



**CIL 2016-208-I-01**  
**PFC William Edward BRANDENBURG**  
**U.S. Marine Corps Reserve**

**Defense POW/MIA Accounting Agency**  
**Laboratory**  
**2300 Defense Pentagon**  
**Washington, D.C. 20301-2300**

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DEFENSE POW/MIA ACCOUNTING AGENCY  
2300 DEFENSE PENTAGON  
WASHINGTON, D.C. 20301-2300

Ser: 129-18  
25 September 2018

MEMORANDUM

From: DPAA Laboratory

To: Headquarters, U.S. Marine Corps  
ATTN: (b)(6)  
Manpower & Reserve Affairs (MRPC)  
2008 Elliot Road  
Quantico, VA 22134

Subj: Identification of CIL 2016-208-I-01

Encl: (1) Case File CIL 2016-208-I-01, DPAA 2018-0129

1. Forwarded is the DPAA Laboratory case file establishing the following identification:

***Private First Class William Edward BRANDENBURG, 500355, U.S. Marine Corps Reserve***

2. Enclosed reports and documents in the DPAA Laboratory case file have been checked for accuracy and completeness and represent those documents deemed relevant and probative. One copy is for your retention and the other is for the casualty individual's family. All presentations are marked appropriately on the inside cover of the booklet. For administrative questions, please contact (b)(6)

3. The identified casualty is currently at the DPAA Hickam Laboratory. Please provide this office with disposition instructions. Point of contact for the identification process is (b)(6)

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SEP. (b)(6) BERRAN.PHILIP.JOSEPH (b)(6)  
Date: 2018.09.25 09:59:49 -10'00' for  
(b)(6)  
Commander, Medical Corps, U.S. Navy  
DPAA Medical Examiner  
Defense POW/MIA Accounting Agency

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Date: 2018.09.25 10:00:05 -10'00'  
PHILIP J. BERRAN, M.D.  
Lieutenant Colonel, Medical Corps, U.S. Army  
DPAA Medical Examiner/Science Director  
Defense POW/MIA Accounting Agency



25 September 2018

The remains designated CIL 2016-208-I-01, DPAA 2018-0129 are identified as those of

***Private First Class William Edward BRANDENBURG, 500355, U.S. Marine Corps Reserve***

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BERRAN.PHILIP.JOSEPH (b)(6)  
SEPH (b)(6) Date: 2018.09.25 10:07:17 -10'00' for

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Defense POW/MIA Accounting Agency

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SEPH (b)(6) Date: 2018.09.25 10:07:38 -10'00'

PHILIP J. BERRAN, M.D.  
Lieutenant Colonel, Medical Corps, U.S. Army  
DPAA Medical Examiner/Science Director  
Defense POW/MIA Accounting Agency

Enclosures (8):

1. Historical Report: Ground Incident 45 Betio Island, Tarawa Atoll, Republic of Kiribati; dtd 5 July 2018
2. Defense Health Agency; Armed Forces Medical Examiner System; BRANDENBURG, William E. (BTB); CIL Case No. 2016-208; AFDIL Case No. 2016H-1835; dtd 21 June 2018
3. Forensic Anthropology Report: CIL 2016-208-I-01; dtd 7 August 2018
4. Biological Profile Comparison Report: CIL 2016-208-I-01; dtd 7 August 2018
5. Relevant Personnel Records
6. Memorandum for Record: CXR comparison between PM Radiographs of the CIL 2016-208-I-01 remains and AM radiographs for (b)(6) and (b)(6) dtd 21 September 2018
7. NMS-Form N, Certificate of Death; BRANDENBURG, William Edward; dtd MAR 18'44
8. DD Form 2064, Certification of Death Overseas; BRANDENBURG, William Edward; dtd 25 September 2018

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**DEFENSE POW/MIA ACCOUNTING AGENCY**  
2300 DEFENSE PENTAGON  
WASHINGTON, D.C. 20301-2300

**MEDICAL EXAMINER SUMMARY REPORT**

**DPAA Number:** DPAA 2018-0129  
**Accession Number:** CIL 2016-208-I-01  
**Name:** BRANDENBURG, William Edward  
**Date of Birth:** 3 January 1924  
**Service Number:** 500355  
**Rank/Service:** Private First Class (PFC)/U.S. Marine Corps Reserve  
**Unit:** A Company, 1st Battalion, 2nd Marine Regiment, 2nd Marine Division, Fleet Marine Force  
**Location of Loss:** Betio Island, Tarawa Atoll, Republic of Kiribati  
**Date of Loss:** 22 November 1943  
**Date of Report:** 25 September 2018

**BACKGROUND**

Private First Class (PFC) William E. BRANDENBURG was assigned to A Company, 1st Battalion, 2nd Marine Regiment, 2nd Marine Division (2nd MARDIV), Fleet Marine Force. Private First Class BRANDENBURG participated in the invasion of Betio Island, Tarawa Atoll, Gilbert Islands (now part of the Republic of Kiribati), and was killed in action by a gunshot wound to the abdomen on 22 November 1943. By the end of 23 November 1943, all organized Japanese resistance had ceased; however, both sides had suffered heavy losses. During the battle, Marines had gathered the dead and moved them to unit collection points for burial. Both the identified and unknown remains received temporary burial in isolated graves in one of six temporary cemeteries on the island. In the case of PFC BRANDENBURG, records indicate his remains were buried in Grave 112, Row C of the Central Division Cemetery, later renamed Cemetery #26.

In 1946, the 604th Quartermaster Graves Registration Company centralized all of the American remains found on Betio Island to Lone Palm Cemetery for later repatriation; however, almost half of the known casualties from the battle were not found. The recovered remains were sent to the Schofield Barracks Central Identification Laboratory (CIL), Territory of Hawaii, for identification. By 1949, after every effort available had failed to identify the remains, the Schofield Barracks CIL interred all of the Betio Island remains that had not been sent back to the continental United States in the National Memorial Cemetery of the Pacific (NMCP), Honolulu, Territory of Hawaii.

In October 2016, the DPAA received authorization to disinter and examine the 94 unknowns originally buried on Betio and now interred in the NMCP. On 17 October 2016, the DPAA disinterred "Tarawa Unknown X-074" from Plot O, Grave 423, accessioning the remains as CIL 2016-208. Records indicated that X-074 was originally buried in Cemetery #26 on Betio as an unknown and was subsequently moved to Lone Palm Cemetery in 1946, then to Schofield CIL for additional analysis. Most of the Marines known to have been buried in Cemetery #26

BRANDENBURG, William Edward  
DPAA 2018-0129; CIL 2016-208-I-01

were members of the Second Marines, including three other members of PFC BRANDENBURG's company who also died on 22 November 1943.

