



DI

#815-06-01-A
ADDENDUM



Divisional Inquiry ADDENDUM to report of March 26, 2007

Incident

Queen of the North
Grounding and Sinking
March 22, 2006

Chair

Executive Vice President
New Vessel Construction & Industry Affairs

Date

October 2, 2007

DIVISIONAL INQUIRY ADDENDUM QUEEN OF THE NORTH

#815-06-01-A (ADDENDUM)

Date of Incident: March 22, 2006
Location of Incident: *Queen of the North* in Wright Sound
Type of Incident: Grounding and Sinking

DIVISIONAL INQUIRY ADDENDUM OUTLINE

PANEL MEMBERS	1
LIST OF INTERVIEWEES	2
GLOSSARY OF TERMS	3
ADDENDUM SYNOPSIS	4
DIVISIONAL INQUIRY FINDINGS	4
ELECTRONIC CHART SYSTEM (ECS) DATA REVIEW	5
TRANSIT AND GROUNDING	6
STATUTORY DECLARATIONS	6
BRIDGE CREW EXPERIENCE SYNOPSIS	7

PANEL MEMBERS

Executive Vice President, New Vessel Construction & Industry Affairs (Chair)

Vice President, Fleet Operations

Vice President, Engineering

Vice President, Employee Relations

Ships Officer's Component, BCFMWU

LIST OF INTERVIEWEES

Interviewees have been identified by job description or EDN (Emergency Duty Number) where appropriate.

3rd Officer – EDN #4

Deckhand – EDN #6

Declarant #1 - Statutory Declaration #1 and interview of July 16, 2007

Declarant #2 - Statutory Declaration #2 and interview of June 7, 2007

GLOSSARY OF TERMS

2/O	2 nd Officer
4/O	4 th Officer
COLREGS	Collision regulations are the regulations for the prevention of collision at sea also known as the rules of the road
ECS	The Electronic Chart System is a digital chart display system which is not International Maritime Organization (IMO) approved
EDN	Emergency duties number
Knots (kn)	Nautical measure of speed. One knot is equivalent to one nautical mile per hour
QM	Quartermaster

ADDENDUM SYNOPSIS

BC Ferries Divisional Inquiry #815-06-01 was reconvened as a result of new information becoming available to the company following publication of the original report on March 26, 2007.

Since releasing the Report, the Panel had the opportunity to obtain the Electronic Chart System (ECS) data and review it in more detail. The Canadian Transportation Accident Investigation and Safety Board (TSB), however, refused to consent to the Panel referring to the ECS data in any published report, despite the ECS and the data from it being the property of BC Ferries. BC Ferries then applied to court for an order that the Panel be permitted to include its analysis in the Addendum. Owing to the court's dismissal of this application (which decision is presently under appeal), the Panel is not able to publish its analysis of the ECS data at this time.

The Panel also reviewed precise position information pertaining to impact marks on the shoreline of Gil Island and the location of debris from the vessel following impact. The first physical impact evidence on the shoreline is consistent with a straight extension of a trackline through the last portion of Grenville Channel across Wright Sound directly to the impact marks.

Additionally, two BC Ferries employees provided sworn statutory declarations stating that shortly following the grounding they heard the on-watch Quartermaster (EDN #7) say, in the context of the sinking, that she was alone. The Divisional Inquiry Panel (with one dissent) finds these declarations to be credible. The QM (EDN #7) has denied that she was left alone on the bridge and the 4th Officer (EDN #5) has refused to provide evidence to the Divisional Inquiry regarding the period of approximately fourteen (14) minutes prior to the grounding. If the statements attributed to the Quartermaster are true, the absence from the bridge of the other members of the bridge watch would be a significant contributing factor in the failure to recognize the deviation from the intended route which led to the grounding.

The new information received does not change the original findings that the deck (navigational) watch failed to maintain a proper lookout by all available means and follow normal navigational procedures.

DIVISIONAL INQUIRY FINDINGS

On March 26, 2007, BC Ferries released the findings into the March 22, 2006 grounding and subsequent sinking of the *Queen of the North*, the relevant navigational conclusions of which are reprinted below.

