

OFFSHORE HELICOPTER SAFETY INQUIRY

January 28, 2010

Tara Place, Suite 213, 31 Peet Street

St. John's, NL

January 28, 2010

PRESENT:

John F. Roil, Q.C./

Anne Fagan.....Inquiry Counsel

**Amy Crosbie. Canada-Newfoundland and Labrador Offshore
..... Petroleum Board (C-NLOPB)**

**Cecily Strickland/Ian Wallace..... Hibernia Management and
..... Development Company (HMDC)**

D. Blair PritchettSuncor (Petro-Canada)

Stephanie Hickman.. Husky Oil Operations Ltd.

Laura Brown LaengleGovernment of Newfoundland and Labrador

Norman J. Whalen, Q.C.....Cougar Helicopters Inc.

Jack Harris, Q.C.Member of Parliament

Allison BattcockFamilies of Deceased Passengers

**Kate O'Brien.....Davis Estate (Pilot) and
..... agent on behalf of Douglas A. Latta for Lanouette Estate (Co-pilot)**

**V. Randell J. Earle, Q.C.Communications, Energy and Paperworkers Union
..... Local 2121**

**Jonathan TarltonDepartment of Justice Canada on behalf of
.....Department of National Defence**

**Major Robert Stoney Office of the Judge Advocate General for the Canadian
..... Forces**

TABLE OF CONTENTS
January 28, 2010

Discussion	Pgs. 1 - 2
COLONEL PAUL DROVER (PREVIOUSLY SWORN)	
Colonel Paul Drover is heard re: clarification on yesterday's evidence.....	Pgs. 2 – 6
Examination by Cecily Strickland	Pgs. 7 – 30
Examination by Jack Harris, Q.C.....	Pgs. 30 – 76
Examination by V. Randell J. Earle, Q.C.....	Pgs. 76 – 95
Examination by Kate O'Brien.....	Pgs. 95 – 104
Discussion	Pgs. 104 – 107
Certificate	Pg. 108

Page 1	Page 3
1 January 28, 2010 2 COMMISSIONER: 3 Q. Good morning, ladies and gentlemen. Before we 4 start the questioning, I think I owe it to 5 counsel to remind them of the specific mandate 6 and the limitation on the Inquiry in respect 7 of matters involving the Department of 8 National Defence, and I'll just read you this 9 and leave it at that. Part of the specific 10 mandate in B is "search and rescue obligations 11 of helicopter operators, by way of contractual 12 undertakings or legislative or regulatory 13 requirements" and that, of course, involves 14 the provision by the oil operators through 15 Cougar and, of course, under the regulation of 16 C-NLOPB which set up this Inquiry. So that is 17 clearly within my terms of reference. 18 But I will read you the limitation as 19 well. "The Commissioner's mandate does not 20 include an examination of the provision by the 21 Government of Canada, Department of National 22 Defence, of search and rescue facilities for 23 all marine incidents and the location of such 24 facilities within the Province of Newfoundland 25 and Labrador" and of course, I will follow	1 A. Good morning, Mr. Commissioner. Thank you 2 very much for the opportunity to clarify a few 3 points that arose after our testimony of 4 yesterday. The first one, it was largely or 5 widely reported in the media that I was head 6 of SAR policy for the CF and Defence. That's 7 not exactly what I meant to imply. I 8 certainly work in policy within our 9 headquarters, and in actual fact, as I 10 explained yesterday, the chief of the air 11 staff has been given the responsibility for 12 SAR policy for Department of National Defence. 13 So I'm on his staff, but I'm certainly not 14 head of policy. So if I could enter that in 15 as a clarification. 16 The second point I would like to raise is 17 yesterday, I gave an overview of the SAR 18 response actions which took place on the 12th 19 of March. I did not state in my testimony 20 that SAR forces, both Hercules and Cormorant, 21 that were tasked to respond to this incident 22 were actually positioned at the time in 23 Sydney, Nova Scotia. The aircraft in question 24 were indeed in Sydney, Nova Scotia on that 25 particular day and they were part of a major
Page 2	Page 4
1 that strictly. 2 Now, I think, Mr. Tarlton, you wanted to 3 raise a matter. 4 COLONEL PAUL DROVER, EXAMINATION BY MR. JONATHAN TARLTON 5 MR. TARLTON: 6 Q. Yes. Good morning, Commissioner. 7 COMMISSIONER: 8 Q. Maybe you should go up there, Mr. Tarlton. 9 MR. TARLTON: 10 Q. Good morning, Mr. Commissioner. My name is 11 Jonathan Tarlton representing the Department 12 of Justice Canada on behalf of the Department 13 of National Defence this morning. Mr. 14 Commissioner, I understand in speaking to 15 Colonel Drover that he wishes to clarify his 16 testimony from yesterday, in light of some 17 comments that have appeared in the media last 18 night and this morning, and I was wondering if 19 I could have an opportunity to ask him to 20 address those matters, those clarifications 21 now? 22 COMMISSIONER: 23 Q. All right then, if you wish to do that, 24 Colonel Drover. 25 COLONEL DROVER:	1 search and rescue exercise. These aircraft 2 were assembled in Nova Scotia to participate 3 with a number of other agencies, Coast Guard, 4 Coast Guard Auxiliary, the Air Force sponsored 5 CASARA organization, ground search, RCMP, for 6 a major event which brings together all the 7 forces, all the available forces within a 8 region to practice the skills required when 9 you may encounter a major undertaking, a major 10 SAR. So it is an essential piece of training. 11 It is developed -- it's worked up. There's a 12 lot of planning that goes into it. It's been 13 approved by all the headquarters that are 14 involved. So it's an approved activity. 15 During this procedure, during this 16 exercise, the integrity of our standby posture 17 is maintained. So all while the exercise was 18 ongoing in Sydney, Nova Scotia, we had a 19 standby capability for the Halifax search and 20 rescue region. In actual fact, the Hercules, 21 by virtue of the fact it was flying during the 22 exercise, arrived on scene about 30 minutes 23 faster than it would have had it been on an 24 half an hour posture in Greenwood, Nova Scotia 25 that particular day.

Page 5	Page 7
1 So I'd just like to -- and it was 2 reported that for some reason we were trying 3 to downplay that activity. In actual fact, 4 that is part of our sort of training program, 5 if you will. As I mentioned yesterday, it's 6 extremely important that we highly train our 7 individual crews to be able to participate in 8 search operations, SAR response, as much and 9 as often as required. Without the training, 10 this would be very, very difficult to do. 11 Therefore, as a part of policy and 12 because of the limitations and the available 13 aircraft and available crews with our standby 14 posture needing to be maintained, we do not 15 have a policy of maintaining the standby 16 aircraft at its home base. Gander aircraft 17 can be used in any part of the Halifax search 18 and rescue region. So two days ago, for 19 instance, the standby helicopter was here in 20 St. John's working the St. John's harbour 21 doing SAR search and rescue training. It was 22 not in Gander at home base. This is part of 23 policy and it allows us to maximize the 24 opportunity to use the aircraft to do 25 training, which is essential for our	1 COMMISSIONER: 2 Q. Now vis-a-vis questioning, Mr. Tarlton, as is 3 usual, you, as counsel for the party giving 4 evidence are entitled to go last, if you wish. 5 Counsel for C-NLOPB? 6 MS. CROSBIE: 7 Q. Thank you, Mr. Commissioner. We have no 8 questions. 9 COMMISSIONER: 10 Q. Okay, thank you. Are counsel for Transport 11 Canada present? No. All right. Counsel or 12 Mr. Brown for CAPP, not present. All right 13 then, counsel for the oil operators beginning 14 with HMDC, Ms. Strickland. 15 COLONEL PAUL DROVER, EXAMINATION BY MS. CECILY STRICKLAND 16 MS. STRICKLAND: 17 Q. Good morning, Mr. Commissioner. Good morning, 18 Colonel Drover. 19 COLONEL DROVER: 20 A. Good morning. 21 MS. STRICKLAND: 22 Q. Colonel Drover, my name is Cecily Strickland 23 and I'm counsel for Hibernia Management and 24 Development Company or HMDC as we often refer 25 to it here. HMDC, Suncor and Husky are the
Page 6	Page 8
1 operations. 2 The third point I would like to raise is 3 during my presentation, I briefed on the 4 requirement for ops reports. It has been 5 reported in the media that I stated that for 6 the Cougar crash no ops report was produced 7 because there was no lessons to be learned. 8 What should have been reported is that for the 9 SAR response to this incident, there was no 10 anomalies and therefore no requirement to 11 produce a report. The SAR response for that 12 incident worked as it was supposed to. I did 13 not infer that there was no lessons to be 14 learned from the accident, but it was not in 15 the domain of our SAR ops report. So if I 16 could include that as clarifications of those 17 points, thank you. 18 COMMISSIONER: 19 Q. Okay, thank you. 20 MR. TARLTON: 21 Q. Thank you, Mr. Commissioner. 22 COMMISSIONER: 23 Q. Anything else, Mr. Tarlton? 24 MR. TARLTON: 25 Q. Nothing further to add, thank you.	1 three Newfoundland offshore oil operators who 2 have projects offshore and who have been 3 participating in this Inquiry and who have 4 been listening with great care to your 5 presentation. 6 On behalf of all three of the operators, 7 I'd like to ask you a few very brief questions 8 and the purpose of the questions is simply to 9 gather a little further information or perhaps 10 obtain a little better understanding of DND 11 SAR role in these offshore activities. 12 I guess, as an aside, my background is 13 marine. I worked with Coast Guard before 14 changing careers and becoming a lawyer, or as 15 my naval architecture and engineering friends 16 would say, before I went to the dark side, and 17 as counsel for shipowners, I've had, over the 18 last 20 years, involvement with a number of 19 DND SAR responses. These have ranged from the 20 fairly common, but I suspect never routine, 21 medevacs of injured seafarers to large scale 22 SAR responses where vessels were in distress 23 and very difficult circumstances and where the 24 lives of the crew members were dependent upon 25 the SAR response. As a result, I have a great

Page 9	Page 11
1 deal of respect and admiration for SAR work 2 undertaken by DND and I know that each of 3 HMDC, Suncor and Husky hold a similar view. 4 The questions that I have are fairly 5 brief. One of them is whether DND has a 6 standard or perhaps a specification that it 7 requires for helicopters that DND uses for SAR 8 operations? 9 COLONEL DROVER: 10 A. First of all, thank you very much for the 11 acknowledgement of the SAR forces and the work 12 they do. Would you rephrase the question? 13 I'm not entirely sure that I understand. 14 MS. STRICKLAND: 15 Q. I was wondering if, for example, there's a 16 standard or a specification that when you 17 acquire a helicopter to use for SAR resources 18 that it has to meet a particular set of 19 specifications? 20 COLONEL DROVER: 21 A. Right, okay. I think I understand what you're 22 looking for. Yesterday, you may recall when I 23 had the helicopter slide, the diagram, the 24 graphic of the aircraft on display, and I had 25 one chart before that that referred to what we	1 for use on civilian aircrafts, although we 2 hope that will change in the very near future. 3 Are there any other SAR related pieces of 4 equipment available to DND that are not 5 currently available to civilians? 6 COLONEL DROVER: 7 A. I really can't answer that question because 8 I'm not quite sure what we don't have that is 9 available, for instance, to the industry at 10 large, and I don't -- I can't speak to what's 11 available that we don't have either. So I can 12 assure you that we have equipped our aircraft 13 with the things, if you will, that we require 14 to undertake our mission, including things 15 like directing finding or homing devices and 16 things like that, which you wouldn't normally 17 find as part of a normal commercial aircraft. 18 MS. STRICKLAND: 19 Q. Can you tell us a little more about the 20 support system that DND needs in order to be 21 able to provide an air response out of Gander 22 on a 24-hour-a-day 7-day-a-week 365-day-a-year 23 basis? I guess what I'm getting at, is it 24 sufficient to have one airframe on the ground? 25 Do you need more than one? Do you need one
Page 10	Page 12
1 elected in our procurement of that aircraft to 2 include. So we certainly had certain 3 modifications, if you will, done to the 4 aircraft to meet those requirements. There's 5 no stated standard for any aircraft that we 6 operate. We start a process where we do 7 mission analysis. So we determine what a 8 particular aircraft would be required to do. 9 So that drives specification. So we determine 10 how much range we're looking for and that 11 would determine what types of aircraft would 12 qualify to do that. So we go down a lot of -- 13 a list of a lot of things that would be 14 appropriate to have on a search and rescue 15 aircraft and in so doing, we basically define 16 that requirement, if you will, for that 17 helicopter. So it's not a -- it's a process 18 that we start with the mission itself and then 19 we determine what things that that aircraft 20 would have, and that's the sort of process 21 that we went through when we acquired the 22 Cormorant. 23 MS. STRICKLAND: 24 Q. Okay. For example, you spoke yesterday of 25 auto hover, which is currently not certified	1 back-to-back set of crew members or do you 2 need more than that? 3 COLONEL DROVER: 4 A. It's a very robust organization that supports 5 a standby aircraft. A standby aircraft 6 implies that it's on the ramp available at all 7 times. Of course, with any organization 8 that's dealing with equipment, especially 9 aircraft, you're not going to be able to keep 10 an aircraft available on a 24-hour basis. It 11 requires periodic servicing and there's 12 requirements to do maintenance, routine 13 maintenance and the like. So our statistics 14 indicate that to provide a serviceable 15 aircraft 100 percent of the time requires at 16 least three aircraft in the fleet, if you 17 will. So you've got -- and at times, you may 18 have all three aircraft available. At other 19 times, you'd have fewer than three available, 20 but the objective, of course, is to -- as near 21 as 100 percent as possible is to have one 22 aircraft available. There are times when that 23 aircraft may go unserviceable, on start, for 24 instance, and every effort is taken to replace 25 it with another aircraft, if there's another

Page 13	Page 15
1 one serviceable and readily available. There 2 is no loss of capability, if you will, and 3 that is sort of the objective. 4 In terms of, obviously I think that 5 speaks to the requirement for a fairly capable 6 maintenance team on the ground that would sort 7 of be available to rectify any mechanical 8 difficulties these aircraft have. And one 9 final point is that at certain phases of 10 flying, which I'm sure you're familiar with, 11 the aircraft actually has to be taken off line 12 to get more substantial maintenance activity 13 take place. So again, we manage those 14 activities on a fleet basis, as opposed to a 15 unit basis. So there may be a requirement to 16 augment, move an aircraft, not often, but we 17 have that flexibility to be able to do that, 18 but the objective, at the end of the day, is 19 to have at least one dedicated serviceable 20 aircraft available. 21 From the crew aspect, I think it's 22 important to note that the requirement to hold 23 a 24-hour standby does drive the need to have 24 multiple crews. We operate, on average, five 25 complete crews to be available and that may	1 Greenwood as well. There are level of 2 service. There's no requirement once an 3 aircraft, standby aircraft is tasked for an 4 actual mission, there is no requirement to 5 bring up another SAR standby aircraft to hold 6 standby while the initial one is prosecuting a 7 case. 8 Having said that, we, at the squadron 9 level, will look at the availability of crews 10 and the availability of aircraft and we would 11 be able, in some circumstances, I can't say 12 how many, be able to respond to an additional 13 SAR tasking under certain circumstances, if 14 the crew -- there would be, for instance, a 15 crew coming on duty anyway because of the 16 rotation -- how quickly you could scramble 17 that crew and stand up that backup. However, 18 as a level of service, it's not a requirement 19 to do so. 20 MS. STRICKLAND: 21 Q. Can you tell us why it's not required? 22 COLONEL DROVER: 23 A. It's a function, back to the model I 24 described, of maintaining the posture of one 25 aircraft on alert all the time, and you look
Page 14	Page 16
1 seem a lot, but actually, when you start 2 working out the requirements to have one crew 3 on duty, one crew coming on duty, one crew 4 going off duty, and then you add in reasonable 5 sort of days off and it becomes a minimum 6 number to do that 24-and-7 operation. 7 MS. STRICKLAND: 8 Q. Okay, thank you. I think you spoke -- you've 9 sort of spoken to this, but perhaps you can 10 elaborate a little on what is the protocol 11 when one Cormorant at Gander has been tasked 12 but then another might be needed? So if you 13 had two call outs simultaneously? 14 COLONEL DROVER: 15 A. Actually, Halifax, as a region, is serviced by 16 two helicopter bases. So if, for instance, 17 the helicopter in Greenwood were tasked to go 18 on a mission and another mission arose that 19 that aircraft couldn't respond to because it's 20 already working a case, certainly most likely 21 Gander would be called into service. Gander 22 and Greenwood both work in the same region, 23 and there's no sort of subregion barriers. 24 Gander aircraft actually can be employed 25 within the region, the whole region, as	1 at the statistics we talked about, the number 2 of incidents that we had in the region in any 3 given year and all of a sudden, you would need 4 a way larger posture or force to be able to 5 guarantee two aircraft, because that's 6 essentially what you'd be saying, every time 7 we launched an aircraft. For instance, last 8 night, we did a medevac offshore. It wasn't 9 related to the industry, but it was a merchant 10 marine, and to suggest that we would have to 11 have a backup standby airplane would mean that 12 while that aircraft was flying down over the 13 ocean to do this medevac, I would have to 14 stand up another helicopter on standby, and 15 for resources, that becomes problematic. 16 MS. STRICKLAND: 17 Q. Does DND have any international obligations, 18 in terms of how it trains its SAR techs? I'm 19 wondering if there's a set international 20 standard or if each country decides for 21 itself. 22 COLONEL DROVER: 23 A. Each country maintains its own. Not every 24 country, of course, employs SAR techs. So I 25 think this SAR tech program that we have,

Page 17	Page 19
1 while you can't compare it with other 2 countries because a lot of them don't do it 3 our way, we have developed those teams, skills 4 and capabilities to fulfil the need that we 5 have to deliver SAR service in Canada. 6 MS. STRICKLAND: 7 Q. So it's dependent on the circumstances that 8 you have to respond to? 9 COLONEL DROVER: 10 A. Well, for sure. If you recall from yesterday, 11 when I briefed on the SAR team, SAR tech team, 12 we'd be a lot less effective as a SAR provider 13 without SAR techs. When you consider the 14 remoteness and the environment that comprises 15 much of Canada, the north, the coastal, the 16 mountain regions, just to be able to penetrate 17 a crash site, for instance, and render 18 assistance, sometimes it's not even accessible 19 by helicopter due to other factors, so where 20 we can SAR techs on the ground who have 21 advanced medical skills, whose life 22 preservation is what it's all about. This is 23 a tremendous capability and really, in my 24 view, it is what makes our SAR response 25 capability as good as it is.	1 aiding the mariners in a general area, but 2 that is part of the legal authorities though 3 for aircraft. 4 MS. STRICKLAND: 5 Q. Sorry, I'm just not clear there. But there is 6 an equivalent authority? 7 COLONEL DROVER: 8 A. Yes. 9 MS. STRICKLAND: 10 Q. But probably not a practical one? 11 COLONEL DROVER: 12 A. Correct. 13 MS. STRICKLAND: 14 Q. Okay. On that same vein, you spoke of 15 proximity being a key factor in determining if 16 a civilian aircraft or vessel would be 17 directed to assist in a SAR operation. Does 18 that mean that a vessel in port or a vessel -- 19 or sorry, an aircraft on the ground could be 20 directed to respond, if that was an 21 appropriate or a necessary - 22 COLONEL DROVER: 23 A. That was raised yesterday and the language 24 doesn't -- that I recall, doesn't really 25 exclude those options, but certainly for
Page 18	Page 20
1 MS. STRICKLAND: 2 Q. When you spoke yesterday, you noted, I think, 3 that DND has the authority to task, of course, 4 its own and Canadian Coast Guard primary SAR 5 resources, which I understood to be, for 6 example, the Cormorant or a Canadian Coast 7 Guard vessel, and also secondary SAR 8 resources, which I understood to be maybe DND 9 aircraft and maybe vessels, as well as 10 voluntary civilian rescue resources, such as 11 CASARA and the Canadian Coast Guard Auxiliary, 12 and I also understood that by way of the 13 Canada Shipping Act, there's also the ability 14 to direct a vessel of opportunity in the area 15 of a casualty at sea to assist in a SAR 16 effort. Is there a similar authority to 17 direct an aviation response? 18 COLONEL DROVER: 19 A. Under certain circumstances that can be 20 accomplished. As I briefed yesterday, it's 21 very rarely enforced, due to the fact that the 22 aircraft -- most fixed wing aircraft at least, 23 really would not be able to assist in any 24 meaningful manner. The Shipping Act is 25 certainly focused on mariners and sort of	1 aircraft on the ground, that would go in the 2 form of a request for commercial assistance 3 and that would be not a tasked direction. I 4 would assume that a ship in port would have 5 the same sort of reasons why you wouldn't 6 direct those, and it would be -- I don't know 7 the scenario that actually that would be the 8 most swift, quickest responder. So I think 9 it's very unlikely that those circumstances 10 would fall into that required rendering 11 assistance provision. 12 MS. STRICKLAND: 13 Q. So distinct from vessel of opportunity would 14 be an entity like a helicopter provider such 15 as Cougar, which you could task on a 16 commercial basis? 17 COLONEL DROVER: 18 A. Cougar and all those commercial operators in 19 the area, absolutely. If, in the 20 determination of the personnel at the rescue 21 centre, that they could render assistance more 22 quickly than any other task asset, they would 23 directly go there and see the availability and 24 the capability and the opportunity or 25 willingness to participate.

Page 21	Page 23
1 MS. STRICKLAND: 2 Q. I'm assuming that that authority to authorize 3 and utilize DND SAR resources and direct 4 civilian assistance is exclusive to DND. No 5 civilian entity could access or have the 6 authority to direct such operations, only DND? 7 COLONEL DROVER: 8 A. To direct -- if I understand your - 9 MS. STRICKLAND: 10 Q. My question perhaps wasn't very clear. 11 COLONEL DROVER: 12 A. Okay. 13 MS. STRICKLAND: 14 Q. Does any civilian responder have the authority 15 to utilize DND resources or direct civilian 16 response? 17 COLONEL DROVER: 18 A. No. 19 MS. STRICKLAND: 20 Q. That's exclusively within the purview of DND? 21 COLONEL DROVER: 22 A. Right. However, if we have a situation where 23 a provincial or territorial authority wishes 24 to get assistance from the CF resources, 25 there's a procedure where they can request our	1 MS. STRICKLAND: 2 Q. So for example, I assume that you would have 3 to muster your personnel and what are the 4 restrictions on how far away they can be for a 5 30-minute wheels up and a two-hour wheels up? 6 COLONEL DROVER: 7 A. Clearly, if they have to respond to a 30- 8 minute posture, they're very close to the 9 aircraft, presumably in the hangar. So when 10 the Claxon goes and the alarm sounds, consider 11 a fire department, they go to -- as I reported 12 yesterday, it's probably not direct to the 13 aircraft. The SAR techs will assemble the 14 gear that they need to -- that they haven't 15 already have on the aircraft. One pilot may 16 go and get the weather briefings. The other 17 pilot talks to RCC. But very quickly they 18 assemble at the aircraft and they establish 19 wheels up as quickly as -- it's the same 20 dynamic if they're on a longer posture of two 21 hours. The response time is a little longer 22 because they have to report to the hangar. 23 They could be on base or very close to it. As 24 I mentioned yesterday, our average is 25 approximately 70 minutes. So that indicates
Page 22	Page 24
1 services. But it's done in a formal manner 2 and it's depending on what agency is involved, 3 the procedure is well mapped out. 4 MS. STRICKLAND: 5 Q. Okay. We've heard the term wheels up a number 6 of times during this Inquiry. What does that 7 mean to DND? 8 COLONEL DROVER: 9 A. It's essentially when the aircraft gets 10 airborne. 11 MS. STRICKLAND: 12 Q. So what's necessary to get wheels up? 13 COLONEL DROVER: 14 A. Establishing flight, no. It's a time line 15 where we have various sort of times where we 16 log activities and engine start would be one 17 time and then when the aircraft starts moving, 18 chucks away, so that's another time, and when 19 the aircraft actually takes off. So it's a 20 fixed wing, it's rolling down the runway and 21 it gets airborne, that's wheels up basically 22 or that's airborne time. For helicopters, 23 basically lift off from the pad. So it's when 24 they're actually -- they're established in 25 flight and they can carry on with the mission.	1 they're not very far away from the aircraft, 2 even at the more relaxed posture. 3 MS. STRICKLAND: 4 Q. Is wheels up time the same across Canada? So 5 is it the same in this region as it would be 6 in British Columbia, 30 and 2? 7 COLONEL DROVER: 8 A. Oh, the posture itself? 9 MS. STRICKLAND: 10 Q. Yeah. 11 COLONEL DROVER: 12 A. Yes. 13 MS. STRICKLAND: 14 Q. I think you indicated that DND has to file a 15 flight plan and that typically it takes 30 16 minutes to obtain clearance, but in a SAR case 17 that could be expedited. Is it only DND able 18 to acquire an expedited departure? 19 COLONEL DROVER: 20 A. I would defer that question to NAV Can or 21 Transport Canada. What I briefed yesterday is 22 that we get good cooperation from all agencies 23 when we're responding to a SAR. The call 24 signs you probably are familiar with. Each 25 aircraft flying will report and be identified

Page 25

1 in some call sign. All military aircraft
 2 engaged in SAR operations get a rescue call
 3 sign. So an aircraft that's out training may
 4 be called Tusker 9401. If it's tasked for a
 5 SAR, it becomes rescue 9401. That rescue
 6 means something to the organization. So we
 7 have now NAV Can recognizing that there's an
 8 aircraft that is responding to an emergency
 9 and without any disruption in air flow, it
 10 gets priority handling because NAV Can
 11 realizes that they are now participants in a
 12 speedy response.