Based on the historical record of PFC BRANDENBURG's initial burial in Cemetery #26, along with other members of the Second Marines, and the initial burial of X-074 in Cemetery #26, an association between CIL 2016-208-I-01 and PFC William Edward BRANDENBURG is historically feasible.

### SUMMARY OF IDENTIFICATION

#### DNA Analysis:

DNA testing is performed at the Armed Forces DNA Identification Laboratory (AFDIL), Armed Forces Medical Examiner System, Dover AFB, DE. Tests include mitochondrial DNA (mtDNA), which traces the maternal (mother's) line.

The right tibia and left radius were tested for mtDNA. The left radius did not yield sufficient mtDNA for comparison. The mtDNA sequence obtained from the right tibia was compared to all completed family reference samples associated with casualties from this World War II incident in the AFDIL Family Reference Database. The mtDNA sequence was consistent with maternal references associated with two missing service members from this World War II incident, one of whom is PFC William E. BRANDENBURG. The other missing service member was previously identified and is excluded by chest radiograph comparison.

The genetic data (mtDNA) are approximately 186 times more likely to be observed under the scenario that the right tibia originated from a maternal relative of PFC BRANDENBURG's (b)(6) and maternal (b)(6) as opposed to originating from an unrelated individual from the Caucasian population.

Mitochondrial DNA (mtDNA) whole genome sequencing was performed on the right tibia, as well as a reference sample associated with William E. Brandenburg. The mtDNA sequence information obtained from the right tibia is consistent with the mtDNA sequence information obtained from the sister of PFC BRANDENBURG at all 16,397 overlapping base pairs.

#### Anthropology Analysis:

The examined remains consist of a nearly complete skeleton in fair condition. The majority of the skeleton is present for analysis: left and right clavulae, humeri, and ulnae; right scapula; left radius; sternum; right ribs 1-10 and 12; left ribs 3-12; T1-T5 and T-11-12 vertebrae; two partial thoracic vertebrae; L1-5 vertebrae; sacrum; 1st coccygeal segment; left and right innominates, femora, tibiae, fibulae, tarsals, metatarsals, and proximal phalanges; 3 intermediate phalanges; 4 distal phalanges; 1 pedal sesamoid; and 4.5 grams of osseous material and sediment. The remains represent a single individual based on consistency in development, morphology, size, articulation, general taphonomic condition and mitochondrial DNA sequence. There is no duplication or overlap of skeletal elements. There is possible perimortem trauma to the right clavicle, but postmortem damage precludes definitive interpretation. The remains

BRANDENBURG, William Edward  
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represent male individual of indeterminate ancestry who was 16 to 20 years of age at time of death. Living stature is estimated as 62.6–68.0 inches. On the date of loss, PFC William E. BRANDENBURG was a 19-year-old White male who stood 65 inches tall.

### OPINION

The laboratory analysis and the totality of the circumstantial evidence available establish the remains as those of Private First Class William Edward BRANDENBURG, U.S. Marine Corps Reserve.

The date of PFC BRANDENBURG's death was previously established by the U.S. Marine Corps as 22 November 1943, with the cause of death stated as "Wound, Gunshot, Abdomen." Based on the available evidence, the cause of death is best certified as "Ballistic Injury of the Abdomen". Based on the historical record the manner of death is certified as homicide. The date of death is consistent with available historical records. If additional remains of PFC BRANDENBURG are recovered and identified, disposition of those remains will be in accordance with the wishes of the next of kin.

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BERRAN.PHILIP.JOSEPH (b)(6)  
SEPH. (b)(6) Date: 2018.09.25 09:58:23 -10'00' for

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Commander, Medical Corps, U.S. Navy  
DPAA Medical Examiner  
Defense POW/MIA Accounting Agency

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DPAA Medical Examiner/Science Director  
Defense POW/MIA Accounting Agency

**Historical Report: Ground Incident 45  
Betio Island, Tarawa Atoll, Republic of Kiribati**



by

(b)(6)

**Indo-Pacific Directorate  
Defense POW/MIA Accounting Agency  
590 Moffet St, Bldg. 4077  
Joint Base Pearl Harbor-Hickam, HI 96853-5168**

**5 July 2018**

## **Historical Report: Ground Incident 45 Betio Island, Tarawa Atoll, Republic of Kiribati**

### **Indo-Pacific Directorate Defense POW/MIA Accounting Agency**

**5 July 2018**

#### **INDIVIDUAL ASSOCIATED**

Name	Service Number	Rank	Branch of Service	Date of Loss	Status
BRANDENBURG, William E.	500355	PFC	USMCR	22 November 1943	KIA-BNR

#### **HISTORICAL BACKGROUND<sup>±</sup>**

Private First Class (PFC) William Edward BRANDENBURG, Service Number 500355, was born on 3 January 1924 in New Miami, Ohio. He enlisted in the U.S. Marine Corps Reserves on 27 November 1942, and was assigned to A Company, First Battalion, Second Marine Regiment, (A/1/2), Second Marine Division (2nd MARDIV), Fleet Marine Force. Private First Class BRANDENBURG was killed in action on 22 November 1943, during the 2nd MARDIV invasion of Betio Island, Tarawa Atoll, Gilbert Islands (now part of the Republic of Kiribati).<sup>1</sup>

In the autumn of 1943, the U.S. Navy Pacific Fleet set its sights on the Gilbert Islands. The Gilberts offered the Pacific Fleet a platform from which to launch air assaults on the Marshall and Caroline Islands, advancing the U.S. Navy's Central Pacific Campaign against Japan. The key to the American seizure of the Gilbert Islands was the capture of Betio Island, a small island located within Tarawa Atoll with a key Japanese air base and sizable Japanese garrison.

