

Lethality in Motion: Tactics

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The fighting on Okinawa had features that were all its own, but even so its dynamics bore a startling resemblance to the fierce no-man's-land fighting of World War I. The conditions of warfare for both sides, but especially for the Japanese, were governed by the reality of the caves. The Okinawa caves were in some ways a unique response to the lethal mass of enemy artillery the IJA 32d Army faced, and given what they were intended to do, the caves were extremely successful.

Cave Warfare

The caves were largely responsible for the denseness and immobility of the fighting on Okinawa. Without them the Japanese would not have been able to continue to fight at all, and they greatly influenced the tactics both sides found themselves using. As an operational device, the Okinawa caves surpassed the trench systems of World War I in some respects, and in their self-sufficiency the caves were an evolution toward the style of tunnel system used by the North Vietnamese at Cu Chi.

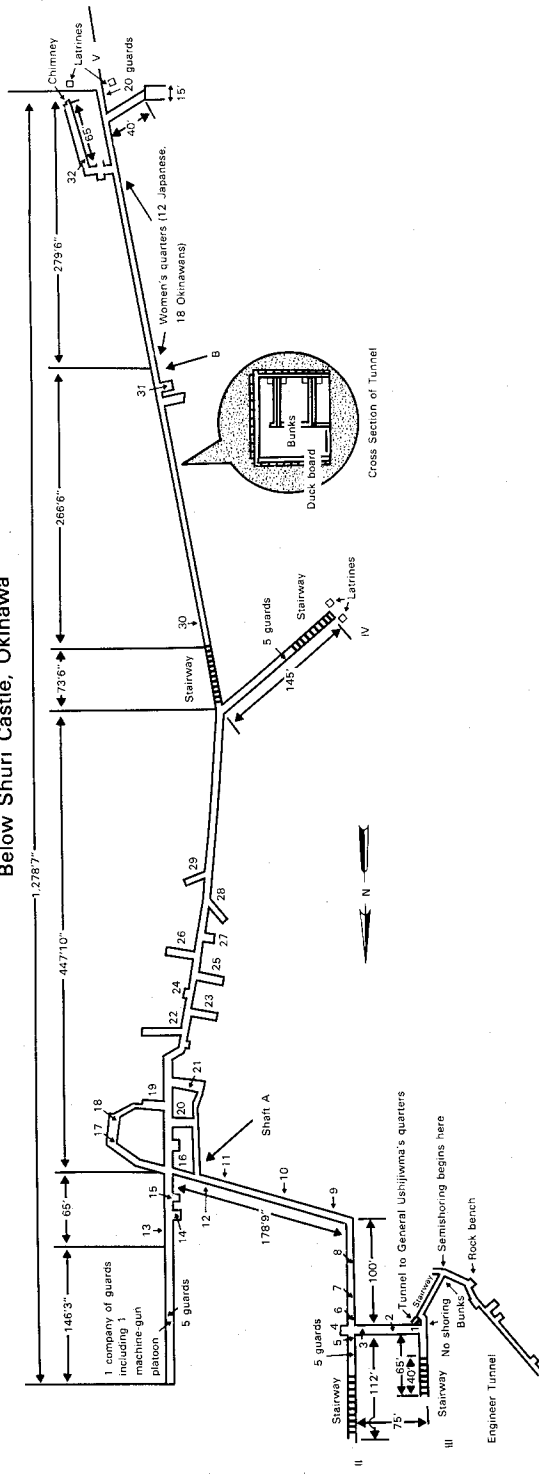
The Command Cave

The most elaborate of the caves was the headquarters structure for the IJA 32d Army, far below Shuri Castle (see figure 4). The headquarters tunnel ran 1,280 feet north to south, with side chambers and a side shaft angling to the left at the north end. The 5th Artillery Command had its tunnel, about 200 yards long, just to the west. The 62d Division headquarters cave lay 300 yards to the east.¹

The 32d Army's command cave lay under sloping terrain, beneath 160 feet of earth at its deepest point, and beneath 50 to 100 feet for most of its length. The 32d's command functions were all placed in sixty yards of the northwestern extremity of the tunnel's side shaft. The commanders were fortunate to be below Shuri Castle rather than in it because as the battle progressed its handsome buildings and parks were reduced to a rubbled moonscape.²

