

Oil Terrorism:

The Living Nightmare No One Wants to Contemplate

By Dr. Roger L. Cory

At the forefront of every American's mind today is the threat of terrorism. It is now the driving force behind U.S. foreign policy and the most important factor in today's national politics. We are personally reminded of terrorism every time we walk into an airport, sporting event, or other large public gathering.

Many terror scenarios have been discussed since September 11, 2001. Suitcase bombs, container ship bombs, railway disasters, biological agents, and so on.

What has not been widely examined, however, is the prospect we now face which no one wants to openly admit: that our very economy and way of life hangs by a thread over the fires of oil terrorism.

September 11th was a horrific ordeal not only for the residents of New York and Washington, D.C., but for all Americans.

Yet as dark as that day was, the possible effects of wide-scale oil terrorism makes the knocking down of a couple of buildings seem like a gentle breeze before an epic storm. This would be a genuine disaster, for Americans in every city and county, hitting them where they live and in their pocketbooks.

This time, the trauma for Americans in Peoria and Eugene and El Paso won't be only psychological.

Before you dismiss this as alarmist talk, take a few moments to educate yourself to the facts of our current oil security situation. Then decide for yourself whether the potential exists for a major, possibly long-term, disruption in our oil supply.

Then ask, is my portfolio positioned to protect me from this present and growing danger?

The First Bubbles Reach the Surface

“You steal our wealth and oil at paltry prices because of your international influence and military threats. This theft is indeed the biggest theft ever witnessed by mankind in the history of the world.”

--Osama bin Laden

“...plans exist (for al Qaeda) to continue attacks against the global petroleum sector. Al Qaeda plans to weaken the petroleum industry by conducting additional sea-based attacks against large oil tankers...such attacks may be part of more extensive operations against port facilities and other energy-related targets, including oil facilities and nuclear power plants.”

---Recent FBI report

I know this is difficult, but try to think like Osama bin Laden and his cohort for a moment. You believe the West is the source of all evil in the world. You believe it is Allah's will that the West be brought to its knees, renounce both materialism and Christianity and confess the Islamic faith.

How, exactly, would you bring this about? What points of vulnerabilities would you exploit to humble this powerful enemy?

Well, you know that the West's military might is dependent entirely upon its economic strength. You cannot employ armies you cannot afford to pay.

So, striking at the West's economic health is the key to victory, right?

Right.

So then, how, exactly, would you strike at the developed world's economic health? You already destroyed two major office buildings in New York. But most of those businesses found ways of carrying on. You understand that September 11th was more a symbolic victory than a real one—a mighty psychological blow, but a mere dent in the American economic armor. You can't possibly bomb all the office buildings in Europe and America.

So, what now? How do you level a right cross to the chin of Western prosperity and economic might? How do you do some *real* damage? There is only one answer.

Energy.

Energy gives the West the ability to do things. To make things. To move things. To heat and cool buildings. To communicate over long distances. To power machines and computers. Energy is the one common critical factor in every modern economy.

"By hitting oil targets overseas, terrorists can hit us here at home, achieving the same destabilizing effect as an attack on American soil," says Gail Luft, executive director of the Institute for the Analysis of Global Security in Washington. "Dependence on foreign oil is America's Achilles heel."

If you're Osama bin Laden and his lieutenants, you're in luck. Most of the world's energy is fueled by oil, and guess what? Most of the world's oil just happens to be right in your own backyard. *Now* you're getting somewhere.

That's why this article needed to be written, and needs to be read.

Even as al Qaeda has been severely disrupted through the West's efforts to freeze assets, destroy training camps and hunt down its leaders, it nevertheless has begun to launch its first efforts into its new war over world oil.

Most of that activity has centered in the kingdom of Saudi Arabia. This development is so important, we've devoted an entire section to it later in this report.

But Islamic terror cells are also beginning to make inroads elsewhere.

In October 2002, suicide bombers destroyed the French oil supertanker *Limburg* in Mukalla, off Yemen's southeastern coast.

Terrorists bought a small boat and loaded it with more than 1,200 kilos of TNT and C-4 explosives. The boat approached the ship as it entered the Al-Dhabba oil exporting harbor, on the Arabian Sea, and the explosives were detonated upon impact.

One Bulgarian crew member was killed, and 90,000 barrels of oil spilled into the Gulf of Aden.

One month later, a helicopter carrying employees of the U.S. oil company Hunt Corp. came under fire just after taking off from San'a airport in Yemen.

A Yemeni security official told The Associated Press that the helicopter was heading to oil fields in the northern province of Marib when it received shots from assault rifles from an area near the airport.

The Institute for Analysis of Global Security cites no fewer than 85 significant attacks on Iraq's oil infrastructure since the U.S. invasion March 2003.

The largest was in April, 2004, when two major Iraqi oil pipelines on the Faw peninsula were destroyed, temporarily cutting Iraq's exports in half. Gunmen also attacked a convoy of civilian oil services contractors, killing several men.

That same month, suicide terrorists aboard three boats attempted a coordinated attack on oil terminals in and around the southern Iraqi city of Basra. Through a series of serendipitous events the attack was foiled, but had it succeeded, Iraq's last remaining outlet to the Persian Gulf would have been destroyed and almost two million barrels per day of Iraqi crude would have disappeared from the oil market.

In July 2004, the Uch Sharif gas pipeline in Pakistan was blown up by terrorists seeking to intimidate the Pakistani regime. Millions were lost in repairing the damage, and a catastrophic loss of oil was only avoided because of an automatic closure of the pipeline.

The Sui Northern Gas Pipeline Company Limited (SNGPL) has asked the federal and Punjab governments to enhance security along its 6,000-kilometer gas pipeline, and had also asked the Interior Ministry to take steps to guard major gas pipelines throughout the country.

Recently, Islamic terrorists, emboldened by these initial small victories, have begun to investigate prospects for oil-related terror activities on our own shores.

In July, 2004, U.S. intelligence agencies reported that they had detected surveillance by terror suspects of three major oil facilities, in Philadelphia, Corpus Christi, Texas and Valdez, Alaska.

The officials report that they had learned that these coastal oil terminals had been cased for “several months” by “Islamic terrorists.” No arrests were made.

There is wide agreement among energy analysts that fundamental supply/demand factors indicate the world price of oil should range between \$32 and \$34 per barrel. The actual price hovers around \$40-42 per barrel.

This has resulted in what is now called a “terror premium” of about \$8-\$10 per barrel. The cost of this terror premium to the U.S. economy adds up to upwards of \$36 billion per year, dampening the U.S. economic recovery and nearly offsetting President Bush’s tax cut.

Make no mistake. Terrorists understand the critical importance of oil to our economic health, and they know exactly what they are doing.

Osama bin Laden has told his followers that oil imports amount to “the feeding to the artery of the life of the Crusader nation.” He should know. His wealth came to him entirely from his family’s oil-related construction business.

