

# Statement Carl overberg

Original

Enclosure 12.4.2.151

Statement

Carl Övberg, alias Kadir Kaymaz, states:

I was born on 18.06.52 and am living at Sundbyberg / Sweden - P.O. Box 7127  
17207, phone +46-70-732 53 31, Fax +46-8-760 86 24.

I have studied jurisprudence in Turkey, but am lacking 2 years of practice to be able to work as a lawyer. In 1980 I immigrated to Sweden and took the Swedish citizenship in 1986 and changed my name from Kadir Kaymaz to Carl Övberg. I was working as a truck driver, driving my own truck and went already with my truck to Tallinn with the "Nord Estonia", the ferry engaged in the Stockholm-Tallinn service before the "Estonia".

Soon after the "Estonia" had taken over this service I made my first trip on this ferry followed by many more. In total I have made 40 trips. At the beginning there were many Swedish crew members on board in addition to the Estonian crew, the number of Swedes, however, became less and less and I am not sure whether there were any on the last voyage. I went a few times by truck, but more often with Volvo personal cars which I sold in Estonia and came back alone. Normally I was staying in cabins above the car deck and only when I booked rather late I had to take a cabin below the car deck on the 1st deck. I keep a logbook where I register what I am doing day by day and where I am, but the one covering 1994 sank with the "Estonia". I have, however, saved my passport and am thus able to state the exact number of voyages I made with the "Estonia" once the respective stamps have been made visible.

When looking at the pictures on Enclosure No. 1 - I recognise these to show the car deck and the bow ramp with the control panel at port side. Several times I stood with Volvo cars right behind the bow ramp, because I drove on board early at Stockholm to be one of the first to leave the ferry at Tallinn.

When I was waiting in my car on the car deck on one voyage I noticed that there was a video camera mounted underneath the upper deck at port side forward which was looking aft. The approximate position is indicated by arrow 3 on picture no. 1 on Enclosure no. 1. I am aware that the ferry's car deck

monitory system comprised 4 video cameras located forward, aft and at both sides of the centre casing, which, however, had nothing to do with the above-mentioned camera. This is also known to other passengers.

Sometimes my car was also on the hanging deck very much forward. The last time my car got stuck (the left front part of the bumper was caught by a pipe which was subsequently freed). I have also been down on the car deck at sea several times to take out something from the car or to look whether nothing was touching it. The car deck doors were never locked, but easy to open by just pressing the button. I also went down in the night and the doors were also unlocked. Only after the "Estonia" casualty were the doors on "Mare Balticum" locked at sea.

During my many stays on the car deck I have made numerous observations which, in my opinion and experience, are not in conformity with the normal operating practice on board a modern car/passenger ferry. These are, to the best of my recollection:

- (a) As stated before, the car deck doors were not locked at sea (although it was said by the crew that they were), thus I was able to go down onto the car deck at sea, also at night (although it was strictly forbidden). I did this frequently to bring something to my car, or take something out, or just to check the car in bad weather to make sure that nothing was touching it. The car was sometimes secured by wooden wedges being put in front and behind the wheels, the trucks were sometimes secured by belts, the trailers very often not at all.
- (b) I once or twice came down to the car deck at sea during normal weather/seastate conditions, opened the door in the centre casing and saw at once that there was a lot of water on the car deck, I would estimate about 5 cm. This was the 2nd door from forward, i.e. in the forward third of the car deck. This was on voyage from Stockholm to Tallinn, because vice versa I had no reason to go to the car deck as I sold the cars in Tallinn.

- (c) In front of the centre casing there were always one or two garbage containers standing into which the crew put empty bottles, cartons and the like. In addition, I noticed sometimes these containers also standing at port and starboard sides in the aft part of the car deck. I have drawn the position into a sketch of the car deck attached as Enclosure no. 2. As far as I remember these containers were never secured and very often caused concern to me when my car was standing close to them. The port one is visible on picture 1 of Enclosure no. 1. Arrow 2 is pointing to it.
- (d) When I was down on the car deck at night, I have several times seen the flashing light of welding being performed in the forward part of the car deck near or at the bow ramp.
- (e) I have actually seen crew members working at the bow ramp many times by hammering, welding or cutting (burning). I have seen the gas bottles and considered it to be very dangerous. As I am quite familiar with the way the crews from ex Eastern Block countries work, I was, however, not too surprised.
- (f) I also remember having heard similar hydraulic noises from forward at sea the same, as I heard during the night of the catastrophe, but not as long lasting as during that night.
- (g) It was clearly visible that the bow ramp was severely misaligned respectively bent. In open condition the port side was much lower compared to the starboard side. The bow ramp could not be opened in one go, but had to be raised/lowered several times before it was finally down.  
Before the ramp was lowered down completely to the quay two crew members jumped on the quay and rolled one or two rope coils underneath the starboard side of the ramp, which was still 30-40 cm above the quay when the port side was already resting on it. I remember also to have

seen that wooden pallets were placed underneath the starboard side of the bow ramp instead of the rope coils, as visible on the picture attached as Enclosure no. 3 (arrow). Such a pallet can also be seen on the large photo attached as Enclosure no. 4 (arrow).

- (h) I am also of the opinion that, at least during the last months before the catastrophe, the bow ramp could not be closed completely anymore, because several times I observed from my position at the fore part of the car deck that light was falling onto the car deck as soon as the visor began to open, i.e. before the bow ramp itself was even moved. This, in my opinion, is only possible if the bow ramp was already open to a certain extent when the visor opened. The light came in as shown on the photo on Enclosure no. 5 at the upper port side. The whole ramp was badly misaligned, in particular the port side looked very bad, whilst the starboard side looked quite in order. Once I saw a crew member standing on a wooden pallet which was lifted up by a forklift standing behind the closed bow ramp at port side. The man was lifted up to a position just underneath what I believe was the upper bolt. After some hammering to the area where the bolt was located the man was lowered down to the car deck again.
- (i) When I was sitting in my car in a position close behind the bow ramp waiting for the ramp to open, I remember having frequently seen crew members pulling steel plates across the gap between the open bow ramp and the car deck. I know that this gap is normally closed by steel flaps, as visible on the photo on Enclosure no. 5 (red arrow "flaps"), but these had been dismounted with certainty at the port side. There were now holes in the flaps on both ends into which crew members were putting hooks by means of which they were pulling the flaps across the gap when the ramp was open and to the side before the ramp was closed. The area with missing flaps at the port side of the closed bow ramp can be seen on picture 1 of Enclosure no. 1, where it is indicated by arrow 1.

- (k) I also remember that I have more or less always seen a large number of wooden pallets on the car deck, which were stowed behind the side-houses at both sides, as I have marked on Enclosure No. 2.
- (l) When I was standing with my car close behind the bow ramp I could look into the open control panel located at the port side inner bulkhead behind the bow ramp. I remember that at least during the last months before the catastrophe there were only 1 (one) green and 1 (one) red light visible on the panel. The operator was always an ordinary crew member with boiler suit and walkie-talkie.
- (m) I saw welding and burning several times when the ramp was closed. It was the port side, mainly the lower bolt. There was always a ladder in the vicinity of the bow ramp.
- (n) I do not remember having been on the 7th deck forward upon departure Tallinn, but I was there upon departure from Stockholm when the visor was frequently open.
- (o) I also made a trip with "Estonia" in February/March 1994 when "Estonia" was acting like an icebreaker proceeding at full speed through heavy ice all the time until shortly before arrival. Once she almost stopped due to the very thick ice and then proceeded slowly ahead. The vessel was shaking and vibrating which was felt and heard all over the ship.

On my last trip to Tallinn before the casualty (I missed one sailing) my car was on the hanging deck at starboard side. Thus I could not see what was going on at the ramp and the visor when being opened. I saw, however, crew members working at the bow ramp before it was lowered down. When I drove down the ramp I saw the equipment for either welding or burning (gas bottles) laying at port side near ramp. We had to wait longer than normal, maybe half an hour or more before the bow ramp opened. I remember this clearly, because I had

people waiting for me at the quay who had left before I was from board because it took so long. It could be the time when I saw the visor moving up and down several times before the bow ramp opened combined with banging noises and also hammering (the same banging noises I heard later during the accident).

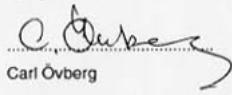
Before the last departure I came on board probably as the last passenger because I had problems getting to the terminal as the whole area around the "Estonia's" berth/terminal was shut off, I believe, by military forces. That's why my friend had difficulties to drop me at the terminal. When I was on board, they pulled back the gangway and the door was closed. This was at about 19.00 hrs. I walked straight to the Reception and asked for a cabin, they said, they didn't have one. The girls were very nervous and behaved quite differently to other voyages. I was asked to come back after 1 hour and I put the luggage into a locker. Finally, at about 20.30 hrs., they gave me cabin 1049, down on the 1st deck. I went down, it was a 2-bed cabin, where I was alone. I went up again and walked around the ship and was also outside on the 7th deck. The weather was not so bad, some wind. Later the vessel took a slight list to starboard. I did not go to the sauna. It was extraordinary that there were no crew members visible, it was like a dead ship. At about 22.30 hrs. I went down to the cabin and to bed where I tried to sleep. After a certain time I suddenly woke up, I believe due to the rather strong noises of rushing water which I could hear from both sides, mainly from the starboard side (not from above and not from below) which alarmed me and, in addition, I heard quite strong metallic banging noises, which had not been there before. I sat up in my bed (was athwartships) and put my feet to the floor, I sat now facing the door, i.e. I was looking aft. I lit a cigarette and listened with concentration to the strange and disturbing noise scenario. After a while I heard suddenly the noise of the starting up of hydraulic pumps, the clicking of valves, and, then, the typical noise of a hydraulic system under load, simultaneously I heard the banging of sledge-hammers. I am uncertain whether these noises came from forward.

The hydraulic-under-load noise faded away and came back again, whilst the sledge-hammers were more or less banging continuously. Both hydraulic and banging of sledge-hammer noises continued for ca. 10-15 minutes whilst the other banging noises, heard then already for some 20-25 minutes, also continued.

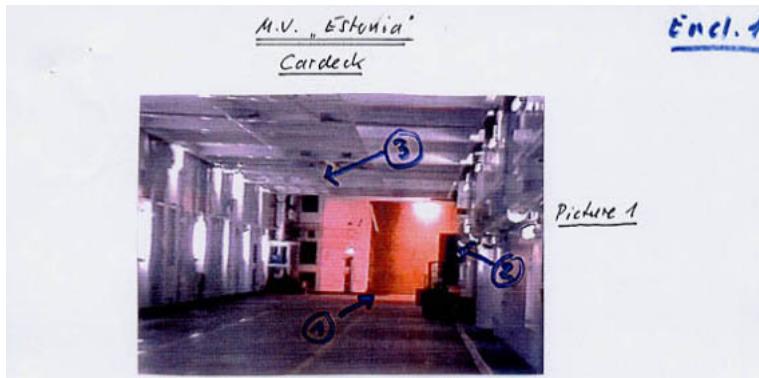
The hydraulic- and sledgehammer-noises stopped with a sharp, short, metallic crash which gave me the impression that something heavy, metallic was broken. After a 'silence' of 30-40 seconds the next really extreme crash followed in connection with an abrupt stopping of the ferry which was so 'sudden' that I was thrown against the front wall of my bed, it was again a short, sharp intense crash as if the ship had struck against something. I jumped out of my bed and put on clothes very quickly when I realised that all engine noises had stopped and the ferry was now making much softer pitch movements. I rushed out of the cabin, turned right towards the stairway, around the aft part of it, through the open WT-door (watertight) towards aft, but turned around after some meters and headed forward, the vessel started to make sideways movements by now (rolling), the door at the port side of the stairway was either open or missing, and I rushed into it, turned right up the stairs when my coat got caught at the beginning of the right handrail, I turned round to my right and looked over my right shoulder out through the door opening into the alleyway (corridor), thereby I saw 2 goose-necks next to the cabin wall, as I have indicated on the drawing attached as Enclosure No. 6, out of these goose-necks water was streaming under great pressure (arrow), I also saw water penetrating the door forward of these goose-necks in the next compartment (arrow), which according to the drawing belonged to a cleaning room. I saw the water running over the floors. Then I had freed myself, whereby I lost my mobile phone which fell down the stairs to 0-deck. I rushed up the stairs. When I was about half way up to the car deck the vessel heeled suddenly and abruptly more than 45°, probably 50° or 60°, to starboard because I was standing on the wall holding to the stair rail. The ferry quickly came back to almost upright position and thereafter slowly heeled more and more to starboard. I continued upwards, i.e. I pulled myself up whilst the ferry was

rolling, i.e. almost uprighted and thereafter heeled to starboard more and more. When I was holding onto the rail in a squatted position during the very wide heel there was an elderly man above me on the same stair, whom I passed on my way up after the ferry had more or less uprighted. My way up is demonstrated on the drawing attached as Enclosure no. 7, whilst the drawing attached as Enclosure no. 8 shows me and the man above me during the excessive heel of the ferry to starboard. After deck 6 it was only possible to walk when the ferry had rolled in the up position and I had to wait and hold myself when she was heeling deeply to starboard, I reached the 7th deck and managed to get out through the forward door, went to the locker with lifevests and opened it, tried to lower the 2nd lifeboat from forward when the lights went out and some came back after a short while, there was one light underneath the port bridge wing which kept burning all the time, otherwise the bridge was totally dark. I was subsequently told that at the moment when the lights went out, the diesel generators shut off due to the heel which must then have been about 45°. The light came back a little later when the emergency generator had started. The bow was raising, whilst the stern was sinking down and the vessel was on her side, I was underneath the bridge and walked down the hull side towards the water just forward of the large letters ESTLINE, I actually walked across the E. It became rather slippery and I took off my shoes, but the seaweed or whatever else was covering the vessel's hull side turned out to be rather sharp.

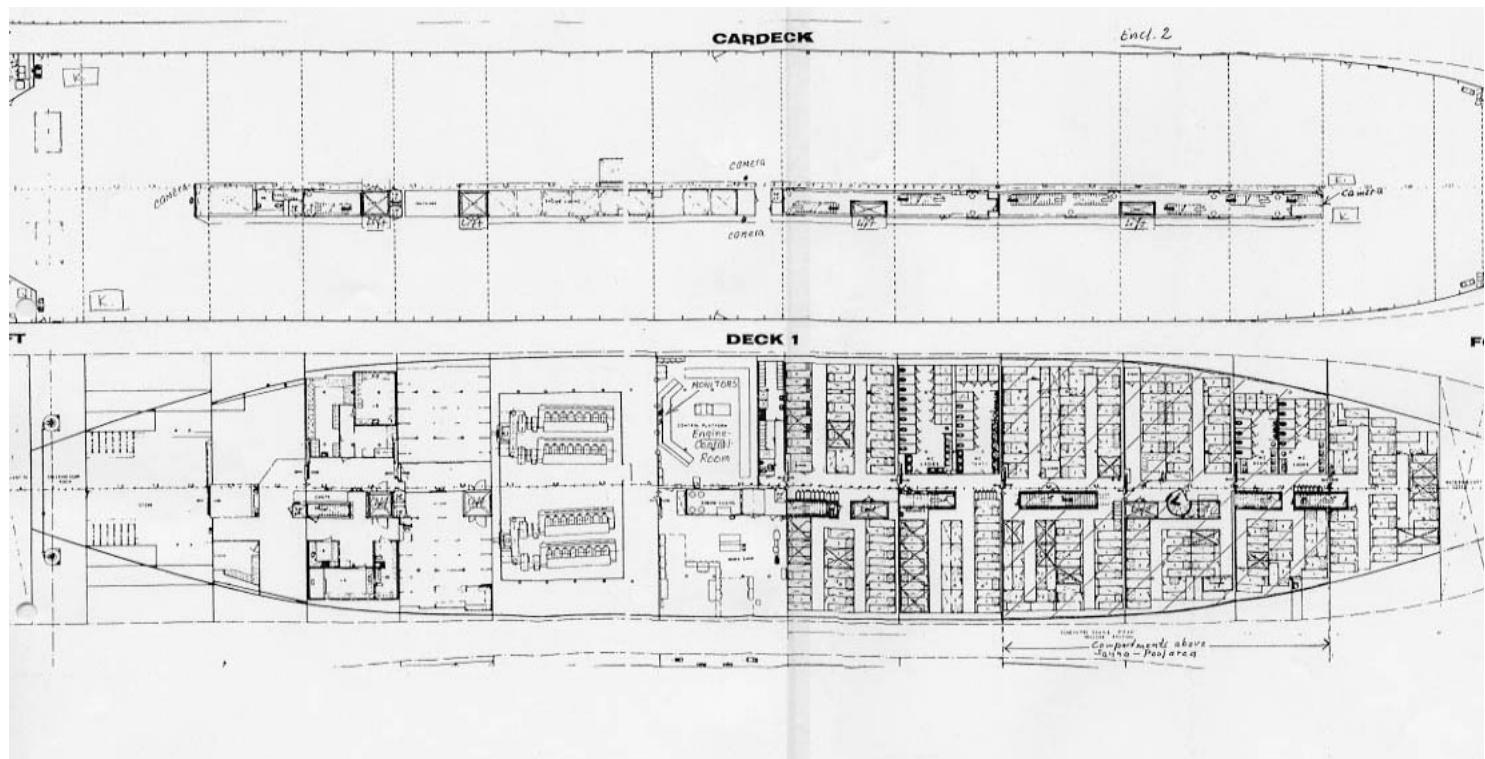
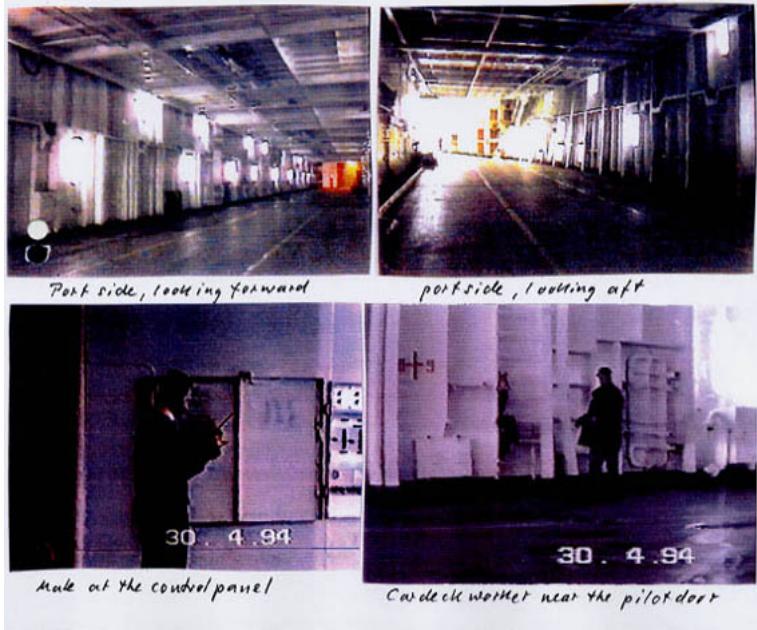
I felt and heard the sound of escaping air and smelled diesel fuel before I heard the sound of the siren, I first believed the vessel would stand on the ground and not sink, however, this was wrong and I finally jumped into the water. I heard lots of people shouting and swam forward, found a rubber raft and grabbed a rope, I pulled myself onto the liferaft, where I spent the next hours together with 3 men and 1 girl until we were picked up by a Finnish helicopter and brought to Hangö.

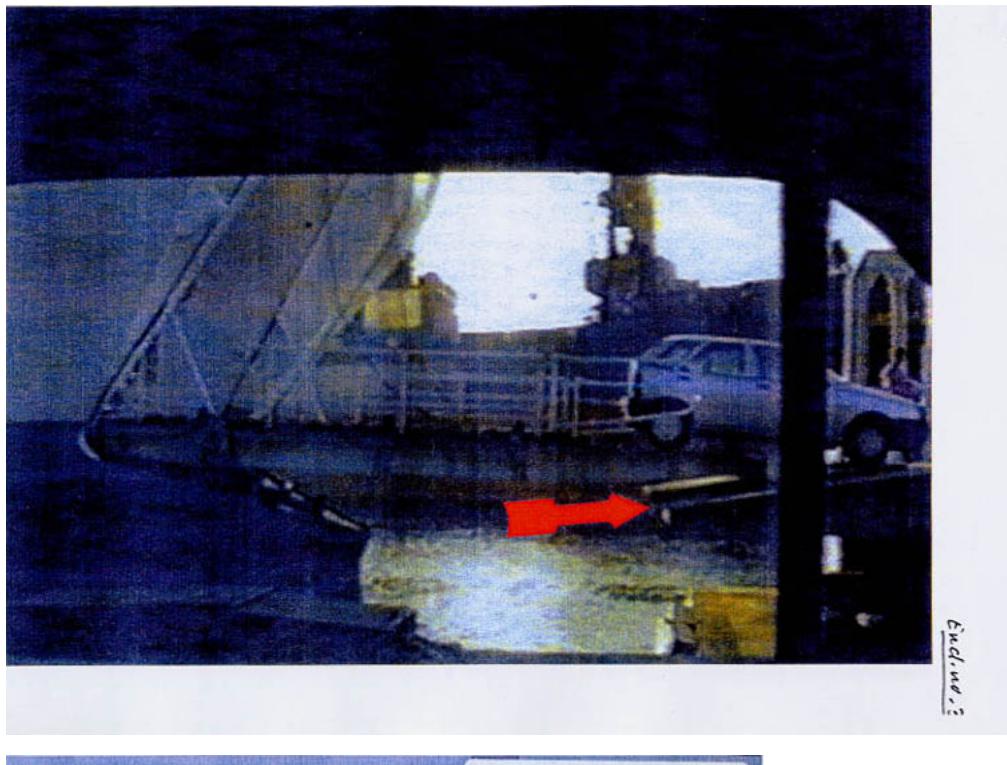
  
Carl Övberg

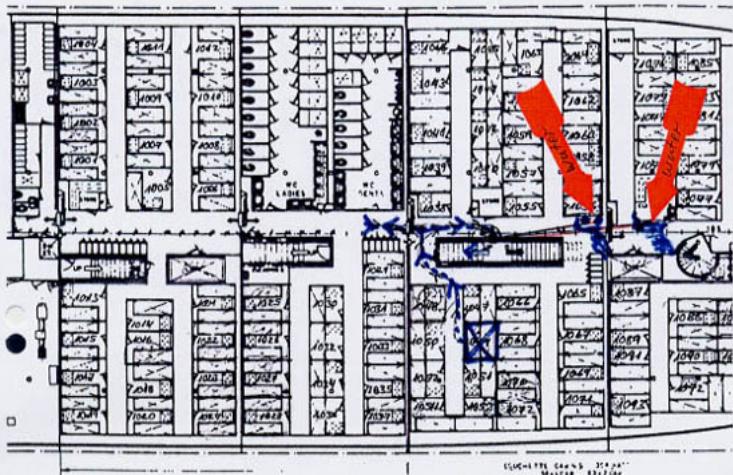
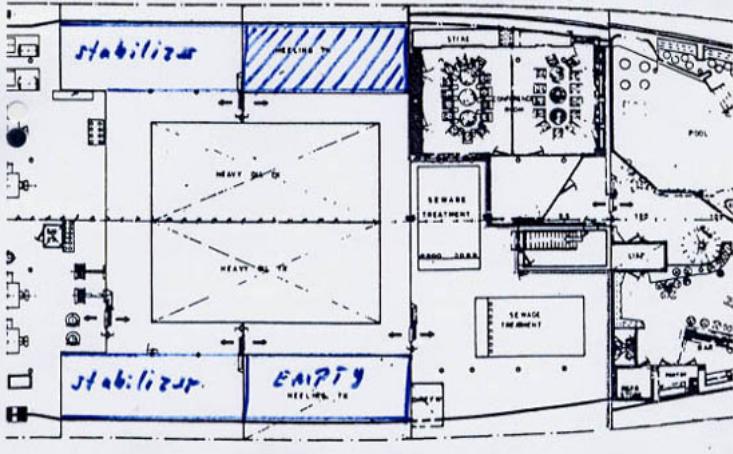
Stockholm, 9.9.97

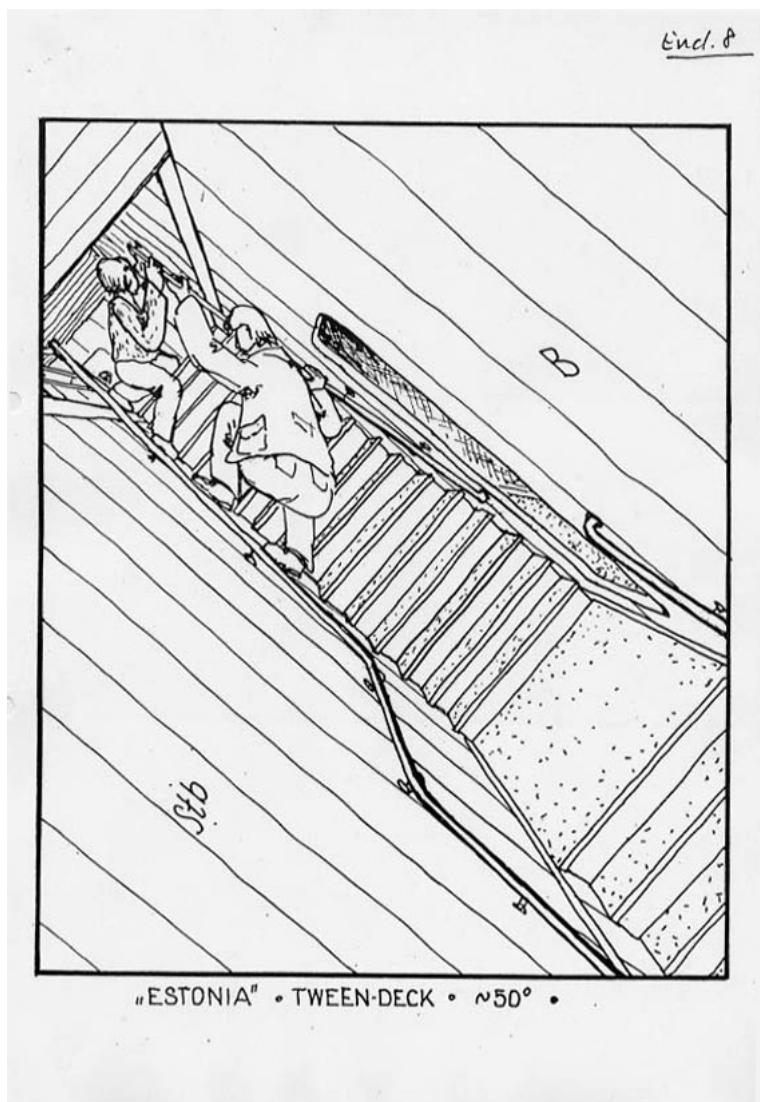
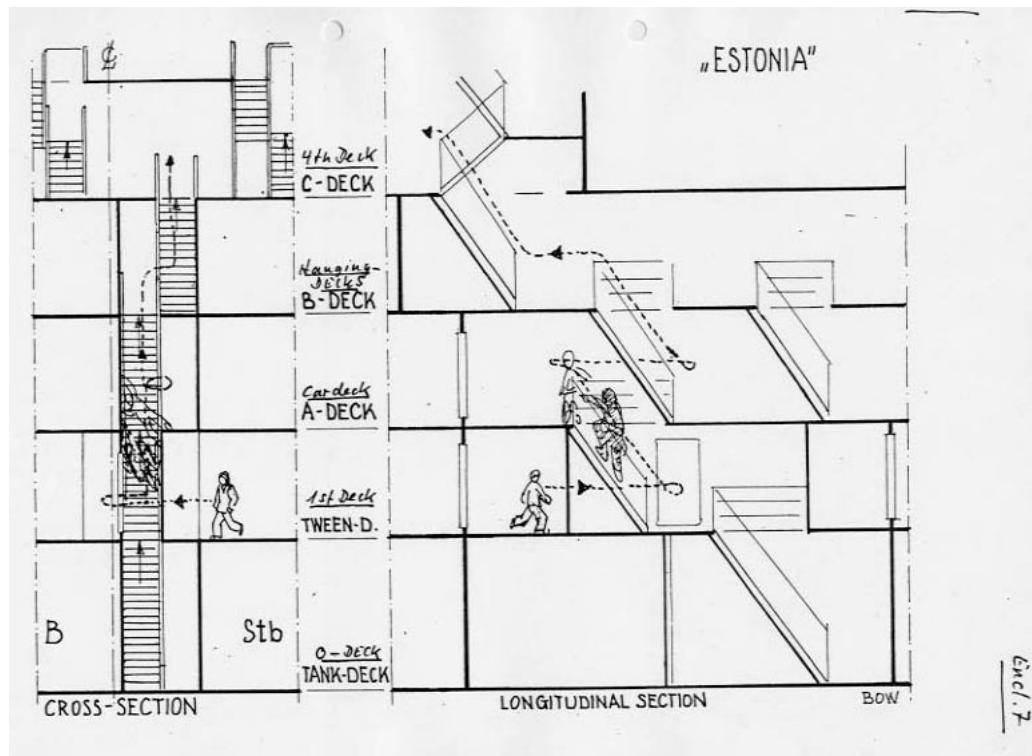


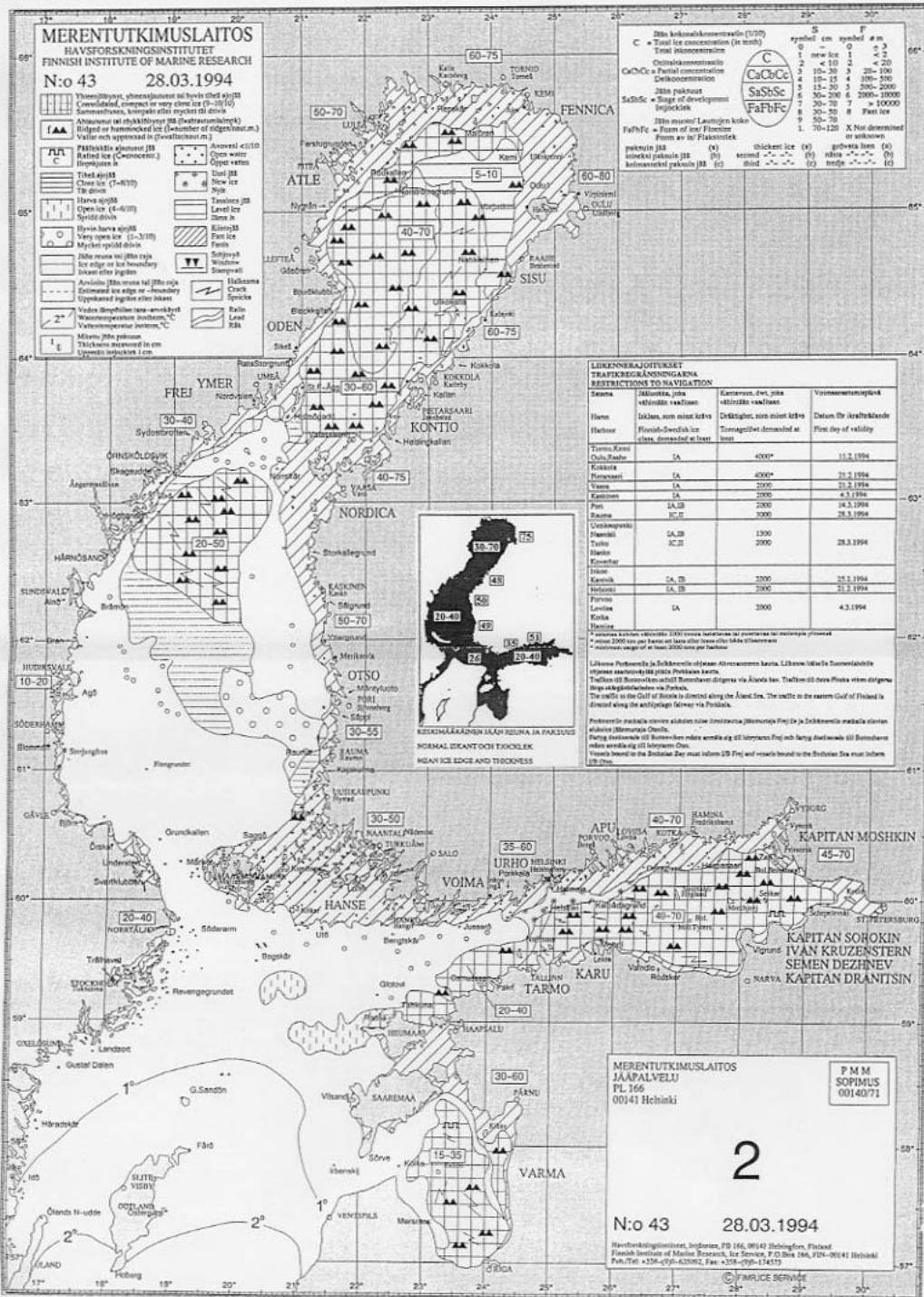
Port forward part with closed bowramp.  
Arrow 1 indicates the missing flaps between ramp/cardeck, which are pulled to the side when the bowramp is closed.  
Arrow 2 indicates the garbage container.