Equipment

- *There were no propulsion, mechanical or control defects on the Queen of the North on the evening of March 21, 2006, up to the grounding.*
- *There is no evidence that the autopilot or steering system malfunctioned. While the after steering mode selector switch was renewed during the refit period, its operation*

was not a causative factor in the grounding. (Refer to Attachments 15 and 16 in the March 26, 2007 report)

- *All electrical navigational equipment in the wheelhouse was operating within normal limits. It was reported by some deck officers after the incident that the ECS could not be dimmed enough and that its brightness affected night vision. There were no written reports of any such issues with bridge navigational equipment submitted to the Master, the Chief Engineer, shore side management or the shore side maintenance team. There are no known problems with this equipment. The manufacturer of this equipment is a reputable worldwide supplier of electronic chart systems for marine applications.*

Bridge Team

- *Bridge team personnel assigned to the Queen of the North were certified by Transport Canada and the deck (navigational) watch at the time of the incident met the requirements of the Crewing Regulations.*
- *Based on the ECS data the 4/O (EDN #5) failed to make a necessary course alteration or verify such alteration was made in accordance with pre-established Fleet Routing Directives and good seamanship.*
- *The 4/O (EDN #5) and QM (EDN #7) lost situational awareness sometime after Sainty Point and failed to appreciate the vessel's impending peril prior to the grounding on Gil Island.*
- *Navigational aids and resources were available to the deck (navigational) watch to enable them to recognize the lack of a course change and to act in a manner to permit safe navigation and prevent the grounding.*
- *The deck (navigational) watch failed to maintain a "proper lookout" by "all available means" as required by Rule 5 of the International Regulations for the Prevention of Collisions at Sea (COLREGS) which states "Every vessel 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."*
- *A casual watchstanding behaviour was practiced at times when operating the Queen of the North, based on evidence given by the Senior Master and further demonstrated by music playing on the bridge as overheard on radio calls. (Refer to Attachment 19 – MCTS Radio Recording Transcription 21/22 March 2006 in the March 26, 2007 report)*

ELECTRONIC CHART SYSTEM (ECS) DATA REVIEW

Since releasing the Report, the Panel had the opportunity to obtain the ECS data and review it in more detail, however, because of the TSB's opposition to its release and the present Court ruling, the Panel is not able to publish its analysis of the ECS data at this time.

TRANSIT AND GROUNDING

A passenger aboard the *Queen of the North* that evening, out on the starboard weather deck, reported seeing the trees and rocky shore of Gil Island prior to the impact. He related he watched the shoreline go by and recognized the ship was getting closer to the shore. Upon impact he was knocked to his knees by the force of the grounding.

The Panel reviewed precise GPS position information pertaining to impact marks found on the shoreline and pertaining to the location of parts of the vessel found on the sea bed that had been dislocated by impact. The first physical evidence of impact on the shoreline is consistent with a straight extension of a trackline through the last portion of Grenville Channel across Wright Sound directly to the impact marks. Rather than altering course at Sainty Point as would be standard routine, the *Queen of the North* did not deviate from a course the vessel had made good through the last portion of Grenville Channel.

STATUTORY DECLARATIONS

Shortly after the publication of the Divisional Inquiry Report on March 26, 2007, two employees of BC Ferries, one of whom was working during the voyage and the other of whom was travelling as a passenger, came forward with information that they believed was material to the incident and that was absent from the initial report.

In statutory declarations¹ and in interviews conducted by the Divisional Inquiry Panel, both employees stated that shortly following the grounding they heard the QM (EDN#7) say, in the context of the sinking, that the QM (EDN #7) had been alone.

The following is an excerpt from Declarant #1's statutory declaration:

"I saw [the Quartermaster] on the deck near the lifeboats where we were both assisting. Just prior to us both getting into one of the rafts [the Quartermaster] said: 'It is not my fault, it was not my fault, I was left alone.'"

And, while in the life raft with the Quartermaster:

"I was sitting not far from [the Quartermaster]. I recall [the Quartermaster] again saying: 'It was not my fault, I was alone.'"

"When we watched the Queen of the North disappear under the water I heard [the Quartermaster] say again: 'It was not my fault' and repeat it."

The following are excerpts from Declarant #2's statutory declaration:

¹ A Statutory Declaration is a document containing statements that are verified by the solemn declaration of the person making those statements. A person making a false declaration is subject to criminal sanction.

“Once our raft was away, it started to drift towards the stern of the vessel and at that point I could hear [the Quartermaster] talking to herself saying, ‘It’s not my fault, it’s not my fault, oh my God.’ I could see that [the Quartermaster] was becoming a bit distressed.”

