NATIONAL TRANSPORTATION SAFETY BOARD

Office of Aviation Safety
Washington, D.C. 20594

October 26, 2016

Attachment 1 – Flight Crew Interview Summaries

OPERATIONAL FACTORS

DCA16IA200

Interview: Matthew Moeller – Delta Airlines (DAL) First Officer
Date: July 13, 2016
Location: via telephone
Time: 1001 EDT

Via Telephone: Mr. Shawn Etcher – National Transportation Safety Board, Mr. David Gerlach - Federal Aviation Administration, AVP-100, Mr. Rai Jennings – Delta Airlines (DAL), Mr. Michael Schilz – Airline Pilots Association (ALPA)

First Officer Moeller was represented by Mr. Gordon Rose – Labor Relations Counsel - ALPA

During the interview, First Officer (FO) Moeller stated the following information:

His name is Matthew Karl Moeller and he was 51 years old at the time of the incident. His date of hire with DAL was May of 2000 and he was based out of the Salt Lake City International Airport (SLC), Salt Lake City, Utah. His total time was about 7,600 hours of which approximately 4,000 flight hours were in the military, he was a flight engineer for about 1,300 flight hours, and had about 2,300 flight hours in the Airbus A320 (incident aircraft). Prior to DAL he had been a military pilot flying F-15E, was a trainer pilot in the military, flew the F-117, and for the last 3 years in the military he flew the U2 airplanes. About 18 months after being hired by DAL he was deployed in the military service for about 11 years, and has been back at DAL for about 3 ½ years. He has not been a captain at DAL.

He had an airline transport pilot certificate with a type rating in the Airbus A-320, and a glider pilot with aero tow only limitation.

He held a 1st class medical, with a limitation to wear corrective lenses; which he was wearing at the time of the incident.

He was the pilot monitoring at the time of the incident.

His most recent training event was the maneuver evaluations training which was conducted in February of 2016. He had never failed a checkride.

He had never been involved in an aircraft accident or incident.

His chain of command at DAL was the SLC Chief Pilot and then the Regional Chief Pilot. He categorized the staffing as adequate in that there are enough pilots to fill all of the lines and the quality of the staffing he would consider professional. He had never been junior manned for extra flight assignments, as pilots utilize "green sheets." Green sheets were voluntary overtime; pilots could request to pick up flights that had not been assigned.

If he noticed a potential problem DAL had forms that could be completed from the flight ops page of their intranet. Some of the forms were ASAP, hotel, and general safety forms. Once he would submit the form he would receive an email with a confirmation that it was received and normally

would receive some sort of follow-up over the concern. DAL utilizes FOQA but he is not certain about SMS.

If he had to call in sick for a flight he would contact crew scheduling and let them know. From what he knew scheduling would then find a reserve to assign to his flights. There was almost never any follow-up if he called in sick. The policy that he utilized is when he would go to the doctor he would get a doctor's note and provide it without being asked.

DAL allows for avoidance bids. He has exercised that option; however, he had never used that option for the incident captain.

He has never heard of DAL pressuring pilots to complete a flight. If he felt that he could not complete a flight the policy was to notify dispatch and then a call to the Chief Pilot. He has never had to do that.

He had flown with the incident captain on a two-day rotation that immediately preceded the incident rotation. He stated that it was a very open communication cockpit and that this was the first time to Rapid City Regional Airport (RAP) and he had never flown into Ellsworth Air Force Base while in the military. There was a line of weather moving into MSP but they were able to depart without any problems. The flight was to be about an hour and fifteen minutes in duration. As they approached RAP the captain briefed both runways as the winds were fairly light out of the west. The captain briefed the ILS 32 first and that was the preferred approach but he also thoroughly briefed the RNAV to runway 14. During the descent they noticed they had a headwind but was not of concern. They discussed that Ellsworth Air Force Base was in close proximity and reviewed the green sheets provided by the company. When they checked on with RAP approach control they were told to expect the approach for runway 14. They completed all the checklists and were assigned vectors from the controller. The captain had set a radial on the FMS to help capture the course as the turn they received required about 120 degrees of heading change. As they were given a vector for the final approach fix to intercept they determined that they were too high to make the airport and were given another vector to help the descent. As they made the turn they were clear for the approach. The autopilot was engaged during the vectoring and descent and subsequently captured the final approach course. As they rolled out the runway they anticipated being still a little above the glidepath and when the saw the runway that was the view they observed. He looked at the "God's eye view" on the navigation display and noted that they were straight on the correct navigation line to the runway/ He made a note that they were a "little too high" to capture the navigation guidance and the captain disconnected the autopilot and had him clear the flight director. The aircraft was configured about 1,500 feet above ground level (agl).

