IX. Phase Six: Expansion of the tanker war in the Gulf to include Western navies, while the land and air war of attrition continues: MARCH 1987 to DECEMBER 1987

9.0 The Increasing Importance of the War at Sea

Important as the fighting around Basra was in shaping the future of the land war, developments in the Gulf were leading to a new major new phase of the war. January involved more Iraqi and Iranian attacks on Gulf targets than any previous month in the conflict. Iraq struck at Kharg Island, Iran's transloading facilities at Sirri, and Iran's shuttle tankers and oil facilities. These strikes did not make major cuts in Iran's oil exports, but they did force Iran sent another purchasing mission to Greece, London, and Norway to buy 15 more tankers.

Iraqi aircraft continued to strike at tankers and the Iranian oil fields. They hit Iran's Cyrus and Norouz fields in late March and April, as well as the Ardeshir oil field, and they continued attacks on Iranian shipping to Sirri. Nevertheless, Iraq still did not score the kind of successes it had scored against Kharg and Iraq's tanker shuttle the previous year. Iran's exports remained relatively high.

Figure 9.1

Patterns in Iraqi and Iranian Attacks on Gulf Shipping: 1984 to June 30, 1987

Month	Iraqi Attacks	Iranian Attacks	Total Attacks	Deaths	Ship Loss
1984	36	18	54	49	32
1985	33	14	47	16	16
1986					
October		1	3	4	- -
November	9	2	11	-	-
December	5	0	5	-	-
Total 1986	66	41	107	88	30
1987					
January		7	6	13	- -
February	6	3	9	-	-
March	3	3	6	-	-
April	2	3	5	-	-
January-June	29	29	58	10	4

Source: Adapted from the Economist, April 25, 1987, p. 34; and Lloyd's Maritime Information Service.

9.1 Iran seeks New Ways To Fight The Tanker War

It was Iran, not Iraq, that was making the most important changes in the "tanker war". Iraq's attacks on the shipping in Iranian waters led Iran to go beyond harassing the shipping moving to and from such pro-Iraqi states as Saudi Arabia and Kuwait. Iran shifted to attacks of its own.

In launching these attacks, Iran faced a number of serious problems. Iran could not afford commit its limited remaining air power. The Iranian Air Force only had 63 to 90 operational fighters, with some 20-35 F-4Es, 30-45 F-5Es, and 7-12 F-14s. Most of these could only fly limited numbers of sorties, and most lacked fully functional avionics. While Iran's F-4E forces has recently improved in readiness because of deliveries of spare parts from various unidentified sources, none of its F-14As seemed to be able to use their Phoenix missiles, and only a limited number seem to have had operational radars. While reports kept appearing that Iran had up to 50 PRC and North Korean copies of the MiG-19 and MiG-21 on order, none appeared in combat.

Iranian faced equally serious problems in using most of its regular Navy. It had lost significant amounts of its trained maintenance personnel in the various purges and upheavals following the revolution. It had suffered serious damage to at least two of its destroyers, two Saam-class frigates, and 1 US PF-103 corvette. It had lost two minesweepers. It had lost two Kaman-class patrol boats and two more were seriously damaged.

Iran not only could not buy new combat ships to replace these losses, and it was experiencing serious difficulties in maintaining the sensors and weapons systems on its remaining ships, and had serious shortages of both anti-ship and anti-air missiles. Most of Iran's key radar and electronic systems were no longer operational. This included the Contraves Sea Hunter, SPG-34, and Mark 37, 51, and 61 fire control systems; the WM-28 tactical and fire control radars; the Plessey AWS 1 and SPS-6 search radars, and SPS-37 air surveillance radars on its larger ships. Iran lacked usable stocks of such key weapons as RIM-66 Standard (anti-aircraft), Sea Cat (anti-aircraft), and RGM-84 Harpoon (anti-ship). Further, most of missiles delivered before the fall of the Shah now were far older than their maximum reliable storage life, and Iran had no access to Western parts or services.

Iran, however, was still able to operate many of its British-made Sa'am class fast attack craft. Further, the Iranian Navy retained up to seven AB-212 helicopters, each with two Sea Killer Mk II or AS-12s. Both systems could be used for sudden attacks against tankers or U.S. warships. The Navy also had two PF-3 Orion maritime patrol aircraft. These lacked operational radars and other sensors, but could be used for visual reconnaissance missions. Further, Iran had seven Sikorsky SH-3D ASW helicopters, and two RH-53D minelaying helicopters. It had Hercules C-130 and four F-27 Mark 400 Fokker Friendship aircraft for minelaying and patrol missions.

Iran now began to use these remaining regular Navy forces to strike at the cargo

ships and tankers in the Gulf, and often struck at night.

In most cases, the missile Iran used seems to have been the Italian-made Sea Killer. The Sea Killer first became operational in 1984, and was sold to Iran before the fall of the Shah. It is a relatively light missile, about 1.01 meters long and 20.6 cm in diameter. It weighs 300 kilograms, and has a small 70 kilogram high explosive semi-armor piercing warhead. It has a maximum air to surface range of 25 kilometers and a minimum range of six kilometers. It is a "sea skimmer" which flies at a height of three to four meters. The missile normally rides a radar beam to the target, but it can be radio directed in a heavy jamming environment.

Few of the cargo ships that Iran and Iraq hit during this period were sunk or seriously damaged, but 16 ships were damaged between January 1 and early February -- raising the total hit since the war began to 284.

On one at least one occasion in early March, the Sea Killer also showed that it could do catastrophic damage. It hit the small 998 ton tanker Sedra in a vulnerable area and turned the ship into an inferno, killing at least seven crewmen.

As a result, both Soviet and Western naval forces began to take action. The USSR reacted in mid-January by sending a Krivak-class missile frigate to escort four Soviet ships carrying arms to Iraq from the Straits to Kuwait. This was the second Soviet warship to enter the Gulf since 1982 -- the first had been sent when Iran detained two Soviet ships in September, 1986 -- and was clearly intended as a signal to Iran, Iraq, and the southern Gulf states that the USSR would protect its ships. .

The U.S. increased its force in the Indian Ocean to a full carrier group -- including the 85,000 ton carrier Kitty Hawk and eleven escort ships. The U.S. deployed the carrier task force just east of Masirah, off the coast of Oman. Britain and France increased their ship activity, and the British Armilla or Indian Ocean squadron began to spend roughly 50% of its time in the Gulf.

9.2 Iran Deploys The Silkworm

The movement of the U.S. carrier group to the Gulf of Oman was in reaction to more than Iranian use of the Sea Killer. The U.S. had found that Iran was deploying a much heavier land-based anti-ship missile near the Straits of Hormuz, and detected at least one test firing of the missile at Qeshim Island near the Straits of Hormuz in late February.

This new system was part of the family of Chinese missile systems shown in Figure 9.2. It was a Chinese version of the Soviet CSS-N-2 or Styx anti-ship missile, which the Chinese had begun to deliver to Iran in the summer of 1986. The PRC designates this system as the Hai Ying HY-2, and it is nicknamed the "Silkworm" It can be deployed in both mobile and fixed sites, and the Iranians chose to use a mix of mobile equipment and fixed concrete bunkers and launch rails. In this form of deployment, the launch sites are pre-surveyed to provide precise range and sensor locations, and the

missile moves on a wheeled or tracked launcher rail. This allows the missiles and the launch vehicles and support vans to be kept in dispersed locations, where they are safer from attack, and to moved to the site when needed.

Each fire unit has two of four missile launchers.

Figure 9.2
Chinese Missile Systems Affecting the Iran-Iraq War and Arms Exports to the Third World - Part One

Model	Speed	Launch Platform	Description
Surface-to Ship			
FL-1	0.9	Ship	Fei Lung or Flying Dragon. An upgraded Soviet SS-N-2. Radio-altimeter monopulse active seeker. Improved ECM seeker. Sea Skimmer with 30 meter altitude for cruise and 8 meter altitude for terminal attack. Range is 40 kilometers. Has 500 kg HE warhead. Weight 2.3 metric tons. CATIC.
FL-7/			
C-801	1.4	Ship	Surface launch model of C-801. Compatible with FL-1 fire control system (Square Tie). Minimum software changes. Counter-ECM passive infrared guidance. Sea Skimmer with 50-100 meter altitude for cruise and 8 meter altitude for terminal attack. Range is 32 kilometers. Has 500 kg HE warhead. Weight 1.8 metric tons. CPMEIC.
HY-2A/			
Silkworm	0.9	Land	Hai Ying or Sea Eagle. Mobile improved version of HY-2 shore to ship missile. Monopulse anti-jamming and passive IR guidance. Range is 20-95 kilometers. Warhead is 500 kilograms. Hit probability greater than 70%. CATIC.
HY-2G	0.9	Land	Variant of HY-2A with active seeker. Sea skimmer with altitude options of 30, 50, or 100 meter flight. CATIC.
HY-4	0.85	Land	Coastal defense missile. Improved variant of the HY-2G. Counter-ECM and passive IR guidance. Range increased to 35-135 kilometers. Weight 2 metric tons with strap-on booster. Cruise altitude of 200-700 meters. CPMEIC
SY-1	0.85	Land	Shui Yang or Water Eagle. Sea skimmer missile. Seems to have some technology similar to C-801. Similar in look to HY-1, but mounted on T-63 tank chassis. Uses active seeker guidance. CATIC. Is also submarine-launched variant called SY-2.
YJ-6	1.2	Ship	Has appearance and mission similar to Exocet and Harpoon. Uses counter-ECM and passive IR guidance. Semi-armor piercing warhead with two-stage solid fuel propulsion. CPMIEC.

Figure 9.2

Chinese Missile Systems Affecting the Iran-Iraq War and Arms Exports to the Third World - Part Two

Model	Speed	Launch Platform	Description

Air to Surface Missiles

C-601 0.9 Aircraft May derive in part from Kennel or Styx. Uses monopulse, countermeasure resistant guidance, with terminal seeker. Range up to 160 kilometers from altitude of 9,000 meters. Launch weight 2.44 metric tons. CPMIEC.

HY-4 0.85 Aircraft Improved HY-2G. Counter-ECM, passive IR seeker. Range up to 135 kilometers. Launch weight 1.74 metric tons. CPMIEC.

YJ-1 1.4 Aircraft Ying Ji or Hawk Attitude/Strike Eagle. Air launched version of C-801. Counter-ECM, passive IR seeker. Attack altitude 5-7 meters. Weight 815 kilograms. CPMIEC.

Surface-to Surface Missiles

C-101 1+ Land A land mobile cruise missile with counter-ECM and passive IR guidance. It is 5.6 meters long, 0.54 meters in diameter, and has 2 ramjet engines and 2 solid fuel boosters. Its range is 50 kilometers. Its cruise altitude is 50-100 meters.

HY-3 1+ Land Longer range version of the C-101. It has counter-ECM and passive infrared guidance. It is 9 meters long, 0.76 meters in diameter, and has 2 ramjet engines and 4 solid fuel boosters.

M-Series - Land Battlefield support missile. Preprogrammed inertial guidance. Solid fuel. Range up to 600 kilometers. Transported and launched from a cross-country vehicle. Preparation time of less than 30 minutes. Reportedly non-nuclear. CPMIEC.

DF-3 - Land IRBM designed in 1970. Inertial guidance. Range up to 2,700 kilometers. Sixty deployed. Normally has 2 megaton warhead.

Manufacturer: CATIC=Aero-Technology Import/Export Corporation; CPMIEC=China Precision Machinery Import/Export Corporation; NORINCO=North China Industry Corporation.

Source: Adapted from Bradley Hahn, "Chinese Tactical Defense Missiles," Journal of Defense and Diplomacy, March, 1988, pp. 26-29; IISS, Military Balance, 1987-1988, London, IISS, 1987; Directory of Chinese Military Equipment, 1987-1988, Worcester, PA., HAI, 1987.

The Silkworm missile is made by the China Precision Machinery for Import and Export Corporation (CPMIEC). It is not particularly sophisticated by Western standards and has been on Chinese ships for twenty years. It has only been exported, however, since 1984. It is 6.5 meters long, and has a diameter of 75 centimeters. It weighs 2,500-3,000 kilograms and has a 500 kilogram or 1,100 pound warhead. This warhead weight is about seven times the weight of that on the Sea Killer and three times the weight of that on the Exocet. It has a maximum range of 95 kilometers, and comes with three different guidance systems: the HY-2 homes in on target by using the tracking radar at the launch

site, the HY-2A homes in using passive IR to defeat electronic counter measures, and the HY-2G uses terminal radar homing plus altimeter.

The Silkworm is most effective at ranges under 40 kilometers, but it has an effective range of 70-80 kilometers if a ship or aircraft can designate the target and allow the Silkworm to reach the point where its on-board guidance can home in on the target. China sold Iran such radar designation capability to use on some of its ships and aircraft.

The missile reaches most targets within its range within six minutes of firing. The missile normally climbs to an altitude of 145 meters before dropping to a final approach altitude of about 30 meters. The primary warning a target receives is from radar contact at launch before the missile drops to near sea level and when the missile is completing its final approach and no longer is masked by the curve of the earth. This is at a range of 16-32 kilometers in the case of active radar homing or 10 kilometers in the case of IR -- since the IR seeker remains passive until this point. It is large enough to be detected and killed by some surface-to-air missiles, but these require good kill capability against very low altitude attacks.

While the resulting mix of anti-ship capabilities scarcely gave Iran a powerful strike force by Western standards, the combination of the Sea Killer and Silkworm missiles did give Iran a significant capability to strike at tankers and cargo vessels in the Gulf, a growing capability to sink ships rather than damage them.

This rise in the Iranian missile threat to Gulf shipping created a very different problem for the West from the one created by Iran's naval and air strikes on tankers in Iranian waters. It was arming to strike at third country ships moving through international waters to ports outside the war zone. This meant Iran planned to threaten or attack international shipping to the Southern Gulf states.

The problem American planners faced was not the current level of the tanker war as much as the broader trends and risks that affected the security of Western oil supplies. Even in a period of comparative "oil glut", the West. faced the problem that the Gulf region provided 63% of the free world's oil reserves, supplied over 25% of all oil moving in world trade, 30% of the oil used by OECD European states, and 60% of Japan's oil. Even with the expansion of pipelines through Turkey and Saudi Arabia, 17% of the West's oil still moved through the Straits of Hormuz.

The mix of potential threats to Kuwait was particularly important. Kuwait had nearly as many proven oil reserves as Iraq and Iran combined. It had more than 100 billion barrels or oil reserves, or 13% of the world's proven oil reserves versus roughly 3.9% for the U.S. It had overseas investments of over $100 billion (80% government and 20% private).

9.3 Kuwait Seeks to Reflag Its Tankers

On January 13, 1987, Kuwait asked the U.S. Embassy if its tankers could receive U.S. Navy protection if they were "reflagged" to fly the U.S. flag, and informed the U.S. it had an offer to provide such protection from the USSR. In making these initiatives to the U.S., Kuwait was more concerned with the need to find outside protection against Iranian land and air threats and attacks as it was with attacks on Kuwaiti flag ships.

Although the "tanker war" was serious -- and ships moving to Kuwait had been the target of 15 of the 19 attacks Iran had conducted on Gulf shipping after September 15, 1986 -- the tanker war still affected only a small portion of the 168-196 tankers a month that moved through the Gulf. Tanker movements to Kuwait averaged at least one ship per day, and often reached a total of as many as 70-80 tankers per month. By early 1987, only seven Kuwaiti-flag ships had been hit out of some 284 attacks on shipping since the beginning of the tanker war. No Kuwait flag ship had been included in any of the 34 vessels Iran had attacked between Christmas day on 1985, and September 17, 1986.

Kuwait was coming under a steadily growing series of Iranian political attacks for allowing Iraq to use its port of Shuaiba to ship Soviet and other arms and war material. Kuwait had also increased the risk of Iranian attacks on its own ships or other ships moving to Kuwait by allowing Iraqi planes to overfly Kuwait so that they could fly down the southern coast of the Gulf and attack Iranian shipping without warning. It also seems to have allowed the Iraqi Navy to send small ships down the Sebiyeh waterway between Kuwait and Bubiyan Island, and may have allowed Iraqi helicopters to stage out of Kuwaiti territory.

Four factors catalyzed the Reagan Administration into supporting the reflagging plan. The first was the U.S. discovery that the Soviet Union had agreed to a similar reflagging request, and that Kuwait was now proposing that the U.S. and USSR share protection of eleven of its tankers -- with the USSR protecting five and the U.S. protecting six. The second was the need to reassert U.S. influence in the region after the U.S. the fall of the Shah, continuing problems in selling arms to friendly Gulf states, the impact of the U.S. withdrawal from Lebanon, and the Iran-Contra arms scandal. The third factor was the fact Iran had deployed the Silkworm missile, and was building up a new branch of the Revolutionary Guards for naval operations. Finally, the Reagan Administration concluded that Iran had not attacked the flag carriers of the major powers earlier in the war, was unlikely to do so now, and lacked the conventional naval and air strength to challenge the U.S. Navy .

In reaching this decision, the Reagan Administration made a error that provides an important lesson to any defense planner. It allowed its interest in supporting a given policy to make it focus on enemy intentions as was perceived at the policy level to the exclusion of enemy capabilities and a full analysis of enemy intentions at the expert level.

The Administration did not go through the full inter-Agency process in shaping its decision to reflag the Kuwaiti tankers. In fact, the Chairman of the Joint Chiefs, the Secretary of the Navy, and most of the Reagan Administration's leading officials on Gulf affairs were not consulted in detail.

The Department of Defense did prepare a contingency plan to strike at the Silkworm missiles, but it did not prepare plans to deploy a force that could deal with all of the threats the U.S. would face in conducting a convoy operation that had to extend from the Gulf of Oman to ports in Kuwait.

Because the Reagan Administration underestimated the risks involved, it also did

not pay proper attention to the probable reaction of the U.S. Congress if the reflagging effort should lead to fighting, and many of the risks inherent in a rising Iranian threat to the southern Gulf states. It saw the Soviet problem almost solely in terms of the risk the Soviets might gain influence with the GCC states, and not in terms of the risk that it might force Iran to improve its relations with the USSR. It ignored Iraq's incentive to try to exploit the reflagging to bring the U.S. into the war against Iran, and it largely ignored Western Europe in its desire to reassert U.S. leadership and demonstrate the importance of a U.S. military presence to the Gulf states.

On March 7, the U.S. informed Kuwait that it would protect all eleven of tankers Kuwait had originally discussed with the U.S., and Kuwait tentatively accepted this offer on March 10. Kuwait signed a formal reflagging agreement with the U.S. on April 2, 1987. Kuwait still, however, was careful to avoid giving its arrangements with the U.S. any unnecessary publicity. It continued to emphasize the fact it had chartered Soviet tankers.

This gave the entire tanker escort activity an "international character", and further defused some of Kuwait's domestic and regional problems in accepting U.S. support.

Like the U.S., Kuwait seems to have underestimated the risks involved in the reflagging effort. It almost certainly felt that Iran would not challenge a combination of U.S. and Soviet guarantees, and that it now have an implied U.S. and Soviet guarantee to defend it from Iranian attacks or invasion. It does not seem to have considered the risk that Iran would try to reestablish some kind of relationship with the USSR, or that it would challenge the U.S. in much the same way it did during the U.S. hostage crisis and intervention in Lebanon.

During the rest of February and through most of March, Iran continued to pound at Basra. Iran's leaders continued to talk about final offensives, but Iranian forces did nothing more than launch limited attacks in the North and conduct a battle of attrition in the south. Iraq, in turn, continued to fight a relatively static defense on the ground, and concentrated on using its air power to pound away at Iran's ground forces, oil targets, and cities.

Iraq kept up its air attacks on the thirteen major cities in Western Iran throughout early and mid February. Iraqi aircraft also continued to strike at Tehran, something they had not done so consistently since the "war of the cites" in 1985 -- when Iraq claimed to have bombed Tehran 30 times.

Iran's Air Force could do little to respond. In fact, a defecting Iranian Air Force Officer claimed that only one-third of Iran's remaining 65 F-4s were now really operational and less than a third of its 1,000 helicopter gunships.

The most Iran could do was to launch a few more Scud missiles at Baghdad, and make futile calls for Iraq's population to evacuate Baghdad. The resulting size of the casualties on each side is indicated by the fact that Iran claimed that Iraq's air attacks had resulted in 3,000 killed and 9,000 wounded, and that 35 Iranian towns and cites had been hit since

January 9th. Iraq reported eleven missile attacks on Baghdad since January 9th, plus the Iranian shelling of several towns, but indicated it had suffered only 300 killed and slightly more than 1,000 wounded.

Iran's ground based air defenses also remained limited. U.S. and Israeli shipments of Hawk parts and missiles probably did reduce Iraqi ability to attack Kharg, Sirri, and Larak, and the otherwise vulnerable bridges and supply lines to the rear of Faw and the Iranian positions near Basra. Nevertheless, Iran also have scored as many kills with the far less capable variants of the SA-2 it had received from the PRC, and with the short range laser guided Robot-70 surface-to-air missiles it had bought illegally from Bofors in Sweden.

Many of Iran's SAM sites and radar stations were no longer functioning -- if, indeed, they had been functioning at the start of the year.

Nevertheless, the "war of the cities" came to a temporary end on February 18, 1987 -- although both sides claimed violations of the ceasefire as early as February 22nd -- and the halt in such attacks continued on into April. The reasons for this halt are somewhat unclear. Iraq claimed at the time that it declared a halt on its anti-city attacks because Rajavi had asked Saddam Hussein to halt attacks which were hurting Iran's "struggling masses" rather than its leadership. The real reason, however, was probably a combination of the fact the Khomeini regime agreed to call off its artillery attacks on Basra, and Iraq's cumulative air losses.