“I proceeded to get [the Quartermaster] outside of the raft to act as a lookout to distance [the Quartermaster] from the passengers. At that time, I heard [the Quartermaster] say, ‘It’s not my fault, I was alone, I was alone.’ When [the Quartermaster] made that statement, because I was not then aware that [the Quartermaster] had been part of the bridge crew, I did not put it into context.”

While the Divisional Inquiry Panel (with one dissent) finds these declarations to be credible, it was the testimony of the QM (EDN #7) that the QM (EDN#7) was never alone on the bridge. The Divisional Inquiry Panel does not offer an opinion on the veracity of this testimony from the QM (EDN #7) but notes that it is inconsistent with the statements attributed to the Quartermaster in the statutory declarations.

BRIDGE CREW EXPERIENCE SYNOPSIS

The 4th Officer (EDN #5) was considered knowledgeable and competent by co-workers and senior bridge officers. He had over 6,800 hours of deckhand experience and over 6,300 hours of bridge officer experience since 1998 when ECS was installed on the Northern route vessels and had routinely transited the Grenville Channel/Wright Sound passage.

The 2nd Officer (EDN#3) was considered knowledgeable and competent by co-workers and senior bridge officers. He had over 2,800 hours of deckhand experience and over 10,000 hours of bridge experience since 1998 when ECS was installed on the Northern route vessels and had routinely transited the Grenville Channel/Wright Sound passage.

The Deckhand/Quartermaster (EDN #7) had worked as a deckhand on the *Queen of the North* and the *Queen of Prince Rupert* for over 1,600 hours since 2005. While considered a “person under training” for the bridgewatch certificate, she had the required seetime to apply for the certificate and was, prior to the grounding, considered by supervising bridge officers to be a competent member of the bridge team.

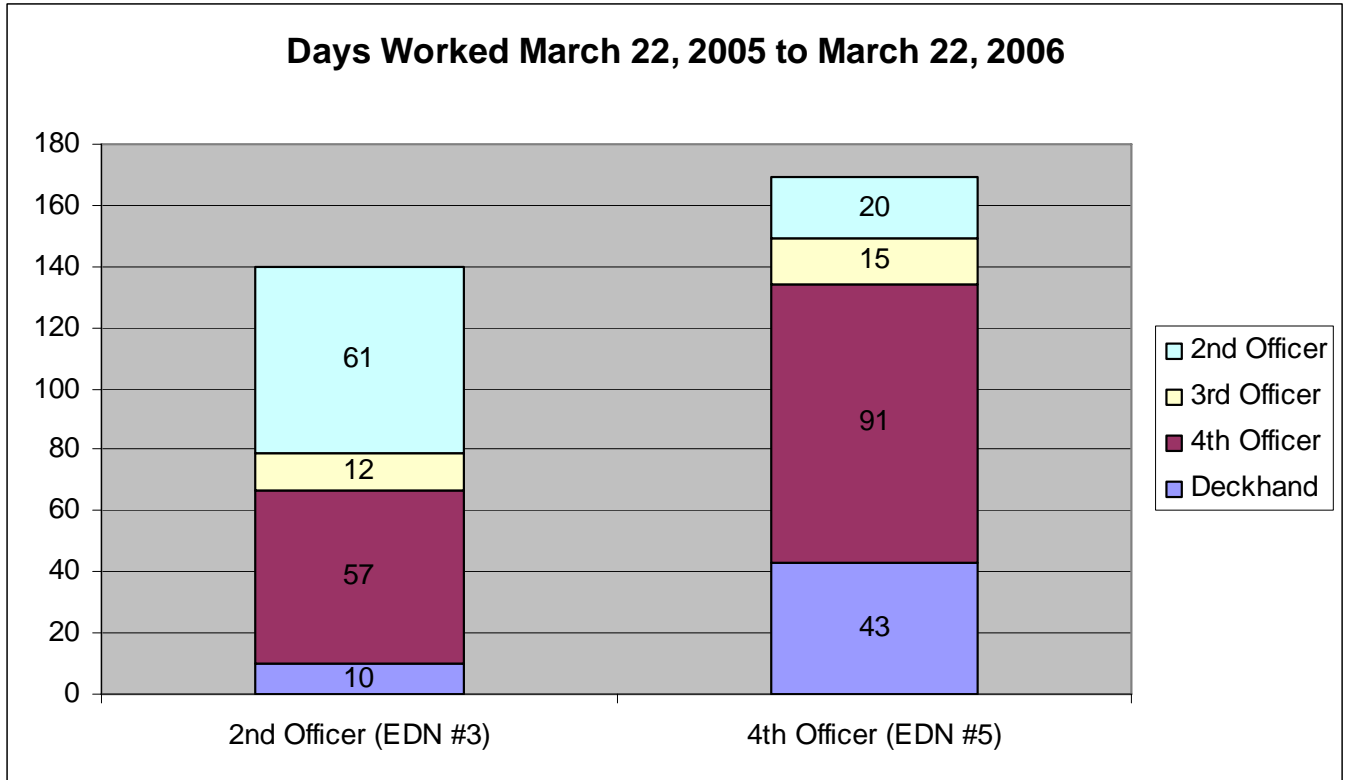
See Attachments 1-6 for additional information regarding the qualifications of the 4th Officer, 2nd Officer, and Quartermaster.