He further recalled that earlier, after they had initially checked on with approach control, the controller did notify them that the airbase was about 6 miles north of the field.

Continuing with the approach they appeared to be in line with the runway. He was completely focused on the visual approach for runway 14 and had requested a frequency change to the RAP tower controller. When he contacted RAP tower the tower controller issued them their clearance to land on runway 14. The PAPI's were not visible to them but he could not recall if there was a NOTAM for them being out of service or if they were not turned on. When the airplane was about

20 feet agl, in the flare, he noted the runway number 13 painted on the runway. During roll out, after touchdown, he notified the captain that they were at the wrong airport. He then noticed the RAP airport symbol on the top of his display about 6 miles away. After clearing the runway, they notified the RAP tower controller that they were on the ground and had landed at the wrong airport. The tower controller informed them that they noticed them go off of radar. They requested the Ellsworth tower frequency and the controller immediately provided it to them.

While on approach to land, the runway width did not look like anything abnormal and that normally they brief runway lengths only.

He further reported that he noticed the contrast on the weather radar was too high and had he reduced the contrast a glance at the displays may have helped him notice the wrong runway. During the approach he felt that the airplane was "high on energy" due to being above the glidepath. He further stated that if they would have cross checked their navigation displays they would have noticed the airport; however, they both "got fixated."

DAL provides "green pages" for all of the airports served. Those page consist of company specific details and some may include historical risks, as in this case in that the runway was in close proximity to the airbase. The green pages for RAP talked about the proximity but both the captain and himself thought they would be doing an approach to the north. He could have looked at the airport page for the airbase to see the differences in the airports, such as the location of the hangars in relation to the runway, etc.; however, neither of them looked at the Ellsworth airport page. The green pages maybe as small as a paragraph or two or could be several pages. He could not recall the green page for RAP but thought it was about 2 pages in length.

When discussing the landing at RAP during the descent neither of them had any concern with landing on the runway at RAP.

During the briefing they discussed the weather, NOTAMs, that it was going to be a normal descent. While briefing for the ILS to 32 they had pulled up the approach plate and discussed all the details on the approach including runway lights and markings. Additionally, the captain briefed that the airbase was in close proximity to RAP. The captain also briefed the RNAV 14 in detail. They discuss the speeds during the descent check; however, he could not recall the speeds that they had discussed. There were no MEL or CDL items for the airplane other than minor information. There were no penalties to the speed or weight for their landing at RAP.

He was not certain of the official time for sunset but thought they were about 5 minutes into civil twilight. He did not feel that the sun was a factor for them on the approach. During the descent the sun was in their faces but once they were in the terminal area it was not a factor and there were no visibility issues.

The captain utilized the autopilot until the airplane turned to the final leg of the approach. Once the airplane was established on inbound course the captain disengaged the autopilot.

The rotation was day one of a three-day rotation. They began their duty day about 1045 Mountain Daylight Time (MDT) and their day consisted for three flight segments, or legs. Their first leg was

from SLC to Sacramento [Sacramento Mather (MHR), Sacramento, California], then MHR to MSP, and then the incident flight of MSP to RAP. RAP was their planned overnight and they were scheduled to have about a 25-hour layover in RAP, with a scheduled departure on July 9th from RAP. While in MSP they had a plan change.

There were not abnormal or emergency checklists that were performed for the flight. The captain operated within company policy and he considered him very thorough, meticulous, and provided a good cockpit report.

He started training in the Airbus A-320 in March of 2013. He felt that the training was compressed to complete it within a month. However, all of the instructors he had were very good. He felt that the training was a challenge but nothing abnormal, as he thought most pilots felt. DAL did a great hob forwarding topics of events and while reading some of the instances were really beneficial. He could not recall if DAL provided information on air carrier events that landed at the wrong airport, but he thought that this event they would use to educate the pilots at the company.

