DIVERTED, continued, (Part 4 of 4):

Before reading the final part of "Diverted", let's bring you up to date. Walter Keys and Zeke Lang are aircraft commanders and each are piloting the navy version of the DC-4 from Iceland to Newfoundland in February, 1953. Keys accepts the flight plan worked up by the Transport Control Officer at Keflavik, Iceland, while Lang, the more experienced of the two, modifies the flight plan to avoid the worst icing conditions. Keys does run into icing conditions worse than forecast and uses up most of his gasoline. The DC-4, the first successful land based transoceanic transport aircraft does not have a lot of extra range, especially when westbound over the North Atlantic in the winter. It is about to be replaced with the 2nd generation of propeller driven transport aircraft. Improvements would be; more speed, more range, equipment that would combat icing efficiently, especially propeller, wing and windshield icing and pressurization to fly above most icing conditions.

A mention about air traffic. There was very few airplanes in the air over the North Atlantic in the late 1940's and early 50's. The pilot usually could choose the altitude desired (within the capability of the aircraft) and deviate from course if he desired. He advised ATC but clearance was granted most of the time.

In the final part, the experienced Lang winds up a routine flight and the sharp Keys, gaining a lot of experience on this flight, faces the fact that he is running low on fuel and weather deteriorates at his destination. He still has some arrows in his quiver though, so how this part ends - read on . . . . .

"Navy 50863, Argentia GCA, your heading now 270 degrees, altitude should be one thousand five hundred feet, you are four miles from runway, over."

"Two-seventy the heading, fifteen hundred feet," Swartz acknowledged into his microphone.

Walter Keys full attention was directed to making this instrument approach. He added power, leveling the R5D at 1,500 feet while maintaining airspeed at 125 knots. He rechecked: wing flaps twenty degrees, RPM 2,300, Approach Check List complete.

"Luke, lets try running some more alcohol on the windshield."

Even after twelve and a half hours of problems Keys twenty-four year old mind was alert and thinking ahead. It wasn't going to be easy to see well enough to land – some of the ice which had accumulated on the windshield over the previous nine hours still clung to the glass. Some had evaporated after they had broken into the clear but enough had remained to form a base for additional accumulation after descending into more weather over Newfoundland. The cockpit heater was operating, supplying warm air, and they had operated the windshield alcohol pump several times but much of the windshield was covered by a rough, opaque mixture of rime ice and packed snow. When Swartz rotated the needle valve, alcohol flowed from the openings located near the apex of both windshields. The fluid had cleared a small area on each side near the apex then flowed over the outside of the rough layer and evaporated in the slipstream. Enough fluid seeped through tiny openings in the unpressurized airplane's aluminum skin so that the cockpit reeked of fumes. Keys anticipated that he might have to use the weather window to see forward for landing. He'd never seen anyone have to open the small, hinged window section because of ice accumulation. However, fortunately for him, during a local training flight at Westover AFB, on a sunny day almost a year ago, Sam Reagan had stretched a cloth hood across Keys' half of the windshield and insisted that he practice one. At least he would not be surprised by the horrendous

noise associated with it.

Although the time was ten A.M. in Greenwich, it was still night in Newfoundland where the local time was three and a half hours earlier. The Naval Air Station's weather wasn't good. If the wind direction had been from the southwest or the northeast, getting down would have been easy. A precision radar approach to the longest runway, 07/25, was a piece of cake for a sharp pilot like Keys. However, the wind was strong from the northwest and GCA, anticipating that a straight-in approach and landing on runway two-five wasn't possible, offered a non-precision approach followed by a circling approach to a landing on three-four. The radar approach would get them below the overcast and over the airport only. Keys would have to maneuver into any runway he could after that. One thing Walter Keys knew for certain - he wasn't going to try to go anywhere else because there wasn't enough fuel to do it. Less than fifty gallons remained in each of the four main tanks. In fact, Claymore's original "hundred gallons for the wife and kids" might be their margin of safety.

"Navy 50863, Argentia GCA, you are drifting left, turn right heading 275, descend to 1,000 feet, you are three miles from the airport, over."

"Right to 275, descend to one thousand," said Swartz, as Keys reduced power.

