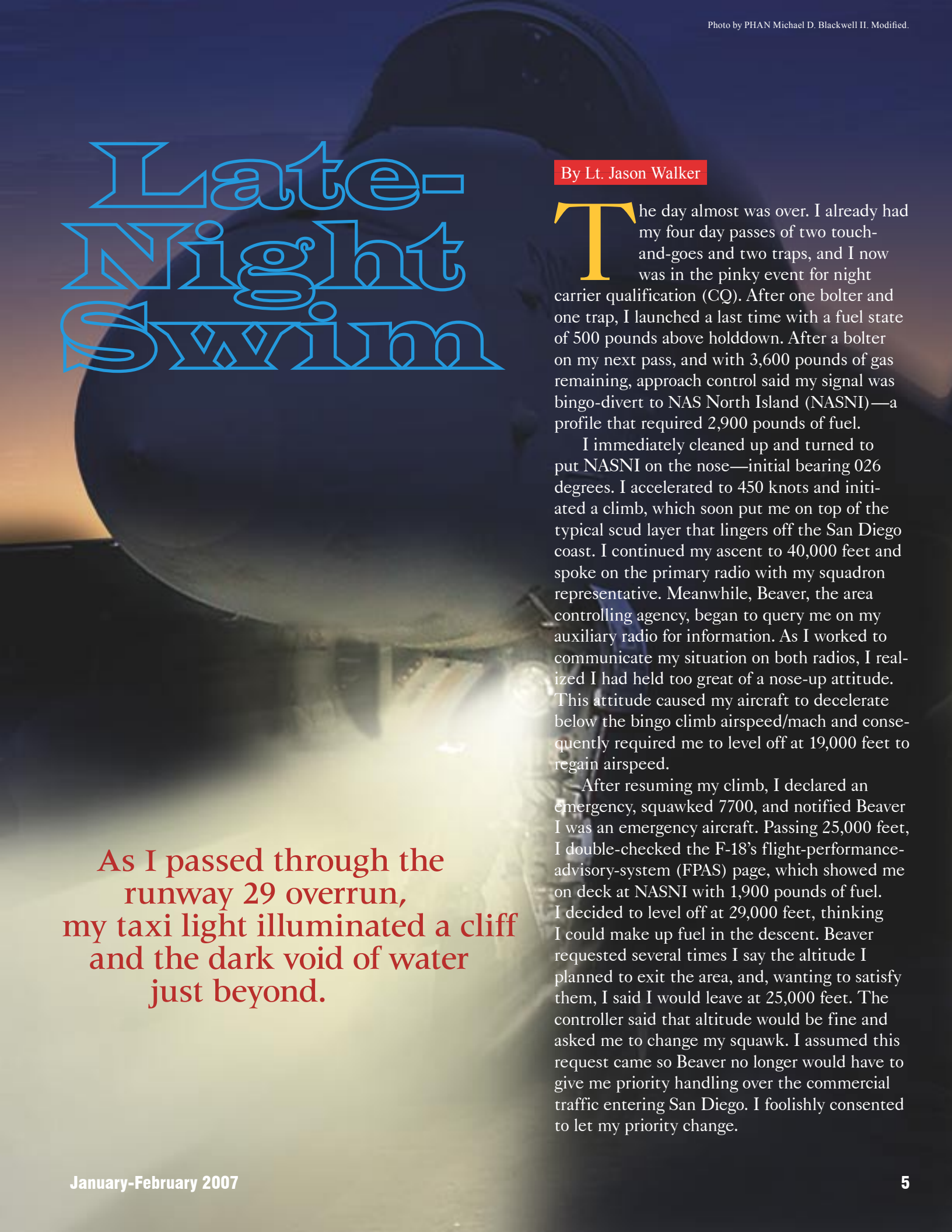

Photo by PHAN Michael D. Blackwell II. Modified.

Late-Night Swim

By Lt. Jason Walker

The day almost was over. I already had my four day passes of two touch-and-goes and two traps, and I now was in the pinky event for night carrier qualification (CQ). After one bolter and one trap, I launched a last time with a fuel state of 500 pounds above holddown. After a bolter on my next pass, and with 3,600 pounds of gas remaining, approach control said my signal was bingo-divert to NAS North Island (NASNI)—a profile that required 2,900 pounds of fuel.

