The Sudanese government is quietly escalating oil exploration inside the Darfur region, a step that has led to protests from rebel leaders in a volatile area where more than 200,000 people have been killed during three years of fighting.

Political and humanitarian experts say oil in Darfur could deliver much-needed development and investment to the region but that attempts to search for oil now may intensify the conflict by raising the stakes in an already war-torn area. The government has recently awarded three new oil concessions in the region.

Rebel leaders say oil exploration in Darfur should be postponed until a peace deal is signed by all parties and stability returns.

"We are still fighting for our lives and our country," said rebel commander Jar Neby, who represents a faction of the Sudan Liberation Army. "We need water right now, not oil. We can talk about these issues after peace comes."

Some political analysts believe that untapped oil reserves might have been an underlying factor in the Darfur conflict all along, explaining why a seemingly barren wasteland of western Sudan would spark such a bitter tug of war between government forces and rebels, eventually drawing the intervention of international players such as the United States, Libya and the United Nations.

"When you don’t find a reasonable explanation, this is what you have to conclude," said Eltayeb Hag Ateya, head of the Peace Studies Institute at Khartoum University. "I believe there must be something else — oil or some natural resource — about Darfur."

Salih Osman, a human rights attorney from Darfur, said government suspicions about oil in Darfur explain why regime officials reacted so strongly to rebel attacks in the region, starting in 2003. "I fear this will only make matters worse," he said, referring to the newly expanded exploration.

The government is accused of arming Arab militias known as janjaweed to attack and destroy scores of Darfur villages over the last three years. Government officials deny supporting the janjaweed and blame rebels for the violence.

A team of Middle Eastern oil companies, including Saudi Arabia-based Al Qahtani Sons Group and Ansan Wikfs, based in Yemen, agreed in November to spend $43 million for drilling rights to 125,000 square miles. The largely uninhabited area, known as Block 12a, is north of where much of Darfur’s fighting is occurring.

The government’s decision to offer new concessions in Darfur is part of an aggressive search for oil in the northern part of the country.

Since discovering oil in the 1970s, Sudan has become one of Africa’s biggest producers. But most of the current production — worth an estimated $6 billion a year — is in the south, and a 2005 peace agreement with former southern rebels gives Sudanese there the right to break away from the rest of the country in 2011, taking much of the oil with them.

"There’s a real scramble to find oil in the north," said a government oil official, who, like several others interviewed for this report, requested that his name be withheld because of the government’s sensitivity about speaking publicly. "The likelihood that there is oil in Darfur is quite high."

The government awarded two smaller concessions east of Nyala, the capital of South Darfur state, to a Yemen-led joint venture. But attempts to find an investor for a concession encompassing much of the rest of North Darfur state have been complicated by the region’s instability, officials said.

Due in part to U.S. investment sanctions imposed on Sudan in the 1990s, China National Petroleum Corp. is Sudan’s biggest oil partner and purchases two-thirds of its oil. One of China’s oil-producing concessions straddles Darfur, but officials said current production is occurring in the state of Western Kordofan, not in Darfur itself. Officials at China National declined to comment.

An oil industry consultant who works with several of Sudan’s major oil companies, and who also spoke on condition of anonymity, said he believed that efforts to look for oil in Darfur are aggravating the conflict.

"The main reason behind Darfur is oil," he said. "This fighting in Darfur had been going on for generations. There is no other reason for this area to have blown like this."

Others are hopeful that oil might help resolve the region’s crisis by bringing all sides together. The discovery of oil in southern Sudan eventually helped end the two-decade civil war when both sides realized that neither would be able to profit from the oil if fighting continued.

"They will see that it’s better to share in the oil than to leave it for someone else," said Salah Wahbi, president of Advanced Petroleum Co., a Sudanese joint venture that has invested more than $30 million to explore in a southern Darfur oil concession. "Oil will bring a better life and will bring a better agreement."

Under a fragile peace accord signed by the government and one rebel group in May, Darfurians have the right to share in whatever oil wealth is discovered.

The increased exploration has not gone unnoticed by Darfur rebels. In late November, two rebel groups attacked a Chinese oil facility in Abu Gabra, located between the states of South Darfur and Western Kordofan, according to a United Nations report. Both rebels and government troops claimed victory in the clash.

U.S. officials have downplayed speculation about oil in Darfur. Andrew S. Natsios, the Bush administration’s special envoy for Darfur, dismissed criticism by some Sudanese that the U.S. interests in Darfur might be linked to oil.

"We’re unaware of any significant amount of oil in Darfur," Natsios told reporters recently. "It’s a small amount down in the southeast corner."

Oil companies, however, have been expanding their exploration, despite security concerns that make drilling in Darfur dangerous. Wahbi, whose joint venture was the first to drill inside Darfur, said some parts of his territory, known as Block C, remain a no-go zone because of the fighting. The company recently got a government extension to conduct exploratory drilling because it has been unable to enter some areas.

"Our workers are foreign contractors, and we don’t want to put them at risk," Wahbi said.

Before drilling, his company meets with local tribal leaders to explain their work, he said. To appease concerns, the company has built six water wells for local communities affected by the drilling and treated hundreds in the company’s mobile health clinic.

The company started drilling in late 2004 and accelerated it in 2005 and 2006. So far, workers have hit only dry wells, but three wells recently showed evidence of oil in the past. Company engineers are now chasing the suspected path of the crude.

"Every day we are getting more information," Wahbi said. "We are getting closer." He noted that his concession is adjacent to some of Sudan’s top-producing oil regions, controlled by China National and others.

Advanced Petroleum is unique among Sudan’s oil ventures because it is the only concession that is owned entirely by Sudanese investors, including private companies and the state government in Khartoum. Previously, the joint venture included Swiss-based Cliveden Group, but the company sold its stake a year ago because of U.S. pressure over Darfur, Wahbi said.