"Navy 50863, Argentia weather now ceiling ragged, 700 overcast, visibility two miles, surface wind 330 at twenty gusts to 35, visibility lower in snow squalls, over."

"What's your temperature on the ground and runway conditions?"

"Minus five degrees Centigrade, runways are generally clear with some minor drifting" came the reply followed by more instructions: "Continue decent to 500 feet, continue heading 275, report field in sight."

Keys set power at twenty-three inches of manifold pressure. Rate of decent was about 500 feet per minute. Although the windshield was mainly iced over, the twenty degrees of left drift permitted forward visibility from his own side window and he spotted runway twenty-five's lights over a mile out. He added power, stopping the descent at six hundred feet. It was easy for him to see that a landing on twenty-five, in the strong crosswind, with the windshield iced over would be extremely risky. The crosswind component would place side loads on the landing gear which far exceeded their design limits. He'd circled to land at Argentia before and knew that, if reported visibility was a mile or less, maneuvering would have to be planned and precise, otherwise a pilot could lose sight of the runway and fly into a pile of granite. He studied the instrument approach plate for the last time and once again read the note: "High terrain east and southeast of the airport. Maneuvering in this area extremely hazardous." He was going to have to use runway thirty-four and maneuver in that area nonetheless.

Skilled all-weather pilots didn't wait until they had visual contact before deciding what to do next. They planned the visual portion while they were still executing the instrument approach. Keys knew it would probably be too risky, after breaking contact, to try a 270 degree left turn to land on runway 34. He might get away with that but more likely he would lose the runway during the turn and the strong wind could easily drift him into high terrain on base leg. A better plan would be to get positioned downwind directly over the landing runway in order to execute a precise reversal

DIVERTED, continued, (Part 4 of 4)

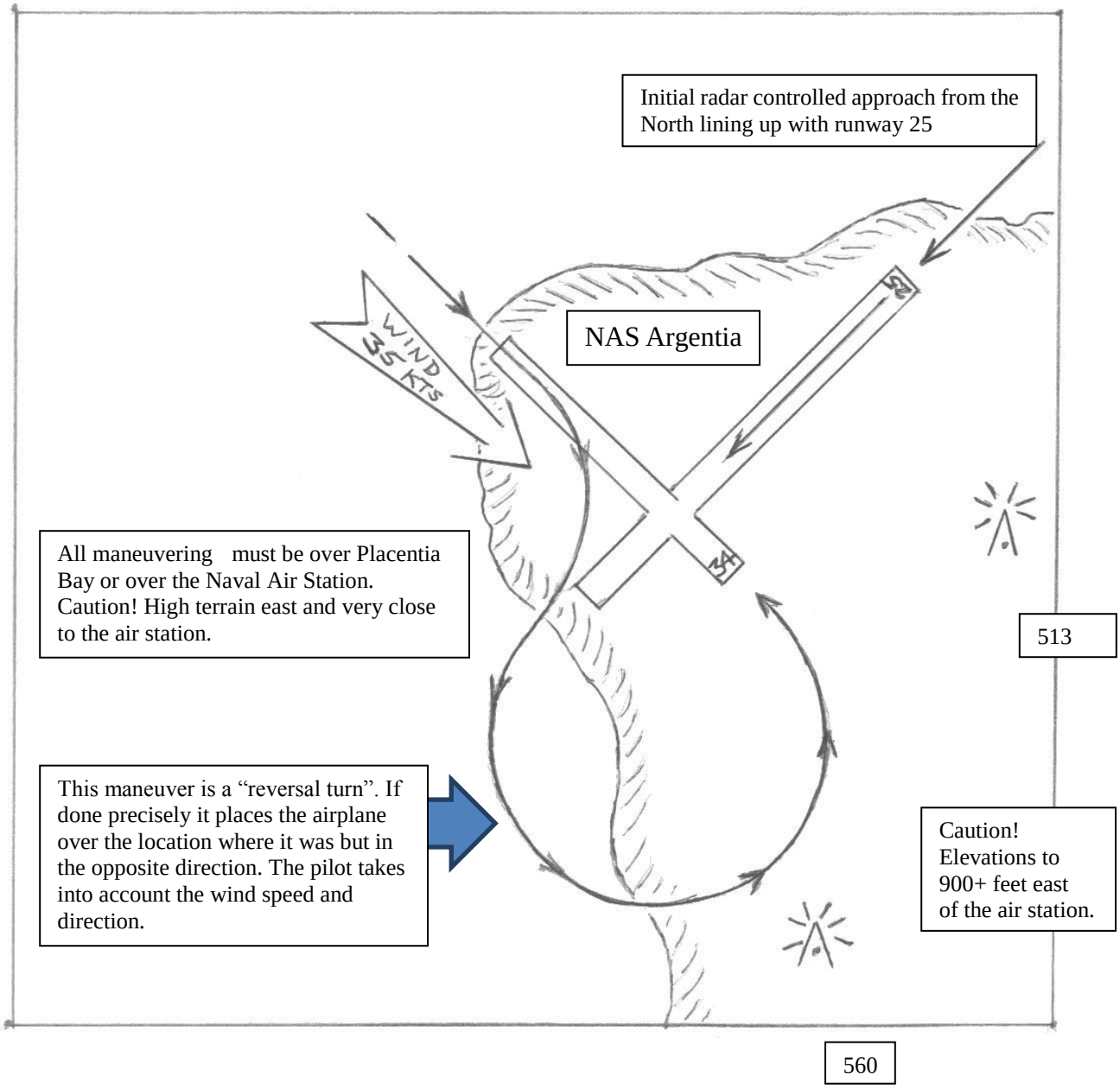
turn for landing into the wind. That way, he could better judge the distance from the airport on base leg and stay close in. Even if he lost the runway on base leg momentarily, a precisely executed reversal turn would enable him to find it again. Precise maneuvering would be essential to get into that initial downwind position over the runway. All preliminary maneuvering must be over water or over the airport. Keys was physically uncomfortable but concentrated his thoughts on the approach nevertheless.

