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imagery analysis report

Cuban Combat Forces in Ethiopia (S)

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## **CUBAN COMBAT FORCES IN ETHIOPIA (S)**

- 1. (S/D) Since late 1977, Cuba has maintained a sizable force of combat troops in Ethiopia. This report will discuss the major Cuban combat units identified on satellite imagery. Included is a brief history of the deployment patterns and activity levels of these units and a comparison of imagery-derived tables of organization and equipment (TO&E) for Cuban forces based in Ethiopia and Cuba.
- 2. (S/D) Cuban units were first introduced into Ethiopia in late 1977 and were immediately involved in combat operations against Somali military forces in the Ogaden Region. After Somali forces withdrew from the Ogaden in early 1978, the Cuban forces moved into garrisons in the Harar-Jijiga-Diredawa area. By late summer 1978, a force consisting of four Cuban brigades had been identified in the region. These units included an armor brigade and an artillery brigade at Jijiga, a second armor brigade at Diredawa, and a mechanized infantry brigade midway between Harar and Diredawa at Alem Maya (Figure 1). With the exception of periodic alert and training exercises, the units at Jijiga and Diredawa remained in their normal garrison areas through October 1980; however, the mechanized infantry brigade at Alem Maya departed in early 1979, and its current location is unknown.
- 3. (S/D) The relative importance of the Cuban combat forces in Ethiopia is shown by the deployment pattern of surface-to-air missile (SAM) sites in the country. SAM sites have been identified at only four locations in Ethiopia: Addis Ababa (the capital), the port of Aseb, and near Cuban combat forces at Jijiga and Diredawa. Two SA-2 sites have been identified at Jijiga and one SA-3 site at Diredawa. The presence of baseball diamonds in the vicinity of several SAM sites in Ethiopia indicates that the sites may be manned by Cuban personnel.

## Jijiga Area

- 4. (S/D) A Cuban armor brigade and a Cuban artillery brigade are garrisoned in the vicinity of Jijiga. These units have been the most active of the Cuban forces identified in Ethiopia, probably because of the proximity of Jijiga to the Somali border—approximately 30 nautical miles. Elements of a Cuban artillery brigade were identified in this area for the first time on \_\_\_\_\_\_ The remaining elements of the artillery brigade and a Cuban armor brigade moved into town during the spring and summer of that year. A major portion of these units moved into existing Ethiopian facilities, and additional barracks and support buildings were constructed to house the remaining Cuban forces.
- 5. (S/D) Beginning in mid-August 1978, a high level of training activity involving Cuban units was observed in the Jijiga area. This training took place east of town and involved major elements of both the armor and artillery brigades from Jijiga and a mechanized infantry brigade (Figure 2). The mechanized infantry brigade was probably made up of a mechanized infantry unit from the armor brigade at Diredawa and portions of the mechanized infantry brigade at Alem Maya. The level of training activity increased through early September. By all of the units involved in this exercise had returned to their normal garrison areas. The timing of the exercise, which coincided with Fidel Castro's visit to Ethiopia, and the fact that it appeared to include elements of all of the major Cuban combat units in the country suggest that it may have been staged in connection with Ethiopia's Revolution Day on
- 6. (S/D) For most of the period from late September 1978 through mid-May 1980, activity remained at a low-to-moderate level in the areas housing the Cuban armor brigade and artillery brigade. The only significant exceptions were the units' involvement in a probable training exercise in early November 1978 and their dispersal to defensive positions surrounding Jijiga in late April and early May 1979. Since mid-May 1980, however, an increased level of activity has been noted. Major elements of the armor brigade were probably being involved in a training exercise in mid-July. Also, the bulk of the Cuban forces in the Jijiga area were again dispersed into defensive positions around the town in late May and in early September. The May dispersal activity was probably a reaction to the heavy fighting that was underway in the eastern Ogaden at the Ethiopian garrison of Uardere. The September dispersal activity was probably a reaction to the outbreak of hostilities, reported in the open press, along the Ethiopian/Somali border near Borama.

## Diredawa Area

- 7. (S/D) A Cuban armor brigade is deployed in a series of revetted parking areas west of Diredawa. In late March 1978, the same time that Cuban forces were moving into garrison areas at Jijiga, the initial elements of a Cuban armor brigade were observed assembling in the Diredawa area. By early August, most of the subordinate units were present and construction of new barracks and support buildings was underway.
- 8. (S/D) With few exceptions, activity levels for this unit have remained in the low-to-moderate range. From mid-August through mid-September 1978, the mechanized infantry battalion from this brigade was absent from its normal parking area and was probably involved in the Revolution Day exercise at Jijiga. In late June 1979 and in mid-July 1980, major elements from this brigade were again absent from their normal parking areas for short periods of time—probably for training. Unlike the forces at Jijiga, no dispersal activity or redeployment of the Cuban armor brigade at Diredawa was observed in either late May or early September 1980.

