The 99th Strategic Reconnaissance Squadron:

The Air Force's Story of Unmanned Reconnaissance in the Vietnam War

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DEDICATION

I want to share a story about this voice I sometimes hear in the back of my mind; which at age 16 used to set my teeth on edge… it is Mrs. Mertyl Greening, my high school English teacher. I hated her for giving me "Fs" on my book reports and term papers that were similar to efforts made by other kids who got "Bs" or "As" for theirs. In a barely civil tone, dripping with contempt, I demanded to know why I got an "F."

Mrs. Greening explained her rationale; then I felt even more frustrated. From that point onwards, she'd always scribble her crazed reasoning on my papers right next to the "F:" **"Do over…you're capable of better work!"**

My maturity at that stage of life was myopic and somewhat narrow. I was unable to see what my teacher was trying to do…I despised Mertyl Greening! I am pretty sure the statute of limitations has expired after four decades for being a teenage pain-in-the-butt to my high school English teacher. I'm guessing it's been more than 20 years since the Lord brought her home; she's likely watching me type this right now. I can only apologize to her for my poor behavior and say thank-you for seeing something in me that I did not see in myself. I have always loved to read; but, did not learn of my love for writing until I went to college a few years after serving in the Air Force. I shudder to think how things would have turned out for me, if for one year of teaching high school English – in a succession of 39 other years just like it – Mrs. Greening merely ignored another obnoxious teenager and did not bother to hold his (my) feet to the fire.

God Bless You & Many Thanks, Mrs. Greening…

FORWARD

The story you are about to read is quite unique; let me tell you why.

If you were to do an internet search on "drone reconnaissance" you would find a lot of material. At the time of this book's publication dozens of countries have some sort of unmanned airborne reconnaissance program either under development or in active operation. The genre is now referred to as UAS (Unmanned Aircraft System) because the drone requires remote control equipment and other external gear to make it a complete ***reconnaissance system***. The flying portion of the system is known as a UAV (Unmanned Aerial Vehicle).

The wars in Afghanistan, Iraq and Libya garnered heavy media attention. It was inevitable for drones to be a common discussion focal for U.S. military activity in all three countries. Media stories made household words out of the most widely seen UAS' –the MQ-1 *Predator* & MQ-9 *Reaper* – both designed & built by General Atomics – or Northrop-Grumman's RQ-4 *Global Hawk*.

If, however, you focused your internet search on operational reconnaissance drones used in 1970 – you would not find a lot of information, if any; and only one model was flying combat missions anyway…*that* is the Air Force UAV story this is all about.

I can tell you, however, that even though reconnaissance drones hit their stride in the 21st century it hasn't always been smooth sailing. During Vietnam anyone connected with drone operations could not wait for the day when the birds could actually deliver ordnance – I was one of those "connected" people. I can tell you, however, that except for the numerous "reincarnations" the U.S. Air Force visited upon the workhorse Lockheed C-130 Hercules during the Vietnam Era, the unmanned aerial platform we flew and became officially designated the "AN/AQM-34," ended up with just as many useful design variations.

Weapons-capable drones did not make it into combat usage in Vietnam; but, not for the lack of trying! The AQM-34 designers from Ryan Aeronautical and the Air Force folks of the 6514th Test Squadron at Hill Air Force Base were surely working their butts off to make weapons-carrying drones ready for Indochina deployment when the War ended.

The news media back then lacked a reliable source about drone operations – that being a testament to everyone's efforts in protecting classified information with good operational security (OPSEC). But, as I was about to say, the Vietnam Era news media was already claiming UAVs were bombing North Vietnam with Mark 82 500 lb. bombs! If they had any clue that a fully fueled drone (without an uploaded bomb) weighed between 2,500 – 3,000 lbs., even a grade-schooler could figure-out there was a problem with the math on that one!

Modern UAVs used in Iraq & Afghanistan have been shooting Hellfire missiles regularly for over a decade; and they're far more accurate and lighter than a 500 lb. "dumb" bomb. You only have to refer back to November 2011 to find the lack of smooth sailing I referred to when a U.S. Air Force drone fired a Hellfire near the AfPak border and mistakenly killed 24 Pakistani soldiers. The tragedy caused Pakistan to close down the AfPak border's G-LOC (ground-lines-of-communication); no American or NATO transportation crossed in either direction for seven months! That unfortunate mistake cost U.S. taxpayers an extra $100 million a *month* in logistics fees. Drones are necessary in today's fight – but, the genre still has some growing pains.

Several books have been written touching on drone reconnaissance during the Vietnam War – but not like this one. There are books written from the manufacturer's perspective and by airborne reconnaissance experts. There's also some unpublished works on the internet written by enthusiasts. But *this* book tells the story based on insider details and organizational knowledge of the USAF airmen who served in the program during Vietnam. It's long overdue in getting some perspective from the Air Force "blue-suiters" who served their country as active members of the first operational drone program to fly combat sorties. As they like to say in today's media, what's written here contains the view from the "boots-on-the-ground."

Having served personally in the Air Force unit described herein, I always toyed with the idea of writing a book about it. What finally galvanized my book-writing effort was reading an internet posting one day that attributed 100% of our work to a different Air Force unit completely unrelated to us! My first thought was: "That does it; it's time to set the record straight…I'm writing a book!"

The majority of veterans, regardless their nationality or era, consider their military service to be ***very*** personal – an almost sacred experience – and are often reluctant to share their stories. You can look to a recent movie, *"The 9th Company,"* about a Russian infantry unit fighting in Afghanistan in the 1980s. If the movie had been done in English instead of Russian – and you didn't know any better – you could easily conclude the story was about an American combat unit. Soldiers are soldiers, and war is war. Years ago, a retired Marine Sergeant Major I knew used to say, "War is hell…but combat is a mother f_ _ _er!"

There are many reasons G.I.s are guarded about their service. For some, the reluctance stems from the horrors they witnessed, friends they lost, or the severe injuries they sustained. In the case of Vietnam Veterans, you can add to the "reluctance list" two additional factors:

1. We fought an unpopular war where the media portrayed us as America's first generation of citizen-soldiers to "lose" a war. Many of us, unjustly or not, adopted a sense of bitterness at one extreme; or at the opposite end many decided the less said the better.
2. Anyone who served during the Vietnam War in special operations or intelligence, surveillance or reconnaissance (ISR) operations held at least a Top Secret clearance. Holding any sort of security clearance meant you were frequently reminded of the "Need-to-Know" rules for handling classified information. In a

unit such as ours where holding a Top Secret clearance was commonplace, we learned from day "1" that whatever was heard, seen or said at work was left at work. These "lessons learned" on classified information carried over to our post-military, civilian lives. As we each put our military careers behind us, we placed our classified information knowledge as far back as possible in our minds and quietly closed the door on that chapter of our lives.

The net result of these two comments is this: There's very little information in the public domain concerning the intelligence programs you will read about in this book.

I started off to make this a "pure" drone story. But, the further I dug, the more I realized I could not keep it pure. I learned that the backdrop of war, politics, social unrest, interagency squabbles and technology all had a ***major*** effect on the shape of unmanned airborne warfare. As you will see, some of the influence was decidedly positive – and some, not so much.

I recognize the readers of this book will span the knowledge spectrum from military and civilian men & women involved in the management, design, manufacture, test and support (i.e.; logistics, finance, accounting, et al) of our drones, or the active-duty airmen who served with me in our wing (and certain other ancillary USAF units), or folks just looking for a good yarn. In consideration of this broad spectrum of readership I've tried to walk the tightrope between too many technical details versus a manuscript that is too generalized.

I must direct some ***important*** comments to my fellow drone program alumni:

1. I apologize if the story path differs at times from your own recollection. If I may be so bold, I can offer you the consolation that in my interviews and extensive research there were many things I learned myself that differed and/or clarified previously skewed information or misconceptions I held.
2. I will also apologize for my own personal observations made from time-to-time. This book is *most* definitely NOT about me. My role in Air Force unmanned reconnaissance was so small and insignificant that I merely consider myself damned lucky the Air Force assignment detailers at Randolph AFB stumbled over my name and blessed me with such a great opportunity. My only intent by interjecting some infrequent personal comments is to keep the narrative from having too much of a textbook or reference manual-feel to it.
3. As the story progresses you will notice back then there was a deliberate effort by recon drone SMEs (subject matter experts) to not only carefully protect classified information, but also to disguise critical project facts. These behaviors often led people to improperly combine two pieces of information, such as adding 3+4, and erroneously conclude the right answer is eight. USAF leadership, the Pentagon, and the Intelligence Community were more than happy to allow rumors, disinformation and incorrect conclusions to spread unchecked. My research showed that in some cases disinformation spread within our own ranks and was left "as-is" – if the gaff didn't cause injury or property damage.
4. The final item directed to my unit colleagues is about the book's title. You might be wondering why I chose to use the 99th Strategic Reconnaissance Squadron

(SRS) as the title instead of our wing's name. I did this thinking the 99th SRS might be a better attention getter and/or memory trigger for readers just learning about us for the first time via this book. The 99th SRS was also the unit that was ultimately "at-the-tip-of-the-spear" – a microcosm of our whole wing – having under one roof both of the wing's National Intelligence Assets – the U-2 *and* the AQM-34 drone reconnaissance program. The 99th not only possessed the drones, aircrew and aircraft, but also the necessary maintenance personnel and support equipment. All of the various "home" unit designations figuring into our story will be mentioned and explained throughout the pages to follow.