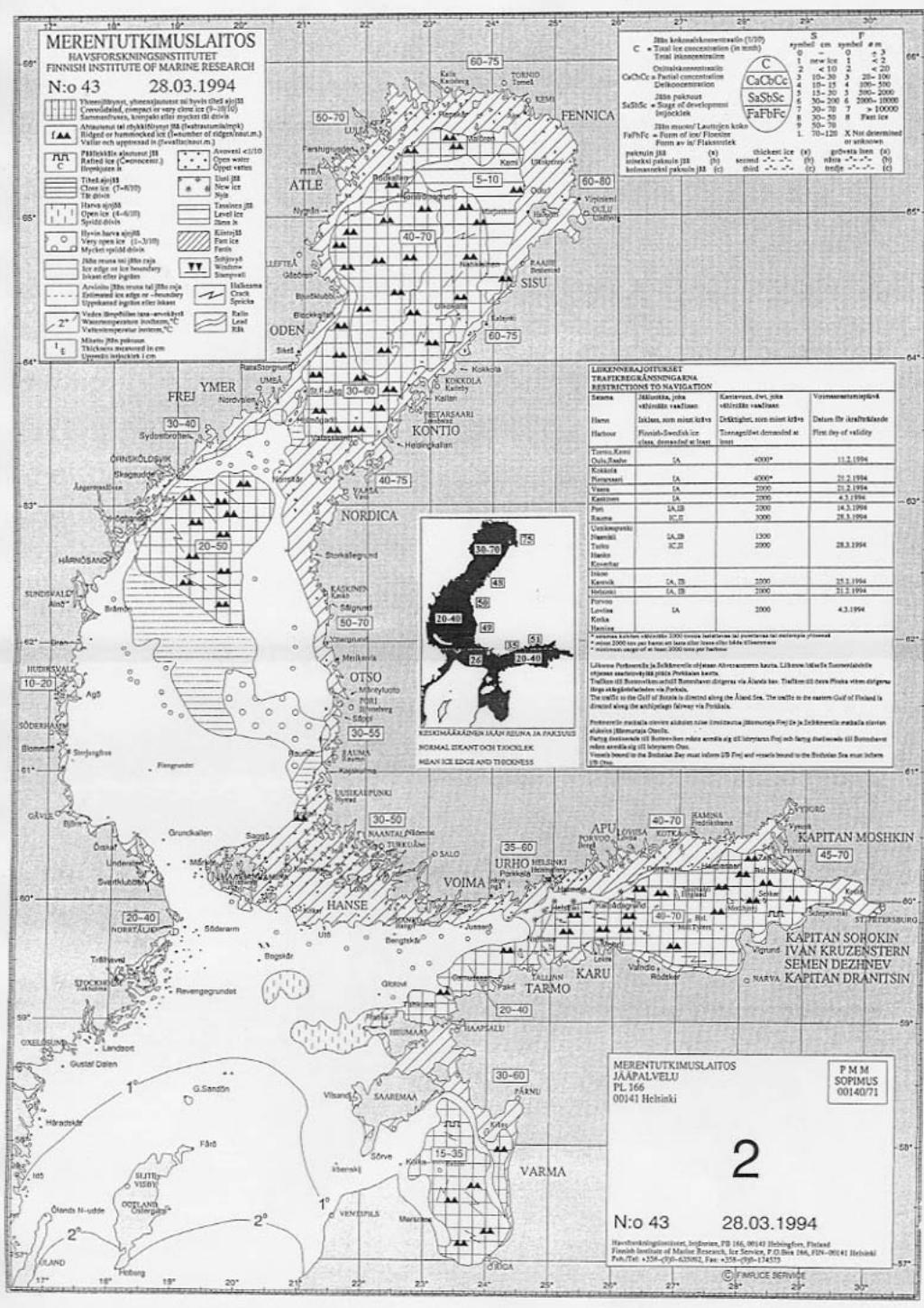


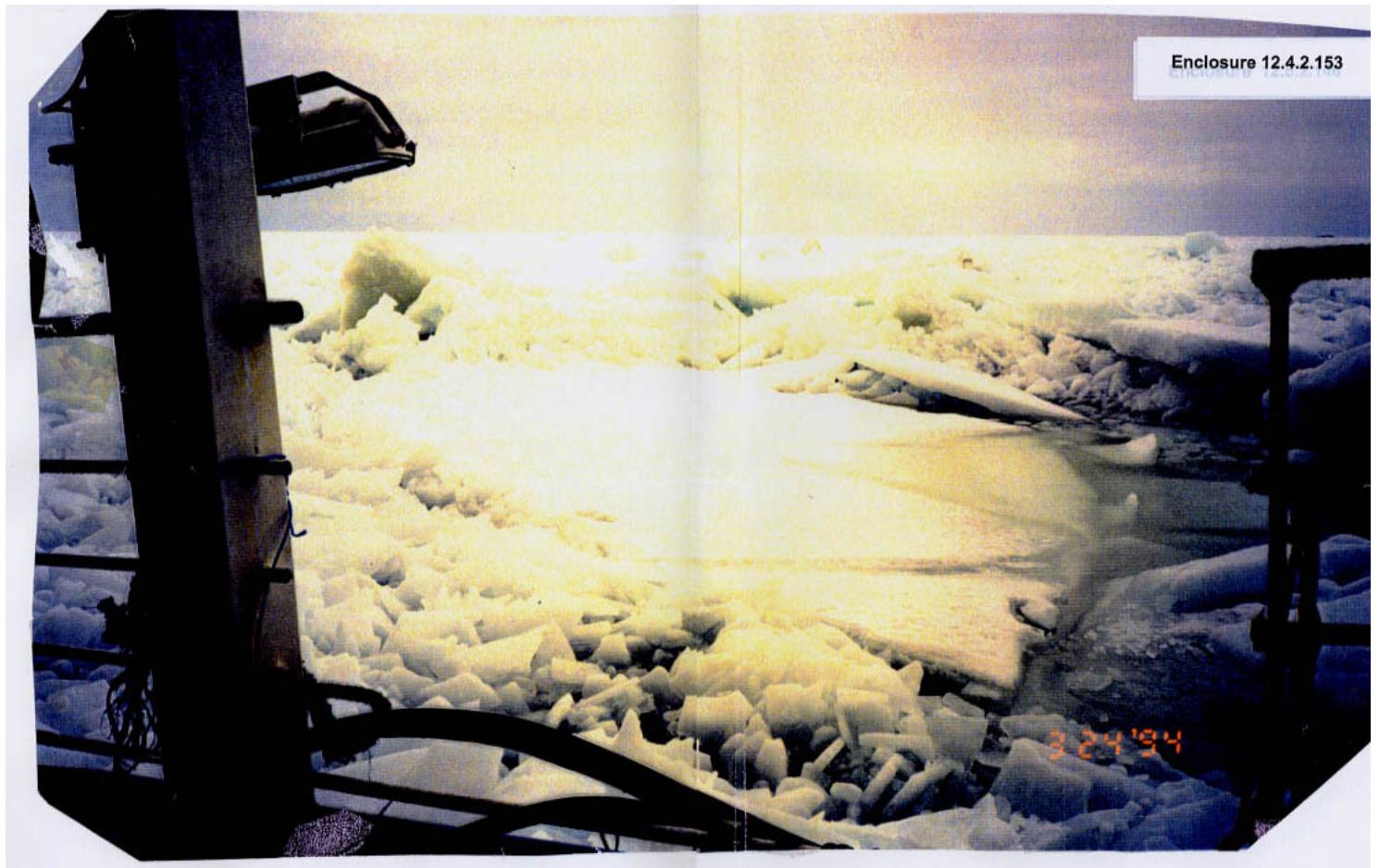
Encl. no. 5Encl. NO. 6**DECK 1****DECK O**



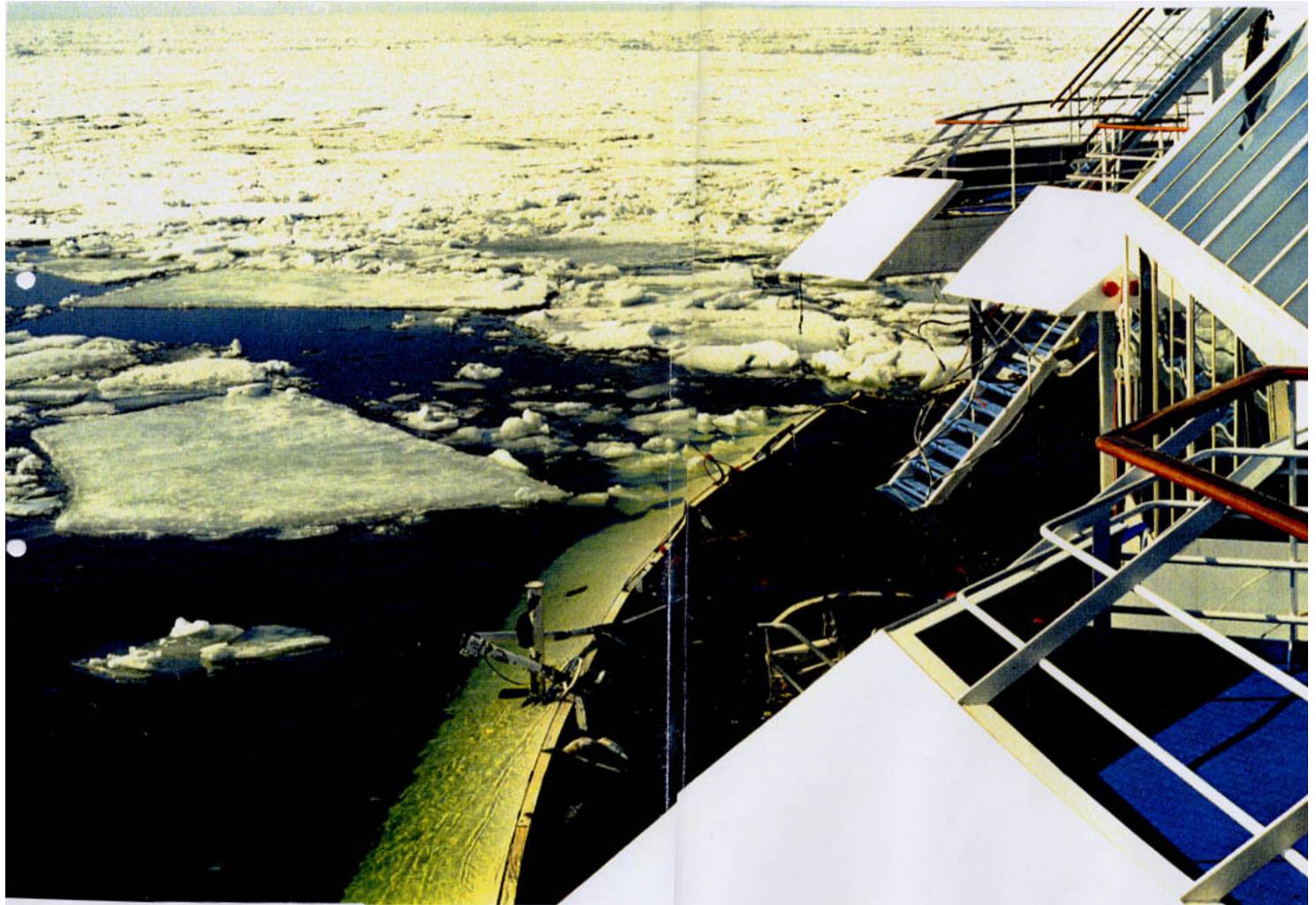


## Ice chart





Enclosure 12.4.2.153



## Interview Lars lindstrom

Interview

Lars Lindström (lost his brother plus 10 friends) – was on board as a passenger with car the last week in July 1994. Their car was the last one to roll on board in Tallinn, the bow ramp was closed behind them and they were leaving the car when he realised that 2 crew members were trying to lock the starboard lower bolt of the bow ramp, which did not work. A third one came with an iron bar in his hand, hammered the pocket a few times, without the bolt moving at all, whereafter they turned around and walked away saying: "*It can remain as it is*" even though the bolt was not locked. (He speaks and understands Estonian.) He had subsequently written a letter to Estline AB and complained about the above, whereafter he received a letter stating that the securing bolts and locking devices were the responsibility of a Finnish engineer company, the name of whom he also received. He wrote to them as well as to Det norske Veritas, but never received a reply.

Stockholm  
18.06.1997

Werner Hummel

## Interview Kari holmsten

**Enclosure 12.4.3.155**Interview

Kari Holmsten, 44 years (lost his wife and both children), his father-in-law is an Ukrainian General and he is now in the metal and weapon smuggling business, which is bad for the time being. He started his professional career/education with Wärtsila, Helsinki as a welder, has also worked inside visors on Silja and Viking vessels. Between 1993 and the catastrophe he made at least 50 trips on the "Estonia", sometimes by car, he has presented 5 passports fully stamped mainly with arrival/departure dates from Tallinn.

By means of these passport stamps he has reconstructed that it was on March 3rd, 1994 when they arrived at Tallinn and when for the first time he noted that something was wrong with the ferry. His car was the 2nd one from forward and he watched how the crew tried in vain to open the visor, he was nervous because he had to reach the Belorussian Embassy before they closed to obtain a visa, he speaks and understands the Estonian language, thus picked up from crew members talk that they were unable to unlock the side locks, he left his car and told the crew members to lift/lower/lift/lower, etc. the visor in short intervals and, when lowering, try to open the side locks simultaneously, they followed the advice and after about 30 minutes they finally managed to open the visor and subsequently also the bow ramp, which did not create problems. There was no ice in the port of Tallinn at the time, however, he seems to remember that there had been ice at sea.

Later, probably on 27th March 1994 he was again on his way to Tallinn when the same happened again, but this time it took the crew only 15-20 minutes to open the visor.

As far as he remembers, it must have been already back in October 1993 when they came down to the car deck and there was still water on the deck inside the indentations and in the corners at the sides.

He had the definite impression that the visor was totally misaligned and did not fit anymore into the locking devices. He does not remember that "Estonia" went with excessive speed through heavy ice, but what he remembers are drunken

crew members in boiler suits, this was especially so in the wintertime when there were not so many passengers.

He also remembers that he frequently noted with surprise when driving onto the car deck at Stockholm that timber boards were standing upright leaning against the bow ramp and that wooden pallets were lying in front of the bow ramp, which did not make sense to him unless they needed wood in Tallinn.

He further noted frequently when driving up or down the bow ramp that the piston rods were dry without any oil (he is willing and prepared to obtain statements from Estonian crew members, who are, so far, silent).

Stockholm

18.06.1997

Werner Hummel

## Statement Torbjorn Cederqvist

Memo

Enclosure 12.4.3.156

## 4.1. Captain Joel Haukka

born 11.4.30 in Estonia and now a Swedish citizen, since 1944, has been at sea since 1948 on Swedish ships, obtained his Master's license in 1961 in Kalmar together with Hans Rosengren, who is now a teacher at this navigation school and a member of the Swedish Part of the International Commission, to whom he has kept in contact until recently, he sailed as mate on Johnsson Line vessels and as master for the last 15 years on tankers of the Lorentzen Group, he has been retired since 1990 and since then has been working as a consultant for Swedish companies in Estonia, he speaks Swedish, Estonian and English. In his consulting job he has gone to and from Tallinn approximately 20-25 times on the "Estonia", the last time in August 1994, sometimes by car, mostly without. He remembers clearly that the cardeck was always wet when they came down just before arrival, as if there had been water on deck before. He remembers in particular one trip he made with his car with some Swedish friends and this trip is the subject of the letter he wrote on 9.10.94 to his previous school friend and mate from the "Kungsholm", Hans Rosengren, in his capacity as a member of the International Commission. He explained what he had observed on this particular trip in his letter where he states as follows:

*"I have made at least 20-25 trips between Tallinn-Stockholm on the "Estonia".*

*I knew Captain Arvo Andresson personally, I have been on the bridge at least 3 times. He made a sympathetic, open and experienced impression on me, however, I don't know anything about his behaviour in unusual situations.*

... / ...

(2)

Concerning the bow ramp I would like to state that in January 1994 at Tallinn I together with many others had to wait for ca. 45 minutes, because they were unable to unlock the ramp. It could not be opened. My car was the first one to leave the cardeck which I had arranged respectively with the chief mate. The car was the first in line at port side, directly next to the hydraulic pump controls which were at port side. They had a problem with the system and alleged that the ramp was frozen fast. I am prepared to give evidence on that and can also state the names of the others."

To the above he added the following after having been questioned respectively:

"The Estonian crew members tried to open the bow ramp in vain for about 20 minutes by operating the hydraulic different ways, then started to hammer against the what he believed were the securing bolts, also in vain, then they asked the Swedish adviser to come down and he believes it was Karl Karell. He stepped out of the car, shook hands with him and said: <Why do the Estonians switch off the hydraulic system at sea?> He shrugged and said something like one year with Estonians is more than enough, but he did something whereafter it was possible for the crew to open the bow ramp and they left the ferry."

He further stated having heard from Estonian truck drivers before and after the casualty that cargo had shifted inside the trucks to forward, which they attributed to the excessive speed of the vessel trying to keep to the schedule. When they complained to crew members about the

.../...

damage caused, the answer had always been that Estline was proud of beating Silja and Viking in bad weather.

He has spoken to the trainee mate Einar Kukk who told him that even the mates on the bridge had discussed amongst themselves on the casualty voyage that the speed was much too high, but no one had the power to do anything against Arvo Andresson who was following the instructions from Estline. (Einar Kukk is now with Tallink.)

He assisted a French camera team about 4 weeks ago in Tallinn and on board of the "Regina Baltica". They were reporting on the "Estonia" casualty. He arranged the meetings in Tallinn and also saw the Report of the Estonia Commission. On the way back on board "Regina Baltica" they wanted to talk to a crew member who was one of the survivors, but had considerable difficulties because the survivors are forbidden to talk about the casualty at all. He promised to send details of the French camera team to enable us to contact them.

He added that he had been told by Erik Moik, one of the masters of "Regina Baltica", that he had once been instructed by Estline to power full ahead against a full storm and find out what happens to the visor.

Note: The visor of this vessel is not welded closed as on "Mare Balticum".

On 2nd February 1996 he wrote a 2nd letter to Hans Rosengren from which the following is quoted:

*"I am sending you the Swedish translation of an interview with Andi Meister published in the Estonian newspaper 'Postimees' on 16th January, 1996.*

*Read the article and draw your own conclusions.*

*For me, having read his statement, it is a further confirmation that the guy doesn't know what he is talking about.*

*He made it quite clear that the causes of the catastrophe are exclusively technical.*

*Why is the excessive speed not taken into account?*

... / ...

(4)

In interviews and statement by the Estonian members of the International Commission it is said that the speed is of no relevance and had no effect on the catastrophe.

The chairman of the Commission has furthermore given wrong information in the interview when he stated that during the voyage there would be nobody on the cardeck. The crew went safety rounds on the cardeck.

At the same time I am asking the question, after having read in the interview about all the deficiencies that had been on the vessel, why were these obvious deficiencies not rectified when the vessel changed flag to Estonia?

The vessel was for a longer time sailing under Estonian flag and it should very well have been noted that the ramp was at the wrong place.

Or didn't they have competent masters and superintendents who were able to find that out?

According to the Estonian newspapers one of the conclusions in the Final Report shall be that the speed had no relevance for the catastrophe, which is totally wrong and not understandable because the vessel was proceeding with full engine power against a full storm. Many people, who do not even have own experience with good seamanship, will laugh about it. Already in the autumn (1995) the public has pointed to the fact that the Estonian Commission is biased. This is true, but the required consequences have not been taken.

The Commission itself does everything to make the Final Report, which is of substantial international interest, a farce, which is absolutely impossible.

Forssberg did indeed state in yesterday's Svenska Dagbladet that the survivors had been questioned by the police. I am asking you, Hans: Is it possible for a layman, who has never

... / ...

(5)

*had to do with shipping or with how to handle a vessel, to ask  
the proper questions to establish a correct picture (scenario) of  
what had happened?"*

Hans Rosengren never replied to this letter and the friendship between  
the two came to an end.

18.6.97

*Warne Hamel*

## **Statement Bo pettersson**

**Enclosure 12.4.3.157.1**Statement

**Bo Pettersson**, living at Norberg/Liken  
born 09.04.46 – profession: manager and owner of Djurutställningar AB, a company engaged in exotic animals.

My father worked at the lock of Hammerby, at the connection of Lake Mälaren and the Baltic. I grew up there in the immediate vicinity, but there were no seagoing ships, more boats. My father was a sailor during the war.

I made two trips to Turku on the big ferries and a couple of times to Denmark and Germany.

I made one trip on the "Estonia" at the end of May 1994 together with my wife. We had a cabin in the forepart of the accommodation from where we could overlook the foreship, probably it was on deck 6. We did not take photos nor did we make a video.

We boarded the ferry at Stockholm and were the last people to come onboard because we first went to the wrong terminal. We went to the information and were shown the way to the cabin. As we were late the ship left straight away. After we had settled down in the cabin, I believe on the 6th deck which was overlooking the foreship, I went to the window and looked down on the foreship while the vessel was proceeding through the archipelago. I immediately had the impression that it was a very old vessel in a bad condition. I saw a couple of empty foundations from where the parts belonging on top, e.g. mooring winches and the like, had been taken away. I had a rather negative impression from the beginning, also that apparently a lot of paint layers were used without taking care for what was underneath. I also noted that the mooring ropes were substantially worn and in a bad condition. They were looking simply worn and over-stretched.

I also saw two crew members on the port side of the forecastle deck. The bigger man was standing on the visor facing me and was hammering with a big sledge hammer on the port edge of the visor which was extending the forepeak deck

by some 10 cm. The gap was in any event big enough that I showed it to my wife. We could see the water through the gap. The other man was standing on the forecastle deck opposite to the one with the sledge hammer and I could only see his back side. The visor was obviously not properly closed because its port side was standing upwards above the level of the forecastle deck, worse at the port outer corner on which the crew member was hammering, apparently without success, as far as I remember.

The window could only be opened by force. I also checked the nearest way to the rescue station. I think we stayed in the cabin for about 1 hour, after some time the hammering stopped but the visor edge was still standing up.

For a luxury cabin the outfit was rather poor. The beds were just welded to the cabin wall and there was a gap between the wall and the bed into which my book fell.

The weather was good and we did not hear anything special during the night on way to Tallinn and also on the way back to Stockholm.

I did not see when they opened the visor at Tallinn because we were probably on our way to the gangway already. We returned onboard the same evening to the same cabin, but I have no memory whether I looked out of the window again and if I saw anything unusual. Most likely not. The voyage back to Stockholm was uneventful.

Liken, 4th September 1999

.....

Bo Petterson

## Interview charly dahlberg

## Enclosure 12.4.4.158

Memo

4.4. Charley K. Dahlberg, engineer, ca. 40 years, has made about 30 trips on the "Estonia", clearly remembers frequently having heard the splashing of water inside the visor at sea; realized the bad condition of the visor and bow ramp as well as the many cracked and rewelded welding seams in way, decided not to use the "Estonia" anymore when going from Stockholm to Tallinn but to go via Helsinki instead; just after the casualty he met a retired Estonian onboard a Viking ferry to Stockholm, this man told him that he had been in the building/construction branch employed with a Swedish firm working on projects in Estonia, thus he very often travelled together with his colleagues on the "Estonia" to Tallinn and back, after a while they realized that at least in the foreship area there was no welding seam which had not cracked and been rewelded at least 3 times, and this was due to pushing the vessel too fast against headseas, this behaviour of the ferry's command in combination with the general bad impression they had of the crew and of the vessel in general persuaded them that it would be safer to refrain from using the "Estonia" any longer and to take the longer but - in their view - safer journey via Helsinki, the same as Charley Dahlberg; consequently they went to Helsinki on Silja or Viking ferries which was o.k., but then they had to rely again on the Estonians because before Silja took up the Tallinn service in 1995 only the "Tallink" and "Georg Ott" were available; Dahlberg has written down his experiences on these ferries in a letter dated November 22nd, 1994, which is attached as enclosure to this addendum and which is absolutely self-explanatory and in line with his experience on the "Estonia".

17.6.97

Warren Flammel

## Letter and drawing of torsten sundberg

Enclosure 12.4.4.159

ESTONIA<sup>22</sup>  
F 56

Till Statens havsverkommision  
Västerbronplan 3  
Box 12538  
10229 Stockholm

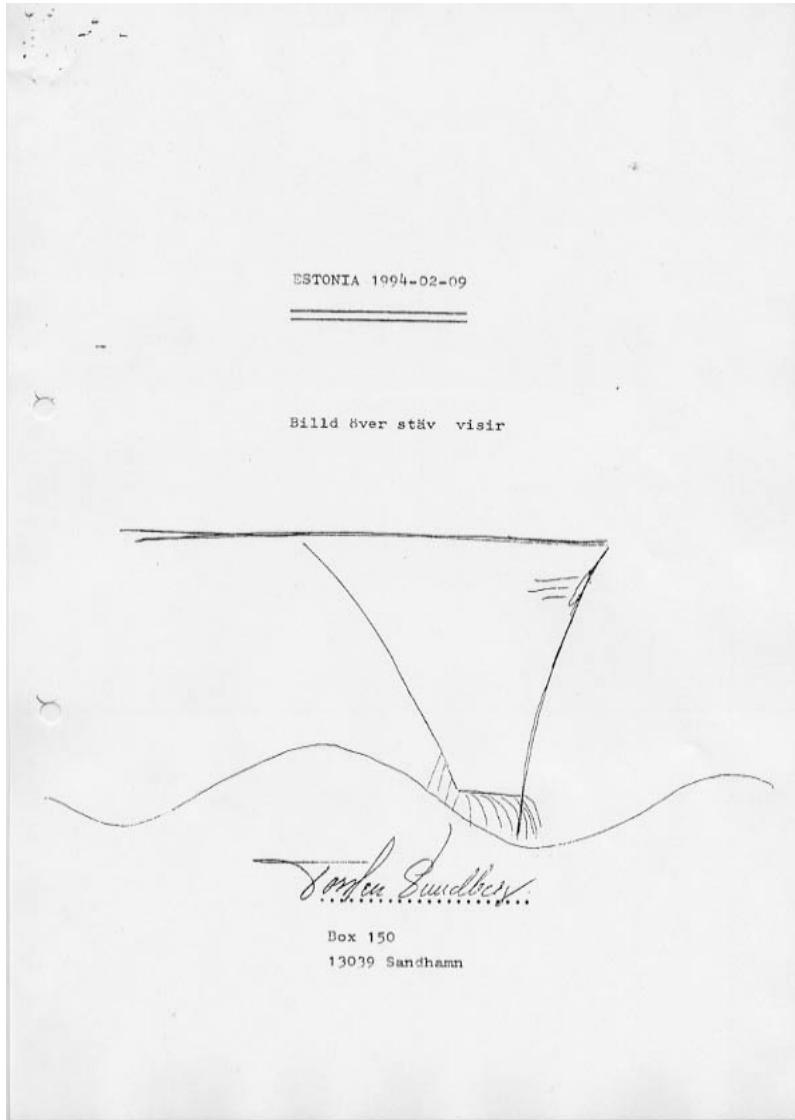
Hänvisar till tidigare telesamtal December 1994 om iakttagelser kring Estonias nedre ståvdel (bogvisir).  
Det är lite ovist om exakt datum det kan vara den 2-9-1994, men vad som kan vara visentligt är min iakttagelse från lotsbåten. Vid utgång till ett fartyg möter vi Estonia sjögången här mättlig vindriktning är ESE, Estonia nedre ståvdel sätter under i sjögången när fartyget lyfter ur vändalen försar det massor av vatten ut ur undre delen av hela bogvisiret även sidor detta upprepas flera gånger under detta möte med Estonia.  
Avståndet till Estonia är kring 75 meter vid iakttagelsen och god sikt.

Sandhamn 1995-02-14

*Dagfin Lundberg*

Box 150  
13039 Sandhamn

Tel 57153213



## Report pilot Bo soderman with office translation

**Enclosure 12.4.4.161**Office TranslationReport of Pilot Bo Söderman

With reference to our telephone conversation today herewith the facts about my observations in December 1993 concerning water ingress on the cardeck of the MV ESTONIA when I piloted the vessel to Stockholm. On the 24th December 1993 at about 05.50 hrs I went alongside the ferry's starboard side on board the Sandhamn pilot boat inside Svängens Light, wind and sea state according to the attached copy.

Water covered the whole starboard side of the cardeck ca. 3-5 cm high.

On the 26th december, 1993 I piloted ESTONIA again, this time from Söderarm. The weather was now worse, according to my own notes ca. 22 m/s from East, with rough seas. I boarded the ferry about 1,5 nm outside Remmargrunds Light. Upon my recommendation the master turned to starboard to make leeway for the pilot boat. I jumped on board from the upper platform of the pilot boat, the port pilot door was open. Under such conditions one has to expect water splashing up from below between ferry and pilot boat. This time, however, surprisingly the water came from above out of the pilot door when the ESTONIA rolled to port. When I came on board the mate warned me that there was "plenty of water on deck!" On the way to the lift I walked through water high up the legs of my boots, ca. 20 cm.

In my opinion there was 5-10 cm water over the whole area of the vessel's cardeck. The water was splashing about 1 m high against the bulkhead with the stairways (centre casing).

I do not know from where the water penetrated the cardeck. I have tried to get a copy of the weather report from SMHI to compare it with my own observations, however, I never received a reply in spite of written and telephone reminders.

In case I can contribute to solve the ESTONIA question in a seaman like way, I am willing to cooperate.

signed by

Bo Söderman, retired pilot

Köpmankholen 314, 76018 YXLAN

**Letter osten lonnestrom/ babro hellstrom**

**Enclosure 12.4.4.162****Office Translation**

Tyresö, 23/7 95

HALLO

I hope that you are able to read and translate this letter and that these lines are going to reach the very person who is doing a special investigation concerning the accident of ESTONIA soonest.

In my opinion the German shipyard, assigned with the task of putting ESTONIA into operating condition, has nothing at all to do with the accident of ESTONIA. If you don't find a shipping company to blame then you tend to blow the fault over to the shipyard which has done a huge job in putting her into shape. I find this rather cowardly of the Swedish authorities, because those are the ones who were doing a sloppy control of all vessels, ESTONIA was one of them. I defend this shipyard regarding the handling of ESTONIA.

What follows now is a statement, made by two Finnish seamen, who, during a conversation, referred to the bow visor which, on many occasions, would not be closed at once without being forced to be opened and thereafter closed again. This they pointed out several times to their superintendent but nothing happened. It was also said that the portside hydraulic, regulating the up and down of the visor, on many occasions had an oil leak. According to the latest report, which can be read in DN, the 'Havarikommision' states that this so-called 'Atlantic Lock' should have caused the accident.

Such a statement cannot be accepted, partly because this report is secret, in this way the 'Kommision' deliberately defends somebody, when there has been an unbelievably messy job done on the vessel causing the death of 900 people. I claim that if this hydraulic was defect by the delivery from the shipyard and that if the shipping company had pointed out that something was wrong, then they definitely would have done something with it. The explanation of the faults pointed out by those two men were purposely delayed in relaying to the superior and who, in turn, should have consulted the shipyard for the purpose of investigation. The theory we are working on (there are four of us), what we would like to hold on to, through all the rumours, is, that this bow visor was not locked in such a way as it should have been when leaving Tallinn. The visor was closed but the locking system was not fixed. Such a construction, the weight of the bow visor being 58,755 kg, we cannot see being blown away just like that, unless somebody actuated the process itself.

Länsiäistä/Helsingfors (Note 13. März 1997)

- page 2 -

Regarding the weather it was not of the type which should be of any danger to ESTONIA or its passengers, it is being said that a giant wave sank her, maximal height of waves according to SMHI could be four or five metres. The speed has been discussed many times. The speed of ESTONIA when leaving Tallinn was actually high, however, after four hours the speed was reduced, this means that she would be late according to her timetable. That these precautions were taken was due to the fact that very probably, after these hours, there was water on the big cardeck already. The seaman Silver Linde should have been there on the cardeck, the ascertained time was 23:35-23:40 hrs. The information he has given to the 'Kommision' is not correct. Even though this bow visor broke away about midnight, you need a lot of water to sink a vessel of the size of ESTONIA: The water was observed on the cardeck about 23:50-23:55 hrs., that is why I am of the opinion that the water came in on the cardeck much earlier than the 'Kommision' has stated.

There are some questions which we have got no answer to regarding the command on the bridge. First of all, where was the captain when the crisis started to arise, secondly, in my opinion none of the staff on the bridge could speak a coherent international language. This was proven when they sent out their MAYDAY. The machinist, who was in the engine room did, according to the press, escape close by the funnel. How can this be possible taking into consideration the heat surrounding it. We believe that this man saw his possibility to escape at an earlier moment and escaped by the stairs leading up past the cardeck midships when all this water started to seep into the engine room.

There were many factors leading to the ship wreckage of ESTONIA on 28/9/94 in the Baltic Sea. First of all the bow visor was not locked in the way it should have been in order to hold the visor back, another thing was that the hydraulic was defect and thirdly the alarm system, showing if the visor is closed. Probably there was a fault on this system, or they didn't care about this on the bridge. Fourthly ESTONIA was stowed wrong, heavy vehicles had been placed all the way in front by the car-ramp at the right side of the ship (portside). The weight estimated is about 375-400 tons. That means that 14/15 heavy vehicles were placed on the portside, one can imagine what this means to a vessel. Why were her ballast tanks not filled, this would have made her going more steadily?

They failed to take up the case (equipment) which had recorded ESTONIA's speed during the night she sank. I to interpret this to the effect that the salvage company, doing this job, got the order that this case should remain at the bottom of the sea, because something might emerge pointing against the shipping company. With the

- page 3 -

knowledge and resources being at one's disposal today it should have been possible to lift this case up.

This occurrence with ESTONIA is and will be a rather mysterious matter. Nordström & Thulin have received several complaints regarding the careless handling of the passengers by the crew. How the bow visor loosened, whether the breaking point was down, up or towards starboard or towards portside, the latter being the side to which she capsized, nothing is proven. To us it is obvious that Nordström & Thulin are the ones carrying the responsibility for what happened to ESTONIA. On page 3 the salvage of ESTONIA is being mentioned and how this could happen, according to a telephone conversation with a Norwegian salvage company.

During a dialogue regarding an eventual salvage of ESTONIA a Norwegian salvage company was asked whether such a salvage could be performed. The result was that some difficulties could arise but that it should be possible to carry out the salvage operation. The costs for this task should amount to more than one billion kroner. This Norwegian company was in contact with a German salvage company, whose capacity should correspond to ESTONIA's weight one and a half time, in other words these two companies had the capacity to lift about 35,000 tons. Cranes resembling pontoons were accessible, equivalent to the Swedish "lodkrok". It was in vain, it turned out that the amount would exceed one and a half billion kroner.

When the Swedish government got knowledge of this it was claimed that the Norwegian salvage company was not trustworthy enough to get the assignment of ESTONIA's salvage. Since then the government, with Ines Usman, has delayed this project and made a lot of excuses to avoid the costs involved in getting up all these people who died when ESTONIA sank. Despite the difficult weather condition during the week in question these two companies could have salvaged ESTONIA, it would have been possible with a notice of about 40 hours, the salvage operation could have taken place during even heavier weather conditions. The description of the salvage operation itself was an easy task for me, however, this I would have to revoke. The explanation is that you get down some wired ropes which can be fastened inside the vessel's aft, that means in the entrance gate, simply to achieve a horizontal level of the ship. The stern of the vessel is constructed in such a way that it is possible to lift the ship if you manage to get the aft lifted a little bit up from the bottom. More wires can be fastened under the keel, even the forepart of the ship can be lifted. Of course it is alright to do an experiment in a basin with a model of ESTONIA, however, this cannot be compared with the reality. We repeat that the only ones responsible for the accident with ESTONIA are Nordström & Thulin.

- page 4 -

They did not act responsible and in a seaworthy manner towards their passengers, 90% of the responsibility for the disaster have to be blamed on them, the remaining 10% have to be blamed on the Estonian associate who had no idea of what the Swedish colleagues were doing. Nordström & Thulin did not handle the ferry traffic between Stockholm and Tallinn satisfactory, a lot of things were ignored regarding the vessel's maintenance, like such an important thing as the life-saving equipment on board. Many of the lifeboats were locked and lacked the equipment which should have been inside them. This has been stated by the crew. On the bridge were different instruments showing sometimes wrong data regarding the speed, showing a slower speed of the vessel than stated by the yard. On the 13th of March '94 the superintendent got the information that oil was leaking from the hydraulics on portside. This had not been repaired when these two left Nordström & Thulin on 29/8/94.

We have asked a lot of people about the construction as well as about the functioning of the bow visor. It seems that the information given to the 'Havarikommision' is not in accordance with what came forth during the conversation with these people. It was very interesting to visit one of the Viking's liner ferries, named ISABELLA. It happened on the 25/10/94. We were friendly received and got a technical description of what was located on the foreship. It was surprising to see the construction of those bow visors, as well as the car-ramp when it was moved up and down, there are two gates leading to each side of the vessel, the weight of these two are 45 tons each, that means 90 tons hanging in the bow. In order to get them up a counter pressure is needed.

It is difficult to understand the accident of ESTONIA, that the bow visor could break anyway. Taking into consideration the weather conditons when it happened, the only explanation would be that the vessel went through heavy ice which might have knocked out the Atlantic lock. You felt that the people were unwilling to talk about this matter.

A continuous surveillance is done of these gates, as well as of the hydraulic operating these gates, by a German company who has constructed the equipment being on board these two vessels. One can wonder when this was done on ESTONIA. We also visited AMORELLA; there they told us the same thing as on the sister vessel. A search, hopefully taken up in the police program on TV 3 called "efterlyst" (search for), might lead to the finding of these two Finnish speaking men who had difficulties in speaking Swedish. Thanks to my stay in Norrland I managed to learn a bit Finnish, which was the reason why I could make myself understood and make a conversation

- page 5 -

in Finnish. I placed the usual questions about the work onboard, how long they had been working on ESTONIA. The tasks they were usually given was to place the heavy trucks in a position so that an even distribution of the weight was guaranteed on the big car-deck. We also got to know that carelessness happened rather often when these two were not on duty. They could even tell that on many occasions water was on the big car-deck. The occasions happened during the time from 14/3 until 18/3/94 when those two left in Värtahamnen (Stockholm). It was observed that the bow visor was not properly closed, they had to open it again and close it again, then it was locked. I am convinced that already then the hydraulic on starboard was defect and that water had come in on the big car-deck. This is exactly what happened on ESTONIA the night the sank in the Baltic Sea. A reconstruction of what happened when ESTONIA left Tallinn on 28/9/94 at 18:12 hrs., when ESTONIA had travelled for 45 distance-minutes (1 hours travel = 2,77 miles - 15 dist.) at a speed of 15,7 knots which means at level with Örö after 3,5 hours. There was an opening between the bow visor and the hull. This widened as she proceeded for Stockholm. There were head-winds on most part of the voyage, however, after Örö the weather got worse with the result that the bow visor, which was not in the right position, encounters heavy blows. The force of the waves from beneath is very big and the bow visor is so heavy that it moves forth and out again, later it bends over towards portside and takes with it the car-ramp, which is not locked either.

