TIGHAR TRACKS

THE JOURNAL OF THE INTERNATIONAL GROUP FOR HISTORIC AIRCRAFT RECOVERY

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. . . that they might escape the teeth of time and the hands of mistaken zeal.

– John Aubrey
Stonehenge Manuscripts
1660

About TIGHAR

TIGHAR (pronounced "tiger") is the acronym for The International Group for Historic Aircraft Recovery,a non-profit foundation dedicated to promoting responsible aviation archeology and historic preservation. TIGHAR's activities include:

- Compiling and verifying reports of rare and historic aircraft surviving in remote areas.
- Conducting investigations and recovery expeditions in co-operation with museums and collections worldwide.
- Serving as a voice for integrity, responsiblity, and professionalism in the field of aviation historic preservation.

TIGHAR maintains no collection of its own, nor does it engage in the restoration or buying and selling of artifacts.The foundation devotes its resources to the saving of endangered historic aircraft wherever they may be found,and to the education of the international public in the need to preserve the relics of the history of flight.

TIGHAR Tracks is the official publication of The International Group for Historic Aircraft Recovery. A subscription to *TIGHAR Tracks* is included as part of membership in the foundation (minimum donation $55.00 per year).The editors welcome contributions of written material and artwork. Materials should be addressed to: Editors, *TIGHAR Tracks*, 2812 Fawkes Drive, Wilmington, DE 19808 USA; telephone (302) 994-4410, fax (302) 994-7945; email tigharpat@mac.com. Photographs and artwork will be returned on request.

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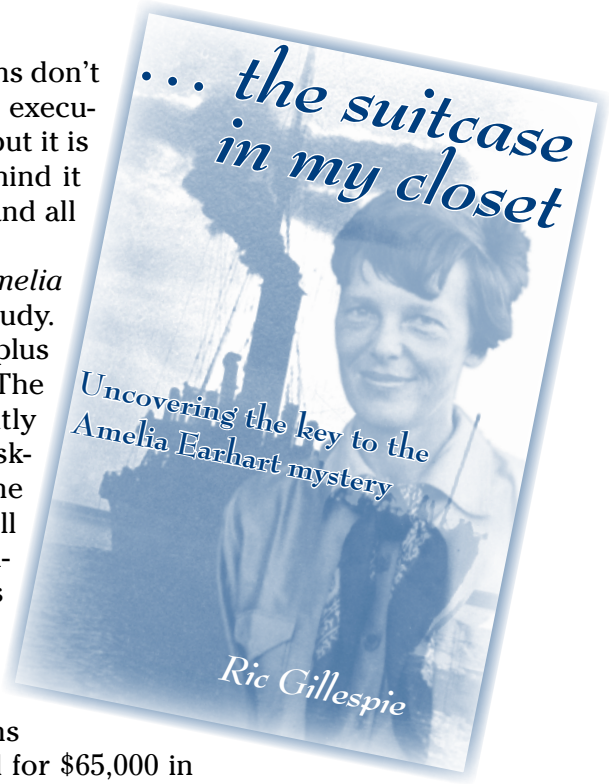
On the Cover

Despite the handwritten notation on this photograph from the College Park Aviation Museum's MacCartee Collection, it shows 2nd Lieutenant Henry H. "Hap" Arnold when he was one of the Army's first flying instructors at the Signal Corps Aviation School, College Park, Maryland. In October, TIGHAR's 2005 Aviation Archeology Field School will do an archaeological examination of the site of two of the original hangars. See page 23.

On the Web

http://www.tighar.org

Board of Directors



TIGHAR is writing a book. Of course, organizations don't write books. People write books and TIGHAR's executive director, Ric Gillespie, is writing this one, but it is nonetheless TIGHAR's book. The research behind it has been conducted and funded by TIGHAR members, and all proceeds from the sale of the book will go to TIGHAR.

The Suitcase In My Closet – Uncovering the Key to the Amelia Earhart Mystery is both a history book and a research study. This will be a major work consisting of eighteen chapters, plus appendix, plus a DVD with all supporting documentation. The research is about 90% completed and writing is presently about half finished. Over the next few months we'll be asking you, the members of TIGHAR, to help peer review the semi-final draft manuscript. Beginning with this issue, we'll serialize the book in *TIGHAR Tracks* with monthly installments of at least two chapters. We invite you to give us your comments and corrections either by letter, fax, or email (see guidelines below).

We're also asking you, the members of TIGHAR, to help fund the writing. It will take about five more months to finish the manuscript and that translates into a need for $65,000 in funding. We are presently negotiating with a number of potential publishers but it's not realistic to think that we'll be able to get that much of an advance. Instead, we're launching a TIGHAR Literary Guild fund raising campaign. Each TIGHAR member who contributes at least $100 will receive an autographed copy of the book upon publication and will be listed with other contributors in a special section of the DVD that will accompany the book.

Guidelines for Comments and Corrections

There are no guidelines for comments. I'll be happy to hear anything you have to say about the book. I'll take your critical remarks seriously and your compliments very seriously indeed. I won't promise to reply to every comment or follow every suggestion, but I will read everything that comes in.

There are very strict guidelines for corrections of fact. The standard is that statements of fact must be supported by contemporaneous written sources (letters, telegrams, logbook entries, etc.). Anecdotes, opinions or unsupported statements by authors of other books are not facts. Because many of the facts presented in this book are bound to be controversial, we've not only footnoted them and cited the source but we'll also be reproducing the actual document on the DVD that will accompany the finished product. If you see a statement of fact that you believe needs a footnote, please tell me. If you dispute a statement of fact, please tell me so and cite your sources. If your sources are better than my sources, I'll change it and thank you.

If you disagree with my interpretation of facts or you don't like my writing style, please feel free to tell me. My ego can handle it. I'll carefully consider your viewpoint but, as the author, decisions about interpretation and style are mine alone (and I have Pat's permission to say so).

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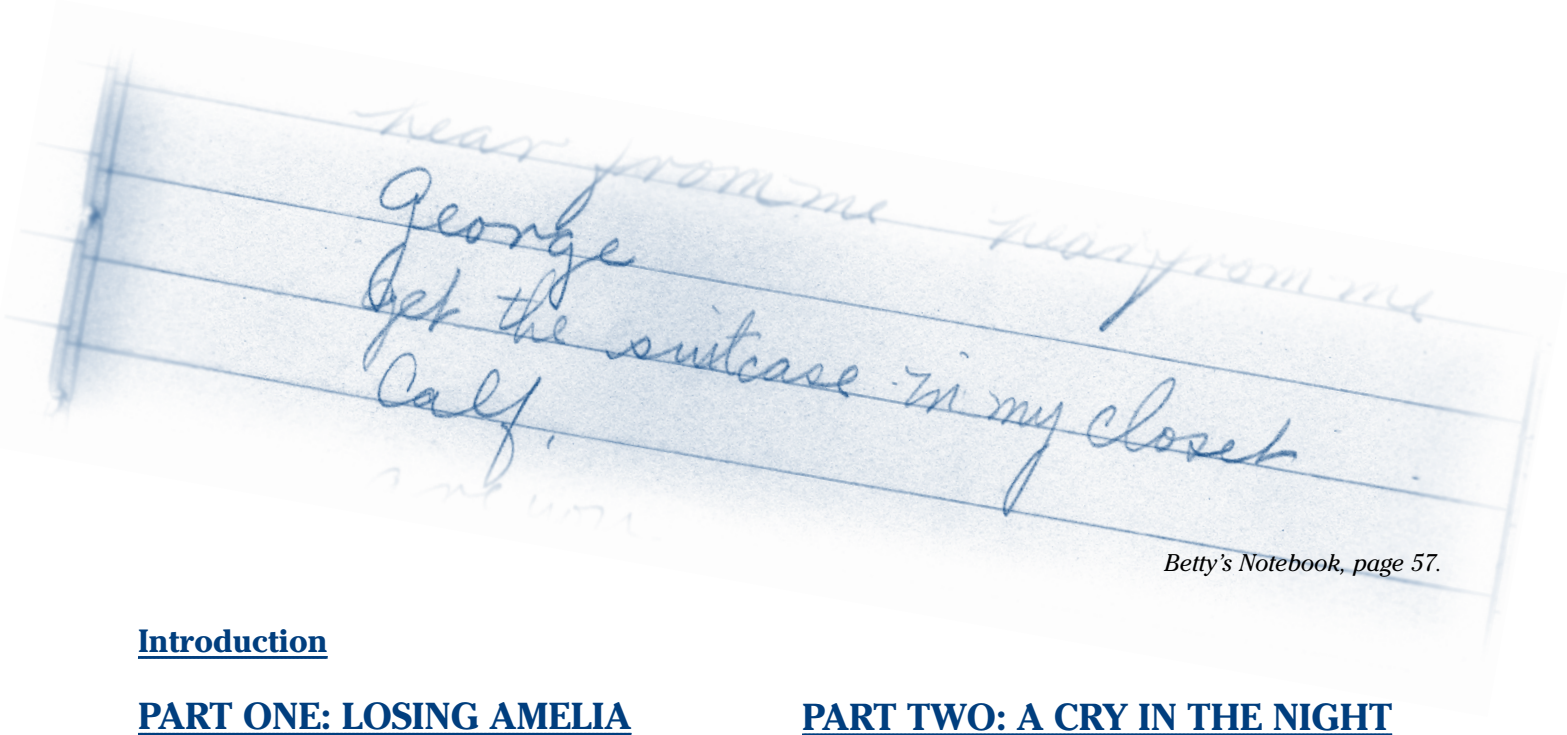
... the suitcase in my closet