13 MS. STRICKLAND:

14 Q. Okay. I think you mentioned briefly the
 15 configuration of the Cormorant and you
 16 mentioned the summer configuration. Is the
 17 configuration consistent all the time? Are
 18 there circumstances when you would have to
 19 change a configuration?

20 COLONEL DROVER:

21 A. The standard sort of structural configuration
 22 is fixed. So the hoist will stay in place and
 23 the various other components. We have a
 24 standard ramp SAR configured aircraft and that
 25 has the necessary SAR equipment that you would

Page 26

1 expect for maybe mountain ops, for ocean
 2 missions. However, depending on how much
 3 information you have before launch of mission,
 4 there's options to be able to add to any one.
 5 So you can add more pumps if a vessel is
 6 taking on water. So there's some swapping of
 7 equipment, but by and large, we have a
 8 standard pack up, if you will, a standard
 9 posture.

10 MS. STRICKLAND:

11 Q. Okay. What are the operational limits on
 12 DND's SAR response capability? And what I'm
 13 thinking of are things like weather,
 14 visibility, sea states, wind, fog, icing.

15 COLONEL DROVER:

16 A. Those are all challenges certainly in the
 17 environment that we do the search and rescue.
 18 Our pilots have the same flight restrictions
 19 or limits that any other operator has, in
 20 terms of weather. There's no special weather
 21 limits for our operators. In terms of the
 22 conditions they fly in, we respond to all SAR
 23 and the crews do the best they can to affect
 24 successful SAR operations, but at the same
 25 time, of course, is that they will not put

Page 27

1 themselves in undue risk. So in other words,
 2 we will fly in whatever conditions that are
 3 out there to the ability of the aircraft to
 4 handle. So icing, freezing rain wouldn't work
 5 but it doesn't work for any aircraft. And in
 6 terms of sea state, it's basically what the
 7 day brings and they will endeavour to
 8 prosecute and execute a successful mission
 9 without respect to a sea state limit.

10 MS. STRICKLAND:

11 Q. Okay, and the limitations, or I'm calling them
 12 limitations, but the limits perhaps, are they
 13 set by DND or are they set by Transport Canada
 14 or are they set by the aircraft manufacturer?

15 COLONEL DROVER:

16 A. Transport Canada.

17 MS. STRICKLAND:

18 Q. And what is Transport Canada's role in
 19 connection with DND? Is there one?

20 COLONEL DROVER:

21 A. Okay. No, there's not a direct connection.
 22 Again, for flight operations, if that's really
 23 your focus here, is we abide by all the flight
 24 regulations that exist for all flight
 25 activity.

Page 28

1 MS. STRICKLAND:

2 Q. I thought that you had mentioned that it was
 3 Transport Canada that set the limits. So is
 4 that in connection with the aircraft?

5 COLONEL DROVER:

6 A. No, those are the flight requirements for any
 7 aircraft. We are not exempt from those.

8 MS. STRICKLAND:

9 Q. Okay, and ultimately, who decides if a mission
 10 is a go or no go?

11 COLONEL DROVER:

12 A. The aircraft commander will make the decision
 13 whether or not he can or she can probably,
 14 safely execute the mission or a portion of it,
 15 but it's never a cancel. It is sort of
 16 standby waiting more developments or better
 17 conditions, if that's what you're referring
 18 to. If it's a weather issue -- and it perhaps
 19 could be an equipment, the aircraft commander
 20 will not go flying if the aircraft is unsafe.
 21 So those are judgments that have to be made at
 22 that level. Again, coordinating with the
 23 rescue coordinating centre, so they have to
 24 determine, okay, if that aircraft is delayed
 25 for whatever reason, what other resources are

Page 29	Page 31
1 involved and how you can sort of continue to 2 do a search and rescue mission despite the 3 fact that you may have one aircraft that can't 4 perform at that particular time. 5 MS. STRICKLAND: 6 Q. Okay. Thank you, Colonel Drover. That's my 7 questions. 8 COLONEL DROVER: 9 A. Okay, thank you. 10 COMMISSIONER: 11 Q. Thank you, Ms. Strickland. Suncor? 12 MR. PRITCHETT: 13 Q. Commissioner, by agreement, Ms. Strickland has 14 covered all the areas that we wanted to 15 address, so no questions. 16 COMMISSIONER: 17 Q. Okay, thank you. Husky? 18 MS. HICKMAN: 19 Q. The same for us, Commissioner. Thank you. 20 COMMISSIONER: 21 Q. Thank you. Counsel for Cougar, Mr. Whalen? 22 WHALEN, Q.C.: 23 Q. No questions, Mr. Commissioner, though I would 24 like to thank Colonel Drover for providing 25 this valuable information to the Inquiry.	1 privately, much more elaborate than was 2 possible when you testified for the Defence 3 Committee last June on search and rescue in 4 the Arctic. But I do have a few questions, 5 and perhaps you can clarify or elaborate on 6 some of them that I think may be important to 7 the Commission's work. Some of them are just 8 detail. 9 Ms. Strickland asked you briefly this 10 morning about the -- and you responded what 11 size of the air crew in place, as it relates 12 to availability of aircraft, and perhaps if 13 you could just look at Gander, since that's 14 the closest, and may be a model for the 15 others. In terms of helicopter availability, 16 obviously we know how many Cormorants there 17 are allocated to Gander. There's three. How 18 many air crews would you have? And I'm 19 assuming an air crew here would be pilot, co- 20 pilot and at least two SAR techs. Am I right 21 about that? 22 COLONEL DROVER: 23 A. For the Cormorant, the complement, the crew 24 complement is five actually. It's the flight 25 engineer, two pilots and two SAR techs.
Page 30	Page 32
1 COMMISSIONER: 2 Q. Okay, thank you. Sikorsky, Helly Hansen is 3 not present. Counsel for MUN, the Marine 4 Institute. Anyone here for the Marine 5 Institute? No. Counsel for the Government of 6 Newfoundland and Labrador, Ms. Brown? 7 MS. BROWN: 8 Q. No questions, thank you. 9 COMMISSIONER: 10 Q. Thank you. Mr. Harris? 11 COLONEL PAUL DROVER, EXAMINATION BY JACK HARRIS, Q.C. 12 HARRIS, Q.C.: 13 Q. Thank you, Mr. Commissioner. My name is Jack 14 Harris and I'm here in my capacity as a Member 15 of Parliament and Defence critic for my party, 16 and happy to ask some questions of Colonel 17 Drover, mindful of your limited jurisdiction. 18 Good morning, Mr. Drover. I should say, I am 19 the Defence critic. I'm not the critic for 20 the military. I'm not here to cross swords 21 with you in your capacity as a representative 22 of the military, and I want to thank you for 23 your very detailed presentation yesterday on 24 behalf of the military. It was quite 25 comprehensive, and as I indicated to you	1 HARRIS, Q.C.: 2 Q. So how many separate crews would you have as 3 part of that complement in Gander? 4 COLONEL DROVER: 5 A. That dynamic sort of varies actually. We 6 would like to have five or even six crews that 7 are fully trained. The reality is we have -- 8 and you may recall when I briefed on the 9 training cycle, a new crew member that arrives 10 that hasn't had any previous SAR experience 11 does not automatically go into a crew 12 position. So they would be under training, if 13 you will. So it'll be some training 14 requirement to bring those up to a crew 15 position status. So they may be replacing 16 some crew member that's been posted elsewhere. 17 So oft times, we have -- even though the 18 numbers may be equating to five full crews, 19 not every crew member is qualified for a crew 20 position, so in actual fact, what I'm really 21 saying is that the numbers would be less than 22 five, and depending on, again, injuries, 23 sickness, may impact on the number. So if a 24 SAR tech suffered an injury, it may take a 25 while to bring up the complement.

Page 33	Page 35
1 I think what's important though is that 2 if the number of crew availability for a short 3 period of time is less than the required 4 number, the crews just do more crew shifts. 5 So there's never a loss of capability due to a 6 smaller number, and most times the complement 7 of the squadron is such that they can do 8 normal rotations without problem. 9 HARRIS, Q.C.: 10 Q. Maybe you can be a little more specific then. 11 You know, you're saying you have five or six, 12 so 25 to 30 as your complement, but not all of 13 them may be fully trained to operate. Some of 14 them may be unavailable. How many do you 15 expect to be available at any one time and you 16 say there's always somebody available to do 17 the work? 18 COLONEL DROVER: 19 A. I can't give you an absolute, saying a minimum 20 of four, but I would suggest that four or 21 better would probably be any given day what's 22 out there. 23 HARRIS, Q.C.: 24 Q. Four crews? 25 COLONEL DROVER:	1 no issues whatsoever with that, and I want to 2 compliment your organization on providing that 3 level of training and capability and 4 competence for people who are in situations 5 requiring assistance. 6 If I could take you back, I want to talk 7 a little bit about the relationship between 8 what you do and Cougar in the offshore and 9 forgive me if I take you back a little far to 10 the Ocean Ranger Royal Commission, although I 11 will say it was back in 1944, yesterday, 12 before you and I were both born, so perhaps 13 you'll forgive me. When the Ocean Ranger made 14 recommendations in its final report, one of 15 the recommendations, as you know, had to do 16 with the placing of a--stationing of a Search 17 and Rescue facility in St. John's. But in 18 dealing with recommendation No. 54, they 19 talked about a contingency plan outlining the 20 procedures for a major marine disaster. In 21 doing this, the Commission referred to 22 guidelines established by the Canadian Oil and 23 Gas Lands Administration in 1983 and this is 24 what it says "GOLGA in its December 1983 25 guidelines to operators East Coast provided
Page 34	Page 36
1 A. Four crews. But it's -- there are a number of 2 qualified crews to maintain our SAR response 3 capability, for sure, at all times. 4 HARRIS, Q.C.: 5 Q. Now I'm only -- we're only talking here about 6 air crews now. We're not talking about 7 maintenance. That's a separate issue. 8 COLONEL DROVER: 9 A. Yeah. 10 HARRIS, Q.C.: 11 Q. We're talking about air crew, people who would 12 go and do the search and rescue capability. 13 And by the way, I should say also, based on 14 what I've heard yesterday and my other 15 previous knowledge, in my opinion, the level 16 of training that you described yesterday, the 17 capabilities, the very impressive abilities in 18 the medical field, and all of the other items 19 that you mentioned, leads me to conclude that, 20 you know, the work and the activity conducted 21 by DND and search and rescue is second to 22 none. I called it -- since you were paying 23 attention to the media, you probably know I've 24 called it the gold standard for search and 25 rescue, in my view, and I have to say I have	1 that operators on the Grand Banks shall on the 2 joint and continuing basis maintain a 3 helicopter dedicated to search and rescue with 4 personnel trained and qualified in the use of 5 such equipment." It goes on to say "The 6 communique accompanying the guidelines 7 elaborated that this would be a fulltime 8 dedicated search and rescue helicopter that 9 the Department of National Defence would 10 assess the search and rescue programs of the 11 operator on an ongoing basis and that DND 12 would provide search and rescue training for 13 industry personnel." Now, I realize this was 14 1983 and it states the posture at the time 15 that DND was expected to assess the search and 16 rescue programs of the operators on a 17 continuing basis and that DND would provide 18 search and rescue training for industry 19 personnel, so I guess if I can ask you to tell 20 us whether you know whether that was the 21 practice from that time forward or whether 22 that did take place and at some point in time 23 DND no longer played any role in assessing the 24 ability of the--or the search and rescue 25 program?

Page 37	Page 39
1 COMMISSIONER: 2 Q. Excuse me for a moment, Mr. Harris, I see Mr. 3 Tarlton standing up. 4 MR. TARLTON: 5 Q. I'm sorry, Mr. Tarlton again and I won't 6 remove Mr. Harris - 7 COMMISSIONER: 8 Q. Now, are you being recorded? 9 MR. TARLTON: 10 Q. I think I am now. 11 COMMISSIONER: 12 Q. Oh, the mike is on, okay, fine. 13 MR. TARLTON: 14 Q. Mr. Commissioner, I think with the greatest 15 respect to Mr. Harris' interest in the matter, 16 we're moving into questions that in our 17 submission deal--or deal with matters outside 18 the Terms of Reference for this Inquiry, in 19 particular Term 6 which speaks to your mandate 20 not including an examination of the provision 21 by the Government of Canada of Search and 22 Rescue facilities for all marine incidents and 23 the location of such facilities. This 24 question goes to the issue of provision. Also 25 Mr. Harris, my recollection of the evidence	1 answer, the answer was, I believe, Colonel, 2 that you do not train private enterprise 3 operators. Did you say that? 4 COLONEL DROVER: 5 A. I did and I think further to the question as 6 whether or not that we provide any oversight 7 to an industry entity and the answer was no, 8 that I'm aware of. 9 COMMISSIONER: 10 Q. I see, yeah, I'm glad that you were able to 11 answer that because anything to do with the 12 interface, as I put it, between what Cougar 13 provides, you know, mandated by C-NLOPB and 14 the operators, so the interface with DND is 15 important to me when the time comes to make 16 recommendations as to what ought to be 17 provided in my opinion would be here in St. 18 John's. So that answers the question, I 19 think, does it, Mr. Harris? There is no - 20 HARRIS, Q.C.: 21 Q. Well I gathered from the question yesterday 22 that DND does not currently engage in training 23 people for Cougar. My question, I suppose 24 was, was there a time when that happened and 25 then it stopped or -- perhaps the witness
Page 38	Page 40
1 yesterday there was questions asked about 2 education and I think Colonel Drover indicated 3 that at the present time the current 4 educational facilities that are involved 5 engage only military personnel, not civilians, 6 so to the extent that--if I understand his 7 question, he's asking about training for 8 civilians in the private industry. I think 9 that question was already addressed and 10 answered by Colonel Drover yesterday, but more 11 importantly, if it's focusing on provision of 12 services by the Department of National Defence 13 for the facilities in the Newfoundland and 14 Labrador offshore, that deals with precisely 15 what you were prohibited from doing by Term 6, 16 or I would say that his line of questioning is 17 outside the mandate and it should be stopped. 18 COMMISSIONER: 19 Q. Thank you. Before you resume, Mr. Harris, on 20 the provision of services, in other words, 21 search and rescue services, I would agree with 22 you that that is not something that we can go 23 into, nor the locations. But on the other 24 hand, this is a question that I think was 25 dealt with yesterday and if I remember the	1 doesn't know anything about that, I mean - 2 COMMISSIONER: 3 Q. Well, if you can answer that, you can - 4 COLONEL DROVER: 5 A. That's more to the point that I am not aware 6 and I have seen no evidence that I've 7 uncovered that there was any program in place 8 where DND shared training or oversight with 9 the industry, so the answer is I do not know 10 if there was--I'm not aware. 11 HARRIS, Q.C.: 12 Q. The other document that I can refer to is a 13 Federal Government document responding to the 14 recommendations of the Royal Commission and I 15 have that in my file, Mr. Commissioner, and it 16 has to do with the implementation status of 17 recommendations and one of them is 18 recommendation 56. Now that did say that at 19 the time, at the time of this report, I'm 20 assuming, when it was reported in April of 21 1985 and just by way of interest the 22 Government of Canada in its introduction to 23 this response said "The meticulous work of the 24 Royal Commission has received acclaim from the 25 international maritime community. The Federal

Page 41	Page 43
1 Government feels that this acclaim is well 2 earned in regards to the Commission work as 3 the most significant milestone yet achieved in 4 the field of offshore safety." So you've got 5 a hard act to follow, Mr. Commissioner, in 6 terms of the Royal Commission and the Ocean 7 Ranger. But in relation to recommendation-- 8 the recommendation about the fulltime 9 dedicated helicopter, COLGA/DND responds on 10 the implementation status, it refers again to 11 the COLGA guidelines and then it says "initial 12 training was provided by DND SAR specialists 13 and further training is available on a 14 continuing basis." But you have no knowledge 15 about that. It goes on to say and perhaps 16 this is something you can comment on whether 17 it still exists. It says, "Present 18 contingency plans call for DND SAR dedicated 19 helicopters to deploy to St. John's or 20 Argentia should environmental conditions 21 indicate a critical situation developing on 22 the Grand Banks. These precautions have been 23 supplemented by a number of other lifesaving 24 precautions that make all commercial 25 helicopters and standby vessels more capable	1 Q. All right. 2 COLONEL DROVER: 3 A. And I probably could have mentioned it in our 4 briefing and it goes back actually to one of 5 my earlier comments about the base and being a 6 base of operation. Obviously we have aircraft 7 located in certain locations and that's where 8 the maintenance facilities and all of the set 9 up, so that's the permanent home. 10 Notwithstanding that, we again can, on a 11 temporary basis, relocate so we can do a 12 deployment or, we'll call it deployment, to 13 any other area for any specific reason. So 14 if, for instance, there is a seal fishery that 15 had a lot of vessel activity and we wished to 16 locate a helicopter closer to the action as a 17 detachment, that is part of the business of 18 providing search and rescue response. That's 19 sort of line with where that recommendation 20 was probably focused, so there's nothing 21 preventing us to take our SAR Forces and 22 basing them, on a temporary basis, in an area 23 that would be in favour of a closer response. 24 HARRIS, Q.C.: 25 Q. So that's within your current mandate, I've
Page 42	Page 44
1 of recovering people from the water." Are you 2 aware of whether - 3 COMMISSIONER: 4 Q. Have you finished stating the question? 5 HARRIS, Q.C.: 6 Q. Yes. Are you aware whether this has ever 7 happened, whether there ever was a deployment 8 of that nature. 9 COMMISSIONER: 10 Q. The Colonel may or may not know whatever 11 happened, but we can't get into the stationing 12 of DND assets as they're called nowadays, 13 within the Province of Newfoundland and 14 Labrador. 15 HARRIS, Q.C.: 16 Q. I guess that was a contingency plan at the 17 time, so the question is whether it's a 18 contingency plan now and that can't be asked. 19 COMMISSIONER: 20 Q. I think if there was a plan in place, yes. Is 21 there a plan in place to your knowledge? 22 COLONEL DROVER: 23 A. Mr. Commissioner, I think that part of that I 24 can address, if I may. 25 COMMISSIONER:	1 seen reference to that for the seal fishery or 2 other activities that Commanders have the 3 discretion to do that restation, 4 repositioning. 5 COLONEL DROVER: 6 A. That is correct. 7 HARRIS, Q.C.: 8 Q. And do you know whether that discretion is 9 exercised very often? 10 COLONEL DROVER: 11 A. I know for sure not very often, I can't quote 12 exactly when and where, it has occurred, but 13 certainly it's a statistic that we can report 14 back to you offline. 15 HARRIS, Q.C.: 16 Q. Okay. Now one of the issues that was 17 discussed yesterday and I think this is 18 something that I'm still having a little 19 trouble getting a handle on and that's the 20 relationship in terms of operations and in 21 terms of response between Cougar's provision 22 of services and yours, in terms of how you co- 23 ordinate things. I guess first of all looking 24 at your map of Canada which you had in your 25 exhibit, I don't know the exhibit number,

Page 45	Page 47
1 there's probably several of them, the map of 2 Canada showing all your assets. Yes, just 3 sort of get a look at all of Canada and your-- 4 I've got it here, thank you. In looking at 5 this map and the asset allocation across the 6 country, I guess what I wanted to suggest to 7 you is that the addition to the east coast of 8 Newfoundland off Hibernia and the Jeanne d'Arc 9 Basin is shown here, we have probably 600 10 people on an ongoing basis who are working 11 there 24/7, 365 days a year. And I'm just, 12 you know, looking up across the country and 13 wondering whether you would agree with me that 14 it's kind of an unique situation to have that 15 number of people permanently located offshore, 16 that's kind of an unique across--I don't know 17 if there are any other places across the 18 country where we have that kind of situation, 19 would you agree with that? 20 COLONEL DROVER: 21 A. I would offer this that certainly you're 22 talking the maritime environment and it's 23 always been the case that there have been 24 people working in the offshore, in the fishing 25 industry and our responsibility is it all of	1 and the Search and Rescue to respond. So the 2 RCC will co-ordinate and control. As an 3 example, the Cougar was clearly from the start 4 our responsibility, the fact that Cougar was 5 the first aircraft or helicopter at least on 6 scene, first responder, that speaks really to 7 the Federal system in place, as I described it 8 yesterday, that draws on, not only these 9 dedicated SAR assets, but any other asset that 10 would be appropriate and applicable, so that's 11 back to our question earlier this morning 12 about the commercial mariner that could be 13 called in. So all that describes a scene 14 where we had control of the incident and 15 Cougar actually was one of the first 16 responders. For the activity that Cougar 17 utilizes their standby aircraft for the 18 medevac normally, as I briefed yesterday, that 19 will not be a responsibility of the Federal 20 system and therefore, our SAR Forces are not 21 involved or engaged. 22 HARRIS, Q.C.: 23 Q. Okay, but let's get back to a non-medevac 24 situation, emergency situation, the first 25 responder from what you've just told me, it
Page 46	Page 48
1 those individuals that are offshore. So in 2 terms of uniqueness, the environment itself 3 speaks to people that are working in the 4 offshore. 5 HARRIS, Q.C.: 6 Q. Oh, there's no doubt about that, but we're 7 talking about in a specific location, 8 concentrated, that number, and I guess this is 9 why we have unique arrangements with respect 10 to providing these services. And what we've 11 been told is that the first responder to an 12 event in this particular offshore is Cougar, 13 and I would like to get a little bit of a 14 handle on what that means in terms of what DND 15 does or doesn't do in these circumstances, as 16 opposed to other circumstances. Can you tell 17 me what, in your end, in DND's mind the first 18 response or the first responder is, because it 19 sounds like we know what it means, but can you 20 tell us what it means in practice. 21 COLONEL DROVER: 22 A. The way it's--and I discussed this yesterday, 23 if there is a maritime incident or an air 24 nautical incident, it is a Federal 25 responsibility, it falls within our mandate	1 seems that the first responder is whoever gets 2 there first or whoever can get there first. 3 Does that mean that we have, say, a Cormorant 4 which is on standby in Gander, deployed 5 immediately as well and it's just that Cougar 6 happens to get their first because they're 7 closer, or would DND stand down and let Cougar 8 go first and make decisions later? 9 COLONEL DROVER: 10 A. It is very unlikely that we would not launch a 11 dedicated SAR aircraft if it were a SAR 12 incident that would the total outcome was 13 unsure. So in other words, unless it was 14 reported and the incident was resolved because 15 a vessel was in close proximity, picked up a 16 person in the water and at that juncture, we 17 probably may not launch our aircraft. 18 Generally speaking, as a matter of procedure, 19 an incident will result in one of our or more 20 than one aircraft being launched. As I 21 mentioned yesterday, there's no difficulty in 22 terminating the SAR mission somewhere before 23 it's complete, so that the whole idea of being 24 on standby is having those assets at the ready 25 and they'd be employed, so to answer your