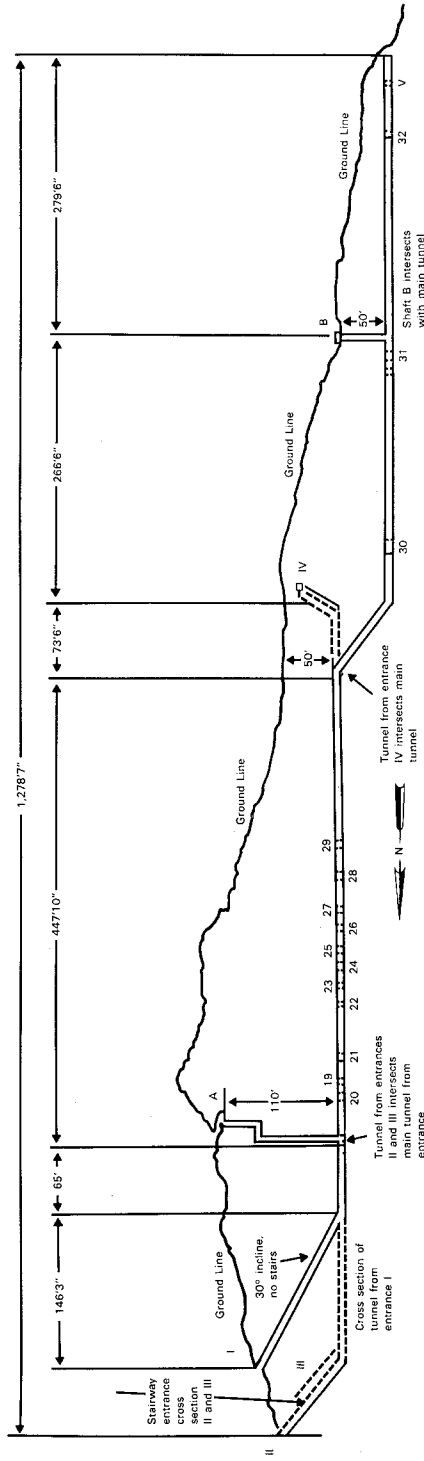
Unlike the smaller frontline caves, the headquarters cave had all walls faced with sawed planks and supported with squared beams. Access shafts

**Floor Plan of the Japanese 32d Army Headquarters
Below Shuri Castle, Okinawa**



No.	Area/Room Designation	No.	Area/Room Designation	No.	Area/Room Designation
1	Commanding general's office and quarters	13	Signal section	25	Air intelligence section, 32d Army
2	Chief of staff's office and quarters	14	Telephone and switchboard	26	Dispensary
3	Staff officers	15	Officers' quarters	27	Staff officers' quarters
4	Senior adjutant's office and quarters	16	Order distributing center	28	Construction section
5	Clerks and messengers	17	32d Army intelligence section	29	Medical officers' office
6	Operations office	18	Operations section, 24th Division	30	Staff office, 44th IMB
7	Formerly commanding general's office and quarters, 44th IMB, later quarters for 10 women typists	19	Operations section, 24th Division	31	Commanding officer (Rear Admiral Ota) and officers' quarters, Okinawa Naval Base Force, 10-17 May 1945
8	Commanding general's pantry	20	Commanding general's office and quarters, 24th Division		
9	Telegraph section	21	Staff office, 24th Division	32	Kitchen
10	Weather section	22	Telegraph section supply room, 32d Army	A B	Secondary entrances and ventilation shafts
11	Material and personnel section	23	Intelligence section, 44th IMB	I-V	Primary entrances
12	Reconnaissance section	24	First-aid station		

Cross Section of the Japanese 32d Army Headquarters
Below Shuri Castle, Okinawa



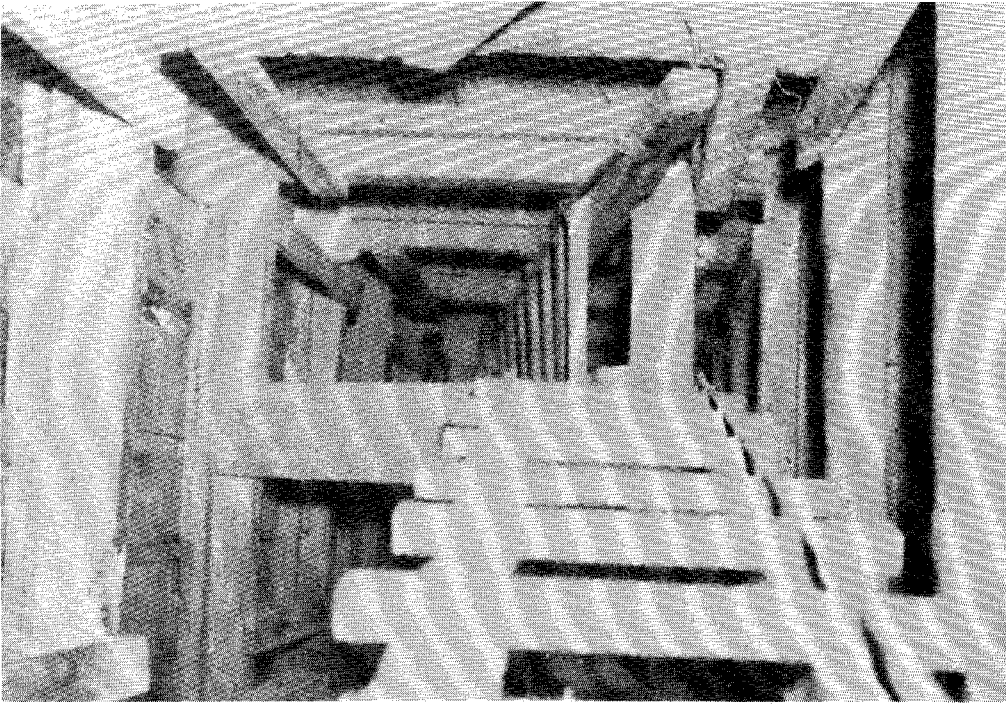
No.	Area/Room Designation	No.	Area/Room Designation
19	Operations section, 24th Division	27	Staff officers' quarters
20	Commanding general's office and quarters, 24th Division	28	Construction section
21	Staff office, 24th Division	29	Medical officers' office
22	Telegraph section, supply room	30	Staff office, 44th IMB
23	Intelligence section 44th IMB	31	Commanding officer (Rear Admiral Ora) and officers' quarters, Okinawa Naval Base Force, 10-17 May 1945
24	First-aid station	32	Kitchen
25	Air intelligence section, 32d Army	I-V	Primary entrances
26	Dispensary	A B	Secondary entrances and ventilation shafts