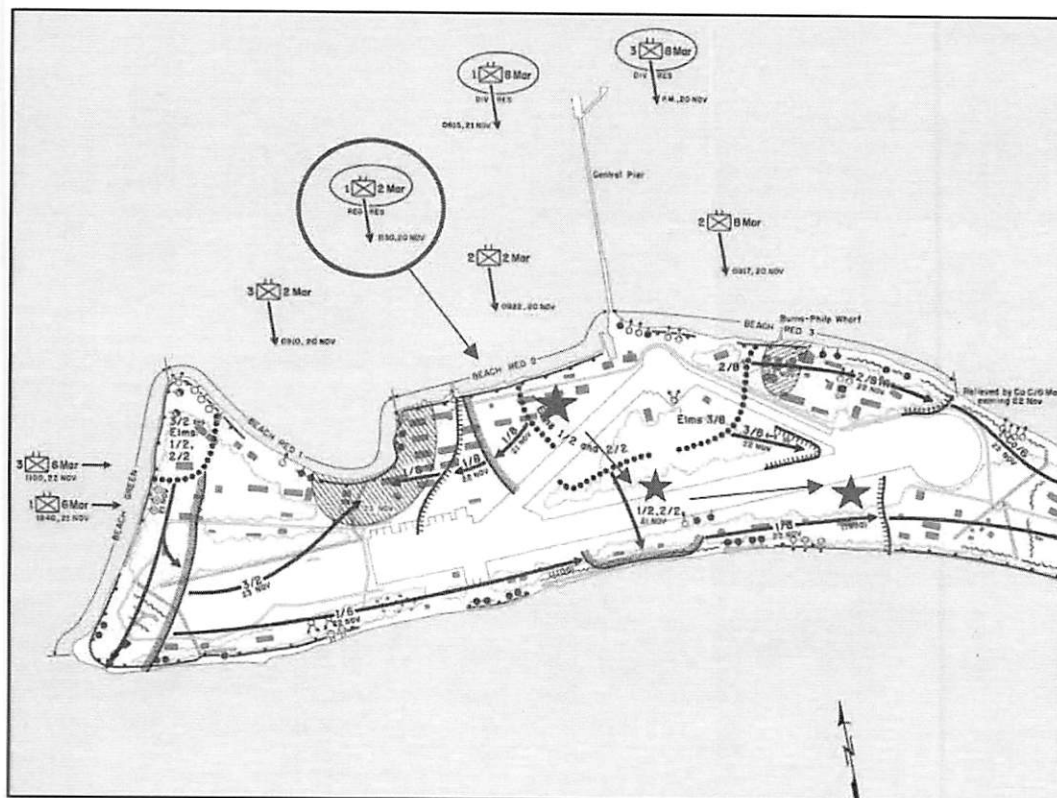
Primary responsibility for the assault on Betio Island, code-named Operation GALVANIC, fell to the 2nd MARDIV. After a massive naval bombardment, the Marines would launch an amphibious assault to take Betio. United States Navy and Marine Corps planners partitioned the primary landing area into three zones designated (from west to east) as Beaches Red 1, 2, and 3.



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H-Hour was 0830 on 20 November 1943. The First Battalion, Second Marines (1/2) remained in reserve while the Second Battalion, Second Marines (2/2) made the initial assault on Beach Red 2. Around 1000, the 1/2 finally received orders to land on Beach Red 2. A Company, PFC BRANDENBURG's unit, would land on the right, with B Company on the left, and C and D Companies in reserve. As the LVTs (Landing Vehicle, Tracked; an amphibious landing craft) approached the beach they ran into heavy Japanese fire. Several LVTs, carrying about ninety men, swerved toward Beach Red 1 to avoid the heaviest of the fire, while the rest clambered into the dubious shelter of the sea wall on Beach Red 2. From this point on, while most of the 1/2 fought on Beach Red 2, some of its men could be found on Beach Red 1, linking up with other units when they discovered could not reach their battalion. The men did not return to their original unit until the close of the battle.

A Company, led by (b)(6) landed about 150 yards west of the pier separating Beach Red 2 and 3. A small group of 25 men managed to push inland to the taxiway toward the center of the island, but when it became clear that they lacked the numbers to hold the position the men withdrew back to the beach. By the end of the day, the 1/2 held the west flank of a precarious American position that stretched from Beach Red 2, through part of the airfield, and to the coast at Beach Red 3 (see Figure 1).



**Figure 1. The assault on Tarawa Atoll, 20-23 November 1943; the movement of First Battalion, Second Marines is indicated in red; the positions held at the end of each day of fighting indicated in red.<sup>2</sup>**

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The next day the 1/2 and 2/2 advanced across the runway to the southern coast of Betio, splitting the island in half. The initial advance met little opposition, but as the Marines dug in at their new positions the Japanese launched a counter attack, inflicting heavy casualties. The Marines successfully repulsed the attack and settled in for another tense night, with B Company on the east, C Company on the west, and A Company in the center of the line.

The following day, the 1/2 received orders to advance east to tie in their lines with the Second Battalion, Eighth Marines (2/8) on the eastern end of the airfield. The First Battalion, Sixth Marines (1/6) would then pass through them and continue the assault eastward. Resistance was heavy; the Japanese had placed an elaborate system of trenches and machine gun emplacements throughout the southern stretch of beach. This was the only sustained action the 1/2 saw on 22 November, and it cost A Company nineteen men. It is likely that PFC BRANDENBURG was killed during this advance as his records indicate that he was killed in action on 22 November 1943 by a gunshot wound to the abdomen.<sup>3</sup>

Despite intense Japanese resistance, the 1/2 continued to push forward to a position just south of the end of the air field, and at approximately 1230, the 1/6 passed through their positions to continue the assault. The 1/2 established a perimeter defense and held their position. Apart from "mopping up" action the next day, that push was the last action the 1/2 saw on Betio.<sup>4</sup> By the end of 23 November 1943, American forces controlled the atoll. In total, the 2nd MARDIV suffered 1,027 dead, 88 missing and presumed dead, and 2,292 wounded.<sup>5</sup> Private First Class BRANDENBURG's company lost 96 men killed in action, most of them killed during the initial landing on Beach Red 2.

Even before the battle ended, Marines began to bury their fallen comrades in isolated graves or in large trench burials scattered across the island. Not all Marines received a burial on Betio Island. Some Marines had been evacuated to hospital ships for medical treatment; those men who succumbed to their wounds were buried at sea. Officials attempted to record as much information about the burial of individual Marines as they could. In the case of PFC BRANDENBURG, his Casualty Card indicates his remains were buried in Grave 112, Row C, of the Central Division Cemetery.<sup>6</sup>

On 24 November 1943, the majority of the 2nd MARDIV withdrew from Betio. Only the chaplains and a defense garrison, including a series of U.S. Navy Construction Battalion ("Seabee") units, remained on the island to bury the dead, and repair and operate the airfield.<sup>7</sup> Over the course of the next few years, Seabee units modified the appearance and organization of the isolated graves and cemeteries. Some cemeteries were lost, while others moved. The Seabees also renamed cemeteries: Central Division Cemetery, where PFC BRANDENBURG was reportedly buried, was renamed Cemetery #26. The Seabees erected memorial markers in the center of several of the larger cemeteries, along with commemorative white crosses. The names on the markers did not necessarily correspond with the names of those buried there: Marines whose remains had not been recovered, who were buried at sea, or who were buried elsewhere on the island, were often listed on the markers, and given a memorial cross. Private First Class BRANDENBURG was given a memorial grave in Cemetery #26, Grave 2, Row 2, Plot 2 (see Figure 2).<sup>8</sup>