When asked if the tower or the approach controller provided or gave any indication that they had lined up for the wrong airport he stated neither did. When they called the RAP tower after landing all the controller said was that they had dropped off the radar. He felt "it was our fault" and that air traffic control could have saved the day had they informed them that it appeared they had lined up for the wrong airport.

He felt that there was more daylight than dark when it come to the amount of light from the sun that was available and that one thing he felt was an important fact is that the geometry of both runways were very similar.

He further clarified that the captain had briefed the ILS 32 and RNAV 14 since the winds were out of the west were fairly light. They both made note of the airbase and that the only remark from the approach controller was that Ellsworth was about 6 miles northeast. He estimated that they intercepted the final approach about 4 to 5 miles outside of ZUDIM (final approach fix for RNAV 14). He stated that navigational cross checking did not happen on this flight and as the pilot monitoring he felt he spent too much time outside than inside monitoring after the captain called the visual to the runway. Following the incident he went into Google Earth noticed that the extended centerline for runway went over the top of the runway at Ellsworth.

When asked if the flight crew at DAL typically brief both runways when briefing approach, he stated that if there is a scenario, like this one, that either runway may be utilized they will brief both runways.

When asked to describe his workload during the descent and/or approach he stated that it was a high workload environment, especially after they descended below about 8,000 feet [above mean sea level]. He would not have called this approach a casual approach in that the workload was higher than normal.

He was further asked to clarify when they were cleared for the visual approach. He stated that following the second vector while still in a left hand turn they were cleared for the approach; he

could not recall if it was clearance for an RNAV approach or a visual approach. While they were in the left hand turn the captain stated that he had the runway insight, at that point the banking of the airplane precluded him from visually acquiring the runway. They were informed to expect runway 14 when they were descending and were still "in the high teens." He could not recall if there is verbal requirement for the pilot monitoring to also report the runway insight but he did know there was a requirement for that if on an instrument approach. He was certain he concurred with the captain but was not sure.

The day prior to the incident, both he and the captain had completed a two-day rotation together. He reported that they dutied off about 2030 MDT at their base in SLC. After he dutied off he had about a 35-minute drive to his residence and the captain went to a hotel to spend the night. The morning of the incident he awoke about 0600 and drove his wife to the airport as she was departing for a personal trip out of the country.

The preceding two-day rotation included two legs on from SLC to Cancun, Mexico on July 5th with an almost 24-hour layover and then a return trip to SLC. On the first day of the rotation he dutied on about 0930 in SLC and the flight arrived 1500 local time. The flights were both about 4 hours in duration. The 2nd day of 2-day rotation included duty on about 1445 local time with an arrival in SLC about 2000. He felt sleep was adequate and he did not feel like he suffered from acute fatigue. Normally on his days off he goes to bed about 2300 MDT and wakes up between 6 ½ and 7 hours later.

On the day of the incident he grabbed some food in MHR in order to eat on the long flight to MSP, which he felt worked well in-order for him to grab dinner when he arrived at RAP.

His most recent day off was July 4th and he had worked a rotation prior to that but could not recall the details of that rotation.

He felt his overall health was good and he exercised between 3 and 4 times per week. He has two children ages 14 and 18 which other than normal raising children stress and the trip his wife was taking out of the country he had no other stress issues. He is a runner and the only health issues he has had within the preceding 12 months was with his knee but it was not a real health issue just normal running pain.

He consumes a drink or two in the evening when he is on days off and may consume up to 8 drinks a week at the most. He does not use tobacco. He takes an over the counter medication, Allegra, for seasonal allergies as well as takes Lipitor in the morning due to a glyceride issue. He does not take naps in the afternoon.

He recalled being cleared to land about 1,500 feet agl.

He further clarified that the range on the navigation display was on 10 and the symbols were washed out due to the radar being on.

Both he and the captain flew the airplane from Ellsworth airbase to RAP. That determination was made in connection with the chief pilot who was also discussing this event with someone at the FAA. He felt that he was very comfortable in conducting this flight.