Source: U.S. Army, 10th Army, G-2 Section, Intelligence Monograph, *Ryukyus Campaign* (Okinawa, 1945), pt. II, sect. D, pp. 4-5.

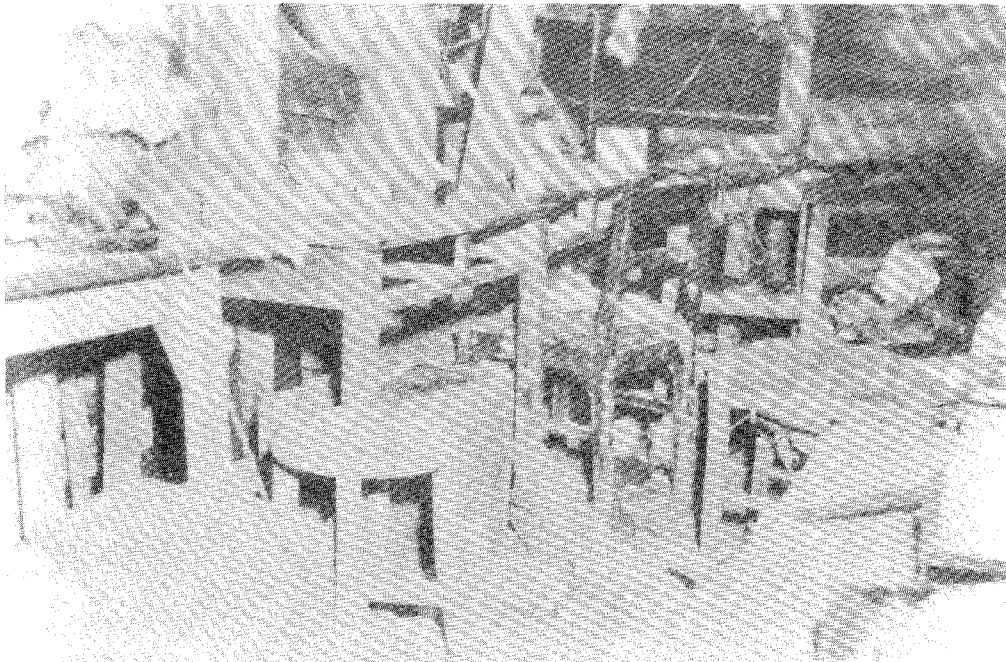
Figure 4. The Shuri command cave



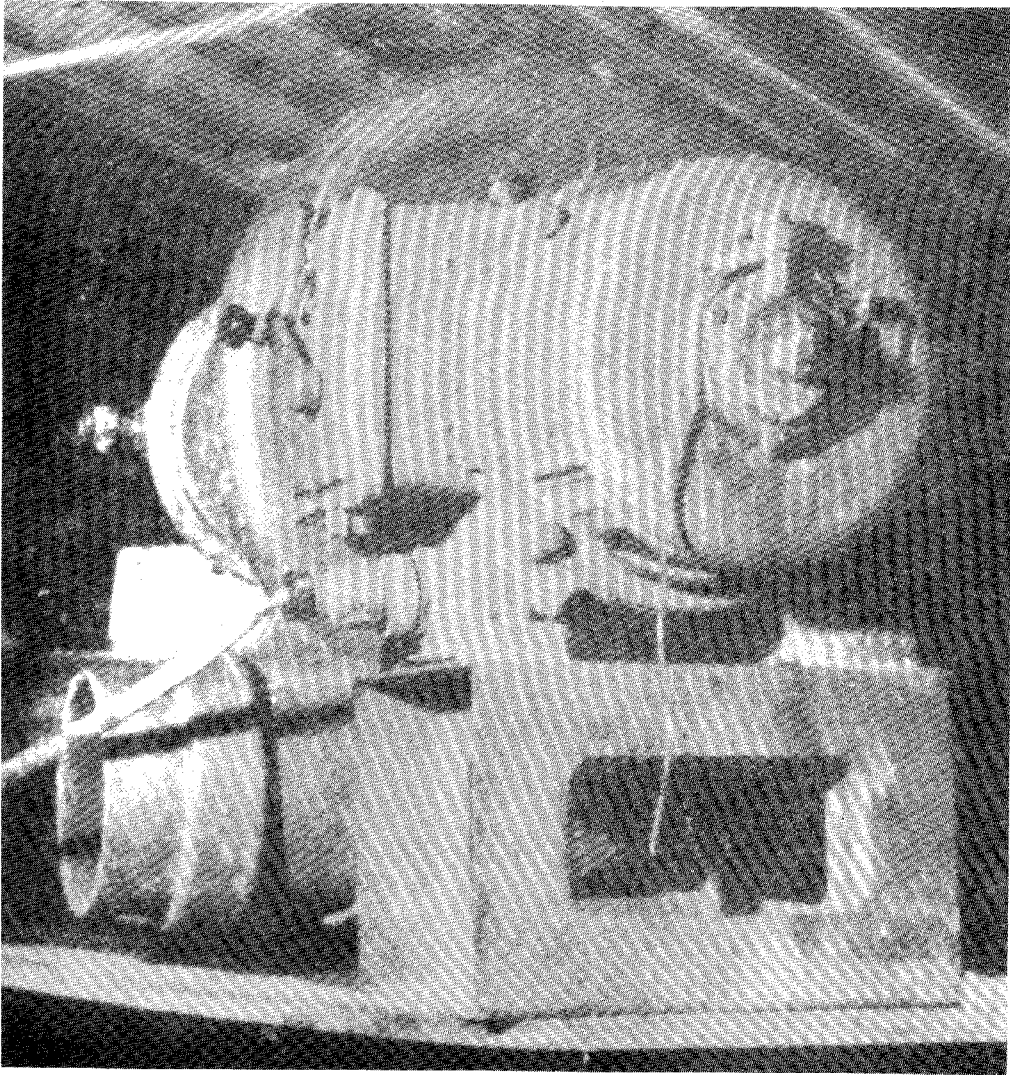
Shuri Castle before and after the Okinawa battle



