)  
EMERGENCY LIGHTING/POWER SYSTEM (35.10-15)  
SANITARY INSPECTION (35.01-5)  
E.P.I.R.B. (35.10-25)

E V E R Y 3 M O N T H S

LINE THROWING APPARATUS (35.10-1c)  
LIFE BOAT DRILL IN THE WATER (35.10-5)  
ELECTRIC POWER OPERATED LIFE BOAT WINCHES (35.10-7)

O N C E A Y E A R

ANNUAL U.S.C.G. INSPECTION (31.10-18)

E N T E R I N G P O R T

PRE-ARRIVAL TEST (33 CFR 164.25)

L E A V I N G P O R T

GETTING UNDERWAY TEST (33CFR 164.25)  
LIFE BOAT RADIO TRANSMITTER (35.10-20)  
DRAFT (35.20-5)  
FUEL (35.25-10)



EVERY 3 MONTHS :

LINE THROWING APPARATUS:

CREW DRILLED IN THE USE OF THE LINE-CARRYING GUN.

LIFE BOAT DRILL IN THE WATER:

ALL LIFE BOATS LOWERED TO THE WATER, CREW EXERCISED AT THE OARS AND MOTOR RUN ON # \_\_\_ BOAT.

ELECTRIC POWER OPERATED LIFE BOAT WINCHES:

ALL LIFE BOAT WINCH CONTROL APPARATUS, INCLUDING MOTOR CONTROLLERS, EMERGENCY SWITCHES, MASTER SWITCHES AND LIMIT SWITCHES EXAMINED AND IN GOOD ORDER.

ONCE A YEAR :

ANNUAL U.S.C.G. INSPECTION

ENTERING PORT :

PRE-ARRIVAL TEST:

(TIME) TESTED PRIMARY AND SECONDARY STEERING GEAR, INTERNAL COMMUNICATION SYSTEM, EMERGENCY GENERATOR, MAIN PROPULSION MACHINERY AHEAD AND ASTERN, WHISTLES, E/R TELEGRAPH, NAVIGATION LIGHTS, SYNCHRONIZED GYRO REPEATERS WITH MASTER GYRO, RADARS, CASII, FATHOMETER, SAT. NAV., LORAN C, VHF RADIOS, SYNCHRONIZED CLOCKS W/ENGINE ROOM. ALL IN APPARENT GOOD ORDER.

LEAVING PORT :

GETTING UNDERWAY : SAME AS PRE-ARRIVAL.

LIFE BOAT RADIO TRANSCEIVER: SAME AS WEEKLY ENTRY.

DRAFT : INCLUDES FREEBOARD USING GOVERNING LOAD LINE.

FUEL: TYPE OF FUEL, QUANTITY RECEIVED, THE NAME OF VENDOR, THE NAME OF PRODUCER, AND THE FLASH POINT.

W E E K L Y

FIRE AND ABANDON SHIP DRILL:

(TIME- LAT/LONG.)

FIRE DRILL: FIRE SIMULATED \_\_\_\_\_. LED OUT \_\_\_\_\_ LENGTHS OF HOSE AND FULL PRESSURE APPLIED.

ABANDON SHIP DRILL: ALL HANDS MUSTERED AND INSTRUCTED IN THEIR DUTIES.

BOATS # \_\_\_ AND # \_\_\_ LOWERED TO RAIL, RECOVERED, AND SECURED.

EMERGENCY GENERATOR OPERATED AND INSPECTED. OPERATED LIFE BOAT MOTORS AHEAD AND ASTERN.

ALL FIRE FIGHTING AND LIFESAVING EQUIPMENT IN APPARENT GOOD ORDER.

DEMONSTRATION: \_\_\_\_\_.

(TIME) SECURED.

EMERGENCY LIGHTING PLUS POWER SYSTEM FOR RADIO ROOM:

RADIO ROOM EMERGENCY BATTERIES, EMERGENCY RECEIVER, EMERGENCY TRANSMITTER ON 500KHZ, RADIO ROOM EMERGENCY LIGHTS, AND AUTO ALARM KEYS ALL IN APPARENT GOOD ORDER.

LIFE BOAT RADIO TRANSCEIVER:

EMERGENCY LIFE BOAT TRANSCEIVER OUT PUT GOOD INTO DUMMY LOAD, OPERATION NORMAL 500/8364 KHZ.

M O N T H L Y :

LIFE BOAT EQUIPMENT INSPECTION:

LIFE BOAT # \_\_\_ EQUIPMENT COMPLETE AND IN GOOD CONDITION.

EMERGENCY LIGHTING/POWER SYSTEM:

INTERNAL COMBUSTION ENGINE DRIVEN GENERATORS OPERATED UNDER LOAD FOR TWO HOURS. ALL IN APPARENT GOOD ORDER.

SANITARY INSPECTIONS:

INSPECTION OF ALL LIVING SPACES INCLUDING QUARTERS, TOILETS, WASH SPACES, SEVERING PANTRIES, GALLEYS, ETC., MADE BY MASTER AND \_\_\_\_\_. ALL SPACES IN GOOD CONDITION.

E.P.R.I.B.

TESTED USING THE INTEGRATED TEST CIRCUIT AND OUTPUT INDICATOR; ALL IN APPARENT GOOD ORDER.

**DECK LOG BOOK**

M. A. EXXON VALDEZ VOYAGE NO. \_\_\_\_\_ FROM MARCH 11 1989 TO MARCH 31 1989  
(DATED) (DATED)

LOG TO BE WRITTEN WITH BALL POINT PEN. CARBON COPY IS TO BE DETACHED DAILY AND FORWARDED TO THE OFFICE ONCE A MONTH.  
 THE NOTES ON THE FLYLEAF MUST BE STRICTLY COMPLIED WITH.

DRILLS					
DATE	TIME	POSITION	FIRE	BOAT	DEMONSTRATION
3-05-89	15:20	65° 57' 00" N 153° 32' 00" W 23405'	IMMEDIATE AREA'S	Muster #2 Boat	Safety Hoisting
3-07-89	15:20	65° 57' 00" N 153° 32' 00" W	FRO	#1	MSA + ESCAPE DRILLS
3-26-89	16:20	65° 57' 00" N 153° 32' 00" W	Radio Room	Muster #2 Boat	SURVIVAL SUIT ADDRESS SQUARES and DRILLING APP
EMERGENCY DRILL					
DATE	TIME	POSITION	REMARKS		

CERTIFIED TO BE A TRUE COPY  
 [Signature]

Exhibit # 6

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**MANEUVERING CHARACTERISTICS**

**EXXON VALDEZ**

11:00 AM AFTER REVISION INDICATIONS.

SHIP PARTICULARS	
LENGTH OP	845 00 FT
BEAM	106 00 FT
DEPTH	88 00 FT
SUMMER P.D. DRAFT	84.57 FT
DEADWEIGHT	211,400 L.TONS

BOW THRUSTERS (EFFECTIVE SHIP SPEED RANGES)	
CONDITION	SHIP SPEED
PULL LOAD	N.A. KNOTS
BALLAST	N.A. KNOTS

MAXIMUM AVAILABLE RUDDER ANGLE	
WARD RIGHT OR STARBOARD	35 DEGREES
WARD LEFT OR PORT	35 DEGREES

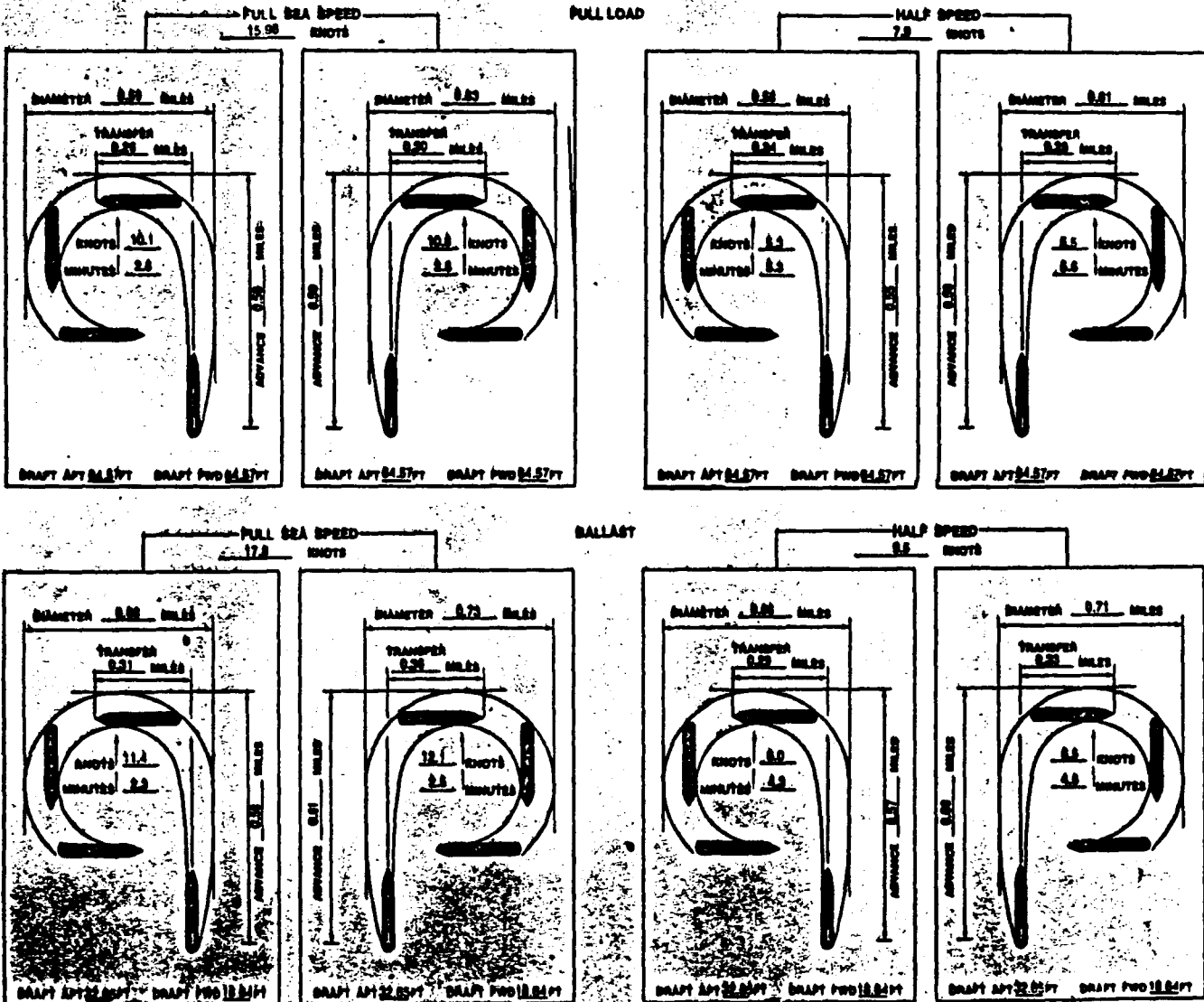
ENGINE ORDER	FULL LOAD		BALLAST	
	TIME (MIN)	DISTANCE (MILES)	TIME (MIN)	DISTANCE (MILES)
FULL SEA SPEED	10.0	1.85	7.4	1.48
FULL AHEAD	8.2	0.78	4.8	0.88
HALF AHEAD	5.3	0.56	3.8	0.21
BLOW AHEAD	4.8	0.42	2.7	0.10

WARNING: THE RESPONSE OF THE EXXON VALDEZ MAY BE DIFFERENT FROM THAT LISTED IF ANY OF THE FOLLOWING CONDITIONS, UPON WHICH THE MANEUVERING INFORMATION IS BASED, ARE VIOLATED:

1. CALM WEATHER- WINDS 16 KNOTS OR LESS, CALM SEA
2. NO CURRENT
3. WATER DEPTH TWICE THE SHIP'S DRAFT OR GREATER
4. CLEAN HULL
5. INTERMEDIATE DRAFTS OR UNUSUAL TRIM

ENGINE ORDER	R.P.M.	SPEED (KNOTS)	
		FULL LOAD	BALLAST
FULL SEA SPEED	82.8	15.96	17.8
FULL AHEAD	85	10.8	12.5
HALF AHEAD	40	7.9	8.5
BLOW AHEAD	32	6.3	7.7
DEAD BLOW AHEAD	24	4.8	6.1
DEAD BLOW ASTERN	NA		
BLOW ASTERN	NA		
HALF ASTERN	NA		
FULL ASTERN	NA		

**DEEP WATER TURNING CIRCLE DIAGRAMS**



NOTE: 1. TURNING DIAMETER AND TRANSFER ARE ABOUT THE SAME REGARDLESS OF TURN SPEED AT EQUAL SPEEDS. 2. ADVANCE FROM HALF AHEAD TO FULL AHEAD WILL BE LESS THAN ADVANCE FROM FULL AHEAD TO FULL SEA SPEED AND MORE TO BALLAST THAN FULL SEA.

3. ADVANCE IS MEASURED FROM A POINT ON THE VESSEL'S CENTERLINE TO THE POINT OF DISCHARGE FROM THE BOW. 4. IN ACTUAL OPERATION THE SHIP DOES NOT STOP AHEAD & REVERSE THERE; IT MAY BE APPROXIMATELY ONE THIRD.

NOTE: THIS FORM IS DESIGNED TO COMPLY WITH TITLE 33, PART 164, UNITED STATES CODE OF FEDERAL REGULATIONS AND 800 RESOLUTION A006.

I HAVE SEEN THE ORIGINAL AND COMPARED THE COPY WITH IT AND FOUND IT TO BE A TRUE COPY. MARINE INVESTIGATOR/INSPECTOR

MARINE SAFETY OFFICE, VALDEZ, AK, USCG  
APR 8 1989

# MANEUVERING CHARACTERISTICS EXXON VALDEZ

11-74 AFTER REPAIR MODIFICATION

SHIP PARTICULARS	
LENGTH OP	845.00 FT
BEAM	106.00 FT
DEPTH	86.00 FT
SUMMER PD DRAFT	84.57 FT
DEADWEIGHT	211,469 L.TONS

BOW THRUSTERS (EFFECTIVE SHIP SPEED RANGES)	
CONDITION	SHIP SPEED
FULL LOAD	N.A. (KNOTS)
BALLAST	N.A. (KNOTS)

MAXIMUM AVAILABLE RUDDER ANGLE	
HARD RIGHT OR STARBOARD	35 DEGREES
HARD LEFT OR PORT	35 DEGREES

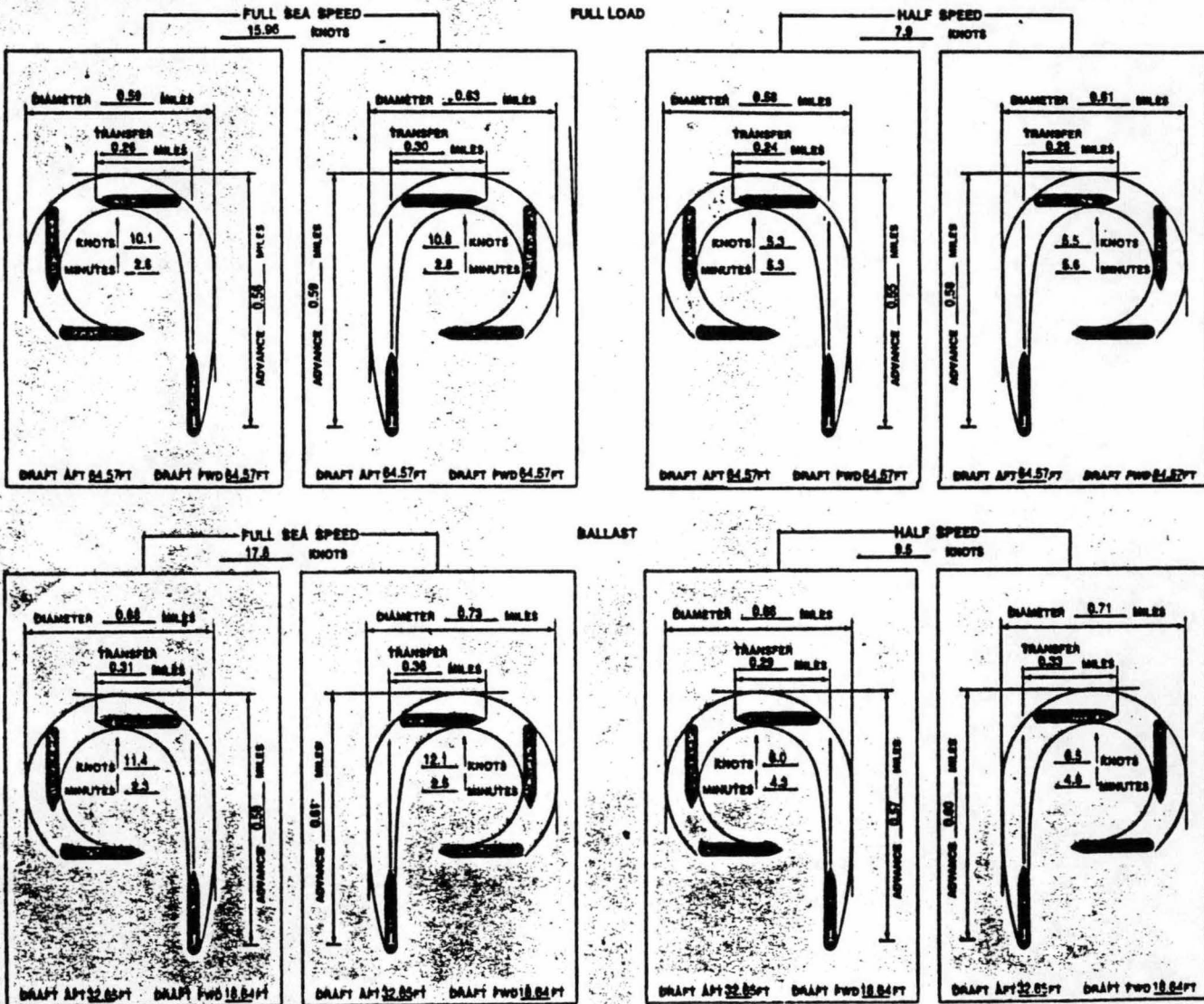
ENGINE ORDER	FULL LOAD		BALLAST	
	TIME (MINUTES)	DISTANCE (MILES)	TIME (MINUTES)	DISTANCE (MILES)
FULL SEA SPEED	10.0	1.85	7.4	1.49
FULL AHEAD	6.2	0.78	4.9	0.88
HALF AHEAD	5.3	0.56	3.6	0.21
SLOW AHEAD	4.9	0.42	2.7	0.10

WARNING: THE RESPONSE OF THE EXXON VALDEZ MAY BE DIFFERENT FROM THAT LISTED IF ANY OF THE FOLLOWING CONDITIONS, UPON WHICH THE MANEUVERING INFORMATION IS BASED, ARE VARIED:

1. CALM WEATHER- WINDS 10 KNOTS OR LESS, CALM SEA
2. NO CURRENT
3. WATER DEPTH TWICE THE SHIP'S DRAFT OR GREATER
4. CLEAN HULL
5. INTERMEDIATE DRAFTS OR UNUSUAL TRIM

ENGINE ORDER	R.P.M.	SPEED (KNOTS)	
		FULL LOAD	BALLAST
FULL SEA SPEED	82.8	15.96	17.8
FULL AHEAD	85	10.8	12.5
HALF AHEAD	40	7.9	9.5
SLOW AHEAD	32	6.3	7.7
DEAD SLOW AHEAD	24	4.8	6.1
DEAD SLOW ASTERN	NA		
SLOW ASTERN	NA		
HALF ASTERN	NA		
FULL ASTERN	NA		

## DEEP WATER TURNING CIRCLE DIAGRAMS



NOTE: 1. ADVANCE, TRANSFER AND DIAMETER ARE ABOUT THE SAME, REGARDLESS OF INITIAL SPEED AT INITIAL SPEEDS SLOWER THAN HALF AHEAD. THE SPEED AT ANY POINT IN THE MANEUVER WILL BE LESS THAN SHOWN ON THE HALF SPEED DIAGRAMS, AND TIMES TO MANEUVER WILL BE GREATER THAN SHOWN.  
2. BALLAST AVAILABLE UNDER LOADS AND CONSTANT ENGINE ORDER ARE MAINTAINED.

3. ADVANCE IS MEASURED FROM A REFERENCE AT THE HELMSMAN'S FOOTSTEP TO THE POINT OF BALLAST FORWARD STOPPING.  
4. IN ACTUAL OPERATION THE SHIP DOES NOT STOP ALONG A STRAIGHT PATH, THEREFORE THERE MAY BE APPRECIABLE SIDE SLACK.

NOTE: THIS FORM IS DESIGNED TO COMPLY WITH TITLE 33, PART 164, UNITED STATES CODE OF FEDERAL REGULATIONS AND 810 RESOLUTION 4886.

**CERTIFIED TO BE A TRUE COPY**

*I have seen the original and compared this copy with it and found it to be a true copy.*

*David J. ...*  
Name-Rank or Title-Duty Station

I HAVE SEEN THE ORIGINAL AND COMPARED THE COPY WITH IT AND FOUND IT TO BE A TRUE COPY.  
MARINE INVESTIGATOR/INSPECTOR

MARINE SAFETY OFFICE, VALDEZ, AK, USCG

APR 5 1989



**PLAINTIFF**

EXHIBIT NO. 8

ADMITTED *by trial*

3AN 589-7217, 7218

(CASE NUMBER)

TRAFFIC ANALYSIS VIA COMSAT EARTH STATIONS

0:32 TUESDAY.

SES ID: 1501474

03/23/89 10:01:00 (GMT) - 03/25/89 00:00:00 (GMT)

Alaska  
Date Time

3/23/89 12:01AM →

3/24/89 12:01AM →

DATE	TIME	SERVICE TYPE	DIRECTION	DESTINATION NUMBER	DURATION (MINUTES)	STATUS
000324	010502	VOICE	SHORE TO SHIP	1501474	0.00	INCOMPLETE
000324	010600	VOICE	SHORE TO SHIP	1501474	0.00	INCOMPLETE
000324	010830	VOICE	SHORE TO SHIP	1501474	0.00	INCOMPLETE
000324	011020	VOICE	SHORE TO SHIP	1501474	0.00	INCOMPLETE
000324	012101	VOICE	SHORE TO SHIP	1501474	33.07	COMPLETE
000324	104040	VOICE	SHORE TO SHIP	1501474	51.02	COMPLETE
000324	120720	VOICE	SHORE TO SHIP	1501474	0.00	INCOMPLETE
000324	120750	VOICE	SHIP TO SHORE	10073401503	12.25	COMPLETE
000324	130105	VOICE	SHORE TO SHIP	1501474	0.00	INCOMPLETE
000324	130301	VOICE	SHORE TO SHIP	1501474	0.00	INCOMPLETE
000324	130437	VOICE	SHORE TO SHIP	1501474	0.00	INCOMPLETE
000324	130044	VOICE	SHORE TO SHIP	1501474	0.00	INCOMPLETE
000324	131055	VOICE	SHIP TO SHORE	10078354701	4.82	COMPLETE
000324	131300	VOICE	SHIP TO SHORE	12020030044	0.00	INCOMPLETE
000324	131501	VOICE	SHIP TO SHORE	12020030044	0.00	INCOMPLETE
000324	131704	VOICE	SHORE TO SHIP	1501474	0.00	INCOMPLETE
000324	131731	VOICE	SHORE TO SHIP	1501474	0.00	INCOMPLETE
000324	131732	VOICE	SHIP TO SHORE	10073401503	15.00	COMPLETE
000324	132205	VOICE	SHORE TO SHIP	1501474	0.00	INCOMPLETE
000324	132450	VOICE	SHORE TO SHIP	1501474	0.00	INCOMPLETE
000324	132642	VOICE	SHORE TO SHIP	1501474	0.00	INCOMPLETE
000324	132834	VOICE	SHORE TO SHIP	1501474	0.00	INCOMPLETE
000324	132050	VOICE	SHORE TO SHIP	1501474	0.00	INCOMPLETE
000324	133236	VOICE	SHORE TO SHIP	1501474	0.00	INCOMPLETE
000324	140310	VOICE	SHIP TO SHORE	10078354701	10.10	COMPLETE
000324	140800	VOICE	SHORE TO SHIP	1501474	0.00	INCOMPLETE
000324	141120	VOICE	SHORE TO SHIP	1501474	0.00	INCOMPLETE
000324	141037	VOICE	SHORE TO SHIP	1501474	4.70	COMPLETE
000324	142034	VOICE	SHIP TO SHORE	10078355017	11.07	COMPLETE
000324	153030	VOICE	SHIP TO SHORE	10078355017	0.00	INCOMPLETE
000324	153303	VOICE	SHIP TO SHORE	00785507	0.00	INCOMPLETE
000324	153341	VOICE	SHIP TO SHORE	10078355017	0.00	INCOMPLETE
000324	153424	VOICE	SHORE TO SHIP	1501474	0.00	INCOMPLETE
000324	153453	VOICE	SHIP TO SHORE	10078355017	0.00	INCOMPLETE
000324	155157	VOICE	SHIP TO SHORE	10078355017	1.07	COMPLETE
000324	155507	VOICE	SHIP TO SHORE	10078355017	0.02	COMPLETE
000324	162140	VOICE	SHIP TO SHORE	010078354701	0.00	INCOMPLETE
000324	162231	VOICE	SHIP TO SHORE	10078354701	0.00	COMPLETE
000324	163747	VOICE	SHORE TO SHIP	1501474	0.00	INCOMPLETE
000324	163800	VOICE	SHIP TO SHORE	10078354305	0.72	COMPLETE
000324	163041	VOICE	SHORE TO SHIP	1501474	0.00	INCOMPLETE
000324	164001	VOICE	SHIP TO SHORE	10078354350	3.10	COMPLETE
000324	164057	VOICE	SHORE TO SHIP	1501474	0.00	INCOMPLETE
000324	164015	VOICE	SHORE TO SHIP	1501474	0.00	INCOMPLETE
000324	165000	VOICE	SHIP TO SHORE	10072734232	10.30	COMPLETE
000324	165233	VOICE	SHORE TO SHIP	1501474	0.00	INCOMPLETE
000324	170722	VOICE	SHIP TO SHORE	10078354701	0.07	COMPLETE
000324	172610	VOICE	SHIP TO SHORE	12009031435	0.00	INCOMPLETE
000324	172643	VOICE	SHORE TO SHIP	1501474	0.00	INCOMPLETE
000324	172710	VOICE	SHORE TO SHIP	1501474	0.00	INCOMPLETE

CERTIFIED TO BE A TRUE COPY

*[Signature]*  
Name-Rank of \_\_\_\_\_  
Duty Station \_\_\_\_\_

~~CONFIDENTIAL~~  
~~UNCLASSIFIED~~  
~~DATE 03/25/89 BY [unclear]~~

## TRAFFIC ANALYSIS VIA COMSAT EARTH STATIONS

0:32 TUESDAY,

SES ID: 1501474

03/23/89 10:01:00 (GMT) - 03/25/89 09:59:00 (GMT)

DATE	TIME	SERVICE TYPE	DIRECTION	DESTINATION NUMBER	DURATION (MINUTES)	STATUS
890324	172741	VOICE	SHORE TO SHIP	1501474	0.00	INCOMPLETE
890324	172800	VOICE	SHORE TO SHIP	1501474	0.00	INCOMPLETE
890324	172830	VOICE	SHIP TO SHORE	19078354701	0.00	INCOMPLETE
890324	172810	VOICE	SHIP TO SHORE	19078352827	0.00	INCOMPLETE
890324	173002	VOICE	SHIP TO SHORE	19078352827	0.00	INCOMPLETE
890324	173107	VOICE	SHIP TO SHORE	14044227883	1.52	COMPLETE
890324	173321	VOICE	SHORE TO SHIP	1501474	0.00	INCOMPLETE
890324	173349	VOICE	SHIP TO SHORE	19078354701	0.00	INCOMPLETE
890324	173427	VOICE	SHIP TO SHORE	001	0.00	INCOMPLETE
890324	173618	VOICE	SHIP TO SHORE	19078352102	2.52	COMPLETE
890324	173811	VOICE	SHORE TO SHIP	1501474	0.00	INCOMPLETE
890324	173745	VOICE	SHORE TO SHIP	1501474	0.00	INCOMPLETE
890324	173833	VOICE	SHIP TO SHORE	19078354808	7.30	COMPLETE
890324	174846	VOICE	SHORE TO SHIP	1501474	0.00	INCOMPLETE
890324	174714	VOICE	SHORE TO SHIP	1501474	0.00	INCOMPLETE
890324	174753	VOICE	SHIP TO SHORE	19078354304	1.47	COMPLETE
890324	175051	VOICE	SHORE TO SHIP	1501474	0.00	INCOMPLETE
890324	175106	VOICE	SHIP TO SHORE	12145521009	0.00	INCOMPLETE
890324	175445	VOICE	SHIP TO SHORE	17184502772	0.00	INCOMPLETE
890324	175851	VOICE	SHORE TO SHIP	1501474	0.00	INCOMPLETE
890324	175906	VOICE	SHORE TO SHIP	1501474	0.00	INCOMPLETE
890324	175920	VOICE	SHORE TO SHIP	1501474	0.00	INCOMPLETE
890324	175935	VOICE	SHIP TO SHORE	12145521009	0.70	COMPLETE
890324	180831	VOICE	SHIP TO SHORE	14152550950	6.23	COMPLETE
890324	181739	VOICE	SHIP TO SHORE	17184502772	3.65	COMPLETE
890324	182720	VOICE	SHIP TO SHORE	19072734232	0.00	INCOMPLETE
890324	182854	VOICE	SHIP TO SHORE	19075838520	0.00	INCOMPLETE
890324	182040	VOICE	SHORE TO SHIP	1501474	0.00	INCOMPLETE
890324	183002	VOICE	SHORE TO SHIP	1501474	0.00	INCOMPLETE
890324	183014	VOICE	SHORE TO SHIP	1501474	0.00	INCOMPLETE
890324	183048	VOICE	SHORE TO SHIP	1501474	0.00	INCOMPLETE
890324	183111	VOICE	SHIP TO SHORE	19072734232	12.15	COMPLETE
890324	184520	VOICE	SHORE TO SHIP	1501474	0.00	INCOMPLETE
890324	184534	VOICE	SHORE TO SHIP	1501474	0.00	INCOMPLETE
890324	184548	VOICE	SHIP TO SHORE	19077454247	24.92	COMPLETE
890324	191131	VOICE	SHORE TO SHIP	1501474	0.00	INCOMPLETE
890324	191153	VOICE	SHORE TO SHIP	1501474	0.00	INCOMPLETE
890324	191237	VOICE	SHORE TO SHIP	1501474	0.00	INCOMPLETE
890324	191344	VOICE	SHORE TO SHIP	1501474	0.00	INCOMPLETE
890324	191421	VOICE	SHORE TO SHIP	1501474	0.00	INCOMPLETE
890324	191442	VOICE	SHIP TO SHORE	19078355175	0.00	INCOMPLETE
890324	191624	VOICE	SHORE TO SHIP	1501474	0.00	INCOMPLETE
890324	191842	VOICE	SHORE TO SHIP	1501474	0.00	INCOMPLETE
890324	191707	VOICE	SHIP TO SHORE	19078354808	7.13	COMPLETE
890324	192500	VOICE	SHIP TO SHORE	19078354701	0.77	COMPLETE
890324	194114	VOICE	SHIP TO SHORE	19078354304	0.00	INCOMPLETE
890324	194155	VOICE	SHIP TO SHORE	19078354808	10.53	COMPLETE
890324	200737	VOICE	SHIP TO SHORE	19077454247	17.35	COMPLETE
890324	204755	VOICE	SHIP TO SHORE	19078354808	14.07	COMPLETE
890324	205000	VOICE	SHORE TO SHIP	1501474	0.00	INCOMPLETE



04. 04. 04

09:55 AM

COMSAT WSD

104

## TRAFFIC ANALYSIS VIA COMSAT EARTH STATIONS

8:32 TUESDAY.

SES ID: 1881474

03/23/89 10:01:00 (GMT) - 03/25/89 08:59:00 (GMT)

DATE	TIME	SERVICE TYPE	DIRECTION	DESTINATION NUMBER	DURATION (MINUTES)	STATUS
880324	205013	VOICE	SHORE TO SHIP	1881474	0.00	INCOMPLETE
880324	210500	VOICE	SHORE TO SHIP	1881474	3.87	COMPLETE
880324	211010	VOICE	SHIP TO SHORE	19078354791	10.12	COMPLETE
880324	212113	VOICE	SHORE TO SHIP	1881474	0.00	INCOMPLETE
880324	212135	VOICE	SHIP TO SHORE	12068880212	2.07	COMPLETE
880324	212200	VOICE	SHORE TO SHIP	1881474	0.00	INCOMPLETE
880324	212854	VOICE	SHIP TO SHORE	19072734232	18.02	COMPLETE
880324	214857	VOICE	SHIP TO SHORE	17872554881	0.47	COMPLETE
880324	215850	VOICE	SHIP TO SHORE	17877457482	0.32	COMPLETE
880324	218200	VOICE	SHIP TO SHORE	17877457482	0.55	COMPLETE
880324	220317	VOICE	SHORE TO SHIP	1881474	0.00	INCOMPLETE
880324	220320	VOICE	SHORE TO SHIP	1881474	0.00	INCOMPLETE
880324	220348	VOICE	SHORE TO SHIP	1881474	0.00	INCOMPLETE
880324	220404	VOICE	SHIP TO SHORE	12133768810	2.42	COMPLETE
880324	220857	VOICE	SHIP TO SHORE	12145521800	1.57	COMPLETE
880324	221128	VOICE	SHORE TO SHIP	1881474	0.00	INCOMPLETE
880324	221200	VOICE	SHORE TO SHIP	1881474	0.00	INCOMPLETE
880324	221220	VOICE	SHORE TO SHIP	1881474	0.00	INCOMPLETE
880324	221235	VOICE	SHIP TO SHORE	19072783550	11.02	COMPLETE
880324	223159	VOICE	SHIP TO SHORE	19078354791	0.00	INCOMPLETE
880324	223245	VOICE	SHIP TO SHORE	19078354698	0.00	INCOMPLETE
880324	223546	VOICE	SHORE TO SHIP	1881474	0.00	INCOMPLETE
880324	223558	VOICE	SHORE TO SHIP	1881474	0.00	INCOMPLETE
880324	223623	VOICE	SHORE TO SHIP	1881474	0.00	INCOMPLETE
880324	223703	VOICE	SHIP TO SHORE	19078354791	0.00	INCOMPLETE
880324	223830	VOICE	SHORE TO SHIP	1881474	0.00	INCOMPLETE
880324	223843	VOICE	SHIP TO SHORE	19078354698	0.00	INCOMPLETE
880324	224007	VOICE	SHORE TO SHIP	1881474	0.00	INCOMPLETE
880324	224031	VOICE	SHORE TO SHIP	1881474	0.00	INCOMPLETE
880324	224051	VOICE	SHIP TO SHORE	19078352102	19.93	COMPLETE
880324	224323	VOICE	SHORE TO SHIP	1881474	0.00	INCOMPLETE
880324	224806	VOICE	SHORE TO SHIP	1881474	0.00	INCOMPLETE
880324	224731	VOICE	SHORE TO SHIP	1881474	0.00	INCOMPLETE
880324	224825	VOICE	SHORE TO SHIP	1881474	0.00	INCOMPLETE
880324	225129	VOICE	SHORE TO SHIP	1881474	0.00	INCOMPLETE
880324	225300	VOICE	SHIP TO SHORE	12028838044	0.00	INCOMPLETE
880324	230211	VOICE	SHORE TO SHIP	1881474	0.00	INCOMPLETE
880324	230241	VOICE	SHIP TO SHORE	19078354331	2.82	COMPLETE
880324	230438	VOICE	SHORE TO SHIP	1881474	0.00	INCOMPLETE
880324	230816	VOICE	SHIP TO SHORE	19078352824	4.68	COMPLETE
880324	232353	VOICE	SHORE TO SHIP	1881474	0.50	COMPLETE
880324	233341	VOICE	SHIP TO SHORE	19078352824	6.63	COMPLETE
880324	234114	VOICE	SHIP TO SHORE	19078352824	5.25	COMPLETE
880324	234333	VOICE	SHORE TO SHIP	1881474	0.00	INCOMPLETE
880324	234811	VOICE	SHORE TO SHIP	1881474	0.68	COMPLETE
880324	235831	VOICE	SHORE TO SHIP	1881474	0.00	INCOMPLETE
880324	235856	VOICE	SHIP TO SHORE	19078362494	0.00	INCOMPLETE
880325	001308	VOICE	SHORE TO SHIP	1881474	0.00	INCOMPLETE
880325	001320	VOICE	SHORE TO SHIP	1881474	0.00	INCOMPLETE
880325	001333	VOICE	SHIP TO SHORE	19072734232	27.35	COMPLETE

## TRAFFIC ANALYSIS VIA COMSAT EARTH STATIONS

8:32 TUESDAY.

BES ID: 1501474

03/23/88 10:01:00 (GMT) - 03/25/88 08:00:00 (GMT)

DATE	TIME	SERVICE TYPE	DIRECTION	DESTINATION NUMBER	DURATION (MINUTES)	STATUS
000325	004340	VOICE	SHORE TO SHIP	1501474	0.00	INCOMPLETE
000325	004355	VOICE	SHORE TO SHIP	1501474	0.00	INCOMPLETE
000325	004422	VOICE	SHIP TO SHORE	10070352024	0.00	INCOMPLETE
000325	004005	VOICE	SHIP TO SHORE	10070354000	7.53	COMPLETE
000325	005010	VOICE	SHORE TO SHIP	1501474	0.00	INCOMPLETE
000325	005031	VOICE	SHORE TO SHIP	1501474	0.00	INCOMPLETE
000325	005044	VOICE	SHIP TO SHORE	17133704304	4.78	COMPLETE
000325	010043	VOICE	SHORE TO SHIP	1501474	0.00	INCOMPLETE
000325	010057	VOICE	SHIP TO SHORE	12085223043	4.07	COMPLETE
000325	011012	VOICE	SHIP TO SHORE	10070354000	0.00	INCOMPLETE
000325	011053	VOICE	SHIP TO SHORE	10070354000	0.17	COMPLETE
000325	011020	VOICE	SHIP TO SHORE	10072734232	14.17	COMPLETE
000325	013344	VOICE	SHIP TO SHORE	10070354000	7.07	COMPLETE
000325	014401	VOICE	SHIP TO SHORE	17136562720	11.40	COMPLETE
000325	015152	VOICE	SHIP TO SHORE	12020630044	0.00	INCOMPLETE
000325	015225	VOICE	SHORE TO SHIP	1501474	0.00	INCOMPLETE
000325	015420	VOICE	SHORE TO SHIP	1501474	0.00	INCOMPLETE
000325	015732	VOICE	SHIP TO SHORE	12020630044	1.00	COMPLETE
000325	015050	VOICE	SHORE TO SHIP	1501474	5.22	COMPLETE
000325	021000	VOICE	SHIP TO SHORE	17153007320	1.55	COMPLETE
000325	022035	VOICE	SHIP TO SHORE	10070355017	0.00	INCOMPLETE
000325	022740	VOICE	SHIP TO SHORE	10070355045	0.00	INCOMPLETE
000325	022050	VOICE	SHIP TO SHORE	10070355017	1.22	COMPLETE
000325	023022	VOICE	SHIP TO SHORE	18137600332	6.78	COMPLETE
000325	024727	VOICE	SHIP TO SHORE	10070355017	0.47	COMPLETE
000325	024900	VOICE	SHORE TO SHIP	1501474	0.00	INCOMPLETE
000325	024035	VOICE	SHORE TO SHIP	1501474	0.00	INCOMPLETE
000325	025515	VOICE	SHORE TO SHIP	1501474	0.00	INCOMPLETE
000325	025543	VOICE	SHIP TO SHORE	14077041861	4.52	COMPLETE
000325	030335	VOICE	SHIP TO SHORE	17136562720	5.00	COMPLETE
000325	031318	VOICE	SHORE TO SHIP	1501474	0.00	INCOMPLETE
000325	031400	VOICE	SHIP TO SHORE	10070354000	12.10	COMPLETE
000325	032740	VOICE	SHIP TO SHORE	10070352000	1.47	COMPLETE
000325	033337	VOICE	SHIP TO SHORE	10070352001	0.00	INCOMPLETE
000325	033450	VOICE	SHORE TO SHIP	1501474	0.00	INCOMPLETE
000325	033527	VOICE	SHIP TO SHORE	10070354000	2.40	COMPLETE
000325	035423	VOICE	SHIP TO SHORE	10070352404	4.90	COMPLETE
000325	040336	VOICE	SHIP TO SHORE	17136562720	6.07	COMPLETE
000325	041520	VOICE	SHIP TO SHORE	10070354000	3.10	COMPLETE
000325	043202	VOICE	SHORE TO SHIP	1501474	0.00	INCOMPLETE
000325	043340	VOICE	SHORE TO SHIP	1501474	0.00	INCOMPLETE
000325	043055	VOICE	SHORE TO SHIP	1501474	0.00	INCOMPLETE
000325	044320	VOICE	SHORE TO SHIP	1501474	3.03	COMPLETE
000325	045550	VOICE	SHIP TO SHORE	10070355070	12.35	COMPLETE
000325	051007	VOICE	SHORE TO SHIP	1501474	13.40	COMPLETE
000325	063042	VOICE	SHORE TO SHIP	1501474	0.00	INCOMPLETE
000325	063714	VOICE	SHIP TO SHORE	10070355550	2.57	COMPLETE
000325	071222	VOICE	SHIP TO SHORE	10070355550	6.05	COMPLETE
000325	002010	VOICE	SHORE TO SHIP	1501474	0.00	INCOMPLETE
000325	002700	VOICE	SHIP TO SHORE	17133005011	10.00	COMPLETE

TRAFFIC ANALYSIS VIA COMSAT EARTH STATIONS

0:32 TUESDAY, /

SES ID: 1601474

03/23/89 10:01:00 (GMT) - 03/25/89 00:00:00 (GMT)

DATE	TIME	SERVICE TYPE	DIRECTION	DESTINATION NUMBER	DURATION (MINUTES)	STATUS
000325	021130	TELEX	SHIP TO SHIP	0011501200	1.10	COMPLETE
					<u>040.38</u>	



525-0050 (GEN. MAR. 24-1965)

# NIGHT ORDER BOOK

OF THE

31 MAR 67

S. M.D. EXON VILDES

CAPTAIN Michael A. Stuber

### CERTIFIED TO BE A TRUE COPY

I have seen the original and compared this copy with it and found it to be a true copy.

*M. J. DeLozier*  
MARK J. DELOZIER, CW03, USCG  
MARINE INVESTIGATOR/INSPECTOR

### CERTIFIED TO BE A TRUE COPY

~~I have seen the original and compared this copy with it and found it to be a true copy~~

*Wayne J. Stock*  
Name-Rank or Title-Duty Station

#109  
Partial





# STANDING ORDERS

1. Watch Officer shall be fully conversant with the Vessel's log, and shall be properly advised by the Master of the Vessel's position, course and speed. The Watch Officer shall be relieved by another licensed Deck Officer when the Vessel is underway.

2. Officer taking over the Watch must be physically able and fully conversant with the vessel's log, and shall be properly advised by the Master of the vessel's position, course and speed. The Watch Officer shall be relieved by another licensed Deck Officer when the Vessel is underway.

3. The Watch Officer shall be conversant with the general weather conditions and associated hazards, the prevailing visibility, the progress of the Vessel during the previous watch, the present geographic position of the Vessel, the present course and speed, the characteristics of any navigational aid in sight or expected to be sighted, navigational dangers or potential dangers the Vessel is required to pass and alterations of course during his Watch and including one hour thereafter, the location of other vessels relative to the Vessel's course and speed, active radio emergencies or warnings affecting Mariners, work at locations which would influence a decision to act to ensure the safety of Vessel's personnel, the orders of the Master concerning the navigation of the Vessel which are recorded in the Night Order Book and Voyage Plan and Navigator's Check List, when applicable.

4. Only when he is satisfied as to these points is he to accept the responsibility of taking over the Watch and not until then is the Officer being relieved permitted to leave the Bridge.

5. The change of Watch is to be logged, noting the time.

6. The Watch is not to be relieved during a maneuver and until the relieving Officer is satisfied as to the safety of the Vessel.

7. The Vessel is at all times to be navigated in strict compliance with the International Regulations for the Prevention of Collisions at Sea and any local Regulations relating to navigation. Any necessary action, such as altering course or reducing speed, especially if the Vessel is the giving-way Vessel under such Regulations, should be positive and taken in sufficient time. Officers of the Watch must bear in mind the necessity of leaving other Vessels in no position of doubt as to his intentions.

8. The position of the Vessel when underway shall be frequently verified, when in sight of land, by visual bearings and, otherwise by celestial observations, or, either case, the positions obtained shall be checked, where practicable by independent use of the navigational aids with which the Vessel is equipped.

9. The Vessel's position when at anchor shall be fixed and thereafter checked frequently, at least once each hour. Particular vigilance is to be exercised prior to, during, and after change of tide. The time of swing is to be entered in the Deck Log Book.

10. Whenever the position of the Vessel is fixed the data shall be entered in the Deck Log Book and the position recorded on the charts in use. Any significant discrepancy in the Vessel's position or a used between positions shall be brought to the immediate attention of the Master.

11. The course to steer will be given as a Gyro Course unless otherwise stated.

12. The Gyro steering repeater shall be checked against the Master Gyro at the commencement of each Watch. The remaining Gyro repeaters will then be checked against the Gyro steering repeater.

13. A close check at half-hour intervals throughout the Watch is to be made between the Standard Compass, Steering Compass (if fitted) and Gyro Steering Repeater. The Off-Course Alarm should be used where installed and practicable.

14. Whenever conditions permit, Gyro and Standard Compass errors shall be ascertained during each Watch for each course that is steered.

15. The Officer of the Watch shall observe the course and speed approved by the Master. This should not prevent the Officer of the Watch from taking the most effective action which, in his judgment, may be necessary to avoid casualty to the Vessel or its personnel. The Master is to be notified as soon as possible of the circumstances and the action taken.

16. The course steered shall be adjusted for set and leeway to make the course laid down, and the Master kept informed. Full use is to be made of the Course Recorder for checking the course steered and the settings in the Gyro Pilot Steering Control.

17. Data in respect of the progress of the Vessel is to be entered on the Course Order Book and initialed by the Watch Officer.

18. At 0000 hours each day enter data and verify that time, course and speed, and Vessel's noon position each day.

19. At 0000 hours each day enter data and verify that time, course and speed, and Vessel's noon position each day.

20. At 0000 hours each day enter data and verify that time, course and speed, and Vessel's noon position each day.

21. At 0000 hours each day enter data and verify that time, course and speed, and Vessel's noon position each day.

22. At 0000 hours each day enter data and verify that time, course and speed, and Vessel's noon position each day.

23. At 0000 hours each day enter data and verify that time, course and speed, and Vessel's noon position each day.

24. The Watch Officer shall record any significant departures from the time, date and position, course or speed as set by the Master and/or course changes made in accordance with the International Regulations for the Prevention of Collisions at Sea.

25. Steering shall be automatic or manual in accordance with Watch type B, C, and D, and other conditions of reduced visibility; in high density traffic conditions, or when close to the shore or near shallow banks; or when in shallow water, ample opportunity should be given for familiarizing themselves with the steering characteristics of the Vessel.

26. When conditions of reduced visibility are suspected ahead or close to the Vessel on either side, the Radar(s) must be switched-on and immediate steps taken to reduce to a moderate speed such that on entering the area of reduced visibility the Vessel is capable of being navigated in strict compliance with the International Regulations for the Prevention of Collisions at Sea. The Master shall be advised immediately of the action taken and is to be called when visibility is reduced or there are indications that visibility is deteriorating.

27. When in reduced visibility, whether underway or at anchor, the appropriate sound signals are to be strictly complied with.

28. The Officer of the Watch must maintain a sharp lookout. This implies anticipation of possible danger, and taking the appropriate action in time to prevent a dangerous situation from developing. Officers must realize that undue reliance on navigational aids is no substitute for the keeping of a good lookout.

29. The Master is to be advised immediately of all equipment failure such as steering gear, engine, gyro pilot, gyro, radar, echo sounder, decoe navigator, horn, whistle, etc.

30. The Master is to take action necessary to restore operability of the defective equipment and to notify Headquarters if assistance is required.

31. The Seaman employed as lookout shall not be called upon to perform duties which will distract his attention.

32. Lookouts are to be posted:  
From sunset to sunrise,  
During reduced visibility,  
When entering or leaving port,  
When traffic is heavy,  
At other times specified by the Master.

33. An Officer or other person may be in the fore part of the Vessel, but who is assigned any other duties whatsoever, does not fulfill this requirement.

34. A stock check shall be kept on the depth of water under the keel by use of the aids provided.

35. Prior to the end of sea passages, Officers shall familiarize themselves with the requirements of the local Regulations relating to navigation contained in the applicable Sailing Directions or Coast Pilots, A "Check List of Items for Planning Entry into Port" and "Vessel/Pilot Information Exchange", also a "Check List of Items to be Agreed Between the Master and the Pilot", are given in Appendices D, E and F of the Navigation and Bridge Organization Manual.

36. When the Master takes the con underway, he shall clearly indicate this fact to the Watch Officer who shall record the fact in the Voyage Plan or Deck Log Book. Until relieved of the con, the Watch Officer should carry-out his responsibilities as if the Master were not present on the Bridge. The Watch Officer should be familiar with his duties and responsibilities when the Master is coming the Vessel.

37. The presence of a Pilot on the Bridge in no way reduces the responsibilities of the Watch Officer for Vessel navigation.

38. The Master is to assign "Stations" to the Deck Officers to cover docking and undocking and such other movements as may occur within the port area.

39. The use of the Bridge radio/telephones should be confined to the safe navigation of the Vessel and to other Company official business and emergencies. The Bridge-to-Bridge radio/telephones shall be used only in accordance with applicable regulations.

40. Persons not directly concerned with the immediate navigation of the Vessel shall not be permitted on the Bridge without permission of the Master.

41. These Standing Orders and the current Night Orders are to be signed by all Licensed Deck Officers to signify that they have read and understood their meaning.

42. Navigating Officers are to be familiar with their duties which are laid down for various watch conditions in Part 8 of the Navigation and Bridge Organization Manual.

43. The Master may add to these Standing Orders.

44. Nothing in these Standing Orders shall be construed as relieving the Master or any Officer or crew member of his responsibility, as defined by law or governmental Regulation, or from the exercise of sound judgement. The Watch Officer's primary consideration must always be the safety of life and property at sea.



# NIGHT ORDERS

DATE	DAY	COURSE	REMARKS
3-17-89	Sun	328°T	Follow 328°T Course Line on Chart 11008 observe standing orders. Call me @ 0700 if not needed before. Joseph J. DeLozier/USCG D. DeLozier J. DeLozier
3-20-88	Mon	328°T	Follow 328°T Course Line on Chart 531. observe standing orders Call me @ 0700 if not needed before Joseph J. DeLozier/USCG D. DeLozier J. DeLozier
2-21-87	Tues	328°T	Follow 328°T Course Line on Chart 531. observe standing orders Call me @ 0700 if not needed before. Joseph J. DeLozier/USCG D. DeLozier J. DeLozier

CERTIFIED TO BE A TRUE COPY

I have seen the original and compared this copy with it and  
 MARK J. DELOZIER, CW03, USCG  
 MARINE INVESTIGATOR/INSPECTOR  
 Name-Rank or Title-Duty Station

734 0000 (GEN-MAR-51-1588)

CERTIFIED TO BE A TRUE COPY  
NIGHT ORDER BOOK

As ordered this copy was made  
for the use of the

OF THE

RECEIVED

Name Name of This Duty Station

S.

A.V. EX-800 PIGEON

CAPTAIN

MICHAEL A. STABER



# STANDING ORDERS

1. The Watch Officer shall not leave the Navigation Bridge when the Vessel is under way unless properly relieved by the Master or another licensed Deck Officer. A proper Watch shall be maintained by Officers when the Vessel is at anchor.

2. The Officer taking over the Watch must be physically able and fully alert and, when the vessel is under way, shall thoroughly familiarize himself with:

- the general weather conditions and forecast;
- the prevailing visibility;
- the progress of the Vessel during the previous watch;
- the present geographic position of the Vessel;
- the present course and speed;
- the characteristics of any navigational aid in sight or expected to be sighted;
- navigational dangers or potential dangers the Vessel is required to pass and alterations of course during his Watch and including one hour thereafter;
- the location of other vessels relative to the Vessel's course and speed;
- active radio emergencies or warnings affecting mariners;
- work at locations which would influence a decision to act to ensure the safety of Vessel's personnel;
- the orders of the Master concerning the navigation of the Vessel which are recorded in the Night Order Book and Voyage Plan and Navigation Check List, when applicable.

Only when he is satisfied as to these points is he to accept the responsibility of taking over the Watch and not until then is the Officer being relieved permitted to leave the Bridge.

The change of Watch is to be logged, noting the time.

The Watch is not to be relieved during a maneuver and until the relieving Officer is satisfied as to the safety of the Vessel.

3. The Vessel is at all times to be navigated in strict compliance with the "International Regulations relating to the Prevention of Collisions at Sea", and any local Regulations relating to navigation. Any necessary action, such as altering course or reducing speed, especially if the Vessel is the giving-way Vessel under such Regulations, should be positive and taken in sufficient time. Officers of the Watch must bear in mind the necessity of leaving other Vessels in no possible doubt as to his intentions.

4. The position of the Vessel when under way shall be frequently verified, when in sight of land, by visual bearings and, otherwise by celestial observations. In either case, the positions obtained shall be checked where practicable by intelligent use of the navigational aids with which the Vessel is equipped.

The Vessel's position when at anchor shall be fixed and thereafter checked frequently, at least once each hour. Particular vigilance is to be exercised prior to, during, and after change of tide. The time of swing is to be entered in the Deck Log Book.

Whenever the position of the Vessel is fixed the data shall be entered in the Deck Log Book and the position recorded on the charts in use. Any significant discrepancy in the Vessel's position or speed between positions shall be brought to the immediate attention of the Master.

5. The course to steer will be given as a Gyro Course unless otherwise stated.

The Gyro steering repeater shall be checked against the Master Gyro at the commencement of each Watch. The remaining Gyro repeaters will then be checked against the Gyro steering repeater.

A close check at half-hour intervals throughout the Watch is to be made between the Standard Compass, Steering Compass (if fitted) and Gyro Steering Repeater. The Off-Course Alarm should be used where installed and practicable.

Whenever conditions permit, Gyro and Standard Compass errors shall be ascertained during each Watch for each course that is steered.

6. The Officer of the Watch will observe the course and speed approved by the Master. This should not prevent the Officer of the Watch from taking the most effective action which, in his judgment, may be necessary to avoid casualty to the Vessel or its personnel. The Master is to be notified as soon as possible of the circumstances and the action taken.

The course steered shall be adjusted for set and leeway to make the course laid down, and the Master kept informed. Full use is to be made of the Course Recorder for checking the course steered and the settings on the Gyro Pilot Steering Control.

Data in respect of the progress of the Vessel is to be entered on the Course Recorder Roll and initialed by the Watch Officer.

- At 0000 hours each day enter data and verify that time, course and quadrant settings are correct;
- Vessel's noon position each day.

It is particularly important to record any significant departures from the time, dates and positions, Vessel's course as set by the Master and/or course changes made in reduced visibility to avoid other vessels or when faced with emergency conditions.

7. Steering shall be changed from automatic to manual in accordance with Watch types B, C, and D; in fog or other conditions of reduced visibility; in high density traffic zones; when navigating close to the shore or near shallow banks; or when in shallow water. Helmsmen should be given ample opportunity for familiarizing themselves with the steering characteristics of the Vessel.

8. If fog or other conditions of reduced visibility are suspected ahead or close to the Vessel on either side, the Radar(s) must be switched-on and immediate steps taken to reduce to a moderate speed such that on entering the area of reduced visibility the Vessel is capable of being navigated in strict compliance with the "International Regulations for the Prevention of Collisions at Sea". The Master shall be advised immediately of the action taken and is to be called when visibility is reduced or there are indications that visibility is deteriorating.

When in reduced visibility, whether underway or at anchor, the appropriate sound signals are to be strictly complied with.

9. The Officer of the Watch must maintain a sharp lookout. This implies anticipation of possible danger, and taking the appropriate action in time to prevent a dangerous situation from developing. Officers must realize that undue reliance on navigational aids is no substitute for the keeping of a good lookout.

10. The Master is to be advised immediately of all equipment failure such as steering gear, engines, gyro pilot, gyro, radar, echo sounder, decca navigator, loran, whistle, etc.

The Master is to take action necessary to restore operability of the defective equipment and to notify Headquarters if assistance is required.