Before I began writing this book in earnest, I spent some time preparing an outline to provide a story infrastructure. When I started writing the actual manuscript I did it by brainstorming my own personal knowledge and referring to my outline as a guide. I knew my SME level was merely average (even if my USAF job skills pertaining to the drone project was above average); so I didn't label *any* of my knowledge as cast-in-concrete. I tried my best to corroborate my personal knowledge with fellow unit alumni and/or 3rd party sources.

I also wanted to ensure accuracy by using official documents and other information repositories as much as possible. Many of the sparse but pre-existing magazine articles, reports, books and internet postings about Vietnam-era drones have used well-worn publicly available anecdotal information; often times just repackaging it. This is not meant as a slight to other writers; but more in recognition that over 80% of Vietnam Era drone program data held by various Government agencies was/is ***still*** classified. Finding useful, but untrampled, pristine data sources was not easy. A good example of this frustration was my pursuit of official Air Force photographs for inclusion in the book. I was looking for two types of photos: 1.) Anecdotal pictures taken by USAF personnel of various aspects of the drone reconnaissance program and its operations, including aircraft, drones, mission equipment, facilities and any troops or aircrew assigned to the program; 2.) Actual reconnaissance photos taken by the drones in Southeast Asia.

As it turned out, the anecdotal photos were not very difficult to locate. But, I was very surprised how difficult and exasperating it was to track down the actual drone reconnaissance imagery. I knew how difficult it was to gain access to written government data pertaining to drones. The difficulty stemmed primarily from most of the documents still being classified Secret or Top Secret. When it came to the drone imagery, however, classification issues did not cause me any trouble. The trouble was *finding* where all the pictures *physically* ended up after the War! Neither the Air Force History Office nor their Historical Research Agency (AFHRA) had them; nor did they know the imagery's whereabouts. The Defense Intelligence Agency, the National Reconnaissance Office, the CIA, the Defense Imagery Service and the National Geo-Spatial Intelligence Agency were ALL unaware of the drone imagery's whereabouts.

I finally checked with the National Archives at their special audio/video repository in Maryland. I spoke with one of the supervisory archivists who acknowledged that according to Federal Law any imagery products over 25 years old, declassified or not,

are to be turned over to the National Archives division where he works. The supervisor explained the laws and regulations were set in this manner so that regardless what someone has, or where it is located, no one is required to know the intricacies of Government recordkeeping…if all else fails, just pack it off to the closest regional National Archives facility where Federal records experts who are paid to know the rules will sort it out. In the case of the millions of photos taken by the drones during the War, the Archives supervisor indicated they did not have ***any*** of the drone imagery in any format; noting the Air Force had ***never*** turned them over. I filed numerous Freedom of Information Act requests throughout the Government and no one could find the photos.

By following a hunch, but mostly just luck, I finally located the drone photos through an unofficial source. I found a retired Chief Master Sergeant who was a photo interpreter; spending half his career as a P.I. at Hickam AFB, HI for the Pacific Air Forces (PACAF). The chief retired on Oahu and is active in an alumni association for his old squadron, which has a website. I spotted some drone recon photos on the site and contacted the chief about obtaining a few. I told him my sad tale of trying to track down the drone photos from the War. The chief replied, "well Steve, this is your lucky day…all those photos are right here!" I was flabbergasted.

The Chief went on to say that he still carried his Top Secret clearance and did volunteer work in the intelligence section of PACAF HQ when they needed help. He said he was quite familiar with all the reconnaissance imagery produced during the Vietnam War and could walk straight into the building and put his hands right on any of the drone's photographic files! I asked him about the situation related to me by the National Archives supervisor and was told the War's imagery collection is enormous and would likely cost millions of dollars to move the cache and re-collate it to National Archive standards in order to properly move the files to Maryland. PACAF never has the budget for the project – so there it sits!

The "elusive drone photos" story is just one of many mini-projects I took on while researching this book. Keeping all this in mind, I considered my data-mining efforts to be well worth the time and energy to flesh-out an accurate narrative, and endeavored to avoid overusing public domain anecdotes. I only used the common anecdotes when they seemed essential in moving the story along, or were a critical puzzle piece. I started out logging my research hours and was over 1,000 before my tracking diligence waned, and then stopped. I can tell you my efforts to find new and useful information sources, often from heretofore classified files, would probably make a good documentary all by itself!

One of my critical research goals was to seek-out a respected systems expert from our program who was willing to be my sounding-board for technical accuracy. I will say more about my project technical expert in various chapters. But for the moment, let me just say that I owe a debt of gratitude to Chief Master Sergeant David Matthews, USAF (retired) for his extensive project support in many different areas. Above all, I value his friendship and consider it the most important outcome of this book from my perspective.

At time of publication in 2014 my research of our unit and its operations brought in more than 37,000 pages of U.S. Government documents, newspaper clippings, industry reports, memoirs by military personnel and translated data originating from both South and North Vietnam, as well as the Soviets. All of the papers from the State Department, National Reconnaissance Office, CIA, Defense Intelligence Agency, Joint Chiefs of Staff, National Security Council, U.S. Air Force, U.S. Pacific Command, National Geospatial Intelligence Agency, and the United States Intelligence Board (or any of these units as they were previously known by) were formerly classified Secret or higher. Many documents (but not a majority) pertaining to the intelligence gathering programs in this book have been declassified by the above organizations – except the U.S. Air Force. A large portion of documents owned by USAF about our unit and its programs are still classified Secret or higher. Some of the lingering classified information is partly due to the fact that many reports were written with our drone reconnaissance program and U-2 information combined together; and with the U-2s still flying missions 50 years later, it makes declassification difficult without risking the lives of current Dragon Lady pilots.

I contacted the Air Force Historical Research Agency (AFHRA) at Maxwell AFB, AL about obtaining all the documents they had for our wing, our squadrons and our reconnaissance programs; and was able to request and receive more than 80 documents recently declassified only a few years ago. Some of these still had administrative markings such as "FOUO" (for official use only) or "NOFORN" (This is an acronym for "No Foreign Nationals;" an administrative marking that means regardless if someone has the proper security clearance, only American citizens are permitted access. This rule would become a thorny issue during South Vietnam's final two years before capitulation. More will be said on this at the appropriate time.)

Once I was vetted for U.S. citizenship and my access reason was deemed a valid and worthy enterprise, the Air Force lifted many of the administrative markings for my personal access.

After I received the declassified documents just mentioned the managing librarian sent me a list of more than 350 other documents at AFHRA still classified. To give you an idea of the magnitude of this document list we pulled, just the 100th Strategic Reconnaissance Wing's four quarterly reports for a one year span and nothing else, is about 2,000 pages. The 100th SRW and its predecessor wing were active a total of 20 years. So, just the quarterly wing history reports would be about 68 documents out of 350, representing 34,000 pages!

I learned about the process of "MDR" (mandatory declassification review). The abstract descriptions on each document were not much help in determining how useful the content might be. My preference was to file a MDR with USAF HQ, asking them to review/redact/declassify all 350+ files. The AFHRA folks, however, cautioned me that if I did that it would likely "crash" USAF's MDR system and I might never receive anything! I understood their point. I had just finished reading a book published in 2006 about a different aspect of Air Force ISR efforts in Vietnam pertaining to only one squadron; it took the author six years to get all of his unit files declassified via MDR. AFHRA suggested I submit a MDR request for six documents and see how it goes. It

took USAF's MDR Office more than two years to get 2,000 pages reviewed and released. Fortunately my personal knowledge of the subject allowed me to focus the MDR request on documents I felt might be the most useful for the book. The result of accessing many declassified documents via my MDRs was: A significant level of book content substantiates, corrects, or adds important, new public information previously unknown.