Page 49	Page 51
1 question, even though it appeared that Cougar 2 would be likely the first responder, there 3 would be a Federal asset tasked in most cases. 4 HARRIS, Q.C.: 5 Q. So once again, from a command and control 6 point of view, as you say, regardless of the 7 fact of it being an oil industry incident, 8 it's still a Federal responsibility and is it 9 the situation that Cougar would automatically 10 respond on its own, or would you have to 11 decide to deploy Cougar? 12 COLONEL DROVER: 13 A. Cougar would take actions on their own accord 14 at times, I'm sure. If RCC wished to engage 15 Cougar, that's done through that formal 16 request tasking sort of example that I gave 17 yesterday. 18 HARRIS, Q.C.: 19 Q. But I'm talking about an industry related one, 20 they--they're certainly free to go off on 21 their own if they have a mayday from their 22 own--from the oil industry, they're going to 23 go without being deployed by you, I 24 understand? 25 COLONEL DROVER:	1 Sydney, Nova Scotia during the training 2 mission and there's no, I don't think, anybody 3 believes that training ought not to be 4 conducted and clearly the standard of training 5 that your organization is providing to your 6 crews is second to none. I guess my question 7 was during that period of time, was there any 8 notion that Cougar was acting as a backup 9 search and rescue because you and your assets 10 were in Nova Scotia? 11 COLONEL DROVER: 12 A. Not that I am aware of, that would not 13 normally be the case. Again, our 14 responsibility is our responsibility and we 15 don't rely and the primary or back up even 16 other agencies and organizations, but as I 17 stated this morning, we had the Halifax Search 18 and Rescue region, the standby posture was in 19 place, so we did not reduce our capability any 20 time during that training exercise, it's just 21 a function of the location. 22 HARRIS, Q.C.: 23 Q. And would Cougar, for example, have been 24 notified that--we're in a different situation 25 than we were before the exercise started and
Page 50	Page 52
1 A. Correct. 2 HARRIS, Q.C.: 3 Q. And then at the same time, you would respond 4 to that emergency as well? 5 COLONEL DROVER: 6 A. Correct. 7 HARRIS, Q.C.: 8 Q. As I said, they would get their first because 9 they're closer, is that--is that the essential 10 difference? 11 COLONEL DROVER: 12 A. In that instance, yes. 13 HARRIS, Q.C.: 14 Q. And DND or the JRCC is still responsible for, 15 in fact, in this incident in March, it was up 16 to the joint rescue centre to stand down 17 Cougar because you had assets in the field. 18 COLONEL DROVER: 19 A. That is correct. 20 HARRIS, Q.C.: 21 Q. At a certain point. So it's still in the 22 control of DND regardless. This is a question 23 that comes up in terms of what the situation 24 was in March and I know you clarified this 25 morning that the assets that you had in	1 that we don't have any assets in Gander and 2 would that be something that you would notify 3 them for the sake of a greater sense of 4 alertness or a possibility that they might be 5 on their own for a longer period of time if 6 something happened? 7 COLONEL DROVER: 8 A. I can't say for sure that they were so 9 informed. There's good communication with 10 Cougar and our SAR squadron that may have 11 taken place and I can find out, but I can't 12 report. 13 HARRIS, Q.C.: 14 Q. That might be helpful, I just--you know, this 15 is not something that I guess this Commission 16 is looking into, but you did mention response 17 times and how long it took to get into the 18 air, et cetera, and we all know about the fact 19 that Cougar didn't reconfigure. It seems to 20 me that if they were notified or aware that we 21 had a different situation in place on March 22 12th, that they may have been already 23 reconfigured and ready to go and that's 24 something maybe Cougar can answer themselves, 25 but you're not aware of any communication

Page 53	Page 55
1 between DND suggesting that circumstances are 2 a little different? 3 COLONEL DROVER: 4 A. No, and again, our SAR aircraft work within 5 the SAR region, either on training or actual 6 operations, I don't think it's policy that 7 they would inform the community at large where 8 they happen to be at any particular time. 9 HARRIS, Q.C.: 10 Q. I guess that might be a different question, 11 whether the community at large would be 12 informed, I was thinking particularly of 13 Cougar who has the first responder duties in a 14 marine emergency involving the industry, so - 15 COLONEL DROVER: 16 A. I could find out, I can get you the answer. 17 HARRIS, Q.C.: 18 Q. Of course there is a difference and I think 19 Major McGuire advised the public at least that 20 there was a difference of about an hour in 21 getting to the site because the assets were 22 stationed in Nova Scotia, so distance matters, 23 does it not? 24 COLONEL DROVER: 25 A. We're responsible for the whole region and the	1 A. Our standard of service, our commitment is to 2 have one of each type of aircraft on primary 3 standby in all the bases. It's the one 4 aircraft ready to go with one crew. 5 HARRIS, Q.C.: 6 Q. That's the minimum standard. 7 COLONEL DROVER: 8 A. That is the standard. 9 HARRIS, Q.C.: 10 Q. That doesn't mean there aren't others 11 available to - 12 COLONEL DROVER: 13 A. That's absolutely right. 14 HARRIS, Q.C.: 15 Q. - be put in the air at any given time. 16 COLONEL DROVER: 17 A. Correct. 18 HARRIS, Q.C.: 19 Q. Now in terms of the response times themselves 20 and I know you were asked about it yesterday, 21 I think you were asked whether you could 22 compare the response time in Canada to the 23 response time in other countries and I was a 24 little surprised to hear you say that you 25 didn't know whether or what the response times
Page 54	Page 56
1 location of the SAR assets is determined on 2 what we're doing, whether it's training or 3 whether it's operations. Incidences are 4 random, they could take place in any part of 5 that region, so it's fairly difficult to 6 predict where you should be at any given time. 7 HARRIS, Q.C.: 8 Q. No, no, to be fair, in response to Ms. 9 Strickland you did say that if you had an 10 incident in one place, you can't be everywhere 11 at once. 12 COLONEL DROVER: 13 A. Sure. 14 HARRIS, Q.C.: 15 Q. I think we all understand that. Again in 16 terms of, since we're going near that issue of 17 where your assets are or that's not--I'm not 18 trying to talk about where they are at any 19 particular time, but where you have three 20 helicopters in Gander, is it my understanding 21 that your answer to Ms. Strickland is that 22 only one of them is considered, only 23 considered to have one of them available for 24 service at any one time? 25 COLONEL DROVER:	1 might be in other countries or that they were 2 variable and you weren't able to provide us 3 any information on that. I understand you're 4 on the international committee that looks at 5 search and rescue, are you? 6 COLONEL DROVER: 7 A. No, I'm not. 8 HARRIS, Q.C.: 9 Q. Oh, you're not, I'm sorry - 10 COLONEL DROVER: 11 A. That's the chief of air command. Oh the one 12 committee I was referring to is the 13 interdepartmental - 14 HARRIS, Q.C.: 15 Q. You're on the interdepartmental committee. 16 COLONEL DROVER: 17 A. That's a national entity. 18 HARRIS, Q.C.: 19 Q. So does your department compare its response 20 times with other countries? 21 COLONEL DROVER: 22 A. I haven't been actively involved in any 23 analysis in that regard. 24 HARRIS, Q.C.: 25 Q. You haven't been involved and you're not aware

Page 57	Page 59
1 of any that's been done? 2 COLONEL DROVER: 3 A. I have not been involved and I'm not aware of 4 any that has been done. 5 HARRIS, Q.C.: 6 Q. Perhaps the Commission itself will be looking 7 into this, I know - 8 COMMISSIONER: 9 Q. Well yes, it is something that I have been 10 reading about and downloaded material about 11 response times say in the North Sea, which is 12 the most comparable to our situation. 13 HARRIS, Q.C.: 14 Q. Yeah, and fairly readily and I did it myself 15 last night, you can find response times of the 16 US Coast Guard, the Irish Coast Guard, the UK, 17 Australia, I have to say I haven't seen one 18 with a two-hour response time after hours, 19 there's a variety there, no doubt, from 15 20 minutes in, between 7:00 in the morning and 21 9:00 at night in Ireland and 45 minutes there 22 after, but there is a variety and 30 minutes 23 seems to be a standard for other places. This 24 issue has been looked at though, and perhaps I 25 can refer you to the report that is in	1 MS. FAGAN: 2 Q. It is an exhibit, I've never had a copy of it. 3 COMMISSIONER: 4 Q. You have it in front of you. 5 HARRIS, Q.C.: 6 Q. I have it in front of me. 7 COMMISSIONER: 8 Q. Oh, well just tell me what your question is. 9 HARRIS, Q.C.: 10 Q. Sure. The issue that I wanted to explore with 11 the witness and it's one that appears in, I 12 guess it's a theme within DND on the standby 13 posture, so called, you know, where we have 14 availability during the daytime, during 15 working hours but not afterwards. And there's 16 some references to that, I guess what I want 17 to explore is the notion that appears is that 18 this standby posture is related in fact to the 19 availability of assets, as opposed to the need 20 that exists. Now if that's not something you 21 think we can go into here, then perhaps you 22 should tell me now because I have a couple of 23 documents, one is the "Melina & Keefe" report 24 from Transportation and Safety Board of Canada 25 which deals with search and rescue response
Page 58	Page 60
1 evidence as P-00113 and I wonder if you could 2 - 3 COMMISSIONER: 4 Q. Would you just pause for a moment, Mr. Harris, 5 until it comes up. 6 HARRIS, Q.C.: 7 Q. Sure. 8 REGISTRAR: 9 Q. Do you know who entered the exhibit? 10 HARRIS, Q.C.: 11 Q. I did. 12 REGISTRAR: 13 Q. You did, Mr. Harris? 14 HARRIS, Q.C.: 15 Q. Yes. 16 REGISTRAR: 17 Q. We're having difficulty finding it. 18 COMMISSIONER: 19 Q. I see Mr. Parsons may have been - 20 COLONEL DROVER: 21 A. It's the same day, I believe, I noticed that 22 but it was me who put it in. It's a document 23 from the National Search and Rescue 24 Secretariat. It's review of SAR response 25 services.	1 times in a general way, not in terms of--they 2 do mention this one, but they do talk about 3 some of the things that the Colonel spoke 4 about yesterday, for example the Auditor 5 General's comments on search and rescue and 6 the follow-up reports and studies done by the 7 National Search and Rescue Secretariat, which 8 I want to ask the Colonel to comment on. 9 COMMISSIONER: 10 Q. I think before making a ruling on that, I 11 would ask are you familiar with what Mr. 12 Harris is talking about, Colonel? 13 COLONEL DROVER: 14 A. I am. 15 COMMISSIONER: 16 Q. I see. Mr. Tarlton, have you any comment or 17 would you like to consult with the Colonel? 18 MR. TARLTON: 19 Q. If we're going to break, I'd like to consult 20 with Colonel--well, of course, if my friends 21 would ask him specific questions relating to 22 the documents, keeping in mind this is an 23 inquiry, there has to be a foundation. I have 24 not seen the documents, and not having a 25 chance to speak to Colonel Drover about it, I

Page 61 1 will try to clarify, but obviously if he 2 hasn't seen the documents, it would be very, 3 in my view, not proper for him to, you know, 4 once he makes that answer, I think that ends 5 the line of inquiry on the questions. 6 COMMISSIONER: 7 Q. What we'll do now, we'll take a break and Mr. 8 Harris you can show the Colonel and Mr. 9 Tarlton and Major Stoney the documents, if you 10 can respond, you will tell me, if you can't, 11 you will tell me that also. Okay. 12 (RECESS) 13 COMMISSIONER: 14 Q. Now, where are we? 15 HARRIS, Q.C.: 16 Q. Well, Mr. Commissioner, we've had -- there 17 were some issues with respect to the exhibit 18 that I had already tendered and were admitted. 19 The exhibits there now apparently available 20 electronically and I guess while we're at 21 that, there were two documents I mentioned 22 this morning that are in the system that I 23 would ask to be submitted as exhibits, which 24 were the ones that I referred to, the Ocean 25 Ranger recommendation with the reference to --	Page 63 1 It's issued by the Department of National 2 Resources in 1985. 3 COMMISSIONER: 4 Q. Certainly on the face of it now, I can see 5 nothing against that, but I would like to have 6 a look at it. 7 HARRIS, Q.C.: 8 Q. That's fine. I just wanted to offer them. 9 COMMISSIONER: 10 Q. Absolutely. 11 HARRIS, Q.C.: 12 Q. They're there to the Commission and the 13 parties for possible use and reference, if you 14 find it of any particular relevance. The 15 question that I was getting to, Mr. 16 Commissioner, the witness has seen a copy of 17 the Transportation Safety Board report on the 18 "Melina and Keith" and there is a section in 19 there, several paragraphs, that deal with a 20 bit of an overview of search and rescue 21 response, including references to the Auditor 22 General's report that the - 23 COMMISSIONER: 24 Q. I've read that reference. 25 HARRIS, Q.C.:
Page 62 1 not to the extent that it's relevant to your 2 proceedings, I did refer to them. They're 3 available to be admitted as exhibits, one 4 being the Government of Canada response 5 document 1985, the second one, the first one 6 being the Ocean Ranger Report itself, the 7 excerpt from it which references the role that 8 DND might have played. 9 COMMISSIONER: 10 Q. Certainly there's no problem with the Ocean 11 Ranger Report. I mean, that's a public 12 document. 13 HARRIS, Q.C.: 14 Q. Yes. 15 COMMISSIONER: 16 Q. I have a copy of it. 17 HARRIS, Q.C.: 18 Q. Sure. 19 COMMISSIONER: 20 Q. Perhaps many of us do, you know. 21 HARRIS, Q.C.: 22 Q. And the Government of Canada, these are just - 23 - the Government of Canada document is a 24 response document that again comes from -- I 25 obtained it from the Library of Parliament.	Page 64 1 Q. Yeah, and so I would like to ask questions to 2 the witness about these comments here, and I 3 understand there may or may not be objections, 4 after having seen the report. So I'll leave 5 that to - 6 COMMISSIONER: 7 Q. Well, I'll ask Mr. Tarlton for his position on 8 that. Yes, Mr. Tarlton? 9 MR. TARLTON: 10 Q. Thank you, Mr. Commissioner. I was waiting to 11 hear the question before I rose, but my 12 understanding of the line of questioning that 13 Mr. Harris is proposing is one that is going 14 to seek from Colonel Drover answers regarding 15 the policy behind the provision of services by 16 the Government of Canada with respect to 17 posturing. Now Mr. Harris, who was here 18 yesterday, and others heard there was some 19 mention of posturing with respect to the 20 evidence regarding the assets, and as you've 21 pointed out on more than one occasion, the 22 purpose for having DND come to testify was to 23 describe essentially the assets, the 24 capabilities of the Department of National 25 Defence with the provision of search and

Page 65	Page 67
1 rescue. However - 2 COMMISSIONER: 3 Q. What it does. 4 MR. TARLTON: 5 Q. What it does, and to the degree that Colonel 6 Drover's presentation discussed posturing, it 7 addressed, I think, the issue regarding to 8 what it does and the number of assets and why 9 they are there at a given point in time. But 10 this document, from what I have seen, and to 11 be fair, I haven't heard Mr. Harris' question, 12 nor has he told me what he intends to ask, but 13 my understanding is it's going to relate to 14 the policy ultimately behind the provision of 15 these services and particular posturing. I'm 16 not sure that Colonel Drover is even capable, 17 but beyond that, we're getting into precisely 18 what is prohibited by Term 6 of your Terms of 19 Reference. 20 The Government of Canada is not here to 21 be asked questions on this policy level as to 22 why resources are allocated at a given point 23 or why certain decisions are made with respect 24 to posturing. In giving their overview and 25 presentation as to how its done, we've	1 postures that exist are not related to the 2 need that exists, but are rather related to 3 the availability of resources. Now that's 4 relevant in this sense, Mr. Commissioner, 5 that, you know, I wanted you to be aware of 6 these reports which take this view, and these 7 are reports from the National Secretariat of 8 Search and Rescue, National Search and Rescue 9 Secretariat and the Transportation Safety 10 Board of Canada which are fairly significant 11 authorities within the search and rescue and 12 marine safety field, and you're being asked 13 and you're going to be asked to establish 14 standards for search and rescue in our 15 offshore that may be provided by the operators 16 or whatever. 17 My issue is this, I would want -- I would 18 not want you to take the view that because DND 19 has established, say, two hours as an adequate 20 response time after 4:00 or on holidays that 21 that somehow is the standard that has any 22 relevance to the needs of our offshore, and 23 backing that up is a suggestion in these 24 reports that -- and they detail the 25 Transportation Safety Board's own analysis,
Page 66	Page 68
1 identified that, because it does impact on the 2 assets, but my friend is embarking down a line 3 of questioning which, in my submission, is 4 prohibited by Term 6 and it's also something 5 that ultimately is a matter of what we would 6 refer to as higher policy, something to be 7 made by the Government of Canada as a whole, 8 and Colonel Drover is not here in that 9 capacity, to explain or defend such high 10 policy decisions. There may be other forum 11 for my friend to raise this matter, and he is 12 certainly entitled to do that, but it's not 13 appropriate to do so at this Inquiry and with 14 this line of questioning. 15 COMMISSIONER: 16 Q. Okay. Well, at the moment, I haven't heard 17 the question. So if you'd tell me the 18 question, Mr. Harris? 19 HARRIS, Q.C.: 20 Q. Well, Colonel Drover has had an opportunity to 21 look at this. The report itself discusses the 22 various recommendations that have been made 23 over time, but what it discloses is a theme, I 24 guess, that's in existence within DND for some 25 time and a suggestion that the standby	1 plus what the Auditor General said, what the 2 National Secretariat, National Search and 3 Rescue Secretariat said in its report, which I 4 think I've referred to P-00113, which is 5 already in evidence, that these are matters 6 that I think are relevant to your Inquiry. 7 Whether they're beyond -- I don't -- they're 8 not examining what they do, I guess, in that 9 sense, but they are reflecting on what the 10 standards are for search and rescue in our 11 offshore. So if you will permit that question 12 and I'd ask the Colonel to make comments on 13 it. He certainly is aware of that, as he 14 indicated even before I showed him the 15 document. 16 COMMISSIONER: 17 Q. Firstly, obviously I will have to, in 18 developing my report, consider the standard 19 which should be applied to the services 20 provided here in St. John's by the operators. 21 There is no question that I have to go there. 22 That's specifically part of my mandate. The 23 other thing is that there is nothing 24 prohibitive whatsoever about my examining 25 reports that have been produced by reputable

Page 69

1 or governmental agencies, such as the
 2 Transportation Safety Board. On the other
 3 hand, policy decisions which are above the
 4 level of Colonel Drover, he may not -- and
 5 we'll see what he says, but he may not be able
 6 to comment on them. I mean, if you'll
 7 remember the slide of yesterday, this process
 8 goes right to the Federal Cabinet. They may
 9 make decisions that are handed down through
 10 their designate, the Minister of National
 11 Defence, and so on, down to the military. If
 12 it's decisions which are taken up at that
 13 level, then I would not expect Colonel Drover
 14 to do anything except to say yes, they're
 15 there, because they're not his decisions. So
 16 let me ask, whether it be you or the Colonel,
 17 Mr. Tarlton, what's your position on this?

18 COLONEL DROVER:
 19 A. Thank you for the opportunity to respond. My
 20 understanding coming here, it would not be a
 21 part of the Inquiry to get into the reasons
 22 why we maintain a certain posture. We have
 23 certainly discussed this and we have good
 24 reason the way we're established and based.
 25 This is based on certainly policy for sure.

Page 70

1 Resources come into play. I was not expecting
 2 to have to explain, in great detail, why we
 3 are in this posture. So I would prefer not to
 4 be able to get into the details of it for this
 5 Inquiry.

6 COMMISSIONER:
 7 Q. Okay then. In that case, Mr. Harris, I won't
 8 allow the question, but I will accept the
 9 documents which you have.

10 HARRIS, Q.C.:
 11 Q. Thank you.

12 COMMISSIONER:
 13 Q. And later in the process, as with everyone who
 14 has standing, there will be an opportunity to
 15 make written submissions and oral submissions
 16 to the Inquiry.

17 HARRIS, Q.C.:
 18 Q. Well, thank you, Mr. Commissioner. You
 19 anticipated my next request, which was that if
 20 that's the case, then I'd certainly want to
 21 present these. Well, one is already there as
 22 an exhibit, the review of the SAR response
 23 services. The second one being comments that
 24 are contained in the Transportation Safety
 25 Board of Canada marine reports on the "Melina

Page 71

1 and Keith" and there's a section there,
 2 several paragraphs, which do provide that. I
 3 think that that information may be helpful to
 4 you, reviewing that, and I -

5 COMMISSIONER:
 6 Q. Thank you. We'll accept them. You can give
 7 them to counsel.

8 HARRIS, Q.C.:
 9 Q. Mr. Roil has a copy of it.

10 COMMISSIONER:
 11 Q. And we can -- we will have a look at it
 12 internally to see if it should go up as an
 13 exhibit or be simply for the information of
 14 the Inquiry. Thank you for that. These are
 15 reports that I can look at.