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## Alem Maya Area

9. (S/D) No imagery was acquired of the Alem Maya area during the spring and early summer of 1978—the time that Cuban forces were observed moving into garrison in the vicinity of Jijiga and Diredawa. However, partial coverage of this area in early August revealed the presence of elements of a Cuban mechanized infantry brigade in bivouac on the shores of a lake immediately north of town. Complete coverage on revealed the unit to be a full-strength mechanized infantry brigade. Elements of two mechanized infantry battalions subordinate to this brigade were absent throughout most of November 1978 and may have been involved in a combined training exercise with the armor and artillery brigades from Jijiga. The fact that only limited barracks construction was observed in the Alem Maya area during this time indicated that deployment to this area was only temporary. In the spring of 1979, units from this brigade began to depart the Alem Maya area, and by early May the entire brigade was gone. Its current location is unknown.

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## Unit Structure

10. (S/D) Repeated coverage of the Cuban brigade garrisons at Diredawa, Jijiga, and Alem Maya since early 1978 has permitted an examination of the unit structure of these forces. There are no vehicle/equipment storage sheds at these installations, and all major pieces of equipment have remained parked in the open. A comparison of Cuban combat forces in Ethiopia with those in Cuba has revealed some differences in equipment count and type. Some of these differences are because Cuban forces in Ethiopia have been specially configured for their current roles. Photographic evidence indicates that in Ethiopia forces have been organized into brigades for independent combat operations. In Cuba the ground force maneuver elements are organized into divisions with subordinate regiments. In addition, Cuban forces in Ethiopia have been assigned equipment that has never been seen, or only recently been seen, with Cuban forces in Cuba (e.g., BMP armored personnel carriers, 122mm howitzers D-30, and BM-21 multiple rocket launchers).

#### Armor Brigade

11. (S/D) Although there are some minor differences in equipment holdings between the two Cuban armor brigades in Ethiopia, these units appear to have the same basic structure. Major units identified within each brigade include three tank battalions, one mechanized infantry battalion, one artillery battal-

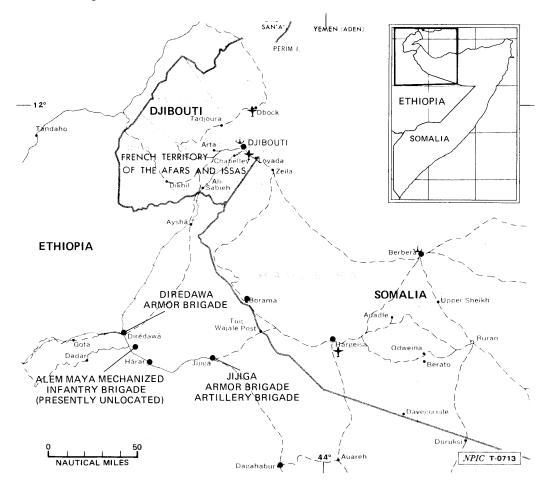


FIGURE 1. CUBAN COMBAT BRIGADES IN ETHIOPIA

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ion, and one multiple rocket launcher battalion (Figure 3). Support units include two antiaircraft batteries, one reconnaissance company, one engineer company, one maintenance company, one medical company, one signal company, and one motor transport company.

- 12. (S/D) Each of the three tank battalions contains 32 T-54/55 tanks comprising three companies of ten tanks each (Figure 4). Tank companies in Cuba usually are composed of seven tanks with a total of 22 tanks per battalion.
- 13. (S/D) The mechanized infantry battalion for each armor brigade consists of 31 or 32 BMP armored personnel carriers (Figure 5). Each battalion is made up of three companies of ten BMPs. These battalions were equipped with BTR-60PB armored personnel carriers when they were first identified in Ethiopia. The BMPs were introduced into the Diredawa armor brigade in September 1978. The mechanized infantry battalion for the Jijiga armor brigade received its BMPs during November and December 1978. In contrast, the BMP is only now being introduced into ground force units in Cuba, where the BTR-60PB has served as the principal armored personnel carrier.

#### Artillery Brigade

14. (S/D) The structure of the artillery brigade in Ethiopia (Figure 6) is similar to that of the independent artillery brigades deployed in Cuba's Western Army. The Jijiga brigade consists of two field-gun battalions (Figure 7), one howitzer battalion (Figure 8), and one battalion of truck-mounted multiple rocket launchers. At least two of the three artillery brigades near Havana have this same unit structure, but their equipment models differ from those of the Jijiga brigade. The artillery brigade in Ethiopia has the 130mm field gun M-46, the 122mm howitzer D-30, and the BM-21 multiple rocket launcher; the two brigades in Cuba are equipped with 130mm and 152mm field guns, the older 122mm howitzer M-30, and the BM-24 multiple rocket launcher.