Uncovering the key to the Amelia Earhart mystery



Betty's Notebook, page 57.

Introduction

Amelia Earhart and her navigator, Fred Noonan, vanished in the Central Pacific on July 2, 1937. At the time of her disappearance Earhart was one of the world's most famous personalities. Over the years she has passed from celebrity to legend, and the answer to the riddle of her fate has become the Holy Grail of historical investigation. Researchers and enthusiasts have spent millions of dollars trying to establish the validity of competing theories. Dozens of expeditions have combed tropical islands and scoured the depths of the ocean. Hundreds of books, articles and documentaries have offered solutions to the riddle. And yet the fate of America's favorite missing person remains unknown.

Clearly there is a problem. Puzzles of far greater complexity are regularly solved in the fields of medicine, genetics, paleontology, law enforcement and dozens of other disciplines. Why can't we figure out what happened to Amelia Earhart? Much of the answer may lie in the way the mystery has traditionally been defined. Like the quest for the Holy Grail, the search for Amelia Earhart is rooted in legend.

The information commonly accepted to comprise the facts of the case is drawn chiefly from Earhart's own writings and from official government reports written after the search for her was abandoned.

Amelia Earhart was a professional celebrity whose livelihood, and that of her promoter/husband George Palmer Putnam, depended upon her popularity with the public. Her press releases, naturally, reflected that imperative. The book she wrote describing her flight around the world, up to what proved to be her final takeoff, told her story as she wished it to be told. Originally to be titled *World Flight*, the unfinished work was edited and polished by Putnam, and published posthumously as *Last Flight*.

After the massive U.S. Navy and Coast Guard effort to find the lost plane was abandoned, the officials who were responsible for assisting the flight, and the officers who directed the search, wrote reports that blamed the victim and exonerated themselves. The official Coast Guard summary of events was such a scathing indictment of Earhart's abilities that senior officials resisted releasing it to the public to avoid besmirching the reputation of America's First Lady of the Air. Their attempt to protect Earhart's image was, in part, responsible for the public's correct impression that there was more to the story than was being told. It wasn't long before rumors of conspiracy began to fill the gaps.

Last Flight and the government reports are after-the-fact descriptions of events rather than contemporaneous records of the events themselves. The stories they tell are necessarily colored by the motives and agendas of their authors.

Fortunately, a record of what actually happened is available. Most of the arrangements for Earhart's two World Flight attempts – the preparation of the aircraft, decisions regarding the route, the extent and nature of the U.S. Government's involvement – were made via correspondence. Nearly all of those documents survive, as do the logs of the ships and the official records of the radio communications that directed the U.S. Navy and Coast Guard search. All told, these sources amount to more than 5,000 individual items, each representing an undeniably genuine piece of the Earhart story. Some pieces have been used selectively to sup-

port various versions of the legend but the entire picture, scattered and dispersed among dozens of archival files and private collections, has been as indecipherable as a dropped box of jigsaw puzzle pieces. Collected, compiled and assembled, however, they provide a day by day, and in some cases minute by minute, record of events. Information replaces interpretation, documentation dispels speculation, and the mists of legend are swept away to reveal a far more accurate and informative picture of the Earhart disappearance than has ever before been available.

Losing Amelia, Part One of this book, is a narrative of Amelia Earhart's attempts to fly around the world as documented in the letters, memos, telegrams, radio messages, maps and logbook entries that recorded events as they actually happened. The documented record answers questions that have fueled decades of conjecture and puts to rest a number of theories about the flight's fate. More importantly, it reveals a crucial question that arose during the search but was never resolved.

In the days immediately following the disappearance, press coverage of the search was dominated by recurring reports of radio distress calls from the missing plane. Professional operators in and near the search area, and amateur stations in Hawaii and on the U.S. mainland, reported hearing signals that were widely believed to be calls for help sent from the lost plane. U.S. Coast Guard, Navy, and Department of Interior radio stations in the Pacific maintained listening watches on Earhart's frequencies and logged a variety of transmissions ranging from weak indecipherable signals to "good, strong" receptions that included the aircraft's call sign. Powerful commercial stations in Hawaii made special broadcasts assuring Amelia that help was on the way and asking her to send dashes if she had received the message. Numerous stations heard dashes in apparent reply. Sophisticated Pan American Airways radio facilities in Hawaii and on the islands of Midway and Wake were able to take directional bearings on some of the signals. Private citizens as far away as Florida and the Canadian Maritimes told of trying to tune in foreign stations on their home shortwave radio sets and stumbling upon Amelia Earhart desperately calling for help.

Major newspapers carried daily updates of the latest reported calls under banner headlines such as "Earhart Radio Heard By Warship After Plane Is Missing Half a Day"[1] and "Hope For Safety of Two Fliers Revived As Signals Recur Almost Hourly."[2] Public anticipation of a happy ending to the drama rose and fell like a Pacific swell as, time and again, a new interception seemed to direct the searchers to where Amelia Earhart and her navigator Fred Noonan would surely be found, only for the rescuers to be met by another disappointment.

The authorities and the public knew that the question of whether authentic distress calls were heard was crucial to knowing where to look for the missing plane. Early in the search, Lockheed engineers made it known that, due to the location of the aircraft's radio equipment, it was not possible for the transmitter to function if the plane was floating in the ocean. If even one of the alleged distress calls was genuine, the Earhart flight must have made a survivable landing at some island. To investigate that possibility a battleship was specifically tasked to search the land areas where the plane might have come down. The Pacific is vast and the flight had been missing for nearly a week before the ship reached the area. By that time the flood of reported distress calls had dried to a trickle. Concerns about the accuracy of the available charts kept the ship well clear of reefs and atolls. No search party was put

ashore on any of the islands. Instead, an aerial inspection was conducted using the battleship's three catapult-launched observation planes. When no trace of the missing plane or its crew was identified, the ship's captain judged that it had been "definitely ascertained that the Earhart Plane (sic) is not on land within the region unless on an unknown, uncharted and unsighted reef."[3] The Naval authorities, therefore, concluded that none of the alleged distress calls was genuine and operations shifted to focus on areas of open ocean.