Iraq not only halted its attacks on Iranian cities after February 18, it reduced its air support of its ground forces. Even admitted Iraqi losses now amounted to at least 5% of Iraq's operational force; if one considers Iranian claims, they were as much as 10-15%. More importantly, most of these losses had cost Iraq part of its small cadre of high quality pilots. While the USSR agreed to rapidly replace the lost aircraft, the loss of experienced pilots was becoming critical. Even if one includes a limited number of foreign mercenaries, Iraq only had high quality pilots for 15-25% of its aircraft, and only a smaller number were top quality by Western standards.

Iraq could not afford to keep committing irreplaceable pilots, and aircraft which cost $15-$25 million each, to close support, interdiction, or low pay off strikes on oil facilities if these meant substantial losses. The average value of the target being destroyed was generally far less than cost of the plane, and the tactical and strategic impact of any damage it did to Iran was usually limited. This meant Iraq was forced to turn to targets where most of its planes could survive, or where it felt air strikes were desperately needed or could have major strategic or political impact.

9.4 The Battle For Influence in the Gulf

Iran found other ways to strike against Iraq. It increased its pressure on Kuwait to reduce its support of Iran, and on Iraq to reduce its attacks on Iranian oil facilities. Pro-Iranian Shi'ites carried out a new series of protests in April. These reached the point where it was clear that Kuwait faced problems with its own Shi'ite citizens and was

forced to stop attributing all such incidents to foreign elements. The government admitted that some 25 native Shi'ites were under arrest for terrorism. It also removed at least one Shi'ite Minister from his position and some 200 Shi'ites from sensitive jobs in the oil industry.

The risks Kuwait faced in terms of sabotage were made even more clear on May 22, when a major fire was set at a propane storage tank at the Ahmadi refinery, near the city of Fahaheel The fire burned for three days, and was the second attempt to burn the refinery in two years, and the fire was designed to explode six 450,000 barrel propane and butane tanks, and threatened to spread to the entire oil installation, and even part of Fahaheel city.

Most importantly, Iran completed the siting of two to four full batteries of Silkworm missiles near the Straits of Hormuz. By mid-April, 1987, it had at least 12 Silkworm launchers and 20 missiles on line, with up to 28 more in reserve or on order. The only problem delaying active deployment of the missiles seemed to be a shortage of critical parts, and even this was controversial.

One of the batteries detected early in the year was relocated from the Island of Queshim (Onqeshim), located on the edge of the Straits to the Iranian naval base at Bandar Abbas, on the northwest shore of the Straits of Hormuz to provide surface-to-air missile protection. The other battery was located at Kuhestak to the east. While the missiles could just barely cover the 64 kilometer-wide Straits with reasonable accuracy and with their normal payload, they could reach up to 75 kilometers with less accuracy and a lower payload.

Iran began to build another battery site on the southern tip of the Faw Peninsula. This site gave Iran the ability to site the missile within firing range of Kuwait city and its port, and gave Iran increasing ability to put pressure on Kuwait and its tanker shuttle.

9.5 Low Level Land Warfare in Mid-1987

In spite of its reversals during the Karbala offensives, Iran launched still another offensive in the North in mid-April, called Karbala 10. Shortly before this offensive, Iran supported several raids by Kurdish supporters of the Barzanis. It claimed on April 18, that the Pesh Merga and Iranian troops had killed 1,500 Iraqis, overrun 20 Iraqi-held villages, and taken 10 key ridges in Sulaimaniya Province.

The Karbala 10 offensive took the form of a three pronged assault. It was conducted in the mountainous area southwest of Baneh and northeast of Sulaimaniya, and seems to have been directed at taking the roads and heights between Mawat and Chwarta. While Mawat is nothing but a small village of mud huts, it is one of the main Iraqi defense points near the border and is ringed with bunkers and minefields. Chwarta is a key population center on the the road to Sulaimaniya.

The offensive began on April 23, 1987, which was a Thursday night and a time when Iraqi troops tended to be least alert. By the end of April, Iran claimed to have taken 11

Iraqi villages and 310 square kilometers, and to have killed 4,000 Iraqis, and to have captured 350, including an Iraqi brigade commander. Iraq claimed to have repelled an assault by two Iranian regiments and to have caused 1,500 Iranian casualties and to have destroyed 66 vehicles.

By the end of May, however, it was clear that Iran had not taken Mawat, Chwarta, or any other key strategic position, although the Iranians did occupy the heights around Mount Sargehelou, above Mawat. This still put Iran about 48 kilometers from Sulaimaniya and about 100 kilometers from Kirkuk. The Iranian positions were in 8,000 foot tall mountains, many of which were still snow capped at the end of May, and did not represent a significant springboard for new attacks or strategic success.

Iran attacked in an area where months of similar victories would not give it any real strategic advantage. In fact, the terrain was so difficult that it led to speculation that the government was simply keeping up the offensives in the north to show the Iranian people a continued series of "victories", or even that Rafsanjani was keeping up the offensives to show his dedication to the war and maintain political leverage over Montazari.

This may have been the case, but the original thrust of the attack was in an area where Iran could continue to exploit Kurdish hostility to Iraq, force Iraq to keep troops in the area, win small victories without losing more casualties than Iraq, and slowly wear down Iraqi resistance. Most probably, the attack simply failed to achieved its purpose.

9.6 The Attack on the USS Stark

The most important developments during the rest of the spring of 1987 took place in the Gulf. Iran's efforts to deprive Iraq of its ability to dominate the "tanker war", and the Kuwaiti reflagging effort, led to the growing internationalization of the naval conflict in the Gulf. This began with with a confrontation between Iran and the USSR, but it soon became dominated by a far more serious process of confrontation between Iran and the U.S.

During April, 1987, Iran began to respond more actively to the Soviet agreement to escort the three Soviet tankers which Kuwait had leased from the USSR, and made part of its tanker shuttle. Iran warned on April 15, that Soviet leasing of oil tankers to Kuwait could create, "a very dangerous situation".

Four days later, on April 19th, Iran responded to a visit to Kuwait by Soviet Deputy Foreign Minister, Vladimir Petrovsky, by warning the USSR that the Gulf could become a "second Afghanistan".

Rafsanjani issued a similar warning to the U.S. on April 20.

The next day, U.S. intelligence experts announced that Iran had deployed its Silkworm missiles on Faw.

This time, however, Iran's threats did not depend on missiles, but rather on the new naval capabilities Iran had developed for its Revolutionary Guards. As has been touched upon earlier, Iran faced major challenges in competing with Iraq in conducting a "tanker war". Unlike Iraq, it had to attack shipping to third countries, since there were no Iraqi ships in the Gulf, and no ships moving to Iraqi ports. This, in turn, meant it had to risk reprisals from both the Southern Gulf and West navies.

The risk from Southern Gulf forces was relatively minor. Iran had suffered some major naval losses, but it was still able to deal with the Southern Gulf navies. The UK-built air defense destroyer Artemiz, and the U.S. built destroyers Babr and Palang, with FRAM II conversions and improved air defenses, were largely inoperable. Iran did, however, have four British-built frigates with Sea Killer anti-ship missiles: Saam, Zamm, Rostam, and Faramarz. At least four of its original eight Combattante II-class patrol boats were still operational, and were equipped with with 76mm and 40mm guns and Harpoon launchers, although supplies of the Harpoon missiles were evidently very limited.

These 154 foot ships could reach speeds of up to 33.7 knots, and had a range of 700 to 2,000 miles, depending upon speed.

Iran also had a wide mix of smaller ships. One 320 ton minesweeper survived, the Shahrokh, but this was deployed in the Caspian. There were four LSTs: The Hengam, Larak, Lavan, and Tonb. The latter two had been delivered in 1974 by Britain, under the pretext they were hospital ships. They carried Agusta-Bell AB-212 helicopters with AS-12 missiles, smaller landing craft, TACAN beacons, and minelaying equipment. Three more 67.5 meter, 2,024 ton. landing ships had just entered service, and four 654 meter Dutch-built freight barges were being used as landing ship tankers.

Two small FRG-built 5,000 ton replenishment tankers -- the Bandar Abbas and Booshehr -- were modified in 1984 to carry 40mm guns and a telescopic helicopter hanger. The Navy still had some BH-7 and SRN-6 hovercraft operational, and up to 150 patrol craft -- although many of the latter might have been sunk, damaged, or turned over to the naval Guards. Iran had the repair ship Chah Bahar and floating docks "400" (300 ton lift) and Dolphin (28,000 tons lift), which it had bought from the FRG in 1985.

This regular navy surface strength was sufficient to keep Iraq from trying to "break out" of its ports, and to challenge the navies in the Southern Gulf, but it scarcely allowed Iran to challenge the West. Iran had to find new solutions to using naval power if it was still to play a major role in the tanker war.

Iran's first solution to these problems was to use its support craft to lay mines as an indirect method of combat. The Iranian Navy had stocks of U.S. Mk. 65 and Soviet AMD 500, AMAG-1, and KRAB anti-ship mines, and PRC and North Korean-made versions of Soviet contact mines.

Iran was beginning to manufacture non-magnetic acoustic free-floating and remote controlled mines. While Iran only had one surviving minesweeper deployed in the

Caspian, it could lay such mines with virtually any small ship, including dhows and small cargo vessels.

Iran's second solution was to create a new naval branch of the Revolutionary Guards under the command of Mohsen Rezai. Iran had begun serious efforts to create such a force over two years earlier. By late 1986, the naval Guards had roughly 20,000 men, and were larger than Iran's regular navy.

The naval elements of the Guard were equipped with a wide mix of small craft, including Swedish-built fast interceptor craft, and numerous Zodiak rubber dinghies. Many of these boats were very difficult to detect by radar, and could carry out high speed rocket, machine gun, small arms, and 107 mm recoilless rifle attacks. The Swedish fast interceptor craft were built by Boghammer, and were 42 feet long. They were purchased in 1985, and could carry a six man crew and up to 1,000 pounds of weapons for ranges of about 500 nautical miles. They could cruise at 46 knots, and could reach speeds up to 69 knots. The Guards were reported to have ordered at least 40 to 50 and to have deployed at least 29.

The naval elements of the Guards were also given dhows equipped with cranes. These boats were hard to identify from the small commercial ships in the area, and could carry up to 350 tons worth of mines. They had at least some landing craft and small craft borrowed from the Navy, and a North Korean miniature submarine of 6-9 meter length.

The naval Guards forces were based at a number of offshore islands and oil platforms, with key concentrations at Al Farisiyah, Sirri, Halu Island, Abu Musa, the Greater and Lesser Tunbs. and Larak.

Guard units publicly trained in "suicide boats" designed to ram ships with high explosive, and claimed to have other boats it could fill with fast drying concrete and use to block key ports or shipping channels. They also made it clear they had extensive stocks of Scuba equipment, and an underwater combat center at Bandar Abbas.

The Guards also had air and missile capabilities. They were given the 35 to 46 Pilatus PC-7 light training/attack aircraft that Iran had bought from Switzerland, and were training with North Korean instructors. They were rumored to be receiving Chinese supplied F-6 and F-7 fighters and to be seeking more advanced fighters from the Soviet bloc. They had a facility at Nowshahr Naval Academy on the Caspian Sea, where some Guards were reported to have had training in suicide attacks using light aircraft as well as small craft. Finally, the Guards had Iran's new HY-2 Silkworm anti-ship missiles.

During the period after the announcement of the U.S. convoy effort, the Revolutionary Guards units continued work on eight hardened sites for the 35-50 Silkworm missiles Iran then had in inventory, and created hardened concrete bunkers for the radar sites for the missiles, which were located on Quesham Island and the mainland. They reinforced their naval forces on Farsi Island, Abu Musa and the Greater (Sughra) and Lesser (Kubra) Tunbs to levels of about 1,000 men, fortified their positions, and deployed helicopters. The Shah had seized these latter islands from Sharjah in 1971: Abu

Musa is about 60 miles west of the Straits and the Tunbs are about 40 miles west.

They also began to make more use of Iran's offshore oil platforms as military bases.

This combination of forces gave Iran considerable ability to conduct hit and run attacks using mines and small craft, and the ability to escalate using its Silkworm missiles and suicide attacks by boats and aircraft. Further, for all its losses, Iran still retained the largest regular surface force in the Gulf.

Iran fully realized that such forces could scarcely win a direct battle with the U.S. or Soviet Navy. Iran was, however, well postured to fight the naval equivalent of guerrilla war, and to exploit any political weakness in the willingness of U.S. or other outside naval forces to engage in a long low level conflict, or take casualties. Equally importantly, Iran had considerable capability to conduct mining and sabotage operations that would be very difficult to trade directly to the Iranian government, and could use the Guards under conditions that made it difficult to tell whether they were small units acting on their own or units directly under the control of the government.

As the Spring wore on, the Iranian government left little doubt about its intentions to use these options to end Iraq's advantage in the "tanker war". On April 27th, Hussein a'Lael, the Revolutionary Guards naval commander, announced that Iran now had "full control" of the northern Gulf, and had established the "first IRGC naval zone". On April 28th, the commander of the Iranian Navy, Commodore Mohammed Hoseyn Malekzadegan, claimed in a speech over Iranian radio Iran had boarded 1,200 ships since the war had begun and had seized 30 cargos. He also warned that Iran would close the Straits of Hormuz if there was any disruption of Iranian exports and imports.

These claims took on a special meaning because of the geography involved. Iraq had been relatively modest in defining its naval war zone, which it set at 29 degrees, 30 minutes North latitude. This included Kharg Island, but did not include a large part of the Gulf's navigable waters. The Iranians, however, claimed both a 12 mile limit from the shore and an "exclusion zone" that ran along the Gulf at a point roughly 40 miles from the shore.

This zone was so large that it created points at which traffic to Kuwait was confined to a very narrow channel outside the Iranian zone. This was particularly true of the waters south of Farsi Island, where the exclusion zone permitted a main navigation channel only two miles wide, although the actual depth of the Gulf permitted passage over a 60 area. The Iranian exclusion zone acted to force tankers into a vulnerable area and create routes that made tanker passage relatively predictable if Iran chose to carry out mining and other attacks outside its declared zone.

In early May, Iran further increased its naval activity. On May 2, 1986. Iranian naval units boarded a total of 14 tankers. The naval Guards attacked the 89,450 ton Indian tanker B R Ambedkar off of Sharjah. On May 4, Guards units attacked the 31,120 ton Petrobulk Regent, and on May 5, the Guards attacked the 258,000 ton Japanese tanker Shuho Maru about 48 kilometers off the Saudi coast.

Naval Guards units launched many of their attack craft from the Guards base closest to Bahrain and Saudi Arabia. This was the small island of Farsi (Al-Farisiyah), midway between the Iranian coast and northern Saudi Arabia.

The naval units in the Guards also used an oil platform near Halul island, Sirri island, Abu Musa, and Larak. Their normal pattern of attack was to challenge the tanker at night, establish its identity and destination, and then return several hours later. Such attacks normally used machine guns and rocket attacks, and while these did not do serious damage it was obvious that that they were often aimed at the crew's quarters.

These shifts in Iranian capability led the U.S. to establish a "two track" policy towards Iran. The first track was to use the UN to force a general ceasefire in the war than would lead to a peace settlement based on the 1974 Algiers Accord, and a return to pre-war borders. The second track was to take military steps to contain the war in the Gulf, limit the growth of Soviet influence, and help push Iran towards accepting a ceasefire. .

This U.S. action, and the initial operation of Kuwait's charters from the USSR, led Iran to launch a new series of political attacks on both Kuwait and the tankers. On May 6, Iranian Prime Minister Mir Hossein Mousavi, warned Kuwait to stop its search for the "protection of the superpowers". On May 8, 1987, Iran went further: Unmarked Iranian small craft used machined guns and rocket launchers attacked a 6,459 ton Soviet freighter, the Ivan Korotoyev, while it was sailing near Iran's Sassan offshore oil field, about 30 miles from Iran's Rostam oil platform.

While it was unclear at the time whether the attack was a deliberate effort by the Iranian government, or the effort of some more extreme faction of the Revolutionary Guards, later evidence pointed strongly towards a deliberate attack. During the months that followed, there was no evidence that the naval Guards units acted independently of government policy -- or even the regular armed forces.

The Iranian Navy used its helicopters, small craft, and P-3 maritime patrol aircraft to track ship movements in the Gulf and help target such Guard activity. The Guard bases on Al-Farisiyah and Abu Musa seemed to be firmly under central government control. Further, the Ivan Korotoyev was a cargo vessel which regularly visited the Gulf, and was exiting Kuwait on route to the Saudi port of Dammam via Dubai along a route precisely known to Iran. This made it somewhat unlikely that the attack was accidental.

Iraq stepped up its attacks on Iranian ships in return, and on May 13, launched its first major air strikes on Iranian refineries since the start of 1987. The Iraqi fighters struck at the refineries at Isfahan and Tabriz. Iraq sought U.S. and British air charters to help carry new purchases of small craft and outboard motors to Baghdad, for use in its rivers and water barriers and the Gulf.

While the land war remained relatively quiet, Iraq also responded to a step up in PUK activity by launching a number of raids on Kurdish camps and villages. It seems to have begun to use mustard gas on Kurdish villages and PUK camps near the border to raze

villages and displace their population.

Iran responded by continuing to escalate. Its next step was to mine one of three Soviet tankers that had been leased to Iran on May 16. The Marshal Chuykov was damaged by a mine in the upper Gulf not far from the Neutral Zone. While this damage might have been coincidental, and could have come from a free floating mine, the combination of location and timing made an accident seem highly unlikely -- particularly because Iran rapidly demonstrated it could carry out such attacks with excellent precision.

Further, that same day, Iranian radio quoted Chief Justice Abdulkarim Mousavi as saying that Iranian forces might have hesitated in attacking Kuwaiti tankers, but would never do so in attacking foreign ships.

These events might well have led to a confrontation between Iran and the USSR, if other events had not acted to change the U.S. role in the Gulf. The attack on the Marshal Chuykov, however, was rapidly overshadowed by other events.

At approximately 9:12 on the evening of May 17, an Iraqi Mirage F-1EQ attacked the U.S. radar frigate, the USS Stark, about 85 miles northeast of Bahrain and 60 miles south of the Iranian exclusion zone. It fired two Exocet missiles, both of which hit the ship, and one of which exploded. This was perhaps the last event that anyone had expected, and while the Iraqi attack was unintentional, it sparked a whole series of debates over the U.S. role in the Gulf, U.S. defense capabilities, and U.S. relations with Saudi Arabia.

The Stark was hit with two Exocet missiles.

The first missile hit on the port side on the second deck. It did not explode, but broke in two parts, spewing some 300 pounds of flammable propellent through a sleeping area where sailors were just settling down and then tore through the barber shop and post office and came to rest against the opposite hull. The second missile was spotted seconds later and detonated. It hit in the same general area in the crew quarters near the ship's Combat Information Center, ripped a 15 foot hole in the side of the ship, and exploded about five feet into the hull. This blew five men in to the water, and 37 American sea men died, and 11 others were seriously wounded. It shut off all power to the CIC, caused serious structural damage, compromised watertight integrity, and cut the main port watermain used for fire fighting.

The Iraqi pilot later claimed that his navigation gear indicated the ship was 5-10 nautical miles inside the Exclusion Zone, not 10-15 nautical miles outside it. Nevertheless, the Iraqi pilot seems to have preserved radio silence and simply fired at the first target confirmed by his radar.

All the pilot's actions in flying both to and from his target indicate that he knew his position, and knew he was firing outside the Iranian exclusion zone. If he had not known his position, he could not have flown the precise return course he used to get back to base. Finally, the Iraqi pilot only turned on his tracking radar seconds before he fired.

This was only justifiable in a combat environment where he faced hostile ships with air defenses, which he did not. The Iraqi pilot made no real attempt to identify his target even by radar.

In any case the loss of 37 American lives suddenly transformed the growing U.S. commitment in the Gulf from a low level political-military activity -- which received little public attention in the U.S., and which was handled at the expert level -- into a major American political crisis. The attack on the Stark immediately led to Congressional investigations, to a heated debate over whether the U.S. presence in the Gulf needed approval under the War Powers Act, and to a debate over whether the U.S. should even have military forces in the area.

The attack sent a signal to every nation in the Gulf that the U.S. might respond to Iranian behavior by withdrawing -- just as it had done in Lebanon. This not only encouraged Iran to take a tougher line than it might otherwise have done, it indicated that any nation whose aid to the U.S. became too visible might simply end up as the target of Iranian hostility and associated with a U.S. defeat.

It is impossible to know just how much this encouraged Iranian weakness to try a military test of wills with the U.S, but it seems likely that it at least encouraged Iran to believe that a "peripheral" strategy of indirect attacks on U.S. ships and forces, the tankers under convoy, or those nations supporting the reflagging effort might lead the Congress and American people to demand that the U.S halt its reflagging effort, or even withdraw from the Gulf. Iran had, after all, already achieved two significant limited victories over the U.S. under somewhat similar circumstances. The first was the hostage crisis after Iranian "students" seized the U.S. embassy in Tehran. The second was U.S. withdrawal from Lebanon after the car bombing of the U.S. Embassy and then the U.S. Marine Corps barracks in Beirut.

Figure 9.3

The Location of the Exclusion Zones and Strikes on the USS Stark

9.7 The U.S. Convoy Effort and the Bridgeton Incident

In any case, Iran gradually shifted from attempts to capitalize on any U.S.-Iraqi tensions and attempts to embarrass the Reagan Administration with a slow war of nerves, to a war of nerves designed to push the U.S. Congress into canceling U.S. plans to escort Kuwait's tankers, and even into withdrawing U.S. naval forces from the Gulf.

