

September 2005

# SECURITY ASSISTANCE

## Efforts to Secure Colombia's Caño Limón-Coveñas Oil Pipeline Have Reduced Attacks, but Challenges Remain



GAO

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Highlights of [GAO-05-971](#), a report to congressional requesters

## Why GAO Did This Study

Oil is one of Colombia's principal exports. The Caño Limón-Coveñas oil pipeline transports almost 20 percent of Colombia's oil production. The pipeline originates in the Department of Arauca in northeast Colombia. It carries oil nearly 500 miles to the Caribbean port of Coveñas. The pipeline has been a principal infrastructure target for terrorist attacks by Colombia's insurgent groups. During 2001, attacks on the pipeline cost the Colombian government an estimated \$500 million in lost revenues for the year. The United States agreed to assist Colombia in protecting the first 110 miles of the pipeline where most of the attacks were occurring. We examined how the U.S. funding and resources provided to Colombia have been used, and what challenges remain in securing the pipeline.

## What GAO Recommends

We recommend that the Secretary of State, in consultation with the Secretary of Defense, develop a plan for transitioning the pipeline security program to Colombia. State commented that the report was an accurate assessment of the program and concurred with our recommendation.

[www.gao.gov/cgi-bin/getrpt?GAO-05-971](http://www.gao.gov/cgi-bin/getrpt?GAO-05-971).

To view the full product, including the scope and methodology, click on the link above. For more information, contact Jess T. Ford at (202) 512-4268 or [FordJ@gao.gov](mailto:FordJ@gao.gov).

## SECURITY ASSISTANCE

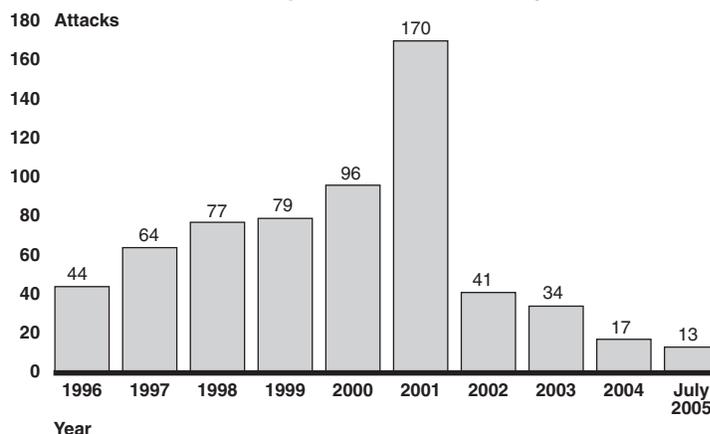
# Efforts to Secure Colombia's Caño Limón-Coveñas Oil Pipeline Have Reduced Attacks, but Challenges Remain

## What GAO Found

Since fiscal year 2002, the United States has provided about \$99 million in equipment and training to the Colombian Army to minimize terrorist attacks along the first 110 miles of the Caño Limón-Coveñas oil pipeline, mostly in the Arauca department. U.S. Special Forces have provided training and equipment to about 1,600 Colombian Army soldiers. However, the delivery of 10 helicopters purchased for the program was delayed—arriving mid 2005. Without the helicopters, the Colombian Army's ability to respond rapidly to pipeline attacks has been limited. Additionally, some equipment, such as night vision goggles, has not arrived due to the long lead-time required to obtain these items because of U.S. military operations in Afghanistan and Iraq.

Despite the delays in equipment deliveries, the number of attacks on the Caño Limón-Coveñas oil pipeline has declined and security in the area has improved. In addition, the Colombian Army and Colombian National Police have improved relations with the civilian population and new oil exploration is occurring in the area due to the improved security. However, challenges to securing the pipeline remain. More attacks are occurring on the Caño Limón-Coveñas oil pipeline outside the 110-mile long area originally addressed. Most of the Colombian Army stationed in these other areas has not received U.S. training. In addition, the insurgents have attacked the electrical grid system that provides energy to the Caño Limón oilfield. Without electricity, oil cannot be pumped. Because the U.S. funds provided for the program will be depleted by the end of September 2005, sustainability of the progress made is uncertain. Colombia cannot fully operate and maintain the helicopters provided without continued U.S. support; and due to U.S. commitments in other parts of the world, U.S. Special Forces will be reducing personnel in Colombia, which will limit future training.

Caño Limón-Coveñas Oil Pipeline Attacks, 1996–July 2005



Source: Occidental Petroleum Corporation.

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### Abbreviations

MilGroup	Military Group, U.S. Embassy, Bogotá
NAS	Narcotics Affairs Section, U.S. Embassy, Bogotá

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United States Government Accountability Office  
Washington, D.C. 20548

September 6, 2005

The Honorable Tom Davis  
Chairman, Committee on Government Reform  
House of Representatives

The Honorable Mark E. Souder  
Chairman, Subcommittee on Criminal Justice, Drug Policy,  
and Human Resources  
Committee on Government Reform  
House of Representatives

The Honorable Charles E. Grassley  
Chairman, Caucus on International Narcotics Control  
United States Senate

Oil is one of Colombia's principal export commodities. The Caño Limón-Coveñas oil pipeline<sup>1</sup> originating in the Department of Arauca transports almost 20 percent of Colombia's oil production, approximately 100,000 barrels of oil per day. Since 1986, however, the Caño Limón pipeline has been a principal infrastructure target for terrorist attacks<sup>2</sup> by Colombia's insurgent groups.<sup>3</sup> During 2001, attacks on the pipeline reduced production by an estimated 70,000 barrels of oil per day, and cost the Colombian government an estimated \$500 million in lost revenues for the year. This loss crippled the Arauca department's government, which receives 90 percent of its revenue from the pipeline oil royalties. In response to these attacks, Colombia developed an infrastructure security strategy. For the first phase of the strategy, Colombia requested equipment and military training from the United States to secure the first 110 miles of the Caño Limón pipeline primarily in Arauca, which was the portion most often

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<sup>1</sup>For the purpose of this report, we refer to the Caño Limón-Coveñas oil pipeline as the Caño Limón pipeline or simply the pipeline.

<sup>2</sup>The Caño Limón pipeline is approximately 3 meters underground. Usually when the pipeline is attacked, a hole must be dug and explosives placed near the pipeline, which results in a dent or rupture.

<sup>3</sup>The Revolutionary Armed Forces of Colombia, the National Liberation Army, and the United Self-Defense Forces of Colombia are designated as terrorist organizations by the United States.

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attacked.<sup>4</sup> Prior to 2001, the Arauca department, a remote and sparsely populated area, held little interest for the Colombian government. As a result, insurgent groups infiltrated all aspects of the department, threatening its governance and security.