And finally to all readers, our unit and the combat operations we conducted were literally one-of-a-kind. The 99th SRS was part of an airborne combat reconnaissance wing that was not only the sole outfit in the Air Force doing this sort of intelligence work, but it was also the only one during the Vietnam War - in comparison to military units from ***all*** other nations - that was capable of doing what we did. In our case, we were walkin' in some tall cotton…and we knew it! This is the story of our outfit's 11 years of combat – mostly in the skies of North Vietnam.*

I hope each of you enjoy this fascinating slice of military history stemming from the Vietnam War. I personally enjoyed my service in the 100th SRW and consider it as one of the more important chapters in my life – a real source of pride for me. Writing this book brought back some great memories and has been a thoroughly engrossing project that has given me a great sense of accomplishment and an awesome learning opportunity.

**In the latter half of the Vietnam War there was a drone crew training squadron and a drone flight test squadron. Each unit was part of a different command and they were not flying combat missions.*

"I told him that I got the word last night that they may want a very heavy effort [from the B-52s] later this weekend well up north. I told him to have his people to do a little studying on the targets in the Hanoi and Haiphong area. If the weather breaks we may get all the way up there. I want the BUFFALO HUNTER [reconnaissance drone's] pictures of those truck parks. Be sure you know that the President [Nixon] is personally involved in this [and wants to see the pictures]."

Admiral Thomas Moorer
Chairman, Joint Chiefs of Staff to:
General John Vogt
Commander, 7th Air Force
April 12, 1972

Chapter 1

Collecting Airborne Photo Intelligence – Time for Something New

A Story That Begins at the End

I can remember it plain as day…it was late afternoon on April 30, 1975. I was standing on the tarmac in front of our squadron operations office at U-tapao Air Base, Thailand with my MCGS radar "partner-in-crime," Sergeant Jerry Pomeraning, awaiting our final mission aircraft of the day to taxi into the hardstand. About the same moment our squadron maintenance superintendent, Chief Master Sergeant Tom Learmonth, pulled-up in his step-van and yelled to us, "After you guys finish post-flight [inspection] of the plane you're done for the night. The squadron's standing down tomorrow and we have a Commander's Call [meeting] at 0800 hours the following day." No sooner than the words were out of his mouth than our chief stomped on the gas and was off to catch a couple more of our guys 200 yards farther down the tarmac.

Jerry and I just looked at each other and shrugged. It was an unusual order; the SOP was: With our squadron flying multiple combat sorties every day for more than five months, *no one* was permitted to leave work at night until all maintenance squawks on the squadron's aircraft and drones were resolved and reported to Maintenance Control…you NEVER took-off for the day, leaving a busted plane sitting there! Based on all we'd heard and seen with our own eyes in the past few days and weeks we could easily figure-out the rationale behind the stand-down. I mean, we couldn't remember the last time we had a full day off from work…so no one was complaining.

As I sit here typing this thought on my computer keyboard I marvel at how young and ignorant I was back then. Not stupid…just ignorant. Aside from any physical inabilities someone past 50 might have, there's no way Uncle Sam could build an outstanding team of G.I.s with a bunch of AARP members…'cuz' we're not ignorant anymore. We'd spend too much time rationalizing, over-analyzing, and determined not to follow the dumb son-of-a-bitch who was in-charge. We might have done these things in our minds at the age of 19; but we kept doing our job because we were not aware there was any other alternative.

On that spring morning of 1975 I was 19 years old. Since I was barely 17 when I joined the Air Force, I automatically assumed everyone around me was older than I was. On that note I figured Jerry Pomeraning was about 21 years old. Neither one of us was formally nor informally in-charge – we were both doing the same job. Even though I was younger than everyone else, I often outranked guys in my age range because I had a six-year enlistment and got two stripes coming out of basic training. A four-year enlistee did not earn their second stripe until they had been in for 18 months.

But, I digress…back to being ignorant. Jerry and I knew there was a war going on elsewhere in Southeast Asia (SEA). We knew South Vietnam was on the losing end of a current death struggle with North Vietnam; beyond that, we had no further details. This lack of detail concerning South Vietnam's military status was in spite of the fact our squadron, the 99th SRS, had primary responsibility (and the only viable means under the circumstances) for collecting imagery intelligence of the unfolding military situation in South Vietnam. We did not know, standing out there on the U-tapao flightline, that Graham Martin, the American Ambassador to South Vietnam, had been choppered by the Marine Corps out of Vietnam early that morning at sun-up (the 30th). Even if we had been told that information I doubt either of us would have understood the full implications; but we knew it wasn't good.

Saigon Dies – But, the City Lives On…

Graham Martin, on the other hand, knew exactly what it meant. Martin was a longstanding career diplomat. He was in Saigon only two years at the time of his departure. He had previously served as Ambassador to Thailand and Italy.

To illustrate Martin's depth of understanding about his departure, there is a relatively unknown vignette that says it all. While serving as Ambassador to Thailand in 1967, Martin came to the attention of Richard Nixon during a state banquet for the Thai King. Former Vice-President Nixon was with current Vice-President Hubert Humphrey; an odd pair considering they would be election adversaries the following year. When the King toasted President Johnson, Humphrey tried to return the toast with a toast to the King. Martin interceded and gave the toast himself, explaining later to both Humphrey and Nixon that as the ambassador, he was the President's personal representative, and thus, outranked the Vice President. He finished his explanation by saying "If you become President yourself someday, Mr. Vice President, you can be sure that I will guard your interests as closely as I did President Johnson's tonight."

Nixon recalled this incident six years later, and it led him to tap Martin for the top job in Saigon. Although means of immediate communication were in-place to certain parts of the globe for 100 years at the time of Martin's Saigon assignment, the worldwide Foreign Service cadre still functioned for the most part under a somewhat chivalrous, but still legally valid, ambassadorial system of international laws and rules of conduct.

Back in the 15th century when fast, reliable communication between far-flung countries did not exist, an ambassador representing the head-of-state from one country to another carried the lofty and important title of "Ambassador Extraordinary and Plenipotentiary." A diplomat holding that title quite literally had the duty and authority to make decisions on behalf of his country that were legal, allowable and binding; just as if the words were uttered by the head-of-state himself.

The immense distances between countries in the days before the telegraph meant that if an ambassador lacked sufficient authority to make decisions on behalf of his country while in-residence at his foreign post, a brewing problem between the two nations could spin completely out-of-control before instructions could be requested and received from home.

Because ambassadorial duties often spanned the complete gamut of diplomatic and political duties, it was not the job of fools. In the centuries prior to the United States becoming sovereign, ambassadorial posts were normally held by career diplomats who were intelligent, well-educated (i.e.; a Cambridge University or Sorbonne graduate, et al) and came from at least an upper middle class family.

When you rolled all of these factors together regardless an ambassador's home country, you would also find one more common threads among these career diplomats, which was: Many were from families three and four generations deep of Foreign Service heritage…with uncles, brothers, cousins, fathers and grandfathers of the same lineage serving simultaneously. Ambassador Graham Martin, the final United States representative to South Vietnam, fit all of the foregoing career traits of the Foreign Service quite well.

Martin left Saigon at 0500 hours on April 30th; he understood the legal, diplomatic and political implications of it. Martin was President Gerald Ford's personal representative to the South Vietnamese Government. As Martin's Marine helicopter headed offshore to a waiting aircraft carrier, he looked down as they crossed over the beach, or as military pilots like to say, they went from "feet dry" to "feet wet." At that moment of "feet wet" Martin closed the unsavory American story of South Vietnam…a tragic, 20-year, billions of dollars and 58,000-American-lives-story-of-Vietnam.

So strong was Martin's sense of duty as President Ford's personal representative, he did not want to admit "the party was over and it was time to turn out the lights." Martin's stubbornness, some say, was born out of a misguided refusal to accept the facts; not from a sense of patriotic duty. In either case, President Ford had to personally order Martin to leave his post. Behind Martin's back the President had also ordered the Marine officer in-charge of Martin's security detail to, if necessary, bodily put Martin on the departing chopper and physically restrain him.

Jerry Pomeraning and I were unaware of any of this at the time…not the money, not the two decades, nor the number of American deaths. To us, whatever *"it"* was, *"it"* was over; and so too, was our unit's long running mission. As for me, it would be more than 30 years before I fully understood what *"it"* was.