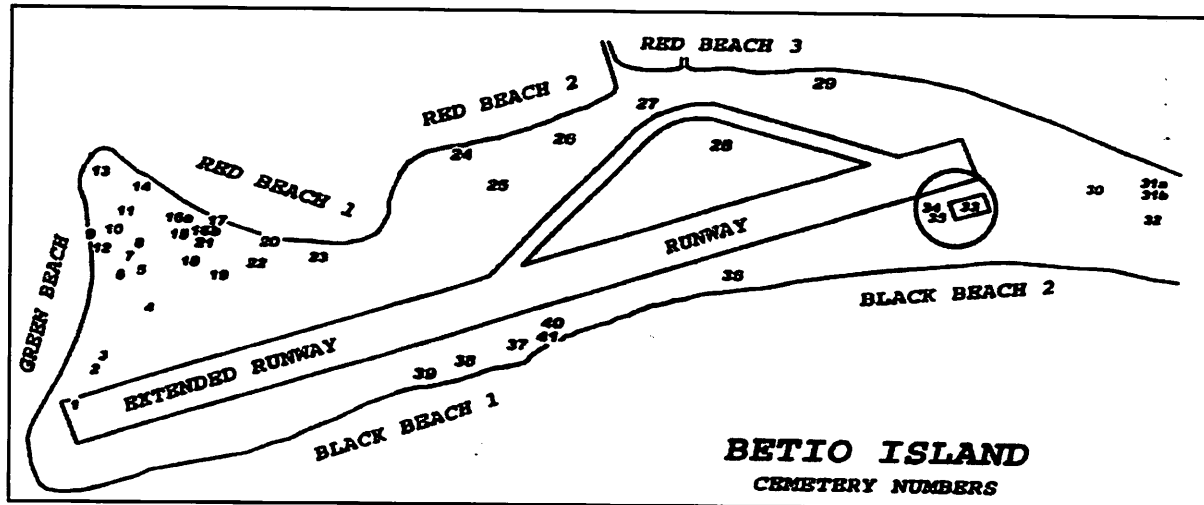


Figure 2. Map of reported burials on Betio Island. Cemetery #26 is highlighted in red.<sup>9</sup>

At the end of the war, the United States began the task of repatriating its fallen. The task of recovering the dead from Betio Island fell to an Army detachment from the 604th Quartermaster Graves Registration Company (604th GRC).<sup>10</sup> On 4 March 1946, the detachment arrived on Betio and began recovery operations.

Over the next two months the 604th GRC recovered 123 remains from Cemetery #26, more than the 115 originally believed to be buried in the cemetery. However, they were only able to recover 532 sets of remains from the island as a whole.<sup>11</sup> This left the remains of almost 500 Marines and sailors unaccounted for.<sup>12</sup> Moreover, many of the 532 remains the 604th GRC had recovered had no means of identification. Officials worked to identify these remains, but in many cases were unsuccessful. Among those whose remains were not recovered or identified was PFC BRANDENBURG.

In an effort to consolidate the remains they had recovered, the 604th GRC moved all American remains found on Betio to a single central location named Lone Palm Cemetery. This included the unidentified remains, which were thoroughly examined and photographed and given an "X" number to denote an unknown.<sup>13</sup> Having completed Lone Palm Cemetery, the 604th GRC concluded their initial phase of operations on Betio on 20 May 1946.

In 1947, the 604th GRC returned to Betio and removed all the remains from Lone Palm Cemetery for repatriation. These remains were sent to the Schofield Barracks Central Identification Laboratory (CIL), at Schofield Barracks, Territory of Hawaii, for further analysis.<sup>14</sup> This resulted in several new identifications but the Schofield Barracks CIL could not associate any of the newly identified remains with PFC BRANDENBURG.

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In 1949, the Schofield Barracks CIL interred all of the Betio Island remains not sent to the continental United States, including 94 unknowns, in the National Memorial Cemetery of the Pacific, Honolulu, Territory of Hawaii. Concurrently, Boards of Review met to review the cases of those missing throughout the Pacific. On 7 October 1949 a Field Board of Review designated PFC William E. BRANDENBURG's remains "non-recoverable."<sup>15</sup>

## INVESTIGATIONS

The Defense POW/MIA Accounting Agency (DPAA) began actively investigating loss incidents on Tarawa in 2010.<sup>16</sup> In January 2016, historians and researchers at DPAA proposed the disinterment of the remains of 94 unknowns buried in the National Memorial Cemetery of the Pacific that had previously been buried in Lone Palm Cemetery. In October 2016, DPAA received authorization to disinter and examine these 94 unknowns. On 17 October 2016, DPAA disinterred "Tarawa Unknown X-074" from Plot O, Grave 423, accessioning the remains as CIL 2016-208.<sup>17</sup>

Records indicate that X-074 was originally buried in Cemetery #26 on Betio as an unknown, and was subsequently moved to Lone Palm Cemetery in 1946, then to the Schofield CIL.<sup>18</sup> No reason was given for the lack of identification by the CIL. However, both Tarawa X-074 and PFC BRANDENBURG were interred in Cemetery #26. Most of the Marines known to have been buried from Cemetery #26 were members of the Second Marines, including three other members of PFC BRANDENBURG's company who also died on 22 November 1943. Therefore, there is a possible historical association between Tarawa X-074 and PFC BRANDENBURG.

## ANALYTICAL SUMMARY

Private First Class William Edward BRANDENBURG, a member of A Company, First Battalion, Second Marines, 2nd MARDIV, was killed in action on 22 November 1943 during the Battle of Tarawa. His remains were reported buried in Cemetery #26.

After the close of World War II, the 604th Quartermaster Graves Registration Company recovered 532 sets of remains from the island of Betio. These remains were moved to Lone Palm Cemetery on Betio Island while awaiting repatriation to the United States. In 1947, the 604th GRC returned, disinterred the remains in Lone Palm Cemetery, and transferred them to the Schofield Barracks Central Identification Laboratory for additional analysis. The Schofield Barracks CIL was unable to associate any remains with PFC BRANDENBURG and, in October 1949, a Board of Review declared his remains "non-recoverable."