In 2002, the United States agreed to assist Colombia in phase one of its infrastructure security strategy. The Department of State's (State) Bureau of Western Hemisphere Affairs and State's Bureau for International Narcotics and Law Enforcement Affairs, and various components of the Department of Defense (Defense)<sup>5</sup> developed a program to assist the Colombian Army in regaining control of Arauca; defending the pipeline and civilian population; and preventing, interdicting, and disrupting insurgents before they attack the pipeline and nearby communities. The pipeline security program called for the delivery of helicopters, equipment, logistical and infrastructure support, and training. Since fiscal year 2002, the United States has provided \$99 million for this program.

In response to your request, we examined (1) how the U.S. funding and resources provided have been used to secure the first 110 miles of the Caño Limón pipeline and (2) what progress has been made in securing the pipeline and what challenges remain. In order to address these objectives, we examined State and Defense project information and budget documents, and interviewed knowledgeable officials involved in the program. We traveled to Colombia and met with cognizant officials from the U.S. Embassy in Bogotá; the Government of Colombia; and Ecopetrol and Occidental Petroleum Corporation, which operate the Caño Limón pipeline and oilfield. We traveled to Arauca and met with the local commanders of the Colombian Army and Colombian National Police, and spoke with U.S. Special Forces who were training the Colombian Army. We also toured a State-constructed facility in Arauca that will house helicopters to help the Colombian Army move more rapidly throughout the area. We conducted our review from January 2005 to July 2005 in accordance with generally accepted government auditing standards.

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<sup>4</sup>The strategy originally consisted of three phases. Phase two was to protect the rest of the pipeline and phase three was to secure other infrastructure throughout Colombia. However, State officials told us the infrastructure security strategy has been incorporated into Colombia's National Security Strategy, which was finalized in June 2003.

<sup>5</sup>U.S. Southern Command and the Military Group at the U.S. Embassy, Bogotá.

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## Results in Brief

In 2002, the United States agreed to provide equipment and military training to the Colombian Army to help minimize terrorist attacks along 110 miles of the Caño Limón pipeline. Since fiscal year 2002, the United States has provided about \$71 million for 10 helicopters<sup>6</sup> and related logistical support and ground facilities, and about \$28 million for training and other equipment.

- To station the helicopters in Arauca, State built facilities on a Colombian Army base near the town of Saravena. The helicopters, which were to arrive in Colombia as early as May 2004, started arriving in April 2005 and the last delivery occurred in June 2005. State attributed some of the delay to negotiations over the type of helicopters to purchase and transportation problems. Without the helicopters, the Colombian Army's ability to respond rapidly to pipeline attacks has been limited and has put them at risk for ambushes.
- Defense also provided U.S. Special Forces training and equipment for about 1,600 Colombian Army soldiers. Because the helicopters only arrived recently, U.S. Special Forces have extended training through fiscal year 2005 to overlap with their arrival. Additionally, some equipment, such as ammunition, night vision goggles, and medical supplies, has not arrived due to the long lead-time required to obtain these items because of U.S. military operations in Afghanistan and Iraq.

Despite the delays in the arrival of the helicopters and other equipment, the number of attacks on the pipeline has declined and governance and security in Arauca has improved. State and Defense officials attributed the decrease in attacks to strong Colombian leadership; U.S. Special Forces training; and better coordination among the Colombian Army, police, and Colombian Ministry of Justice prosecutors (known as fiscalia). In addition, the Colombian Army and police have improved relations with the civilian population, and arrests and prosecutions of insurgents have occurred. New oil exploration is also occurring due to improved security in the area. However, several challenges remain. Attacks on the pipeline continue—though at a reduced rate—and the insurgents have changed their tactics.

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<sup>6</sup>The helicopters are State assets and are provided under a no-cost lease to the Government of Colombia.

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- Attacks have increased on the Caño Limón pipeline in the neighboring Department of Norte de Santander, which is outside the 110-mile range of the first phase of the original infrastructure security program. Most of the Colombian Army stationed in Norte de Santander has not received U.S. training.
  - The nature of attacks on oil production in Arauca has changed. In recent years, the insurgents have attacked the electrical grid system that provides energy to the Caño Limón oilfield. Without electricity, the oil wells cannot operate.

Finally, the Colombian Army does not have the capacity to fully operate and maintain the helicopters it possesses without continued U.S. support.<sup>7</sup> According to the U.S. Embassy, Bogotá, Colombia will not have a sufficient number of trained pilots and mechanics to operate all the U.S.-provided helicopters it has until fiscal years 2008 and 2010, respectively. In addition, due to U.S. commitments in other parts of the world, U.S. Special Forces will be reducing training in Arauca and throughout Colombia.

We recommend that the Secretary of State, in consultation with the Secretary of Defense, develop a plan for transitioning the pipeline security program to Colombia. The plan should delineate (1) how the helicopters will be used and maintained, (2) how progress to date will be sustained, and (3) an expected completion date for U.S. involvement. In commenting on a draft of this report, State said it was an accurate assessment of the program and concurred with our recommendation, but expressed some concern that the report overemphasized the time required to deliver the helicopters.

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## Background

In 2004, Colombia was the fourth largest Latin American supplier of crude oil and petroleum-related products to the United States and the 16th leading supplier worldwide. One of Colombia's largest oilfields—Caño Limón—was discovered in 1983 in the Department of Arauca and today accounts for almost 20 percent of Colombia's oil production. The oilfield is

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<sup>7</sup>In 2000 and 2003, we reported that Colombia has limited capacity to absorb the U.S. assistance. See GAO, *Drug Control: U.S. Assistance to Colombia Will Take Years to Produce Results*, GAO-01-26 (Washington, D.C.: Oct. 17, 2000) and GAO, *Drug Control: Specific Performance Measures and Long-Term Costs for U.S. Programs in Colombia Have Not Been Developed*, GAO-03-783 (Washington, D.C.: June 16, 2003).