Report Signed By: Executive Vice President
New Vessel Construction & Industry Affairs

Date: October 2, 2007

ATTACHMENT 1

DAYS WORKED MARCH 22, 2005 TO MARCH 22, 2006



	Deckhand	4th Officer	3rd Officer	2nd Officer	Total
2nd Officer (EDN #3)	10	57	12	61	140
4th Officer (EDN #5)	43	91	15	20	169

ATTACHMENT 2

2nd OFFICER EDN #3

Hired as a Group 3 casual in 1980 and appointed as Regular Seaman, *Queen of the North* January 21, 1982. He had approximately 23 years relevant experience.

- Group 3 casual seaman status from May 1980 (as per 1981 job application)
- Reassigned from group 3 casual to group 2 casual status on June 1, 1981
- Appointed to group 1 supplementary manning pool status on October 1, 1981
- Appointed Regular Seaman, *Queen of the North*, January 21, 1982
- Second Mate Home-Trade Steamship/Watchkeeping Mate (WKM) certificate issued May 21, 1997
- Appointed 4th Officer, Term Certain, Prince Rupert effective June 14, 2000
- Appointed 3rd Officer, Sea Time Accrual, Term Certain, Prince Rupert, effective May 16, 2001
- First Mate Intermediate Voyage certificate of competency November 22, 2001
- Cleared as 2nd Officer, *Queen of the North*, Route 10/11 effective April 22, 2002
- Appointed 3rd Officer, Term Certain, Prince Rupert (QPR) effective July 23, 2002
- Passed Mate-Minor/Intermediate Assessment November 15, 2002
- Cleared as 3rd Officer, *Queen of Chilliwack*, Route 40 effective June 18, 2004
- Cleared as 2nd Officer, *Queen of Prince Rupert*, Route 10/11 effective February 15, 2005
- Cleared as 2nd Officer, *Queen of Chilliwack*, Route 40 effective September 5, 2005
- Cleared as Chief Officer, *Queen of Prince Rupert*, Route 10/11 effective October 30, 2005

Total hours worked 1998 to 2006:	12,818
Deck hours worked 1998 to 2006:	12,818
<i>Deckhand</i>	2,812
<i>Deck Officer</i>	10,006
Average Deck hours per year:	1,569

ATTACHMENT 3

4th OFFICER EDN #5

EDN #5 was hired as a Probationary Seaman on May 8, 1990 and had approximately 15 years relevant experience at BC Ferries. The 15 years employment included deck and terminal work. Since 1999, EDN #5 worked in deck positions except for the period of February to April 2004 when he worked as a Terminal Attendant.

Prior to his employment at BC Ferries, his employment application indicates his experience included approximately four years working on fishing vessels and a term as an Assistant Instructor in the Marine Department at Northwest Community College teaching Marine Emergency Duties (MED I), Safety Oriented First Aid (SOFA) and Basic Navigation and Safety.

- Cleared to work as a Deckhand on the *Queen of the North* and *Queen of Prince Rupert* at the time of hire (1990)
- Became group 2 casual on May 1, 1993
- Applied for leave of absence October 11, 1994 to March 31, 1995 to attend Watchkeeping Mate (WKM) course at Northwest Community College
- WKM certificate and endorsement issued May 8, 1995
- Received clearance to work as a relief 4th Officer on October 4, 1995
- Passed 3rd/4th Officer assessments on July 8, 1998 and was cleared to work as a 3rd/4th Officer on the *Queen of the North* on August 1, 1998
- Continued Proficiency Certificate issued June 12, 2000 and endorsement January 23, 2002
- In 2002 was cleared to work as Deckhand on the *Bowen Queen*, *Mayne Queen*, *Queen of Esquimalt*, *Queen of New Westminster*, *Queen of Vancouver*, and *Queen of Saanich*.
- November 1, 2002 status change from casual to regular employee and assigned Group C seniority
- Term Certain Terminal Attendant from February 2004 to April 2004
- Returned to deck duties in April 2004 on Route 10/11