A Low-Profile Operation Ends In a Low-Profile Place

A couple of hours earlier at our recovery location up-country at Nakhon Phanom (NKP) Royal Thai Air Force Base, a U.S. Air Force operation finally came to an end after 11 years of combat missions in SEA. Just like everything else at NKP during the SEA conflict, our outfit, the 99th Strategic Reconnaissance Squadron (SRS), was a highly classified operation. There was no squadron, aircraft or combat sortie at NKP that was considered "routine." The 99th SRS recovery team was a perfect fit for NKP's eclectic mix of critical mission profiles.

This is a section of the parking apron at Nakhon Phanom Air Base, Thailand, circa 1969. All of the aircraft in this picture are Douglas A-1 Skyraiders belonging to two different special operations squadrons, the 1st Special Operations Squadron and the 602nd SOS. One flew the combat search and rescue (CSAR) escort mission, call sign "Sandy," and the other flew armed reconnaissance and CAS (close air support) sorties in Laos. Both squadrons were part of NKP's large, base hosting unit, the 56th Special Operations Wing. Take note of the material used to construct the apron, taxiway and runway – PSP (pierced steel planking). NKP's runway was not long enough to use as a beddown base for jets. But, the facility was a great spot to assign fixed-wing turboprops, "recips" and plenty of helicopters.

Navy Seabees built NKP in late 1962 by literally carving-out a rectangular clearing in the middle of a densely wooded area 10 miles from the upper Mekong River; with the air base adopting the name of the nearby river town. The base's location was deliberately chosen for two reasons: 1.) Proximity to the warzone running the length of neighboring Laos' eastern border, and; 2.) The Thai province of NKP was so remote that prior to the Vietnam War and throughout, there was no public transportation to the area or amenities such as hotels or car rentals. The American military wanted a low-profile location that western news media would not easily find by just stumbling into it while trolling for a story. The Air Base at NKP lived up to USAF's expectation of secrecy throughout the War.

We had been operating under various code names (predominantly Operation **BUFFALO HUNTER**) in Southeast Asia for a long time. But, the OL-NB (Operating Location – NKP RTAFB) team only transferred to NKP in 1972 from another Indochina air base. Other than a couple of Sikorsky CH-3E helicopters and a special tower built near the flightline with two radar vans sitting atop, you likely would not have known we were there.

I can tell you with complete confidence, however, our deliberately obscure presence in terms of 99.9% of what anyone knew who never served with us was fully compensated by the 0.1% who had an abiding appreciation of the vital, high quality work and products our efforts produced. My goal in the pages that follow is to describe what we did during

our operational history. If I do my job properly in this book, it's my feeling you will want to be included in the 0.1%.

Where Did This Story Start?

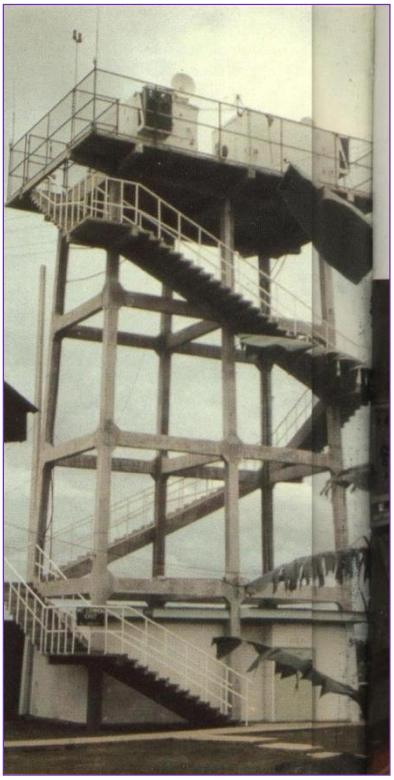
Our parent unit was the 100th Strategic Reconnaissance Wing (SRW) at Davis-Monthan AFB in Tucson, AZ. Prior to 1966 the 100th SRW was the 4080th Strategic Reconnaissance Wing (SRW). Activated in 1956 at Turner AFB, Georgia, it did not become fully operational until a number of months later when it was permanently moved to Laughlin AFB in Del Rio, TX. In those days the wing operated the Lockheed U-2 spy plane out of the 4028th Strategic Reconnaissance Squadron (SRS) and the Martin RB-57D Canberra reconnaissance aircraft out of the 4025th SRS.

Wing patch, circa 1965. For about one year prior to activation of the 100th SRW the wing adopted a name that was a little bit more definitive. This was one of the techniques used in the mid-1960s on a service-wide project to standardize USAF unit naming conventions and stop the ever-expanding proliferation of unit numbers; as well as retaining/recycling of squadron and wing numbers to preserve unit heraldry, honors, awards and traditions.

By 1959 the U.S. Air Force had some serious issues concerning these aircraft that led to a paradigm shift in covert photographic intelligence collection. First of all, the family of B-57 aircraft had notorious problems with airframe fatigue. I remember reading a short story by one the 4080th troops while they were stationed down on the Mexican border at Laughlin AFB. The young airman had been standing in front of the base's flight ops building one day when a RB-57 came slowly taxiing by and in the blink of an eye the wing on the side nearest him promptly fell off! I am sure that youngster was completely shocked by what he just witnessed; but, not anymore shocked than the pilot who just landed the plane! I have no doubt the pilot, if ever he needed a reason to drink himself stupid at the "O" Club, he just had it when his wing dropped six feet to the tarmac!

Even after each still-serving RB-57 received a TCTO (time compliance technical order) developed to make structural strengthening modifications to the plane, they were

still coming to the premature end of their service life due to aircrew safety concern. They were already moving into early retirement – scheduled for completion by 1964; and that was after only 10 years of service. Of necessity based on their mission profile, the 4025th SRS would not have the luxury of using the RB-57D all the way to their 1964 retirement. And sadly, the Taiwanese would have the "opportunity" to provide the impetus for the 4025th SRS to take an early bailout from the RB-57's already scheduled early retirement.



The specially built 50' MCGS radar tower at NKP

Planes, Planes and More Planes…How Did We End-Up with All of These Planes?

The American military had an unprecedented number of aircraft designed and built in the 1950s. This "bumper crop" of planes yielded historic models such as the Lockheed C-130 Hercules & U-2 Dragon Lady, and the Boeing B-52 StratoFortress. These Air Force platforms have been in-use since the 1950s; with many of the actual planes still flying after 50 years! The B-52, U-2 and C-130 seem assured of a position in the top 10 most successful American military aircraft ever flown.

A standard "E" model C-130 Hercules transport plane

Although the decade featured "superstar" aircraft like the ones I just mentioned, the period also yielded a sizable group of duds that were just as much forgettable as the "Buff" and "Herky" are unforgettable. One of the most amazing aspects of the period aircraft is not so much the great utility of the more memorable airframes, but the quality of workmanship and design enabling these historic aircraft to still be flying in the 21st century.

A second generation U-2 (courtesy Defense Industry Daily)

When the best & worst military aircraft of the 1950s are set aside you are left with a majority of designs that were merely average aircraft. Although some aeronautical historian-experts might disagree with me – my opinion of the B-57 aircraft family is it was just average, at best. The Cold War fueled many of the 1950s designs. With so many varied air missions of the period, and lacking hall-of-fame performers in numerous categories, you had the likes of the B-57 pressed into service to cover some of

the operational gaps. If someone opined that the B-57 Canberra was an important niche aircraft I would tend to disagree for no other reason than their sub-optimal, limited service life.

The RB-57D had a 105 ft. wingspan in lieu of 64 ft. on the original bomber. The greater wingspan and upgraded engines allowed it to fly at 65,000 ft. instead of only 45,000 ft. The maiden flight of the first RB-57D was on 3 November 1955, with 20 aircraft built. They were the last new-build B-57s. The program was codenamed BALD EAGLE. Flying at 65,000 ft. over enemy territory was considered adequate protection from being shot down through the mid-to-late 1950's. As long as planes weren't being shot down the missions could still be considered "covert" and foreign government complaints about airspace violations were politely ignored. Overflights? What overflights?

An excellent comparison of the long-winged RB-57D high altitude reconnaissance version in the foreground, and standard "A" model in the background

And almost in parallel the second issue was becoming an even greater concern than RB-57 structural fatigue. And that was the fact manned recce (pronounced "wreck-ee") flights through denied airspace regardless the aircraft, were becoming hazardous to a pilot's health! Previously, flying a plane upwards of 75,000 ft. was unreachable by any means. The 1960 shoot-down of Francis Gary Powers over the USSR by a SAM missile and other losses over Cuba and China proved that even the high flying U-2 could not survive in a high-threat environment with the presence of improved SAMs.