Iran began slowly. Iranian Revolutionary Guard boats fired on a Norwegian tanker, the 219,387-ton Golar Robin. They hit the crew's quarters and set the ship afire.

Guards units then attempted to seize the offshore terminal near Faw which involved some 40 small craft armed with 106mm recoilless guns, machine guns, and rocket launchers. A 272,000 ton VLCC, the Primrose, was hit by a mine in roughly the same area as the Chuykov on May 16 Guards units attacked a small 2.6 ton cargo vessel, the Rashidah on May 22, and the LPG carrier Nyhammer on May 24. A speed boat attacked the Nyhammer without warning while it was on route to Ras Tanura. The Iranian boat fired two rockets which missed the vessel, and then left.

The most Iran did that affected U.S. interests during May and early June was to challenge a U.S. merchant ship, the Patriot, to identify itself when it entered the Gulf on its way to Bahrain. The Iranian destroyer turned away immediately when the merchant ship's escort, the U.S. Destroyer Coynigham, came to its aid. No major attack took place on Gulf shipping until June 11, when an unidentified warplane attacked the 126,000 ton Greek tanker Ethnic near Kuwait.

Then, on June 19/20, Iraq made its first major air strikes in the tanker war since the attack on the Stark. Iraq hit one of the Iranian shuttle tankers, the Tenacity, with an Exocet missile. Iraqi also attacked the "western jetty" at Kharg Island. These attacks came after Iraq had halted its attacks on Gulf targets for nearly a month. Iraq had clearly been afraid of losing Western support for the UN ceasefire effort, but it also reacted to the fact that Iran was exporting at its OPEC oil quota of 2.3 million barrels a day and insurance premiums on Gulf tanker traffic had dropped.

While it is unclear whether Iran respond directly to these Iraqi attacks, Iran began active minelaying operations in the northern Gulf. Some of these mines reached Kuwait's port of Ahmadi. This caused enough concern for U.S. officials to announce that Saudi Arabia had agreed to allow its four minesweepers to help clear mines, and to use its mine sweeping helicopters and their sleds to help clear the mines in Kuwait harbor. Further, the U.S. announced that Saudi Arabia would allow the USAF to use Saudi Arabia's E-3A AWACS to expand surveillance coverage over the Gulf. The planes were to have Saudi pilots with U.S. crews.

On June 25, a Iraq attacked a Turkish tanker with rocket fire near Iran's main loading terminal at Kharg Island. Then, on June 27, Iran attacked two Scandinavian tankers moving to and from Kuwait about 120 miles south of Ahmadi and 60 miles east of Saudi Arabia. Iraq replied on the 29th with its sixth attack in ten days, and an Iranian gun boat hit a Kuwaiti tanker on June 30th.

As June ended, the U.S. rejected an Iranian proposal for a partial ceasefire that would only have affected the Gulf, while preventing Iraqi from shipping through the Gulf and allowing the land war to go on. The U.S. continued to press for an expansion of UN Resolution 582, which had resulted in a general call for a for a ceasefire in 1986, that would out real pressure on Iran to actually halt its role in the conflict. Iran replied by staging naval maneuvers, and both Iran's Prime Minister and Hassan Ali, the commander of the naval branch of the Guards, used the occasion to warn that the U.S. would get a " bitter and unforgettable lesson" if it challenged Iran in the Gulf.

This jockeying for position made it increasingly clear that Iran was unlikely to back down in the face of the U.S. escort effort, and that the U.S. faced a serious threat from mines, terrorism, suicide attacks, and small craft raids. As for the overall intensity of the tanker war: Some 53 vessels were damaged in the first 5 1/2 months of 1987. That total compared with 107 attacks in 1986 -- the highest number of attacks in any year since the beginning of the war. The tanker war had produced a total of 226 deaths between 1981 and 1986. It had killed 47 so far in 1987, some 37 of them aboard the USS Stark.. The total insurance claims paid since the beginning of the war totalled roughly $1.5 billion. That figure, however, included 110 vessels paid out as total losses, and all but 17 of these ships had been trapped in the Shatt al Arab at the start of the war.

9.8 More Low-Level Attacks in the North

While Iran concentrated on its war of nerves in the Gulf during the late Spring of 1987, it continued its land attacks. It launched a major artillery barrage against Basra on May 14. It continued to launch small actions along the border and to support Kurdish rebel forces in their attacks in the North. Iran claimed in mid-June that pro-Iranian Kurdish forces had killed 260 Iraqis and wounded 400 more in the previous two weeks of fighting and that PUK forces had held the town of Taqtaq, about 35 miles north of Kirkuk, for ten hours.

While such claims were probably exaggerated, U.S. experts estimated that some 35,000 to 50,000 Iraqi troops had to be kept in the region to deal with roughly 20,000 part time PUK and KDP Kurdish guerrillas. These Kurdish forces were also felt to be causing a continuing series of low level military clashes in the Arbil, Zahko, and Dohuk regions, and some Iraqi sponsored Kurdish paramilitary units were reported to have gone over to the PUK intact. These same experts felt that Iraqi forces had suffered at least 2,000 casualties in recent months as the result of the growing Kurdish presence, and that the Kurdish forces now controlled a "liberated zone" of some 2,000 to 5,000 square kilometers of rough terrain in the north, had killed several thousand Iraqi troops and security forces, and were well armed with Soviet automatic weapons, mortars, and machine guns.

Meanwhile, Iraq continued to strengthen its land defenses, and created new defenses in depth along much of the southern border. Where many Iraqi positions had previously consisted of one line of earthen fortifications, bunkers, and dug-in tanks, the Iraqis began to create several lines. Long artificial barriers about 15 feet high were placed in parallel about 200 to 800 yards apart. This allowed Iraqi forces to retreat quickly to a

new defensive position without giving up ground, and to deal better with the kind of human wave attacks that could saturate pat of a position.

Iran responded by trying to drain Fish Lake, and the rest of the water barriers in front of Basra. It also built up a large earthen berm in the lake on the eastern side, and seemed to be preparing for another attack on Basra. Further, Iran launched two small attacks on June 17 and 18, 1987. The first attack was another joint attack with Kurdish rebels in the north. It took place near Arbil and seems to have been little more than a local clash. The offensive in the south took place a day later, and was a three pronged attack in the Misan sector. While Iraq reported that the attack was crushed, it seems to have scored some limited gains.

Iran launched another assault in the North on June 20, 1987. It claimed on June 22, that it had scored gains in the area around Mawat, in northern Kurdish highlands about eight miles from the border, and had that it captured Mawat , 15 other villages, and 24 square miles of Iranian territory.

Iraq, however, claimed on June 27, 1987 that the attack was beaten back and that Iraq had recaptured all of the territory involved. While the details remain unclear, Iran does not seem to have made any significant gains.

9.9 The Impact of New UN Peace Efforts

Ironically, the main impact of these Iranian offensives may have been to aid Iraq, since they help lead outside nations to agree to a far more UN ceasefire resolution. On July 20, 1987, the UN Security Council finally agreed to UN Resolution 598. The resolution expressed the usual concern with the cost and risk of war. It also, however, deplored attacks on civilian targets and the use of chemical warfare, and:

- Demanded that "Iran and Iraq observe an immediate ceasefire, discontinue all military actions, on land, at sea, and in the air, and withdraw all forces to the internationally recognized boundaries without delay."

- Requested the Secretary-General to dispatch a team of UN observers to verify, confirm, and observe the ceasefire.

- Urged the immediate repatriation of prisoners of war the moment hostilities ceased.

- Called on other nations to avoid escalating the conflict.

- Requested the Secretary General to "explore, in consultation with Iran and Iraq, the question of entrusting an impartial body with inquiring into responsibility for the conflict, and to report to the Secretary General as soon as possible."

- Requested the Secretary General to assign a team of experts to study the question of reconstruction and to report to the Secretary-General.

- Requested the Secretary General "to examine in consultation with Iran and Iraq and with the other states in the region, measures to enhance the security and stability of the region.

- Decided to "meet again as necessary to consider further steps to ensure compliance.

There is little question that this UN action favored Iraq, and reflected the extent to which Iran's continuing offensives and strident attacks on other states had begun to alienate much of the membership of the UN. Iraq had pressed hard for such action for several years. The text of Resolution 598 also effectively called for immediate Iranian withdrawal from all the territory Iran occupied in Iraq, and immediate repatriation of prisoners of war. At the time the resolution was passed, this language meant Iran had to make major concessions with little in return, except for the possibility that international recognized boundaries meant Iran would retain the rights to the Shatt al-Arab it had obtained in the Algiers Accord of 1975.

Resolution 598 did mention study of the question of guilt for the war, and vaguely referenced the possibility of aid in reconstruction, but the timing of the resolution meant such action would only occur after Iran had given up all of the negotiating leverage it had in terms of Iraqi territory and prisoners of war. Further, the UN passed the resolution at a time when the US and many other states were pressing hard for an arms embargo as part of "further steps to enforce compliance" that would have applied to any side that did not agree to Resolution 598, but which would have effectively deprived Iran of the arms it needed to continue its offensives.

It is not surprising, therefore, that the new UN resolution had little more immediate impact on Iran than the much vaguer resolution that the UN had passed the year before. Iran's response was to denounce the UN for tilting towards Iraq, and to demand that the issue of war guilt be decided upon before any formal ceasefire was agreed to. It continued to stress its demands for a partial ceasefire that would only apply to the war in the Gulf, and it stepped up its attacks on the U.S. It also attempted to strengthen its ties to the USSR in a largely successful effort to make sure the Security Council would not agree to an arms embargo. Further, Iran immediately held covert negotiations with the PRC to try to ensure its flow of arms from that country and that the PRC would not provide an substantive support for a UN arms embargo, regardless of what it might say in public.

The net result was that UN Resolution 598 succeeded in giving the UN peace effort a formal status and international profile that it had never had before, but that the resolution also made the UN part of the complex war of negotiations that Iran and Iraq were conducting to try to obtain external support for their own positions in the war. In fact, the UN became an extension of war by other means.

The longer term impact of the UN resolution was very different. During the year that followed, Iran and Iraq constantly struggled for influence within the UN, with Iraq gaining the overall advantage because of its far more flexible diplomacy and willingness

to deal with other nations. The U.S. led an effort to use UN sanctions to help bring an end to the fighting, but it was unsuccessful in finding any way to obtain Security Council agreement on an arms embargo. Instead, the U.S. and USSR became involved in a complex diplomatic duel over any applications of UN sanctions. The USSR generally rejected an arms embargo and sanctions, and attempted to use this position to win support in Iran and convince the Southern Gulf states that it was the only power that both sides would trust to negotiate a ceasefire. At the same time, the Secretary-General was thrust into the position of having to try to find some form of agreement between Iraq and Iran that would produce a more balanced ceasefire. While Resolution 598 did offer a diplomatic context in which peace could be achieved, it was the fighting and not negotiation that continued to decide the outcome of the war.

The UN resolution also did little to persuade "other states to exercise the utmost restraint and to refrain from any act which may lead to further escalation and widening of the conflict, and thus to facilitate the the implementation of the present resolution." A complex mix of different causes began to broaden the role of outside powers only days after the passage of Resolution 598.

9.10 The U.S. Reflagging Effort Begins to Operate

The first U.S. flags went up on two Kuwaiti tankers on July 21, 1987, and the convoy effort -- by then codenamed Operation Earnest Will -- was underway. The U.S. had had nearly four months to prepare, but the resulting task force still had a complex mix of strengths and weaknesses. The U.S. faced a complex array of potential friends and enemies shown in Figure 9.4, but it had to rely primarily on its own forces.

Figure 9.4
Naval Forces in the Persian Gulf and Gulf of Oman: July, 1987

Country	Cruisers	Destroyers	Frigates	Corvettes	FAC	Patrol	Amphibious	Mine
U.S.*	2	1	4	-	-	-	-	-
Iran**	-	3	4	2	8	7	8	2
Iraq *** -	-	2	12	15	11	7	5	
Britain	-	1	1	-	-	-	-	-
France	-	2	-	-	-	-	-	-
USSR	-	-	1	-	-	-	-	2
Kuwait	-	-	-	-	8	50	13	-
Saudi Arabia	-	-	4	4	12	46	15	4
Bahrain	-	-	-	-	4	-	-	-
Qatar	-	-	-	-	3	6	-	-
UAE	-	-	-	-	6	9	-	-
Oman	-	-	-	-	8	9	7	-

* The U.S. had an additional command ship in the Gulf, and a carrier group with the Constellation and its escorts in the Indian Ocean. A battleship was in transit to the area.
** Does not reflect war time damage or losses. Does not include naval Guards units.
*** Does not reflect wartime damage or losses and includes ships trapped in port.

Source: Adapted from the IISS, Military Balance, 1987-1988, and New York Times, July 12, 1987, p. E-3.

The main strength of the U.S. force that accompanied the first convoys was that it consisted of a relatively large force to convoy only two tankers. The U.S. had four frigates, three cruisers, and a destroyer in the area around the Gulf and the Straits of Hormuz. These ships had gone through three rehearsals since the last elements of the escort force had arrived in early July, and the escort plan had reached the size of an 80 page document. The U.S. also had a carrier task force, including the carrier Constellation, in the Indian Ocean. The battleship Missouri, two more cruisers, and a helicopter carrier were in transit to the region.

The convoy plan called for three to four U.S. ships to escort each of the two tanker convoys while the cruisers stood buy to provide a defense against air attack. U.S. A-6 and F/A-18 attack aircraft. EA-6B jamming aircraft, and F-14 fighter planes were to provide support from the U.S. carrier Constellation in the Arabian sea. The tankers were then to have at least three escorts once they passed beyond the Straits, with USAF E-3A AWACS providing airborne surveillance.

The U.S. planned to provide convoys once every two weeks during July and August. This interval was intended to allow the task force concept to be tested, and to find out Iranian reactions. It also eased the burden of being on constant alert against suicide attacks or other means of irregular warfare. The destroyer Fox and cruiser Kidd were selected in part because their 76mm guns provided considerable firepower against sudden raids by the Iranian Navy or shore targets. All of the U.S. combat ships were equipped with long radar radars, data nets, and Phalanx terminal defense guns.

The U.S. force also, however, had several weaknesses. These included the lack of local naval and air bases in the Gulf, its inability to provide a cross-reinforcing defense of single ships operating outside the convoy to minimize the success of a saturation attack, and its lack of mine warfare defenses. It was the latter weakness that Iran chose to exploit.

The U.S. lack of mine warfare defenses was partly a matter of inadequate planning, and the initial operational plan the Joint Chiefs and USCENTCOM developed for the convoy made no provision for mine forces in spite of warnings from U.S. intelligence officials and the U.S. Navy.

The U.S. Navy, however, was not ready to carry out the mine warfare mission. It relied on its European allies for most mine warfare missions since the early, and the U.S. had made little initial effort to get direct allied military support. The U.S. had only 21 30-year old minesweepers (MSOs) in service.

All but three of these minesweepers were in the Naval Reserve Force. The three active ships were assigned research duty and were not ready to perform their mission. They were augmented only by seven active-duty 57 foot minesweeping boats (MSBs), and 23 Sea Stallion RH-53D helicopters, four of which were also allocated to the naval reserves.

The U.S. thus faced a wide range of threats, only part of which it was prepared to deal with. Iran had had access to a wide range of sources for its mines. It had both surface

mines and bottom mines, and at least some timed or interval mines that only became active after a fixed time period or after several ships or minesweepers passed by. While Iran's mine assets were uncertain, it seemed to have contact, magnetic, acoustic, bow wave, pressure, and temperature mines, and possibly remote controlled mines as well. Some were large metal mines and could easily be detected by sonar, but many were too small for easy detection and others were non-magnetic.

Another problem consisted of the distance the convoy had to move, and the fact it was continuously vulnerable from the time it approached the Straits to the moment it entered port in Kuwait. The convey had to follow a route that included an 60 mile voyage from Dibba, outside the Gulf, to the Straits. With a convoy speed of 16 knots, this would take eight hours. For the next 50 miles, the convoy would pass through the Straits, and near Iran's 20 mile exclusion zone and its Silkworm missiles. It would then sail for another 90 miles to a point near Abu Nuayr off the coast of Abu Dhabi. This meant passing by Abu Musa and the Tunbs. There was then a 60 mile stretch to the UAE's Zaqqum oil channel, followed by a 60 mile voyage to Qatar's Halul Island. The convoy then had to sail 90 miles to the Shah Allum shoals and a point only a mile from Iranian waters. At this point the convoy had about 285 miles more of relatively open sailing from a position off the Ras Tanura beacon ship to Kuwait. During all of this time, Iran could chose its point and means of attack.

Finally, the U.S. faced the problem that -- in spite of efforts to keep the convoy's composition and schedule, and the details of its strengths and weaknesses secret -- it received a relentless exposure in the media. Its weakness, particularly in regard to mine warfare, were fully communicated to Iran. Iran could predict the path of the convoy and its timing, and meant that small craft might succeed in hitting a ship even if they did nothing more than drop a few contact mines at night.

The first convoy sailed on schedule on July 22, 1987. The U.S. sent in four combat ships, including a guided missile cruiser. The reflagged ships included the 414,266 ton supertanker Bridgeton and the 48,233 ton gas tanker Gas Prince. It transited the Straits safely, amid wide speculation that a week long lull in the tanker war somehow meant Iran had decided not to attack. In fact, the most Iran did publicly was to send four of its F-4s near the convoy when it entered the Gulf, and to announce new naval maneuvers which were code-named Operation Martyrdom.

The convoy reached the half-way point on July 23, when Iran declared it had a cargo of "prohibited goods".

Unfortunately, the U.S. concentrated far too much on the missile threat near the Straits, and far too little on the risk of other forms and areas of attack. This became brutally clear about 6:30 AM on July 24. The Bridgeton struck a mine at a position of 27°58' north and 49°50' east. This was a position roughly 18 miles from the Iranian naval Guards base on Farsi Island. It was about 80 miles southeast of the four mine hits reported between May 16 and June 19 in the approach channel to Mina al Ahmadi, and about 50 miles north of the Juaymah departure channel.

The Bridgeton was hit in its number 1 port cargo tank, and the mine blew a large hole in her hull and flooded four of her 31 compartments. The convoy was force to slow from a speed of 16 knots to 5, and its warships were forced to follow the damaged Bridgeton, which was the only ship large enough to survive another mine it. The only action the warships could take was to turn on their sonars and put riflemen on the bow to try to shoot a mine if they saw it.

Iran succeeded in capitalizing on the greatest single vulnerability in the U.S. convoy system, and did so without leaving a clear chain of hard evidence linking Iran or the Iranian government to the attack. Although it later turned out that Iran had laid three different minefields, and at least 60 mines, this activity had not been fully detected and had not been filmed.

The impact of the Iranian attack was further heightened by the fact that it came only hours after after the U.S. government had publicly expressed the feeling that the most threatening part of the passage was over. The day before, Rear Admiral Harold Bernsen, commander of the Navy's Middle East Task Force had declared that, "so far it has gone exactly as I thought it would -- smoothly, without any confrontation on the part of Iran." The admiral then went on to declare that Iran had been weakened by seven years of war, and "The Iranian Air Force and Navy are not strong. It would not be in their best interest to utilize their forces in a direct confrontation."

It is interesting to note that after the Bridgeton was hit, Admiral Bernsen was forced to admit that no one had checked to convoy's route for mines, although intelligence sources had warned him and the convoy commander that mines might be present.

The cumulative result of the Bridgeton incident was to give Iran a major initial propaganda victory. Prime Minister Mir Hossein Mousavi promptly called the attack "an irreparable blow on America's political and military prestige", although he was careful to say that the blow came by "invisible hands". Rafsanjani extended the threat to Kuwait and Saudi Arabia: "From now on, if our wells, installations, and centers are hit, we will make the installations and centers of Iraq's partners the targets our attacks." Rafsanjani also announced a "new policy of retaliation". Khameini reiterated this threat on July 27, and called Kuwait "the only country in the region that openly supports Iraq in the war." He specifically threatened Kuwait with the fact Iranian surface-to-surface missiles could reach any target in Kuwait.

The next day, more mines were sighted south of the area where the Bridgeton was hit, and seven more North Korean versions of Soviet mines were discovered on July 27. This made it even more apparent to the world that the U.S. had no immediate contingency plan to deal with the situation. This further strengthened Iran's victory, and those within Iran who favored continuing the war. Khomeini stated on July 28th, that there could be no end to the war along as Saddam Hussein was in power.

The U.S. took time to respond. It could not deploy its own minesweepers in less than 10 to 15 days, and could not use its helicopters without deploying suitable support ships. As a result, the most the U.S. could do initially was to airlift eight RH-53Ds to Diego Garcia,

and prepare the the amphibious landing ship, USS Guadalcanal, to operate four of them in the Gulf.

The Guadalcanal was operating in the Indian Ocean and could be deployed relatively rapidly, but then had to be equipped and organized for the minewarfare mission. The most the U.S. could do to speed up the deployment of its minesweepers was to load another amphibious ship, the USS Raleigh., with four minesweepers. This still meant a nearly month long voyage to the entrance of the Gulf.

The U.S. also faced serious problems in finding the basing facilities it needed for the helicopters, special forces units, and other elements it wanted to deploy in the Gulf. Although Kuwait had hosted a small U.S. mine clearing detachment, and had allowed U.S. military aircraft to operate out Kuwait on 17 occasions in the previous month, it remained reluctant to offer any formal base for a U.S. combat unit for he reasons discussed earlier.