I immediately cleaned up and turned to put NASNI on the nose—initial bearing 026 degrees. I accelerated to 450 knots and initiated a climb, which soon put me on top of the typical scud layer that lingers off the San Diego coast. I continued my ascent to 40,000 feet and spoke on the primary radio with my squadron representative. Meanwhile, Beaver, the area controlling agency, began to query me on my auxiliary radio for information. As I worked to communicate my situation on both radios, I realized I had held too great of a nose-up attitude. This attitude caused my aircraft to decelerate below the bingo climb airspeed/mach and consequently required me to level off at 19,000 feet to regain airspeed.

After resuming my climb, I declared an emergency, squawked 7700, and notified Beaver I was an emergency aircraft. Passing 25,000 feet, I double-checked the F-18's flight-performance-advisory-system (FPAS) page, which showed me on deck at NASNI with 1,900 pounds of fuel. I decided to level off at 29,000 feet, thinking I could make up fuel in the descent. Beaver requested several times I say the altitude I planned to exit the area, and, wanting to satisfy them, I said I would leave at 25,000 feet. The controller said that altitude would be fine and asked me to change my squawk. I assumed this request came so Beaver no longer would have to give me priority handling over the commercial traffic entering San Diego. I foolishly consented to let my priority change.

As I passed through the runway 29 overrun, my taxi light illuminated a cliff and the dark void of water just beyond.

As Beaver pushed me to SoCal approach control, I ran through the ship-to-shore checklist in my cockpit. Runway 36/18 was out of service at NASNI, so SoCal immediately gave me a vector for a PAR approach to runway 29. I continued a gentle descent, hoping to conserve fuel, but I soon realized I was setting up for an extremely steep approach if I quickly didn't lose some altitude.

With my speedbrake deployed and pushing the minute-to-live rule, I made it down to my assigned altitude. I lined up for the approach just as SoCal switched me to the NASNI final controller. His initial calls said I was "well right of course," which was confusing, because I could see the runway straight ahead, aligned perfectly off my nose.

My controller began to pass instructions about noise-abatement procedures, and I suddenly recalled the divert lecture our squadron had received on NASNI: The final-approach corridor was offset from runway 29 by eight degrees to the left. Looking out, I saw the famous Hotel Del Coronado dead ahead, along with a number of other apartment buildings along the Coronado coastline; I decided to make a quick jog to the left to avoid them. Once past the buildings, I returned to runway centerline and received the call that I was "well above glide slope." This information was disheartening, to say the least, considering I had not heard any previous glide-slope calls from my controller. With the runway in sight, I immediately pushed over and set the velocity vector four-degrees down on the landing environment, establishing a 1,000-to-1,200-feet-per-minute rate of descent. Although I had sight of the landing area and the instrument-approach markings at the end of the runway, I could not see the fresnel lens, which I knew had to be there somewhere.

Upon reaching about half the pedal depression, I realized something was not right.

While on short final, I double-checked my velocity vector was set on the captain's bars, roughly 500 to 1,000 feet down the runway. However, once I saw the familiar airfield markings, I unconsciously became complacent and gave up looking for the ball. Continuing with my steep approach, I never did achieve a three-degree glide slope and subsequently touched down with an 800-to-900-feet-per-minute rate of descent. I landed, pulled the throttles to idle, and programmed in aft stick as the jet decelerated through 100 knots. I also checked my brakes and felt what I thought was a solid lurch of the jet when I applied pressure to the pedals.

Approach told me to switch to tower; I momentarily looked down to scan for their frequency on the approach plate. I quickly decided against searching for the frequency. Feeling like I had lost track of time, I looked back up and immediately got the sensation I was going way too fast. I began to slowly apply brake pressure. Upon reaching about half the pedal depression, I realized something was not right. I released the brakes and tried again, but still nothing happened. As panic began to creep in, I stood on the brakes, and got the same result. My throttles were at idle, my speed brake was out, and my anti-skid switch was on. My mind raced to determine why I wasn't stopping.

Seeing the red runway-end lights fast approaching, and with no distance-remaining markers in front of me, I threw down the hook. As soon as I dropped it, the wire came into view. I was hoping and praying the hook would get down in time, but a voice in my head was saying "no chance."

After making sure my nosewheel steering was engaged, I briefly considered taking a high-speed turnoff but quickly realized I was going way too fast. I was roughly 600 to 700 feet from the end of the runway and still traveling at 60 to 70 knots when I reached for the emergency-brake handle. I couldn't find it. Seeing the runway-end lights racing up at me, I screamed into my mask as my left hand continued to fumble for the brake handle. As I passed through the runway 29 overrun, my taxi light illuminated a cliff and the dark void of water just beyond. I had not even thought of the ejection handle until this point, but, as the water got closer, I quickly grabbed it with both hands.