Air Force leaders came to realize for the RB-57Ds, the lack of an additional 10,000 ft. of operating altitude exacerbated an already risky (structural fatigue) usage of the

aircraft. The shoot down risk underscored the need for pulling the RB-57s out of the 4025th SRS; which was done in 1959. About half of the RB-57Ds were re-converted to a safer, less structurally demanding special mission application – outside of the 4025th SRS. This enabled the Air Force to get another four years of work before retirement from only a marginally useful asset.

From Nothing but a "Flying Footnote" To a "Key" Player Almost Overnight

When the Vietnam War heated-up, however, many airplane models slated for retirement at the military aircraft "boneyard" in Tucson, AZ, found instead a new lease-on-life. Planes like the Fairchild C-123 Provider had never been a "star" performer before the War and were scheduled for that *"final-flight-to-oblivion."* The Vietnam War, however, put the C-123 on center stage and it became a reliable aircraft as a traditional tactical airlifter.

The C-123 also did an excellent job in some highly classified, critical combat roles; this included Operation RANCH HAND, the Agent Orange defoliant spray mission. The 12th Special Operations Squadron was the sole owner of the RANCH HAND mission and history would record this unit's operation as the most dangerous and oft shot at of any American aircraft deployed to Southeast Asia. The 606th Special Operations Squadron at NKP successfully flew the C-123 as a night-time FAC (forward air control) over and near The Ho Chi Minh Trail (HCMT), identifying enemy targets-of-opportunity for strike aircraft (Operational code name: CANDLESTICK). Most of the lackluster aircraft from the 1950s did not get a second chance like the C-123.

Anyone who has served in a combat unit – on the ground, in the air or on the water – knows the heavy hand irony plays in your daily life while on deployment. As an example of what I mean, consider the yeoman's service of a typical C-123 and crew while serving in Vietnam.

In order to see the irony of the C-123's service, start by looking at the extensive time, money and brain-power invested in protecting an aircraft and its crew that is *expected* to go in harm's way – like the many iterations of the McDonnell-Douglas F-4 Phantom fighter-bomber. Conversely, the basic C-123 configuration, which was never meant for the dangerous RANCH HAND or CANDLESTICK programs, found itself swimming in irony every day! The air war planners from PACAF endorsed the use of an unmodified, slow & low flying, unarmed, unarmored C-123, lacking any defensive ECM gear, to fly the aforementioned special operations sorties on a daily basis for years and years with an extremely low loss rate. No one can miss the irony of that scenario!

One of the 1950s superstars – the U-2 – first became operational in 1956. The program was managed by a fast-rising star at the CIA, Dick Bissell. Bissell said the U-2 would only have about two years of worldwide unimpeded overflight access through denied airspace. Of course he was thinking about the Soviet Union and Red China. Bissell's crystal ball was pretty accurate. The Russians had been deploying the SA-2 surface-to-air missile (SAM) all over their country and the Soviet satellite states since 1957. By 1959 the new missile system was at the end of its gestation period and was ready for some serious business. Ironically, the Russians were not the first ones to score a hit with the new SA-2 SAM.

The Soviets sold only five missiles, one tracking radar unit and one launcher system to mainland China in 1959. The Chinese People's Army immediately activated their lone SA-2 battery near Beijing. In parallel, the Americans had begun to wonder about the U-2's survivability in making covert reconnaissance overflights. There had been some close calls on overflights but nothing too serious. To be sure, the U.S. only made reconnaissance overflights using the U-2 and RB-57Ds, regardless the location, after very careful planning and each mission required approval by President Eisenhower. But, even with all the pre-mission care our troops exercised, concern for crew safety was still mounting.

Along with everything else going on, the Nationalist Chinese on Taiwan were "chafing-at-the-bit" for more reconnaissance aircraft…hmmm, why not sell them some of our RB-57Ds – they are going to be retired in a few years anyway, right? So, in the same year, 1959, the Americans sold several RB-57Ds to the Taiwanese under the code name DIAMOND LIL. At this juncture you've got to wonder how forthcoming we were about the hazards of using the plane for reconnaissance of denied airspace.

The Nationalist president, Chiang Kai Shek, had been authorizing deep penetration intelligence gathering flights into China for nearly a decade. The Taiwanese pilots were well trained and extremely competent. And like the Mainlanders with their new missiles, the Taiwanese also planned to put their recently acquired RB-57Ds to immediate use.

Throughout the 1950s Red Chinese air defenses were so weak that Nationalist Chinese pilots repeatedly got away with overflights in worn-out, surplus B-17s and other WW II aircraft! And these Taiwanese overflights were not quick dashes into coastal areas, and then back out. They would plan a reconnaissance flight to start in Southeastern China and fly for eight or more hours over the mainland and then recover the mission at an American air base in South Korea!

Not knowing anything about China's newly acquired SAMs, a Taiwanese aircrew jumped into their newest plane in October 1959 to fly another one of their patented eight hour missions over the mainland. This sortie was planned to take photos of military equipment near Beijing. Meanwhile the Mainlanders proved to be quick studies with the new SA-2 missile system. They promptly shot down Taiwan's first overflight in one of the newly acquired surplus RB-57Ds. As it turned out, this was history's first recorded combat shoot-down with a surface-to-air missile. This event, in fact, caused the Air Force's Strategic Air Command to immediately suspend operational RB-57 sorties.

Bissell's prediction was right on-target. The 4025th SRS' RB-57Ds were done flying; with the whole squadron deactivated before year's end. Bissell knew the communist Chinese were not capable of making a fire control radar and SAM anti-aircraft system on-their-own – it had to come from the Soviets. He was very interested in one particular fact surrounding the SA-2 shoot-down: The RB-57 had been flying at 65,000 ft. This meant the new SAM could likely reach a little farther and hit a U-2. (*Author's note: This paragraph contains the first appearance of the proper noun "communist" or "communism." Although it is only a minor gesture by me, readers should note*

*throughout the book that unless either of these words happen to start a sentence, I have otherwise purposely **NOT** used correct grammar of capitalizing a proper noun. To my mind, there is nothing "proper" about communism; ergo, I am using lower case letters for a noun representing a blight on the history of mankind that will not receive any nod of respect from me.)*

Now with the game-clock inside the two-minute warning how much longer could U-2s make USSR overflights without getting caught? About six months later in May 1960, Frank Powers had an answer to that question. U-2s no longer had Carte Blanche to fly anywhere they wanted. Henceforth, mission planning would first have to consider possible air defense threats in the target area. Photo imagery collection was changing rapidly.

Defining the Importance of Imagery Intelligence to Military Operations

Although the CIA and the Air Force both pursued ultra-high altitude, supersonic reconnaissance in the form of the Lockheed A-12 and SR-71, these platforms did not fly their first operational combat missions until May 1967 and March 1968, respectively. And keep in mind that these aircraft were incredibly expensive to operate. You were not going to use these assets to spy on a couple of Viet Cong soldiers crouching over a campfire in the Mekong Delta! There *was*, however, a viable and less expensive answer in response to the problem of maintaining aircrew safety while simultaneously continuing photo intelligence collection missions that were covert and deniable; ***the solution was jet-powered, unmanned airborne reconnaissance.***

This is an AN/AQM-34Q reconnaissance drone designed and built by Teledyne Ryan Aeronautical. The "Q" and "R" models were made for long endurance, high altitude signals intelligence missions flown by the 350th SRS from South Korea. All drone sorties began from an airborne launch off the wing of a highly modified Lockheed DC-130. This snapshot was taken over South Korea from the aircraft commander's side window showing "Q" model #15 prior to launch. The special "Q" and "R" sorties will be covered in-depth in Chapter 13. Q-15 is now hanging from the ceiling of the U.S. Air Force Museum at Wright-Patterson AFB, Dayton, Ohio. (photo courtesy of Dave Matthews, circa 1972)

And make no mistake about the military importance of airborne photo reconnaissance in time of war: U.S. government statistics from World War II and the Korean Conflict show that a full 80% of actionable intelligence came from airborne imagery. By the 1960s there were some viable signals intelligence (SIGINT) gathering platforms and a few spy satellites; but the National Command Authority and combatant commanders still got 70% of their intelligence information from airborne photo flyovers. There definitely *was* a major role to fulfill by our unmanned platforms.