11. The Seaman employed as lookout shall not be called upon to perform duties which will distract his attention.

Lookouts are to be posted:

- From sunset to sunrise;
- During reduced visibility;
- When entering or leaving port;
- When traffic is heavy;
- At other times specified by the Master.

(An Officer or other person may be in the fore part of the Vessel, but who is assigned any other duties whatsoever, does not fulfill this requirement.)

12. A close check shall be kept on the depth of water under the keel by use of the aids provided.

13. Prior to the end of sea passage, Officers shall familiarize themselves with the requirements of the local Regulations relating to navigation contained in the applicable Sailing Directions or Coast Pilots. A "Check List of Items for Planning Entry Into Port" and "Vessel/Pilot Information Exchange", also a "Check List of Items to Be Agreed Between the Master and the Pilot", are given in Appendices D, E and F of the Navigation and Bridge Organization Manual.

14. When the Master takes the con underway, he shall clearly indicate this fact to the Watch Officer who shall record the fact in the Voyage Plan or Deck Log Book. Until relieved of the con, the Watch Officer should carry-out his responsibilities as if the Master were not present on the Bridge. The Watch Officer should be familiar with his duties and responsibilities when the Master is conning the Vessel.

15. The presence of a Pilot on the Bridge in no way reduces the responsibilities of the Watch Officer for Vessel navigation.

16. The Master is to assign "Stations" to the Deck Officers to cover docking and undocking and such other movements as may occur within the port area.

17. The use of the Bridge radio/telephone should be confined to the safe navigation of the Vessel and to other Company official business and emergencies. The Bridge-to-Bridge radio/telephone shall be used only in accordance with applicable regulations.

18. Persons not directly concerned with the immediate navigation of the Vessel shall not be permitted on the Bridge without permission of the Master.

19. These Standing Orders and the current Night Orders are to be signed by all Licensed Deck Officers to signify that they have read and understood their meaning.

20. Navigating Officers are to be familiar with their duties which are laid down for various watch conditions in Part 8 of the Navigation and Bridge Organization Manual.

21. The Master may add to these Standing Orders.

22. Nothing in these Standing Orders shall be construed as relieving the Master or any Officer or crew member of his responsibility, as defined by law or governmental Regulation, or from the exercise of sound judgement. The Watch Officer's primary consideration must always be the safety of life and property at sea.





# NIGHT ORDERS

DATE	DAY	COURSE	REMARKS
8-27-88	Sat	Ad Anchor.	<p>Observe &amp; Sign Standing Orders. Take &amp; Put anchor bearings frequently. Call me if in doubt or if vessel starts to drag anchor. Call me 30 minutes before Exxon Galveston comes alongside. Call Mr. Paul Myer # 1419 and DR. Margaret McVain # 134 30 minutes before the Galveston comes alongside.</p> <p><i>Thomson A. Hogan</i> <i>Chief Pilot</i>  <i>M. Carroll</i> <i>C. Henderson</i></p>
8-29-88	Mon	328	<p>Observe Standing Orders. Sign Standing Orders. Call me when in doubt or when needed and at 0700. Follow 328 course on chart # 18007.</p> <p><i>Thomson A. Hogan</i> <i>Chief Pilot</i>  <i>M. Carroll</i> <i>C. Henderson</i></p>
8-30-88	Tues	328	<p>Observe Standing Orders. Follow 328 course on chart 18007 + 531. Call me when in doubt or when needed and at 0700.</p> <p><i>Thomson A. Hogan</i> <i>Chief Pilot</i>  <i>M. Carroll</i> <i>C. Henderson</i></p>

# NIGHT ORDERS

DATE	DAY	COURSE	REMARKS	
8-31	Wed	328	<p>Observe Standing Orders. Follow 328 course on chart 531. Call me if i doubt or when needed and at 0600.</p> <p>M. Carrick C. Hampstead</p>	
9-1	Thu	328	<p>Observe Standing Orders. Follow 328 course on chart 531. Call me when i doubt or when needed and at 0600.</p> <p>M. Carrick C. Hampstead</p>	9
9-2	Fri	At Anchor	<p>Observe Standing Orders. Take 1 plot anchor bearing frequently. Call me if we start to drag anchor or when i doubt and at 0600.</p> <p>M. Carrick C. Hampstead</p>	9
				9



# NIGHT ORDERS

DATE		DAY	COURSE	REMARKS
9-3		Sat	St. Andrew	<p>Observe Standing Orders. Take 1st course bearing frequently. Call me if we start to drag when in doubt.</p> <p><i>Kenneth A. Hooper</i>  <i>W. Carr</i> <i>Ch. H. H. H.</i>  <i>C. H. H. H.</i></p>
9-6		Tues	119	<p>Observe Standing Orders. Follow 119 course on chart 10700. When in position lat 59-58' N long 145-45' W c/c 148.</p> <p>Call me when in doubt or when needed.</p> <p><i>Kenneth A. Hooper</i>  <i>W. Carr</i> <i>Ch. H. H. H.</i>  <i>Kenneth A. Hooper</i></p>
9-6		Tues	148	<p>Observe Standing Orders. Follow 148 course on chart 531. Keep well clear of buoy #46184. Call me when in doubt or when needed.</p> <p><i>Kenneth A. Hooper</i>  <i>W. Carr</i> <i>Ch. H. H. H.</i>  <i>Kenneth A. Hooper</i></p>
9-7		Wed	148	<p>Observe Standing Orders. Follow 148 course on chart 531. Call me when needed or when in doubt and at 0700.</p> <p><i>Kenneth A. Hooper</i>  <i>W. Carr</i> <i>Ch. H. H. H.</i>  <i>Kenneth A. Hooper</i>  <i>W. Carr</i></p>

# NIGHT ORDERS

DATE	DAY	COURSE	REMARKS
9-8	Thurs	148°	<p>Observe Standing Orders. Follow 148 course on chart 18007. Call me when in doubt or when needed and if adv.</p> <p style="text-align: right;"><i>Michael H. Hoff</i></p> <p>Kenneth A. Hogan - V. Carr 24M C. Henshaw</p>
9-9	Fri	148	<p>Observe Standing Orders. Follow 148 course on chart 18007. Call me when in doubt or when needed.</p> <p style="text-align: right;"><i>Michael H. Hoff</i></p> <p>Kenneth A. Hogan - V. Carr 24M C. Henshaw</p>
9-10	Sat	144	<p>Observe Standing Orders. Follow 144 course on chart 18022. Keep a sharp lookout for small vessels. Give all traffic a 2 mile CPA. Call me when needed or when in doubt.</p> <p style="text-align: right;"><i>Michael H. Hoff</i></p> <p>Kenneth A. Hogan - V. Carr 24M C. Henshaw</p>

# NIGHT ORDERS

DATE	DAY	COURSE	REMARKS
9-11	Sun	144	<p>Observe Standing Order. Follow 144 course on chart 18000 + 21005. Keep a sharp lookout for small vessels. Give all traffic a 2 mile C.P.A. Call me when in doubt or when needed.</p> <p style="text-align: right;"><i>Michael J. Hoyle</i></p> <p><i>Kenneth A. Hogan</i>  <i>J. Carr 21M</i>  <i>C. Heppstein</i></p>
9-12	Mon	144	<p>Observe Standing Order. Follow 144 course on charts 21011 &amp; 21014. When in position hit 23-18' by 112-14' c/p to 124. Call me when needed or when in doubt.</p> <p style="text-align: right;"><i>Michael J. Hoyle</i></p> <p><i>Kenneth A. Hogan</i>  <i>J. Carr 21M</i>  <i>C. Heppstein</i></p>
9-13	Tues	124	<p>Observe Standing Order. Follow 124 course on chart 21017. Call me when in doubt or when needed and I O for.</p> <p style="text-align: right;"><i>Michael J. Hoyle</i></p> <p><i>Kenneth A. Hogan</i>  <i>J. Carr 21M</i>  <i>C. Heppstein</i></p>



# NIGHT ORDERS

DATE	DAY	COURSE	REMARKS
Wed	9-14	114	<p>Observe Standing Order. Follow 114 course on chart 21020. Keep a sharp lookout for small vessels. Give all traffic a 2 mile G.P.A. Call me when needed or when in doubt.</p> <p style="text-align: right;"><i>W. Carr</i></p> <p>W. Carr C. Campbell</p>
Thurs	9-15	114	<p>Observe Standing Order. Follow 114 course on chart 21023. Call me when in doubt or when needed.</p> <p style="text-align: right;"><i>W. Carr</i></p> <p>W. Carr C. Campbell</p>
Fri	9-16	115	<p>Observe Standing Order. Follow 115 course on chart 21026. Call me when in doubt or when needed.</p> <p style="text-align: right;"><i>W. Carr</i></p> <p>W. Carr C. Campbell</p>

# NIGHT ORDERS

DATE		DAY	COURSE	REMARKS
Sat		9-17	126	<p>Observe Standing Order. Follow 126 course on chart 21500. When position lat 9-09.2 long 85-01.0. C/L to 118°. Keep a sharp lookout for small vessels. Give all traffic a 2 mile CPA. Call me when needed or when in doubt.</p> <p style="text-align: right;"><i>Michael H. Carr</i></p> <p>Myron A. Loggins C. Hampstead</p>
Sun		9-20	296	<p>Observe Standing Order. Follow 296 course on chart 21500. Call me when needed or when in doubt.</p> <p style="text-align: right;"><i>Michael H. Carr</i></p> <p>Myron A. Loggins C. Hampstead</p>
Wed		9-21	296	<p>Observe Standing Order. Follow 296 course on chart 21026. Call me when needed or when in doubt.</p> <p style="text-align: right;"><i>Michael H. Carr</i></p> <p>Myron A. Loggins C. Hampstead</p>

# NIGHT ORDERS

DATE	DAY	COURSE	REMARKS
Thurs	9. 22	296	Observe Standing Orders. Follow 296 course on chart 21023. Call me when in doubt or when needed. <div style="text-align: right;"><i>Michael H. Hill</i></div> Kenneth A. Grogan Lt. Comm. USN C. Hempstead
9. 23	Fri	296	Observe Standing Orders. Follow 296 course on chart 21020. When in position Lat 17° 58' N Long 103° 47' W. Call me when in doubt or when needed. <div style="text-align: right;"><i>Michael H. Hill</i></div> Kenneth A. Grogan Lt. Comm. USN C. Hempstead
9. 24	Sat	304	Observe Standing Orders. Follow 304 course on chart 21017. Call me when in doubt or when needed. <div style="text-align: right;"><i>Michael H. Hill</i></div> Kenneth A. Grogan Lt. Comm. USN C. Hempstead
9. 25	Sun	324	Observe Standing Orders. Follow 324 course on chart 21014 - 21011. Call me when in doubt or when needed. <div style="text-align: right;"><i>Michael H. Hill</i></div> Kenneth A. Grogan Lt. Comm. USN C. Hempstead



# NIGHT ORDERS

DATE		DAY	COURSE	REMARKS
9-26		Mon	342	Observe Standing Orders. Follow 342 course on chart 21005 & 18000. Call me when needed or when in draft. <i>Walter H. Meyer</i>
				<i>Kenneth A. Boyer</i> <i>H. Carr</i>
9/27/88		Tues.	Long Beach D-12	Anchored J-25-A-2-Long Beach Anchorage Point Ancker 5-Steps. Keep a close check on vessel's position and inform me of any sign of dragging. Have watch stand by for launch arrivals and departures. Observe standing orders. Call me @ 0700 if not needed before. <i>Joseph J. Heccewood</i>
				<i>Kenneth A. Boyer</i> <i>H. Carr</i>
9-28-88		Wednesday	Long Beach J-25-A-2	Anchored as per 9/27. Observe standing orders. Call me @ 0700 if not needed before. <i>Joseph J. Heccewood</i>
				<i>Kenneth A. Boyer</i> <i>H. Carr</i>

# NIGHT ORDERS

DATE	DAY	COURSE	REMARKS	
10-12-88	Wednesday	320°T	Follow 320°T Course Line on Chart # 18022 @ point indicated @ Lat 36°N - 4c	10
		328°T	and follow this course line. - Observe standing orders - Call me @ 0700 if not needed before	
			Joseph J. Greenwood Ops 214 Thomatt A Hogan 3/m N. Carr 2/m Jack R. Kuhl	10
12-12-88	Thursday	328°T	Follow 328°T Course Line on Chart # 18007. Observe standing orders Call me @ 0700 if not needed before	
			Joseph J. Greenwood Ops 214 Thomatt A Hogan 3/m N. Carr 2/m Jack R. Kuhl	
12-14-88	Friday	328°T	Follow 328°T Course Line on Chart # 18007. Observe standing orders Call me @ 0700 if not needed before	10
			Joseph J. Greenwood Ops 214 Thomatt A Hogan 3/m N. Carr 2/m Jack R. Kuhl	
10-15-88	Sat.	328°T	Follow 328°T Course Line on Chart # 531. Observe standing orders Call me @ 0700 if not needed before	10
			Joseph J. Greenwood Ops 214 Thomatt A Hogan 3/m N. Carr 2/m Jack R. Kuhl	

# NIGHT ORDERS

DATE	DAY	COURSE	REMARKS
10-19-88	Wed.	148°T	Follow 148°T Course Line on Chart #531 observe standing orders. Call me @ 0700 if not needed before. Joseph J. Greenwood / MASTER Merritt A. Hooper 3/m U. Carr 2/m Janet Kuhl.
10-20-88	Thurs.	148°T	Follow 148°T Course Line on Chart #531. Now proceeding @ 75 RPMs as water moderated increase speed via Finz SFT. Do not allow vessel to labour, decrease speed if necessary observe standing orders. Call me @ 0700 if not needed before. Joseph J. Greenwood / MASTER Merritt A. Hooper 3/m U. Carr 2/m Janet Kuhl.
10-21-88	Fri.	148°T	Follow 148°T Course Line on Chart #18007. observe standing orders Call me @ 0700 if not needed before. Joseph J. Greenwood / MASTER Merritt A. Hooper 3/m U. Carr 2/m Janet Kuhl.
10-22-88	Sat	148°T	Follow 148°T Course Line on Chart #18007. observe standing orders. Call me @ 0700 if not needed before. Joseph J. Greenwood / MASTER Merritt A. Hooper 3/m U. Carr 2/m Janet Kuhl.



# NIGHT ORDERS

DATE	DAY	COURSE	REMARKS	
10.23.88	Sunday	148°T	Follow 148°T Course Line to point indicated there &c.	10.
		144°T	and follow this course line there &c.	
		123°T	and continue to follow this course line. Don proceed into 70 RPMs for 1700 local arrival Long Beach. Breakfast. Observe standing orders Call me @ 0700 if not needed before.	
			Joseph J. Hazelwood / MASTER Kenneth A. Hogan / H. Carroll James R. Bell	
10.24.88	Friday	328°T	Follow 328°T Course Line on Chart #18007. Observe standing orders. Call me @ 0700 if not needed before.	10.
			Joseph J. Hazelwood / MASTER McQuinn James R. Bell	
10.29.88	Sat	328°T	Follow 328°T Course Line on Chart #18007-1831. Observe standing orders. Call me @ 0700 if not needed before.	
			Joseph J. Hazelwood / MASTER McQuinn James R. Bell	

# NIGHT ORDERS

DATE	DAY	COURSE	REMARKS
10-30-88	Sun	328°T	<p>Follow 328°T Course Line on CHART # 531. Now proceeding @ reduced RPM's - Do not allow vessel to labor. If necessary reduce speed further. Call duty engineer; my 02/prior to doing this. Observe standing orders call me @ 0700 if not needed before.</p> <p style="text-align: right;">Joseph J. Harewood / Master James M. Bull</p>
10-31-88	Mon	328°T	<p>Follow 328°T Course Line on CHART # 531 - Observe standing orders. Call me @ 0700 if not needed before.</p> <p style="text-align: right;">Joseph J. Harewood / Master James M. Bull</p>
11-2-88	Tue.	119°T	<p>Follow 119°T Course Line on CHART # 1603 @ Point Indicated of 1/4. 148°T and follow this course line - Continuing on CHART # 1603. Observe standing orders - Call me @ 0700 if not needed before.</p> <p style="text-align: right;">Joseph J. Harewood / Master James M. Bull</p>

# NIGHT ORDERS

DATE	DAY	COURSE	REMARKS
4-3-88	Thurs.	148°T	<p>Follow 148°T Course Line on Chart # 531 - observe standing orders. Call me @ 0700 if not needed before.</p> <p style="text-align: right;">Joseph J. Hazzard / Master</p> <p><i>[Signature]</i> Jack Hill</p>
4-4-88	Friday	148°T	<p>Follow 148°T Course Line on Chart # 531; 118007. observe standing orders. Call me @ 0700 if not needed before.</p> <p style="text-align: right;">Joseph J. Hazzard / Master</p> <p><i>[Signature]</i> Jack Hill</p>
4-6-88	Sunday	125°T	<p>Follow 125°T Course Line on Chart # 18607; 118640. Proceeding at reduced speed for an 0830 1/8-KEA at SF Pilot Station. Comply with San Francisco Traffic System regulations. observe standing orders call me at point indicated off of Pt. Reyes or at any other time you are in doubt on needed assistance. Contact Pilot and establish a log and hold clear 12x4 watch to 1900 hours.</p> <p style="text-align: right;">Joseph J. Hazzard / Master</p> <p><i>[Signature]</i> Jack Hill</p>



# NIGHT ORDERS

DATE	DAY	COURSE	REMARKS
11-7-88	Monday	Anchorage #9 S.F. Bay	Anchored San Francisco Bay Anchorage #9. STRAHEAD of Anchor 8 shots in water. Check vessel's Position frequently and NOTIFY ME at any sign of dragging. OBSERVE standing orders. - (CALL ME @ 0700 if NOT NEEDED before.)  Joseph J. Farrell / Captain John P. [Signature]
11-18-88	Thursday	Anchorage #9 S.F. Bay	Anchored 5th of Anchor 7 shots in water. Now anticipating bunkum barges alongside approx 0200 U/S. Have tentatively ordered S.F. Pan Pizzas for 0800 sailing. Update sailing times as necessary and notify S.F. Pan Pizzas. Keep a close check on vessel's position and call me @ any sign of dragging. OBSERVE standing orders - (CALL ME @ 0700 if NOT NEEDED before.)  Joseph J. Farrell / Captain John P. [Signature]

# NIGHT ORDERS

DATE	DAY	COURSE	REMARKS	
11.18.88	Friday	305°T	Follow 305°T Course Line on CHARTS # 18645, # 18640. @ point indicated etc	11.
		328°T	and follow this course line con- tinuing on CHART # 18007. Observe standing orders - Call me @ 0700 if not needed before.	
			Joseph J. HAZELWOOD / MASTER James K. Kunkel J. K.	11.
11.19.88	Saturday	328°T	Follow 328°T Course Line on CHART # 18007. No proceeding a 65 RPRS due to heavy pitching Hence allow vessel to labour Reduce speed as necessary calling deck engineer and myself. Observe standing orders. Call me @ 0700 if not needed before.	11.
			Joseph J. HAZELWOOD / MASTER James K. Kunkel J. K.	11.

# NIGHT ORDERS

DATE	DAY	COURSE	REMARKS
11-20-88	Sun.	328°T	<p>Follow 328°T Course Line on CHART #18007 &amp; #531. - OBSERVE STANDING ORDER. CALL ME @ 0700 if NOT NEEDED before.</p> <p style="text-align: right;">Joseph J. Greenwood / Master  <i>[Signature]</i> James K. Ruhl  <i>[Signature]</i></p>
11-21-88	Mon	328°T	<p>Follow 328°T Course Line on CHART #531. OBSERVE STANDING ORDER. CALL ME @ 0700 if NOT NEEDED before.</p> <p style="text-align: right;">Joseph J. Greenwood / Master  <i>[Signature]</i> James K. Ruhl  <i>[Signature]</i></p>
11-25-88	Tuesday	148°T	<p>Follow 148°T Course Line on CHART #531 - OBSERVE STANDING ORDER. CALL ME @ 0700 if NOT NEEDED before.</p> <p style="text-align: right;">Joseph J. Greenwood / Master  <i>[Signature]</i> James K. Ruhl  <i>[Signature]</i></p>
11-27-88	Sunday	125°T	<p>Follow 125°T Course Line on CHART #531. Not proceeding @ Reduced Speed due to heavy ground swell &amp; observe standing order. CALL ME @ 0700 if NOT NEEDED before.</p> <p style="text-align: right;">Joseph J. Greenwood / Master  <i>[Signature]</i> James K. Ruhl  <i>[Signature]</i></p>



# NIGHT ORDERS

DATE	DAY	COURSE	REMARKS
11-28-88	Mon.	164°T	Follow 164°T Course Line on Chart 1800Z. Observe standing orders - Call me @ 0700 if not needed before Joseph J. Greenwood / Officer
			<del>164°T</del> 2/nt J. R. O'Neil / 1st J. R. O'Neil / 1st
11-29-88	Tues.	164°T	Follow 164°T Course Line on Chart 1800Z. Proceeding @ reduced speed for time of arrival observe standing orders Call me @ 0700 if not needed before Joseph J. Greenwood / Officer
			J. R. O'Neil / 1st J. R. O'Neil / 1st
11-30-88	Wednesday	125°T	Follow 125°T Course Line on Chart 1800Z. Check in with vessel Graphic @ point indicated off of Bodysgathed. Call @ point indicated to
		120°T	and continue on this course line. Adjust speed as necessary to arrive North of LNB-5F @ 0500 12-1-88. Contact P12025 and ascertain his side and rig location. Observe standing orders Call me @ point indicated on Chart #18645 if not needed before Joseph J. Greenwood / Officer
			J. R. O'Neil / 1st J. R. O'Neil / 1st

# NIGHT ORDERS

DATE		DAY	COURSE	REMARKS
12-2		Fri	At Anchor	Observe Standing Order. Take & Plot anchor bearing. Call me if vessel starts to drag or when in doubt and at 0200. (*124)  Hail to the King J. R. [Signature] [Signature]
12-3		Sat	At Anchor	Observe Standing Order. Take & Plot anchor bearing. Call me if vessel starts to drag or when in doubt. Call me if you need me for the buoy.  Hail to the King J. R. [Signature] [Signature]
12-4		Sun	At Anchor	Observe Standing Order. Take & Plot anchor bearing frequently. Call me if vessel starts to drag or when in doubt and at 0200.  Hail to the King J. R. [Signature] [Signature]
12-5		Mon	At Anchor	Observe Standing Order. Take & Plot anchor bearing frequently. Call me if vessel starts to drag or when in doubt and when needed.  Hail to the King J. R. [Signature] [Signature]

# NIGHT ORDERS

DATE	DAY	COURSE	REMARKS
12-6	Tues	At Anchor	Observe Standing Order. Take PLS anchor training frequently. Call me if vessel starts & drag or when in doubt.  <div style="text-align: right;"> <i>Walt H. Hays</i>  <i>[Signature]</i> </div>
12-8	Thurs	328	Observe Standing Order. Follow 328 course on chart 18007. Give all traffic a 2 mile CPA. call me when in doubt or when needed and at 0700  <div style="text-align: right;"> <i>Walt H. Hays</i>  <i>[Signature]</i> C. Hemsted                 </div>
12-9	Fri	328	Observe Standing Order. Follow 328 course on chart 18007. Steer well clear of buoy ODS "46005". Call me when needed or when in doubt and at 0700  <div style="text-align: right;"> <i>Walt H. Hays</i>  <i>[Signature]</i> C. Hemsted                 </div>
12-10	Sat	328	Observe Standing Order Follow 328 course on chart 531. Call me when in doubt or when needed and at 0700.  <div style="text-align: right;"> <i>Walt H. Hays</i>  <i>[Signature]</i> C. Hemsted                 </div>



# NIGHT ORDERS

DATE		DAY	COURSE	REMARKS
12-11		Sun	328°	<p>Observe Standing Order. Follow 328 course on chart 531. Call me when in doubt or when needed and at 0700.</p> <p style="text-align: right;">Walt H. Hays</p> <p>Walt H. Hays C. Hays</p>
12-14		Wed	119	<p>Observe Standing Order. Follow 119 course on chart 1670D. Proceeding at 65 RPM. When in lat 59-58' N long 145-45' W c/c to 148.</p> <p>Call me if need starts to <sup>found</sup> <del>change</del> when in doubt or when needed.</p> <p style="text-align: right;">Walt H. Hays</p> <p>Walt H. Hays C. Hays</p>
12-14		Wed Thurs	148	<p>Observe Standing Order. Follow 148 course on chart 531. Proceeding at 65 RPM. Call me when in doubt or when needed and at 0700.</p> <p style="text-align: right;">Walt H. Hays</p> <p>Walt H. Hays C. Hays</p>

STAY Well Clear of  
WESSLETS Reef.

# NIGHT ORDERS

DATE	DAY	COURSE	REMARKS	
12-15	Thurs	150	Observe Standing Orders. Steer 150. Proceeding at 50 RPM. Call me when in doubt or when needed and at 0700.	1
			<p style="text-align: right;"><i>Walter H. Hays</i></p> <p><i>Walter H. Hays</i></p> <p><i>Walter H. Hays</i></p>	
12-16	Fri	148	Observe Standing Orders. Follow 148 course on chart 531. Call me when in doubt or when needed and at 0700.	12
			<p style="text-align: right;"><i>Walter H. Hays</i></p> <p><i>Walter H. Hays</i></p> <p><i>Walter H. Hays</i></p>	
12-17	Sat	148	Observe Standing Orders. Follow 148 course on chart 1807. Call me when needed. or when in doubt and at 0700.	
			<p style="text-align: right;"><i>Walter H. Hays</i></p> <p><i>Walter H. Hays</i></p> <p><i>Walter H. Hays</i></p>	12
12-19	Sun	148	Observe Standing Orders. Follow 148 course on chart 1807. Call me when needed or when in doubt and at 0700.	
			<p style="text-align: right;"><i>Walter H. Hays</i></p> <p><i>Walter H. Hays</i></p> <p><i>Walter H. Hays</i></p>	

# NIGHT ORDERS

DATE	DAY	COURSE	REMARKS
12-19	Mon	148	<p>Observe Standing Order Follow 148 course on charts 18007 + 18022. Keep a sharp lookout for small vessels. Give all traffic a 2 mile CPA. Call me when in doubt or when needed and at 0700.</p> <p style="text-align: right;"><i>Michael A. Haggan</i> Master</p> <p><i>J. H. C. Haggan</i></p>
12-21	Wed	162	<p>Observe Standing Order - Follow 162 course on chart 21005. When in position Lat 28°01' N by 116°02' W Ck 144.</p> <p>Call me when in doubt or when needed and at 0700.</p> <p style="text-align: right;"><i>Michael A. Haggan</i></p> <p><i>J. H. C. Haggan</i></p>
12-22	Thurs	144	<p>Observe Standing Order. Follow 144 course on chart 21014. When in position Lat. 23-18 N by 112-14 W c/c to 124. Call me when in doubt or when needed and at 0700.</p> <p style="text-align: right;"><i>Michael A. Haggan</i></p> <p><i>J. H. C. Haggan</i></p>



# NIGHT ORDERS

DATE	DAY	COURSE	REMARKS
12-23	Fri	124	Observe Standing Order. Follow 124 course on chart 21017. Call me when i doubt or when needed and at 0700.  [Signature] 257 C. Henshaw
Plot All	SAT. FIXES		
12-24	Sat	114	Observe Standing Order. Follow 114 course on chart 21020. Keep a sharp lookout for small vessels. Give all traffic a 2 mile CPA. Call me when needed or when i doubt and at 0700.  [Signature] 257 C. Henshaw
12-25	Sun	114	Observe Standing Order. Follow 114 course on chart 21023. Call me when needed and at 0700.  [Signature] 257 C. Henshaw
		125	Observe Standing Order. Steer 125.  [Signature] C. Henshaw

# NIGHT ORDERS

DATE		DAY	COURSE	REMARKS
12-26		Mon	110	<p>Observe Standing Order. Follow 110 course on chart 21026 when at Lat 11-52' N Long 89-51' W Ck to 115. Call me when needed or when i descent and at 0700.</p> <p><i>[Signature]</i>  <i>[Signature]</i> C. Henshaw</p>
12-27		Tue	126	<p>Observe Standing Order. Follow 126 on chart 21500 when i lat 9-07' N Long 85-07' W Ck to 118. Keep sharp lookout for small vessels Give all traffic a 2 mile CPA Call me when needed or when i descent and at 0700.</p> <p><i>[Signature]</i>  <i>[Signature]</i> C. Henshaw</p>
12-28		Thu	296	<p>Observe Standing Order. Follow 296 course on chart 21566 &amp; chart 21540. Keep a sharp lookout for small vessels. Give all traffic a 2 mile CPA. Call me when needed or when i descent and at 0700.</p> <p><i>[Signature]</i>  <i>[Signature]</i> C. Henshaw</p>

# NIGHT ORDERS

DATE	DAY	COURSE	REMARKS	STATION
12-29	Fri	296	<p>Observe Standing Order. Follow 296 course on chart 21026 &amp; 21023.</p> <p>Call me when needed or when in doubt and at 0700.</p> <p><i>Michael H. Hays</i></p> <p><i>John A. Hays</i></p> <p><i>John A. Hays</i> (Hempstead)</p>	
12-30	Sat	296	<p>Observe Standing Order. Follow 296 course on chart 21023 &amp; 21020.</p> <p>Call me when in doubt or when needed and at 0700.</p> <p><i>Michael H. Hays</i></p> <p><i>John A. Hays</i></p> <p><i>John A. Hays</i> (Hempstead)</p>	
1-1	Sun	304	<p>Observe Standing Order. Follow 304 course on chart 21020 &amp; 21017.</p> <p>Call me when in doubt or when needed and at 0700.</p> <p><i>Michael H. Hays</i></p> <p><i>John A. Hays</i></p> <p><i>John A. Hays</i> (Hempstead)</p>	



# NIGHT ORDERS

DATE	DAY	COURSE	REMARKS
1-2	Mon	304	<p>Observe Standing Order. Follow 304                      come on duty 21017. Call me                      when i doubt or when needed and                      at 0700.</p> <p style="text-align: right;">Mail [Signature]                      J. [Signature] [Signature]                      [Signature]</p>
1-3	Tue	324	<p>Observe Standing Order. Follow 324                      come on duty 21011 - 21005.                      Call me when i doubt or when needed                      and at 0700. When i position                      lat 28-01.2 long 116-02.0 Ck 342.</p> <p style="text-align: right;">Mail [Signature]                      J. [Signature] [Signature]                      [Signature]</p>
1-5	Thurs	At Anchor	<p>Observe Standing Order. Plot anchor bearing                      frequently. When the pyro is cleared                      call Comby tug "Control 6" on channel 10                      for a tag standing "at the dock".                      Call me when needed and at 0745.</p> <p style="text-align: right;">Mail [Signature]                      [Signature]</p>

# NIGHT ORDERS

DATE	DAY	COURSE	REMARKS
1-5	Thu	320	<p>Observe Standing Order. Follow 320 course on chart 18022. Use in position lat 36° 00' N long 122° 19' W Clc 328.</p> <p>Keep a sharp lookout for small vessels. Give all traffic a 2 mile CPA. Call me when needed and at 0700.</p> <p><i>Michael P. Hester</i>  <i>J. Carr 2/14 (Hester)</i></p>
1-6	Fri	328	<p>Observe Standing Order. Follow 328 course on chart 18007. Call me when needed or when in doubt and at 0700.</p> <p><i>Michael P. Hester</i>  <i>J. Carr 2/14 (Hester)</i></p>
1-7	Sat	328	<p>Observe Standing Order. Follow 328 course on chart 18007. Call me when in doubt or when needed and at 0700.</p> <p><i>Michael P. Hester</i>  <i>J. Carr 2/14 (Hester)</i></p>

# NIGHT ORDERS

DATE	DAY	COURSE	REMARKS
1-8	Sun	328	<p>Observe Standing Order. Follow 328 course on chart 531. Call me when in doubt or when needed and at 0700.</p> <p style="text-align: right;">Michael J. Hayes</p> <p>John Carter U. Carr 21 M. (Hayes)</p>
1-9	Mon Sun 315	328	<p>Observe Standing Order. Follow 328 course on chart 531. Call me if in doubt or when needed. and at 0700.</p> <p style="text-align: right;">Michael J. Hayes</p> <p>John Carter U. Carr 21 M. (Hayes)</p>
1-10	Tue	328	<p>Observe Standing Order. Follow 328 course on chart 531. Call me when in doubt or when needed and at 0700.</p> <p style="text-align: right;">Michael J. Hayes</p> <p>John Carter U. Carr 21 M. (Hayes)</p>



# NIGHT ORDERS

DATE		DAY	COURSE	REMARKS
1-13		Fri	119	<p>Observe Standing Order. Follow 119 course on chart 167W. When in position Lat 59-58' Log. 145-44' C/L to 148. Call me when needed or when in doubt.</p> <p style="text-align: right;">Milt F. Hoff</p> <p>W. Carrington C. Hengst</p>
1-13		Fri	148	<p>Observe Standing Order. Follow 148 course on chart 531. Stay well clear of "46189". Call me when needed or in doubt and if 0 Fo.</p> <p style="text-align: right;">Milt F. Hoff</p> <p>W. Carrington C. Hengst</p>
1-14		Sat	148	<p>Observe Standing Order. Follow 148 course on chart 531. Call me when in doubt or needed and if 0 Fo.</p> <p style="text-align: right;">Milt F. Hoff</p> <p>W. Carrington C. Hengst</p>
1-15		Sun	148	<p>Observe Standing Order. Follow 148 course on chart 18007. Call me when in doubt or when needed and if 0 Fo.</p> <p style="text-align: right;">Milt F. Hoff</p> <p>W. Carrington C. Hengst</p>

# NIGHT ORDERS

DATE	DAY	COURSE	REMARKS
1-16	Mon	148	Observe Standing Order. Steer 148. Call me when in doubt or when needed and at 0700.
148.			
			Hail T. Hays
			J. Carr 2/4
1-18	Wed	At Anchor	Observe Standing Order. Take plot anchors bearing frequently. Call me if wind starts to blow and at 0700.
			Hail T. Hays
			J. Carr 2/4
1-19	Thurs	At Anchor	Observe Standing Order. Take plot anchors bearing frequently. Call me if wind starts to blow or when in doubt and at 0700.
			Hail T. Hays
			J. Carr 2/4
1-20	Fri	At Anchor	Observe Standing Order. Take plot anchors bearing frequently. Call me when needed or if wind starts to blow, and at 0700, and for telling of E. S. S. S.
			Hail T. Hays
			J. Carr 2/4

# NIGHT ORDERS

DATE	DAY	COURSE	REMARKS
1-21	Sat	331	<p>Observe Stand; Under Follow Great                      Circle course toward waypoint @                      Lat 58-00 N. Call me when needed                      or when in doubt about 0700.                      Under Stand; Stand 11/11/12                      In Carr 27M [Signature]</p>
1-22	Sun	331	<p>Observe Stand; Under. Follow Great                      Circle route to waypoint at 58 N                      Call me when in doubt or when needed                      and at 0700.                      Under Stand; Stand 11/11/12                      In Carr 27M [Signature]</p>
1-23	Mon	325	<p>Observe Stand; Under. Steer 325.                      Call me when in doubt or when                      needed and at 0700.                      Under Stand; Stand 11/11/12                      In Carr 27M [Signature]</p>



# NIGHT ORDERS

DATE	DAY	COURSE	REMARKS
1-24	Tues	328	Observe Standing Order. Follow 328 course on chart 531. Call me when i doubt or when needed and get a fix. W. [unclear] [unclear] [unclear] H. Carr 2/4 [unclear]
1-27	Fri	119	Observe Standing Order. Follow 119 course on chart 1670 & 18013. When in position lat 57-57' S Long 145-44.5' W Ck 148. Call me when i doubt or when needed. W. [unclear] [unclear] [unclear] H. Carr 2/4 [unclear]
1-28	Sat	144	Observe Standing Order. Follow 148 course on chart 531. Call me when needed or when i doubt. W. [unclear] [unclear] [unclear] H. Carr 2/4 [unclear]
1-29	Sat	144	Observe Standing Order. Follow 148 course on chart 531. Call me when i doubt or when needed. W. [unclear] [unclear] [unclear] H. Carr 2/4 [unclear]

# NIGHT ORDERS

DATE		DAY	COURSE	REMARKS
29		Sun	148	<p>Observe Standing Orders. Follow green course line 148. Call me when needed or when in doubt and at 0700.</p> <p><i>W.P. [Signature]</i>  <i>H. Carr 21M [Signature]</i></p>
1-30		Mon	148	<p>Observe Standing Orders. Follow green 148 course on LIT 18007. Call me when in doubt or when needed and at 0700.</p> <p><i>W.P. [Signature]</i>  <i>H. Carr 21M [Signature]</i></p>
1-31		Tues	At Anchor	<p>Observe Standing Orders. Take a plot another bearing frequently. Call me if vessel starts to drag or when in doubt. The fuel pumps to the main engine are secured. If we need the engines call engineer immediately &amp; get him down below. Do NOT slow turn engines.</p> <p><i>W.P. [Signature]</i>  <i>H. Carr 21M [Signature]</i></p>

# NIGHT ORDERS

DATE	DAY	COURSE	REMARKS
2-1	Wed	At Ancho	Observe Standing Order. Take & Plot Ancho bearing frequently. Engine are disabled and Standby tug on 5th bow. Call me when in doubt or if vessel drag anchor. <div style="text-align: right;"> <i>W. J. Carr 2/M</i>  <i>3/M</i> </div>
2-2	Thurs	At Ancho	Observe Standing Order. Take & Plot Ancho bearing frequently. Call me when in doubt or if vessel drag anchor and 15 min before the Galveston is along side. <div style="text-align: right;"> <i>W. J. Carr 2/M</i>  <i>3/M</i> </div>
2-3	Fri	At Ancho	Observe Standing Order. Take & Plot Ancho bearing frequently. Baton Range has cancelled out. Call standby for Exxon Galveston when she passes under St. - Oswald Bay Bridge. Call me when needed or if vessel starts to drag. <div style="text-align: right;"> <i>W. J. Carr 2/M</i>  <i>3/M</i> </div>



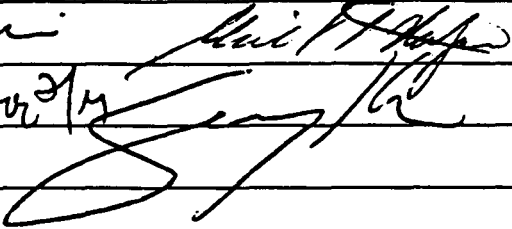
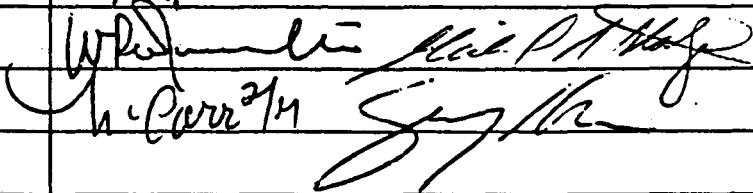
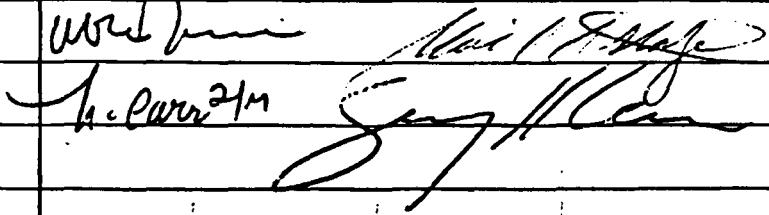
# NIGHT ORDERS

DATE	DAY	COURSE	REMARKS
2-4	Sat	At Anchor	<p>Observe Standing Orders. Take &amp; Plot anchor bearing frequently.            Call me when needed or if vessel starts to drag and at 0700            W. D. [Signature] M. [Signature]</p>
<p>20 Min 3/M</p>			
2-5	Sun	At Anchor	<p>Observe Standing Orders. Take &amp; Plot anchor bearing frequently.            Call me when needed or if vessel starts to drag and at 0700.            W. D. [Signature] M. [Signature]            H. Carr 2/4</p>
2-6	Mon	328	<p>Observe Standing Orders. Follow 328 course on chart 18007. Call me when in doubt or when needed and at 0700            W. D. [Signature] M. [Signature]            H. Carr 2/4 [Signature]</p>
2-7	Tue	328	<p>Observe Standing Orders. Follow 328 course on chart 18007. Call me when in doubt or when needed and at 0700.            W. D. [Signature] M. [Signature]            H. Carr 2/4 [Signature]</p>

# NIGHT ORDERS

DATE	DAY	COURSE	REMARKS
2-8	Wed	328	Obtain Study Order. Follow 328 course on chart 531. Call me when doubt or when needed and at 0700. WPA [Signature] [Signature] H. Carr 2/11 [Signature]
2-9	Thurs	328	Obtain Study Order. Follow 328 course on chart 531. Call me when in doubt and at 0700. WPA [Signature] [Signature] H. Carr 2/11 [Signature]
2-11	Sun	119	Obtain Study Order. Follow 119 course on chart 16700. When in position lat 59-59' N long 145-44' W c/c to 148. Let vessel set to the east of the 148 course line. Call me when in doubt or when needed. WPA [Signature] [Signature] H. Carr 2/11 [Signature]

# NIGHT ORDERS

DATE	DAY	COURSE	REMARKS
2-12	Sun	148	<p>Observe Standing Orders. Follow 148 course on chart 531. Call me when i doubt or when needed and at 0700.</p> <p>W. J. Carr 214  </p>
<p>Stay clear of by 46184</p>			
2-13	Mon	148	<p>Observe Standing Orders. Follow 148 course on chart 531. Call me when needed or when i doubt and at 0700.</p> <p>W. J. Carr 214  </p>
2-14	Tues	146	<p>Observe Standing Orders. Follow 146 course &amp; meet at 0700. Call me when needed or i doubt and at 0700.</p> <p>W. J. Carr 214  </p>



# NIGHT ORDERS

DATE		DAY	COURSE	REMARKS
2-15		Wed	144.	<p>Observe the order - Follow 144                      green course until lat 38-43;                      long 124-25 in c/c to 125.                      Stay north of the 125 course line                      until Pt. Reyes. Be aware of                      Southernly set. Call me when                      aware of Reyes and at 0500.                      Chief Mate to load down and                      adjust up to 14 at 'N' Bay at                      0630. Call ZAE for loading                      down when needed after 0700.                      Call me when in doubt or as                      needed.</p> <p>W.D. [unclear] [unclear]                      H. Carr 2/14</p>
2-17-89		Friday	Anchorage * S.F. Bay.	<p>Anchorage of Anchorage #9 S.F. Bay -                      Seaboard Anchor 10 shackles on deck.                      Keep a close watch on vessel's position                      visually and by radar and call me @                      any sign of dragging. Have Seaboard                      gangway attended when launch A/S -                      observe standing orders - Call me @ 0700                      if not needed before.</p> <p>W.D. [unclear] [unclear]                      Joseph J. Hazardwood / 14822                      H. Carr 2/14</p>

# NIGHT ORDERS

DATE	DAY	COURSE	REMARKS	D/T
2-21-89	Tues.	Anchorages #9	- Anchored As Before, Observer standing orders. Call me @ 0700 if not needed before. Joseph J. Greenwood / Master Douglas H. Carr / M Gyffler	2-24
2-22-89	Wednesday	Anchorages #9	- Anchored As Before - S.F. 12AK Pilot ordered for 2/23/89 - 0900 Trotter by 0800 and he prepared to leave by 0900. Observer standing orders - Call me @ 0700 if not needed before. Joseph J. Greenwood / Master Douglas H. Carr / M Gyffler	2-25
2-25-89	Thursday	328°T	Follow 328°T Course Line on Chart # 18007 - Observer standing orders - Call me @ 0700 if not needed before. Joseph J. Greenwood / Master Douglas H. Carr / M Gyffler	3-1

# NIGHT ORDERS

DATE	DAY	COURSE	REMARKS
2-24-89	Friday	328°	Follow 328° Course Line on Chart # 18007. Observe standing orders. Call me @ 0700 if not needed before. Joseph J. Greenwood / HARTIS [Signature] W. Carr 21M [Signature]
2-25-89	Saturday	328°	Follow 328° Course Line on Chart # 18007 & 531- observe standing orders. Call me @ 0700 if not needed before. Joseph J. Greenwood / HARTIS [Signature] W. Carr 21M [Signature]
2-26-89	Sunday	328°	Follow 328° Course Line on Chart # 531- observe standing orders. Call me @ 0700 if not needed before. Joseph J. Greenwood / HARTIS [Signature] W. Carr 21M [Signature]
3-1-89	Wednesday	148°	Follow 148° Course Line on Chart # 16013 observe standing orders. Call me @ 0700 if not needed before. Joseph J. Greenwood / HARTIS [Signature] W. Carr 21M [Signature]



# NIGHT ORDERS

DATE	DAY	COURSE	REMARKS
3.2.89	Thursday	148°T	Follow 148°T Course Line on Chart #531 observe standing orders. Call me @ 0700 if not needed before.  Joseph J. FREELWOOD / MASTER Dennis H. Carruth
3.3.89	Friday	148°T	Follow 148°T Course Line on Charts #531 & #18007 - observe standing orders Call me @ 0700 if not needed before.  Joseph J. FREELWOOD / MASTER Dennis H. Carruth
3.4.89	Saturday	148°T	Follow 148°T Course Line on Chart #18007 - No turning 77 RPMs - to prevent vessel from labouring excessively. If vessel labours decrease RPMs and call me. - observe standing orders, call me @ 0700 if not needed before.  Joseph J. FREELWOOD / MASTER Dennis H. Carruth

# NIGHT ORDERS

DATE	DAY	COURSE	REMARKS
3-5-89	Sun.	148°T	<p>Follow 148°T Course Line on CHART #18007 - OBSERVE STANDING ORDERS - CALLERS @ 0700 - J/NTS needed before.</p> <p style="text-align: right;">Joseph J. Hazelwood / Master Doreen M. Carr 2nd Grylls</p>
3-9-89	Tues.	320°T 328°T 360°T	<p>Follow 320°T Course Line on CHART #18022 - @ Points Indicated 1/2</p> <p>and follow this course line CONTINUING on CHART #18680 - @ point indicated 1/2</p> <p>and follow this course line CONTINUING on CHART #18680. a NOTED points along track line Check in with S.F. Traffic Controller land Programming down and call me. Call Points as early as possible to establish the fee for rigging a pilot ladder. which entails holding over a watch on calling out the 8:12 early.</p> <p>OBSERVE STANDING ORDERS - Call me at any time you are in doubt or need assistance - prior to NOTED points on CHART #18680 -</p> <p style="text-align: right;">Joseph J. Hazelwood / Master Doreen M. Carr 2nd Grylls</p>

# NIGHT ORDERS

DATE	DAY	COURSE	REMARKS
3-10-89	Tuesday	S.F. Bay Anchorage #9	Anchored S.F. Bay - Anchorage #9 - 9shots on deck - starboard anchor. - Presently loading bunkers and lightering to Exxon Washington. Keep a close check on vessel's position and call me at any sign of dragging. Observe standing orders for anchorage and call me @ 0700 if not needed before.
			Joseph J. Hernandez / MRS 3 J. Lawrence
3-13-89	Monday	S.F. Bay Anch. #9	Anchored S.F. Bay Anchorage #9 - 9shots on deck - undergoing turbine change inspection & repairs - at present main engine is disabled. When E.R. tells to say main engine is available. - Call Traffic and inform them that engine is available and release the standby tug. - observe standing orders. Call me @ 0700 if not needed before.
			Joseph J. Hernandez / MRS 3 J. Lawrence



# NIGHT ORDERS

DATE	DAY	COURSE	REMARKS
3-19-88	Sun.	328°T	Follow 328°T Course Line on Chart #1808 observe standing orders. Call me @ 0700 if not needed before. <i>Joseph J. Hazzard / Master</i> <i>James J. Kelly</i>
3-20-88	Mon	328°T	Follow 328°T Course Line on Chart #531. observe standing orders Call me @ 0700 if not needed before. <i>Joseph J. Hazzard / Master</i> <i>James J. Kelly</i>
3-21-88	Tues.	328°T	Follow 328°T Course Line on Chart # 531. observe standing orders Call me @ 0700 if not needed before. <i>Joseph J. Hazzard / Master</i> <i>James J. Kelly</i>

# NIGHT ORDERS

DATE	DAY	COURSE	REMARKS
3-14-89	Tues	Anchorage # 2 S.F. Bay	Anchored S.F. Bay Anchorage # 9. Standby Anchor 72105. Keep a close check on vessel's position and call me at any indica- tion of dragging. - observe standing orders Call me @ 0700 if not needed before. Joseph J. Hazelwood / Captain L. J. [Signature] L. B. [Signature]
3-15-89	Wed	Anchorage # 9 S.F. Bay	Anchored at before - observe standing orders. - Call me @ 0700 if not needed before. Joseph J. Hazelwood / Captain L. J. [Signature] L. B. [Signature]
3-16-89	thurs.	Anchorage # 9 S.F. Bay	Anchored at before - observe standing orders - Call me @ 0700 if not needed before Joseph J. Hazelwood / Captain L. J. [Signature] L. B. [Signature]
3-17-89	Fri.	Anchorage # 9 S.F. Bay	Anchored at before - observe standing orders Pilot ordered for 0600 3/18/89 Call ZAR for Nav. 3200 @ 0530. Call me @ 0530 if not needed before. Joseph J. Hazelwood / Captain L. J. [Signature] L. B. [Signature]

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I have seen the original and  
compared this copy with it and  
found it to be a true copy

Ray J. Stock, LCDR, USCG  
Name-Rank or Title-Duty Station

**PLAINTIFF**  
EXHIBIT NO. 10  
ADMITTED  Trial  
ANS 89-7217, 7218  
(CASE NUMBER)



**CERTIFIED TO BE A TRUE COPY**

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compared this copy with it and  
found it to be a true copy

*Ray J. Stock, LCDR, USCG*

Name-Rank or Title-Duty Station

PLAINTIFF  
EXHIBIT NO. 10  
ADMITTED  Trial  
NS 89-7217 7218  
(CASE NUMBER)

bnc

7/21/89

**PLAINTIFF**  
EXHIBIT NO. 11  
ADMITTED  trial  
3ANS89-7217  
(CASE NUMBER)

SLIP					
RPM	0%	5%	10%	15%	20%
78.9	18.68	17.74	16.81	15.87	14.94
78.0	18.46	17.54	16.62	15.70	14.77
77.0	18.23	17.32	16.41	15.50	14.58
76.0	18.00	17.09	16.19	15.29	14.40
75.0	17.76	16.87	15.98	15.09	14.20
74.0	17.52	16.64	15.77	14.89	14.02
73.0	17.28	16.42	15.55	14.69	13.83
72.0	17.05	16.19	15.34	14.49	13.64
71.0	16.81	15.97	15.13	14.29	13.45
70.0	16.57	15.74	14.91	14.09	13.26
69.0	16.33	15.51	14.70	13.88	13.07
68.0	16.09	15.29	14.49	13.68	12.88
67.0	15.86	15.07	14.28	13.48	12.69
66.0	15.63	14.84	14.06	13.28	12.50
65.0	15.39	14.62	13.85	13.08	12.31
64.0	15.15	14.39	13.64	12.88	12.12
63.0	14.91	14.17	13.42	12.68	11.93
62.0	14.68	13.94	13.21	12.48	11.74
61.0	14.44	13.72	13.00	12.28	11.55
60.0	14.20	13.49	12.78	12.07	11.36
59.0	13.97	13.27	12.57	11.87	11.17
58.0	13.73	13.04	12.36	11.67	10.98
57.0	13.49	12.82	12.14	11.47	10.80
56.0	13.25	12.59	11.93	11.27	10.60
55.0	13.02	12.37	11.72	11.07	10.42

CERTIFIED TO BE A TRUE COPY  
 I HAVE SEEN THE ORIGINAL AND COMPARED  
 THE COPY WITH IT AND FOUND IT TO BE A  
 TRUE COPY.  
 Name-Rank or Title-Duty Station  
 T. Hill  
 Master

I HAVE SEEN THE ORIGINAL AND COMPARED  
 THE COPY WITH IT AND FOUND IT TO BE A  
 TRUE COPY.

T. HILL  
 MASTER



**PLAINTIFF**  
EXHIBIT NO. 12  
ADMITTED  *me*  
3ANS89-7217  
(CASE NUMBER) 247

CALEB BRETT U.S.A., INC.

CERTIFIED TO BE A TRUE COPY

~~I have seen the original and  
compare it to this copy, with it and  
found it to be a true copy~~

*Dan J. Scott, Lt. J.R., USCG*  
Name-Rank or Title-Duty Station

Caleb Brett



Caleb Brett U.S.A., Inc.

To #10  
FROM DAN LAWN

EXXON VALDEZ: GROSS STANDARD VOLUME : 1,263,018 BBLs @ 60F

TOTAL CARGO LIGHTERED : 999,540 BBLs @ 60F

263,478 BBLs @ 60F

CARGO REMAINING ON BOARD EXXON VALDEZ : 2,392 BBLs  
APRIL 20, 1989.