He further stated that he felt there were a lot of cues that were missed on his part. Some of the cues were washed out by the radar on the navigation display.

In looking back at the event he wished they would have briefed the approach with a little more detail. He felt they were a little behind based on the airplane's energy and that situational awareness had broken down. He further felt that his cross-check had also broke down. He further stated that there were a lot of human factors involved.

He felt that perhaps more detail on the green pages may have drawn attention to the close proximity or even a sentence or two stating that airline crews have landed at the wrong airport when flying into RAP. He also felt that when the flight director and autopilot are disengaged and turned off to cross-check the navigation display would be beneficial.

The interview concluded at 11:21 AM

Interview: James Evans – Delta Airlines (DAL) Captain
Date: July 14, 2016
Location: via telephone
Time: 1312 EDT

Via Telephone: Mr. Shawn Etcher – National Transportation Safety Board, Mr. Robert Hendrickson - Federal Aviation Administration, AVP-100, Mr. Rai Jennings – Delta Airlines (DAL), Mr. Michael Schilz – Airline Pilots Association (ALPA)

Captain Evans was represented by Mr. Gordon Rose – Senior Labor Relations Counsel - ALPA

During the interview, Captain Evans stated the following information:

His name was James Murphy Evans, and he was 60 ½ years old. His date of hire was June 9, 1986 which was with Republic Airways, which later became Northwest Airlines, and later became DAL. He was a captain in the Airbus A-320 (incident airplane) and was a line pilot based out of the Salt Lake City International Airport (SLC), Salt Lake City, Utah. He has an Airline Transport Pilot (ATP) certificate with type ratings in the Airbus A-320 and A330, and Boeing 747 with Second in Command privileges. He also has a commercial pilot certificate for instrument helicopter, and a flight engineer certificate. He was due for a checkride at the time of the event; however, he waived training as August would be his grace month and he is retiring August 31, 2016. His most recent checkride was about 9 months prior to the incident; however, he was not sure of the exact date.

He was an initial operating experience (IOE) trainer in the flight engineer position in the Boeing 747 as well as a unit trainer in the military.

He had about 25,800 hours of total flight experience and 3,778 hour of total flight experience in the A-320. All of his flight experience in the A-320 was as a captain.

He had a first class medical issued on April 8, 2016 and it was a special issuance certificate due to him being pre-diabetic since 2005. He also had limitation of the requirement to wear corrective lenses for both far and near vision and he was wearing his bi-focal glasses at the time of the incident. He clarified that his distant vision only needed minor corrections due to a stigmatism.

He had no civilian accident or incidents and once while in the Army fly helicopters had a main transmission filter issue. All five occupants were not injured.

He started flying when he was 16 years old and then joined the national guard as a helicopter crew chief. Then he went to flight school, flew corporate light twins. While in the military he flew the Huey, jet ranger, Hughes 500 and the C23, which he flew for the last 6 years. He subsequently applied to Cascade Airways as a pilot and was hired 10 days later. After Cascade Airways was bought by Horizon he flew there for a short period of time and was then hired at Republic Airways. Republic airways merged with Northwest Airlines which was subsequently bought by DAL. He originally started as a flight engineer on the Boeing 727 then transitioned to a First Officer (FO). Subsequently became an FO on the Boeing 757, then a flight engineer on the Boeing 747. He transitioned to an FO on the Boeing 747 until the Anchorage base closed and then flew the Airbus A-330 until he was involved in a motorcycle accident which required him to be wheelchair bound for about 6 months. June of 2010 he transitioned to a the A-320.

He had never been fired or asked to resign from any of his employers.

His chain of command is the chief pilot in SLC and then the regional director. He has a good relationship with both of the chief pilots and visits with them often when in SLC.

He felt that the operation at DAL was the best he had ever had. He would like to see a few changes in the training but what they have works very well. He has communicated with the chief pilot following the incident. He felt that staffing was good and that he flies about 80 to 85 hours every month. However, he has seniority and picks what he would like to fly. He has heard more junior crews say that they are worked too hard but he felt staffing is adequate.

When he normally bids his schedule for the upcoming month he usually gets his first choice and if does not receive his first choice he will always get his second choice of bid. He normally bids to minimize his commute from Alaska. DAL does have avoidance bidding in which the First Officer can request not to be paired with a captain. He has no knowledge of any First Officer that has utilized that procedure in order not to be paired with him.