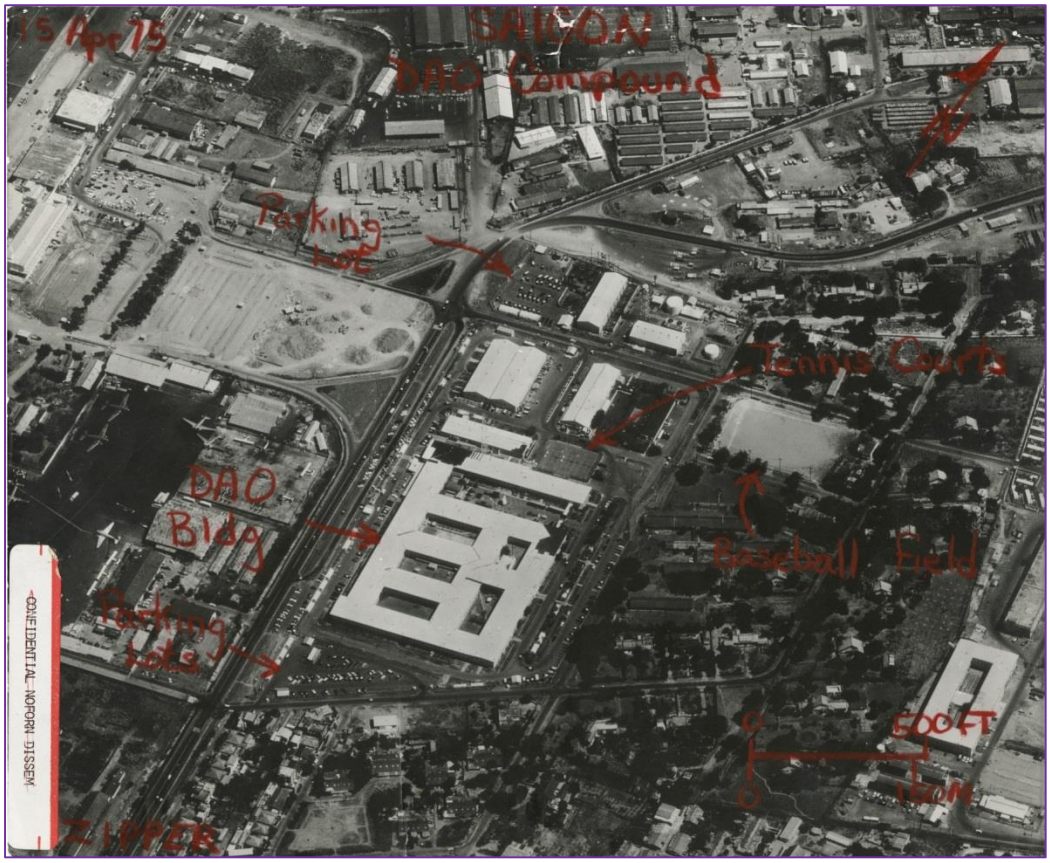
Considering the huge strides made in the field of intelligence electronics over the next 30 years, few expected photographic reconnaissance to survive. Without question, more sophisticated imagery systems stepped in that were not limited by smoke, haze or clouds. Equipment such as radar and infrared could obtain remarkably clear imagery that could "see" through overhead cloud cover and at night. These new systems seemed to render traditional photographic systems useless.

During Desert Shield/Storm USAF deployed five U-2s from the 17th Reconnaissance Wing at RAF Alconbury to Taif AB, Saudi Arabia. These were brand new planes just built in 1989 from Lockheed's reactivated production line after sitting dormant for more than 25 years. These U-2s had the latest in electro-optical sensors, synthetic aperture radar and signals intelligence equipment. With this many planes and personnel in one location, it quickly switched from just an operating location (OL-CH, operation code word "CRESTED HARVEST") to a full squadron – the 1704th Reconnaissance Squadron-Provisional.

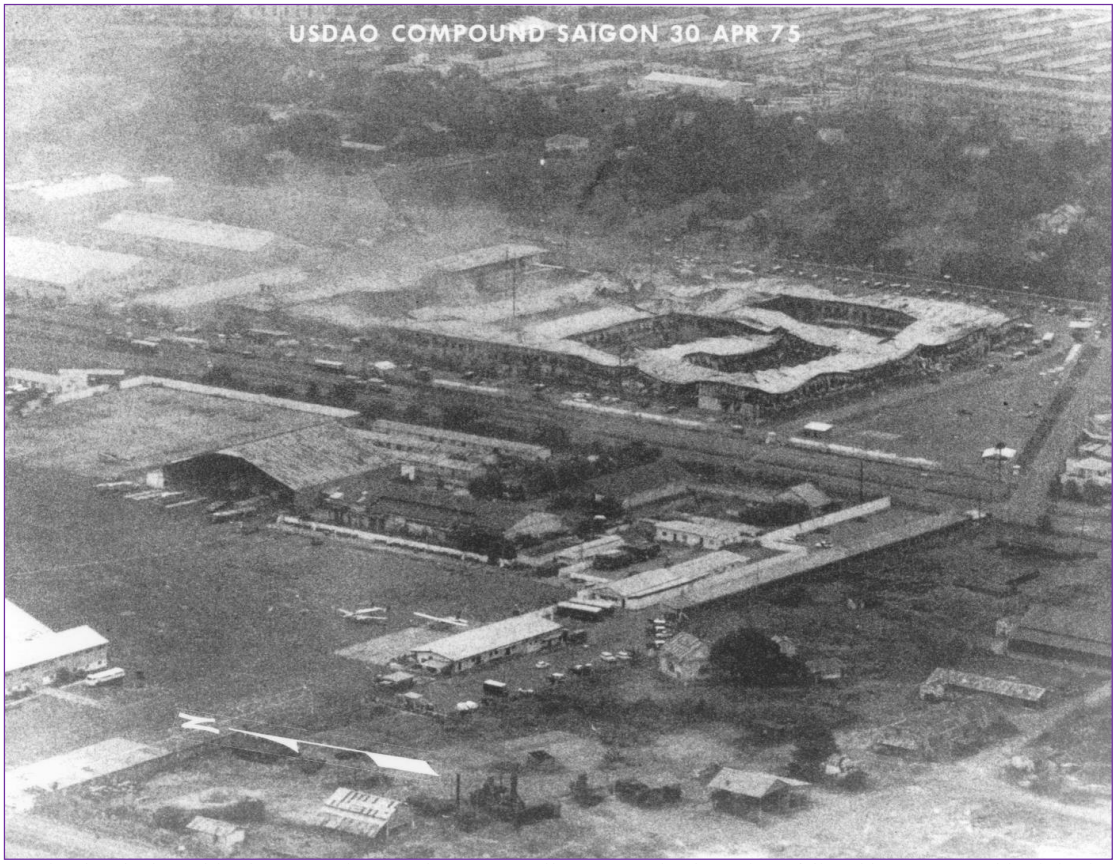
Air Force Lt. General Chuck Horner was the air combatant commander for Desert Shield/Storm. As Horner and his senior planners went about orchestrating the air war a disturbing fact arose about the imagery intelligence they were receiving: They couldn't interpret what they were seeing! Imagery from the electro-optical and radar sensors was normally analyzed, interpreted and exploited by trained intelligence officers. This was still the case; however Horner and his senior planners wanted to do their jobs by directly surveying the imagery *themselves*.

Deployed intelligence officers on Horner's staff tried to teach their senior officers how to "see" things in the infrared or radar imagery; it was a painstaking effort for both student and teacher. Horner and his senior planners immediately recognized the new skill was not something easily acquired overnight. Frustrations ran very high.

Finally, Horner demanded that he wanted to see *real* photographs, not radar images. As a result, four of the 20+ year old U-2s flown by the 9th Reconnaissance Wing at Beale AFB carrying traditional high-resolution cameras were sent to Taif AB. Now the senior air component planners could see and interpret photographs for themselves like they saw at the beginning of their careers. Airborne photographic intelligence has had a significant role to play in warfare since the start of World War I in 1914!



BUFFALO HUNTER drone photo of the DAO area at Tan Son Nhut, April 15, 1975. The "DAO Building" is the former MACV HQ. Col. LeGro's office was about midway on the east side. It was the former office of the MACV Chief of Staff. In the building on the north edge of the tennis court was the living quarters for Gen. Murray, and later Gen. Smith; the last two DAO Chiefs, listed in order. At the center of the right edge of the photo are the trailers occupied by senior staff. The Command Mess - off the photo - was immediately east of the row of trailers. The gymnasium was in the lower right corner of the photo. This was the ad hoc processing area where the Embassy staff vetted Vietnamese evacuees eligible for one of the precious few seats on the final three American Government-chartered passenger planes departing Saigon.