A statement posted on the Internet and signed by the then-Saudi Al Qaeda leader, Abdul-Aziz al-Miqrin, stated, “The (Khobar Towers attack) took the oil price to its highest levels of over \$42, while Saudi Arabia is committed to America’s prosperity by providing oil at the cheapest prices. Our heroic fighters were able, by the grace of Allah, to raid the locations of the occupying American oil companies...which are plundering the Muslims’ resources.”

Miqrin also criticized the Saudi government for “supplying the United States with oil for the cheapest prices, according to their master’s wish, so that their economy does not collapse.”

Within the shadowy world of al Qaeda and other Islamic terror groups, the war over oil has been officially engaged. The only question is where in the world the next battle will be staged.

Unfortunately, that decision will not be ours to make, but the terrorists’.

Where Our Oil Comes From, How it Gets Here

The production of everything from toothpaste to iPods is dependant, in some way, upon oil in some refined state.

While our everyday direct involvement with oil products is usually limited to gasoline and heating oil, thousands of products we use at home and at work require oil to produce, transport, maintain and use.

Most of us are insulated from the source of the oil products we consume. Much of the time we are either unaware of the necessity of oil in the manufacture of what we are using, or we are insulated from the understanding of how the gasoline or heating oil got to us.

But today it is critical that we know something of the source of the lifeblood of our economic health, which is now so much at risk.

Every drop of oil we consume must pass through each of four major milestones:

- 1) Oil Well
- 2) Oil Tanker/Land Pipeline
- 3) Storage Tank
- 4) Refinery

From the refinery, refined products (transport fuels, heating oil, lubricants or petrochemicals for plastics) are then transported to wholesalers and distributors on its way to gas stations, manufacturing facilities, etc.

Each of these milestones is subject to its own unique terror vulnerabilities, which we will examine in a later section of this report.

In energy industry parlance, the movement of oil from under the ground to the tanker or pipeline is called “upstream” and the movement from tanker or pipeline to the end user is called “downstream.”

The U.S. now produces roughly 40% of the oil it uses. Most of our domestic lower-48 production is centered in the Southeastern states and the Gulf of Mexico.

But oil in crude form is useless for almost any purpose. It needs to be refined to make gasoline, diesel fuel, industrial lubricants, petrochemicals, and so on. Because crude oil needs refining, refineries are a major choke point for our petroleum system.

Most crude oil from the Gulf Coast is piped to refineries in the Midwest. Most of the oil from Alaska’s North Slope travels by pipeline to Alaskan

oil ports for tanker shipment to West Coast refineries. Tankers and barges move most of the refined product within the continental U.S.

There is an extensive pipeline grid which interconnects the entire continental U.S. petroleum production system. Many miles of exposed pipe winds its way across wide-open plains to reach its refinery destinations.

Although the U.S. was once entirely oil self-sufficient, we now import 60% of our oil. Who are the largest exporters, and where exactly does our oil come from?

The world's largest oil producers (with 2002 estimated reserve figures in millions of barrels) are:

- 1) Saudi Arabia (259,000)
- 2) Iraq (112,000)
- 3) United Arab Emirates (98,000)
- 4) Iran (90,000)
- 5) Venezuela (78,000)
- 6) Russia (49,000)
- 7) Mexico (27,000)
- 8) Nigeria (24,000)
- 9) U.S. (22,000)
- 10) Norway (10,000)

Contrary to popular belief, the U.S. does not receive most of its oil imports from the Middle East. According to the Energy Information

Administration, U.S. oil import sources are, in order of volume of shipments per year:

- Venezuela (910 million barrels)
- Mexico (623 million barrels)
- Canada (511 million barrels)
- North Sea (371 million barrels)

The remainder comes to us from Nigeria and the Middle East. These figures indicate a strong bias in favor of oil imports from Western Hemisphere sources.

In contrast, Europe and Japan receive the vast majority of their oil imports from the Middle East, and the majority of exports from the Middle East go to Europe and Japan—some 3.5 billion barrels per year!

What all this means for oil security is simply this: Most of the world's oil is refined and consumed thousands of miles away from its point of production, even when the oil is produced within nations, such as in the U.S.

This globe-spanning oil transportation system provides an endless array of possibilities for the terror networks to exploit. We'll discuss the details of those terror possibilities later.

What About the Strategic Petroleum Reserve?

Most of us are aware of the fact that since the oil shocks of the 1970's, the U.S. government sought to cushion the nation from any major disruptions of foreign oil supply by establishing a collection of storage facilities known as the Strategic Petroleum Reserve (SPR).

Where is all this oil stored, how would it be distributed, and how long would it last in a major emergency?

The SPR is located in four massive underground cavern complexes in the Gulf Coast region of Texas and Louisiana. This area provided proximity to Gulf Coast oil-production for convenient filling/refilling, as well as a convenient tie-in with the existing pipeline network extending from the Gulf to refineries in points north.

There are some 50 caverns altogether. The caverns lie deep within underground salt structures, with an average storage capacity of 10 million barrels each. They are usually cylindrical in shape, and boast a diameter of about 200 ft. and a depth below ground of 2,000 ft. The Empire State building can easily fit into even an average-sized cavern!

The SPR's total capacity is about 700 million barrels, which was ordered filled by President Bush in November 2001. Now, what happens in an oil emergency? That depends upon how bad an emergency it is.

The maximum drawdown capacity for the SPR is about 4 million barrels per day; but the U.S. consumes about 20 million barrels a day, eight

million of which is imported. So the SPR could never provide us with more than half of our usual import supply.

And even at just 4 million barrels per day, the SPR, even when filled to the brim—would last only 42 days.

This has led some oil industry analysts to suggest that the SPR is more placebo than solution. It will never provide the U.S. with more than a portion of our oil needs, and that only for a relatively short time.

Excess Capacity: Can't Other Nations Help Out?

The short answer is, don't count on it.

Excess capacity is the ability to a given producing nation to produce more oil than it normally produces, presumably in an emergency. And there is very little excess capacity in the present world oil production equation.

Just scan this list of oil-producing nations/regions which have virtually no excess capacity at the present time:

- United States
- Mexico
- Former Soviet Union
- North Sea
- Venezuela
- Nigeria
- Iran

- Iraq
- UAE

So, does anyone have any excess capacity? Yes, according to the Energy Information Association, Saudi Arabia has about 2 million barrels per day excess capacity, and Kuwait has less than 1 million barrels per day.

That's it.

So, that means, if there's a major supply disruption anywhere in the world, there is very little slack in the system to make up the shortfall.

Saudi Arabia has traditionally served as the producer of last resort, a sort of Federal Reserve of world oil production. But with world oil demand surging, and production leveling off, everyone's running at full speed just to keep up, including the Saudis.

Keep these facts in mind as we explore the real-world dangers to world oil supply from Islamic terrorists' efforts to bring down the Great Satan.

A major oil production disruption will mean only one thing: pain for industrialized nations via massive spikes in the price of oil.

Blood Has Always Spilled For Oil

The 20th century—and, some would argue, the 21st as well—saw a number of bloody wars over oil.