Bahrain and Saudi Arabia were willing to provide virtually all the support the U.S. wanted, but could not agree to the kind of formal basing arrangements some U.S. officials wanted. Both nations felt they needed to keep a low military profile at a time when U.S. domestic politics were forcing it to do everything in a spotlight, and the Secretary of Defense was seeking formal basing agreements.

This led to a compromise where Kuwait agreed to charter two large barges that were to be moored in international waters in the Gulf, and Bahrain and Saudi Arabia agreed to provide the staging support for them. These barges avoided the problems inherent in any formal U.S. base on Saudi or Bahraini territory, but gave the U.S. a facility where it could stage attack, reconnaissance, and mine warfare helicopters; state army and navy commando units, and deploy intelligence sensors and electronic warfare equipment. Both barges were defended by Stinger missiles and Phalanx anti-missile close defense systems, and were heavily sandbagged and compartmented to minimize the damage impact of a single missile or air attack.

The U.S. stationed one of these barges, a converted Brown and Root North Sea drilling platform only about 20 miles from Iran's Farsi Island. The barge, now code named "Hercules" paid off immediately in providing a constant watch over Iranian activity at the Island. It was so successful that the U.S. immediately began to plan for another facility near the naval Guards speed boat base at Abu Musa.

Saudi Arabia also agreed to expand the use of its four minesweepers, and these helped discover the presence of additional mines after the Bridgeton was hit. It could not, however, fully commit its small force to protecting shipping to Kuwait when it was equally vulnerable. It quietly agrees to provide ship and aircraft fuel, and to provide emergency landing and fueling support for U.S. carrier aircraft. Bahrain also agreed to a de facto basing arrangement where the U.S. leased some extremely large platforms normally used for off-shore oil work and created the equivalent of small bases in the Gulf without formally operating from Gulf territory.

Iran quickly responded. On July 31st, Iranian "pilgrims" staged a massive riot during the pilgrimage to Mecca. Cadres began to mobilize agitators among the 70,000 Iranian pilgrims in Mecca itself at roughly 2:00 PM. They completed getting ready for a mass meeting at 4:30 PM. This was typical of similar disturbances Iran had caused in the past, but these had stayed outside the Grand Mosque.

This time, the Iranians slowly began to advance on the Grand Mosque. At about 6:30 they reached the Saudi security line barring the entrance. The Iranians used sticks, knives, and stones, and may have used a limited number of small arms. The Saudi security guards and National Guard replied with tear gas, and riot control devices. The incident was over by 7:00 PM, but the resulting panic and fighting in the crowded pilgrimage area left 402 dead and 649 injured and its intensity is revealed by the fact that while 275 of those killed were Iranian, 85 were Saudi security officers and 42 were of other nationalities. While Saudi Arabia denied it used firearms, and claimed to have relied on tear gas, the evidence does indicate that at least some Saudi officers fired pistols and M-16s.

Iran made false claims the next day that the Saudi police had opened fire without warning, and that 650 Iranians were dead or missing and 4,500 were wounded.

Iran made these claims in spite of detailed Saudi TV coverage which showed that the riots had been started by organized Iranian mobs throwing rocks at the police and considerable evidence that organized Iranian teams had been instructed to start the riots and infiltrators were equipped with pistols and explosives.

July ended in a growing confrontation between Iran, its neighbors in the Gulf, Britain and France, and the U.S. Iran had succeeded in challenging the U.S., but there was little sign that the U.S. intended to back down, and Iran remained highly vulnerable. While it could still act with considerable freedom in low level war, it was extremely vulnerable to U.S. attacks on or embargo of its oil exports and arms imports. Its apparent strength existed only to the extent that the U.S. chose not to retaliate against Iran's weaknesses, and much of the U.S. restraint had taken place because the Reagan Administration felt it could not get Congressional support for such action without a clear Iranian pattern of aggression -- a "smoking gun".

If any outside nation benefited from this escalation, it may have been the USSR. During both June and July, it continued to publicly support the Iraqi and Arab position. It openly more arms to Iraq and denounced Iran for continuing the fighting. At the same time, it sharply criticized the US for escalating the conflict in the Gulf and indicated that it would not provide a military escort for its reflagged ships. It also rejected the U.S. escort plan, and declared it would leave the Gulf if the U.S. did.

There was relatively little land fighting during this period, and Rafsanjani gave a strong indication at one of his June press conferences that Iran would reject further human wave attacks because they produced excessive casualties, and would concentrate on surprise attacks. Iran avoided any major call-ups or other deployments that could have signaled a major offensive, and limited its attacks on Basra to artillery fire and

skirmishes. Iran did, however, continue to try to improve its attack position in the south by partially draining Fish Lake and improving its attack routes -- a series of moves that were ultimately to do Iraq more good than Iran.

Iran continued to increase its support of the Kurdish forces in the north. This, in turn, led Iraq to step up its program to destroy hostile Kurdish villages, and relocate their population. This reached a level by July, 1987, where more than 100 villages had been destroyed, and tens of thousands of Kurds had been relocated. Iraq had clearly shifted from trying to negotiate with the Kurds to a classic pacification and suppression campaign. The growing seriousness of the situation is illustrated by the fact that Iraq now had over 35,000 combat troops committed full time to the pacification effort, and the Kurdish guerrilla movement had grown to as many as 8,000-10,000 men.

A constant series of small engagements took place elsewhere on the border, but open fighting between the two armies was relatively limited. In mid-July, Iraq attempted to counterattack Iranian positions in Majnoon. Iraq almost certainly used poison gas, and made some minor gains, but did not achieved any strategic result. Iraq also seems to have conducted a counterattack against Iranian positions in Faw in late July, and on the border about 80 miles north of Baghdad on July 24. Once again, there were few indications that these attacks resulted in any strategic gains, although each may have produced over 2,000 killed.

9.7 Iran Expands Its Mining Effort and European Forces Join the U.S.

During August, 1987, the war continued to lead to the steady escalation of tensions between Iran and the West. Virtually every week brought a new Iranian effort to strike at the U.S. by indirect means, as Iran exploited every means it could find of attacking shipping in the Gulf that would embarrass the U.S. and potentially force it to withdraw. At the same time, Iran continued to escalate its political and military pressure on Kuwait and Saudi Arabia. Iran continued its efforts to limit the effectiveness of the UN ceasefire initiative, although its military actions in the Gulf progressively alienated more European countries and led the PRC to increasingly distance itself from any overt ties to Iran. The U.S., in turn, steadily improved its military capabilities and showed a growing willingness to confront Iran.

The first step in this process of escalation occurred on August 4, when Iran noisily announced a naval exercise in the Gulf called "Operation Martyrdom", and which was carefully timed and located to interfere with U.S. escort operations. The exercise also showed off the naval Guards force, a remote controlled speed boat filled with explosives, and the existence of a small submarine.

On August 8, two U.S. F-14s from the carrier Constellation encountered an Iranian F-4 which refused to be warned off and appeared to be closing on a U.S. Navy P-3C patrol plane. The Iranian fighter closed to within threatening range of the P-3C, in spite of the fact the F-14s were closing directly on the Iranian fighter and issued a steady series of warnings. One F-14A then fired an AIM-7F missile whose motor failed to

ignite. It then fired an AIM-7M missile which appeared to track the target but which was fired at the limit of its minimum range. This allowed the Iranian pilot to maneuver and dodge the missile, which lacked the rapid turn rate required for dog fight conditions. Once the Iranian pilot turned back, the U.S. fighters did not pursue. The entire exchange took place on radar, since visibility was less than eight miles, and the closing ranges varied from 20 to five miles and ended below 10,000 feet. The E-3A AWACS provided to tracking data used to detect the Iranian intercept and vector the F-14A fighters.

Meanwhile, the USS Guadalcanal entered the Gulf, after stopping at Diego Garcia to pick up the RH-53D Sea Stallion helicopters that had been airlifted to the base. The ship not only gave the U.S. an improved mine warfare capability, and brought Marine Stinger teams to provide point air defense and Bell AH-1T/UH-1N attack helicopters with TOW missiles. This gave the U.S. an enhanced capability to strike at Iranian small craft and naval Guards operations.

The battleship USS Missouri was also arriving in the area, along with another Aegis cruiser, and the USS Raleigh -- which was carrying four 65 foot patrol boats operated by SEAL special forces units and armed with 20mm and 40 mm cannon. Another Army surveillance unit with surveillance and counterattack helicopters was also on the way. The U.S. planned to build up to a level of 31 ships and vessels, and more than 25,000 naval personnel, by early September. This compared with a height of 27 vessels during the Iranian hostage crisis.

On August 10, Iraq bombed Iranian oil installations for the first time in 25 days. Iraq claimed to have flown 110 sorties and to have hit the refinery in Tabriz, and oil sites in central and southern Iran at Biki Hakima, Marun, Karanj, and Gach Saran. At the same time, a U.S. operated, Panamanian registered, 117,200 ton tanker -- the Texaco Caribbean -- was hit by a mine off the coast of Fujayrah, about 80 miles south of the Straits and in the Gulf of Oman. This was the sixth tanker to have hit a mine in the last three months, but the first to be hit outside the Gulf.

The next day, five more mines were found off Fujayrah. They were all Soviet made mines Iran had bought from North Korea and of the type used against the Bridgeton. This mining incident had a major impact because Iran had chosen to escalate its naval operations to cover a sanctuary area outside the Gulf where virtually all the tankers entering the area waited before transiting the Straits. While Rafsanjani responded by saying the mines were planted "by the U.S. or its allies, if not Iraq" and announced that the Iranian Navy had been sent to clear the mines, there was no doubt regarding what Iran had done.

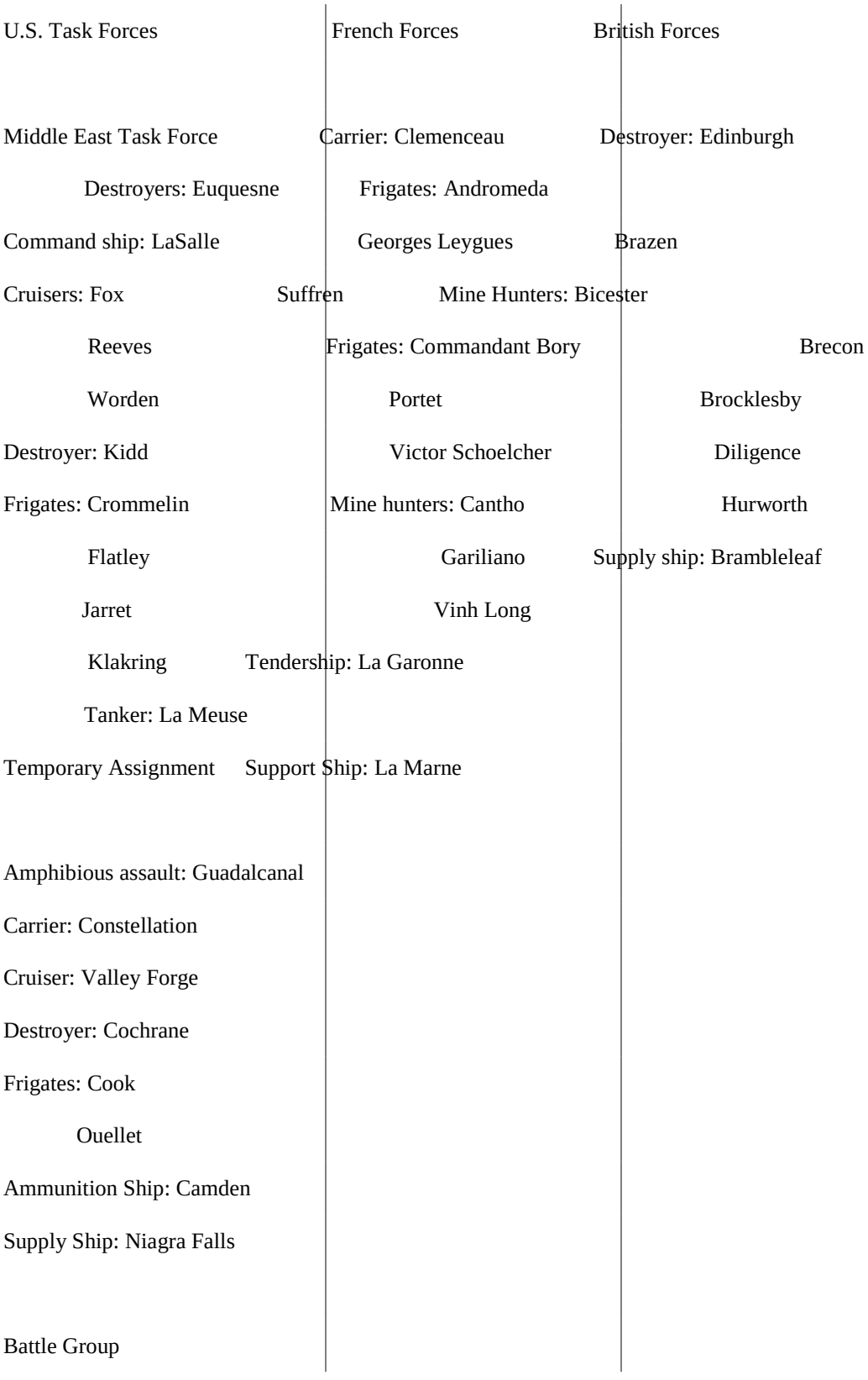
Whatever Iran's calculations may have been in conducting this mining effort, it badly underestimated the hostile reaction of the major European states. Britain announced it would send four 615 ton Hunt-class minesweepers to the Gulf to join the destroyer, two frigates, and supply ship it had already already in the Armilla Patrol. Further, the British made it clear they would cooperate with the U.S.. France announced that it would send three minesweepers and a support ship to protect the Gulf approaches, and join the carrier Clemenceau, two destroyers, and a support ship -- which had just reached waters outside

the Gulf.

These announcements did not mean immediate minesweeping capability. British mine vessels took five weeks to reach the Gulf, and the French vessels 13 days. Still, Iran had succeeded in creating a de facto coalition between the U.S. and Europe. It also did little to intimidate Europe by then threatening Britain and France, by alluding to the 1983 truck bomb incident in Lebanon, and warning that it was "ready to repeat the events in Lebanon, which resulted in their flight."

Further, Iran's hard line -- and the unilateral actions of Britain and France -- led Belgium, Italy and the Netherlands realized they could no longer wait for international action. Each began to actively consider contingency plans to send national mine war fare contingents and military assistance group.

Figure 9.5
Western Ships in the Gulf and Gulf of Oman, or On Route, on August 15, 1987



Battleship: Missouri

Cruisers: Bunker Hill

Long Beach

Destroyer: Hoel

Frigate: Curts

Transport ship: Raleigh

Support Ship: Kansas City

1. The USSR then had one depot ship, three minesweepers, and three trawlers stationed in the Gulf.

The U.S. faced the problem, however, that its commitment was becoming increasingly open-ended. The U.S. was mow involved in a duel with Iran where the use of low levels of military force tended to favor Iran. No matter what the U.S. did in reprisal to any given Iran act, its effectiveness had to depend on Iran's fear of the U.S. using its superior strength to destroy a large part of Iran's military forces in the Gulf or escalating to block its oil exports and arms imports.

Limited U.S. strikes on naval Guards units, or the loss of a few Iranian ships and aircraft, could not have any real military effect on Iran and the resulting "martyrdom" was likely to encourage Iran's forces than deter them. Further, the fact the U.S., Britain and France had limited their escort activities to ships flying their own flags in carefully designated zones in the Gulf meant Iran could use its peripheral strategy to strike at other ships flying flags of convenience, use indirect tactics like mining, use small Guards units as sacrifice pawns, and strike by using the Guards and pro-Khomeini movements and proxies to commit acts of sabotage, terrorism, and hostage taking.

These same limited encounters forced the U.S. to keep military units in the area costing one to two million dollars a month, depending on the definition of the costs to be included.

Further, they confronted the Reagan Administration with the fact that even limited U.S. casualties could create enough opposition to the U.S. presence in the Gulf to shift the Senate towards support of the House in limiting the President's freedom of action.

Since the Iranians were well aware of these vulnerabilities, a cautious strategy of escalation and steadily growing pressure on Iran tended to favor Khomeini, even though Iran lacked the military capability to survive a U.S. attack on its naval and air forces and was extremely vulnerable to any higher level of escalation that threatened its trade in arms and oil. This situation created the kind of "escalation ladder" that was a recipe for trouble. Each side had strong incentives to test the other to its limits. At the same time, the situation was an invitation to the USSR to attempt to exploit U.S. and Iranian tensions.

The next step in the escalation of the tanker war came in the Gulf of Oman. While the Iranian Navy was completing a "minesweeping" effort off Fujayrah that involved six ships and six RH-53 helicopters inherited from the Shah, two Iranian patrol boats attacked a Liberian registered chemical tanker, the Osco Sierra outside the Straits of Hormuz. This marked the first use of the naval Guards vessels in direct attacks outside the Gulf.

This escalation also came at a time when the UN Security Council was calling for new pressure on Iran to obey its ceasefire resolution, and Secretary General Javier Perez de Cuellar was trying to arrange another visit to Iran and and Iraq. It may well have helped convinced Saddam Hussein that no progress in a ceasefire was likely. He resumed his attacks on Iranian cities after August 10, and hit Tabriz and Gachsaran. Other raids hit targets like oil fields, petrochemical and cement plants, sugar factories, power stations, and an aluminum plant.

The damaged Bridgeton left the Gulf on August 23, completing the fifth one-way convoy movement down the Gulf. That same day Iraq threatened to shift from concentrating its attacks on land targets and to renew its attacks on Gulf shipping. It made it clear that its strategy was now dependent on two factors: exploiting the UN initiative and other external efforts to reach a comprehensive ceasefire, and attempting to use the oil market and strikes against Iran's oil facilities to enforce a peace. When its threats drew no response, Iraq took action. On August 30, it resumed air strikes in the Gulf after a 45 day pause. It hit Kharg Island and the Iranian oil terminals at Sirri and Lavan, and set at least one storage tanker on fire. The same day the fourth U.S. convoy head towards Kuwait entered the Gulf.

In theory, Iran should have been highly vulnerable to strikes on its power plants, refineries, and key oil facilities. By mid-1987, oil exports accounted for 90% of Iran's foreign exchange earnings, and 80% of Iran's oil was still being processed through Kharg Island. On paper, strikes against Kharg looked particularly attractive. Kharg Island, however, still retained substantial surplus export capability. It had originally been designed for a capacity of 6 MMBD. Iran also had about 250,000 BPD of direct export capability from the islands of Lavan and Sirri in the Southern Gulf, and since its OPEC quota was only 2.4 MMBD, and it could export less than 3 MMBD, Iran could meet its export needs from Kharg if it could service an average of about one 1.8 million barrel-capacity tanker a day.

Many of Kharg's facilities were highly redundant and buried, and its main control facilities were in a hardened building. Its Sea Island terminal to the West, and Kharg Terminal to the East were also massive concrete structures which were relatively easy to repair. This meant Iraq had to maintain an almost constant series of large-scale air raids against the Island to have any effect. While Iraq did have hundreds of fighter-attack aircraft, it had lost some 40-50 aircraft in the fighting early in the year. It now had only about 70-80 top quality pilots -- all of which could be critical in dealing with an Iranian offensive. Further, while Kharg did not have heavy missile defenses, it had enough defenses to cause substantial losses if Iraq tried to maintain a constant series of raids.

By mid-1987, Iran also was relatively well buffered against temporary losses of Kharg's export capability and even domestic refinery output. It was only consuming about 250,000 BPD domestically, and had a fleet of storage tankers near Larak that acted as a massive reserve. Six super tankers maintain a reserve of about 19 million barrels worth of crude oil, and another eleven tankers maintained a reserve of product. This gave Iran about 7 days of reserves in the event it temporarily lost exports from Kharg.

Iraq insisted on continuing to use Exocet missiles, most of which it fired without ever closing to visual range. These missiles simply were not heavy enough for tanker killing. Many of the tankers in the Gulf were nearly 1,000 feet long and less vulnerable than most warships. Their steel hulls were 22-26 mm thick and capable of resisting most machine gun bullets. Rockets and missiles could penetrate them easily, but the explosion of any small missile like the Maverick, Exocet, Harpoon, or Sea Killer tended to be muffled by crude oil and the oil rarely caught fire even exposed to a warhead explosion. Empty tankers had to flush their compartments with the exhaust from their engines to

eliminate oxygen and the fire hazards from oil vapor as part of their stand operations. The ships also had up to 17 compartments and only one was likely to flood as the result of the kind of missiles Iran was using.

Even the liquid gas tankers were built with double hulls and the inner pressure hull had to be separated from the outer hull by a distance of two feet. This separation reduced the lethality of small missiles. Similarly, the steering gear and engine rooms of most tankers were difficult to hit and there was no way Iraqi aircraft could attack them without overflying the tanker and guiding optical missiles to a specific point on the ship. Only gasoline tankers -- which were relatively rare in the Gulf -- were acutely vulnerable to air attack.

As a result, Iraq rarely succeeded in actually destroying one of Iran's 18 shuttle tankers or even knocking one out for a sustained period of time. Since Iran only needed about 10 tankers to run its shuttle, this gave it a substantial reserve. Iraqi fighters would unquestionably have been far more lethal if they had dropped a mix of conventional bombs and napalm on the tankers, used laser guided bombs, or used laser guided cluster bombs with anti-armor and incendiary minelets. Heavy bombs would also have succeeded in killing the foreign tanker crews and rapidly discouraging further charters. Once again, however, Iraq lacked the sophistication to analyze the need for such attacks and execute them.