If Keys had briefly entertained the possibility of a crosswind landing on either two-five or seven, he dismissed all thoughts of it upon first spotting the runway. Left drift on their southwest heading was so great that he had no trouble seeing runway two-five and most of the airport from his clear side window. It was immediately obvious that the crosswind componet for the main runway was well in excess of the maximum allowable for landing an R5D.

"Tell 'em airport in sight Luke and tell the tower we'll use thirty-four."

The tower cleared them to land on any runway at pilot's discretion, adding a caution about the high terrain east of the airport.

DIVERTED, continued, (Part 4 of 4)



Even the most experienced all-weather pilot's skill and judgment would be tested in these conditions. Keys could see the lighted runways, through the snow shower, straight down out of his side window. He proceeded down runway two-five allowing the aircraft's altitude to drift up - testing the base of the ragged overcast. Seven hundred feet was okay but any higher and he had to nose over to stay visual then, as he passed the southwest end of two-five, he executed his first planned turn. His flying was primarily on instruments with his scan going outside to check lights on the ground. Staying in the blackness over Placentia Bay, he made a right standard rate turn to a heading of 340, or a northwesterly direction. The aircraft was now flying directly into the strong wind and the airport was difficult to see. He resisted the temptation to turn back too soon but continued into the blackness over the bay for nearly a minute then executed another standard rate turn to the right. As his heading approached 160 degrees the copilot picked up the airport and runway lights first and suggested a shallower turn. Keys eased to a lesser bank angle then was able to see the runway lights

DIVERTED, continued, (Part 4 of 4)

himself to align the plane to come directly downwind over the runway 34. Although it appeared to the passengers that the pilot was confused, (they saw the airport's lights on first one side of the plane then the other) Keys was executing his well thought out maneuvers flawlessly.

Now he was downwind directly over the northwest end of the landing runway with airspeed well under control at 125 knots and "gear-to-go" on the check list. He had executed the radar approach and the preliminary turns for one purpose only - to get into this position. Just ahead, beyond runway sixteen's end, was darkness marked by a few red obstruction lights atop some higher elevations. There, high terrain rose to 770 feet within two miles and over nine hundred feet within four miles and a strong tailwind was blowing him toward it. An obstruction light whose elevation was marked as "560 feet" on the approach chart could be seen through a hole in the windshield's ice. Keys used a precious two seconds to check the operation of his weather window. It opened without difficulty but with the sound of a freight train coming through the cockpit. He quickly closed it. He dared not delay his reversal turn because the strong tailwind would carry them into the high terrain if he allowed it to do so. He started the right reversal turn just before crossing runway thirty-four's intersection with runway seven which he could determine from his side window. This was over the middle of the airport and almost two thousand feet before reaching runway thirty-four's approach end. He made his right bank slightly steeper than standard rate and rolled through with no hesitation on a heading of 250, continuing into a left turn. Altitude seven hundred feet, just under the cloud bases and just inboard of the obstruction light labeled 560 feet - it was black out here and the confident young pilot resisted a very strong urge to gain altitude and in clouds.