Not long after the turn of the last century, the ever-growing popularity of automobiles at home and mechanized transport in war required a free flow of oil that wasn't needed in simpler, horse-and-buggy times.

Oil wars have been fought, for the most part, in the Middle East, as might be expected. And for that reason, many Americans have forgotten, or simply never learned, of these significant military campaigns related to oil.

Arab children, by contrast, are taught about these wars nearly the same way American children are taught about the War of 1812 and the Spanish-American War. They are considered major historical events in their history, because Arab peoples usually fought and died on their own soil, and in large numbers.

Islamic terrorists also know their history, of course. They know all too well that over the past century, the West's principal interest in their part of the world has centered around oil. They know how much their oil means to the Western nations, because of how willing we have been to die to get our hands on it.

To help us appreciate the close relationship between oil and war in the last century, let's note just a few of the more notable oil wars of the past 100 years.

- World War I was the first oil-related war, and in some respects it was lost for lack of it. America was the world's largest producer at this time, and our ready supply of oil ensured the Allies' ability to fight history's first mechanized war. On the other hand, Germany, having been denied access to the Romanian oil fields, gradually fell

prey to chronic fuel shortages. With domestic train service all but stopped cold and unable to even lubricate their tanks and trucks properly, the German army, having only a few days' fuel left, finally surrendered on November 11, 1918.

- World War I also witnessed the epic battle between the British and the Ottoman (Turkish) Empire, who had sided with the Germans and Austrians and against the Allies. The Turks had a firm grip on many of the Persian and Arabian oil fields, which Britain needed to fuel its large navy, with which the Empire ruled the waves. In 1917 British forces finally overwhelmed the Ottoman army in present-day Iraq, thereby capturing a perpetual oil supply for the Royal Navy, which soon after established a base in Kuwait's harbor.
- Adolf Hitler was determined to make sure that this time, Germany had all the fuel it needed to fulfill its imperial ambitions. Thus among his first military objectives were the oil fields of Poland and North Africa. It is important to note that the Allies, seeing the danger of Germany controlling Middle East oil, decided to engage Germany *first* in North Africa. Only after having secured the world's most prized oil fields did the Allies feel free to launch the war for Europe. As troubling as the German occupation of Europe was to the Allies, the prospect of its occupation of the Middle East's oil fields was deemed even more critical. Having lost North Africa, and under pressure to secure more oil for his gas-guzzling *blitzkrieg* machine,

Hitler launched his ill-fated invasion of Russia, in an attempt (at least in part) to capture their abundant oil reserves. Though the attempt to fight a two-front war was considered a wild gamble on Hitler's part, in retrospect, given his energy circumstances he may not have had much choice. Beat back in Russia and suffering severe fuel shortages as a result of the Allies' success in cutting off German supply lines, by the spring of 1945 the most mobile army in history simply ran out of gasoline and with it, the ability to continue the fight against the advancing Allied armies.

- On September 22, 1980, Iraqi armed forces invaded western Iran in part to seize control of the rich oil-producing Iranian border province of Khzest. Iraq's war effort was openly financed by Saudi Arabia and Kuwait, and tacitly supported by the United States. Iraq at this time was considered a less-unfriendly state compared to Iran, whose Islamic revolutionaries had held hundreds of Americans hostage in 1979 and '80. The war ended in a stalemate eight years later, having cost an estimated one million lives.
- In another attempt to invade a neighboring oil-rich state, Iraq invaded Kuwait in the summer of 1990, sparking the Gulf War, launched in January 1991. The defense of Kuwait's oil reserves was considered so critical to the world's economy that a coalition of dozens of Western nations almost immediately developed plans to descend upon the region to oust Saddam Hussein's army.

- In March, 2003, U.S. and British forces invaded Iraq in an ostensible attempt to capture Iraqi weapons of mass destruction. However, the need to place the world's second-largest oil reserves in safer hands is widely speculated to be at least one of the reasons for the invasion.

These oil war highlights are far from exhaustive. Many more battles have been fought over oil, and likely will be in the future.

If so, where are the next hot spots likely to be? Where are the oil-critical points on the globe which may yield the conflicts of tomorrow?

Global Oil Choke Points

One of the critical issues we face with oil security is the transportation of it. As we mentioned before, the vast majority of the world's oil is produced thousands of miles from where it is consumed, so it needs to be transported to refineries closer to its final destination.

This transportation system, in normal times, is a marvel of efficiency and safety, given the amounts of oil being moved every day. But these are not normal times.

While efforts are being made to better secure the oil transport system worldwide, the problem is precisely that—our oil transport system is a *worldwide* system! It's practically impossible to secure it all, and one soft target for terrorists can create significant disruptions.

We cannot, of course, sketch out all the potential areas of attack to our oil transportation system. There are thousands of miles of pipeline, tens of thousands of miles of shipping lanes, and many hundreds of oil terminals worldwide, all of which possess their own security profiles.

But we should make ourselves aware of the major oil transport choke points, because these are undoubtedly where Islamic terrorists would dearly love to hit our system.

- **The Alyeska Pipeline** is not, technically, a choke point since it is 800 miles long, but it is a cause for concern for U.S. oil security. Much of the West Coast's fuel originates from Alaska's North Slope, which is then pumped south through the Pipeline across the state to Valdez, at the Gulf of Alaska near the southern city of Anchorage. From Valdez, the oil is shipped by oil tanker to West Coast refineries, some 800,000 to one million barrels per day. Thus far, the Pipeline has enjoyed a remarkable security record. Since its construction in the 1970's, no major attacks have occurred. No doubt part of the reason is its sheer remoteness. The weather is hostile most of the year along most of the Pipeline, and the region is far from the traditional centers of terrorist activity. However, its very remoteness may someday prove to be its greatest vulnerability. Should al Qaeda or other terror groups decide to hit the Pipeline, there are 800 miles of pipe—most of it above ground—waiting for them to destroy.

- **The Bosphorus Straits** in Turkey is a key world oil choke point that has a long history in world affairs as a strategic location. At its narrowest point, the Straits are only 700 yards wide! Yet 50,000 ships per year pass through this channel between the Black Sea and the Mediterranean—one every ten minutes. This makes the Straits the busiest waterway in the world. Of those 50,000 ships, nearly 6,000 of them are massive oil tankers, some longer than the width of the Straits at its narrowest point. To make matters more difficult, the Bosphorus Straits are notoriously tricky to navigate, requiring 12 course changes, several of which are 45 degrees or more. Oil tanker traffic is only expected to increase, as Caspian Sea development continues (that oil is pipelined to the shores of the Black Sea, then loaded onto tankers). A troubling development in the Bosphorus is the dramatic increase of nuclear materials shipments, a result of Russia's recent agreement with several nations to reprocess and dispose of nuclear material in its southern region near the Black Sea. Not surprising given its difficult navigation and high traffic, the accident rate in the Bosphorus is startling; over 350 dangerous incidents have been recorded in the last ten years. Even more alarming is the fact that the Straits pass right through the Turk metropolis of Istanbul. The potential for terrorist mayhem in the Bosphorus is nearly limitless. Possibilities include the explosion of a nuclear-loaded vessel near Istanbul; the sinking of a major vessel in the Strait's narrowest point, halting traffic indefinitely; vessels set adrift, causing blockage and collisions; on-board fires and sea-borne fires of petroleum cargo, and many more. An extended closure of the

Bosporus could lead to the effective loss of some 70 million tons of oil per year to the world market from the Caspian Sea region.