I pulled the handle and heard a zip as the charges fired through the seat. I then saw the flash of the canopy blowing off, while my cockpit filled with smoke. I remember seeing a large fireball erupt around me as the main rockets in the seat fired, pushing me down with a significant rush of G's and launching me up into the black abyss of the night. I quickly was pulled out of my seat, and I looked up to find a good chute. Grabbing

the risers, I got about one-and-one-half swings before hitting the water and submerging.

When I finally reached the surface, I managed to remove my mask and heard the flotation devices on my harness inflating. I began to back away from the parachute when I realized my leg restraints and kneeboard, which amazingly still were attached but were hung up on the parachute lines. I cleared myself of the lines, only to discover my left Koch fitting still was attached. The parachute was being dragged by the current and was sinking, taking me along with it. The inflated LPU was restricting my access to the Koch fitting. I eventually released it, freeing myself from the tangled mass. I was in the water for about five minutes before crewmen in a Coast Guard zodiac rescued me.

After a thorough investigation, the aviation-mishap board determined I lost my normal anti-skid braking because of a transducer-circuit failure. The transducer is located in the aft portion of the brake hub and has a wire protruding from it that is adjacent to the aft wheel tie-down point. Because of its proximity to the tie down, the transducer on my aircraft had become damaged during flight-deck operations.

As background, the anti-skid transducer's purpose is to monitor the anti-skid system and completely shut it off should the anti-skid fail or the brakes lock up. With the switch on, all braking is lost should a transducer failure occur. The easy fix is to simply turn off the anti-skid switch, which will provide full braking without anti-skid. This failure is quite common during shipboard ops, with more than 19 confirmed cases of this failure in the FA-18. The failure can be recognized by a cockpit anti-skid caution and an MSP code of 907 or 908 (left/right anti-skid, transducer-circuit failure). The night of my mishap, the deployable-flight-accident-recording system (DFIRS) noted an anti-skid caution illuminating about one second after touchdown, but I do not remember seeing or hearing that caution.

In retrospect, I should have taken a different course of action the instant I realized the brakes were not working. There were several actions to choose from. First, I could have gone around and come back for an arrested landing. The Hornet can get airborne with as little as 1,000 feet of runway remaining, and I certainly had that much concrete in front of me when I realized my brakes were gone. Second, once I did decide to keep the jet on the runway, my priorities should have been to select emergency brakes, not check my throttles and put out the speed brake. Finally, I let myself get distracted; I was wondering why I was having this braking problem instead of reacting to the emergency. Once I knew I had the runway made, I allowed myself to become complacent. I no longer was ready to handle, with split-second precision, any problem or emergency that might arise.

The administrative portion of flight is where most mishaps occur. We must continue to aviate, navigate and communicate until the aircraft is stopped. While NATOPS is our guiding publication and must be followed to the letter, it "is not a substitute for sound judgment." Many situations can arise that NATOPS explicitly will not cover; so, we must rely on experience—ours and that of others. The information that comes out of SIRs, hazreps and publications, such as this one, are there to help you deal with compound emergencies or situations others have faced. Study them, break them down, and talk about them within your ready room.

Aviators gain invaluable experience by traveling to unfamiliar fields. Cross-countries, out-and-ins, and detachments are essential to becoming a better, more experienced pilot. Studying your divert fields also is essential to preflight planning. Destination information, including runway lengths, arresting gear location, obstacles, procedures, emergency-safe and minimum-safe altitudes, and field lighting is information you must be armed with before walking to your aircraft.

Preflight planning also includes knowing your aircraft's performance characteristics. An FA-18, at landing weight and with two good engines in max afterburner (AB), still can take off from a stop in less than 1,500 feet. On average, E-28 gear is 1,500 feet from the end of the runway. The obvious take-away here is if you are trying to take the long-field gear and miss the wire, do not be afraid to take it around. Know your line speeds and maintain a good inside-outside scan of your instrument and the distance-remaining markers while on landing rollout. A line speed of double the distance-remaining board is a good rule of thumb for the Hornet (for example, no greater than 80 knots at the four board and 60 knots at the three board).

Never let anyone talk you into doing something that is against your best judgment, no matter how persistent or distracting they may be. Take charge and use the good headwork that you have developed as a naval aviator. If you are told to bingo, fly the profile, no matter how much excess gas you have.

Lt. Walker flies with VFA-151.