DAL has flight condition reports (FCR) as a way to express concern if a pilot sees something that they consider unsafe or inadequate. He fills them out “quite often” as he feels that the flight crews are in a position to see the operation. He will receive feedback from his FCR If he has a concern that he feels will not be adequately addressed by the FCR he will go into the chief pilot’s office and talk with the chief pilots about it. He felt that the labor/management relationship in SLC was very good. He felt that the DAL ASAP program “works excellent.”

DAL does have a protocol for a flight crew to refuse a flight or an airplane. He has had to refuse an airplane a few times, as he felt most of the time everything was above the required standard. He has never felt any pressure from anyone within management at DAL to complete a flight, nor would he accept any pressure to complete a flight if he refused it. The protocol at DAL was for the flight crew to call dispatch and normally that was all he has had to do. There was further protocol that if dispatch was unable to address the concern he could go to the chief pilot, but he has never had to do that. He further reported that he is known for being very thorough.

The incident flight was from MSP to RAP in aircraft ship number 3233. The flight was parked at gate C10 at MSP and he had requested a 10-minute early departure from the gate. The flight pushed back from the gate at 0103 [UTC] and became airborne at 0126 [UTC]. The flight was planned with an estimated time enroute of 1:17 hours with an estimated time of arrival at 0243 [UTC]. They were originally cleared for the DARWIN 6 departure to Aberdeen to RAP; however, the clearance was changed to the SCHEP 8 departure with a different transition. While holding short of the runway waiting for their takeoff clearance. It was normal departure off of runway 17 utilizing flaps 2. The climb out was normal and they were leveled at FL320 for traffic and weather; later there were cleared to, and ascended to, FL340. During the enroute phase they performed the cruise flow and checked the flight plan information. While enroute they received the ASOS [automated surface observation system] weather information at RAP. The weather was VFR with the wind from 240 degrees at 5 knots. He loaded the ILS 32 into the primary in the FMS and loaded the RNAV 14 as the secondary approach. He always puts in a backup approach into the FMS. He briefed that it would be a visual approached backed up by the instrument approach. He briefed both approaches as well as the RNAV card and the 10-7 pages, which included a caution about Ellsworth airbase. They planned on utilized autobrakes on low and he briefed the anticipated taxi route to the gate after landing. During the descent they observed an 80 knot headwind indication as well as were transferred from Minneapolis center to Ellsworth approach control. Although they briefed and planned for 32 approach, on initial check-in, told them to expect the visual for 14. They were provided vectors to the east of the airport. They reviewed the 12-2 page again [RNAV 14], completed all of the checklist items, reviewed the speed on their ACARS. They slowed the airplane to about 210 knots. When they were at 6,900 feet [above mean sea level (msl)] and abeam ZUDIM intersection they determined that it was going to be a high energy descent. ATC gave them a turn for the base leg of the approach and he thought that the controller reported they were 6 miles from RAP. He had the FO request an extended downwind. While on the left base to final leg he had, what he thought, was RAP in sight and put in a direct radial to ZUDIM intersection. They were cleared for the visual approach to runway 14 and he armed the approach. The airplane, on the autopilot, turned and intercepted the course about 5 miles from ZUDIM. They configured the airplane for landing and completed all of the required checklist. The FO requested a frequency change from the approach control to the RAP tower controller and upon contacting the RAP tower controller was cleared to land runway 14. They were on the lateral guidance but above the vertical deviation indicator. They were a little high but within the DAL stable approach criteria and were still lined up on the runway with the lateral guidance. They were both focused on the visual approach and he disconnected the autopilot and had the FO clear his flight director and put in the missed approach altitude in the altitude preselect. About 500 feet [above ground level (agl)] mentioned that he did not see the PAPI lights but remained focused on the visual approach. As they approached the runway he retarded the thrust levers and the engine spooled down about the

same time they both realized there were landing at Ellsworth. He made a "split second" decision to continue with the landing since the engines were spooled down. The landing was uneventful, normal decelerations, and cleared the runway at taxiway delta. The flight remained on the taxiway, performed their checklist, and were met by base security. They started the APU, shutdown the engines, and he communicated with passengers while the FO communicated with ATC. They then completed all of their shutdown checklist. After the checklist were completed they communicated with the company. Due to discussion with the base commander the passengers were to remain on the airplane and the military base personnel boarded the aircraft. The base commander boarded the airplane and discussed the options with the crew for departure. He went back, into the cabin, to make an announcement to the passengers so they could visually see him.