This was part of the reason that Iraq attacked inland oil facilities, refineries, and power plants whenever it wanted to put pressure on Iran, without disturbing other nations. These targets were less politically provocative to the West and GCC states than strikes in the Gulf, were easier to hit, and struck at both Iran's export capability and its ability to operate its economy in the face of Iran's cold winters. These attacks still, however, required sustained and highly accurate bombing by large numbers of aircraft to have a significant effect.

A more sophisticated air force could probably have accomplished this without major losses, but Iraq not only lacked pilot numbers, it had little operational research capability except for some supported provided by France, and limited battle management and advanced reconnaissance capability. Although Iraq had first hit targets near Larak on November 25, 1986, it did not renew such attacks until after it started its new bombing activity on August 10, 1987, and does not seem to have scored any major hits until October 5, 1987 -- when it still failed to sink any tanker or set one on fire.

As for the overall pattern of the war in the Gulf, tensions had declined after Iran ceased its pressure on Basra and during the period that the UN ceasefire negotiations offered Iraq a potential alternative. Saddam Hussein had declared a unilateral ceasefire on attacks on Gulf targets after the UN Security Council agreed to its ceasefire resolution on July 120, 1987. Most of the tankers and cargo vessels moving through the Gulf in August did not have military escorts. Six out of every seven tankers moved on its own, plus dozens of cargo vessels and hundreds of dhows and small coastal vessels. Kuwait received 70 to 80 tankers per month, the vast majority of which traveled without incident. While the number of ships hit in the war had risen to 325, the total casualties were still only about

320, or less than one per attack on a ship. While the volume of trade was far below its 1984 level, this was due more to the fall in oil prices than the war.

Ironically, Iran had probably suffered almost much as much from its attacks on shipping as Iraq. Some 35 to 40 ships were calling at ports in the Gulf of Oman and off-loading cargo to move by road to the UAE. Although Iranian had mined the area, much of this traffic went to Iran. It had been heavily dependent on transhipping through Khor Fakkan since 1985, and the total flow of shipping had increased during 1986. While the number of cargo ships going to Dubai's ports at Port Rashid and Jebel Ali had dropped from 3,229 in 1983 to 2,888 in 1986, the number of dhows and small costal vessels calling at these ports had risen from 6,366 in 1984 to 10,008 in 1986.

The tanker war became far more serious, however, during late August and the first part of September. Saddam Hussein's unilateral ceasefire on attacks on Gulf shipping expired on August 29. Once it was clear that Iran would not accept some form of the UN ceasefire, Iraq sharply stepped up its strikes on Gulf targets in addition to the strikes on economic and urban targets that it had resumed on August 10.. Iraq kept up its air raids on Gulf targets for four straight days from August 30 to September 1, 1987. It hit Iranian tankers, oil facilities in the Gulf, and Iranian land based oil facilities and factories. Iran replied on September 1, by having the naval Guards attack a Kuwaiti freighter with machine gun fire and rockets. Iran was careful, however, to pick a target that was not reflagged and which was then about 350 miles from the nearest U.S. convoy.

Iraq and Iran exchanged another round of threats, and Iran stated that it would retaliate on a "blow for blow" basis and charged that Iraq was using its fighters to conduct extensive attacks on cities for the first time since a limited unofficial ceasefire on such attacks in February, 1986. The next day, Iran hit two tankers carrying Arab oil. This triggered a round of Iranian and Iraqi attacks that hit seven ships in one 24 hour period. Iraq had now claimed to have hit 11 naval targets in five days, plus two power plants and a communications facility. Counting Iranian attacks, 20 ships were hit in the six days between August 27 and September 3, 1987. This was the most intense series of attacks in the history of the tanker war, and Lloyds raised its war risk premium by 50%.

The patterns in such strikes are interesting, and reflect the importance of the UN ceasefire effort. The air war had been relatively quiet during April to mid-August. Iraq carried out 5 strikes on shipping during April, 1987, and Iran carried out none. Iraq carried out 7 air strikes on urban and economic targets and Iran carried out none. Iraq carried out 6 strikes on shipping during May, 1987, and Iran carried out 8. Iraq carried out 5 air strikes on urban and economic targets and Iran carried out 2. Iraq carried out 1 strike on shipping during May, 1987, and Iran carried out 1. Iraq carried out 1 air strikes on urban and economic targets and Iran carried out none. Iraq carried out 5 strikes on shipping during July, 1987, and Iran carried out 4. Iraq carried out 6 air strikes on urban and economic targets and Iran carried out none. Iraq carried out no strikes on shipping during August, 1987, and Iran carried out 3. Iraq carried out 2 air strikes on urban and economic targets during August 1-15, and Iran carried out none.

During August 16-31, however, the breakdown of the ceasefire negotiations

created a pattern of challenge and response that was to last for the rest of the year, and well into 1988. Iraq escalated the moment it felt there was no chance of a ceasefire, that the situation was threatening to stabilize without a ceasefire, when it was under military pressure, or when it felt this would increase the impact of Western military pressure on Iran. Iran either retaliated, or escalated whenever it felt this would be to its advantage:

- During August 16-31, Iraq carried out 13 air strikes on urban and economic targets, and Iran carried out 7.

- Iraq carried out 22 strikes on shipping during September 1-15, 1987, and Iran carried out 10. Iraq carried out 35 air strikes on urban and economic targets , and Iran carried out eight.

- Iraq carried out 19 strikes on shipping during September 1-15, 1987, and Iran carried out 7. Iraq carried out 19 air strikes on urban and economic targets, and Iran carried out three.

- Iraq carried out 15 strikes on shipping during October 1-15, 1987, and Iran carried out 8. Iraq carried out 12 air strikes on urban and economic targets, and Iran carried out 6.

- Iraq carried out 19 air strikes on urban and economic targets , and Iran carried out three. Iraq carried out 9 strikes on shipping during October 16-31, 1987, and Iran carried out 1. Iraq carried out 4 air strikes on urban and economic targets, and Iran carried out 8 -- four with Scud.

- Iraq carried out 18 strikes on shipping during November 1-15, 1987, and Iran carried out 3. Iraq carried out 14 air strikes on urban and economic targets , and Iran carried out 9 -- one with Scud.

- Iraq carried out 12 strikes on shipping during November 16-30, 1987, and Iran carried out 7. Iraq carried out 10 air strikes on urban and economic targets , and Iran carried out 2 -- both with Scud.

- Iraq carried out 8 strikes on shipping during December 1-15, 1987, and Iran carried out 5. Iraq carried out 7 strikes on urban and economic targets , and Iran carried out two.

- Iraq carried out 9 strikes on shipping during December 16-31, 1987, and Iran carried out 10. Iraq carried out one air strikes on urban and economic targets, and Iran carried none. This decrease in attacks may have been in response to the Gulf summit meeting on December 29, 1987.

Other events then heightened the tensions in the Gulf in early September, 1987. On September 3, Iranian speedboats attacked an Italian container ship, and wounded two Italians in the crew. This led to a meeting of the Italian Cabinet on September 4, and Italy changed its position from seeking a UN peace force to one of sending Italian warships to

join the U.S., British, and French warships in the Gulf. Italy was then receiving 40% of its oil from the Gulf.

That same day, Iran fired a Silkworm missile at Kuwait from a site on the far southern tip of the Faw Peninsula. The missile fell on an uninhabited strip of coastline, but it was two miles from one of Kuwait's main oil terminals and two tankers were loading at the time. This initially made it uncertain as to whether the missile's terminal guidance system failed to acquire the ships or Iran had merely intended the firing as a threat. Iran denied responsibility for the firing, but then fired another missile on September 4, and a third on September 5. The second missile hit near Mina Abdullah, 30 miles to the south of Kuwait City and showed Iran could bracket the entire country. The third hit near Failaka Island, 13 miles from Kuwait's northern coast.

Kuwait protested the missile firings to the UN, complained to the permanent members of the Security Council, and expelled five of Iran's seven diplomats in Kuwait. This led Iran to charge that the U.S. had pressured Kuwait to expel the diplomats, but that Kuwait would have to take the consequences. It also again called for the U.S. to leave the Gulf.

The GCC states responded by calling a meeting of their foreign ministers on September 12, 1987, although it was clear that there was little the Southern Gulf states could do.

The U.S. rebuked Iraq for its attacks, but concentrated on attacking the Iranian delay in accepting the UN ceasefire proposal. The Secretary General's mission reached Tehran on September 11, 1987. When his talks with the Iranians began the next day, both sides were claiming the other had violated the ceasefire. Iran said Iraq had killed 13 civilians. Baghdad said Iran had shelled eight Iraqi cities and towns in the last 48 hours, and naval Guards attacked a Cypriot supertanker carrying Saudi oil with rockets.

The Secretary General arrived in Tehran, he found a very uncertain reception. Further, when the Secretary General reached Baghdad, both sides again charged the other with renewing the war. Iraq claimed Iran had shelled Basra, and stared an offensive in the central sector which it repulsed.

Tehran accused Iraq of shelling three Iranian cities. Saddam Hussein then met with the Secretary General and accused Iran of having started the war. Foreign Minister Tariq Aziz charged that Iran was only stalling and demanded that the UN impose sanctions and an arms embargo. The most that Cuellar could do on his return to New York, on September 16, was to tell the Security Council that Iran had offered to halt military action but that would only honor a formal ceasefire after an international commission established Iraq's guilt in starting the war.

Iraq began a new series of air strikes on Iranian oil facilities and ships the same day the Secretary General returned to New York, and Iran shelled Basra, stepped up its naval challenges of Gulf shipping, and made limited gains being seizing several important hill positions on the central front. By September 19, Iran and Iraq were both attacking each other's inland oil facilities, and the war was continuing to escalate.

Meanwhile, the European role in the Gulf continued to grow. The French and British decision to send warships to the Gulf on August 11, 1987, was followed by growing British pressure on Belgium, Italy, and the Netherlands to take a more active role. As a result, a special meeting on cooperative action in the Gulf took place in the WEU on August 20. This meeting failed, however, to produce any tangible result other than a call for freedom of navigation. The FRG could not agree on any positive course of action; Italy persisted in pushing for some form of UN initiative; and Britain and France had already moved beyond the point where they felt they could subordinate their freedom of action to a committee.

The Netherlands, which chaired the WEU -- and had tried to catalyze a common WEU effort in the Gulf then gave up, and decided to act on its own. It turned to Britain for assistance, and Britain agreed to provide air cover and logistic support for a Dutch minesweeping effort in the Gulf. On September 7, 1987, the Netherlands announced that it would send two minesweepers to the region. Belgium, which had long worked closely with the Netherlands and UK in planning the naval defense of the Gulf, followed the Dutch lead. It announced it would send two of its minesweepers to the Gulf, and the minesweepers and a support ship. Belgium also agreed to a joint command with the Netherlands, with a Belgian officer in charge of the naval units on the scene and a Dutch officer in command of the overall task force effort.

The Belgian and Dutch ships sailed as a flotilla in late September, but then demonstrated that the U.S. was not the only nation that could run into problems in deploying its mine forces. The Belgian minesweepers were ex-U.S. World-War II ships of the Avenger class. One, the Breydel, was 30 years old and broke down in the Mediterranean. This meant the task force could not arrive by its scheduled date of November 1st. The flotilla also ran into problems because it had no base in the Gulf and no air cover. The best that it could do was to rely on France to provide support from Djibouti and using the Belgian support ships -- the Zinnia -- as a supply shuttle. The British agreed to provide air cover, but only as a third priority after British warships and merchant ships. The Belgian-Dutch force was armed only with 20mm guns, and this led the Netherlands to reinforce them with Stingers operated by Dutch Marines.

As has been discussed earlier, Italy had decided to enter the Gulf on September 8, after an Iranian strike on an Italian tanker. This strike gave the Italian Cabinet an excuse to act, and it announced the dispatch of eight ships, including three Lerci-class minesweepers and one Lupo-class frigate and two Maestrale class frigates. The ships set sail on September 15, 1987.

As for the forces already in the Gulf, French task force remained part of the ALINDIEN (Indian Ocean) Command, based at Mayotte in La Reunion. It included the Clemenceau, a 32,700 ton carrier with 38 aircraft and recently modernized air defenses, including Thomson CSF EDIR defense systems. The escorts included two guided missile destroyers, a corvette, and three multi-role frigates. There were two underway replenishment ships and a 2,320 ton repair ship. The French force was reinforced by three minesweepers which began operations in the Gulf of Oman on September 11.

By late October, the French force had found found nine M-08 mines in the area off of the ports of Fujayrah and Khor Fakkan. Two were surfaced by sweeping and seven were detected at depths of two to seven meters by sonar. The French frigate Dupleix had detected and destroyed two more mines off of Qatar. The brought the total number of mines found since the beginning of the U.S. reflagging effort to 80.

The British Armilla Patrol included the HMS Andromeda, a Batch 3 Leander-class frigate with Sea Wolf short range air defense systems. It was supported by the destroyer Edinburgh, a Type 42 air defense ship, and the Brazen, a Type-22 Batch 1 anti-submarine warfare frigate. The British mine force had reached the Gulf of Oman on September 15. It included the 1,375 ton tender Abdiel, which carried spare minesweeping gear and cables and acted as a command ship, and three minesweepers from 1 and 4 MCM, which carried lightweight wire sweeps, mine hunting sonars, Barricade anti-missile decoys, and ROVs.

Fleet support was provided by the 40,200 ton replenishment tanker Brambleleaf, the stores ship Regent, and repair ship Diligence -- which provided repair, fire fighting and diving facilities.

The U.S. was now deployed for a major war. A new carrier task force with the carrier USS Ranger had arrived to replace the task force led by the Constellation., the forces in the Indian Ocean continued to included a carrier wing of 87 aircraft. The Valley Forge acted as an air cover control ship, coordination center with the Saudi Air Force, and escort for the Constellation. The Cochrane provided air defense cover, and two Knox-class frigates -- the Cook and Quellet -- provided ASW cover and surface defenses with RGM-84 Harpoon missiles. The 53-600 ton support ship Camden provided fuel and munitions, a 16,070 ton Mars-class ship provided combat stores, and the Niagra Falls provided spares and aircraft repair parts and equipment. A second carrier group was rotating into the area led by the carrier Ranger.

The U.S. Naval Surface Group Western Pacific included a battery of 32 Tomahawk cruise missiles with both anti-ship and land attack versions. The Missouri was escorted by an upgraded Aegis ship, the Bunker Hill, and the cruiser Long Beach -- the first nuclear powered warship -- with Tomahawk and Harpoon missiles. The air defense for the surface group came from the Hoel, and the Curts provided anti-submarine defense. The supply ship Kansas City provided oil, fuel, ammunition, and provisions.

The Middle East Task Force in the Gulf continued to include the command ship La Salle, but was reinforced by the amphibious assault ship USS Raleigh, which was equipped with a well dock. The Raleigh had carried four MSB5-class minesweeping boats, and four SEAL Seafox light special warfare craft, to the Gulf. The cargo ship St Louis had arrived on August 27, with two more MSB5s and two Seafoxes.

The Guadalcanal had offloaded its 700-man Marine unit and carried eight RH-53D Sea Stallion minesweeping helicopters. The force also included four AH-1T Sea Cobra attack helicopters, four UH-1N utility helicopters, and two CH-46C Sea Knight medium transport helicopters.

There were five missile armed hydrofoil ships -- the Hercules, Taurus, Aquila, Aries, and Gemini --with 76mm guns and Harpoon missiles. A U.S. Army Special Force units provided four MH-6A surveillance and counter-attack helicopters.

The convoys of the reflagged Kuwaiti shuttle tankers were escorted by Destroyer Squadron 14. This included the guided missile destroyer Kidd. The squadron also included the guided missile cruiser Fox, and guided missile frigates Reid, Crommelin, Jarret, and Hawes. These four frigates had 76mm guns, and LAMPS 1 SH-2F or LAMPS III SH-60B helicopters. The force was supported by an area defense force including the frigates Flatley and Klakring and the guided missile cruisers Worden and Reeves.

In sort, there was a total of 11 U.S. ships, with about 4,500 crew members, actually in Gulf waters. This raised the Pentagon's estimate of the cost of the U.S. reflagging exercise to the Navy alone to $200 million a year.

The total number of Western ships scheduled for operation in the area rose to 35 U.S. and 35 allied vessels. Europe was sending a total of one aircraft carrier, three destroyers, 10 frigates, and five large and five small support ships. Europe was also send a substantial minesweeping capability of fourteen modern vessels in the region.

The FRG also agreed to send its ships south to replace some of the ships other European nations had moved out of the Mediterranean. The FRG sent the destroyer Moelders, frigate Niedersachsen, and support ship Frieburg, all of which had arrived in the Mediterranean by mid-October.

Figure 9.6

Western Ships in the Gulf and Gulf of Oman, or On Route, on September 20, 1987

U.S. Task Forces

Middle East Task Force

Destroyers: Duquesne (355)

Command ship: LaSalle (499)

Cruisers: William H. Standley (513)

Reeves (513)

Destroyer: Kidd (346)

Frigates: Crommelin (200)

Rentz (200)

Flatley (200)

Jarret (200)

Klakring (200)

Transport ship: Raleigh (429)

Amphibious assault:

Guadalcanal (754)

French Forces

Carrier: Clemenceau (1,338)

Destroyers: Duquesne (355)

Frigates: Andromeda (224)

Georges Leygues

Suffren (355)

Mine Hunters: Bicester

Frigates: Commandant Bory (167)

Portet (167)

Victor Schoelcher (167)

Mine hunters: Cantho

Loire

Vinh Long

Tendership: La Garonne

Tanker: La Meuse

Support Ship: La Marnet

Mine Support Ship: Loire

British Forces

Destroyer: Edinburgh (253)

Brazen (175)

Brecon

Brocklesby

Hurworth

Repair Ship: Diligence

Mine Support Vessel: Abdiel

Supply ship: Brambleleaf (42)

MPA: Nimrods

Other Temporary Assignments

Italian Forces

Carrier: Ranger

Cruiser: Valley Forge

Destroyer: Arcadia

Frigates: Cook

Quellet

Belgian Forces

Frigates: Scirocco

Gregala

Perseo

Mine Vessel: Vieste

Minesweepers: Breydel

F. Bovesse

Support Ship: Zinnia

Ammunition Ship: Camden Milazzo

Supply Ship: Niagra Falls Sapri Netherlands Forces

Supply Ship: Vesuvio

Battle Group Salvage Vessel: Anteo Minesweepers: Hellevoetsluls

Maassluis

Battleship: Missouri

Cruisers: Bunker Hill

Long Beach

Destroyer: Hoel

Frigate: Curts

Support Ship: Kansas City

Minevessels in transit: Enhance

Esteem

Fearless

Inflict

Illusive

Mine tow ships: Barber County

Grapple

1. The Soviet Indian Ocean Squadron was commanded by a Vice Admiral, using the Ladny, a Krivak 1 class frigate. The Soviets had a total of a Sovremenny or Udaloly class destroyer, two frigates, three Natya-class minesweepers, one Urga-class submarine depot ship, an unstated number of submarines, and three AGI trawler or an intelligence gathering vessels in the region.

2. Figures in parenthesis are crew numbers and provide a rough indication of ship size.

3. The weapons complements of the ships in the Gulf included 1 ASW helicopter for the William H. Standley; 2 ASW helicopters for each U.S. frigate; 8 MSW helicopters, 4 attack helicopters, 2 transport helicopters, and 4 utility helicopters for the Guadalcanal; 6 MSC, 4 special warfare boats, and 2 FPB for the Raleigh; 20 FBA, 10 AWX, and 10 ASW aircraft for the Clemenceau.

4. U.S. forces were supplemented by E-3A and tanker aircraft in Saudi Arabia, cargo and support ships at Diego Garcia, P-3 aircraft in Masirah in Oman, and 150 support personnel at Jufair in Bahrain.

Iraq continued to sporadically strike at targets in the Gulf throughout the rest of September, but it was Iran that set the pace. On September 20, an Iranian speed boat attacked a Saudi tanker in the Straits. On September 21, Iran attacked a British flag tanker, the Gentle Breeze, and setting it afire and killing a crewman. This led the British government to react by expelling all of the personnel in the Iranian Logistic Support Center in London that had been purchasing arms, and to bring its full weight into the effort to halt arms sales to Iran.

9.8 The Iran Ajar Incident

Later that day, a more dramatic development occurred. After the Bridgeton hit had hit a mine, the U.S. had publicly and privately stated to Iran on several occasions that its rules of engagement would lead it to strike without warning at any Iranian ship that was caught laying mines, or preparing to lay mines, in international waters. At the direction of the Chairman of the Joint Chiefs, Admiral William Crowe, the U.S. then dispatched a U.S. Army special forces unit to the Gulf from Task Force 160 -- the "wings of Delta Force" -- at Fort Campbell, Kentucky.

In early September, Crowe visited Rear Admiral Harold Bernsen on the USS La Salle, and they worked out a plan to track and intercept any Iranian vessels that continued to lay mines.

The U.S. used its intelligence satellites, SR-71 reconnaissance aircraft, and the tactical intelligence gathering assets the U.S. had deployed in the Gulf -- including E-3As, P-3Cs, and specially equipped helicopters such as silenced OH-6As -- to track Iranian minelaying efforts from the loading of the ships in port to the actual minelaying. The U.S. then picked out one of the Iranian vessels -- an Iranian Navy LST called the Iran Ajr. It tracked it from the time it left port. It watched while the Iranian ship reached a point about 50 miles north east of Bahrain and north of Qatar, and laid at least six mines. The Iranian ship seems to have felt it was safe in doing this because it was operating at night. The U.S., however, had deployed the Guadalcanal and Jarret to the area, and was using OH-6 light attack helicopters from the U.S. Army Special Operations Command which were equipped with night-vision devices including forward looking infrared (FLIR) equipment. They also had passive light intensification devices, and could track every movement on the Iranian ship.