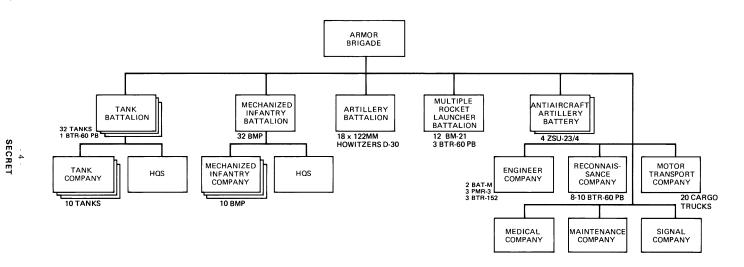
## Mechanized Infantry Brigade

15. (S/D) The Cuban mechanized infantry brigade at Alem Maya consisted of three BTR-60PB-equipped mechanized infantry battalions (each with three companies), one tank battalion, one multiple rocket launcher battalion, one reconnaissance company, and one antiaircraft battery (Figure 9). The artillery assets were not organized into a battalion; rather, one battery of 122mm howitzers D-30 was (Continued p. 10)

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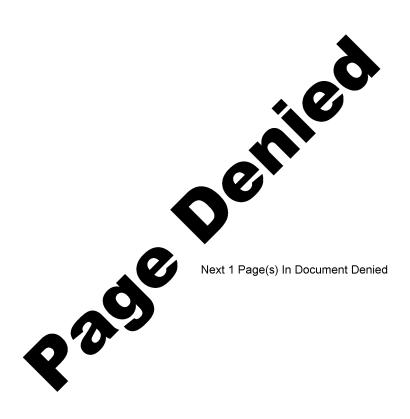
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FIGURE 3. POSTULATED TABLE OF ORGANIZATION AND EQUIPMENT FOR CUBAN ARMOR BRIGADE



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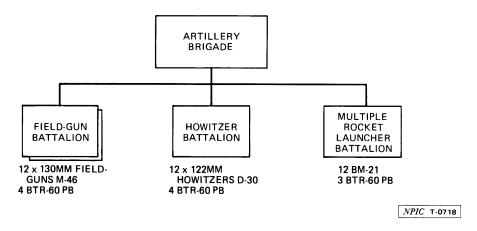
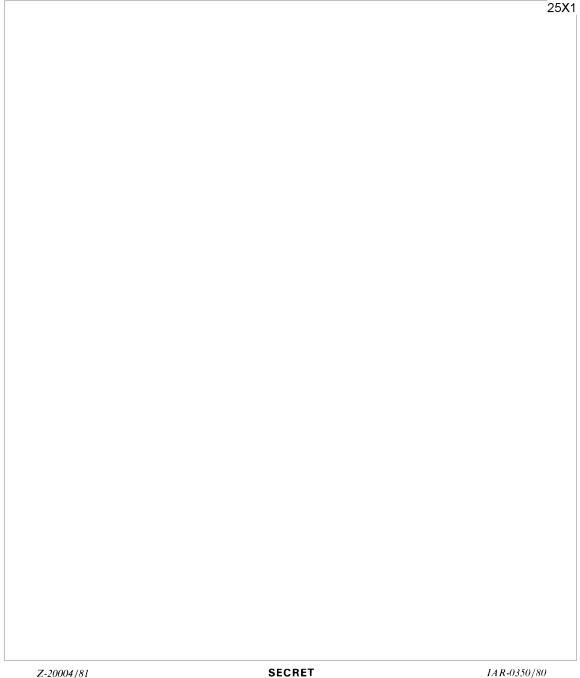


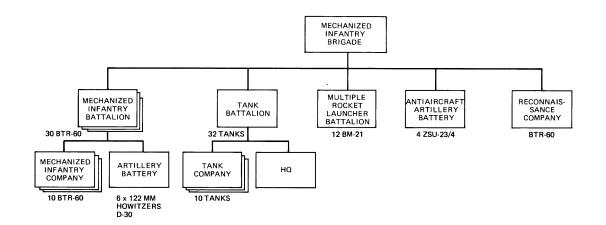
FIGURE 6. POSTULATED TABLE OF ORGANIZATION AND EQUIPMENT FOR CUBAN ARTILLERY BRIGADE



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deployed with each mechanized infantry battalion. The subordination of one howitzer battery to each mechanized infantry battalion of the brigade is similar to the organization of the Soviet Brigade in Cuba. As with the armor brigades at Diredawa and Jijiga, the tank battalion observed with the mechanized infantry brigade at Alem Maya was made up of three companies with a total of 32 tanks, as opposed to the 22 that are present in tank battalions in Cuba.

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(S/D) All available satellite imagery from December 1977 to was used in the preparation of this report.
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Relevant information is classified SECRET
(S) Comments and queries regarding this report are welcome. They may be directed to  Third World Forces Division, Imagery Exploitation Group, NPIC,

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