When the search was ultimately abandoned, no attempt was made to compile, compare and evaluate all of the alleged receptions. To question whether brief over-flights of the islands constituted a conclusive search, and to acknowledge the possibility that any of the signals was legitimate, would be to admit that when the ships finally turned for home they might have condemned the lost fliers to a slow death as castaways on some remote Pacific atoll. Instead, the entire body of evidence was declared to be composed entirely of hoaxes and misunderstood receptions of messages sent by the searchers. The alleged distress calls were characterized as "a serious handicap to the progress of the search"[4] and the receptions reported by amateurs were said to be "all probably criminally false transmissions."[5] Earhart's husband and many of her closest associates were unconvinced by the official dismissals but their attempts to launch a comprehensive privately funded search of remote islands were unsuccessful.

Today, the role of the radio distress calls in the Earhart saga is largely forgotten. The Amelia Earhart of legend vanished without a trace. A few researchers have examined some of the more remarkable incidents, most notably the handful of occasions when Pan American Airways radio stations on Oahu, Midway, and Wake Island were able to take directional bearings on suspect transmissions. Selected bearings have been used to support or refute a variety of theories about Earhart's fate, but they have been treated as isolated incidents rather than analyzed in the full context of events.

Part Two of this book, *A Cry in the Night,* addresses the question of whether any of the signals was sent from the lost plane. If Amelia Earhart called for help then the mystery of her disappearance is a far smaller mystery than has previously been supposed. Transmissions from the aircraft were not possible unless it was on land. If there is reason to believe that genuine distress calls were received, then there is reason to believe that the Earhart plane made a survivable landing on a reef or island – and the possible locations are very few in number.

Finding and cataloging the nearly two hundred alleged receptions took years of old-fashioned archival detective work, but compiling and comparing the data were greatly facilitated by the use of 21st century information management systems. Once the reports were digitized and databased the entire body of evidence could be examined quantitatively, without making subjective judgments about the credibility of any individual report or group of reports. The ability to instantly sort the data by any desired criterion, or combination of criteria, revealed patterns and anomalies that could then be evaluated in the context of documented events.

Were any of the reported calls from Earhart misunderstood interceptions of the searchers calling Earhart? By comparing the alleged receptions of messages from Earhart with the few occasions when the searchers made calls on her frequency, the question can be readily answered. Were there hoaxes? That possibility is harder to resolve but by examining the frequency, type of signal and geographical location using state-of-the-art radio wave propaga-

tion software, receptions that have a very low probability of being physically possible can be identified. When the message content of a low probability reception describes circumstances that are impossible (e.g. supposedly sent from a floating aircraft) or when the information can be shown to have been available from other sources (e.g. from intercepted government radio traffic) there is a significant likelihood that the report is a hoax. How many of the suspect signals were heard by professional operators in or near the search area? How many were heard by far away amateurs? Do any of the messages contain information that could only have come from Earhart? Were there occasions when multiple stations heard the same thing at the same time? Do the directional bearings taken by Pan American offer a credible indication of the transmissions' point of origin?

The answers to these and other questions allow an informed assessment of how many, if any, of the reported signals were genuine. If some of the messages are credible then their content might provide important clues to the circumstances faced by Earhart and Noonan, and to why the aerial search failed to spot them. A re-examination of what the Navy pilots reported seeing could reveal clues that were not recognized at the time. Other historical accounts and physical evidence recovered by recent expeditions might provide puzzle pieces that fit an emerging picture of what happened and where.

Any scientifically sound investigation must begin with a reasoned assessment of what is known. Only then is it possible to know what questions to ask in seeking answers to the unknown. The mystery of Amelia Earhart's fate is solvable but only at the expense of treasured myths about those who disappeared and those who tried to find them. The intent of this book is not to defame or judge. This is the true story of the events surrounding the Earhart disappearance and an examination of the crucial question it reveals. ◆

Notes

[1] New York Herald Tribune, July 3, 1937, late edition, page 1.

[2] New York Herald Tribune, July 5, 1937,early edition, page 1.

[3] "Resumé Earhart Search by the USS *Colorado,*" Wilhelm L. Friedell, Captain, USN, Commanding Officer USS *Colorado*, dated July 13, 1937.

[4] "Report of Earhart Search, USS *Lexington*, July 1937," Leigh Noyes, Captain, USN, Commanding Officer USS *Lexington*, page 4.

[5] Treasury Department Report "Radio Transcripts – Earhart Flight," 19 July 1937, page 104.

TIGHAR

THE EARHART PROJECT

Part 1

Losing Amelia

Chapter 1

Kamakaiwi Field

Itasca nodded gently in the tropical night, waiting, listening. The two a.m. deck log entry recorded a balmy 81°, clear skies, a light breeze from the east, and a calm sea. Somewhere, far to the west, Amelia Earhart's Lockheed Electra was drawing closer with each passing hour.

Nearby, invisible but for the faint moonlit line of surf breaking on its fringing reef, lay a narrow lozenge of coral sand and scattered scrub less than two miles in length. The captain of a Nantucket whaler had dubbed it Worth Island in honor of himself in 1822 but the name didn't stick, perhaps because no one thought the barren outcropping was "worth" anything. Located in what was then the South Seas Whale Fishery, the island's small size and low profile made it a hazard to navigation, and in 1842 another American whaling captain bestowed a measure of immortality upon the lookout who saw it coming. All we know about the sharp-eyed sailor is that his name was Howland.

On a July night nearly a century later, Mr. Howland's island was inhabited by several thousand seabirds, a similar number of small gray Polynesian rats, and a half dozen Hawaiian and Chinese American youths. The birds and rats were regular residents but the young men were there on business. They were employed by the U.S. Department of Interior as "colonists" and their presence on the island was the product of a burgeoning market for air travel and the resultant political tensions between the U.S. and Great Britain.

Throughout the late 1920s and early '30s international air commerce had become a growing economic concern. Overseas routes depended not only on aircraft that could safely carry suitable payloads over great distances but also required the development of refueling facilities and the cooperation of the governments in destination countries. To the frustration of Pan American Airways and the U.S. State Department, the potentially lucrative routes across the North Atlantic to Europe were stymied by Britain's refusal to grant landing rights in Newfoundland and England despite the U.S. offer of reciprocal accommodations. The British did not yet have an aircraft that could carry a meaningful payload on such a long trip and had no desire to award a North Atlantic monopoly to the Americans.

With the Atlantic blocked for the moment, Pan American formed a Pacific Division and, in 1935, established routes across the North Pacific using American possessions – Hawaii, Midway, Wake and Guam – as stepping- stones to Manila and Hong Kong. The southern routes to New Zealand and Australia, however, hit another British roadblock.

Transoceanic air travel in the 1930s relied upon flying boats. Flying boats needed calm, protected water and all of the South Pacific atolls known to feature lagoons suitable for landings and takeoffs already belonged to His Majesty or, at least, such was the opinion of His Majesty's Government.

Forced for the time being to settle for the crumbs, the U.S. undertook to establish an American presence on three small, desolate, lagoon-less islands near the equator. A young Bureau of Air Commerce employee by the name of William T. Miller was selected to head the project by which Jarvis, Baker and Howland Islands were to be "colonized" using young native Hawaiian graduates of Honolulu's Kamehameha vocational school. Four men would live on each island for nine months at a time, re-supplied with food and water at three month intervals.