One of the vertical shafts that allowed access to the Shuri headquarters cave



Headquarters cave office still showing a semblance of order despite demolition efforts by withdrawing Japanese



Motor that ran headquarters cave ventilator fan

were provided with wooden ladders and landings every four yards or so. Climbing straight up 50 to 100 feet in these shafts was arduous. The furnishings were simple but useful, rather like an IJA barracks. Offices were set up with desks and chairs and had electricity. The commander's pantry was notoriously well stocked, and seventy-two feet of tunnel at the south end served as the headquarters kitchen. Elaborate measures were taken to lead the smoke outlets to points where they would be screened from the Americans' view. In the soldiers' areas, bunks ran lengthwise along the side of the tunnel. The functions and spaces of the tunnels took on the quality of a warship.³

As far as enemy fire was concerned, the Shuri command tunnel was completely safe. Life there, however, was not without its hardships. Accord-

ing to Yahara, the atmosphere was hot and humid—over 90 degrees Fahrenheit with 100 percent humidity. Walls sweated and desks and chairs were sticky with moisture. The inhabitants developed skin rashes because their skin never dried. A large ventilator fan placed in one of the access shafts to bring in fresh air had a limited effect. Moreover, rice stored in the tunnels began to ferment in the sack, giving it a sour taste when served. Besides that, given the command staff, the sentries, the numerous messengers, and the headquarters company, there were over 1,000 troops in the tunnel. This made the air not only stuffy but also filled with human aromas. The press of people itself was a kind of hardship.⁴

On the other hand, boosting morale, thirty bright young women did office work in the cave, twelve Japanese and eighteen Okinawan, and had their own living quarters at the cave's south end. There were also some creature comforts. Staples and canned goods were stored in abundance, and tasty dinners were provided for the staff by the chef Chief of Staff Cho had brought from Fukuoka. Cho had also brought a pastry chef, who prepared the refreshments for afternoon tea. Fresh vegetables were harder to come by, but the sentries outside managed to forage some tomatoes and Chinese cabbage from neighboring gardens. Beer and sake were plentiful, and the commander's cabinet held respectable Scotch whiskeys. Though cigarettes soon grew moldy in the dampness of the cave, lucky staff members occasionally could get fresh Camels, as Yahara did, from mis-carried American parachute drops.⁵

Besides the physical rigors, there were psychological pressures that accompanied cave life. The headquarters cave was a "nightless palace" where electric lights burned day and night, which was disorienting. Since messengers could move only at night,* the battle situation could not begin to be pieced together until well after dark. The situation then had to be analyzed, a response determined, and orders drafted. The result was to reverse night and day for the staff, which could not complete its work until just before dawn. Yahara wrote afterwards that he would fall asleep at dawn just as the American bombardment was beginning, with "the feeling he was being dragged to the bottom of hell." The strange life of the caves, even though shielded from battle, took its toll. Even the formidable Cho began mumbling in his sleep, "Mother, it hurts."⁶