TOTAL BBLs ESTIMATED LOST : 261,086 BBLs @ 60F

TOTAL CARGO LIGHTERED

EXXON BATON ROUGE G.S.V. : 462,015 BBLs @ 60F

EXXON SAN FRANCISCO G.S.V. : 402,707 BBLs @ 60F

EXXON BAYTOWN G.S.V. : 119,306 BBLs @ 60F

984,028 BBLs @ 60F

"BARGE UT-10" APRIL 20TH G.S.V. : 14,380 BBLs @ 60F

FOSS BARGE 255 APRIL 13TH G.S.V. : 1,132 BBLs @ 60F

TOTAL CARGO LIGHTERED G.S.V. : 999,540 BBLs @ 60F

PAUL KELLETT  
CALEB BRETT U.S.A., INC.  
AREA MANAGER

# Caleb Brett

SHIP SHOW 1204155  
 + 677  
 .05

VCF: 1262455

OSQ = 1424

VESSELS ULLAGE/SOUNDING  
 CAPACITY REPORT

AFTER LOADING  
 BEFORE DISCHARGE

BEFORE LIGHTERING  
 AFTER LIGHTERING

LIGHTERING VESSEL  
 LIGHTERING VESSEL

DEPARTURE

VESSEL Exxon Valdez	PORT Valdez, Alaska	PRODUCT/CARGO ANSL	VOYAGE NO. 05/89	DATE ULLAGES TAKEN 03-23-89
------------------------	------------------------	-----------------------	---------------------	--------------------------------

ANK NO.	ULLAGE FT. AIR	TRIM-LIST CORRECTED ULLAGE FT. AIR	T.O.V. BBLs/CUM	FREE WATER		G.O.V. BBLs/CUM	API	V.C.F. TABLE 6A	G.S.V. BBLs/CUM @ 60°F/15°C	W.C.F. TABLE	LONG TONS METRIC TONS	
				ULLAGE	VOL. BBLs/CUM							
13-02 1/4	Not Applied		61348	None	Found	61348	104.0	27.6	98088	60175	13886	8356
13-09 1/2			109270	None	Found	109270	101.8		98228	107334		14904
18-08 3/4			62992	2"	95	62994	101.5		98228	61750		8579
17-10 3/4			27350	5"	179	27171	97.2		98355	26732		3712
13-01 3/4			135602	None	Found	135602	102.2		98167	136001		18893
14-00 1/2			175121	None	Found	175121	99.8		98272	172095		23897
14-05			193177	2"	405	192772	99.8		98272	189441		26306
33-03 1/4			50441	None	Found	50441	97.8		98272	79051		10977
18-10 3/4			176216	None	Found	176216	100.3		98250	173132		24041
13-01 1/4			61454	None	Found	61454	104.8		98083	60257		8367
13-11 1/2			109078	None	Found	109078	101.6		98193	107107		14573
18-07			63169	None	Found	63169	103.4		98115	61978		8606
15-07 1/4	Not Applied		28520	5"	179	28341	97.9		98355	27875		3871
2025			1286738			1285977						

I HAVE SEEN THE ORIGINAL AND COMPARED THE COPY WITH IT AND FOUND IT TO BE A TRUE COPY.  
 My Veron 20 MAR 89  
 J. DEWATER, CIVIL, USCG  
 MARINE INVESTIGATOR/INSPECTOR  
 1263018 175382

TOTAL OBSERVED VOLUME (T.O.V.)	1286738	GROSS STANDARD VOLUME @ 60°F/15°C (G.S.V.)	1263015
LESS FREE WATER	861	LONG TONS/METRIC TONS (G.S.V.)	175382
GROSS OBSERVED VOLUME (G.O.V.)	1285877	DRAFT FORWARD	55-11
TEMPERATURE @ 160°F	27.6	DRAFT AFT	50-03
W & VCL		LIST	

MARINE SAFETY OFFICE, VALDEZ, AK, USCG  
 SIGNATURES:  
 [Signature] VESSEL REPRESENTATIVE  
 [Signature] PORT REPRESENTATIVE

# aleb Brett

FINAL SHEET AFTER DISCHARGE

0830 4 APR 88

VESSELS ULLAGE/SOUNDING  
CAPACITY REPORT

AFTER LOADING  
 BEFORE DISCHARGE

BEFORE LIGHTERING VESSEL  
 AFTER LIGHTERING VESSEL

VESSEL <b>EXXON VALDEZ</b>	PORT	PRODUCT/CARGO	VOYAGE NO.	DATE ULLAGES TAKEN <b>4 APR 89</b>
-------------------------------	------	---------------	------------	---------------------------------------

NK NO.	ULLAGE FT./MTR.	TRIM-LIST CORRECTED ULLAGE FT./MTR.	T.O.V. BBLs./Cu.M.	FREE WATER		G.O.V. BBLs./Cu.M.	°F/°C	REL. DENS. (15°C) API 60°F	V.C.F. TABLE 6A	G.S.V. BBLs./Cu.M. @ 60°F/15°C	W.C.F. TABLE	LONG TONS METRIC TONS
				ULLAGE	VOL. BBL/Cu.M.							
P	92-01	92-01 <sup>3</sup> / <sub>4</sub>	319	None	Found	319	39.1	27.6	1.0090	322	.13886	45
P	4-05	4-04	109,239	4-04	109,239	TRACE	—	—	—	—	—	—
P	93-00	93-02 <sup>1</sup> / <sub>4</sub>	825	None	Found	825	41.3	—	1.0080	832	—	115
P	3-05 <sup>1</sup> / <sub>4</sub>	3-05	66,272	3-05	66,272	TRACE	—	—	—	—	—	—
SP	79-02	79-05 <sup>3</sup> / <sub>4</sub>	10,506	80-1 <sup>1</sup> / <sub>2</sub>	9959	547	39.8	—	1.0086	552	—	77
ST	5-02	5-05	33,506	6-03	33,110	396	40.0	—	1.0086	399	—	55
IC	40-06	41-00 <sup>3</sup> / <sub>4</sub>	90,454	45-0 <sup>1</sup> / <sub>4</sub>	83,555	6,899	39.7	—	1.0088	6960	—	966
2C	41-10	42-05	113,626	42-7	113,259	367	38.1	—	1.0095	370	—	51
3C	42-03 <sup>1</sup> / <sub>2</sub>	42-09 <sup>3</sup> / <sub>4</sub>	124,269	43-2 <sup>3</sup> / <sub>4</sub>	123,253	1,011	39.5	—	1.0088	1020	—	142
4C	42-01	42-08 <sup>1</sup> / <sub>2</sub>	67,949	45-4 <sup>1</sup> / <sub>2</sub>	64,419	3,530	39.6	—	1.0088	3561	—	494
5C	42-08	43-04 <sup>1</sup> / <sub>2</sub>	116,812	43-8 <sup>1</sup> / <sub>2</sub>	116,003	809	40.5	—	1.0084	816	—	113
1S	40-00	39-10	40,158	39-11 <sup>1</sup> / <sub>2</sub>	40,056	102	37.5	—	1.0097	103	—	14
2S	38-11	38-9 <sup>3</sup> / <sub>4</sub>	66,334	39-0 <sup>3</sup> / <sub>4</sub>	66,022	312	37.4	—	1.0097	315	—	44
3S	41-07	41-02 <sup>1</sup> / <sub>4</sub>	71,799	41-04 <sup>1</sup> / <sub>4</sub>	71,571	228	38.1	—	1.0095	230	—	32
4S	78-04	78-03 <sup>1</sup> / <sub>2</sub>	10,542	79-1 <sup>1</sup> / <sub>2</sub>	9919	623	38.4	—	1.0093	629	—	87
5S	42-5	41-11 <sup>3</sup> / <sub>4</sub>	42,788	42-0 <sup>3</sup> / <sub>4</sub>	42,716	72	39.5	—	1.0088	73	—	10
ST	6-06 <sup>1</sup> / <sub>2</sub>	6-02 <sup>1</sup> / <sub>2</sub>	33,006	6-10 <sup>1</sup> / <sub>2</sub>	32,841	165	39.6	—	1.0088	166	—	23
			998,404			982,199				16,348		2268

M. Valdez  
 CERTIFIED TO BE A TRUE COPY  
 19 APR 1989

TOTAL OBSERVED VOLUME (T.O.V.)	998 404	GROSS STANDARD VOL. @ 60°F/15°C (G.S.V.)	16 348
LESS FREE WATER	982 199	LONG TONS/METRIC TONS (G.S.V.)	2 268
GROSS OBSERVED VOLUME (G.O.V.)	16,205	DRAFT FORWARD	▶ 51-03
DENSITY (15°C) @ 60°F	27.6	DRAFT AFT.	▶ 50-00
W.C.F. VOL.		LIST	▶ 1.25°

SIGNATURES:

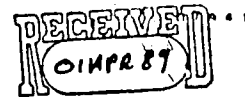
*James R. Bull*  
VESSEL REPRESENTATIVE

*John H. A...*  
PORT REPRESENTATIVE  
INSPECTOR



**PLAINTIFF**  
BIT NO. 13  
ADMITTED  7218  
3ANS89-7217  
(CASE NUMBER)

CERTIFIED TO BE A TRUE COPY SEA CARRIER INITIATIVE  
SEARCH GUIDELINES



~~I have seen the original and~~  
~~The following is a copy with all and~~  
~~is for the Treasury~~  
The following are guidelines for the Ships' officers to search their respective vessels for illegal drugs and contraband. These guidelines are in relation to paragraph one (1) of the U.S. Customs Sea Carrier Initiative Agreement, namely:

Dan J. Stock, LCDR, USCG  
1. Name, Rank or Title, Duty Station

regularly search vessels for illegal drugs and contraband prior to departure for, and enroute to, the United States. The Master shall upon arrival report to the U.S. Customs Services all instances where illegal drugs or contraband have been found. Any illegal drugs or contraband located during vessel searches shall be secured with minimal handling and preserved for appropriate follow-up action by the U.S. Customs Services.

This form shall be completed with each search and attached to the ship's log. A copy shall be sent to the respective fleet office.

The Master shall conduct searches as referenced above. There shall be two or more persons to conduct this search, typically another officer, and an offer shall be made to the Union representative to accompany this team, but his or her participation is at their option.

Since it would be impractical for you to conduct an extensive search of the entire vessel after departing port, you should use your own judgment in selecting the number of areas to be searched. Over time, all areas should receive equal scrutiny. In so doing you should routinely search both licensed and unlicensed quarters as well as public areas. If there is reason to believe the employee has a substance in his possession, ask him/her to empty pockets/purse. Do not touch the employee or try to forcibly obtain the substance.

Most contraband will be in a location that is easily accessible. Check the areas and spaces searched.

- ( ) Officer's quarters      ( ) Paint lockers      ( ) Engine/Shaft alley      ( ) Forecastle
- ( ) Crew quarters          ( ) Mess area          ( ) Galley
- ( ) Recreation rooms      ( ) Stack area          ( ) Bow thrusters
- ( ) Rope lockers            ( ) Freezer area        ( ) Laundry area

Be especially observant of: 1) freshly applied paint, lighter shade in color, 2) weld marks, 3) unusual scratch marks on nuts, bolts, ceiling tile, ventilator ducts, 4) globs of grease, and 5) equipment not in use.

Look for: white powder or green leafy substance in a plastic bag and wrapped in some type of tape, capsules or tablets not in prescription bottles, or paraphernalia.

Items that are found during the search and believed to be contraband will be photographed. Document the location, the time and date found, and where stored. The item will be sealed and impounded and placed in a locked ship's safe to be turned over to the U.S. Customs Service upon arrival at a U.S. port. Immediately notify the respective fleet office if contraband is found.

In the space below, please provide a summary of the results of the search:

---

---

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---

\_\_\_\_\_  
Vessel Name

\_\_\_\_\_  
Master Name

\_\_\_\_\_  
Date

\_\_\_\_\_  
Master Signature

## SEA CARRIER INITIATIVE AGREEMENT

This voluntary Agreement is made between Exxon Shipping Company having its principal place of business at Houston, Texas, and the United States Customs Service.

This agreement cannot, by law, exempt the Carrier from statutory sanctions in the event illegal drugs are discovered by the U.S. Customs Service on board the Carrier's vessels. However, the extent to which the Carrier has shown compliance with the terms of this Agreement will reflect favorably on any U.S. Customs Service decision or recommendation on final case disposition. This Agreement between the U.S. Customs Service and the Carrier is designed to strengthen the Carrier's ability to deter illegal access to and use of its commercial vessels, their associated equipment, and company facilities, by those engaged in the trafficking of illegal drugs. The U.S. Customs Service and the Carrier recognize the need to take positive steps to secure the Carrier's vessels against possible unauthorized use, and in particular, against trafficking in illegal drugs. The following Agreement addresses the concerns of the U.S. Customs Service and the Carrier.

1. Ships' officers will regularly search vessels for illegal drugs and contraband prior to departure for, and enroute to, the United States. The Master shall upon arrival report to the U.S. Customs Service all instances where illegal drugs or contraband have been found. Any illegal drugs or contraband located during vessel searches shall be secured with minimal handling and preserved for appropriate follow-up action by the U.S. Customs Service.
2. Vessels' staffs will lock or seal specific compartments aboard ships which may be used to conceal illegal drugs where such locking will not interfere with normal vessel operation or pose a possible safety hazard. An alternative plan for those areas which cannot be sealed or locked will be to limit access to those persons with legitimate business in such areas. The Master will notify the U.S. Customs Service of broken seals or locks, and of unauthorized crew members found in restricted areas.
3. Carrier management will designate, at each port of entry which it serves, the company official or representative who will assist the U.S. Customs Service with searches of the Carrier's vessels at that port. Carrier management will be readily accessible for contact on all matters identified as of enforcement interest to the U.S. Customs Service.

4. Carrier management will designate, for each vessel, the ship's officer who will be available to assist the U.S. Customs Service in searches of that vessel, and in gaining access to all compartments and spaces.
5. The U.S. Customs Service will provide training to certain of the Carrier's personnel in search methods, enforcement awareness, security measures, and in recognition of situations of enforcement interest to the U.S. Customs Service.
6. The Carrier will promptly notify the U.S. Customs Service of major structural repairs, remodeling, or reconfiguration of vessels' interiors.
7. The Carrier will take all reasonable measures to enhance security and control procedures in order to make it more difficult for unauthorized persons to gain access to vessels, both overseas and in the United States.
8. In accordance with all applicable laws, the Carrier will upon request provide to the U.S. Customs Service identifying data provided by current employees and applicants for employment where there is a need for such information.
9. Vessels' staffs will permit only employees displaying proper identification access to vessels, and only when required by their assignments. A security system acceptable to the U.S. Customs Service will be developed and implemented by the Carrier. The system will address the threat of the illegal drugs smuggler.
10. The Carrier will require, as a matter of company policy, that all of its managers, supervisors, employees, and its General Agent, cooperate fully with the U.S. Customs Service and other law enforcement entities in implementing the various actions and initiatives growing out of this Agreement, while encouraging the open and on-going exchange of information among all of the entities involved. Each vessel will carry on board the name of the appropriate U.S. Customs Service officer (as provided by the U.S. Customs Service) to contact at each port at which the Carrier's vessels call.
11. Discussions will be held regarding joint security surveys by the U.S. Customs Service and the Carrier or its General Agent at selected United States and foreign locations.
12. In the event that vessels operated by the Carrier are not owned by or under the management or control of the Carrier, the Carrier will make every effort to see that vessel owners agree to the terms of this Carrier Initiative Agreement.



13. Carrier management will provide advance copies of the inward foreign manifest for each of its vessels, noting any first-time shippers, and will immediately notify the U.S. Customs Service of any suspicious circumstances surrounding cargo shipments.
14. The U.S. Customs Service will make every effort to coordinate with Carrier management the release to the press or the public of information which may involve the Carrier's interests.
15. As soon as such information is available to the Carrier, the Carrier or its General Agent will provide the U.S. Customs Service with a list of all United States ports at which the Carrier's vessels are expected to call during the upcoming year.

This Agreement, once fully implemented, will act as a deterrent to those persons who may utilize the Carrier's vessels as a means of smuggling illegal drugs.

The listed elements reflect the mutual understanding of the Carrier and the U.S. Customs Service of what is expected of each.

This document, once jointly endorsed, will serve as a working agreement to be utilized at each United States port of entry served by the Carrier.

Assistant Commissioner  
Office of International Affairs  
United States Customs Service

*F. J. Larossi*  
(Title and firm)  
F. J. Larossi, President  
Exxon Shipping Company <sup>PHM</sup>

Dated:

Dated:

## EXXON SHIPPING COMPANY

### Policy Statement on Employee Alcohol and Drug Use

Exxon Shipping Company is committed to a safe, healthy, and productive work place for all employees. The Company recognizes that alcohol, drug, or other substance abuse by a few employees will impair their ability to perform properly and can have serious adverse effects on the safety, efficiency, and productivity of other employees and the Company as a whole. The misuse of legitimate drugs or the use, possession, distribution, or sale of illicit or unprescribed controlled drugs on Company business or premises is strictly prohibited and is grounds for termination. Possession, use, distribution, or sale of alcoholic beverages on Company premises is not allowed without prior approval of appropriate senior management. Being unfit for work because of use of drugs, or alcohol is strictly prohibited and is grounds for termination of employment. While this policy refers specifically to alcohol and drugs, it is intended to apply to all forms of substance abuse.

The Company recognizes alcohol or drug dependency as a treatable condition. Employees who suspect they have an alcohol or drug dependency are encouraged to seek advice and to follow appropriate treatment before it results in job performance problems. Employee Health Advisory Program or medical professional staff will advise and assist in securing treatment. Those employees who follow approved treatment will receive disability benefits in accordance with the provisions of established benefit plans and medical insurance coverage consistent with existing plans.

No employee with alcohol or drug dependency will be terminated or otherwise disciplined solely due to a request for help in overcoming that dependency or because of involvement in a rehabilitation effort. If, however, an employee violates provisions of the Employee Alcohol and Drug Use Policy, appropriate disciplinary action will be taken. Such action cannot be avoided by a request at that time for treatment or rehabilitation. If an employee suffering from alcohol or drug dependency refuses rehabilitation or fails to respond to treatment or fails to meet satisfactory standards of effective work performance, appropriate disciplinary action, up to and including termination, will be taken. This policy does not require and should not result in any special regulations, privileges, or exemptions from normal job performance requirements.

Exxon Shipping Company may from time to time conduct unannounced searches for drugs and alcohol on owned or controlled property. The Company also has the right to require employees to submit to medical evaluation or alcohol and drug testing where cause exists to suspect alcohol or drug misuse. A positive test result or refusal to submit to a drug test is grounds for disciplinary action, including dismissal.

Contractor, common carrier, and vendor personnel are also covered by paragraph one and the search provisions of paragraph four of this policy. Those who violate the policy will be removed from Company premises and may be denied future entry.

Exxon Shipping Company  
Employee Alcohol and Drug Use Policy  
Guidelines for Masters, Captains, Managers and Supervisors

Purpose

Exxon Shipping Company is committed to providing for all employees a safe, efficient, and productive workplace. The Company recognizes that the misuse of alcohol and/or drugs can have serious adverse effects in the workplace. In addition to the implementation of the Employee Alcohol and Drug Use Policy, the Company has taken many related steps to ensure employees a safe and efficient workplace. These include company-wide expansion of the Medical Department's Employee Health Advisory Program which includes confidential assistance in securing treatment and rehabilitation for alcohol and/or drug dependency, alcohol and drug detection efforts, clarification of work rules and disciplinary guidelines, and preemployment drug testing.

These guidelines have been developed to assist in the implementation of the Employee Alcohol and Drug Use Policy and are intended to help assure uniform Company actions. While the guidelines refer specifically to drugs and alcohol, they are intended to apply to all forms of substance abuse.

Guidelines

- A. The misuse of legitimate drugs or the use, possession, distribution, or sale of illicit or unprescribed controlled drugs or the misuse of other substances on Company business or premises is strictly prohibited. Possession, use, distribution, or sale of alcoholic beverages on Company premises is not permitted without the prior approval of the President. Being unfit for work because of use of drugs or alcohol is strictly prohibited.
- B. All applicants offered employment must pass a drug test as part of the preemployment process. The details of this program are described in the guidelines for preemployment drug testing.
- C. Employees who acknowledge they have either an alcohol or drug dependency and who desire rehabilitation and are willing to cooperate by participating in a treatment program are encouraged to seek assistance through the Employee Health Advisory Program (EHAP) or the Medical Department.

No employee with an alcohol or drug dependency will be terminated or otherwise disciplined due solely to a request for help in overcoming that dependency or involvement in a rehabilitation effort.

However, if an employee's request for rehabilitation is made after the Company's discovery of a violation of the policy, the Company will take disciplinary action which may include termination. Such disciplinary action cannot be avoided by a request for treatment or rehabilitation at that time.

- D. When an employee's unsatisfactory performance is believed to be the result of an alcohol or drug dependency, Medical Department advice should be sought and every effort should be made to encourage the employee to seek assistance through the EHAP or the Medical Department. Any employee who follows treatment approved by the Medical Department will receive medical and disability benefits for which he/she has subscribed in accordance with the provisions of established employee benefit plans.

If the employee refuses rehabilitation or fails to respond to treatment or fails to meet satisfactory standards of effective work performance, the Company will take appropriate disciplinary action which may include termination.

The Alcohol and Drug Use Policy does not require and should not result in any special regulations, privileges, or exemptions from normal job performance requirements.

- E. At the discretion of the President or the Fleet Manager, the Company may conduct unannounced alcohol and drug searches on owned or controlled property in operations where use of these substances could create an unsafe situation or where there is reasonable cause to suspect that these substances may be present. During searches of oceangoing vessels, the Ship Representative will be invited to accompany the search team as an observer. Reasonable cause for conducting a search may include but is not limited to justifiable safety-related concerns, discovery of alcohol or drugs or paraphernalia in common areas, or information which indicates that these substances may be present. Security special agents will normally conduct the searches and dogs may be used to assist. When a search is conducted, appropriate witnesses should be present. These searches may include but are not limited to: buildings, Company and private vehicles, Ocean and Inland vessels, dock areas, parking lots, equipment, lockers, toolboxes, quarters, and desks. Searches may also include asking the employee to empty his/her pockets, purse, bag, lunch box, etc. No physical contact with the employee will be made.

In the event prohibited substances are discovered either as a result of a search or by other means of detection, they should be confiscated and preserved as evidence and tagged as to suspected type of substance, amount, where found, time, date, etc. The Law Department and Security must be notified when prohibited substances are discovered.

- F. The Company may require employees to submit to medical evaluation or alcohol and drug testing where reasonable cause exists to suspect alcohol or drug misuse. Basis for judging cause may include (but not by way of limitation) instances where drugs or alcohol have been detected on Company premises, there are observable physical signs of impairment of the employee's ability to perform, or where as a result of any incident there exists a basis to suspect the involvement of drugs or alcohol.



Observable physical signs might include but are not limited to: difficulty in maintaining normal balance, poor coordination, slurred speech, illogical and/or unrelated responses to questions, inability to understand and connect thoughts, or smell of alcohol on breath. These observable signs may occur from either a sudden impairment of the employee's behavior, a more gradual deterioration over time, or other indications that an employee is unfit for work. In such instances or where there is other reason to believe an employee's unfitness for work results from the use of alcohol or drugs, the employee should immediately be relieved of his/her duties.

Typical incidents supporting alcohol and drug testing include but are not limited to: uncharacteristic behavior, a pattern of frequent unexplained absences, otherwise inexplicable accidents or near misses, or unusual damage to property.

With the effective date of this policy, management may require drug and/or alcohol tests or a more complete medical evaluation of any employee under the conditions described in this section as a condition of continued employment. A positive test result or refusal to submit to a drug and/or alcohol test is grounds for disciplinary action, including dismissal.

Employees should recognize that there are over-the-counter and prescription drugs which when taken may result in impairment to safe, effective performance. The employee has the obligation to notify his/her supervisor, in advance of beginning work, when he/she is taking one of these drugs. This will allow for any needed adjustments to work assignments. The employee should be prepared to provide evidence that the drug being taken is prescribed or otherwise legitimate.

- G. In cases where a medical evaluation is deemed appropriate, the physician should be asked to collect a urine and/or blood sample for testing by the American Institute for Drug Detection, Inc. to determine the presence of alcohol and/or drugs. In cases onboard ship where a licensed practicing physician is unavailable, blood tests will not be taken. If circumstances prevent medical evaluation from being conducted soon after the "for cause" incident, the Supervisor may collect and properly process the urine sample. The decision to require an employee to submit to testing for drugs and alcohol requires the advance endorsement of the Human Resources Manager. Prior to any testing, the employee must sign an Informed Consent form (Exhibits I and II).

Time off required for medical evaluation will be at Company expense unless the circumstances merit suspension without pay.

- H. At no time should an employee suspected of being in an unfit condition be permitted to drive a Company vehicle, and every effort should be made to discourage the employee from driving a private vehicle. If the employee insists on driving his/her private vehicle, arrangements should be made to have a coworker or Security representative drive the vehicle from Company property. Once off Company property, if the employee continues to insist on driving his/her vehicle, the appropriate law enforcement agency will be called and advised of the Company's reasonable belief that he/she is unfit to drive. (Call the law enforcement agency dispatcher to give description, license number of vehicle, and destination, if known.)
- I. In cases of apparent violation of the policy, the Company will investigate thoroughly and will consider all relevant information. In all cases involving unfit condition, management has the discretion to either terminate the employee or impose a lesser discipline as warranted by the circumstances of the individual case. If disciplinary action other than termination is determined appropriate, the disciplinary steps described in the Progressive Disciplinary Guidelines for Employee Misconduct (in particular the section headed "Important Notes") are appropriate. All cases involving disciplinary action should be reviewed with the Personnel Relations Committee who will consult the Law Department and forward its recommendation according to the Approval Authority Guidelines.
- J. While drug and alcohol abuse can cause severe problems in the workplace and must be dealt with accordingly, sound judgment must be used in executing this policy, with due consideration of guarding the reputation, privacy, and dignity of all employees.

Because of the potentially serious consequences of falsely accusing an employee of drug or alcohol abuse, any employee taken to one of the progressive discipline steps may introduce evidence supportive of his/her position, including voluntarily requesting a drug and/or alcohol test.

- K. Contract personnel, common carrier, and vendor personnel violating the policy will be expelled from Company premises and will be denied future entry.

March 11, 1987

**PLAINTIFF**  
EXHIBIT NO. 14  
ADMITTED  *trial*  
3ANS89-7217-7218  
(CASE NUMBER)

# EXXON SHIPPING COMPANY

POST OFFICE BOX 1512 • HOUSTON, TEXAS 77251-1512

S P REVERE  
VICE PRESIDENT, OPERATIONS

D J PAUL  
FLEET SERVICES MANAGER

WILLIAM G DUNCAN  
MARINE ADVISOR

CERTIFIED TO BE A TRUE COPY

~~I have examined the original and  
confirm that it is a true and  
correct copy~~

*W. J. Stock, Lt. JG, USCG*  
Name-Rank or Title-Duty Station

May 30, 1986

Circular Letter M-232-03  
Revised Bridge Organization Manual

## MASTERS OF EXXON SHIPPING COMPANY OCEANGOING VESSELS

Responding to a request from some of the marine affiliates, Exxon Corporation convened a work group in May 1984 to review the General Navigation Policy. Exxon Shipping Company participated in the work group, which used as a basis for discussion terms of reference agreed upon in advance by the five affiliates represented. Highlights of the terms of reference are:

- 1) To review the existing General Navigation Policy and its General Sailing Route Guidelines to enable full implementation by all Exxon marine ocean and coastal operating organizations regardless of vessel size and trading pattern.
- 2) To develop guidelines for the implementation of the General Navigation Policy. These guidelines should be those which are generally applicable to all vessels regardless of size and trading pattern.

The minor amendments proposed by the work group to the General Navigation Policy and General Sailing Route Guidelines concerning application to all owned tonnage, irrespective of trade, were endorsed by affiliate senior management. The existing concept when passage planning in providing for a margin of safety of at least 20 miles from the "grounding line" was unchanged. Since publication of the amendments necessitated updating only part of the Navigation and Bridge Organization Manual, it provided an opportunity to review the content in other sections to ensure that the particular operational practices of the affiliate were up to date.

Against such a background, some changes have been made in the Navigation and Bridge Organization Manual to reflect Exxon Shipping Company's current operational practice. Verbatim extracts from the Code of Federal Register, Titles 33 and 46, have also been maximized to provide consistency in compliance with regulatory requirements. Of particular interest with respect to the former (provided certain conditions are met), the Master will now have discretion in deciding the frequency for completing the "Voyage Plan and Navigation Check List" when in dedicated service as well as in utilizing resources for "Watch Type D" with a complement of three licensed deck officers. The following information expands on the conditions which allow discretionary options:



### Voyage Plan and Navigation Check List

As indicated in Chapter III, Appendix B of the Marine Regulations, the purpose of the above is to provide a formal procedure for preplanning navigation along a route. This includes a checking procedure to guard against one person's errors and a requirement to check the vessel's position by more than one method, especially prior to a change of course.

The present intent is that the plan and check list be completed for each leg of the voyage; however, given personnel familiarity with frequently used routes - e.g., dedicated trade - recording of information would become repetitive. In such circumstances, it is therefore appropriate for the Master to use discretion in deciding the frequency and information to be completed for each voyage on the plan and check list while ensuring that the necessary safeguards are maintained. The following factors pertaining to personnel are provided as guidance when making such a decision:

- a) Continuity of personnel in the bridge team
- b) Familiarity of personnel with voyage routing when trade is between the same ports
- c) Assignment of personnel to the bridge team unfamiliar with the intent of the "Voyage Plan and Navigation Check List".

### Watch Type "D"

Watch Type "D" specifies the bridge complement as the Master and two deck officers in specific situations involving a simultaneous high workload of navigation and collision avoidance. Recognizing that variables such as geographical location and duration of the specific situations influence the involvement of backup personnel, utilization of available resources has to be balanced between the primary concern of vessel safety and optimum use of personnel to minimize fatigue. How best to organize available manpower and maintain the necessary safeguards is therefore at the Master's discretion. Anchoring should be considered as an option whenever personnel fatigue becomes a problem.

### Section 6, "Entering, Leaving Port, and In-Port Transit"

In the interest of simplification, Section 6, "Entering, Leaving Port, and In-Port Transit" has been condensed while retaining those requirements which have to be considered to help ensure safety of the vessel while under way within the confines of a port - i.e., inside the sea buoy. This section essentially formalizes routine procedures and records for the use of the Master and ship's officers information to assist in their respective responsibilities when a pilot is on board and in planning for safe navigation of the vessel during the in-port phase of activities. The intent is that it will:

- a) Make a better informed bridge team through preplanning in advance of transit
- b) Provide awareness of the need to develop contingency plans
- c) Reduce erroneous assumptions or incomplete information necessary for the safe navigation of the vessel between the sea buoy up to the berth
- d) Confirm the need to continuously monitor the safe progress of the vessel along the intended track, even when a pilot is on board.

Information on Parallel Indexing Techniques which should already be on board is no longer included in this manual but should be made available on the bridge for reference and used whenever it is considered appropriate.

Enclosed are two hard-bound copies of the revised Navigation and Bridge Organization Manual. One is intended for the Master's library and the other for use on the navigating bridge. The latter should be made available at all times for use by the watch officer to ensure familiarization with his/her responsibilities. A signature sheet to acknowledge that the watch officer has read and understood the content is provided in the front of the manual and should be kept up to date as personnel are rotated. Previous editions of this manual are now obsolete and should be discarded.

To reiterate, the basic objective outside of the corporate changes to the Navigation Policy and Guidelines was to update the content to best meet the operational practice of Exxon Shipping Company, while at the same time to retain the necessary safeguards when under way. It is therefore important for deck officers to become familiar with the content as soon as is practical after joining the vessel.

Please acknowledge receipt of the manuals by telex, attention DUNCAN in Headquarters. Circular Letters M-224-03 and M-205-03 are then superseded and should be removed from your files.

A handwritten signature in black ink, appearing to read "M. Duncan", with a long horizontal line underneath it.

WGD:cr  
227852  
Enclosures



## NAVIGATION AND BRIDGE ORGANIZATION

## MANUAL

## INDEX OF CONTENTS

	<u>PAGES</u>
<u>SECTION 1:</u> INTRODUCTION	1- 4
1.1 PURPOSE OF MANUAL	1
1.2 NAVIGATION POLICY	1- 2
1.2.1 IMPLEMENTATION	2
1.3 VOYAGE PLAN AND NAVIGATION CHECK LIST See also Appendix B (Pages 80-89)	3
1.4 IN-PORT NAVIGATION See also Appendix A (pages 32-33)	4
1.5 STANDING ORDERS See also Appendix C (pages 83-90)	4
 <u>SECTIONS 2,3,4:</u> NAVIGATIONAL RESPONSIBILITIES	 5-15
2. THE MASTER	5
2.1 RESPONSIBILITIES FOR THE SAFE CONDUCT OF THE VESSEL	5- 7
2.2 TIME/DISTANCE SAVING	7
2.3 WATCHSTANDING PROFICIENCY	8
2.4 PILOTAGE WATERS	9
3. THE NAVIGATION OFFICER	10-11
4.1 NAVIGATION UNDERWAY: GENERAL (USCG 33.164.11)	12-14
4.2 ALL DECK OFFICERS	14-15
4.3 RADIO OFFICERS	15
 <u>SECTION 5:</u> DUTIES OF THE WATCH OFFICER AT SEA AND IN U.S. NAVIGABLE WATERS	 16-25
5.1 SCOPE OF RESPONSIBILITY	16-17
5.2 RELIEVING THE WATCH	17
5.3 TURNING-OVER THE WATCH	17-18



	<u>PAGES</u>
<u>SECTION 5:</u> DUTIES OF THE WATCH OFFICER AT SEA AND IN U.S. NAVIGABLE WATERS (Cont'd)	
5.4 COURSE AND SPEED	18
5.5 HEAVY WEATHER	18
5.6 CALLING THE MASTER	19
5.7 NOTIFYING THE ENGINE ROOM	19-20
5.8 MANUAL/AUTOMATIC STEERING	21
5.9 VERIFICATION OF POSITION FIXES	21
5.10 ENTRIES IN THE DECK LOG BOOK	22-23
5.11 ENTRIES IN THE BELLBOOK	23-24
5.12 ENTRIES & VERIFICATION ON THE COURSE RECORDER ROLL	24
5.13 NAVIGATION MONITORING WITH PILOT ABOARD	24-25
5.14 EQUIPMENT TESTS	25
 <u>SECTION 6:</u> ENTERING, LEAVING PORT AND IN-PORT TRANSIT	 26-40
6.1 GENERAL INFORMATION	26
6.1.1 REVIEW OF PORT INFORMATION	26-27
6.1.1.1 WEATHER FORECASTS	26
6.1.1.2 NOTICES TO MARINERS	27
6.1.1.3 NAVIGATION PUBLICATIONS	27
6.1.1.4 COMPANY MANUALS	27
6.1.1.5 LOCAL REGULATIONS AND INSTRUCTIONS	27
6.1.2 PLANNING THE APPROACH	28-30
6.1.2.1 WATCH TYPE REQUIRED	28
6.1.2.2 AVAILABLE AIDS TO NAVIGATION	28

<u>SECTION 6:</u> ENTERING, LEAVING PORT AND IN-PORT TRANSIT (Cont'd)		
6.1.2.3	EXPECTED WEATHER AND TRAFFIC CONDITIONS	28
6.1.2.4	CAUTIONARY NOTICES	29
6.1.2.5	MANEUVERING RESTRICTIONS	29
6.1.2.6	CONTINGENCY PLANNING	29
6.1.2.7	PLOTTING THE INTENDED COURSES	30
6.1.2.8	MONITORING VESSEL POSITION	30
6.1.3	MOORING OR ANCHORING GUIDELINES	30-32
6.1.4	VESSEL READINESS	32
6.1.4.1	SHIP CONTROL EQUIPMENT	33
6.1.4.2	NAVIGATION EQUIPMENT	33
6.1.4.3	DECK MACHINERY AND EQUIPMENT	34
6.1.4.4	COMMUNICATIONS EQUIPMENT	34
6.1.4.5	CARGO PLANS AND EQUIPMENT	35
6.1.4.6	REPORT TO THE MASTER AND AUTHORITIES	35
6.1.4.7	MASTER/PILOT INFORMATION EXCHANGE CARDS	36
6.2	PERSONNEL REQUIREMENTS	37-38
6.2.1	MANNING REQUIREMENTS WITH THE PILOT ONBOARD	37
6.2.2	MANNING REQUIREMENTS DURING MOORING OPERATION	37
6.2.3	INFORMATION EXCHANGE BETWEEN RELIEVING PILOTS	38
6.3	ANCHORING	38-39
6.3.1	PROCEDURES	38

<u>SECTION 6:</u>	ENTERING, LEAVING PORT AND IN-PORT TRANSIT (Cont'd)	
	6.3.2 POSITION REQUIREMENTS AND CLEARANCES	39
	6.3.3 REQUIREMENTS FOR VESSELS AT ANCHOR	39
	6.4 PORT DEPARTURE PROCEDURES	40
	6.4.1 PREPARATION	40
	6.4.2 ORGANIZATION AND PLANNING	40
	6.4.3 NAVIGATION IN PILOTAGE WATERS	40
	6.4.4 DISEMBARKING A PILOT	40
<u>SECTION 7:</u>	MASTER/PILOT INTERFACE	41-44
	7.1 MASTER'S RESPONSIBILITY	41
	7.2 BRIDGE ORGANIZATION	41-42
	7.3 MASTER/PILOT RELATIONSHIP	42-43
	7.4 REPORTING UNSATISFACTORY PILOT ACTION	44
	7.5 PILOT COMPLIANCE WITH RULES	44
	7.6 PILOT BOARDING	44
<u>SECTION 8:</u>	BRIDGE ORGANIZATION	44-55
	8.1 UNDERWAY WATCH CONDITIONS	45-47
	8.2 UNLICENSED PERSONNEL	48
	8.2.1 STEERING	48
	8.2.2 LOOKOUT	48-49
	8.3 WATCH TYPE A	49
	8.4 WATCH TYPE B	50-51
	8.4.1 MASTER	50
	8.4.2 THE WATCH OFFICER	51
	8.5 WATCH TYPE C	51-52
	8.5.1 MASTER	52
	8.5.2 THE WATCH OFFICER	52

PAGES

<u>SECTION 8:</u>	BRIDGE ORGANIZATION (Cont'd)	
	8.6 WATCH TYPE D	53-54
	8.6.1 MASTER	53-54
	8.6.2 OFFICER-RADAR/COLLISION AVOIDANCE	54
	8.6.3 OFFICER-NAVIGATION AND COMMUNICATIONS	54
	8.7 AUTOMATIC STEERING/PILOT	55
<u>SECTION 9:</u>	PROPER USE OF RADAR AND A.R.P.A.	56-59
<u>SECTION 10:</u>	PROCEDURES IN REDUCED VISIBILITY	60-61
APPENDIX A -	GENERAL SAILING ROUTES - GUIDELINES FOR MASTERS	62-72
APPENDIX B -	VOYAGE PLAN AND NAVIGATIONAL CHECK LIST	73-82
APPENDIX C -	STANDING ORDERS	83-90
APPENDIX D -	PORT ENTRY CHECK LIST	91-94
APPENDIX E -	PORT DEPARTURE CHECK LIST	95-97
APPENDIX F -	CHECK LIST OF ITEMS TO BE AGREED BETWEEN THE MASTER AND THE PILOT	98-102



## SECTION 1 - INTRODUCTION

### 1.1. PURPOSE OF MANUAL

The purpose of this Navigation and Bridge Organization Manual is to assist the Master and deck officers in planning for the safe navigation of their vessel. In order to ensure that all the desired safety criteria are considered, it is essential to consult all sections of the manual including pertinent appendices for guidance.

### 1.2. NAVIGATION POLICY

The prime objective when navigating company vessels is the safety of personnel, vessel and cargo. Speed and economy, while important, are secondary to safety considerations. Safety in navigation requires selection of courses and speeds that provide a margin of safety which takes into account all of the various influences which could affect the vessel's progress. The determination of the margin of safety will be dependent upon the prevailing conditions for a particular vessel and location.

The Master is fully responsible for the safe navigation of the vessel. He/she should ensure that all applicable international/national and local rules of navigation are followed. He/she should ensure that all courses are well clear of hazards to navigation and that operating practices safeguard personnel, vessel, and cargo. It is recognized that the intended course may of necessity place the vessel in close proximity to hazards to navigation during the voyage. In such cases, appropriate action should be taken to ensure safe transit.

While the ultimate responsibility for safe operation rests with the Master, part of this responsibility extends to the officers and crew, who must always be on the alert to prevent accidents to personnel, vessel, and cargo. It is the duty of each crew member observing any situation which he/she feels may endanger the safety of personnel, vessel, and cargo, to report his/her observations to the officer on watch or, if circumstances dictate, to the Master. An investigation should be carried out immediately and action taken as necessary.

Nothing in this policy nor in any regulations issued by Exxon Shipping Company should be construed as relieving the Master or any officer or crew member of his/her responsibility to exercise sound judgment nor of his/her responsibilities as defined by law or governmental regulation.

#### 1.2.1. IMPLEMENTATION

In order to implement this policy, the Master should be guided by the General Sailing Route Guidelines (Appendix A).

In addition to being a part of the Navigation and Bridge Organization Manual, the Navigation Policy statement should be displayed in the wheelhouse as a constant reminder of a primary and basic safety responsibility.

The Master should ensure that the officers and unlicensed personnel are made aware of their respective responsibilities as required by regulatory authorities and by this policy.

### 1.3 VOYAGE PLAN AND NAVIGATION CHECK LIST

The use of the Voyage Plan and Navigation Check List (Appendix B) is intended as a practical navigational procedural system with emphasis on a preplanning approach to the vessel's intended routes throughout the voyage between start and end of sea passage. It incorporates a checking procedure to guard against one person's errors and ensures that positive action is taken to check the vessel's position at frequent stipulated intervals by more than one method, especially prior to a change of course.

The Voyage Plan and Navigation Check List should be completed for each voyage. However, at the discretion of the Master, the necessity for completing a voyage plan for every voyage leg can be influenced by the following:

- (a) continuity of personnel in the bridge team
- (b) familiarity with voyage routing when trading between the same ports
- (c) assignment of personnel to the bridge team unfamiliar with the intent of the plan and check list

#### 1.4 IN-PORT NAVIGATION

Preplanning of In-Port Navigation is necessary to provide early identification of potential hazards to navigation. Available publications should be consulted and where appropriate, contingency plans should be devised. The continuous monitoring of the vessels' progress along the planned track is essential to safe navigation. The primary method of monitoring is fixing of the vessels' position on the chart at intervals appropriate for the particular circumstances. Realizing that there are instances where the position accuracy is limited by the method of obtaining a fix, monitoring of the vessels' progress in such circumstances may be satisfied by recording time abeam of prominent aids to navigation.

#### 1.5 STANDING ORDERS

The Standing Orders (Appendix C) together with the other material in this manual form the basis for an efficient bridge organization. All deck officers should be familiar with the content and meaning of the Standing Orders. When joining a vessel, Standing Order 21 shall be complied with by signing the Standing Order Book.



## SECTION 2 - NAVIGATIONAL RESPONSIBILITIES

### THE MASTER

#### 2.1 RESPONSIBILITIES FOR THE SAFE CONDUCT OF THE VESSEL

- 2.1.1 The Master is responsible for the safe navigation of the vessel. He/she must verify that all pertinent information has been considered in plotting the intended track of the vessel and that the course to be steered will keep the vessel in compliance with the prescribed distance of 20 miles from the grounding line whenever practical to do so in order to keep clear of dangers to navigation.
- 2.1.2 The Master is responsible for designating a qualified officer to act as the Navigation Officer (see Section 3.1).
- 2.1.3 The Master should ensure that the appropriate sections of the Voyage Plan and Navigation Check List are accurately completed and take into account the general sailing route guidelines for route planning (see Appendix B).
- 2.1.4 The Master should establish the Bridge Organization as prescribed in Section 8 of this manual and ensure that all watch officers are aware of their duties and responsibilities. When specifying Watch Type "D" (as outlined in Section 8), the Master should be sure to designate which Watch Officer is responsible for radar/collision avoidance and which is responsible for navigation/communications.

2.1.5 Within the limitations outlined in Paragraph 2.1.5(h) below, the Master must be on the bridge whenever conditions present a potential threat to the vessel such as:

- (a) passing in the vicinity of shoals, rocks or other hazards which represent any threat to safe navigation
- (b) restricted visibility
- (c) high traffic density
- (d) heavy weather
- (e) entering/leaving port
- (f) docking/undocking
- (g) shifting ship within a harbor area including drydock shifting
- (h) While the Master remains responsible at all times, conditions will arise which require the Master to spend prolonged periods on the bridge, possibly reducing his alertness and efficiency. In such circumstances, the Master should consider delegating navigational conning responsibilities to the Senior Officer to allow sufficient time for adequate rest.

2.1.6 The Master should ensure that the vessel's position is fixed along the route as often as the situation requires. He/she should ensure that frequent checks of the vessel's position are made by all means available, thus reducing to a minimum the risk of grounding or stranding as a result of human or mechanical error. The vessel's position must be fixed more frequently in restricted or coastal areas where potential hazards to navigation exist.

2.1.7 When the Master relieves the watch officer of the conn, the transfer should be communicated in a manner which avoids any misunderstanding. Time and watch condition set are to be recorded in the Log Book and, if utilized, the Bell Book.

2.1.8 The Master should always endeavor to keep the watch officer informed of his/her location where he/she can be contacted.

2.1.9 The Master must comply with the provisions of the IMO, Traffic Separation Schemes, and follow the applicable rules as defined in the IMO publication, "Ship's Routing and Traffic Separation Schemes."

Information on new traffic separation schemes or revisions of existing schemes are published in Notices to Mariners. The Master should ensure that these additions or changes are included in the IMO publication and plotted on the appropriate chart.

## 2.2 TIME/DISTANCE SAVING

Time/distance saving is secondary to safe navigation. The Master must comply with the intent of the Navigation Policy, which places the safety of the vessel before consideration of speed or economy of operation.

## **2.3 WATCHSTANDING PROFICIENCY**

- 2.3.1 The Master should be certain that the watch officers carry out all their navigational duties in a satisfactory manner. Where considered appropriate, he/she should remedy any deficiencies through on board training.
- 2.3.2 The Master should delegate authority for various assignments to improve watch standing proficiency as part of ongoing training needs. However, he/she should be certain that each officer understands the circumstances which exceed his/her authority thereby necessitating involvement of the Master.
- 2.3.3 The Master is encouraged to undertake maneuvering exercises which would be of training value to deck officers including conning of the vessel in reasonable traffic conditions while he/she is present on the bridge. Shiphandling exercises should be conducted with the participation of all deck officers. These exercises should include the "Williamson Turn" which may be expanded to include approach and stopping using a drum or other floating markers put overboard at the beginning of the exercise. An appropriate entry should be made in the Deck Log Book.



## 2.4 PILOTAGE WATERS

2.4.1 The Master must employ a Pilot when this is required by regulations or when in his/her judgment the safe navigation of the vessel so requires. The presence of a Pilot aboard does not relieve the Master of his/her responsibility for the safety of his/her vessel. The Master should continue to monitor the safe navigation of the vessel, including position fixing, course, speed, soundings and compliance with the applicable Rules of the Road. He/she should counsel the Pilot at any time he/she judges the Pilot to be in error. Unless the Master or his designated representative carefully follows the actions of the Pilot at all times, he/she may not be in a position to timely relieve the Pilot of the con if that action becomes necessary.

2.4.2 See Section 7 for additional details on Master/Pilot interface.

## SECTION 3 - NAVIGATIONAL RESPONSIBILITIES

### THE NAVIGATION OFFICER

3.1 The designated Navigation Officer unless stated otherwise is responsible for the following:

- (a) Keeping charts and navigational publications corrected and up to date according to the latest Notices to Mariners, radio, and other navigational warnings. An appropriate correction record file of each chart and publication must be maintained and the appropriate notations are to be made on the charts to the effect:

"Corrected through NM #      ". (With the initials  
of Navigation Officer).

- (b) Establishing a separate system for filing and recording navigational warnings.
- (c) Care of the magnetic compass, maintenance and adjustment of gyro compass, repeaters and course recorder.
- (d) Winding of chronometers and clocks, checking chronometer rate, and maintaining the chronometer record book. (Another officer may be assigned the task of winding the chronometers and taking radio time checks.)
- (e) Checking operational status of echo-sounder and hand lead line. (When opportunity permits, the accuracy of the echo-sounder and shallow depth indicator should be checked.)

(f) Checking operational status of radar and all electronic position fixing equipment such as Sat.-Nav., Omega, RDF, Loran, etc. The Master should be kept informed of any malfunctions.

(g) Sextants, patent logs, azimuth circles, barographs, anemometer, thermometers, hygrometers and navigational lights.

(h) Preparing meteorological reports.

3.2 When informed by the Master of the next destination, the Navigation Officer must ascertain that all appropriate charts and navigational publications for the voyage are aboard with corrections up to date. The Master must be informed of any deficiencies.

Prior to sailing, the Navigation Officer must test the equipment for which he/she is responsible, as listed in Paragraph 3.1, to ensure it is operating properly. An entry to this effect must be made in the Deck Log Book. It is particularly important that the master gyro has settled on the correct heading. Gyro repeaters, including the course recorder, RDF and radar, must be synchronized with the master gyro. Another deck officer may be designated to test the bridge gear before sailing.

3.3 When required by the Master, the Navigation Officer should prepare the Voyage Plan and Navigation Check List as described in Appendix B of this manual.

## SECTION 4 - NAVIGATIONAL RESPONSIBILITIES

### 4.1 NAVIGATION UNDERWAY: GENERAL (U.S.C.G. Title 33.164.11)

The owner, Master, or person in charge of each vessel underway shall ensure that:

- (a) The wheelhouse is constantly manned by persons who:
  - (1) Direct and control the movement of the vessel; and
  - (2) Fix the vessel's position;
- (b) Each person performing a duty described in Paragraph (a) of this section is competent to perform that duty;
- (c) The position of the vessel at each fix is plotted on a chart of the area and the person directing the movement of the vessel is informed of the vessel's position;
- (d) Electronic and other navigational equipment, external fixed aids to navigation, geographic reference points, and hydrographic contours are used when fixing the vessel's position;
- (e) Buoys alone are not used to fix the vessel's position;

**Note:** Buoys are aids to navigation placed in approximate positions to alert the mariner to hazards to navigation or to indicate the orientation of a channel. Buoys may not maintain an exact position because strong or varying currents, heavy seas, ice, and collisions with vessels can move or sink them or set them adrift. Although buoys may corroborate a position fixed by other means, buoys cannot be used to fix a position; however, if no other aids are available, buoys alone may be used to establish an estimated position.



- (f) The danger of each closing visual or each closing radar contact is evaluated and the person directing the movement of the vessel knows the evaluation;
- (g) Rudder orders are executed as given;
- (h) Engine speed and direction orders are executed as given;
- (i) Magnetic variation and deviation and gyrocompass errors are known and correctly applied by the person directing the movement of the vessel;
- (j) A person whom he has determined is competent to steer the vessel is in the wheelhouse at all times;<sup>1</sup>
- (k) If a pilot other than a member of the vessel's crew is employed, the pilot is informed of the draft, maneuvering characteristics, and peculiarities of the vessel and of any abnormal circumstances on the vessel that may affect its safe navigation.
- (l) Current velocity and direction for the area to be transited are known by the person directing the movement of the vessel;
- (m) Predicted set and drift are known by the person directing movement of the vessel;
- (n) Tidal state for the area to be transited is known by the person directing movement of the vessel;
- (o) The vessel's anchors are ready for letting go; walked out if considered necessary.
- (p) The person directing the movement of the vessel sets the vessel's speed with consideration for:
  - (1) The prevailing visibility and weather conditions;
  - (2) The proximity of the vessel to fixed shore and marine structures;

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<sup>1</sup>Note also 46 U.S.G. §8702(d) requires an able seaman at the wheel on U.S. vessels of 100 gross tons or more in narrow or crowded waters or during low visibility.

- (3) The tendency of the vessel underway to squat and suffer impairment of maneuverability when there is small underkeel clearance;
- (4) The comparative proportions of the vessel and the channel
- (5) The density of marine traffic;
- (6) The damage that might be caused by the vessel's wake;
- (7) The strength and direction of the current; and
- (8) Any local vessel speed limit;

#### 4.2 ALL DECK OFFICERS

#### 46 CFR

#### Subpart 35.20-~~Navigation~~

##### 35.20-1 Notice to mariners; aids to navigation-T/OCLB.

- (a) Licensed officers are required to acquaint themselves with the latest information published by the Coast Guard and the U.S. Navy regarding aids to navigation, and neglect to do so can be considered as evidence of neglect of duty. It is desirable that vessels navigating oceans and coastwise and Great Lakes waters shall have available in the pilothouse for convenient reference at all times a file of the applicable Notice to Mariners.
- (b) Weekly Notices to Mariners (worldwide coverage) are prepared jointly by the U.S. Naval Oceanographic Office, the National Oceanographic Survey and the U.S. Coast Guard. They include changes in aids to navigation in assembled form for the 1st, 3rd, 5th, 7th, Greater Antilles Section, 8th, 11th, 12th, 13th, 14th, and 17th Coast Guard Districts. Foreign marine information is also included in these notices. These notices are

available without charge from the U.S. Naval Oceanographic Office, Washington, D.C. 20390, Branch Oceanographic Offices, U.S. Collector of Customs of the major seaports in the United States and are also on file in the U.S. Consulates where they may be inspected.

(c) As appropriate for the intended voyage, all vessels must carry adequate and up-to-date:

- (1) Charts;
- (2) Sailing Directions;
- (3) Coast pilots;
- (4) Light lists;
- (5) Notices to mariners;
- (6) Tide tables;
- (7) Current tables; and
- (8) All other nautical publications necessary.<sup>1</sup>

<sup>1</sup>See 33 CFR 164.33.

#### 4.3 RADIO OFFICERS

Radio officers are required to obtain the latest radio information on Notices to Mariners, navigational warnings and weather reports. One copy of each report is to be posted on the bridge, one copy delivered to the Master, and one copy retained by the Radio Officer.

SECTION 5 - DUTIES OF THE WATCH OFFICER AT SEA  
AND IN U.S. NAVIGABLE WATERS

**5.1 SCOPE OF RESPONSIBILITY**

- 5.1.1 The watch officer is the Master's representative when on the bridge and responsible for executing his/her orders. On no account is the navigating bridge to be vacated when the vessel is underway or at anchor unless properly relieved by the Master or another deck officer. The safety of the vessel and its personnel must be ensured at all times.
- 5.1.2 The watch officer shall navigate the vessel at all times in compliance with the "International Regulations for the Prevention of Collisions at Sea" and any local regulations relating to navigation. Any necessary action should be taken in sufficient time to avoid close quarter situations. C.P.A.'s of no less than 2.0 miles shall be maintained whenever prevailing circumstances permit.
- 5.1.3 The watch officer shall be familiar and proficient with the WATCH CONDITIONS and duties set forth in Section 8 of this manual and comply with all other instructions contained herein. He/she shall consult the Master if there is any doubt concerning the meaning of any of these instructions or how he/she should carry out specified duties.



5.1.4 The watch officer shall ensure the safe progress of the vessel by making full use of all navigation aids and equipment to frequently determine the position of the vessel while underway.

5.1.5 All deck officers shall be familiar with all navigational equipment on board, and especially be aware of any limitations in their use.

5.1.6 The watch officer should be aware that only a qualified helmsman is permitted at the wheel while in ports, harbors and other waters subject to congested vessel traffic or under conditions of reduced visibility, adverse weather, or other hazardous circumstances [46 USC § 8702 (d)].

On board training may therefore be necessary to ensure appropriate personnel are familiar with characteristics of the steering system.

## 5.2 RELIEVING THE WATCH

It is the responsibility of the officer relieving the watch to do so in conformance with the requirements prescribed in Standing Order 2. He/she must ensure that the watch is relieved on time and shall not take over the watch until eyes have become accustomed to the prevailing conditions of light.

## 5.3 TURNING-OVER THE WATCH

5.3.1 The watch officer shall not turn-over the Watch until assured that the relieving officer is physically capable and when applicable, understands the conditions as set out in the Voyage Plan and Navigation Check List. If not assured, he/she must call the Master and report the circumstances.

5.3.2 Before leaving the bridge, the relieved watch officer must make the required entries in the Deck Log Book and Voyage Plan and Navigation Check List. The Gyro Course Recorder Chart should be checked to verify that the proper time is indicated.

5.3.3 On vessels not equipped with automatic fire detection systems, the relieved watch officer or designated rating is to make a safety inspection of the accommodation areas at 2400 hours and 0400 hours, and report back to the watch officer on duty.

#### 5.4 COURSE AND SPEED

5.4.1 The watch officer will navigate the vessel on the courses and at the speeds which have been designated by the Master. This should not prevent the watch officer from initially taking appropriate action which, in his judgment, may be necessary to avoid casualty to the vessel or its personnel. In such circumstances the Master is then to be notified as soon as possible.

5.4.2 The Course Recorder should be used to verify actual course steered. Setting of the Auto Pilot Steering Control should also be verified to optimize rudder movement.

#### 5.5 HEAVY WEATHER

The watch officer should be alert to changes in weather or sea state that may create a hazard to personnel, the vessel, or equipment. When approaching heavy weather, he/she should have the vessel inspected in good time to make

certain that all equipment is secured, that weather doors and ports are secured and the deck vacated. He/she should alert the Master to the changing conditions, and take timely action to discontinue work in areas that could become hazardous with a change in weather or sea state. An appropriate entry should be made in the Deck Log Book.

## 5.6 CALLING THE MASTER

The watch officer must call the Master when:

- There is uncertainty about navigational safety.
- At any time the vessel is standing into danger, after first taking any action which might be required immediately.
- In any situation as prescribed in the Standing Orders (see Appendix C).
- Specified on the Voyage Plan and Navigation Check List or in the night orders, or at any other time when considered necessary in the interest of safety of personnel, vessel and cargo.

## 5.7 NOTIFYING THE ENGINE ROOM

The watch officer must notify the engineer on watch (or the Engineer on Standby in the case of an unmanned engine room operation) as follows:

- When the vessel is at least one hour away from the end of sea passage.

- When it becomes apparent that changes in speed may be required due to weather or sea conditions, reduced visibility, heavy traffic, or whenever possible in an emergency situation.  
**Note:** When changing to maneuvering speed, the watch officer and the engineer on watch should agree on the number of engine revolutions for each ahead and astern bells.
- When ambient temperature could adversely affect the equipment and piping integrity in exposed locations.
- When unusual concentrations of ice, seaweed, other marine life or shallow water are encountered which might affect water intakes to the engine room.
- When appropriate, to check that the bridge and engine room clocks are synchronized.
- When approaching or departing an area such as 50 miles from the nearest land in order to comply with MARPOL 73/78 or any other pollution prevention requirements.



## 5.8 MANUAL/AUTOMATIC STEERING

- 5.8.1 The automatic steering mode should be changed over to manual steering in accordance with Standing Order 7.
- 5.8.2 All deck officers must be thoroughly familiar with the operation of the steering systems on the vessel, and in particular with the methods of changing-over the steering mode.
- 5.8.3 Changes of steering mode must be performed by, or under the supervision of, the Watch Officer. Instructions on how to change-over from automatic to manual steering or from manual to automatic steering must be posted in a prominent position near the wheel.
- 5.8.4 When in automatic steering, the watch officer must be aware of the possibility that the system could fail. To help warn of such a failure, the "off course alarm" unit, if installed, must always be activated.

## 5.9 VERIFICATION OF POSITION FIXES

The position of the vessel when under way shall be frequently verified, either by shore bearings when in sight of land or by celestial observations, soundings, etc. The positions obtained shall be checked where practical by use of the on board electronic navigational aids.

## 5.10 ENTRIES IN THE DECK LOG BOOK

- 5.10.1 All of the information indicated by the format of the Deck Log Book must be entered during every watch.
- 5.10.2 Whenever the position of the vessel is fixed, the data relevant to the determined position shall be entered in the Deck Log Book and the position shall be recorded on the chart. Any discrepancy in the vessel's position or calculated speed between positions shall immediately be brought to the attention of the Master.
- 5.10.3 The vessel's position upon anchoring shall be immediately entered in the Deck Log Book; the position shall be checked at least at hourly intervals or more frequently as deemed necessary. Constant vigilance is to be maintained prior to, during, and after change of tide. The time of swing is to be entered in the Deck Log Book.
- 5.10.4 Additional information required to be entered includes, but is not limited to, the following:
- Courses steered, gyro and magnetic, together with the errors on gyro and magnetic compasses.
  - All course alterations and adjustments made in the navigation of the vessel, together with the corresponding position.