- **The Malacca Strait** is the world's second busiest shipping lane. It is the shortest route for oil tankers from the Middle East on their way to China and the rest of Asia, thus it is the primary route for those oil shipments. Coursing through the territorial waterways of Indonesia, Malaysia, Thailand and Singapore, the Malacca Strait is 10 miles at its narrowest and 500 miles long. Unlike the Bosporus, there are alternatives for oil to travel, should Malacca traffic be halted by terrorist activity or accident. But those routes involve an extra three days' travel and higher expenses. A Malacca Strait closing would be more a psychological blow to world markets than a practical disaster for oil shipping. But there is little question that world oil prices would rise to discount the possibility that other, even more critical, oil choke points stood in the terrorists' crosshairs.
- **The Strait of Hormuz** is the heavyweight champion of oil transport. Eighty percent of all Persian Gulf oil—40% of all world oil production—passes through this 34-mile-wide channel. It is the only sea-going exit from the Persian Gulf. The Strait lies at the southern end of the Persian Gulf, and separates Iran from the Arabian Peninsula. Needless to say, a major incident in the Strait of Hormuz would prove disastrous to the world oil production system. When 40% of the world's oil supply is effected, the result would range anywhere from a crisis to a catastrophe, depending upon how long the delays remained in place. The Strait's proximity to terror capitals

makes it all the more inviting and accessible a target. A major disruption of oil shipping in the Strait of Hormuz would inflict unprecedented economic pain throughout the developed world, perhaps doubling or even tripling the world price of oil virtually overnight.

- **Bab Al-Mandab and the Suez Canal** together form the western counterpart to the Strait of Hormuz. As Mideast oil tankers bound for Europe move down the Persian Gulf through the Strait of Hormuz and around the southern end of the Arabian Peninsula, they then head north through the Red Sea, passing these two strategic choke points between the Arabian Peninsula and the continent of Africa. Bab Al-Mandab, straddling the Red Sea on the southern end of the Arabian Peninsula, is the less well-known of the two, but both possess strategic significance to world oil transport. Nearly one million barrels pass through these two points each day on its way to refineries in Europe. While a closure of either of these gateways would be severe, unlike the Strait of Hormuz it would not necessarily be catastrophic. Alternate routes include shipping around Africa's Cape of Good Hope, though this would require significant additions to tanker fleets and much higher transportation expenses. The Suez region also operates the Sumed Pipeline, which bypasses the Canal by connecting the area just south of the Canal to an oil terminal near Alexandria, Egypt, on the Mediterranean. Two million barrels per day pass through this pipeline, which serves as another inviting terror target.

The Ras Tanura complex, Saudi Arabia's main oil export terminal, remains vulnerable to catastrophic terrorist attack. Ras Tanura is the nerve centre for Saudi global exports, responsible for moving 80% of its exports. The oil-laden ships which head down the Persian Gulf through the Strait of Hormuz that we spoke of earlier are first loaded at Ras Tanura. Oil from the giant Ghawar oil field, Saudi's largest, is pumped directly to Ras Tanura. There are no alternative destinations for this oil. If Ras Tanura should go down, the world would, in effect, lose access to its largest oil field. Experts estimate that a single aircraft flown into Ras Tanura could disable it indefinitely and create an instant oil price spike of \$80-100 per barrel or more. Even under the best of conditions, rebuilding this sprawling complex would require years.

We've only had space to outline in the briefest terms the most critical oil choke points in the world oil transport system. Many more thousands of miles of pipeline and sea lanes offer the determined terrorist the opportunity for significant, if not catastrophic, damage to the world oil system.

The only wonder is that such attacks have not yet occurred. The only question is how much time we have left before they do.

Weapons and Targets: How Can They Hurt Us?

In his book *Energy Security for Industrial Facilities*, Peter Broussard reports an incident involving a disgruntled former employee of a Louisiana oil company that demonstrates the ease by which a determined terrorist can cripple an oil facility:

“What (man’s name) did in the course of a single night set off a chain reaction that rippled through the marshes of south Louisiana all the way up to the top stories of the Kayne Building in Houston, the oil company’s headquarters. All it cost him was about \$248, including a new ax, a cutting torch, acetylene bottle, an oxygen bottle, and some gasoline...”

Within the space of five hours one evening, this man laid waste an entire oil facility; wells, storage tanks and all. After cutting the sucker rod to the wells so they could no longer extract oil, he proceeded to the storage tanks, where the real fireworks would begin.

Simply by leaving a burning torch to cut through one of the tanks, so that the resulting fire would explode the acetylene and oxygen bottles he left behind, the disgruntled oil worker unleashed a hellish firestorm wherein,

“...the damage was almost indescribable. Because the oil field was located in a remote area, the fire-fighting capacity needed to extinguish the flames was not on the scene before the fire spread to the adjacent tanks, In all, three 85,000 barrel and one 100,000 barrel tanks succumbed to the initial fire; *almost 2*

million gallons of crude oil were lost...The wells took weeks to repair.”

One man. One night. One torch. Two million gallons of crude gone. Now multiply that by the thousands of Islamic terrorists who are plotting right now to perform similar acts on much larger scale, and you can begin to understand the potential for massive destruction upon our energy infrastructure.

But how might they accomplish this? No doubt most oil facilities are not as poorly secured as that of the former employer of our disgruntled ex-employee. At the same time, you can bet al Qaeda isn't shopping for their weapons at Wal-Mart, either.

So what weapons do the terrorists have at their disposal, and how might they use them?

Conventional Explosives

Conventional explosives are easily obtained by underworld figures today. Most of us are familiar with them but may not understand how they are used.

Black Powder

The grandfather of all explosives is black powder, invented by the Chinese around the 13th century. Black powder is the mixture of potassium nitrate, sulfur and charcoal. When combined and ignited, it forms a hot gas which builds up instantly inside its container until it literally explodes out. It is

considered the most primitive of explosives and its most common use today is in firecrackers and various rural uses.

Dynamite

Dynamite, ironically enough, was invented by Alfred Nobel, of the Nobel Peace Prize. It was developed by Nobel as a result of his studies of nitroglycerin, which he had hoped to stabilize for productive use. His 19th century patents for dynamite are still in use today.

Dynamite is tied with plastic explosives (“C4”) as the most popular among terrorists. Because of their wide application in industrial uses, they are both readily obtained on the black market. One of its benefits to terrorists is its simplicity of use and easy ability to step up explosive power simply by taping together multiple sticks.