Photograph taken by low-altitude reconnaissance drone on April 30, 1975, the day Saigon fell and became Ho Chi Minh City. This picture was taken with a forward oblique camera looking northeast; Tan Son Nhut AB is in the left-center area of the picture. The purpose of the photo was to document the final condition of the white-roofed building in the background. The white-roofed building across the street from Tan Son Nhut AB was the U.S. Defense Attaché Office. Prior to the last American's departure from the DAO, the U.S. Marines were ordered to place explosives throughout the facility, and then detonate them as they were leaving. The Marines were told to use enough explosives to destroy everything inside the building – but not to blow the place to smithereens. There was concern about the charge being excessive, causing collateral death/injuries to nearby civilians. The collapsed roof indicates the explosives achieved the desired results.

What Was the Magnitude and Impact of Imagery Intelligence in Vietnam?

An example of the importance of airborne imagery in Southeast Asia can be seen by looking at just one major battle from the War…Operation NIAGARA – the protracted siege of the Marine combat base at Khe Sanh in February-March 1968. During the 60+ day siege an unprecedented number of photo reconnaissance sorties were flown – over 1,400! The fact was, the Khe Sanh airspace was so overcrowded that special rules were set-up and managed by a ***dedicated*** air control center to avoid midair collisions and/or unauthorized ordnance expenditure. From January 22nd to March 31st the defense of Khe Sanh caused MACV to authorize 24,000 tactical airstrike sorties and 2,500 B-52 ARC LIGHT sorties. Just counting the number of bombing sorties flown is a staggering number. The magnitude of the bombing goes completely off the chart by doing some mental gymnastics with mathematics. Each B-52 ARC LIGHT aircraft was loaded with 108 Mk-82 500 lb iron bombs totaling 54,000 lbs! I have spoken to more than a dozen Marines who were present at Khe Sanh during NIAGARA and none of them failed to mention the surreal air strikes they witnessed 24 hours a day for over two months!

Most of these guys groped to find adequate words to do justice in describing what they saw, heard and felt.

The dedicated air control center was actually an ABCCC (airborne command and control center) using an EC-130 from the 7th Airborne Command and Control Squadron stationed at Udorn AB, Thailand. The 7th ACCS was already flying three ABCCC orbits in Laos daily; two during the day (call signs "Hillsboro" and "Cricket") and one at night (call sign "Alleycat"). The additional, dedicated ABCCC for Operation NIAGARA was called "Moonbeam." Anyone knowledgeable of the air war throughout the SEA conflict is likely to be familiar with a nighttime ABCCC mission known as "Moonbeam;" which flew the same orbit after dark that "Hillsboro" flew in the daytime. When the Khe Sanh siege ended on March 31st, "Moonbeam" was retained as the permanent nighttime ABCCC, complementing "Hillsboro's" daytime efforts.

The weather was quite poor at Khe Sanh in early 1968. In order to get the desired airborne imagery many of the photo sorties were flown by low altitude drones that came in right underneath the cloud base at more than 550 knots! Drone sorties were normally programmed to take photos of 5 to 15 targets on a single sortie and flew with their cameras active as much as 5 times longer than a typical McDonnell-Douglas RF-4C Phantom reconnaissance sortie. However, with the Khe Sanh target area being so small the average number of targets for all photo sorties, regardless the collection platform, was only 1.4. The most staggering airborne imagery metric from the siege was the amount of film consumed; the one day peak was 100,000 feet of film!

As it often happens, important work is accomplished by unnamed and unsung heroes. Drone reconnaissance is a case-in-point. Due to the highly classified nature of our work, and it always being denied by the government, we did not get the recognition that was deserved until much later. Of course the end-users of our drone's intelligence products knew about the good work being done…they just couldn't talk about it publicly! But eventually accolades were openly expressed by people in-the-know. For instance, there's Colonel William E. LeGro, U.S. Army, retired.

Colonel LeGro can be called a subject matter expert when it comes to intelligence work done during the Vietnam War. LeGro was the officer-in-charge of the U.S. military intelligence branch in Saigon for the final two and a half years of a sovereign, independent South Vietnam. Whereas, most people prefer to abandon a sinking ship, this was not the colonel's approach during his Saigon assignment. When he came aboard in December 1972 he wanted to be there; even though it was akin to signing-on to the Titanic after it hit the iceberg. In 1981 LeGro wrote a book that has become the definitive account of the final years of the war, entitled, *"Vietnam: From Cease-Fire to Capitulation."*

In the March-April 1997 edition of *"INSCOM Journal,"* Colonel LeGro wrote an article about the war's final hours. He had this to say about our drone's contribution to influencing the Saigon leadership: "No discussion of intelligence collection during these final months in Vietnam would be complete without prominent mention of *BUFFALO HUNTER."* LeGro went on to comment about the 99th SRS' efforts, saying that we "…responded with remarkable speed and effectiveness to requests for coverage and

produced a valuable photo intelligence product." Anyone would be proud of that endorsement; even if it was the only acknowledgement after 11 years of unseen work behind a wall of secrecy. Damned right it was a valuable intelligence product!!!

Here is drone Q-15, hanging from the rafters in the U.S. Air Force Museum at Wright-Patterson AFB, OH. This is one of the many different versions of the successful Ryan Aeronautical Model 147 RPV. The USAF designation for this drone is AN/AQM-34Q. These missions were flown for five years (1970 to 1975) and staged out of Osan AB, South Korea. The Q-15 exhibit project was managed by Dave Matthews; a long-serving drone systems technician.

Throughout my research efforts to write this book I had recurring thoughts about the Ryan reconnaissance drone program. One of the thoughts which came back to me over and over again was how the drone program came from a ***very*** humble beginning in 1962 – was nearly canceled several times – yet became an indispensable, national intelligence collection platform less than six years later. There were numerous individual and institutional critics of the Model 147 drones who later became vocal supporters before the Vietnam War ended. One of the prominent institutional critics throughout the war was USAF's 7th Air Force staff in Saigon and its final commander, General John Vogt. Yet by war's end Vogt became an ardent, vocal supporter of drone reconnaissance.

General Vogt's 7th AF assignment came at a time when our nation's Government and military leaders had exhausted their patience in dealing with North Vietnam's political games and their lack of effort to bargain in good faith at the Paris Peace Talks. Starting at the top with President Nixon and moving down the chain of command, everyone felt the North Vietnamese did not take America's war fighting capacity seriously. It appeared as if North Vietnam thought America's political leaders, in the name of peace, were willing to be extremely flexible with Hanoi…if only it would stop the fighting. In essence, so Hanoi thought, the U.S. would put up with a lot of nonsense and double-dealing just to hurry up and get it all over with.

President Nixon decided it was time to show the North Vietnamese Government what could happen if they continued to be uncooperative at the bargaining table. General Vogt was instructed to turn loose America's air warriors in a no-holds-barred fight to show the communists in Hanoi how quickly and drastically things could change.

December 18, 1972 the Navy and Air Force launched an all-out bombing campaign against North Vietnam – it was called Operation LINEBACKER II.

Military historians have commented often about the fact you can't win wars without "boots-on-the-ground." This comment is usually tied to a reference about wars not being winnable solely by airpower or with a country's Navy. You can take this line of reasoning a step further when it comes to intelligence gathering. No country's intelligence apparatus has ever won a war either. However, there are several examples of successful intelligence programs that had a direct correlation on the outcome of certain battles.

For example, in World War II the U.S. Navy had a unit stationed at Pearl Harbor that was known as "FRUPAC." This acronym stood for Fleet Radio Unit-Pacific. The point of FRUPAC's title was done purposely to disguise their real work of decrypting Japanese naval codes. The most significant breakthrough for FRUPAC was when they cracked the latest version of Japan's military codes; thereby discovering the plan for attacking and occupying Midway Island. With the U.S. Navy's limited number of aircraft carriers, we could not afford to fight the Imperial Navy toe-to-toe, or inadvertently stumble into a surprise attack. Either scenario could have rendered a disastrous outcome we could ill afford; that being the loss of the only few aircraft carriers we had left. The U.S. west coast would have been left wide open to a Japanese invasion and the Navy would not have had enough resources to stop it.

This example clearly demonstrates the direct effect that FRUPAC had on the outcome of the battle at Midway. FRUPAC's continued efforts to intercept and decipher Japanese naval messages led to our submarine forces finding and sinking more than 90% of the Japanese merchant fleet. Naval Intelligence enabled American military forces to quicken the pace of the war, avoid fighting battles of little strategic value, and consistently beat Tokyo's Army and Navy to the punch at every turn. Historians estimate the impact of the gains coming from Naval Intelligence to have shortened the Pacific War by at least two years.