In October 2016, the Defense POW/MIA Accounting Agency disinterred Tarawa X-074 from the National Memorial Cemetery of the Pacific. Records indicate that X-074 was originally buried in Cemetery #26 on Betio as an unknown, and was subsequently moved to Lone Palm Cemetery in 1946, then to the Schofield CIL. As both X-074 and PFC BRANDENBURG were

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*Historical Report: Ground Incident 45*

interred in Cemetery #26, along with other members of the Second Marines, it is historically feasible that the remains accessioned as CIL 2016-208 could be associated with Private First Class William E. BRANDENBURG.

(b)(6)



World War II Historian  
Indo-Pacific Directorate

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## NOTES

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<sup>±</sup> The historical background and investigations sections were compiled, unless otherwise noted, from information owned and published by the Department of Defense.

<sup>1</sup> Individual Deceased Personnel File (IDPF) for BRANDENBURG, William E., PFC, USMCR, 500355; Records of the Quartermaster General, Record Group (RG) 92; National Personnel Records Center (NPRC), St. Louis, MO; United States Marine Corps Casualty Card for BRANDENBURG, William E., PFC, USMCR, 500355, Historical Reference Branch, Marine Corps History Division, Quantico, VA.

<sup>2</sup> Philip A. Crowl and Edmund G. Love, *Seizure of the Gilberts and Marshalls* (Washington, D.C.: Center of Military History, 1993), 435.

<sup>3</sup> Marine Corps Casualty Card for BRANDENBURG, William E., PFC, USMCR, 500355, Quantico, VA.

<sup>4</sup> "1<sup>st</sup> Bn, 2d Marines – Tarawa Narrative Report," Record Group 127: Records of the US Marine Corps, National Archives and Records Administration, College Park, MD.

<sup>5</sup> This number includes Navy medical personnel assigned to Marine units. Joseph H. Alexander, *Across the Reef: The Marine Assault of Tarawa*, Marines in World War II Commemorative Series, (Washington, D.C.: Marine Corps Historical Center, 1993), 50.

<sup>6</sup> Marine Corps Casualty Card for BRANDENBURG, William E., PFC, USMCR, 500355, Quantico, VA.

<sup>7</sup> James R. Stockman, *The Battle for Tarawa*, USMC Historical Monograph (Washington, D.C.: Marine Corps Historical Center, 1947), 65.

<sup>8</sup> Marine Corps Casualty Card for BRANDENBURG, William E., PFC, USMCR, 500355, Quantico, VA.

<sup>9</sup> "Location of Graves on Betio Island Tarawa Atoll," RG 80: General Records of the Department of the Navy, 1798-1947, National Archives, College Park, MD.

<sup>10</sup> Edward Steere and Thayer Boardman, *Final Disposition of WWII Dead, 1945-1951* (Washington, DC: Historical Branch, Office of the Quartermaster General, 1957), 398.

<sup>11</sup> Graves Registration Section, Service & Supply Company, "Recapitulation of Known Graves," 3 February 1944, RG 127: Records of the US Marine Corps, National Archives and Records Administration, College Park, MD; First Lieutenant Eisensmith, Memorandum to Chief, Memorial Branch, Quartermaster Section, Army Forces, Middle Pacific, 3 July 1946, General Correspondence, Miscellaneous File, RG 92: Records of the Quartermaster General, NARA, College Park, MD.

<sup>12</sup> This number includes servicemen killed on the island after the battle.

<sup>13</sup> First Lieutenant Eisensmith to Memorial Branch, 3 July 1946, RG 92, NARA.

<sup>14</sup> Steere and Boardman, *Final Disposition of WWII Dead*, 406.

<sup>15</sup> "Non-Recoverable Remains of BRANDENBURG, William E.," 7 October 1949, in IDPF for BRANDENBURG, William E., PFC, USMCR, 500355, NPRC.

<sup>16</sup> In January 2015, three elements of the Accounting Community – the Joint POW/MIA Accounting Command (JPAC), Defense POW/Missing Personnel Office (DPMO), and Life Science Equipment Laboratory (LSEL) – combined to become one agency, the Defense POW/MIA Accounting Agency (DPAA). These predecessor organizations are referred to as DPAA throughout this report.

<sup>17</sup> "Disinterment Directive," X-74, Schofield Mausoleum #1, RG 92: Records of the Quartermaster General, NARA, College Park, Maryland.

<sup>18</sup> "Report of Interment," X-74, Schofield Mausoleum #1, NARA.

## **FORENSIC ANTHROPOLOGY REPORT: CIL 2016-208-I-01**

### **DPAA LABORATORY**

**7 August 2018**

### **DESCRIPTION OF REMAINS**

The skeletal remains designated CIL 2016-208-I-01 consist of a nearly complete skeleton in fair condition. These remains were exhumed from the National Memorial Cemetery of the Pacific on 17 October 2016 as Unknown (X)-074. The majority of the skeleton is present for analysis: left and right clavicaulae, humeri, and ulnae; right scapula; left radius; sternum; right ribs 1-10 and 12; left ribs 3-12; T1-T5 and T11-12 vertebrae; two partial thoracic vertebrae; L1-5 vertebrae; sacrum; 1st coccygeal segment; left and right innominates, femora, tibiae, fibulae, tarsals, metatarsals, and proximal phalanges; 3 intermediate phalanges; 4 distal phalanges; 1 pedal sesamoid; and 4.5 grams of osseous material and sediment (Figures 1 and 2). The right tibia and left radius were sampled for DNA analysis. The left humerus and ulna and right femur, tibia and fibula were sampled for isotope analysis.

### **MINIMUM NUMBER OF INDIVIDUALS**

One. The remains represent a single individual based on consistency in development, morphology, size, articulation, general taphonomic condition and mitochondrial DNA sequence. There is no duplication or overlap of skeletal elements.

### **SEX**

Male. Morphological analyses of the postcranial remains indicate that this individual is male. The left pubic bone lacks a subpubic concavity (Score of 3), and the ischiopubic ramus ridge is broad and flat (Score of 3; Buikstra and Ubelaker 1994). The right pubic bone was unscorable due to postmortem damage. According to Phenice (1969), these traits are consistent with males and have a 96% accuracy for sex determination in the test sample.

Metric analyses of the humeral heads indicate probable male. Measurements above the sectioning point of 47 mm are indicative of a male individual, while measurements from 45–47 mm indicate probable male. The humeral head diameters of this individual are 45 and 46 mm, for left and right, respectively. Due to cortical erosion, these measurements should be treated as minimum estimates of the maximum diameter, which strengthens the assessment that this individual is male (Stewart 1979).