According to the Army lieutenant tasked with selecting the colonists:

> The requirements were that they must be grown up, that they be able to fish in the native manner, to swim excellently, and to handle a boat; that they be boys who were disciplined, boys who were friendly and unattached, and who had proven themselves of the type of disposition that could stand the rigors that might have to be undergone, who it was believed would be able to 'take it', no matter what might come.[1]

Their pay, at three dollars per day, would be better than the average factory worker's, and they would have no expenses. They were to keep logs of daily tidal and weather observations, but their primary function was to just be there. The Coast Guard, at that time an arm of the Treasury Department, would provide transportation to and from the islands but the boys would be well advised to try not to get sick or injured, because they would be literally marooned on desert islands with no means of communication. The Navy supplied fuel for the Coast Guard ships and drums of drinking water for the colonists. The Army provided engineers and materials for the construction of rudimentary accommodations and, in March of 1935, the first colonization expedition to the American Equatorial Islands set out from Honolulu aboard *Itasca*.

Despite some early setbacks the program was a success with William Miller supervising three replenishment missions by *Itasca* over the next year. In February 1936, Secretary of State Cordell Hull sent a memorandum to President Roosevelt recommending that American ownership of the islands be cemented with an Executive Order placing the islands "under the administration of one of the Departments of the Government, possibly the Interior Department."[2] Legal authority was found in the American Guano Act of 1856, a relic of the days when accumulations of guano (bird dung) on Pacific islands were a valuable source of fertilizer. The law provided for the acquisition of uninhabited islands that were deemed vital to American commercial interests. The suggestion was favorably received, but when the Bureau of Air Commerce learned that its project was about to be handed to the Interior Department, the Bureau – either out of confusion or pique – took its ball and went home. In March all of the colonists and supplies were abruptly removed from the islands.

On May 13, 1936, the President signed the order annexing the three islands and in June the colonists were re-installed by the Department of the Interior. Better accommodations were constructed, communications equipment was installed, and young Chinese-American men in Hawaii who held amateur (ham) licenses were recruited to operate the radios. To replace the Bureau of Air Commerce's William Miller as the administrator of the Equatorial Islands the Interior Department selected Richard B. Black. A tall, sturdily built, 34 year-old civil engineer from North Dakota, Richard Black was a seasoned explorer who had been a member of Admiral Byrd's 1933-35 Antarctic Expedition. The

transition seems to have gone smoothly with Miller and Black both making the first reprovisioning voyage to the islands following the reinstatement of the colonists. Miller then returned to the States while Black settled into his new job in Hawaii.

Surveys of the islands conducted by William Miller early in the project indicated that Jarvis Island was the best candidate for construction of an airfield, but land planes capable of carrying meaningful payloads on transoceanic flights were still years away. Nonetheless, on November 16, 1936 Black received a cable from his supervisor at the Interior Department's Division of Territories and Island Possessions in Washington asking him to look into the availability of tractor equipment in Hawaii for a January expedition to the Equatorial Islands. "Desire to have landing field prepared on Jarvis Island earliest date practicable."[3] The next day, Black replied asking where the money was going to come from and was told that there was no money. He'd need to borrow a tractor from the Army or the Navy or somebody. "Fully appreciate difficulties and urge your best efforts for their solution."[4]

The origins of the mission handed to Richard Black can be traced back to 1932 when, among the telegrams received by Amelia Earhart upon the successful completion of her solo transatlantic flight from Newfoundland to Ireland, was one from the wife of New York Governor and presidential candidate Franklin Roosevelt. Mrs. Roosevelt expressed her congratulations and those of her husband, and Amelia responded with a letter of thanks.[5] The two women met for the first time later that year shortly after FDR became the president-elect. Amelia was scheduled to give a talk at a high school in Poughkeepsie, New York not far from the Roosevelt estate and Eleanor took the opportunity to invite the famous flier and her husband, publisher and promoter George Palmer Putnam, to stop at Hyde Park for dinner on the way. Afterward, Mrs. Roosevelt introduced Amelia at the lecture. "I hope to know Miss Earhart more and more but I never hope to admire her more than I do now. She has done so many things which I have always wanted to do."[6]

Earhart and Putnam were invited to the inauguration in March and, during an overnight visit to the White House in April, AE famously escorted the new First Lady on her first night airplane ride to see the lights of Washington from the air. Airplanes were also on the President's mind and one of his first acts was to reorganize the federal agency charged with regulating civil aviation. Competition for the job of Director at the Commerce Department's Aeronautics Branch was intense and throughout the summer of 1933 Amelia lobbied the President for the appointment of her dear friend Eugene Vidal. Her efforts were successful and, in September, Vidal was made head of the agency that would soon be renamed the Bureau of Air Commerce. As a celebrity aviator, Amelia could not have been more well-connected. She was married to one of the countries most accomplished publicists; she was pals with the First Lady; and the nation's top aviation regulatory official was her close friend.

Over the next few years Earhart and Putnam continued their friendship with the Roosevelts and, during a May 14, 1936 overnight stay at the White House, they spoke of Amelia's still very confidential plans to fly around the world. In June, George wrote to the First Lady on his wife's behalf asking "… to avail ourselves of the help you so kindly offered when we last saw you. Our wish is to be put in touch with the proper person in the State Department whose aid can be enlisted in connection with A.E.'s proposed world flight."[7] True to her word, the First Lady had her secretary write a note to Richard Southgate, Chief of the Division of Protocol, asking him to "… take care of the things he [Putnam] wished done in the State Department." Southgate was also cautioned that "Mrs. Roosevelt asked me to send you this

special note to say that she had promised Mr. Putnam to keep this matter confidential. She is sure you understand and that you will be *very* nice to him."[8] [emphasis in original]

To take care of the things that Mr. Putnam wished done the State Department would need to be very nice indeed. Flying around the world meant corresponding with and obtaining permissions and clearances from every country whose territory would to be visited or flown over. Routes had to be set so as to avoid sensitive areas and approvals were complicated by the fact that the airplane would not have a standard license but would be operating in the "restricted" category at very high weights. Arrangements concerning passports, visas, inoculations, and fumigations had to be addressed. Over the next months the State Department would send dozens of letters and telegrams clearing the way for Amelia's World Flight. Putnam paid the postage and cable costs but civil servants handled the hassle.

While the State Department worked on the diplomatic issues, Amelia grappled with the practical aspects of the trip and by later that fall she had another favor to ask of her friends on Pennsylvania Avenue. On November 10, 1936 she wrote a letter to the President asking him to support her unique approach to a major obstacle – the Pacific Ocean.

> Some time ago I told you and Mrs. Roosevelt a little about my confidential plans for a world flight. …For some months Mr. Putnam and I have been preparing for a flight which I hope to attempt probably in March. The route … is east to west, and approximates the equator.
>
> The chief problem is the jump westward from Honolulu. The distance thence to Tokio *[standard spelling in 1936]* is 3900 miles. I want to reduce as much as possible the hazard of the takeoff at Honolulu with the excessive overload. With that in view, I am discussing with the Navy a possible *refueling in the air over Midway Island*." [emphasis in the original]

A squadron of Consolidated PBY-1 (later to be dubbed "Catalina") flying boats was due to be ferried to Hawaii early in 1937. Amelia's idea was that she would practice aerial refueling from one of the "new seaplanes being completed at San Diego for the Navy." "That plane subsequently from Honolulu would be available for the Midway operation."