If it had been driven up towards the landings which are in the construction around the frame which the car-ramp is supposed to rest against, then it would not have got stuck in the bow visor when that one broke away. The distance from the car-ramp to the bow visor is constructed in such a way that it should, under normal circumstances, not be possible for the bow visor to tear away in such an important thing as a car-ramp. I do a relatively simple experiment like taking a piece of iron, copper and brass and bend it to and from to a point of near breaking. The same thing is thinkable to have happened on ESTONIA. The bow visor, weighing 58,755 kg, moves back and forth and after awhile these unbelievable hinges finally break and the accident happens. Not even a constructor of the foreship, with his construction knowledge, could dream of such an accident happening. ESTONIA was even equipped with an amplification to withstand hard weather and relatively heavy ice. Those were the bangs which were heard on ESTONIA. A competent crew on the bridge could have prevented the accident by 45% by making a powerful turn to the portside. Such a manoeuvre would have placed ESTONIA into relatively shallow waters, this would have given her ample time to get away from the wind and heavy sea. I must admit that

- page 6 -

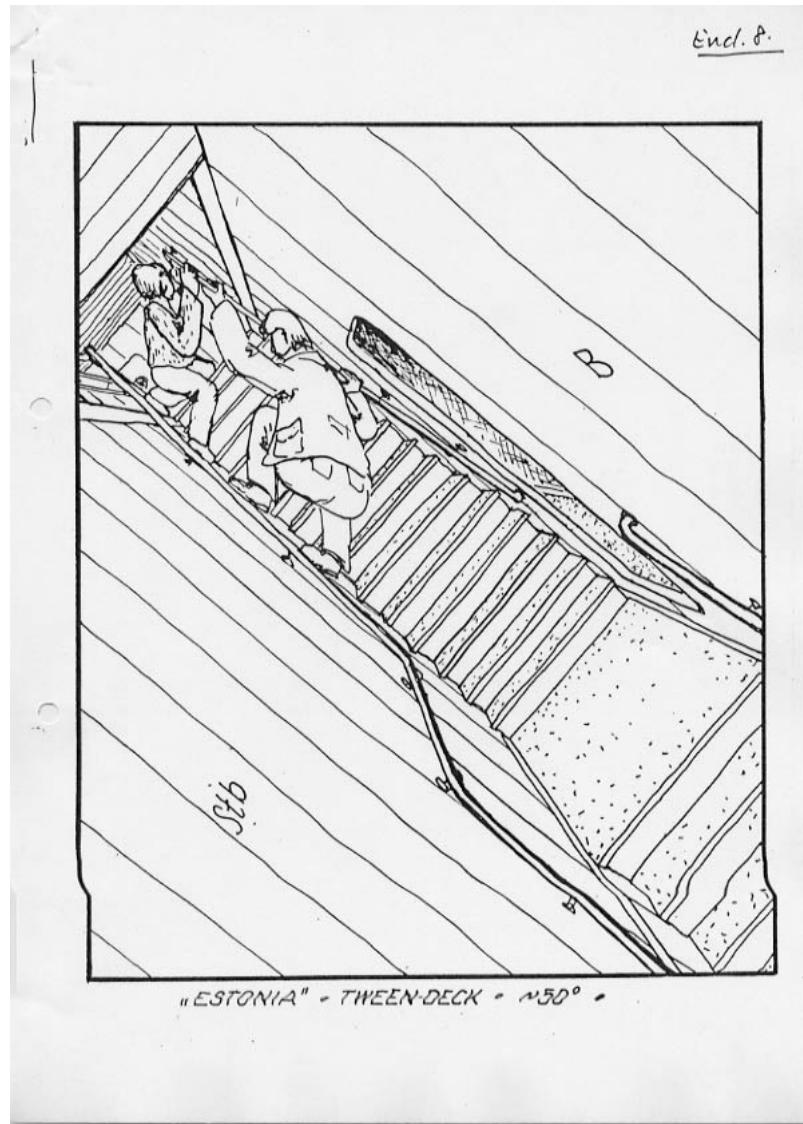
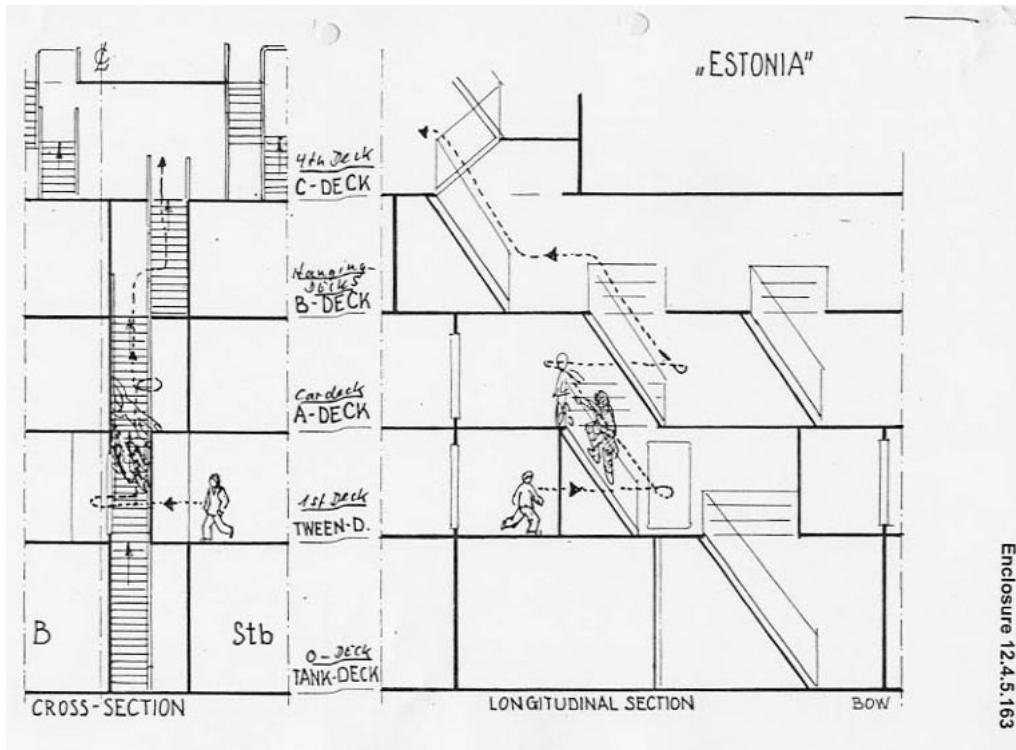
such a manoeuvre also would have cost some lives, namely passengers in the economy quarters. These are lying very close to the bow under the car-deck. There were some people around the pool and the sauna. How ESTONIA would have managed a grounding and how the passengers would have survived such a manoeuvre is something we have thought over for some length. Probably the people would have been severely hurt, the number of victims would probably have been fewer. The length of the ship is 155 metres, the depth of the sea from Örö towards a group of islands called JURMO would have caused the foreship to ground at a depth of about 15/17 metres and the aft part about 28/30 metres. This would have meant that part of the ship would have been over the waterlevel and would thereby have supported the task to rescue the people. When the engineer moved upwards in the vessel to bring himself into safety there was already water on the car-deck. I believe that this man told his friends on the bridge what had happened on the car-deck, since they activated the TV monitor and were able to see water on the car-deck. They were scared stiff and could do nothing about it, that is something I am wondering about (where was the commander who was responsible for the vessel when a decision should have been taken). The time it took to go from Örö to the place where she sank, according to the Finnish UTÖ there should have been enough time to ground ESTONIA in shallow waters. At 00:24 hrs. ESTONIA sent an emergency call to SILJA EUROPA: "Mayday, Mayday". At 00:30 hrs. her last words were heard: "Really bad, it looks really bad here." Through our conversations with competent seamen we got to know that what happened to ESTONIA is a very curious matter. Next you will find the search message which was sent on TV 4 regarding those two Finnish speaking men. The man we spoke with (I speak Finnish) was about 180/85 cm tall, he was dressed in dark Manchesterjeans, he wore a checkered shirt in many colours as well as a light blue quilted jacket with a red stripe in it, he had a peaked cap with a sign similar to a club membership sign. His beard was about 5 cm long, it was well groomed and he wore heavy working boots. When the conversation was finished he said to his friend that we had taken down in writing a lot of what had been said. He turns towards his friend, whom he calls by the name of PERTTI, and asks if he goes with it (that is how it is being expressed in Finnish). As they turn away and walk towards the customs station which is located a little away from the place the ferry OLYMPIA of Silja Line lied moored. The second man was dressed in working pants with suspenders, he wore an army coloured shirt, he had dark hair, he wore a dark brown leather jacket with a little lighter lining, he also wore heavy working boots. We have to guess the age of these two men somewhere between 48-55 years, the latter spoke no Swedish.

- page 7 -

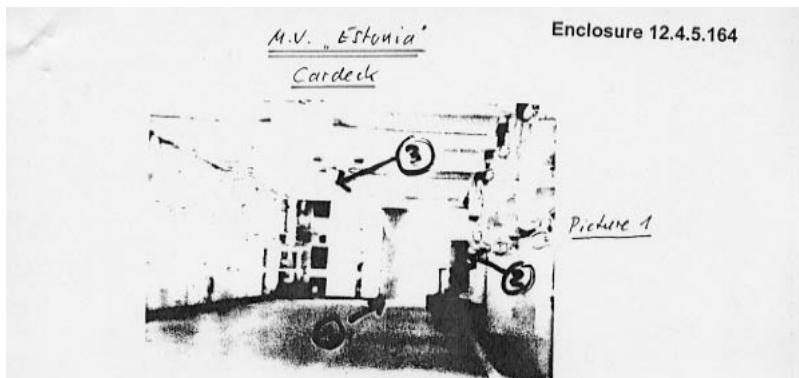
We have done some travelling to ABO, MARIEHAMN, HELSINGFORS as well as some trips to Tallinn, hoping to pick up some more information by talking to the crewson the ferries going on the Baltic Sea. It has been instructive to learn about their vessels' capacities, constructions and also the rescue equipment onboard the ferries. The last trip we made was onboard Silja Line's SYMPHONY, on 18/7/95 we were in ABO. As a result of all these conversations we may conclude that to take possession of ESTONIA will not prove difficult to fortune hunter companies who have enormous resources to overcome different obstacles. These companies mostly operate in warm waters where driving in deep waters is of no difficulty. There are tug boats equipped with compressors for divingchambers, there are even small boats of types similar to the Swedish mini-submarines. It is only a question of time when these companies will make a visit to ESTONIA. The rumours say that a huge amount of valuables are to be found onboard the vessel which costed the lives of 900 people. What could be found are jewelry, securities (shares, obligations) foreign currency which should have been exchanged in Sweden. There were even different drugs onboard like cannabis, hashish ass well as anabolasteroid. The value of these things out to amount to several million kroner. Last but not least one should not forget all the personal belongings of the victims and which are of great value to the relatives. Also there are all the contents in the cars, trailers, busses. Waiting for reports from different sources, such as the final report from the 'Havariekommission', this letter has been delayed, however, we have made our statements and send this letter off hoping that somebody else may contribute to the explanation of this accident in a rightful and satisfactory manner for all people involved. Finally I can only state what we have heard through conversations that Nordström & Thulin are and will remain the only ones responsible for the disaster with ESTONIA. We wish you all a nice and beautiful summer.

Regards from      Östen Lönnérström  
                         Barbro Hellström  
                         Rullstensgränd 2  
                         135 50 Tyresö

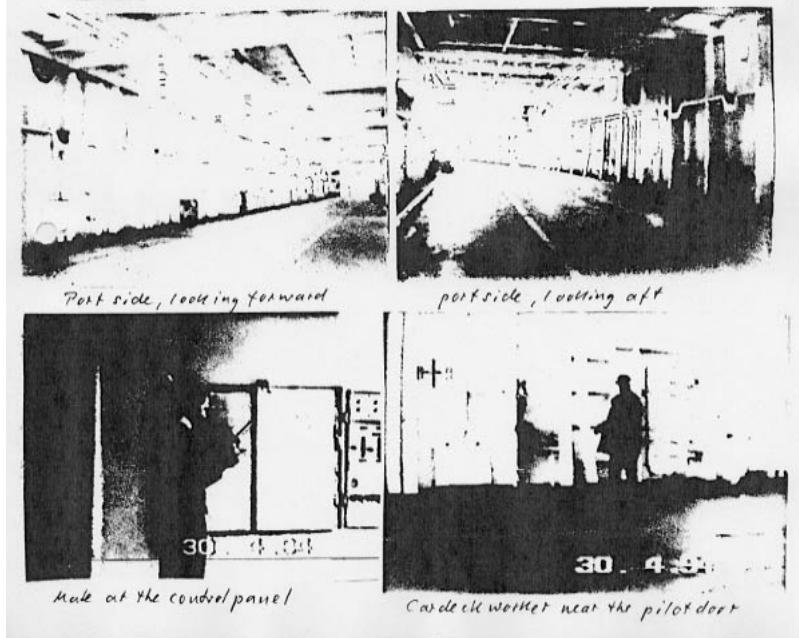
## Drawing carl overberg



## Photo page reffering to statement of carl overberg



Port forward part with closed bowramp.  
 Arrow 1 indicates the missing flaps between ramp/cardeck, which are pulled to the side when the bowramp is closed.  
 Arrow 2 indicates the garbage container.



Fax carl-Magnus ring to Goran Persson

Fax till

Kopia av brev till

Statminister Göran Persson

HEJ!

JAG FÖLJER DEBATTEN OM ESTONIAS

TÄCKNING MED STOR INDIGNATION.

ESTONIA LIGGER NEDANFÖR ENKELT

DYKBART DJUP För AMATORDYKARE.

DESSA KAN EJ HELLER EKONOMISKT  
ORGANISERA MÄTTNADSDYKENING FÖR ATTFÅ TILLTRÄDE TILL FARTYGETS INNANDÖMEN - VÄRDET AV FÖREVAL OMBORD,  
som är utspridda, kan inte försvara  
EN PROFESSIONELL DYKEXPEDITION.

ALLTSÅ ÄR EN TÄCKNING ONSÖDIG!

MAN KAN VÄNDA SIG TILL MARINENS  
DYKERICENTRUM FÖR ATT KONSTATERA  
OVANNÄMDA FAKTUM.UPPSLAUNNINGEN AV FARTYGET GÅR RELATIVT  
FORT OCH KAN PÅSKYNDAS GENOM

PUMPNING AV SLAM FRÅN BOTTENINGINTILL.

DÄRMED SKULLE MAN KUNNA TILLFREDSTÄLLA TÄCKNINGSVARNA.

DYKARE TYCKER ILLA OM SLAM.

JAG HAR DELGIVIT UPPGIFTER OM  
ATT STOPPKLACKARNA TILL BOGVISIRET  
SLIPATS NER AV ESTLÄNDARNA, DÅ MAN  
INTE HADE RÅD ATT BYTA GUMMILITTEN.  
DENNA UPPGIFT KOMMEST FRÅN EN

Forts.

TIDIGARE OM BORDANSTÄLLD SVENSK

I BEFATNINGSPERPOSITION OM BORD.  
DET ÄR VÄSENTLIGT ATT KOLLA DETTA.

JAG BEGÄR INHIBITION AV  
BESLUTET OM TÄCKNINGE TILLS  
EN ADEKVAT OCH OBJEKTIV ~~FACKLIG~~  
UTREDNING ÄR KLAR. DET ÄR  
INTE BRÅTTOM ATT TÄCKA FÄRTYGET.

Med vänliga hälsningar,

Carl-Magnus Ring

CARL-MAGNUSS RING  
BORGAR C  
117 34 Stockholm

Tel. arb. 611 22 33

P.S. JAG ÄR DYKARE, BÄRCARE  
OCH SKRÄPPSBYCARE.

D. S

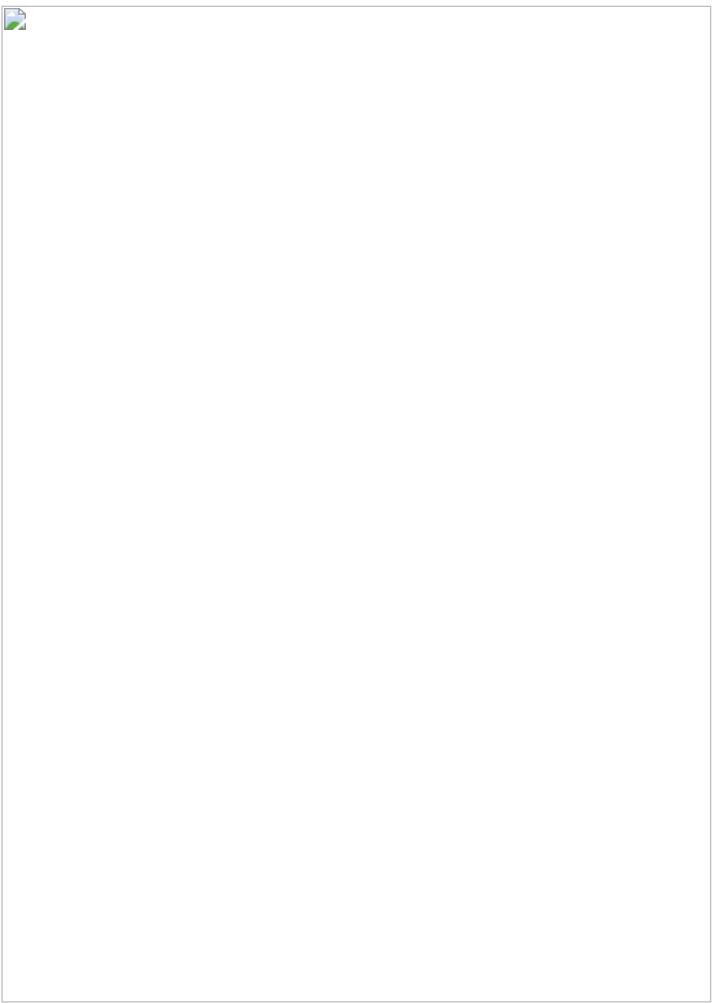
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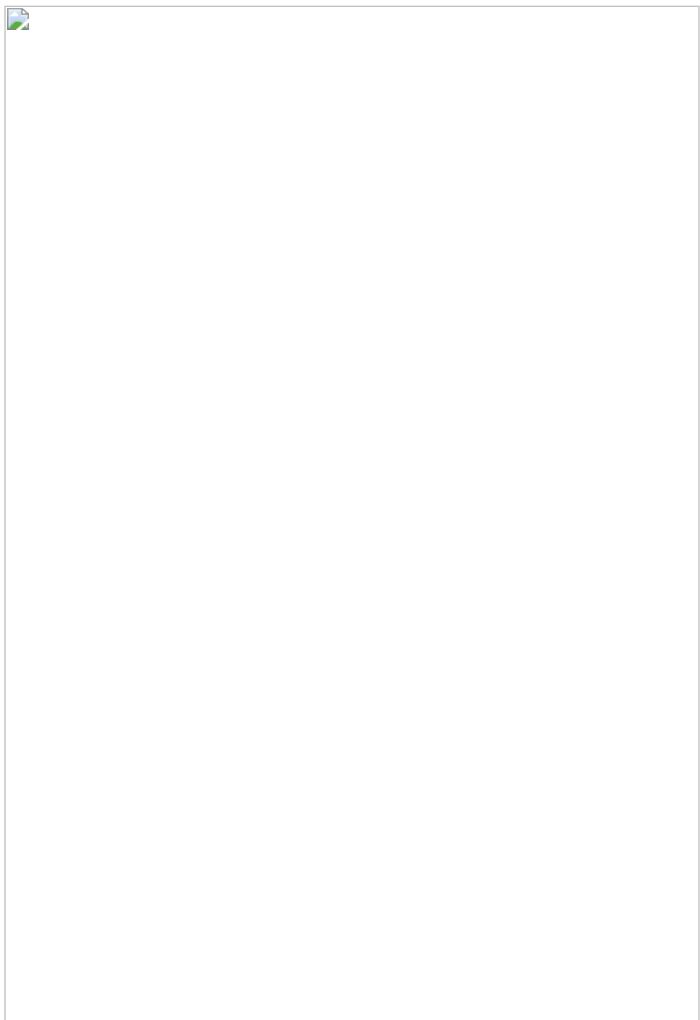
Fax to  
Prime Minister Göran Persson 18.4.96

Hi,  
I am following the debate about the "Estonia" tragedy with great indignation.  
"Estonia" is lying at a depth beyond the limits of amateur divers .....  
Also the covering is not necessary .....  
I have received information that the Estonians had grinded down the steel pads  
of the bow visor, because they did not have the money to renew the rubber  
packings. The information came from a previous Swedish crew member  
onboard. It is important to talk to him. ....

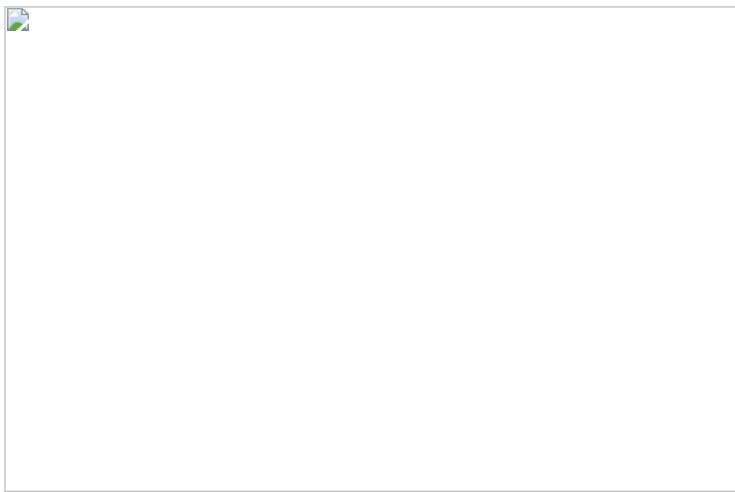
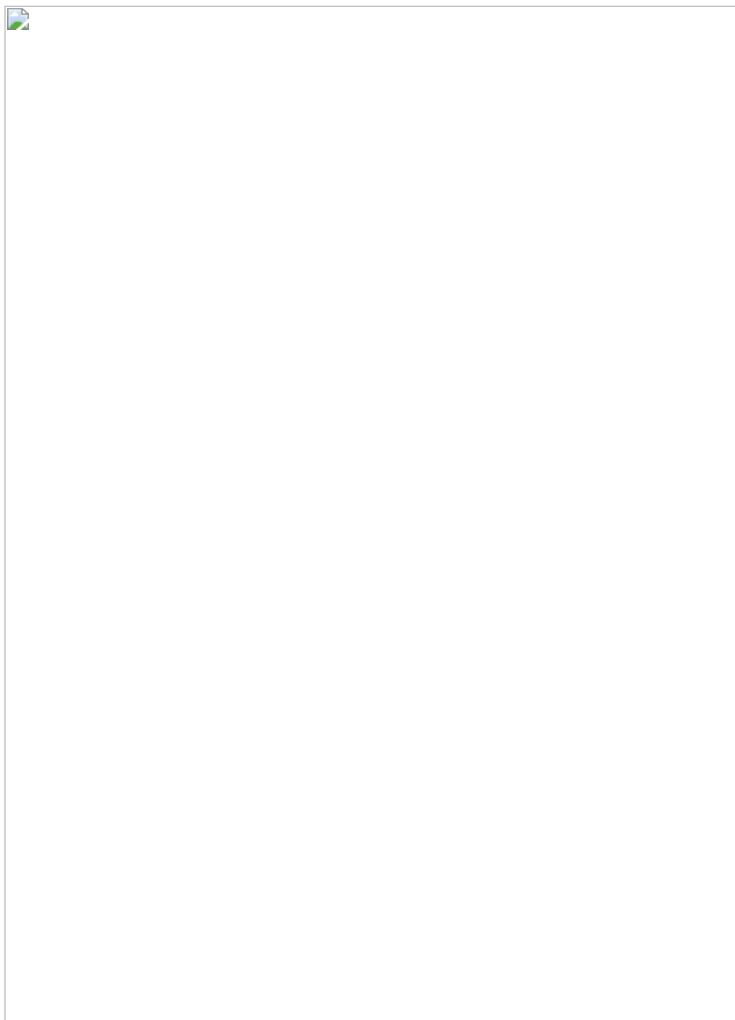
With best regards  
Carl-Magnus Ring

## **Statement Peeter tuur**

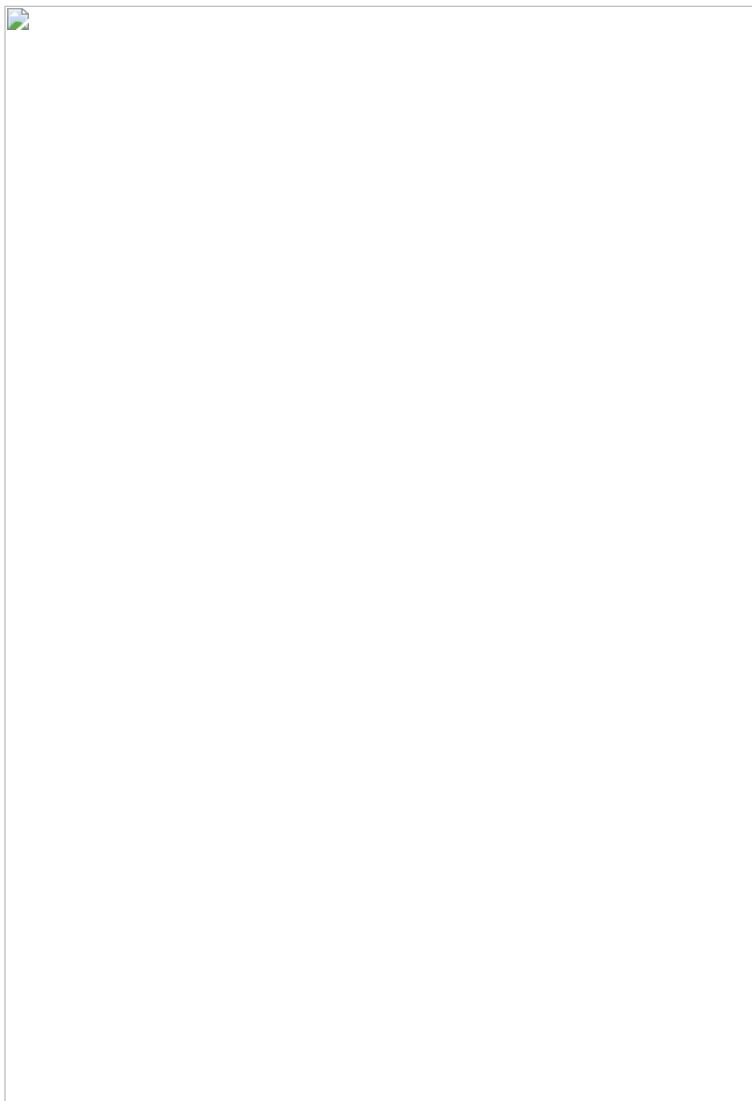




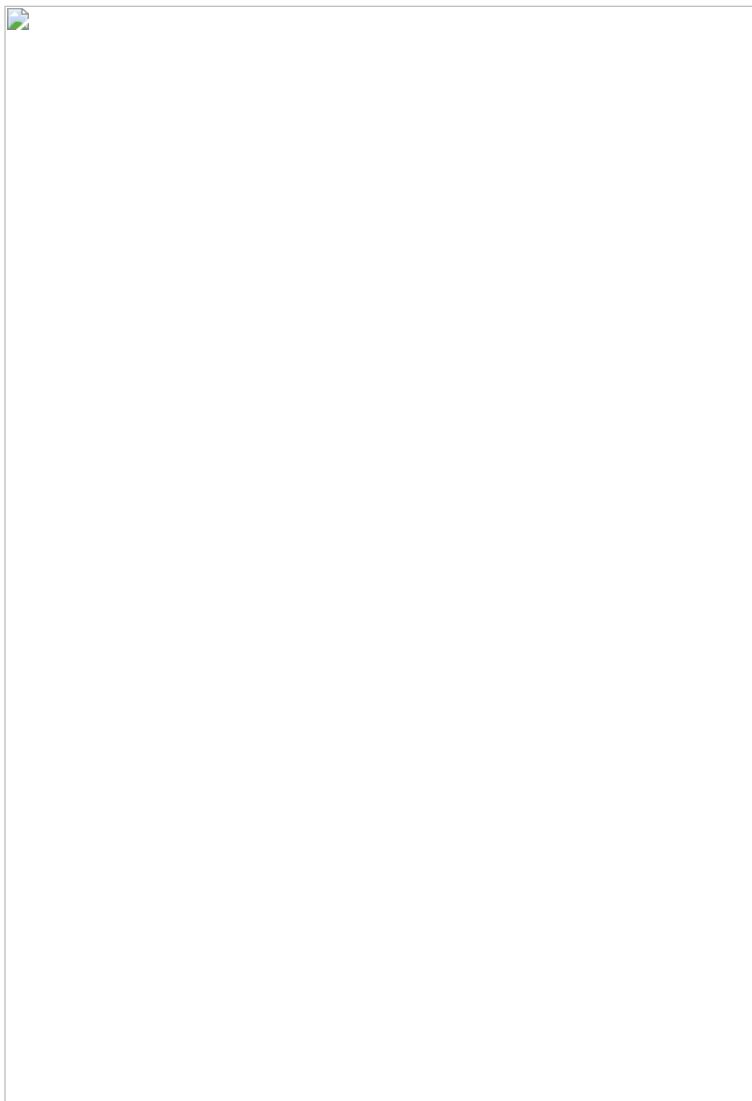


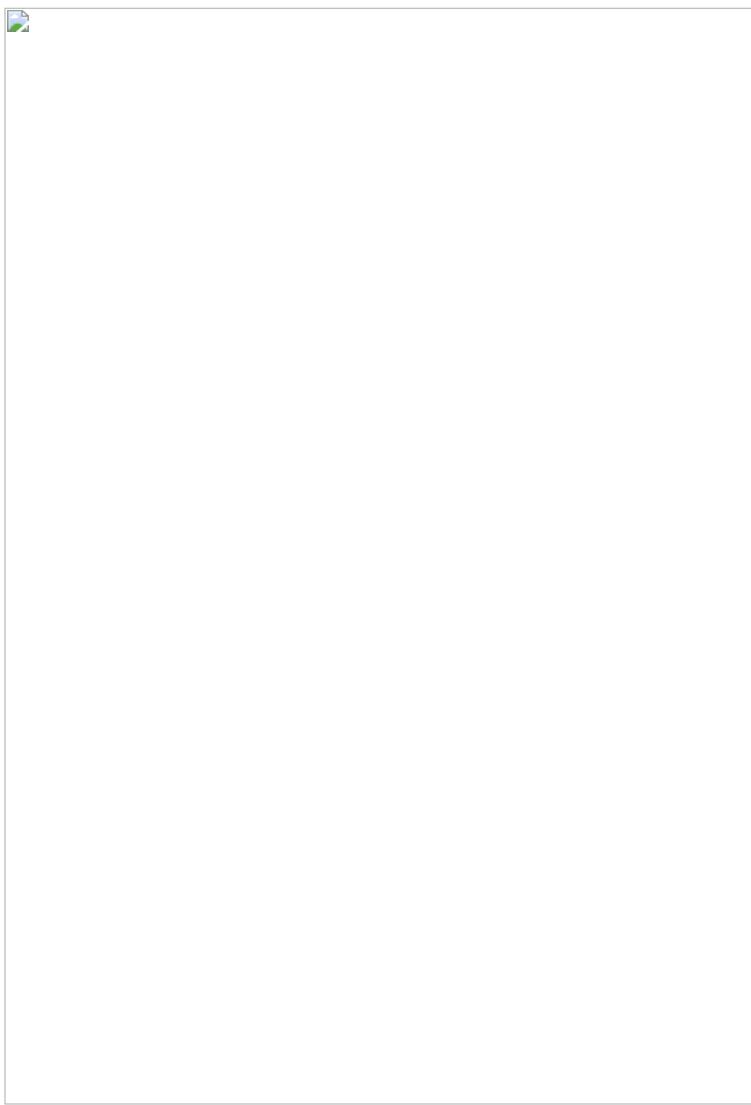


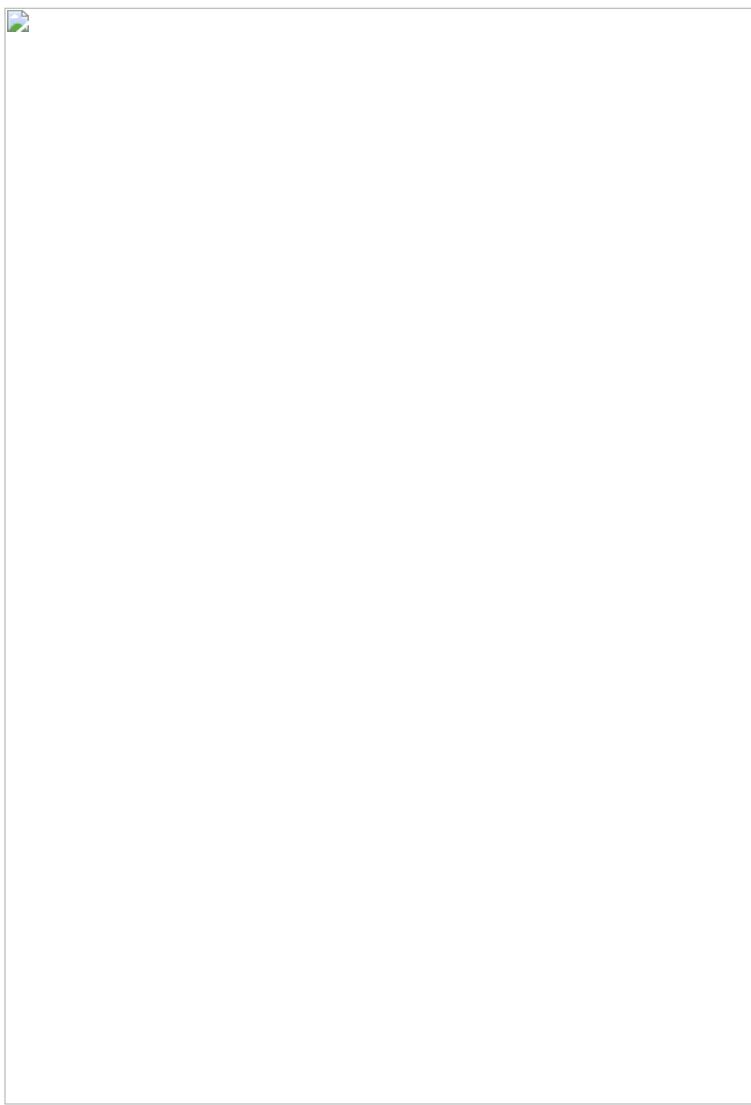
## **Interview Ervin roden by jutta rabe**