16 HARRIS, Q.C.:
 17 Q. Thank you, Mr. Commissioner. I don't have a
 18 lot more questions of you, Mr. Drover, but I
 19 did, since you referred, I believe, to a
 20 report yesterday, a 2008 report which you
 21 said, quite rightly, recognized the services
 22 provided by DND in Canada, that they have been
 23 -- the structure and capability are considered
 24 as a model internationally. Is that the
 25 report which I believe is already an exhibit,

Page 72

1 P-00110, called the Evaluation of CF's DND
 2 Component in the National Search and Rescue
 3 Program produced by the chief review of
 4 services, which I think you referred to him as
 5 an auditor? I think that's the -

6 COLONEL DROVER:
 7 A. I did, auditor, and then I also, I think,
 8 mentioned review services. So that is the
 9 document that I

10 HARRIS, Q.C.:
 11 Q. That is the document.

12 COLONEL DROVER:
 13 A. - quoted yesterday, yes, sir.

14 HARRIS, Q.C.:
 15 Q. Now that's there. Just again, I guess part of
 16 the background, in terms of the commitment of
 17 the Government of Canada to resources, if I
 18 could refer to page 3/15 of that. This may be
 19 helpful in terms of the context, Mr.
 20 Commissioner. The annual forecast spending
 21 for, in this case 2006-2007, for NSP, National
 22 Search and Rescue Program estimated at 219
 23 million and that the Canadian Forces' share is
 24 approximately 102 million or 46.6 percent of
 25 total Federal SAR forecasted expenditures and

Page 73

1 that's separate for the Canadian Coast Guard.
 2 Do you know -- maybe you don't have this
 3 experience, and perhaps this is wrong -- you
 4 might be the wrong person to ask this. This,
 5 I'm assuming, includes the cost of operating
 6 what you showed us as the bases across Canada,
 7 the helicopters, the assets, the gear, the
 8 crew that go with them. Would that be the
 9 case?
 10 COLONEL DROVER:
 11 A. I can't answer that precisely, because I'm not
 12 familiar with the way they've calculated and
 13 what was included in terms of costing for our
 14 program. So again, that's beyond my ability
 15 to respond at this time.
 16 HARRIS, Q.C.:
 17 Q. Thank you. Okay, well, I just wanted to point
 18 that out, just as sort of the context of the
 19 effort that's there. Part of it obviously is
 20 Coast Guard, and Coast Guard, as you
 21 mentioned, yesterday is a very important
 22 component of search and rescue, but between
 23 the two departments, there's a total of 219
 24 million dollars spent to provide the services
 25 that you do. The other questions that I had

Page 74

1 on that particular report are in the same
 2 category, Mr. Commissioner, as the ones that
 3 you just disallowed, so I won't ask them.
 4 Perhaps if I can end briefly, Colonel
 5 Drover, on the capabilities and the SAR techs
 6 and other officers that are engaged in search
 7 and rescue, these are regular Forces
 8 personnel, I understand. Would you tell --
 9 could you tell us what ranks these individuals
 10 would hold in search and rescue? Is there a
 11 separate rank for search and rescue
 12 technicians?
 13 COLONEL DROVER:
 14 A. No. The rank structure is the same as any
 15 other military profession, I suppose. It's
 16 structured in this manner. Our pilots and
 17 navigators, air crew are of the officer rank.
 18 Engineer is usually an NCM, non-commissioned
 19 member, warrant officer, sergeant, corporal.
 20 The search and rescue technicians are again
 21 corporal up to chief warrant officer ranking.
 22 Generally speaking, team leaders are of a
 23 higher rank than the junior ones, by virtue of
 24 they've been in longer, but it's not
 25 automatic. They could be of equal rank, as

Page 75

1 far as that goes. Similarly with the two
 2 pilots, the junior in rank could be the
 3 aircraft captain, by virtue of the fact that
 4 he's got more SAR experience. So there's no
 5 difference. There's no special category of
 6 ranking for SAR people at all.
 7 HARRIS, Q.C.:
 8 Q. So all of the search and rescue personnel are
 9 part of the regular Force, with same ranks,
 10 the same military culture and discipline and
 11 all that goes with that?
 12 COLONEL DROVER:
 13 A. In actual fact, that's very true, and there's
 14 mobility. You're not necessarily in the SAR
 15 community for your whole career. As you may
 16 recall from my bio, there was periods in that
 17 career where I was not associated with search
 18 and rescue or flying operations as well. We
 19 have some of our SAR pilots, for instance, now
 20 flying tactical helicopter in Afghanistan and
 21 we may receive new folks from Afghanistan to
 22 join our SAR forces. So within the military,
 23 it's not a life-long endeavour necessarily,
 24 although for the SAR techs, for sure, that is
 25 their primary career progression, within the

Page 76

1 SAR community.
 2 HARRIS, Q.C.:
 3 Q. Well, it would certainly be -- I'd certainly
 4 be grateful if I could operate at the level of
 5 a SAR tech for a full career. I think I'll
 6 end where I began, by expressing my admiration
 7 for the work that they do and the ability that
 8 they have to provide rescue services, and I
 9 think that's perhaps an appropriate place for
 10 me to end.
 11 COMMISSIONER:
 12 Q. Okay, thank you, Mr. Harris. Now, counsel for
 13 CEP, Mr. Earle.
 14 COLONEL PAUL DROVER, EXAMINATION BY RANDELL EARLE, Q.C.
 15 EARLE, Q.C.:
 16 Q. Good morning, Colonel Drover. I'm Randell
 17 Earle and I'm counsel for CEP Local 2121,
 18 which represents a substantial portion of the
 19 people who actually work offshore and with
 20 whose safety this Inquiry is concerned and
 21 first of all, I'd like to thank you for coming
 22 here and thank DND for making you available,
 23 because you bring to this Inquiry considerable
 24 expertise, which I think is very helpful in
 25 painting a portion of the landscape against

Page 77	Page 79
1 which decisions of this Inquiry must be made. 2 I'm quite interested in this notion that 3 Cougar Helicopters is in a first response 4 role, and I was wondering, to your knowledge, 5 is there anywhere else within your 6 jurisdiction where a private provider provides 7 a first response function? 8 COLONEL DROVER: 9 A. Honestly, I'm not familiar with any situations 10 that would be similar to the one you're 11 referring to with Cougar. 12 EARLE, Q.C.: 13 Q. Okay. Now you talked about the fact that if 14 Cougar is doing a medevac, that wouldn't 15 necessarily engage the JRCC, but if there was 16 an incident then that would engage JRCC and 17 first of all, have I got that correct? 18 COLONEL DROVER: 19 A. As I understand your questioning line, yes. 20 EARLE, Q.C.: 21 Q. Okay, and I take it the situation is the 22 moment JRCC is engaged then Cougar is acting 23 under their direction? 24 COLONEL DROVER: 25 A. When JRCC becomes involved in a case, if you	1 or a potential or a suspected incident and 2 take the appropriate SAR response reaction. 3 So until JRCC is notified that there is 4 something happening, no action takes place. 5 On notification, JRCC will make a 6 determination whether or not there actually is 7 something in the nature of an incident. When 8 they make that determination, they assume 9 responsibility for the coordination of that 10 particular incident. 11 EARLE, Q.C.: 12 Q. And at that point, they have legal authority 13 to task Cougar? 14 COLONEL DROVER: 15 A. They do. 16 EARLE, Q.C.: 17 Q. Okay, thank you. Now I think you may have 18 answered this question, but I'd like to ask it 19 in a very straightforward fashion. Is there 20 any protocol between DND and Cougar or the 21 JRCC and Cougar as to how this first response 22 role will work? 23 COLONEL DROVER: 24 A. There is an understanding among the various 25 players of how it does work. I'm not familiar
Page 78	Page 80
1 will, it is their responsibility to provide 2 the coordination for the SAR response. Part 3 of that coordination may well include 4 employment or use of the Cougar assets. So in 5 that light, they would now be under the 6 direction of JRCC. If they are not 7 specifically tasked by JRCC, they would be 8 operating independently and the JRCC would not 9 have any specific control over their 10 operation. 11 EARLE, Q.C.: 12 Q. Yes. Well, let's see if we can understand how 13 it all happens, if you will. I mean, there's 14 -- you described the March 12th incident and 15 NAV Can made a report to JRCC, as I understand 16 it, in that incident. But clearly this was 17 the most extreme of events. Who would decide 18 whether something ought to be reported, 19 whether something reaches the incident level, 20 in terms of reporting to JRCC? Is that 21 dependent on Cougar? 22 COLONEL DROVER: 23 A. No. If I understand your question, and as I 24 described the function of the rescue centre is 25 to determine if, in fact, there is an incident	1 with any formal agreement, because there's not 2 one that would be required. The JRCC is 3 responsible for that SAR coordination, which 4 they fulfil continually. There is also a good 5 line of communication between Cougar 6 operations, JRCC and Gander. So there's a lot 7 of informal information flow, if that sort of 8 helps the question that you have. 9 EARLE, Q.C.: 10 Q. But in terms of defined -- in terms of a 11 document -- for instance, you were asked about 12 the circumstance of March 12th where the 13 assets were off base, and you weren't able to 14 tell us if Cougar would have been told of 15 that, but you did refer, as you just have, to 16 the general good level of communication. 17 COLONEL DROVER: 18 A. Right, and for that specific question, I said 19 I can get the answer. I just don't happen to 20 know, in that particular instance, whether it 21 took place or not. In terms of a document, 22 the document which is part of the evidence 23 which is a search and rescue manual, that 24 very, very clearly outlines the roles, 25 responsibilities and duties of the RCC. So

Page 81

1 that is out there for all organizations and
 2 agencies that may be involved in SAR
 3 operations. That manual has a very
 4 comprehensive description of the various
 5 responsibilities.
 6 EARLE, Q.C.:
 7 Q. But in terms of the interface with a private
 8 sector provider, there is no document as such?
 9 COLONEL DROVER:
 10 A. Not that I'm aware.
 11 EARLE, Q.C.:
 12 Q. I'm sure you're familiar with Defence R & D
 13 Canada and it's my understanding that in 2008,
 14 they did a study on the availability of
 15 Cormorants and they found with the fleet that
 16 the availability was less than 50 percent. Is
 17 that your understanding as well?
 18 COLONEL DROVER:
 19 A. I'm not familiar with the report that you're
 20 referring to.
 21 EARLE, Q.C.:
 22 Q. I see. There was a report on the availability
 23 of the CH149 Cormorant fleet and an ideal
 24 sparing situation.
 25 COLONEL DROVER:

Page 82

1 A. Sorry, I can't speak to that without seeing
 2 the document.
 3 EARLE, Q.C.:
 4 Q. Okay. Well, you're not familiar with the
 5 report -
 6 COMMISSIONER:
 7 Q. Excuse me, Mr. Earle. Do you mean it's
 8 availability on any given day or any given
 9 period?
 10 EARLE, Q.C.:
 11 Q. As I understand this report, Mr. Commissioner,
 12 they basically say at any given point in time,
 13 less than 50 percent of the Cormorant fleet is
 14 available.
 15 COMMISSIONER:
 16 Q. I see, okay.
 17 EARLE, Q.C.:
 18 Q. And I just ask you, can you comment on that,
 19 as to whether that would be the practical
 20 situation? It seems to line up with your
 21 evidence that there's -- the goal is one
 22 aircraft on standby, and we have three at
 23 Gander.
 24 COLONEL DROVER:
 25 A. That is correct, and that's as I previously

Page 83

1 provided that information this morning. So,
 2 and that's across all our operating squadrons.
 3 The goal, the objective, the standard is to
 4 maintain a primary standby aircraft. The
 5 report you're referring to, I just simply
 6 don't have that report, so I can't comment on
 7 it.
 8 EARLE, Q.C.:
 9 Q. Well, just in our -- in terms of our
 10 understanding of the landscape, what would be
 11 normally available, given the requirements of
 12 maintenance, both -- you know, I mean there's
 13 -- I gather there's short term maintenance and
 14 there's maintenance that requires a helicopter
 15 to go over to IMP in Halifax and that sort of
 16 stuff -- that what would be available would be
 17 the one helicopter on standby?
 18 COLONEL DROVER:
 19 A. That is the level of service that is provided
 20 and that's the objective is to ensure that
 21 that one aircraft is on standby.
 22 EARLE, Q.C.:
 23 Q. Okay. Now just so we can get a handle on
 24 this, can you give us some sense of the
 25 capacity of a Cormorant, in terms of literally

Page 84

1 being able to pull people out of the water and
 2 get them back to land? And I think, given
 3 that we're dealing with the North Atlantic, I
 4 think we'll have to assume that some degree of
 5 medical attention will be necessary to these
 6 people. I mean, realistically, are we talking
 7 about a Cormorant that -- let's say it leaves
 8 Gander full of fuel and it's headed to a spot
 9 sort of equidistant from land and the offshore
 10 installation, sort of the worst possible
 11 location in terms of landing resources. Can
 12 you give us some sense of the capacity of that
 13 Cormorant to take -- and its crew, the five-
 14 person crew, to take people out of the water,
 15 get them on board and provide some level of
 16 medical attention, before they have to say
 17 "okay, we're leaving site. We're heading to
 18 land"?
 19 COLONEL DROVER:
 20 A. In answer to that question, I will take you
 21 back to the last portion of my presentation
 22 yesterday where basically we talked a little
 23 bit about the anatomy of a SAR mission. I did
 24 mention, and I think it's worth repeating,
 25 that each and every individual SAR mission

Page 85	Page 87
1 will differ from the last and from all others. 2 There's no template. There's no textbook sort 3 of explanation of what that would be entailed. 4 I also, in that portion of my briefing, 5 described the routine that takes place and 6 anything but routine, of course, but there's 7 certain deliberate sort of planning steps and 8 on route steps that take place. In a 9 situation scenario you describe -- now let me 10 sort of say there are scenarios that would be 11 impossible to deliver a SAR response to. So 12 if something happened 600 miles at sea, my 13 helicopter simply does not have range. So I'd 14 have to look for a different solution. So 15 that would be surface vessels, to some extent 16 my long range Hercules airplane dropping 17 equipment at that incident site. 18 The one you describe, again if you recall 19 that sequence of events that takes place, the 20 crew, in conjunction with the help of RCC, 21 would have to make a plan of how to get to the 22 scene as quickly as possible with sufficient 23 fuel to be able to extract the number of 24 people in the water that was reported and then 25 return to a safe place for recovery, be it the	1 the water. I don't have a seating limit, nor 2 do we prescribe one. They are operational 3 decisions that would be made at the scene to 4 determine how best to effect the successful 5 rescue. Perhaps there's a vessel that can 6 sort of close and rescue or transport some of 7 the people as well. Very difficult question to 8 give you precise answer, but I think it speaks 9 to what service we do provide is one that is 10 robust, flexible, capable and every effort 11 will be made to provide that rescue service in 12 the least amount of time. 13 One last point. I think it's important 14 to note that a sequence of extracting an 15 individual does take time. So the more folks 16 that are in harm's way, the longer it's going 17 to take to execute that process of getting 18 them in the aircraft. It's not like you can 19 land and allow everybody to enter the 20 aircraft. So I'm not sure that's the answer 21 you're looking for, but I think it is 22 important to explain the dynamics here. 23 EARLE, Q.C.: 24 Q. Well, let me ask you another question, and I 25 appreciate that every SAR mission is defined
Page 86	Page 88
1 oil rig or shore base. There may be 2 situations where it's more beneficial to do a 3 refuelling stop on route. You lose some time, 4 but then you can prosecute -- you can do the 5 extraction completely when you get to the 6 site. It all depends on what the survival 7 situation is about. 8 In my briefing yesterday, I also 9 described the importance of being able to 10 outlast your environment or your circumstance. 11 So that's called survival. Are the 12 individuals that are being extracted in a life 13 raft situation? Maybe that's not quite as 14 urgent as if you were in just the immersion 15 suits in open water. So all those factors go 16 into it. 17 The capacity of the aircraft, every 18 aircraft has limitations. This Cormorant 19 actually is a very large aircraft and, as I 20 said, I showed you the statistics yesterday. 21 18 passengers we can get aboard the aircraft 22 with proper configuration. In a case of an 23 emergency, every effort will be made, given 24 the circumstance of fuel availability, et 25 cetera, et cetera, to extract all that are in	1 by its own circumstances, but what we're 2 looking at here is helicopter transportation 3 safety, and we know that the helicopters that 4 are used here have about 18 passengers on 5 them, similar to what you said was the 6 passenger capacity of the Cormorant, and what 7 I'm hearing from the evidence that I've heard 8 from you about the -- you know, the fact that 9 medical attention is provided. We have two 10 pilots, flight engineer and two SAR 11 technicians on one of these things. That in 12 the best possible scenario for a helicopter 13 going down on its way to the Hibernia Platform 14 or the Terra Nova FPSO or one of the drill 15 rigs, in the best possible scenario of a 16 controlled ditch with a helicopter being 17 tasked from Cougar, with a helicopter being 18 tasked from Gander and maybe another one being 19 tasked from Greenwood, although I think the 20 time frame engages the possibility of other 21 resources, really if we're talking about 22 getting 18 people out of the water, this is 23 going to require marine resources to be 24 engaged that if we're thinking in terms of 25 helicopters are going to go out and pluck all

Page 89	Page 91
1 these people out of the water and get them 2 back to land, we're dreaming in technicolour. 3 That's the message I'm getting. Now am I - 4 COLONEL DROVER: 5 A. That's - 6 EARLE, Q.C.: 7 Q. - am I out to lunch with that? 8 COLONEL DROVER: 9 A. I wouldn't say that you're out to lunch, but - 10 EARLE, Q.C.: 11 Q. Or is that a realistic view? 12 COLONEL DROVER: 13 A. - I didn't -- I don't think I left that 14 impression, at least framed that way, and if I 15 did, I would take exception a little bit to 16 what you're suggesting. Even though, yeah, 17 there are limits to the ability of any 18 particular vessel or craft to perform rescue 19 operations, you know, in the scenario that you 20 describe, I think with the combined efforts of 21 more than one helicopter, the rescue of 18 22 individuals, it's not beyond reason at all, 23 especially if -- well, if you're dealing with 24 medical situations, that gets more complex. 25 But every -- as I mentioned, every SAR has its	1 that's what they're paid to do is to put that 2 plan together to make it work. 3 EARLE, Q.C.: 4 Q. So are you suggesting that a Hercules would 5 actually parachute SAR techs into the water 6 with life rafts? 7 COLONEL DROVER: 8 A. If need be, absolutely. 9 EARLE, Q.C.: 10 Q. So a totally air-based rescue of 18 people is, 11 in your view, feasible? 12 COLONEL DROVER: 13 A. We don't use the word feasible too often in 14 search and rescue. It's more are we capable 15 of doing it and we will make every effort, 16 given the equipment and the circumstances, to 17 effect a very successful rescue. 18 EARLE, Q.C.: 19 Q. Can you give us an idea -- and again, you 20 know, it's one thing if it's flat calm. It's 21 another thing if you've got a different sea 22 state. Can you give us an idea of how long it 23 takes, on average, to get somebody out of the 24 water from the point of time that a helicopter 25 is overhead and, you know, technicians ready
Page 90	Page 92
1 own dynamics. But in terms of an extraction 2 from the ocean reaches, I think Cougar's 3 capability to do that and ours would be able 4 to accommodate or deal with large numbers. 5 There's other -- again, we focus that a 6 response would be an isolated helicopter and 7 that's one scenario. That's certainly 8 possible, but in a case where you had a large 9 fishing vessel that may have a number of 10 people on board or a helicopter, whatever, and 11 if it exceeded the capacity of the only 12 helicopter that was available to extract 13 without having to return and return to the 14 scene, we can't discount the fact that there 15 may be other ways to increase that survival 16 dynamic and I referred to having your 17 Hercules, which goes faster and will probably 18 be there sooner, drop their SAR techs as well 19 as life rafts, so they can actually start 20 improving the circumstances for survival, 21 pending the hoisting or the extraction from 22 the helicopter. So it's not sort of a success 23 or failure. Every SAR has all these dynamics, 24 and then I really would like to take you back 25 to the rescue coordinating centre, because	1 to go down to get that person? 2 COLONEL DROVER: 3 A. Again, it's very dependent on the 4 circumstance, the weather conditions, 5 day/night operations, but we're talking a 6 matter of minutes to get the aircraft in 7 location. Generally speaking, a SAR tech will 8 be lowered down to the individual in the water 9 and then there'll be a double, sort of, hoist 10 backwards single, and time it takes to get 11 with the individual and do the harnessing, 12 connecting up, minutes, but not extensive 13 minutes. 14 EARLE, Q.C.: 15 Q. Pardon? 16 COLONEL DROVER: 17 A. Minutes, but - 18 EARLE, Q.C.: 19 Q. But not? 20 COLONEL DROVER: 21 A. Not -- five minutes, perhaps. I'm not going 22 to state an exact time, because it's very 23 scenario driven, but it takes a minimum amount 24 of time, but it does take time. 25 EARLE, Q.C.:

Page 93	Page 95
1 Q. We've heard from you about the high level of 2 training of the SAR techs and obviously this 3 is something that doesn't -- you don't train - 4 - you're trained and you never have to do any 5 more training. It's a continuing period of 6 time devoted to SAR tech training. Could you 7 give us some idea of the number of hours a 8 fully trained SAR tech would engage in on an 9 annual basis, the number of hours training to 10 keep himself or herself current and up to 11 date? 12 COLONEL DROVER: 13 A. And as I did brief yesterday, I talked about 14 the requirements, the annual sort of 15 proficiency checks and all that, those 16 requirements, the exams that maintain and 17 ensure their proficiency. I did not specify 18 the number of training hours. They obviously 19 can maintain proficiency in two methods 20 essentially is the training and also SAR 21 operation. So any time you're on SAR 22 operations, you actually are being -- sort of 23 increasing your proficiency. In terms of the 24 absolute numbers of training hours dedicated 25 to a crew, I do not have that number. I can	1 like to Colonel Drover. 2 COMMISSIONER: 3 Q. Okay, thank you. And counsel for the Estates 4 of the pilots, Ms. O'Brien? 5 COLONEL DROVER, EXAMINATION BY MS. KATE O'BRIEN 6 MS. O'BRIEN: 7 Q. Yes, thank you, Commissioner. Thank you, 8 Colonel Drover. I'm Kate O'Brien. I'm here 9 representing the families of the deceased 10 flight crew from the Cougar flight. I don't 11 have very many questions, but I do have a 12 couple. The first is you have talked a fair 13 bit about having the two postures, the 30- 14 minute posture and the two-hour posture, and I 15 understand that the two-hour posture is for 16 after hours and holidays, but I just -- I 17 don't know if you've given us a clear 18 statement of what's considered after hours. 19 What are the -- you know, when do you switch 20 over from 30 minutes to two hours? 21 COLONEL DROVER: 22 A. Generally speaking, during work days, it's 23 8:00 to 4:00. 24 MS. O'BRIEN: 25 Q. So 8 a.m. to 4 p.m.?
Page 94	Page 96
1 certainly find out for you. That's pretty 2 straight. 3 EARLE, Q.C.: 4 Q. I think it would be helpful for this process, 5 because - 6 COLONEL DROVER: 7 A. Yeah, that's -- sure. 8 EARLE, Q.C.: 9 Q. - if we're going to be looking at what others 10 do, we need a standard to measure them 11 against. 12 COLONEL DROVER: 13 A. Yeah. We can provide that information for 14 you. 15 EARLE, Q.C.: 16 Q. Those are my questions. Thank you very much, 17 Colonel Drover. 18 COLONEL DROVER: 19 A. Thanks. 20 COMMISSIONER: 21 Q. Okay, thank you, Mr. Earle. Now, counsel for 22 the families. Is Mr. Martin here? Ah, yes. 23 Sorry, I know you're not Mr. Martin, but - 24 MS. BATTCOCK: 25 Q. That's okay. We have no questions, but we'd	1 COLONEL DROVER: 2 A. Right. That's 30 minutes. 3 MS. O'BRIEN: 4 Q. And that's Monday through Friday? 5 COLONEL DROVER: 6 A. Correct. 7 MS. O'BRIEN: 8 Q. Okay. So on weekends, it is the two hour 9 time? 10 COLONEL DROVER: 11 A. Correct. 12 MS. O'BRIEN: 13 Q. And statutory holidays also, two hour time? 14 COLONEL DROVER: 15 A. Correct. 16 MS. O'BRIEN: 17 Q. Okay. 18 COLONEL DROVER: 19 A. And even though we're not, again, getting much 20 deeper into the policy that surrounds that, I 21 do like to restate -- I will restate and I've 22 said it several times in the past day or so, 23 those are the levels of service that we are 24 obliged to achieve, but we do, in terms of 25 practical application, much better. Average