- The time at which the normal steaming watch A is changed to the modified steaming watch types B, C or D and the time at which the bridge organization reverts to the normal steaming watch type A.
- Any unusual situations that occur during the watch.

ERASURES MUST NEVER BE MADE IN THE DECK LOG BOOK, IN THE BELL BOOK, OR ON THE COURSE RECORDER CHART. IF AN ERROR IS MADE, A THIN LINE MUST BE DRAWN THROUGH THE ERROR SUCH THAT IT REMAINS LEGIBLE. THE CORRECT ENTRY SHOULD BE WRITTEN ABOVE OR BELOW THE ERROR AND THE CHANGE INITIALED BY THE OFFICER MAKING THE CORRECTION.

#### 5.11 ENTRIES IN THE BELL BOOK

Entries in the Bell Book must include, but not be limited to, the following:

- All orders to the engine room by the bridge telegraph except on those vessels equipped with operable automatic engine order recorders.
- Information shall also include time/speed/engine direction where applicable), time of pilot boarding or leaving, tug names, events relating to the progress of the passage or mooring operation.

- The information is to include the time abeam of important navigation aids which will assist in the assessment of speed and passage progress.
- Navigational information which could protect the company from potential liability when maneuvering in rivers, channels, harbors, or other restricted areas such as "approaching a bridge," "approaching a dredger," (or similar floating equipment) "passing yacht harbor," and the passing of important navigation aids.
- Port, date, and nature of each operation. Reasons for engine order when at sea under unusual circumstances such as "restricted visibility," "heavy traffic," "arriving or departing harbor or port," "anchoring," "shifting of vessel in port".

#### 5.12 ENTRIES AND VERIFICATIONS ON THE COURSE RECORDER ROLL

Officers relieving or being relieved shall verify that time (in GMT), course and quadrant setting are correct and enter his/her initials. Immediately after 0000 hours, the officer on watch shall also enter the date. Noon position shall be recorded daily. Time zone changes must also be recorded.

#### 5.13 NAVIGATION MONITORING WITH PILOT ABOARD

5.13.1 Deck officers on the bridge must advise the Master, or in his/her absence the Pilot, of anything which they consider will assist the Master or Pilot in any given situation. In particular when, in the watch officer's judgment, compliance with the Pilot's or Master's instructions, or lack of instructions, would jeopardize the safety of the vessel, it is the watch officer's immediate duty to bring this to the Master's or Pilot's attention.



5.13.2 Particular emphasis must be placed on ensuring that the officer of the watch has a clear understanding of his/her duties during the period the Pilot is on board. He/she must continue to monitor the navigation of the vessel by obtaining and charting frequent position fixes using all available means.

#### 5.14 EQUIPMENT TESTS

The following tests and inspections, aside from others indicated in this manual, are to be made daily at noon as well as prior to entering restricted waters:

5.14.1 - Whistle  
- Engine Telegraph

5.14.2 Bridge and Engine Room clocks are to be synchronized daily at noon and prior to arrival or departure.

5.16.3 At 1700 each day, test general alarm bell.

SECTION 6 - ENTERING, LEAVING PORT  
AND IN-PORT TRANSIT

6.1 GENERAL INFORMATION

This section contains information useful to the Master for the appraisal, planning, execution and monitoring of any vessel passage. To assist in the planning phase, check lists are available for reference in Appendix D & E. The check lists contain references to this and other manuals which provide specific information regarding port entry and departure. The Master should consider the check lists as a guide and not necessarily all inclusive. If necessary, additional items can be added in the interest of safe operations.

6.1.1 Review of Port Information

In anticipation of arrival, the Master and all deck officers should review the available information regarding the port and its approaches. The following sources should be consulted to assist in plan preparation.

6.1.1.1 Weather Forecasts

Updated information should be obtained as frequently as possible.

#### 6.1.1.2 Notices to Mariners

Every effort must be made to obtain the latest Notice to Mariners. Particular attention should be given to Broadcast Notice to Mariners obtained from the appropriate coast radio station.

#### 6.1.1.3 Navigation Publications

All pertinent navigation publications for the port and approach areas should be reviewed.

#### 6.1.1.4 Company Manuals

The following manuals should be reviewed for essential information and to ensure compliance with established policy:

- o Port Information Manual
- o Vessel Instruction Manual

#### 6.1.1.5 Local Regulations and Instructions

All available sources should be checked for any local regulations or requirements pertaining to the port and its approaches.

## 6.1.2 Planning the Approach

In planning the approach, careful consideration must be given to the procedures necessary to avoid hazards. Areas which will require specific planning include:

### 6.1.2.1 Watch Type Required

Changing conditions may require changes in the Watch Type as specified in Section 8 of this manual. Plans must be made to ensure that the proper Watch Type is in effect at all times.

### 6.1.2.2 Available Aids to Navigation

Charts and publications for the area and the latest radio navigation warning should be studied to identify available aids to navigation.

### 6.1.2.3 Expected Weather and Traffic Conditions

Information regarding weather or traffic in the area must be considered for potential effects on the ability of the ship to maneuver as planned.



#### 6.1.2.4 Cautionary Notices

All cautionary notices obtained from charts, publications or radio broadcasts must be taken into consideration when planning the port arrival and operations.

#### 6.1.2.5 Maneuvering Restrictions

Areas where maneuverability of the ship might be restricted due to depth of water, currents or obstructions should be identified and allowance made during planning of the approach. In this regard, it is particularly important to include a review of draft/water depth relationship. Where appropriate, reduction of speed through the water should be planned to minimize the effect of squat.

#### 6.1.2.6 Contingency Planning

Contingency Plans should be developed to identify available emergency anchorages for the intended passage when maneuvering in restricted waters.

#### 6.1.2.7 Plotting the Intended Courses

The courses to be followed during the approach transit of port confines and departure should be plotted on the largest scale charts.

#### 6.1.2.8 Monitoring Vessel Position

Continuous monitoring of the vessels' progress along the planned track is essential to safe navigation.

**Note: BE AWARE THAT BY LEGAL PRECEDENT, MAINTAINING A PLOT OF OTHER VESSEL MOVEMENTS IS REQUIRED WITHIN PILOTAGE WATERS.**

#### 6.1.3 Mooring or Anchoring Guidelines

The following guidelines should be considered when planning mooring or anchoring:

- o Location of the mooring or anchorage (**Note: This should include identifying routine and emergency anchorages to be used in dense fog and other emergencies, during river transits).**
  
- o Estimated time of arrival

**o Mooring Type and Arrangement**

- Sea berth (MBM)
- SPM
- Pier
- Lightering

**o Equipment Requirements**

- Accommodation ladder/Pilot ladder
- Expected number and use of tugs or line handling boats
- Messengers and heaving lines
- Number, type and position of mooring lines
- Winch brake settings
- Ship or shore gangway
- Crane or boom requirements and loads
- Hose/arm sizes, numbers, connections

- o Limitations of Berth or Anchorage
  - Water depth
  - Wave effects on mooring and underkeel clearance
  - Type sea bottom
  - Wind effects and necessity to control or minimize freeboard
  - Shoals or obstructions
  - Currents
  - Anchorage area congestion
  
- o Requirements for maintaining engine readiness for maneuvering in an emergency.

#### 6.1.4 Vessel Readiness

The readiness of the vessel to enter port should be confirmed in advance to provide an opportunity for correcting discrepancies. Items requiring specific attention include:



#### 6.1.4.1 Ship Control Equipment

##### (33 CFR 164.25) Tests Before Entering or Getting Underway

- No person may cause a vessel to enter into or get underway on the navigable waters of the United States unless no more than 12 hours before entering or getting underway, the following equipment has been tested:
  - (1) Primary and secondary steering gear.
  - (2) All internal vessel control communications and vessel control alarms.
  - (3) Standby or emergency generator, for as long as necessary to show proper functioning, including steady temperature and pressure readings.
  - (4) Storage batteries for emergency lighting and power systems in vessel control and propulsion machinery spaces.
  - (5) Main propulsion machinery, ahead and astern.

#### 6.1.4.2 NAVIGATION EQUIPMENT

Navigation equipment which may be required during approach or entry to a port should be checked for accuracy. Whenever possible, compare a visual fix with that obtained by electronic equipment. Both radars should be compared for range and bearing errors and all gyro repeaters compared to the master compass. Verify fathometer readings with charted depths.

#### 6.1.4.3 Deck Machinery and Equipment

Deck machinery and equipment should be inspected and tested as necessary. This should include:

- o Anchor windlasses including anchor securing equipment
- o Mooring winches
- o Pilot hoist or ladder
- o Deck lighting
- o Accommodation ladder
- o Bow thruster

#### 6.1.4.4 Communications Equipment

All communications equipment should be tested to confirm operation. Included are:

- o VHF and UHF radios
- o Walkie-talkies
- o Voice radio equipment
- o Telephones to control stations
- o Talk-back systems
- o Emergency alarms
- o Loud hailers

6.1.4.5 Cargo Plans and Equipment

Cargo and bunkering plans should be completed in accordance with the Oil Transfer Procedures and necessary equipment checked and made ready.

6.1.4.6 Report to the Master and Authorities

During the preparation for entering port, any equipment failures or other problems noted should be brought to the attention of the Master and corrective measures taken whenever possible.

**Note:** 33 CFR ~~164.53~~ Deviations from rules and reporting: Non-operating equipment.

- (a) If during a voyage any equipment required by this part stops operating properly, the person directing the movement of the vessel may complete the voyage subject to the requirements in Part 160 of this chapter.
  
- (b) If the vessel's radar, radio navigation receivers, gyro compass, echo depth sounding device, or primary steering gear stops operating properly, the person directing the movement of the vessel must report or cause to be reported that it is not operating properly to the nearest Captain of the Port, District Commander, or, if participating in a Vessel Traffic Service, to the Vessel Traffic Center, as soon as possible.

#### 6.1.4.7 Master/Pilot Information Exchange Cards

The Master/Pilot information exchange is important, not only to safe navigation, but to both Master and Pilot, each of whom can benefit from a timely discussion on specified vessel and port characteristics.

To assist in this regard, the vessel data section of the Master/Pilot Information Exchange Card should be completed prior to port entry. Particular attention should be given to the following points:

- o Information provided should reflect current status of propulsion and navigation equipment at the time the card is presented to the Pilot.
- o The RPM indicated must be that which the engine can deliver at specified bells.
- o The depth of water, hull condition, and ship's draft must be considered when establishing anticipated speeds. Additionally, adjustments to speed may be necessary to minimize the effect of squat.

Section 7 of this manual provides detailed information on the Master/Pilot Information Exchange Cards.

## 6.2 PERSONNEL REQUIREMENTS

### 6.2.1 Manning Requirements With a Pilot On Board

Environmental and traffic conditions anticipated during pilotage should be identified as early as possible to assist the Master in determining the appropriate Watch Type to be set. In all circumstances a careful check of the vessel's position, course and speed must be maintained. Additionally, plotting of targets on the radar should be considered to satisfy a legal precedent. The officer of the watch must not hesitate to inform the Master or the Pilot whenever he has any doubts about the safe navigation of the vessel.

### 6.2.2 Manning Requirements During Mooring Operation

It is the Master's responsibility to assign the deck officers to the bridge and mooring stations. The assignments will depend upon the existing circumstances. In certain situations the Chief Officer can be assigned to the bridge for purposes of training or experience. However, in more critical situations it might be necessary to assign the Chief Officer to the forward mooring station.



### 6.2.3 Information Exchange Between Relieving Pilots

Whenever one Pilot relieves another, it is the responsibility of the Master to ensure that a proper exchange of information takes place between the two. The Master should not authorize the first Pilot to leave the bridge before the second Pilot has properly relieved him. The Master/Pilot Information Exchange Card should be completed with the relieving pilot at the earliest opportunity.

## 6.3 Anchoring

### 6.3.1 Procedures

Unless prohibited by local regulations, both anchors should be prepared for letting go when the vessel is navigating within a port or its approaches. This requirement includes the stationing of qualified personnel on the forecastle to let go the anchor when necessary. During anchoring, the Master must ensure that speed over the ground is monitored. The scope of cable to be used should provide maximum holding power.

It may be necessary to lower the anchors outside the hawsepipe. This is to ensure immediate release in an emergency and avoid potential damage to the bulbous bow.

6.3.2 Position Requirements and Clearances

Once anchored, the ship's position is to be fixed and the heading noted. The position of the vessel and the amount of cable paid out is to be entered in the Deck Log Book and Bell Book. A careful inspection of the swing area, both on the chart and around the ship, is to be made to ensure vessel will remain clear of hazards or shoals.

6.3.3 Requirements for Vessels at Anchor

- o The Master shall inform the officer of the watch the requirements for safeguarding the vessel at anchor.
- o The position of the vessel must be checked frequently, plotted on the chart and entered in the Deck Log Book. The activity of other vessels, change of tide and swing about the anchor must be carefully monitored. The time of start and finish of the vessel's swing is to be recorded in the Deck Log Book. Any unusual occurrence must be reported to the Master immediately.

33 CFR: 164.19

- o The Master or person in charge of each vessel that is anchored shall ensure that:
  - (a) A proper anchor watch is maintained;
  - (b) Procedures are followed to detect a dragging anchor; and
  - (c) Whenever weather, tide, or current conditions are likely to cause the vessel's anchor to drag, action is taken to ensure the safety of the vessel, structures, and other vessels, such as being ready to veer chain, let go a second anchor, or get underway using the vessel's own propulsion or tug assistance.

## 6.4 DEPARTURE PROCEDURES

### 6.4.1 Preparation

Preparation for port departure should be commenced as far in advance as reasonable and practicable. Reference should be made to the Port Departure Check List provided in Appendix E to this manual.

### 6.4.2 Organization and Planning

At the earliest convenience after the Docking Master or Pilot boards, a brief meeting should be conducted on the bridge with the officers assigned to the mooring stations to review the unmooring sequence and planned use of tugs.

### 6.4.3 Navigation in Pilotage Waters

Once the vessel is underway, the appropriate watch type should be set. Personnel should not be permitted to leave their mooring stations until all equipment is properly stowed or made ready for sea. The anchors should be kept ready for letting go until the vessel is clear of restricted waters.

### 6.4.4 Disembarking a Pilot

It is recommended that the Pilot not disembark before arrival at the designated pilot station. The Master and Pilot should discuss what maneuvers will be required to make a lee for the launch.

## SECTION 7 - MASTER/PILOT INTERFACE

### 7.1 MASTER'S RESPONSIBILITY

The Master is the ultimate authority on the vessel and is responsible for the safe navigation of the vessel. A Pilot's presence on the bridge is solely in an advisory capacity\* and in no way reduces the responsibility of the Master or the officer of the watch to continue navigating. The Master is to discuss with the Pilot all pertinent information required for the safe navigation of the ship (see Appendix F).

\*Except for Panama Canal where pilotage is mandatory and compulsory.

### 7.2 BRIDGE ORGANIZATION

When in pilotage waters the following general instructions apply unless otherwise specified by the Master:

7.2.1 The standing orders applicable to open-sea navigation remain valid in pilotage waters.

7.2.2 The appropriate officer shall:

- Operate the engine room telegraph and bridge/engine room communications.

- Monitor the main engine and bow thruster tachometers.
- Repeat helm orders and check their execution.
- Ensure that both radars are operating properly.
- Monitor the vessel's position and course being steered.
- Monitor the depth of water under the keel.

### 7.3 MASTER/PILOT RELATIONSHIP

The Master's knowledge of the vessel's characteristics and the Pilot/Mooring Master's knowledge of local conditions such as tide and current should be exchanged in order to facilitate the safest transit.

7.3.1 In order to gain maximum advantage from each other's specialized knowledge, the Master must:

Inform the Pilot as soon as possible after boarding of the vessel's characteristics and equipment and any unusual conditions. The Master/Pilot Information Exchange form (Appendix G) should be completed and discussed with him.

Discuss any anticipated problems of the vessel's transit with the Pilot and ascertain his intended course of action, using the Check List provided in Appendix F.

When two Pilots are on duty on the bridge, the Master must establish which Pilot is in charge and issuing instructions.

X Monitor and evaluate all orders given by the Pilot, to determine whether or not the desired results will be obtained.



With a Pilot conning in restricted waters, the Master should ensure that the vessel's speed is regulated in time to prevent wave damage to shore areas, passing tows or small craft, and is in compliance with laws or regulations. The Master should also ensure that vessel speed is regulated to reduce squat and maintain sufficient underkeel clearance when transiting shallow areas.

X The Master should be satisfied that his watch officers are capable of acting on his/her behalf should it be necessary to leave the bridge when a Pilot has the conn.

7.3.2 A very sensitive matter is the means of judging a Pilot/Mooring Master's competence and the decision to countermand instructions if these are, in the Master's judgment, leading the vessel into danger.

However, when in the Master's judgment compliance with the Pilot's instructions or lack of instructions, would jeopardize the safety of the vessel, and the Pilot fails to act on the Master's counsel, it is the Master's responsibility to countermand the Pilot and to take necessary corrective action. Such action, to be effective, must be taken in ample time to ensure the desired result. Appropriate Log Book entries must be made.

#### 7.4 REPORTING UNSATISFACTORY PILOT ACTION

If the Master judges it necessary to countermand a Pilot's actions or take extraordinary precautions to monitor the Pilot, details are to be provided in a written report in order to pursue follow-up with the appropriate authorities.

#### 7.5 PILOT COMPLIANCE WITH RULES

The Master should ensure that the Pilot complies with the Collision Regulations and observes speed restrictions when navigating rivers and narrow channels, having due regard for all conditions likely to be encountered enroute to the vessel's destination.

7.5.1 The minimum possible speed consistent with maneuvering requirements is to be used when docking at piers or coming alongside other vessels.

#### 7.6 PILOT BOARDING

A deck officer is to supervise personally the boarding or disembarkation of the Pilot. When Pilots board or disembark, life rings, proper illumination, and other appropriate lifesaving gear are to be available and ready for use.

## SECTION 8 - BRIDGE ORGANIZATION

### INTRODUCTION

The concept of "Watch Conditions" is to provide guidance to the Master in standardizing manpower utilization on the bridge under the environmental and traffic conditions delineated. It is recognized that available manpower may vary, but in the overall interest of safety, the principles prescribed in each of the "Watch Types" should be adhered to leaving to Masters' discretion how best to optimize use of available resources.

### 8.1 UNDERWAY WATCH CONDITIONS

- 8.1.1 The Voyage Plan and Navigation Check List (see Appendix B) and the Standing Orders (see Appendix C), together with the other contents of this Manual form the basis for an efficient bridge organization.

8.1.2 In addition, the following four bridge organizations or watch conditions have been established so that all personnel engaged in navigating the vessel understand what their duties and responsibilities are:

**BRIDGE ORGANIZATION**

**WATCH TYPE**

**IN OPEN WATERS**

With clear visibility and regardless  
of traffic **A**

With restricted visibility and  
regardless of traffic **B**

**IN RESTRICTED WATERS**

With clear visibility and little  
or no traffic **A**

With clear visibility and high  
density traffic **C**

With restricted visibility and  
little or no traffic **B**

With restricted visibility and  
high density traffic **D**

WHEN ENTERING OR LEAVING PORT

With clear visibility and regardless  
of traffic C

With restricted visibility and  
little or no traffic B

With restricted visibility and  
high density traffic D

AT OTHER TIMES WHEN THERE IS A  
SIMULTANEOUS HIGH WORKLOAD OF  
NAVIGATION AND COLLISION AVOIDANCE D

8.1.3 Watch conditions are to be set by the Master according to the actual or anticipated steaming situation. They will normally be based upon one of the four indicated bridge organizations, although it is the Master's responsibility to modify the bridge organization as he deems necessary for the safe operation of the vessel.

8.1.4 Each deck officer must fully understand the duties he is to perform under each watch condition. He is expected to carry out those duties unless specifically told to do otherwise by the Master. When Watch Condition "D" is set and two officers are on bridge duty, the Master will specify which officer is to perform the radar/collision avoidance duty and which is responsible for navigation/communication duties.



## 8.2 UNLICENSED PERSONNEL

The responsibilities of the Master and watch officer in supervising the unlicensed personnel assigned to watch duties as required by the watch condition are described below:

### 8.2.1 STEERING

Only a qualified helmsman should be assigned and the watch officer must ensure that when changing helmsman, comprehension of the current order is made. (see 5.1.6)

### 8.2.2 LOOK-OUT

The following is an extract from IMO publication titled "Recommendations on basic principles and operational guidance relating to navigational watchkeeping." Every ship shall at all times maintain a proper look-out by sight and hearing as well as by all available means appropriate in the prevailing circumstances and conditions so as to make a full appraisal of the situation and of the risk of collision, stranding and other hazards to navigation. Additionally, the duties of the look-out shall include the detection of ships or aircraft in distress, shipwrecked persons, wrecks and debris. In applying these principles the following shall be observed:

- (a) whoever is keeping a look-out must be able to give full attention to that task and no duties shall be assigned or undertaken which would interfere with the keeping of a proper look-out;

- (b) the duties of the person on look-out and helmsman are separate and the helmsman should not be considered the person on look-out while steering,
- (c) there may be circumstances in which the officer of the watch can safely be the sole look-out in daylight. However, this practice shall only be followed after the situation has been carefully assessed on each occasion and it has been established without doubt that it is safe to do so. Full account shall be taken of all relevant factors including but not limited to the state of weather, conditions of visibility, traffic density, proximity of navigational hazards and if navigating in or near a traffic separation scheme. Assistance must be summoned to the bridge when any change in the situation necessitates this and such assistance must be immediately available.

### 8.3 WATCH TYPE A

In situations such as:

- o In open waters with clear visibility and regardless of traffic, or
- o In restricted waters with clear visibility and little or no traffic.

The watch will normally consist of a watch officer and a seaman readily available in the close vicinity of the navigation bridge. The duties of the watch officer are described in Section 8.4.2.

# EXXON SHIPPING COMPANY

POST OFFICE BOX 1512 • HOUSTON, TEXAS 77251-1512 "EXXSHIP HOUSTON"

W. G. DUNCAN  
SR. MARINE ADVISOR

June 16, 1987

## Circular Letter M-235-03 Steering on Automatic Pilot

### TO MASTERS OF EXXON SHIPPING COMPANY OCEANGOING VESSELS

At a recent Fleet Management Conference, a question was raised regarding adoption of a more flexible approach to manual steering requirements than those currently prescribed in the Bridge Organization Manual for Watch types B, C, and D.

Given the regulatory implications, the following material was reviewed to decide the basis for change:

#### Title 46 §8702 Certain Crew Requirements

(d) An individual having a rating of less than able seaman may not be permitted at the wheel in ports, harbors, and other waters subject to congested vessel traffic, or under conditions of reduced visibility, adverse weather, or other hazardous circumstances.

(e) The owner, charterer, managing operator, agent, master, or individual in charge of a vessel operated in violation of this section or a regulation prescribed under this section is liable to the United States Government for a civil penalty of \$500.

#### IMO-STCW 1978

##### AUTOMATIC PILOT

11. The officer of the watch should bear in mind the necessity to comply at all times with the requirements of Regulation 19, Chapter V of the International Convention for the Safety of Life at Sea, 1974. He should take into account the need to station the helmsman and to put the steering into manual control in good time to allow any potentially hazardous situation to be dealt with in a safe manner. With a ship under automatic steering it is highly dangerous to allow a situation to develop to the point where the officer of the watch is without assistance and has to break the continuity of the look-out in order to take emergency action. The change-over from automatic to manual steering and vice-versa should be made by, or under the supervision of, a responsible officer.

SOLAS 1974Regulation 19Use of the Automatic Pilot

(a) In areas of high traffic density, in conditions of restricted visibility and in all other hazardous navigational situations where the automatic pilot is used, it shall be possible to establish human control of the ship's steering immediately.

(b) In circumstances as above, it shall be possible for the officer of the watch to have available without delay the services of a qualified helmsman who shall be ready at all times to take over steering control.

(c) The change-over from automatic to manual steering and vice versa shall be made by or under the supervision of a responsible officer.

To summarize regulatory impact:

- (a) Title 46 58702(d) prescribes the qualification for who should steer during the various circumstances described. No reference is made to the use of automatic pilot.
- (b) Both Standards of Training and Certification for Watchkeeping (STCW) and SOLAS stress the need to station the helmsman such that change over to manual control is made to allow any potentially hazardous situation to be dealt with in a safe manner.

Reflecting on the above, SOLAS permits use of the automatic pilot when in areas of high traffic density, in conditions of restricted visibility and other hazardous navigational situations. However, in such circumstances, manual control must be engaged in good time to safely deal with a potential hazardous situation. Obviously, timing for such a change is important recognizing that the helmsman cannot then be considered a lookout, and backup to cover such a position has to be taken into account in the overall planning to maintain compliance.

Against such a background, the requirements as prescribed in SOLAS Regulation 19 pertaining to use of the automatic pilot will be incorporated into Exxon Shipping Company's Bridge Organization Manual. Attached are amended pages for insertion into your onboard manuals.

The only significance in the timing of this communication is responding to questions raised during the recent Fleet Management Conferences. It is unrelated to other discussions on the use of unlicensed personnel on lookout.



MGD:lc  
Attachments

3159x

## 8.4 WATCH TYPE B

In situations such as:

- o In open waters with restricted visibility and regardless of traffic,
- o In restricted waters with restricted visibility and little or no traffic, or
- o When entering or leaving port with reduced visibility and little or no traffic.

Supplementary personnel are necessary so that there are two officers on the bridge, with lookout posted.

If the automatic pilot is being used, comply at all times with the requirements of Regulation 19 in Solas (see page 55). In planning for compliance, take into account the need to station the helmsman and engage manual control in ample time to allow any potentially hazardous situation to be dealt with in a safe manner.

Normally, the officer complement will be the Master and a watch officer (but may, in special circumstances, be the senior deck officer and the watch officer).

### 8.4.1 MASTER

The Master or senior deck officer is in charge of the watch and will coordinate and supervise the overall watch organization and the safe navigation of the vessel.



#### 8.4.2 THE WATCH OFFICER

The role of the watch officer is to assist the Master or senior deck officer by performing the duties outlined below. Primary emphasis should be placed on RADAR and COLLISION AVOIDANCE.

Maintain a radar plot and keep the Master or senior deck officer informed. Plotting of contacts must be maintained even if an ARPA is installed and operating. Trial maneuvers as obtained through ARPA should be verified by manual rapid radar plotting on the conventional radar.

Coordinate bridge-to-bridge, ship-to-shore, station-to-station communications and other duties as prescribed by the Master or senior deck officer. Assist as required when a Pilot is conning.

#### 8.5 WATCH TYPE C

In situations such as:

- o in restricted waters with clear visibility and high density traffic,
- or
- o when entering or leaving port with clear visibility, regardless of traffic,

Supplementary personnel are necessary so that there are two officers on the bridge, with a lookout posted.

If the automatic pilot is being used, comply at all times with the requirements of Regulation 19 in Solas (see page 55). In planning for compliance, take into account the need to station the helmsman and engage manual control in ample time to allow any potentially hazardous situation to be dealt with in a safe manner.

Normally, the officer complement will be the Master and a watch officer (but may, in special circumstances, be the senior deck officer and the watch officer).

#### 8.5.1 MASTER

The Master or senior deck officer is in charge of the watch and will coordinate and supervise the overall watch organization and the safe navigation of the vessel.

#### 8.5.2 THE WATCH OFFICER

The role of the watch officer is to assist the Master or senior deck officer by performing the duties outlined below. Primary emphasis will be placed on NAVIGATION and COMMUNICATIONS.

Continue to navigate the vessel and monitor its progress in accordance with the Voyage Plan and Navigation Check List, operate the depth recording equipment, radar and other navigational aids as may be directed, and provide the Master with current information on the vessel's position.

Provide the Master or senior deck officer with traffic information.

Coordinate bridge-to-bridge, ship-to-shore, station-to-station communications and other duties as prescribed by the Master or senior deck officer. Assist as required when a Pilot is conning.

#### 8.6 WATCH TYPE D

In situations involving a simultaneous high workload of navigation and collision avoidance such as:

1. in restricted waters with restricted visibility and high density traffic;
2. when entering or leaving port with restricted visibility and high density traffic;
3. in critical passages, where warranted in Master's judgment.

To ensure the optimum utilization of resources for such special situations, the watch complement should be the Master and two deck officers. However, with three deck officers, the period for sustaining such an organization is at the discretion of the Master, guided by how best to provide the necessary safeguards for the particular circumstance. Lookout must be posted.

If the automatic pilot is being used, comply at all times with the requirements of Regulation 19 in Solas (see page 55). In planning for compliance, take into account the need to station the helmsman and engage manual control in ample time to allow any potentially hazardous situation to be dealt with in a safe manner.

8.6.1 MASTER

The Master is in charge of the watch and will coordinate and supervise the overall watch organization and the safe navigation of the vessel.

With this bridge organization, the Master will specify which watch officer is to perform RADAR/COLLISION AVOIDANCE duty and which is responsible for NAVIGATION/COMMUNICATIONS duties.

8.6.2 ONE OFFICER may, at the discretion of the Master, be primarily concerned with RADAR/COLLISION AVOIDANCE. He/she will keep the Master informed of traffic conditions and developments. He/she will also perform other duties as prescribed by the Master. He/she shall also be familiar with the vessel's navigation progress and the degree to which it will influence the collision avoidance.

8.6.3 THE OTHER OFFICER may, at the discretion of the Master, assist the Master by being primarily concerned with NAVIGATION and COMMUNICATIONS duties as described below:

Continue to navigate the vessel and monitor its progress in accordance with the Voyage Plan and Navigation Check List, operate the depth recording equipment, radar, and other navigational aids as may be directed, and provide the Master with current information on the vessel's position. Coordinate bridge-to-bridge, ship-to-shore, station-to-station communications and other duties as prescribed by the Master. Assist as required when a Pilot is on board.

8.7. AUTOMATIC STEERING/PILOT

Automatic steering shall, at the discretion of the Master, be used in accordance with established safe practice, bearing in mind at all times the possibility of sudden failure of the equipment. Consideration should be given to maintaining personnel competency in the art of manual steering.

8.7.1 To warn of a system failure, the "Off Course Alarm" unit, if installed, must be activated when operating in the automatic steering mode.

8.7.2 Instructions for changing from automatic to manual or from manual to automatic steering are to be displayed adjacent to the automatic steering equipment. All changing over of the steering mode must be performed by or under the supervision of a watch officer.

8.7.3 SOLAS 1974. REGULATION 19. USE OF THE AUTOMATIC PILOT

(a) In areas of high traffic density, in conditions of restricted visibility and in all other hazardous navigational situations where the automatic pilot is used, it shall be possible to establish human control of the ship's steering immediately.

(b) In circumstances as above, it shall be possible for the officer of the watch to have available without delay the services of a qualified helmsman who shall be ready at all times to take over steering control.

(c) The change-over from automatic to manual steering and vice versa shall be made by or under the supervision of a responsible officer.



SECTION 9 - PROPER USE OF RADAR AND A.R.P.A.

(Automatic Radar Plotting Aid)

9.1 Masters and watch officers are to utilize all the navigational equipment available and they must comply with the applicable rules as specified in the "International Regulations for Preventing Collisions at Sea 1972" and/or any other national or local regulations relating to navigation.

9.2 The watch officer must ensure that:

- The equipment performance is checked at regular intervals either by visual means or by reference to manufacturer's operating manual.
- The equipment is not to be used as the only source of navigational information.
- The accuracy limitations of the equipment are understood.
- Malfunctioning equipment is reported to the Master.

9.3 The Master must ensure that all deck officers regularly manually plot radar contacts. CAS electronic tracking is not to be considered as a substitute for manual plotting. The necessary proficiency in the use of radar plotting will only be achieved by regular anti-collision plotting practice. It is recommended that deck officers be familiar with the rapid radar plotting method called "transfer method" which permits a fast and rapid check on the indications given by ARPA.

9.4 At least one radar is to be operating and the other on "standby" in the following situations:

- Restricted/anticipated restricted visibility
- Making landfall
- From sunset to sunrise
- Approaching/navigating restricted waters
- In clear weather with traffic present
- Maintaining distance off
- At any time when Master or watch officer considers to use necessary for safe navigation.

9.5 The watch officer should be aware of all the advantages/disadvantages of the 3 cm. and 10 cm. radar.

9.6 The following information is provided for guidance only:

- The 3 cm. radar normally provides finer bearing discrimination and a "sharper" picture. The 10 cm. radar is less affected by disturbances which reduce radar performance such as fog, wet snow, rain and sea return.
- Generally, use 3 cm. radar for navigation purposes and short range search when 10 cm. radar is operating at the same time on long range search.
- When sea clutter is heavy, use 10 cm. for short range search.
- Discrimination between targets in range on the same bearing is more a function of pulse length rather than equipment operating frequency or wave-length.
- When using the ARPA for collision avoidance purposes, only ship's speed through the water should be used.

9.6.1 A limitation of any ARPA system is that it cannot display contacts which are not shown on the screen of the radar from which it receives information.

The ARPA may display less contacts than those appearing on the radar screen and it is, therefore, essential to continuously compare the ARPA's screen to that of the radar set in use for collision avoidance purposes.

It is equally important that the anticlutter controls of the ARPA connected radar be properly set at all times to assure that no target is obscured.

Note: IT SHOULD BE NOTED THAT TO DATE, NO COURTS HAVE RULED THAT USE OF ARPA (CAS) REPLACES THE REQUIREMENT TO MANUALLY PLOT.

## SECTION 10 - PROCEDURES IN RESTRICTED VISIBILITY

- 10.1 - In developing procedures to be followed when: (1) visibility begins to or is expected to be restricted; and (2) when restricted visibility is suddenly encountered, the following points should be considered:
- Head-on closing speeds of 40 knots are not uncommon on present-day trade routes.
  - The time lapse necessary for the engines to be brought from the full ahead to the stand-by maneuvering condition.
  - Any temporary engine fault or engine room condition which could increase the time lapse or limit engine maneuverability.
  - Density of traffic, traffic type, and traffic flow patterns in the area being navigated.
  - Necessity for calling standby unlicensed personnel and/or officers, and the time lapse before they can be on the bridge and effectively on duty.
  - Any maneuvering restrictions due to draft and depth of water, the presence of shoals, or any other navigational danger in the area that could restrict alteration of course before speed could be reduced.



- Time delay from switching on until radar becomes operational.
- Condition of radar equipment.
- The vessel's stopping distance from operating speed and how best to maintain heading control while stopping.
- Turning capabilities commensurate with speed reductions.

10.2 The following example of restricted visibility procedures is provided for guidance:

- (1) Ring stand-by engines and reduce speed, as appropriate, warning the engineer on stand-by in the case of an unmanned engine room operation.
- (2) Sound appropriate fog signals,
- (3) Call the Master,
- (4) Switch on both radars and ARPA. Commence plotting of targets.
- (5) Call stand-by unlicensed personnel and/or officers to bridge duty according to the watch condition to be set,
- (6) Post a seaman as lookout
- (7) Change to manual steering as appropriate (refer Section 8),

10.3 The Master must ensure that all deck officers are made aware of the procedures required to be followed in restricted visibility.

## APPENDIX A

### GENERAL SAILING ROUTES - GUIDELINES FOR MASTERS

#### 1.0 INTRODUCTION

The purpose of these guidelines is to minimize the risk of grounding and collision. In order to increase the margin of safety in the event of a vessel losing propulsive power or steering capability, the planned courses should maximize as far as practicable and reasonable the distance from hazards to navigation. Reduced searoom, narrow passages, traffic rules, or other circumstances could impose a reduction in the distance from dangers below the base distance as indicated in these guidelines. In such cases the selected course should endeavor to maximize the margin of safety available in case of equipment failure.

#### 2.0 PASSAGE PLANNING - ROUTING

##### 2.1 Base Distance

Passage planning should, when in the Master's judgment it is practical to do so considering the intended voyage of vessel and navigational constraints, be based upon a distance of 20 miles from the "grounding line". This base distance should provide for a drifting time of six hours or more to the "grounding line" under average conditions in order to carry out repairs and/or obtain external assistance.

The "grounding line" is the contour of water depths on the passage equal to the draft of the vessel.

## 2.2 Increase in Base Distance

Variables in conditions encountered during the passage which under certain circumstances may result in a decision to increase the base distance of 20 miles from the grounding line include but are not limited to:

### 2.2.1 Severe/Adverse Meteorological Conditions

When a large drift rate is foreseen, during severe and adverse conditions, the distance from the grounding line should be increased in order to maintain a minimum of six hours drifting time whenever possible.

The anticipated drift vector should be determined based on dead ship conditions and taking into account the following parameters:

- o Ballast or loaded condition.
- o Forecasted wind force and direction.
- o Predicted current velocity and direction.
- o Expected wave or swell effect.

(Refer to graph in Annex 1.

### 2.2.2 Traffic

In areas where heavy or adverse traffic, or where concentrations of fishing vessels may be expected, the distance from the grounding line may have to be increased in order to avoid these areas.

### 2.2.3 Malfunction/Unreliability of Vessel Equipment

The base distance to the grounding line should, whenever possible, be increased when the reliability of the engine and/or steering equipment is uncertain.

The failure of important navigational equipment may, in certain circumstances, dictate a similar course of action.

### 2.2.4 Voluntary Stops and Performing Repairs During Passage

In case of a voluntary stop for repair or dismantling of equipment, which is essential for propulsion/steering, the vessel position to perform the repairs should be selected to provide the best possible margin of safety.

When performing repairs and/or dismantling of essential backup equipment while proceeding at full or reduced speed, the vessel's course to perform the repairs should be selected to provide the best possible margin of safety.

### 2.2.5 International/National Regulations

International/national regulations may require an increase over the base distance from the grounding line.

### 2.2.6 Reported Navigational Hazards

The following hazards, unknown at the outset of the voyage preplanning, should be taken into account when they become known during the passage and to the extent possible the distance from the grounding line increased accordingly.

- o Wrecks
- o Drifting Objects
- o Ice
- o Tropical Storms
- o Naval Exercises
- o Others

### 2.3 Decrease in Base Distance

Variables in conditions encountered during the passage which under certain circumstances may result in a decision to decrease the base distance of 20 miles from the grounding line include but are not limited to:

#### 2.3.1 Geographical Constraints

Narrow passages or recognized trade routes may require a reduction of the base distance from the grounding line.

Reductions of the base distance should be in accordance with the available searoom. However, a distance of less than 5 miles from the grounding line should only be considered where no other reasonable alternatives exist and when necessary safeguards can be complied with.



### 2.3.2 Restricted Passages

Special cases may be developed for transit through certain restricted passages provided the following conditions have been taken into consideration:

- o Large increase in distance experienced on the alternative route.
- o Proper level of experience in the transit by the Master.
- o No important navigational aid inoperative.
- o All navigating equipment required for the passage in full working order.
- o Engines in maneuvering condition, to enable adjusting speed as necessary.
- o Acceptable weather conditions prevailing.

In critical areas the speed may be reduced or increased as necessary in order to maintain operational safety having regard to the vessel's handling capabilities.

(Refer to Annex 2 for locations.)

### 2.3.3 Traffic

In areas where heavy or adverse traffic, or where concentrations of fishing vessels may be expected, when 2.2.2 cannot be reasonably complied with, the distance from the grounding line may be decreased.

The period during which the vessel is inside the base distance for these purposes should be kept to a minimum.

### 2.3.4 Operational Requirements

A vessel using launch, helicopter, or pilot services may be required to proceed inside the base distance. The period during which the vessel is inside the base distance for this purpose should be kept to a minimum.

### 2.3.5 International/National Regulations

International/national regulations may require a decrease of the base distance from the grounding line.

### 2.3.6 Adverse Weather/Shelter

With due consideration for good seamanship principles, a route closer to the grounding line than required by paragraphs 2.3.1 through 2.3.5 may be selected in order to obtain suitable shelter against adverse weather or sea condition. However, such course of action should only be taken if the estimated drift vector is away from the grounding line, in order to retain an acceptable margin of safety in case of equipment failure.

## 2.4 Other Considerations

### 2.4.1 IMO and Other Traffic Routing Schemes

- o The Master must comply with the provisions of the IMO traffic separation schemes or any International/national Routing schemes where such schemes are in force. When navigating in such areas, this can result in a decrease of the base distance to the grounding line.

- o Voluntary traffic schemes may exist and in such cases it is recommended that vessels comply when practical to do so. This is particularly recommended with respect to the use of safety fairways in an area such as the Gulf of Mexico due to the high concentration of oil production platforms.
  
- o When prevailing conditions will not provide acceptable drifting time in the event of steering or propulsion failure, where practicable the safety margin should be increased by maximizing the distance from the grounding line outside and clear of all traffic Routing schemes.

#### 2.4.2 Hydrographic Information

Critical areas with insufficient or unreliable hydrographic information should be taken into account when passage planning and may result in an increase or decrease from the base distance.

Careful consideration should be given to the quality of information presented on the charts in use, particularly soundings and type of bottom. Due regard must be given to the adequacy and date of the surveys from which the chart has been prepared.

### 2.4.3 Use of Tugs and Anchors

In the event of loss of propulsion and/or loss of steering the Master should keep in mind that:

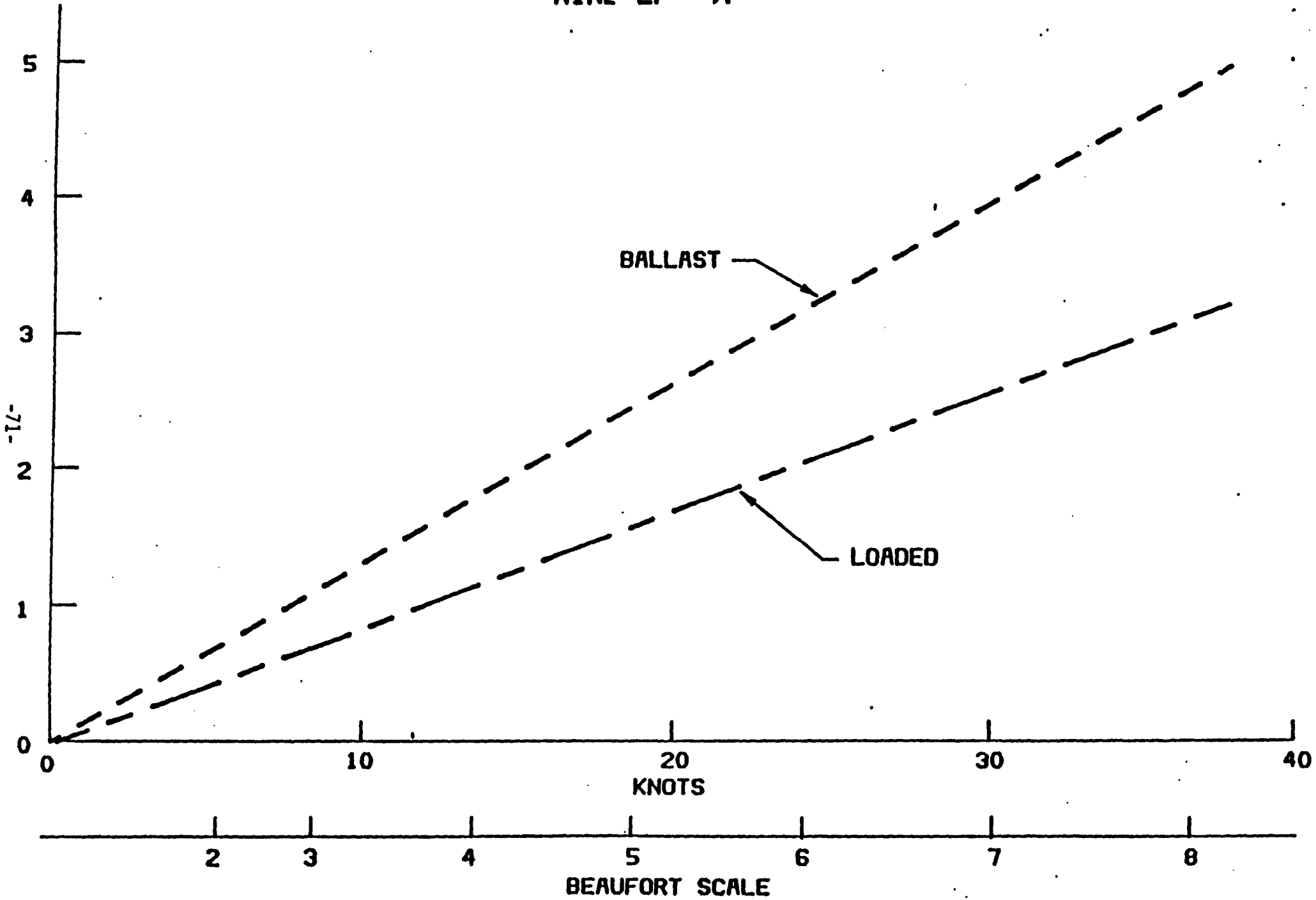
- o Tugs are not always readily available.
- o The use of anchors does not always provide an effective means of arresting the vessel's drift.

### 3.0 TRAFFIC CLEARANCE

To increase the margin of safety in the event of own or other vessel steering failure, it is recommended to pass all traffic at a minimum distance of 2 miles. If due to available searoom or other constraints the recommended distance cannot be complied with, then the distance should be maximized.



ANNEX  
WIND EFFECT



## ANNEX 2

Certain passages are not generally recommended unless previously agreed with affiliate management, since reasonable alternative routes are available. For example:

- o Strait of Mesina
- o Strait of Bonifacio
- o Between Scilly Isles and Lands End
- o The Minches and the channel between St. Kilda and West Coast of Hedbrides
- o Old Bahamas channel
- o When bound to ports in the River Thames, it is recommended that vessels avoid the inshore traffic zone of the English Channel. Masters are authorized to employ a North Sea pilot at Brixham to assist in navigating in the NE lane of the separation scheme and to safely select the position at which to cross the SW lane when approaching Folkestone.
- o Vessels using the Windward Passage or Yucatan Channel should give the coast of Cuba a wide berth -i.e., 20 miles whenever practical. The same consideration should be given to such countries as Nicaragua and El Salvador.

## APPENDIX B

### VOYAGE PLAN AND NAVIGATION CHECK LIST

The use of the Voyage Plan and Navigation Check List will provide a practical, navigation procedural system which emphasizes a preplanning approach to navigation. It incorporates a checking procedure to guard against one person's errors and ensures that positive action is taken to check the vessel's position at frequent, stipulated intervals by more than one method, especially prior to a change of course. The accurate and conscientious completion of the Voyage Plan and Navigation Check List provides a system for monitoring the vessel's progress. However, at the discretion of the Master, re-evaluation of the necessity for voyage plan completion can be influenced by the following:

- (a) Continuity of personnel in the bridge team
- (b) Familiarity with voyage routing when trading between the same ports
- (c) Assignment of personnel to the bridge team unfamiliar with the intent of the plan and check list

## 1. GENERAL PROCEDURES

1.1 Before departing from port, the Master should inform the Navigation Officer of the general courses to be followed for the entire voyage, with particular attention to the first 48-hour period.

When the Master prefers to lay down courses, he/she should state this intention to the Navigation Officer. Otherwise, the Navigation Officer will lay down the courses for at least the first 48-hour period on the appropriate charts. He/she must also complete the appropriate columns in the first or "Navigation Officer Section" of the Voyage Plan for the first 12 hours, commencing with departure time and position.

Every 24 hours thereafter, after consulting with the Master, the Navigation Officer should update and/or lay down the courses for the following 48-hour period. The information contained in the "Navigation Officer Section" of the Voyage Plan should be kept updated by a minimum of 12 hours by either the Navigation Officer or the Master.

In all cases, the Master should check and verify the course laid down by the Navigation Officer. When the Master lays down his/her own course, the Navigation Officer should review the course and if considered appropriate, offer suggestions to the Master.

When frequent planned course changes are anticipated, the 48-hour requirement may be reduced; but the charted courses and updated Voyage Plan should be projected for at least 12 hours in advance at any time.

- 1.2 Prior to departure, the Master should complete all of the appropriate columns in the "Master Section" of the Voyage Plan, including any special instructions which may be appropriate.

The Master should keep this section updated 12 hours in advance. When he/she is conning the vessel, the Position Fixing Method and the Position Fixing Frequency columns should be completed; however, the other columns need not be completed, provided that the Master clearly marks on the chart his ETA at the next alter-course (A/C) position. When he/she returns the conn to the watch officer, he/she should put the Navigation Check List procedure back into full operation by completing all columns in his section of the Voyage Plan up to a minimum of 12 hours ahead.

- 1.3 The watch officer, on taking over the watch, must first carry out all instructions contained in Paragraph 2 of the Standing Orders (See Appendix C). Furthermore, he/she must familiarize himself/herself with ALL of the Master's instructions, by consulting the Voyage Plan and Navigation Check List.



If the Master's ETA at the alter-course (A/C) or abeam position is on his/her watch, he/she should then calculate ETA and enter estimated A/C time, together with the estimated log reading on the chart in brackets, thus distinguishing it from other times and distances. If the vessel's position and the ETA at the A/C point have not been verified beyond all doubt BEFORE the time the Master has specified, then the Master is to be called.

At the A/C position, the watch officer is to verify the actual sounding with the expected sounding.

The watch officer's comments are to include notes on features such as defective equipment, speed reductions, diversions from course, reason for difference between ETA and actual time. He/she must also comment when there is a substantial difference between estimated and actual sounding.

2. SECTION TO BE COMPLETED BY NAVIGATION OFFICER (unless the Master has preference for laying out his/her own courses, in which case the Master must complete this Section):

- 2.1 Departure/Alter-Course/Arrival Positions are to be entered as geographical positions expressed in latitude and longitude except where for ease of identification, they can be better expressed as a true bearing and accurate distance from an established navigation mark or landmark.

## 2.2 Guidelines for Planning Routes

Time/distance saving is secondary to safe navigation. The following factors for planning routes shall be taken into consideration:

Depth of water and draft of Vessel;

Availability of navigation aids (lighthouses, buoys, beacons, radar targets and radio position fixing system), with particular reference to cross-checking fixes and positions by more than one method;

Daytime versus nighttime passing of danger points;

Degree of accuracy of position fixing that can be expected in critical areas or landfalls;

IMO established traffic separation schemes;

Weather, particularly in areas that are known to have frequent periods of low visibility;

Traffic, especially at main navigation focal points;

Possibility of engine/steering-gear breakdown;

Navigation equipment reliability;

Currents and tides;

Advice and recommendations given in the Sailing Directions.

2.3 True Course and Distance. The "true course" is to be expressed in 0 to 360° notations. The "distance" is the distance in nautical miles between the two geographical positions entered in the previous "From"- "To" columns.

2.4 Expected Minimum Sounding. It is the minimum under keel clearance to be expected at A/C position, after considering all relevant factors: vessel's draft, condition of the tide, squat effect if any.

3. SECTION TO BE COMPLETED BY MASTER ON VOYAGE PLAN AND NAVIGATION CHECK LIST

3.1 Estimated Speed is the estimated speed of the vessel over the ground, taking into account tides, currents, and local conditions of weather.

3.2 Running Time is to be expressed in hours and decimal parts of an hour and is the estimated time required to cover the distance at the estimated speed.

3.3 E.T.A. at Next A/C Position is to be expressed as the date and estimated time of arrival at the next planned alter course position, or the estimated time of arrival abeam of an established navigation mark or landmark stipulated by the Master as an A/C position.

In case of a significant difference between the ETA and the actual arrival time, the Master must be called. In this event, all subsequent ETAs at A/C positions within the current pre-plan period should be amended. The Master should decide what constitutes a "significant difference" taking into consideration the prevailing circumstances and record that time in the "Master's Comments/Instructions Section".

#### 3.4 Time Master to be Called

Is to be used for all those instructions the Master thinks are convenient to give and to indicate the time he/she must be notified-i.e., before an alteration of course in case the position cannot be verified or, if verified, the vessel's position is found off course. Therefore a time or a distance should be entered.

The time when steering must be changed from automatic to manual.

3.5 Position Fixing Frequency is to be expressed as the time lapse between fixes as required by the Master and will depend upon the proximity of the vessel to navigational dangers.

3.6 Position Fixing Methods are to be expressed as Visual Bearings (VIS), Radar bearings and distances (RA), Radio Direction Finding bearings (D/D), Soundings (SDG), Dead Reckoning positions (DR), Celestial Observation (OBS), Satellite Navigation (SN), Omega (OM), or Loran position-fixing (LO).

Where possible, more than one method should be specified.

4. SECTION TO BE COMPLETED BY THE WATCH OFFICER

When the Master is conning the vessel it is not required to have the Master's preplanning section filled in. Also, in case of more than one A/C within one hour's time, the course data to be entered by the officer on watch may be left blank, provided that time and ship's position of each A/C are entered in the "remarks" section.

4.1 Log Reading at A/C or Abeam Position is the actual log reading, taken when the vessel alters course.

4.2 Log Distance is the distance run between two consecutive A/C or abeam positions as indicated by the log.

4.3 Actual Sounding is the sounding recorded as the vessel is altering course.

4.4 Actual Time of Altering Course or Arriving at Abeam Position is the time noted both on the chart and in the Deck Log.

4.5 Time New Course Verified is the time after alteration of course when the vessel's position is verified on the new track.



5. SECTION FOR WATCH OFFICER'S COMMENTS

This section should be completed by the watch officer and indicate, for example:

Defective equipment

Reasons for diversion from the planned course

Any substantial difference between expected and actual soundings

Anything directly affecting the navigation of the vessel which is not included in the Deck Log.

The time of changing the watch condition.

The time when the preplanning had been checked before taking over the watch.

6. SECTION FOR MASTER'S COMMENTS

This Section should include specific instructions to the watch officers appropriate for the circumstances. Examples are:

- Changing from auto steering to manual
- Time to change watch conditions
- Time to be called

7. MASTER'S NIGHT ORDERS

The Master is to write orders nightly in the Night Order Book. Before taking over the watch at 20:00, 00:00 and 04:00, the watch officer should read and initial the Master's night orders.

8. DRAFTS

To be logged on leaving and arriving in port.

9. CHANGES IN DRAFT

The actual draft, together with the date, should be recorded after any appreciable change of draft has taken place,-e.g., transfer of cargo or bunkers, changing ballast, tank washing.

APPENDIX C

STANDING ORDERS

1. The watch officer is on no account to leave the navigating bridge when the vessel is underway unless properly relieved by the Master or another certified deck officer. A proper watch shall be maintained by officers when the vessel is at anchor.
  
2. The officer taking over the watch must be sober, fully alert and when the vessel is underway shall thoroughly familiarize himself/herself with the following by personally checking and confirming:

The progress of the vessel during the previous watch;

The present geographic position of the vessel;

The present course and speed;

The verification of time, course, and quadrant of the course recorder;

The general weather conditions and forecast;

The prevailing visibility;

Any navigational aids in sight or shortly to be so;

Navigational dangers or potential dangers the vessel is required to pass and alterations of course, both during his/her watch and for one hour thereafter;

The location of other vessels relative to his/her vessel's course and speed;

Active radio emergencies or warnings affecting mariners;

Deck work at locations which would influence a decision to act to ensure the safety of vessel's personnel;

The orders of the Master concerning the navigation of the vessel which are recorded in the Voyage Plan and Navigation Check List.

Only when he/she is satisfied as to these points is he to accept the responsibility of taking over the watch, and not until then is the officer being relieved permitted to leave the bridge.

The change of watch is to be logged by the relieving officer, noting the time of acceptance.

The watch is **NOT** to be relieved during a maneuver.

3. The vessel is at all times to be navigated in strict compliance with the "International Regulations for the Prevention of Collisions at Sea" and any local regulations relating to navigation i.e., U.S. Navigation Safety Regulation 33 CFR 164. Any necessary action, such as altering course or reducing speed, especially if the vessel is the burdened vessel (give-way vessel) under such regulations, should be positive and taken in sufficient time. The watch officer must leave other vessels with no possible doubt as to his/her intentions.
  
4. The position of the vessel when underway shall be frequently verified when in sight of land by shore bearings and, if not, by celestial observations. The positions obtained shall be checked where practicable using the navigational aids with which the vessel is equipped.

Whenever the position of the vessel is fixed, the data relevant to the position determination shall be entered in the Deck Log Book and the position recorded on the charts being used. Any discrepancy in the vessel's position or speed between position determinations shall be brought to the immediate attention of the Master.

The vessel's position when at anchor shall be fixed and thereafter checked frequently. Constant vigilance is to be maintained prior to, during, and after change of tide. The time of swing is to be entered in the Deck Log Book.



5. The course to steer will normally be given as a gyro course unless otherwise stated. A close check is to be kept on the corresponding course by standard compass.