Ammonium Nitrate

Yes, this is farm fertilizer. It also happens to be highly explosive in large quantities when combined with other compounds. Nearly 5,000 lbs. of the stuff packed into a service van was enough to almost level the Alfred P. Murrah Federal Building in Oklahoma City. A primary explosive is usually needed to detonate the ammonium nitrate. This is an easily-obtained explosive; just ask your local hardware store or garden center for a quote!

Liquid Oxygen

This is a powerful, highly explosive industrial compound which, to make matters worse, is present in most oilfield operations for welding and other

tasks. A simple detonating device, when set off at or near significant stores of liquid oxygen, can produce an explosion of cataclysmic proportions.

C4

Composition C4 is what is normally called “plastic explosives.” It is more powerful than dynamite and is infinitely malleable to whatever shape the explosive needs to fit into. It is the explosive of choice for suicide bombers, and is readily available on the black market, or can be produced in home labs.

Mass Weapons

Nuclear

Obviously, a full-blown nuclear detonation would wreak havoc on the world scene such as we have never known. Along with a probable death toll in the hundreds of thousands, if not millions, a nuclear device aimed at an oil-producing region would render that region uninhabitable for years to come, effectively eliminating that oil source from the world market. The question is how likely such an event is, since Islamic terrorism is centered in the Arab world, and nuking an Arab nation would be anathema to most Muslims. We simply cannot know whether some in the terror cells are so desperate to hurt us they are willing to hurt many thousands of their own as well. What we do know is that India, Pakistan, China and North Korea possess nuclear weapons. Iran probably has them. Nuclear material is not only in the responsible hands of NATO states anymore, and we cannot know into whose hands it may have passed, especially since the chaotic dissolution of the Soviet empire.

Dirty Bombs

A dirty bomb is created when radioactive materials are combined with a conventional explosive as a dispersant. At the moment there has been far more talk about dirty bombs than actual experience. No dirty bomb is known to have been detonated, so we cannot be sure exactly what the result would be to an oil facility or port. But most munitions experts agree that such a bomb is possible and that its radioactivity would present unique challenges compared to a mere conventional bomb. One of the causes for concern with dirty bombs, and the reason we hear so much about them, is the ready availability of the radioactive material thought to be available to the determined terror cell. It is commonly thought that spent nuclear fuel rods and other nuclear waste could provide an effective radioactive element in a dirty bomb; but if this has been tested, results of those tests have not been made public. Nuclear waste is far more readily accessible than weapons-grade nuclear material, especially in the former Soviet Union, which voted to accept worldwide nuclear waste for disposal in the southern region of Mayak.

Biological Weapons

It is known that al Qaeda has obtained biological agents for terrorism purposes. Al Qaeda in Albania has obtained anthrax, and botulism toxin from the Czech Republic. The open question is whether al Qaeda would consider biological agents for oil facilities, especially in the Arab world. Biological weapons kill people but do not destroy infrastructure. Arguments can be made on both sides. On the one hand, al Qaeda may be reluctant to kill fellow Arabs without at least the benefit of destroying oil

facilities at the same time. On the other hand, if al Qaeda wished to seize functioning oil operations on a large scale, this is precisely the class of weapons they might pursue.

Biological agents are classified by the Centers for Disease Control and Prevention into three groups, Class A (the highest risk group) Class B (moderate risk) and Class C (least risk). Some of the agents in these groups include:

Class A

- smallpox
- anthrax
- plague
- botulism

Class B

- Q fever
- brucellosis
- alphaviruses
- salmonella
- e-coli

Class C

- encephalitis
- yellow fever
- tuberculosis

The greatest menace are the Class A toxins, which therefore receive the most attention. If al Qaeda plans to use bio agents on a large scale, they will no doubt focus their energies upon obtaining these.

Chemical Weapons

The chief difference between the effect of biological agents and chemical agents is the length of time required for victims to be affected. Biological agents generally require hours or days for their effects to be felt by victims. Chemical weapons, on the other hand, unleash their destructive effects immediately. They include:

- nerve agents
- blood agents
- blister agents
- heavy metals
- pulmonary agents
- incapacitating agents

Once again, the open question still is whether weapons that kill only people and do not destroy infrastructure are more or less preferable to terror cells than ones that do both. We can all hope that we never discover the answer.

Targets

Now that we've reviewed some of the more probable weapons terrorists may use to obstruct oil production, we're ready to ask the question: where are they most likely to use them?

Oil-related targets center around five parts of the oil production machine:

- wells & platforms
- pipelines
- loading terminals and ports
- tanker ships & routes
- refineries

Wells and Platforms

Reservoirs are the natural stores of oil or natural gas which we extract to obtain our energy supplies. While the reservoirs themselves, buried thousands of feet underground, would be very difficult to damage, the equipment we use above-ground to extract it—well heads and offshore platforms—are inviting targets for terrorists seeking to disrupt production.

Well heads are a complex of valves which control the pumping of oil or gas out of the well and into pipelines for eventual storage. They are the most important element in any well and the most vulnerable. Widespread explosion of well heads was a tactic Saddam Hussein's army used before retreating from Kuwait, which crippled that nation's oil production capacity for many months.

Offshore oil and gas platforms are merely giant versions of their usually smaller land-based brethren. These are vulnerable to sea-based attack from explosive-laden boats and even from the skies. Security at these platforms has increased in recent years but security experts admit that their remoteness still invite attack and that heavy damage can still be inflicted upon offshore targets.

Pipelines

We've already discussed the vulnerabilities of the Alaska Pipeline in an earlier section. But the Alaska is but the best-known of many thousands of miles of largely unsecured energy pipeline all over the world.

In the lower 48, major pipelines carry natural gas, the largest of which originate from the Southeast and Gulf of Mexico region, moving northward to upper-Midwest and northeast markets, where natural gas has become increasingly popular as a heating and cooking source.

Indeed, 27 U.S. states are entirely dependant upon natural gas from other states. This has required the construction of 200,000 miles of pipeline across the U.S., operated by 85 different private companies.

These pipelines are among the softest of soft targets in the energy production and transportation system. Much of that 200,000 miles of pipe lies above ground, even major trunk lines which direct most of the gas flow to its appointed destination many miles away. Even underground pipelines must, by law, be clearly marked above-ground in plain view!

North American oil pipeline routes, though not quite as numerous, run along the same geographic contours as natural gas routes, and nearly everything said here about gas pipes can be said about crude oil pipes as well.

It doesn't require the mind of an evil genius to apprehend the danger here. A concerted attack on exposed natural gas trunk lines in the middle of winter could victimize millions of northern U.S. citizens and make their

homes heatless and without the ability to cook food—essentially uninhabitable.

Think broken pipes, flooded homes, and a property insurance crisis. An attack on crude oil pipes destined for heating oil refineries could achieve the same effect.

Could those pipelines be repaired? Of course, eventually, but not before a mighty psychological blow was dealt to a major portion of the U.S. population.