Twelve and a half hours after takeoff, forty-five minutes of fuel remaining, tired and troubled, with the windshield iced over, Walter Keys had the toughest two minutes yet to go. His two hundred seventy degree turn back to runway heading over the dark hills was smooth and precise. He picked up the poorly lighted fifty-eight hundred foot long runway through his side window as he finished his turn to short final, still planning ahead.

"Gi'me the gear Luke!"

They appeared to be high but he counted on the thirty-five knot headwind to reduce their groundspeed dramatically, allowing time for a steep decent after clearing all terrain.

"I got three green on the gear," stated Swartz.

"I'll take thirty flaps and - I'll be using the weather window."

"Gotcha!"

"Landing lights on!"

Keys allowed his speed to taper to 110 knots but was descending rapidly now - less than one-half mile from threshold. Very little drift and having trouble seeing the runway while lined up - the iced over windshield obstructing his view and snow streaming back into the lights. He skidded and slipped the airplane slightly, to maintain the view out the side window - it was difficult but he'd postpone using the weather window as long as possible. . .Coming down - not going to have to use full flaps . . . . steep descent . . . . make a double flare Keys . . . just like Otto Kouroon taught you at Crows Landing. . . . two hundred feet . . . 105 knots . . . . throttle back

DIVERTED, continued, (Part 4 of 4)

some more . . . . . pull the weather window open . . . left side runway lights okay through the window but the noise! Loud as hell! . . . . threshold lights . . . . . about a hundred feet - flare some more - come on down - ease the power off more - come on down . . . . . touchdown! . . . . . left of centerline - rudder it over and lower the nose . . . . . slowing fast and the freight train is fading away . . . or is it because we're almost stopped on the runway.

"Damn its cold with that thing open!" Keys slammed his weather window closed. A few snowflakes had entered the cockpit after their speed had slowed to almost a walk. Using the nose wheel steering and looking out his side window, he made a left 180 degree turn on the runway to taxi back but then couldn't see well enough ahead. He slowed, unlatched his side window and slid it back on its tracks. A swirling tailwind mixed with prop wash whipped snowflakes into the cockpit as Keys leaned his head out into the cold to see where he was taxiing.

The blackness of night was just beginning to give way to the gray of early morning twilight.

* * * * * *

Two weeks later, Zeke Lang sat alone at the bar of the Red Barn one mile outside Westover AFB's main gate in Chicopee Falls, Mass. He sipped his beer and checked his watch. Five o'clock and the place was just starting to get busy. He'd been here a few times before and knew that within the hour there would be a big crowd. They didn't call this place the "body exchange" for nothing and Friday night should be the best time.

Lang was dressed in his aviation winter working green uniform. Even though it wasn't authorized for off base use, except for going to and from work, he felt confident that he would have no trouble. Chicopee Falls was far enough inland so there were no Navy shore patrols and the base Air Force personnel had no idea that greens were not to be used off base. He had a reason to wear his aviation green uniform - it attracted women in droves. They didn't seem to be able to resist the sight of an officer wearing greens, especially when they spotted the gold wings on the left chest. Lang recalled that his old friend, Carl Hardwick, used to call greens his "rape suit" because of the magical effect they had on women. Carl thought he had such an advantage while wearing them that it was almost "unfair." Even now a cute blonde came in, sat directly across the open rectangular bar from Lang, then started sending signals in his direction.

"Hey Zeke, I've never seen you in here before."

Lang turned to see Walter Keys, also wearing greens, take the stool beside him. "Hi Walt. Your gon'na see me in here more from now on."

Keys tucked his green garrison cap in his trousers belt then looked at Lang curiously.