Page 97	Page 99
1 70 minutes to flight time wheels up, as 2 opposed to two hours. 3 MS. O'BRIEN: 4 Q. Yes, I understood you mentioned that 5 yesterday. 6 COLONEL DROVER: 7 A. Okay. 8 MS. O'BRIEN: 9 Q. Okay. The next question I have, if we could 10 perhaps go to slide 71 of your presentation? 11 So I understand -- and let me preface this, 12 Commissioner, by saying I don't intend to get 13 into details of what DND should be doing. I 14 just want to get a bit more information about 15 what's going on currently. So I think my 16 questions will be within boundary, but if not, 17 someone will tell me. 18 You said yesterday that you certainly -- 19 you don't do any training for, say, Cougar 20 Helicopters and you don't do any auditing of 21 their SAR capabilities, and I understand that. 22 I just want to know, you know, on this slide, 23 you've indicated a number of the commercial 24 resources that are known to your RCC. Do you 25 have any information from them about what kind	1 they will make, whether to say stop what 2 Cougar is doing and have their own -- have 3 your own DND SAR forces take over, would 4 include an analysis of what personnel Cougar 5 has on board, what equipment they have on 6 board? Can you just give us a little bit more 7 information really about, you know, how that 8 happens when you have to work hand to hand 9 with, say, you know, a private SAR provider? 10 COLONEL DROVER: 11 A. Basically what you describe is the way it 12 would normally happen. Again, each SAR is 13 different, so a different sort of set of 14 dynamics, but essentially when the rescue 15 coordinating centre is doing the coordination 16 of an event, all those participants in that 17 activity are basically in communication with 18 the JRCC and maybe if, in the case of Cougar 19 were out doing a normal mission, a passenger 20 aircraft for instance, and if it was 21 potentially useful or helpful in a search 22 situation, an emergency somewhere else, the 23 RCC would contact that airplane and say "have 24 you got a full cabin?" or "are you out of 25 gas?" and so those kinds of coordinated -- but
Page 98	Page 100
1 of equipment they have, what kind of training 2 their personnel have? Do you have that 3 information? Does your RCC have that 4 information readily available at all times? 5 COLONEL DROVER: 6 A. Yes, they do, and again, that's part of what 7 the RCC, the coordination aspect. They 8 maintain databases, current communications, 9 telephone numbers, and they are fully aware of 10 what resources and the status, if you will, 11 the state of those resources within their 12 region, and similar situation for the marine 13 environment, for all the vessels that are 14 being tracked and things. So that is kept up 15 to date. 16 MS. O'BRIEN: 17 Q. Okay, and the reason I was asking that 18 question, perhaps you can tell me if this is 19 why you have that information is if you have a 20 case where your forces have responded, but say 21 one of the -- say a Cougar helicopter happened 22 to be the first one on the scene, so they have 23 started making -- taking rescue steps, shall 24 we say, recovery steps, I take it when your 25 personnel take command, one of the decisions	1 again, that is the essence of coordination is 2 to -- for the RCC to figure out what's 3 available and how that availability can 4 influence the mission itself. So it's a 5 communication flow through usually the JRCC. 6 If there is an on-scene commander, which I had 7 mentioned yesterday, that would be the local 8 authority, if you will, working on behalf of 9 JRCC to coordinate all those assets. 10 MS. O'BRIEN: 11 Q. Okay. So what I'm hearing is some information 12 they would get sort of on the fly, like how 13 many do you have on board right now, what's 14 your fuel capacity; but some information they 15 would already have in terms of what equipment 16 they would expect the civilian or the 17 commercial aircraft to be carrying. 18 COLONEL DROVER: 19 A. That's correct, yes. 20 MS. O'BRIEN: 21 Q. Yesterday in response to some of Ms. Fagan's 22 questioning you went over a little bit about 23 what your, what your flight crew, what your 24 DND staff flight crew would wear, in terms of 25 equipment, safety equipment and whatnot and I

Page 101	Page 103
1 just want to make sure I have it clear. Your- 2 -I'm going to speak really of your flight 3 crews, your pilot and co-pilot as opposed to 4 your SAR techs, they would be wearing some 5 sort of a--and I'm also going to say, I'm 6 going to talk about a marine environment like 7 we have. 8 COLONEL DROVER: 9 A. Sure, I understand that. 10 MS. O'BRIEN: 11 Q. So let's talk about, you know, what we're 12 concerned with here, the Newfoundland 13 Offshore, so they would typically be wearing 14 some sort of emersion suit? 15 COLONEL DROVER: 16 A. That's correct. 17 MS. O'BRIEN: 18 Q. And is that--do you know if there is anybody 19 certifying that emersion suit or how is that 20 emersion suit selected? Are you able to tell 21 us that? 22 COLONEL DROVER: 23 A. I can't speak on our procurement process, 24 certainly it's the same as we acquire aircraft 25 or any other area equipment and there are	1 COLONEL DROVER: 2 A. Only recently. 3 MS. O'BRIEN: 4 Q. We all are here now definitely, so that is--so 5 I just want to make sure that what you're 6 talking about what your pilots carry, this 7 compressor breathing system is a similar 8 system to the HUEBA system that has been 9 discussed at this Inquiry as to what the 10 passengers area carrying currently? 11 COLONEL DROVER: 12 A. Right and I believe there's a lot of 13 commonality there, but maybe if I could add to 14 our submission of information with the suit, I 15 could also give you characteristics of our 16 breathing apparatus. 17 MS. O'BRIEN: 18 Q. Thank you, that would be helpful. 19 COMMISSIONER: 20 Q. Thank you. 21 MS. O'BRIEN: 22 Q. And just to be clear on that you said that 23 your pilots, your flight crew, their system is 24 somehow integrated into their suit or their 25 on-body equipment.
Page 102	Page 104
1 certain specifications that it has to meet and 2 there's the manufacturers that are selected. 3 If it's of interest to the Inquiry, I can get 4 some more detailed information on the 5 manufacturer, the qualify of our suit and it 6 may well be something of interest, I just 7 don't have it here. 8 MS. O'BRIEN: 9 Q. Okay, I think I would be interested in that 10 and thank you very much, because of course, 11 we're looking to see what, you know, what 12 Cougar's pilots are wearing - 13 COLONEL DROVER: 14 A. I understand. 15 MS. O'BRIEN: 16 Q. And having some information to do a comparison 17 on would be very helpful. I understood that 18 they wear a life vest as well and that they 19 carry, you I think referred to a compressed 20 air breathing system. I don't know if you use 21 the term "HUEBA"? 22 COLONEL DROVER: 23 A. No. 24 MS. O'BRIEN: 25 Q. Okay, are you familiar with that term?	1 COLONEL DROVER: 2 A. That's my understanding. I'm going to confirm 3 that, but I believe that to be the case and 4 that will be included in the information we 5 provide. 6 MS. O'BRIEN: 7 Q. Thank you very much. And I think yesterday 8 that you said that they do not, your flight 9 crew do not carry a personal locator beacon or 10 a PLB? 11 COLONEL DROVER: 12 A. I'm going to confirm that, it's not on the 13 suit and in some circumstances they may have a 14 locator beacon or a radio with them, but I'll, 15 again, get you the precise answer. There's no 16 homing device associated with the suit though. 17 MS. O'BRIEN: 18 Q. Okay, and you didn't mention helmets. Do your 19 pilots wear helmets? 20 COLONEL DROVER: 21 A. Yes, they do. 22 MS. O'BRIEN: 23 Q. Always? 24 COLONEL DROVER: 25 A. I believe so, I think pretty generally, you

1 know, yeah.

2 MS. O'BRIEN:

3 Q. Okay. Those are all my questions, thank you
4 very much and thank you for your presentation.

5 COLONEL DROVER:

6 A. Thank you.

7 COMMISSIONER:

8 Q. Thank you Ms. O'Brien. Now, Mr. Tarlton, have
9 you any questions to wind up the matter?

10 MR. TARLTON:

11 Q. Commissioner, we don't have any questions,
12 thank you very much.

13 COMMISSIONER:

14 Q. Thank you. Well I want to express my thanks
15 to you, Colonel Drover, for coming and I would
16 ask you to convey to the Chief of Defence
17 Staff, my thanks to him for responding really
18 in the way he did to my request that you
19 assist us really in matters of search and
20 rescue without, I hope, violating the Terms of
21 Reference under which I work. I would also
22 say to counsel and those present, I think that
23 yesterday and today have provided very, very
24 valuable information that get right down into
25 the heart of search and rescue, which I will

1 have to get down to and look forward to
2 getting down to when a report--when I'm
3 writing a report. And I would also express my
4 thanks to counsel and to you, Mr. Harris,
5 although a senior counsel, you're not here
6 today in that capacity, but to all of you for
7 helping us get vital information without
8 violating the Terms of Reference under which I
9 must operate. So thank you very much indeed.
10 Now, Mr. Roil, Ms. Fagan, the next presenter
11 or next witness is Cougar, aren't they?

12 MS. FAGAN:

13 Q. Cougar and it's Tuesday, so that's a little
14 bit of a change from the normal week. We
15 start at Tuesday at 9:30, not Monday. There
16 won't be any hearing on Monday, so it's
17 February 2nd, which is a Tuesday and we're
18 scheduled to run from Tuesday to Friday, so
19 that would be four days, if the evidence takes
20 four days.

21 COMMISSIONER:

22 Q. Yes, yes. Okay, thank you very much. We'll
23 adjourn until Tuesday morning at 9:30.

24 Upon conclusion at 12:05 p.m.

1 CERTIFICATE

2 We, the undersigned, do hereby certify that
3 the foregoing is a true and correct transcript of a
4 hearing heard on the 28th day of January, 2010 at
5 Tara Place, 31 Peet Street, Suite 213, St. John's
6 Newfoundland and Labrador and was transcribed by us
7 to the best of our ability by means of a sound
8 apparatus.
9 Dated at St. John's, NL this
10 28th day of January, 2010
11 Cindy Sooley
12 Discoveries Unlimited Inc.
13 Judy Moss
14 Discoveries Unlimited Inc.

-&- & [2] 59:23 81:12 --- -I'm [1] 101:2 -1- 100 [2] 12:15,21 102 [1] 72:24 12:05 [1] 106:24 12th [4] 3:18 52:22 78:14 80:12 15 [1] 57:19 18 [5] 86:21 88:4,22 89:21 91:10 1944 [1] 35:11 1983 [3] 35:23,24 36:14 1985 [3] 40:21 62:5 63:2 -2- 2 [1] 24:6 20 [1] 8:18 2006-2007 [1] 72:21 2008 [2] 71:20 81:13 2010 [3] 1:1 107:4,10 2121 [1] 76:17 213 [1] 107:5 219 [2] 72:22 73:23 24-and-7 [1] 14:6 24-hour [2] 12:10 13:23 24-hour-a-day [1] 11:22 24/7 [1] 45:11 25 [1] 33:12 28 [1] 1:1 28th [2] 107:4,10 2nd [1] 106:17 -3- 3/15 [1] 72:18 30 [9] 4:22 23:7 24:6,15 33:12 57:22 95:13,20 96:2 30-minute [1] 23:5 31 [1] 107:5 365 [1] 45:11 365-day-a-year [1] 11:22 -4- 4 [1] 95:25 45 [1] 57:21 46.6 [1] 72:24 4:00 [2] 67:20 95:23 -5- 50 [2] 81:16 82:13	54 [1] 35:18 56 [1] 40:18 -6- 6 [4] 37:19 38:15 65:18 66:4 600 [2] 45:9 85:12 -7- 7-day-a-week [1] 11:22 70 [2] 23:25 97:1 71 [1] 97:10 7:00 [1] 57:20 -8- 8 [1] 95:25 8:00 [1] 95:23 -9- 9401 [2] 25:4,5 9:00 [1] 57:21 9:30 [2] 106:15,23 -A- a.m [1] 95:25 abide [1] 27:23 abilities [1] 34:17 ability [7] 18:13 27:3 36:24 73:14 76:7 89:17 107:7 able [21] 5:7 11:21 12:9 13:17 15:11,12 16:4 17:16 18:23 24:17 26:4 39:10 56:2 69:5 70:4 80:13 84:1 85:23 86:9 90:3 101:20 aboard [1] 86:21 above [1] 69:3 absolute [2] 33:19 93:24 absolutely [4] 20:19 55:13 63:10 91:8 accept [2] 70:8 71:6 access [1] 21:5 accessible [1] 17:18 accident [1] 6:14 acclaim [2] 40:24 41:1 accommodate [1] 90:4 accompanying [1] 36:6 accomplished [1] 18:20 accord [1] 49:13 achieve [1] 96:24 achieved [1] 41:3 acknowledgement [1] 9:11 acquire [3] 9:17 24:18 101:24 acquired [1] 10:21 act [3] 18:13,24 41:5 acting [2] 51:8 77:22 action [2] 43:16 79:4	actions [2] 3:18 49:13 actively [1] 56:22 activities [4] 8:11 13:14 22:16 44:2 activity [8] 4:14 5:3 13:12 27:25 34:20 43:15 47:16 99:17 actual [7] 3:9 4:20 5:3 15:4 32:20 53:5 75:13 add [5] 6:25 14:4 26:4,5 103:13 addition [1] 45:7 additional [1] 15:12 address [3] 2:20 29:15 42:24 addressed [2] 38:9 65:7 adequate [1] 67:19 adjourn [1] 106:23 Administration [1] 35:23 admiration [2] 9:1 76:6 admitted [2] 61:18 62:3 advanced [1] 17:21 advised [1] 53:19 affect [1] 26:23 Afghanistan [2] 75:20 75:21 afterwards [1] 59:15 again [24] 13:13 27:22 28:22 32:22 37:5 41:10 43:10 49:5 51:13 53:4 54:15 62:24 72:15 73:14 74:20 85:18 90:5 91:19 92:3 96:19 98:6 99:12 100:1 104:15 against [3] 63:5 76:25 94:11 agencies [5] 4:3 24:22 51:16 69:1 81:2 agency [1] 22:2 ago [1] 5:18 agree [3] 38:21 45:13,19 agreement [2] 29:13 80:1 aiding [1] 19:1 air [15] 3:10 4:4 11:21 25:9 31:11,18,19 34:6 34:11 46:23 52:18 55:15 56:11 74:17 102:20 air-based [1] 91:10 airborne [3] 22:10,21 22:22 aircraft [94] 3:23 4:1 5:13,16,16,24 9:24 10:1 10:4,5,8,11,15,19 11:12 11:17 12:5,5,9,10,15,16 12:18,22,23,25 13:8,11 13:16,20 14:19,24 15:3 15:3,5,10,25 16:5,7,12 18:9,22,22 19:3,16,19 20:1 22:9,17,19 23:9,13 23:15,18 24:1,25 25:1,3 25:8,24 27:3,5,14 28:4,7 28:12,19,20,24 29:3 31:12 43:6 47:5,17 48:11	48:17,20 53:4 55:2,4 75:3 82:22 83:4,21 86:17 86:18,19,21 87:18,20 92:6 99:20 100:17 101:24 aircrafts [1] 11:1 airframe [1] 11:24 airplane [3] 16:11 85:16 99:23 alarm [1] 23:10 alert [1] 15:25 alertness [1] 52:4 allocated [2] 31:17 65:22 allocation [1] 45:5 allow [2] 70:8 87:19 allows [1] 5:23 always [3] 33:16 45:23 104:23 among [1] 79:24 amount [2] 87:12 92:23 analysis [4] 10:7 56:23 67:25 99:4 anatomy [1] 84:23 annual [3] 72:20 93:9,14 anomalies [1] 6:10 answer [18] 11:7 39:1,1 39:7,11 40:3,9 48:25 52:24 53:16 54:21 61:4 73:11 80:19 84:20 87:8 87:20 104:15 answered [2] 38:10 79:18 answers [2] 39:18 64:14 anticipated [1] 70:19 anyway [1] 15:15 apparatus [2] 103:16 107:8 appeared [2] 2:17 49:1 applicable [1] 47:10 application [1] 96:25 applied [1] 68:19 appreciate [1] 87:25 appropriate [6] 10:14 19:21 47:10 66:13 76:9 79:2 approved [2] 4:13,14 April [1] 40:20 architecture [1] 8:15 Arctic [1] 31:4 area [7] 18:14 19:1 20:19 43:13,22 101:25 103:10 areas [1] 29:14 Argentia [1] 41:20 arose [2] 3:3 14:18 arrangements [1] 46:9 arrived [1] 4:22 arrives [1] 32:9 aside [1] 8:12 aspect [2] 13:21 98:7 assemble [2] 23:13,18 assembled [1] 4:2 assess [2] 36:10,15	assessing [1] 36:23 asset [4] 20:22 45:5 47:9 49:3 assets [20] 42:12 45:2 47:9 48:24 50:17,25 51:9 52:1 53:21 54:1,17 59:19 64:20,23 65:8 66:2 73:7 78:4 80:13 100:9 assist [4] 18:15,23 19:17 105:19 assistance [7] 17:18 20:2 20:11,21 21:4,24 35:5 associated [2] 75:17 104:16 assume [4] 20:4 23:2 79:8 84:4 assuming [4] 21:2 31:19 40:20 73:5 assure [1] 11:12 Atlantic [1] 84:3 attention [4] 34:23 84:5 84:16 88:9 auditing [1] 97:20 auditor [5] 60:4 63:21 68:1 72:5,7 augment [1] 13:16 Australia [1] 57:17 authorities [2] 19:2 67:11 authority [9] 18:3,16 19:6 21:2,6,14,23 79:12 100:8 authorize [1] 21:2 auto [1] 10:25 automatic [1] 74:25 automatically [2] 32:11 49:9 Auxiliary [2] 4:4 18:11 availability [15] 15:9 15:10 20:23 31:12,15 33:2 59:14,19 67:3 81:14 81:16,22 82:8 86:24 100:3 available [30] 4:7 5:12 5:13 11:4,5,9,11 12:6,10 12:18,19,22 13:1,7,20 13:25 33:15,16 41:13 54:23 55:11 61:19 62:3 76:22 82:14 83:11,16 90:12 98:4 100:3 average [4] 13:24 23:24 91:23 96:25 aviation [1] 18:17 aware [14] 39:8 40:5,10 42:2,6 51:12 52:20,25 56:25 57:3 67:5 68:13 81:10 98:9 away [3] 22:18 23:4 24:1 -B- B [1] 1:10 back-to-back [1] 12:1 background [2] 8:12 72:16
--	---	--	---	--

backing [1] 67:23 backup [3] 15:17 16:11 51:8 backwards [1] 92:10 Banks [2] 36:1 41:22 barriers [1] 14:23 base [7] 5:16,22 23:23 43:5,6 80:13 86:1 based [3] 34:13 69:24,25 bases [3] 14:16 55:3 73:6 Basin [1] 45:9 basing [1] 43:22 basis [13] 11:23 12:10 13:14,15 20:16 36:2,11 36:17 41:14 43:11,22 45:10 93:9 BATTCK [1] 94:24 beacon [2] 104:9,14 becomes [4] 14:5 16:15 25:5 77:25 becoming [1] 8:14 began [1] 76:6 beginning [1] 7:13 behalf [4] 2:12 8:6 30:24 100:8 behind [2] 64:15 65:14 believes [1] 51:3 beneficial [1] 86:2 best [5] 26:23 87:4 88:12 88:15 107:7 better [4] 8:10 28:16 33:21 96:25 between [8] 35:7 39:12 44:21 53:1 57:20 73:22 79:20 80:5 beyond [4] 65:17 68:7 73:14 89:22 bio [1] 75:16 bit [10] 35:7 46:13 63:20 84:23 89:15 95:13 97:14 99:6 100:22 106:14 board [10] 59:24 63:17 67:10 69:2 70:25 84:15 90:10 99:5,6 100:13 Board's [1] 67:25 born [1] 35:12 boundary [1] 97:16 break [2] 60:19 61:7 breathing [3] 102:20 103:7,16 brief [3] 8:7 9:5 93:13 briefed [6] 6:3 17:11 18:20 24:21 32:8 47:18 briefing [3] 43:4 85:4 86:8 briefings [1] 23:16 briefly [3] 25:14 31:9 74:4 bring [4] 15:5 32:14,25 76:23 brings [2] 4:6 27:7 British [1] 24:6 Brown [3] 7:12 30:6,7	business [1] 43:17 -C- C-NLOPB [3] 1:16 7:5 39:13 cabin [1] 99:24 Cabinet [1] 69:8 calculated [1] 73:12 calm [1] 91:20 Canada [30] 1:21 2:12 7:11 17:5,15 18:13 24:4 24:21 27:13,16 28:3 37:21 40:22 44:24 45:2 45:3 55:22 59:24 62:4 62:22,23 64:16 65:20 66:7 67:10 70:25 71:22 72:17 73:6 81:13 Canada's [1] 27:18 Canadian [6] 18:4,6,11 35:22 72:23 73:1 cancel [1] 28:15 capabilities [5] 17:4 34:17 64:24 74:5 97:21 capability [13] 4:19 13:2 17:23,25 20:24 26:12 33:5 34:3,12 35:3 51:19 71:23 90:3 capable [5] 13:5 41:25 65:16 87:10 91:14 capacity [10] 30:14,21 66:9 83:25 84:12 86:17 88:6 90:11 100:14 106:6 CAPP [1] 7:12 captain [1] 75:3 care [1] 8:4 career [4] 75:15,17,25 76:5 careers [1] 8:14 carry [4] 22:25 102:19 103:6 104:9 carrying [2] 100:17 103:10 CASARA [2] 4:5 18:11 case [15] 14:20 15:7 24:16 45:23 51:13 70:7,20 72:21 73:9 77:25 86:22 90:8 98:20 99:18 104:3 cases [1] 49:3 casualty [1] 18:15 category [2] 74:2 75:5 Cecily [2] 7:15,22 centre [6] 20:21 28:23 50:16 78:24 90:25 99:15 CEP [2] 76:13,17 certain [10] 10:2 13:9 15:13 18:19 43:7 50:21 65:23 69:22 85:7 102:1 certainly [23] 3:8,13 10:2 14:20 18:25 19:25 26:16 44:13 45:21 49:20 62:10 63:4 66:12 68:13 69:23,25 70:20 76:3,3 90:7 94:1 97:18 101:24 CERTIFICATE [1]	107:1 certified [1] 10:25 certify [1] 107:2 certifying [1] 101:19 cetera [3] 52:18 86:25 86:25 CF [2] 3:6 21:24 CF's [1] 72:1 CH149 [1] 81:23 challenges [1] 26:16 chance [1] 60:25 change [3] 11:2 25:19 106:14 changing [1] 8:14 characteristics [1] 103:15 chart [1] 9:25 checks [1] 93:15 chief [5] 3:10 56:11 72:3 74:21 105:16 chucks [1] 22:18 Cindy [1] 107:11 circumstance [4] 80:12 86:10,24 92:4 circumstances [14] 8:23 15:11,13 17:7 18:19 20:9 25:18 46:15,16 53:1 88:1 90:20 91:16 104:13 civilian [8] 11:1 18:10 19:16 21:4,5,14,15 100:16 civilians [3] 11:5 38:5,8 clarification [1] 3:15 clarifications [2] 2:20 6:16 clarified [1] 50:24 clarify [4] 2:15 3:2 31:5 61:1 Claxon [1] 23:10 clear [5] 19:5 21:10 95:17 101:1 103:22 clearance [1] 24:16 clearly [6] 1:17 23:7 47:3 51:4 78:16 80:24 close [4] 23:8,23 48:15 87:6 closer [4] 43:16,23 48:7 50:9 closest [1] 31:14 co [2] 31:19 44:22 co-ordinate [1] 47:2 co-pilot [1] 101:3 coast [13] 4:3,4 8:13 18:4 18:6,11 35:25 45:7 57:16 57:16 73:1,20,20 coastal [1] 17:15 COLGA [1] 41:11 COLGA/DND [1] 41:9 Colonel [159] 2:4,15,24 2:25 7:15,18,19,22 9:9 9:20 11:6 12:3 14:14 15:22 16:22 17:9 18:18 19:7,11,22 20:17 21:7	21:11,17,21 22:8,13 23:6 24:7,11,19 25:20 26:15 27:15,20 28:5,11 29:6,8 29:24 30:11,16 31:22 32:4 33:18,25 34:8 38:2 38:10 39:1,4 40:4 42:10 42:22 43:2 44:5,10 45:20 46:21 48:9 49:12,25 50:5 50:11,18 51:11 52:7 53:3 53:15,24 54:12,25 55:7 55:12,16 56:6,10,16,21 57:2 58:20 60:3,8,12,13 60:17,20,25 61:8 64:14 65:5,16 66:8,20 68:12 69:4,13,16,18 72:6,12 73:10 74:4,13 75:12 76:14,16 77:8,18,24 78:22 79:14,23 80:17 81:9,18,25 82:24 83:18 84:19 89:4,8,12 91:7,12 92:2,16,20 93:12 94:6 94:12,17,18 95:1,5,8,21 96:1,5,10,14,18 97:6 98:5 99:10 100:18 101:8 101:15,22 102:13,22 103:1,11 104:1,11,20,24 105:5,15 Columbia [1] 24:6 combined [1] 89:20 coming [5] 14:3 15:15 69:20 76:21 105:15 command [3] 49:5 56:11 98:25 commander [3] 28:12 28:19 100:6 Commanders [1] 44:2 comment [6] 41:16 60:8 60:16 69:6 82:18 83:6 comments [6] 2:17 43:5 60:5 64:2 68:12 70:23 commercial [8] 11:17 20:2,16,18 41:24 47:12 97:23 100:17 Commission [9] 35:10 35:21 40:14,24 41:2,6 52:15 57:6 63:12 Commission's [1] 31:7 Commissioner [81] 1:2 2:6,7,10,14,22 3:1 6:18 6:21,22 7:1,7,9,17 29:10 29:13,16,19,20,23 30:1 30:9,13 37:1,7,11,14 38:18 39:9 40:2,15 41:5 42:3,9,19,23,25 57:8 58:3,18 59:3,7 60:9,15 61:6,13,16 62:9,15,19 63:3,9,16,23 64:6,10 65:2 66:15 67:4 68:16 70:6,12,18 71:5,10,17 72:20 74:2 76:11 82:6 82:11,15 94:20 95:2,7 97:12 103:19 105:7,11 105:13 106:21 Commissioner's [1] 1:19 commitment [2] 55:1 72:16 committee [4] 31:3 56:4 56:12,15	common [1] 8:20 commonality [1] 103:13 communication [6] 52:9,25 80:5,16 99:17 100:5 communications [1] 98:8 communiqué [1] 36:6 community [5] 40:25 53:7,11 75:15 76:1 Company [1] 7:24 comparable [1] 57:12 compare [3] 17:1 55:22 56:19 comparison [1] 102:16 competence [1] 35:4 complement [6] 31:23 31:24 32:3,25 33:6,12 complete [2] 13:25 48:23 completely [1] 86:5 complex [1] 89:24 compliment [1] 35:2 component [2] 72:2 73:22 components [1] 25:23 comprehensive [2] 30:25 81:4 compressed [1] 102:19 compressor [1] 103:7 comprises [1] 17:14 concentrated [1] 46:8 concerned [2] 76:20 101:12 conclude [1] 34:19 conclusion [1] 106:24 conditions [5] 26:22 27:2 28:17 41:20 92:4 conducted [2] 34:20 51:4 configuration [6] 25:15 25:16,17,19,21 86:22 configured [1] 25:24 confirm [2] 104:2,12 conjunction [1] 85:20 connecting [1] 92:12 connection [3] 27:19,21 28:4 consider [3] 17:13 23:10 68:18 considerable [1] 76:23 considered [4] 54:22,23 71:23 95:18 consistent [1] 25:17 consult [2] 60:17,19 contact [1] 99:23 contained [1] 70:24 context [2] 72:19 73:18 contingency [4] 35:19 41:18 42:16,18 continually [1] 80:4 continue [1] 29:1 continuing [4] 36:2,17
---	--	---	---	---