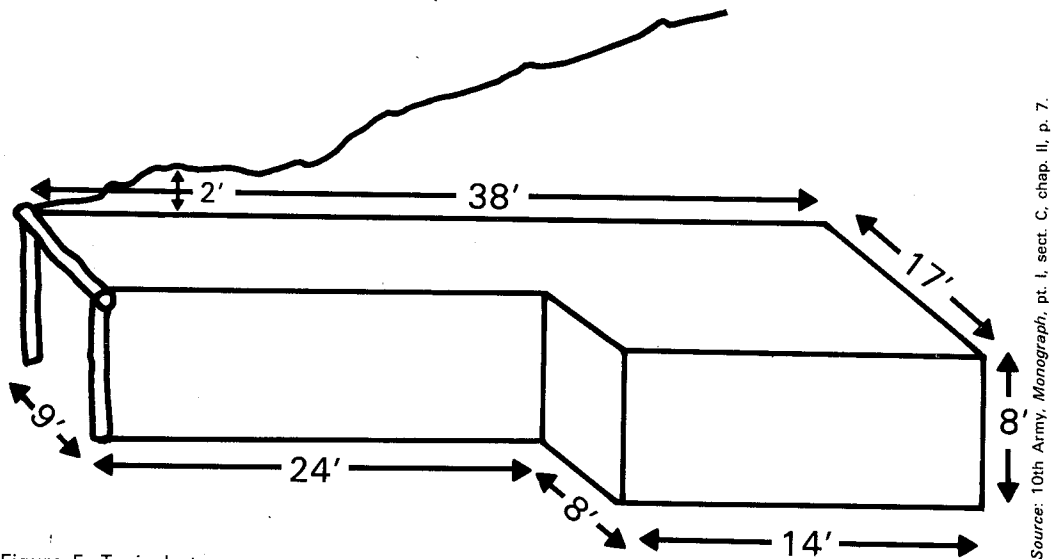
Line and Artillery Caves

Although the 32d Army headquarters tunnel was the most imposing of the caves, there were many other underground structures, enough to house all 100,000 men of 32d Army underground, 60 miles of tunnels in all. These caves were all located at the south end of Okinawa in an area three to twelve miles wide and sixteen miles long: the whole battle area was honey-

*Communication below battalion level was by messenger. Communication at battalion level and above was by field telephone, but artillery bombardment often cut the telephone lines. Thus communication even at battalion level and above was often by messenger. See 10th Army, *Monograph*, pt. I, sect. D, chap. IV, p. 1.

combed with defensive fortifications. Each unit at company and battalion level was responsible for building its own tunnels. This seemed to guarantee that the job was done thoroughly but also meant that there was considerable variety in the tunnel patterns. It meant further that fire nets were not well integrated for units larger than battalion.⁷

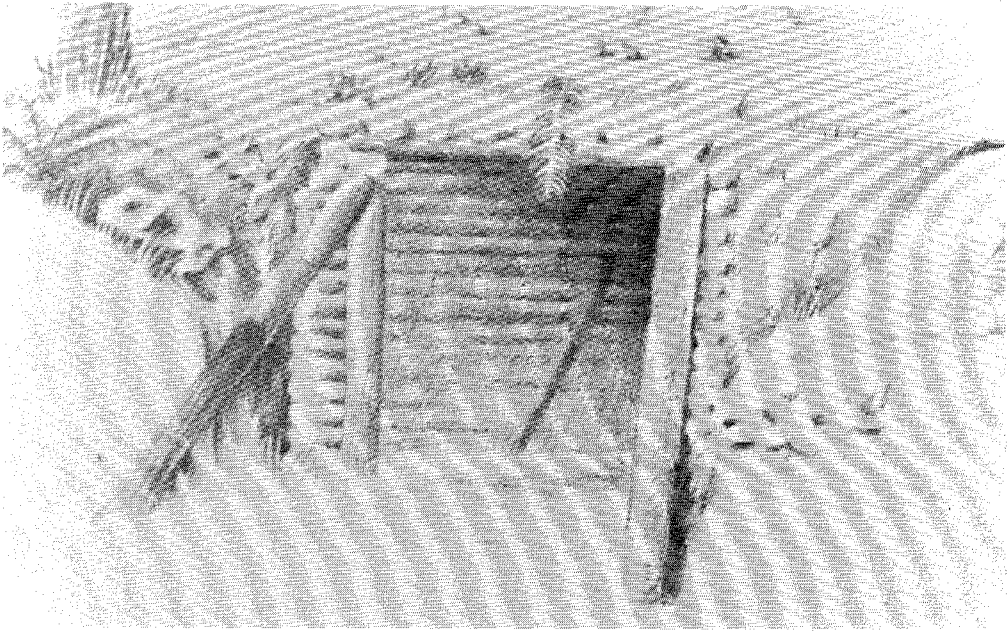
There was enough variety in the construction of the caves that one American officer described them as "artful and fantastic." Even so, what mainly varied was size, function, and the degree to which they were finished. The headquarters caves were the most elaborate. At the other extreme were the supply caves designed to hold ammunition and food. These differed from other tunnels in that they had wide mouths, wide shafts, and large chambers and did not have multiple openings. They were just modest underground storage rooms. One example of this type was found by Americans near the north end of the Okinawa isthmus (see figure 5).⁸ Somewhat akin to this style was the underground barracks room. This type featured long underground shafts with one or several entrances, a vertical air duct, a chamber fifteen feet by fifteen feet by six feet for dining, and another chamber for sleeping. Like the storerooms, these underground barracks were not fortifications.⁹