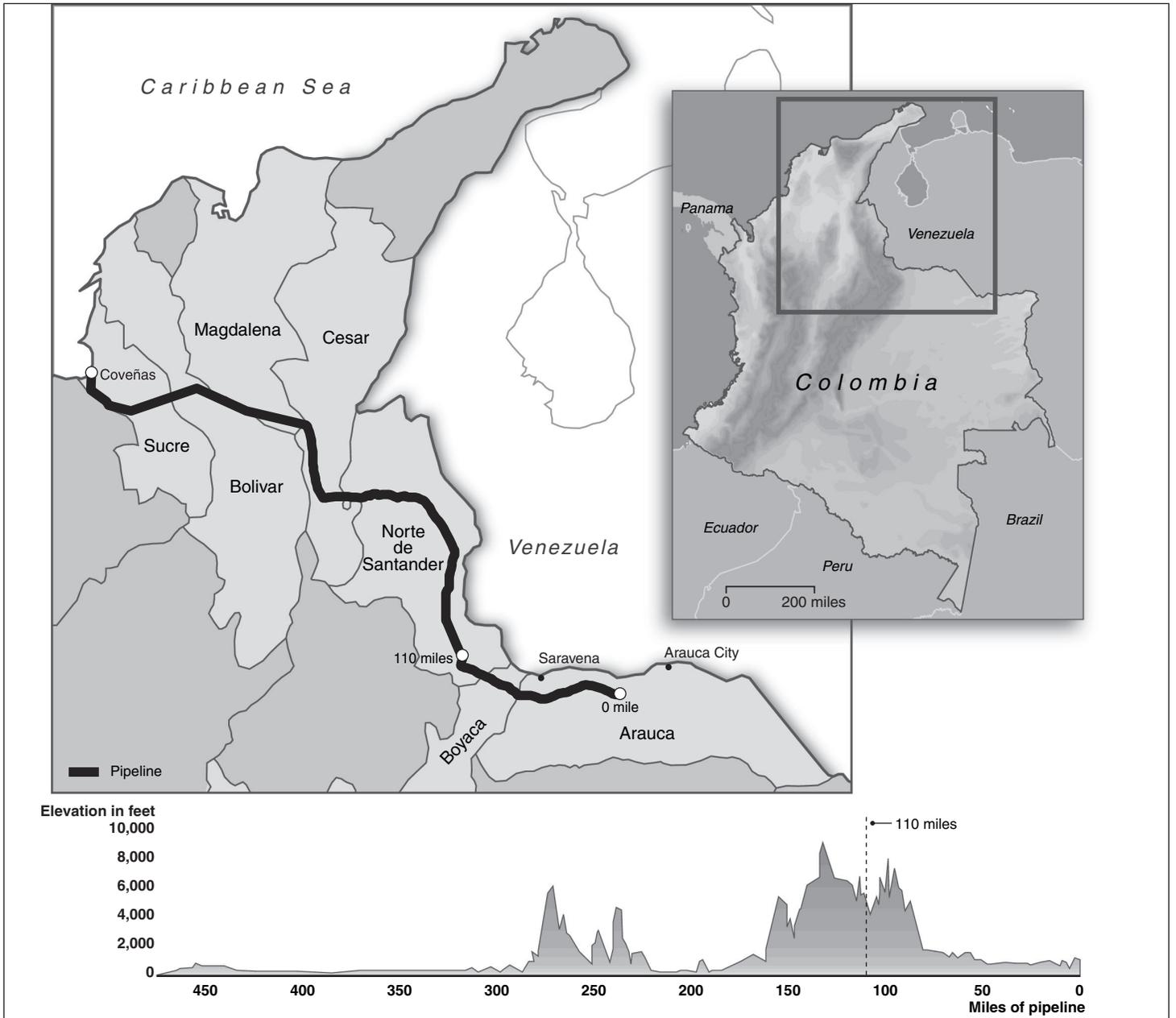
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located in north-central Arauca about six miles south of the Venezuelan border. The Caño Limón pipeline carries oil from the oilfield northwest about 477 miles, through seven departments<sup>8</sup> to the Caribbean port of Coveñas (see fig. 1). The Caño Limón oilfield is operated by an association comprised of Colombia's state-owned oil company, Ecopetrol; a United States company, Occidental Petroleum Corporation; and a Spanish oil company, Repsol. Between 1986 and 2002, the Caño Limón oilfield generated \$800 million in national royalties and another estimated \$1.2 billion in regional royalties for the seven departments it traverses. In particular, the oilfield provides Arauca with 90 percent of its total revenues—about \$40 million a year.

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<sup>8</sup>The Caño Limón pipeline traverses the Departments of Arauca, Boyaca, Norte de Santander, Cesar, Magdalena, Bolivar, and Sucre.

**Figure 1: Map of Colombia and Caño Limón Pipeline**



Sources: Occidental Petroleum Corporation (data); Map Resources (map).

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Throughout Colombia's history, the Department of Arauca has been a remote area that held little interest for the Colombian government and lacked an effective police presence. Over the past 25 years, the discovery of oil and the establishment of the illegal drug trade have brought the department a measure of wealth and attracted the attention of Colombia's insurgent groups. These groups had infiltrated all aspects of the Arauca government and conducted a variety of illegal activities, such as extortion of oil revenues; terrorist attacks on economic infrastructure;<sup>9</sup> drug trafficking; and attacks against citizens, department officials, and military and police forces.<sup>10</sup> Civilians caught between the insurgent groups and government forces, often sided with the insurgent groups out of fear.

In Arauca, the pipeline has been the principal economic infrastructure target of attacks. During 2001, the Caño Limón pipeline was attacked 170 times,<sup>11</sup> resulting in the pipeline shutting down for over 200 days, costing Colombia approximately \$500 million in lost revenues and considerable environmental damage (see fig. 2). For example, in early November 2001, one attack resulted in 7,000 barrels of oil spilling over a 50-mile area—including the Arauca River—which greatly affected agricultural production in the area. However, despite the frequency of attacks, between 1986 and 2001 Colombia's fiscalia—prosecutors—arrested only three people of attacking the pipeline.

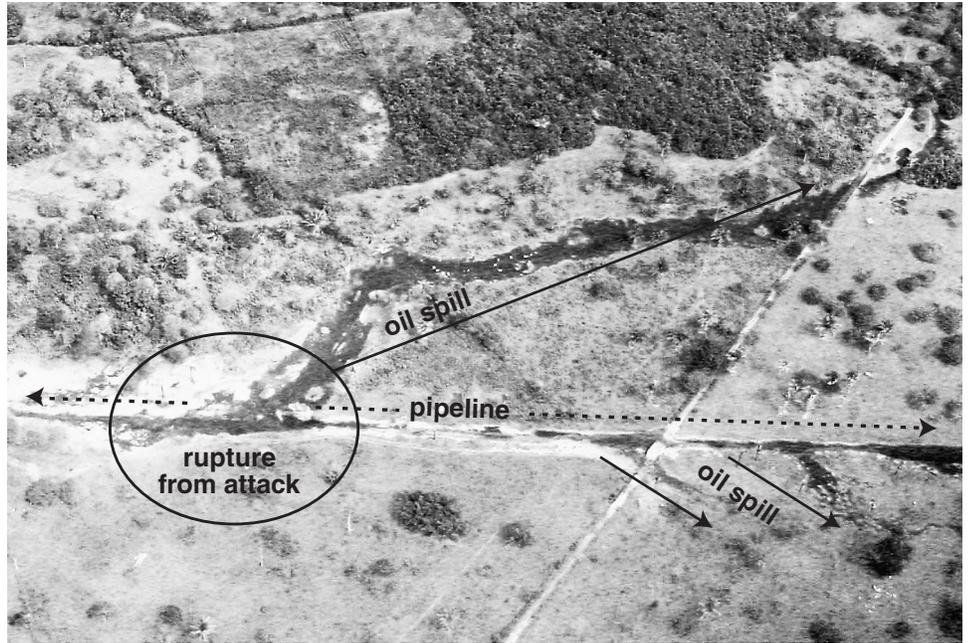
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<sup>9</sup>Economic infrastructure includes roads, bridges, power lines, telephone towers, reservoirs, and pipelines.

