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NASA DC-8 Comes To UND



wo years ago I heard a NASA DC-8 was coming to UND, I laughed, out loud. Eighteen months ago, I heard, again, that a NASA DC-8 was coming to UND, I chuckled. Twelve months ago, I heard a NASA DC-8 was coming to UND, I grinned. Six months ago, I heard a DC-8 was

REALLY coming to UND, I was getting concerned. On September 14th, the DC-8 landed in Grand Forks, North Dakota. I'm now sweating BB's. Now what are we going to do? (Actually, we're ecstatic to have it on our ramp.)

On September 14, 2005, NASA's DC-8 Airborne Laboratory was delivered to the University of North Dakota. Under a cooperative agreement with NASA, the University will work closely with the international scientific community to optimize their research.

NASA's decision to bring the aircraft to UND was based on two factors; the University's scientific research capabilities and the expertise of UND Aerospace Flight Operations.

UND Flight Operations will be responsible for the daily operations of the DC-8. The DC-8 will be embedded within the Flight Operations organization, which will include all maintenance functions, quality control, inventory control and tracking, records, modifications, and assisting with uploads of experimental equipment. These additional responsibilities will result in 7 full-time positions in the Maintenance Department at UND Aerospace.

Continued on page 4

Chairman's Corner

By Fred Adams

"THE FUTURE OF AVIATION IS NOW" is

the theme selected for the 2006 Upper Midwest Aviation Symposium. Thanks to the council members for other very good ideas to choose from. There are many challenges that need our input to promote aviation in North Dakota, the Upper Midwest, and nationally.

"Safety Standdown" – a term used both in civilian and military aviation. The Upper Midwest Aviation Symposium has been providing courses for a wide variety of General Aviation users for many years.

I would like to challenge all of you involved in aviation to mark your

calendars for March 5-7, 2006. The Symposium will be held in Bismarck at the Ramkota Hotel. Many of us mark our calendars for vacation, yearly dental or medical physicals, but do we mark days to increase our aviation knowledge and thereby reducing our risk, which provides each and every one of us with better safety skills in a field that has very little tolerance for mistakes?

Continued on page 2

Talk with your employers and let them know this is part of your safety program. A BFR is a part, so is a yearly visit to FlightSafety for a ride in the box. There is more to remember and/or learn than just the two items listed. There are new things to learn, new regulations to comply with, and knowledge is a big part of what will make you safer while involved in aviation. Once your boss or spouse understands this is not just three days of fun and games, when you see the registration material show up, get yours in, make a reservation at the hotel and join us.

Now that you have made that decision, what do you want provided? If you are a pilot, do you want more information on GPS approaches, what is the status on WAAS, how do I know what minimums to use for the instrument approaches? How do I handle crosswind landings with more confidence, can I use the Weather Channel for preflight briefing? Let your North Dakota Aviation Council member representatives know what you want. This goes for mechanics, FBO's, aerial applicators, EAA, and so on. You will find a listing of NDAC representatives in the Quarterly. Do it now so they can plan to have presentations that are of interest to you.

The Aviation Council representatives will be busy working on putting together the 2006 UMAS schedule, get your requests in soon. Remember SAFETY does not happen by itself, YOU need to be involved.

Happy Landings.

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FROM THE DIRECTOR'S CHAIR

With the bankruptcy of Northwest Airlines and those concerns about air service for our state, I thought that we should review the



By Gary Ness, Director, North Dakota Aeronautics Commission

background of air service that North Dakota has enjoyed and tolerated over the years.

Our state's air service history started in the 1920's. Airmail activity in the United States started commercial passenger and cargo aviation. Building of airport runways and terminals in ND lagged behind due to communities' lack of legislative authority to spend public monies on airports. In 1927, a civic minded banker donated 160 acres (Hector Field) to the City of Fargo. A private sector investor in Grand Forks near UND established runways, hangars and offices. In 1927 Minot purchased land for the airport through the park board. In 1929, the City of Bismarck leased an 80-acre tract for an airport.

Due to the limited airfield facilities, ND's first commercial airline service was a customs stop at Pembina on a Winnipeg to Minneapolis flight in February 1928. {A point of history: the hangar that Northwest built for this stop was used until the 1997 flood that destroyed the building.} By 1932, air mail and passenger service had been established in Fargo, Grand Forks, Pembina, Valley City, Jamestown, Bismarck and Dickinson through Northwest Airways. During these gestational and growth years, aviation became the engine that helped run the country. After World War II the Civil Aeronautic Board gave airlines permanent route certificates and US Air Mail contracts brought stability to the airline business.

North Dakota was served for most of this time by Northwest Airlines, Frontier Airlines and North Central Airlines.

Then, the infamous year of DEREGULATION --- 1978. See timeline at right for history of airline companies since 1978.

It has been a long and frustrating road. But, the states air service airports and the communities have been flexible, understanding, innovative and strong-minded. Air service is most important to our state and our business community. However, that same air service is a boon to those in the big metropolitan population points in the world that want to come here and sell us stuff. Those airports, airlines and the service they provide are just as important to the OUTSIDE world as they are to North Dakota. By the next issue of the *Quarterly*, the Aeronautics Commission will have completed the Aviation Economic Impact Study for the state, and we will have the data to show how important our industry is to the state and its economy.

Have a good winter and we will see you in Bismarck at the Upper Midwest Aviation Symposium.

PS. Kindred won the "BEST PANCAKES" and Washburn won the "BEST SAUSAGE" awards this year for the Fly-Ins.

No downwind landings were observed this year.