AE felt that

> …a project such as this (even involving a mere woman!) may appeal to Navy personnel. Its successful attainment might, I think, win for the Service, further popular friendship.
>
> I should add the matter of international permissions, etc. is being handled very helpfully by the State Department.
>
> Knowing your own enthusiasm for voyaging and, and your affectionate interest in Navy matters, I am asking you to help me secure Navy cooperation – that is if you think well of the project.[9]

The President apparently thought well of the project and, a week later, Chief of Naval Operations Admiral William Leahy received Amelia's letter and a memorandum saying that "the President hoped the Navy would do what they could to cooperate with Miss Amelia Earhart in her proposed flight."[10]

The job of assessing the practicality of the proposal landed on the desk of Rear Admiral Ernest J. King, the newly appointed Commander Aircraft, Base Force and, for the past three years, the Chief of the Navy's Bureau of Aeronautics. The admiral was an experienced naval aviator and he had some practical observations about Miss Earhart's plan. In a confidential memo to his superiors, King acknowledged that "…the PBY-1 lends itself to the refueling uses discussed…," but he pointed out that "The chief factor attending the feasibility of the proposed plan is that of airmanship." King felt confident that the Navy's pilots would be up to the task of holding the tanker aircraft steady, but he was worried about the skill required to approach and detach from the tanker without fouling

the hose line in the propellers or any other part of the lower aircraft. Just how Amelia, alone in the aircraft, intended to accomplish this tricky bit of formation flying while also getting hold of and attaching the refueling hose was not discussed. "The ability of the pilot(s) of the receiving plane has not been demonstrated, and since this phase of flying is not ordinarily practiced by, or included in the training of, civilian or commercial aviators it is reasonable to assume that considerable special training will be required to assure the success of the undertaking."[11]

Admiral King also pointed out that the extensive training stateside and the proposed operation at Midway were going to be expensive and he did not think the Navy should foot the William. Meanwhile, in other government offices, a better and cheaper plan was already in the works.

On November 16th, two weeks before Admiral King's memo raised concerns about the midair refueling idea, Richard Black in Hawaii had received his instructions from the Interior Department to figure out some way to build a runway on Jarvis Island as soon as possible. In Washington the next day, a Tuesday, Gene Vidal at the Bureau of Air Commerce sent a cable to William Miller telling him to contact Amelia Earhart at the Seymour Hotel in New York and arrange to meet her in South Bend, Indiana on Saturday. Miller was to bring with him information about the three Pacific islands that the Bureau had colonized and were now being administered by Interior.[12]

Vidal's Bureau of Air Commerce was heavily invested in the proposition that the islands were of great value in the development of air routes to New Zealand and Australia. At least for the moment, however, transoceanic commercial aviation was the province of the flying boat and Pan American Airways was preparing to send its first survey flight to New Zealand in March using the lagoon at Kingman Reef as a refueling stop. The three lagoon-less American Equatorial Islands were beginning to look like the American equatorial white elephants. If one of them became a key element in a highly publicized crossing of the Pacific by a land plane, the islands' future utility would be demonstrated and the colonization program validated.

When presented with the possibility, Earhart recognized that island hopping southwestward across the Pacific to New Guinea would be safer and less expensive than a 3,900 mile non-stop shot from Hawaii to Japan that relied upon midair refueling over Midway. The Navy was notified that it was off the hook and, on December 4th, the Chief of Naval Operations put out the word to his people that "arrangements for refueling [Earhart are] no longer required."[13]

In Hawaii, Richard Black, still clueless about why an airport was needed, was able to report that he had a line on an Army "five-ton caterpillar and improvised scraper." He also mentioned that Robert Campbell, a Bureau of Air Commerce engineer who happened to be in Honolulu to do a survey of Hawaiian airports, had an idea that some financial help might be obtainable through the Honolulu office of the Works Progress Administration office. The local WPA administrator, Mr. F. H. Lacey, suggested that the request should start in Washington. If the necessary equipment, materials, personnel, transportation and money could be rounded up, it was Black's opinion that Jarvis could be "worked into fair emergency field" in three months.[14]

Although Black and Campbell may have been puzzled by the sudden urgency to build an airport in the middle of nowhere, it is not surprising that the WPA was seen as a possible source of funding. Among the many "make work" projects carried out by the Works Progress Administration during the Roosevelt years was the construction of more than a thousand airports around the U.S. The agency was also reputed to be something of an easy mark and, in fact, the term "boondoggle" entered the American political lexicon in 1935 to describe WPA projects

that were considered trivial, wasteful and motivated by political favoritism.

With Amelia's acceptance of Vidal's apparent assurance that he could build her a mid-Pacific airport came the realization that Howland Island's location made it far preferable to Jarvis as a refueling stop on her World Flight. On December 7th, without explanation, Black received notice from Washington that the plan had been changed. The airfield was now to be built on Howland instead of Jarvis. He was also informed that William Miller of the Bureau of Air Commerce was consulting with Aubrey Williams, the WPA Deputy Director, and that he "will propose that Howland landing field be designated WPA project under Lacey. Suggest you keep in communication with Robert Campbell and Lacey as to developments."[15]

The next day, December 8th, Vidal sent a cable to Robert Campbell in Hawaii informing him:

> You will be temporarily retained in the Pacific and will be in charge of runway construction on Howland. More particulars will be mailed you. Release no information for publication concerning these activities.[16]

Campbell's reaction to the news that he was being sent to the middle of the ocean to build an airport on a desert island with a catch-as-catch-can assortment of equipment and labor is suggested by his announced decision to not supervise the work personally but return to Hawaii with the Coast Guard cutter *Duane* which had been tasked with dropping off the construction crew. He had a change of heart, however, when he received the letter with the promised particulars.

> For your information, be advised that Miss Amelia Earhart is contemplating a flight around the world, in a twin-motored land plane, and is including Howland Island, South Seas, as one of her refueling stops. … Inasmuch as Miss Earhart is including Howland Island as one of her stops, it enables the Government to give immediate consideration to previous plans and to expedite the construction of a landing area on the Island which will be available to the flying public.[17]

On December 21st Campbell cabled Washington:

> Air mail instructions received December 19th. Under circumstances withdraw my suggestion to start work and return with *Duane*. Appreciate opportunity and glad to remain Howland for purpose assuring completion. General Drum also feels necessary I remain account of equipment and personnel.*[18]

Lacey, the local WPA administrator, told Campbell that before applying for funding, the airport project would have to be formally approved by the sponsoring agency, in this case, the Bureau of Air Commerce. Accordingly, Campbell cabled a formal project proposal to headquarters "…for the construction of three runways forming basic development in airport construction program on proposed route to antipodes."[19] On December 28th Campbell received confirmation that the Bureau had approved the Howland Island airport project "for immediate prosecution."[20]

By that time, preparations for the airport construction expedition were already coming together. General Drum had offered to send along a surveyor to lay out the runways and a couple of mechanics to help keep the equipment running. Army engineers from Schofield Barracks were building a pontoon arrangement for getting the heavy equipment ashore over the reef, and arrangements had been made to assemble all of the equipment at Hickam Army Airfield. From there it could be brought "through the fence" to an adjoining Navy yard for loading aboard the Coast Guard ship "…to prevent curious being admitted to dock".[21]

**General Drum was the commanding officer of the U.S. Army's Hawaiian Department. His advice was probably based upon his knowledge that the borrowed tractor and grader were available because they had been condemned.*

Most of the project's $9,981 budget was covered by in-kind contributions from the participating agencies but nearly a third of the expenses required cash expenditures – $225 for gasoline, $65 for an acetylene welding unit, $60 to repair the blade on the grader, $9 for a set of socket wrenches and $2,500 in payroll – and that was a problem. Both the Bureau of Air Commerce and the Interior Department were adamant that they could provide no financial support for the project. The cash would have to come from the WPA but that agency seemed to be living up to the popular joke that its acronym stood for We Piddle Around. Lacey was sympathetic but until he received clearance from Washington he could not release a nickel.

The Coast Guard cutter *Duane* was scheduled to embark the expedition on January 12th and, on Tuesday the 5th, with one week left, Robert Campbell was getting nervous.