The gyro steering repeater shall be checked against the master gyro at the commencement of each watch. The remaining gyro repeaters will then be checked against the gyro steering repeater.

A close check at frequent intervals throughout the watch is to be made between the standard compass, steering compass (if fitted) and gyro steering repeater. The off-course alarm (if fitted) is to be in use when the vessel is underway.

The errors of both the gyro and standard compasses shall be ascertained during each watch whenever conditions permit. If more than one course is steered, then an error for each course shall be determined.

6. The watch officer will observe the course and speed which has been approved by the Master. This should not prevent the watch officer from taking the most effective action which, in his/her judgment, may be necessary to avoid casualty to the vessel or its personnel. The Master is to be notified as soon as possible of the circumstances and the action taken.

The course steered shall be adjusted as specified by the Master for set and drift to make good the course laid down. Full use is to be made of the Course Recorder for checking the course steered and the settings on the auto pilot steering control.

It is particularly important to document in the Deck Log Book any significant departures from the vessel's course as set by the Master and/or course changes made in restricted visibility to avoid other vessels, or when faced with emergency conditions.

7. Steering shall be changed from automatic to manual:

In accordance with Watch types B, C, and D;

In fog or other conditions of restricted visibility;

In high density traffic zones;

When navigating close to the shore or near shallow banks;

When in shallow water;

In any emergency situation; and

At other times specified by the Master or deemed necessary by the watch officer.

8. If fog or other conditions of restricted visibility are suspected ahead or close to the vessel on either side, the radar(s) must be switched on and immediate steps taken to proceed at a safe speed such that, on entering the area of reduced visibility, the vessel is capable of being navigated in strict compliance with the "International Regulations for the Prevention of Collisions at Sea". The Master shall be advised immediately and procedures covering restricted visibility conditions implemented.

When in restricted visibility, whether underway or at anchor, the appropriate sound signals are to be strictly complied with.

9. The watch officer must maintain a good lookout at all times. This implies anticipation of possible danger and taking the appropriate action in time to prevent a dangerous situation developing. Officers must realize that undue reliance on navigational aids is no substitute for the keeping of a good lookout.
10. When a seaman is posted as lookout, he/she shall not be called upon to perform duties other than those associated with such a position.

A seaman shall be posted as lookout as required by the watch condition which has been set and:

From sunset to sunrise;

During restricted visibility;

When entering or leaving port;

When traffic is heavy;

At other times specified by the Master.

11. The Master is to be advised immediately of all equipment failures that may be relevant to the safety of personnel, vessel, or cargo such as steering gear, engine room, auto-pilot, gyro, radar, echo sounder, Loran, whistle, etc.

The Master is to take appropriate action to restore operability to the defective equipment and to notify the fleet office if assistance is required.

12. A close check shall be kept on the depth of water under the keel by use of the aids provided. Due consideration is to be given to reducing vessel speed, thereby reducing squat when transiting shallow areas so that sufficient underkeel clearance is maintained.

13. Prior to the end of sea passage, officers shall familiarize themselves with the local regulations pertaining to navigation contained in the applicable Sailing Directions. In addition they should refer to the "Check List of Items for Planning Port Arrival/Departure," the "Master/Pilot Information Exchange" form, and a "Check List of Items to be Agreed Between the Master and the Pilot," given in Appendices D, E, and F of the Navigation and Bridge Organization Manual.

14. At those times when the Master takes over the conn of the vessel, he/she shall clearly indicate this fact to the watch officer and record the fact in the Voyage Plan, Bell Book, and Log Book. Until he/she does so, the Watch Officer is to carryout his/her responsibilities as if the Master were not present. The Watch Officer is to be familiar with his/her duties and responsibilities when the Master is conning the vessel.

15. The presence of a Pilot on the bridge in an advisory capacity in no way reduces the responsibilities of the watch officer to continue navigating.
16. The use of the bridge radio telephones should be confined to the safe navigation of the vessel, port facilities, company official business, and emergencies.
17. Watch officers are to be familiar with their duties with respect to the various watch conditions as set forth in Section 8 of the Navigation and Bridge Organization Manual.
18. Persons not directly concerned with the immediate navigation of the vessel shall not be permitted on the bridge without permission of the Master.
19. The Master may add to these Standing Orders as is necessary.
20. Nothing in these Standing Orders shall be construed as relieving the Master or any officer or crew member of his/her responsibility, as defined by law or governmental regulation, or from the exercise of sound judgment. The prime consideration in the mind of all must always be the safety of life and property at sea.
21. Each time a deck officer joins or rejoins a vessel, he/she shall sign these Standing Orders signifying that he/she has read them and understands their meaning.



APPENDIX D

PORT ENTRY CHECK LIST

1. Cargo and bunkering plans completed.
2. Port area weather forecasts monitored.
3. Radio navigation warnings monitored.
4. Navigation publications reviewed.
  - Sailing Directions
  - IMO/Port Routing Schemes
  - Coastal Pilot Book
  - Light List
  - Tide and Current Book

5. Company manuals reviewed.
  - Port Information Manual
  - Vessel Instruction Manual
  - Terminal Regulations
6. Local regulations reviewed.
7. Charts corrected up to date.
8. Cautionary notices reviewed.
9. Emergency plans developed for engine or steering failure.
10. Arrival message sent to agent. Includes any questions about the port or ship's requirements.
11. Approach to pilot station or anchorage planned and charted. Tides and currents calculated.
12. Revised ETA at pilot station sent to agent.
13. Navigation and radar watch duties planned.

14. Radio working frequencies determined for VHF.
15. Main engine and bow thruster controls tested.
16. Primary and backup steering gear tested.
17. Vessel control communications systems tested.
18. Appropriate entries made in Deck or Engine Log Book regarding tests of equipment.
19. Master/Pilot Information Exchange Cards prepared. Information to be requested from Pilot identified.
20. Deck machinery and mooring equipment tested and ready.
21. Gyro error determined and repeaters compared to master gyro.
22. Fathometer energized and tested. Depth alarm set.
23. Equipment failures reported to Master and authorities as required.
24. Pilot hoist or ladder rigged and tested.
25. Radio working frequencies set for Port Control, Pilot Boat, Tugs, Terminal, etc.

26. Clocks synchronized for Bridge, Engine Room, Radio Room, Course Recorder and Engine Order Recorder.
27. Portable radios (walkie-talkies) tested.
28. Required flags and signals ready. Ship's whistle tested.
29. Appropriate watch type set and recorded in Deck Log Book.
30. Required charts and publications ready for use.
31. Both anchors ready for letting go. (may have to be lowered outside hawsepipes)
32. Master/Pilot card and associated information exchanged.
33. Requirements, procedures and information exchange for Pilot to Pilot relief agreed.
34. Communications with anchoring and mooring stations tested.
35. Mooring procedures reviewed.
36. COW Check List

APPENDIX E

PORT DEPARTURE CHECK LIST

1. Latest Local Notice to Mariners and radio navigation warnings available.
2. Latest weather forecast available.
3. Charts and publications corrected and ready for use.
4. Departure planned and charted.
5. Predicted tides and currents calculated.
6. Emergency plans developed for engine or steering failure.
7. Personnel assignment plan completed and sailing board posted.
8. Emergency generator tested and emergency lighting and power systems in control and propulsion spaces tested. Results entered in Engine Log Book. (U.S. Ports Only).
9. Main engine and bow thruster tested.
10. Vessel control communications systems tested.

11. Primary and backup steering gear tested.
12. Appropriate entries made in Deck or Engine Log Book regarding equipment tests.
13. Ship's whistle tested (if permitted by local regulations).
14. Gyro error determined. Repeaters compared to master gyro.
15. Fathometer energized and tested. Depth alarm set.
16. Navigation equipment energized and tested as appropriate.

- Radars
- ARPA
- Omega
- SATNAV
- LORAN
- RDF
- DOPPLER
- Rate of Turn Indicator



17. Master/Pilot Information Exchange Cards completed.
18. Draft verified and posted on bridge.
19. Equipment failures reported to Master and authorities as required.
20. Bridge prepared for departure.
21. Clocks synchronized for Bridge, Engine Room, Radio Room, Course Recorder and Engine Order Recorder.
22. Portable radios (walkie-talkies) tested.
23. Required flags and signals ready.
24. Unmooring plan agreed with pilot.
25. Master/Pilot Information Exchange Card exchanged.
26. Requirements, procedures and information exchange for Pilot to Pilot relief agreed.
27. Procedures and location to disembark Pilot agreed.

APPENDIX F

CHECK LIST OF ITEMS TO BE AGREED BETWEEN MASTER AND PILOT

(See Section 7 of Manual)

1. NAVIGATION ADVICE TO PILOT

- a. Vessel's heading, speed, r.p.m.'s (speed increasing/decreasing).
- b. Distance off/bearing nearest appropriate navigation aid or landmark.
- c. Traffic situation.
- d. Depth of water under the vessel.
- e. Any other items.

2. REACH AGREEMENT ON UNDERWAY PROCEDURES

- a. Manuevers for narrows, bends, turns, etc.
- b. Courses/headings, distance off danger areas, maximum speed.

- c. Restrictions: day versus night movement/berthing.
- d. Tide and current conditions not acceptable.
- e. Minimum acceptable visibility at any point.
- f. Use of anchor (planned, emergency).
- g. Location for emergency anchorage (fog).
- h. Maneuvers with and without tugs.
- i. Number of tugs required and horsepower.
- j. Source of tug securing lines: ship or tug.
- k. Communications procedure between vessel and tugs.
- l. Placement of tugs alongside.
- m. Crew standby requirements - numbers available and stations.

- n. Expected time vessel has to arrive at berth/turning basin at high/low/slack water - average speed to this position.
- o. Any other items.

3. REACH AGREEMENT ON MOORING/UNMOORING PROCEDURES

- a. Sequence of running out/retrieving mooring lines, wires.
- b. Mooring lines to be run out by launch.
- c. Determine which side to.
- d. Fire wires required.
- e. Any other items.

TUG POSITION			
TUGS	NUMBER	HORSE POWER	USING <input type="checkbox"/> OWN WIRE <input type="checkbox"/> SHIP'S WIRE



MOORING ARRANGEMENT

NUMBER OF LINES \_\_\_\_\_

SEQUENCE \_\_\_\_\_



VESSEL COPY

**MASTER/PILOT INFORMATION EXCHANGE CARD** 411 294

\_\_\_\_\_/S ESSO \_\_\_\_\_ DATE \_\_\_\_\_

PORT \_\_\_\_\_

BUILT AT \_\_\_\_\_ YEAR \_\_\_\_\_

TONNAGE: NET \_\_\_\_\_ GROSS \_\_\_\_\_

**VESSEL DIMENSIONS (IN METERS)**

LENGTH	OVERALL	BETWEEN PERPENDICULARS	
	DISTANCE	BRIDGE TO BOW	BRIDGE TO MANIFOLD
HEIGHT	KEEL TO TOP OF MAST		
BREADTH			

**DRAFTS**

FORWARD	MID SHIP	AFT	INCREASE FOR 1° LIST
GYRO COMPASS ERROR		DISPLACEMENT (TONS)	
DEGREES EAST	DEGREES WEST	PRESENT	SUMMER

**MANEUVERING SPEEDS (KNOTS)**

ENGINE ORDER	RPM		SPEED			
	AHEAD	ASTERN	LOADED		LIGHT	
			AHEAD	ASTERN	AHEAD	ASTERN
FULL						
HALF						
SLOW						
DEAD SLOW						