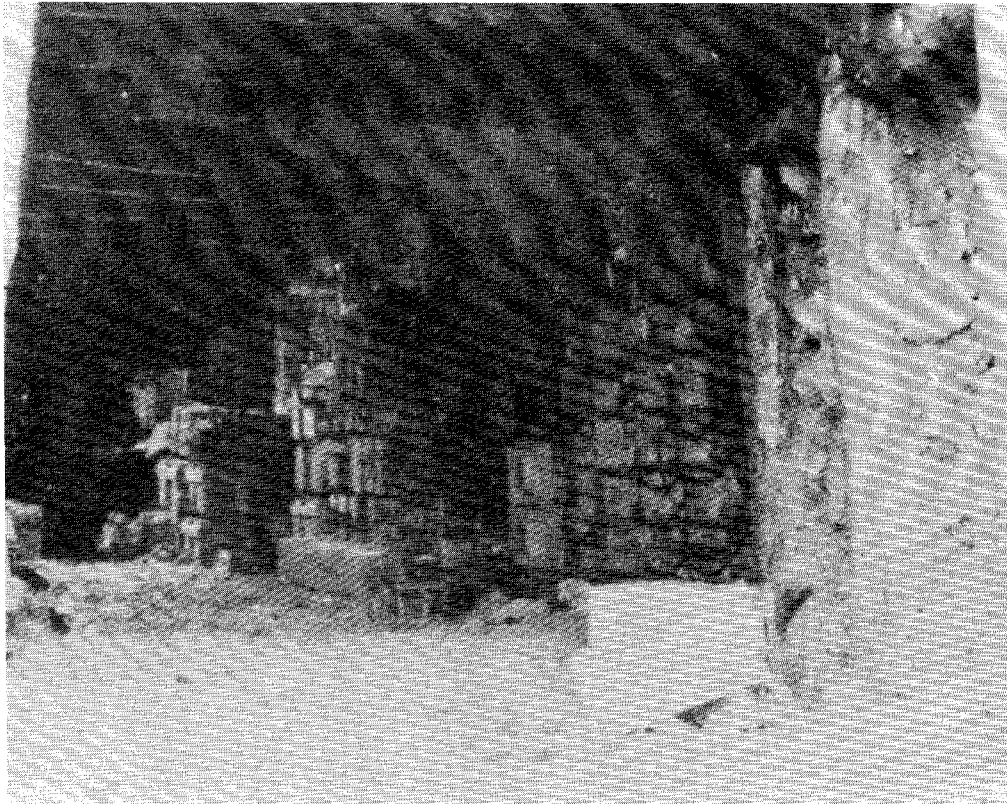
Source: 10th Army, *Monograph*, pt. I, sect. C, chap. II, p. 7.

Figure 5. Typical storage cave

Most of the honeycomb of tunnels the Japanese companies and battalions built for themselves, however, were underground fighting positions. Although these forts were made in a great variety of sizes and patterns, the principles they followed were all remarkably the same: they were pillboxes (see figure 6). The cave pillbox positions were in a sense not underground. Because of the undulating terrain and because the Japanese used only reverse-slope tactics, their technique was to dig horizontal shafts into the hill or ridge opposite the one they intended to cover with fire. Therefore,