<sup>10</sup>For example, according to Defense, insurgent groups killed more than 40 municipal legislators and nine reporters in the department in 2002.

<sup>11</sup>When the pipeline is attacked, Occidental's instrumentation will sense a drop in the pipeline's pressure. It then notifies the Colombian Air Force, which flies over the location to confirm the attack. Once confirmed, the Colombian Army is notified and soldiers are sent to the location to sweep the area of landmines and make it secure for Occidental employees to repair the damage.

**Figure 2: Oil Spill from Pipeline Attack**



Sources: State (photo); GAO (presentation).

## Infrastructure Security Strategy

To regain control of Arauca and decrease economic infrastructure attacks, the Government of Colombia developed a three-phased infrastructure security strategy. The initial phase focused on securing the first 110 miles of the pipeline, which was the section most often attacked. The second phase was proposed to protect the remaining 367 miles of the pipeline, and phase three called for protecting 338 other critical economic infrastructure targets throughout the country.<sup>12</sup> To help implement the first phase of the strategy, Colombia asked the United States to provide military training and equipment to its army, and a memorandum of agreement was signed between the two countries in 2003. As stipulated in the agreement, a bilateral working group was formed, and it developed a plan to protect the Caño Limón pipeline. The Narcotics Affairs Section (NAS) in the U.S. Embassy, Bogotá, administers the day-to-day aviation components of the

<sup>12</sup>According to State officials, Colombia incorporated the infrastructure security strategy into its National Security Strategy, which was finalized in June 2003.

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program, and the Military Group (MilGroup) in the U.S. Embassy, Bogotá, administers the day-to-day nonaviation components of the program.

U.S. assistance was directed toward Colombia's 18<sup>th</sup> army brigade headquartered in the Department of Arauca, whose area of responsibility includes all of Arauca and parts of the Boyaca and Norte de Santander departments to the northwest. The 18<sup>th</sup> army brigade is charged with providing roadway security, controlling Colombian-Venezuelan border traffic, conducting counternarcotic operations, ensuring public order, and securing the Caño Limón pipeline and other infrastructure.

In addition to U.S. assistance in Arauca, Ecopetrol and Occidental have contributed financial support to the Colombian armed forces, as well as community programs. In particular, each year Ecopetrol and Occidental contribute about \$8.65 million to help secure the Caño Limón pipeline, according to Ecopetrol. This money supports the army, air force, and fiscalia in the department and has been used for housing, food, land and air transportation, communication equipment, gasoline, and medical assistance. In addition, Occidental has built barrack facilities for soldiers on an army base near the town of Saravena, and has established a foundation to promote community development programs throughout the region.

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## Future of Colombia's Oil Production

From 1999 to 2004, Colombia's oil production steadily declined. Much of this was due to the depletion of Colombia's mature oilfields and the lack of new major oilfield discoveries. Security for Colombia's oil industry infrastructure, however, is an ongoing concern due to the threats posed by insurgent groups operating in Colombia's oil production areas. With a decreasing pool of proven oil reserves, industry experts have stated that Colombia may become a net importer of oil by 2008. In an effort to attract private investors to Colombia, the Colombian government implemented regulatory and institutional reforms to create a more conducive climate for the exploration of oil reserves.<sup>13</sup>

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<sup>13</sup>For example, in 2003 it moved regulatory responsibilities from the state-owned oil company, Ecopetrol, to a newly created agency. Under the new arrangement, Ecopetrol no longer has a mandatory share in joint ventures, and oil companies may now assume up to 100 percent of investment and risk activities in all exploration and production contracts. In 2003, Colombia surpassed its exploratory goal to drill 28 wells, but in 2004 drilled only 21, short of its target of 25.

## Helicopters and Other Equipment Were Delayed

In fiscal year 2002, the Congress provided \$6 million to initiate training of the Colombian Army units in Arauca, and in fiscal year 2003 an additional \$93 million was provided.<sup>14</sup> Of this funding, State used \$71 million to acquire two UH-60 Black Hawk helicopters, eight UH-1H helicopters, and related logistical support and ground facilities. However, the helicopters were not delivered on schedule. The lack of airlift capabilities has put the army at-risk for insurgent attacks and limited the Colombian Army's ability to quickly respond to infrastructure attacks. Defense used the remaining \$28 million for U.S. Special Forces training and equipment for the Colombian Army (see table 1); however, much of this equipment has not arrived.

**Table 1: U.S. Support for Protecting the Caño Limón Pipeline, Fiscal Years 2002 and 2003**

Dollars in millions	
Items purchased	Cost
<b>Helicopters</b>	
Two UH-60 Helicopters	\$26.8
Eight UH-1H Helicopters	20.1
Helicopter facilities	14.3
Helicopter maintenance and equipment	8.8
<b>Training</b>	
Equipment, ammunition, and parts	15.4
U.S. Special Forces training	12.7
Aerial eradication program <sup>a</sup>	0.9
<b>Total</b>	<b>\$99.0</b>

Sources: State and Defense (data).

<sup>a</sup>Funds were used for converting the building contractors' living quarters and related facilities for use by State's aerial eradication program.

<sup>14</sup>2002 Supplemental Appropriations Act for Further Recovery From and Response to Terrorist Attacks on the United States, Pub. L. 107-206, 116 Stat. 820, 855, and Consolidated Appropriations Resolution, 2003, Pub. L. 108-7, 117 Stat. 11, 176.

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## Helicopter Facilities Were Built, but the Helicopters Arrived Late

State built helicopter and barrack facilities on a Colombian Army base near the town of Saravena to support the 10 helicopters. The facilities were completed in December 2004, but remained vacant for 5 months awaiting the arrival of the helicopters. The UH-60 Black Hawks and four of the UH-II helicopters were delivered to Colombia in April 2005. They were moved to Arauca in May for training and air operations. In late June 2005, the remaining four UH-II helicopters arrived in Colombia and were moved to Arauca in August.