History Of Airline Companies Serving North Dakota, 1979 to 2005 1978 Northwest, NorthCentral, Frontier

- · Air Wisconsin replaces NWA at Jamestown & Devils Lake
- Jamestown becomes the first Essential Air Service point in the United States

1979 Northwest, Republic, Frontier, Air Wisconsin, Big Sky

- Republic Airlines is started by merging NorthCentral and Southern Airways
- · RealWest Commuter service for 14 months of in-state service
- 1980 Northwest, Republic, Frontier, Big Sky, Air Wisconsin (leaves)
 - · Big Sky starts Williston service replacing Frontier

1981 Northwest, Republic, Frontier and Big Sky

· Big Sky starts Jamestown service replacing Air Wisconsin

1982 Northwest, Republic, Frontier, Big Sky

Pioneer Airline starts Williston-Dickinson-Denver service

1983 Northwest, Republic, Frontier, Big Sky, Pioneer

- Western Airlines starts service Bismarck to Salt Lake City
- · Northern Airways offers in-state service

1984 Northwest, Republic, Frontier, Big Sky, Pioneer, Western

- · United Airlines starts service Fargo-Denver
- · Northern Airways stops service after 15 months
- · Frontier leaves Grand Forks market

1985 Northwest, Republic, Frontier, United and Western

· Peoples Express buys Frontier

1986 Northwest/Republic (merge) Western, United

- Continental buys Frontier from People's Express, enter Bismarck-Minot-Fargo
- · Mesaba starts service in Grand Forks
- Pioneer guits service in Dickinson and Williston
- · Big Sky starts service, Billings-Williston-Bismarck

1987 NO CHANGE

1988 Northwest, Continental, United

- Delta buys Western
- · Continental leaves Fargo market

1989 Northwest, Continental, Big Sky, Delta, United

- United Express (Aspen Air) starts service, Denver-GRK- Winnipeg
- Aspen Air declares bankruptcy 6 months later, leaves market

1990 NO CHANGE

1991 Northwest, Continental, Big Sky, Delta, United

- Great Lakes Airline replaces Mesaba in Jamestown/Devils Lake route
- · Great Lakes flying under a contract with UND and China Air starts a statewide route structure
- · GFK, MOT, BIS, FAR, DVL using JMS as the hub airport
- · Later they moved the hub to BIS and funneled passengers to DEN from the BIS hub.

1992 Northwest, Continental, Big Sky, United, Great Lakes

- · AirVantage starts freight/passenger service, MPS-FAR-BIS market
- · Delta leaves Bismarck-Salt Lake Market, American leaves the Fargo market

1993 Northwest, United, AirVantage

- Great Lakes replaces Big Sky at Williston and begins service, Dickinson to Denver
- Continental leaves Bismarck-Minot-Denver route
- United leaves Fargo-Denver market
- GP Express starts Denver-Bismarck-Minot route 5 months only

1994 Northwest, AirVantage, Great Lakes

· New Frontier starts service Minot-Bismarck-Denver, Grand Forks-Fargo-Denver

1995 Northwest, AirVantage, Great Lakes, New Frontier

- Mesaba returns to Bismarck and Fargo markets
- Athabaska Air Service, starts at Williston to Regina (May to Nov '95)

1996 Northwest, Great Lakes, Mesaba

- · New Frontier leaves all North Dakota markets
- AirVantage is purchased and leaves state

1997 NO CHANGE

1998 Northwest, Great Lakes, Mesaba

- United Express-Air Wisconsin starts service, Fargo-Chicago and Fargo-Denver
- · United Express-Air Wisconsin starts service, Bismarck-Denver
- · Big Sky returns to Billings-Williston-Bismarck market
- NWA Pilot strike, Aug 29th Sept 16th

1999-2000-2001-2002 NO CHANGES

2003 Northwest, Great Lakes, Mesaba, United Express, Big Sky

Mesaba replaces Great Lakes in Jamestown-Devils Lake-MPS route

2005 Northwest, Great Lakes, Mesaba, United Express

Big Sky leaves the Williston-Bismarck market

As of today, August 29th, these are the airlines present in North Dakota

Bismarck - NWA - MPS; United Express - DIA

Fargo - NWA - MPS; United Express - DIA and Chicago

Jamestown/Devils Lake - Mesaba - MPS

Williston/Dickinson - Great Lakes - DIA

Minot - NWA - MPS

Grand Forks - NWA - MPS

DC-8 from page 1

In addition, UND Aerospace will be responsible for the flight crew on the aircraft during their flight missions.

National Suborbital **Education and Research** Center (NSERC)

The University of North Dakota has created a National Suborbital Education and Research Center in which the DC-8 is the first facility. The NSERC melds the education and research communities drawn from the many disciplines constituting Earth System Science with the aviation expertise needed to meet the scientific goals safely and efficiently. The NSERC is a unit of UND's Northern Great Plains Center for People and the Environment.

DC-8 Airborne Laboratory

The McDonnell Douglas DC-8 aircraft is in reality, a science laboratory. The fact that it flies is a means to the end, the end being greater understanding of Earth's environment and use of that understanding to provide societal benefits. The platform aircraft will be based at the Grand Forks Air Force Base. The DC-8 can conduct missions anywhere in the world. Maximum flight duration is 12 hours and its range can be 10,000 kilometers. The aircraft can perform between 300 and 12,500 meters. It can accommodate up to 15,000 kilograms of scientific equipment. Data gathered by the DC-8 at flight altitude and by remote sensing has been used for scientific studies in archaeology, ecology, geography, hydrology, meteorology, oceanography, volcanology, atmospheric chemistry, soil science, and biology.

Sensor Development

Sensors launched on spacecraft into Earth's orbit

are costly. It is wise to build and test them on an aircraft platform first. The DC-8 offers a comparatively inexpensive way to test and verify prototype instruments to be flown on the Space Shuttle or on satellites. Hardware first proven in flight can result in substantial savings in time and resources.