"I'm batching it now - or didn't you know?" Lang waited for a comment from the young ensign.

"No kiddin' Zeke. What happened to Cathy? This is just temporary right?"

"Nope. Not temporary. She took off. It was right after that trip a couple weeks ago - you know - that one where you and I came back on the same day. Where you went into Argentia and I diverted to Moncton."

DIVERTED, continued, (Part 4 of 4)

"Took off? So you're splitting up? You and Cathy - splitting up?"

"Yep. Split up. Past tense Walt - but what about you? I haven't seen you around since we got back?"

Keys poured his beer into a glass and took a long drink before answering. "Yeah - I took a few days leave. Had to go down to Garret County in Maryland to see my folks but I'm back, fit as a fiddle and ready to hit the road again."

Lang wondered what Keys meant by "fit as a fiddle" but allowed the remark to pass. "I didn't get a chance to talk to you about that crazy flight Walt. You must have been running low on petrol when you touched down at Argentia."

"Low is an understatement Zeke. Don't think we had more than forty-five minutes left in the tanks."

"How was the approach into Argentia?"

"Actually, the weather wasn't all that bad except that the damn wind was blowing from the wrong direction. We had to land on thirty-four with a 700 foot ceiling. The windshield being iced up didn't help."

"They have a lot of rocks close in on the approach to thirty-four. Guess you managed to miss 'em or you wouldn't be talking to me now."

"You know Zeke, its funny but when I was maneuvering to land I thought about how you, Sam Reagan and Otto Kouroon had worked my butt over practicing reversal turns and tight close-in approaches." A note of gratitude came through in the young pilot's tone of voice.

"I figured you must have had to do something like that when I listened to the weather reports. We were sweating you guys out. Especially after you went off the frequency for Harmon."

"Sorry about that. Without you relaying for us after we lost our HF antenna, we would have been in even more trouble. What happened was that I temporarily switched over from 137.88 to Gander Radio on 135.9. I was surprised when they answered up right away. Later, when they switched us over to radar at Argentia, I remembered but it was too late to call you. We didn't want to chance losing the ground station either."

"No problem Walt. We barely passed Harmon when they told us you had diverted to Argentia. What did they do with you on the ground there incidentally? I knew you couldn't have been delayed too long because, by the time we landed at Westover, they had a flight plan on you."

"We lucked out. They took a P2V out of the big hangar and towed us in. Then they put a tall workstand up and reattached our HF antenna to the vertical fin where it had broken off. While we were in the warm hangar, the accumulated ice melted off the airplane. There was enough ice still on the plane that it left an outline of melted chunks beneath the engines, props and wing leading edge. We'd been carrying some ice for hours."

"Walt - anytime you can miss going through that stuff you're money ahead."

"Yeah - I heard what you guys did Zeke. I was talking to Whitey and he told me about how you stayed low - two thousand feet for the first four hours, then up to ten after hitting the front. I'll bet your not gon'na believe this but the idea of going out low actually crossed my mind while we were filing out at Keflavik Operations. Wish I had done it."

DIVERTED, continued, (Part 4 of 4)

Lang sipped on his beer again and glanced at Keys. Only seven years of age separated them but the experience crammed into that seven years was considerable. However, It wasn't merely the experience that counted, it was the confidence that he'd acquired along with it. Enough confidence to make a decision like filing his flight plan for two thousand then not be swayed by some inexperienced operations officer's remark about what a crazy idea it was because nobody else did it. He started to try and put that in the right words for Keys, then thought better of it. After all, Keys was sharp and he'd probably already learned his lesson from what had happened. Wasn't it similar to what he himself had gone through?

"Say - uh - Zeke - uh - you see that top-heavy brunette that just pulled up and sat beside the blonde over there? They're smiling and lookin' this way - uh - see the ones I mean?"

"I got 'em 'scoped Walt."

"I know that brunette, her name's Vivian. Met her in here a month or so ago. You want'a go over? Maybe buy 'em a drink?"

Lang tossed money on the bar, arose and stood behind his stool without answering. Then he and Keys walked around to the other side of the bar together.

Joe Reeves

Retired Navy Pilot & Navigator

Revised Sept, 2010

DIVERTED, continued, (Part 4 of 4)