FULL AHEAD RPM TO FULL ASTERN \_\_\_\_\_ SECONDS

PLANT  STEAM  DIESEL BRIDGE CONTROL  YES  NO

BOW THRUSTER \_\_\_\_\_ H.P. ASTERN POWER \_\_\_\_\_ % AHEAD

MAXIMUM TIME ASTERN \_\_\_\_\_ MINUTES CRITICAL RPM \_\_\_\_\_

SPEED AND ECONOMY ARE SECONDARY TO SAFETY

APPENDIX F

PILOT COPY

-101-

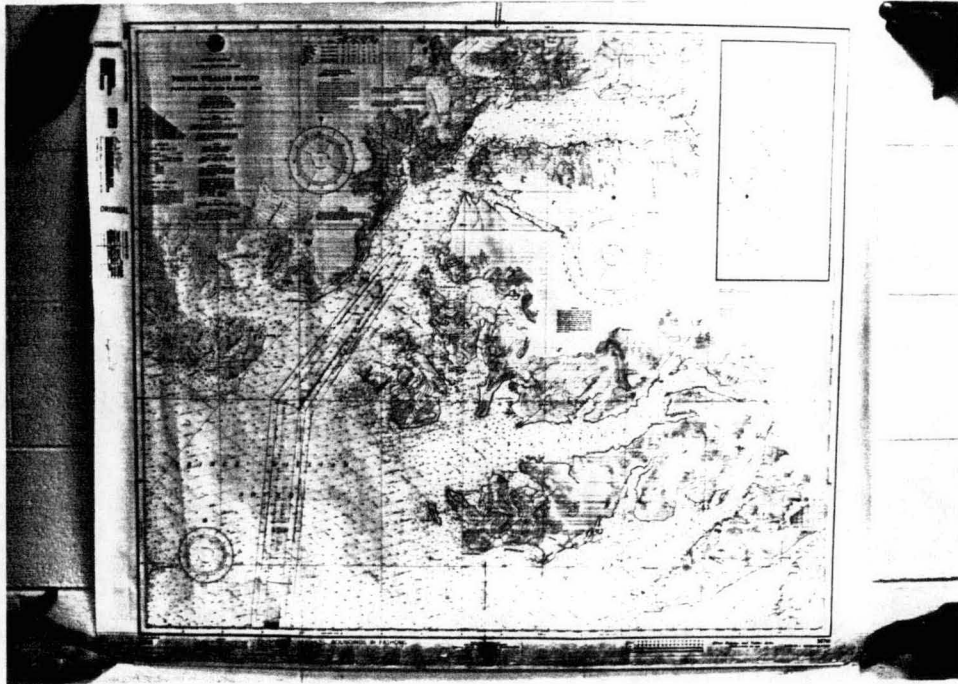


Exhibit #15





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*****
STB STB A. 09.20:06
BC STOP -1RPM
0
Stop 12:20 STB STB A. 09.20:00
BC STOP +7RPM
0
STB STB A. 09.19:49
>BC STOP +26RPM
STB STB A. 09.19:48
BC D. SL FWD +23RPM
0
STB STB A. 09.19:35
>BC D. SL FWD +31RPM
STB STB A. 09.19:30
BC SLOW FWD +33RPM
0
STB STB A. 09.19:18
>BC SLOW FWD +40RPM
STB STB A. 09.19:15
BC MRLF FWD +42RPM
0
STB STB A. 09.19:06
BC MRLF FWD +49RPM
0
Grounding STB STB A. 09.18:54
>BC MRLF FWD +46RPM
STB STB A. 09.09:00
BC FULL FWD +61RPM
0
Midnight STB STB A. 09.24:24
BC FULL FWD +56RPM
0
if Program Up STB STB A. 09.24:09
BC FULL FWD +51RPM
0
STB STB A. 09.24:00
>BC FULL FWD +21RPM
0
STB STB A. 09.19:29
BC SLOW FWD +32RPM
0
STB STB A. 09.19:27
BC SLOW FWD +36RPM
0
STB STB A. 09.19:19
>BC SLOW FWD +45RPM
0
09 MAR 24 09.00:00
STB STB A. 07.56:21
BC FULL FWD +67RPM
0
STB STB A. 07.47:22
BC FULL FWD +68RPM
0
STB STB A. 07.47:02
>BC FULL FWD +41RPM
*****
09 MAR 25 00.00:00
09 MAR 24 20.00:00
09 MAR 24 16.00:00
09 MAR 24 12.00:00
STB STB A. 10.41:09
BC STOP -1RPM
0
Stop 1:41 STB STB A. 10.41:03
BC STOP +7RPM
0
STB STB A. 10.40:53
>BC STOP +23RPM
STB STB A. 10.40:43
>BC D. SL FWD +24RPM
STB STB A. 10.40:39
BC SLOW FWD +43RPM
0
STB STB A. 10.40:30
>BC SLOW FWD +56RPM
STB STB A. 09.58:12
BC FULL FWD +58RPM
0
STB STB A. 09.56:30
BC FULL FWD +50RPM
0
STB STB A. 09.56:19
>BC FULL FWD +42RPM
STB STB A. 09.48:48
BC MRLF FWD +41RPM
0
STB STB A. 09.48:29
>BC MRLF FWD +32RPM
STB STB A. 09.40:24
BC SLOW FWD +21RPM
0
STB STB A. 09.40:13
>BC SLOW FWD +20RPM
STB STB A. 09.36:27
BC D. SL FWD +24RPM
0
STB STB A. 09.30:58
BC D. SL FWD +32RPM
0
STB STB A. 09.30:52
BC D. SL FWD +23RPM
0
Restart Engine 12:00 STB STB A. 09.29:57
>BC D. SL FWD +68RPM
STATUS:
09 MAR 24 09.29:30
STB STB A.
BC STOP -6RPM

```

EXHIBIT # 17

---

Bell Logger Blow-up



MANEUVERING CHARACTERISTICS

EXXON VALDEZ

-11/88 AFTER RIDER MODIFICATION

SHIP PARTICULARS	
SP	54' 10" FT
LD	166' 10" FT
DR	50' 7" FT
FTW DRAFT	32' 4" FT
PORT	211' 4" L TONS

ENGINE ORDER	TIME AND DISTANCE TO CRASH STOP			
	FULL LOAD		BALLAST	
PULL SEA SPEED	10.0	1.85	7.4	1.49
PULL AHEAD	6.7	0.78	4.9	0.60
HALF AHEAD	5.7	0.56	3.6	0.71
BLOW AHEAD	4.9	0.42	2.7	0.10

ENGINE ORDER'S P.W. SPEED		
ENGINE ORDER	R.P.M.	SPEED (KNOTS)
PULL SEA SPEED	82.8	15.96
PULL AHEAD	55	10.6
HALF AHEAD	40	7.9
BLOW AHEAD	32	6.3

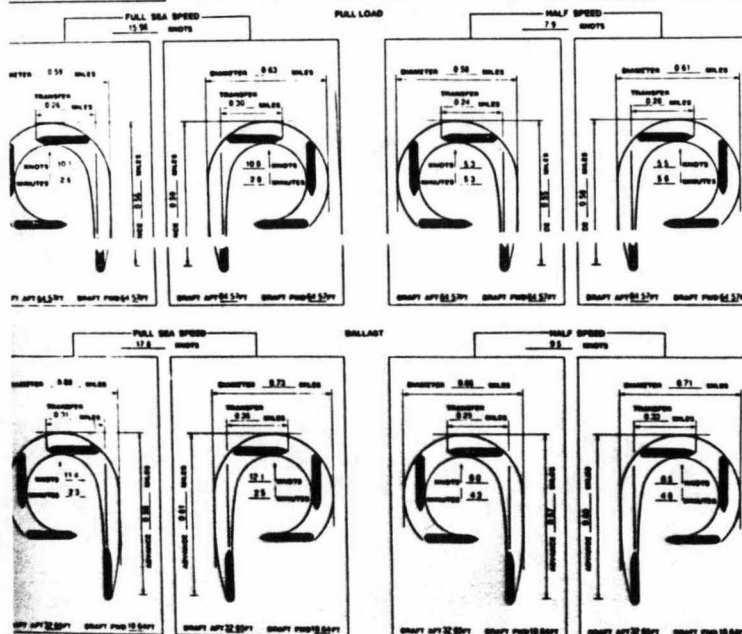
CONDITION	SHIP SPEED
1	N.A.
2	N.A.
3	N.A.
4	N.A.
5	N.A.

- IF ANY OF THE FOLLOWING CONDITIONS APPLY WHILE THE MANEUVERING INFORMATION IS BASED ARE TAMPED
- 1 CALM WEATHER UNDER 10 KNOTS OR LESS CALM SEA
  - 2 NO CURRENT
  - 3 WATER DEPTH TWICE THE SHIP'S DRAFT OR GREATER
  - 4 CLEAR HULL
  - 5 INTERMEDIATE DRAFTS OR SHROUDED TWIN

BLAST BLOW AHEAD	N.A.
BLOW AHEAD	N.A.
HALF AHEAD	N.A.
PULL AHEAD	N.A.

MINIMUM AVAILABLE RUDDER ANGLE	
RIGHT OR STARBOARD	35 DEGREES
LEFT OR PORT	35 DEGREES

DEEP WATER TURNING CIRCLE DIAGRAMS



1. APPROXIMATE TURNING CIRCLE DIMENSIONS ARE BASED ON THE ASSUMPTIONS OF A 100% RUDDER ANGLE AND A 100% TURNING CIRCLE. THE TURNING CIRCLE DIMENSIONS WILL VARY WITH THE TURNING CIRCLE. THE TURNING CIRCLE DIMENSIONS WILL VARY WITH THE TURNING CIRCLE. THE TURNING CIRCLE DIMENSIONS WILL VARY WITH THE TURNING CIRCLE.

NOTE: THIS PLAN IS DESIGNED TO COMPLY WITH TITLE 33, PART 164, UNITED STATES CODE OF FEDERAL REGULATIONS AND 33 CFR 164.001-10.

*Maneuvering Chart Blow-up*

*Exhibit # 18*

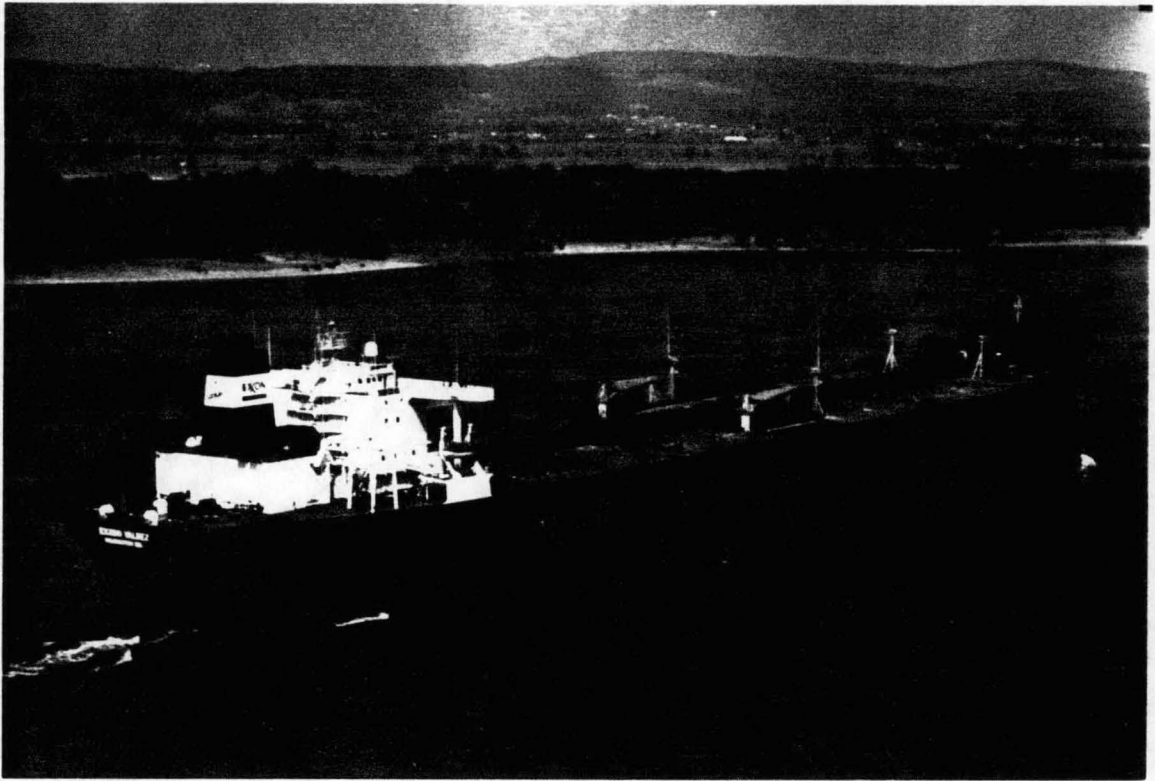
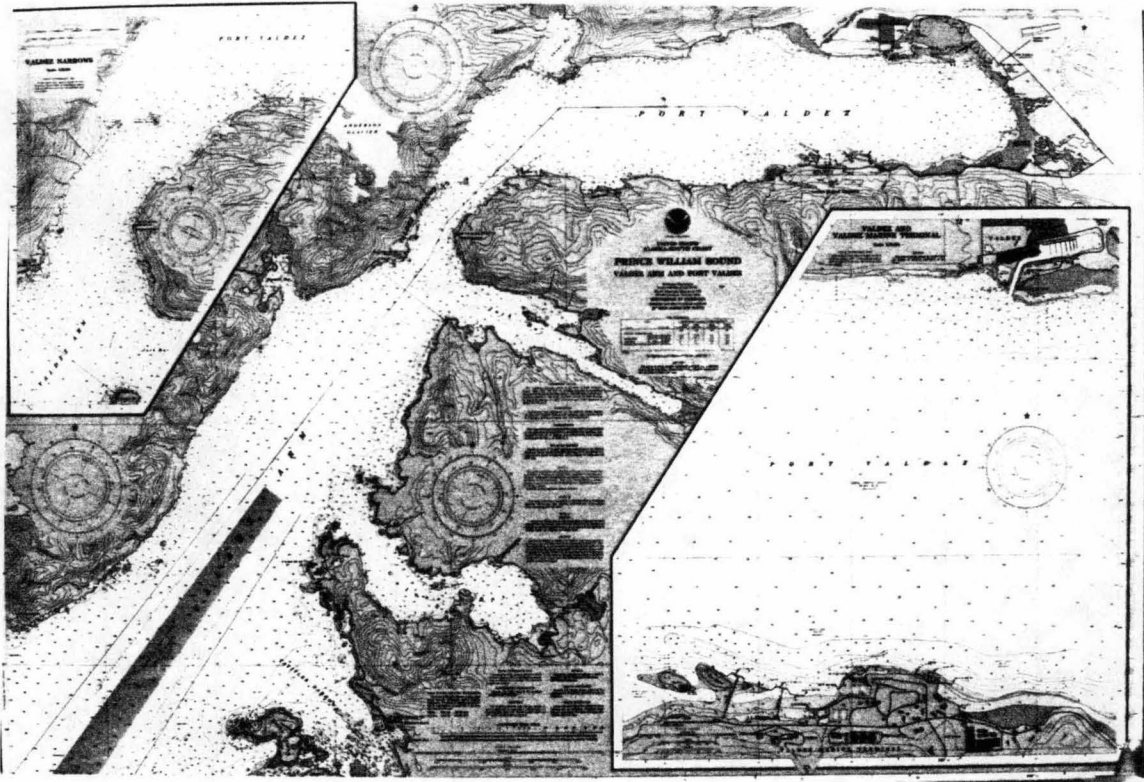


Exhibit #19

photo of the Exxon Valdez

**EXHIBIT 20**

**WAS NOT ADMITTED INTO EVIDENCE**



Map of Prince William Sound - Valdez Arm and Port Valdez

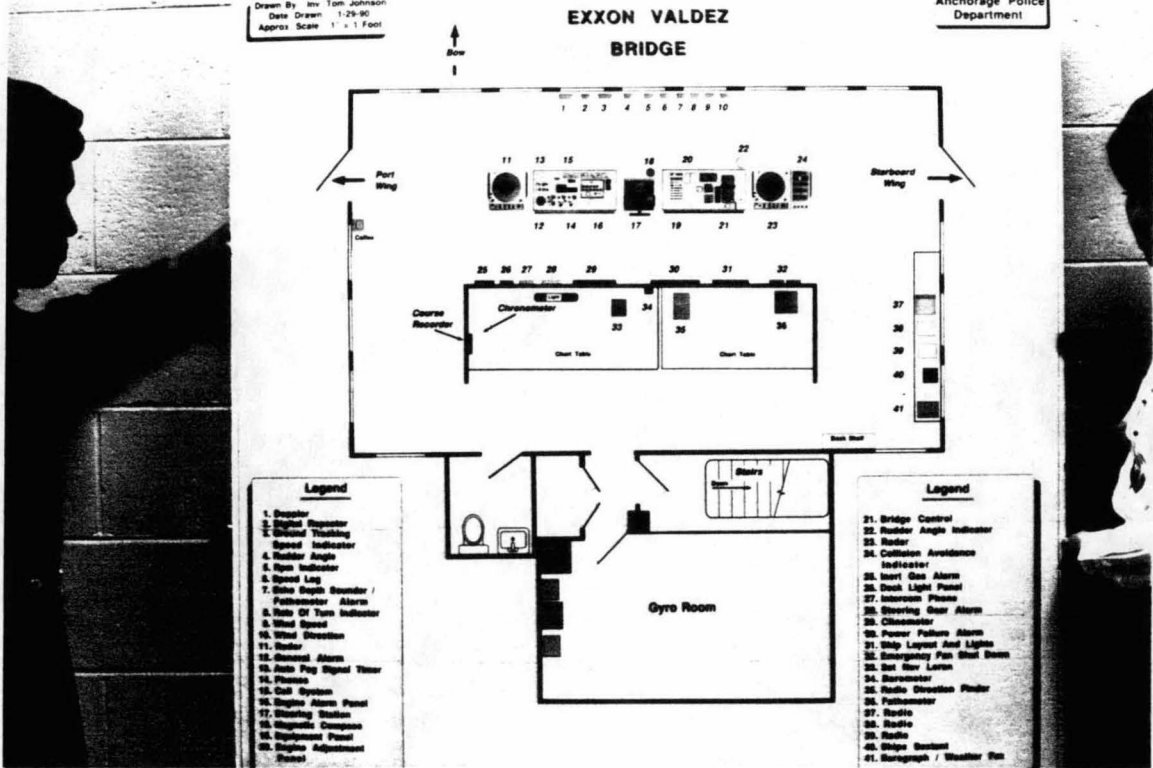
Exhibit # 21



Drawn By: Inv. Tom Johnson  
Date Drawn: 1/28/90  
Approx. Scale: 1" = 1 Foot

# EXXON VALDEZ BRIDGE

Anchorage Police  
Department

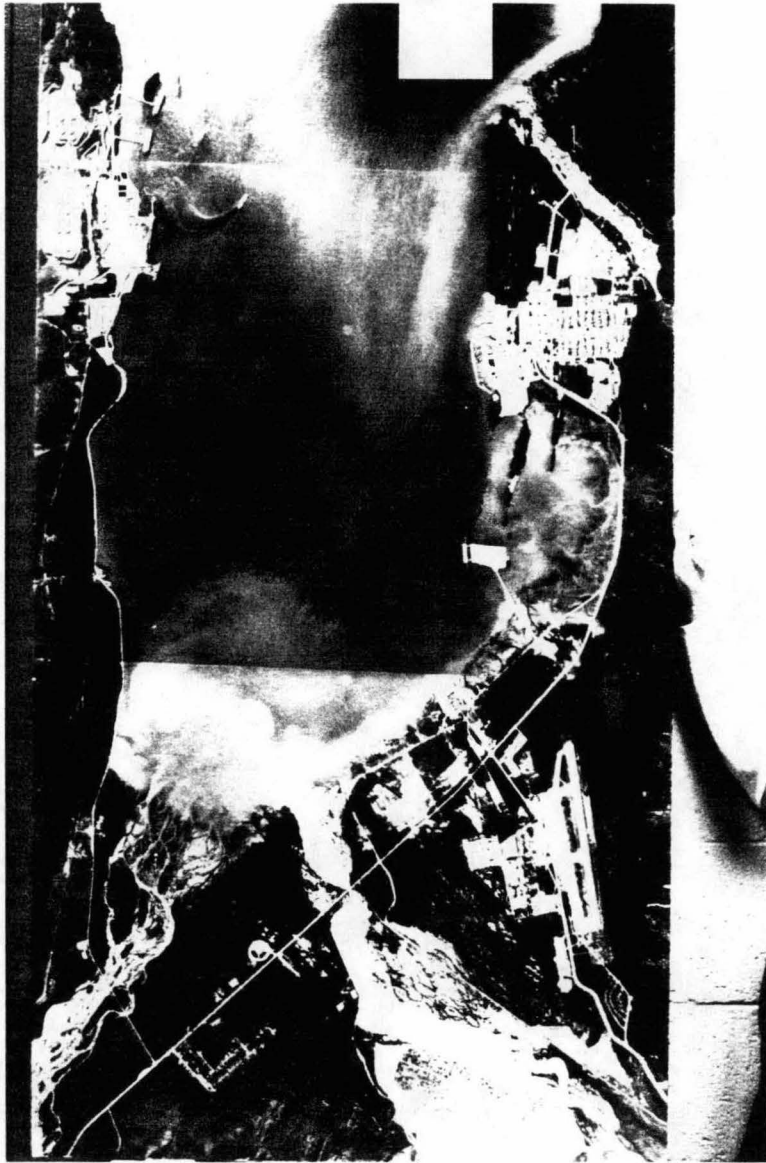


- Legend**
- 1. Engine Roomer
  - 2. Engine Thrusting
  - 3. Speed Indicator
  - 4. Radar Angle
  - 5. RPM Indicator
  - 6. Speed Log
  - 7. Fish Depth Sounder / Pathometer Alarm
  - 8. Rate Of Turn Indicator
  - 9. Wind Speed
  - 10. Wind Direction
  - 11. Radar
  - 12. Alarm Alarm
  - 13. Auto Pay Signal Ther
  - 14. Phone
  - 15. Call System
  - 16. Engine Alarm Panel
  - 17. Steering Station
  - 18. Magnetic Compass
  - 19. Equipment Panel
  - 20. Engine Adjustment Panel

- Legend**
- 21. Bridge Control
  - 22. Heading Angle Indicator
  - 23. Radar
  - 24. Collision Avoidance Indicator
  - 25. Inert Gas Alarm
  - 26. Deck Light Panel
  - 27. Intercom Panel
  - 28. Steering Gear Alarm
  - 29. Clinometer
  - 30. Power Failure Alarm
  - 31. Ship Layout And Lights
  - 32. Emergency Fan Shut Down
  - 33. Bat Bar Lanes
  - 34. Barometer
  - 35. Radio Direction Finder
  - 36. Pathometer
  - 37. Radio
  - 38. Radio
  - 39. Radio
  - 40. Ship's Sounder
  - 41. Barograph / Weather Fan

*Exp. #22*

Bridge Diagram Chart



City of Valdey Photo chart  
EX# 23

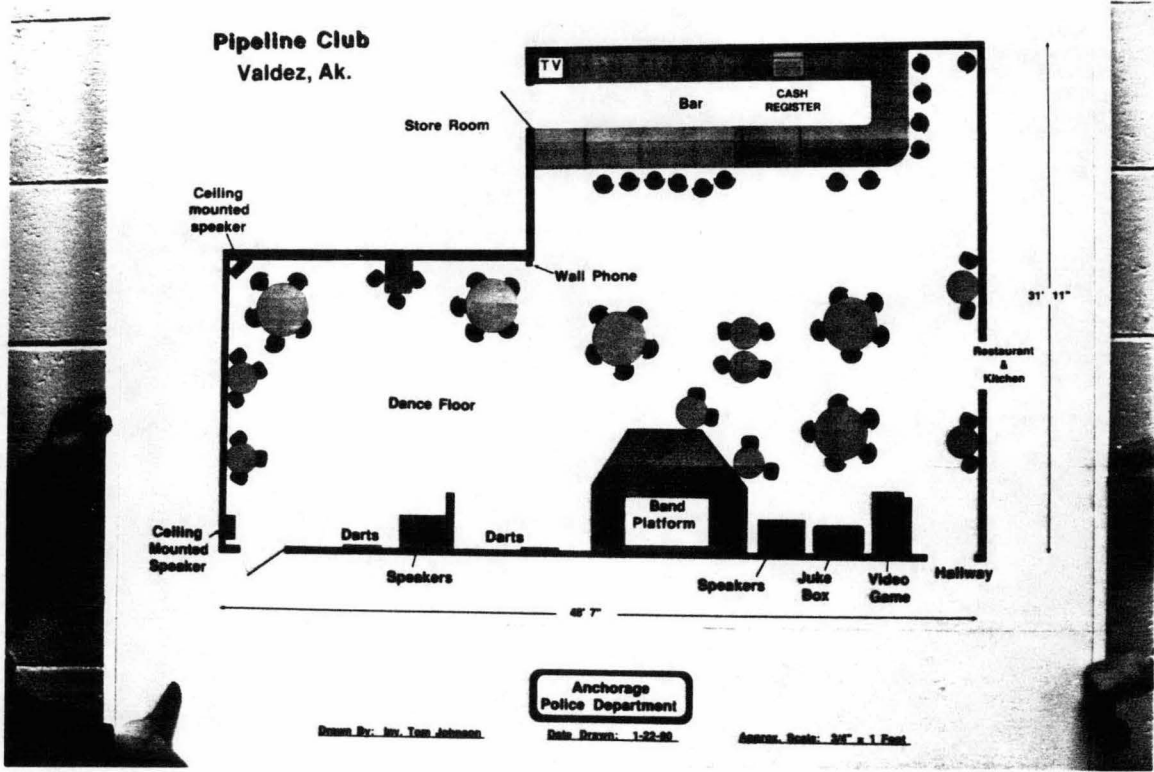
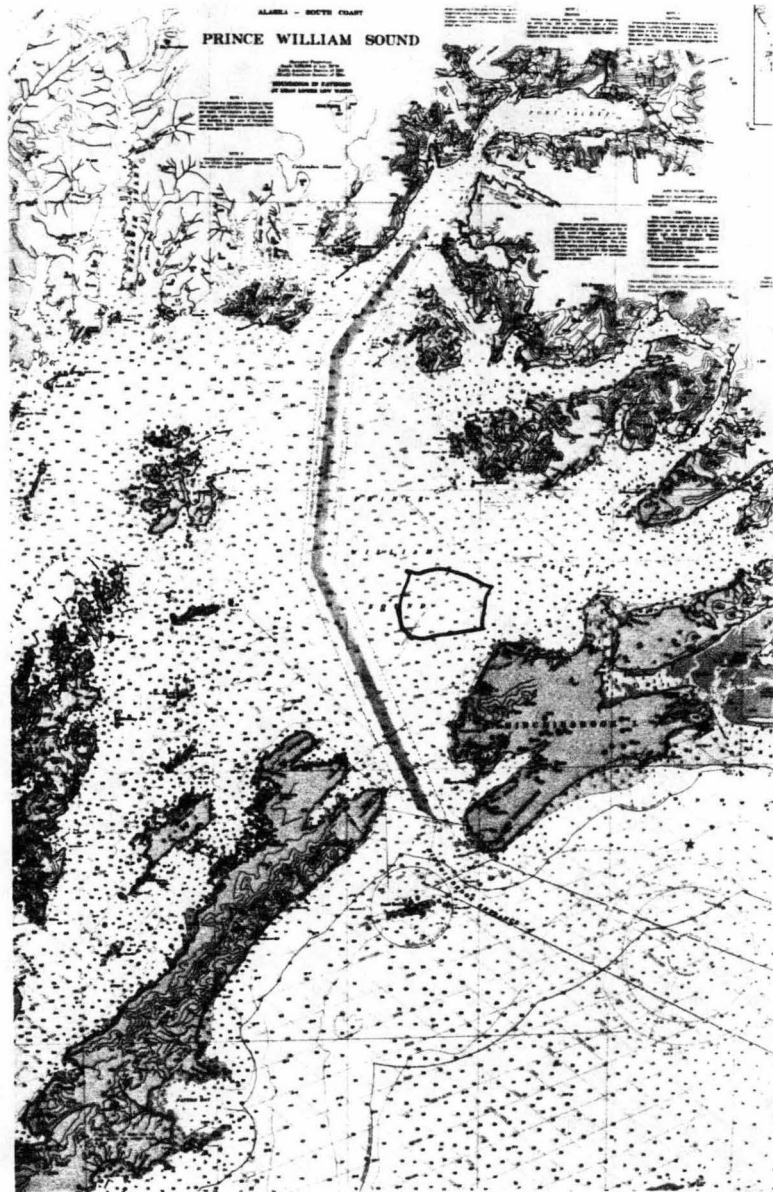


Diagram of the Pipeline Club  
EX.#24



Exp # 25

Chart 1670

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Exhibit 26

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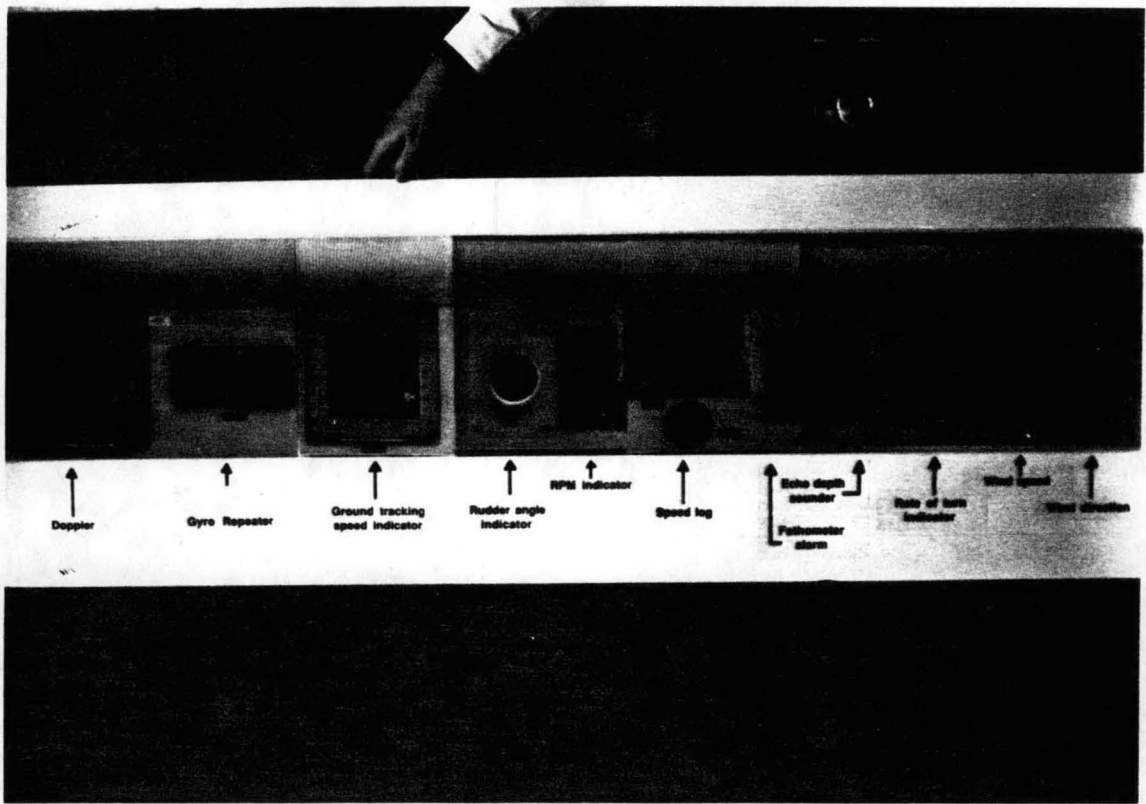


Exhibit #27

Fiddle Board Chart



**EXHIBIT 28**

**WAS NOT ADMITTED INTO EVIDENCE**

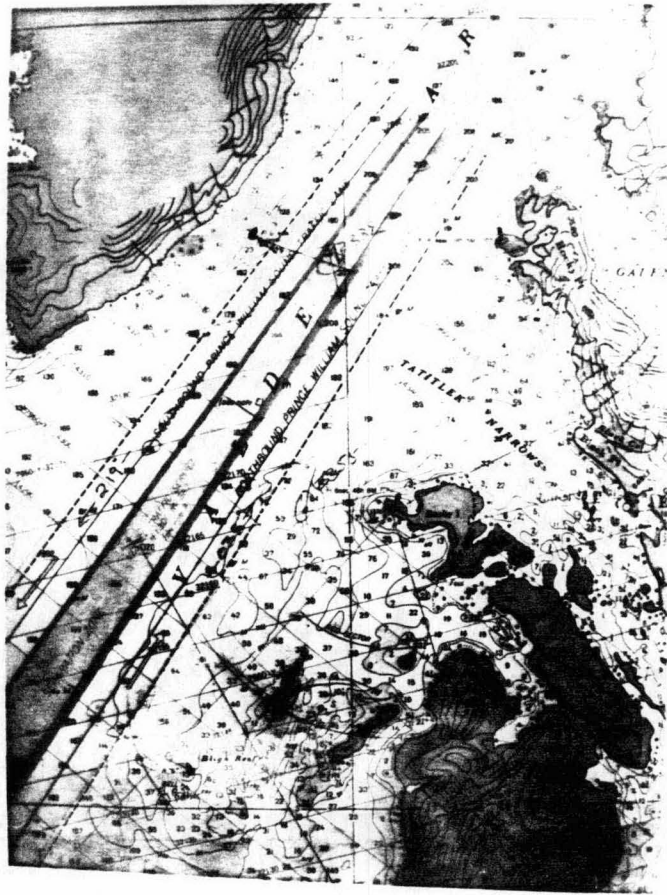


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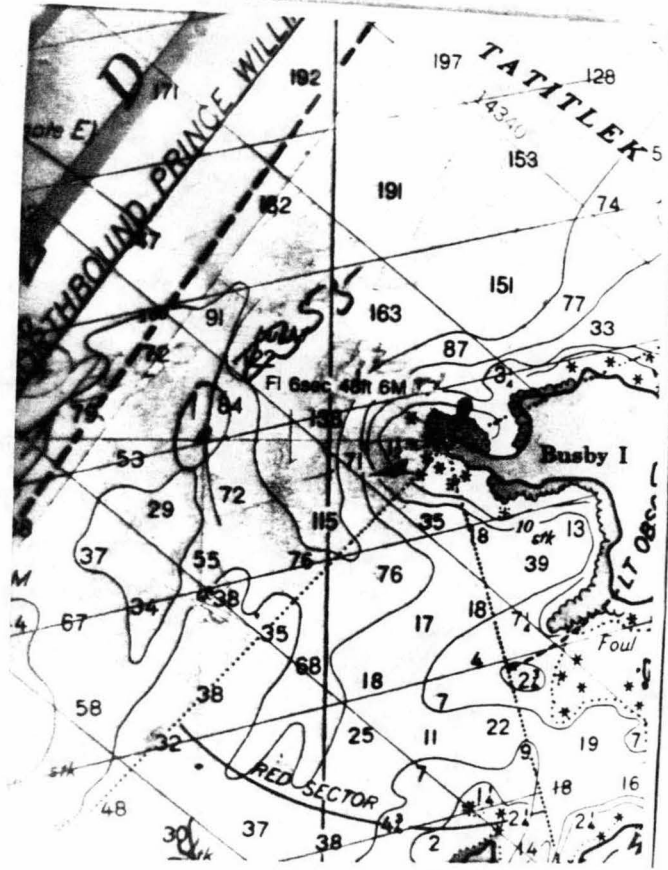


Exhibit # 30

**PLAINTIFF**  
XHIBIT NO. 31  
ADMITTED  *initial*  
3ANS89-7217  
(CASE NUMBER)

April 28, 1989

James Gilmore  
310 K Street, Suite 308  
Anchorage, AK 99501

Re: Immunity for Edward Murphy

Dear Mr. Gilmore:

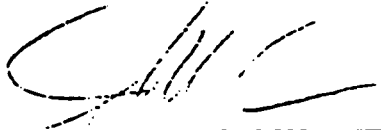
As counsel for Mr. Murphy you indicated that he would assert his constitutional right not to testify in connection with any inquiry into the Exxon Valdez incident unless he receives immunity from prosecution.

As you know, it is not our policy to lightly grant requests for immunity, and we must carefully weigh the competing interests involved. In order to permit the inquiry to proceed in this case and to obtain Mr. Murphy's testimony and to expedite resolution of this matter, the state grants Mr. Murphy immunity from prosecution for any acts committed in connection with the Exxon Valdez incident occurring on March 23, 24, and 25 in Alaska, except that there will be no immunity for perjury or the giving of a false statement. This does not provide transactional immunity from federal prosecution.

This grant is made on the condition that Mr. Murphy cooperate fully with the District Attorney's Office in interviews and that he make himself available to testify at Grand Jury and any subsequent trial and that he testify truthfully in connection with those proceedings.

Sincerely,

DOUGLAS B. BAILY  
ATTORNEY GENERAL



---

DWAYNE W. MCCONNELL  
DISTRICT ATTORNEY

POST No.: 132 LOCATION: VALDEZ TERMINAL DATE: 3-23-89 PAGE: 9 OF: 12

BEGIN SHIFT:		END SHIFT:		GUARD'S NAME: (PRINT)			RECEIVED RADIO:		RECEIVED KEYS:		RECEIVED WEAPONS:	
0801		2400		K. Christensen			<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	
TIME IN	TIME OUT	TIME IN	TIME OUT	INDIVIDUAL'S NAME	COMPANY	ALYESKA BADGE No.	LICENSE No. VEHICLE No.	CODE	COMMENTS, REMARKS, EXPLANATIONS, ETC.			
/	1059	2024			Exxon			/				
/	1059	2024		Roberson, J.	Valdez	Sea	3487CH	S				
/	1059	2024		Glowacki, J.	Exxon			/				
/	1059	2024		Hazelwood, J.	Valdez	Sea	3487CH	S				
1102	1108	1327	1332		Exxon (Master)			/				
1640	1659			Watkins, J.	Yellow Cab	VT0446	22F443	S	B-1-1-3/5 In-4-1-0 Out-2-0-5			
1102	1128	1409	1523					/				
/	1108	1358		Von Barger, L.	Aly		9129	S	Exhibit #32			
/	1108	1358		Hayden, J.	Arco			/				
/	1108	1358		Christeson, B.	Juncou	Sea	22F443	S				
1125	1302	1610	1717					/	1125: B3-Aspen 1610: B4 ARCO INDEPENDENCE			
/	1203	1353		Santos, A.	Sohio	R119	B4F611	S				
/	1259	1410		FULLERTON, J.	HOUSTON	VC0503	A310	S				
1328	1433			BURZINSKI, J.	EM	VC0437	9262	S				
1340	1402			TOLL, D.	USCG	VG0026	16597	S	1328 B1 ARCO JUNEAU MARINE SUPER NOTIFIED			
				FULLER, R.	APSC		9244	S				

CODE: W - WEAPONS, V - VISITORS, R - RADIO CHECK, P - PROPERTY IN/OUT, K - KEY, SR - SECURITY REPORT ACCOMPLISHED, S - SEARCHED.

GUARD'S SIGNATURE: *[Signature]* SUPERVISOR'S SIGNATURE: *[Signature]*



**EXHIBIT 33**

**WAS NOT ADMITTED INTO EVIDENCE**

**EXHIBIT 34**

**WAS NOT ADMITTED INTO EVIDENCE**

**EXHIBIT 35**

**WAS NOT ADMITTED INTO EVIDENCE**

**EXHIBIT 36**

**WAS NOT ADMITTED INTO EVIDENCE**



Exhibit # 37

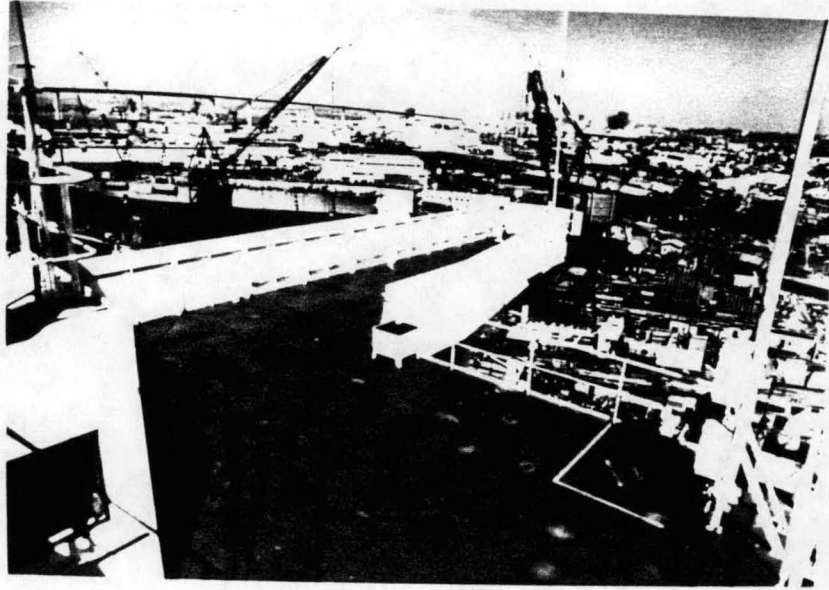


Exhibit # 38



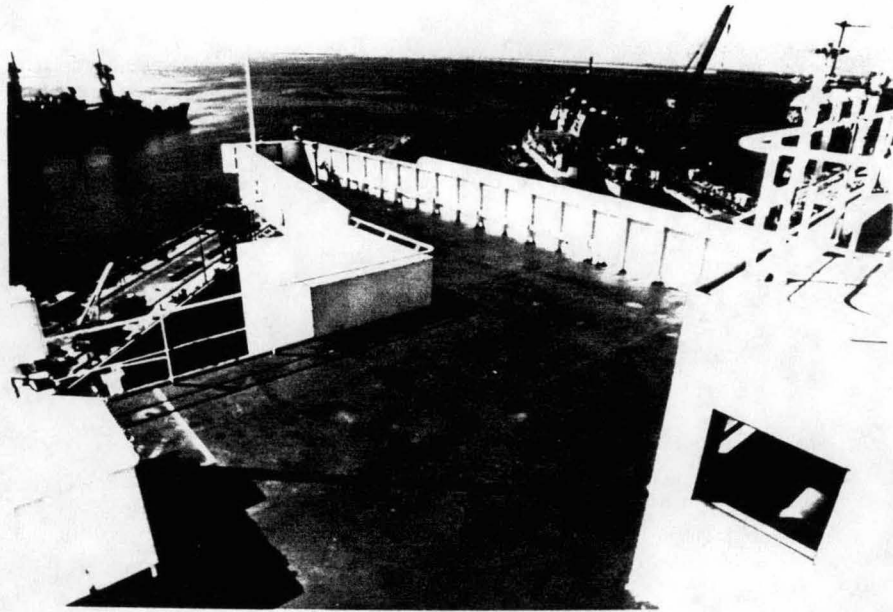


Exhibit #39



Exhibit 40

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Exhibit 41

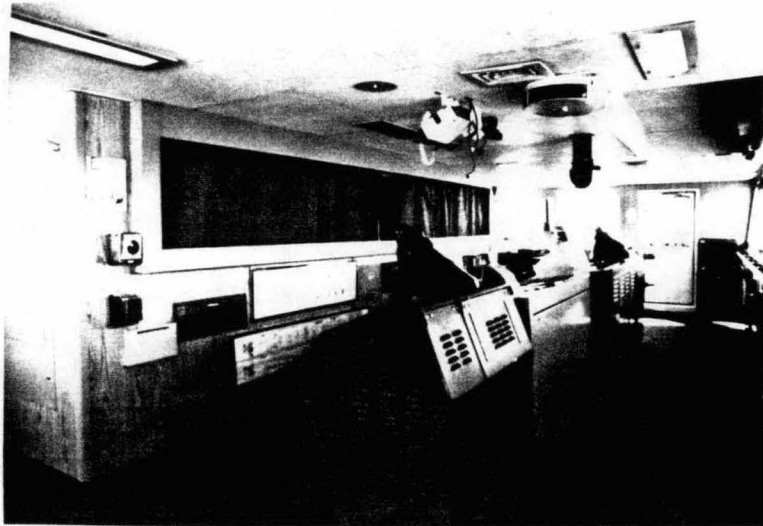


Exhibit 42



Exhibit 43

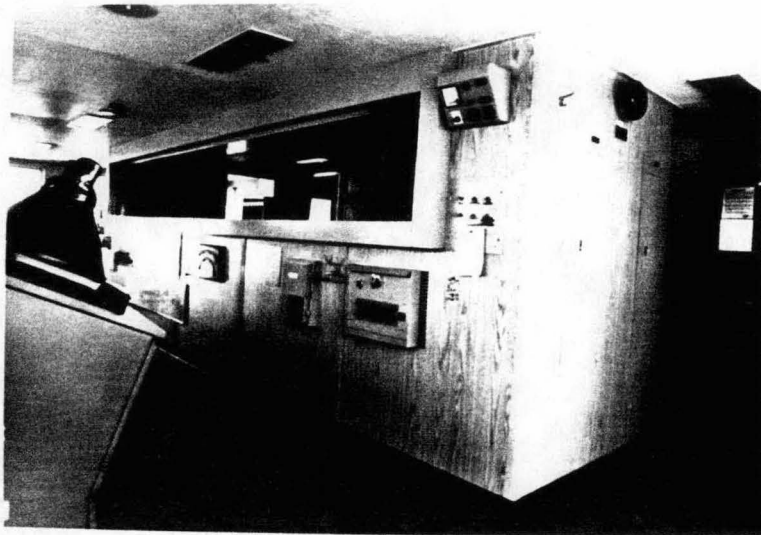


Exhibit 44





Exhibit 45

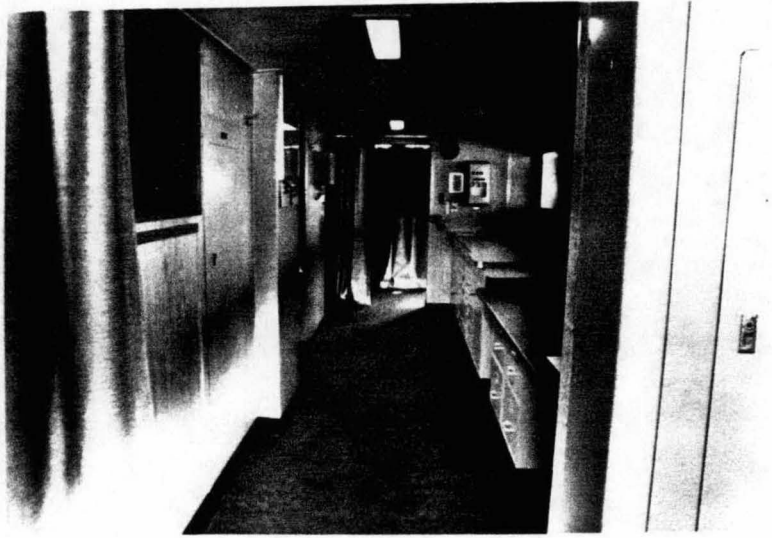


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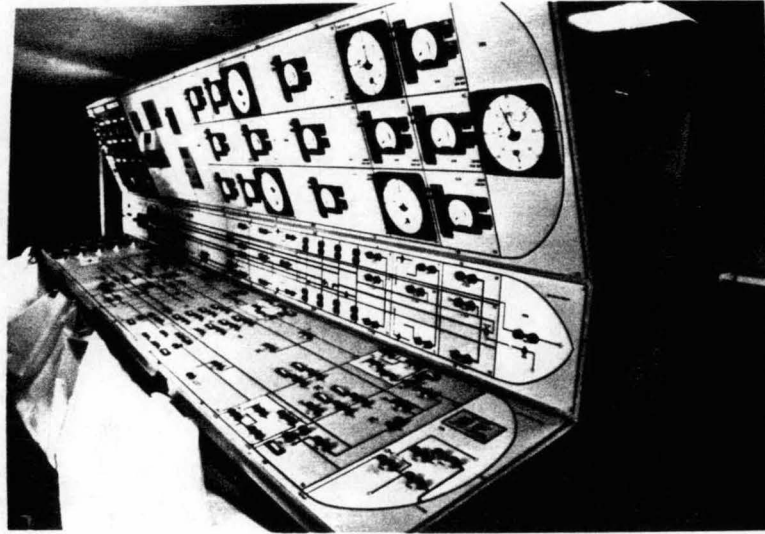


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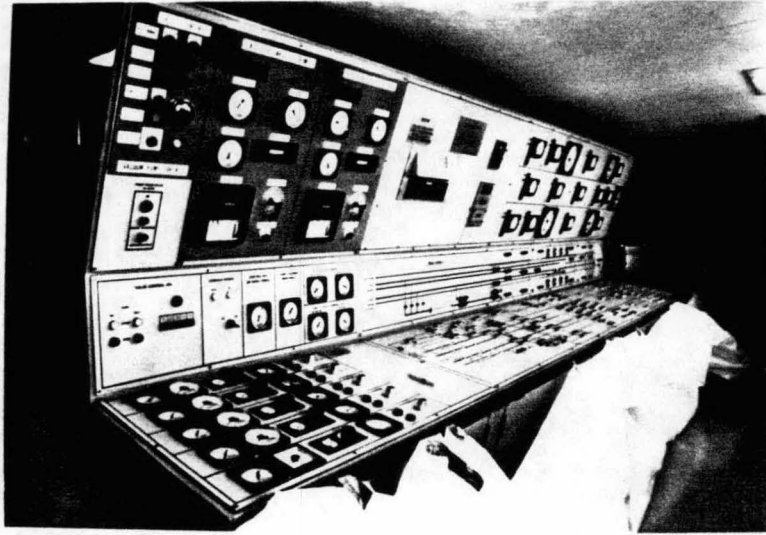


Exhibit 48



Exhibit 49

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Exhibit 50





Exhibit 51

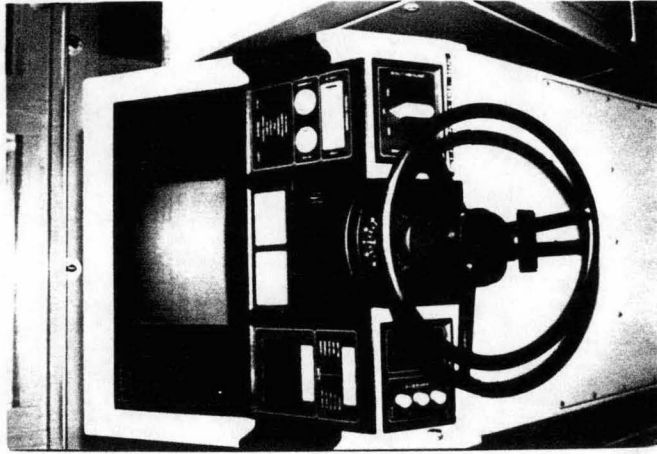


Exhibit 52



Exhibit 53

**EXHIBIT 54**

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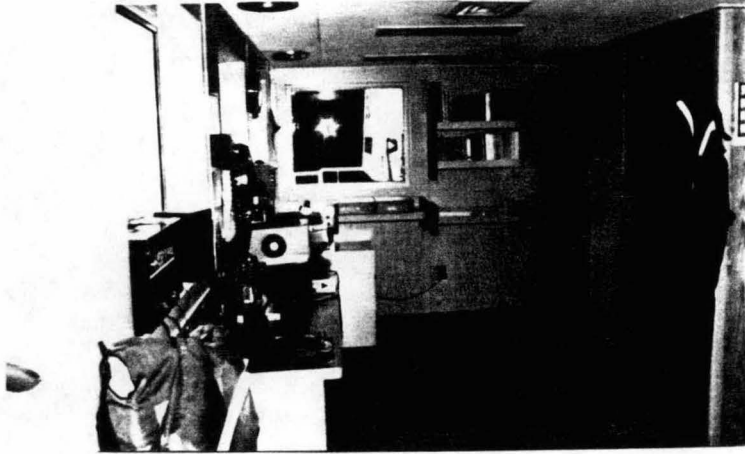


Exhibit 55



Exhibit 56

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Exhibit 58

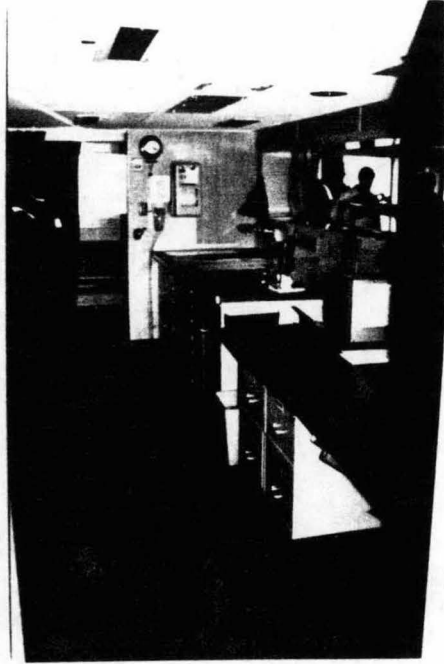


Exhibit 57

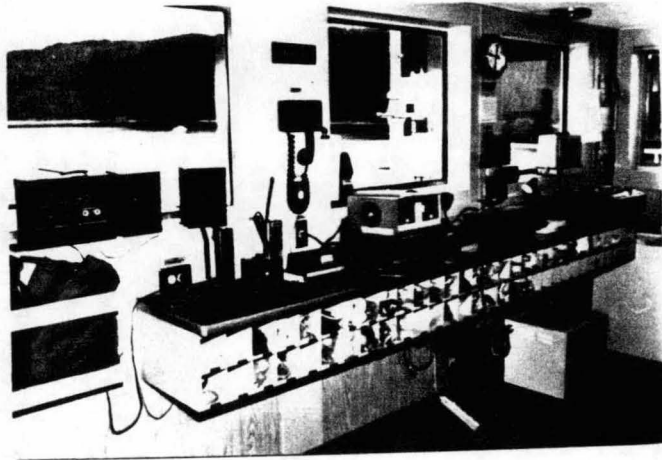


Exhibit 59

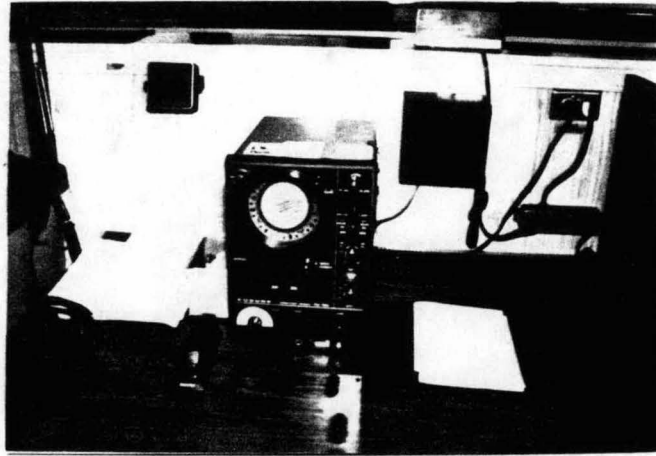


Exhibit 60



Exhibit 61

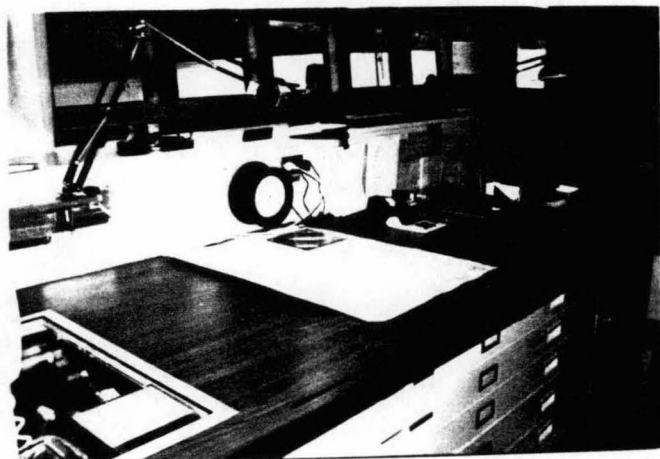


Exhibit 62

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Exhibit 63



Exhibit 64

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Exhibit 65

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Exhibit 66

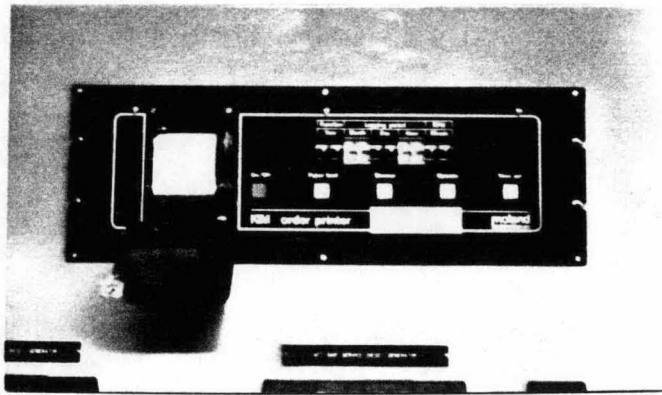


Exhibit 67

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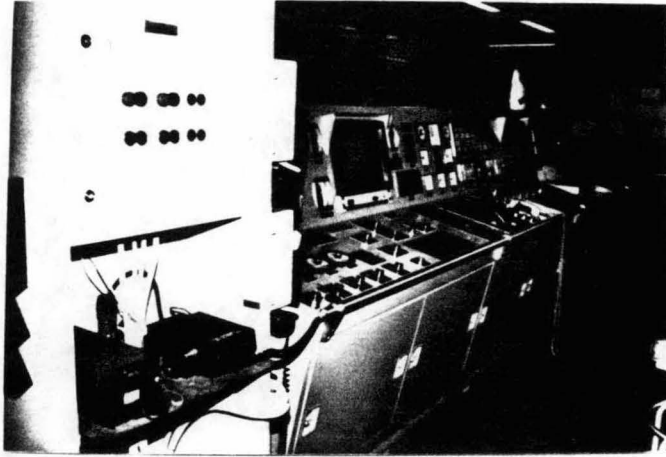


Exhibit 68

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Exhibit 69

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Exhibit 70

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Exhibit 71

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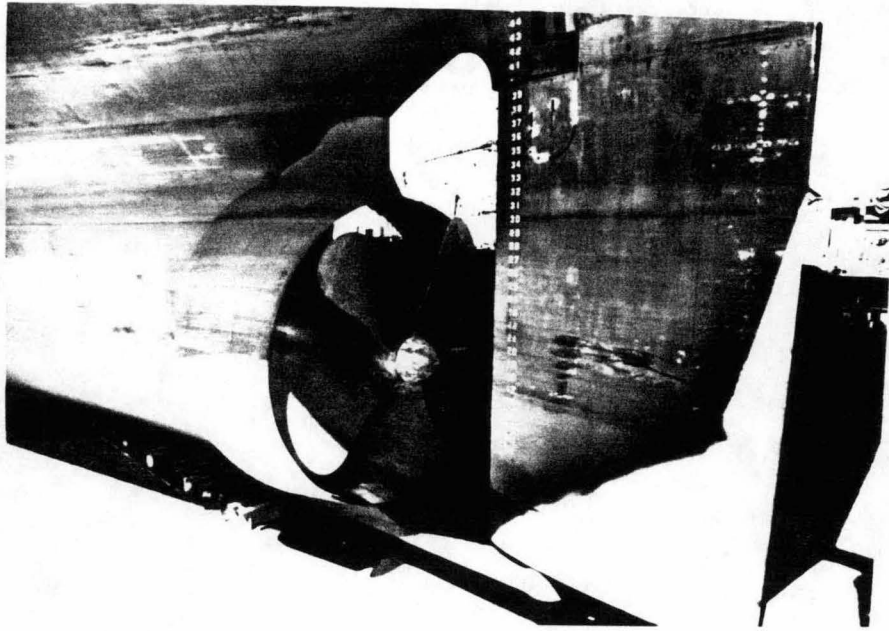
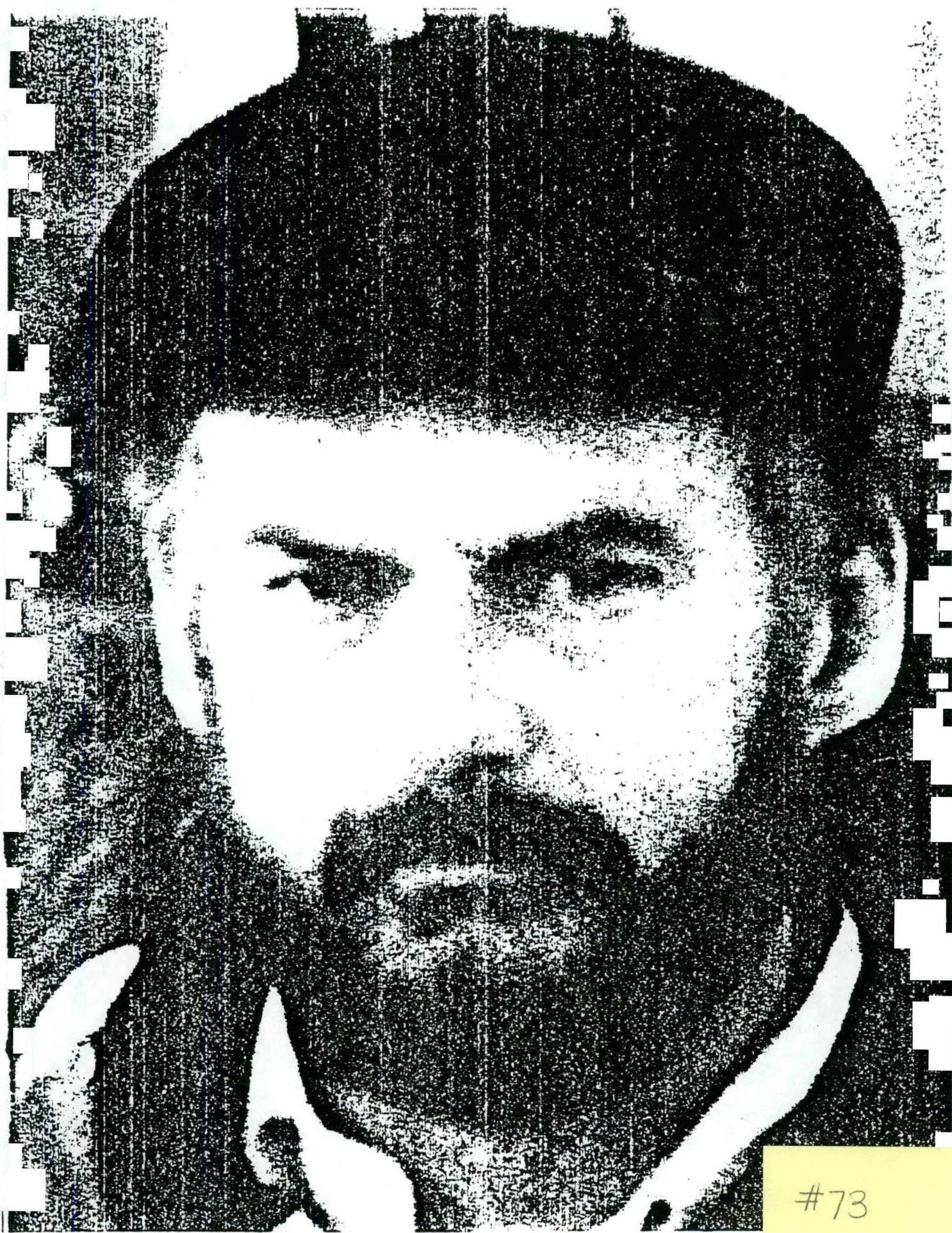


Exhibit # 72





#73



DEPARTMENT OF TRANSPORTATION



**COAST GUARD**

**Vessel  
Traffic  
Service**

**PRINCE WILLIAM SOUND  
USER'S MANUAL  
SECOND EDITION**

1988

**PLAINTIFF**

EXHIBIT NO. 75

ADMITTED  *trial*

*89-7217 CE*

*89-7218 CE*

(CASE NUMBER)

012107



## INTRODUCTION

This manual is intended to provide the user with information necessary for participation in the Prince William Sound Vessel Traffic Service. This User's manual fulfills the Operating Manual requirements of 33 CFR 161.306 and it contains the rules and regulations which delineate the service, and which are published in Title 33, Code of Federal Regulations. This manual is not intended to conflict with or modify the regulations in any respect, and any apparent conflict should be resolved in favor of the regulations. The Coast Guard will keep the manual current with any permanent changes issued to the regulations. Changes of a temporary nature will be promulgated by the Commander Seventeenth Coast Guard District, in notices to mariners, and will not be incorporated in this User's Manual.

The Prince William Sound Vessel Traffic Service is a vessel movement reporting system established under the authority of the Ports and Waterways Safety Act and it consists of four basic components: A Traffic Separation Scheme; a Vessel Movement Reporting System; radar surveillance; and regulations. A Vessel Traffic Center is located in Valdez, Alaska. It utilizes a VHF-FM communication network continuously manned and recorded by Coast Guard personnel. The center processes information received from participating vessels and enhances its accuracy with radar and then disseminates the information to other participating vessels operating in the Vessel Traffic Service area. The goal of the system is to improve vessel transit safety by providing the vessels with advance information of other reported marine traffic and any additional information which may affect vessel traffic safety within the area of the Vessel Traffic Service.

THE MARINER IS CAUTIONED THAT INFORMATION PROVIDED BY THE VESSEL TRAFFIC CENTER IS TO A LARGE EXTENT BASED UPON REPORTS OF PARTICIPATING VESSELS AND CAN BE NO MORE ACCURATE THAN THE INFORMATION RECEIVED. THE COAST GUARD MAY NOT KNOW OF ALL HAZARDOUS CIRCUMSTANCES WITHIN THE VESSEL TRAFFIC SERVICE AREA. UNREPORTED HAZARDS MAY CONFRONT THE MARINER AT ANYTIME. ANY CONFLICTING CIRCUMSTANCES OR HAZARDOUS CONDITIONS SHOULD BE REPORTED TO THE VESSEL TRAFFIC CENTER IMMEDIATELY.

The efficient operation of the Prince William Sound Vessel Traffic Service and safe navigation in the service area depend upon mariners observing these operating procedures day and night, in all weather. The Coast Guard welcomes any suggestions that may improve this manual or the Prince William Sound Vessel Traffic Service.

ALL PREVIOUS EDITIONS ARE OBSOLETE

## CHANGE SHEET

CHANGE NUMBER

EFFECTIVE DATE

CHANGE NUMBER	EFFECTIVE DATE

012109

INTRODUCTION.....	i
CHANGE SHEET.....	ii
TABLE OF CONTENTS.....	iii
CHARTLETS.....	v
I. GENERAL OPERATING PROCEDURES.....	1
1. Purpose and applicability.....	1
2. Definitions.....	1
3. Vessel operation in the VTS area.....	2
4. Laws and regulations not affected.....	2
5. VTS Operating Manual.....	2
6. VTC directions.....	2
7. Authorization to deviate from these rules.....	3
8. Emergencies.....	3
II. COMMUNICATIONS PROCEDURES.....	3
1. Radio listening watch.....	3
2. Radiotelephone equipment.....	4
3. English language.....	4
4. Time.....	4
5. Radio failure.....	4
6. Report of emergency or radio failure.....	4
7. Report of impairment to the operation of the vessel.....	4
III. VESSEL MOVEMENT REPORTING PROCEDURES.....	5
1. Initial report.....	5
2. Follow-up report.....	5
3. Movement reports.....	5
4. Reporting points.....	6
5. Final report.....	6
IV. TRAFFIC SEPARATION SCHEME PROCEDURES.....	6
1. Vessels required to use the TSS.....	6
2. Vessel operation in the TSS.....	6
3. Direction of traffic.....	6
4. Anchoring in the TSS.....	6
5. Joining, leaving, and crossing a traffic lane.....	6

012111

TABLE OF CONTENTS CONTINUED

V. VALDEZ NARROWS PROCEDURES..... 7  
1. One-Way traffic in Valdez Narrows..... 7  
2. Entering Valdez Narrows..... 7  
3. Communications in Valdez Narrows..... 7  
VI. SPECIAL REQUIREMENTS FOR TANK VESSELS... 7  
1. Tank vessels in the VTS area..... 7  
2. Tug assistance for tank vessels..... 8  
VII. DESCRIPTIONS AND GEOGRAPHIC COORDINATES.. 8  
1. VTS Area..... 8  
2. Separation zone..... 8  
3. Traffic lanes..... 9  
4. Valdez Narrows one-way traffic area..... 9  
APPENDIX A SUMMARY OF VTS PROCEDURES..... 11  
APPENDIX B SAMPLE MESSAGES..... 13  
APPENDIX C WEATHER REPORTS..... 15  
APPENDIX D ICE SIGHTING REPORTS..... 15  
APPENDIX E DESCRIPTION OF HAZARDOUS CARGO.. 16  
APPENDIX F ANCHORING REGULATIONS..... 17  
APPENDIX G SAFETY ZONE REGULATIONS..... 18  
APPENDIX H PRINCE WILLIAM SOUND  
VTS REGULATIONS..... 19

CHARTLETS OF  
THE VESSEL TRAFFIC SERVICE AREA



## VESSEL TRAFFIC SERVICE OPERATING PROCEDURES

### I. GENERAL PROCEDURES

#### 1. PURPOSE AND APPLICABILITY

(a) This manual describes procedures to be followed by vessels operating in the Prince William Sound Vessel Traffic Service Area (VTS Area). The purpose of the Prince William Sound Traffic Service is to enhance the safety of navigation in the VTS Area by reducing the potential for collisions and groundings, and to protect the waters of the VTS Area from environmental harm resulting from those mishaps.

(b) Section I, General Procedures; Section IV, Traffic Separation Scheme (TSS) Procedures; and Section VII, Descriptions and Geographic Coordinates apply to all vessels.

(c) Section II, Communication Procedures; Section III, Vessel Movement Reporting Procedures; and Section V, Valdez Narrows Procedures apply only to:

- (1) Each vessel of 300 or more gross tons that is propelled by machinery;
- (2) Each vessel of 100 or more gross tons that is carrying one or more passengers for hire;
- (3) Each commercial vessel of 8 meters or over in length engaged in towing another vessel astern, alongside, or by pushing ahead; and
- (4) Each dredge and floating plant.

For the purpose of brevity, the vessels previously described will be referred to as "radio equipped vessels" in the text of this manual. The primary users of the Vessel Traffic Service will be "radio equipped vessels" However within the capacity of the system, all possible assistance concerning safety of navigation will be furnished to any participating vessel in the Vessel Traffic Service area.

(d) Section VI, "Special Requirements for Tank Vessels", applies to all tank vessels of 20,000 DWT or more.

#### 2. DEFINITIONS

As used in this manual

- (a) "ETA" means estimated time of arrival
- (b) "Person" includes individual, firm, corporation, association, partnership, and governmental entity.



- (c) "Separation zone" means an area of the TSS that is located between two traffic lanes to keep the vessels proceeding in opposite directions a safe distance apart.
- (d) "Traffic lane" means an area of the TSS in which all vessels ordinarily proceed in the same direction.
- (e) "Traffic separation scheme" (TSS) means the network of traffic lanes and separation zones in the VTS Area.
- (f) "Vessel Traffic Center" (VTC) means the shore-based facility that operates the Prince William Sound Vessel Traffic Service.
- (g) "Vessel Traffic Service Area" (VTS Area) means the area described in Section VII of this manual.
- (h) "Tank Vessel" means any vessel specially constructed or converted to carry oil or any other hazardous substances in bulk in the cargo spaces.
- (i) "Laden Tank Vessel" means a tank vessel having cargo on board in excess of normal clingage or residue.

### 3. VESSEL OPERATION IN THE VTS AREA

Persons participating in the Vessel Traffic Service will follow the procedures contained in this manual.

### 4. LAWS AND REGULATIONS NOT AFFECTED

Nothing in this manual is intended to relieve any person from complying with:

- (a) International Regulations for Preventing Collisions at Sea, 1972;
- (b) Vessel Bridge-to-Bridge Radiotelephone Regulations (33 USC 26);
- (c) The Federal Boat Safety Act of 1971 (46 U.S.C. 1451 through 1489); and
- (d) any other laws or regulations.

### 5. VTS OPERATING MANUAL

The master of a radio equipped vessel (vessels listed in Section I (c)) shall insure that a copy to the current edition of the Prince William Sound Vessel Traffic Service Operating Manual is available on board the vessel when it is in the VTS Area.

### 6. VTC DIRECTIONS

(a) During conditions of vessel congestion, adverse weather, reduced visibility, or other hazardous circumstances in the reduced visibility, or other hazardous circumstances in the VTS Area, the VTC may issue directions specifying times when vessels may enter, or move within or through, or depart from ports, harbors, or other waters in the VTS Area.

(b) The master of a vessel in the VTS Area shall comply with each direction issued to the vessel under this section.

(c) Under normal circumstances the VTC will exercise no direct control over vessel movements in the VTS Area. However, when the situation dictates, the Coast Guard will exert control over vessel movements by invoking this regulation. Responsibility of the master or pilot for safe navigation and prudent maneuvering of his vessel is in no way lessened or relieved by this regulation.

### 7. AUTHORIZATION TO DEVIATE FROM THESE RULES

(a) The Commander, Seventeenth Coast Guard District may, upon written request, issue an authorization to deviate from any rule if he finds that the proposed operation under the authorization can be done safely. An application for an authorization must state the need for the authorization and describe the proposed operations.

(b) The VTC may, upon request, issue an authorization to deviate from any rule in the regulations for a voyage or part of a voyage on which a vessel is embarked or about to embark.

### 8. EMERGENCIES

In an emergency, any master may deviate from any rule in the VTS regulations to the extent necessary to avoid endangering persons, property, or the environment. When an emergency arises and it becomes necessary to deviate from these rules for reasons of safety, the master of the vessel shall report or cause to be reported, the deviation to the VTC as soon as possible.

## II. COMMUNICATIONS PROCEDURES

### 1. RADIO LISTENING WATCH

The master of a vessel in the VTS Area shall continuously monitor or cause to be monitored the radio frequency designated herein for the Prince William Sound VTS area, except when transmitting on that frequency. A radio listening watch is required whether underway, anchored or aground.

VHF-FM Channel 13 (156.65 MHz), the Bridge-to-Bridge Navigation Safety Frequency, has been designated as the radiotelephone frequency for the entire Vessel Traffic Service area. The Vessel Traffic Center will maintain a continuous guard on Channel 13 and it will be used to transmit and receive vessel movement data and other maritime safety information.

VALDEZ TRAFFIC is the radio call sign. Radio procedures



will be in accordance with the Radio Regulations promulgated by the International Telecommunications Union. Sample messages are provided in Appendix B.

## 2. RADIOTELEPHONE EQUIPMENT

Each report required by the Prince William VTS rules to be made by radiotelephone must be made using a radiotelephone that is capable of operating on the navigational bridge of the vessel, or in the case of a dredge, at its main control station.

## 3. ENGLISH LANGUAGE

Each report required must be made in the English language.

## 4. TIME

Each report required must specify time using:

- (a) The zone time in effect in the VTS area; and
- (b) The 24-hour clock system.

## 5. RADIO FAILURE

Any vessel participating in this system which experiences radio failure while transiting in the Vessel Traffic Service area may continue to his reported destination. Alternate communications should be used if available. The master should exercise due diligence to restore it or cause it to be restored to effective operating condition at the earliest practicable time. Such failure should be reported to the VTC as soon as possible. Any radio equipped vessel having experienced a radio failure which desires to resume a voyage without radio communications in the VTS area may do so only with permission from the VTC.

## 6. REPORT OF EMERGENCY OR RADIO FAILURE

Whenever the master of a vessel deviates from any rule in the regulations because of an emergency or radio failure, he shall report the deviation to the VTC as soon as possible.

## 7. REPORT OF IMPAIRMENT TO THE OPERATION OF THE VESSEL

The master of a vessel in the VTS Area shall report to the VTC as soon as possible:

- (a) Any emergency or unusual event such as fire, collision, grounding, man overboard.

(b) Any condition on the vessel that may impair its navigation, reduce its capabilities or which may effect the safety of other vessels such as defective propulsion, defective steering, inoperative navigational running lights, unusual handling, impaired maneuverability, inoperative whistle or horn.

(c) Any tow that the towing vessel is unable to control, or can control only with difficulty.

## III VESSEL MOVEMENT REPORTING PROCEDURES

### 1. INITIAL REPORT

Three hours before a radio equipped vessel enters or begins to navigate in the VTS Area through Hinchinbrook Entrance or at least 30 minutes before a vessel enters or begins to navigate in the VTS Area from other points, the master of the vessel shall report to the VTC:

- (a) Name, type, and draft of the vessel;
- (b) Position of the vessel;
- (c) Estimated time and place of entering or beginning to navigate in the VTS Area;
- (d) Estimated vessel speed to transit the VTS Area;
- (e) ETA to destination in the VTS Area and name of the destination;
- (f) If the vessel is a towing vessel, the overall length of the tow, including the towing vessel;
- (g) Whether or not any dangerous cargo is on board the vessel or its tow: (See Appendix E);
- (h) Any impairment to the operation of the vessel;
- (i) Alternate communications, if any;
- (j) Any other information requested by the VTC.

### 2. FOLLOW-UP REPORT

At least 60 minutes before a vessel enters or begins to navigate in the VTS Area through Hinchinbrook Entrance the master of the vessel shall report the following to the VTC:

- (a) Name of the vessel;
- (b) Position of the vessel;
- (c) Course and speed of the vessel;
- (d) ETA at Hinchinbrook Entrance;
- (e) ETA of the vessel at its destination if changed from the preliminary report.

### 3. MOVEMENT REPORTS

While navigating in the VTS Area the master of a vessel shall report the following information to the VTC by radiotelephone:

- (a) Any increase or decrease of speed of more than 1 knot;
- (b) The intent to cross through the TSS at least 10 minutes (for vessels with a tow at least 30 minutes) before beginning to cross the TSS;
- (c) When the vessel clears the TSS after crossing;

#### 4. REPORTING POINTS

Whenever a vessel enters or departs the VTS Area at Hinchinbrook Entrance and when passing abeam of Naked Island, the master of a vessel shall report the following information to the VTC by radiotelephone:

- (a) The name of the vessel;
- (b) The reporting point.

#### 5. FINAL REPORT

Whenever a vessel anchors, moors in, departs from the VTS Area, the master shall report the place and time of anchoring, mooring, or departing to the VTC.

### IV. TRAFFIC SEPARATION SCHEME RULES

#### 1. VESSELS REQUIRED TO USE THE TSS

All radio equipped vessels must use the TSS when enroute to or from Valdez via Hinchinbrook Entrance or navigating any portion of that route.

#### 2. VESSEL OPERATION IN THE TSS

The master of a vessel shall operate the vessel in accordance with the TSS rules and the procedures of this manual where applicable.

#### 3. DIRECTION OF TRAFFIC

A vessel proceeding in a traffic lane must keep the separation zone to port.

#### 4. ANCHORING IN THE TSS

No vessel may anchor in the TSS.

#### 5. JOINING, LEAVING, AND CROSSING A TRAFFIC LANE

(a) A radio equipped vessel may join, cross, or leave a traffic lane only after the VTC has been notified of the point at which the vessel will join, cross, or leave the traffic lane.

(b) A vessel crossing a traffic lane shall, to the extent possible, maintain a course that is perpendicular to the direction of the flow of traffic in the traffic lane.

012120

(c) A vessel joining or leaving a traffic lane shall steer a course to converge or diverge from the direction of traffic flow in the traffic lane at as small an angle as possible.

(d) A vessel engaged in fishing shall not impede the passage of any vessel following a traffic lane.

(e) A vessel of less than 20 meters in length or a sailing vessel shall not impede the safe passage of a power-driven vessel following a traffic lane.

### V. VALDEZ NARROWS PROCEDURES

#### 1. ONE-WAY TRAFFIC IN VALDEZ NARROWS

The area designated as the Valdez Narrows One-Way Traffic Area is restricted to one-way traffic whenever a tank vessel of 20,000 dead weight tons (DWT) or more is navigating therein.

#### 2. ENTERING VALDEZ NARROWS

A radio equipped vessel may not enter the Valdez Narrows One-Way Traffic Areas unless:

- (a) Permission to enter is obtained from the VTC;
- (b) Any directions from the VTC to remain separated from another vessel are complied with;
- (c) The radio equipment on the vessel that is used to transmit the reports required by the Prince William Sound VTS rules is in operation;
- (d) The radar on a vessel equipped with radar is in operation and manned; and
- (e) The vessel is free of any condition that may impair its navigation, such as fire, defective steering equipment, or defective propulsion machinery.

#### 3. COMMUNICATIONS IN VALDEZ NARROWS

Before a radio equipped vessel meets, overtakes, or crosses ahead of another radio equipped vessel in the Valdez Narrows One-Way Traffic Area, the master or person designated by the master to direct the movement of the vessel shall transmit the intentions of his vessel to the master of the other vessel on Channel 13 VHF-FM (156.65 MHz) for the purpose of arranging safe passage.

### VI. SPECIAL REQUIREMENTS FOR TANK VESSELS

#### 1. TANK VESSELS IN THE VTS AREA

(a) Each tank vessel of 20,000 DWT or more operating in the VTS Area must:

- (1) Have two separate marine radar systems for surface navigation, one of which is operating and the other either operating or capable of immediate

012121

operation;

- (2) Have an operating LORAN-C receiver;
- (3) Have an operating rate of turn indicator; and
- (4) Have at least two radiotelephones capable of operating on the designated VTS frequency, one of which is capable of battery operation.

If unable to comply to the above, the master of the vessel shall immediately notify the VTC.

(b) No laden tank vessel of 20,000 DWT or more may transit that portion of Valdez Narrows between Middle Rock and Potato Point at a speed in excess of 6 knots.

(c) No tank vessel of 20,000 DWT or more may transit the Valdez Narrows One-Way Traffic Area in excess of 12 knots.

## 2. TUG ASSISTANCE FOR TANK VESSELS

(a) For the purposes of this section, tug assistance means the use of a sufficient number of tugs properly manned and positioned, with enough power and maneuverability to enable the vessel to accomplish the intended maneuvers safely. Factors to be considered in determining the amount of tug assistance needed are:

- (1) Existing and expected conditions of wind, tide and current; and
- (2) Size, displacement, and maneuvering capabilities of the vessel.

(b) No laden tank vessel of 20,000 DWT or more may transit the Valdez Narrows One-Way Traffic Area unless:

- (1) A sufficient number of tugs, as determined by the VTC, are standing by the northern entrance to Valdez narrows; and
- (2) Tug assistance is utilized when directed by the VTC.

(c) The master of any tank vessel required to use tug assistance shall insure that there are sufficient persons positioned on the vessel to handle lines to tugs as needed.

## VII. DESCRIPTIONS AND GEOGRAPHIC COORDINATES

### 1. VTS AREA

The VTS Area consists of the navigable waters of the United States north of a line drawn from Cape Hinchinbrook Light to Schooner Rock Light, comprising that portion of Prince William Sound between longitudes 146°30'W and 147°20'W and includes Valdez Arm, Valdez Narrows, and Port Valdez.

### 2. SEPARATION ZONE

The separation zone is 1,830 meters wide from Hinchinbrook

Entrance to Valdez Arm west of Bligh Reef and decreases in width from 1,830 meters to 915 meters from the entrance to Valdez Arm to where it terminates and is bounded by lines connecting the following latitudes and longitudes:

- |     |               |               |
|-----|---------------|---------------|
| (a) | 60° 58'43"N., | 146° 47'50"W. |
| (b) | 60° 49'47"N., | 147° 02'06"W. |
| (c) | 60° 34'43"N., | 147° 05'16"W. |
| (d) | 60° 17'05"N., | 146° 49'18"W. |
| (e) | 60° 16'20"N., | 146° 46'28"W. |
| (f) | 60° 34'53"N., | 147° 03'14"W. |
| (g) | 60° 49'23"N., | 147° 00'08"W. |
| (h) | 60° 58'26"N., | 146° 47'02"W. |

### 3. TRAFFIC LANES

The traffic lanes are 1,375 meters wide from Hinchinbrook Entrance to Valdez Arm west of Bligh Reef, and decrease in width from 1,375 meters to 915 meters from the entrance to Valdez Arm to where they terminate. The traffic lanes are as follows:

(a) The inward bound traffic lane is between the separation zone and a line connecting the following latitudes and longitudes:

- |     |               |               |
|-----|---------------|---------------|
| (1) | 60° 58'09"N., | 146° 46'16"W. |
| (2) | 60° 49'07"N., | 146° 58'42"W. |
| (3) | 60° 35'00"N., | 147° 01'42"W. |
| (4) | 60° 15'45"N., | 146° 44'20"W. |

(b) The outward bound traffic lane is between the separation zone and a line connecting the following latitudes and longitudes:

- |     |               |               |
|-----|---------------|---------------|
| (1) | 60° 59'01"N., | 146° 48'37"W. |
| (2) | 60° 50'04"N., | 147° 03'35"W. |
| (3) | 60° 34'36"N., | 147° 06'48"W. |
| (4) | 60° 17'38"N., | 146° 51'20"W. |

### 4. VALDEZ NARROWS ONE-WAY TRAFFIC AREA

Valdez Narrows One-Way Traffic Area consists of the navigable waters of the United States in Valdez Arm, Valdez Narrows, and Port Valdez northeast of a line bearing 307° true from Tongue Point at 61°02'06"N., 146°40'00"W., and southwest of a line bearing 307° true from Entrance Island Light at 61°05'06"N., 146°36'42"W.

012123

## APPENDIX A

### SUMMARY

#### A. COMMUNICATIONS

Channel 13 (156.65 MHz) is the radiotelephone frequency designated for the Prince William Sound Vessel Traffic Service. The voice-call for Prince William Sound Vessel Traffic Center is VALDEZ TRAFFIC. All times will be given in Alaska Standard Time (Zone +9) or Alaska Daylight Time (Zone +8), whichever is in effect, using the 24-hour clock time system. All messages originated or received by the Vessel Traffic Center (VTC) will be in the English language.

#### B. INITIAL REPORT

The following information should be reported to VALDEZ TRAFFIC upon transmitting the initial report three hours before a vessel enters or begins to navigate in the VTS Area through Hinchinbrook Entrance:

- (1) Name, type, and draft of vessel;
- (2) Position of the vessel;
- (3) Estimated time of entering or beginning to navigate in the VTS Area;
- (4) Estimated vessel speed to transit the VTS Area;
- (5) ETA to destination in the VTS Area and name of the destination;
- (6) If the vessel is a towing vessel, the overall length of the tow, including the towing vessel;
- (7) Whether or not any dangerous cargo is on board the vessel or its tow;
- (8) Any impairment to the operation of the vessel;
- (9) Alternate communications, if any;
- (10) Any other information requested by the VTC.

#### C. FOLLOW-UP REPORT

At least 60 minutes before a vessel enters or begins to navigate in the VTS Area through Hinchinbrook Entrance the master of the vessel should report the following to the VTC:

- (1) Name of the vessel;
- (2) Position of the vessel;
- (3) Course and speed of the vessel;
- (4) ETA at Hinchinbrook Entrance;
- (5) ETA of the vessel at its destination if changed from the preliminary report.

012124



#### D. MOVEMENT REPORT

The following information should be reported whenever a vessel passes a reporting point:

- (1) Name of vessel;
- (2) Reporting point.

#### E. FINAL REPORT

The following information should be reported whenever a vessel anchors, moors in or departs from the VTS Area:

- (1) Name of vessel
- (2) Position.

#### APPENDIX B SAMPLE MESSAGES

##### A. GENERAL

Communications with the Vessel Traffic Service is conducted on Channel 13 (156.65 MHz). Turning the radio receiver down or off defeats the purpose of the service and is a violation of VTS regulations. Maintaining a proper listening watch on the appropriate frequency will allow each participating vessel to know the traffic and navigation situation in its vicinity.

##### B. INITIAL REPORT

**SITUATION:** A vessel is approaching Hinchinbrook Entrance en route to the Alyeska Marine Terminal at Jackson Point.

**CALL UP:** VALDEZ TRAFFIC, this is the BROOKLYN, over.

**REPLY:** BROOKLYN, this is VALDEZ TRAFFIC, over

**MESSAGE:** VALDEZ TRAFFIC, this is the tank vessel BROOKLYN, draft forward 27 feet, aft 37 feet. We are in position 59° 35'N., 145° 16'W., ETA to Cape Hinchinbrook 0800, estimated speed in the Traffic Area is 16 knots, ETA Alyeska Marine Terminal 1300. No dangerous cargo aboard, no impairments to the vessel's operation and we have a back-up VHF-FM on Channel 13, over.

**REPLY**

**ADVISORY:** BROOKLYN, this is VALDEZ TRAFFIC, roger, we have the T/V AMERICAN SUN outbound at Bligh Reef. You should meet in the vicinity of Montague Point, over.

**REPLY:** This is the BROOKLYN, roger, out.

**SITUATION:** A ferry boat is getting underway for a routine movement.

**CALL-UP:** VALDEZ TRAFFIC, this is M/V BARTLETT, over.

**REPLY:** M/V BARTLETT, this is VALDEZ TRAFFIC over.

**MESSAGE:** VALDEZ TRAFFIC, BARTLETT, I am preparing to get underway from the ferry terminal. My deep draft is 13'2", speed of advance 13.8, no dangerous cargo, no operational impairments, the VTS manual is onboard and we are in compliance, over.

012126

REPLY: BARTLETT, VALDEZ TRAFFIC, roger, I have no reported traffic in the system. request a call when you are underway, over.

REPLY: TRAFFIC, BARTLETT, roger, out.

#### C. FOLLOW-UP REPORT

SITUATION: A Vessel is approaching Hinchinbrook Entrance en route to the Alyeska Marine Terminal.

CALL-UP: VALDEZ TRAFFIC, this is the BROOKLYN. We're 16 NM ESE from Cape Hinchinbrook, ETA Cape Hinchinbrook in 0800, my course is 302 degrees true, SOA 16 knots. Revised ETA to Alyeska Terminal is 1400, over.

REPLY: BROOKLYN, this is VALDEZ TRAFFIC, roger, out.

#### D. MOVEMENT REPORT

SITUATION: Vessel passes a reporting point.

CALL UP VALDEZ TRAFFIC, this is the T/V ARCO TEXAS, over.

REPLY: ARCO TEXAS, this is VALDEZ TRAFFIC, over.

MESSAGE: VALDEZ TRAFFIC, this is the ARCO TEXAS, I have Cape Hinchinbrook abeam and am decreasing speed to 10 KTS. Revised ETA at Alyeska Marine Terminal is 1600, over.

REPLY: ARCO TEXAS, this is VALDEZ TRAFFIC, roger, out.

#### E. FINAL REPORT

SITUATION: Vessel leaving VTS area.

CALL UP: VALDEZ TRAFFIC, this is the TUG MARS, over.

REPLY: TUG MARS, this is VALDEZ TRAFFIC, over.

MESSAGE: VALDEZ TRAFFIC, TUG MARS, I have Schooner Rock abeam and will be checking out of the system, over.

REPLY: TUG MARS, TRAFFIC, roger, out.

012127

#### APPENDIX C.

##### WEATHER REPORTS

Vessels may be asked, from time to time, to pass weather information to the VTC for use by the National Weather Service. Weather information is normally requested as the vessel passes the Cape Hinchinbrook and Naked Island Reporting Points. Weather information is also requested when a vessel gives an Ice Sighting Report (See Appendix D). Vessels are requested to pass the following information, if available:

- (1) Sky condition and weather
- (2) Visibility
- (3) Wind direction and speed
- (4) State of the sea
  - (a) Wave height
  - (b) Direction and height of swell
- (5) Sea water temperature
- (6) Air temperature
- (7) Barometric pressure

This will enable improved weather forecasting in the Prince William Sound area for the benefit of all mariners.

#### APPENDIX D.

##### ICE SIGHTING REPORTS

Due to the Columbia Glacier's predicted rapid retreat, Ice Sighting Reports are more important than ever. For the purposes of uniformity for all Prince William Sound VTS users, the following definitions will apply:

- (a) BRASH ICE: Accumulations of floating ice made up of fragments not more than 2 meters across.
- (b) GROWLER: A small piece of ice extending less than 1 meter above the surface and less than 5 meters in length.
- (c) BERGY BIT: A piece of ice between 1 and 5 meters above the surface and 5 to 15 meters long.
- (d) ICE BERG: A piece of ice over 5 meters above the surface and 15 meters long.

Ice conditions and approximate positions of ice concentration are requested during or after the vessel's transit of the area between Point Freemantle and Bligh Island.

012128



## APPENDIX E

### DESCRIPTION OF HAZARDOUS CARGO

As used in this VTS Users Manual hazardous cargo means every description of cargo listed below:

- (1) Explosives, Class A, (commercial or military).
- (2) Oxidizing materials for which a special permit for loading or discharge operations is required by 49 CFR 176.415.
- (3) Any dangerous cargo considered to involve a particular hazard, when transported or handled in bulk quantities, as further described in 33 CFR 126.10.

NOTE: A dangerous cargo considered to involve a particular hazard, when transported in bulk quantities on board vessels, is any commodity which by virtue of its properties would create an unusual hazard if released. Commodities subject to this would be one that has one or more of the following characteristics:

- (a) Is highly reactive or unstable, or
- (b) Has severe or unusual fire hazards, or
- (c) Has severe toxic properties, or
- (d) Requires refrigeration for its safe containment, or
- (e) Can cause brittle fracture of normal ship materials by reason of its being carried at low temperatures, or because of its low boiling point at atmospheric pressure (unless uncontrolled release of the cargo is not a major hazard to life.)

It should be noted that within this VTS Area the requirement to report whether hazardous cargo is on board is applicable to any type vessel on any voyage within the VTS Area.