Satellite Sensor Verification

Once in orbit, satellite instruments can infer properties of Earth's atmosphere from their remote orbits. The question always is: are the remote inferences accurate? One way to masses and continents, he or she cannot see individual countries. Nations are artificial human constructs. In actuality, all 6.4 billion of us are fellow passengers on Spaceship Earth. As a result of this new way of viewing Planet Earth, a new discipline emerged, Earth System Science. The DC-8's extended range, prolonged flight duration, large payload capability, and laboratory environment makes it one of the premier research aircraft available for measurements that teach how events like pollution plumes spread from their origin around the planet. Combined with measurements, satellite observations, and models in the pursuit of the mission objectives. The long range and high altitude capability of the DC-8 enables INTEX-B researchers to investigate both the inflow of pollution to North America from Asia as well as the outflow and evolution of pollution from Mexico City. The DC-8 is the platform of choice for the task of large scale chemical characterization.

DC-8-72 Aircraft

The NASA DC-8-72 is a four-engine jet transport aircraft that has been highly modified to support the Airborne Science missions. The aircraft is 157 feet long with a 148-foot wingspan. It can fly at altitudes from 1,000 to 42,000 feet for up to 12 hours, although most science missions average six to ten hours. The aircraft has a range of 5,400 nautical miles. The DC-8 can carry 30,000 pounds of scientific instruments and

equipment. Among the aircraft's features are wing pylons (for aerosol sampling), a gyro-stabilized pointing and tracking mirror system, a dropsonde delivery tube, atmospheric chemistry sampling probes, and several reinforced ports that accept experiments pointing in virtually any direction. Experiment support facilities include weather radar, an integrated navigation management system, a satellite-based time code generator, a standalone Global Positioning System, and a weather satellite receiver system. Each experiment is supported by an information collection and transmission system providing navigation,

aircraft conditions, and

environmental data measured

by facility sensors. UND will

continue to operate the DC-8

globally, as in the past.

The McDonnell Douglas DC-8 aircraft is in reality a science laboratory. The fact that it flies is a means to the end, the end being greater understanding of Earth's environment and use of that understanding to provide societal benefits. The platform aircraft will be based at the Grand Forks Air Force Base.

quantify their accuracy is by direct in situs measurements conducted aboard the DC-8 at the exact spot in the atmosphere about which the satellite-borne sensor is making its inferences.

Basic Research Studies

Space exploration altered humankind's perception of our home planet. Once humans traveled so far from Earth that they could capture it in a single photograph, the realization seeped in that the planet is a single, integrated system. What happenes in one location has consequences everywhere else. Likewise, although a space explorer can see land

other aircraft, satellites, or ground stations, the DC-8 complements and extends the range of any instrument package, allowing scientists to successfully address today's planet-wide issues. The U.S. is developing an Integrated Earth Observing System which will be part of the multi-natural Global Earth Observation system of systems. The DC-8 will be integral to these programs.

INTEX-B (Intercontinental Chemical Transport Experiment - Phase B) will use the DC-8 to validate satellite observations of troposphere composition, and researchers will coordinate between aircraft

5 NORTH DAKOTA AVIATION QUARTERLY

NDEAA

By Darrel Pittman

I feel I owe you faithful readers an apology. My article in the last issue of the *Quarterly* was rather short and uninformative. Due to some family time needed in Texas, I couldn't do my article justice. I hope I can do better this time.

Most of you know and respect Les Ellingson, as I do. Les is the FAA safety specialist from the FAR FSDO office. Well, Les has named me the FAA safety coordinator for the MOT area, a topic and position I really like. I can see some of you now saying, here comes Pittman with his runway incursion speech. As important as that subject is, I'm going let it rest, this time! I want to instill some thoughts about inadvertent VFR flight into IMC.

I don't know how many of you get or have access to NASA's "Aviation Safety Reporting System" (ASRS) newsletter, the "CALLBACK". Here are some of the insights I gleaned from the August issue. There are two types of reports that help to determine valuable information in accidents/ incidents. According to NASA, they are ASRS reports and NTSB reports. An ASRS report is usually a statement by the person involved. Those reports are informative, costfree, and anonymous to the reporter. An NTSB report is generally a second-hand statement from a witness/ witness's or investigators, because the accident involved fatalities to those on board. We, as pilots and controllers, can learn from these reports and apply them to ourselves on a daily basis.

Each month the CALLBACK addresses a different issue of safety. The



August issue focused on VFR into IMC weather conditions, specifically Scud-running and icing. Each topic had two ASRS reports and two NTSB reports. Reading each report was an eye opening experience. In all eight reports I kept thinking that the event could have been avoided by proper common sense flight preparation; and calm, cool, heads-up pilot skills. I kept recalling the many times when as a controller I've gotten panic calls from pilots. It's an empty feeling when the pilot reports he's in the soup and not IFR rated. Worse yet, the aircraft is not rated either.

In summary: it's easy to sit back and second-guess a situation. My point in all this is when you are late or in a got-to-get-there situation, using an old adage, stop look and listen, then make the right life-saving decision. Try to remember the saying about "Old Bold Pilots. In quoting from the NASA newsletter "it pays to learn from the experience of others. Learn the lesson before you take the test. It could be a final exam - with no opportunity for a retake," end of quote.

The NASA monthly safety bulletin can be acquired from the Office of the NASA Aviation Safety Reporting System, P.O. Box 189, Moffett Field, CA 94035-0189 or on the web site, http://asrs.arc.nasa.gov/.

We've had our first NDAC meeting from the summer break at the Ramkota Inn in Bismarck. The main topic was the Symposium that will be held at the Ramkota Inn. Another topic that was discussed had to do with a

new GENERAL AVIATION AIRPORT SECURITY bill currently introduced and referred to the committee on Homeland Security. This bill is H.R. 3397 and was introduced by Representative Sweeney. The bill is not GA or private airport friendly and we need to make our voice heard. Gary Ness sent the information out to the members of the council to be shared with all of you. Become familiar with this bill and make your feelings known to Gary and to Representative Pomeroy. Senator Hillary Clinton is also planning to introduce a companion bill in the Senate. The council plans to send a memorandum to Gary opposing the bill, you should do the same. Talk to your council representative and give your input, they want to hear from you. See you at the Symposium.