41:14 93:5 contractual [1] 1:11 control [5] 47:2,14 49:5 50:22 78:9 controlled [1] 88:16 convey [1] 105:16 cooperation [1] 24:22 coordinate [1] 100:9 coordinated [1] 99:25 coordinating [4] 28:22 28:23 90:25 99:15 coordination [7] 78:2,3 79:9 80:3 98:7 99:15 100:1 copy [4] 59:2 62:16 63:16 71:9 Cormorant [14] 3:20 10:22 14:11 18:6 25:15 31:23 48:3 81:23 82:13 83:25 84:7,13 86:18 88:6 Cormorants [2] 31:16 81:15 corporal [2] 74:19,21 correct [14] 19:12 44:6 50:1,6,19 55:17 77:17 82:25 96:6,11,15 100:19 101:16 107:3 cost [1] 73:5 costing [1] 73:13 Cougar [47] 1:15 6:6 20:15,18 29:21 35:8 39:12,23 46:12 47:3,4 47:15,16 48:5,7 49:1,9 49:11,13,15 50:17 51:8 51:23 52:10,19,24 53:13 77:3,11,14,22 78:4,21 79:13,20,21 80:5,14 88:17 95:10 97:19 98:21 99:2,4,18 106:11,13 Cougar's [3] 44:21 90:2 102:12 counsel [19] 1:5 7:3,5,10 7:11,13,23 8:17 29:21 30:3,5 71:7 76:12,17 94:21 95:3 105:22 106:4 106:5 countries [4] 17:2 55:23 56:1,20 country [6] 16:20,23,24 45:6,12,18 couple [2] 59:22 95:12 course [12] 1:13,15,25 12:7,20 16:24 18:3 26:25 53:18 60:20 85:6 102:10 covered [1] 29:14 craft [1] 89:18 crash [2] 6:6 17:17 crew [33] 8:24 12:1 13:21 14:2,3,3 15:14,15,17 31:11,19,23 32:9,11,14 32:16,19,19 33:2,4 34:11 55:4 73:8 74:17 84:13 84:14 85:20 93:25 95:10 100:23,24 103:23 104:9 crews [17] 5:7,13 13:24 13:25 15:9 26:23 31:18	32:2,6,18 33:4,24 34:1,2 34:6 51:6 101:3 critic [3] 30:15,19,19 critical [1] 41:21 CROSBIE [1] 7:6 cross [1] 30:20 culture [1] 75:10 current [4] 38:3 43:25 93:10 98:8 cycle [1] 32:9 -D- D [1] 81:12 d'Arc [1] 45:8 dark [1] 8:16 databases [1] 98:8 date [2] 93:11 98:15 Dated [1] 107:9 day/night [1] 92:5 days [6] 5:18 14:5 45:11 95:22 106:19,20 daytime [1] 59:14 deal [5] 9:1 37:17,17 63:19 90:4 dealing [4] 12:8 35:18 84:3 89:23 deals [2] 38:14 59:25 dealt [1] 38:25 deceased [1] 95:9 December [1] 35:24 decide [2] 49:11 78:17 decides [2] 16:20 28:9 decision [1] 28:12 decisions [10] 48:8 65:23 66:10 69:3,9,12,15 77:1 87:3 98:25 dedicated [8] 13:19 36:3 36:8 41:9,18 47:9 48:11 93:24 deeper [1] 96:20 Defence [14] 1:8,22 2:13 3:6,12 30:15,19 31:2 36:9 38:12 64:25 69:11 81:12 105:16 defend [1] 66:9 defer [1] 24:20 define [1] 10:15 defined [2] 80:10 87:25 definitely [1] 103:4 degree [2] 65:5 84:4 delayed [1] 28:24 deliberate [1] 85:7 deliver [2] 17:5 85:11 department [11] 1:7,21 2:11,12 3:12 23:11 36:9 38:12 56:19 63:1 64:24 departments [1] 73:23 departure [1] 24:18 dependent [4] 8:24 17:7 78:21 92:3 depending [3] 22:2 26:2	32:22 deploy [2] 41:19 49:11 deployed [2] 48:4 49:23 deployment [3] 42:7 43:12,12 describe [5] 64:23 85:9 85:18 89:20 99:11 described [7] 15:24 34:16 47:7 78:14,24 85:5 86:9 describes [1] 47:13 description [1] 81:4 designate [1] 69:10 despite [1] 29:2 detachment [1] 43:17 detail [3] 31:8 67:24 70:2 detailed [2] 30:23 102:4 details [2] 70:4 97:13 determination [3] 20:20 79:6,8 determine [7] 10:7,9,11 10:19 28:24 78:25 87:4 determined [1] 54:1 determining [1] 19:15 developed [2] 4:11 17:3 developing [2] 41:21 68:18 Development [1] 7:24 developments [1] 28:16 device [1] 104:16 devices [1] 11:15 devoted [1] 93:6 diagram [1] 9:23 differ [1] 85:1 difference [4] 50:10 53:18,20 75:5 different [8] 51:24 52:21 53:2,10 85:14 91:21 99:13,13 difficult [4] 5:10 8:23 54:5 87:7 difficulties [1] 13:8 difficulty [2] 48:21 58:17 direct [9] 18:14,17 20:6 21:3,6,8,15 23:12 27:21 directed [2] 19:17,20 directing [1] 11:15 direction [3] 20:3 77:23 78:6 directly [1] 20:23 disallowed [1] 74:3 disaster [1] 35:20 discipline [1] 75:10 discloses [1] 66:23 discount [1] 90:14 Discoveries [2] 107:12 107:14 discretion [2] 44:3,8 discussed [5] 44:17 46:22 65:6 69:23 103:9 discusses [1] 66:21	display [1] 9:24 disruption [1] 25:9 distance [1] 53:22 distinct [1] 20:13 distress [1] 8:22 ditch [1] 88:16 DND [48] 8:10,19 9:2,5 9:7 11:4,20 16:17 18:3,8 21:3,4,6,15,20 22:7 24:14,17 27:13,19 34:21 36:11,15,17,23 39:14,22 40:8 41:12,18 42:12 46:14 48:7 50:14,22 53:1 59:12 62:8 64:22 66:24 67:18 71:22 72:1 76:22 79:20 97:13 99:3 100:24 DND's [2] 26:12 46:17 document [16] 40:12,13 58:22 62:5,12,23,24 65:10 68:15 72:9,11 80:11,21,22 81:8 82:2 documents [7] 59:23 60:22,24 61:2,9,21 70:9 doesn't [7] 19:24,24 27:5 40:1 46:15 55:10 93:3 dollars [1] 73:24 domain [1] 6:15 done [7] 10:3 22:1 49:15 57:1,4 60:6 65:25 double [1] 92:9 doubt [2] 46:6 57:19 down [14] 10:12 16:12 22:20 48:7 50:16 66:2 69:9,11 88:13 92:1,8 105:24 106:1,2 downloaded [1] 57:10 downplay [1] 5:3 draws [1] 47:8 dreaming [1] 89:2 drill [1] 88:14 drive [1] 13:23 driven [1] 92:23 drives [1] 10:9 drop [1] 90:18 dropping [1] 85:16 Drover [150] 2:4,15,24 2:25 7:15,18,19,22 9:9 9:20 11:6 12:3 14:14 15:22 16:22 17:9 18:18 19:7,11,22 20:17 21:7 21:11,17,21 22:8,13 23:6 24:7,11,19 25:20 26:15 27:15,20 28:5,11 29:6,8 29:24 30:11,17,18 31:22 32:4 33:18,25 34:8 38:2 38:10 39:4 40:4 42:22 43:2 44:5,10 45:20 46:21 48:9 49:12,25 50:5,11 50:18 51:11 52:7 53:3 53:15,24 54:12,25 55:7 55:12,16 56:6,10,16,21 57:2 58:20 60:13,25 64:14 65:16 66:8,20 69:4 69:13,18 71:18 72:6,12 73:10 74:5,13 75:12 76:14,16 77:8,18,24	78:22 79:14,23 80:17 81:9,18,25 82:24 83:18 84:19 89:4,8,12 91:7,12 92:2,16,20 93:12 94:6 94:12,17,18 95:1,5,8,21 96:1,5,10,14,18 97:6 98:5 99:10 100:18 101:8 101:15,22 102:13,22 103:1,11 104:1,11,20,24 105:5,15 Drover's [1] 65:6 due [3] 17:19 18:21 33:5 during [11] 4:15,15,21 6:3 22:6 51:1,7,20 59:14 59:14 95:22 duties [2] 53:13 80:25 duty [4] 14:3,3,4 15:15 dynamic [3] 23:20 32:5 90:16 dynamics [4] 87:22 90:1 90:23 99:14 -E- Earle [32] 76:13,14,15 76:17 77:12,20 78:11 79:11,16 80:9 81:6,11 81:21 82:3,7,10,17 83:8 83:22 87:23 89:6,10 91:3 91:9,18 92:14,18,25 94:3 94:8,15,21 earned [1] 41:2 east [2] 35:25 45:7 education [1] 38:2 educational [1] 38:4 effect [2] 87:4 91:17 effective [1] 17:12 effort [6] 12:24 18:16 73:19 86:23 87:10 91:15 efforts [1] 89:20 either [2] 11:11 53:5 elaborate [3] 14:10 31:1 31:5 elaborated [1] 36:7 elected [1] 10:1 electronically [1] 61:20 elsewhere [1] 32:16 embarking [1] 66:2 emergency [6] 25:8 47:24 50:4 53:14 86:23 99:22 emersion [3] 101:14,19 101:20 employed [2] 14:24 48:25 employment [1] 78:4 employs [1] 16:24 encounter [1] 4:9 end [5] 13:18 46:17 74:4 76:6,10 endeavour [2] 27:7 75:23 ends [1] 61:4 enforced [1] 18:21 engage [6] 38:5 39:22
---	--	--	---	--

49:14 77:15,16 93:8 engaged [5] 25:2 47:21 74:6 77:22 88:24 engages [1] 88:20 engine [1] 22:16 engineer [3] 31:25 74:18 88:10 engineering [1] 8:15 ensure [2] 83:20 93:17 entailed [1] 85:3 enter [2] 3:14 87:19 entered [1] 58:9 enterprise [1] 39:2 entirely [1] 9:13 entitled [2] 7:4 66:12 entity [4] 20:14 21:5 39:7 56:17 environment [7] 17:14 26:17 45:22 46:2 86:10 98:13 101:6 environmental [1] 41:20 equal [1] 74:25 equating [1] 32:18 equidistant [1] 84:9 equipment [15] 11:4 12:8 25:25 26:7 28:19 36:5 85:17 91:16 98:1 99:5 100:15,25,25 101:25 103:25 equipped [1] 11:12 equivalent [1] 19:6 especially [2] 12:8 89:23 essence [1] 100:1 essential [3] 4:10 5:25 50:9 essentially [5] 16:6 22:9 64:23 93:20 99:14 establish [2] 23:18 67:13 established [4] 22:24 35:22 67:19 69:24 Establishing [1] 22:14 Estates [1] 95:3 estimated [1] 72:22 et [3] 52:18 86:24,25 Evaluation [1] 72:1 event [3] 4:6 46:12 99:16 events [2] 78:17 85:19 everybody [1] 87:19 everywhere [1] 54:10 evidence [10] 7:4 37:25 40:6 58:1 64:20 68:5 80:22 82:21 88:7 106:19 exact [1] 92:22 exactly [2] 3:7 44:12 examination [7] 1:20 2:4 7:15 30:11 37:20 76:14 95:5 examining [2] 68:8,24 example [8] 9:15 10:24 18:6 23:2 47:3 49:16 51:23 60:4	exams [1] 93:16 exceeded [1] 90:11 except [1] 69:14 exception [1] 89:15 excerpt [1] 62:7 exclude [1] 19:25 exclusive [1] 21:4 exclusively [1] 21:20 Excuse [2] 37:2 82:7 execute [3] 27:8 28:14 87:17 exempt [1] 28:7 exercise [6] 4:1,16,17 4:22 51:20,25 exercised [1] 44:9 exhibit [8] 44:25,25 58:9 59:2 61:17 70:22 71:13 71:25 exhibits [3] 61:19,23 62:3 exist [2] 27:24 67:1 existence [1] 66:24 exists [3] 41:17 59:20 67:2 expect [4] 26:1 33:15 69:13 100:16 expected [1] 36:15 expecting [1] 70:1 expedited [2] 24:17,18 expenditures [1] 72:25 experience [3] 32:10 73:3 75:4 expertise [1] 76:24 explain [3] 66:9 70:2 87:22 explained [1] 3:10 explanation [1] 85:3 explore [2] 59:10,17 express [2] 105:14 106:3 expressing [1] 76:6 extensive [1] 92:12 extent [3] 38:6 62:1 85:15 extract [3] 85:23 86:25 90:12 extracted [1] 86:12 extracting [1] 87:14 extraction [3] 86:5 90:1 90:21 extreme [1] 78:17 extremely [1] 5:6	factor [1] 19:15 factors [2] 17:19 86:15 Fagan [3] 59:1 106:10 106:12 Fagan's [1] 100:21 failure [1] 90:23 fair [3] 54:8 65:11 95:12 fairly [6] 8:20 9:4 13:5 54:5 57:14 67:10 fall [1] 20:10 falls [1] 46:25 familiar [10] 13:10 24:24 60:11 73:12 77:9 79:25 81:12,19 82:4 102:25 families [2] 94:22 95:9 far [4] 23:4 24:1 35:9 75:1 fashion [1] 79:19 faster [2] 4:23 90:17 favour [1] 43:23 feasible [2] 91:11,13 February [1] 106:17 Federal [9] 40:13,25 46:24 47:7,19 49:3,8 69:8 72:25 feels [1] 41:1 few [3] 3:2 8:7 31:4 fewer [1] 12:19 field [4] 34:18 41:4 50:17 67:12 figure [1] 100:2 file [2] 24:14 40:15 final [2] 13:9 35:14 finding [2] 11:15 58:17 fine [2] 37:12 63:8 finished [1] 42:4 fire [1] 23:11 first [26] 3:4 9:10 44:23 46:11,17,18 47:5,6,15 47:24 48:1,2,2,6,8 49:2 50:8 53:13 62:5 76:21 77:3,7,17 79:21 95:12 98:22 Firstly [1] 68:17 fishery [2] 43:14 44:1 fishing [2] 45:24 90:9 five [8] 13:24 31:24 32:6 32:18,22 33:11 84:13 92:21 fixed [3] 18:22 22:20 25:22 flat [1] 91:20 fleet [5] 12:16 13:14 81:15,23 82:13 flexibility [1] 13:17 flexible [1] 87:10 flight [18] 22:14,25 24:15 26:18 27:22,23,24 28:6 31:24 88:10 95:10,10 97:1 100:23,24 101:2 103:23 104:8 flow [3] 25:9 80:7 100:5 fly [3] 26:22 27:2 100:12	flying [7] 4:21 13:10 16:12 24:25 28:20 75:18 75:20 focus [2] 27:23 90:5 focused [2] 18:25 43:20 focusing [1] 38:11 fog [1] 26:14 folks [2] 75:21 87:15 follow [2] 1:25 41:5 follow-up [1] 60:6 force [3] 4:4 16:4 75:9 forces [10] 3:20 4:7,7 9:11 43:21 47:20 74:7 75:22 98:20 99:3 Forces' [1] 72:23 forecast [1] 72:20 forecasted [1] 72:25 foregoing [1] 107:3 forgive [2] 35:9,13 form [1] 20:2 formal [3] 22:1 49:15 80:1 forum [1] 66:10 forward [2] 36:21 106:1 found [1] 81:15 foundation [1] 60:23 four [6] 33:20,20,24 34:1 106:19,20 FPSO [1] 88:14 frame [1] 88:20 framed [1] 89:14 free [1] 49:20 freezing [1] 27:4 Friday [2] 96:4 106:18 friend [2] 66:2,11 friends [2] 8:15 60:20 front [2] 59:4,6 fuel [4] 84:8 85:23 86:24 100:14 fulfil [2] 17:4 80:4 full [4] 32:18 76:5 84:8 99:24 fulltime [2] 36:7 41:8 fully [4] 32:7 33:13 93:8 98:9 function [4] 15:23 51:21 77:7 78:24 future [1] 11:2	General's [2] 60:5 63:22 generally [5] 48:18 74:22 92:7 95:22 104:25 gentlemen [1] 1:3 given [15] 3:11 16:3 33:21 54:6 55:15 65:9 65:22 82:8,8,12 83:11 84:2 86:23 91:16 95:17 giving [2] 7:3 65:24 glad [1] 39:10 goal [2] 82:21 83:3 goes [10] 4:12 23:10 36:5 37:24 41:15 43:4 69:8 75:1,11 90:17 gold [1] 34:24 GOLGA [1] 35:24 good [15] 1:3 2:6,10 3:1 7:17,17,20 17:25 24:22 30:18 52:9 69:23 76:16 80:4,16 Government [13] 1:21 30:5 37:21 40:13,22 41:1 62:4,22,23 64:16 65:20 66:7 72:17 governmental [1] 69:1 Grand [2] 36:1 41:22 graphic [1] 9:24 grateful [1] 76:4 great [3] 8:4,25 70:2 greater [1] 52:3 greatest [1] 37:14 Greenwood [5] 4:24 14:17,22 15:1 88:19 ground [6] 4:5 11:24 13:6 17:20 19:19 20:1 guarantee [1] 16:5 Guard [11] 4:3,4 8:13 18:4,7,11 57:16,16 73:1 73:20,20 guess [16] 8:12 11:23 36:19 42:16 44:23 45:6 46:8 51:6 52:15 53:10 59:12,16 61:20 66:24 68:8 72:15 guidelines [4] 35:22,25 36:6 41:11
-F-				
-G-				
Gander [17] 5:16,22 11:21 14:11,21,21,24 31:13,17 32:3 48:4 52:1 54:20 80:6 82:23 84:8 88:18 gas [2] 35:23 99:25 gather [2] 8:9 83:13 gathered [1] 39:21 gear [2] 23:14 73:7 general [4] 19:1 60:1 68:1 80:16				
-H-				
half [1] 4:24 Halifax [5] 4:19 5:17 14:15 51:17 83:15 hand [4] 38:24 69:3 99:8 99:8 handed [1] 69:9 handle [4] 27:4 44:19 46:14 83:23 handling [1] 25:10 hangar [2] 23:9,22 Hansen [1] 30:2 happening [1] 79:4 happy [1] 30:16 harbour [1] 5:20 hard [1] 41:5				