> No release Howland project received today. All materials, supplies, equipment should be ready to load Friday at latest. Normal purchase and delivery delays make imperative release by January 6th or sailing date *Duane* extended. Have three days work repairing county grader which must be paid for by WPA as no other funds purchase available. Repair work on WPA truck essential and truck cannot be released until project OK.[22]

January 6th came and went with still no word from the WPA. On the 7th Richard Black cabled his own frustration and concern.

> Island welding company who will repair blade for condemned grader will require three days after authority to complete job. Sunday intervenes. Blade could be delivered Tuesday if authority from project cleared by 9 a.m. Honolulu Time, January 8th. Grader essential for project. Delay of grader repair would mean delayed sailing. Campbell and I cannot understand why Lacey has received no word of project status since he wired approval.[23]

Amelia planned to begin her World Flight from California on March 15 and land at Howland two days later. The construction of the runways was expected to take three months. If the expedition sailed from Hawaii on January 12th, time would be tight to get the airport finished, especially if there were equipment problems. Black and Campbell were concerned that any postponement of the sailing date meant an increased risk that the runways wouldn't be ready in time, but back in the States, Amelia had just learned that the problem was much worse than that.

The WPA approval process was more complicated and went far higher than any of the planners had realized. Before the agency could release any money the expenditure would have to be cleared by the Treasury Department's Bureau of Budget, and that could not happen unless and until it was specifically approved by the President of the United States. As far as FDR knew, Amelia was planning on flying nonstop from Hawaii to Japan. The funding request that the WPA and the Bureau of Budget would lay before him was "for the construction of three runways forming basic development in airport construction program on proposed route to antipodes." – hardly an urgent matter.

Amelia had no choice but to bring the President back into the loop, and fast. On Thursday, January 7th the White House received a Western Union telegram from Amelia Earhart in Burbank, California, addressed to "Honorable Franklin D. Roosevelt." After briefly reminding him of his helping her to get Navy cooperation for her aerial refueling plan she informed him that:

> Since then the necessity for such difficult and costly maneuvers has been obviated and instead I hope to land on tiny Howland Island where the government is about to establish an emergency field. Commerce approves my plan, Interior very cooperative, Coast Guard ditto. All details arranged. Construction party with equipment due to sail from Honolulu next

> week. Am now informed apparently some question regarding WPA appropriation in amount $3,000 which covers all costs other than those born by me for this mid-Pacific pioneer landing field which permanently useful and valuable aeronautically and nationally. Requisition now on desk of A.V. Keene, Bureau of Budget, Treasury Department. Understand its moving requires executive approval. Under circumstances could you expedite, as immediate action vital. …Please forgive troublesome female flyer for whom this Howland project is key to world flight attempt.[24]

The following Monday, January 11th, the President approved the project.

The construction expedition was set to sail from Honolulu the next day but trouble with the *Duane's* boiler delayed the departure until the 13th. The plan was to proceed immediately to Howland but, two days out, one of the crew became seriously ill and the decision was made divert to Fanning Island – the nearest hospital. It was January 22nd when the *Duane* finally arrived at Howland Island to find more surf on the reef than they would have wished. One of the tractors and some supplies were landed on the island at the cost of wrecking the pontoon raft and "two men disabled but not seriously hurt."[25] The entire next day until midnight was spent rebuilding the raft and it was the 24th before the landing of equipment and supplies could resume.[26] Finally, on January 28th, Campbell could report that, "*Duane* leaves today. Gear and personnel all landed and in working order. Actual grading operations start tomorrow." Black would return to Honolulu with the *Duane* which, once again, went by way of Fanning Island, this time to collect the body of the crewman who had died despite the hospital's best efforts to save him.

On February 2nd Campbell reported that work was underway and, despite numerous difficulties, he thought he could have the runways finished by March 15th "exclusive of breakdown."[27]

The World Flight appeared to be back on track and, on February 12th, at a packed press conference at Manhattan's Barclay Hotel, Amelia Earhart announced that she would fly around the world. Later that day Richard Black in Honolulu sent a cable to his boss in Washington:

> Mainland press releases give Earhart itinerary. Mainland releases January 14 announced WPA airport project Howland. Many requests here for story and pictures of landing and airport construction. Please outline policy for me follow.[28]

Black was told to "… refer all requests for news releases pictures etcetera to William Cogswell, Miss Earhart's representative Honolulu."[29]

Three 150 foot-wide runways had been planned for Howland. The coral would be graded and rolled to create a north/south strip 4,000 feet long and a northeast/southwest strip 3,000 feet long but, due to the prevailing easterly winds, the runway most likely to be used was the east/west strip. Due to the shape and orientation of the island, this was necessarily also the shortest strip at 2,400 feet. By March 4th, Black was able to forward word from Campbell that the east/west strip was finished, but the next day brought news that the tractor had suffered a serious mechanical breakdown that "will not allow completion of northeast/ southwest runway as originally planned."[30]

William Miller immediately replied that, "Miss Earhart desires as long a runway as possible for takeoff. Advise if north and south runway will be ready, also length and possible wind direction and velocity in the evening."[31] Black was in Honolulu. Campbell was on Howland. Their only means of communication was through the island's amateur radio station. When there was no response by the next day, Miller sent a more emphatic cable.

> It is necessary and desirable to have suitable runway of sufficient length for take off of Miss Earhart's plane as her longest

> flight is from Howland to Lae, New Guinea. Your information on east and west runway received. Advise progress of construction of north and south runway which I understand will be longest runway. Also advise date of completion and latest information on length of all runways.[32]

The same day he sent a cable to George Putnam advising him that "tractor broke down on Howland which was repaired and work progressing slowly."[33]

Monday, March 8th, and still no word about the situation on Howland. Miller resent his March 6th cable to Black followed by another later that day.

> Miss Earhart is ready to leave on schedule and it appears as if the completion of runways on Howland will delay her flight. It will be appreciated if you can expedite a reply from Campbell to my radios of March 6th and 8th requesting information on runway.[34]

Things were looking grim enough that Miller decided to ask the Coast Guard and Navy to delay the sailing of the ships that would be supporting the flight "until further advised. … A short delay appears to be necessary in order to allow for the completion of runway construction on Howland Island."[35] When Black saw the message he quickly pointed out that the Coast Guard cutter going to Howland should sail as scheduled because it was carrying the spare parts Campbell needed to fix the tractor.[36]

In a separate cable that same day, Black also explained to Miller why communication with Campbell on Howland was so slow. High frequency radio signals travel best during the hours of darkness, and Black was only able to communicate with Campbell at night because "day light schedules with island impossible on present equipment." He had relayed Miller's message on the night of the 6th and on the night of the 7th Campbell had replied, estimating that the work could be completed within 24 hours of the ship's arrival with the spare parts.[37] Meanwhile, the Coast Guard, acting on the earlier request, had already ordered the cutter to delay sailing, so Miller had to send another message to straighten that out.

It was Monday, March 8th, and Putnam had informed Miller that the plane would be "probably ready after Friday, weather permitting." If the runway wasn't ready the departure of the World Flight would have to be delayed. "Important know promptly as possible condition at Howland."[38] Miller still didn't have the information Earhart wanted about the north/south runway. On Tuesday he again told Black to tell Campbell to "Cable further information concerning Howland runways."[39] Black replied, explaining that "Amateur short wave distance contest now in progress and poor atmospheric conditions causing delay handling messages to and from Campbell but hope contact him tonight and forward runway report to you."[40] Later that night he did manage to get through to Howland. Black cabled Miller that "Campbell says tonight there is no need for delay." Assurances were fine but what about the north/south runway?

Meanwhile, events in Washington had taken a turn that spelled trouble for the World Flight. Amelia's close friend Gene Vidal had resigned as Director of Air Commerce. Vidal's tenure as Director had been contentious from the beginning and the previous September he had nearly been fired. Amelia had saved him with a strong telegram to the First Lady in which AE threatened to withdraw her support for FDR's re-election unless Vidal was reinstated.