Cleared for take-off.



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NDPA

Paul Hanson President

Welcome to another summer of fun flying, flyins and pancake breakfasts. It should be quite a summer full of many events across the state. Wait, this is September not May. All of the fly-ins and pancake breakfasts are coming to an end. Where have the summer flying months gone? Although the "season" is about over for fly-ins, etc., we should congratulate the people who put on these events. There is a lot of hard work that goes into each event. Next time you see an organizer of these events, fly-ins, pancake breakfasts, airshows, thank them for all the effort they put in. I know they will appreciate the kind words.

As fall arrives, preparations for the next session of the Upper Midwest Aviation Symposium, slated for early March 2006, will start to get under way. A survey sent out last spring brought good results on many different areas of concern (see Spring issue Aviation Quarterly). With this information we will be able to bring better programs to the symposium. NDPA and NDEAA are going to attempt to bring programs together for both groups. It may require two separate rooms to hold the session. This would be a good thing to happen for all wishing to attend. Anyone with suggestions, forward those ideas for consideration.

Speaking of conventions, I was fortunate enough to attend EAA Air Venture 2005 at Oshkosh, Wisconsin. Some of the bigger events centered around the arrival of SpaceShipOne with mothership White Knight and the Global Flyer,

which was delayed a day due to weather. Of course the primary participants of each of these aircraft were present. Burt Rutan, Paul Allen, Mike Melville, Brian Bemmi of SpaceShipOne and Sir Richard Branson and Steve Fossett of Global Flyer. Cooperation between Richard Branson and Burt Rutan brought the creation of a new company called the SpaceshipCo. whose purpose is to provide commercial

aircraft, as low as \$60,000 bare bones to \$75,000 and up, depending on avionics and finish. People interested in this category of aircraft, watch the trade magazines for articles on these aircraft.

One of my personal highlights of Air Venture was Glacier Girl. This is a P-38 F Lighting salvaged from the ice pack of Greenland. Although most of this aircraft had to be recreated, there is still a lot of the original

the F-4 's. Two to three miles out and approximately 30 to 40 degrees from the center line of the runway, the F-16 approaches Glacier Girl with the P-51, F-4 Phantom is 1/2 mile past the end of the runway now, and climbing. At approximately 60 degrees from center line and 5-6 miles out, the Phantom catches the formation of the other three aircraft. In fact, slowing down so it does not overshoot the formation. Time from first aircraft takeoff to last aircraft joining formation was around 6 minutes. From the ground it looked really impressive to this person.

Back to our state. There are things to be watchful about. Over the past couple of years, discussion on Special Use Airspace covering the entire state has been on going. No word if it will happen, but briefings and talks lead one to speculate it is more when it will happen. With the BRAC round coming to a close and the likelihood of the two USAF air bases and NDANG base remaining open, proposal for this SUA is more likely to happen. I can see drawbacks as well as positives for the creation of this SUA. Time will tell if it is a good or bad idea.

Another area of concern is the security of our local airports. There is some language in legislation that is pointed directly at General Aviation as a security risk. Potential proposals are to require fencing around "sensitive areas" of each airport. A few years back, the ND Aeronautics Commission sent out information and forms to each airport on how they would cover security with several different situations. I believe this may have covered a good portion of "risk factors of major attributes" for each airport.



flight into space. Want a chance to go into space? \$200,000 will get a seat with the Spaceship Co., 150 plus people have already paid for the ride. Timeline is pointed in the direction of 3-5 years down the road for the first rides similar the flight of SpaceShipOne.

Other notes of interest came at the other end of the aviation spectrum, Sport Pilot aircraft. A showing of candidates for this category of aircraft were on display. Several US manufacturers like Legend Aircraft, and an updated version of J3. Some of the European aircraft are quite well built with a lot of goodies in them. As with all aircraft in this category, refinement of the product is a continues process, which was evident in some of the aircraft. Over all, there is a lot to choose from with prices starting, for a complete

aircraft. One of the fly-bys, during the airshow portion of daily events, had Glacier Girl leading a formation of aircraft, P-51 Mustang on right wing, F-16 Falcon on left wing and the F-4 Phantom in the slot area. It was interesting to watch as they took off to join up into formation. Glacier Girl took flight first, followed by the P-51, then F-16 and F-4 last. As they climbed for altitude, making a left arcing turn to the west of the Oshkosh airport, the P-51 closed and caught Glacier Girl about a mile or so out. Keep in mind the F-16 and F-4 have not departed yet. The F-16 lights its fire clawing for altitude a few seconds before the P-51 reaches the right wing position. As the F-16 clears the end of the runway the F-4 lights up her twin turbines bellowing the signature black smoke trail of

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TRIM TAB



By Bob Simmers

It seams that we should not be preparing for winter yet, but as I made a trip from BIS to MOT this morning the colors brought the realization that fall is well upon us and that the seasons and time wait for no one. It is certainly the best time of year to fly. As I assemble my thoughts, another hurricane is headed for the Gulf Coast and I have just received word that my nephew and his family are leaving their home in Houston until Mother Nature has finished with yet another of her tantrums. We should be so

lucky here on the plains to only have to deal with the elements mostly one at a time. Over the years, I have developed a pattern that allows me to cope with winter. I can handle winter just fine if I only have to deal with the extreme elements, one at a time.