During the discussion with the base commander it was brought to his attention that there had been four aircraft that had landed at Ellsworth in the last year that were not supposed to land there.

After they complied with the airbase requirements, DAL dispatch was able to re-dispatch them to RAP. There were no issues with the dispatching and all of their documents were received via ACARS. He verified their rest requirements and that they were still legal to operate the flight. He contacted the DAL duty pilot via his cell phone as well as the SLC chief pilot and dispatch. It was determined, and he agreed, that they were capable and fit for duty. They were given their clearance to depart for RAP via their normal procedures. Prior to departure they had a slight fuel imbalance due to the operations of the APU but that was corrected prior to departure. The FO flew the flight from Ellsworth to RAP and that flight was uneventful. As soon as the airplane was shut down and the RAP terminal gate he opened the cockpit door and went to apologize to the passengers. He reported that the passengers were grateful and he received a lot of hugs and handshakes. He felt there were no disgruntled passengers and that they were all very understanding, he felt that his cabin crew did a great job with keeping the passengers comfortable while on the ground at Ellsworth.

He further explained that the 10-7 pages is DAL specific information and that they are also called the "green pages." DAL has a 10-7 page for every airport that they service. Some of the 10-7 pages include a caution note, as did RAP which discussed that Ellsworth AFB was to the north and that the airports have a similar runway alignment. He felt that perhaps a pictorial description would have been better to see the similarities.

He provided further detail about when they were on the approach in that they were told they were about 6 miles from the airport and they verified the navigational course in which they were aligned. The runway they saw, which turned out to be Ellsworth, appeared to be about 6 miles away, in what he would have assumed was the right place, and he did not see any other airport past that. He stated that after they landed at Ellsworth and contacted the RAP tower controller they were told they "watched them drop off of the screen." He felt that the RAP tower controller or the Ellsworth approach controller could have assisted in avoiding the wrong airport had they informed the crew that they were lined up for the wrong airport, but neither controller said anything to them until after they had landed.

The airplane had 4 deferral items but nothing that was deferred had any effect on the flight.

After the flight he found out that it was the FO's first time to fly to RAP. However, he had been there on December 4, 2014 which was a night landing to runway 32. The incident trip was his 2nd time to RAP. He felt that even had he known it was the FO's first time to RAP he would have not done anything different as he had done a very thorough briefing.

When asked why he typically loaded 2 separate approaches into the FMS he explained that when he loads in the primary flight plan on the performance page minimums, weather, and other items can be inputted. He can the copy all of that information and add it to the secondary page and be able to only need to insert the correct approach. This would allow them to only be required to activate the secondary approach. He felt this minimize the amount of time one of the pilots is looking inside the cockpit in the terminal area.

When asked why he, as the flying pilot, programmed the approaches he stated that it is a DAL policy that if the airplane is flying on automation the flying pilot "owns the box." However, when the airplane is not on automation, as when hand flying, the pilot monitoring programs the FMS. However, it did not matter who inputted the information into the FMS both pilots had to verify and agree that it was correct information entered.

He felt that the workload on the flight was pretty standard until they were transferred to approach control and given runway 14. At that point they activated the secondary approach and as a policy immediately reviewed the approach plate for the newly activated approach. Since they had already accomplished the checklist items they were required to go and re-accomplish the "black box items." He felt that they were a little time compressed due to be above the normal approach path. Once they were switched over to Ellsworth approach from the center controller they were given vectors "pretty rapidly" and they had to request an extension.

Although it was starting to become dusk the sun was no factor for them as it was behind them while on the approach. He further stated that the sun was not a factor in seeing what turned out to be Ellsworth; however, at no time did he see RAP.

While on approach prior to landing the only audible noise produced by the airplane was when he disconnected the autopilot. There were no other messages, warning or otherwise, that was audibly observed.