The helicopter facilities include helicopter pads, a hangar, training rooms, equipment storage, and building security. State also built barracks with exercise rooms, kitchen and laundry facilities, and conference rooms (see fig. 3). While the 10 helicopters will be stationed at the new facilities and routine maintenance will occur at this location, depot-level<sup>15</sup> maintenance will be done at the Colombian Army base in Tolomaida.<sup>16</sup>

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<sup>15</sup>Depot-level maintenance primarily entails rebuilding and overhauling equipment.

<sup>16</sup>Tolomaida is approximately 50 miles from Bogotá and the headquarters for the Colombian Army Aviation Battalion.

**Figure 3: State-Constructed Facilities on an Army Base near the Town of Saravena**



Heliport facility.



Barracks and helicopter pads.



Source: GAO.

Although the helicopters recently arrived in Colombia, they were expected to arrive as early as May 2004.<sup>17</sup> However, some State officials said the helicopters were always planned to arrive in December 2004. They noted that the lead time to order the helicopters precluded an earlier delivery

<sup>17</sup>Several State and Defense documents listed a number of dates for the scheduled arrival of the helicopters, with the earliest being May 2004.

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date. State officials did not provide any planning documents that detailed timeframes and milestones associated with the helicopter delivery, but did provide documents coordinating the construction of facilities with the arrival of the helicopters in late 2004. According to State officials, negotiations over what type of helicopters to purchase caused some delay, and problems with transportation and delivery accounted for the 4 to 6 month delay from the December 2004 timeframe.

Nevertheless, in the absence of the helicopters, the Colombian Army did not move any of its other air assets, including similar helicopters, to Arauca to assist in infrastructure security training<sup>18</sup> and operations. As a result, the army in Arauca responded to pipeline attacks using the roads, placing them at greater risk for ambushes by insurgents and taking more time to reach an area of an attack. According to Defense officials, Colombian Army soldiers have been killed traveling on the roads in the Arauca department.

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### U.S. Special Forces Provided Training, but Much of the Equipment Is Delayed

U.S. Special Forces provided training and equipment for about 1,600 Colombian Army soldiers to improve their ability to act quickly in minimizing terrorist attacks along the Caño Limón pipeline. In November 2002, a team of U.S. Special Forces traveled to Arauca to assess the area and determine the training needs of the Colombian Army. In January 2003, U.S. Special Forces started training in Arauca and planned for training to continue through December 2004.<sup>19</sup> U.S. Special Forces focused on helping the Colombian Army take a more proactive and aggressive approach to defend the pipeline; regain control of the area around the pipeline; and prevent, interdict, and disrupt the insurgents before they attack the pipeline. Training included developing quick reaction capabilities, small unit tactics, planning and conducting operations, reconnaissance, collecting and analyzing timely intelligence, and medical support.

U.S. Special Forces also facilitated joint and combined operations between the Colombian Army and police to restore public confidence and security throughout Arauca. The U.S. Special Forces' civil affairs and psychological operations officers helped the Colombian Army improve relationships with the civilian population by hosting local events and developing radio

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<sup>18</sup>In April and November 2004, about 75 Colombian Army soldiers from Arauca went to Tolomaida to conduct air assault training, however, it was only for a 2-week period.

<sup>19</sup>Additionally, prior to training, the army unit was vetted for human rights issues.

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broadcasts and leaflets. For example, officers assisted in providing medical and dental exams and vaccinations to over 1,760 individuals during a 2-day event.

Because the helicopters did not arrive until mid-2005, U.S. Special Forces extended their training in Arauca to overlap with their arrival. In a March 2004 cable from the U.S. Embassy in Bogotá, officials recognized that if the U.S. trainers did not overlap with the arrival of the helicopters in Arauca, the Colombian Army units would not receive the appropriate training. According to a MilGroup official, to extend the original training funds through September 2005, the U.S. Special Forces had to reduce the number of trainers and support staff in Arauca. Since the helicopters have just arrived, U.S. Special Forces will only have 3 months to provide the necessary operational training. A MilGroup official said they would have liked to have had 6 to 9 months of training to ensure the Colombian Army was fully capable of employing the helicopters to support infrastructure protection and related combat operations. Again, however, State could not provide us any documentation that coordinated the planned arrival of the helicopters with the necessary training.

Defense also purchased equipment for the Colombian Army for use in Arauca, but much of it has not arrived. Equipment purchased includes night vision goggles, ammunition, weapons, helmets, and medical supplies. According to the MilGroup, the delivery time for some items is now almost 2 years because of the demand for supplies created by U.S. military operations in Afghanistan and Iraq. For example, night vision goggles for the Colombian Army were ordered in late 2003 and a partial shipment arrived in July 2005.

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## Improved Security and Governance in the Department of Arauca, but Challenges Remain

Despite the delays in the arrival of the helicopters and other equipment, attacks on the Caño Limón pipeline have declined. Additionally, governance and security in Arauca has improved, and new oil exploration is also occurring due to improved security conditions. However, despite these improvements, challenges remain, particularly as more attacks on the pipeline are occurring in the neighboring Department of Norte de Santander. In addition, insurgents are attacking the electrical grid system that provides energy to the Caño Limón oilfields. Finally, because nearly all the \$99 million in U.S. assistance will be obligated or expended by the end of September 2005, and Colombia's capability to operate and maintain the helicopters without U.S. support is limited, sustainability of the progress made is uncertain.

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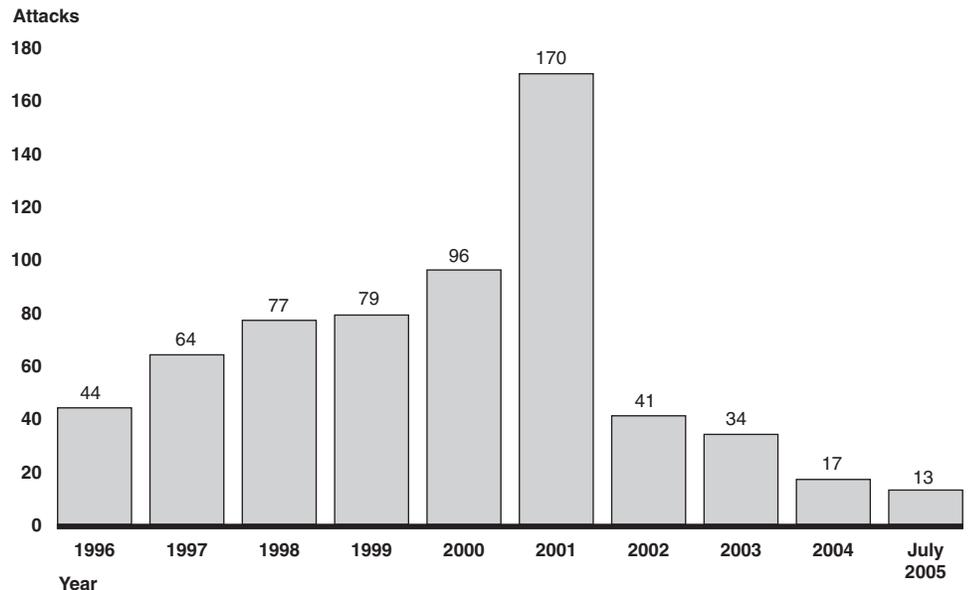
## Attacks on the Caño Limón Pipeline Have Decreased