I also have been informed of the results of a survey taken about the *Quarterly*. It seems that you, the readers, speak very highly of this column. For this I want to thank you. It also presents me with the challenge of continuing to find topics of interest to you. It has also been interesting for me as it has spurred communication with some old acquaintances that I have not seen for years. I hope that we can meet face to face soon.

I have also been asked to be a representative on the Council this year. I am happy to serve although I

on the Council this year. I am happy to serve although I would encourage the younger aviators to get involved.

This issue's topic is in response to a question that was asked of me by an old friend. It is centered around traffic pattern etiquette. Traffic patterns are not regulatory but are covered in the Airmans Information Manual (AIM), AC 90.48C, and AC 90.66A. Traffic patterns are designed to promote visibility between all aircraft arriving at and departing from an airport. The AIM talks about standard and non-standard traffic patterns, standard being left hand unless otherwise noted in the Airport Facility Directory (AFD). The AC suggests that pattern altitude be 1000 feet for piston and 1500 for turbine-powered aircraft unless otherwise noted in the AFD. The AIM is very specific about arrival routes and departure routes, all designed to promote good visibility among all aircraft in the traffic pattern. When arriving we should enter the downwind or the base at a 45 degree angle. When departing we should avoid crossing the downwind at a point that would interfere with arriving traffic. We also have right-of-way rules that apply in all phases of flight. Here the lowest, slowest and least maneuverable on final approach has the right- of-way.

So, how does this apply to the aviator of North Dakota? We have some 90 public airports in North Dakota, most of them without any communication, but all with a published common traffic advisory frequency (CTAF) and most with a published GPS approach. We are instructed to announce our intentions when we are 10 miles from an airport, weather we are arriving or departing. In the traffic pattern we are instructed to announce downwind, base and final approach, even if there is no one to talk to. This is fine, but here in North Dakota we have one of the largest populations of non-radio aircraft anywhere. This is especially true during the agricultrural season. The ariel applicator operators are advised that they are exempt from the traffic pattern only when they are performing an agricultural operation. This means that when they are loaded, any direction and altitude is fair game. They are also instructed that they need to follow that advertised traffic

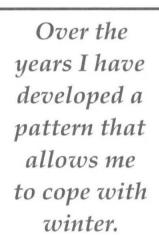
> pattern when returning to the airport, but they may be as low as 500 feet AGL instead of the published altitude. Any good flying will bring out the rest of the non-radio flying population, and believe me, there are plenty of them out there. How do we communicate with these non-radio aircraft that we are in the area?

> First, we fly the traffic pattern as recommended. This gives us the best chance of seeing anyone else that is there. Slow down and take your time on your approach. This gives you more time to look around. Turn on your lights. This will enable you to be seen better. Make your calls on the radio. Someone on the ground may be listing on a scanner or Unicom radio. Use the airport

pilot controlled lighting system to notify the non-radio aircraft in the area that someone is in the area. They may not be able to hear you, but the airport lights will alert them that someone else is in the area and will prompt them to spend a little more time scanning the area looking for the one who turned the lights on. Lastly, if you are practicing instrument approaches at this small non radio field, make your non-standard operations known by transmitting those intentions in the blind. You also must increase your scanning techniques because you are responsible to see and yield to other aircraft in the area.

With the increase in regulations we are seeing more activity at the non-controlled airports. To increase your knowledge of how to survive in these areas, refer to Advisory Circular 90.48C, "Pilots Roll in Collision Avoidance," Advisory Circular 90.66A, "Recommended Standard Traffic Patterns at Uncontrolled Airports," and refer to the Airmans Information Manual section on traffic patterns. I hope to see you in the traffic pattern soon.

Happy Flying, Bob Simmers



North Dakota Announced Most Innovative State Of 2005

During the NASAO's 74th Annual Convention and Trade Show, held in DeMoines, Iowa, September 10-14, 2005, North Dakota's Aeronautics Commission Director Gary R. Ness accepted the award for the "Most Innovative State" Program. North Dakota received the award for its comprehensive "General Aviation Airport Crisis Communications Plan." The project was the first of its kind in North Dakota and was pursued to ensure safer operations and more prepared responses to emergency situations for the state's 82 general aviation airports. The project involved surveying airport mangers, local law enforcement and emergency responders, and asking them to assess vulnerabilities related to the airport facility. After the information was gathered, five regional workshops were held to inform airport management, law enforcement and first responders of the identified vulnerabilities and the importance of coordinated communication in the event of a crisis. Finally, each general aviation airport was presented with an individualized assessment with a tailored crisis communications plan. The plan will help coordinate the response of any emergency event in the communities and with the state's Department of Emergency Services.

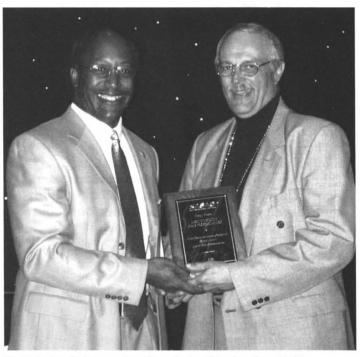
This plan was funded, in part, by a grant issued from the North Dakota Department of Emergency Services Division of Homeland Security.

THIS IS NASAO

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North Dakota's Aeronautics Commission Director Gary R. Ness accepted the award for the "Most Innovative State Program" from Dave Green, NASAO President, Wisconson Aeronautics Division



A Dark Night and Then, "Is That an Aircraft in Front of Us?"

By Matthew L. Wald, Washington, DC

With his plane hurtling down a Kennedy International Airport runway at nearly 100 miles per hour, the first officer of a DC-8 cargo jet looked ahead through the darkness and driving rain and asked the captain sitting at his left, "Is that an aircraft in front of us?"

The captain who gave the account was acting as the co-pilot, and as his eyes alternated between the windows and the instrument panel, he looked ahead but did not see anything. The first officer saw what he thought were lights, the captain said, and asked again, "Is that an aircraft in front of us?" He swiftly took action, pulling back on the yoke and lifting the roaring jet's nose sharply into the air.