## APPENDIX F

### ANCHORAGE REGULATIONS

#### 33 CFR 110.233 PRINCE WILLIAM SOUND, ALASKA

- (a) The anchorage grounds: In Prince William Sound, Alaska, beginning at a point at latitude 60° 40'00"N., longitude 146° 40'00"W.; thence south to latitude 60° 38'00"N., longitude 146° 40'00"W.; thence east to latitude 60° 38'00"N., longitude 146° 30'00"W.; thence north to latitude 60° 39'00"N., longitude 146° 30'00"W., thence north-westerly to the beginning point.
- (b) The regulations:
  - (1) This anchorage is for the temporary use of vessels during:
    - (i) Adverse weather or tidal conditions;
    - (ii) Vessel equipment failure; or
    - (iii) Delays at Port Valdez;
  - (2) No vessel may anchor in this anchorage without notifying the vessel traffic center in Valdez; and
  - (3) Each vessel anchored shall notify the vessel traffic center in Valdez when it weighs anchor.

#### ANCHORING PROCEDURES

Upon notification by the vessel to the VTC of intentions to anchor at Knowles Head Anchorage Area, the VTC will verify the vessel's need to anchor to ensure compliance with the regulations. The vessel may be requested to anchor in a designated position based on a true bearing and range from Red Head Light (LLNR 3422.80). The responsibility of the master or pilot for safe navigation and prudent maneuvering of his vessel is in no way lessened or relieved by this request.

**APPENDIX G**  
**SAFETY ZONE REGULATIONS**

**33 CFR 165.23 GENERAL REGULATIONS**

Unless otherwise provided in this part:

(a) No person may enter a safety zone unless authorized by the Captain of the Port or the District Commander;

(b) No person may bring or cause to be brought into a safety zone any vehicle, vessel, or object unless authorized by the Captain of the Port or the District Commander;

(c) No person may remain in a safety zone or allow any vehicle, vessel, or object to remain in a safety zone unless authorized by the Captain of the Port or the District Commander; and

(d) Each person in a safety zone who has notice of a lawful order or direction shall obey the order or direction of the Captain of the Port or District Commander, or his authorized representative issued to carry out the purposes of this part.

**33 CFR 165.1701 PORT VALDEZ, VALDEZ, ALASKA**

The waters within the following boundaries are a safety zone: the area within 200 yards of any waterfront facility at the Alyeska Marine Terminal complex or vessels moored or anchored at the Alyeska Marine Terminal complex and the area within 200 yards of any tank vessel maneuvering to approach, moor, unmoor or depart the Alyeska Marine Terminal complex.

**APPLICABLE INFORMATION**

All vessels are required to stand clear of these areas. Vessels that require entry into the safety zone, with the exception of mooring or unmooring tank vessels and tugs providing assistance, are required to contact the VTC on Channel 13 (156.65 MHz) for permission to enter the safety zone.

**PRINCE WILLIAM SOUND VESSEL  
TRAFFIC SERVICE**

**AUTHORITY:** Sections 161.301 through 161.387 issued under 60 Stat. 238 (5 U.S.C. 552); 63 Stat. 545 (14 U.S.C. 633); 80 Stat. 937 (49 U.S.C. 1655 (b) Stat. 1477 (33 U.S.C. 1231); 49CFR 1.46 (n) (4) unless otherwise noted.

**SOURCE:** Sections 161.301 through 161.387, CGD 80-010, 46 FR 34580, July 2, 1981, unless otherwise noted.

**GENERAL RULES**

**§ 161.301 Purpose and Applicability**

(a) Sections 161.301 through 161.387 prescribe rules for vessel operation in the Prince William Sound Vessel Traffic Service (VTS Area) to prevent collisions and groundings and to protect the navigable waters of the VTS Area from environmental harm resulting from collisions and groundings.

(b) The General Rules in §§ 161.301 through 161.311 excepting § 161.306 and the Traffic Separation Scheme (TSS) Rules in §§ 161.350 through 161.354 and 161.356 (b) and (c) apply to the operation of all vessels.

(c) General Rules § 161.306, the Communications Rules in §§ 161.320 through 161.332, the Vessel Movement Reporting Rules in §§ 161.334 through 161.342, the TSS Rules in §§ 161.348 and 161.356 (a), and the Valdez Narrows Rules in § 161.372 and 161.374 apply only to the operation of:

(1) Each vessel of 300 or more gross tons that is propelled by machinery;

(2) Each vessel of 100 or more gross tons that is carrying one or more passenger for hire;

(3) Each commercial vessel of 8 meters or over in length engaged in towing another vessel astern, alongside, or by pushing ahead; and

(4) Each dredge and floating plant.

**§ 161.303 Definitions.**

As used in §§ 161.301 through 161.387:

"ETA" means estimated time of arrival.

"Person" includes an individual, firm, corporation, association, partnership and government entity.

"Separation zone" means an area of the TSS that is located between two traffic lanes to keep vessels proceeding in opposite directions a safe distance apart.

"Traffic Lane" means an area of the TSS in which all vessels ordinarily proceed in the same direction.

"Traffic separation scheme" (TSS) means the network of traffic lanes and separation zones in the VTS area.

"Vessel Traffic Center" (VTC) means the shore based facility that operates the Prince William Sound Vessel Traffic Service.

"Vessel Traffic Service Area" (VTS Area) means the area described in § 161.380.

"Tank Vessel" means any vessel specially constructed or converted to carry oil or other hazardous substances in bulk in the cargo spaces.  
"Laden Tank Vessel" means a tank vessel having cargo on board in excess of normal clingage or residual.

**§ 161.304 Vessel operation in the VTS Area.**

No person may cause or authorize the operation of a vessel in the VTS Area contrary to the rules in §§ 161.301 through 161.387.

**§ 161.305 Laws and regulations not affected.**

Nothing in §§ 161.301 through 161.387 is intended to relieve any person from complying with:

(a) International Regulations for Preventing Collisions at Sea, 1972;

(b) Vessel Bridge-to-Bridge Radiotelephone Regulations (Part 26 of this chapter);

(c) The Federal Boat Safety Act of 1971 (46 U.S.C. 1451 through 1489); and

(d) any other law or regulation.

**§ 161.306 VTS Operating Manual.**

The master of a vessel listed in § 161.301 (c) shall insure that a copy of the current edition of the Prince William Sound Vessel Traffic Service Operating Manual is available on board the vessel when it is in the VTS Area.

Note: The Prince William Sound VTS Operating Manual includes VTS regulations, navigation information, and guidelines for the efficient operation of the VTS system. The manual may be obtained in person or by writing: Prince William Sound Vessel Traffic Service, c/o USCG Marine Safety Office, P.O. Box 486, Valdez Alaska 99686; or Commander, Seventeenth Coast Guard District, Federal Building, P.O. Box 3-50000, Juneau, Alaska 99802. Temporary changes to the operating manual are promulgated by the Commander, Seventeenth Coast Guard District, in local notices to mariners.

**§ 161.307 VTC Directions.**

(a) During conditions of vessel congestion, adverse weather, reduced visibility, or other hazardous circumstances in the VTS Area, the VTC may issue directions specifying times when vessels may enter, move within or through, or depart from ports, harbors, or other waters in the VTS area.

(b) The master of a vessel in the VTS area shall comply with each direction issued to the vessel under this section.

**§ 161.309 Authorization to deviate from these rules.**

(a) The Commander, Seventeenth Coast Guard District may, upon written request, issue an authorization to deviate from any rule in §§ 161.301 through 161.387 if he finds that the proposed operation under the authorization can be done safely. An application for an authorization must state the need for the authorization and describe the proposed operations.

(b) The VTC may, upon request, issue an authorization to deviate from any rule in §§ 161.301 through 161.387 for a voyage or part of a voyage on which a vessel is embarked or about to embark.

#### § 161.311 Emergencies.

In an emergency, any master may deviate from any rule in §§ 161.301 through 161.387 to the extent necessary to avoid endangering persons, property, or the environment.

#### COMMUNICATIONS RULES

##### § 161.320 Radio listening watch.

The master of a vessel in the VTS Area shall continuously monitor the radio frequency designated in the current edition of the Prince William Sound VTS Operating Manual for the sector of the VTS Area in which the vessel is operating, except when transmitting on that frequency.

##### § 161.322 Radiotelephone equipment.

Each report required by the Prince William Sound VTS rules to be made by radiotelephone must be made using a radiotelephone that is capable of operating on the navigational bridge of the vessel, or in the case of a dredge, at its main control station.

##### § 161.324 English language.

Each report required by the Prince William Sound VTS rules must be made in the English language.

##### § 161.326 Time.

Each report required by the Prince William Sound VTS rules must specify time using:

(a) The zone time in effect in the VTS Area; and

(b) The 24-hour clock system.

##### § 161.328 Radio failure.

Whenever a vessel's radiotelephone equipment fails:

(a) Before entering or while underway in the VTS Area:

(1) Compliance with §§ 161.320 and 161.338 is not required; and

(2) Compliance with §§ 161.334, 161.336, and 161.342 is not required unless the reports can be made by other means;

(b) Before getting underway in the VTS Area permissions to get underway must be obtained from the VTC;

(c) The master shall restore the radiotelephone to operating condition as soon as possible.

##### § 161.330 Report of emergency or radio failure.

Whenever the master of a vessel deviates from any rule in §§ 161.301 to 161.387 because of an emergency or radio failure, he shall report the deviation to the VTC as soon as possible.

##### § 161.332 Report of impairment to the operation of the vessel.

The master of a vessel in the VTS Area shall report to the VTC as soon as possible:

(a) Any condition on the vessel that may impair its navigation, such as fire, defective steering equipment, or defective propulsion machinery; and

(b) Any tow that the towing vessel is unable to control, or can control only with difficulty.

#### VESSEL MOVEMENT REPORTING RULES

##### § 161.334 Initial Report.

Three hours before a vessel enters or begins to navigate in the VTS Area through Hinchinbrook entrance or at least 30 minutes before a vessel enters or begins to navigate in the VTS Area from other points, the master of the vessel shall report to the VTC:

(a) Name type, and draft of the vessel;

(b) Position of the vessel;

(c) Estimated time and place of entering or beginning to navigate in the VTS Area;

(d) Estimated vessel speed to transit the VTS Area;

(e) ETA to the destination in the VTS Area and name of the destination;

(f) If the vessel is a towing vessel, the overall length of the tow, including the towing vessel;

(g) Whether or not any dangerous cargo listed in § 161.3 of this chapter is on board the vessel or its tow;

(h) Any impairment to the operation of the vessel as described in § 161.332;

## APPENDIX H

(i) Alternate communications, if any;

(j) Any other information requested by the VTC.

##### § 161.336 Follow-up report.

At least 60 minutes before a vessel enters or begins to navigate in the VTS Area through Hinchinbrook entrance the master of the vessel shall report the following information to the VTC:

(a) Name of the vessel;

(b) Position of the vessel;

(c) Course and speed of the vessel;

(d) ETA at Hinchinbrook Entrance;

(e) ETA of the vessel at its destination if changed from the preliminary report.

##### § 161.338 Movement reports.

(a) While navigating in the VTS Area at least master of a vessel shall report the following information to the VTC by radiotelephone:

(1) Any increase or decrease of speed of more than 1 knot.

(2) The intent to cross through the TSS at least 10 minutes (for vessels with a tow at least 30 minutes) before beginning to cross the TSS;

(3) When the vessel clears the TSS after crossing;

(b) When the vessel passes a reporting point listed in § 161.340, the master of a vessel shall report the following information to the VTC by radiotelephone:

(1) The name of the vessel;

(2) The reporting point.

##### § 161.340 Reporting points.

The reporting points are

(a) When entering or departing the VTS Area at Hinchinbrook Entrance; and

(b) When a beam of Naked Island.

##### § 161.342 Final Report

Whenever a vessel anchors, moors in, or departs from the VTS Area, the master shall report the place and the time of anchoring, mooring, or departing to the VTC, except:

(a) When mooring or anchoring in Port Valdez, unless requested to do so by the VTC; or

(b) When departing the VTS Area at Hinchinbrook Entrance and the movement report for the reporting point in § 161.340 (a) is made.

#### TRAFFIC SEPARATION SCHEME RULES

##### 161.348 Vessels required to use the TSS.

All vessels described in § 161.301 (c) must use the TSS when en route to or from Valdez via Hinchinbrook Entrance or navigating any portion of that route.

##### § 161.350 Vessel operation in the TSS.

(a) The master of a vessel shall operate the vessel in accordance with the TSS rules prescribed in §§ 161.352, 161.354 and 161.356 (b) and (c).

(b) The master of a vessel described in § 161.301 (c) shall, in addition to paragraph (a), operate the vessel in accordance with § 161.356 (a).

##### § 161.352 Direction of traffic.

A vessel proceeding in a traffic lane must keep the separation zone to port.

##### § 161.354 Anchoring in the TSS.

No vessel may anchor in the TSS.

##### § 161.356 Joining, leaving, and crossing a traffic lane.

(a) A vessel described in § 161.301 (c) may join, cross, or leave traffic lane only after the VTC has been notified of the point at which the vessel will join, cross, or leave the traffic lane.

(b) A vessel crossing a traffic lane shall, to the extent possible, maintain a course that is perpendicular to the direction of the flow of traffic in the traffic lane.

(c) A vessel joining or leaving traffic lane shall steer a course to converge or diverge from the direction of traffic flow in the traffic lane at as small angle as possible.

(d) A vessel engaged in fishing shall not impede the passage of any vessel following a traffic lane.

(e) A vessel of less than 20 meters in length or a sailing vessel shall not impede the safe passage of a power-driven vessel following a traffic lane.

#### VALDEZ NARROWS RULES

##### § 161.370 One-way traffic in Valdez Narrows.

(a) The area described in § 161.387 is designated as the Valdez Narrows One-way Traffic Area and is restricted to one-way traffic whenever a tank vessel of 20,000 dead weight tons (DWT) or more is navigating therein.

(b) A tank vessel of 20,000 DWT or more may not enter Valdez Narrows One-way Traffic Area unless:

(1) It complies with § 161.372; and

(2) It complies with § 161.376 (a) (1), (3), and (4).



§ 161.372 Entering Valdez Narrows.

A vessel described in § 161.301 (c) may not enter the Valdez Narrows One-Way Traffic Area unless:

- (a) Permission to enter is obtained from the VTC;
- (b) Any directions from the VTC to remain separated from another vessel are complied with;
- (c) The radio equipment on the vessel that is used to transmit the reports required by the Prince William Sound VTS rules is in operation;
- (d) The radar on a vessel equipped with radar is in operation and manned; and
- (e) The vessel is free of any condition that may impair its navigation, such as fire, defective steering equipment, or defective propulsion machinery.

§ 161.374 Communications in Valdez Narrows.

Before a vessel meets, overtakes, or crosses ahead of any vessel in Valdez Narrows One-Way Traffic Area, the master or person designated by the master to pilot or direct the movement of the vessel shall transmit the intentions of his vessel to the master or the person designated by the master to pilot or direct the movement of the other vessel on the frequency designated under the Bridge-to-Bridge Radiotelephone Act for the purpose of arranging safe passage.

SPECIAL REQUIREMENTS FOR TANK VESSELS

§ 161.376 Tank vessels in the VTS Area.

- (a) Each tank vessel of 20,000 DWT or more operating in the VTS Area must:
  - (1) Have two separate marine radar systems for surface navigation, one of which is operating and the other either operating or capable of immediate operation;
  - (2) Have an operating LORAN-C receiver;
  - (3) Have an operating rate of turn indicator; and
  - (4) Have at least two radiotelephones capable of operating on the designated VTS frequency, one of which is capable of battery operation.
- (b) No laden tank vessel of 20,000 DWT or more may transit that portion of Valdez Narrows between Middle Rock and Potato Point at a speed in excess of 6 knots.
- (c) No tank vessel of 20,000 DWT or more may transit the Valdez Narrows One-Way Traffic Area in excess of 12 knots.
- (d) While in the VTS Area, if a tank vessel of 20,000 DWT or more is unable to comply with paragraph (a) the master shall immediately notify the VTC.

§ 161.378 Tug assistance for tank vessels.

(a) For the purposes of this section, tug assistance means use of a sufficient number of tugs properly manned and positioned, with enough power and maneuverability to enable the vessel to accomplish the intended maneuvers safely. Factors to be considered in determining the amount of tug assistance needed are:

- (1) Existing and expected conditions of wind, tide and current; and
  - (2) Size, displacement, and maneuvering capability of the vessel.
- (b) No laden tank vessel of 20,000 DWT or more may transit the Valdez Narrows One-Way Traffic Area unless:
- (1) A sufficient number of tugs, as determined by the VTC, are standing by the northern entrance to Valdez Narrows; and
  - (2) Tug assistance is utilized when directed by the VTC.

(c) The master of any tank vessel required to use tug assistance shall insure that there are sufficient persons positioned on the vessel to handle lines to tugs as needed.

DESCRIPTIONS AND GEOGRAPHIC COORDINATES

§ 161.380 VTS area.

The VTS Area consists of the navigable waters of the United States north of a line drawn from Cape Hinchinbrook Light to Schooner Rock Light, comprising that portion of Prince William Sound between longitudes 146°30' W. and 147°20' W. and includes Valdez Arm, Valdez Narrows, and Port Valdez.

§ 161.381 Separation zone.

The separation zone is 1,830 meters wide from Hinchinbrook Entrance to Valdez Arm west to Bligh Reef and decreases in width from 1,830 meters to 915 meters from the entrance to Valdez Arm to where it terminates and is bounded by lines connecting the following latitudes and longitudes:

- (a) 60°58'43" N., 146°47'50" W.
- (b) 60°49'47" N., 147°02'06" W.
- (c) 60°34'43" N., 147°05'16" W.
- (d) 60°17'05" N., 146°49'18" W.
- (e) 60°16'20" N., 146°46'28" W.
- (f) 60°34'53" N., 147°03'14" W.
- (g) 60°49'23" N., 147°00'08" W.
- (h) 60°58'26" N., 146°47'02" W.

§ 161.385 Traffic lanes.

The traffic lanes are 1,375 meters wide from Hinchinbrook Entrance to Valdez Arm west of Bligh Reef, and decrease in width from 1,375 meters to 915 meters from the entrance to Valdez Arm to where they terminate. The traffic lanes are as follows:

(a) The inward bound traffic lane is between the separation zone and a line connecting the following latitudes and longitudes:

- (1) 60°58'09" N., 146°46'16" W.
- (2) 60°49'07" N., 146°58'42" W.
- (3) 60°35'00" N., 147°01'42" W.
- (4) 60°15'45" N., 146°44'20" W.

(b) The outward bound traffic lane is between the separation zone and a line connecting the following latitudes and longitudes:

- (1) 60°59'01" N., 146°48'37" W.
- (2) 60°50'04" N., 147°03'35" W.
- (3) 60°34'36" N., 147°06'48" W.
- (4) 60°17'38" N., 146°51'20" W.

§ 161.387 Valdez Narrows one-way traffic area.

Valdez Narrows One-Way Traffic Area consists of the navigable waters of the United States in Valdez Arm, Valdez Narrows, and Port Valdez northeast of a line bearing 307° true from Tongue Point at 61°02'06" N., 146°40'00" W., and southwest of a line bearing 307° true from Entrance Island Light at 61°05'06" N., 146°36'42" W.

012135

012136

VESSEL DAT' SHEET

1

NAME Exxon Valdez TYPE TKR DATE 22 Mar 89

ADEN Y IMPAIRMENTS N  
 LT. COMMS. Y 1/b Y o/b N  
 PILOTAGE Y 1/b Y o/b  
 PARTS 28'6" 39'6" 1/b 55'11" 56'01" o/b VTC MAN. ABD. Y 1/b Y o/b  
 SPEED 16 KTS 1/b 22 1/b 23 o/b  
 NARROWS CLEARANCE 2019 1/b 2126 o/b

POC San Fran  
 C/BERTH B-3 ETA 2330 ARRIVED 2248 ETD 23  
 POC San Fran <sup>LONG</sup> <sub>Beach</sub> ETA 30/0001

SH. INFO: ETA \_\_\_\_\_ ANCHORED \_\_\_\_\_ POSITION \_\_\_\_\_ U/W \_\_\_\_\_

POSITION	ETA	ARRIVED	REMARKS
<u>5953 145273</u>		<u>1438</u>	
<u>60-09 146-12</u>		<u>1630</u>	<u>293 16 KTS</u>
<u>CHR</u>	<u>1730</u>	<u>1717</u>	
<u>NIR</u>	<u>NIR</u>	<u>1830</u>	
<u>RKY</u>	<u>2020</u>	<u>2019</u>	
<u>RT</u>	<u>2110</u>	<u>2108</u>	
<u>30 min pre call</u>		<u>2057</u>	
<u>JW</u>		<u>2126</u>	
<u>EJ</u>	<u>2215</u>	<u>2217</u>	
<u>RKY PT</u>		<u>2326</u>	
<u>NIR</u>	<u>0100</u>		

I HAVE SEEN THE ORIGINAL AND COMPARED THE COPY WITH IT AND FOUND IT TO BE A TRUE COPY.

MARK J. DELOZIER, CW03, USCG  
 MARINE INVESTIGATOR/INSPECTOR  
 MARINE SAFETY OFFICE, VALDEZ, AK. USCG

ADDITIONAL INFO: (WAIVERS, ICE, TOWING INFO, DANG. CARGO ON BOARD) 015325

**PLAINTIFF**  
 EXHIBIT NO 76  
 ADMITTED  Trial  
 89-7217 ee

**EXHIBIT 77**

**IS AN AUDIO CASSETTE**



NATIONAL TRANSPORTATION SAFETY BOARD  
WASHINGTON, D. C. 20594

MARINE ACCIDENT REPORT

VHF RADIO COMMUNICATIONS TRANSCRIPT

FACTUAL REPORT

October 30, 1989



A. Accident

Vessel : Grounding of the Tank Vessel EXXON VALDEZ.  
Location : Bligh Reef, Prince William Sound, near Valdez, Alaska.  
Date : March 24, 1989.  
Time : 0004 AST (according to the vessel's log).  
Accident No.: DCA-89-MM-040.

B. Report prepared by W. R. Woody, Investigator-in-Charge

C. Development of the Transcript

The Vessel Traffic Center (VTC) recordings of radio transmissions on March 22, 1989, were screened on April 7, 1989, by L. Z. Katcharian, NTSB Marine Accident Division, and Petty Officer RD1 J. Moore, USCG, to identify any transmissions by Captain Joseph Hazelwood while the EXXON VALDEZ was en route to Port Valdez. Two such transmissions by Captain Hazelwood, about 1500 while the vessel approached Prince William Sound, were recorded. The two transmissions, transcribed by M. Brenner, Human Performance Division, are quoted:

1. Ah, W-H-C-B. EXXON VALDEZ back.
2. Okay. She's going to depart at twenty three hundred, ah, all right yeah. We'll, ah, get with the pilot, see if we can go with two tugs instead of three (and) take an escort boat. We'll work that out amongst ourselves. Okay. Thank you very much. Ah, we'll give you a shout at one hour from, ah, Cape Hinchinbrook. EXXON VALDEZ off. Standing by channel thirteen and sixteen.

The VTC recordings of radio transmissions on Thursday, March 23, 1989, and Friday, March 24, 1989, were screened by Petty Officer QM1 E. M. Labelia, USCG, during the week of March 28-31, 1989. Those transmissions relating to the EXXON VALDEZ, commencing on Thursday evening, March 23, 1989, when the vessel departed the Alyeska Terminal until noon Friday, March 24, 1989, were recorded. Times of transmissions involving the EXXON VALDEZ were recorded, and times of other transmissions were recorded periodically to provide a general time reference.

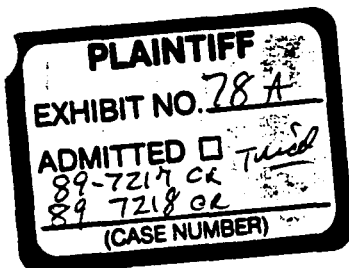
The recordings for March 23 and 24, 1989, were transcribed by Janette DeLorge, NTSB, Bureau of Accident Investigation. The transcripts were reviewed by L. Z. Katcharian and W. R. Woody of the Marine Accident Division. Those portions of the transcript, identified as transmissions by Captain J. Hazelwood, were also reviewed by M. Brenner of the Human Performance Division.

018341

Transcript of Radio Transmissions Recorded by  
the Vessel Traffic Center, Valdez Alaska  
on March 23 and 24, 1989, relating to the  
grounding of the EXXON VALDEZ

Stations: AA = ARCO ALASKA  
AB = ADMIRALTY BAY  
AJ = ARCO JUNEAU  
BA = BARANOF (pilot boat)  
BE = BERING  
CC = CHEVRON CALIFORNIA  
CG Helo USCG Helicopter No. 1479  
CG Radio USCG Radio, Valdez  
CH = CHIRIKOF  
COTP Captain of the Port  
EBR = EXXON BATON ROUGE  
ELB = E. L. BARTLET  
EV = EXXON VALDEZ  
Fox = Trooper Fox  
HB = HELENKA B  
JF = JEFFERY FOSS  
PA = PATHFINDER  
SB = SILVER BULLET  
SF = SEA FLYER  
ST = STALWART  
VTC = Vessel Traffic Center

<u>Time</u>	<u>Station</u>	<u>Transmission</u>
2124.28	EV	... traffic. EXXON VALDEZ.
	VTC	EXXON VALDEZ Traffic.
	EV	Underway from berth 5. Estimating Entrance Island at 2215.
	AJ	Valdez Traffic. The ARCO JUNEAU.
2124.55	-VTC	EXXON VALDEZ. Valdez traffic. Roger that, sir, underway. She's clear for the oneway zone. And inbound--the BARTLET's inbound. They've got Entrance Island 2150. You're clear as soon as they're through. Over.
	EV	Roger that for the BARTLET. Thank you. Out.
	VTC	Traffic clear.
2125.09	EV	Break. Calling the ferry E. L. BARTLET. EXXON VALDEZ.



AJ ... Calling Valdez Traffic.

2125.32 EV E. L. BARTLET. EXXON VALDEZ.

EV ... Channel 13.

ELB BARTLET, back to the call on 13.

2125.38 EV E. L. BARTLET, EXXON VALDEZ. We are just underway from berth 5 here. We'll favor the north side and meet you port to port. We'll be at Entrance Island at 2215, so you should be through and well clear. Okay?

2125.50 ELB Real fine. Thanks for the call. BARTLET clear.

EV EXXON VALDEZ standing by.

ELB Valdez Traffic. BARTLETT.

VTC BARTLET Traffic. Over.

2147.43 ELB BARTLET back. We're clear of the Narrows at Entrance Island. We'll give you a call when we're all passed.

VTC ... Traffic. Roger out.

ELB BARTLET.

ELB Valdez Traffic. BARTLET.

VTC BARTLET. Traffic.

2224.44 ELB BARTLET back. We're alongside. Checking all the systems ....

VTC Have a good evening. Valdez Traffic out.

ELB Roger, out.

EV Pilot boat BERING. EXXON VALDEZ.

BE EXXON VALDEZ. BERING.

2229.12 EV Yeah, we're at Middle Rock here. See you in about 50 minutes. Okay?

BE Okay, one five minutes. BERING out.

EV Five zero, 50.

BE Okay, thank you. BERING.

EV EXXON VALDEZ.

2249.31 EV ... Traffic. EXXON VALDEZ. Potato Point outbound increasing speed.

2249.36 VTC Traffic. Roger out.

2249.37 EV .... Report please.

2249.38 VTC Traffic. Roger out.

2249.40 EV Ice report please.

2249.45 VTC There are numerous small pieces of ice from Freemantle all the way down to Glacier Island, and they had to deviate over into the Northbound lane for about a half an hour. Over.

2249.53 EV Roger that. EXXON VALDEZ.

2249.56 VTC Traffic clear.

2324.50 EV Valdez Traffic. EXXON BA ah VALDEZ.

2324.54 EV EXXON VALDEZ traffic.

2324.58 VTC Valdez Traffic. Go ahead.

2325.01 EV Yes. We've ah departed the pilot or disembarked the pilot. Excuse me. And this time hooking up to sea speed and ETA Naked Island 0100. Over.

2325.19 VTC Roger that, sir. Request an updated ice report when you get down through there. Over.

2325.24 EV Okay. I was just about to tell you that, ah, judging by our radar, I we'll probably divert from, ah, the TSS and end up in the, ah, inbound lane if there's no conflicting traffic. Over.

2325.42 VTC No reported traffic. I've got the CHEVRON CALIFORNIA one hour out. Then the ARCO ALASKA is right behind them, but they're an hour out from Cape Hinchinbrook. Ah how on that. Over.

2325.53 EV That'd be fine. Yeah. We we may end up over in the, ah, inbound lane, outbound transit. Ah, we'll notify you when we leave the, ah, TSS and, ah, cross over the separation zone. Over.

2326.07 VTC Roger that. Be waiting your call. Traffic out.

2326.10 EV Okay. EXXON VALDEZ over. Standing by 13 and 16.

2330.45 EV Ah, Valdez Traffic. EXXON VALDEZ. W-H-C-B. Over.

2330.50 VTC Valdez Traffic. Over.

2330.54 EV At the present time, I'm going to alter my course to two, zero, zero and reduce speed to about 12 knots to, ah, wind my way through the ice, and, ah, Naked Island ETA might be a little out of whack but, ah, once we're clear of the ice out of Columbia Gla... Bay, we'll give you another shout. Over.

2331.16 VTC Roger that, sir. Be awaiting your call. Traffic standing by.

2344.45 ST Valdez Traffic. The STALWART.

2344.51 VTC STALWART Traffic.

2344.53 ST ... Yes, was that 0100 for the CHEVRON CALIFORNIA.

2345.03 VTC They got 0015.

2345.07 ST Could you repeat that?

2345.08 VTC They're showing 0015 for Cape Hinchinbrook.

2345.12 ST Thank you. STALWART.

2345.13 VTC Traffic clear.

Date: March 24, 1989

0017.21 CC Calling Valdez Traffic. CHEVRON CALIFORNIA.

0017.35 VTC CHEVRON CALIFORNIA. Valdez Traffic.

0017.38 CC CHEVRON CALIFORNIA to Valdez Traffic. Abeam Cape Hinchinbrook at 0015, estimating Naked Island about 0200.

0017.53 VTC CHEVRON CALIFORNIA. Valdez Traffic. Roger. We have the EXXON VALDEZ outbound estimating Naked Island, Naked Island 0100, and he should be able to give you a pretty good ice report. Over.

0018.07 CC Yeah. Okay. Sounds good. We'll talk to him on his way out then. Thank you very much.

0018.11 VTC Traffic out.

0026.41 EV Yeah, Valdez Traffic. EXXON VALDEZ. Over.

0026.46 VTC EXXON VALDEZ. Valdez traffic.

0026.55 EV Yeah. Ah, it's VALDEZ back. Ah, we've--ah, should be on your radar there--we've fetched up, ah, hard aground north of, ah, Goose Island off Bligh Reef. And, ah, evidently, ah, leaking some oil, and, ah, we're gonna be here for awhile. And, ah, if you want, ah, so you're notified. Over.

0027.44 VTC EXXON VALDEZ. Valdez traffic. Roger. Are you just about ah about a mile north of Bligh Reef?

0027.57 EV Yeah. That's correct. Over.

0028.01 VTC Roger that.

0028.03 EV Okay. I'll give you a status report, ah, ascertain the situation. Over.

0028.10 VTC Standing by.

0031.35 VTC Tug STALWART. Valdez Traffic.

ST The STALWART back to Valdez Traffic. Go ahead.

VTC We have the EXXON VALDEZ aground at Bligh Reef. Request you proceed for possible assist. Over.

ST Roger, Roger. We'll be underway in just a few minutes.

VTC EXXON VALDEZ. Valdez Traffic.

EV EXXON VALDEZ back. Over.

VTC Yes sir. Could you give me the on-scene weather down there?

0038.47 EV Ah, it's blowing, ah, northerly a little bit, ah, drizzle, visibility, ah, two miles. Over.

VTC Roger. What was the wind speed?

EV Ah, ten knots right now. Over.

VTC Roger that. Slight sea?

EV Yeah, it's kinda indeterminate, ah, right now. It's ... ah, slight sea. Over.



VTC Roger that. Thank you very much. Traffic out.

VTC CHEVRON CALIFORNIA. Valdez traffic.

CC CHEVRON CALIFORNIA back to Valdez traffic. Go ahead.

0041.55 EV Yes sir. Good morning. Pending disposition of the EXXON VALDEZ sir--as soon as we get his situation resolved. The Captain of the Port has closed the port to all traffic in and out. Over.

CC Okay. Roger, copy that. Any idea on expected reopening of the port there? Over.

VTC Not at this time. We'll have to get some further information. Traffic out.

CC Okay. Roger. We'll go down to a slow bell then, and we'll probably be proceeding over towards Knowles Head then. CHEVRON CALIFORNIA W-C-G-N.

VTC CHEVRON CALIFORNIA. Valdez traffic.

VTC CHEVRON CALIFORNIA traffic.

0048.00 CC CHEVRON CALIFORNIA. I just want to confirm the port is closed, and we are to proceed to Knowles Head. Is that correct?

VTC Roger that.

CC Roger. We'll be ah--we'll ah ... Knowles Head. We'll get up on the track line there, and we'll let you know when we get up there.

VTC Roger that. Traffic out.

ST Valdez traffic. The STALWART.

0053.27 VTC STALWART traffic. Go ahead.

ST We're underway heading toward the VALDEZ now.

VTC Traffic. Roger.

VTC Pilot boat BERING. Valdez traffic.

BE Traffic. BERING.

BE Valdez Traffic. BERING.

VTC Bravo. BERING. Valdez Traffic. Shift to channel two two, please.

BE Roger.

BE BERING on 22.

VTC Bravo BERING. Valdez traffic. Have you been copying the EXXON VALDEZ?

BE Yea, that's a roger. Understand STALWART's on their way out and the port is closed until further notice.

0059.41 VTC Roger, we'd like you to get underway in the--either the BARONOV or CHIRIKOV or whatever you have, and do a little reconnaissance of the situation for us, if you could?

BE Ah, yea. Any particulars? Yea, we'll head out there. Okay. I'll go wake everybody up and we'll head out.

VTC Roger that. Do you also have enough people on board to possibly send the SILVER BULLET in to pick up some Coast Guard personnel?

BE Yeah. When? ASAP on that?

VTC Roger that. Yeah, if you could get the SILVER BULLET underway and send her into town and pick up a couple of Coast Guard people to go to the scene, and if you could give us a recon report on the amount of oil, particularly that might be leaking out. Over.

BE Yeah. Roger that. I'll get right back to you. Okay? Stand by. Are they pretty hard aground? They are leaking oil?

-VTC Roger. At first report that seems to be the situation.

BE Okay. Stand by. I'll get back to you in a couple of minutes. Okay.

VTC Roger that. Swish, shifting back to 13. Out.

AA Valdez Traffic. Valdez Traffic. ARCO ALASKA KSBK.

VTC ARCO ALASKA Traffic.

0102.03 AA ... personnel. We'll be departing the lanes in about half an hour. We'll give you a call when we do.

0102.27 VTC ARCO ALASKA. Valdez traffic, roger. We also have the CHEVRON CALIFORNIA departing the lanes and heading to Knowles Head also. Traffic out.

CC CHEVRON CALIFORNIA to Valdez traffic. We'll be departing the lane here in 2 or 3 minutes. Over.

VTC Traffic, roger out.

BE Valdez Traffic. The BERING.

VTC BERING Traffic.

BE 22.

VTC Two two.

VTC BERING traffic.

BE Traffic BERING.

VTC BERING Traffic. Go ahead.

BE Valdez Traffic. BERING.

VTC BERING Traffic. Go ahead.

0105.58 BE Yeah, I understand you want to take some people out to--somewhere.

VTC Roger. We have the EXXON VALDEZ hard aground on Bligh Reef and presumably leaking oil. If you have enough people, we'd like you to go down there with the pilot boat to evaluate the situation, see what kind of damage they've sustained. And, if you have enough people, if you could send the SILVER BULLET into town to pick up some Coast Guard people.

0106.54 BE Yeah, roger, okay. We'll do that and I guess you can figure that there'll be somebody in there within the hour. Okay?

VTC Roger that. Thank you very much, and we'll be standing by on 13. Traffic out.

BE Out BERING.

0107.29 COTP EXXON VALDEZ. This is the Captain of the Port on channel 13. Over.

EV EXXON VALDEZ back. Over.

COTP EXXON VALDEZ. This is the Captain of the Port, Commander McCall. Good evening. Do you have anymore of an estimate as to your situation at this time? Over.

EV Ah, not at the present, ah, Steve. Ah, ...or ah, a little problem here with the third mate but, ah, we are working our way off the reef. We've, ah, the vessel's been holed and, ah, we're ascertaining--right now we're trying to just to get her off the reef and, ah, we'll get back to you as soon as we can. Over.

COTP Roger on that. Yeah, I've got--we've got all our plan mechanisms in way to give you what assistance we can. Ah, you know take it slow and easy, and you know I'm telling you the obvious, but take it slow and easy and we're getting help out as fast as we can. And I'd appreciate when you get around, if you can give me a fairly good--if you can give me an update whenever as to the general location where you suspect it might be and of the stability info. Over.

EV Okay. We're, ah, pretty good shape right now stability-wise. We're, ah, just trying to extract her off the, ah, shoal here, and, ah, you can probably see me on your radar and, ah, once we get underway, I'll let you know. Do another, ah, damage control assessment. Over.

COTP Roger. Yeah. And let me know--again, before you make any drastic attempt to get underway, you make sure you don't start doing any ripping. You got a rising tide. You got about another--about an hour and a half worth of tide in your favor. Once you hit that max, I wouldn't recommend doing much wiggling. Over.

EV Okay. Yeah, I think it's, ah, major damage is kinda been done. We kinda rock and rolled over it, and, ah, we're just kinda hung up in the stern here. We're just, ah, we'll drift over it. I'll get back to ya. We'll be standing by thirteen sixteen. EXXON VALDEZ clear.

COTP Captain of the Port. Out.

BE Valdez Traffic. BERING.  
VTC BERING Traffic.  
0110.07 BE Yeah, how many personnel are you going to have coming out?  
VTC Two Coast Guard and one ADEC.  
BE Roger. Okay.  
VTC BERING Traffic. Coast Guard dock okay?  
BE Yeah. Roger. That'd be just fine.  
VTC Traffic out.  
CH Calling the BERING. This is the CHIRIKOF.  
0118.12 BE CHIRIKOF. This is BERING. Go ahead.  
12. Over.  
CH 12.  
AA Valdez Traffic. ARCO ALASKA K-S-B-K.  
VTC ARCO ALASKA. Valdez Traffic. Over.  
0126.54 AA We will depart the lanes in 10 minutes.  
VTC Traffic. Roger. Out.  
CH EXXON VALDEZ. ... CHIRIKOF.  
EV Yeah, VALDEZ back. Over.  
0131.36 CH Yeah. This is CHIRIKOF back. I'm just about a mile away heading in your direction. Do you want to send a man down for any kind of a visual?  
EV Ah, not at this time. Ah, got a pilot aboard us? Over.  
CH Ah, okay. I'll be there in just a second.  
EV Ah, okay. Ah, we'll ... there'll be a ladder on the port side. Over.  
CH Is it my understanding you have a pilot on board?

EV Ah, no. Not at this time. Ah, I do have the pilotage for this area, but, ah, no pilot, ah, Southwest Pilot on board. Over.

CH Yeah. Roger. I neither have a pilot on board myself. So, I'll be there in just a minute.

EV Very well, EXXON VALDEZ standing by thirteen and sixteen.

AA Valdez Traffic. ARCO ALASKA.

VTC ARCO ALASKA traffic.

0139.01 AA We are exiting the lanes. Will give you a call when we get the anchor down.

VTC Traffic. Roger, out.

VTC SILVER BULLET. Valdez traffic.

SB Traffic. This is SILVER BULLET.

0151.26 VTC SILVER BULLET Traffic. Could I have an ETA please?

SB Yeah. It looks like maybe 20 to 30 minutes. We're just coming up on Middle Rock.

VTC Roger that. Thank you. Traffic out.

SB BULLET out.

0159.03 COTP EXXON VALDEZ. This is Valdez Traffic. Channel 13. Over.

EV The EXXON VALDEZ.

COTP VALDEZ. VALDEZ. EXXON VALDEZ. Valdez Traffic. Yeah. Any update captain?

EV We're ah still surveying ah tanks ah trying to assess the damage. Over.

COTP Roger. Do you have capacity on board to internally transfer if you need to? Over.

EV Yes, we could do that.

COTP Okay. That's--obviously, you know better than I do, but that's highly recommended if once you determine which tanks are holed, to drop the head if you can. Over.



EV Yes, roger that.

COTP And you're still working at trying to get off?  
Over.

EV No. Our engines are stopped right now. We're going  
to wait ah until a little more water underneath us.

COTP Ah, roger on that. We've got negative further.  
Standing by. Out.

EV VALDEZ clear.

**EXHIBIT 79**

**IS AN AUDIO CASSETTE**

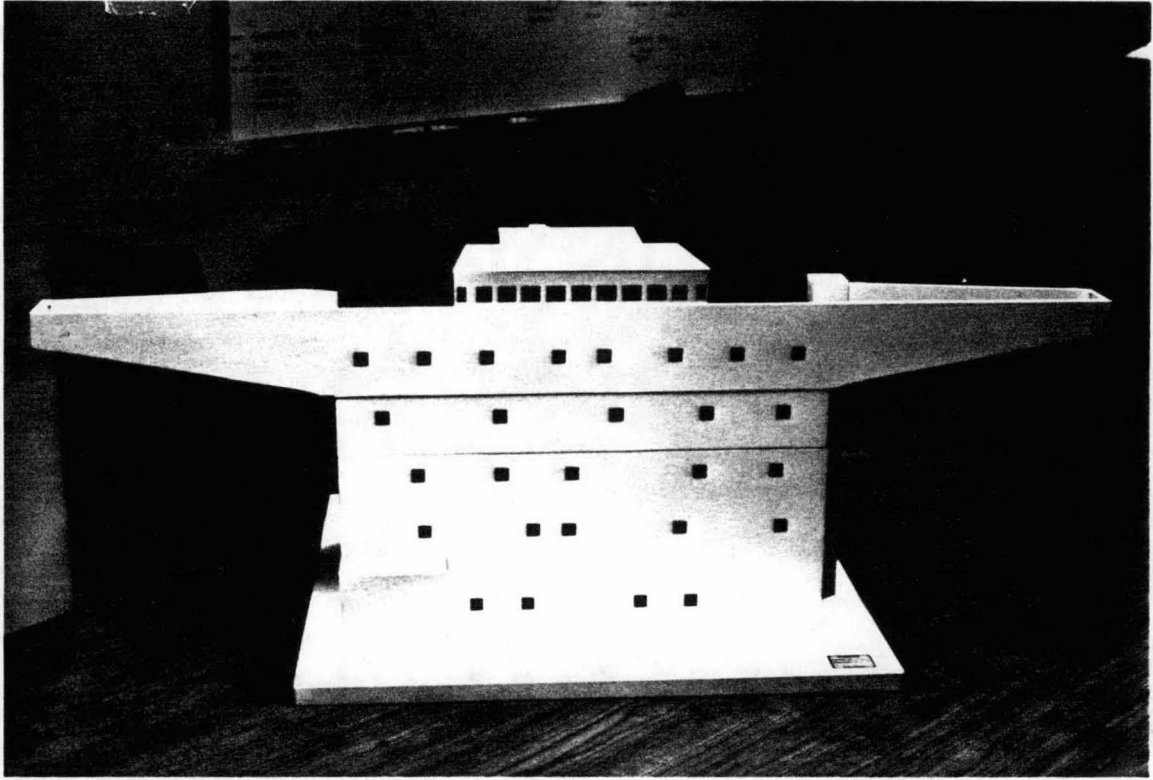


Exhibit #80  
MODEL OF SHIP'S BRIDGE

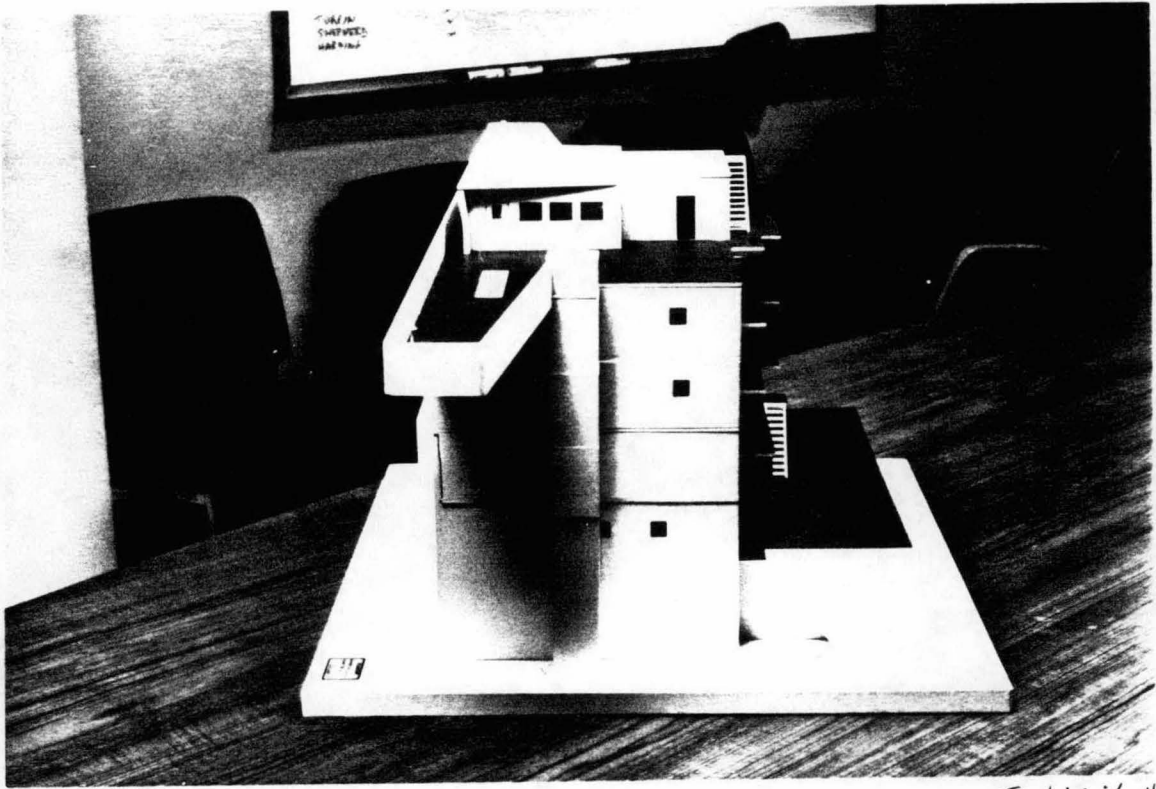


Exhibit #80

Model of Ship's Bridge

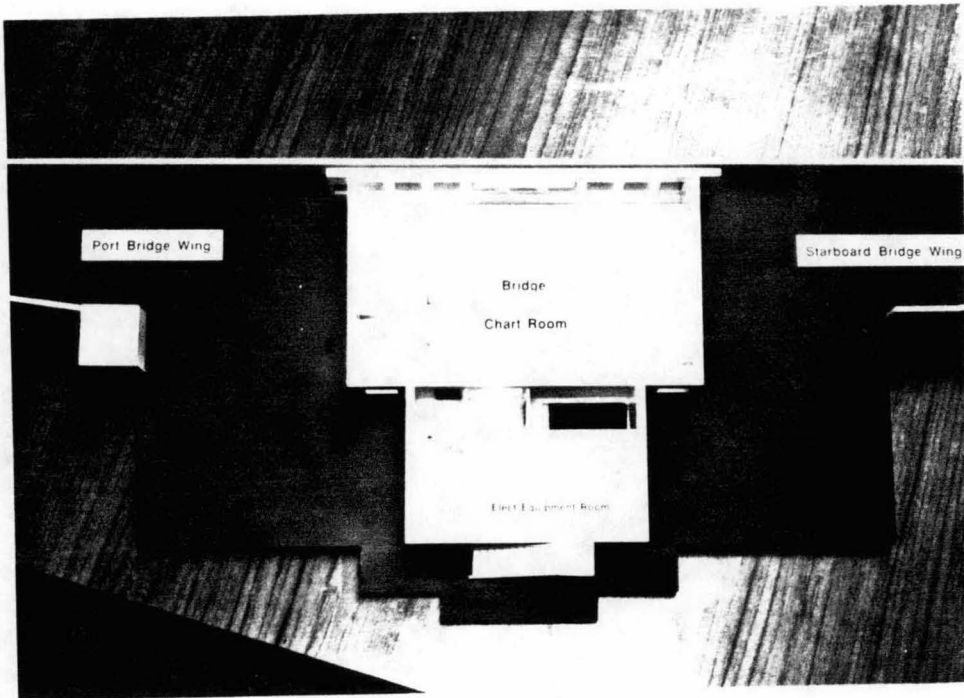


Exhibit 80

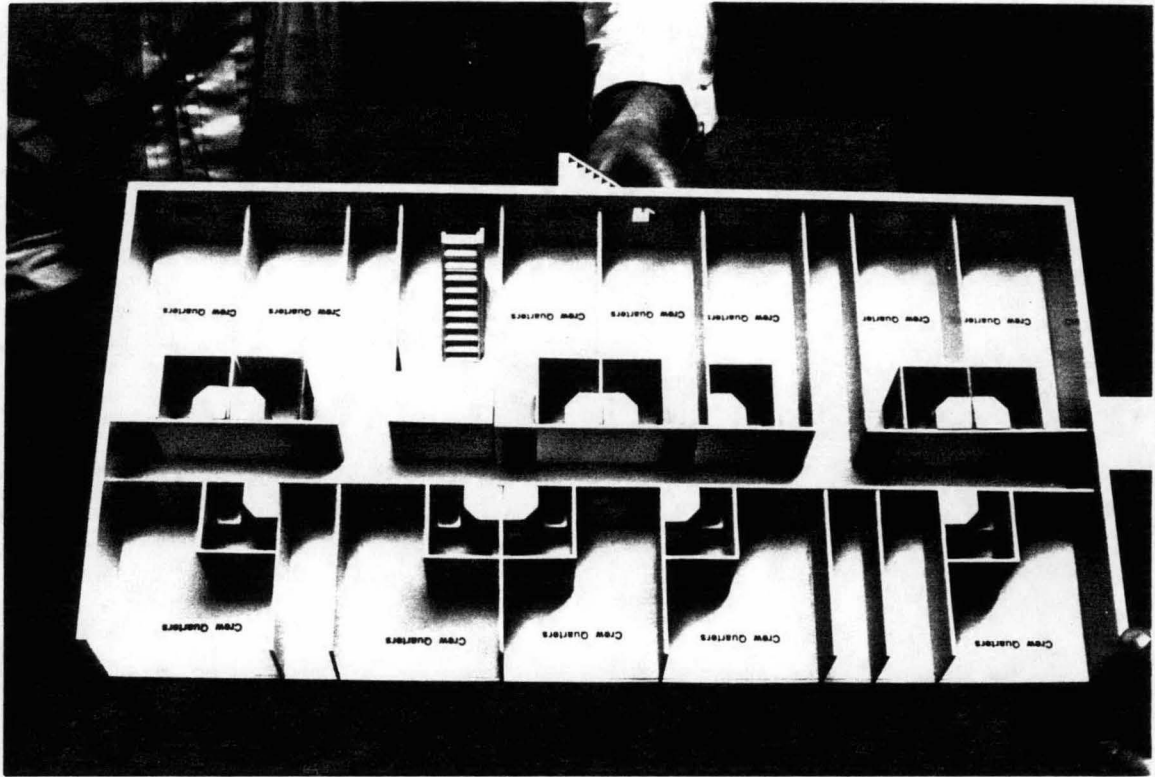


Exhibit # 80

Model of Ships Bridge

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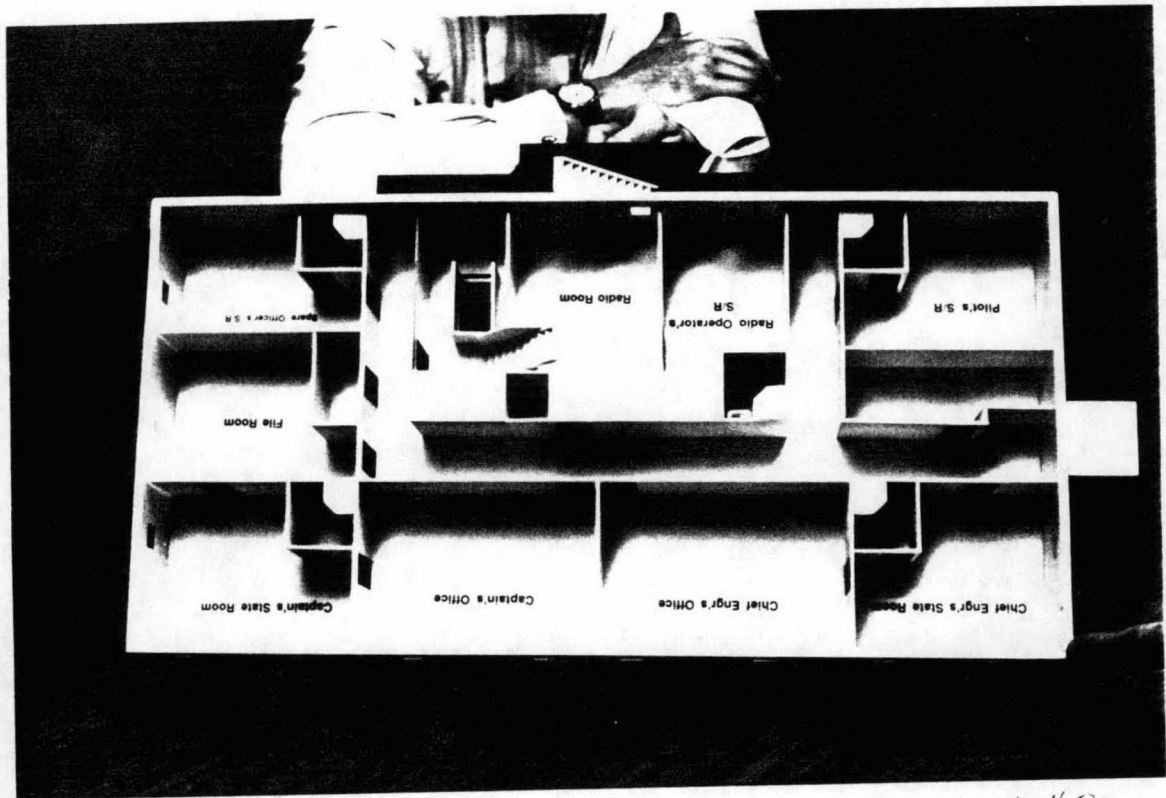


Exhibit #80

Model of Ships Bridge

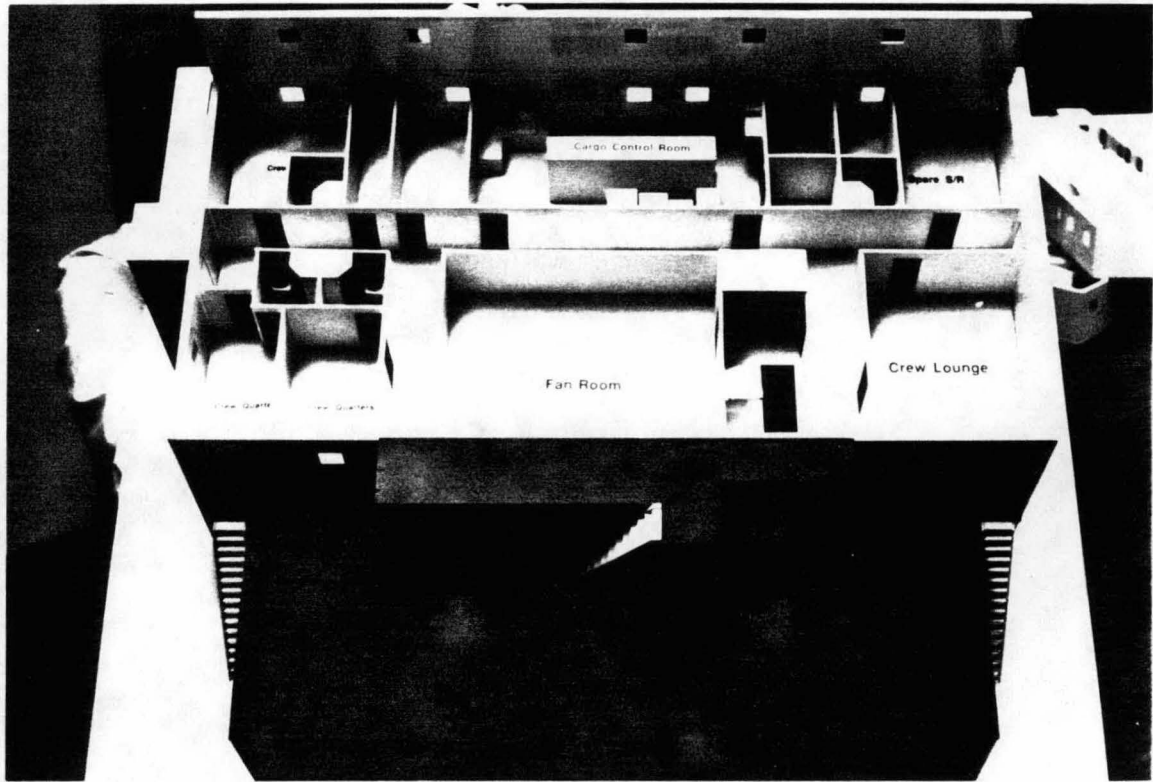


Exhibit #80

Model of Ship's Bridge

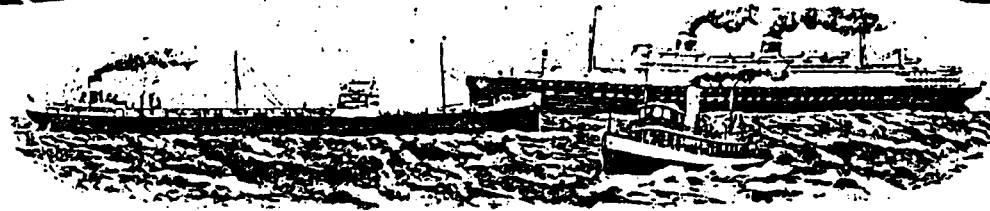
SERIAL NUMBER

637253

ISSUE NUMBER

2-2

# UNITED STATES COAST GUARD



## RECEIVED

### TO U.S. MERCHANT MARINE OFFICER

001414

*This is to certify that* \* \* \* \* \* GREGORY T. COUSINS \* \* \* \* \*  
*having been duly examined and found competent by the*  
*undersigned, is licensed to serve as* SECOND MATE OF OCEAN STEAM OR MOTOR  
 VESSELS OF ANY GROSS TONS; ALSO, RADAR OBSERVER UNLIMITED (RADAR OBSERVER EXPIRES  
 MARCH 1991).

*for the term of five years from this date.*

*Given under my hand this*

12TH

JANUARY

19 89

DANIEL W. HALL

NEW ORLEANS, LOUISIANA

FOR THE

*Officer in Charge of Marine Inspection*

PLAINTIFF

EXHIBIT NO. 81

ADMITTED *Equal*

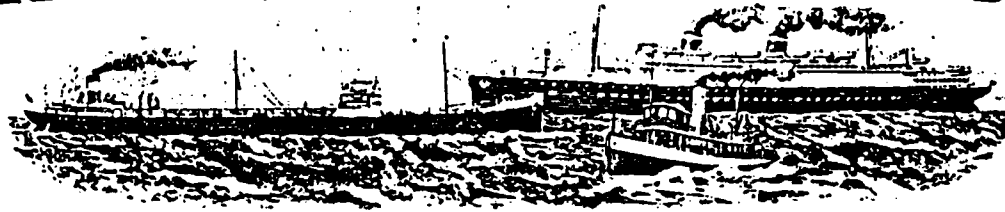
89-7217 CR  
89-7218 CR

(CASE NUMBER)

SERIAL NUMBER  
637253

ISSUE NUMBER  
2-2

# UNITED STATES COAST GUARD



001414

## LICENSE

### TO U.S. MERCHANT MARINE OFFICER

*This is to certify that* \* \* \* \* \* GREGORY T. COUSINS \* \* \* \* \*  
*having been duly examined and found competent by the*  
*undersigned, is licensed to serve as* SECOND MATE OF OCEAN STEAM OR MOTOR  
VESSELS OF ANY GROSS TONS; ALSO, RADAR OBSERVER UNLIMITED (RADAR OBSERVER EXPIRES  
MARCH 1991).

*for the term of five years from this date.*

*Given under my hand this* 12TH *day of* JANUARY 19 89

*Daniel W. Hall*  
DANIEL W. HALL

NEW ORLEANS, LOUISIANA

FOR THE *Officer in Charge of Marine Inspection*

C01024

COPY

COMPASS OBSERVATIONS OF M/S ERON VALDEZ

DATE	SHIP'S TIME	SHIP'S POSITION		SHIP'S HEAD		OBSERVED BEARING	TRUE BEARING	ERROR	VAR. BY CHART	DEVIATION		MEL
		LAT.	LONG.	STAND	STEER					STAND	STEER	
3-15-89	0817	27.5	126.7			096.2	110.8	14.6 <sup>E</sup>	16 <sup>E</sup>	1.4 <sup>W</sup>		
3-17-89	0624	41.2	126.5			74.1	90.6	16.5 <sup>E</sup>	17.5 <sup>E</sup>	0.7 <sup>W</sup>		
3-19-89	0801	41.6	126.8			088.1	105.0	16.9 <sup>E</sup>	18.1 <sup>E</sup>	1.2 <sup>W</sup>		
3-22-89	0759	55.5	143.3			080.7	106.1	25.4 <sup>E</sup>	25.1 <sup>E</sup>	.5 <sup>W</sup>		

FROM

GYRO	