Another opportunity for terrorists is the 10,000 miles of oil pipeline in Saudi Arabia. Most of that stands above ground and some is protected by nothing more than a chain link fence. We will review Saudi Arabia's particular oil security problem more comprehensively later in this article. But suffice to say now that there is no more important oil producer in the world than Saudi Arabia and much of their oil lies exposed to terrorists in above-ground pipelines stretching from inland fields to coastal oil ports.

There are countless other potential oil and natural gas pipeline targets worldwide. Most Caspian Sea oil is piped. Ditto the former Soviet states. Much of it lies above ground and vulnerable to attack. The possibilities are virtually endless.

World terror organizations could do worse than to target this softest of security underbellies and wreak havoc on the world energy system, sending energy prices skyrocketing.

Loading terminals and ports

Oil produced by inland wells are usually piped to terminals at coastal oil ports for loading onto tankers for subsequent shipment to their designated refineries. These terminals are natural bottlenecks in the oil transportation system, and an orchestrated attack on several critical terminals could have a major impact upon the world's ability to move oil to refineries.

By their very nature oil ports provide water access, which gives the determined terror cell ample opportunity to float destruction to the terminal by boat, as happened in the case of the USS Cole and other, less-publicized incidents.

Tanker Ships and Routes

No one oil tanker, should it be incapacitated by a terrorist attack, carries a sufficient oil load to dent the world's oil producing capacity. But the sinking of a tanker or tankers in a crucial choke point like the Bosphorus Straits or the Strait of Hormuz could have a tremendous effect.

The environmental impact would create a crisis all by itself, of course. And the psychological effect would no doubt send energy prices surging. But more important would be the potential for significant oil transport disruption, should a major choke point be rendered impassible or significantly obstructed.

We treated the topic of choke point vulnerability earlier in this article. But we need to always keep in mind that a large percentage of the world's oil must pass through often poorly-guarded, relatively narrow channels in the world's most dangerous regions.

Any violent disruption in this crucial international movement of oil would slingshot energy prices to historic highs for an unknown length of time. Even after those seas lanes are cleared, the oil market would have to build into the energy price structure the possibility of similar, future attacks.

Refineries

Crude oil, in its natural state, is useless for most purposes. It must be refined into products that machines can use, like jet fuel, diesel fuel, heating oil, lubricants, gasoline and petrochemicals.

Most of us have seen oil refineries. They are among the most complex production facilities on earth, and they cost some \$300 million each to build. Most of them possess large storage facilities of highly flammable refined product.

What's worse, the labor pool of your average refinery numbers in the thousands, and includes temporary workers and transients of unknown background. The opportunities for sabotage, or outright destruction, are virtually endless.

While an attack on one refinery would merely produce difficulty to the company involved, an attack on several at once could create a significant impact on the market's ability to obtain necessary refined product.

Having now reviewed the more common tools of destruction available to terrorists, and the more obvious points of vulnerability in our oil production and transportation system, we owe it to ourselves to assess the naked facts of the situation before us.

First, terrorists who seek to harm us economically by disrupting our oil supply probably have access to all of the tools they need to accomplish that task. If they do not now, they have made no secret of their desire to do so.

Consider the words of Osama bin Ladin, speaking about al Qaeda's efforts to acquire WMD in a *Time* magazine interview published over five years ago, in January, 1999:

“Acquiring weapons for the defense of Muslims is a religious duty. If I have indeed acquired these weapons, then I thank Allah for enabling me to do so. And if I seek to acquire these weapons, I am carrying out a duty. It would be a sin for Muslims not to try to possess the weapons that would prevent the infidels from inflicting harm on Muslims.”

Clearly, this is a man, and a movement, prepared to do whatever it takes to harm us any way possible with whatever weapons they can possibly acquire.

Second, our world oil system is so vast, so complex, so multifaceted, and designed and built so long before the advent of worldwide terror, that there is almost no major cog in our system which does not lie vulnerable to catastrophic attack.

So each investor must ask himself: Is my portfolio sufficiently hedged with oil-related investments which will increase in value should any such attack occur? Are you protected against these clear and present dangers?

The Threat to Saudi Arabia (and all of us)

Everyone knows that, with one-quarter of the world's proven oil reserves, Saudi Arabia is the world's largest oil producer, and therefore its most important producer.

For this reason, the Bush family, among other powerful Americans, have sought to foster friendly relations between the United States and the House of Saud—the royal family which rules the Kingdom of Saudi Arabia.

Despite occasional tussles between us over OPEC oil production quotas and other business issues, the relationship between the U.S. and the House of Saud has remained close. Too close, for some.

Al Qaeda, for one. It and other radical Islamic groups have openly stated on radical Web sites and other venues that Saudi Arabia has compromised itself morally by its association with the U.S. and the West.

They believe the House of Saud has become hopelessly degenerate, and experts say plans are now underway to weaken and eventually overthrow the royal family and install an Islamic regime in its place.

Osama bin Laden and other jihad leaders routinely call the Saudi royal family the “puppet of the West” or worse, the “puppet of the Crusaders.” In their world, this is about as close to a sentence of death that one can receive without actually receiving one.

Said Charles W. Freeman, former Ambassador to Saudi Arabia, “Al Qaeda is directed first and foremost at the overthrow of the Saudi monarchy.”

This same script was played out in Iran in the 1970's, remember. Islamic radicals there viewed the Shah of Iran—another protectorate of the U.S.—as a corrupt, worldly infidel who exploited his people and was worthy of, if not execution, at least exile. And that is what they did. The American Embassy hostage crisis of 1979 was a direct result of the radical Islamic overthrow of Iran's government.

Today Iran is ruled by conservative Shia mullahs who use their oil wealth to support terror activities all over the world. This is what Sunni al Qaeda hopes to accomplish in Saudi Arabia.

Only the stakes are much higher in Saudi Arabia. Not only does it possess many times more oil than Iran, it contains the two sites considered most holy to Muslims, Mecca and Medina. Islamists would dearly love to take possession of these sites.

So for jihadists the appeal of Saudi Arabia involves radical religion on a deep level, plus oil wealth of sufficient quantity to exercise virtual control over Western economies.

No doubt the jihadists understand they have a long row to hoe to bring down the house of Saud. This is a family with enormous resources and powerful friends throughout the West. And they will not go down without a fight. Yet their monolith is beginning to reveal cracks.

For instance, during the weekend of May 29-30, 2004, at two oil industry residential compounds in Saudi Arabia's eastern province of Khobar, terrorists went on a shooting rampage and took hostages while holed up in one of the buildings. After a 25-hour standoff with security forces, at least

22 (some reports suggest as many as 50) Western hostages were found dead.

Despite a massive security cordon around the compound, three of the four terrorists escaped, suggesting either that the Saudi security forces were complicit or incompetent. This show of security without actual security has created great concern for U.S. State Department officials, and they have since recommended that Americans leave the country.