A disaster was averted by the narrowest of margins: the ABX Air DC-8 missed a fully loaded Israir Boeing 767 with 262 people on board, by 75 feet at the nose, the captain estimated, and as little as 45 feet at the tail, which was much lower because of the angle of the plane during its

The July 6 incident, in which the 767 taxied onto an active runway shortly before 2 a.m. while preparing to take off, is being investigated by the Federal Aviation Administration and the National Transportation Safety Board.

In an interview, the captain of the cargo plane, Kerry McMahon, gave his first public account of the dramatic seconds when the two planes nearly collided. The first officer, who has not been identified by ABX, "did an outstanding job," Mr. McMahon said. "I'm glad I was flying with him that night." Mr. McMahon said the two planes avoided collision because his plane was not carrying cargo and because the first officer decided shortly before takeoff to use full-power settings because of the weather. Had that not been the case, he said, the cargo plane would never have made it over the 767 flown by Israir, an Israeli carrier. "We were empty," Mr. McMahon said. "To me, that's the reason we missed that aircraft. If we had been loaded down, we would probably have hit him."

long flying career in the Army and the Marines.

The 767 had stopped halfway down the runway, at a place where planes about to take off are typically moving at more than 100 miles per hour, nearly fast enough to become airborne.

The Israeli government's chief air safety investigator, Itzhak Raz, said Israir's crew members told him that they had seen the DC-8's lights and thought someone was taxiing toward them. "I don't want to say it 100 percent, but who asked not to be identified because the incident is still under investigation, said the captain of the Israir flight had been suspended pending the outcome of the investigation.

Mr. McMahon said that he and his first officer and flight engineer reported for work the night of July 5 at the airline's Wilmington, Ohio, hub, as a "reserve crew," ready to fill in for pilots who called in sick, or to handle other unexpected problems. And there was one: a DC-8 at Kennedy needed a replacement part, and Mr. McMahon and his crew flew in with one.

The crew already at Kennedy took the plane that Mr. McMahon had flown in, with their cargo loaded on board, back to Wilmington.

After the damaged plane was fixed, Mr. McMahon was assigned to fly it out. It is typical at airlines for the captain and the first officer to alternate roles during takeoffs. In the flight from Kennedy, Mr. McMahon said, it was his turn to serve as the "nonflying pilot," and as the plane approached the runway, it began raining hard.

Airline policy at ABX is to take off at reduced power settings, a practice that requires traveling more distance on the runway before takeoff but limits wear on the engines, he said.

Because of the weather, the first officer asked if he could use full power. "I said, it's your leg, you make the decision, and he said he's more comfortable with that," Mr. McMahon said.

As the plane accelerated down the runway, the

Continued on page 11

"After we got over him and I knew we didn't hit him, I called the tower and told them there was an aircraft on the runway," Mr. McMahon said.

The captain's account of the early morning of July 6 and the evening before, delivered in the dry tones of a professional pilot who once flew for the military, lays out - in sometimes harrowing detail — the countless minor events that brought the planes so close to each other on that rainy night in the middle of one the nation's busiest airports.

A separate interview with an Israeli government investigator jibes with Mr. McMahon's account, and provides some insight into the experience of the Israir plane's crew. Mr. McMahon, 56, said he had been flying for ABX, previously Airborne Express, since 1991, and that this was the closest he had come to a collision in civilian flying, although he had seen some near-collisions in his

it's very possible that at this time, they were like freezing for a second, praying to God not to have an accident," Mr. Raz said of the Israeli crew. "It was very close." A spokeswoman for the National Transportation Safety Board said that her agency was still waiting for audio and radar tapes and other information from the Federal Aviation Administration.

The F.A.A.'s preliminary report, which Mr. Raz said matched what he knew so far, found that the Israir plane had missed a turn onto a taxiway and ended up on the runway instead.

According to Israir, which began serving Kennedy Airport from Tel Aviv in March, the plane held 250 passengers, 9 flight attendants and 3 pilots. The DC-8 carried a crew of three. Israeli officials.

In Memory of Duane "Pappy" Larson North Dakota Aviation Hall of Fame Member

"Pappy" Larson died at his Fargo home on September 21, 2005, after a bout with cancer.

He was 89. Pappy was a native of Regent, ND, and a WWII fighter pilot, flying 68 missions in a P-51 Mustang over Europe with the 8th Air Force. He is best known as a long time member of the North Dakota Air National Guard 119th Fighter Squadron of the 178th Fighter Interceptor Wing in Fargo. Larson spent 18 years in the Fargo unit, attaining the rank of Brigadier General and retiring as the Commanding Officer of the 119th in 1969. Respected for his natural leadership and kind spirit, Larson always had a story to tell and was admired as an excellent pilot by the men who served with him.

The moniker for the 119th is the "Happy Hooligans," it is a take-off of the 1930s cartoon called "Happy Easter and His Hooligans." Larson's fellow pilots called him "Pappy" and when he became the squadron leader the nicknamed "Happy Hooligans" was tagged.

Several quotes from those that knew him well were offered up. "He didn't have a mean bone in his body." "He was more than an excellent pilot and was respected for that."

"He affected the lives of many people." "To all of us he was Hooligan No.1."

"You knew a conversation with Pappy would be memorable." "He was always a pleasant guy. He was always willing to tell you stories." "He always wanted to shake your hand."

The North Dakota Aviation Hall of Fame inducted Duane "Pappy" Larson as one of it's first ten Charter Members of the Hall of Fame in the spring of 1997.

"We all will have a hole in our lives with his passing but we all will have a good spot in our heart where he will always remain. So long, good friend, you will be missed." G. Ness







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2005 is a Great Year to Buy or Sell, Call Me!