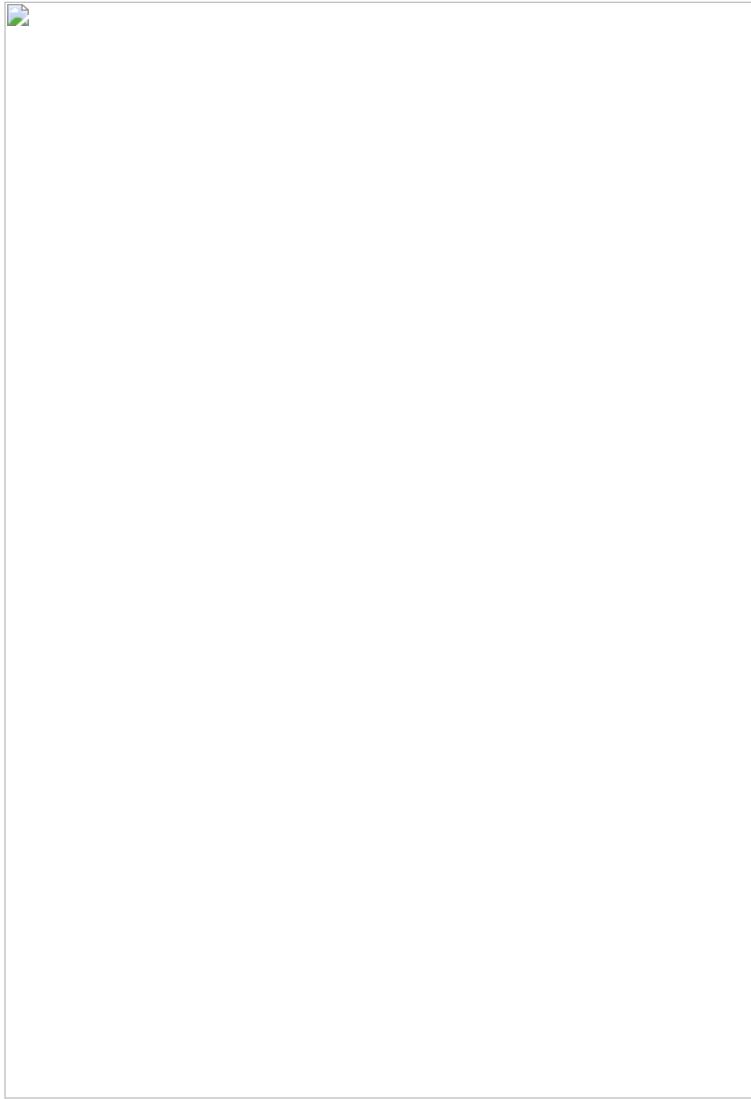




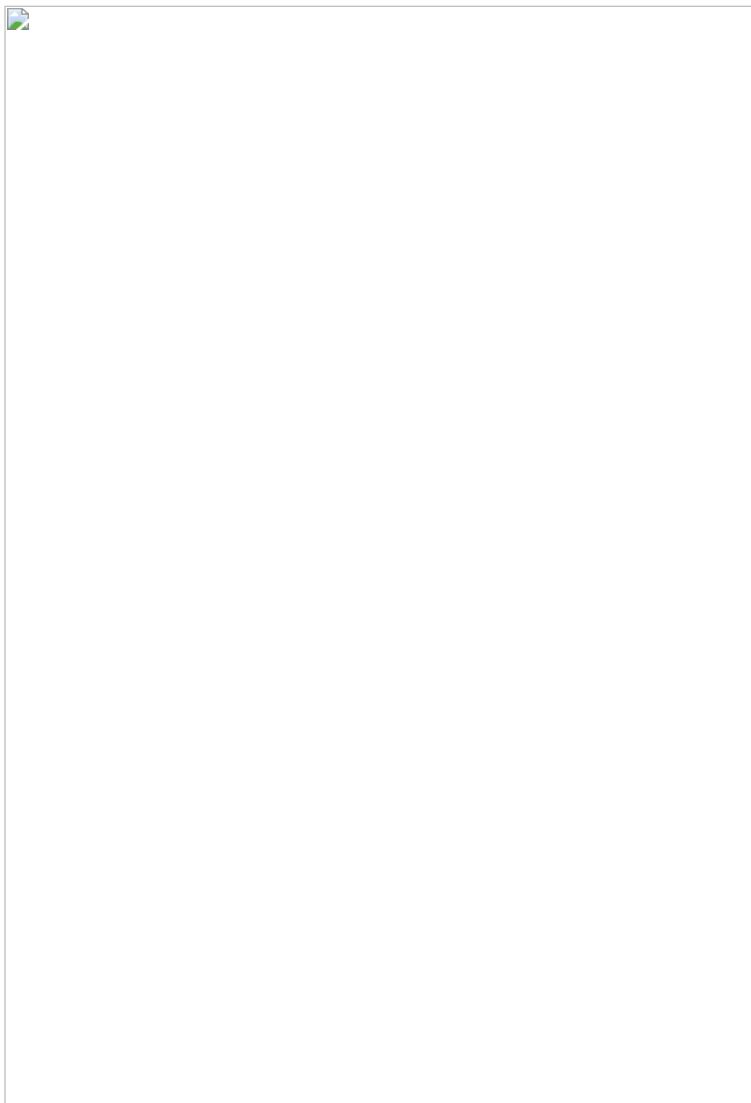


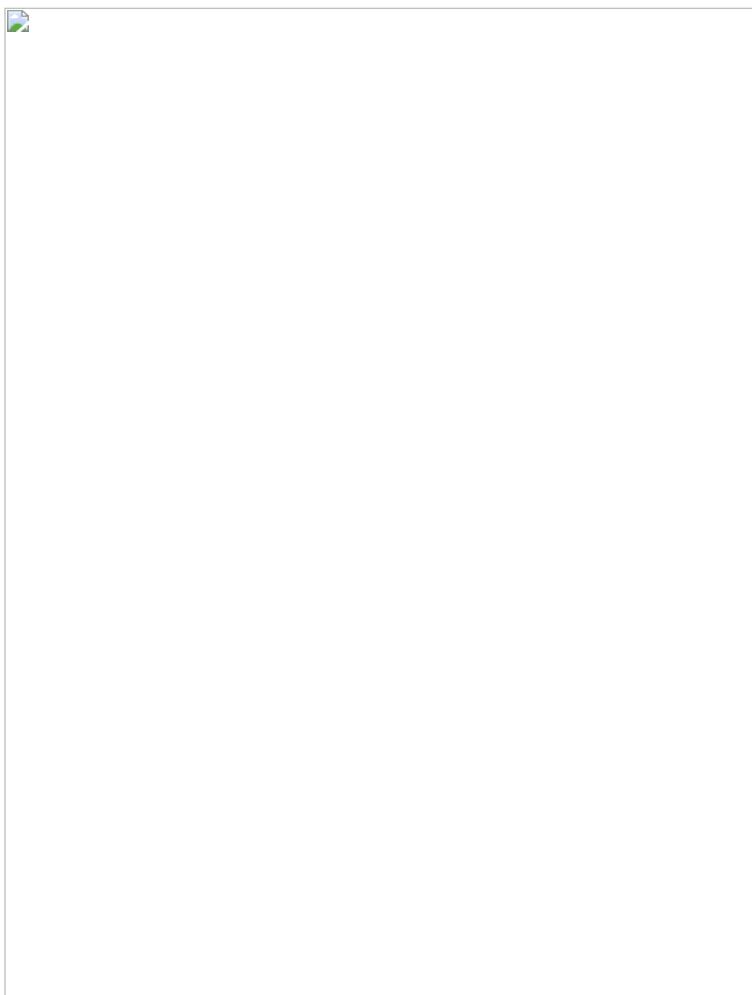


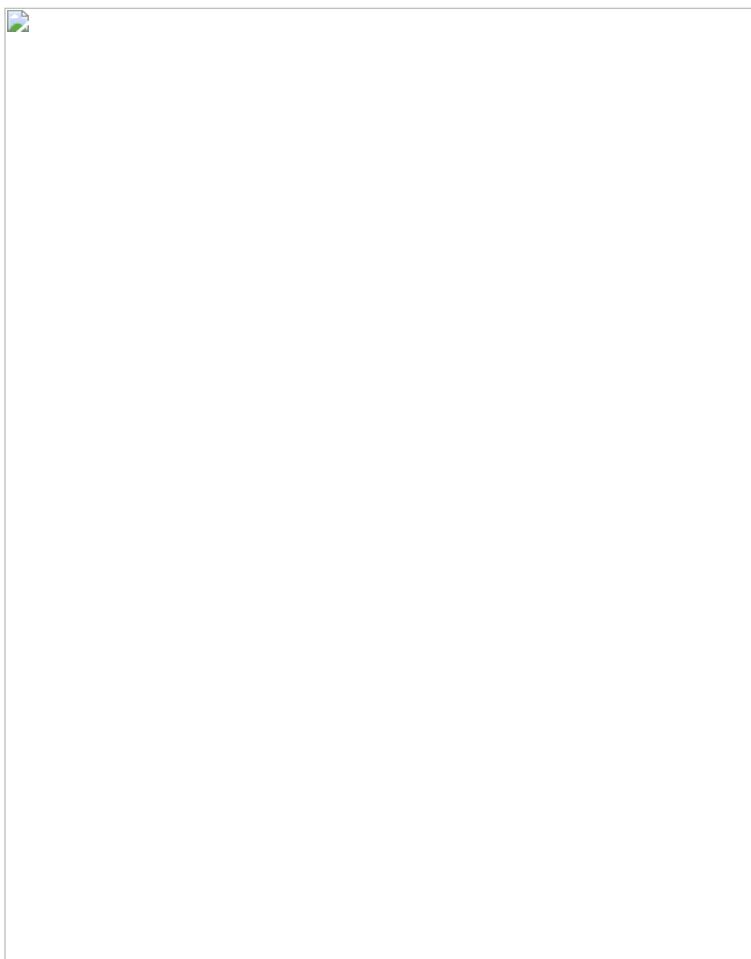




## **Fax exchange with christer eriksson**







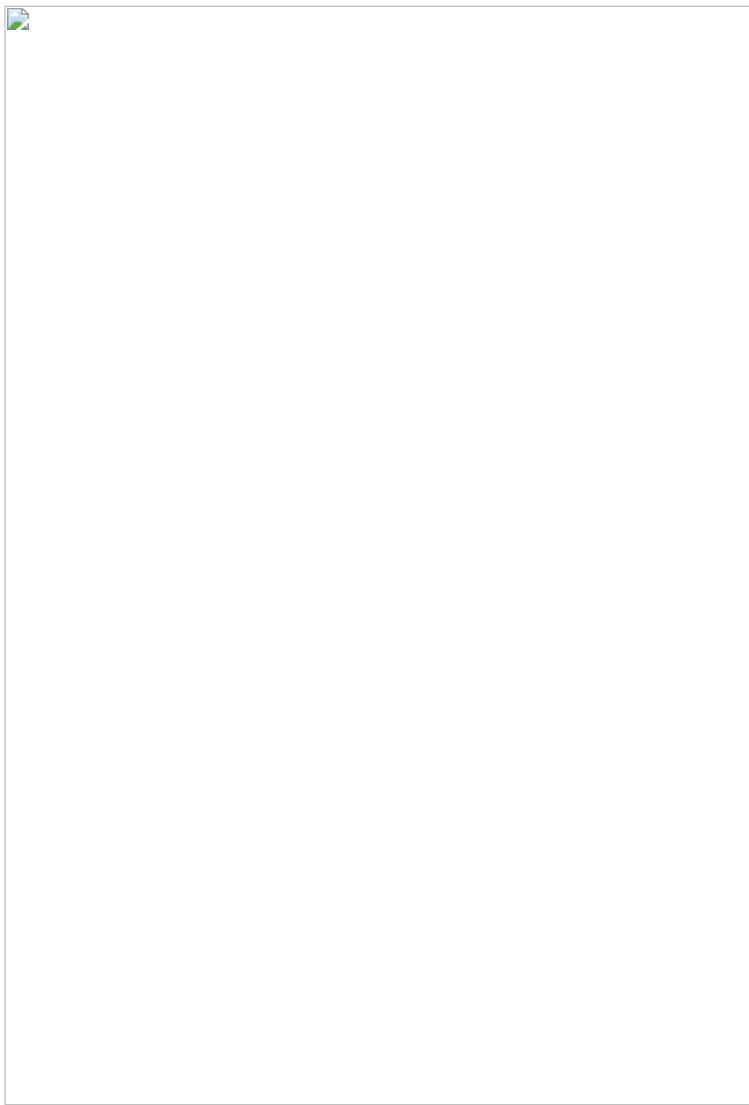


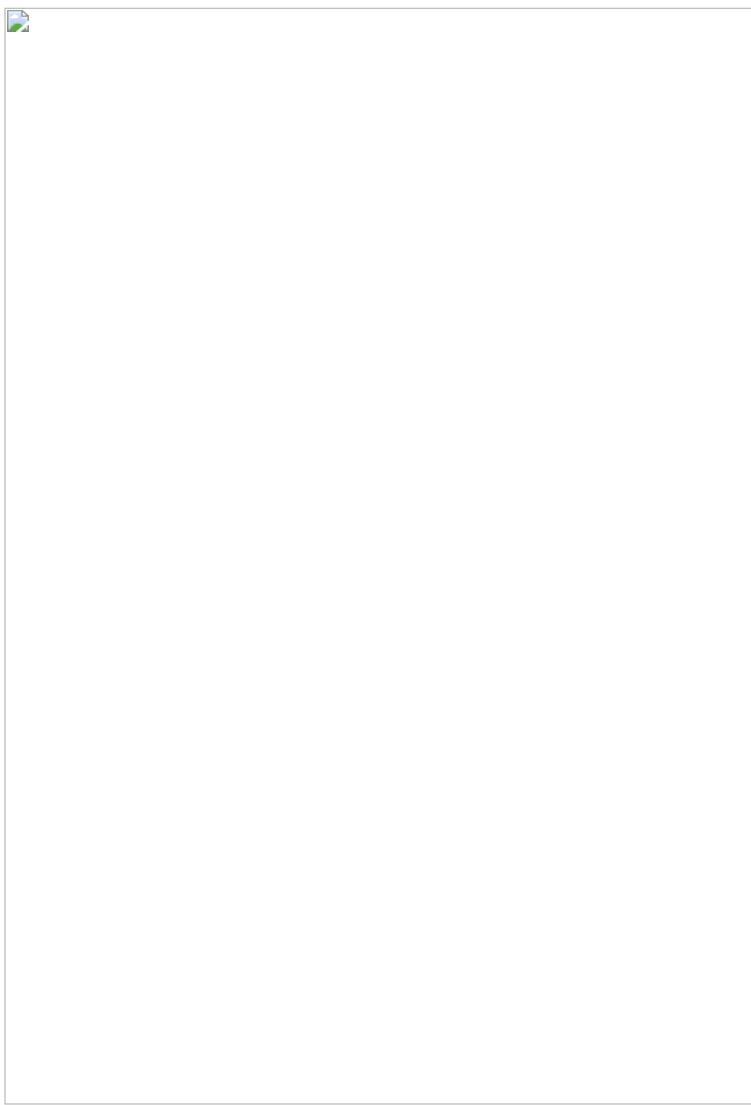


## **Letter anton B paulomo**

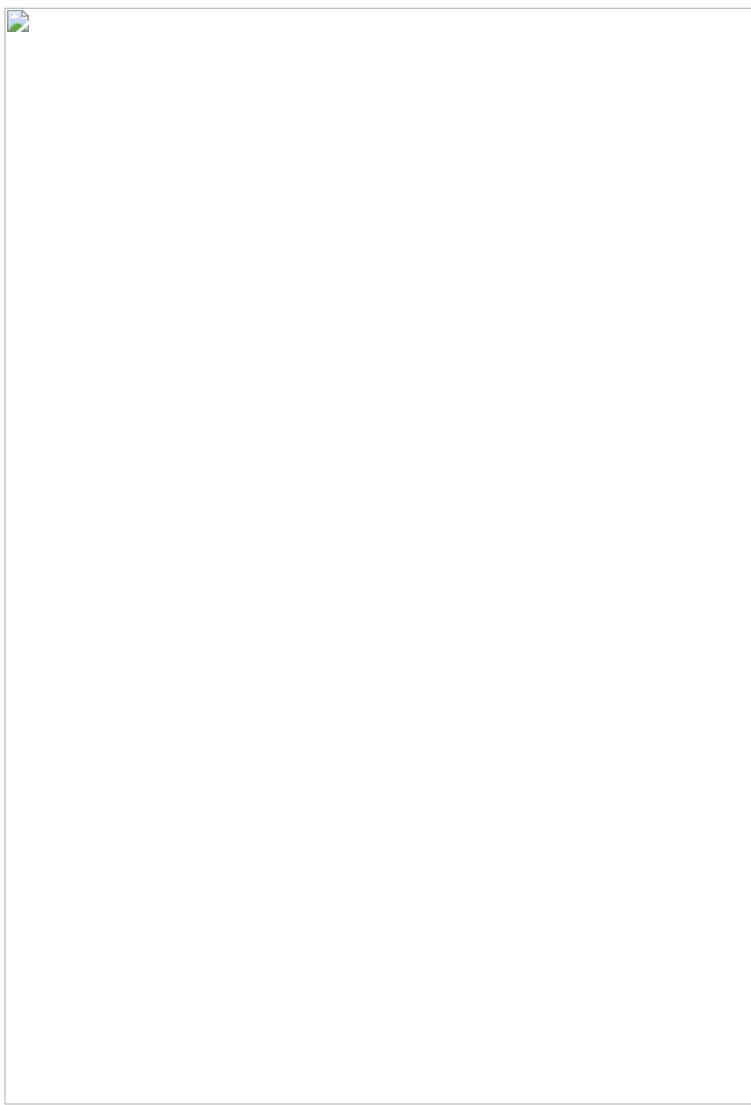


## **Statement Ulf hobro**



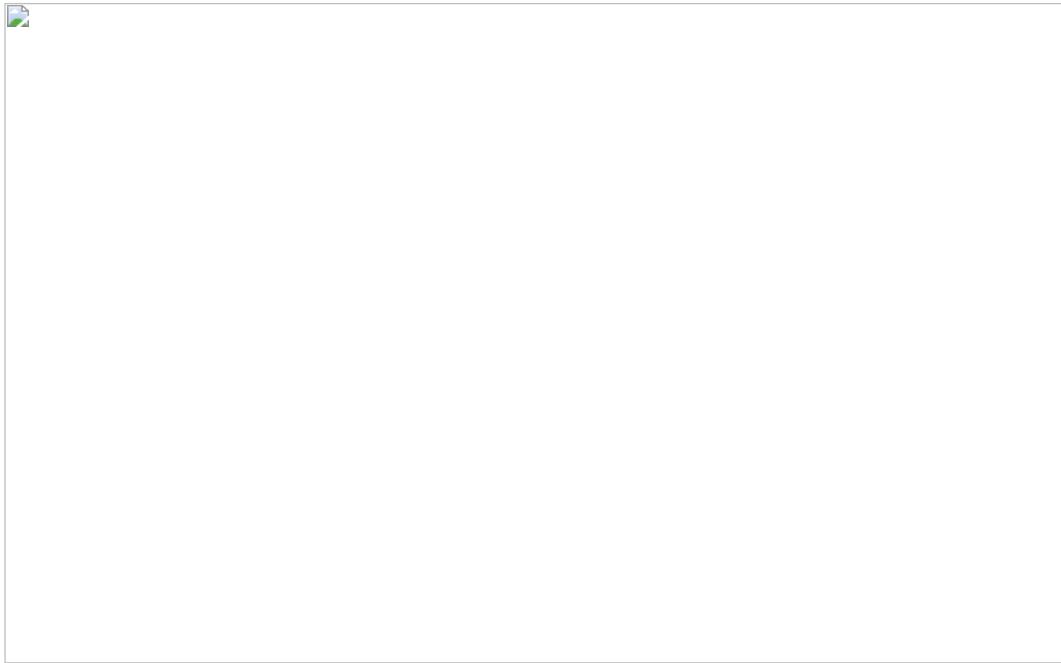
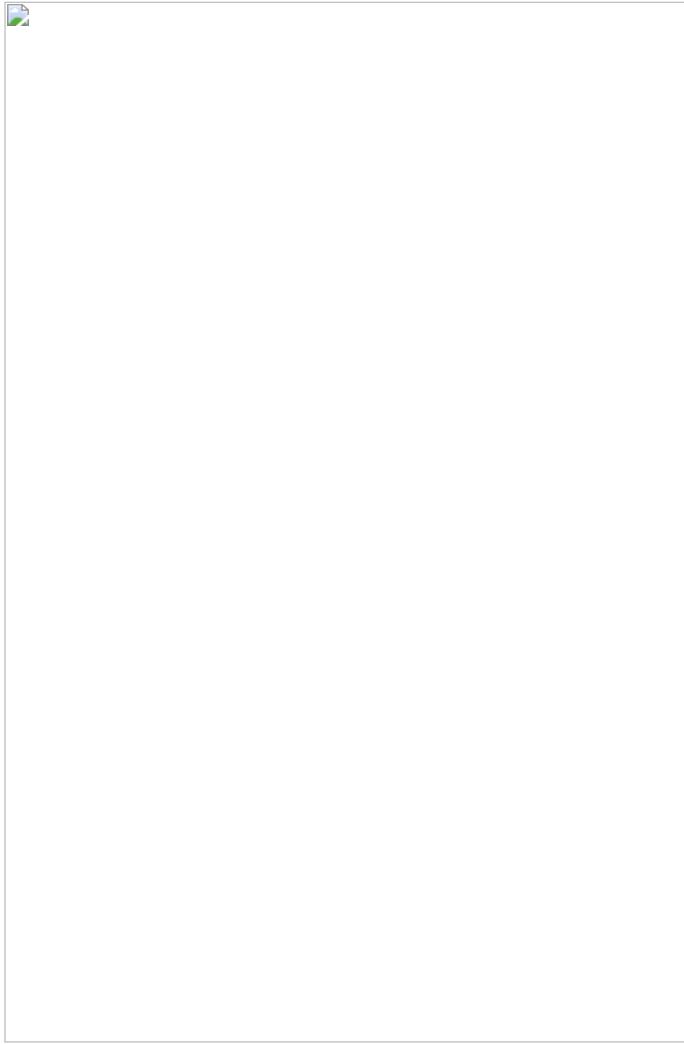


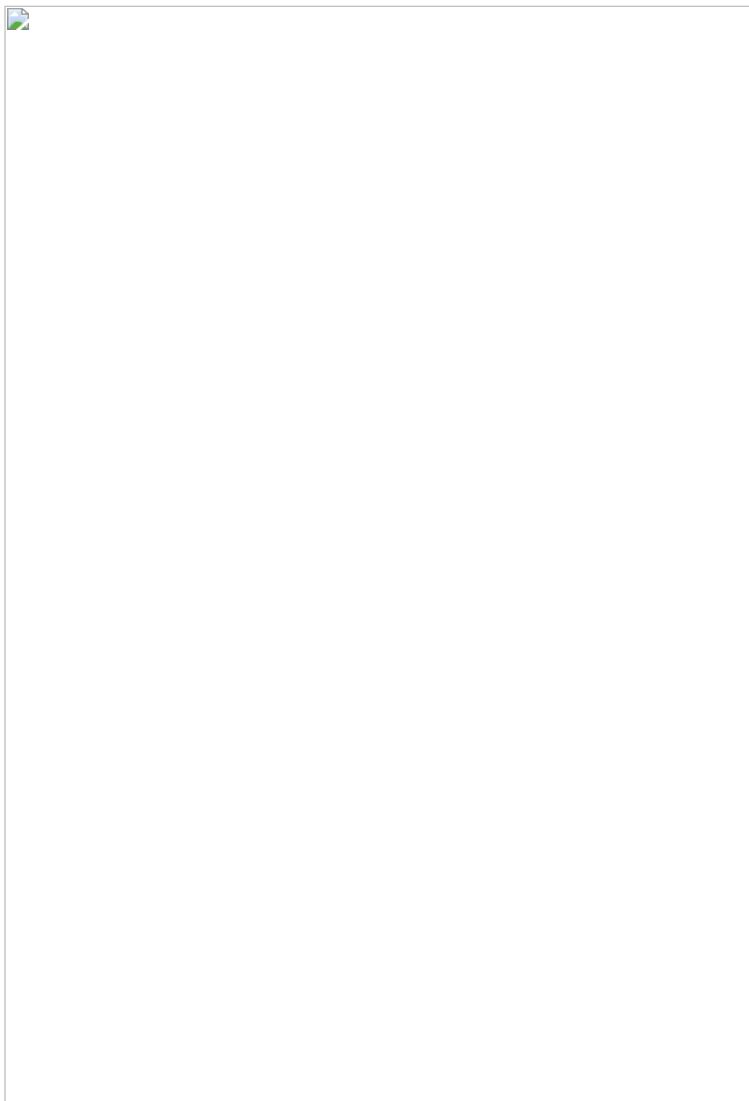


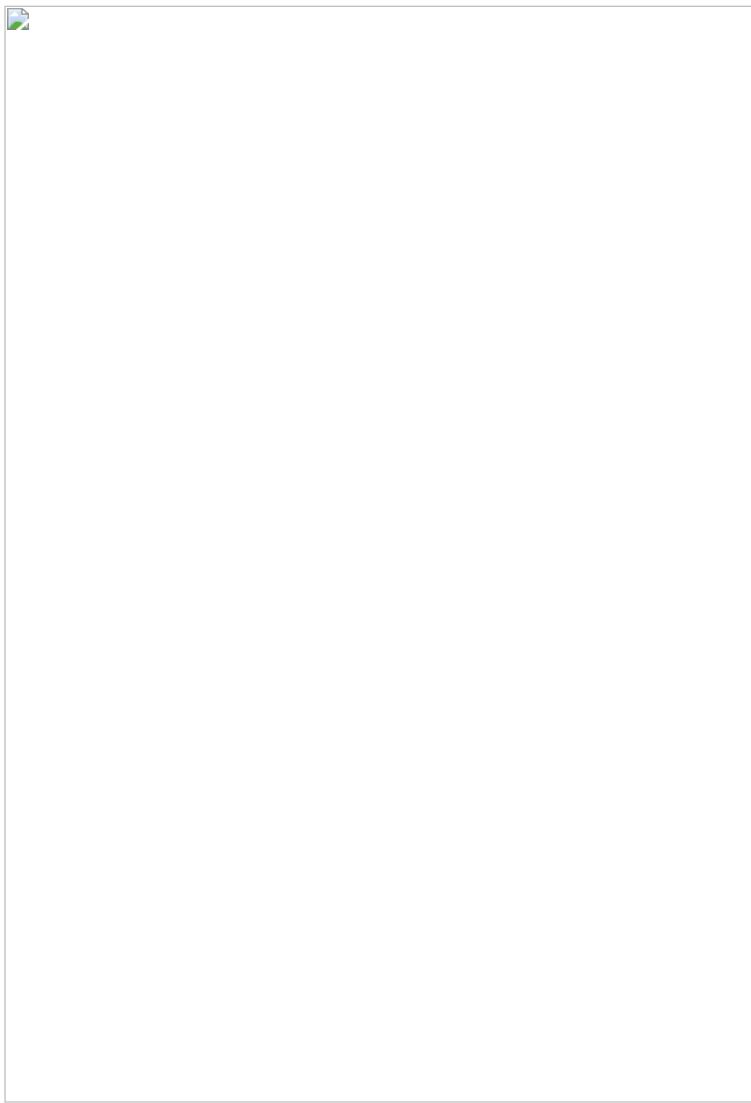


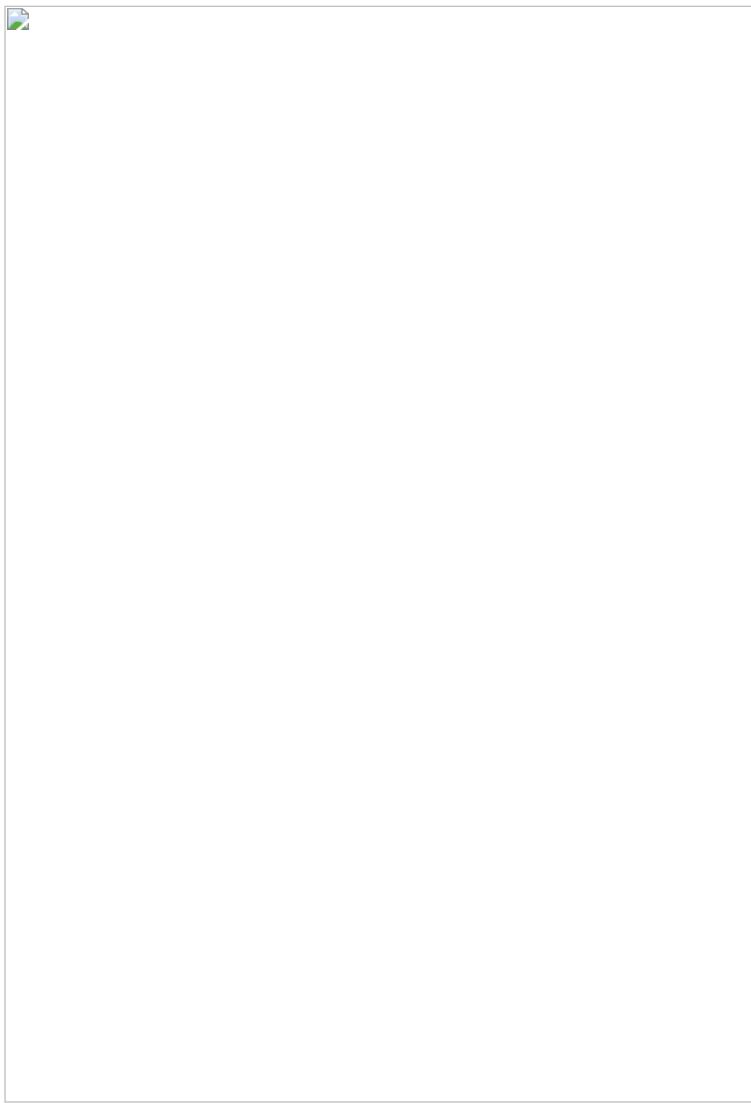


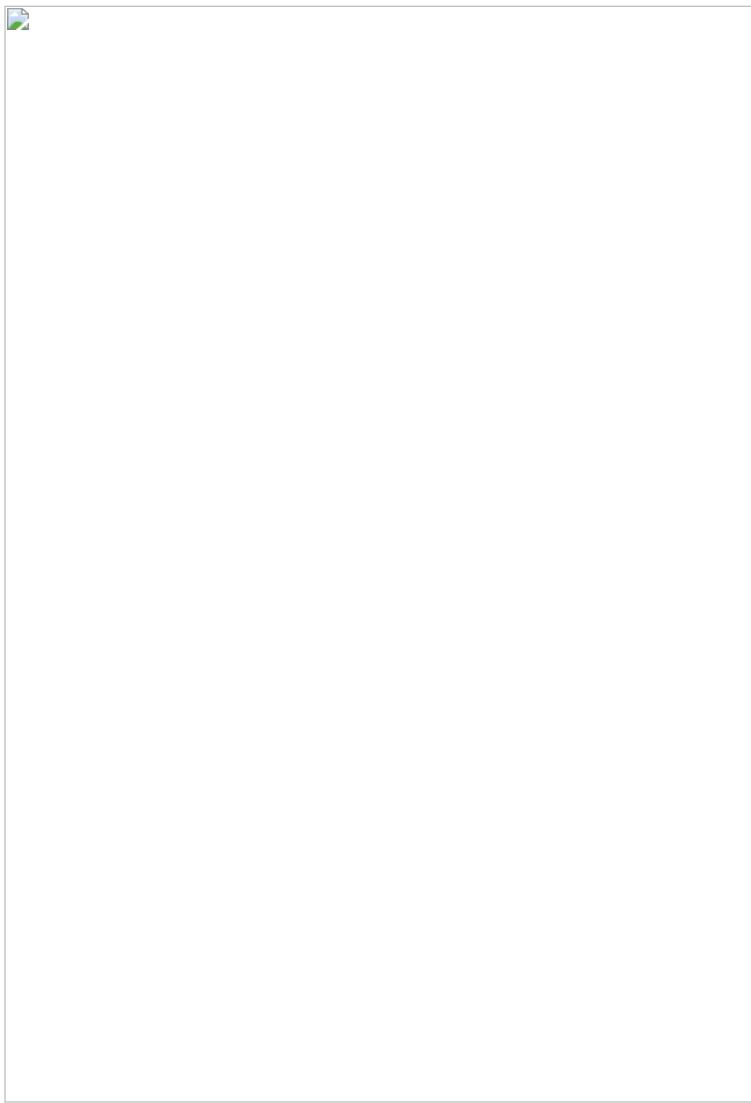
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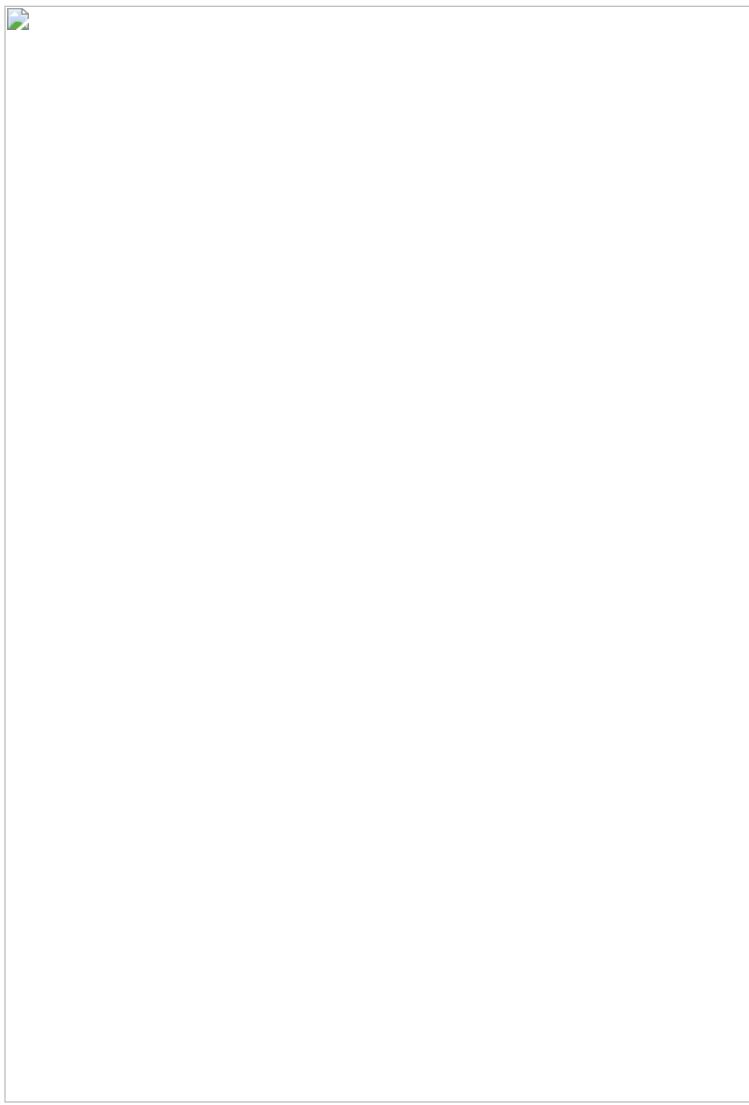


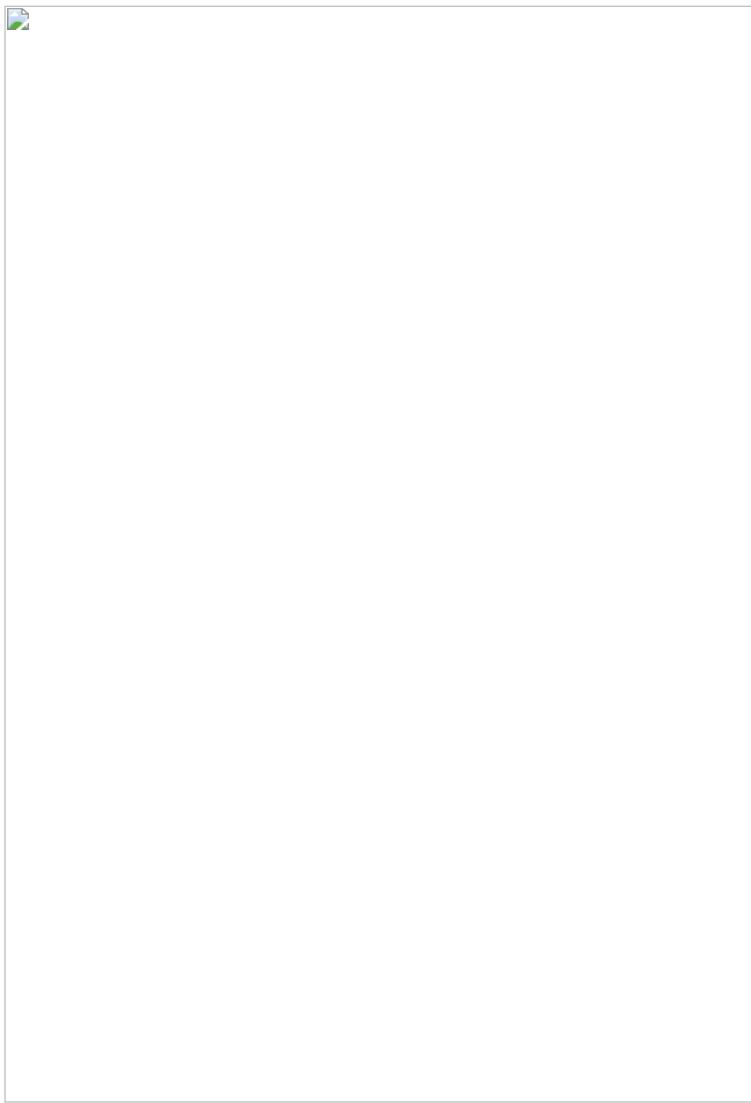


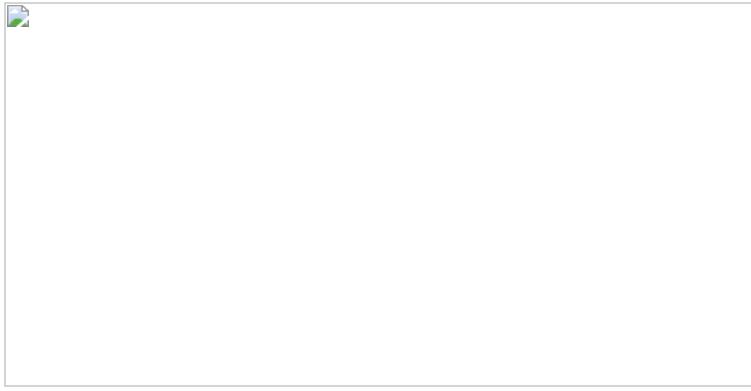
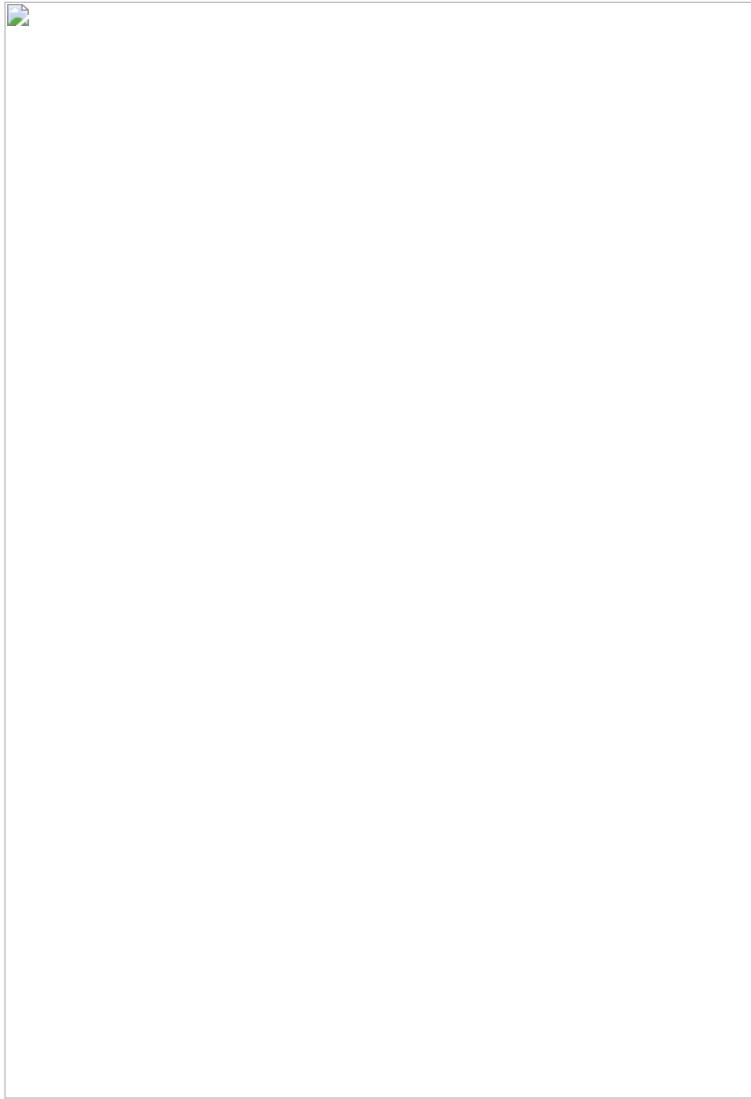