harm's [1] 87:16 harnessing [1] 92:11 Harris [77] 30:10,11,12 30:14 32:1 33:9,23 34:4 34:10 37:2,6,25 38:19 39:19,20 40:11 42:5,15 43:24 44:7,15 46:5 47:22 49:4,18 50:2,7,13,20 51:22 52:13 53:9,17 54:7 54:14 55:5,9,14,18 56:8 56:14,18,24 57:5,13 58:4 58:6,10,13,14 59:5,9 60:12 61:8,15 62:13,17 62:21 63:7,11,25 64:13 64:17 66:18,19 70:7,10 70:17 71:8,16 72:10,14 73:16 75:7 76:2,12 106:4 Harris' [2] 37:15 65:11 head [2] 3:5,14 headed [1] 84:8 heading [1] 84:17 headquarters [2] 3:9 4:13 hear [2] 55:24 64:11 heard [8] 22:5 34:14 64:18 65:11 66:16 88:7 93:1 107:4 hearing [4] 88:7 100:11 106:16 107:4 heart [1] 105:25 helicopter [31] 1:11 5:19 9:17,23 10:17 14:16,17 16:14 17:19 20:14 31:15 36:3,8 41:9 43:16 47:5 75:20 83:14,17 85:13 88:2,12,16,17 89:21 90:6 90:10,12,22 91:24 98:21 helicopters [10] 9:7 22:22 41:19,25 54:20 73:7 77:3 88:3,25 97:20 Helly [1] 30:2 helmets [2] 104:18,19 help [1] 85:20 helpful [8] 52:14 71:3 72:19 76:24 94:4 99:21 102:17 103:18 helping [1] 106:7 helps [1] 80:8 Hercules [5] 3:20 4:20 85:16 90:17 91:4 hereby [1] 107:2 herself [1] 93:10 Hibernia [3] 7:23 45:8 88:13 HICKMAN [1] 29:18 high [2] 66:9 93:1 higher [2] 66:6 74:23 highly [1] 5:6 himself [1] 93:10 HMDC [4] 7:14,24,25 9:3 hoist [2] 25:22 92:9 hoisting [1] 90:21 hold [4] 9:3 13:22 15:5 74:10	holidays [3] 67:20 95:16 96:13 home [3] 5:16,22 43:9 homing [2] 11:15 104:16 Honestly [1] 77:9 hope [2] 11:2 105:20 hour [4] 4:24 53:20 96:8 96:13 hours [12] 23:21 57:18 59:15 67:19 93:7,9,18 93:24 95:16,18,20 97:2 hover [1] 10:25 HUEBA [2] 102:21 103:8 Husky [3] 7:25 9:3 29:17	individual [5] 5:7 84:25 87:15 92:8,11 individuals [4] 46:1 74:9 86:12 89:22 industry [12] 11:9 16:9 36:13,18 38:8 39:7 40:9 45:25 49:7,19,22 53:14 infer [1] 6:13 influence [1] 100:4 inform [1] 53:7 informal [1] 80:7 information [23] 8:9 26:3 29:25 56:3 71:3,13 80:7 83:1 94:13 97:14 97:25 98:3,4,19 99:7 100:11,14 102:4,16 103:14 104:4 105:24 106:7 informed [2] 52:9 53:12 initial [2] 15:6 41:11 injured [1] 8:21 injuries [1] 32:22 injury [1] 32:24 inquiry [19] 1:6,16 8:3 22:6 29:25 37:18 60:23 61:5 66:13 68:6 69:21 70:5,16 71:14 76:20,23 77:1 102:3 103:9 installation [1] 84:10 instance [13] 5:19 11:9 12:24 14:16 15:14 16:7 17:17 43:14 50:12 75:19 80:11,20 99:20 Institute [2] 30:4,5 integrated [1] 103:24 integrity [1] 4:16 intend [1] 97:12 intends [1] 65:12 interdepartmental [2] 56:13,15 interest [4] 37:15 40:21 102:3,6 interested [2] 77:2 102:9 interface [3] 39:12,14 81:7 internally [1] 71:12 international [4] 16:17 16:19 40:25 56:4 internationally [1] 71:24 introduction [1] 40:22 involved [10] 4:14 22:2 29:1 38:4 47:21 56:22 56:25 57:3 77:25 81:2 involvement [1] 8:18 involves [1] 1:13 involving [2] 1:7 53:14 Ireland [1] 57:21 Irish [1] 57:16 isolated [1] 90:6 issue [8] 28:18 34:7 37:24 54:16 57:24 59:10 65:7 67:17 issued [1] 63:1	issues [3] 35:1 44:16 61:17 it'll [1] 32:13 items [1] 34:18 itself [8] 10:18 16:21 24:8 46:2 57:6 62:6 66:21 100:4	-J- Jack [2] 30:11,13 January [3] 1:1 107:4 107:10 Jeanne [1] 45:8 John's [8] 5:20,20 35:17 39:18 41:19 68:20 107:5 107:9 join [1] 75:22 joint [2] 36:2 50:16 Jonathan [2] 2:4,11 JRCC [18] 50:14 77:15 77:16,22,25 78:6,7,8,15 78:20 79:3,5,21 80:2,6 99:18 100:5,9 judgments [1] 28:21 Judy [1] 107:13 juncture [1] 48:16 June [1] 31:3 junior [2] 74:23 75:2 jurisdiction [2] 30:17 77:6 Justice [1] 2:12	-K- Kate [2] 95:5,8 Keefe [1] 59:23 keep [2] 12:9 93:10 keeping [1] 60:22 Keith [2] 63:18 71:1 kept [1] 98:14 key [1] 19:15 kind [5] 45:14,16,18 97:25 98:1 kinds [1] 99:25 knowledge [4] 34:15 41:14 42:21 77:4 known [1] 97:24	-L- Labrador [5] 1:25 30:6 38:14 42:14 107:6 ladies [1] 1:3 land [5] 84:2,9,18 87:19 89:2 landing [1] 84:11 Lands [1] 35:23 landscape [2] 76:25 83:10 language [1] 19:23 large [8] 8:21 11:10 26:7 53:7,11 86:19 90:4,8 largely [1] 3:4	larger [1] 16:4 last [9] 2:17 7:4 8:18 16:7 31:3 57:15 84:21 85:1 87:13 launch [3] 26:3 48:10,17 launched [2] 16:7 48:20 lawyer [1] 8:14 leaders [1] 74:22 leads [1] 34:19 learned [2] 6:7,14 least [8] 12:16 13:19 18:22 31:20 47:5 53:19 87:12 89:14 leave [2] 1:9 64:4 leaves [1] 84:7 leaving [1] 84:17 left [1] 89:13 legal [2] 19:2 79:12 legislative [1] 1:12 less [5] 17:12 32:21 33:3 81:16 82:13 lessons [2] 6:7,13 level [15] 15:1,9,18 28:22 34:15 35:3 65:21 69:4 69:13 76:4 78:19 80:16 83:19 84:15 93:1 levels [1] 96:23 Library [1] 62:25 life [5] 17:21 86:12 90:19 91:6 102:18 life-long [1] 75:23 lifesaving [1] 41:23 lift [1] 22:23 light [2] 2:16 78:5 likely [2] 14:20 49:2 limit [2] 27:9 87:1 limitation [2] 1:6,18 limitations [4] 5:12 27:11,12 86:18 limited [1] 30:17 limits [6] 26:11,19,21 27:12 28:3 89:17 line [11] 13:11 22:14 38:16 43:19 61:5 64:12 66:2,14 77:19 80:5 82:20 list [1] 10:13 listening [1] 8:4 literally [1] 83:25 lives [1] 8:24 local [2] 76:17 100:7 locate [1] 43:16 located [2] 43:7 45:15 location [7] 1:23 37:23 46:7 51:21 54:1 84:11 92:7 locations [2] 38:23 43:7 locator [2] 104:9,14 log [1] 22:16 longer [6] 23:20,21 36:23 52:5 74:24 87:16 look [10] 15:9,25 31:13 45:3 63:6 66:21 71:11
--	--	---	--	--	---	--	--

71:15 85:14 106:1 looked [1] 57:24 looking [11] 9:22 10:10 44:23 45:4,12 52:16 57:6 87:21 88:2 94:9 102:11 looks [1] 56:4 lose [1] 86:3 loss [2] 13:2 33:5 lowered [1] 92:8 lunch [2] 89:7,9	67:15 69:4,5,8 71:3 72:18 75:15,21 78:3 79:17 81:2 86:1 90:9,15 102:6 104:13 mayday [1] 49:21 McGuire [1] 53:19 mean [12] 16:11 19:18 22:7 40:1 48:3 55:10 62:11 69:6 78:13 82:7 83:12 84:6 meaningful [1] 18:24 means [5] 25:6 46:14,19 46:20 107:7 meant [1] 3:7 measure [1] 94:10 mechanical [1] 13:7 medevac [4] 16:8,13 47:18 77:14 medevacs [1] 8:21 media [4] 2:17 3:5 6:5 34:23 medical [6] 17:21 34:18 84:5,16 88:9 89:24 meet [3] 9:18 10:4 102:1 Melina [3] 59:23 63:18 70:25 member [5] 30:14 32:9 32:16,19 74:19 members [2] 8:24 12:1 mention [5] 52:16 60:2 64:19 84:24 104:18 mentioned [14] 5:5 23:24 25:14,16 28:2 34:19 43:3 48:21 61:21 72:8 73:21 89:25 97:4 100:7 merchant [1] 16:9 message [1] 89:3 methods [1] 93:19 meticulous [1] 40:23 might [7] 14:12 52:4,14 53:10 56:1 62:8 73:4 mike [1] 37:12 miles [1] 85:12 milestone [1] 41:3 military [9] 25:1 30:20 30:22,24 38:5 69:11 74:15 75:10,22 million [3] 72:23,24 73:24 mind [2] 46:17 60:22 mindful [1] 30:17 minimum [4] 14:5 33:19 55:6 92:23 Minister [1] 69:10 minute [2] 23:8 95:14 minutes [14] 4:22 23:25 24:16 57:20,21,22 92:6 92:12,13,17,21 95:20 96:2 97:1 mission [19] 10:7,18 11:14 14:18,18 15:4 22:25 26:3 27:8 28:9,14 29:2 48:22 51:2 84:23	84:25 87:25 99:19 100:4 missions [1] 26:2 mobility [1] 75:14 model [3] 15:23 31:14 71:24 modifications [1] 10:3 moment [4] 37:2 58:4 66:16 77:22 Monday [3] 96:4 106:15 106:16 morning [19] 1:3 2:6,10 2:13,18 3:1 7:17,17,20 30:18 31:10 47:11 50:25 51:17 57:20 61:22 76:16 83:1 106:23 Moss [1] 107:13 most [8] 14:20 18:22 20:8 33:6 41:3 49:3 57:12 78:17 mountain [2] 17:16 26:1 move [1] 13:16 moving [2] 22:17 37:16 Ms [73] 7:6,14,15,16,21 9:14 10:23 11:18 14:7 15:20 16:16 17:6 18:1 19:4,9,13 20:12 21:1,9 21:13,19 22:4,11 23:1 24:3,9,13 25:13 26:10 27:10,17 28:1,8 29:5,11 29:13,18 30:6,7 31:9 54:8,21 59:1 94:24 95:4 95:5,6,24 96:3,7,12,16 97:3,8 98:16 100:10,20 100:21 101:10,17 102:8 102:15,24 103:3,17,21 104:6,17,22 105:2,8 106:10,12 multiple [1] 13:24 MUN [1] 30:3 must [2] 77:1 106:9 muster [1] 23:3	needing [1] 5:14 needs [2] 11:20 67:22 never [5] 8:20 28:15 33:5 59:2 93:4 new [2] 32:9 75:21 Newfoundland [8] 1:24 8:1 30:6 38:13 42:13 45:8 101:12 107:6 next [4] 70:19 97:9 106:10,11 night [4] 2:18 16:8 57:15 57:21 NL [1] 107:9 non-commissioned [1] 74:18 non-medevac [1] 47:23 none [2] 34:22 51:6 nor [3] 38:23 65:12 87:1 99:19 106:14 normally [5] 11:16 47:18 51:13 83:11 99:12 north [3] 17:15 57:11 84:3 note [2] 13:22 87:14 noted [1] 18:2 nothing [4] 6:25 43:20 63:5 68:23 noticed [1] 58:21 notification [1] 79:5 notified [3] 51:24 52:20 79:3 notify [1] 52:2 notion [3] 51:8 59:17 77:2 Notwithstanding [1] 43:10 Nova [9] 3:23,24 4:2,18 4:24 51:1,10 53:22 88:14 now [36] 2:2,21 7:2 25:7 25:11 34:5,6 36:13 37:8 37:10 40:18 42:18 44:16 55:19 59:20,22 61:7,14 61:19 63:4 64:17 67:3 72:15 75:19 76:12 77:13 78:5 79:17 83:23 85:9 89:3 94:21 100:13 103:4 105:8 106:10 nowadays [1] 42:12 NSP [1] 72:21 number [22] 4:3 8:18 14:6 16:1 22:5 32:23 33:2,4,6 34:1 41:23 44:25 45:15 46:8 65:8 85:23 90:9 93:7,9,18,25 97:23 numbers [5] 32:18,21 90:4 93:24 98:9	105:2,8 objections [1] 64:3 objective [5] 12:20 13:3 13:18 83:3,20 obligations [2] 1:10 16:17 obliged [1] 96:24 obtain [2] 8:10 24:16 obtained [1] 62:25 obviously [8] 13:4 31:16 43:6 61:1 68:17 73:19 93:2,18 occasion [1] 64:21 occurred [1] 44:12 ocean [9] 16:13 26:1 35:10,13 41:6 61:24 62:6 62:10 90:2 off [8] 13:11 14:4,5 22:19 22:23 45:8 49:20 80:13 offer [2] 45:21 63:8 officer [3] 74:17,19,21 officers [1] 74:6 offline [1] 44:14 offshore [18] 8:1,2,11 16:8 35:8 38:14 41:4 45:15,24 46:1,4,12 67:15 67:22 68:11 76:19 84:9 101:13 oft [1] 32:17 often [6] 5:9 7:24 13:16 44:9,11 91:13 oil [7] 1:14 7:13 8:1 35:22 49:7,22 86:1 on-body [1] 103:25 on-scene [1] 100:6 once [4] 15:2 49:5 54:11 61:4 one [68] 3:4 9:5,25 11:24 11:25,25 12:21 13:1,8 13:19 14:2,3,3,11 15:6 15:24 19:10 22:16 23:15 26:4 27:19 29:3 33:15 35:14 40:17 43:4 44:16 47:15 48:19,20 49:19 54:10,22,23,24 55:2,3,4 56:11 57:17 59:11,23 60:2 62:3,5,5 64:13,21 70:21,23 77:10 80:2 82:21 83:17,21 85:18 87:2,9,13 88:11,14,18 89:21 90:7 91:20 98:21 98:22,25 ones [3] 61:24 74:2,23 ongoing [3] 4:18 36:11 45:10 open [1] 86:15 operate [5] 10:6 13:24 33:13 76:4 106:9 operating [3] 73:5 78:8 83:2 operation [5] 14:6 19:17 43:6 78:10 93:21 operational [2] 26:11 87:2 operations [16] 5:8 6:1
--	---	--	--	--

9:8 21:6 25:2 26:24 27:22 44:20 53:6 54:3 75:18 80:6 81:3 89:19 92:5 93:22 operator [2] 26:19 36:11 operators [14] 1:11,14 7:13 8:1,6 20:18 26:21 35:25 36:1,16 39:3,14 67:15 68:20 opinion [2] 34:15 39:17 opportunity [9] 2:19 3:2 5:24 18:14 20:13,24 66:20 69:19 70:14 opposed [5] 13:14 46:16 59:19 97:2 101:3 ops [4] 6:4,6,15 26:1 options [2] 19:25 26:4 oral [1] 70:15 order [1] 11:20 ordinate [1] 44:23 organization [6] 4:5 12:4,7 25:6 35:2 51:5 organizations [2] 51:16 81:1 ought [3] 39:16 51:3 78:18 ours [1] 90:3 outcome [1] 48:12 outlast [1] 86:10 outlines [1] 80:24 outlining [1] 35:19 outs [1] 14:13 outside [2] 37:17 38:17 overhead [1] 91:25 oversight [2] 39:6 40:8 overview [3] 3:17 63:20 65:24 owe [1] 1:4 own [12] 16:23 18:4 49:10 49:13,21,22 52:5 67:25 88:1 90:1 99:2,3	69:21 72:15 73:19 75:9 78:2 80:22 98:6 participants [2] 25:11 99:16 participate [3] 4:2 5:7 20:25 participating [1] 8:3 particular [15] 3:25 4:25 9:18 10:8 29:4 37:19 46:12 53:8 54:19 63:14 65:15 74:1 79:10 80:20 89:18 particularly [1] 53:12 parties [1] 63:13 party [2] 7:3 30:15 passenger [2] 88:6 99:19 passengers [3] 86:21 88:4 103:10 past [1] 96:22 PAUL [4] 2:4 7:15 30:11 76:14 pause [1] 58:4 paying [1] 34:22 Peet [1] 107:5 pending [1] 90:21 penetrate [1] 17:16 people [19] 34:11 35:4 39:23 42:1 45:10,15,24 46:3 75:6 76:19 84:1,6 84:14 85:24 87:7 88:22 89:1 90:10 91:10 percent [5] 12:15,21 72:24 81:16 82:13 perform [2] 29:4 89:18 perhaps [22] 8:9 9:6 14:9 21:10 27:12 28:18 31:5 31:12 35:12 39:25 41:15 57:6,24 59:21 62:20 73:3 74:4 76:9 87:5 92:21 97:10 98:18 period [5] 33:3 51:7 52:5 82:9 93:5 periodic [1] 12:11 periods [1] 75:16 permanent [1] 43:9 permanently [1] 45:15 permit [1] 68:11 person [4] 48:16 73:4 84:14 92:1 personal [1] 104:9 personnel [11] 20:20 23:3 36:4,13,19 38:5 74:8 75:8 98:2,25 99:4 phases [1] 13:9 picked [1] 48:15 piece [1] 4:10 pieces [1] 11:3 pilot [5] 23:15,17 31:19 31:20 101:3 pilots [11] 26:18 31:25 74:16 75:2,19 88:10 95:4 102:12 103:6,23 104:19 place [22] 3:18 13:13 25:22 31:11 36:22 40:7	42:20,21 47:7 51:19 52:11,21 54:4,10 76:9 79:4 80:21 85:5,8,19,25 107:5 places [2] 45:17 57:23 placing [1] 35:16 plan [8] 24:15 35:19 42:16,18,20,21 85:21 91:2 planning [2] 4:12 85:7 plans [1] 41:18 Platform [1] 88:13 play [1] 70:1 played [2] 36:23 62:8 players [1] 79:25 PLB [1] 104:10 pluck [1] 88:25 plus [1] 68:1 point [14] 3:16 6:2 13:9 36:22 40:5 49:6 50:21 65:9,22 73:17 79:12 82:12 87:13 91:24 pointed [1] 64:21 points [2] 3:3 6:17 policy [16] 3:6,8,12,14 5:11,15,23 53:6 64:15 65:14,21 66:6,10 69:3 69:25 96:20 port [2] 19:18 20:4 portion [5] 28:14 76:18 76:25 84:21 85:4 position [5] 32:12,15,20 64:7 69:17 positioned [1] 3:22 possibility [2] 52:4 88:20 possible [8] 12:21 31:2 63:13 84:10 85:22 88:12 88:15 90:8 posted [1] 32:16 posture [19] 4:16,24 5:14 15:24 16:4 23:8,20 24:2 24:8 26:9 36:14 51:18 59:13,18 69:22 70:3 95:14,14,15 postures [2] 67:1 95:13 posturing [5] 64:17,19 65:6,15,24 potential [1] 79:1 potentially [1] 99:21 practical [3] 19:10 82:19 96:25 practice [3] 4:8 36:21 46:20 precautions [2] 41:22 41:24 precise [2] 87:8 104:15 precisely [3] 38:14 65:17 73:11 predict [1] 54:6 preface [1] 97:11 prefer [1] 70:3 prescribe [1] 87:2	present [7] 7:11,12 30:3 38:3 41:17 70:21 105:22 presentation [8] 6:3 8:5 30:23 65:6,25 84:21 97:10 105:4 presenter [1] 106:10 preservation [1] 17:22 presumably [1] 23:9 pretty [2] 94:1 104:25 preventing [1] 43:21 previous [2] 32:10 34:15 previously [1] 82:25 primary [5] 18:4 51:15 55:2 75:25 83:4 priority [1] 25:10 PRITCHETT [1] 29:12 private [5] 38:8 39:2 77:6 81:7 99:9 privately [1] 31:1 problem [2] 33:8 62:10 problematic [1] 16:15 procedure [4] 4:15 21:25 22:3 48:18 procedures [1] 35:20 proceedings [1] 62:2 process [8] 10:6,17,20 69:7 70:13 87:17 94:4 101:23 procurement [2] 10:1 101:23 produce [1] 6:11 produced [3] 6:6 68:25 72:3 profession [1] 74:15 proficiency [4] 93:15 93:17,19,23 program [7] 5:4 16:25 36:25 40:7 72:3,22 73:14 programs [2] 36:10,16 progression [1] 75:25 prohibited [3] 38:15 65:18 66:4 prohibitive [1] 68:24 projects [1] 8:2 proper [2] 61:3 86:22 proposing [1] 64:13 prosecute [2] 27:8 86:4 prosecuting [1] 15:6 protocol [2] 14:10 79:20 provide [15] 11:21 12:14 36:12,17 39:6 56:2 71:2 73:24 76:8 78:1 84:15 87:9,11 94:13 104:5 provided [10] 35:25 39:17 41:12 67:15 68:20 71:22 83:1,19 88:9 105:23 provider [5] 17:12 20:14 77:6 81:8 99:9 provides [2] 39:13 77:6 providing [5] 29:24 35:2 43:18 46:10 51:5 Province [2] 1:24 42:13	provincial [1] 21:23 provision [11] 1:14,20 20:11 37:20,24 38:11,20 44:21 64:15,25 65:14 proximity [2] 19:15 48:15 public [2] 53:19 62:11 pull [1] 84:1 pumps [1] 26:5 purpose [2] 8:8 64:22 purview [1] 21:20 put [5] 26:25 39:12 55:15 58:22 91:1
-P-				
P-00110 [1] 72:1 P-00113 [2] 58:1 68:4 p.m [1] 106:24 p.m. [1] 95:25 pack [1] 26:8 pad [1] 22:23 page [1] 72:18 paid [1] 91:1 painting [1] 76:25 parachute [1] 91:5 paragraphs [2] 63:19 71:2 Pardon [1] 92:15 Parliament [2] 30:15 62:25 Parsons [1] 58:19 part [20] 1:9 3:25 5:4,11 5:17,22 11:17 19:2 32:3 42:23 43:17 54:4 68:22				
-Q-				
				Q.C [89] 29:22 30:11,12 32:1 33:9,23 34:4,10 39:20 40:11 42:5,15 43:24 44:7,15 46:5 47:22 49:4,18 50:2,7,13,20 51:22 52:13 53:9,17 54:7 54:14 55:5,9,14,18 56:8 56:14,18,24 57:5,13 58:6 58:10,14 59:5,9 61:15 62:13,17,21 63:7,11,25 66:19 70:10,17 71:8,16 72:10,14 73:16 75:7 76:2 76:14,15 77:12,20 78:11 79:11,16 80:9 81:6,11 81:21 82:3,10,17 83:8 83:22 87:23 89:6,10 91:3 91:9,18 92:14,18,25 94:3 94:8,15 qualified [3] 32:19 34:2 36:4 qualify [2] 10:12 102:5 questioning [8] 1:4 7:2 38:16 64:12 66:3,14 77:19 100:22 questions [25] 7:8 8:7,8 9:4 29:7,15,23 30:8,16 31:4 37:16 38:1 60:21 61:5 64:1 65:21 71:18 73:25 94:16,25 95:11 97:16 105:3,9,11 quickest [1] 20:8 quickly [5] 15:16 20:22 23:17,19 85:22 quite [5] 11:8 30:24 71:21 77:2 86:13 quote [1] 44:11 quoted [1] 72:13
-R-				
				R [1] 81:12 radio [1] 104:14 raft [1] 86:13 rafts [2] 90:19 91:6 rain [1] 27:4 raise [4] 2:3 3:16 6:2 66:11 raised [1] 19:23 ramp [2] 12:6 25:24 Randell [2] 76:14,16