NDAAM

By Don Larson

The 2005 summer season has come to an end, and fall is definitely in the air. We at the Dakota Territory Air Museum in Minot are winding down a very busy summer. We closed our doors for the season the 15th of October.

Our 2005 Annual Sweepstakes is history. The lucky winner of the Luscombe was Roger Tretera of Greencastle, IN. He was obviously extremely excited. Roger tells us that he will be here to pick up his prize sometime this fall. We are looking forward to meeting him and handing over the keys for his airplane. John Mentag of Bloomfield Hills, MI, was the winner of the Bomber jacket. This year we increased the number of entries we would accept in the Sweepstakes to 1200 and they were all gone 12 days before the drawing. The first time we have sold out well

Please keep in mind that the Dakota Territory Air Museum and the Fargo Air Museum are non-profit organizations and will accept donations that are normally tax deductible to the donees.

in advance of the drawing. The 2006 Sweepstakes aircraft has not been purchased. If any one has 40's vintage aircraft that you might want to sell, please let us know.

Both the Dakota Territory Air Museum and the Fargo Air Museum continue to receive aircraft and aviation related memorabilia. Please keep in mind that both museums are non-profit organizations and will accept donations that are normally tax deductible to the donees. Please keep the museums in mind when you are thinking of cash donations. Also, keep us in mind when you are doing estate planning. It all helps us to do a better job of preserving aviation history.

As I mentioned earlier, we at the Dakota Territory Air Museum, are winding down our 2005 season, however, the Fargo Air Museum does remain open year round. Whenever you get to Minot or Fargo, please include us in your schedule.

Dark Night from page 6

first officer looked out the windshield and the captain managed the radio communications and focused alternately on the windshield and the instrument panel. The plane was moving at more than 80 knots, or nearly 100 miles per hour, when the first officer asked if there was an aircraft in their path. Mr. McMahon looked but did not see one.

"It was far too late to stop," he said — they could have steered off the runway and into the dirt, but probably would have hit the Boeing anyway. After the first officer asked again, "Is that an aircraft in front of us?" he pulled back on the yoke, lifting the nose, a maneuver known to pilots as rotation.

But once he had spotted the passenger jet, he pulled back hard so the climb would be abnormally steep, Mr. McMahon said. The captain estimated that his cockpit was probably only about 75 feet above the fuselage of the 767, and that since his plane was 187 feet long and was pointed up very steeply, the tail was much lower.

Mr. Raz calculated that if the DC-8 were at a 10-degree angle, its tail would have been about 45 feet above the fuselage.

Fully loaded, the top of the Boeing 767 fuselage is about 23.5 feet off the ground. The tail rises about 30 feet above that.

The unauthorized presence

of a plane or other vehicle on an active runway, known as "runway incursion," has been a major concern for years.

In order to prevent it, the intersection at Kennedy Airport through which the Israir plane mistakenly crossed, has a line of amber and red lights embedded in the concrete.

"After we got over him and I knew we didn't hit him, I called the tower and told them there was an aircraft on the runway," Mr. McMahon said.

The tower controller did not immediately respond, he said, and Mr. McMahon repeated the information, to be sure the controllers on the ground understood the problem before clearing another aircraft for takeoff.

"Do you understand that there's an aircraft on Runway 22, right?" Mr. McMahon said. He repeated. Mr. McMahon. A slight pause, and the controller replied, "Yes, we're talking to him now."

Mr. McMahon did not find fault with the Israir crew. He said that in the dark, it was easy to get lost. "I've been there with bad weather before, and I can put myself in the same position as the other captain," he said. "He basically missed that turn, and I can see why." Mr. Raz said of the first officer, "It was a very good decision to take off and not to try to stop or steer from the runway." He added, "It was very, very lucky, that's for sure."

NDPA from page 6

they would cover security with several different situations. I believe this may have covered a good portion of "risk factors of major attributes" for each airport. But you never know what will pop up in legislation on the federal level because of someone's belief. Best thing we can do in ND, is make it known, we are taking proactive measures to thwart any means to use our airports and aircraft for unscrupulous activities. Meanwhile keep a sharp eye out for activities the may not seam appropriate for our airports and use of aircraft. Report these activities to law enforcement or Homeland Security personal.

Have a great fall, and see you at the Symposium in March.





By Erling Rolfson, President

It has been busy across the great State of North Dakota for airports. The AAND board met in Dickinson in August with Charity Speich, the Airport Manager, hosting the event. The meeting was held in Dickinson and after an afternoon meeting we proceeded on to Medora to the pitchfork fondue and attended the musical. The weather was perfect and a great time was had by all.

Major concerns at the meeting centered around new construction and the status of air carrier service throughout the State. Jamestown is having a total reconstruction of their main runway with a completion date of October 1st. It is on schedule. Wishek just completed a new overlay. Loren Henke reported everything went well and it looks great. This is a great addition for that community in southcentral North Dakota. New Rockford completed a total rebuilding of the runway in six days. This involved adding four inches of gravel to the existing runway, then grinding the old runway asphalt in with gravel to come up with an excellent base. To this we added to two lifts, a two-inch lift followed by a 1 and 1/2 inch lift. The runway was down for six days — that must be some kind of a record for a complete reconstruction. The contractor and engineering firm did an outstanding job and references will be supplied on request. The financing and work with our local city and county government went smoothly. It shows that if we all work together, good things can be accomplished.

Air carrier service to Jamestown and Devils

Lake was discussed. The bottom line is that these communities now have early morning departures and late evening arrivals. Great work by the communities, their Airport Managers and Authorities. This is the kind of growth and cooperation that is needed for regional Airports in North Dakota. Fargo is in the process of receiving another airline to service their

community.

The BRAC is now history. We did take some hits. We must thank our Congressional delegation for the excellent work and effort that was put forward. This also includes our State government and the local communities. North Dakota has fared well and the combined effort paid off.