The Khobar attack came on the heels of the May 1, 2004 attack in the western Saudi city of Yanbu, where six Westerners were killed in the offices of Houston-based ABB Lummus Global Inc..

Abdul-Aziz al-Miqrin, then al Qaeda leader on the Arab Peninsula, praised the Yanbu attack on an Islamist Web site: “The Yanbu cell which this month carried out the daring and successful operation is one of the best examples. They hit the enemy in an important economic facility which had a big effect on world oil prices which continues to this day.”

On June 4, a statement surfaced on another Islamist Web site that encouraged Muslims to continue to attack oil companies’ office complexes and Western workers’ housing complexes. It read: “The rise in oil prices is in the interests of the Muslim people.”

Now, these were not attacks on Saudi infrastructure. They were attacks on Western workers in Saudi Arabia, designed to scare them and drive them out of Saudi Arabia. And it’s working. Officials have reported an exodus of frightened Western petroworkers escaping mortal danger in Saudi Arabia.

From al Qaeda's point of view, though, how does the departure of a relatively modest number of Western ex-pats from Saudi Arabia further Allah's cause? Why is it worth risking the lives of fellow Muslims?

Will the hasty departure of thousands of skilled Western petroworkers reduce oil production there? No. The Saudi production system is highly automated, and day-to-day operations can be handled by domestic workers.

So why the attacks in Khobar and Yanbu? Housing complexes? Office buildings? What could be the point of that?

The jihadists understand that the Saudis do very much need Western technicians and experts, for one important purpose—to step in and tackle *emergencies*.

Saudis turn to American and German engineers, among other Western experts, to fix the complex technical problems and mechanical breakdowns they do not have the expertise to fix. That's why they pay Western technicians so well to live there. Western workers form the brain trust of Saudi oil operations.

So think about it. The jihadists are concentrating on terrorizing and driving out Western experts from Saudi operations, so they will not be available to help—in *emergencies*? What emergencies? Emergencies created by their own future terror activities upon Saudi oil facilities?

Now we're getting somewhere.

In a recent interview, Dr. Stephen Gale, co-chairman of the Center on Terrorism, Counterterrorism and Homeland Security at the Foreign Policy

Research Institute, said, “The Saudi oil industry does not necessarily need Westerners on a daily basis; it’s when something goes wrong that they need Westerners...It all has to do with dependability and regular supply...The major problem right now is that there isn’t a reserve great enough for our needs if a considerable terrorist attack occurs.”

United Press International has obtained copies of an unusually frank e-mail exchange between executives of Saudi Aramco (the state-owned oil company) pointing out the ineffectiveness of Saudi forces in dealing with mounting threats of Islamist terrorism. “Aramco and Saudi Arabian forces are completely inadequate in terms of training, capability and motivation,” reports one of the executives.

M.J. Gohel and Sajjan M. Gohel, London-based terrorism analysts, offer this candid analysis: “The fact that most of the arrests have resulted in open gun battles suggests that the Saudis are either remarkably inept at security operations or that the terrorists know that security forces are coming.”

Frank Garner, a BBC Security Analyst specializing in the Middle East, was even more blunt: “There is no question in my mind that al-Qaeda has very strong sympathizers in the Saudi interior ministry. The very people who are meant to be cracking down on al-Qaeda-related terrorism are actually sympathetic to it,” he says.

The terrorists’ ultimate goal, a Saudi Aramco executive said, “is to harm the Saudi government by disrupting Saudi oil operations and, thereby,

disrupt the global economy.” An unstable economy, al-Qaeda hopes, will help them eventually overthrow the House of Saud.

Geoff Pyne, an independent London energy analyst, told the BBC, “This is the worst escalation in terrorism in Saudi Arabia we’ve seen. It shows these guys are serious and will attack again. Even if they are not capable of doing serious damage to oil infrastructure, political instability and the threat to the ruling family is of real concern and promises to haunt the oil market for some time to come.”

In an interview with NBC News on June 14, 2004, the always circumspect Secretary of State Colin Powell was uncharacteristically direct about the threat to our Saudi friends: “This is a dangerous time for Saudi Arabia and we’re working with them...to defeat terrorists.” He then warned that the terrorists are “coming after the Saudi royal family and going to great lengths to destabilize the oil-rich country’s infrastructure.”

Is the powerful Saud family really at risk of overthrow? How could that happen to the Middle East’s wealthiest nation?

According to a poll overseen by royal consultant Obaid conducted in late 2003, over half of the Saudi population has a favorable view of Osama bin Laden, and 61 percent have a negative view of the Saudi armed forces.

Talking to *Washington Post* reporters on June 8, 2004, Khalil Khalil, a professor at Imam University in Riyadh, confessed that it is difficult to dissuade Saudis from the appeal of bin Ladin’s extreme brand of Muslim moralism. “That is the question in Saudi Arabia: How do we deal with the people who like bin Laden’s slogans, his ideas? It’s hard.”

Indeed, it has been widely noted that 19 of the 20 September 11th hijackers were Saudis. Clearly, radical elements in that kingdom are taking hold. The Saudi royal family is losing its grip over its own populace, perhaps even its own security forces.

Now, Iran was taken over by a radical Muslim regime, and today it is a steady producer of oil for Western markets. Would a radical Muslim Saudi Arabia take such a pragmatic course? We can't know for certain.

But a real possibility exists that a radical Islamic regime in Saudi Arabia, supported and installed by al Qaeda, would be willing to forego a significant portion of their income through reduced oil production if that meant knocking out the supports from under the Great Satan.

It seems unlikely they would shut down production entirely, since oil is the only source of the Peninsula's income and wealth; even jihadists understand the power of money. After all, they have an entire world to conquer for Allah, and they know that will require a great deal of money, much more than they possess now.

But we can be sure that an al Qaeda-installed regime in what is now the Kingdom of Saudi Arabia would use their newfound control over one-quarter of the world's oil reserves to inflict as much harm as possible to the West through skyrocketing prices while still maintaining the income needed to finance their terror activities worldwide.

So, for al Qaeda, a takeover of Saudi Arabia would be hitting the trifecta: They gain control of the holy sites, they hurt the West by reducing the supply of oil necessary to fuel their energy-hungry economies, and they

gain a phenomenal increase of income through the sale of Saudi oil at massively inflated prices—which they can then use to further finance mass terror upon the U.S. and the West.

Shall we call that a quadfecta?

The Time is Now to Terror-proof Your Portfolio

By now I hope it has become obvious that the threat of major oil terrorism is both very real and very threatening to your portfolio. For that reason I believe every investor needs to take steps now to diversify at least a portion of one's portfolio into oil-related investments, both to hedge the potential for loss in other investments and to possibly profit from higher oil prices already underway.

But which investments? There are several oil investment categories, and we should carefully consider each.

Oil stocks

Generally, we are speaking here of shares of multinational oil companies (like ChevronTexaco and ExxonMobil) which are traded on major exchanges through stockbrokers.