Attacks on the pipeline have declined since 2001, until recently. As illustrated in figure 4, attacks on the Caño Limón pipeline reached a high of 170 in 2001. In 2002, the attacks dropped to 41; and in 2004, dropped even further to 17. However, in the first 7 months of 2005, attacks on the pipeline are almost equal to all of 2004. State and Defense officials said they were not sure why pipeline attacks were apparently increasing.

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**Figure 4: Caño Limón Pipeline Attacks, 1996–July 2005**



Source: Occidental Petroleum Corporation.

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## Attacks in Norte de Santander Have Increased

While attacks are decreasing on the Caño Limón pipeline in Arauca, more attacks are occurring in the neighboring Department of Norte de Santander. In the first 7 months of 2005, of the 13 attacks that occurred along the pipeline, 9 were in Norte de Santander. About 200 miles of the pipeline passes through Norte de Santander, and much of it is in rough mountainous terrain. This makes getting to the affected areas difficult, which delays repairs. Occidental officials said that in some cases, it takes up to 8 days to access, secure, and repair the damaged pipeline. In addition, according to Occidental, attacks on the pipeline in the mountains are hard

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to contain as spilled oil runs down the mountains, causing environmental problems.

Additionally, most of Norte de Santander is secured by a different Colombian Army brigade, which has not received U.S. infrastructure security training. According to the MilGroup, U.S. Special Forces are trying to determine if they can train additional soldiers in Norte de Santander. However, no military training facilities exist in the department. In commenting on this report, the MilGroup stated that NAS is studying the feasibility of deploying some of the helicopters to this region to support operations as required.

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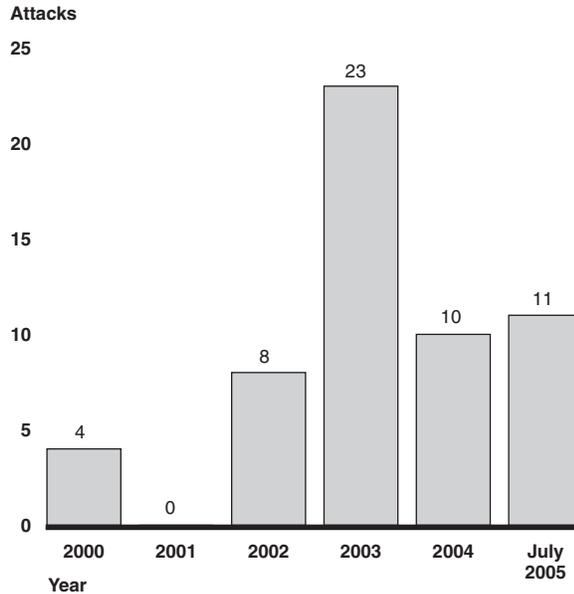
## Insurgents Are Attacking the Electrical Grid System

In addition to pipeline attacks, insurgents are attacking the electrical grid system that provides energy to the Caño Limón oilfield. Occidental is able to produce 50 percent of its energy requirements; however, the remaining 50 percent is purchased from the nation's electrical grid system. According to a Colombian Army official, attacking the electrical grid can shut down oil pumping completely.<sup>20</sup> In 2002, eight towers were destroyed within Arauca. Attacks on the electrical grid system spiked upwards in 2003 to 23 and are increasing again as the electrical attacks in the first seven months of 2005 have surpassed attacks in all of 2004 (see fig. 5). According to Occidental, as of July 2005 the attacks on the electrical grid system have cost \$117 million in lost production since 2002.

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<sup>20</sup>When the Caño Limón oil pipeline is shut down because of an attack on the pipeline, oil can still be pumped into storage tanks that have a 7-day holding capacity. However, when the electrical grid system is attacked, the oil wells cannot pump oil into the storage tanks, shutting down oil production.

**Figure 5: Electrical Grid System Attacks that Have Affected Occidental, 2000–July 2005**



Source: Occidental Petroleum Corporation.

### Strong Colombian Leadership and U.S. Special Forces Training Contributed to Increased Security in Arauca

The Colombian government has made security and the re-establishment of state presence in Arauca a priority. According to a State official, before the United States provided any equipment or training to the Colombian Army in Arauca, many changes were already occurring due to interventions by the Colombian government. For example, in January 2003, the Colombian government stripped the Arauca department of control over its oil royalties to restore fiscal responsibility to the department. Additionally, in order to disrupt systemic corruption, in November 2003, the government arrested about 30 public officials, including a city mayor, who were connected to insurgent groups.

To strengthen the army in Arauca, the Colombian government changed its leadership. Historically, according to the MilGroup, the army had been passive and reactive in part because Colombia's military structure holds leaders personally responsible for the loss of soldiers and equipment. The MilGroup and State officials noted that President Uribe replaced some of the army commanders in Arauca with others who were more aggressive

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and proactive against the insurgent groups, and he extended the current Brigadier General's term in Arauca because of his strong leadership abilities.

In addition to improvements made by the Colombian government, U.S. Special Forces training has improved the Colombian Army's capabilities. In the past, the Colombian Army lacked tactical and operation planning, civilian-military programs, and ground mobility. According to the Colombian Army Colonel in Saravena, due to U.S. Special Forces training, his troops are better able to infiltrate areas, react to situations, and work with the civilian population while respecting human rights. For example, in April 2005, the Colombian Army unit near the town of Saravena captured 18 insurgents, and an additional 5 insurgents turned themselves in during the first 4 months of 2005.