Clint Torp, Airport Manager at Devils Lake and Secretary/Treasurer of AAND, will be attending a UND Aviation Scholarship Awards ceremony. He will be giving out our annual

scholarship to some deserving student from North Dakota involved in Airport Management. We have been giving this scholarship for many years and several of the recipients now manage airports in North Dakota.

We discussed the annual convention in March. We are putting together a great program. If there are topics you would like to have us address now is the time to let us know. Mark Holzer, Aeronautics Commission Aviation Planner and Jim Lawler, Airport Manager in Mandan, are in charge. They do a great service. We believe that every community should have a representative attend this convention. You know you have to take check rides and physicals, therefore this annual checkup is just as important, be there.

12 NORTH DAKOTA AVIATION QUARTERLY

North Dakota Aviation



HALL OF FAME

Birthdate:	If Deceased, Date of Death:
Current Place of Residence: If applicable)	
City and County in which this not with respect to this award:	minee's greatest aviation contribution(s) took place,
	City / County
This I	Nomination is submitted by:
	Nomination is submitted by: dividual or Corporation
In	

Each nomination will be judged according to the following criteria. Each category will be given equal weight in the judging.

- Major achievements in aviation in North Dakota.
- Significant contributions to the development of others in aviation in North Dakota.
- Special service to the state of North Dakota in aviation activities.
- Activities that bring credit to North Dakota aviation, either nationally or internationally.
- Significant contributions to the local community or the state of North Dakota that are not related to aviation (i.e.; service clubs, church related, political activities, etc).

Each entry must include information that meets each of these criteria. Each entry will receive a more accurate evaluation if the information is presented by category in the suggested order. Additionally, the nominee's achievements must be submitted type written, double spaced with the text limited to a maximum of four pages. If the nominee is selected, the nominator is responsible for a 5 x 7 photograph of the nominee.

Nominations are to be sent to:

Aviation Hall of Fame, PO Box 5020, Bismarck, ND 58502 before November 30th of this year.

If you have any questions please write or phone (701) 328-9650.

Hector International Airport (FAR) Honored as National Award Winner

The American Concrete Pavement Association and Concrete Construction magazine gave the runway project a national award of excellence in its commercial service and military airport category.

The award honors contractors, engineers and owners for outstanding projects completed in 2004.

Hector's primary runway was rebuilt over a five-month span last year, at a cost of about \$18.2 million. The renovation project was the largest in the airport's history.

Minnesota-based Shafer Contracting Company and local firm, Ulteig Engineers, worked on the project.

Last year's winner in this category was for a runway and lighting project at Denver International Airport.

The Fargo Airport Authority will be honored at an awards ceremony at the Association's annual meeting in early December in Indian Wells, California.

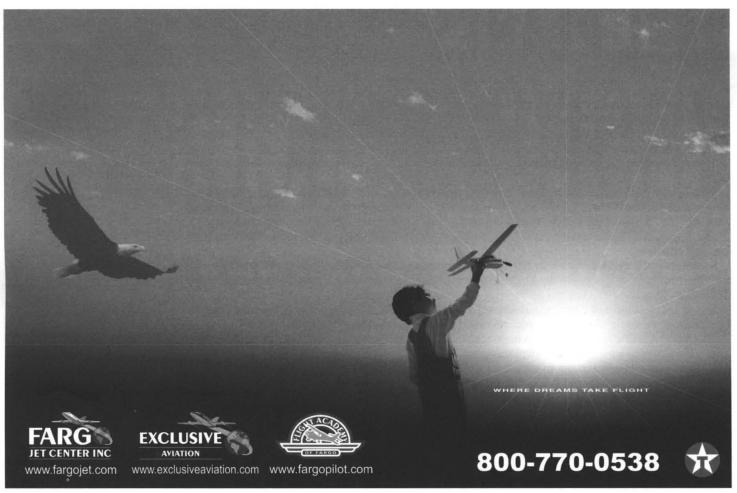


We have completed our mission and attended all of this year's fly-ins.

Let's start to gear up for the Upper Midwest Aviation Symposium to be held in Bismarck

March of 2006







REEL PLANES



Most people know Gen. Chuck Yeager as the man who first broke the sound barrier, but did you know he was also a movie pilot? Yeager flew one of the F-86 Sabre jets seen in the 1950 epic "Let Bilet" etaring John Wayne

"Jet Pilot," staring John Wayne.

Produced by Howard Hughes, the film was shot over three years, from 1949 to 1951. Of note to history buffs is the mix of Air Force uniforms. Some of the men wear the khaki and olive drab leftovers from the Army Air Corps days, others are in Air Force blue similar to what we know today.

While most movie makers of the era had to rely on models for their action scenes, Hughes, because of the contributions he'd made to aviation, got the Air Force to help him out with real aircraft. The "Russian fighter" in the movie was actually Northrop's XF-89 Scorpion prototype.

The movie was not released until 1957. By then, the military aircraft shown in the film had become obsolete.

Sometimes the military went to Hollywood producers asking for certain airplanes to be put into the movies. Such was the case in 1938 when "Test Pilot," starring Clark Gable and Spencer Tracy, was filmed.

The military could not have manufactured a better publicity campaign. Gable was the biggest box office draw of the day and the plot revolved around his character testing the YB-17.

The Army Air Corps was happy to have the producers use the airplanes. At the time, Congress was still not quite convinced the airplane was all that the Air Corps and Boeing claimed it was and there was some reluctance to spend the money on weapons when America was not at war.

In all, 12 of the B-17 prototypes participated in the filming. A few years later these same airplanes saw action in World War II, while Gable became a waist gunner on a B-17 following the death of his wife, Carole Lombard, in an airplane crash.

Credit: General Aviation News

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