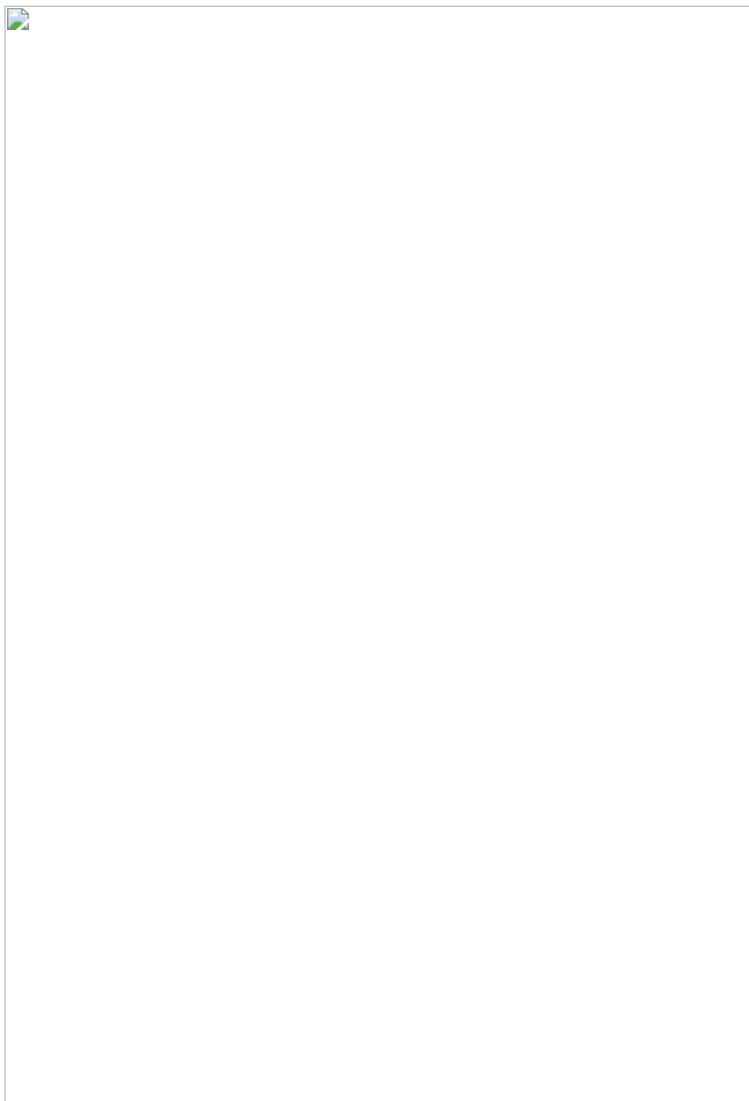




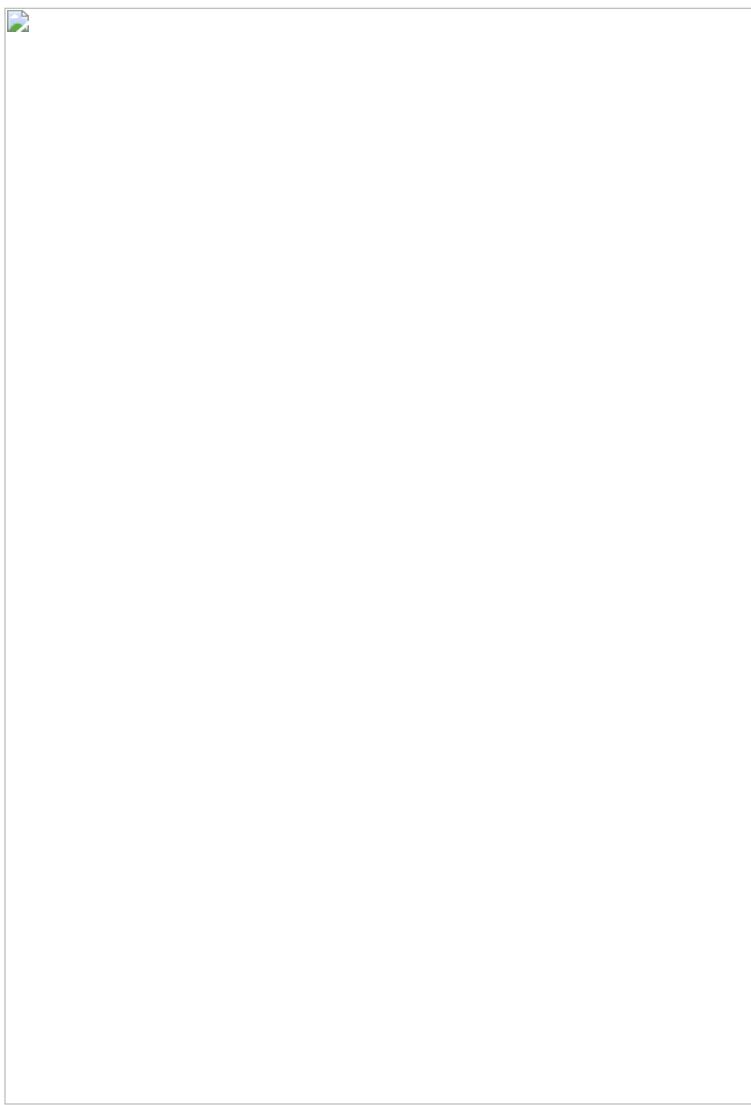




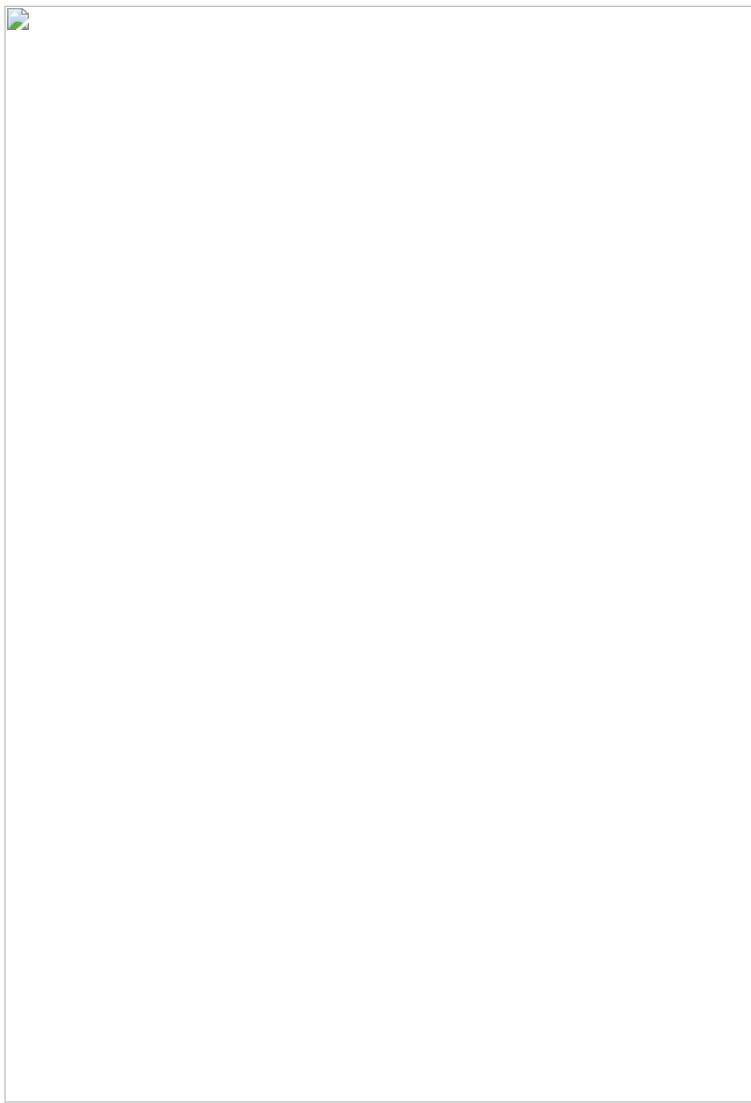


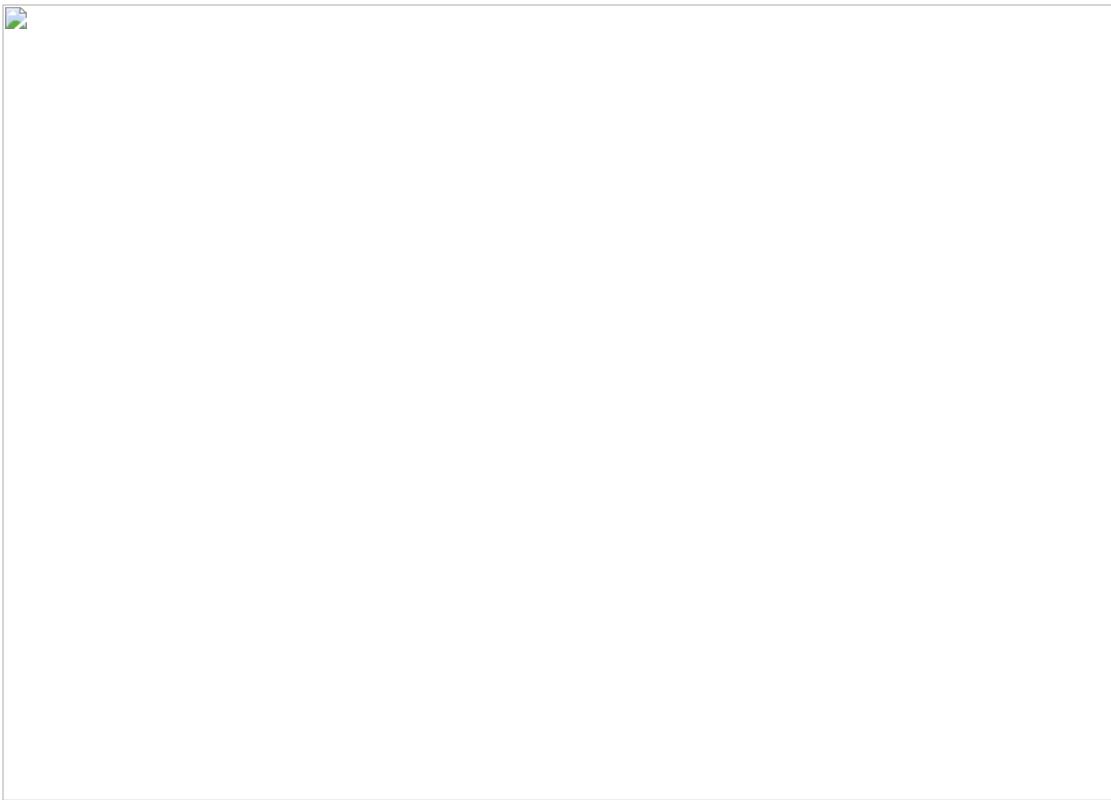


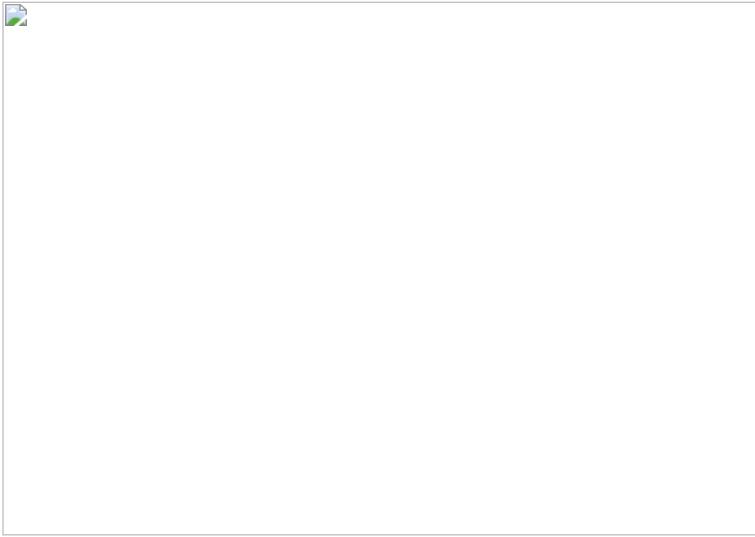












## **Interview sillaste /Moosaar**











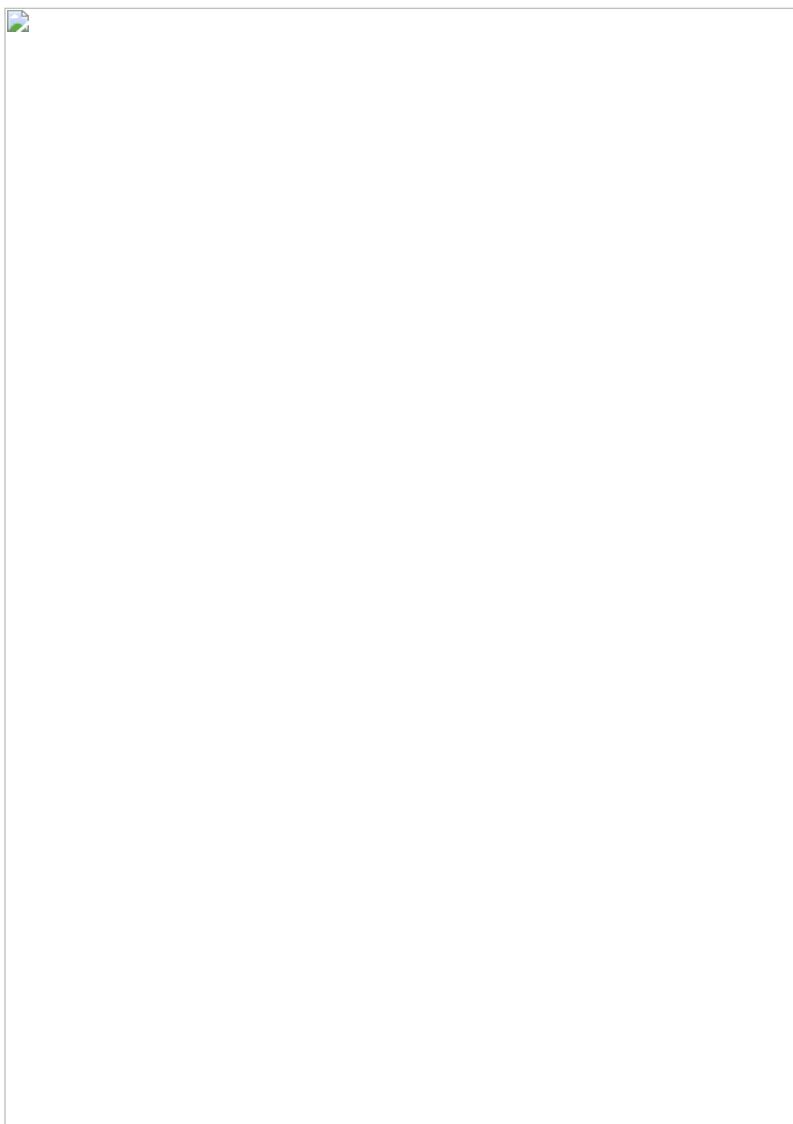


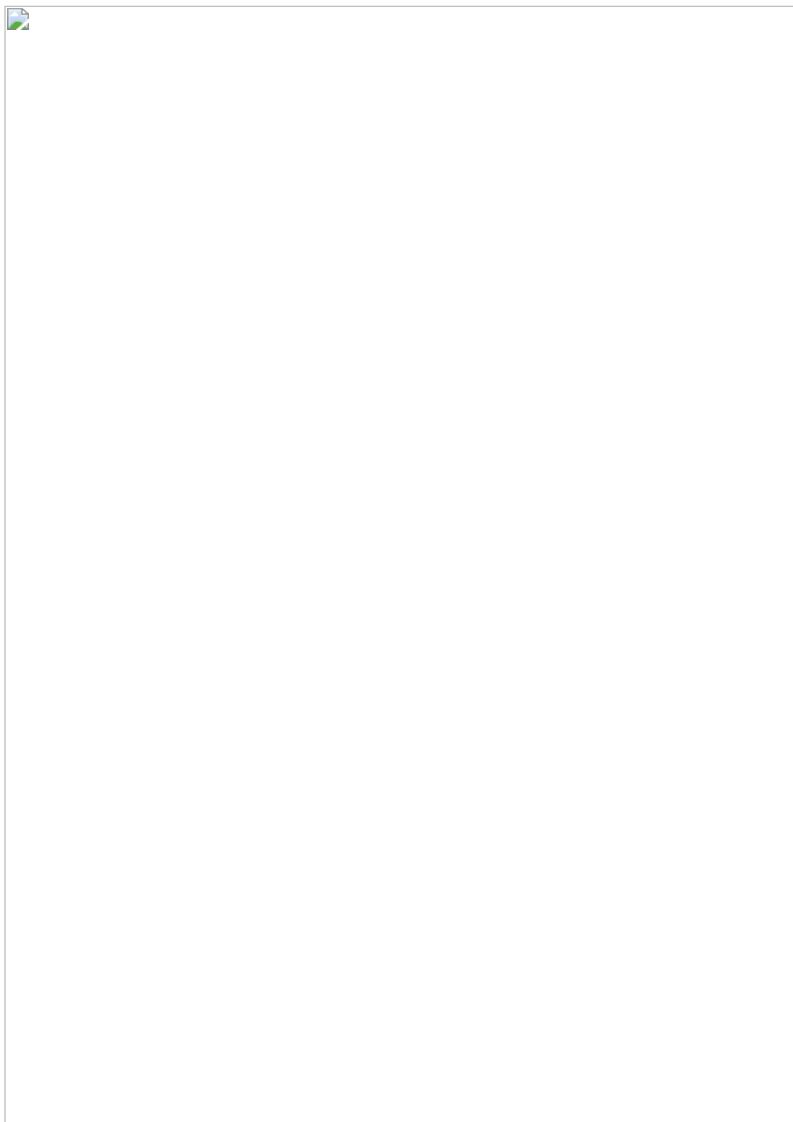


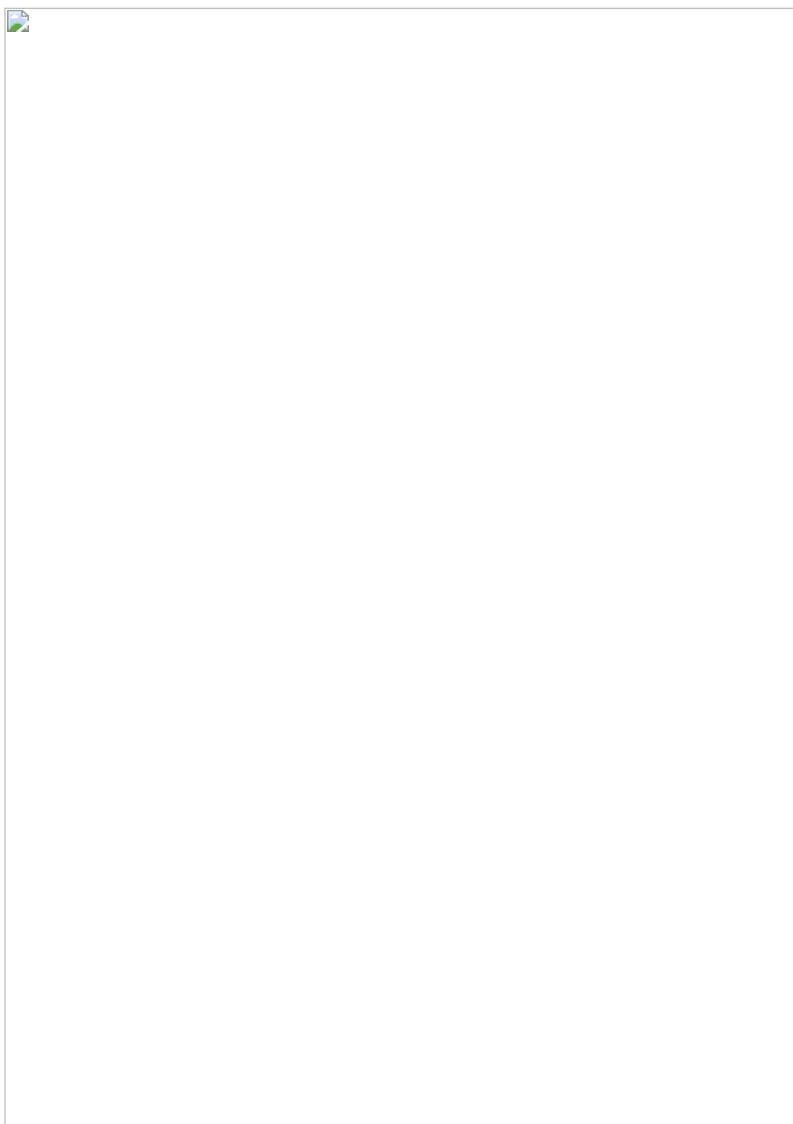




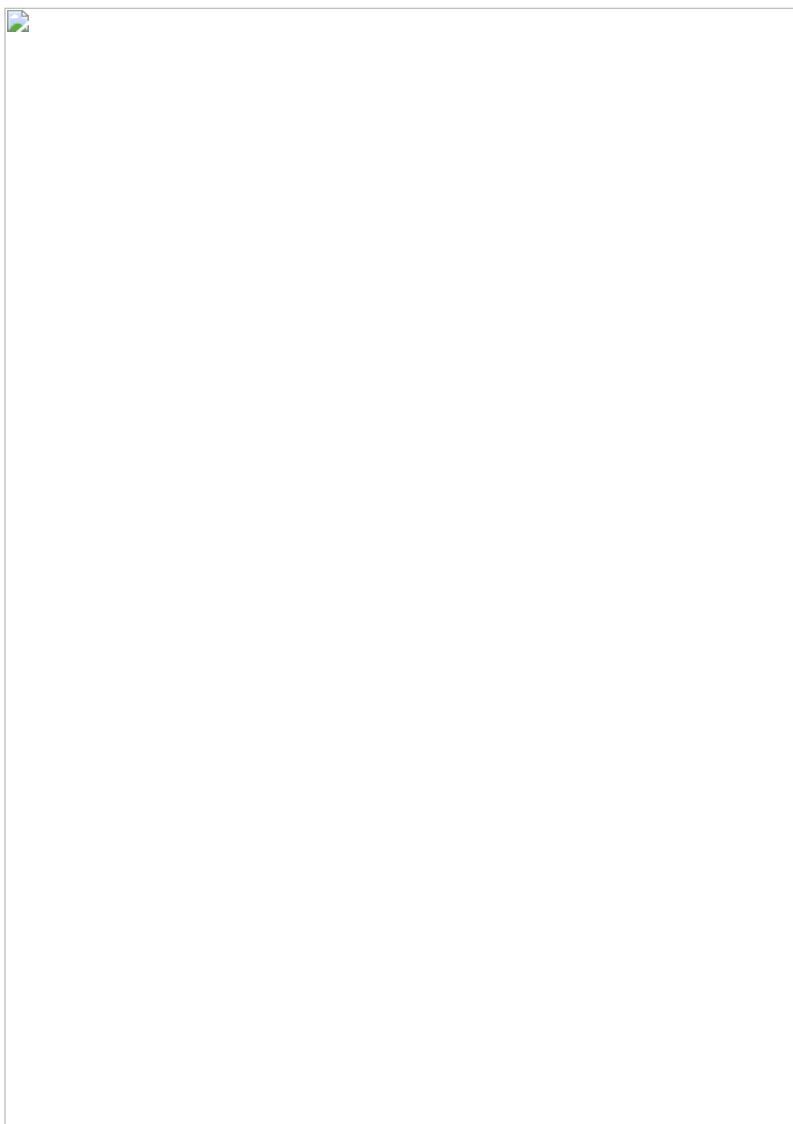














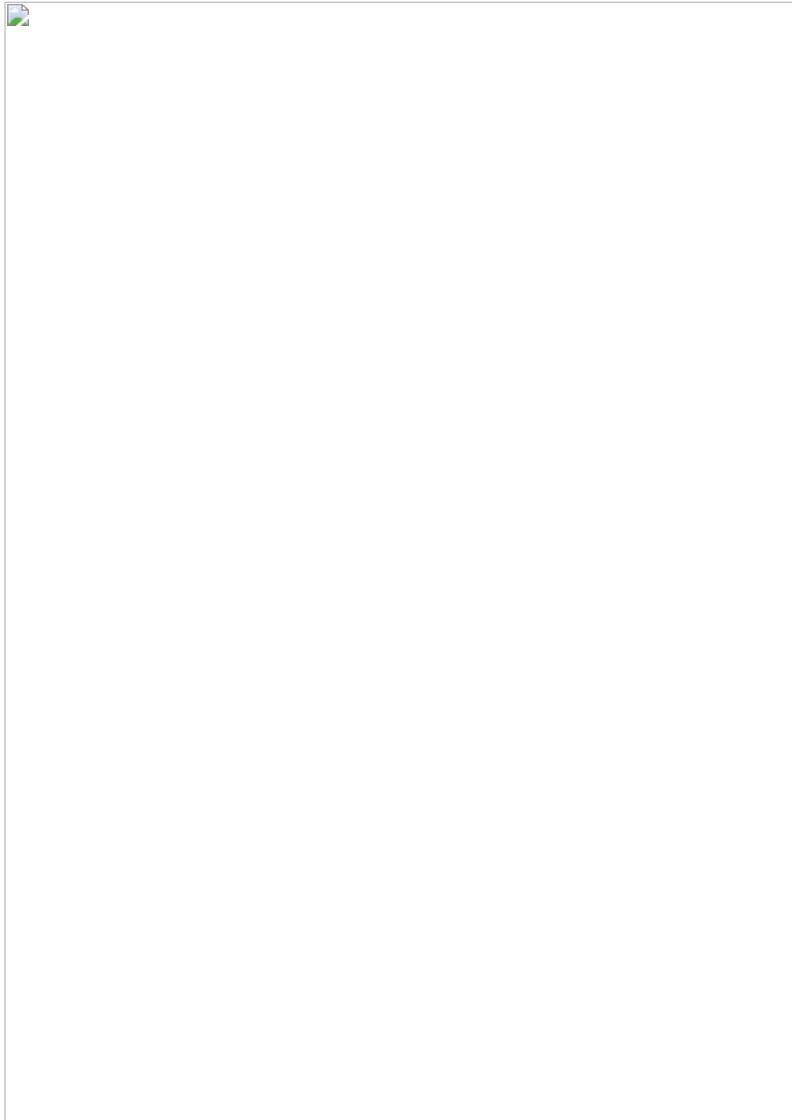




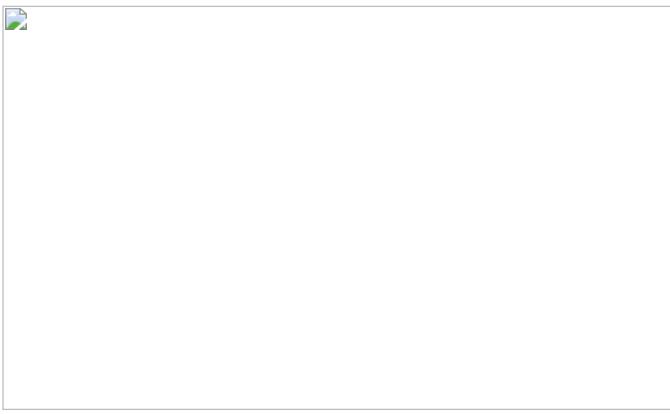
## **Statement Arvi Myyrylainen**







## **Statement tomas rasmussen**





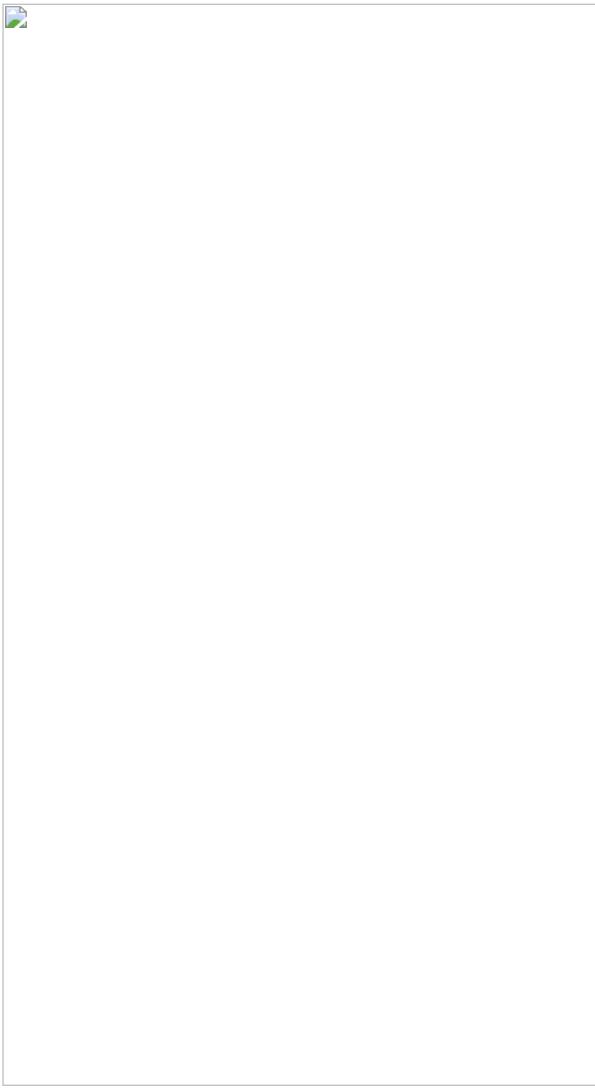
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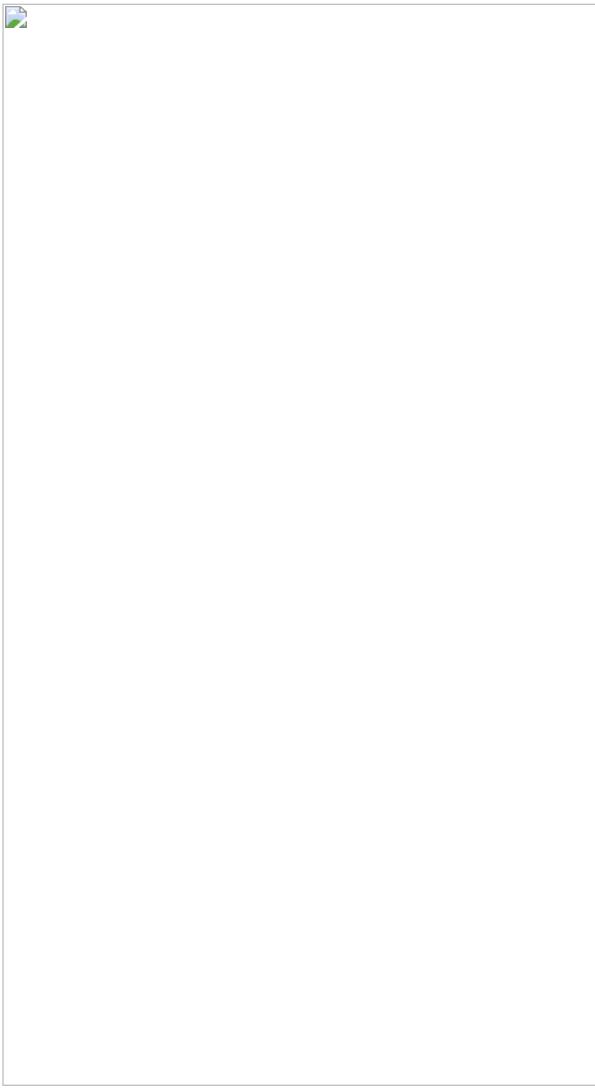


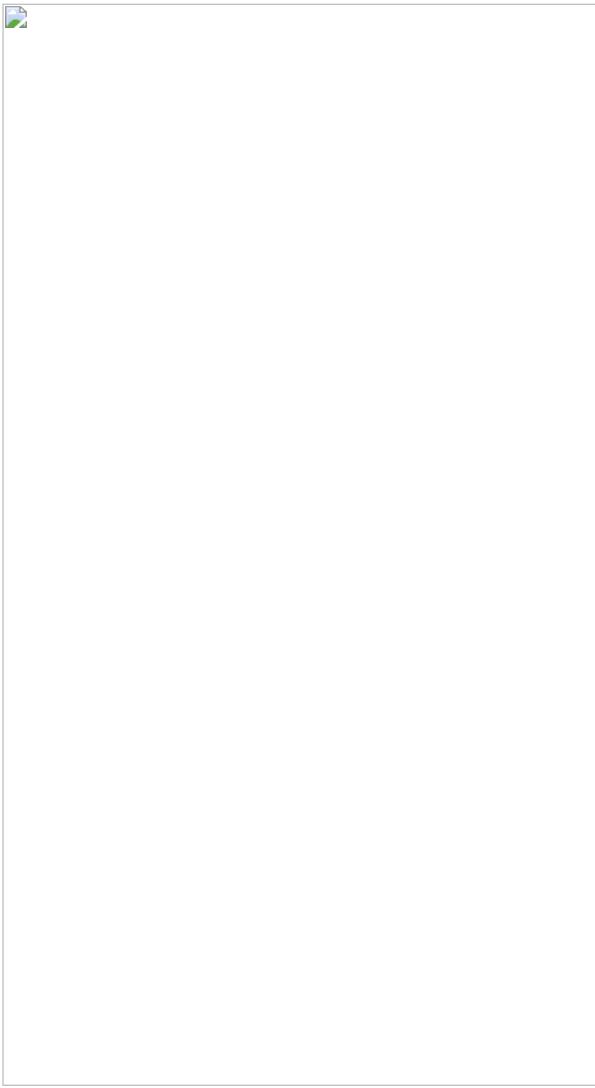
## **Statement rain Oolmets in hango**

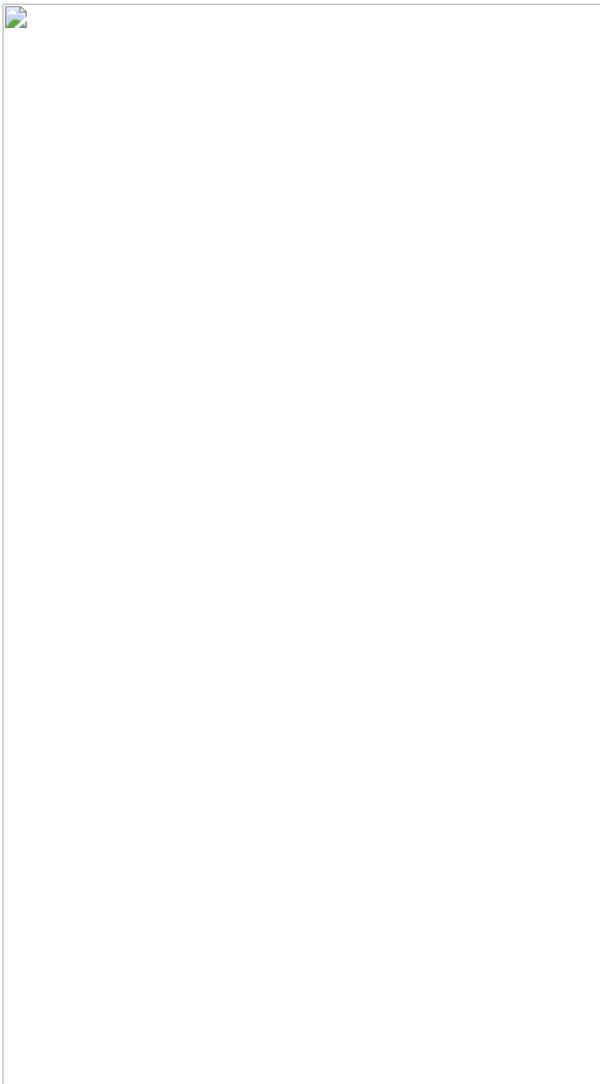


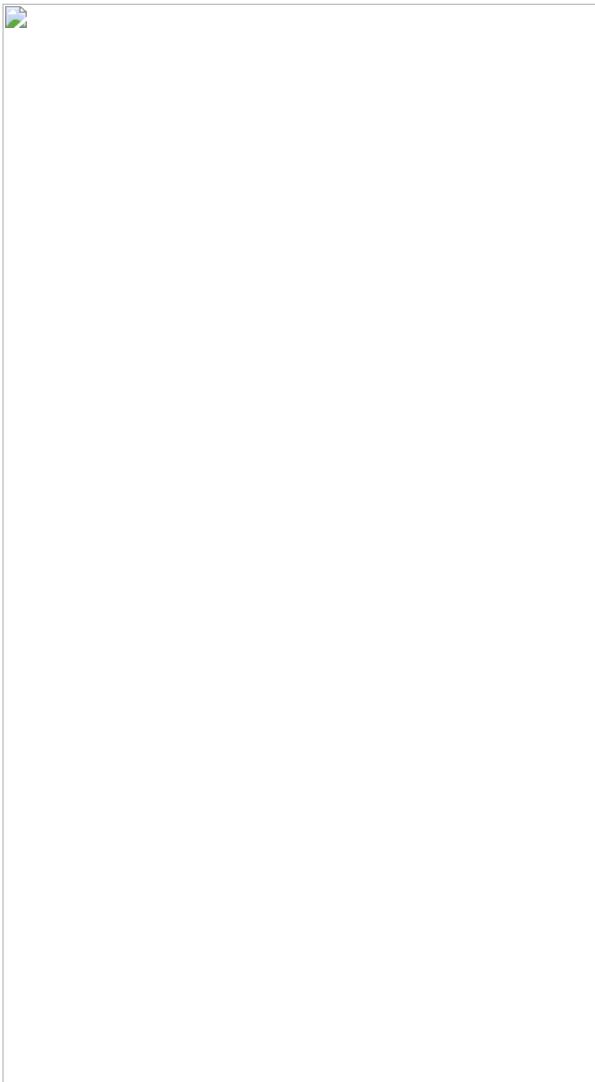
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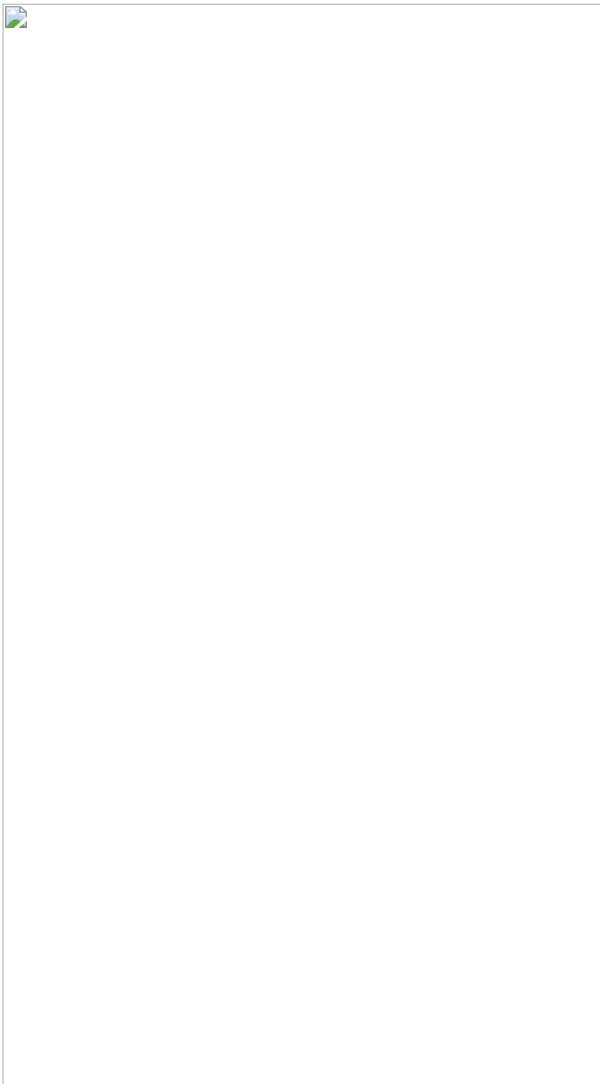