Historically, these stocks have profited from bull markets in the price of oil. Because these companies' cost of exploration is more or less fixed,

they earn more when they receive more for the oil they've drilled. For investors, that's good news.

However, what happens to the price of, say, your BP shares when news hits that a major, very expensive drilling project in the Gulf of Mexico they had hoped would yield millions barrels turns out to be a bust? This is not an unheard-of development. Your shares in BP will suffer. Even though management may have had some advance warning, retail investors like yourself will certainly be the last to know about it.

A recent development with Royal Dutch Shell further illustrates the uncertainties inherent in oil stocks. The Anglo-Dutch company stunned shareholders in January 2004 when it downgraded its estimate of proven reserves 3.9 billion barrels, a 20 percent reduction. Its stock plunged nearly 15% after the news broke. Then, *three more* downgrades followed, for a total reduction in estimated reserves of 23 percent from previously reported levels, depressing its stock price for months.

Shell later dismissed several top executives and delayed release of its annual report for two months, creating more uncertainty for investors. When Shell's annual report finally came out, "rebuilding credibility" and "regaining trust" were said to be the company's new key priorities.

Let's consider another, unfortunately all-too-realistic scenario. Imagine a major terrorist attack is launched against the overseas natural gas plants of a few major oil companies.

This attack will shrink their bottom lines for months, perhaps years to come. Aside from the loss of physical plant, loss of production capacity and loss of the gas itself, management will now be completely preoccupied in a Herculean effort to get their companies back on their feet again; psychologically, financially, and logistically. They will have to break the bank to implement new security measures and build new physical plant, which will require resources that management had hoped to put to more profitable uses.

Their shares, of course, plunge immediately upon release of the news. Other oil company stocks also take a major hit, for fear they might be next to suffer the terrorists' wrath.

At the very same moment, however, the price of oil and gas is skyrocketing with the news, since new energy shortages, and new dangers of overseas energy exploration, have now emerged. Are investors in oil company stocks profiting? Quite the opposite; they are losing their shirts. Why? Because they haven't invested in oil, they've invested in companies who hope to find and market oil, which is not the same thing.

For these reasons and many more, with oil company stocks you are buying the shares of large, diversified, multinational corporations—you are *not buying oil*. The price of oil may or may not result in a concomitant rise in the shares of any given company, as their prospectuses will tell you.

Natural-resource mutual funds

Natural resource mutual funds eliminate one of the larger disadvantages of buying individual oil-related stocks. Like all mutual funds, natural resource funds broadly diversify their holdings among many stocks, so that a crisis in one company does not wipe out your entire investment.

However, while diversification brings a degree of safety, it also inevitably reduces returns. Among any group of companies, within a given window of time some will always underperform others, and those lower earnings will be reflected in the price of their stock.

Almost by design, then, a mutual fund will usually offer somewhat mediocre performance compared to other alternatives, simply because diversification itself almost requires the holding of underperformers. This is the price you pay for the benefit of diversification.

This shortcoming of diversification is magnified with natural-resource funds, because they usually include forestry, mining and other non-oil-related companies in their holdings. Because of the historic volatility of oil shares, most fund managers are uncomfortable weighting their holdings too heavily in oil-related stocks. Thus these funds are not a pure oil play and do not deliver the results of a pure oil play.

Those relatively few funds whose charters do allow them to invest exclusively in oil company stocks are still bedeviled with the same core issue that all investors in oil company stocks face: even though the price of oil is going up, some major players may not, for any number of company-specific reasons, be able to capitalize on it.

Oil futures and options

If you want a thrill ride even greater than high-stakes Vegas gambling, you've found it in the NYMEX pits in New York, where energy futures contracts and options on those contracts are frantically traded.

With futures and options on futures, you receive the benefit of profiting from the rise in the price of oil. When the price rises, the value of the futures contract or "call" option you purchased will go up with it. Since they are both inherently leveraged instruments, your percentage return on capital is excellent. That's the good part.

The downside is, well, the downside. In any market, even a major bull market, there are periods of consolidation, periods of decline. This is actually healthy for markets, because as profits are taken, it tends to cool off speculative fever. Bull markets are not always—or even usually—a straight-to-the moon affair. They usually consist of a long series of higher highs and higher lows.

So what happens if, in the week you decided to jump in and buy a highly leveraged oil futures contract, the market decided to take a well-deserved breather? If the breather is deep enough and long enough, you can not only lose the money you deposited with your commodities broker, you can lose *more* than you put up. You will get a call from a margin clerk demanding more money. There is almost no limit to how much money you can lose in futures if you place your bets at the wrong time.

For this reason, some have fled to the “safety” of options on futures, which also bring excellent returns when you are right and if your timing is perfect. The benefit with options, however, is that, unlike futures, you cannot lose more than you originally invested. But if your timing is off, even by just a few weeks in some cases, you can still lose every penny you invested, because options “expire” at a set date. Indeed, options professionals know that *80% of all options expire worthless*. You know the futures pits are another world of speculation when an 80% probability of losing everything you invested is supposed to be a comforting thought.

Oil & gas partnerships (Part 1)

The last category of oil investment is exactly that—investing in oil, through an oil & gas partnership. U.S. partnerships explore for oil & gas in proven areas of the country, with the anticipation of discovering “black gold” and returning a long-term flow of income to its partners. *Oil & gas partnerships are the only means most investors have to personally own and sell oil*. None of the other oil investment alternatives we’ve discussed invest directly in the commodity *itself*. And it is oil, as we’ve seen, whose price promises to continue to increase over the long term.

As limited partners in a drilling partnership, investors own a percentage of all the oil and natural gas extracted from the wells they helped pay for. If drilling is successful, the rising price of oil and gas go directly to their bottom line returns, since the price received for their oil will move more-or-less in lock-step with oil’s worldwide price.

There is, of course, no guarantee that oil and/or gas will be struck by the partnership. That is the risk the partners take. To help compensate for that risk, the IRS offers oil & gas partners generous tax deductions which can result in a significant reduction in federal taxes. (We discuss this in detail in Part Two of this discussion.)

No other energy-related investment we've discussed is subsidized by the federal government this way. Today, more than ever, the U.S. has an interest in encouraging the domestic production of energy and reducing our dependence upon foreign oil. That's why U.S. taxpayers receive almost unmatched tax incentives to encourage them to join together to discover oil and gas. Most importantly, though, the potential exists to earn a significant long-term flow of income from any successful drilling project.

In Part Two of this topic, we demonstrate in detail the uniquely advantageous economics of oil and gas partnerships, and why more and more investors are joining together to claim their piece of America's ever-more-valuable energy resources.

We hope you have profited from this discussion of Oil Terrorism and its implications for investors, as much as we have enjoyed sharing it with you. We invite you to contact us at the number below any business day with questions you may have about Oil Terrorism, oil investments, or the world oil situation generally.

And, as always, we at Mammoth Resource Partners wish you every success as you navigate your own portfolio through these challenging, yet potentially profitable, years ahead.