> There is little use of my trying to interest others in the President's cause when my heart is sick with the knowledge that an industry can be jeopardized and an individual's career blasted by what seems a personal feud.[41]

Vidal kept his job and so did Roosevelt. Without the help of both men later that fall there almost certainly would not have been an Amelia Earhart World Flight. Vidal's troubles

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**The examinations required for obtaining a non-scheduled instrument flying rating were less demanding than those for pilots who flew for scheduled air carriers.*

continued and by the end of February he was fed up and resigned. With her friend no longer running the Bureau of Air Commerce it didn't take long for regulatory issues to start causing problems for Amelia.

On that busy Tuesday of March 9th, with the World Flight's scheduled departure just days away, William Miller received a cable from Robert R. Reining, chief of the Bureau's Registration Section, suggesting Miss Earhart renew her Transport License which was due to expire on April 15th during the proposed flight. Reining also wired AE directly, calling her attention to a letter sent to her husband back on October 20, 1936 in which Assistant Director J. Carroll Cone had pointed out that Amelia's Transport License had expired on October 15. She would, of course, need to get her license renewed and,

> In view of the long over water flights involved [*in the proposed World Flight*], it will be necessary for A.E. to obtain a nonscheduled instrument flying rating.[42]*

Amelia had renewed her six-month Transport License, but nothing had been done about the instrument rating. Now Vidal was gone and the rating was an obstacle to her planned departure. Reining made it clear to Earhart and to Miller that the World Flight could not proceed until the matter was settled.

The next day Miller received word that the State Department had completed all the necessary international permissions and clearances and had sent a letter to the Department of Commerce authorizing the World Flight. He sent a cable to Reining asking him to forward the letter to Amelia at Oakland Airport via air mail special delivery.[43] Reining wouldn't budge. "Earhart letter authority withheld pending receipt inspector's report flight check approving instrument rating."[44]

There were three elements to the instrument rating examination. The applicant had to pass a written examination; demonstrate ability to control the aircraft solely by reference to flight instruments; and show proficiency in the use of radio navigation aids, but the wording in Reining's cable to Miller offered a way out. Authority would be withheld pending Earhart's obtaining "a nonscheduled instrument rating or flight check ability to fly entirely by instruments."[45] In other words, she could skip the written exam and the radio navigation flight test. Seizing on the easier option, Amelia did not attempt to qualify for an instrument rating but chose rather to take a flight check of her ability to fly entirely by instruments. On March 11th Reining received a telegram from chief inspector in Oakland. "Flight check Earhart instrument flying satisfactory. Written and radio flying not given account her desire to expedite and save engines."[46] The next day, Reining sent the State Department authorization letter to Earhart via airmail, special delivery.

At the same time Earhart and company were sorting out Amelia's pilot certification issues and desperately trying to find out what was going on at Howland, they were also coming to the realization that they needed another navigator. The crossing of the Pacific Ocean to Hawaii, thence to Howland Island and from there to New Guinea, was recognized as the most hazardous portion of the World Flight, and to help her with radio and navigation on those legs Amelia had recruited Harry Manning. They had met and struck up a friendship in 1928 when Manning was the captain of the ocean liner that brought Amelia home from her first aerial Atlantic crossing. As a mariner, Manning was well-versed in ocean navigation. As an amateur radio enthusiast and private pilot, he was familiar with morse code and radio direction-finding. Manning seemed like a good choice to help Amelia cross the Pacific but, in the final days before departure, questions arose about his ability to adapt his nautical navigation skills to the very different aviation environment. Fortunately for Earhart, Captain Frederick J. Noonan, arguably the world's finest aerial navigator, had recently left Pan American Airways and was

available to help out. Due to the very short notice, Noonan did not have time to get the necessary visa to accompany the flight as far as New Guinea, but his skills in aeronautical celestial and dead reckoning navigation were most needed for the flight from Hawaii to tiny Howland Island. The new plan was for AE, her technical advisor Paul Mantz, and the two navigators to make the flight form Oakland to Honolulu. Mantz would stay in Hawaii while Earhart, Manning and Noonan made the jump to Howland. Noonan would leave the flight there and return to Honolulu aboard the Coast Guard cutter *Shoshone*. Manning would continue on as far as Darwin, Australia and AE would make the rest of the trip around the world solo.

At long last, on Saturday, March 13th, a message was received from Campbell on Howland with apologies that static interference had precluded communication for the past three days. Two runways were now completed; the east/west at 2,400 feet and northeast/southwest at 3,000 feet. The north-south strip would be finished by March 15th with a length of 5,200 feet.[47] Richard Black announced that the airport had been officially named "Kamakaiwi Field" in honor of James Kamakaiwi, the Honolulu boy who had been the first Hawaiian to go ashore on Howland when the island was first colonized on March 30, 1935 and had been the leader of the colonists ever since.[48]

With this last hurdle cleared, Earhart hoped to depart as early as the next day, Sunday the 14th, but she would have to switch airports. Heavy rain had swept the San Francisco Bay area since Thursday and the unpaved Oakland airfield was a mess. San Francisco airport had a 3,000 foot paved strip and it was decided that the World Flight would depart from there at 5 p.m. on Sunday, but there was a problem. Mr. Doolin, the airport manager at San Francisco, was worried that the overloaded aircraft might not be able to clear obstructions off the end of the runway and he was reluctant to grant permission for the takeoff. Mr. Bedinger, the Chief of the Bureau's General Inspection Service and the same person who had given Earhart her instrument check ride, cabled Reining in Washington asking for instructions on how to handle the dispute.[49] A reply came the next day from the Bureau's new director, Fred D. Fagg, Jr. He noted that the flight was non-commercial, that the airplane had been given a "restrictive certificate" for the specified take off weight, and that the pilot had been "certified for radio and instruments" (which, of course, was not the case). Nonetheless, he said that, "Unless takeoff would interfere with interstate or foreign commerce, responsibility for place and manner of takeoff rests entirely with state and local authority and person making such takeoff."[50] This time the Bureau would not bend the rules. The airport manager was the local authority and Mr. Doolin apparently stood firm because the aircraft remained at Oakland.

On Monday, March 15th, William Miller informed all government agencies cooperating with the flight that:

> Miss Earhart will not depart this date from Oakland airport on her round the world flight on account weather conditions. Will advise on March 16 further information relative to her departure from Oakland.[51]

The *Herald Tribune* newspapers carried a story that day by Carl Allen, a reporter who had covered Earhart for years. Oakland airport officials were scrambling to get the runway in shape for Earhart's takeoff but the flight had been delayed due to "head winds of unexpected strength on the 2,410-mile course to Honolulu."[52] The weather was a legitimate concern and had also delayed the departure of two Pan American flights to Honolulu, but no one mentioned another reason that the World Flight could not leave.

Fred Noonan, having had a chance to assess the plane's navigational equipment, had identified a major deficiency in the flight preparations. As described in a *TIME*

magazine article later that summer, Noonan was "dismayed that there was nothing with which to take celestial bearings except an ordinary ship sextant. He remedied that by borrowing a modern bubble octant designed especially for airplane navigation."[53] Modern bubble octants were expensive and Fred apparently didn't own one himself. It is equally apparent that he was unwilling or unable to borrow one from his former employer, even though Pan American had a major terminal right there in Alameda. Harry Manning held a commission in the Naval Reserve so a telegram was sent to the Naval Air Station at San Diego urgently requesting that a Navy bubble octant be sent via air express to Oakland for use on Earhart's transpacific flight. Manning would sign for the instrument.[54] At 10:10 a.m. the next morning, Wednesday the 16th, the Naval Reserve Air Base at the Oakland airport received word that the octant would be on the United Air Lines flight scheduled to arrive at 2:50 p.m. Three-quarters of an hour later, at 10:57 a.m., Miller made the announcement that, "Weather conditions improving. Departure from Oakland on March 17th looks definite."[55]

With Pioneer Bubble Octant No. 12-36 safely aboard, the World Flight splashed through the puddles of the Oakland airport and lifted into the air at 4:37 p.m. on March 17th.[56] ◆

Footnotes

1 *Panala'au Memoirs* by E. H. Bryan, Jr. Pacific Scientific Information Center, Bernice P. Bishop Museum, Honolulu, Hawaii (1974) pp. 1-12.