Total hours worked 1998 to 2006:	13,833
Deck hours worked 1998 to 2006:	13,147
<i>Deckhand</i>	6,836
<i>Deck Officer</i>	6,311
Average Deck hours per year:	1,587

ATTACHMENT 4

DECKHAND (QUARTERMASTER) EDN #7

One year of relevant shipboard experience and approximately 5 years related marine experience.

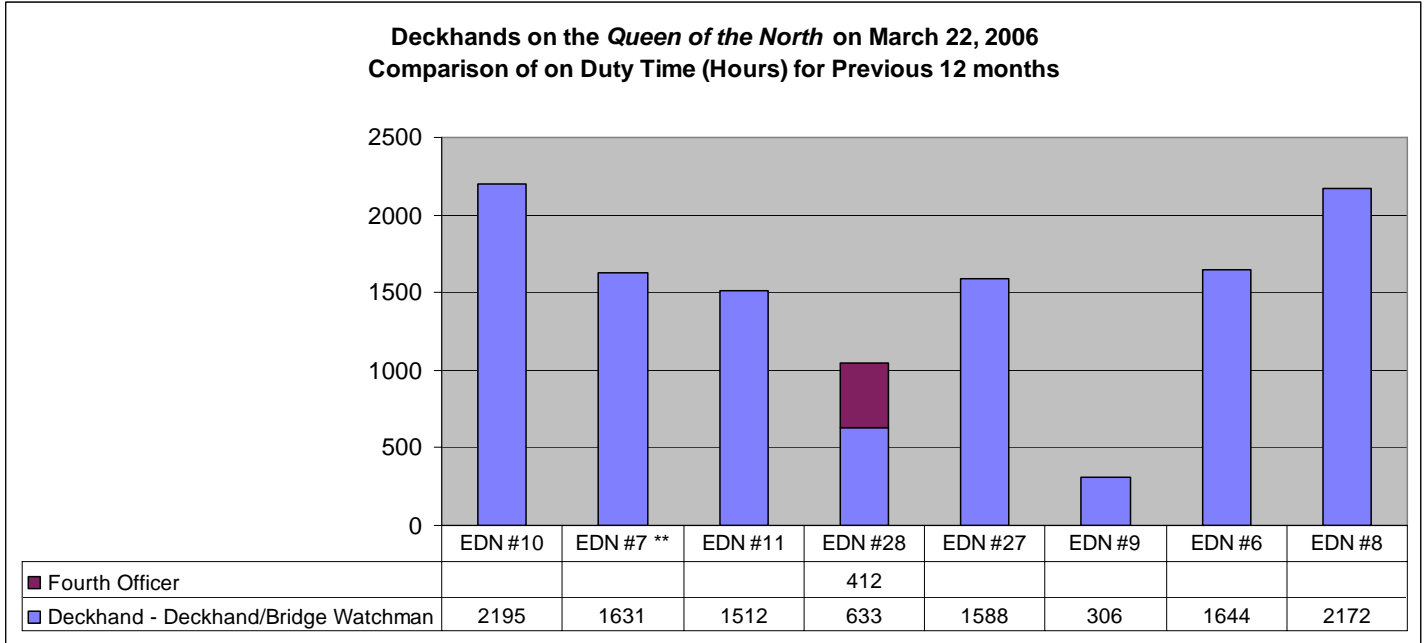
- Hired May 11, 1999
- Worked as a casual terminal attendant and cleaner from May 1999 to May 2000 and April 2001 to February 2005
- Cleared as Deckhand on the *Queen of the North* and *Queen of Prince Rupert* effective April 10, 2005
- Quartermaster duty 114 days out of 143 days worked from March 2005 to March 2006

Total hours worked 1999 to 2006:	4,223
Deck hours worked 2005 to 2006:	1,631

ATTACHMENT 5

DECKHAND EXPERIENCE

Comparison of On Duty Time (Hours) for Previous 12 Months as at March 22, 2006



** EDN #7 was working as Quartermaster at the time of the incident.

ATTACHMENT 6

4th OFFICER / 2nd OFFICER / QUARTERMASTER

Number of days worked together
March 22, 2005 to March 22, 2006