Moreover, better coordination exists among the Colombian Army, police, and the fiscalia. Both army and police officials acknowledged they have established a good working relationship, which has helped in neutralizing the insurgent groups. The Colombian Army and police perform daily foot patrols and carry out joint missions. Because of this teamwork, the army and police have been able to seize rockets and landmines, and capture insurgents. In 2001, the fiscalia were incorporated into the Colombian Army operations and now accompany units on investigations. Since 2002, the fiscalia have prosecuted 597 individuals, compared to only three arrests between 1986 and 2001.

Finally, interactions between the Colombian Army and the civilian population have dramatically improved. In 2001, neither the civilian population nor the army would travel along the roads or in the town of Saravena because it was not safe. Today, however, the Colombian Army holds meetings with various communities, provides entertainment, administers medical care, and performs daily foot patrols in Saravena.

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## New Exploration Is Occurring

New oil exploration is occurring in Arauca due to increased security. Prior to 2004, Occidental did not look for additional oil reserves due to safety concerns, even though the Caño Limón oilfield will probably only produce oil near its current rate for a few more years. Today, Occidental is able to increase its exploration within Arauca, by working with the Colombian Army and police. According to Occidental, it drilled 40 new wells in the Caño Limón oilfield this year and is making an effort to find new oil reserves. Additionally, according to Occidental, the Colombian Army's

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protection of the Caño Limón pipeline makes it possible for their employees to safely repair the pipeline and get it operational quickly. The safety of Occidental employees has been a concern in the past. For example, in 2002 a bus carrying 30 Occidental employees was attacked by insurgents, leaving 2 dead, 12 injured, and 3 missing.

Occidental acknowledged that while exploration is becoming more attractive in Colombia, challenges remain. For instance, according to Occidental, some of the best prospective locations for oil in Arauca are located in coca-growing areas controlled by insurgents. The U.S. Embassy, Bogotá also reports that although oil companies have stated they are concerned about the financial losses and damage caused by ongoing attacks to the oil sector, the problem is now being contained, and security concerns no longer outweigh profit possibilities in the country.

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## Sustainability of Progress Uncertain

As we reported in 2000 and 2003, the Colombian Army did not have the capability to fully operate and maintain the U.S.-provided helicopters it had. At that time we recommended that the Secretary of State, in consultation with the Secretary of Defense, examine U.S. assistance programs to the Colombian Army to (1) establish clear objectives for the programs and (2) estimate future funding requirements for U.S. support.<sup>21</sup> The Secretary has not addressed our recommendation. We added that this analysis should designate specific performance measures for assessing progress, define the roles of U.S. personnel and contractors, and develop a timeline for achieving the stated objectives. On our visit to Colombia in April 2005, a NAS official told us Colombia will not have a sufficient number of trained helicopter pilots until fiscal year 2008, and this assumes that none leave or fail the training program.<sup>22</sup> In addition, NAS and Defense officials estimate Colombia will not have enough trained mechanics until at least 2010.

Additionally, the reduction in U.S. Special Forces trainers will slow training. Due to commitments in Iraq and Afghanistan, U.S. Special Forces will be reducing personnel throughout Colombia by over 50 percent

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<sup>21</sup>See [GAO-01-26](#) and [GAO-03-783](#). In 2003, we noted the start of the infrastructure security program and discussed the implications of providing additional helicopters to Colombia.

<sup>22</sup>According to a U.S. Embassy, Bogotá, cable to State, the helicopters provided to help protect the pipeline require 50 pilots and additional mechanics to maintain them.

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starting in October 2005. According to a MilGroup official, training will be suspended in Arauca until early 2006 when U.S. Special Forces is planning to deploy a training team to Arauca for about 10 weeks. The MilGroup told us that training for the Colombian Army units in Arauca ideally should occur through fiscal year 2010.

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## Conclusions

Colombia's original plan to secure a 110-mile portion of the Caño Limón pipeline is nearing completion. The helicopters have arrived, the Colombian Army protecting the pipeline has received training, and the Colombian government has improved security and governance in Arauca. Pipeline attacks in Arauca have decreased since 2001 and new oil exploration is occurring.

Despite these improvements, more attacks are occurring on the pipeline in Norte de Santander and on the electrical grid system in Arauca, and State has not addressed how it will help Colombia sustain the progress made. As we reported in 2003, Colombia does not have the capacity to sustain the U.S. helicopters provided to the Colombian Army without continued U.S. support. The 10 helicopters provided for the pipeline security program will exacerbate this problem. Moreover, because the U.S. Special Forces are reducing the number of trainers throughout Colombia, training additional personnel for infrastructure security and sustaining the training already provided to units in Arauca will be problematic.

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## Recommendation for Executive Action

Because Colombia continues to face serious obstacles in its long-standing insurgency and in protecting the Caño Limón-Coveñas oil pipeline, we recommend that the Secretary of State, in consultation with the Secretary of Defense, develop a plan for transitioning the pipeline security program in Arauca to the Government of Colombia. The plan should delineate (1) how the helicopters provided for pipeline security will be used and maintained, (2) how the progress made to date will be sustained, and (3) an expected completion date for U.S. involvement.

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## Agency Comments and Our Evaluation

State provided written comments on a draft of this report (see app. II). State commented that the report provided an accurate assessment of the program and agreed that challenges remain and the Government of Colombia will need continued assistance to support the program. State concurred with the report's recommendation to develop a plan for

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transitioning the pipeline security program to the Government of Colombia, including the aviation component. State stated this plan should be incorporated into a larger United States government strategy to transition responsibilities for key U.S. funded programs to the Colombian government.

However, State expressed some concern that we overemphasized the time required to deliver the helicopters, but it did not provide any additional information for us to modify our discussion. The point is that the planned rapid reaction capability for the pipeline security program was not available until almost 2-1/2 years after the program began.

Defense did not comment on this report, but along with State, provided technical comments, which we incorporated as appropriate.

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As agreed with your office, unless you publicly announce its contents earlier, we plan no further distribution of this report until 30 days from the date of this letter. We are sending copies of this report to interested congressional committees and the Secretaries of State and Defense. We will also make copies available to others upon request. In addition, this report will be available at no charge on the GAO Web site at <http://www.gao.gov>.

If you or your staff have any questions concerning this report, please call me at (202) 512-4268 or [FordJ@gao.gov](mailto:FordJ@gao.gov). Key contributors to this report were Al Huntington, Hynek Kalkus, Kerry Lipsitz, and Summer Pachman. Contact Points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this report.

A handwritten signature in black ink that reads "Jess T. Ford". The signature is written in a cursive, flowing style with a large initial "J" and "F".