Two of these helicopters, based on the frigate Jarret, flew at 200 feet to a point about 500 meters from the Iran Ajr. They watched the ship, and when they visually confirmed that it was still laying mines, they asked for permission to attack. Bernsen approved and the helicopters attacked the Iranian vessel with their 7.62mm machine guns and 2.75 inch rockets. They immediately disabled the ship, and killed five crewmen. U.S. Navy SEAL teams from the Guadalcanal then used small boats to seize the ship and took 26 prisoners -- one of which later died from wounds. A day later, the U.S. blew up and sank the Iranian vessel.

This American strike exposed Iran's action in a way that publicly confirmed its

guilt for all the past minelaying efforts. Iran could no longer make vague references to an "invisible hand" or blame the mine laying on an American plot. Further, the U.S. attack came while Khameni was at the UN. All he could do was to claim the ship was a "merchant ship" and describe the mine laying charge as "a pack of lies". Given the fact the U.S. found 10 fully armed Soviet-made M-08 mines on the ship, charts showing where it had laid mines in the past day, filmed the captured crewmen discussing their mine laying activities, and recovered mines where the chart indicated they had been laid the result was to sharply embarrass Khameini. This embarrassment was so acute that some experts questioned whether the incident was a deliberate attempt to embarrass Khameini and the Iranian "moderates". In fact, the actual minelaying was part of a continuing effort by Iran and was not part of a special effort that could have been deployed to be caught. In fact, Rafsanjani was almost certainly correct when he later charged that the U.S. had time the attack to divert attention from Khameini.

In any case, the U.S. attack immediately gained a great deal of U.S. and foreign support. This support enabled Reagan to take a hard line on maintaining the U.S. presence in the Gulf. At the same time, the Reagan Administration had shown it could and would hit Iran. This had a powerful impact in correcting the U.S. reputation for military errors and in reassuring both it European and Gulf allies that the U.S. would stay in the Gulf. The incident also seems to have helped make the PRC to openly state in the UN that it would support an arms embargo if Iran did not move towards a ceasefire.

Further, it was clear that the Iranian actions could not simply be blamed on members of the Guards. A regular Iranian naval vessel was involved, and the documents found on the ship clearly indicated it was acting on the basis of formal orders from a relatively high level. Khameini tacitly admitted this when he took a much more moderate line a few days later. He stressed that Iran had no desire to go to war with the U.S. and stated that Iran had not closed the door to negotiations.

The USSR was the only major power which reacted to the U.S. attack by taking a stand favorable to Iran. Iran, however, did not get uncritical support from the USSR. Soviet spokesmen were careful not to imply that Iran had any justification for mining the Gulf. The Soviet Union was still concerned with Arab opinion. While both the US and USSR had agreed to defer an arms embargo and continue diplomacy, even the USSR did not rule out the idea of an embargo in the near future.

At the same time, Kurdish independence movements were causing increasing trouble for Iraq and Turkey. Once Iran halted its spring offensives in the South, it steadily increased its aid to anti-Iraqi Kurds. The Ba'athist elite did a notably bad job of trying to win over those Kurdish factions that were willing to compromise. Baghdad reacted to each new attack by the Kurdish rebels by taking an increasingly harder line. While reports may be exaggerated, some 500 villages had been razed by late 1987, and 100,000 to 200,000 Kurds had been displaced.

This relocation effort was poorly managed, poorly funded, and ruthlessly discriminatory. The government tightened its fist around the rest of Kurds it could reach and control after every new internal security problem -- even when totally non-related

movements like Al Daawa were to blame. When Al Daawa fired on a diplomatic reception in Baquba, about 50 miles north of Baghdad, on September 7, and killed 50 to 100 people, the result not only was interrogations and summary hangings in the area where the incident occurred, but new round ups of suspected Kurds.

The man immediately in charge of the effort to suppress the Kurds, Saddam Hussein's cousin Ali Hassan al-Majid, required more and more troops, and began to drain manpower from Iraq's 5th Corps. While Major General Taleh al-Douri, the 5th Corps Commander, denied the incidents and blamed Iran, this led the government to use the Iraqi Air Force to begin to bomb Kurdish villages. These attacks had the almost inevitable result of creating at least two new guerrillas for every one that was killed or imprisoned. For the first time, the KDP and similar movements really began to threaten control of the countryside, and to give Iran's slow advances in the North strategic meaning.

Iran had internal problems of its own. The various opposition movements had little impact on the government, but the People's Mujahideen, led by Masoud Rajavi, was capable of occasional challenges to Khomeini. The Mujahideen were receiving massive Iraqi funding, and had built up paramilitary forces in Iraq called the National Liberation Army or NLA, but these had more visibility than effectiveness and could only carry out the occasional bombing and small raids. These raids were enough to lead the Guards units in western Iran to create special anti-NLA forces in late October, 1987, but they did not present a significant threat to local security even in the areas where they occurred.

The NLA does seem to have been more successful in a series of attacks in West Azerbaijan, Ilam, and Khuzistan provinces in late November, when it claimed to have inflicted 3,680 casualties and captured 467. Nevertheless, the Mujahideen's total claims for 100 clashes between January 1 and December 1, 1987, amounted to only 8,400 casualties and 845 prisoners. Further, it remained virtually impossible to determine what Rajavi really stood for, and how many of his Marxist and anti-Western roots he retained. The Royalist and middle class exile factions seemed even more powerless. They could not even mount effective meetings or media campaigns.

The most interesting change in Iran's power structure was the steady growth of the role of the Revolutionary Guard. Even before the U.S. entered the Gulf, the Guard seemed to be winning most of its political battles and the regular military seemed to increasingly be relegated to roles like artillery support, naval and air patrols, and other missions requiring technical expertise. By this time, the Guard had built up to at least 350,000 men, and was getting most of the new weapons systems obtained from China, such as the Silkworm missile.

The naval elements of the Guards now had around 20,000 men and were substantially larger than Iran's 14,500 man navy. They were responsible for the attacks on the Kuwait and Saudi embassies, and had priority in establishing military factories and supply facilities. It was also clear that the two top men in the Guard -- Minister Mohsen Rafiqdust and Commander Moshen Rezai -- were gaining in power. what was far less certain was whether this increased in power was confined to military influence, or policy

level and civil decision making as well.

At the beginning of October, 1987, a pattern had been established where the war involved three parallel struggles: The first struggle was the escalating confrontation between Iran and the U.S., Western Europe, and Iran. The second struggle was a continuing political battle over the UN peace initiative, with the U.S. increasingly pressing for an arms embargo, the USSR seeking to strengthen its developing ties to Iran without alienating the Arab world, and Iran in the ambiguous position of either seeking concessions or simply using such demands to delay UN action. The third struggle, was the continuing series of exchanges and low level border conflicts taking place between Iraq and Iran.

The first and second of these struggles were highly interactive. During August 31 to October 1, Iran launched a new set of gunboat attacks. Iranian ships hit three tankers, and often seemed to deliberately pass near western and Soviet naval forces. Iraq responded in kind, and this raised the number of attacks on Gulf ships to 375. It is interesting to note, however, that this struggle did comparatively little to alter each sides oil production. As Figure 9.7 shows, both sides were able to sustain comparatively high monthly production rates.

These production levels were possible because several important factors limited the intensity of the oil war:

o Both sides conducted a limited war in the sense that they never tried to commit all their forces to halting their opponents oil shipments. Iraq had to be careful of provoking its allies in the Southern Gulf into reducing their financial support because of Iran's threat to their oil exports, and of losing Western and outside support for a ceasefire. It also risked provoking Iran into an all-out offensive and making any peace settlement impossible. Iran was even more constrained by the risk of dragging the West fully into the war, or at least into suppressing the Guards and Iranian Navy. Further, Iran was extremely vulnerable to Western embargos of its oil exports.

o Both sides had limited military means. Iran lacked the air power to strike at Iran's oil production facilities and pipelines. It could not openly compete with the Western naval forces in the Gulf. Iraq could not risk the airpower losses necessary to sustain full scale attacks on Iran's oil facilities, and lacked the sensors and effective forces necessary to interdict Iranian shipping through the Gulf. Both sides lacked the kind of missile types and numbers necessary to destroy and sink large numbers of tankers, and the C3I/BM systems necessary to manage a large scale efficient war against the number of ships moving to and from the opposing country.

o Both sides had had more than half a decade to build up their capability to repair limited damage to their oil export capabilities. Iraq had the support of Turkey in protecting its pipelines through that country, and Iran had built up a considerable shuttle fleet and large number of tankers to act as a floating reserve.

One of the more important lessons of the war, however, is that there was nothing inevitable about this state of affairs. Both Iran and Iraq suddenly escalated towards

something approaching an all out oil war for short periods. Both would have been far more willing to escalate if they had had modern maritime patrol aircraft, longer range and higher payload aircraft and missiles, and better C3I/BM systems. Both sides are in the process of acquiring such weapons, and future conflicts in the region and in the rest of the Third World will be far more capable of doing sudden and intensive damage to critical economic facilities and activities.

Figure 9.7

Iranian and Iraqi Oil Production: October 1986 -January, 1988

Month	Output in MMBD_____	
	Iran	Iraq
1986		
October	1.5	1.8
November	1.6	1.6
December	1.9	1.7
1987		
January	2.2	1.7
February	1.7	1.7
March	2.1	1.7
April	2.2	1.9
May	2.6	1.9
June	2.4	2.0
July	2.5	2.0
August	2.7	2.2
September	2.1	2.3
October	2.4	2.5
November	2.2	2.6
December	2.2	2.6
1988		
January	2.0	2.4
February	2.0	2.5

Adapted from William L. Randol and Ellen Macready, Petroleum Monitor, Vol. 7, No. 3, March, 1988, pp. 16-17

The third struggle was more quiet, although Iran claimed that it had begun a major build-up. Iran stated that it had begun to mass 10 to 20 Guards divisions of roughly 10,000 men each opposite Basra. It announced that as many as 120 volunteer battalions, or roughly 48,000 men had been sent to the front in the last few days. It also said that another 85 battalions, or as many as 34,000 men, had been sent to the South to protect against the U.S. threat.

The Iraqi Air Force responded by stepping up its strikes at troop concentrations in the southern and central sectors of the 1,174 kilometer front, and reinforced the 3rd and 7th Armies. This, however, was largely precautionary. Iran seemed unlikely to attack before the beginning of the rainy season in late October or early November.

At the same time, Iran gave some important signals that it might not be considering another frontal attack on Basra, and that it intended to be more careful about its land attacks. Mohsen Rezai, the commander of the Revolutionary Guards, stated in September that Iran's two great advantages in the war were martyrdom, and "innovation and creativity...in the tactics we used against the whole world."

The Supreme Defense Council seems to have been continuing the debate over how to react to Iran's massive losses at Basra, and on November 12, Khomeini announced what seemed to be a new strategy: "A stage has been reached where, with the continuation of operations, and repeated blows, we should deprive the enemy of respite, and bring closer the inevitable...defeat." Rafsanjani went on the next day to say that the war was entering a "totally new phase" and that Iran would rely on "numerous and consecutive" attacks to drain Iraq's military strength without allowing it to recover. Similarly, Khameini referred to the need for "continuous operations".

The problem with these ideas was that they called for a major superiority in manpower to compensate for Iraq's superiority in weapons and supply. As became clearer in 1988, Iran was actually experiencing growing mobilization problems. They also called for a high degree of military experience and professionalism, but the Mullahs continued to favor revolutionary fervor over the professional advice of both the regular forces and Pasdaran and to allow divisions and conflicts in the operations of the regular army and Pasdaran units. They also called for consistency of policy, and they were not really innovations, but rather the repetition of ideas that Iranian leaders had raised repeatedly after every major reversal from 1983 onwards.

As for the ceasefire effort, the differing positions of the two sides effectively blocked effective UN action and pushed the U.S. and Iran towards further confrontation. On October 1, more mines were spotted off Farsi Island to the North of Bahrain, and a British minesweeper was dispatched to sweep the area. On October 2, intelligence sources discovered that Iran was planning a substantial strike on Ras al Khafji -- a large Saudi-Kuwaiti oil field and processing complex with a capacity of 300,000 BPD near the Saudi-Kuwaiti border, and about 110 miles from Kharg. It was this field which was used to produce the oil Saudi Arabia and Kuwait marketed for Iraq.

After consultation with the U.S., the Saudis put F-15 and Tornado aircraft on alert

and began to move ships towards the area. They also warned Tehran they had learned of the plan. Tehran, however, decided to go on with the attack, at least to the point of forcing a Saudi reaction and demonstrating its resolve. On October 3rd, 48 to 60 Iranian speed boats assembled near Kharg Island. They then moved towards the Khafji oil field. U.S. E-3A aircraft detected the move, and notified the U.S. commander of the Middle East Task Force and the key command centers Saudi Arabia. The Saudis responded immediately by sending ships and F-15 and Tornado aircraft towards the Iranian force, and the U.S. task force -- including the command ship LaSalle, sailed in the same direction. When the Iranian force detected these moves, it turned away.

On October 5th, Iraq launched a new series of long range air strikes, and struck at tankers loading near Larak, Iran's transloading point for its tanker shuttle. These attacks included a successful hit on the Seawise Giant, a 564,739 ton ship which was the largest ship afloat. While reports differed, up to four tankers may have been damaged during this raid. This brought the total number of Iraqi raids on Gulf shipping since late August up to 21, and Iraq steeped up its air attacks to the point where it was flying some 50 sorties a day during October 5-8.

Iran, in turn, launched new Scud strikes on Baghdad for the first time since mid-February, and continued to strike at Gulf shipping. Both the Guards and regular Iranian Navy were increasingly aggressive. Guards ships often attacked targets near Western warships. For example, they hit a Pakistani oil tanker only three to four miles from the French warship Georges Leygues. An Iranian destroyer moved within a mile of the U.S. destroyer USS Kidd and locked its fire control radar on the Kidd. The US. ship immediately warned the Iranian ship to cease illuminating three times, and finally warned it to halt immediately or the it would fire. The Iranian ship immediately halted and turned away.

Iran hit a number of Japanese ships, and Japan again warned its ships not to enter the Gulf, although it was getting more than 50% of its oil from Gulf states. On October 7, 1987, Japan did announce that it would finance a precision navigation system to assist ships of all nations in avoiding mines. Prime Minister Nakasone also indicated that Japan might make a major increase in financing its share of the Western military presence in the area. Nevertheless, Japan conspicuously avoided taking sides and making any military commitment, and they had little effect on Iran. On October 8, Guards units set a 9,400 ton Japanese owned ship under Panamanian registry, the Tomoe-8, afire about 60 miles east of Jubail. This came only one week after Japan had again allowed its ships to enter the Gulf.

On October 8, another direct clash took place between U.S. and Iranian forces. A force of one Iranian corvette and three speedboats moved toward base Hercules, one of the barges that U.S. forces were using as a base near Farsi Island.

When the U.S. sent helicopters towards the Iranian force, which was moving directly towards the U.S. base, the Iranian ships fired on the U.S. helicopters. The force included three U.S. MH-6 night surveillance/attack helicopters. The aircraft were then about 15 miles southwest of Farsi Island, and three miles outside Iran's 12 mile limit..

The U.S. army helicopters immediately returned the Iranian's fire. They attacked the Iranian force of four ships, and sank one Boghammer speed boat and damaged two Boston-Whaler type boats. An Iranian corvette either escaped or was not attacked.

Eight Iranians were killed or died later, and six were taken prisoner by SEAL units using Mark III Sea Specter patrol boats. An inspection of the damaged boats revealed that at least one had carried U.S.-made Stinger missiles of the kind being given to the Afghan Freedom fighters. The Afghans later claimed these were part of six Stingers that Iranians had stolen from a group near the border in April, but U.S. experts felt they might well have been sold. The Iranians claimed they were part of another secret sale by McFarlane in 1986, and that many more had been delivered.

As for Iraq, Iraqi jets continued the tanker war. They hit a Greek-owned ship and killed one crewman that same day. This raised the total of ships hit by both sides to nine ships in one week, with at least seven crewman killed and four missing. Iraq then continued to pound away at Iran's shuttle and storage tankers in the Gulf, although at high cost and usually with marginal success. By some U.S. estimates, Iraq was spending nearly a $40 million a day on the war, but doing little to interfere with the fact Iran was getting $20 million a day from its oil exports. Since October 1, Iraq had made 12 confirmed raids on Iranian tankers, some of which had reached as far down the Gulf as Larak. While it did hit several tankers, but only one was destroyed. It also lost at least one Mirage fighter, and each raid generally used at least two Exocet missiles, which were reported to have cost as much as $1.3 million each. Since the damage rarely cost more than $500,000, and the chartered tankers still only cost Iran twice the normal daily rate, it was clear that Iraq was not winning on cost grounds-- much less strategic ones.

Figure 9.8

Targets in the Tanker War as of October 12, 1987 -Part One

Year/Country	by Iran	by Iraq	Total
Total Attacks By Source			
1981	0	5	5
1982	0	22	22
1983	0	16	16
1984	53	18	71
1985	33	14	47
1986	66	45	101
1987	62	61	123

Figure 9.7

Targets in the Tanker War as of October 12, 1987 -Part Two

Target By National Flag of Ship Involved			
Australia	0	1	1
Bahamas	1	2	3
Belgium	1	0	1
China	1	0	1
Cyprus	9	33	43
FRG	1	4	5
France	5	0	5
Greece	10	22	32
India	4	4	8

Iran	0	48	48	
Italy	1	1	2	
Japan	9	0	9	
Kuwait	11	0	11	
Liberia	24	36	60	
Malta	1	11	13	
Netherlands		0	2	2
North Korea		0	1	1
Norway	4	1	5	
Pakistan	2	0	2	
Panama	18	28	46	
Philippines		3	0	3
Qatar	2	1	3	
Saudi Arabia		9	2	11
Singapore		1	5	6
South Korea		3	3	6
Spain	3	0	3	
Sri Lanka	1	0	1	
Turkey	2	8	10	
UAE	1	0	1	
U.S.	1	0	1	
USSR	2	0	2	
Yugoslavia		1	0	1
Unknown	2	42	44	

Figure 9.7

Targets in the Tanker War as of October 12, 1987 -Part Three

Iranian Target By National Flag of Ship Involved, including mine and Silkworm Strikes

Flag of Target	1984	1985	1986	1987
Bahamas	-	-	2	
Belgium	-	1	-	-
Cyprus	-	1	3	5
Denmark	-	-	-	2
France	-	-	4	1
Germany (FRG)	-	2	-	-
Greece	-	1	5	9
India	2	-	-	2
Italy	-	-	-	1
Japan	-	-	1	5
Kuwait	4	2	2	4
Liberia	3	2	9	18
Maldives	-	-	-	2
Netherlands	-	-	2	4
Pakistan	1	-	-	1
Panama	4	2	5	10
Philippines	-	-	-	1
PRC	-	-	-	1
Qatar	-	-	1	1
Romania	-	-	-	2
Saudi Arabia	1	1	3	5

Singapore	-	-	-	2
South Korea	-	1	1	2
Soviet Union	-	-	-	2
Spain	1	-	-	2
UAE	-	-	1	1
United Kingdom	1	1	1	2
United States	-	-	-	2
Total	17	14	41	89

Adapted from the Washington Post, October 13, 1987, p.1 information provided by the Center for Defense Information, and information provided by the U.S. Navy.

Both Iraq and Iran continued to exchange artillery and missile attacks. By sheer bad luck, one of these attacks had an unusually bloody effect. On October 12, Iran fired its third Soviet-made Scud B missile in a week into Baghdad in a resumption of the "war of the cities". This time the missile hit a school just as 650 children were preparing to enter classes. It killed 29 children and three adults, and Iraq claimed that it wounded nearly 200 people.

October 14 was less intense, but it showed that even a "typical day" was now anything but calm. Iran fired on Basra, and an Iranian gunboat machine-gunned a Saudi tanker off Dubai. Italy announced that it blame Iran for the fact pro-Iranian Kurds had taken three Italians in Iraq prisoner, and were demanding the withdrawal of Italian forces for their release. Kuwait announced that the PRC had agreed to reflag Kuwaiti tankers and would deploy forces to the Gulf.

9.9 Iran's Silkworm Attacks On Kuwait

On October 15, Iran added yet another a new level of escalation to the war in the Gulf. It again fired a Silkworm missile at Kuwait from Faw, 40 miles to the north. This time, however, it hit a U.S. owned tanker with Liberian registry. The tanker was 275,932 ton Sungari , which was anchored in the Shuaiba Anchorage in Kuwaiti waters. The strike caused serious damage, but no injuries. It also showed that Kuwait had failed to re-position its Hawk defenses to Failaka Island, which was south of Bubiyan and provided an ideal location to defend Kuwait's port. The most Kuwaiti forces on Failaka could do was to fire a few ineffective short-range SA-7 manportable missiles.

Western intelligence exports estimated that Iran had a total of 50 to 70 Silkworm missiles and 12 launchers. According to some reports, the missile attacks were carried out by the 26th (Salman) Missile Brigade which was located near Salman. The brigade, and a newly formed 36th Assef Brigade, were stationed in Faw and were under the command of Derakhshan -- an aid of Rafsanjani. They were affiliated with the Guards Corps 1st Naval Region under the command of an officer named Sotoodeh. Another brigade remained in the Sirrik region, about 50 kilometers south of the town of Minhab in Iran's southern coastal province of Hormozgan, on the eastern side of the Straits of Hormuz. The 36th Brigade had been stationed at Sirrik originally, but had moved through Shiraz by truck.