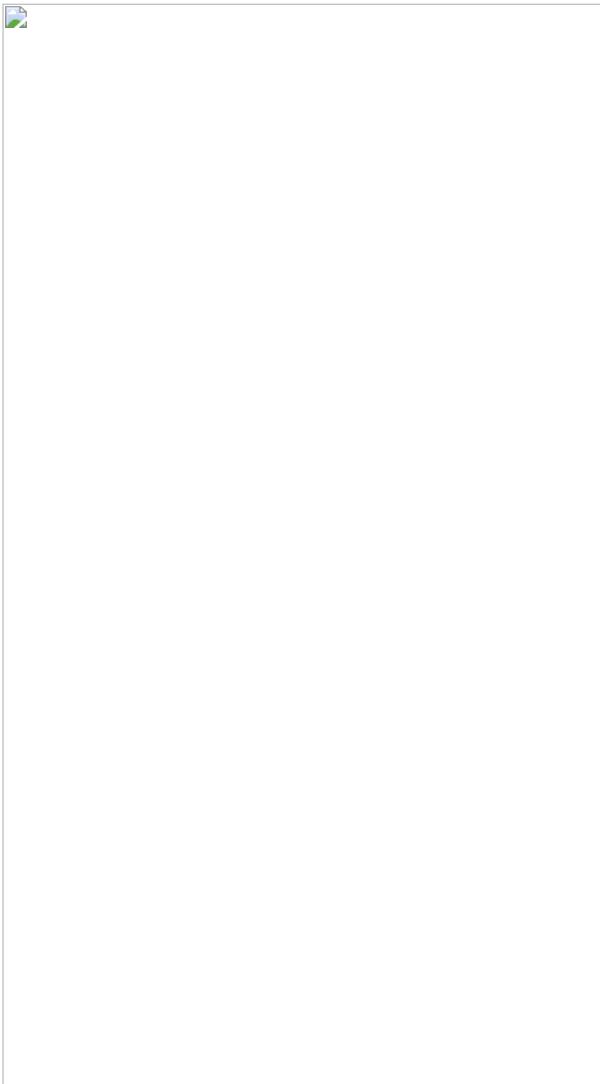


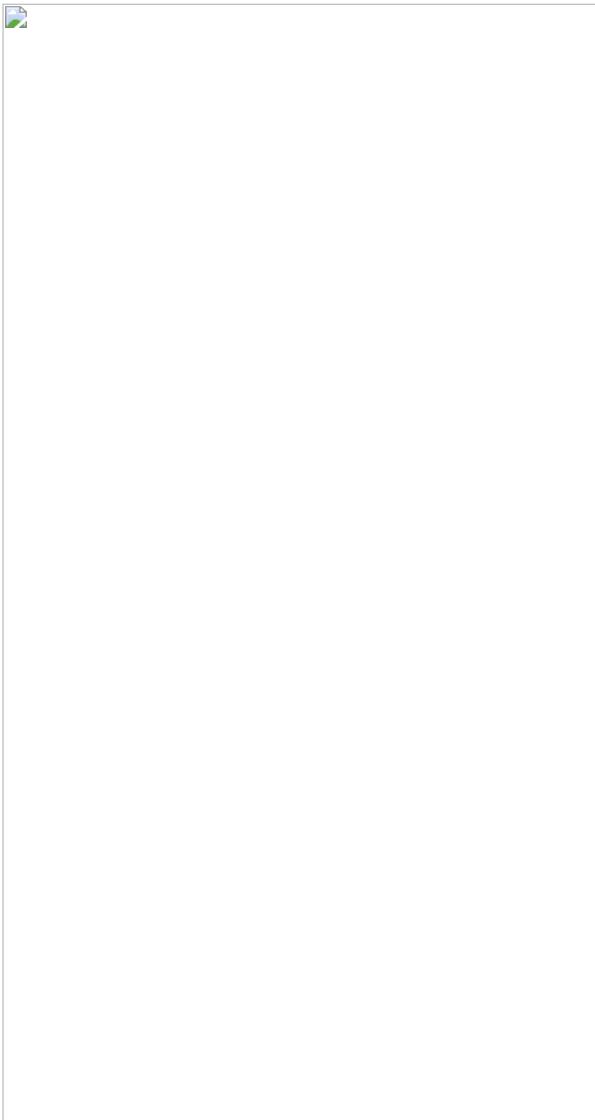


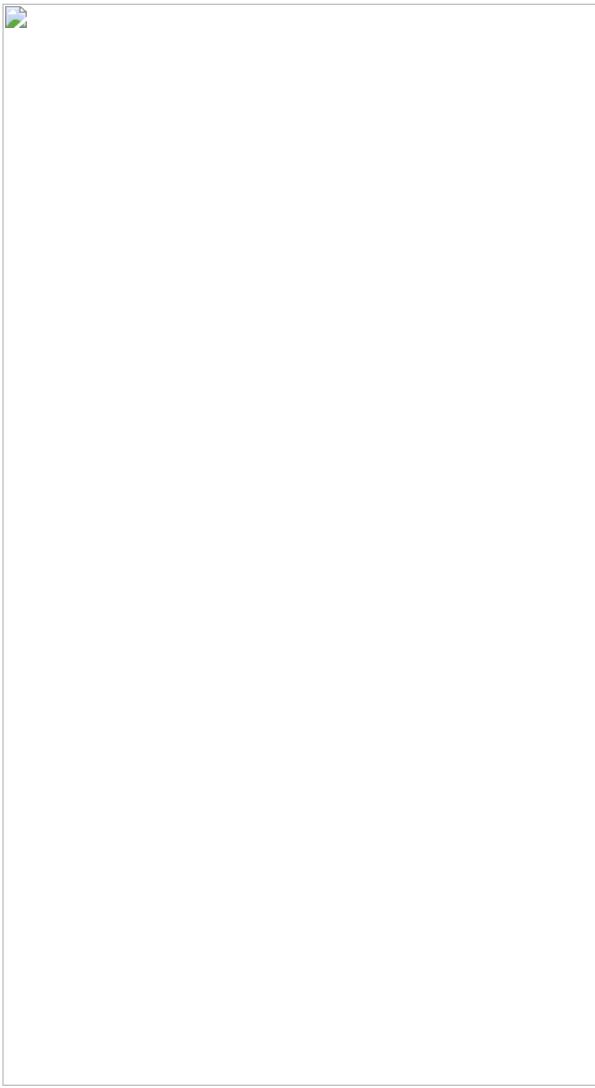


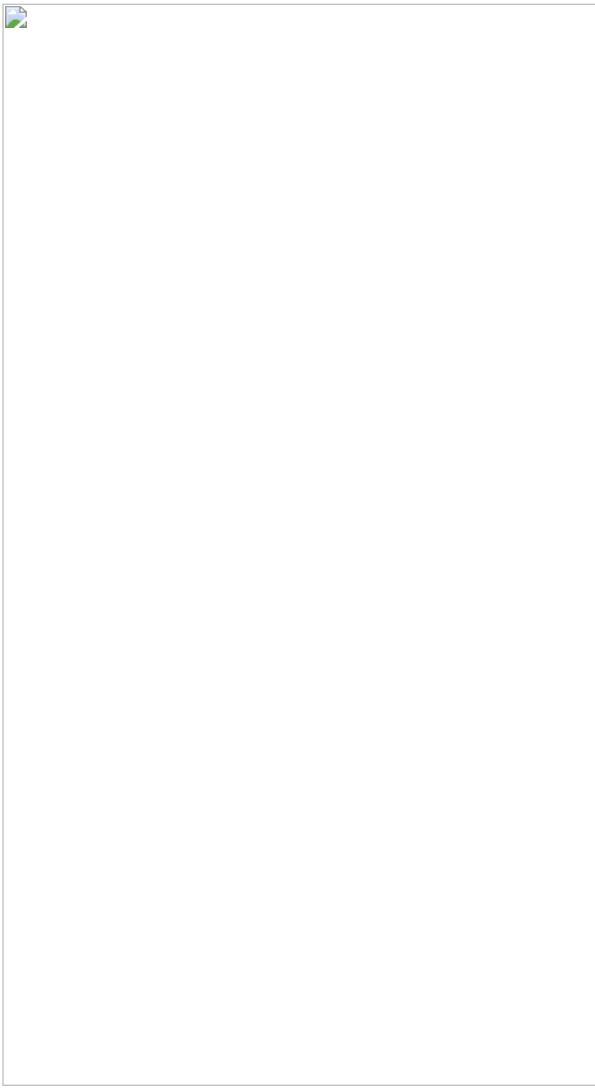


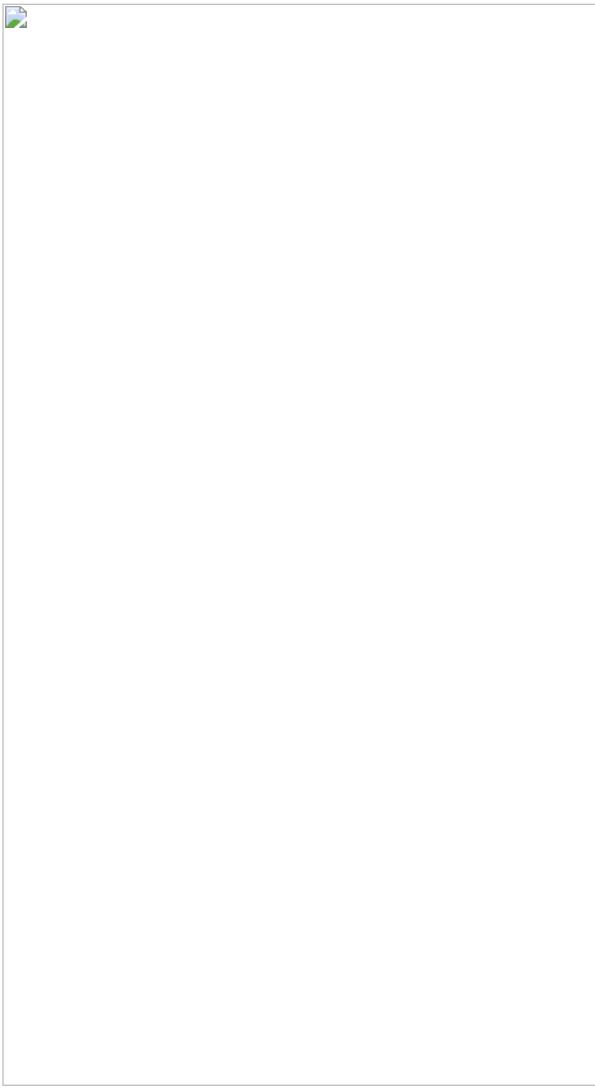


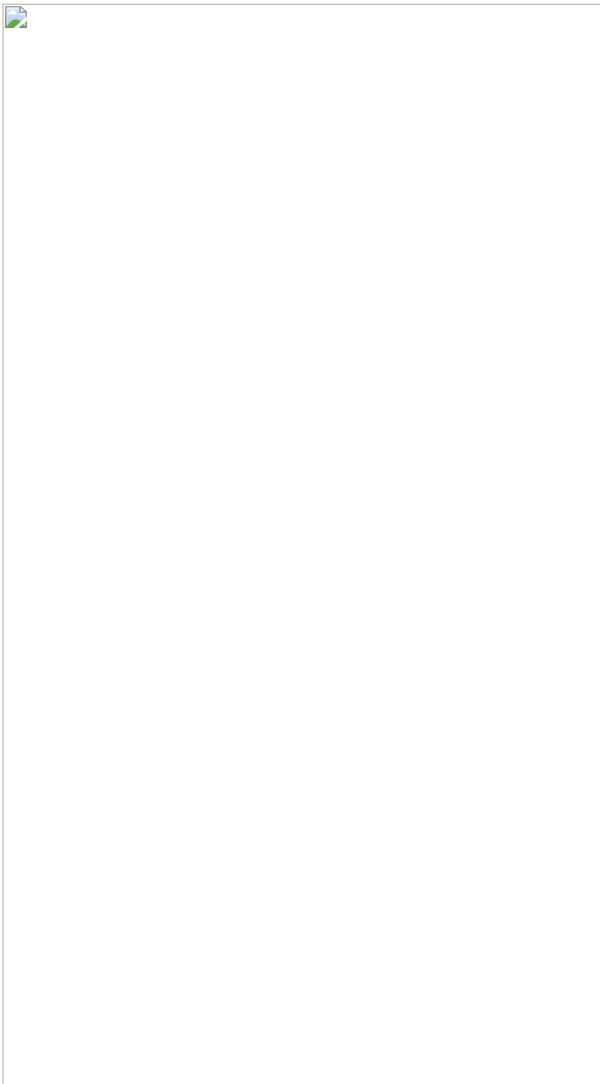


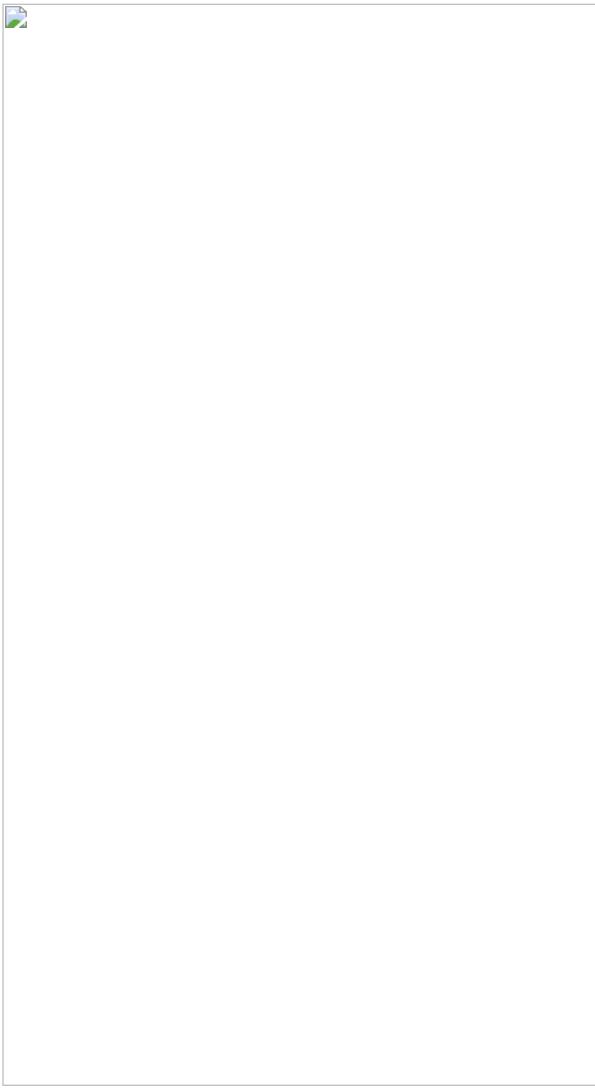


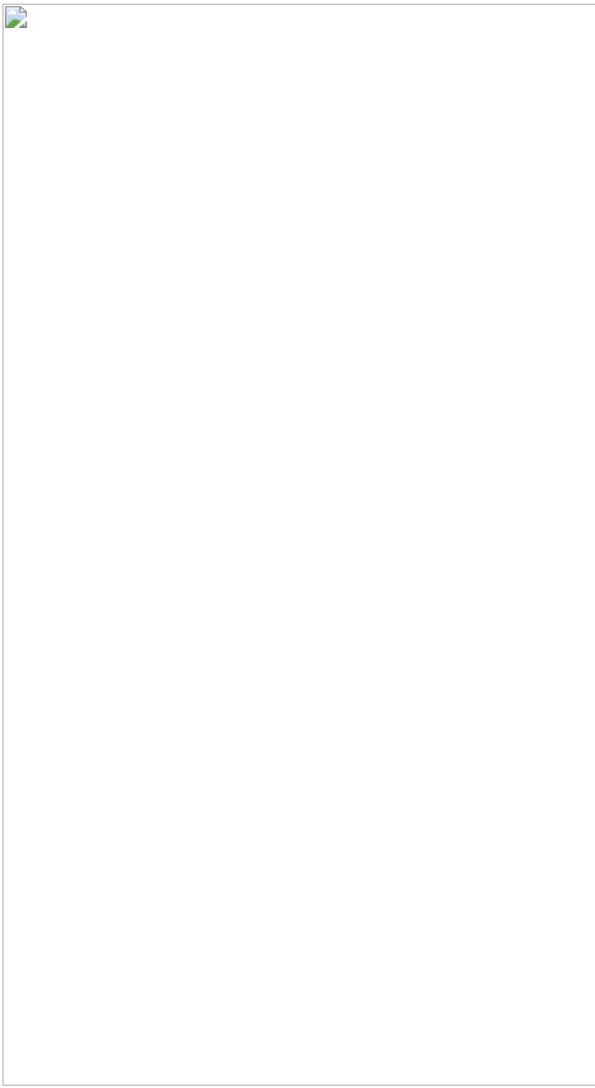


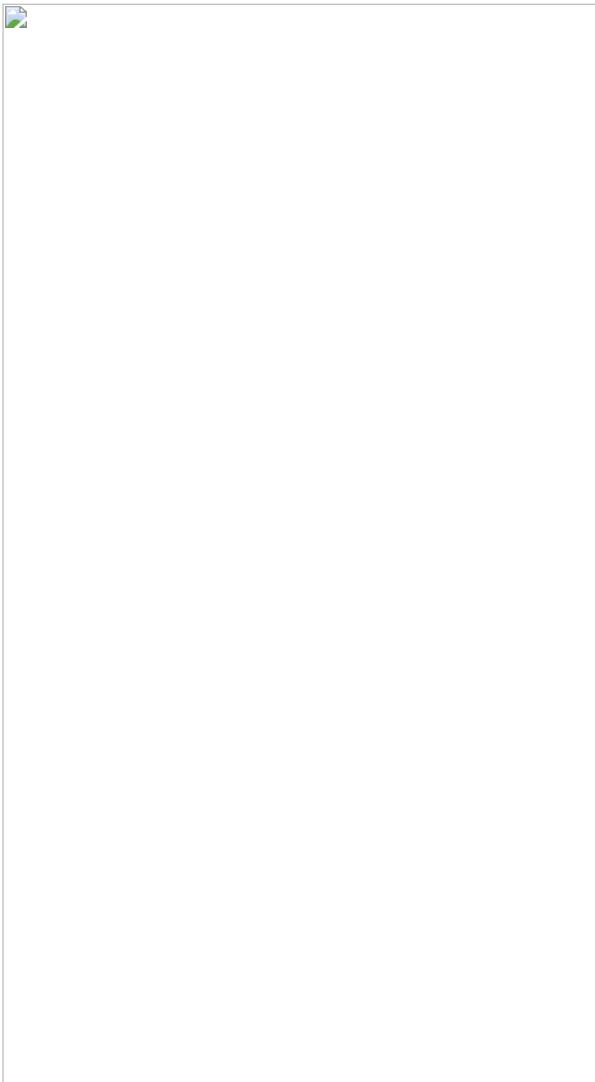


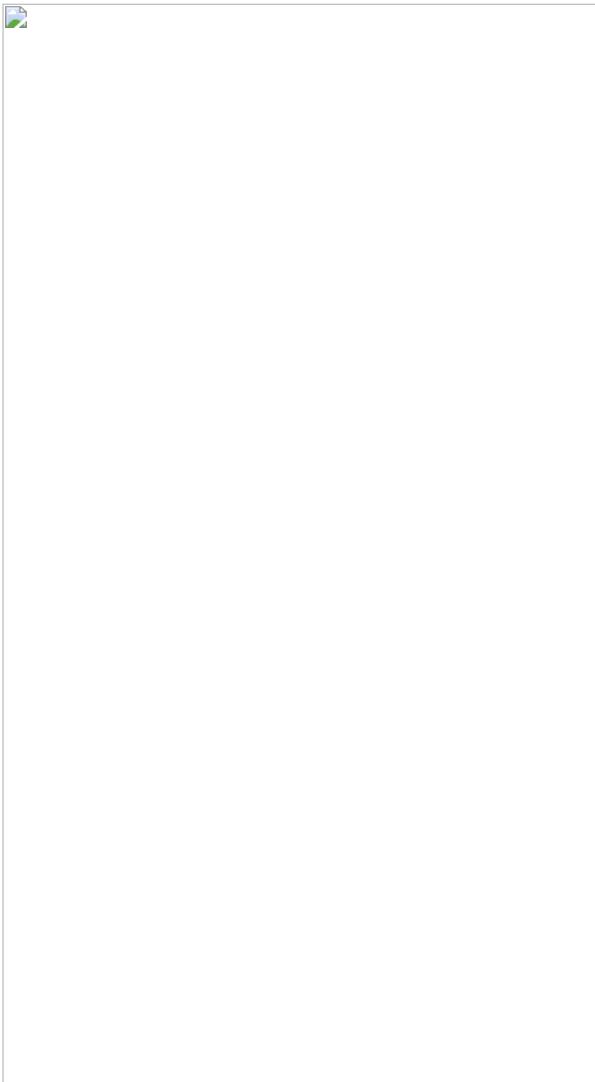


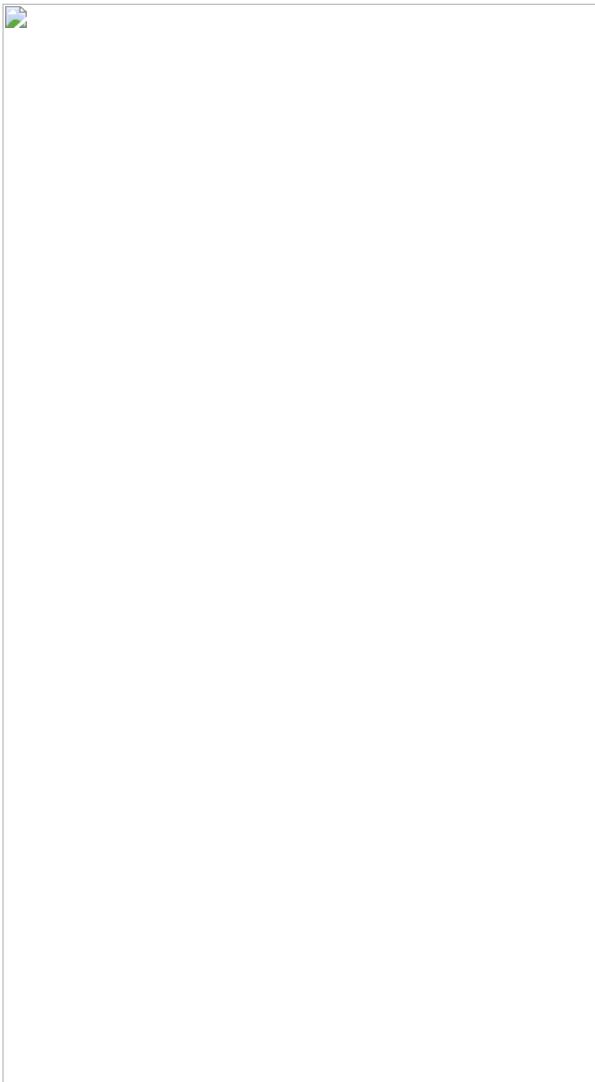


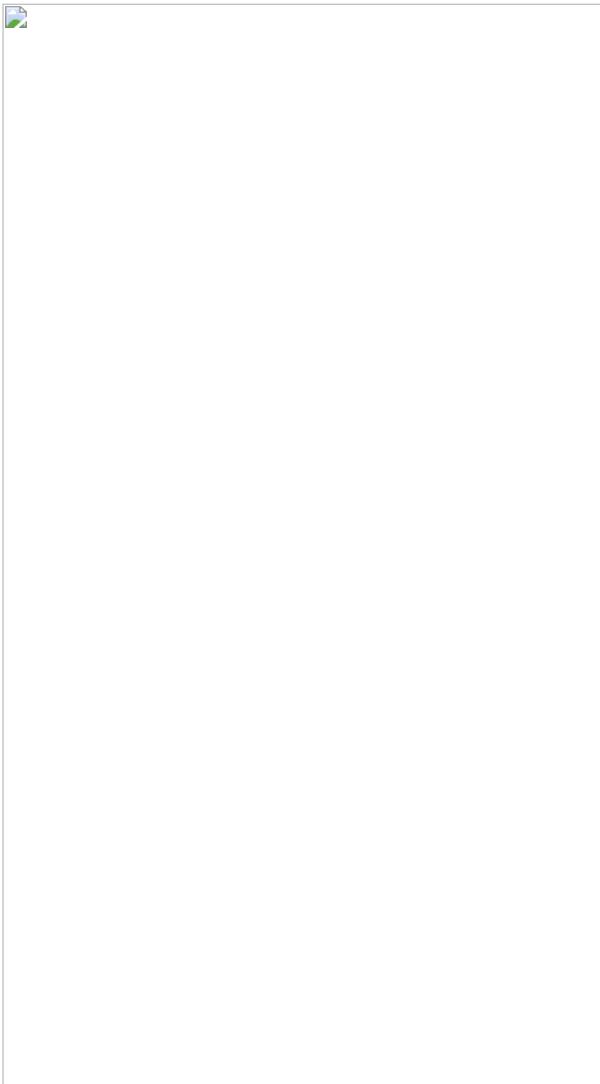


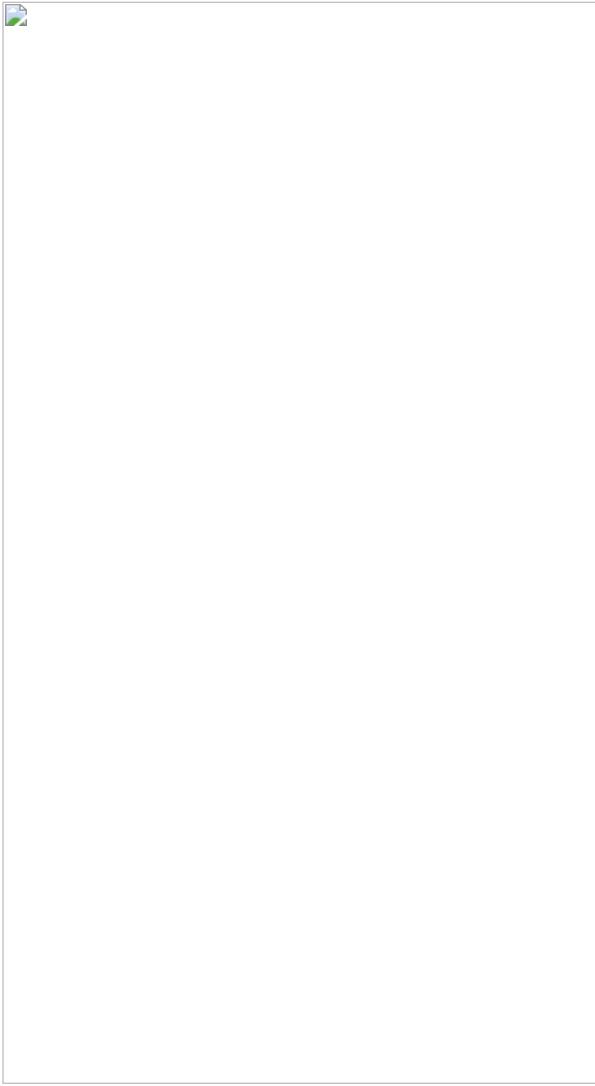


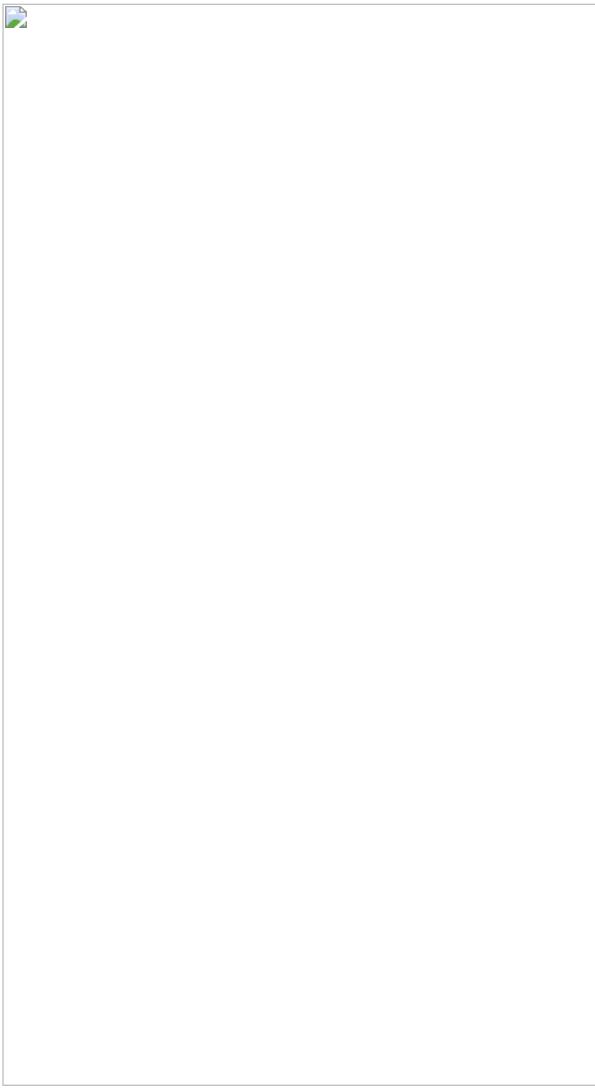


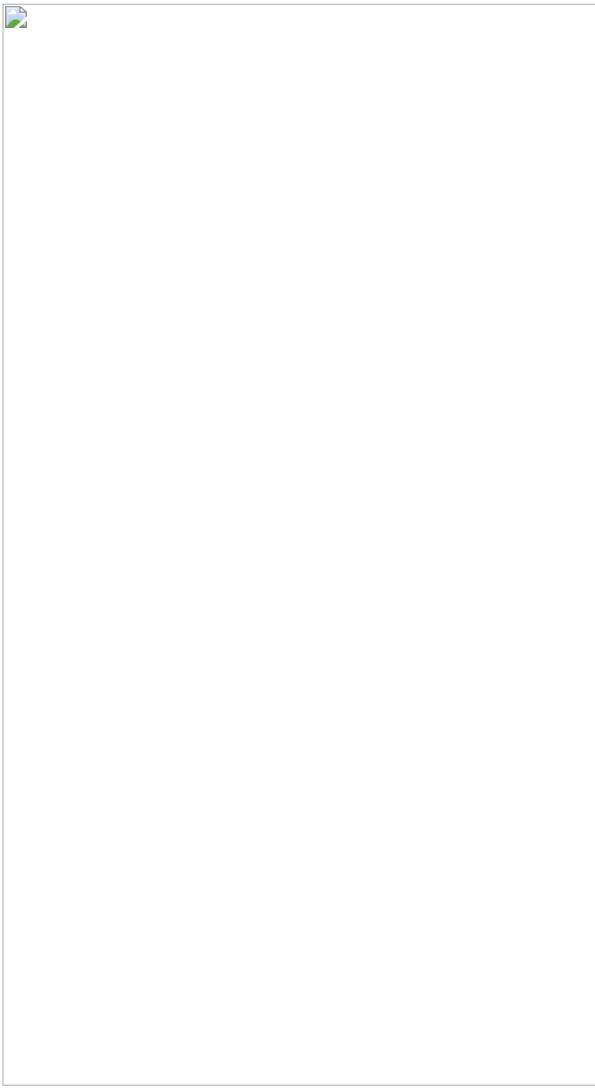


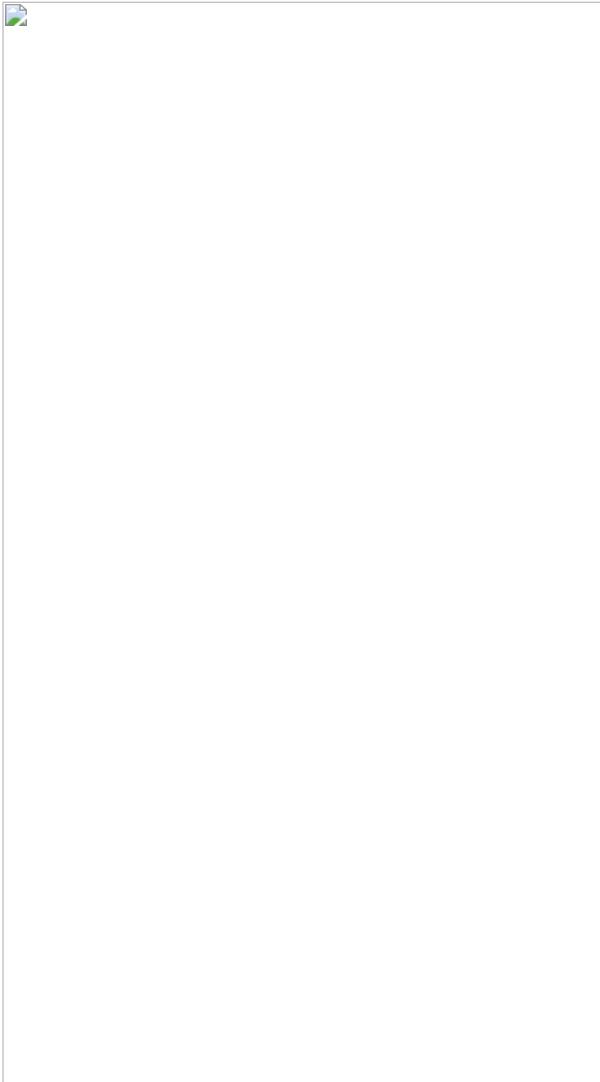






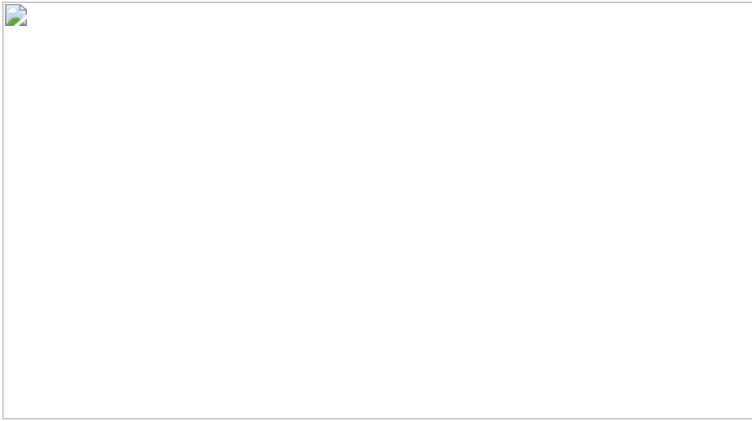




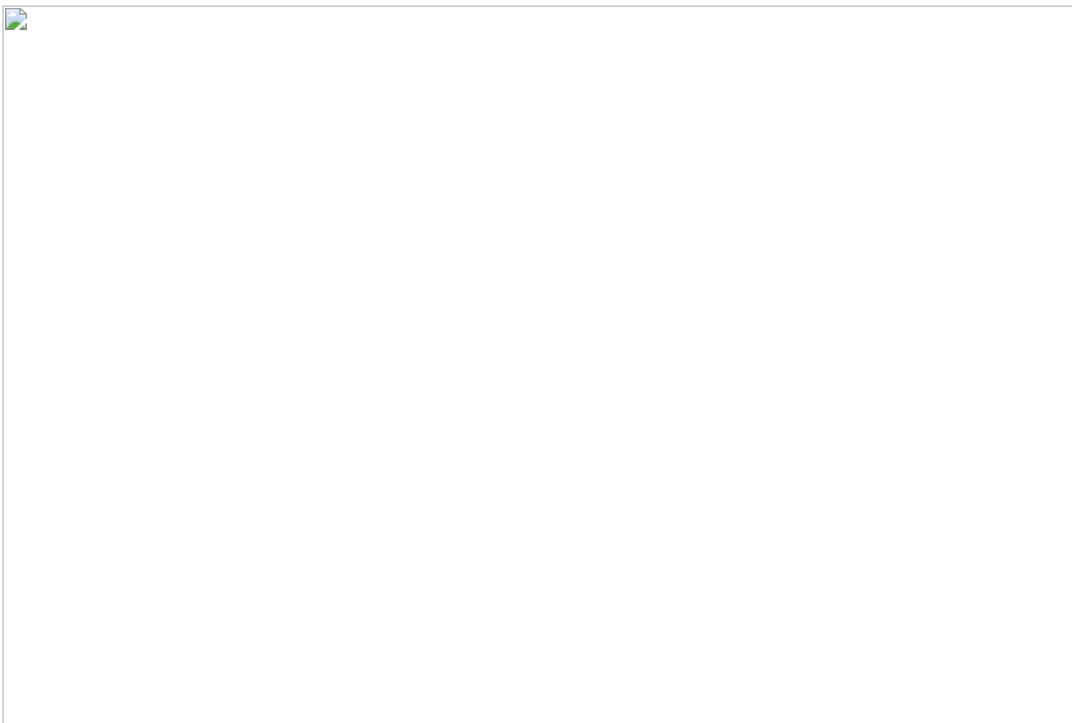


## **Report bryan roberts**





## **Enlargement of starboard visor hinge**

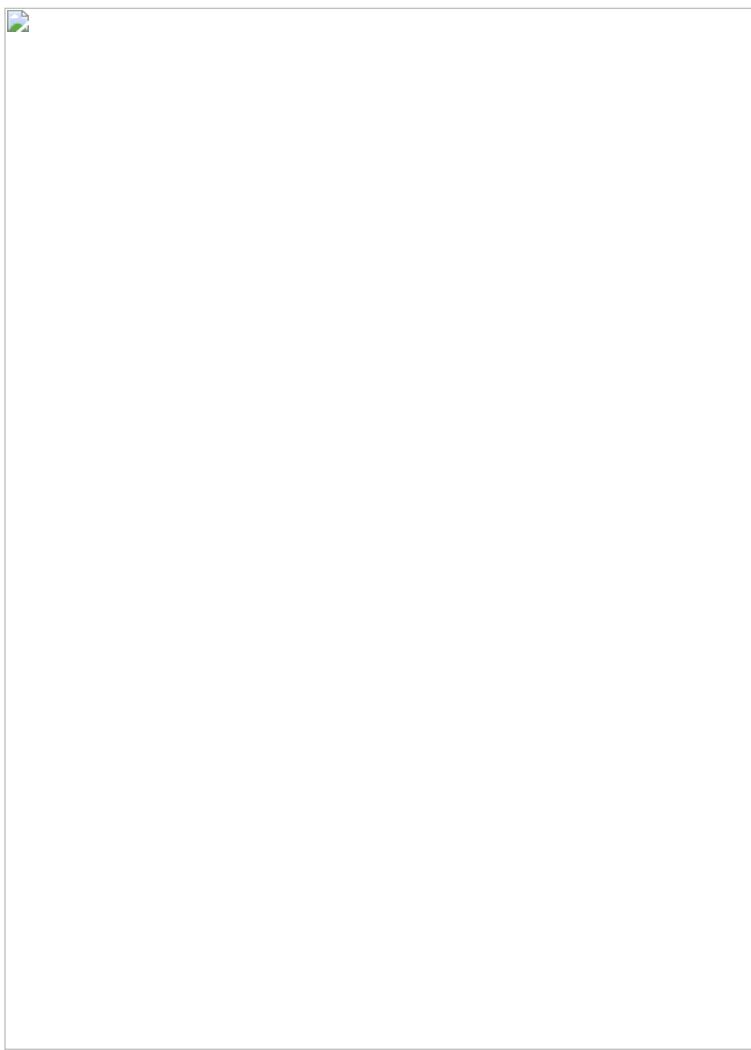


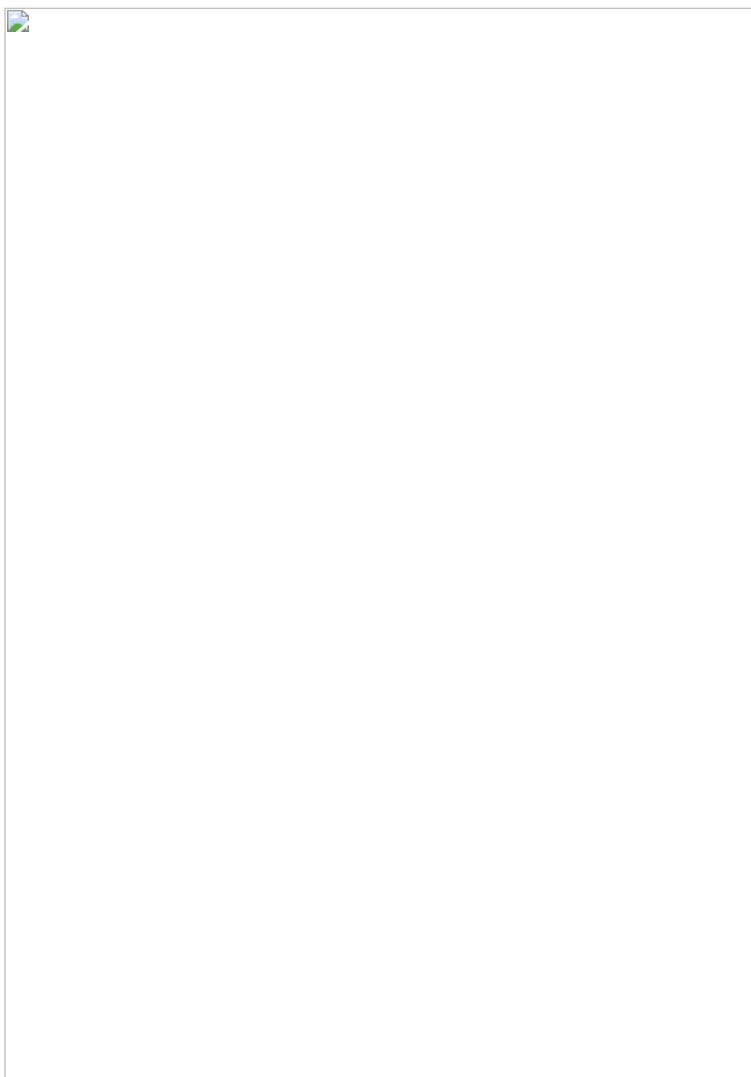
## **Time schedule of crew change**



## **Statement of peeter tuur**









## **Summary of items**



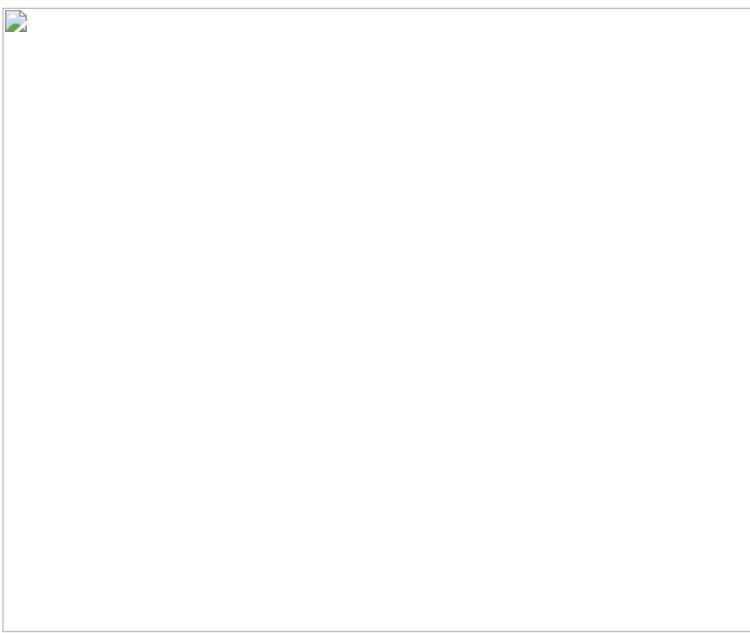
## **Transcript of sten christer forsberg interview**