Jess T. Ford, Director  
International Affairs and Trade

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# Scope and Methodology

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To determine how the U.S. funding and resources provided to secure the first 110 miles of the Caño Limón pipeline were used, we reviewed Departments of State and Defense project information, reports, budget documents, memoranda, cables, and related documents. We assessed budget and funding documentation regarding the uses of the assistance, and found the data sufficiently reliable for our purposes. We interviewed knowledgeable officials involved in the program in State's Bureau for International Narcotics and Law Enforcement Affairs and Bureau of Western Hemisphere Affairs. We also interviewed officials from the Defense Security Cooperation Agency and U.S. Southern Command.

To determine what progress has been made and the challenges that remain for securing the Caño Limón pipeline, we examined reports, cables, and related documents prepared by cognizant State and Defense officials. Specifically,

- To determine the reliability of the data provided on pipeline and electrical grid system attacks, we interviewed officials from the U.S. Embassy, Bogotá; Ecopetrol; and Occidental Petroleum Corporation to determine how they collected and verified the data. We also reviewed State, Ecopetrol, and Occidental documents related to infrastructure attacks and cross-referenced the information with comments made by officials. We found the documents and officials reported similar numbers. Based on this review, we concluded that these data were sufficiently reliable for the purposes of this report.
- We discussed challenges of the program with officials in State's Bureau for International Narcotics and Law Enforcement Affairs and Bureau of Western Hemisphere Affairs. We also spoke with Defense officials from the U.S. Southern Command. On our visit to Colombia in April 2005, we interviewed Colombian government officials from the Ministries of Defense and Justice, and the National Planning Department. We also interviewed officials from Ecopetrol and Occidental Petroleum Corporation, which operate the Caño Limón pipeline and oilfield.
- We traveled to Bogotá in April 2005 and met with State and Defense officials at the U.S. Embassy, including the Narcotics Affairs Section and the Military Group. We also spoke with the Ambassador, the Deputy Chief of Mission, and staff from the economic and political affairs offices.

- Finally, we also traveled to Saravena, Arauca, and toured the State-constructed facility for stationing the helicopters and met with various U.S. officials involved in the pipeline security program. We interviewed the local commanders of the Colombian Army and Colombian National Police, and spoke with U.S. Special Forces trainers who were conducting training.

# Comments from the Department of State



United States Department of State

*Assistant Secretary and Chief Financial Officer*

*Washington, D.C. 20520*

AUG 23 2005

Ms. Jacquelyn Williams-Bridgers  
Managing Director  
International Affairs and Trade  
Government Accountability Office  
441 G Street, N.W.  
Washington, D.C. 20548-0001

Dear Ms. Williams-Bridgers:

We appreciate the opportunity to review your draft report, "SECURITY ASSISTANCE: Efforts to Secure Colombia's Caño Limón-Coveñas Oil Pipeline Have Reduced Attacks, But Challenges Remain," GAO Job Code 320323.

The enclosed Department of State comments are provided for incorporation with this letter as an appendix to the final report.

If you have any questions concerning this response, please contact Jeff Bischoff, Political-Military Narcotics Officer, Bureau of Western Hemisphere Affairs, at (202) 647-6373.

Sincerely,

A handwritten signature in black ink, appearing to read "S. Kaplan".

Sid Kaplan (Acting)

cc: GAO – Addison Ricks  
WHA – Patrick Duddy, Acting  
State/OIG – Mark Duda

Department of State Comments on GAO Report  
SECURITY ASSISTANCE: Efforts to Secure Colombia's Cano Limon-  
Covens Oil Pipeline have Reduced Attacks, But Challenges Remain  
(GAO-05-971, GAO Code 320323)

The Department of State appreciates the opportunity to review and comment on the draft Report "SECURITY ASSISTANCE: Efforts to Secure Colombia's Cano Limon-Covens Oil Pipeline Have Reduced Attacks, But Challenges Remain." This program is an important part of Colombia's National Security Strategy and is a key component of Colombia's effort to secure its national territory and bring peace and prosperity to Colombia. The Department is committed to executing its security assistance programs and its other programs in support of Colombia in a coherent manner that complies with United States law and helps the United States Government achieve its foreign policy goals.

The report represents a generally accurate assessment of intent and execution of the program. We would emphasize the importance of the first paragraph of the report's conclusion:

"Colombia's original plan to secure a 110-mile portion of the Cano Limon Pipeline is nearing completion. The helicopters have arrived, the Colombian Army brigade protecting the pipeline has received training, and the Colombian government has improved security and governance in Arauca. Pipeline attacks in Arauca have decreased since 2001 and new oil exploration is occurring."

Nevertheless, we also recognize, as noted in the conclusion, that challenges remain and that for the short-to-medium-term, the Government of Colombia will need continued assistance to support this program, especially in the areas of training and maintenance support for the aviation component of the program.

The Department would additionally highlight the point found in footnote two, page two, which states that the Colombian effort to secure Arauca and the Cano-Limon pipeline has been subsumed into the larger Colombian strategy for bringing peace and prosperity to Colombia. Support for the program to assist Colombian forces securing Arauca and the Cano-Limon pipeline has also been incorporated into our broader Foreign Military

Financing (FMF) and Andean Counterdrug Initiative (ACI) budgets request for Colombia. Beginning in FY 2004, support for the ground portion of the program has been included in our FMF request while support for the aviation portion of the program has been included in our ACI request.

The Department concurs with the recommendation that State, in consultation with the Department of Defense, develop a plan for transitioning the pipeline security program to the Government of Colombia, including the aviation program. The plan should also include long-term sustainment and an expected completion date. The Department believes that because the purpose of United States' security assistance to Colombia has expanded beyond the security of Arauca and the Cano-Limon pipeline, the plan should be presented as part of a larger United States Government strategy to transition the responsibility for key United States Government funded programs to the Government of Colombia.

The Department finds the draft report a generally accurate assessment. We are concerned that it may over emphasize the time required to deliver the helicopters, which were subject to the vagaries of funding availability and contracting difficulties, rather than the end result of improved security in Arauca and a decline in attacks against the pipeline. The Department recognizes that the helicopters are a key element in the program, but notes, as does the draft report, that the number of attacks against the pipeline dropped before the arrival of the helicopters, attributable to other elements of the program.

Finally, the draft report notes that attacks against the pipeline and the electrical system that supports it have increased in 2005 over the same period in 2004. Nevertheless, attacks against the pipeline and the electrical system in 2005 (24) are still dramatically below the level of attacks in against the pipeline 2001 (170), which is before the program began. The Department recognizes that changes in terrorists' tactics associated with the increase in attacks in 2005 will require adjustments by Colombian security forces and changes in the allocation of assets provided under this program. The Department will work with the Department of Defense and the Government of Colombia to adjust our support to the Government of Colombia to counter the changes in terrorist tactics.

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