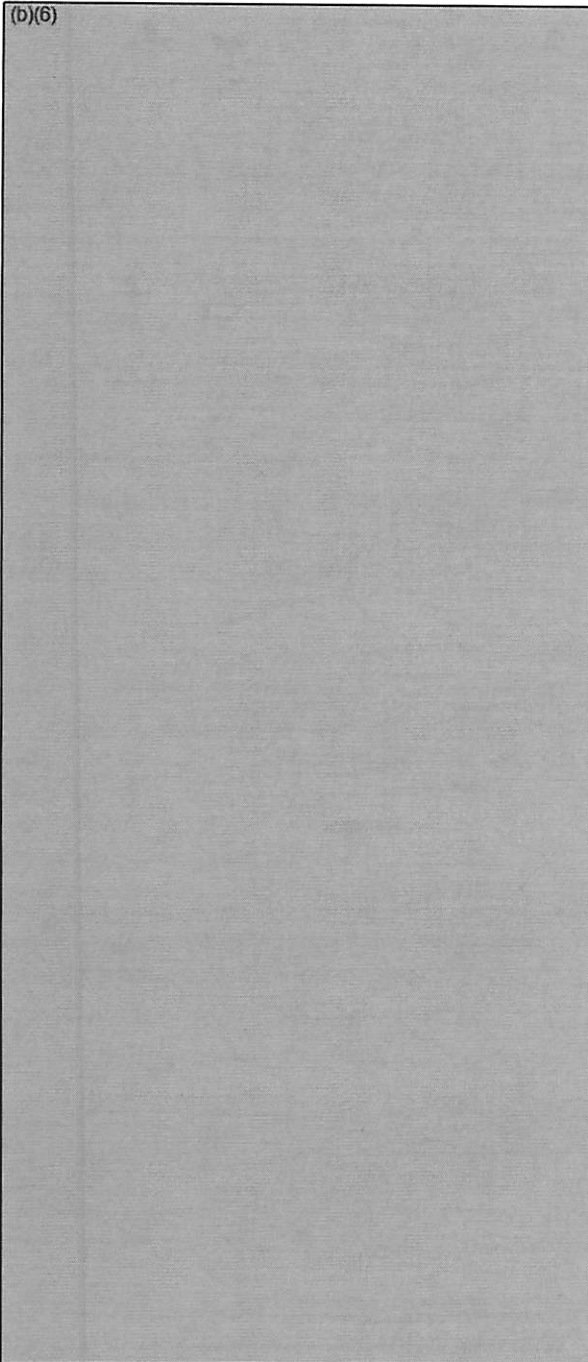


Figure 1. CIL 2016-208-I-01, skeletal layout. Scale is in decimeters.

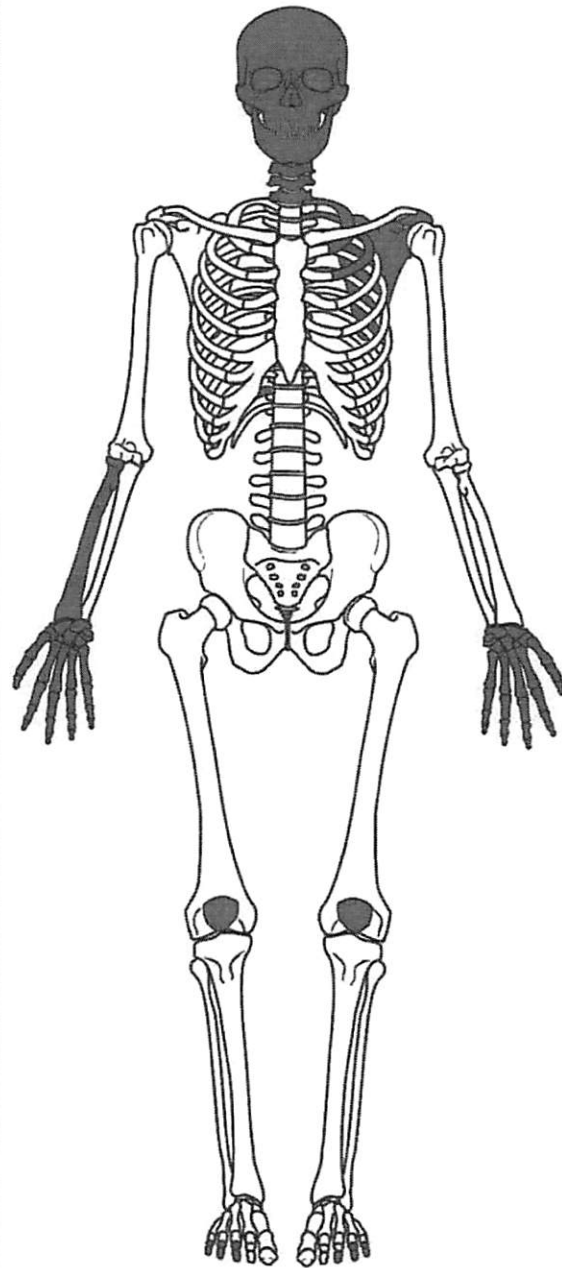


Figure 2. CIL 2016-208-I-01, skeletal inventory diagram. Elements in red are absent. Hyoid and absent thoracic vertebrae not depicted. Pedal phalanges are arbitrarily sided.



## **AGE**

16–20 years. The age-at-death estimate is based on pubic symphysis morphology and overall skeletal development. The pubic symphyses display postmortem damage; however, the dorsal aspect of the right pubic symphysis is observable and was scored as Phase 0, corresponding to an age range of 17–18 years (McKern and Stewart 1957).

Epiphyses in varying stages of union are observable throughout the postcranial skeleton. The proximal humeri, distal radius, and iliac crests all exhibit active fusion (Stage 2), corresponding to age ranges of 17–20 years for the distal radius, 17–21 years in the proximal humeri, and 17–22 years in the iliac crests. Recent union (Stage 3) of the distal ulna is consistent with the range for iliac crest fusion (McKern and Stewart 1957). The McKern and Stewart (1957) sample population was comprised of males of military age, with a lower age restriction of 17 years. The sample presented in Schaefer (2008), which consists of male individuals of Eastern European descent ranging in age from 14–30 years, was utilized to refine the bounds of this age assessment. Following the scoring system utilized in Schaefer (2008), all elements are in Stage 1 union, which corresponds to age ranges of 16–20 years for the distal radius and ischial tuberosity, 16–21 years for the proximal humerus, 17–20 years for the distal ulna, and 17–21 years for the iliac crest.

Proximal humeri, distal radius and ischial tuberosity fusion provide a lower bound of 16 years of age. Distal radius and ulna and ischial tuberosity fusion provide an upper bound of 20 years of age.