COURSE	OBSERVED BEARING
2	2
32.5	102.1
22.5	126.1
31.5	107.8

*Ereron*

**PLAINTIFF**  
 EXHIBIT NO. 88  
 ADMITTED  Trial  
 89-7217 cc  
 89-7218 cc  
 (CASE NUMBER)

001623

COPY

001511

NS OF 15 ...

FROM ... TOWARD VAICZ AK

MAGNETIC COMPASSES

OBSERVED BEARING	TRUE BEARING	ERROR	VAR. BY CHART	DEVIATION	HEEL
090.2	110.2	19.6°	12.5°	1.4°	
74.1	90.6	16.5°	17.2°	0.7°	
080.1	100.0	16.3°	16.1°	1.2°	
080.8	106.1	25.3°	25.3°	1.5°	

GYROCOMPASS

COURSE	OBSERVED BEARING	TRUE BEARING	ERROR	REMARKS	Day	HR	OBSERVER
323	120.2	120.2	1.2°	+ 7.5°	0	5	C'S
323	120.1	120.6	1.5°	Clear & Steady			
323	126.1	126.2	1.1°	Slowly & Clear			
323	127.8	126.1	1.7°	Clear - Roll - 12	0	5	C'S



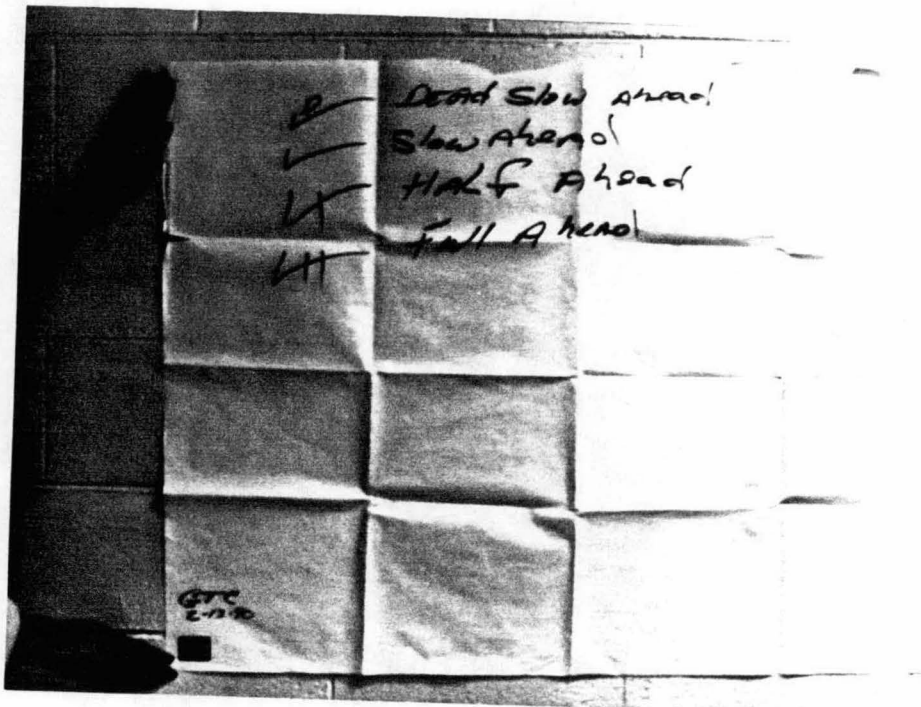


Exhibit #83

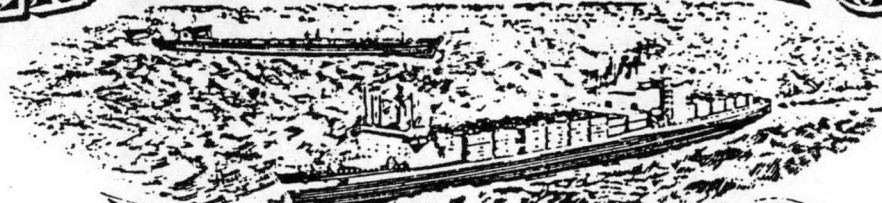
SERIAL NUMBER

009811

ISSUE NO.

1-4

# UNITED STATES COAST GUARD



# MASTER LICENSE

001419

This is to certify that . . . . . \*JAMES R. KUNKEL\* . . . . .  
having been duly examined and found competent by the  
undersigned, is licensed to serve as Master of United States  
Steam or Motor Vessels of any Gross Tons upon Oceans

ALSO, RADAR OBSERVER-UNLIMITED (RADAR OBSERVER EXPIRES FEBRUARY 1992).-----

for the term of five years from this date.

Given under my hand this 6TH day of MARCH 19 87

NEW ORLEANS, LOUISIANA  
*Post*

*[Signature]*  
DANIEL W. HALL

For the *Office in Charge of Marine Inspection*

PLAINTIFF

EXHIBIT NO. 84

ADMITTED  *trial*

89-7217 CR  
89-7218 CR

(CASE NUMBER)



U.S. Department  
of Transportation  
United States  
Coast Guard



# OIL RECORD BOOK FOR SHIPS

CHECK ONE:

- This book is for Machinery Space Operations (Part I - All Ships)
- This book is for Cargo/Ballast Operations (Part II - Oil Tankers)

Name of Ship: M/V EXXON VALDEZ Gross Tonnage: ~~95115~~ 94999  
 Owner: EXXON  
 Period From: 12-1-86 To: 4/8/89 Official Number: 692966

This record book is issued by the Secretary of Transportation and is distributed by the United States Coast Guard to ships of American registry. It remains the property of the United States Government and each owner/operator is responsible to maintain and surrender it in accordance with the Secretary's regulations. Note that the Oil Record Book is one book with two parts; Machinery Space Operations is under Part I and Cargo/Ballast Operations is under Part II.

An Oil Tanker of 150 gross tons or above must maintain Parts I and II of the Oil Record Book; Machinery Space Operations (Part I), and Cargo/Ballast Operations (Part II). A ship of 400 gross tons or above, other than an oil tanker, and any other ship required by 33 CFR Part 151 must maintain Machinery Space Operations (Part I) in the Oil Record Book.

A non-tanker that carries more than 200 cubic meters of oil must fill in the Oil Record Book used for oil tankers. (Reference: MARPOL 73/78, Regulation 2(2)).

**PLAINTIFF**  
 IBIT NO. 85  
 DATED  Trial  
 1219 CR  
 84-7218 CR  
 (CASE NUMBER)

008437

Extract of MARPOL 73/78 Regulations

MARPOL 73/78, Annex I, Chapter II, Regulation 9

Subject to the provisions of Regulations 10 and 11 of this Annex and paragraph (2) of this Regulation, any discharge into the sea of oil or oily mixtures from ships to which this Annex applies shall be prohibited except when all the following conditions are satisfied:<sup>1</sup>

(a) for an oil tanker, except as provided for in sub-paragraph (b) of this paragraph:

- (i) the tanker is not within a special area;
- (ii) the tanker is more than 50 nautical miles from the nearest land;
- (iii) the tanker is proceeding en route;
- (iv) the instantaneous rate of discharge of oil content does not exceed 60 litres per nautical mile;
- (v) the total quantity of oil discharged into the sea does not exceed for existing tankers 1/15,000 of the total quantity of the particular cargo of which the residue formed a part, and for new tankers 1/30,000 of the total quantity of the particular cargo of which the residue formed a part; and
- (vi) the tanker has in operation, except as provided for in Regulation 15(5) and (6) of this Annex, an oil discharge monitoring and control system and a slop tank arrangement as required by Regulation 15 of this Annex;<sup>2</sup>

(b) from a ship of 400 tons gross tonnage and above other than an oil tanker and from machinery space bilges excluding cargo pump room bilges of an oil tanker unless mixed with oil cargo residue:

- (i) the ship is not within a special area;
- (ii) the ship is more than 12 nautical miles from the nearest land;
- (iii) the ship is proceeding en route;
- (iv) the oil content of the effluent is less than 100 parts per million; and
- (v) the ship has in operation an oil discharge monitoring and control system, oily-water separating equipment, oil filtering system or other installation as required by Regulation 16 of this Annex.<sup>3</sup>

NOTES:1 Regulation 10 is titled "Methods for the Prevention of Oil Pollution from Ships while operating in Special Areas."  
Regulation 11 is titled "Exceptions."

2 Regulation 15 is titled "Retention of Oil on Board."

3 Regulation 16 is titled "Oil Discharge Monitoring and Control System and Oily-Water Separating Equipment."

008438

## OIL RECORD BOOK ENTRY REQUIREMENTS

MARPOL 73/78, Annex I, Chapter II, Regulation 20

(1) Every oil tanker of 150 tons gross tonnage and above and every ship of 400 tons gross tonnage and above other than an oil tanker shall be provided with an Oil Record Book Part I (Machinery Space Operations). Every oil tanker of 150 tons gross tonnage and above shall also be provided with an Oil Record Book Part II (Cargo/Ballast Operations). The Oil Record Book(s), whether as a part of the ship's official log book or otherwise, shall be in the Form(s) specified in Appendix III to this Annex.

(2) The Oil Record Book shall be completed on each occasion, on a tank to tank basis if appropriate, whenever any of the following operations take place in the ship:

(a) for machinery space operations (all ships):

- (i) ballasting or cleaning of oil fuel tanks;
- (ii) discharge of dirty ballast or cleaning water from tanks referred to under (i) of the sub-paragraph;
- (iii) disposal of oily residues (sludge);
- (iv) discharge overboard or disposal otherwise of bilge water which has accumulated in machinery spaces.

(b) for cargo/ballast operations (oil tankers):

- (i) loading of oil cargo;
- (ii) internal transfer of oil cargo during voyage;
- (iii) unloading of oil cargo;
- (iv) ballasting of cargo tanks and dedicated clean ballast tanks;
- (v) cleaning of cargo tanks including crude oil washing;
- (vi) discharge of ballast except from segregated ballast tanks;
- (vii) discharge of water from slop tanks;
- (viii) closing of all applicable valves or similar devices after slop tank discharge operations;
- (ix) closing of valves necessary for isolation of dedicated clean ballast tanks from cargo and stripping lines after slop tank discharge operations;
- (x) disposal of residues.

(3) In the event of such discharge of oil or oily mixture as is referred to in Regulation 11 of this Annex or in the event of accidental or other exceptional discharge of oil not excepted by that Regulation, a statement shall be made in the Oil Record Book of the circumstances of, and the reasons for, the discharge.

(4) Each operation described in paragraph (2) of this Regulation shall be fully recorded without delay in the Oil Record Book so that all the entries in the book appropriate to that operation are completed. Each completed operation shall be signed by the officer or officers in charge of the operations concerned and each completed page shall be signed by the master of

008439



the ship. The entries in the Oil Record Book shall be in an official language of the State whose flag the ship is entitled to fly, and, for ships holding an International Oil Pollution Prevention Certificate, in English or French. The entries in an official national language of the State whose flag the ship is entitled to fly shall prevail in case of a dispute or discrepancy.

(5) The Oil Record Book shall be kept in such a place as to be readily available for inspection at all reasonable times and, except in case of unmanned ships under tow, shall be kept on board the ship. It shall be preserved on board the ship for a period of three years after the last entry has been made.

(6) The competent authority of the Government of a Party to the Convention may inspect the Oil Record Book on board any ship to which this Annex applies while the ship is in its port or offshore terminals and may make a copy of any entry in that book and may require the Master of the ship to certify that the copy is a true copy of such entry. Any copy so made which has been certified by the Master of the ship as a true copy of an entry in the ship's Oil Record Book shall be made admissible in any judicial proceedings as evidence of the facts stated in the entry. The inspection of an Oil Record Book and the taking of a certified copy by the competent authority under this paragraph shall be performed as expeditiously as possible without causing the ship to be unduly delayed.

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OIL RECORD BOOK PART I - MACHINERY SPACE OPERATIONS

INSTRUCTIONS FOR ALL SHIPS\*

The following pages of this section show a comprehensive list of items of machinery space operations which are, when appropriate, to be recorded in the Oil Record Book in accordance with Regulation 20 of Annex I of the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto (MARPOL 73/78). The items are grouped into operational sections, each of which is denoted by a letter code.

When making entries in the Oil Record Book, the date, operation code and item number shall be inserted in the appropriate columns and the required particulars shall be recorded chronologically in the blank spaces. All quantities should be consistently recorded throughout the Oil Record Book as cubic meters, gallons, or barrels.

Each completed operation shall be signed for and dated by the officer or officers in charge. Each completed page shall be signed by the master of the ship.

\* Note: Oil Record Book Part I is provided to every oil tanker of 150 tons gross tonnage and above and every ship of 400 tons gross tonnage and above, other than oil tankers, to record relevant machinery space operations. For oil tankers, Oil Record Book Part II is also provided to record relevant cargo/ballast operations.

008441

CODE AND ITEM NUMBER TO BE RECORDED FOR ALL SHIPS  
400 GROSS TONS AND ABOVE

(A) BALLASTING OR CLEANING OF OIL FUEL TANKS

1. Identity of tank(s) ballasted.
2. Whether cleaned since they last contained oil and, if not, type of oil previously carried.
3. Position of ship at start of cleaning.
4. Position of ship at start of ballasting.

(B) DISCHARGE OF DIRTY BALLAST OR CLEANING WATER FROM OIL FUEL TANKS REFERRED TO UNDER SECTION (A)

5. Identity of tank(s).
6. Position of ship at start of discharge.
7. Position of ship on completion of discharge.
8. Ship's speed(s) during discharge.
9. Method of discharge:
  - .1 Through 100 ppm equipment;
  - .2 Through 15 ppm equipment;
  - .3 To reception facilities (identify port).
10. Quantity discharged .

(C) DISPOSAL OF OIL RESIDUES (SLUDGE)

11. Quantity of residue retained on board for disposal .
12. Methods of disposal of residue:
  - .1 To reception facilities (identify port);
  - .2 Mixed with bunkers;
  - .3 Transferred to another (other) tank(s) (identify tank(s));
  - .4 Other method (state which).

(D) NON-AUTOMATIC DISCHARGE OVERBOARD OR DISPOSAL OTHERWISE OF BILGE WATER WHICH HAS ACCUMULATED IN MACHINERY SPACES

13. Quantity discharged.
14. Time of discharge. (position of ship at start and end of discharge)
15. Method of discharge or disposal:
  - .1 Through 100 ppm equipment;
  - .2 Through 15 ppm equipment;
  - .3 To reception facilities (identify port);
  - .4 To slop or collecting tank (identify tank).

(E) AUTOMATIC DISCHARGE OVERBOARD OR DISPOSAL OTHERWISE OF BILGE WATER WHICH HAS ACCUMULATED IN MACHINERY SPACES

16. Time when the system is put into automatic mode of operation for discharge overboard.
17. Time when the system is put into automatic mode of operation for transfer of bilge water to collecting (slop) tank (identify tank).
18. Time when the system is put to manual operation.

19. Method of discharge overboard:  
 .1 Through 100 ppm equipment;  
 .2 Through 15 ppm equipment.

(F) CONDITION OF OIL DISCHARGE MONITORING AND CONTROL SYSTEM

20. Time of system failure.  
 21. Time when system has been made operational.  
 22. Reasons for failure.

(G) ACCIDENTAL OR OTHER EXCEPTIONAL DISCHARGES OF OIL

23. Time of occurrence.  
 24. Place or position of ship at time of occurrence.  
 25. Approximate quantity and type of oil.  
 26. Circumstances of discharge or escape, the reasons therefore and general remarks.

(H) ADDITIONAL OPERATIONAL PROCEDURES AND GENERAL REMARKS

\*EXAMPLE\*

Name of Ship: M/V NOT AN OIL TANKER  
 Official Number or Call Sign: XXX  
 CARGO/BALLAST OPERATIONS (OIL TANKERS) / MACHINERY SPACE OPERATIONS (ALL SHIPS)  
 (circle one)

DATE	CODE (letter)	ITEM (number)	Record of operations/signature of officers in charge
8/1/82	D	13	4 barrels
		14	1000 hrs
		15.4	to collecting tank
			8/1/82 J. Johnson
8/3/82	D	13,14,15	75 barrels 8/82 D. Black
8/4/82	E	16	0-300 hrs
		19.2	15 ppm
			8/4/82 D. Black
8/7/82	A	1	No.5 DB Port and Stbd
		2	Yes
		4	79-47N x 26-01W
			8/7/82 J. Johnson

Signature of Master \_\_\_\_\_

008443

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OIL RECORD BOOK PART II - CARGO/BALLAST OPERATIONS

ADDITIONAL INSTRUCTIONS FOR OIL TANKERS

The following pages of this section show a comprehensive list of items of cargo and ballast operations which are, when appropriate, to be recorded in the Oil Record Book in accordance with Regulation 20 of Annex I of the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto (MARPOL 73/78). The items are grouped into operational sections, each of which is denoted by a letter.

When making entries in the Oil Record Book, the date, operation code and item number shall be inserted in the appropriate columns and the required particulars shall be recorded chronologically in the blank spaces. All quantities should be consistently recorded throughout the Oil Record Book as cubic meters, gallons, or barrels.

Each completed operation shall be signed for and dated by the officer or officers in charge. Each completed page shall be signed by the master of the ship.

In respect of the oil tankers engaged in specific trades in accordance with Regulation 13C of Annex I of MARPOL 73/78, appropriate entry in the Oil Record Book shall be endorsed by competent Port State authority (United States Coast Guard).

Note:

Every oil tanker of 150 tons gross tonnage and above is provided with Oil Record Book Part II to record relevant cargo/ballast operations. Such a tanker is also provided with Oil Record Book Part I to record relevant machinery space operations.

7  
008444

CODE AND ITEM NUMBER TO BE RECORDED FOR TANKERS

(A) LOADING OF OIL CARGO

1. Place of loading.
2. Type of oil loaded and identity of tank(s).
3. Total quantity of oil loaded.

(B) INTERNAL TRANSFER OF OIL CARGO DURING VOYAGE

4. Identity of tank(s)
  - .1 From:
  - .2 To:
5. Was (were) tank(s) in 4(1) emptied?

(C) UNLOADING OF OIL CARGO

6. Place of unloading.
7. Identity of tank(s) unloaded.
8. Was (were) tank(s) emptied?

(D) CRUDE OIL WASHING (COW TANKERS ONLY)

(To be completed for each tank being crude oil washed)

9. Port where crude oil washing is carried out or ship's position if carried out between two discharge ports.
10. Identity of tank(s) washed.<sup>1</sup>
11. Number of machines in use.
12. Time of start of washing.
13. Washing pattern employed.<sup>2</sup>
14. Washing line pressure.
15. Time completed or stopped washing.
16. State method of establishing that tank(s) was (were) dry.
17. Remarks.<sup>3</sup>

(E) BALLASTING OF CARGO TANKS

18. Identity of tank(s) ballasted.
19. Position of ship at start of ballasting.

- NOTES: 1 When an individual tank has more machines than can be operated simultaneously, as described in the Operations and Equipment Manual, then the section being crude oil washed should be identified, e.g. No. 2 center, forward section.
- 2 In accordance with the Operations and Equipment Manual, enter whether single-stage or multi-stage method of washing is employed. If multi-stage method is used, give the vertical arc covered by the machines and the number of times that arc is covered for that particular stage of the program.
- 3 If the methods given in the Operations and Equipment Manual are not followed, give the reasons under Remarks.



(F) BALLASTING OF DEDICATED CLEAN BALLAST TANKS (CBT TANKERS ONLY)

20. Identity of tank(s) ballasted.
21. Position of ship when water intended for flushing, or port ballast is taken into dedicated clean ballast tank(s).
22. Position of ship when pump(s) and lines are flushed to slop tank.
23. Quantity of oily water resulting from line flushing transferred to slop tank(s) (identify slop tank(s)).
24. Position of ship when additional ballast water is taken into dedicated clean ballast tank(s).
25. Time and position of ship when valves separating the dedicated clean ballast tanks from cargo and stripping lines were closed.
26. Quantity of clean ballast taken on board .

(G) CLEANING OF CARGO TANKS

27. Identity of tank(s) cleaned.
28. Port or ship's position.
29. Duration of cleaning.
30. Method of cleaning.<sup>4</sup>
31. Tank washings transferred to:
  - .1. Reception facilities;
  - .2 Slop tank(s) or cargo tank(s) designated as slop tank(s) (Identity of tank(s)).

(H) DISCHARGE OF DIRTY BALLAST

32. Identity of tank(s).
33. Position of ship at start of discharge into the sea.
34. Position of ship on completion of discharge into the sea.
35. Quantity discharged into the sea.
36. Ship's speed(s) during discharge.
37. Was the discharge monitoring and control system in operation during the discharge?
38. Was a regular check kept on the effluent and the surface of the water in the locality of the discharge?
39. Quantity of oily water transferred to slop tank(s) (identify slop tank(s)).
40. Discharge to shore reception facilities (identify port if applicable).

(I) DISCHARGE OF WATER FROM SLOP TANKS INTO THE SEA

41. Identify slop tank(s).
42. Time of settling from last entry of residues, or,
43. Time of settling from last discharge.
44. Time and position of ship at start of discharge.
45. Ullage of total contents at start of discharge.
46. Ullage of oil/water interface at start of discharge.
47. Bulk quantity discharged and rate of discharge.

NOTES: 4 This includes hand hosing, machine washing and/or chemical cleaning. Where chemically cleaned, state the chemical concerned and amount used.

48. Final quantity discharged and rate of discharge.
49. Time and position of ship on completion of discharge.
50. Is the discharge monitoring and control system in operation during the discharge?
51. Ullage of oil/water interface on completion of discharge.
52. Ship's speed(s) during discharge.
53. Was a regular check kept on the effluent and the surface of the water in the locality of the discharge?
54. Confirm that all applicable valves in the ship's piping system have been closed on completion of discharge from the slop tanks.

(J) DISPOSAL OF RESIDUES AND OILY MIXTURES NOT OTHERWISE DEALT WITH

55. Identity of tank(s).
56. Quantity disposed of from each tank.
57. Method of disposal:
  - .1 To reception facilities (identify port);
  - .2 Mixed with cargo;
  - .3 Transferred to another tank(s) (identify tank(s));
  - .4 Other method (state which).

(K) DISCHARGE OF CLEAN BALLAST CONTAINED IN CARGO TANKS

58. Position of ship at start of discharge of clean ballast.
59. Identity of tank(s) discharged.
60. Was (were) the tank(s) empty on completion?
61. Position of ship on completion if different from 58.
62. Was a regular check kept on the effluent and the surface of the water in the locality of the discharge?

(L) DISCHARGE OF BALLAST FROM DEDICATED CLEAN BALLAST TANKS  
(CBT TANKERS ONLY)

63. Identity of tank(s) discharged.
64. Time and position of ship at start of discharge of clean ballast into the sea.
65. Time and position of ship on completion of discharge into the sea.
66. Quantity discharged.
  - .1 Into the sea; or
  - .2 To reception facility (identify port)
67. Was there any indication of oil contamination of the ballast water before or during the discharge into the sea?
68. Was the discharge monitored by an oil content meter?
69. Time and position of ship when valves separating dedicated clean ballast tanks from the cargo and stripping lines were closed on completion of deballasting.

(M) CONDITION OF OIL DISCHARGE MONITORING AND CONTROL SYSTEM

70. Time of system failure.
71. Time when system has been made operational.
72. Reasons for failure.

(N) ACCIDENTAL OR OTHER EXCEPTIONAL DISCHARGES OF OIL

- 73. Time of occurrence.
- 74. Port or ship's position at time of occurrence.
- 75. Approximate quantity and type of oil.
- 76. Circumstances of discharge or escape, the reasons therefore and general remarks.

(O) ADDITIONAL OPERATIONAL PROCEDURES AND GENERAL REMARKS

---

ADDITIONAL CODES FOR TANKERS ENGAGED IN SPECIFIC TRADES

(P) LOADING OF BALLAST WATER

- 77. Identity of tank(s) ballasted.
- 78. Position of ship when ballasted.
- 79. Total quantity of ballast loaded.
- 80. Remarks.

(Q) REALLOCATION OF BALLAST WATER WITHIN THE SHIP

- 81. Reasons for reallocation.

(R) BALLAST WATER DISCHARGE TO RECEPTION FACILITY

- 82. Port(s) where ballast water was discharged.
- 83. Name or designation of reception facility.
- 84. Total quantity of ballast water discharged.
- 85. Date, signature and stamp of port authority official.

008448

\*EXAMPLE\*

Name of Ship: M/V TANKER

Official Number or Call Sign: XXXXX

CARGO/BALLAST OPERATIONS (OIL TANKERS) / MACHINERY SPACE OPERATIONS (ALL SHIPS)  
(circle one)

DATE	CODE (letter)	ITEM (number)	Record of operations/signature of officers in charge.
8/11/82	G	27	NO. 5 port tank
		28	Port Shaw, California
		29	1 hour
		31.1	8/11/82 J.B. Smith
8/14/82	A	1	Port Shaw, California
		2	Heavy fuel oil 1-5 C, 1-5 SB and 1-5 P
		3	1500 barrels 8/14/82 J.B. Smith
8/16/82	C	6	Port Pine, Texas
		7	1 C 3 C and 5 C
		8	yes
8/18/82	B	4.1	2 C
		4.2	5 C
		5	No 8/18/82 D.B. Miller

Signature of Master \_\_\_\_\_

008449

List of Oils\* (Appendix I to Annex I of MARPOL 73/78)

Asphalt Solutions:

Blending stocks  
Roofers flux  
Straight run residue

Oils:

Clarified  
Crude oil  
Mixtures containing crude oil  
Diesel oil  
Fuel oil No. 4  
Fuel oil No. 5  
Fuel oil No. 6  
Residual Fuel oil  
Road oil  
Transformer oil  
Aromatic oil (excluding vegetable oil)  
Lubricating oils and Blending stocks  
Mineral oil  
Motor oil  
Penetrating oil  
Spindle oil  
Turbine oil

Distillates:

Straight run  
Flashed feed stocks

Gas Oil:

Cracked

Gasoline Blending Stocks:

Alkylates - fuel  
Reformats  
Polymer - fuel

Gasolines:

Casinghead (natural)  
Automotive  
Aviation  
Straight run  
Fuel oil No. 1 (kerosene)  
Fuel oil No. 1-D  
Fuel oil No. 2  
Fuel oil No. 2-D

Jet Fuels:

JP - 1 (kerosene)  
JP - 3  
JP - 4  
JP - 5 (kerosene, heavy)  
Turbo fuel  
Kerosene  
Mineral spirit

Naphtha:

Solvent  
Petroleum  
Heartcut Distillate oil

\*This list of oils is not meant to be comprehensive, but suggest the most common types of oil carried.

METRIC AND UNITED STATES LIQUID MEASURE EQUIVALENTS

<u>U.S. UNIT</u>		<u>METRIC UNIT</u>
1 gallon	=	3.7854 liters
1 barrel (42 gal.)	=	119.2401 liters
0.26417 gallon	=	1 liter
1 cubic foot	=	0.028317 cubic meter
35.315 cubic feet	=	1 cubic meter

008450





Name of ship: EXXON VALDEZ

Official number or letters: 1-92166

CARGO/BALLAST OPERATIONS (OIL TANKERS) / MACHINERY SPACE OPERATIONS (ALL SHIPS)  
(Circle one)

DATE	CODE (letter)	ITEM (number)	Record of operations/signature of officers in charge
1/12/89	A	3	112600 GB (50' DIRT-ST)
1/18/89	C	6	SAN FRANCISCO BAY A-9 LT12
		7	ALL TANKS
		8	NONE EMPTIED
1/18/89	C	6	SAN FRANCISCO BAY A-9
		7	ALL TANKS
		8	NONE EMPTIED
1/19/89	C	6	SAN FRANCISCO BAY A-9
		7	ALL TANKS
		8	NONE EMPTIED
1/20/89	C	6	SAN FRANCISCO BAY A-9
		7	ALL TANKS
		8	ALL EMPTIED <i>(Signature)</i>
1/21/89	E	18	IC 3C 5C
		19	SAN FRAN BAY L 37-44N-A 122-20W
1/26/89	H	32	IC, 3C, 5C GK
		40	BERTH'S, ALYESKA DOCKS, VALDEZ, AK
1/26/89	A	1	BERTH'S, ALYESKA DOCKS, VALDEZ, AK
		2	ANS CRUDE, ALL CARGO TANKS
		3	109.3704 G. BRLS GK
2/1/89	C	6	San Francisco Bay, #9, Light #1
		7	1P, 1S, 5C
		8	No GK

Master's Signature *(Signature)*

008452

Name of ship: FRON VALDEZ  
 Official number or letters: 192966

CARGO/BALLAST OPERATIONS (OIL TANKERS) / MACHINERY SPACE OPERATIONS (ALL SHIPS)  
 (Circle one)

DATE	CODE (letter)	ITEM (number)	Record of operations/signature of officers in charge
2/2/89	B	4	1 From: 1 P & 1 S
			2 To: 5 Ctr
		5	NO. GK
2/3/89	C	6	ANCHORAGE #9, SAN FRANCISCO BAY <sup>LIGHTER #2</sup>
		7	1CTR, 2CTR, 3CTR, 4CTR, 5X
		8	NO. GK
2/3/89	B	4	1 From: 1 P & 1 S
			2 To: P & S Septimas
		5	yes GK
2/4/89	C	6	ANCHORAGE #9, SAN FRANCISCO BAY <sup>LIGHTER #3</sup>
		7	ALL CARGO TANKS EXCEPT 1U'S
		8	NO. GK
2/4/89	C	6	ANCHORAGE #9, S.F. BAY, LIGHTER #4
		7	ALL CARGO TANKS EXCEPT 1U'S
		8	NO. GK
2/5/89	C	6	ANCHORAGE #9, S.F. BAY, LIGHTER #5
		7	ALL
		8	YES. GK
2/6/89	E	18	1CTR, 3CTR, 5CTR
		19	ANCHORAGE #9, SAN FRANCISCO BAY GK
2/6/89	A	1	BERTH #4, ALASKA TERMINAL VALDEZ ALASKA
		2	BNS CRUDE ALL CARGO TANKS
		3	1,100,000 G. BBLS GK

Master's Signature Alvin [Signature] 008453

Name of ship: EXON VALDEZ  
 Official number or letters: 692966

CARGO/BALLAST OPERATIONS (OIL TANKERS) & MACHINERY SPACE OPERATIONS (ALL SHIPS)  
 (Circle one)

DATE	CODE (letter)	ITEM (number)	Record of operations/signature of officers in charge.
2/16	C	6	ANCHORAGE #9, S.F. BAY, LIGHTER #1
		7	1X, 2C, 3C, 4C, 5X, PIS SCA
		8	NO, EXCEPT 1W'S. GK
2/18	C	6	ANCHORAGE #9, S.F. BAY, LIGHTER #2
		7	ALL EXCEPT 1W'S
		8	No. GK
2/19	E	18	1P & 1S
		19	ANCHORAGE #9, SAN FRANCISCO BAY GK
2/20	C	6	ANCHORAGE #9, S.F. BAY, LIGHTER #3
		7	ALL EXCEPT 1W'S
		8	No. GK
2/21	D	9	ANCHORAGE #9, SAN FRANCISCO BAY, CA.
		10	2 CTR, 3W'S
		11	<sup>12</sup> <del>2</del> machines at once
		12	2/21/89 1515
		13	TOP & BOTTOM WASH
		14	130 PSI
		15	1745
		16	MMC type
		17	NON= GK

Master's Signature [Signature]



Name of ship: EXXON VALDEZ  
 Official number or letters: 692966

CARGO/BALLAST OPERATIONS (OIL TANKERS); / MACHINERY SPACE OPERATIONS (ALL SHIPS)  
 (Circle one)

DATE	CODE (letter)	ITEM (number)	Record of operations/signature of officers in charge
3/12/89	D	9	ANCH #9 S.F. Bay
		10	1P, 1C, 1S
		11	4 mech flush, 12 mach install
		12	2110
		13	Single-stage
		14	130 P 51
		15	2300
		16	SAAB meter
		17	NONE GK
3/11/89	D	9	ANCH #9 S.F. Bay
		10	3 Ch
		11	4 mach in
		12	2310
		13	Single-stage
		14	130 P 51
		15	3/12/89 0050
		16+17	SAAB meter
		17	none GK
3/12/89	C	6	Anchorage #9 S.F. Bay LTR #4
		7	All cargo to be
		8	yes GK
3/13/89	E	18	3 C & 5 C
3/13/89		19	to #9 S.F. Bay

Master's Signature: \_\_\_\_\_

*[Handwritten Signature]*  
 00845R





Name of ship: Exxon Valdez  
 Official number or letters: 692966

CARGO/BALLAST OPERATIONS (OIL TANKERS) / MACHINERY SPACE OPERATIONS (ALL SHIPS)  
 (Circle one)

DATE	CODE (letter)	ITEM (number)	Record of operations/signature of officers in charge
3/25/89 3/25/89	C	6	Bligh Reef Lighter to Exxon Baton Rouge
		7	All except 2P & 4P
		8	No <i>Sam R. Hull 4/6/89</i>
3/20/89 4/21/89	C	6	Bligh Reef Lighter to Exxon San Francisco
		7	All except 2P & 4P
		8	No <i>Sam R. Hull 4/6/89</i>
4/2/89 4/4/89	C	6	Bligh Reef Lighter to Exxon Baytown
		7	All except 2P & 4P
		8	No <i>Sam R. Hull 4/6/89</i>
4/5/89	N	73	Approx 1030 — 1700 (Throughout Transit)
		74	Transit under Tow to Naked Island
		75	Light Sheen ANS Crude
		76	Appeared to be hull clingage due to Grounding of 3/24/89 <i>Sam R. Hull 4/6/89</i>
4/5/89			Vessel Anchored off Naked Island. Boomed and undergoing survey + Temp. Repairs. <i>Sam R. Hull 4/5/89</i>

Master's Signature \_\_\_\_\_

008458



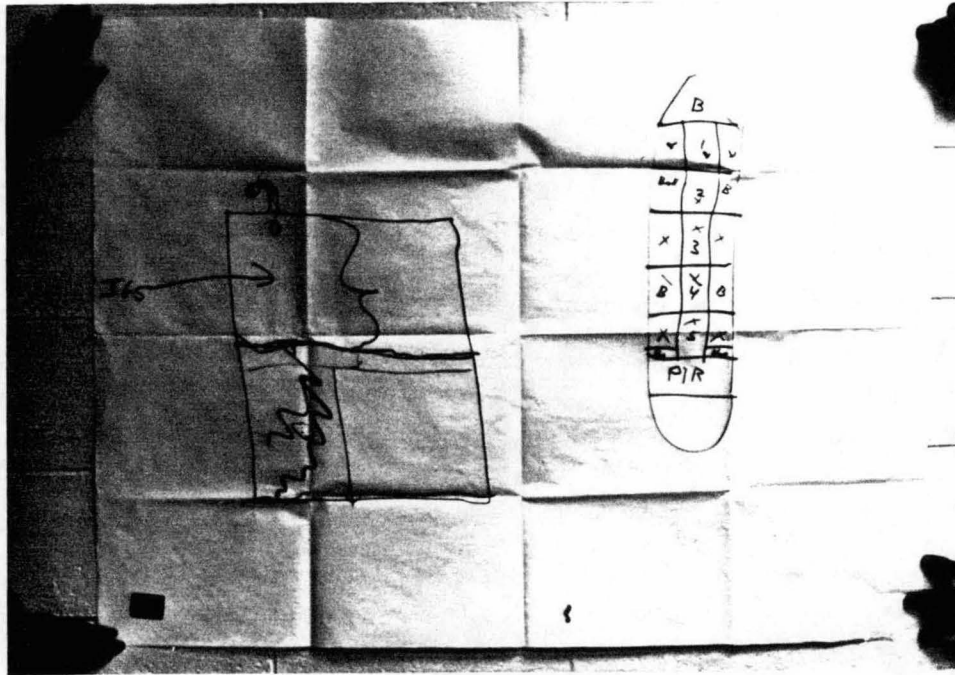


Exhibit #86



PLEASE COMPLETE ALL INFORMATION IN THE 5 BLOCKS OUTLINED IN ORANGE  
SEE BACK OF FORM SET FOR COMPLETE PREPARATION INSTRUCTIONS

AIRBILL NUMBER  
**439132293**



YOUR FEDERAL EXPRESS ACCOUNT NUMBER

DATE  
**27 MARCH 89**

FROM (Your Name)  
**Lt. Gary Stock**

TO (Recipient's Name)  
**Dr. Jill Henec**

U. Mail For Pick Up or Delivery  
Recipient's Phone Number

COMPANY DEPARTMENT/FLOOR NO.  
**U.S. Coast Guard - Mine Safety Office**

COMPANY DEPARTMENT/FLOOR NO.  
**CHEMWEST**

STREET ADDRESS  
**222 E 7th Rm. D-148**

STREET ADDRESS (P.O. BOX NUMBERS ARE NOT DELIVERABLE)  
**600 W. NORTH MARKET BLVD**

CITY STATE  
**ANCHORAGE ALASKA**

CITY STATE  
**SACRAMENTO CAL.**

AIRBILL NO. **439132293**

ZIP ACCOUNT NO OR ZIP CODE FOR CONTACT ADDRESS  
**915181314**

BY TENDERING THIS SHIPMENT SHIPPER AGREES THAT  
F.E.C. SHALL NOT BE LIABLE FOR SPECIAL INCIDENTS  
OR CONSEQUENTIAL DAMAGES ARISING FROM  
CARRIAGE HEREOF F.E.C. DIS  
CLAIMS ALL WARRANTIES EXPRESS OR IMPLIED WITH  
RESPECT TO THIS SHIPMENT. THIS IS A NON-NEGOTIABLE  
AIRBILL SUBJECT TO CONDITIONS OF CONTRACT SET FORTH  
IN REVERSE OF SHIPPER'S COPY UNLESS YOU DECLARE A  
HIGHER VALUE. THE LIABILITY OF FEDERAL EXPRESS COM-  
PENSATION IS LIMITED TO \$100.00. FEDERAL EXPRESS DOES  
NOT CARRY CARGO ABILITY INSURANCE.

ZIP ACCOUNT NO OR ZIP CODE FOR DELIVERY ADDRESS  
**915181314**

YOUR NOTES/REFERENCE NUMBERS (FIRST 12 CHARACTERS WILL ALSO APPEAR ON INVOICE)

PAYMENT  By Shipper  By Recipient's F.E.C. Acct.  By 3rd Party F.E.C. Acct.  By Credit Card  
 CASH IN ADVANCE Account Number/Credit Card Number

SERVICES CHECK ONLY ONE BOX  
PRIORITY 1 OVERNIGHT LETTER  
 PRIORITY 1 (NO DEL. MON-FRI)  
COURIER FAX   
 PRIORITY 2 (NO DEL. MON-FRI)  
 PRIORITY 3 (NO DEL. MON-FRI)  
 PRIORITY 4 (NO DEL. MON-FRI)  
STANDARD AIR  
 STANDARD AIR (NO DEL. MON-FRI)  
OVERNIGHT IS NEXT BUSINESS DAY (MONDAY THROUGH FRIDAY). TWO DAYS FROM ALASKA/HAWAII. SATURDAY DELIVERY AVAILABLE IN CONTINENTAL U.S. SEE SPECIAL HANDLING.

DELIVERY AND SPECIAL HANDLING CHECK SERVICES REQUIRED  
1  HOLD AT PICK UP AT ALL TIMES. FEDERAL EXPRESS LOCATION SHOWN IN SERVICE COPY. NO CARRIER'S PHONE NUMBER REQUIRED.  
2  DELIVER  
3  SATURDAY SERVICE REQUIRED (See Manual for other restrictions to delivery)  
4  RESTRICTED ARTICLES SERVICE (See Manual for Package and other restrictions)  
5  SAS (Signature Security Service) (See Manual for other restrictions)  
6  DAY CERTIFICATE (See Manual for other restrictions)  
7  OTHER SPECIAL SERVICE  
8   
9

PACKAGES	WEIGHT	DECLARED VALUE	OS
TOTAL	TOTAL	TOTAL	

RECEIVED AT  
SHIPPER'S DOOR  
 REGULAR STOP  
 ON CALL STOP  
 F.E.C. LOC  
Federal Express Corporation Employee No  
DATE/TIME For Federal Express Use

FEDERAL EXP  
FACILITY CHARGE  
DECLARED VAL  
AGT:PRO  
AGT:PRO  
G-HER  
TOTAL CHARG  
PART 2041  
FEC 5-0750  
REVISION C  
2 83 GBF  
PRINTED U

PLEASE PRINT OR TYPE

**PLAINTIFF**  
EXHIBIT NO. **87**  
ADMITTED *trial*  
**89-7217**  
**89-7218**  
(CASE NUMBER)

COPY

000293



COMPUCHEM  
LABORATORIES

March 29, 1989

REPORT # 1

Requesting Agency: U.S. Coast Guard  
222 E. 7th Street, Room D-148  
Anchorage, Alaska 99501  
Attn: Lt. Gary Stock

Reference Information: HAZELWOOD Joseph  
071-38-8376

Our Reference No: CW78-88

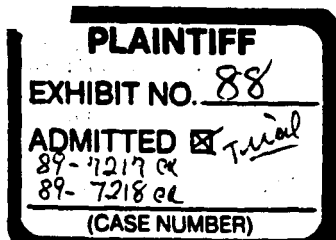
Sample: Blood and urine received on March 28, 1989.


Request: Ethanol by gas chromatography. Cocaine and its metabolites, cannabinoids, amphetamine, morphine and codeine, barbiturates, benzodiazepines, phencyclidine and methaqualone by radioimmunoassay.

Results:

<u>Drug</u>	<u>Blood</u>	<u>Urine</u>
Ethanol (w/v)	0.061%	0.094%
Cocaine & metabolites		None Detected
Methaqualone		None Detected
Amphetamine		None Detected
Phencyclidine		None Detected
Morphine & Codeine		None Detected
Barbiturates		None Detected
Benzodiazepines		None Detected
Cannabinoids		None Detected

Disposition: Further assays are being done.



  
Michael A. Peat, Ph.D.  
Director

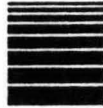
POST No.: 132 LOCATION: VALDEZ TERMINAL DATE: 3-23-89 PAGE: 9 OF: 12

BEGIN SHIFT:		END SHIFT:		GUARD'S NAME: (PRINT)			RECEIVED RADIO:	RECEIVED KEYS:	RECEIVED WEAPONS:
0001		2400		K. Christensen			<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
TIME IN	TIME OUT	TIME IN	TIME OUT	INDIVIDUAL'S NAME	COMPANY	ALYESKA BADGE No.	LICENSE No. VEHICLE No.	CODE	COMMENTS, REMARKS, EXPLANATIONS, ETC.
/	1059	2024			Exxon			/	
				Roberson, J.	Valdez	Sea	3487CH	S	
/	1059	2024			Exxon			/	
				Glowacki, J.	Valdez	Sea	3487CH	S	
/	1059	2024			Exxon	(Master)		/	
				Hazelwood, J.	Valdez	Sea	3487CH	S	
1102	1108	1327	1332		Yellow			/	B-1-1-3/5
1640	1659			Watkins, J.	Cab	VT0446	22F443	S	In-4-1-0 Out-2-0-5
1102	1128	1409	1523					/	
				Von Barger, L.	Aly		9129	S	
/	1108	1358			Arco			/	
				Hayden, J.	Juncou	Sea	22F443	S	
/	1108	1358			Arco			/	
				Christeson, B.	Juncou	Sea	22F443	S	
1125	1302	1610	1717					/	1125: B3-Aspen 1610: B4 ARCO INDEPENDENCE
				Santos, A.	Sohio	R119	BUF611	S	
/	1203	1353						/	
				FULLERTON, J.	HOUSTON	VCAS03	A310	S	
/	1259	1410						/	
				BURZINSKI, J.	EM	VC0437	9262	S	
1328	1458							/	1328 BIARCO JUNEAU MAEWE Super notified
				TOLL, D.	USCG	VG0026	16597	S	
1340	1402							/	
				FULLER, R.	APSC		9244	S	

CODE: W - WEAPONS, V - VISITORS, R - RADIO CHECK, P - PROPERTY IN/OUT, K - KEY, SR - SECURITY GUARD'S SIGNATURE: SUPERVISOR'S SIGNATURE:

*[Handwritten signatures]*





COMPUCHEM  
LABORATORIES

March 29, 1989

REPORT # 1

Requesting Agency: U.S. Coast Guard  
222 E. 7th Street, Room D-148  
Anchorage, Alaska 99501  
Attn: Lt. Gary Stock

Reference Information: KAGAN Robert  
438-64-5051

Our Reference No: CW79-88

Sample: Blood and urine received on March 28, 1989.

Request: Ethanol by gas chromatography. Cocaine and its metabolites, cannabinoids, amphetamine, morphine and codeine, barbiturates, benzodiazepines, phencyclidine and methaqualone by radioimmunoassay.

Results:

<u>Drug</u>	<u>Blood</u>	<u>Urine</u>
Ethanol	None Detected	None Detected
Cocaine & metabolites		None Detected
Methaqualone		None Detected
Amphetamine		None Detected
Phencyclidine		None Detected
Morphine & Codeine		None Detected
Barbiturates		None Detected
Benzodiazepines		None Detected
Cannabinoids		None Detected

Disposition: Further assays are being done.

**PLAINTIFF**  
 T NO. 89  
 ADMITTED  *Tuich*  
 89-7217 CK  
 89-7218 EK  
 (CASE NUMBER)

*Michael A. Peat*  
 Michael A. Peat, Ph.D.  
 Director



COMPUCHEM  
LABORATORIES

March 29, 1989

REPORT # 1

Requesting Agency: U.S. Coast Guard  
222 E. 7th Street, Room D-148  
Anchorage, Alaska 99501  
Attn: Lt. Gary Stock

Reference Information: COUSINS Gregory  
005-52-2008

Our Reference No: CW80-88

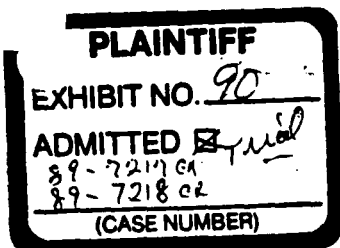
Sample: Blood and urine received on March 28, 1989.

Request: Ethanol by gas chromatography. Cocaine and its metabolites, cannabinoids, amphetamine, morphine and codeine, barbiturates, benzodiazepines, phencyclidine and methaqualone by radioimmunoassay.

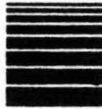
Results:

<u>Drug</u>	<u>Blood</u>	<u>Urine</u>
Ethanol	None Detected	None Detected
Cocaine & metabolites		None Detected
Methaqualone		None Detected
Amphetamine		None Detected
Phencyclidine		None Detected
Morphine & Codeine		None Detected
Barbiturates		None Detected
Benzodiazepines		None Detected
Cannabinoids		None Detected

Disposition: Further assays are being done.



*[Signature]*  
Michael A. Peat, Ph.D.  
Director



# COMPUCHEM LABORATORIES

March 29, 1989

REPORT # 1

Requesting Agency:

U.S. Coast Guard  
222 E. 7th Street, Room D-148  
Anchorage, Alaska 99501  
Attn: Lt. Gary Stock

Reference Information: JONES Maureen  
385-88-6116

Our Reference No: CW81-88

Sample: Blood and urine received on March 28, 1989.

Request: Ethanol by gas chromatography. Cocaine and its metabolites, cannabinoids, amphetamine, morphine and codeine, barbiturates, benzodiazepines, phencyclidine and methaqualone by radioimmunoassay.

Results:

<u>Drug</u>	<u>Blood</u>	<u>Urine</u>
Ethanol	None Detected	None Detected
Cocaine & metabolites		None Detected
Methaqualone		None Detected
Amphetamine		None Detected
Phencyclidine		None Detected
Morphine & Codeine		None Detected
Barbiturates		None Detected
Benzodiazepines		None Detected
Cannabinoids		None Detected

Disposition: Further assays are being done.

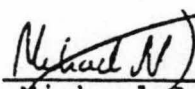
**PLAINTIFF**

SIT NO. 91

ADMITTED

89-7217A  
89-7218A

(CASE NUMBER)

  
Michael A. Peat, Ph.D.  
Director

STB STB A. 09.40:24  
BC SLOW AHD  
e +31RPM  
STB STB A. 09.40:13  
>BC SLOW AHD  
+25RPM  
STB STB A. 09.36:27  
BC D. SL AHD  
e +24RPM  
STB STB A. 09.36:18  
BC D. SL AHD  
e +32RPM  
STB STB A. 09.36:12  
BC D. SL AHD  
e +23RPM  
STB STB A. 09.35:57  
>BC D. SL AHD  
+0RPM

STATUS:

89 MAR 24 09.29:30  
STB STB A.  
BC STOP  
+0RPM

BC CONTRL LOCATION  
\*\*\*\*\*

STB STB A. 09.20:06  
BC STOP  
e -1RPM  
STB STB A. 09.20:00  
BC STOP  
e +7RPM  
STB STB A. 09.19:49  
>BC STOP  
+26RPM  
STB STB A. 09.19:48  
BC D. SL AHD  
e +23RPM  
STB STB A. 09.19:35  
>BC D. SL AHD  
+31RPM  
STB STB A. 09.19:30  
BC SLOW AHD  
e +33RPM  
STB STB A. 09.19:18  
>BC SLOW AHD  
+40RPM  
STB STB A. 09.19:15  
BC HALF AHD  
e +42RPM  
STB STB A. 09.19:06  
BC HALF AHD  
e +49RPM  
STB STB A. 09.18:54  
BC HALF AHD  
e +64RPM  
STB STB A. 09.05:00  
BC FULL AHD  
e +61RPM  
STB STB A. 09.24:24  
BC FULL AHD

EL FULL AHD +56RPM  
STB STB A. 08.24:09  
BC FULL AHD +51RPM  
STB STB A. 08.24:00  
>BC FULL AHD +31RPM  
STB STB A. 08.15:39  
BC SLOW AHD +31RPM  
STB STB A. 08.15:27  
BC SLOW AHD

001226

+31RPM  
STB STB A. 08.15:27  
BC SLOW AHD +36RPM  
STB STB A. 08.15:19  
>BC SLOW AHD +45RPM  
89 MAR 24 08.00:00  
STB STB A. 07.51:21  
BC FULL AHD +57RPM  
STB STB A. 07.47:12  
BC FULL AHD +52RPM  
STB STB A. 07.47:02  
>BC FULL AHD +41RPM  
STB STB A. 07.45:39  
BC HALF AHD +40RPM  
STB STB A. 07.45:28  
>BC HALF AHD +31RPM  
STB STB A. 07.44:33  
BC SLOW AHD +32RPM  
STB STB A. 07.44:22  
>BC SLOW AHD +24RPM  
STB STB A. 06.58:51  
BC D. SL AHD +24RPM  
STB STB A. 06.58:34  
>BC D. SL AHD +31RPM  
STB STB A. 06.56:15  
BC SLOW AHD +33RPM  
STB STB A. 06.56:04  
>BC SLOW AHD +41RPM  
STB STB A. 06.53:30  
BC HALF AHD +41RPM  
STB STB A. 06.53:15  
BC HALF AHD +47RPM

+37RPM  
 STB STB A. 06.27:27.  
 BC FULL AHD  
 @ +55RPM  
 STB STB A. 06.27:00  
 BC FULL AHD  
 @ +50RPM  
 STB STB A. 06.26:50  
 >BC FULL AHD  
 +41RPM  
 STB STB A. 06.25:57  
 BC HALF AHD  
 @ +40RPM  
 STB STB A. 06.25:40  
 >BC HALF AHD  
 +33RPM  
 STB STB A. 06.22:51  
 BC SLOW AHD  
 @ +31RPM  
 STB STB A. 06.22:37  
 >BC SLOW AHD  
 +25RPM  
 STB STB A. 06.21:33  
 BC D. SL AHD  
 @ +28RPM  
 STB STB A. 06.21:27  
 BC D. SL AHD  
 @ +22RPM  
 STB STB A. 06.21:13  
 >BC D. SL AHD  
 +0RPM

001227

+37RPM  
 STB STB A. 06.21:33  
 BC D. SL AHD  
 @ +28RPM  
 STB STB A. 06.21:27  
 BC D. SL AHD  
 @ +22RPM  
 STB STB A. 06.21:13  
 >BC D. SL AHD  
 +0RPM  
 >STB STB A. 05.53:54  
 BC STOP  
 +0RPM  
 >STB STB A. 05.53:52  
 BC STOP  
 +0RPM  
 >BC CONTROL LOCATION  
 05.52:32  
 05.51:12  
 CRC STOP  
 @ACK SLOW AST -1RPM  
 05.51:00  
 CRC STOP



STATS:  
 8 MAR 25 00:00  
 STB STB A.  
 BC STOP  
 +URPM

BC CONTRL LOCATION

\*\*\*\*\*

89 MAR 25 00.00:00

89 MAR 24 20.00:00

89 MAR 24 16.00:00

89 MAR 24 12.00:00

STB STB A. 10.41:09

BC STOP

@ -1RPM

STB STB A. 10.41:03

BC STOP

@ +7RPM

STB STB A. 10.40:53

>BC STOP

+23RPM

STB STB A. 10.40:43

>BC D. SL AHD

+34RPM

STB STB A. 10.40:39

BC SLOW AHD

@ +43RPM

STB STB A. 10.40:30

>BC SLOW AHD

+56RPM

STB STB A. 09.58:12

BC FULL AHD

@ +55RPM

STB STB A. 09.56:30

BC FULL AHD

@ +50RPM

STB STB A. 09.56:19

>BC FULL AHD

+42RPM

STB STB A. 09.48:48

BC HALF AHD

@ +41RPM

STB STB A. 09.48:35

>BC HALF AHD

**PLAINTIFF**  
 EXHIBIT NO. 92  
 ADMITTED  *89-72170 nial*  
*89-7218 CA*  
 (CASE NUMBER)

001225

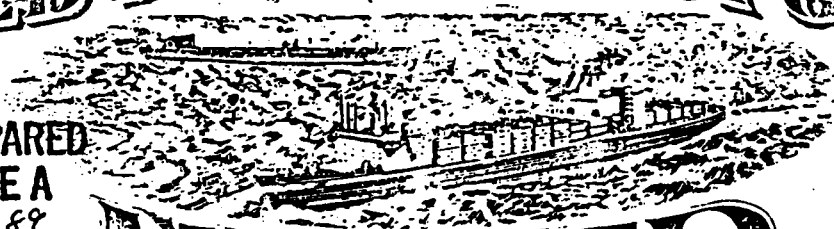
SERIAL NUMBER

010347

ISSUE NO

3-6

# UNLIMITED STATES COAST GUARD



# MASTER

I HAVE SEEN THE COPY WITH MY OWN EYES AND FOUND IT TO BE A TRUE COPY.

ORIGINAL AND COMPARED

AND FOUND IT TO BE A

*only Valdez 26 MAR 89*

J. DELOZIER, CW03, USCG

LINE INVESTIGATOR/INSPECTOR

MARINE SAFE

OFFICE, VALDEZ, AK. USCG

# COPY

*This is to certify that* \_\_\_\_\_ JOSEPH J. HAZELWOOD \_\_\_\_\_  
*having been duly examined and found competent by the undersigned, is licensed to serve as Master of United States Steam or Motor Vessels of any Gross Tons upon Oceans*

RADAR OBSERVER (UNLIMITED (Expires: November 1991)) \_\_\_\_\_  
FIRST CLASS PILOT OF STEAM OR MOTOR VESSELS OF ANY GROSS TONS, UPON: THE WATERS OF PRINCE WILLIAM SOUND FROM HINCHINBROOK ENTRANCE TO ROCKY POINT, ALASKA \_\_\_\_\_

*for the term of five years from this date.*

Given under my hand this \_\_\_\_\_ 13TH day of \_\_\_\_\_ DECEMBER \_\_\_\_\_, 19 86

NEW YORK, N. Y. \_\_\_\_\_  
*Post*

*Mark L. McEwen*  
MARK L. MCEWEN, LIEUTENANT, USCG  
*Officer in Charge of Marine Inspection*  
By direction

012090

PLAINTIFF

EXHIBIT NO. 93

ADMITTED  *trial*

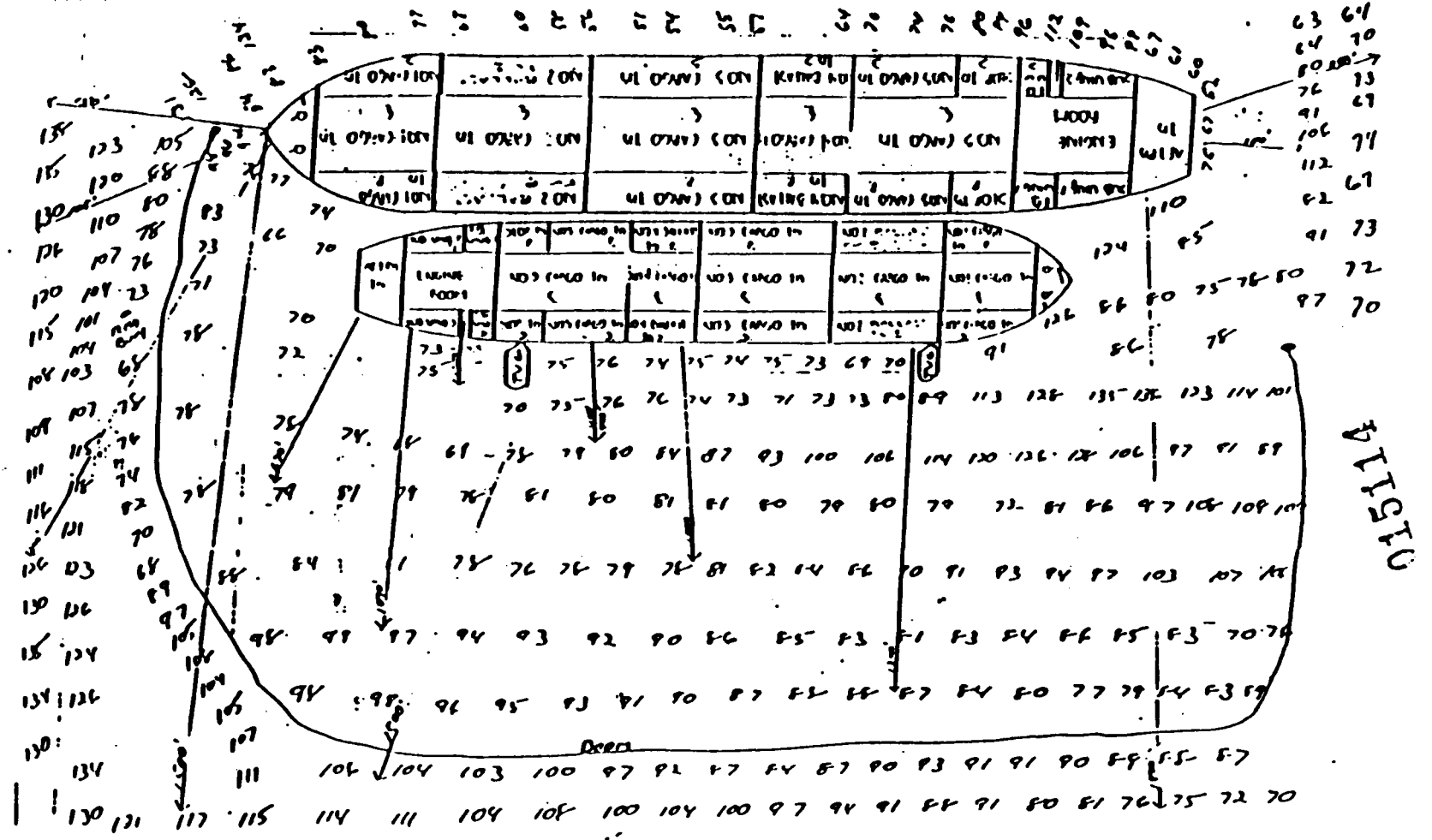
89-72170  
89-72180

(CASE NUMBER)



**EXHIBIT 94**

**IS A VIDEO TAPE**



**PLAINTIFF**  
**EXHIBIT NO. 95**  
**ADMITTED**   
 84-7217 C  
 89-7218 C  
 (CASE NUMBER)

**ARLIS**  
Alaska Resources  
**Library & Information Services**  
Anchorage Alaska