The U.S. did not react to this missile attack. It stated that the attack was against Kuwait and not against U.S.-flagged ship. This again reflected the decision by the Reagan Administration to avoid any commitment to defend Kuwaiti territory.

Most importantly, the U.S. did not want to create a further barrier to the UN ceasefire effort, and had previously been told by Kuwait that it would be responsible for any defense of its territory.

Iran, however, proceeded to force the Reagan Administration's hand. On October 16, Iran fired another Silkworm missile into a tanker. This time, however, it was a U.S.-flagged Kuwaiti tanker, the Sea Island City. The missile hit the tanker about seven miles

east of the Mina al Ahmadi port and two miles south of the oil terminal at Kuwait's sea island. It blinded the American captain, wounded the American radio officer, and wounded 17 other members of the crew, eight seriously. To make this worse, the French minesweeping force found four more submerged mines in the lower Gulf that same day..

While it was uncertain that Iran had deliberately chosen a U.S. flag target for its Silkworm strike, the U.S. stated it would retaliate because it was an attack on a U.S. flag vessel and the U.S. would protect such vessels anywhere in the world. On October 18, President Reagan announced that the U.S. had chosen its option and would act. On October 19, the U.S. retaliated with a carefully limited attack. Its choice of target came only after prolonged debate and a full meeting of the NSPG under deputy national security advisor, Colin L. Powell. The U.S. had difficulty in attacking the Silkworm sites at Faw for several reasons. The Iranians were well aware of the vulnerability of their missiles. They normally kept them dispersed, set up the missiles at their sites at night, fired them near dawn, and immediately dispersed.They were so far up the Gulf that trying to hit the missiles while they were at the launch sites presented operational problems for U.S. carrier aircraft There was a risk that U.S. aircraft might fly more than 600 miles into an area with large numbers of land based SHORADS, and hit nothing but the ramps and bunkers in the built-up site.

Further, the Iranian launch site was at the extreme southern tip of the Faw Peninsula. A U.S. strike on any target in Faw had the disadvantage that it would appear to aid Iraq. As a result, it was likely to do the most damage to the UN peace effort, and further undermine the neutral status of the U.S. It also risked making an open ended commitment to Kuwait that the U.S. not only was not ready to make, and which required bases in Kuwait or Saudi Arabia that the U.S. did not have.

These factors help explain why the Reagan Administration decided on a visible show of force in the Gulf. Four U.S. warships -- the destroyers Kidd, Leftwich, Young, and Hoel -- moved to within visible distance of Iran's Rostam offshore oil platform in the lower Gulf -- about 120 miles east of Bahrain. They had air cover from two F-14s and an E-2C and were supported by the guided missile cruiser Standley and frigate Thatch. This oil platform had produced from the small Rashadat oil field producing about 18,000 barrels a day, but oil production had halted about two years earlier. Further, Iraqi aircraft had heavily damaged the platform in November, 1986, and knocked out the bridge between its two main units. It was now being used by Iranian forces and these forces had fired on a U.S. helicopter on October 8.

The U.S. warships radioed to warn the naval Guards on the platform and allowed them to evacuate. They then fired some 1,065 rounds into the platform with their Mark-45 l guns.

This gunfire set the platform afire, and SEAL teams then seized the two halves of the platform and blew it up. In the process, the SEAL teams saw Iranian troops evacuating from a second platform. They investigated, and found this platform was also being used as a base, and used explosives to largely destroy it. The SEALS who took the platforms found that both were armed and used for weapons storage, and were equipped with radars

or other surveillance equipment which the Iranians used to track tankers and other ships in the Gulf. The entire incident took about 85 minutes and the only Iranian response was to launch an F-4, which turned back the moment its radar acquired a picture of the size of the U.S. forces in the area.

While Secretary Weinberger ended his announcement of the U.S. attack by stating that, "We now consider this matter closed", the U.S. attack scarcely acted as a definitive deterrent to further Iranian action and it left a number of U.S. planners unsatisfied. They felt the response was so limited that it did not act as a real deterrent. In fact, the Chairman of the Joint Chiefs, and other U.S. military planners, had strongly urged an attack on Farsi Island or an Iranian combat ship. Virtually all U.S. policymakers and planners wanted to avoid a level of escalation that would block any hope of the UN ceasefire proposal succeeding and commit the U.S. to a full scale war at sea. At the same time, many felt such a limited U.S. response would actually encourage further Iranian action.

As for foreign reactions, the British, French, and West German governments sent messages of support, although the French statement expressed some fear of further escalation and the Belgian, Dutch, and Italian governments were silent. Most of the smaller Gulf states made cautious statements. Saudi Arabia and Jordan expressed their support, but Crown Prince Abdullah ibn Abdul Aziz of Saudi Arabia -- who was visiting Washington -- made it clear that he wished the U.S. had attacked the Silkworm sites as well.

Kuwait issued a statement reiterating that it would not offer the U.S. based, but that Iran had committed repeated aggressive acts and had been repeated warned to stop its attacks before the U.S. reaction.

The USSR, however, continued to distance itself from the U.S. policy. The Soviets kept their military presence in the Gulf down to one frigate and half a dozen minesweepers and supply ships. They called for restraint on all anti-ship attacks by both Iran and Iraq, and continued to demand the withdrawal of all foreign fleets and reliance on diplomatic solutions. At the same time, the USSR continued to expand relations with Iran and to sell arms to Iran as well as Iraq.

Iran's first response to the U.S. strike was to issue a mix of new threats against the U.S. and to briefly shell northern Kuwait. While the twelfth U.S. convoy up the Gulf left without incident, Iran accused the U.S. of causing $500 million in damage, and cutting Iran's oil production by 25,000 barrels a day. Iran also, however, held emergency consultations with Moscow, and the Soviet press denounced the attack as "military adventurism". Iran had clearly begun to realize its actions earlier in the year had pointlessly alienated a number of useful foreign governments. It was particularly careful to increase its courting of the USSR. It suddenly dropped all attacks on the USSR from the usual Friday diatribes against foreign nations, and suddenly resumed Aeroflot flights to Tehran.

Iran, however, was still committed to military action. On October 22, Iran fired another Silkworm missile at Kuwait's Sea Island -- an oil loading facility nine miles out

in the Gulf from the Ahmadi oil complex. This third Iranian Silkworm strike again raised questions about Iranian targeting since the Silkworm missile either had to be fired into the harbor area and allowed to home on the largest target it could find, or had to be retargeted by some observer within line of sight of the target. This made it difficult to be certain whether Iran was chosing specific targets or simply firing into an area where it knew the missile would find a target. The ships normally near the sea island had now been moved away, however, and its 100 foot height made it by far the largest radar blip in the area. This made it easy for Iran to chose a target outside the direct coverage of the U.S. reflagging agreement without any difficulty.

The strike also had a much more significant effect than the previous strikes against tankers because missile fragmented when it hit the Sea Island and did extensive damage, although only one loading arm was seriously hit. The Sea Island terminal is a 2,500 foot long pier which was the only facility in water deep enough for Kuwait could easily load supertankers of up to 500,000 tons. It provides some 33% of Kuwait's oil export flow and can handle a peak of 80%. It was then handling roughly 200,000 barrels per day of Kuwait's average production of about 600,000 barrels of crude oil. Kuwait's two other terminals were in shallower channels better suited to tankers of 150,000 tons.

The Sea Island terminal was not loading any tankers when it was hit, but the oil lines to it were pressurized, and the missile started a major oil fire in its overflow tanks and sent up a smoke column over 300 feet in height. The fire was out by early in the afternoon, but enough damage was done to force Kuwait to jury rig alternative loading facilities and close the island. Kuwait's exports of roughly 600,000 barrels a day of petroleum products were not affected, but the Sea Island had to be closed until late November.

The U.S. did not respond militarily to the new Iranian attack. It again took the position that it had no obligation to defend Kuwait.

The U.S. did, however, quietly help Kuwait plan the redeployment of part of the its 12,000 man army to help secure the island of Bubiyan and prevent any quick Iranian amphibious attack that might seize this strategic location between the Faw Peninsula and the Kuwaiti mainland. The U.S. reached an arrangement with Kuwait to deploy a large barge off the coast of Kuwait similar to the ones it had off the coast of Bahrain and Saudi Arabia.

This allowed both the U.S. and Kuwait to avoid the problems inherent in any formal U.S. base on Kuwaiti territory, but gave the U.S. a facility where it could stage attack, reconnaissance, and mine warfare helicopters; state army and navy commando units, and deploy intelligence sensors and electronic warfare equipment.

Finally, the U.S. also speeded up its effort to assist Kuwait in setting up decoys and other countermeasures to the Silkworm, and in re-siting its Hawk missiles to Failaka to provide coverage against the Silkworm. In fact, the new Iranian strike on Kuwait led to a scramble throughout the rest of the Southern Gulf for air defense systems, as each GCC country sought to try to improve the defense of its own oil facilities. Bahrain asked the

U.S. to speed up action on its request for 70 Stingers and 14 launchers, and the UAE quietly revived previous requests for the sale of Stingers and other U.S. air defense equipment.

Figure 9.8

The Pattern of Iranian and Iraqi Attacks in the Tanker War: 1984-1987

Year	Air Launched Systems			Helicopter Launched Missiles	Missiles From Ships	Rockets Gunfire from Ships	Mines	Unknown	Total Attacks
	Missiles	Rockets	Bombs			Grenades			
1984									
Iraq	35	-	-	-	-	-	2	16	53
	Iran	(18	)	-	-	-	-	-	-	18
	Total	52	-	-	-	-	-	-	16	71
1985									
	Iraq	32	-	1	-	-	-	-	-	33
	Iran	(10	)	-	3	-	-	-	1	14
	Total	(42	)	-	3	-	-	-	1	47
1986									
	Iraq	52	4	1	1	-	-	-	8	66
	Iran	(9	)	-	26	4	1	-	5	45
	Total	(65	)	1	27	4	1	-	13	110
1987 (To October 12, 1987)									
	Iraq	57	-	3	-	-	-	-	2	62
	Iran	-	-	-	1	14	34	8	5	62
	Total	57	-	3	1	14	34	8	7	124

Total: 1984 to 1987

Iraq	176	4	5	1	-	-	2	26	214
Iran	(37	)	-	30	18	35	8	11	139
Total	(217	)	5	31	18	35	10	37	353

Adapted from Bruce McCartan, "The Tanker War," Armed Forces Journal, November, 1987, pp. 74-76, and reporting by Lloyd's and Exxon.

During the rest of October, Iran was careful to avoid direct provocation of the U.S. and the thirteenth U.S. convoy through the Gulf arrived in Kuwait without incident. It seemed to be waiting to see if the U.S. would take the initiative, and suspended most of its naval activity in the Gulf. Iran did, however, claim on October 24, that three of its fighters had flown within 10 miles of a U.S. warship in spite of warnings not to do so. Iran did, however, continue to use terrorism. A Pan American World Airways office in Kuwait was bombed on October 24. Pro-Iranian groups in Lebanon -- such as the Islamic Jihad -- revived the threat of terrorism during late October. They exhibited photos of the damage to the U.S. Embassy and Marine Corps barracks in Beirut, showed new films of the hostages they still kept, threatened to take new hostages and threatened to send suicide volunteers to the Gulf.

Iraq, however, continued to fight its tanker and oil wars. Iraq used its air power to demonstrate that it would not accept any form of partial ceasefire that only affected the tanker war. At the same time, it pursued a shift in its air strategy that it had begun in late August. It attempted to hit Iran's refinery system and power plants with sufficient force to make it difficult for Iran to provide fuel and power during the winter. This strategy had the potential advantage that it could cripple Iran's economy more quickly than an embargo on oil exports, and that Iraq could reduce the number of its attacks in the Gulf and the resulting pressure from other states to halt them. During late October, Iraqi jets hit the Agha Jari oil field in southwest Iran, a refinery in Shiraz, and Iran's shuttle tankers. While Iraq also claimed a hit on a supertanker, it seems to have hit a hulk that was moored near the tankers as a decoy. Iraq claimed that these strikes were in response for the 134 killed and 2,036 wounded that resulted from the four Scud strikes Iran had launched against Baghdad in October.

Iran responded to Iraq's attacks by charging that Iraq was bombing civilian targets and Iranian radio warned that, the rulers of Baghdad should anticipate the "deadly response of the combatants of Islam as long as they continue their wicked acts". It warned all Iraqi civilians living near economic and military targets to abandon their homes, and seek refuge in the holy cities of Najaf, Karbala, Kadhimain, and Samarra. Iran, however, could only carry out a few symbolic air raids and fire occasional Scud missiles. For example, Iran fired a total of five Scud missiles at Baghdad between October 4 and October 31. While each attack produced casualties, the volume of fire was so sporadic and the targets were so random that they almost unquestionably did more to increase popular hostility to Iran than to deter Iraq's use of its air power.

Iraq had effectiveness problems of its own. It began to make an increasing number of claims to have damaged Iranian ships that later proved false. For example, Iraq claimed to have hit three Iranian tankers on October 28, 1987. In reality, however, no successful Iraqi attack on shipping took place between October 21 and November 4, when Iraqi jets hit the Taftan, a 290,000 dwt VLCC that was part of the National Iranian Tanker Company's shuttle fleet and which was loading at Kharg.

Iran did not attack any ship moving in the Gulf between October 21 and November 6, 1987. It then, however, resumed its pattern of choosing the kind of indirect and peripheral targets in the Gulf that could embarrass the West, but which would not

provide a major Western response. It started to hit ships that were not flying U.S., British, French, Dutch, Italian, or Belgian flags. Iran seemed to be shifting to a lower level war of attrition with the West in which it hoped that it could keep up constant low level pressure on Gulf shipping while forcing the U.S. and its allies to maintain massive military deployments they would lack a reason to use.

On November 6, 1987, Iran's naval Pasdaran forces carried out a speed boat attack from Abu Musa that fired rocket propelled grenades at a U.S. operated tanker . This ship was the 105,484 dwt Grand Wisdom , which was sailing about 20 miles west of the main UAE port of Jebel Ali.

This attack came without warning and was the first attack against a foreign tanker since one of Iran's Silkworm missiles hit the Sea Island City on October 16.The Iranian attack on the Grand Wisdom seems to have involved the careful choice of a target that would affect the U.S., but which would avoid the consequences of attacking a ship flying under the U.S. flag. Further, it seems to have been carefully timed to embarrass the U.S. The Iranians hit the Grand Wisdom when it was near the guided missile cruiser USS Rentz. The Rentz had an attack helicopter on board, but could take no action other than shadow the crippled Grand Wisdom as it sailed back to Jebel Ali.

Both sides kept up their attacks on shipping during the second week in November, and Iraq continued to claim far more hits than it actually scored. Iraq claimed it hit eleven ships during this period, but seems to have hit no more than three. On November 11, two Iranian gunboats hit a Japanese tanker. It was then sailing within 15 miles of the 17th U.S. convoy through the Gulf, and was near a French warship escorting two French tankers. The gunboats also struck at a point when the USS Missouri and the cruiser Bunker Hill had entered the Gulf for the first time in order to escort the 12 ship U.S. convoy as it sailed through the "Silkworm envelope" at the Straits. A Soviet merchant ship reported an unconfirmed sighting of mines in the same general area. The Iranians had again showed that the Western rules of engagement could not protect freedom of navigation in the Gulf, although the U.S. did quietly ad Bahrain-flagged tankers to one of its convoys for the first time.

Further, Iraqi and Iranian attacks occurred during November 12-15, 1987, although it is important to note that each side hit less than one ship per day. Iraq, for example, claimed to have hit 15 ships between November 9 and November 15, but only damaged three. Both sides also attacked civilian targets. Iran bombarded Basra and Iraq bombed the district capital of Kamyaran, about 50 miles east of the border. Iraq kept up its attacks on Iran's oil facilities and claimed to have attacked three Iranian oil fields -- at Abed al-Khan, Marun, and Kaj Saran -- on November 14, 1987. On November 16, however, Iranian speedboats attacked three tankers in one day. They hit the U.S. managed Liberian tanker Lucy near the Straits of Hormuz. They also hit a U.S. owned ship under the Bahamanian flag, the Esso Freeport. It marked the first time in the war that Iran had hit a ship owned directly by a major U.S. oil company like Exxon. Finally, they hit a small Greek-owned Tanker, the Filikon L.

The air and sea wars continued to follow a similar pattern for the rest of the

month, Iraq claimed Iran had attacked a hospital on November 19, and two major generating complexes at the Reza Shah and El-Diz dams on November 29. Both Iraq and Iran hit a ship nearly every three to four days, although Iraq claimed a total of 21 successful attacks during the 12 days between November 8 and November 20, and only actually scored four.

U.S. minesweepers found thirteen mines in the waters near Farsi island during November 20-25, and U.K. Mine forces found five more mines northeast of Bahrain -- although it was unclear whether these were new or old Iranian mine deployments.

Iran's attacks on shipping during November affected only a small proportion of the shipping to and from Kuwait. Nevertheless, they did have some effect. Insurance rates continued to rise, and Kuwait decided on November 26, to keep the now repaired Bridgeport out of its tanker shuttle. The 401,382-ton ship was the only one of the eleven reflagged vessels that carried crude oil; the others carried gasoline, LNG, and refined products This meant that U.S. convoys would only escort smaller tankers carrying product, and that the only ship carrying crude oil was dropped from the convoy system. Even though Iran did not hit U.S. ships, it also succeeded in forcing the U.S. convoy effort to lag far behind schedule. By the end of November, the U.S. had only completed 18 one-way convoys, or less than five a month. This compared with an original goal of 10 per month.

Further, the U.S. still faced a mine warfare problem. MSOs deployed from the U.S. joined the MSCs and helicopters already in the Gulf in early November, and became a fully operational mine sweeping unit by mid-November.British, Dutch and Italian units also operated independently in the area.

Nevertheless, Iran still had the remnants of three mine fields with 60 mines in the Gulf. While many of the mines had been swept, and Iranian mine laying activity had halted or been sharply curtailed, there were reports that Iran was building new mines and might be getting more modern influence mines from Libya.

The only direct military incident between the U.S. and Iran during this period occurred on November 22, when Iran claimed that it had fired on four U.S. helicopters. This latter claim was made by Commodore Mohammed Hussein Malekzadegan, but seems to have been little more than part of propaganda campaign in which Iran was using the U.S. threat to try to boost internal morale. It occurred a day after Hussein Alaie, a commander of the naval Guards, announced that no political solution to the U.S. presence in the Gulf was possible and that Iran had drawn up plans to destroy the U.S. fleet.

These events left the U.S. with the alternatives of expanding its military presence, seeking immediate UN Security Council action on sanctions, or waiting and trying to mobilize added support for military and economic sanctions on a bilateral basis. The U.S. chose the latter option, but had little success.

The military action in December, 1987, concentrated on the tanker war. Iraq hit occasional land targets, including Iran's dams and refineries, and continued to strike at the

Iranian tanker shuttle. As a result, roughly 60% of all the attacks on shipping during 1987, took place in the last four months of the year and after the failure of the temporary UN ceasefire on August 29th. These attacks reached their peak in December. Twenty-one attacks occurred in November, but 34 occurred in December.

Iran increasingly targeted its strikes against Kuwait and Saudi Arabia. Seventy-three of the 80 attacks Iran conducted on Gulf shipping in 1987 were enroute to and from Kuwait and Saudi Arabia. Iran averaged 3-6 attacks on shipping enroute to and from Kuwait during each month of the year, and steadily increased its attacks enroute to and from Saudi Arabia at the end of the year. The cumulative total of Iranian attacks on shipping to Saudi Arabia was only one in February, three through March and April, and seven through June and August. It reached 16 in September, 22 in October, 26 in November, and 38 in December.

These attacks did not affect oil flows from Saudi Arabia, but they did briefly threaten crude oil exports from Kuwait. The U.S. convoy effort provided security for Kuwait's exports of product and liquid natural gas, but most crude oil shipments operated outside the convoys. The attacks also forced tanker captains in the Gulf to try measures like joining the tail end of Western convoys, to maintaining radio silence, and even to simulating convoys on radar by moving in convoy-like lines at night. These measures may have helped reassure the tanker captain and crew, but they had little real impact on vulnerability because of the constant Iran patrols in the Gulf.

These Iranian attacks peaked shortly before Christmas. While the Guards conducted most attacks, the regular Iranian Navy sent out its frigates, and Iranian forces carried out three major attacks on crude oil tankers enroute to Kuwait between December 18 and 23. Iranian frigates shelled a Norwegian tanker on the 18th and a Liberian tanker on the 22nd. The next day, naval Guards forces attacked another Norwegian tanker. These attacks did not injure the crews, but they did make all three ships unfit to carry crude oil. They were serious enough to force Kuwait to renew its use of the Bridgeton to ship crude oil, and to include it in the U.S. convoy effort.

The exact sequence of events which halted this escalation is uncertain, but the U.S. seems to have quietly threatened Iran, and Syria seems to have put pressure on Iran to halt its attacks. Iraq also carried out an unusual long range air strike on the Iranian tanker shuttle near Larak on December 22, and showed it could hit four of the supertankers which had been deployed there as oil storage ships. The 564,739-ton Seawise Giant, the world's largest tanker, was one of Iraq's targets.

Regardless of the cause, Iran avoided Western escorted ships throughout the rest of the Winter of 1987/1988, and rapidly reduced the intensity of its attacks. As a result, Kuwait was able to increase its crude oil exports from around 970,000 barrels per day during the first two quarters of the year to 1.2 million barrels per day during most of the winter.