2 State Department memorandum, February 18, 1936. Franklin D. Roosevelt Library, Hyde Park, NY.

3 Message from Hampton to Black via Hawaiian Governor dated 11/16/37.

4 Message from Hampton to Black via Hawaiian Governor dated 11/17/37.

5 Letter from Earhart to Mrs. Roosevelt dated June 15, 1932. Schlesinger Library collection reference 83-M69 (according to Lovell pp. 186 & 386).

6 Poughkeepsie *Eagle-News*, November 20, 1932

7 Letter from George Putnam to Eleanor Roosevelt. June 1936. Purdue Collection.

8 Note from Malvina Schneider, Mrs.Roosevelt's secretary, to Richard Southgate dated June 29, 1936. FDR Library.

9 Letter from Amelia Earhart to President Roosevelt dated November 10, 1936. Purdue, file VII A.1.

10 Navy Department memorandum from Paul Bestede to CNO dated November 16, 1936. Reproduced in *Amelia My Courageous Sister*, page 185.

11 United States Fleet memorandum from Commander, Aircraft Base Force to Commander-in-Chief, U,S. Fleet, dated November 29, 1936.

12 Message from Vidal to Miller, November 17, 1936.

13 Message from CNO to CinCus, December 4, 1936.

14 Message from Black to Gruening dated 12/2/36.

15 Message from Hampton to Black, December 7, 1936.

16 Message from Vidal to Campbell, December 8, 1936.

17 Letter from J.S. Wynne, Chief, Airports Section to R.L. Campbell, December 14, 1936.

18 Message from Campbell to Wynne, December 19, 1936.

19 Message from Campbell to Wynne, December 19, 1936.

20 Message from Cambpell to Wynne, December 28, 1936.

21 Message from Campbell to Wynne, December 23, 1936.

22 Message from Campbell to Wynne, January 5, 1937.

23 Message from Black to Gruening, January 7, 1937.

24 Telegram from Earhart to FDR, January 7, 1937.

25 Message from USCG *Duane* to Commandant, Coast Guard, January 22, 1937.

[26] Message from Black to Commandant, Coast Guard, January 24, 1937.

[27] Message from Campbell to Wynne, February 2, 1937.

[28] Message from Black to Gruening, February 12, 1937.

[29] Message from Gruening to Black, February 15, 1937.

[30] Message from Wynne to Miller quoting Campbell to Black, March 5, 1937.

[31] Messge from Miller to Black, March 5, 1937.

[32] Message from Miller to Black, March 6, 1937.

[33] Message from Miller to Putnam, March 6, 1937.

[34] Message from Miller to Black, March 8, 1937.

[35] Message from Miller to Commandant 14th Naval District, etc., March 8, 1937.

[36] Message from Black to Miller, March 8, 1937.

[37] Message from Black to Miller, March 8, 1937.

[38] Message from Putnam to Miller, March 8, 1937.

[39] Message from Miller to Black, March 9, 1937.

[40] Message Black to Miller, March 9, 1937.

[41] Telegram from Earhart to Mrs. Roosevelt, September 15, 1936. FDR Library.

[42] Letter from J.Carroll Cone, Assistant Director of Air Commerce to George P. Putnam dated October 20, 1936.

[43] Message from Miller to Reining, March 10, 1937.

[44] Message from Reining to Miller, March 10, 1937.

[45] Message from Reining to Miller, March 9, 1937.

[46] Message from Bedinger to Reining, March 11, 1937.

[47] Message from Shoshone to Wynne via Commandant, Coast Guard, March 13, 1937.

[48] Message from Keane to the Associated Press, March 15, 1937.

[49] Message from Bedinger to Reining, March 13, 1937.

[50] Message from Fagg to Bedinger, March 14, 1937.

[51] Message from Miller to COMFRANDIV et al, March 15, 1937.

[52] New York *Herald Tribune,* March 15, 1937.

[53] *TIME* magazine, July 19, 1937, page 45.

[54] Message from NAVSTA San Diego to Secretary of the Navy, March 15, 1937.

[55] Message from Miller via COMFRANDIV to Cincus, et al. March 16, 1937.

[56] Message from Miller to Director, Bureau of Air Commerce, March 17, 1937.

Announcing

2005 TIGHAR Aviation Archaeology Field School

October 9 –14 (Sunday through Friday)
College Park Airport, Maryland

Registrations are now being accepted for the 2005 offering of TIGHAR's Aviation Archaeology Field School. TIGHAR members who complete the program will receive their "C" (Course) and "E" (Expedition) certifications and will be eligible for selection to participate in major field work such as the Earhart Project expeditions.

Previous TIGHAR field schools have focused on wilderness aircraft wreck sites in the western U.S. This year we'll be on the east coast for an archaeological excavation of one of the most significant sites in American aviation history. The College Park Aviation Museum has asked TIGHAR to examine Hangars One and Two of the 1911 U.S. Army Aviation School.

College Park, just seven miles north of Washington, DC, is the world's oldest continuously operated airport. In 1909, after trials at Ft. Myer, Virginia, the U.S. Army agreed to buy a flying machine from the Wrights. To fulfill the contract, Wilbur was required to train two officers "of reasonable intelligence to become proficient in its use in a reasonable amount of time." The commanding officer at Ft. Myer, however, was concerned that the operation of the machine and the large crowds it attracted were interfering with the training of cavalry horses and insisted that another location be found. A large, level field near the Maryland Agricultural College (today the University of Maryland) was selected and 160 acres of land were leased. A small temporary hangar was erected and Wilbur began training Lt. Frank Lahm and Lt. Frederick Humphreys.

In 1911 the U.S. Army Signal Corps opened the Army Aviation School at College Park Airport with three flying instructors, Lt. Roy Kirtland, 2nd Lt. Henry "Hap" Arnold (on our cover), and 2nd Lt. Thomas Milling, all trained by the Wrights in Ohio. Arnold, of course, went on to become a five-star General and Commander-In-Chief of the Army Air Forces during World War Two.

The original Army Aviation School was based in four hangars near the Baltimore & Ohio railroad tracks at the north end of the field. Over the years, the sites of two of the original hangars and several other structures have been paved over, but the foundations and floors of Hangars One and Two still survive under the grass. Archeological test pits from earlier evaluations at the site yielded an abundance of artifacts including parts, tools, and various types of equipment. For TIGHAR's survey, we plan to use Ground Penetrating Radar (GPR) to identify the most promising areas for excavation.

The Field School will consist of two days of classroom work at the College Park Aviation Museum followed by four days of field work on the historic site under the supervision of TIGHAR's senior archaeologist Dr. Tom King. Because there will be no hiking or camping involved, there are no physical requirements for participation. We anticipate a high level of interest and space will be limited. Please use the enclosed form to

register now for this unique opportunity to learn the science of aviation archaeology, get that "CE" added to your TIGHAR member number, and touch the past at one of aviation's most historic sites.

Visitors admire a Wright Model B in front of the Army Aviation School hangars at College Park in 1912. Photo courtesy College Park Aviation Museum/Robert Strobell Collection.

The site as it appears today. TIGHAR photo by R. Gillespie.

The College Park Aviation Museum. TIGHAR photo by R. Gillespie.

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