## **ANCESTRY**

Indeterminate. The absence of cranial remains precludes an accurate assessment of ancestry.

## **STATURE**

65.3 ± 2.7 (62.6 to 68.0 inches). The living stature of this individual was estimated using the bicondylar length of the left femur (429 mm) and the maximum lengths of the left femur (433 mm) and right fibula (363 mm). Stature was calculated using a regression formula in *FORDISC 3* derived from the Trotter MStats Any male reference data (Jantz and Ousley 2005). The point estimate is 65.3 inches with a 95% prediction interval of 62.6–68.0 inches.

## **TRAUMA**

There is possible perimortem trauma to the right clavicle but postmortem damage precludes a definitive interpretation. No other perimortem trauma was observed on the remains.

## OBSERVATIONS

The skeletal remains are in fair condition. There is significant postmortem damage throughout the remains, including excavation damage, erosion, delamination, and cracking. The remains are tan to medium brown with areas of dark brown mottling and staining and areas of bleaching. Green staining is present on the fifth lumbar vertebra. There is a caudal shift in the first sacral segment as evidenced by a slight sacral hiatus and the presence of apophyseal joints between the first and second sacral segments.

## CONCLUSIONS

The skeletal remains designated CIL 2016-208-I-01 represent a 16–20-year-old male of indeterminate ancestry with a living stature of 62.6–68.0 inches. There is possible perimortem trauma to the right clavicle but postmortem damage precludes a definitive interpretation. No other perimortem trauma was observed on the remains. There is a caudal shift in the first sacral segment as evidenced by a slight sacral hiatus and the presence of apophyseal joints between the first and second sacral segments.

(b)(6)



Anthropologist

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## BIOLOGICAL PROFILE COMPARISON REPORT: CIL 2016-208-I-01

### DPAA LABORATORY

7 August 2018

Subsequent to the forensic anthropology analysis of the skeletal remains annotated above, a comparison of those remains to Private First Class (PFC) William Edward BRANDENBURG, 500355, U.S. Marine Corps, was conducted. The following known physical characteristics for PFC BRANDENBURG and CIL 2016-208-I-01 are presented for comparison:

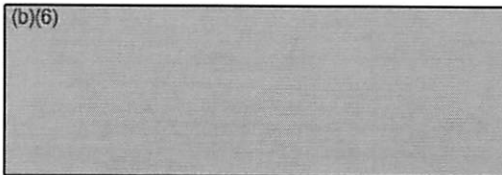
	Forensic Anthropology Report: CIL 2016-208-I-01	PFC William E. BRANDENBURG
SEX:	Male	Male
AGE:	16–20 years	19 years, 10 months <sup>1,2</sup>
ANCESTRY:	Indeterminate	White <sup>2</sup>
STATURE:	62.6–68.0 inches	65 inches <sup>2</sup>
TRAUMA:	Possible perimortem trauma to the right clavicle	Killed in action. Gunshot wounds, abdomen <sup>2</sup>

<sup>1</sup>NAVMED H-4 (DENTAL RECORD) labeled *BRANDENBURG, William Edward*, dtd Nov. 29, 1942. Age based on date of birth 1-3-24.

<sup>2</sup>OQMG FORM 371 (DATA ON REMAINS NOT YET RECOVERED OR IDENTIFIED) labeled *BRANDENBURG, William Edward*, undated. Age based on date of death 22 Nov 1943.

The above comparison shows that there is overall good biological agreement between the skeletal remains and the physical characteristics of PFC William E. BRANDENBURG.

(b)(6)



Anthropologist

# Memorandum for the Record

**To:** LAB ADMINISTRATION  
**From:** (b)(6)  
**Date:** 21 September 2018  
**Re:** CXR comparison between PM radiographs of the CIL 2016-208-I-01 remains and AM radiographs for (b)(6) and (b)(6)

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I compared the antemortem (AM) radiographs of (b)(6) and (b)(6) with the exploratory postmortem (PM) radiographs of the clavicles and vertebrae from CIL 2016-208-I-01. The shapes and densities of numerous regions of the clavicles and vertebrae show discrepancies between the AM image and the PM images, rendering a 'No Match' opinion for both individuals. Specific items of discordance between the PM images and the AM images for each individual are listed below.

The AM radiograph for (b)(6) shows numerous morphological features that are not present in the PM radiographs of the CIL 2016-208-I-01 remains. (b)(6) left clavicle has a distinct "S-shape" with pronounced medial and lateral bends, while the left clavicle in the PM radiographs has a more gradual curvature. (b)(6) right and left clavicles have narrow lateral ends with no observable conoid tubercle, while the clavicles in the PM radiographs of the CIL 2016-208-I-01 remains display wide, spatulate-shaped lateral ends with prominent conoid tubercles. (b)(6) left clavicle has a roughly uniform diameter across the length of the diaphysis, while the diameter of the CIL 2016-208-I-01 left clavicle diaphysis is relatively thick near the medial end and gradually tapers towards the lateral end.

The AM radiograph for (b)(6) shows numerous morphological features that are not present in the PM radiographs of the CIL 2016-208-I-01 remains. (b)(6) left clavicle midshaft is curved superiorly, while the CIL 2016-208-I-01 left clavicle midshaft is straight. The AM radiograph for (b)(6) shows a bulging on the superior surface of the lateral end of the left clavicle; the PM radiographs for CIL 2016-208-I-01 lack a corresponding bulge on the left clavicle. The AM radiograph for (b)(6) shows a constriction of the left clavicle diaphysis, just lateral of the sternal end; the PM radiographs for CIL 2016-208-I-01 do not show a corresponding constriction in this region. (b)(6) left clavicle has a distinct narrowing of the diaphysis in the region of the lateral bend of the left clavicle; this narrowing is not present on the CIL 2016-208-I-01 PM images. (b)(6) T1 transverse processes are oriented superiorly, while the CIL 2016-208-I-01 T1 transverse processes are more horizontally oriented. (b)(6) T1 spinous process appears more round and bulbous in the AM images, while the profile of the CIL 2016-208-I-01 T1 spinous process is narrow and oval-shaped. (b)(6) T1 and T2 neural arches are markedly taller than the CIL 2016-208-I-01 T1 and T2 neural arches.

Based on the above items of discordance and clear overall morphological differences between the left and right clavicles and T1-T2 vertebrae in the AM and PM images, it is my opinion that the remains of CIL 2016-208-I-01 do not belong to (b)(6) or (b)(6). While any one of the discrepancies listed above would warrant a 'No Match' opinion, the presence of numerous discrepancies makes it clear that these remains are not those of either of these individuals.