**Fax andi meister to hans rosengren**











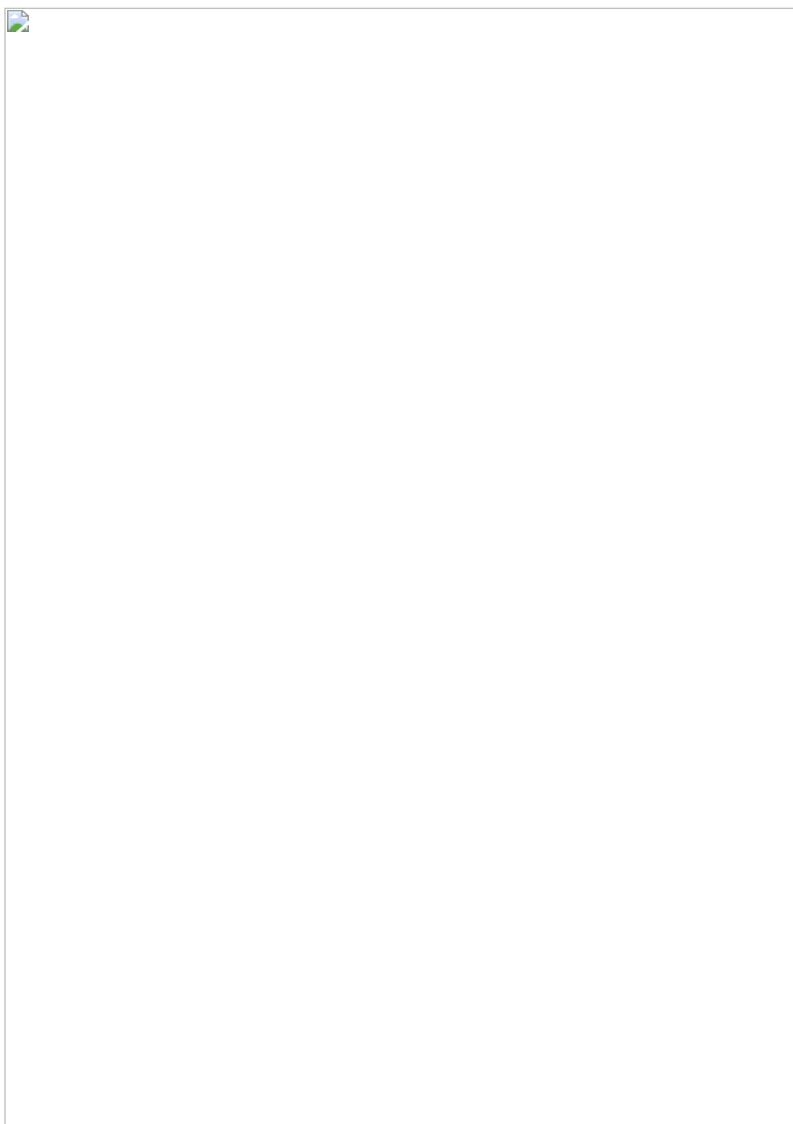




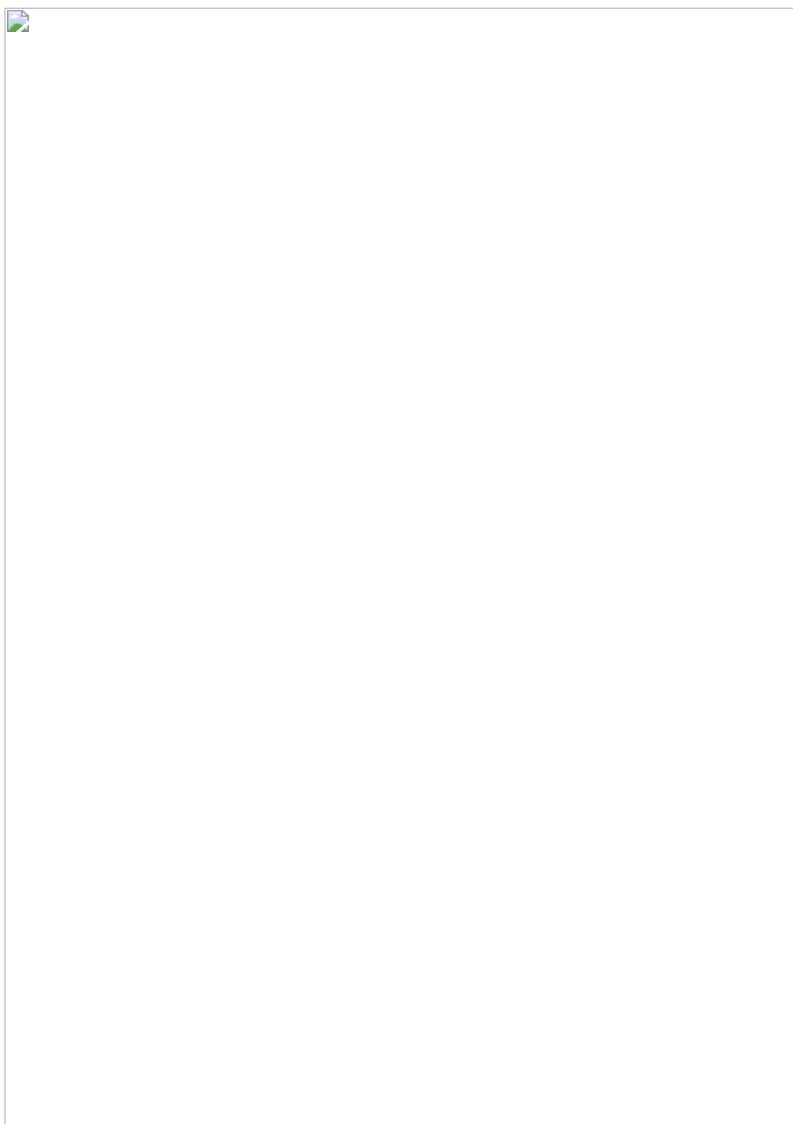


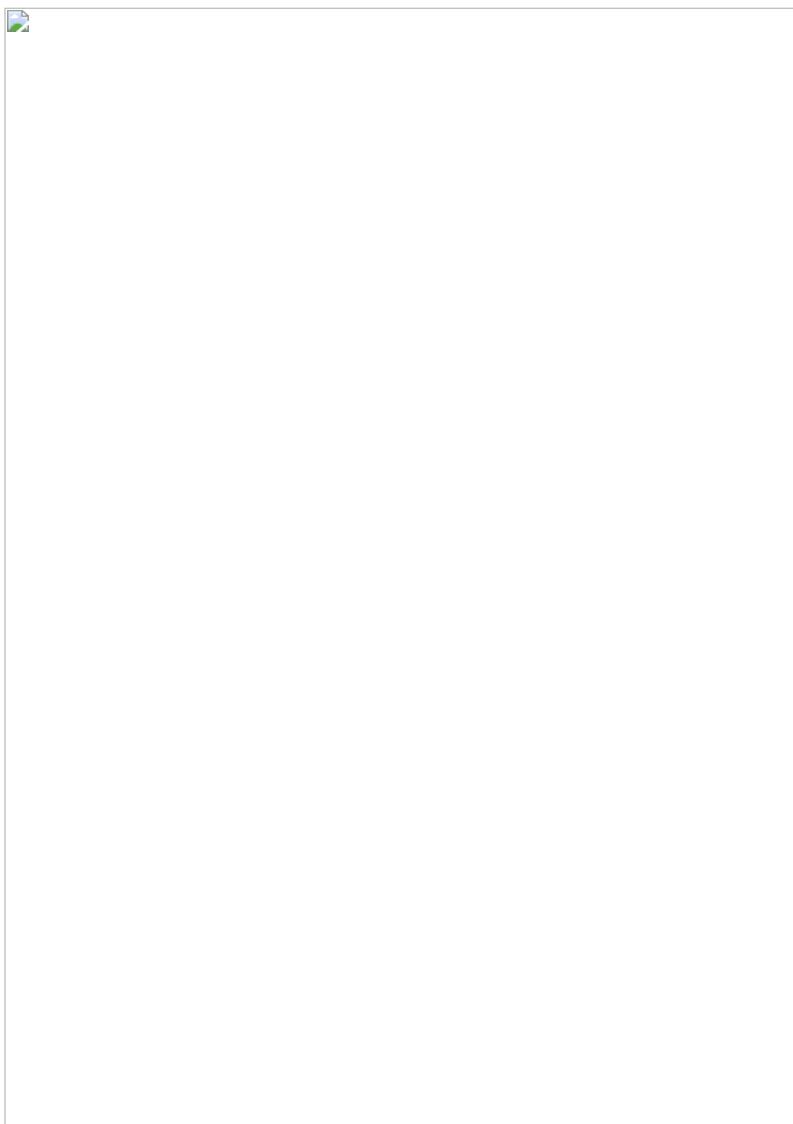




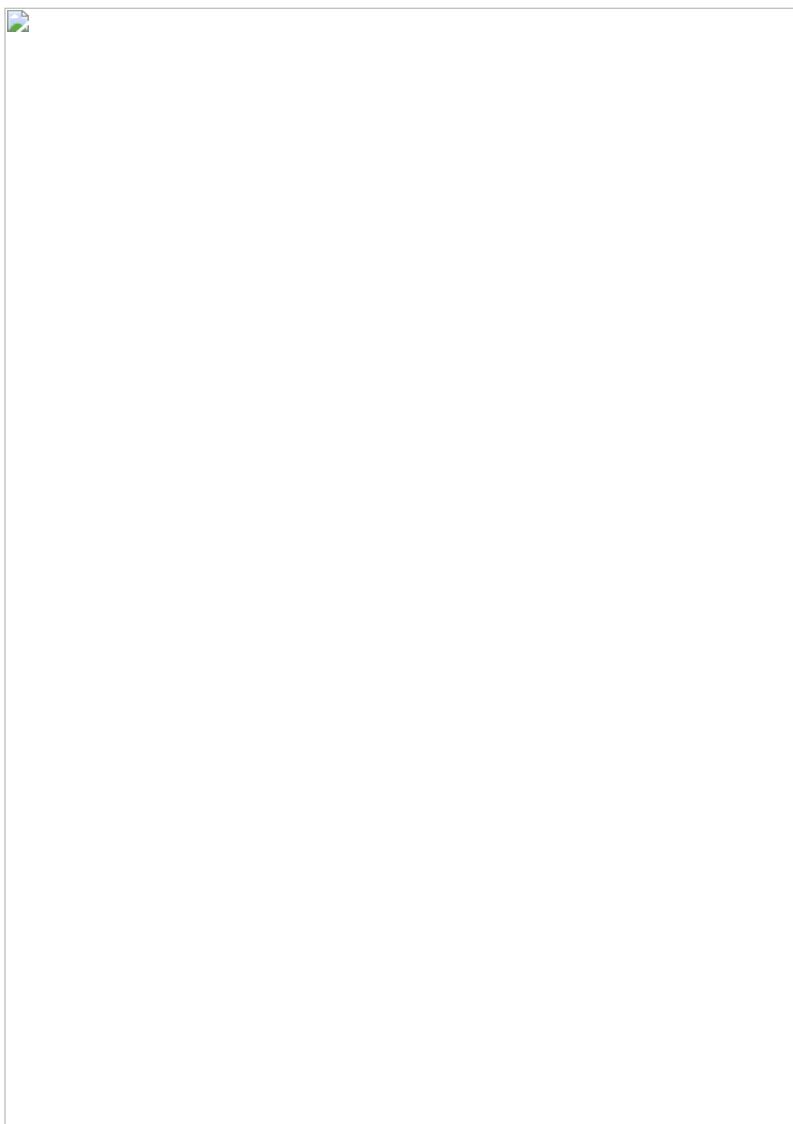










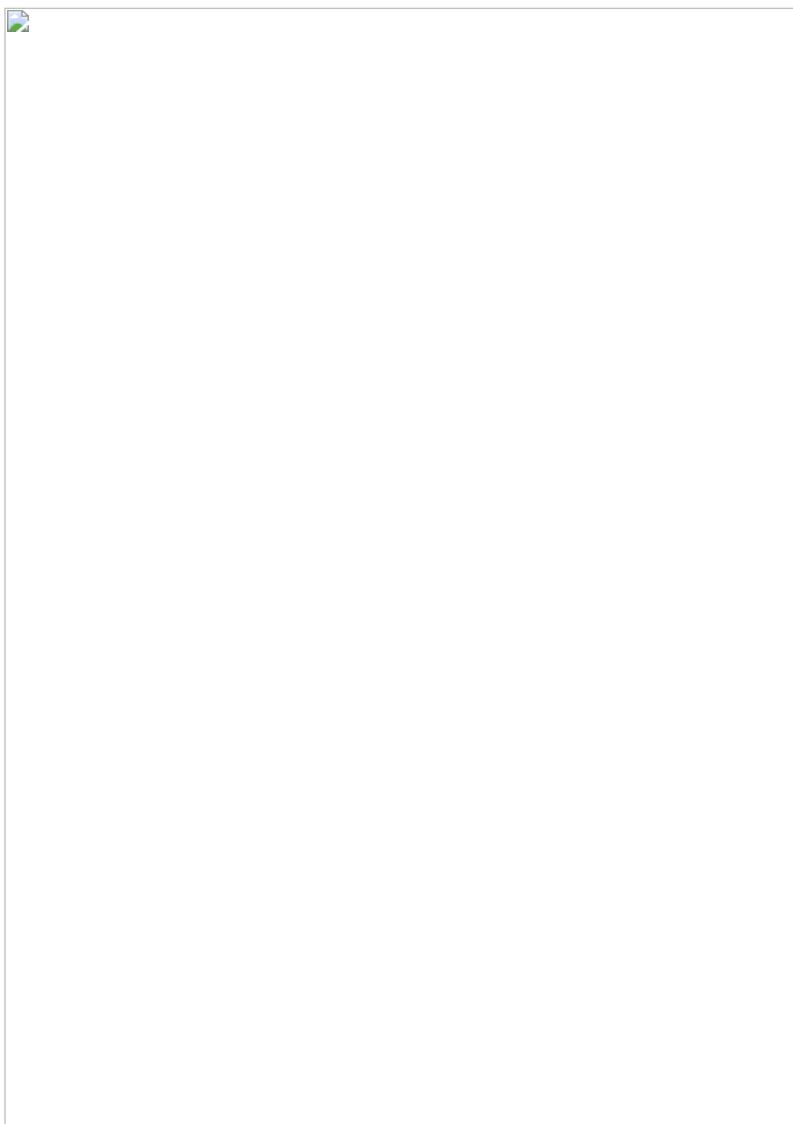








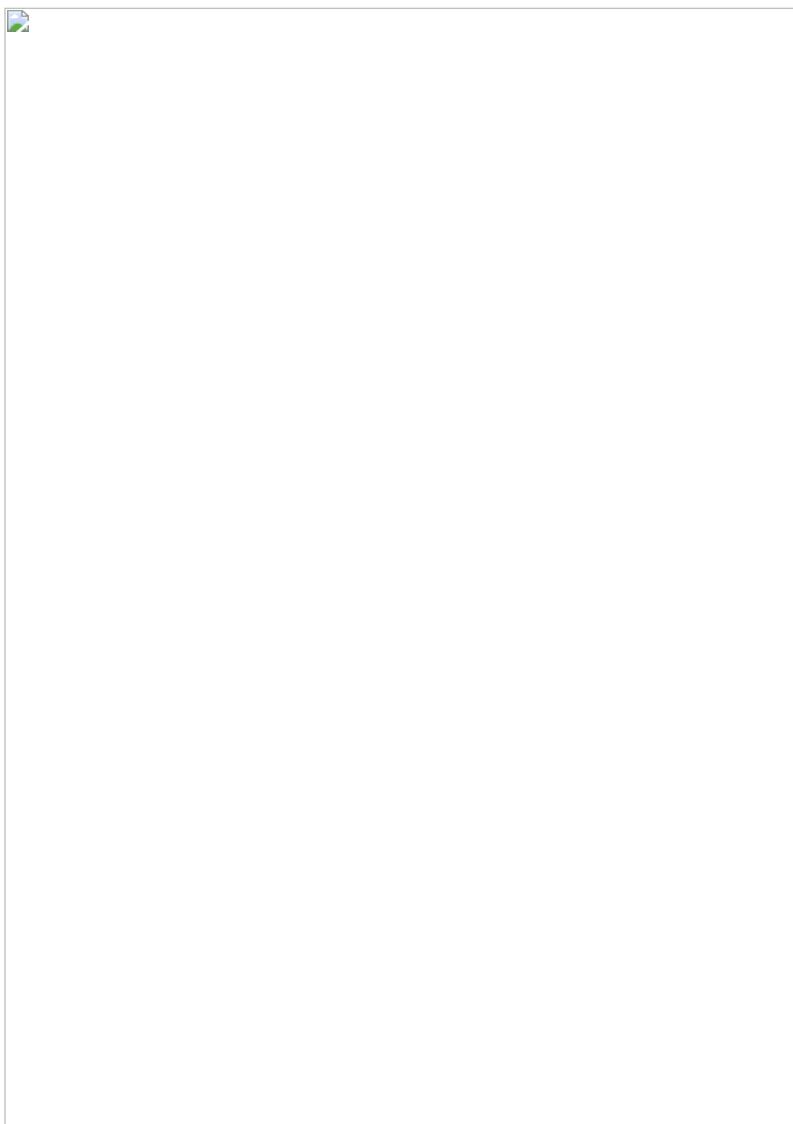










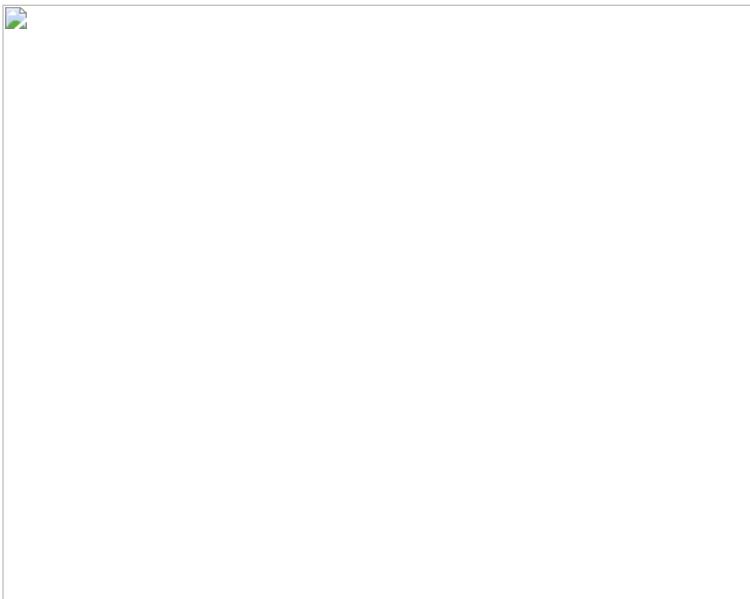


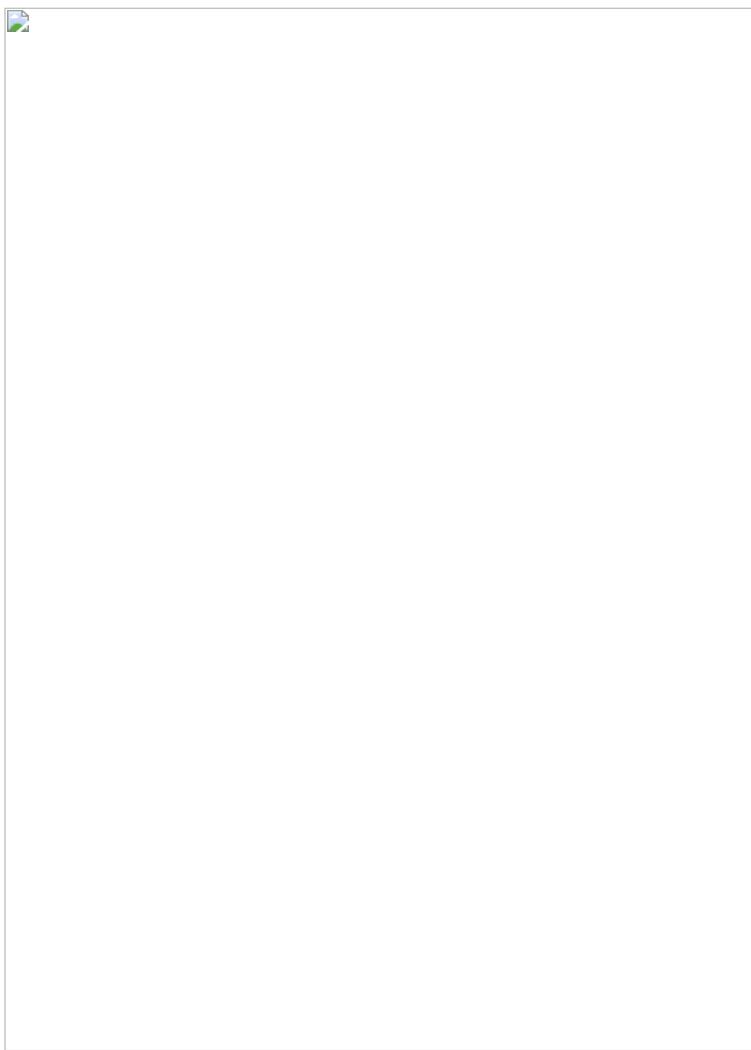


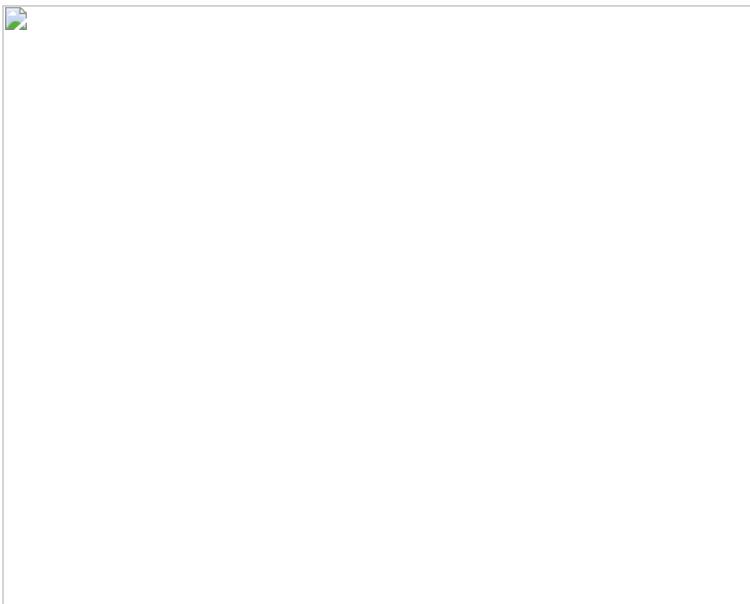


## **Statement electrician A rohumaa**





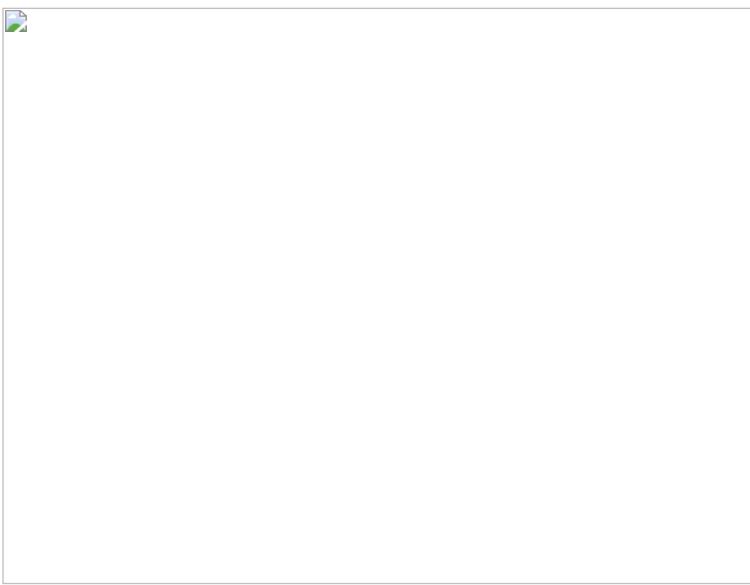




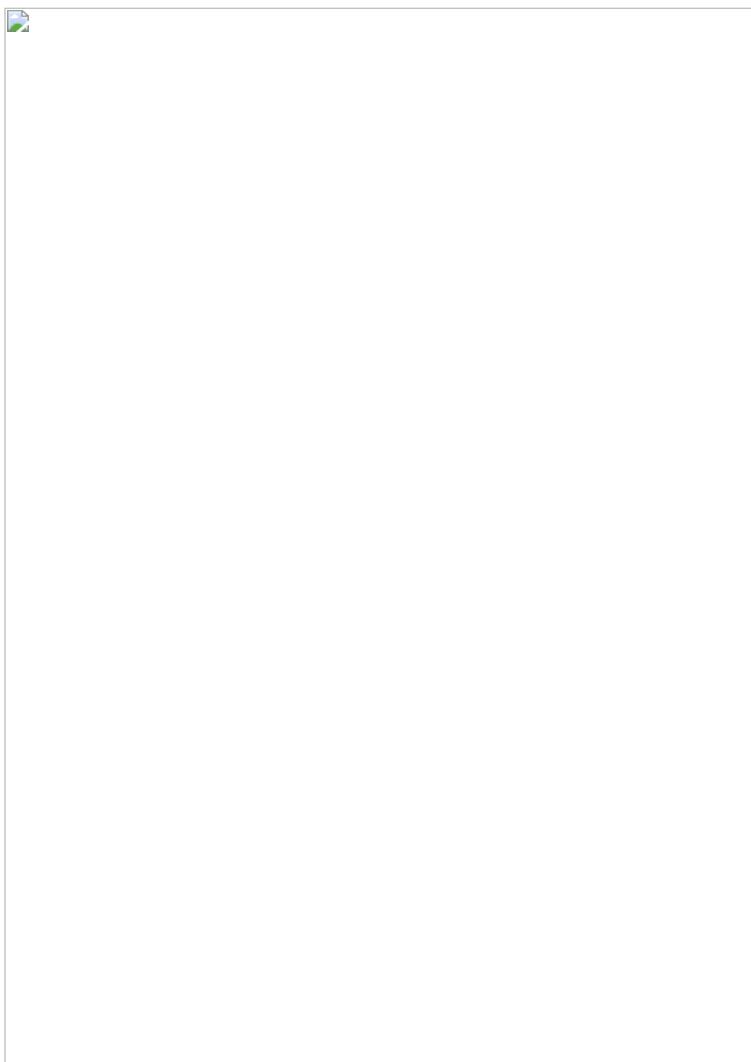
## **Statement motorman E siegel**

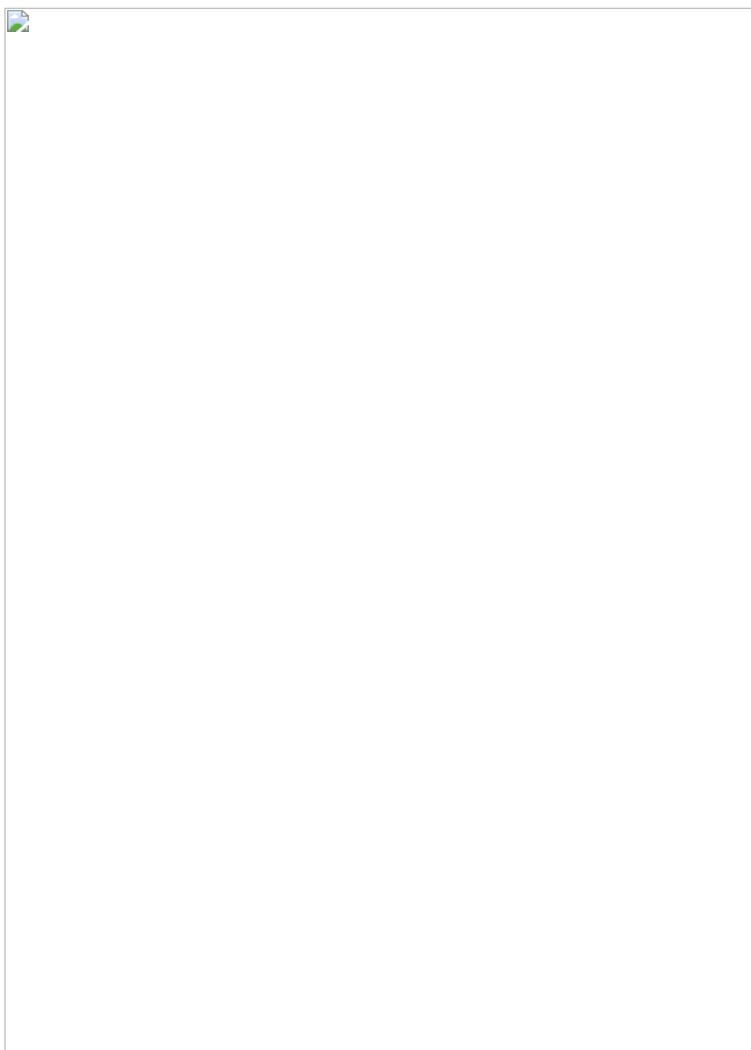






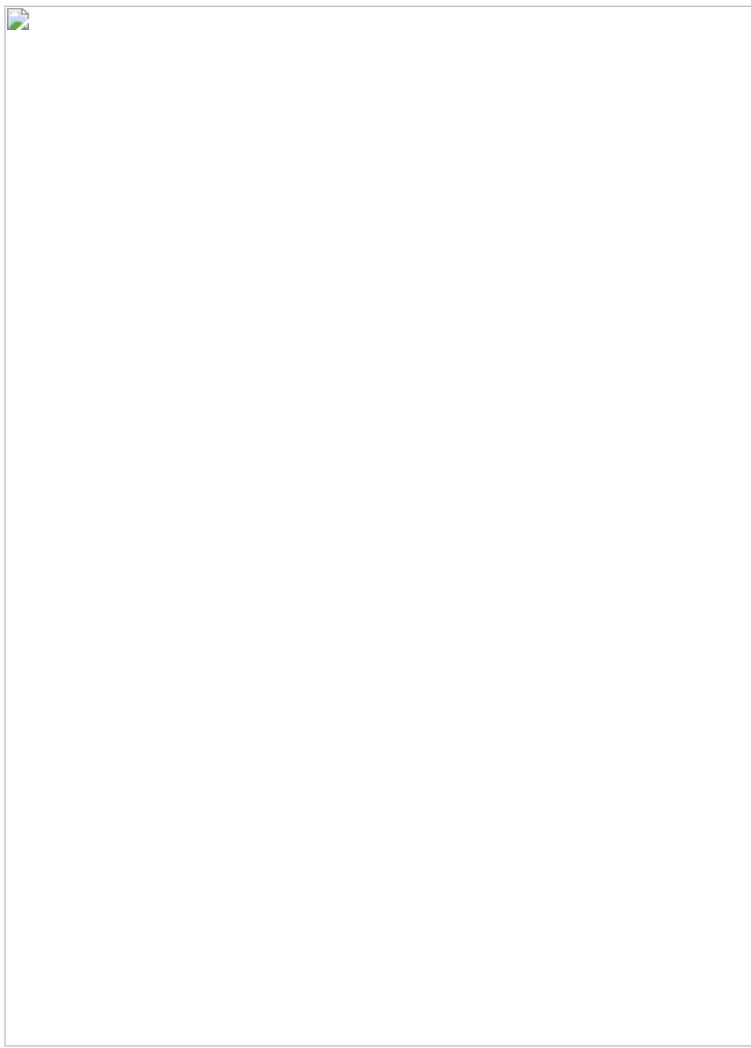
## **Statement motorman I Ziljajev**



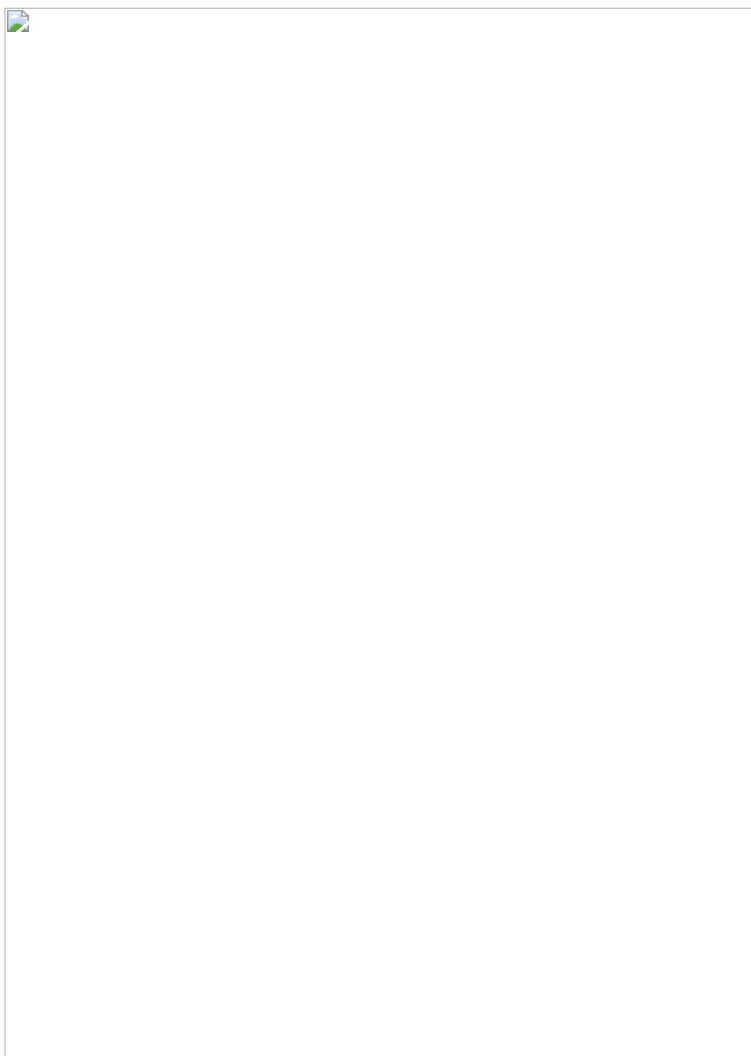






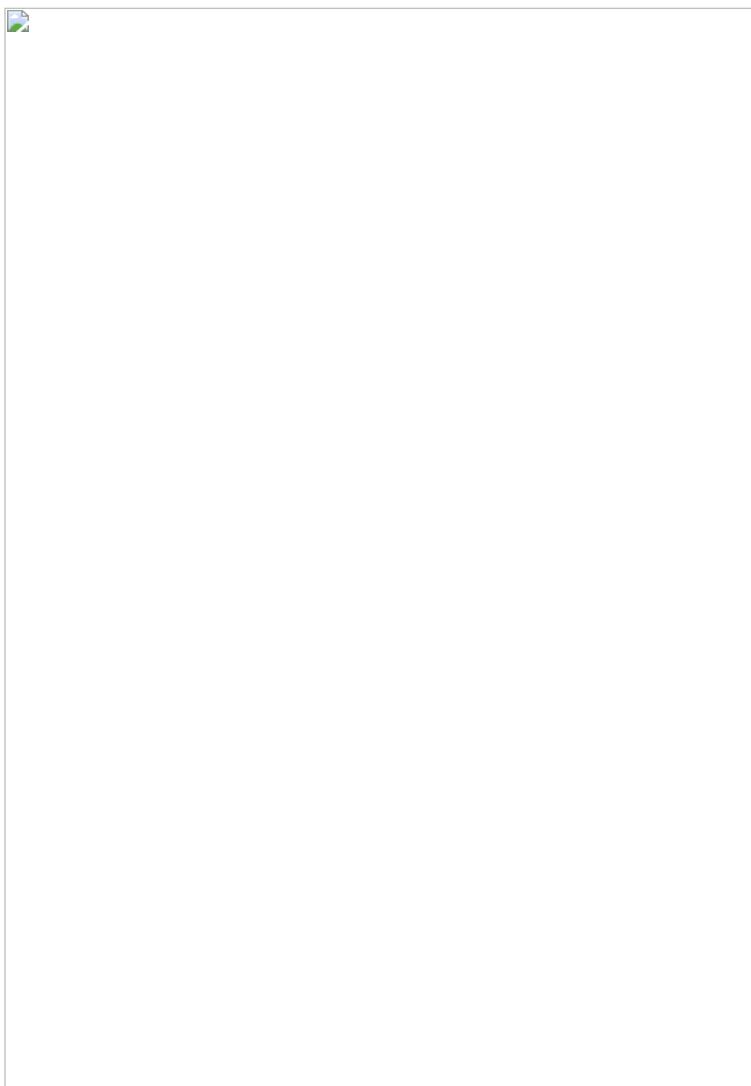