When asked if he could recall the wrong airport landing done by NWA back in 2004, he stated he did not remember that event until after this event when he was conducting an internet search. He further stated that when that event had happened he was flying out of Alaska for NWA. However, he could not recall if NWA had provided any guidance to their crews at the time about wrong airport landings.

When asked was rest issues or fuel quantity of any concern and he stated no. He further elaborated that he is "big into CRM" and had asked the FO if he was tired or if he was comfortable with repositioning the airplane to RAP. The FO reported to him he was fine with it and subsequently he had the FO report that to the chief pilot. As far as legality to fly, although they were in their "extension" they were still legal to fly. He stated he was concerned about the FO's mental being but the FO appeared and stated that he was fine.

They were required to conduct drug testing which he accomplished at RAP the next day.

The incident had occurred on leg 3, and the last scheduled leg of the day. It was their first day of a three-day pairing. They had earlier reported in SLC, flew to Sacramento, California, then to MSP, and then the incident flight to RAP. He felt that it was a nice paring with a 32-hour layover in RAP. The day prior he had finished a two-day pairing with the FO which was a two-leg trip with the first day flying from SLC to Cancun, Mexico and the second day flying back to SLC. That trip provided them with a 20 plus hour layover in Cancun.

After contacting Ellsworth approach control they were given a lower altitude but he could not recall that altitude. They were subsequently given a lower altitude which required them to descent "pretty fast" but he felt it was just a step down. He conducted a high-energy descent, which was a term Airbus utilized which requires the landing gear to be down, configured for landing, airspeed about 190 knots, and utilization of the flight spoilers. Then they would continue to slow to 170 knots and utilize the spoilers and the landing gear to assist with drag and to slow the airplane down. He began the high-energy descent about the time they were on the left base. They were at 6,900 feet msl when they were abeam the final approach fix which had an altitude of 4,900 feet msl.

He further reported that on touchdown he landed at the touchdown point [1,000 foot markers] and the FO had saw the 13 in small numbers, just as the airplane announced "retard retard" and that at that point he had already retarded the throttles. He thought for "a split-second" of performing a go-around; however, he recalled be taught in training that once the engines spooled down it was not recommended to conduct a go-around, He knew that on touchdown with the engines spooled down, the spoilers would extend; however, if a go-around was accomplished the engines would accelerate to go-around power and spoilers would have retracted. He felt that landing was the safer option.

He felt that the 10-7, DAL page, should have included, within the note, the location of ZUDIM in relation to Ellsworth; however, he felt that now that he knows that it was very close to Ellsworth he would include it in the briefing.

When asked when he conducted the high-energy descent what he observed he stated that he was already looking at Ellsworth. He had already "keyed in" on the controller stating that RAP was 6 miles away at which point they were about 5 miles prior to ZUDIM. They never received any information from ATC that they were lined up for, or a descent trajectory for, Ellsworth airbase. At no point during that approach did he observe runway 14 at RAP and they both were focused outside the airplane for the visual approach. He further stated that it is his personal procedure to always takeoff and land with the radar on as he was instructed in the past that it may help with bird strikes. That was something he had always done. Although he could not recall the tilt setting of the radar he always sets it, when not needed for weather, with a little ground clutter on the top of the screen. He had it set for calibrated but unsure of the tilt setting.

When asked if briefing both approaches could have caused an issue he stated that it may have. Although in the briefing for 32 RAP would have been the first airport they would have seen and for 14 Ellsworth was. He further felt that there were many "links in the safety chain" that were

broken and felt ATC could have given better vectors and that it would have been easy for ATC to call out awareness to them if they felt that he was descending to the wrong airport. He further felt that when he saw Ellsworth in his mind it was RAP and that he had an expectation bias.

He further felt that although the caution message on the 10-7 page provided some information it was not enough. He felt it should at a minimum draw attention to the flight crew that the runway alignment between Ellsworth and RAP are nearly the same and that Ellsworth is in nearly direct line with the approach to runway 14. Although the navigational approach chart shows Ellsworth slightly off the course but it is so close that it is hard to judge it. He further felt that there were a lot of cues that should have helped him, such as no PAPI lights but he was so fixated to land that it did not register in his mind until too late.