random [1] 54:4 range [3] 10:10 85:13,16 ranged [1] 8:19 Ranger [6] 35:10,13 41:7 61:25 62:6,11 rank [6] 74:11,14,17,23 74:25 75:2 ranking [2] 74:21 75:6 ranks [2] 74:9 75:9 rarely [1] 18:21 rather [1] 67:2 RCC [10] 23:17 47:2 49:14 80:25 85:20 97:24 98:3,7 99:23 100:2 RCMP [1] 4:5 reaches [2] 78:19 90:2 reaction [1] 79:2 read [3] 1:8,18 63:24 readily [3] 13:1 57:14 98:4 reading [1] 57:10 ready [4] 48:24 52:23 55:4 91:25 realistic [1] 89:11 realistically [1] 84:6 reality [1] 32:7 realize [1] 36:13 realizes [1] 25:11 really [13] 11:7 17:23 18:23 19:24 27:22 32:20 47:6 88:21 90:24 99:7 101:2 105:17,19 reason [6] 5:2 28:25 43:13 69:24 89:22 98:17 reasonable [1] 14:4 reasons [2] 20:5 69:21 receive [1] 75:21 received [1] 40:24 recently [1] 103:2 RECESS [1] 61:12 recognized [1] 71:21 recognizing [1] 25:7 recollection [1] 37:25 recommendation [6] 35:18 40:18 41:7,8 43:19 61:25 recommendations [6] 35:14,15 39:16 40:14,17 66:22 reconfigure [1] 52:19 reconfigured [1] 52:23 recorded [1] 37:8 recovering [1] 42:1 recovery [2] 85:25 98:24 rectify [1] 13:7 reduce [1] 51:19 refer [7] 7:24 40:12 57:25 62:2 66:6 72:18 80:15 reference [9] 1:17 37:18 44:1 61:25 63:13,24 65:19 105:21 106:8 references [3] 59:16	62:7 63:21 referred [8] 9:25 35:21 61:24 68:4 71:19 72:4 90:16 102:19 referring [5] 28:17 56:12 77:11 81:20 83:5 refers [1] 41:10 reflecting [1] 68:9 refuelling [1] 86:3 regard [1] 56:23 regarding [3] 64:14,20 65:7 regardless [2] 49:6 50:22 regards [1] 41:2 region [14] 4:8,20 5:18 14:15,22,25,25 16:2 24:5 51:18 53:5,25 54:5 98:12 regions [1] 17:16 REGISTRAR [3] 58:8 58:12,16 regular [2] 74:7 75:9 regulation [1] 1:15 regulations [1] 27:24 regulatory [1] 1:12 relate [1] 65:13 related [6] 11:3 16:9 49:19 59:18 67:1,2 relates [1] 31:11 relating [1] 60:21 relation [1] 41:7 relationship [2] 35:7 44:20 relaxed [1] 24:2 relevance [2] 63:14 67:22 relevant [3] 62:1 67:4 68:6 relocate [1] 43:11 rely [1] 51:15 remember [2] 38:25 69:7 remind [1] 1:5 remoteness [1] 17:14 remove [1] 37:6 render [2] 17:17 20:21 rendering [1] 20:10 repeating [1] 84:24 rephrase [1] 9:12 replace [1] 12:24 replacing [1] 32:15 report [32] 6:6,11,15 23:22 24:25 35:14 40:19 44:13 52:12 57:25 59:23 62:6,11 63:17,22 64:4 66:21 68:3,18 71:20,20 71:25 74:1 78:15 81:19 81:22 82:5,11 83:5,6 106:2,3 reported [9] 3:5 5:2 6:5 6:8 23:11 40:20 48:14 78:18 85:24 reporting [1] 78:20	reports [8] 6:4 60:6 67:6 67:7,24 68:25 70:25 71:15 repositioning [1] 44:4 representative [1] 30:21 representing [2] 2:11 95:9 represents [1] 76:18 reputable [1] 68:25 request [5] 20:2 21:25 49:16 70:19 105:18 require [2] 11:13 88:23 required [7] 4:8 5:9 10:8 15:21 20:10 33:3 80:2 requirement [10] 6:4 6:10 10:16 13:5,15,22 15:2,4,18 32:14 requirements [8] 1:13 10:4 12:12 14:2 28:6 83:11 93:14,16 requires [4] 9:7 12:11 12:15 83:14 requiring [1] 35:5 rescue [72] 1:10,22 4:1 4:20 5:18,21 10:14 18:10 20:20 25:2,5,5 26:17 28:23 29:2 31:3 34:12 34:21,25 35:17 36:3,8 36:10,12,16,18,24 37:22 38:21 43:18 47:1 50:16 51:9,18 56:5 58:23 59:25 60:5,7 63:20 65:1 67:8,8 67:11,14 68:3,10 72:2 72:22 73:22 74:7,10,11 74:20 75:8,18 76:8 78:24 80:23 87:5,6,11 89:18 89:21 90:25 91:10,14,17 98:23 99:14 105:20,25 resolved [1] 48:14 resources [20] 9:17 16:15 18:5,8,10 21:3,15 21:24 28:25 63:2 65:22 67:3 70:1 72:17 84:11 88:21,23 97:24 98:10,11 respect [9] 1:6 9:1 27:9 37:15 46:9 61:17 64:16 64:19 65:23 respond [13] 3:21 14:19 15:12 17:8 19:20 23:7 26:22 47:1 49:10 50:3 61:10 69:19 73:15 responded [2] 31:10 98:20 responder [9] 20:8 21:14 46:11,18 47:6,25 48:1 49:2 53:13 responders [1] 47:16 responding [4] 24:23 25:8 40:13 105:17 responds [1] 41:9 response [43] 3:18 5:8 6:9,11 8:25 11:21 17:24 18:17 21:16 23:21 25:12 26:12 34:2 40:23 43:18 43:23 44:21 46:18 52:16 54:8 55:19,22,23,25	56:19 57:11,15,18 58:24 59:25 62:4,24 63:21 67:20 70:22 77:3,7 78:2 79:2,21 85:11 90:6 100:21 responses [2] 8:19,22 responsibilities [2] 80:25 81:5 responsibility [10] 3:11 45:25 46:25 47:4,19 49:8 51:14,14 78:1 79:9 responsible [3] 50:14 53:25 80:3 restate [2] 96:21,21 restation [1] 44:3 restrictions [2] 23:4 26:18 result [2] 8:25 48:19 resume [1] 38:19 return [3] 85:25 90:13 90:13 review [4] 58:24 70:22 72:3,8 reviewing [1] 71:4 rig [1] 86:1 right [14] 2:23 7:11,12 9:21 21:22 31:20 43:1 55:13 69:8 80:18 96:2 100:13 103:12 105:24 rightly [1] 71:21 rigs [1] 88:15 risk [1] 27:1 robust [2] 12:4 87:10 Roil [2] 71:9 106:10 role [6] 8:11 27:18 36:23 62:7 77:4 79:22 roles [1] 80:24 rolling [1] 22:20 rose [1] 64:11 rotation [1] 15:16 rotations [1] 33:8 route [2] 85:8 86:3 routine [4] 8:20 12:12 85:5,6 Royal [4] 35:10 40:14,24 41:6 ruling [1] 60:10 run [1] 106:18 runway [1] 22:20	19:17 21:3 23:13 24:16 24:23 25:2,5,24,25 26:12 26:22,24 31:20,25 32:10 32:24 34:2 41:12,18 43:21 47:9,20 48:11,11 48:22 52:10 53:4,5 54:1 58:24 70:22 72:25 74:5 75:4,6,14,19,22,24 76:1 76:5 78:2 79:2 80:3 81:2 84:23,25 85:11 87:25 88:10 89:25 90:18,23 91:5 92:7 93:2,6,8,20,21 97:21 99:3,9,12 101:4 says [4] 35:24 41:11,17 69:5 scale [1] 8:21 scenario [7] 20:7 85:9 88:12,15 89:19 90:7 92:23 scenarios [1] 85:10 scene [7] 4:22 47:6,13 85:22 87:3 90:14 98:22 scheduled [1] 106:18 Scotia [8] 3:23,24 4:2,18 4:24 51:1,10 53:22 scramble [1] 15:16 sea [7] 18:15 26:14 27:6 27:9 57:11 85:12 91:21 seafarers [1] 8:21 seal [2] 43:14 44:1 search [56] 1:10,22 4:1,5 4:19 5:8,17,21 10:14 26:17 29:2 31:3 34:12 34:21,24 35:16 36:3,8 36:10,12,15,18,24 37:21 38:21 43:18 47:1 51:9 51:17 56:5 58:23 59:25 60:5,7 63:20 64:25 67:8 67:8,11,14 68:2,10 72:2 72:22 73:22 74:6,10,11 74:20 75:8,17 80:23 91:14 99:21 105:19,25 seating [1] 87:1 second [5] 3:16 34:21 51:6 62:5 70:23 secondary [1] 18:7 Secretariat [6] 58:24 60:7 67:7,9 68:2,3 section [2] 63:18 71:1 sector [1] 81:8 see [12] 20:23 37:2 39:10 58:19 60:16 63:4 69:5 71:12 78:12 81:22 82:16 102:11 seeing [1] 82:1 seek [1] 64:14 seem [1] 14:1 selected [2] 101:20 102:2 senior [1] 106:5 sense [5] 52:3 67:4 68:9 83:24 84:12 separate [4] 32:2 34:7 73:1 74:11 sequence [2] 85:19 87:14 sergeant [1] 74:19 service [10] 14:21 15:2
--	---	---	---	--

-S-

safe [1] 85:25

safely [1] 28:14

safety [11] 41:4 59:24 63:17 67:9,12,25 69:2 70:24 76:20 88:3 100:25

sake [1] 52:3

SAR [99] 3:6,12,17,20 4:10 5:8,21 6:9,11,15 8:11,19,22,25 9:1,7,11 9:17 11:3 15:5,13 16:18 16:24,25 17:5,11,11,12 17:13,20,24 18:4,7,15

15:18 17:5 54:24 55:1 83:19 87:9,11 96:23 serviceable [3] 12:14 13:1,19 serviced [1] 14:15 services [16] 22:1 38:12 38:20,21 44:22 46:10 58:25 64:15 65:15 68:19 70:23 71:21 72:4,8 73:24 76:8 servicing [1] 12:11 set [10] 1:16 9:18 12:1 16:19 27:13,13,14 28:3 43:8 99:13 several [4] 45:1 63:19 71:2 96:22 shall [2] 36:1 98:23 share [1] 72:23 shared [1] 40:8 shifts [1] 33:4 ship [1] 20:4 shipowners [1] 8:17 Shipping [2] 18:13,24 shore [1] 86:1 short [2] 33:2 83:13 show [1] 61:8 showed [3] 68:14 73:6 86:20 showing [1] 45:2 shown [1] 45:9 sickness [1] 32:23 side [1] 8:16 sign [2] 25:1,3 significant [2] 41:3 67:10 signs [1] 24:24 Sikorsky [1] 30:2 similar [6] 9:3 18:16 77:10 88:5 98:12 103:7 Similarly [1] 75:1 simply [4] 8:8 71:13 83:5 85:13 simultaneously [1] 14:13 single [1] 92:10 site [5] 17:17 53:21 84:17 85:17 86:6 situation [19] 21:22 41:21 45:14,18 47:24,24 49:9 50:23 51:24 52:21 57:12 77:21 81:24 82:20 85:9 86:7,13 98:12 99:22 situations [4] 35:4 77:9 86:2 89:24 six [2] 32:6 33:11 size [1] 31:11 skills [3] 4:8 17:3,21 slide [4] 9:23 69:7 97:10 97:22 smaller [1] 33:6 solution [1] 85:14 someone [1] 97:17 sometimes [1] 17:18	somewhere [2] 48:22 99:22 Sooley [1] 107:11 sooner [1] 90:18 sorry [6] 19:5,19 37:5 56:9 82:1 94:23 sort [34] 5:4 10:20 13:3,6 14:5,9,23 18:25 20:5 22:15 25:21 28:15 29:1 32:5 43:19 45:3 49:16 73:18 80:7 83:15 84:9 84:10 85:2,7,10 87:6 90:22 92:9 93:14,22 99:13 100:12 101:5,14 sound [1] 107:7 sounds [2] 23:10 46:19 sparing [1] 81:24 speak [5] 11:10 60:25 82:1 101:2,23 speaking [5] 2:14 48:18 74:22 92:7 95:22 speaks [5] 13:5 37:19 46:3 47:6 87:8 special [2] 26:20 75:5 specialists [1] 41:12 specific [8] 1:5,9 33:10 43:13 46:7 60:21 78:9 80:18 specifically [2] 68:22 78:7 specification [3] 9:6,16 10:9 specifications [2] 9:19 102:1 specify [1] 93:17 speedy [1] 25:12 spending [1] 72:20 spent [1] 73:24 spoke [5] 10:24 14:8 18:2 19:14 60:3 spoken [1] 14:9 sponsored [1] 4:4 spot [1] 84:8 squadron [3] 15:8 33:7 52:10 squadrons [1] 83:2 St [8] 5:20,20 35:17 39:17 41:19 68:20 107:5,9 staff [4] 3:11,13 100:24 105:17 stand [4] 15:17 16:14 48:7 50:16 standard [18] 9:6,16 10:5 16:20 25:21,24 26:8 26:8 34:24 51:4 55:1,6,8 57:23 67:21 68:18 83:3 94:10 standards [2] 67:14 68:10 standby [27] 4:16,19 5:13,15,19 12:5,5 13:23 15:3,5,6 16:11,14 28:16 41:25 47:17 48:4,24 51:18 55:3 59:12,18 66:25 82:22 83:4,17,21	standing [2] 37:3 70:14 start [9] 1:4 10:6,18 12:23 14:1 22:16 47:3 90:19 106:15 started [2] 51:25 98:23 starts [1] 22:17 state [6] 3:19 27:6,9 91:22 92:22 98:11 statement [1] 95:18 states [2] 26:14 36:14 stating [1] 42:4 stationed [1] 53:22 stationing [2] 35:16 42:11 statistic [1] 44:13 statistics [3] 12:13 16:1 86:20 status [4] 32:15 40:16 41:10 98:10 statutory [1] 96:13 stay [1] 25:22 steps [4] 85:7,8 98:23,24 still [5] 41:17 44:18 49:8 50:14,21 Stoney [1] 61:9 stop [2] 86:3 99:1 stopped [2] 38:17 39:25 straight [1] 94:2 straightforward [1] 79:19 Street [1] 107:5 Strickland [39] 7:14,15 7:16,21,22 9:14 10:23 11:18 14:7 15:20 16:16 17:6 18:1 19:4,9,13 20:12 21:1,9,13,19 22:4 22:11 23:1 24:3,9,13 25:13 26:10 27:10,17 28:1,8 29:5,11,13 31:9 54:9,21 strictly [1] 2:1 structural [1] 25:21 structure [2] 71:23 74:14 structured [1] 74:16 studies [1] 60:6 study [1] 81:14 stuff [1] 83:16 submission [3] 37:17 66:3 103:14 submissions [2] 70:15 70:15 submitted [1] 61:23 subregion [1] 14:23 substantial [2] 13:12 76:18 success [1] 90:22 successful [4] 26:24 27:8 87:4 91:17 such [10] 1:23 18:10 20:14 21:6 33:7 36:5 37:23 66:9 69:1 81:8 sudden [1] 16:3	suffered [1] 32:24 sufficient [2] 11:24 85:22 suggest [3] 16:10 33:20 45:6 suggesting [3] 53:1 89:16 91:4 suggestion [2] 66:25 67:23 suit [8] 101:14,19,20 102:5 103:14,24 104:13 104:16 Suite [1] 107:5 suits [1] 86:15 summer [1] 25:16 Suncor [3] 7:25 9:3 29:11 supplemented [1] 41:23 support [1] 11:20 supports [1] 12:4 suppose [2] 39:23 74:15 supposed [1] 6:12 surface [1] 85:15 surprised [1] 55:24 surrounds [1] 96:20 survival [4] 86:6,11 90:15,20 suspect [1] 8:20 suspected [1] 79:1 swapping [1] 26:6 swift [1] 20:8 switch [1] 95:19 swords [1] 30:20 Sydney [4] 3:23,24 4:18 51:1 system [9] 11:20 47:7,20 61:22 102:20 103:7,8,8 103:23	technicians [4] 74:12 74:20 88:11 91:25 technicolour [1] 89:2 techs [13] 16:18,24 17:13 17:20 23:13 31:20,25 74:5 75:24 90:18 91:5 93:2 101:4 telephone [1] 98:9 template [1] 85:2 temporary [2] 43:11,22 tendered [1] 61:18 term [8] 22:5 37:19 38:15 65:18 66:4 83:13 102:21 102:25 terminating [1] 48:22 terms [38] 1:17 13:4 16:18 26:20,21 27:6 31:15 37:18 41:6 44:20 44:21,22 46:2,14 50:23 54:16 55:19 60:1 65:18 72:16,19 73:13 78:20 80:10,10,21 81:7 83:9 83:25 84:11 88:24 90:1 93:23 96:24 100:15,24 105:20 106:8 Terra [1] 88:14 territorial [1] 21:23 testified [1] 31:2 testify [1] 64:22 testimony [3] 2:16 3:3 3:19 textbook [1] 85:2 thank [52] 3:1 6:17,19 6:21,25 7:7,10 9:10 14:8 29:6,9,11,17,19,21,24 30:2,8,10,13,22 38:19 45:4 64:10 69:19 70:11 70:18 71:6,14,17 73:17 76:12,21,22 79:17 94:16 94:21 95:3,7,7 102:10 103:18,20 104:7 105:3,4 105:6,8,12,14 106:9,22 thanks [4] 94:19 105:14 105:17 106:4 theme [2] 59:12 66:23 themselves [3] 27:1 52:24 55:19 there'll [1] 92:9 therefore [3] 5:11 6:10 47:20 they've [2] 73:12 74:24 thinking [3] 26:13 53:12 88:24 third [1] 6:2 thought [1] 28:2 three [8] 8:1,6 12:16,18 12:19 31:17 54:19 82:22 through [6] 1:14 10:21 49:15 69:9 96:4 100:5 times [19] 12:7,17,19,22 22:6,15 32:17 33:6 34:3 49:14 52:17 55:19,25 56:20 57:11,15 60:1 96:22 98:4 today [2] 105:23 106:6
--	---	---	---	---

-T-

tactical [1] 75:20

takes [9] 22:19 24:15
79:4 85:5,19 91:23 92:10
92:23 106:19

taking [2] 26:6 98:23

talks [1] 23:17

Tara [1] 107:5

Tarlton [25] 2:2,4,5,8,9
2:11 6:20,23,24 7:2 37:3
37:4,5,9,13 60:16,18
61:9 64:7,8,9 65:4 69:17
105:8,10

task [4] 18:3 20:15,22
79:13

tasked [11] 3:21 14:11
14:17 15:3 20:3 25:4
49:3 78:7 88:17,18,19

tasking [2] 15:13 49:16

team [4] 13:6 17:11,11
74:22

teams [1] 17:3

tech [7] 16:25 17:11
32:24 76:5 92:7 93:6,8

together [2] 4:6 91:2 too [1] 91:13 took [3] 3:18 52:17 80:21 total [3] 48:12 72:25 73:23 totally [1] 91:10 tracked [1] 98:14 train [3] 5:6 39:2 93:3 trained [5] 32:7 33:13 36:4 93:4,8 training [33] 4:10 5:4,9 5:21,25 25:3 32:9,12,13 34:16 35:3 36:12,18 38:7 39:22 40:8 41:12,13 51:1 51:3,4,20 53:5 54:2 93:2 93:5,6,9,18,20,24 97:19 98:1 trains [1] 16:18 transcribed [1] 107:6 transcript [1] 107:3 transport [7] 7:10 24:21 27:13,16,18 28:3 87:6 transportation [7] 59:24 63:17 67:9,25 69:2 70:24 88:2 tremendous [1] 17:23 trouble [1] 44:19 true [2] 75:13 107:3 try [1] 61:1 trying [2] 5:2 54:18 Tuesday [5] 106:13,15 106:17,18,23 Tusker [1] 25:4 two [20] 5:18 14:13,16 16:5 23:20 31:20,25,25 61:21 67:19 73:23 75:1 88:9,10 93:19 95:13,20 96:8,13 97:2 two-hour [4] 23:5 57:18 95:14,15 type [1] 55:2 types [1] 10:11 typically [2] 24:15 101:13 -U- UK [1] 57:16 ultimately [3] 28:9 65:14 66:5 unavailable [1] 33:14 uncovered [1] 40:7 under [8] 1:15 15:13 18:19 32:12 77:23 78:5 105:21 106:8 undersigned [1] 107:2 understand [20] 2:14 9:13,21 21:8 38:6 49:24 54:15 56:3 64:3 74:8 77:19 78:12,15,23 82:11 95:15 97:11,21 101:9 102:14 understood [5] 18:5,8 18:12 97:4 102:17 undertake [1] 11:14	undertaken [1] 9:2 undertaking [1] 4:9 undertakings [1] 1:12 undue [1] 27:1 unique [3] 45:14,16 46:9 uniqueness [1] 46:2 unit [1] 13:15 unless [1] 48:13 unlikely [2] 20:9 48:10 Unlimited [2] 107:12,14 unsafe [1] 28:20 unserviceable [1] 12:23 unsure [1] 48:13 up [34] 1:16 2:8 4:11 15:5 15:17 16:14 22:5,12,21 23:5,5,19 24:4 26:8 32:14,25 37:3 43:9 45:12 48:15 50:15,23 51:15 58:5 67:23 69:12 71:12 74:21 82:20 92:12 93:10 97:1 98:14 105:9 urgent [1] 86:14 used [2] 5:17 88:4 useful [1] 99:21 uses [1] 9:7 usual [1] 7:3 usually [2] 74:18 100:5 utilize [2] 21:3,15 utilizes [1] 47:17 -V- valuable [2] 29:25 105:24 variable [1] 56:2 varies [1] 32:5 variety [2] 57:19,22 various [5] 22:15 25:23 66:22 79:24 81:4 vein [1] 19:14 vessel [12] 18:7,14 19:16 19:18,18 20:13 26:5 43:15 48:15 87:5 89:18 90:9 vessels [5] 8:22 18:9 41:25 85:15 98:13 vest [1] 102:18 view [9] 9:3 17:24 34:25 49:6 61:3 67:6,18 89:11 91:11 violating [2] 105:20 106:8 virtue [3] 4:21 74:23 75:3 vis-a-vis [1] 7:2 visibility [1] 26:14 vital [1] 106:7 voluntary [1] 18:10 -W- waiting [2] 28:16 64:10 warrant [2] 74:19,21	water [13] 26:6 42:1 48:16 84:1,14 85:24 86:15 87:1 88:22 89:1 91:5,24 92:8 ways [1] 90:15 wear [3] 100:24 102:18 104:19 wearing [3] 101:4,13 102:12 weather [6] 23:16 26:13 26:20,20 28:18 92:4 week [1] 106:14 weekends [1] 96:8 Whalen [2] 29:21,22 whatnot [1] 100:25 whatsoever [2] 35:1 68:24 wheels [8] 22:5,12,21 23:5,5,19 24:4 97:1 whole [5] 14:25 48:23 53:25 66:7 75:15 widely [1] 3:5 willingness [1] 20:25 wind [2] 26:14 105:9 wing [2] 18:22 22:20 wish [2] 2:23 7:4 wished [2] 43:15 49:14 wishes [2] 2:15 21:23 within [18] 1:17,24 3:8 4:7 14:25 21:20 42:13 43:25 46:25 53:4 59:12 66:24 67:11 75:22,25 77:5 97:16 98:11 without [10] 5:9 17:13 25:9 27:9 33:8 49:23 82:1 90:13 105:20 106:7 witness [5] 39:25 59:11 63:16 64:2 106:11 wonder [1] 58:1 wondering [5] 2:18 9:15 16:19 45:13 77:4 word [1] 91:13 words [3] 27:1 38:20 48:13 worked [3] 4:11 6:12 8:13 worst [1] 84:10 worth [1] 84:24 writing [1] 106:3 written [1] 70:15 wrong [2] 73:3,4 -Y- year [2] 16:3 45:11 years [1] 8:18 yesterday [45] 2:16 3:4 3:10,17 5:5 9:22 10:24 17:10 18:2,20 19:23 23:12,24 24:21 30:23 34:14,16 35:11 38:1,10 38:25 39:21 44:17 46:22 47:8,18 48:21 49:17 55:20 60:4 64:18 69:7 71:20 72:13 73:21 84:22	86:8,20 93:13 97:5,18 100:7,21 104:7 105:23 yet [1] 41:3
--	--	--	---