A storage cave entryway



A storage cave interior

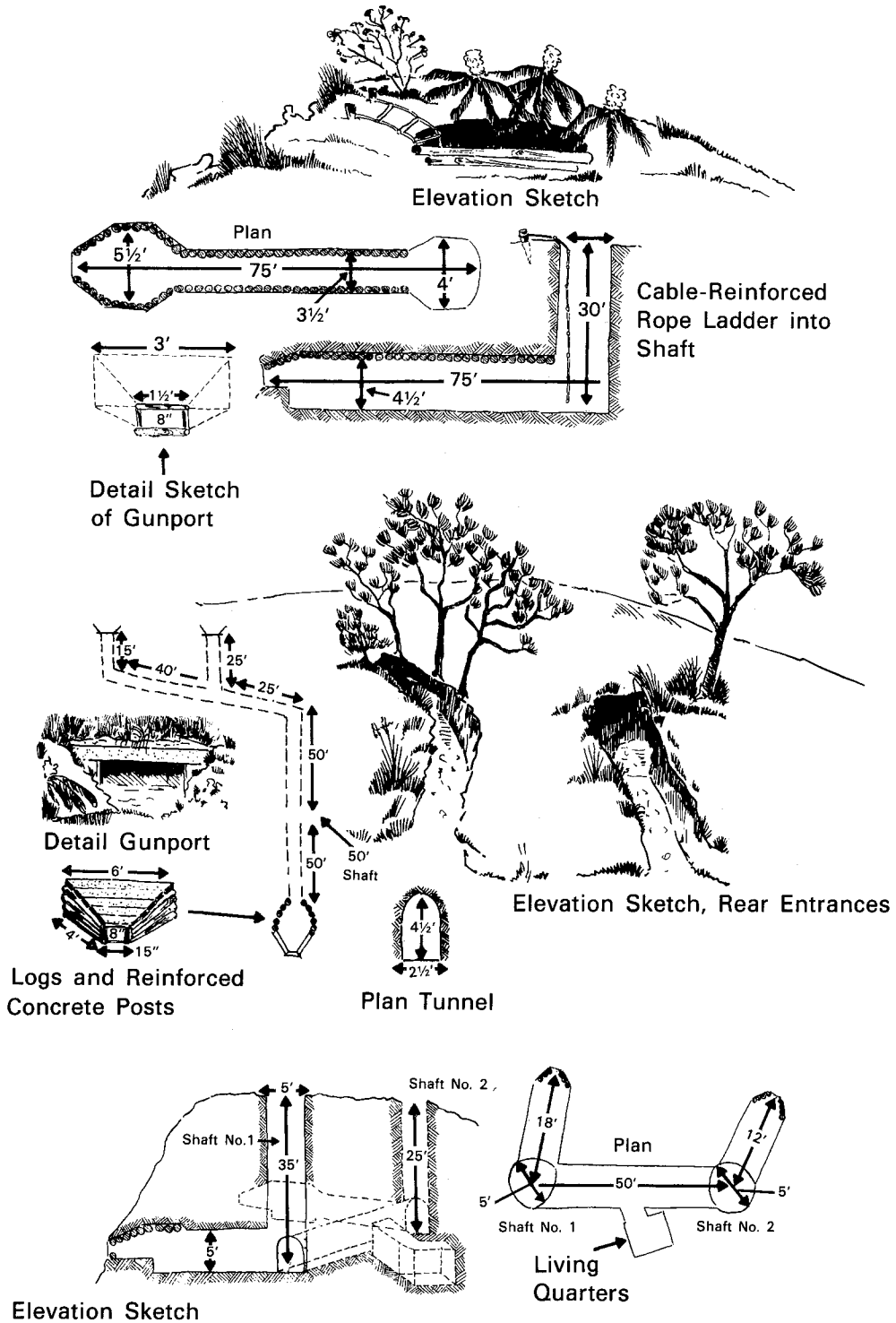


Figure 6. Typical pillbox caves

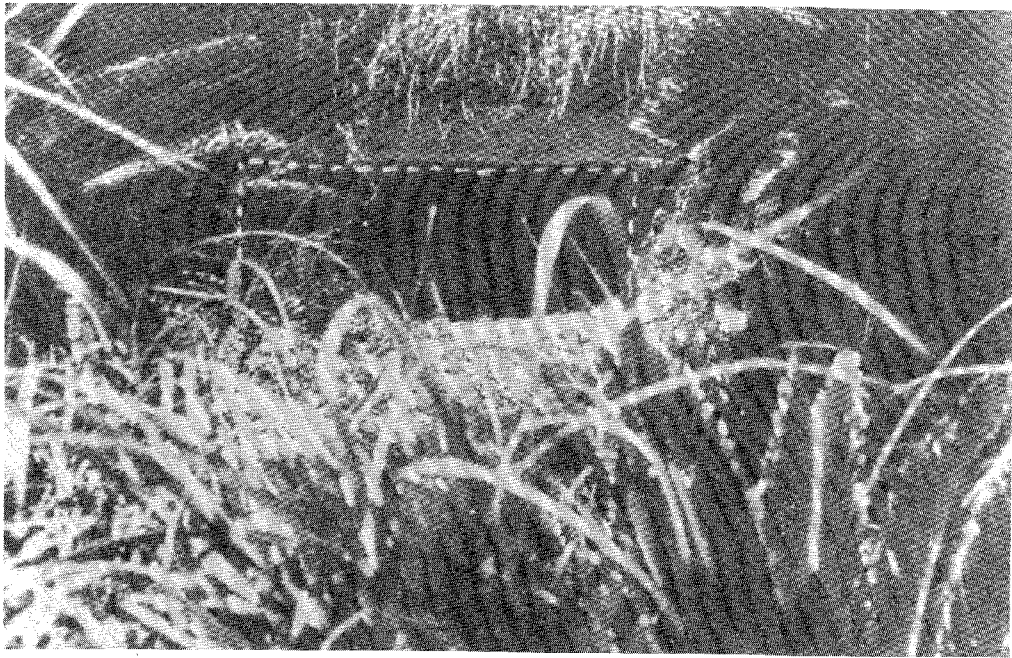
when they looked out their fire ports, their perspective was one of a person at ground level or above. The caves' entrances were made by extending the cave shaft to the rear of the same hill whose front slope had the fire port. One entered the tunnel from the rear, without descending. These so-called caves might also be described as hilltop fortresses since they offered complete protection while also commanding the terrain. This may have kept the Japanese inhabitants' morale higher than that of their counterparts in World War I trenches or the caves of Cu Chi.