As part of his briefing he always states which direction he will be taxiing off the runway, since he briefed the ILS 32 it would have been a left taxi off the runway to the gate. When on final the buildings off to the left side of the runway were not a cue that his mind registered.

When asked to go into a little more detail about the reason to brief both approaches he provided that it has been his policy especially when he was flying internationally. He would like to see that to be something DAL makes as a standard policy in the future. He normally utilized the secondary approach at least once a trip as just an option to have in "his back pocket." He has always briefed this as part of a behavioral pattern for him in hopes to keep him out of trouble. He provided an example as when flying into certain airports with parallel runways, ATC would assign one runway and then change it later to the other parallel runway. It was a lot easier and quicker to activate the secondary approach rather than have one pilot have to input all of the information. He wants both pilots to be able to provide their full attention outside of the cockpit when flying below 10,000 feet msl.

He further provided that while on the final for landing the runway width nor length registered any differently in his mind. As well as the fact that since it was still daylight no airport beacon was visible and had he noticed the double lighted beacon at Ellsworth it would have drawn his attention to the fact his was lined up at the wrong airport.

Prior to the beginning of this trip, he and the FO had completed a trip to Cancun, Mexico in which they arrived at SLC at 1947 mountain daylight time (MDT). The departure time for the incident trip was at 1116 MDT the next day. After he returned from Cancun he went to a nearby hotel that he always uses when he commutes to work. After he arrived at the hotel he had the airport van take him to another hotel restaurant for dinner and he was back in his room about 90 minutes after he first checked in. After he returned to his room he did some stretching exercises and other items and then went to bed. He feels that he can sleep whenever he needs to as he spent 20 years of his career flying internationally and his body was conditioned to do that. He does not have any problem sleep and typically will get between 8 and 9 hours of sleep a night. He felt that he had not turned on a television in a hotel room for more than 10 years, and the night prior to the incident he had not turned on the television.

Prior to the start of the two-day trip he flew into the SLC on the 4th of July from his home in Alaska. He does not like to push himself when it comes to commuting and usually comes down

the day prior to his trips. Normally he likes to try and "stack" his trips to minimize the commuting. He had felt well rested for the incident trip. The day of the incident flight he had snacked on the airplane. While in Sacramento he had 1:13hours on the ground and was certain he had a café mocha. While at MSP they had 1:44 hours on the ground and he had dinner, which was fast food. He and the FO also had an ice cream cone prior to their flight to RAP.

The two-day trip was his first trip back from vacation, in which he was of for the entire month of June. He scheduled it in order to use up all his vacation prior to his retirement.

When asked about his health, he felt that when compared to others pilots his age he is in good health. Although he is prediabetic he is very careful about his diet and he does monitor and keep his blood sugar level "in-check." He does not run for exercise ever since his motorcycle accident his hip aches but he does walk a lot, which he reported a 5-mile walk is typical. He does smoke tobacco and that prior to this event he was trying to quit; however, since this incident he has started smoking again, but he does use Nicorette gum to help quit.

Since he is retiring from DAL he will be going on Tri-care medical coverage from his military time. Prior to the incident he had gone to the doctor and had them conduct a full physical, which included lab work, stress test, etc. The results of that physical was that he had only one "issue" which was he was "low on sodium."

Ever since his motorcycle accident he has been on Metformin and take a small dose of Lipitor; however, due to his cholesterol level he felt the doctor will likely have him cease taking Lipitor. When he tests his blood sugar level it is around 120 but when he has been home for 2 weeks or so it is usually down to 100.

When asked if there were any changes in his financial status within the last 12 months he stated that it will be hard to walk away from the money he makes at DAL. However, they had purchased a VRBO [vacation rental by owner] for retirement.

When asked about any changes to his personal life in the last 12 months he stated that in September he will become a grandfather for the first time. He has been married for 34 years and has 3 daughters all of which are doing well. He felt that "life is good."

When asked if there was anything he good have done differently to avoid this incident he stated he has spent a lot of time thinking about the event but could not think of anything he could have done differently. He felt that the event itself was "the perfect storm" and that it was a big embarrassment for him.

The interview concluded at 1523 EDT.