(b)(6)

Anthropologist

CERTIFICATION OF DEATH (OVERSEAS) Acte de deces (D Outre-Mer)			
NAME OF DECEASED (Last, First, Middle) Nom du decede (Nom et prenom) <b>BRANDENBURG, William Edward</b>		GRADE Grade <b>Private First Class</b>	BRANCH OF SERVICE Arme <b>U.S. Marine Corps Reserve</b>
ORGANIZATION Organisation (SPONSOR) <b>A Company, 1st Battalion, 2nd Marine Regiment, 2nd Marine Division, Fleet Marine Force</b>		NATION (e.g. United States) Pays <b>United States</b>	DATE OF BIRTH Date de naissance <b>3 January 1924</b>
SEX Sexe <input checked="" type="checkbox"/> MALE Masculin <input type="checkbox"/> FEMALE Feminin			
RACE Race	MARITAL STATUS Etat Civil		RELIGION Culte
<input checked="" type="checkbox"/> CAUCASOID Caucasique	<input type="checkbox"/> SINGLE Calibataire	<input type="checkbox"/> DIVORCED Divorce	<input type="checkbox"/> PROTESTANT Protestant
<input type="checkbox"/> NEGROID Negroide	<input type="checkbox"/> MARRIED Marie		<input type="checkbox"/> CATHOLIC Catholique
<input type="checkbox"/> OTHER (Specify) Autre (Specifier)	<input type="checkbox"/> WIDOWED Veuf	<input type="checkbox"/> SEPARATED Separe	<input type="checkbox"/> JEWISH juif
NAME OF NEXT OF KIN Nom du plus proche parent		RELATIONSHIP TO DECEASED Parente du decede avec le susdit	
STREET ADDRESS Domicile a (Rue)		CITY OR TOWN AND STATE (Include ZIP Code) Ville (Code postal compris)	
MEDICAL STATEMENT Declaration medicale			
CAUSE OF DEATH (Enter only one cause per line) Cause du deced (N'indiquer qu'une cause par ligne)			INTERVAL BETWEEN ONSET AND DEATH Intervalle entre l'attaque et le deces
DISEASE OR CONDITION LEADING TO DEATH Maladie ou condition directement responsable de la mort 1			<b>Ballistic injury of the abdomen</b>
ANTECEDENT CAUSES	MORBID CONDITION, IF ANY, LEADING TO PRIMARY CAUSE Condition mordide, s'il y a lieu. Menany a la cause primaire		
Symptomes percurseurs de la mort	UNDERLYING CAUSE, IF ANY, GIVING RISE TO PRIMARY CAUSE Raison fondamentale, s'il y a lieu. Ayant suscite la cause primaire		
OTHER SIGNIFICANT CONDITIONS Autres conditions significatives			
MODE OF DEATH Condition de deces	AUTOPSY PERFORMED Autopsie effectuee <input type="checkbox"/> YES Oui <input checked="" type="checkbox"/> NO Non		CIRCUMSTANCES SURROUNDING DEATH DUE TO EXTERNAL CAUSES Circonstances de la mort suscitees par des causees exterieures <b>MODE OF DEATH: KILLED IN ACTION</b>
<input type="checkbox"/> NATURAL Mort naturelle	MAJOR FINDINGS OF AUTOPSY Conclusions principales de l'autopsie		
<input type="checkbox"/> ACCIDENT Mort accidentelle			
<input type="checkbox"/> SUICIDE Suicide	NAME OF PATHOLOGIST Nom du pathologiste (b)(6)		
<input checked="" type="checkbox"/> HOMICIDE Homicide	SIGNATURE Signature BERRAN.PHILIP.JOSEPH. [Signature] for Digitally signed by BERRAN.PHILIP.JOSEPH. [Signature] Date: 2018.09.25 09:57:29 -1000	DATE Date <b>25 September 2018</b>	AVIATION ACCIDENT Accident a Avion <input type="checkbox"/> YES Oui <input checked="" type="checkbox"/> NO Non
DATE OF DEATH (Hour, day, month, year) Date de deces (l'heure, le mois, l'annee) <b>22 November 1943</b>		PLACE OF DEATH Lieu de deces <b>Betio Island, Tarawa Atoll, Republic of Kiribati</b>	
I HAVE VIEWED THE REMAINS OF THE DECEASED AND DEATH OCCURRED AT THE TIME INDICATED AND FROM THE CAUSE AS STATED ABOVE. J'examine les restes mortels du de fuit et conclus que le deces est survenu a l'heure indiquee et a la suite des causes enumerees ci-dessus.			
NAME OF MEDICAL OFFICER Nom du medecin militaire ou du medecin sanitaire (b)(6)		TITLE OR DEGREE Titre ou diplome <b>DO, DPAA Medical Examiner</b>	
GRADE Grade <b>CDR/O-5</b>	INSTALLATION OR ADDRESS Installation ou adresse <b>Defense POW/MIA Accounting Agency, 590 Moffet St, Bldg 4077, JBPHH, HI 96853-5168</b>		
DATE Date <b>25 September 2018</b>	SIGNATURE Signature BERRAN.PHILIP.JOSEPH. [Signature] for Digitally signed by BERRAN.PHILIP.JOSEPH. [Signature] Date: 2018.09.25 09:57:51 -1000		
1 State disease, injury or complication which caused death, but not mode of dying such as heart failure, ect. 2 State condition contributing to the death, but not related to the disease or condition causing death. 1 Preciser la nature de la maladie, de la blessure ou de la complication qui a contribue a la mort, mais non la maniere de mourir, telle qu'un arrei du coeur, ect. 2 Preciser la condition qui a contribue a la mort, mais n'ayant aucun rapport avec la maladie ou la condition qui a provoque la mort.			

DD FORM 2064

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S/N 0102-LF-002-0640

DISPOSITION OF REMAINS			
NAME OF MORTICIAN PREPARING REMAINS	GRADE	LICENSE NUMBER AND STATE	OTHER
INSTALLATION OR ADDRESS	DATE	SIGNATURE	
NAME OF CEMETERY OR CREMATORY	LOCATION OF CEMETERY OR CREMATORY		
TYPE OF DISPOSITION		DATE OF DISPOSITION	
REGISTRATION OF VITAL STATISTICS			
REGISTRATION (Town and Country)	DATE REGISTERED	FILE NAME	
		STATE	OTHER
NAME OF FUNERAL DIRECTOR	ADDRESS		
SIGNATURE OF AUTHORIZED INDIVIDUAL			