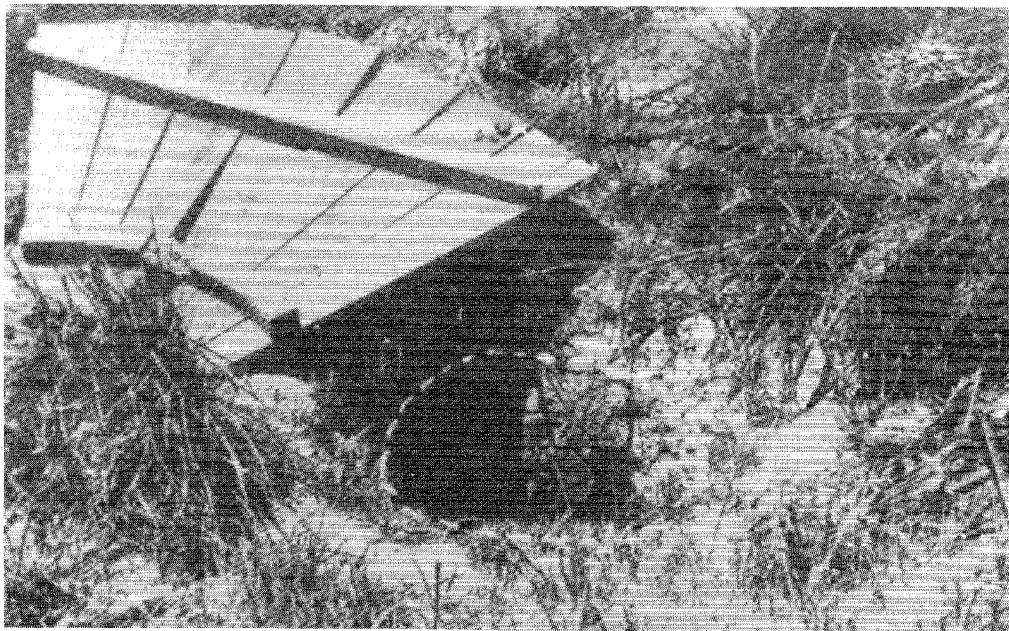
Inconspicuous vertical entrance of the upper example of line cave represented in figure 6

There was variety in the pillbox patterns due both to how many men were available in an area to labor on a cave (and then dwell in it) and to what terrain features were available. Sometimes a whole round hilltop would be taken over with fire ports pierced out of every side and multiple concealed entrances on the side the enemy was least likely to approach. The air ventilation shaft would be extended vertically.¹⁰

More often defenders found themselves on a continuous ridge that, unlike the round-topped hills, did not offer the possibility of side shafts, so shafts were cut straight back from the fire position. In the most elementary and most common of these, a shaft four and a half feet high and three and a half feet wide (as opposed to five feet by six feet in the deluxe Shuri headquarters cave) was pushed far back into the hillside, with a vertical entry shaft only if the back side of the hill was too far away. If there was a vertical entry shaft, it would have a simple rope and bamboo ladder, and its mouth would be covered by a wooden lid crafted like part of a traditional



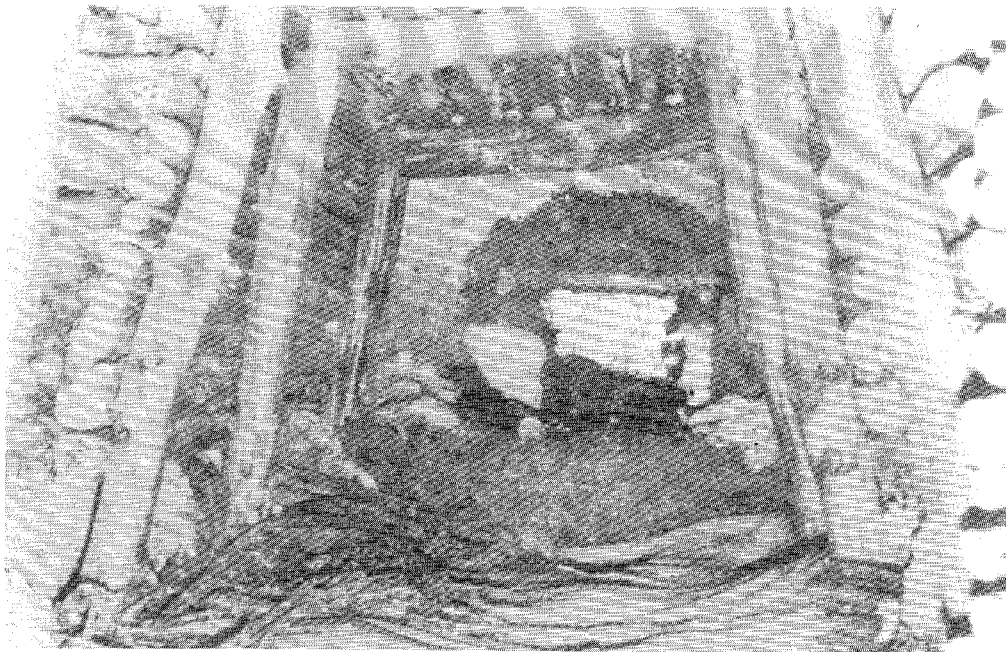
Fire port of the type of line cave represented in figure 6. The hard-to-see opening is indicated by a broken white line.



Coopered lid for pillbox cave entrance



Lids covered with sod became nearly invisible



Wooden beams supported earthen shafts



Vertical shaft of pillbox cave