In another instance of value attributable to intelligence gathering, the Ryan RPVs had a strategic and tactical impact on the Vietnam War in 1972. It's difficult to explain in a side note in a book, such as we're doing here, just how stymied and frustrated our leaders were in dealing with the North Vietnamese at the Paris Peace Talks.

The American public only learned of the ongoing Peace Talks in April 1972. The Talks in Paris had started in secrecy by President Johnson in March 1968. The only thing the public was told at that time was the ordered bombing halt for most of North Vietnam and Johnson's revelation of removing himself from the race for reelection.

When Nixon took office as the new president in January 1969 the public knew the presidential race between Nixon and Vice President Hubert Humphrey had been very tight. Nixon campaigned on his promise to extricate American armed forces from the Vietnam War. Nixon's Administration came into office with *no* real plan on how to stop the War.

Since the public was unaware of the secret peace talks it appeared like Nixon's team was only wasting time and was not doing anything to end the War. By October 1972, Paul Nitze, our chief negotiator in Paris, felt like they had the Peace Treaty just about done. But, at the 11th hour the Hanoi Government reneged on the deal. Nitze said the level of anger and frustration felt by Nixon, Kissinger and others was so high that <u>no one</u> felt compelled to launch LINEBACKER II with the intent of giving the North Vietnamese just a "taste" of what it felt like to be bombed back to the stone age; the intent was not to stop the bombing until one of two things happened: 1.) Our Navy and Air Force literally bombed North Vietnam into a pile of rubble, or; 2.) Hanoi begged us to stop. The bombing campaign lasted 11 days – December 18th through December 29th. Of the two choices given above, it was pretty much like the old story of, "which came first, the chicken or the egg?" Ultimately, North Vietnam <u>was</u> bombed into a pile of rocks…then the Hanoi Government asked President Nixon to stop the bombing.

<u>How Important Was the Model 147 Drone In Stopping the Vietnam War</u>?

During the 11 days of bombing, however, General Vogt and his staff could not have achieved what they did, had it not been for a bunch of unmanned reconnaissance drones providing critical intelligence to wage the fight. What follows is a direct quote from General Vogt; paraphrasing could not have made it sound any better. This is from an interview conducted in 1973 with General Vogt, by Major Paul Elder, of PACAF's Operations Analysis Directorate.

"BUFFALO HUNTER has played an extremely important part in securing for us the BDA [bomb damage assessment] of the strikes in the North. The characteristic that I think makes it invaluable in this role [low altitude photo reconnaissance] is its ability to go under the weather during the bad weather periods and procure the necessary coverage. The high altitude airplanes such as the SR-71 and our own tactical reconnaissance [RF-4Cs], which fly at altitudes considerably higher [than the drone], are not capable of doing this particular job…The BUFFALO HUNTER was extremely valuable to us during the intense combat period in December because we were in the middle of the [Northeast] Monsoon season, when cloud conditions were about eight-to-ten-tenths at all times. We found ourselves relying increasingly on the [BUFFALO] HUNTER to get the pictures back so we could determine whether or not the target had been destroyed and if we had to go back.

"I know of no other way we could have obtained the information we needed…[during] the intensive combat activity of the December period."

Serious students of American airpower in the Cold War are aware of the deep enmity held by tactical airpower ("tac-air") proponents against strategic air power advocates. U.S. military participation in the Indochina conflict only strained the relationship further. With this sort of ingrained discord between the two camps I don't see how the interface could be much different in terms of our Indochina-deployed drone operations. I will provide a full treatment of the topic in a later chapter. Suffice to say for now that nothing changed between the two groups. If anything, the rift was more acute because it was now Saigon's 7th Air Force HQ vocalizing the tac-air position in actual combat, not in a theoretical simulation.

Based on the quick level-set I provided in the previous paragraph we can recognize the magnitude of 7th Air Force's "Vogt-of-confidence" in reference to our drone operations. And this was in spite of it being a strategic air function. When the SEA war ramped-up for American forces the RF-101C Voodoo was the only high-speed photo reconnaissance platform directly available to tac-air planners. Although the RF-101 Voodoo was known for collecting good imagery intelligence and was a pretty fast plane, it still had dated technology which limited its utility. All the Indochina-deployed U.S. military leaders involved in planning/using tac-air reconnaissance appreciated the RF-101's yeoman service; but the new McDonnell-Douglas RF-4C recce jets were eagerly anticipated.

The Vietnam War had many events and actions occur that were new for America's military forces and required revised tactics and new weaponry. One aspect of the War was unchanged; that being our zeal to identify a military problem and go after a solution as quickly as possible. A later chapter is devoted solely on the Ryan Model 147's transition from a high altitude strategic platform to a low-level tac recce vehicle. The chapter discusses the wholly inadequate photo intelligence collection plan included in the ROLLING THUNDER bombing campaign CONOPS from 1964. The air war planners had no idea that what they thought was sufficient would go quickly by the wayside; even the new RF-4Cs would be marginalized.

Recognizing the capability gap between the RF-101 and RF-4, and a war still had to be fought with or without the RF-4, the MACV (military assistance command-Vietnam) and 7th AF intelligence officers increasingly turned to our drones to fill the information gap left by the RF-101s; including the RF-4C's later on.

The excitement about the RF-4C stemmed from the plane's ability to accomplish so many different reconnaissance missions in its "as-built" configuration. The new recce jet came standard with better cameras than the RF-101 for "garden variety" photo intelligence. Now, if we are going to compare the RF-4 and RF-101 in a side-by-side comparison of intelligence collection features the conversation would be over; the RF-101 had nothing else. The new RF-4s, however, also had built-in gear for real-time infrared intelligence gathering, laser ground-mapping and side-looking airborne radar (SLAR). A casual observer would conclude the RF-4's versatility would alleviate any gripes from 7th Air Force's intelligence shop about:

1. The outdated RF-101's limitations, and;
2. No longer having to bicker with SAC to get preferential treatment for SEA drone sorties.

Well, the "honeymoon" didn't last very long after the RF-4's arrival. The plane was every bit as good as McDonnell-Douglas claimed. The intelligence staff at 7th AF learned that even a plane carrying all the latest imagery intelligence gadgets wasn't going to alleviate the ever-present bad weather over Southeast Asia; nor was the RF-4 anymore immune to North Vietnam's anti-aircraft coverage. Within six months 7th AF intelligence officers were back to requesting Model 147 drone sorties from SAC ***and*** hardcore lobbying to Shanghai operational control of the drone program.

After all the political infighting over control & ownership of the RPV program General Vogt's praise was a big A+ for the 100th SRW, Teledyne-Ryan and key Government leaders, in or out of uniform, who backed the Model 147 drone. An even bigger "Sierra-Hotel" went to the USAF "blue-suiters" & Ryan field reps in-country who busted their butts putting in long hours for eight years flying and fixing all the gear under difficult conditions. Perseverance & hard work paid-off!

In early January 1973 the 12th Reconnaissance Intelligence Technical Squadron prepared a summary briefing entitled "Reconnaissance Mission Objectives." The briefing was given to the various generals and admirals of the Pacific Command, including CINCPAC, the PACAF commander, MACV commander, 7th AF commander, and Navy Task Force 77 commander. Numerous lower echelon staff also attended the briefing. As the saying goes, "The devil is in the details." These data points show the value of the Ryan Model 147 reconnaissance RPVs.

"During the reconnaissance effort from 18 December through 29 December [1972], 12 RF-4C tactical reconnaissance sorties provided complete coverage of 49 objectives. During the same timeframe 77 BUFFALO HUNTER low altitude drone missions provided complete coverage of 632 objectives." These numbers clearly show that for all the USAF engineers, Ryan engineers & managers, Air Force personnel, National Reconnaissance Office (NRO) staffers and many others – all who supported the reconnaissance RPV concept in 1962 – their efforts were not wasted. Ten years later a gaggle of Ryan Model 147 drones stepped-up and enabled our war fighters to get the intelligence data they needed that no one else could procure. The bombing and post-strike drone imagery during 11 very rapid & hectic days proved the door *could* be slammed shut against an enemy in very quick order if the American military forces are left to do their job the way they were trained to. It was a travesty that our warfighters were not given the same greenlight eight years earlier. Instead, 58,000 Americans lost their lives and the country wasted untold billions of dollars on an effort which lasted far too long; regardless whose yardstick you were using.

In the pages that follow the reader will see how all the patience (although not always!) and hard work paid-off; and how a simple concept evolved into having a seat at the big table when it really counted.