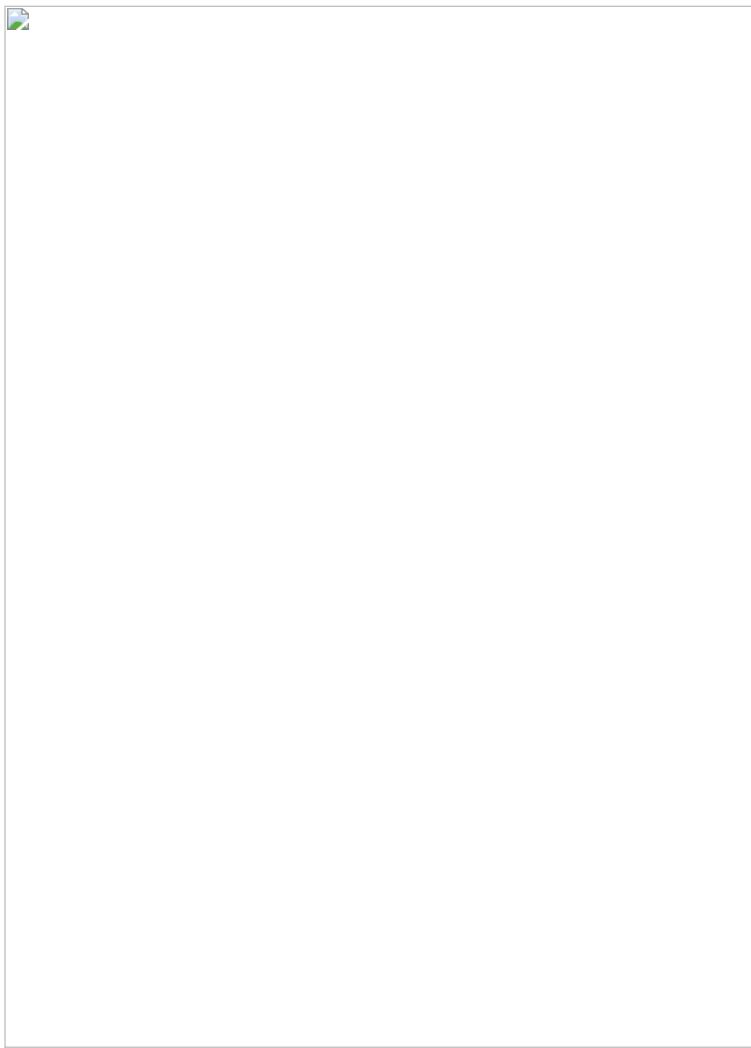








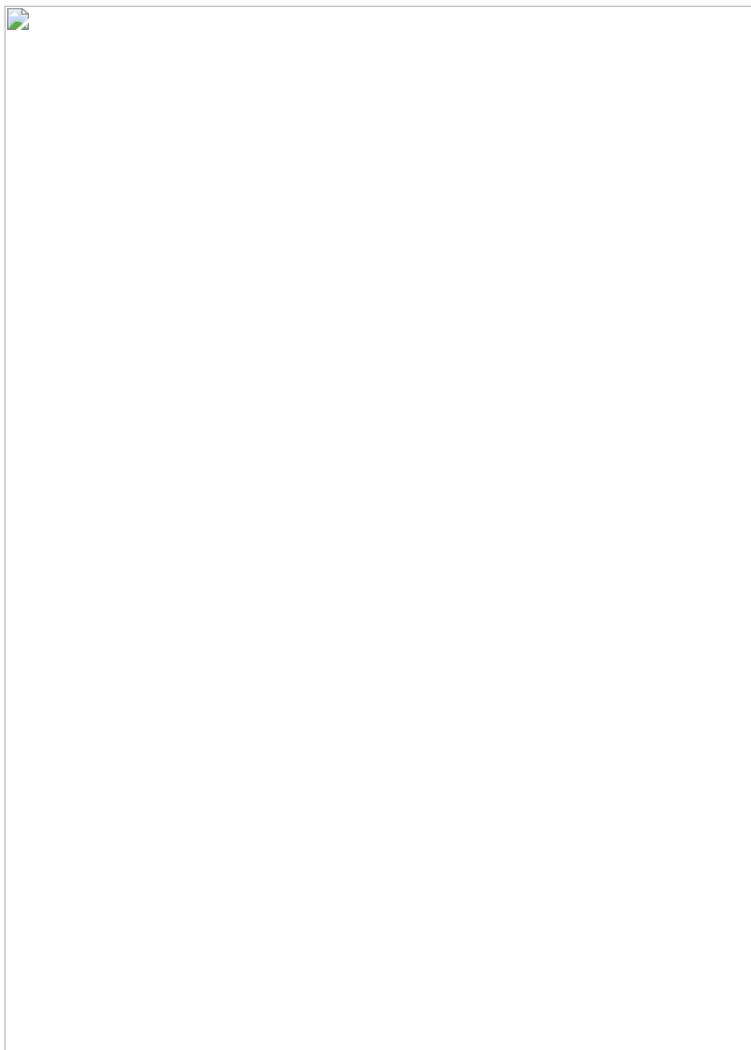






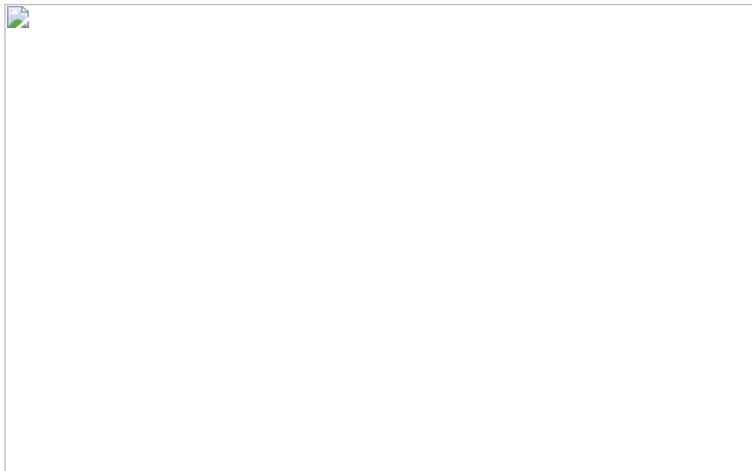
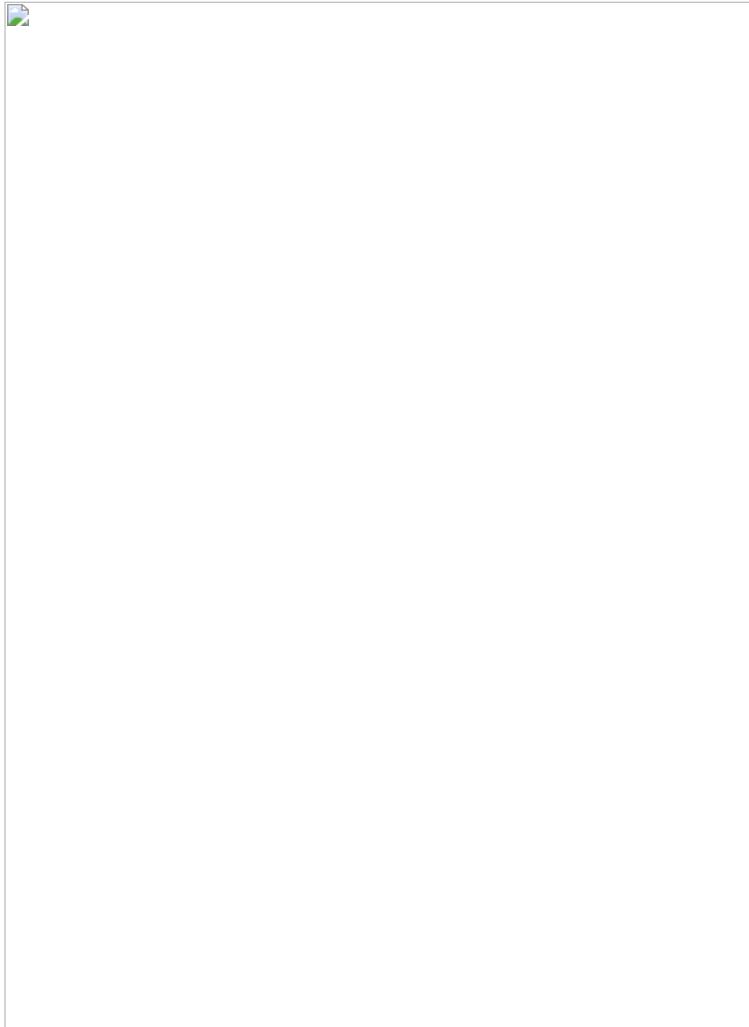




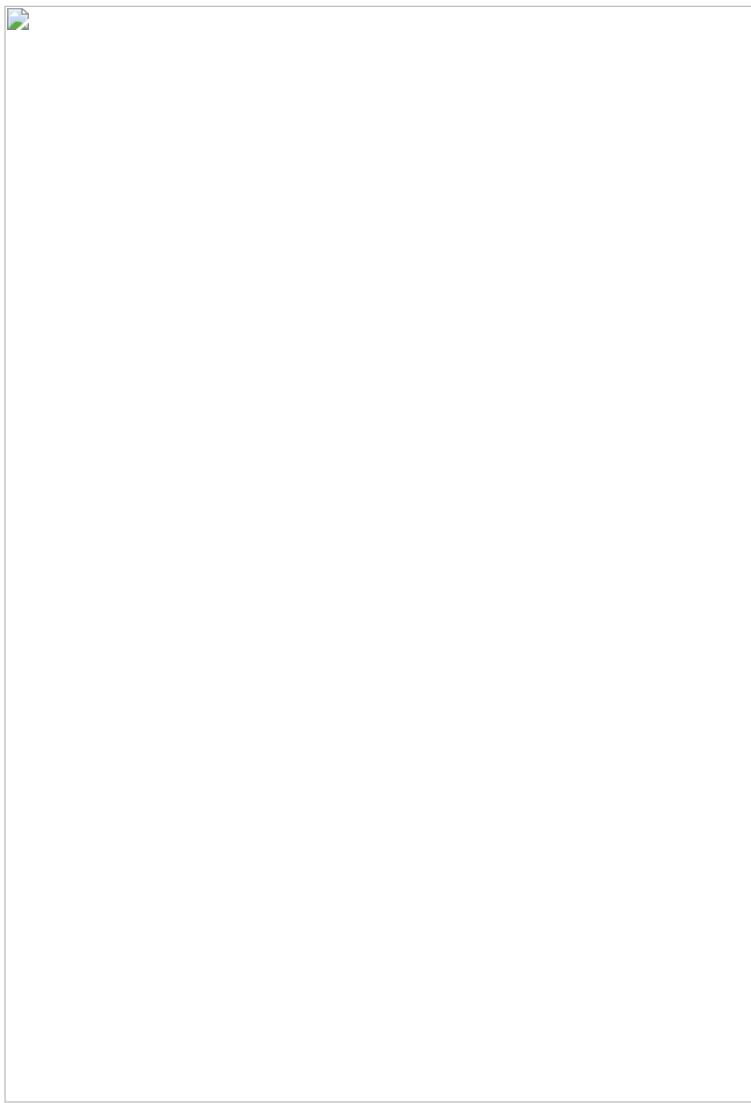


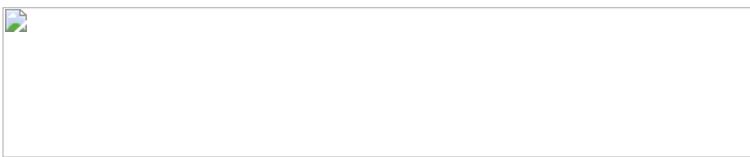


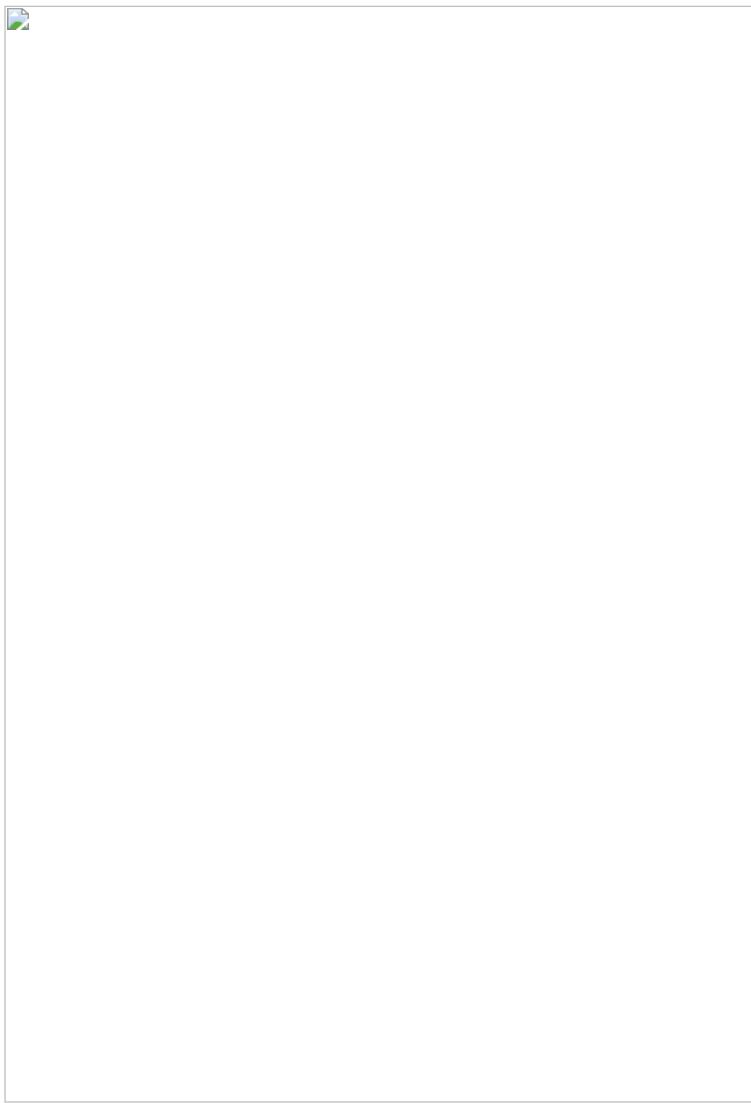




## **Calculations of ship consulting OY TURKU**







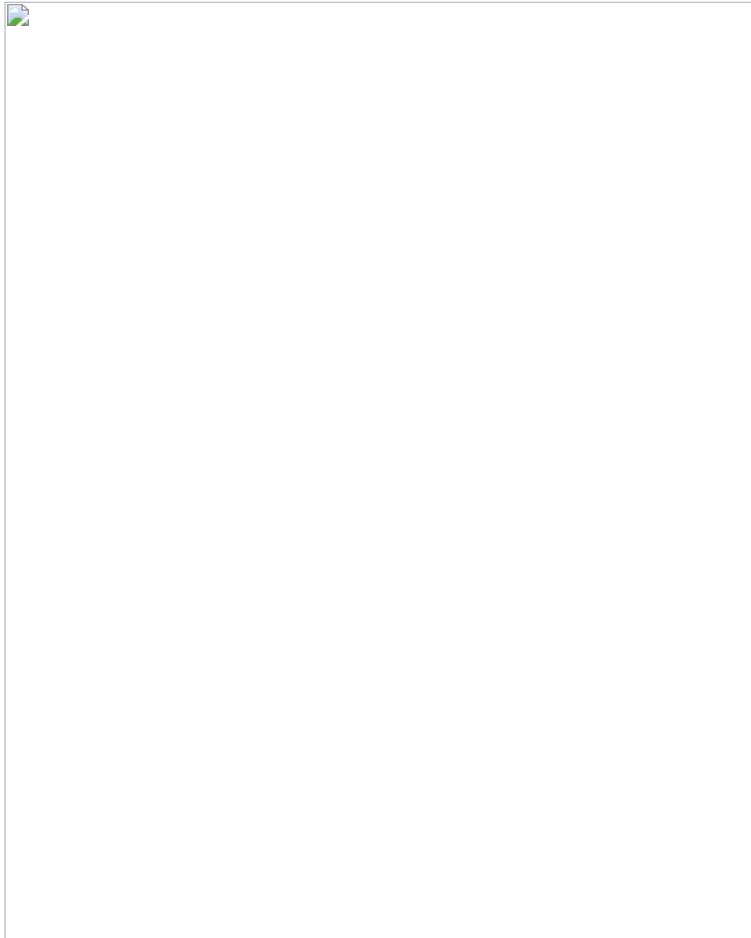




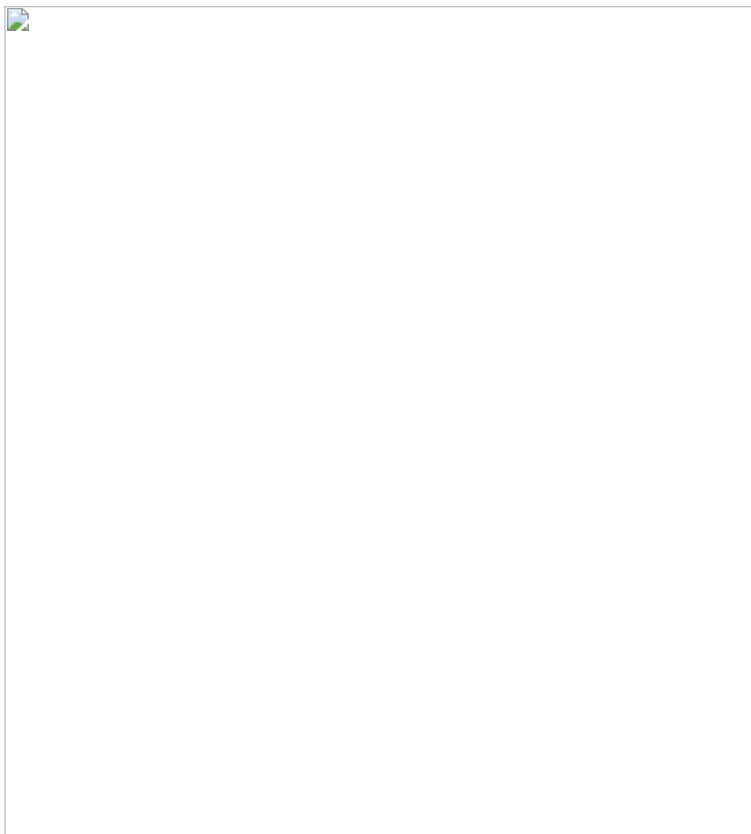


## **Statement andres vihmar**

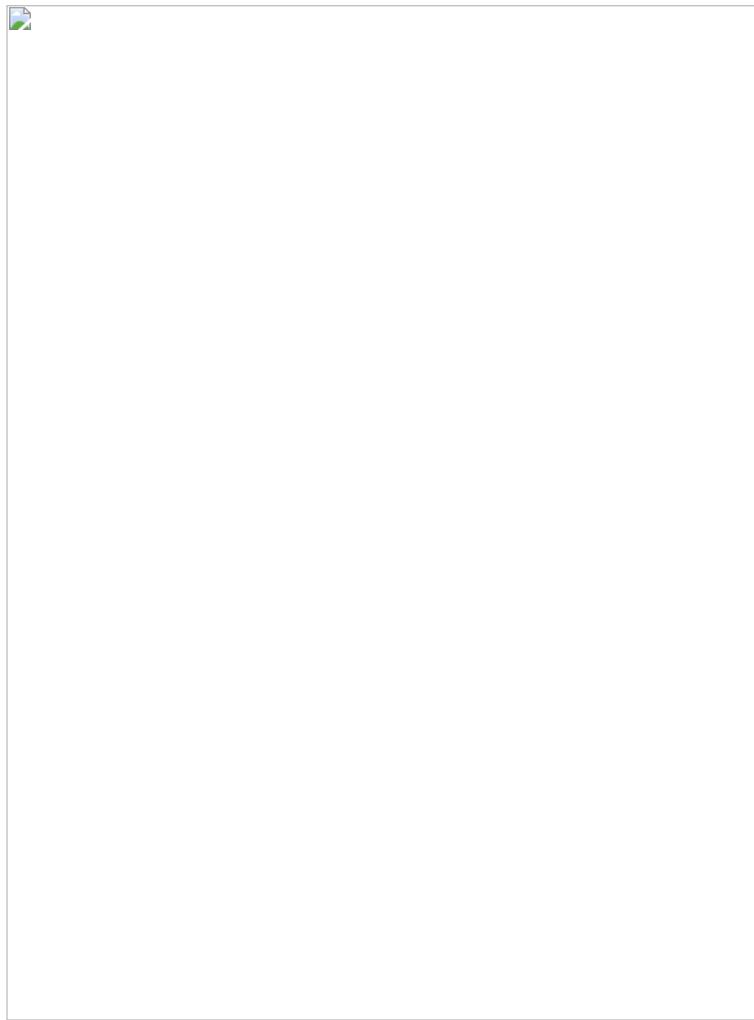




## **Statement vasili Krjutjkov**

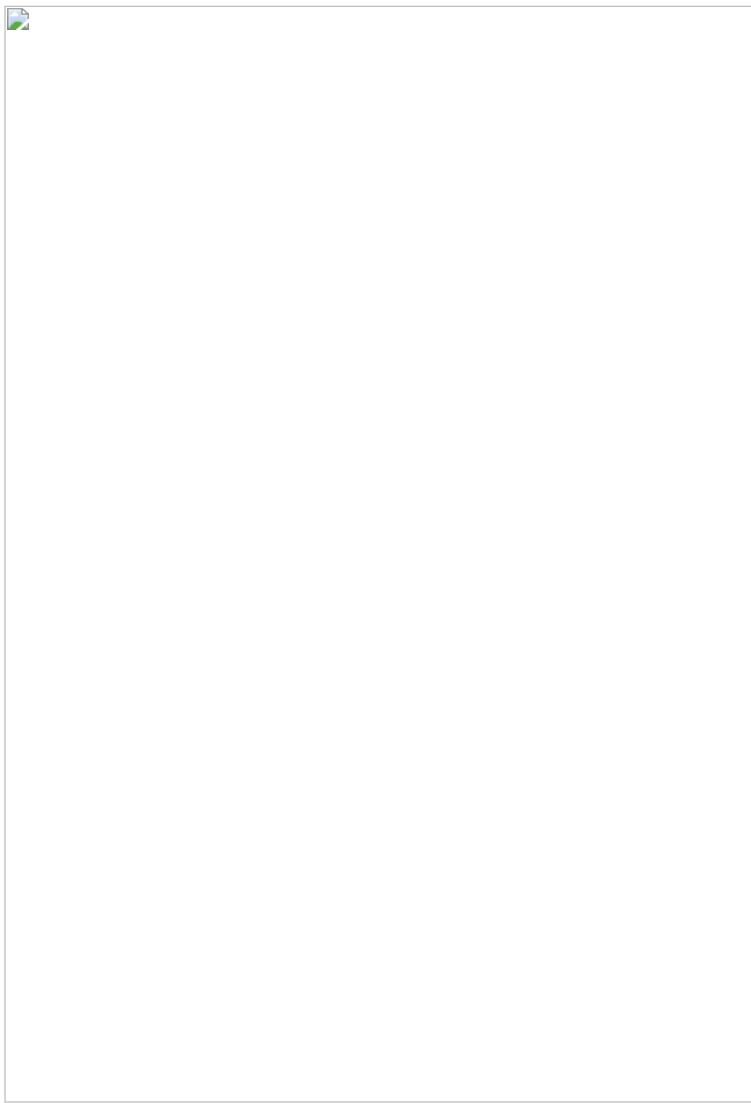


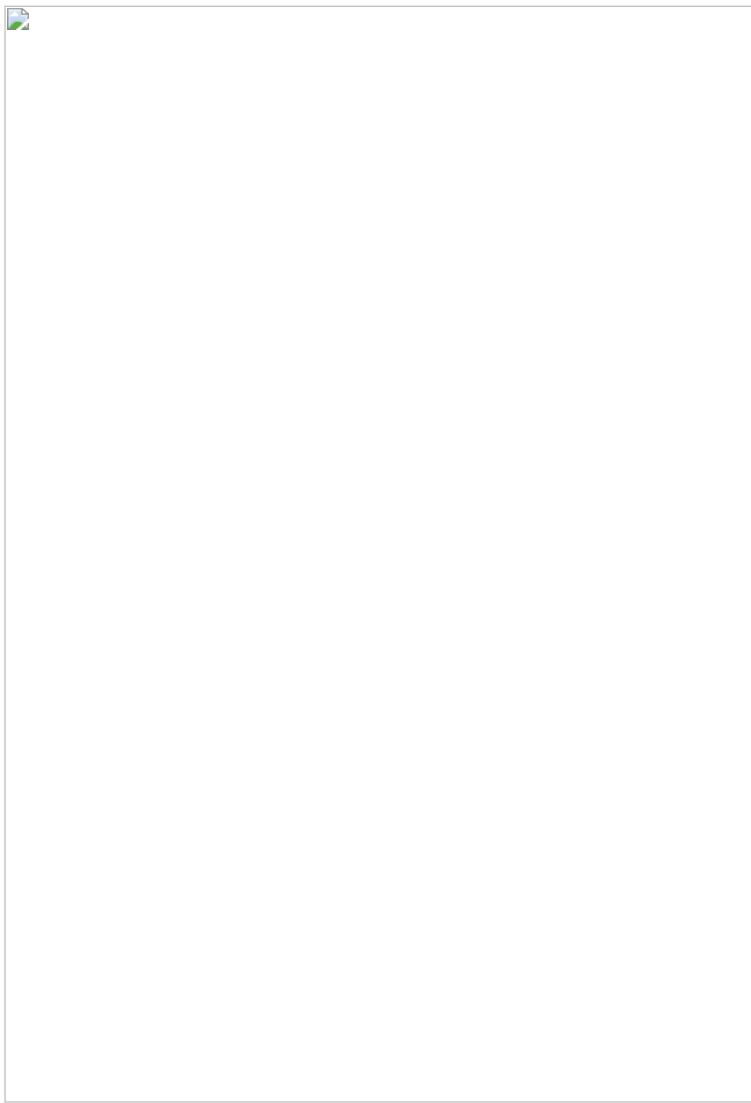
## Statement vasili Krjutjkov

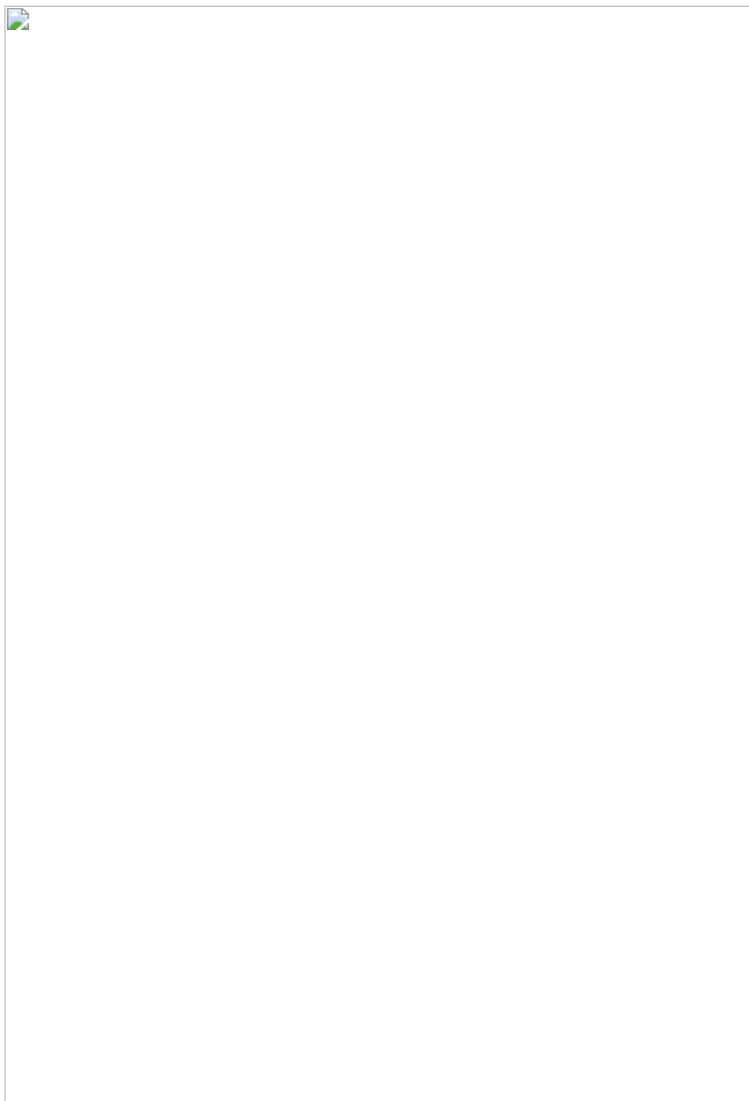




## **Report on the job training by Ake sjoblom**













## **Report of inspection in accordance with memorandum**