Further, Lloyd's reduced its war risk premium from 0.75% to 0.45% in February, 1988.

As for the overall pattern of the tanker war, there were a total of 80 Iranian attacks and

83 Iraqi attacks on shipping during 1987. These attacks raised the total number of attacks since 1984, to 180 Iranian attacks and 215 Iraqi attacks. It is important to note, however, that most of these attacks had only limited lethality. At the end of 1987, Iran had only destroyed or heavily damaged a total 16 ships since the beginning 1984, and Iraq had only destroyed 49 and heavily damaged nine. While Iraq increased its total number of attacks on shipping from 65 in 1986 to 83 in 1987, Iranian oil exports through the Gulf were 40% higher in 1987 than in 1986 -- demonstrating that oil prices and the oil glut were more important than the tanker war. In fact, both Iran and Iraq steadily increased their oil exports throughout the second half of 1987.

The mine war virtually faded from the world's headlines in late 1987. The mix of U.S. and allied mine warfare forces in the Gulf not only had at least temporarily checked the Iranian mine threat, they allowed the U.S. to withdraw some of its smaller mine vessels and mine warfare helicopters. Further, British, Dutch, and Belgian minesweepers were able to withdraw from the central Gulf. While some 80 mines had been detected and neutralized since the beginning of 1987, British ships had recently only found four mines laid earlier in the year, and the Belgian and Dutch ships had not found any.

As for the missile war, Kuwait fired another Silkworm missile at Kuwait on December 6, 1987. This missile was aimed at the Mina al-Ahmadi terminal, but this time it failed to hit its target. The U.S. had helped Kuwait develop nearly a dozen barges with large reflector targets that decoyed the Silkworms away from nearby tankers and oil facilities.

One of these barges was about a mile from the terminal, at the missile veered away and struck the barge.

This Iranian attack may have been a response to the fact the U.S. had leaked that it had Kuwait's agreement to charter a Kuwaiti-owned barge to use as a third sensor, electronic warfare, special forces, and helicopter base. The U.S. also informed the press it would deploy this barge just inside Kuwaiti waters, or just outside the waters of the Neutral Zone.

The fact Kuwait was willing to permit this, and to provide a Kuwaiti barge for charter, led to immediate Iranian threats against Kuwait and the U.S.

Iran was careful to limit its actions, however, and did not repeat its Silkworm attacks during the rest of 1987 and during the first two months of 1988.

The U.S. had less reason to be happy with other developments in the missile war. There were new reports that the PRC had sold Iran additional Silkworms, and new types of anti-ship missiles, such as the Chinese version of the Soviet Styx, the Chao PTG.

There were also reports that the PRC sold Iran up to 100 of the latest sea-skimming versions of missiles like C-601 and C-801.

Even so, the U.S. often had more to reason to fear Iraq on a day-to-day basis than from Iran. Iraq continued its often erratic air sorties in the Gulf, and bombed a Saudi

island by mistake. It flew Mirage F-1 attack sorties in the direction of U.S. combat ships. Further, when it tried to launch its own purchases of Silkworm missiles from its Soviet and PRC-made bombers. Iraqi Tu-16s first approached a U.S. combat ship, and had to be warned away. They then hit a tanker on the way to a Saudi port. In mid February, an Iraqi bomber launched Silkworm missiles that flew within eight miles of a U.S. convoy. Oddly enough, Iraq did not use the bombers to extend its attack range down to Lavan, perhaps because it felt they were too vulnerable to Iran's remaining fighters.

The situation remained potentially explosive. Nevertheless, the U.S. was sufficiently confident by the beginning of January, 1988 to begin cutting its naval deployments in the Gulf and Indian Ocean. U.S. combatant strength, which had risen from six ships in January and February, to 13 in March through June, and then up to 24 in September through November, dropped to 22 in December. The U.S. rotated in smaller ships to replace the Guadalcanal and several other vessels, and began to adjust its forces to withdraw the battle group with the battleship Iowa from the region.

By the end of February, the total U.S. force had dropped from a peak of 39 ships of all types to only 25. The U.S. also sent back the rest of the eight RH-53D Sea Stallion minesweeping helicopters it had deployed in August. These reductions did not produce any immediate Iranian response. The U.S. completed its 40th convoy without incident, and no deliberate Iranian attack on any Western escorted convoy occurred through mid-March.

Further, the U.S. consolidated the command of its forces in the Gulf so that command of land, air, and naval forces were all centered in a single officer based on the flagship of the Middle East Task Force off Bahrain. Under the previous system, one officer had commanded most operations actually in the Gulf while another, based on the battleship Iowa -- hundreds of miles outside the Gulf -- commanded most naval forces. Creating a single command in the Gulf also created one chain of command, reporting through USCENTCOM, to the Chairman of the Joint Chiefs in Washington.

At the same time, the U.S. announced that it was altering its rules of engagement to allow U.S. Navy ships to come to the aid of any NATO allied warship that asked for assistance. This formalized an arrangement that had tacitly existed since the beginning of Western deployments in the Gulf.

The net result of nearly six months of war at sea was to create a relatively stable pattern of Western intervention, where Iran could challenge the U.S. and other Western forces, but only at the cost of immediate U.S. retaliation of a kind that presented little real risk to the U.S. While Iran could always strike at individual ships, it could not hope to use its Navy, the naval branch of the Guards, or its Silkworms to achieve any major results. In spite of the problems inherent in reflagging, and mistakes at the beginning of the convoy effort, the U.S. had largely achieved its objectives. Iran, in contrast, had achieved a remarkable degree of isolation from its Southern Gulf neighbors and the West with no perceptible benefits. It also had made it far harder for its purchasing agents to obtain arms, ammunition, and spares from the West, and had created a situation where its own flow of oil exports was virtually a "free fire zone" for Iraq, but every action it took

increased the "tilt" of outside nations towards Iraq. Like the war on the land, Iran's leadership had done a great deal to defeat itself.

Footnotes

Iran's stocks of Harpoon may have been limited to seven missiles for its Kaman-class fast attack craft. Iran's stocks of surface-to-air missiles were so low that Iran tried to convert some of its Standard ship-to-ship missiles to an air-to-surface role. Larry Dickerson, "Iranian Power Projection in the Persian Gulf", World Weapons Review, August 12, 1987, p. 7.

New York Times, January 20, 1987, p. A-1; Philadelphia Inquirer, January 21, 1987, p. 5A; Observer, January 25, 1987; Washington Times, February 5, 1987, p. 7A; Baltimore Sun, March 1, 1987, p. 24. Many of these attacks took place outside Iranian waters and off the shore of the UAE. Little effort seems to have been made to identify the targets. The Wu Jiang, for example, was a PRC registered freighter with no cargo of military value.

Iran's Sea Killers could be deployed in both a helicopter launched and deck mounted configuration. The deck mount was a five round trainable launcher which could be integrated with the existing X-band radars, conical scan radars, and shipboard computers on many small combat ships.

The helicopter fired version could be mounted on any medium lift helicopter, although it was originally configured for use with the Agusta/Sikorsky SH-3D and AB-212. The heliborne system includes an MM/APQ-706 tracking radar, a missile control console, guidance computer, command link, optical tracker with joystick, pilot display, and Sea Killer/Marte missile.

The heliborne system weighs 865-1,165 kilograms, with 300-600 kilograms for one to two missiles, 400 kilograms for the launch console, 143 kilograms for the radar, and 22 kilograms for the optical sight. The missile can either be fired directly from a helicopter flying at medium altitude, or the helicopter can acquire the target on its radar, pop down to fly under a ship's radar, and then pop up to fire the missile.General Dynamics, The World's Missile Systems - 1982, Pomona, General Dynamics, 1982, pp. 233-234; Bill Gunston, Modern Airborne Missiles, New York, Arco, 1983, pp.110-11.

Washington Times, February 5, 1987, p. 7A.

Baltimore Sun, March 29, 1987, p. 1A.

The Armilla Patrol was set up in 1980 with four combat ships, but was reduced to two in 1982, when Britain had to establish a permanent presence in the South Atlantic. A Type 42 destroyer is normally assigned to provide medium range air defense plus a Type 22 or Leander class frigate with Sea Wolf to provide an anti-missile capability. Only ships under the British flag or more than 505 beneficially owned are eligible for British protection, but Britain lets other ships join its convoys. Technically, the British warships accompany cargo ships, rather than escort them, which implies war time conditions. Jane's Defense Weekly, May 2, 1987, p. 824. Christian Science Monitor, January 21,

1987, p. 1; Washington Post, January 28, 1987, p. A-1.

Washington Post, March 24, 1987, p. A-25, and August 23, 1987, p. 12.

According to some Western sources, Iran had decided to buy the system in early 1986. In January, the Ministers in charge of the Guards Corps, Mohsen Rafiqdoust, sent a team headed by an Iranian official named Riazi went to the PRC. Riazi is associated with Rafsanjani and seems to have signed a $400 million contract for the Silkworm and HQ2J missiles. The first set of missiles arrived at Bandar Abbas in March, 1986. In June, 52 regular navy officers and NCOs and 50 naval Guards personnel were secretly sent to China for training in the use of the Silkworm. Upon their return, one cadre established a training center at the navy missile depot at Bandar Abbas in the First Naval Region. A second cadre formed two additional missile brigades which were later sent to the Faw Peninsula. Also see Jane's Defense Weekly, June 6, 1987, p. 1113. New York Times, June 16, 1987, p. A-11.

Adapted from unclassified data provided by General Dynamics and Jane's Defense Weekly, June 6, 1987, p. 1113.

Free floating mines were becoming a growing problem in the Gulf during this period. The Qatari and other navies were routinely destroying such mines with naval gunfire. Jane's Defense Weekly, May 2, 1987, p. 824; Washington Post, March 24, 1987, p. A-25.

Reports surfaced at this time that the changes in Iran's strike capabilities were not confined solely to anti-ship capabilities. There were reports that China was transferring enough technology to allow Iran to begin assembling or coproducing its own surface-to-surface missile, or a Chinese variant of the FROG and Scud missiles. While such missiles could not threaten shipping, they could give Iran another way of offsetting Iraq's advantage in the air. While the FROG variant only had a range of about 40 miles, it could reach Basra. The Scud variant had a range of up to 180 miles and gave Iran the potential ability to fire at large area targets in Kuwait and the Southern Gulf states. Baltimore Sun, March 29, 1987, p. 1A

Caspar W. Weinberger, A Report to Congress on Security Arrangements in the Persian Gulf, Department of Defense, June 15, 1987, p. 5.

Kuwait's conservative production policy has led to a decline in production, and deficit spending. It earned $12.28 billion from oil exports in 1984, $10.46 billion in 1985, and $6.38 billion in 1986. It has the capacity, however, to produce nearly 3 million barrels per day. Its Fund for the Future has $40 billion in holdings and receives 10% of state revenues each year. It holds money in trust for Kuwait until the year 2001, and is one of the largest single foreign investors in the West. It owns such major Western oil firms as Sanata Fe International, and has major refining and other downstream investments, as well as a large tanker fleet. Only about 10% of Kuwait's income is now tied to crude in comparison with downstream products. Washington Post, July 5, 1987, p. A-1; Christian Science Monitor, July 10, 1987, p. 9; Wall Street Journal, June 25, 1987, p.1, July 23, 1987, p. 26;

Washington Post, August 28, 1987, p. A-16.

Kuwait denies providing any direct military support to Iraq. Washington Times, June 22, 1987, p. A-6.

This later became public when Secretary of the Navy James H. Webb sent a highly critical memo to Secretary of Defense Weinberger in July, 1987, expressing his concern that the U.S. was being drawn into a morass and building-up a massive force without a clear assessment of the risks, limit to the forces involved, or ability to predict the course of the war. Philadelphia Inquirer, September 6, 1987, p. 9A.

New York Times, June 16, 1987, p. A-11.

Washington Times, April 14, 1987. p. 6A; Washington Post, May 5, 1987, p. A-1 and May 14, 1987, p. A-27; Chicago Tribune, April 18, 1987, p. Q-8; Economist, April 18, 1987, p. 39; .

These claims were made by Colonel Behzad Moezi during Mujahideen-e-Khalq sponsored meetings with the press. He also claimed that (a) Iran had shot down 55 of its own planes because of the lack of functioning IFF and radar systems, including a Falcon jet transport which he said was shot down by a U.S. supplied Hawk missile in early February, (b) that only 30-40% of Iran's C-130 transports were flyable and that several had crashed because of poor maintenance, (c) that two-thirds of overall mix of 65 fighter Iran had operational were not 100% functional, (d) that all RF-4Es were shot down or lost, (e) that only 1-2 of Iran's remaining P-3Cs out of a prewar total of 6 had serious computer and sensor problems, (f) that only 6-10 F-14s were still operational, (g) that only four tankers were still operational, (h) that over 180 pilots had defected and many with their aircraft, (i) that too few specialists remained to keep Iran's planes flying, and (j) that pilots were only briefed on their missions an hour of so before attacks to keep them from having time to plan defections. Washington Times, February 12, 1987, p. 6A, and Aviation Week, February 23, 1987, p. 25.

Washington Times, February 20, 1987, p. 8A; Washington Post, February 24, 1987, p. A-1; Washington Post, February 19, 1987, p. A-23..

The Chinese version of the SA-2 is an obsolete missile which first deployed in 1958. It is lethal only against fighters flying at medium to high altitudes which do not use their radar warning receivers effectively enough to allow them maneuver and dodge the missile. It is a radar guided system using the Fan Song Radar and a computer aided command link. The missile has a maximum effective range of about 30 kilometers, a slant range of 50 kilometers, and a ceiling of around 5,500 meters. It is a large complex system requiring a well prepared ground sight. The missile alone weighs 2,300 kilograms.

The Robot 70, or RBS70, is a portable air defense system which is carried in three manportable packs and which can be assembled in less than two minutes. One pack contains the stand, the second the sight and laser transmitter units, and the third the missile. The missile is 1.32 meters long and 106 centimeters in diameter. It weighs 13 kilograms and has a small high explosive fragmentation warhead with a proximity fuze. It

has a maximum range of five kilometers and a maximum altitude of 3,000 meters. It is normally a laser beam rider, but it has been installed in both Land Rovers and APCs using search radars. General Dynamics, The World's Missile Systems - 1982, Pomona, General Dynamics, 1982, pp..85 and 187. The President of Bofors resigned on March 6, 1987 as a result of the sale after two years of investigation. Washington Post, March 7, 1987, p. A-24.

The land based radars for the Silkworm have a maximum range of about 42 kilometers. The longer ranges assume remote designation by a ship or aircraft mounted radar. Jane's Defense Weekly, March 28, 1987, p. 532.

Washington Times, April 24, 1987, p. 12A.

Jane's Defense Weekly, May 9, 1987, p. 864.

Washington Times, April 29, 1987, p. 6A.

Washington Post, May 10, 1987, p. A-19.

Washington Post, April 16, 1987, p. A-24.

Washington Times, April 20, 1987, p. 6A.

Washington Post, April 21, 1987, p. A-21.

Washington Times, April 24, 1987, p. 12A.

The operational status of these missile is uncertain, and stocks as low as seven missiles have been reported by some sources.

Estimates of the number of mines involved are extremely uncertain, and often confuse large holdings of land mines with holdings of naval mines. The core of Iranian naval mine holdings probably consisted of roughly 1,000 moored contact mines made by the USSR in the early 1900s, reconditioned, and then sold to Iran by North Korea.

Some estimates went as high as 80.

Jane's Defense Weekly, July 4, 1987, p. 1417; Chicago Tribune, July 12, 1987, p. 1; Washington Post, July 26, 1987, p. A-25. World Weapons Review, August 12, 1987, p. 7.

These assessments are based on various editions of the IISS Military Balance; the Jaffe Center Middle East Military Balance, and Jane's Defense Weekly, July 11, 1987, p. 15.

Chicago Tribune, July 8, 1987. p. I-1; Baltimore Sun, July 7, 1987; U.S. News and World Report, July 6, 1987, p. 41.

The Naval Guards began significant anti-ship operations in November, 1986, but did not become a major force in the "tanker war" until 1987. Naval Guards units conducted 17 known attacks on neutral ships between February and late July, 1987.Ibid, April 30,

1987, p. 8A; Jane's Defense Weekly, May 23, 1987.

Baltimore Sun, May 6, 1987, p. 5A.

New York Times, May 9, 1987, p. 1; Washington Post, May 9, 1987, p. 1; Washington Times, May 9. 1987, p. 2A.

The outboard motors are made by Outboard Marine in Chicago, and are painted olive drab. Although U.S. regulations prohibit the export of motors over 45 HP as military goods, they are said to range in power from 5 to 235 HP. While some of the small craft are used in the Gulf, they have even more value in the water barriers around Basra. Philadelphia Inquirer, May 15, 1987, p. 1E.

Baltimore Sun, May 14, 1987, p. 17A, Washington Post, May 14, 1987, p. A-32; Jane's Defense Weekly, May 16, 1987, p. 920.

The 272,000 VLCC, Primrose, was hit by a mine in a similar position about 34 miles east of Mina al Ahmadi as it left Kuwait on May 26, 1987. The mine was reported to have broken loose from the Shatt al Arab waterway about 60 miles to the north, and was about 10 miles west of the site where the Chuykov was hit. This shows the free floating or break away mine theory was possible, At the same time, it was all too easy for Iranian naval Guards units to put mines in the ship's path.

Washington Post, May 16, 1987.

Washington Post, May 25, p. A-1 and May 26, 1986, p. A-15; Aviation Week, May 25, 1987, pp. 23-25. One theory advanced immediately after the attack was that the "accident" was a deliberate Iraqi attempt to internationalize the war. Nothing about the Iraqi flight pattern or prior Iraqi activity supports this thesis.

Iraq did not allow the U.S. investigating team that visited Iraq to interview the pilot. It claimed that he had 1,300 hours of flying time, including 800 hours on Mirage fighters. The Iraqi ambassador to the U.S. later conceded that the Iraqi plane might have made a navigation error. Washington Times, July 17, 1987, p. A-1.

Washington Times, May 19, 1987, p. 8A; Baltimore Sun, May 19, 1987, p. 4A; New York Times, May 22, 1987, p. A-1.

New York Times, June 10, 1987; Boston Globe, June 12, 1987, p. 10.

Washington Times, June 24, 25, 27, and 29, 1987; Washington Post, June 24, 25, 27, and 29, 1987; New York Times, June 24, 25, 27, and 29, 1987; Washington Times, July 1, 1987, p. 1.

Washington Post, June 21, 1987, p. A-1 and A-27.

Claims were made that the Kurds had a liberated zone of anywhere from 4,500 to 10,000 square miles. Their maximum gains at any period seem to have been about 4,500 square

miles. Los Angeles Times, June 10, 1987, p. I2; Baltimore Sun, June 15, 1987, p. 5A; Jane's Defense Weekly, October 3, 1987, p. 797.

New York Times, June 8, 1987, p. A-1

Washington Times, June 19, 1987. p. A-9; Washington Post, June 23, 1987, pp A-13 and A-14.

Baltimore Sun, June 27, 1987, p. 2A.

The Pentagon released an unclassified version of the plan on June 16, 1987. It makes no reference to planning for the mine war fare threat. Baltimore Sun, August 23, 1987, p. 2A.

Washington Times, August 3, 1987. P. 1.

To put these numbers in perspective, classified studies have indicated that it would take a minimum of 25 modern minesweepers to keep the Gulf ports open, assuming a 1,200 meter wide channel is explored every 48 hours. Jane's, August 22, 1987, p. 296.

U.S. News and World Report, July 13, 1987, p. 39; Washington Times, July 2, 1987, p. A-1, and July 15, 1987; Washington Post, June 27, 1987, p. A-23, 20, 1987, P. A-21, July 21, 1987, P A-1;, Christian Science Monitor, July 2, 1987, p. 11; New York Times, July 19, 1987, p. 12; July 21, 1987, p. A-8 and July 22, p. A-10; Baltimore Sun, July 1, 1987, p. 1A and 2A, July 24, 1987, p. 2A; Wall Street Journal, July 1, 1987, p. 2, July 19, 1987, p. 12.

Free floating or moored contact mines can be planted by dropping them over the side of any small ship with a crane. They also are difficult to destroy since a direct hit on the tip of one of the mine's spiked contacts is necessary to make it explode.

Chicago Tribune, July 24, 1987, p. I-1.

Washington Post, July 24, 1987, p. A-16.

New York Times, July 25, 1987, p. 1; Washington Post, July 25, 1987, p. A-1.

Washington Post, July 27, 1987, p. I-1, and August 2, 1987, p. A-23.

Kuwait is highly vulnerable to air and missile strikes. It has about 6-8 power and desalinization plants that are critical to economic operations and normal life, and only limited air defense capability. There are three power plants near Doha and Shuwalkh and two more near Shuaiba. The desalinization plants are at Mina Ahmadi, Shuaiba, Mina Abdullah, and Mina Saud. Another power plant is under construction at Failakka Island. Kuwait also tends to layer liquid gas and oil processing and refining facilities, and the propane plant at the Ahmadi refinery is particularly vulnerable. A lucky hit could trigger a series of explosions that could cripple Kuwait's export capability. Iran's missiles, however, are too limited in number and accuracy to be used for surgical strikes and its air

attack capability is so limited it would taker a major risk in committing its remaining active attack aircraft against even a small force like the Kuwaiti Air Force. A successful Iranian strike would require a massive amount of luck.

Economist, August 1, 1987, p. 38.

The Guadalcanal is an Iwo-Jima class amphibious assault ship which is designed for amphibious operations. It can operate four Sea Stallions simultaneously from its deck, and hold 11 of the helicopters. It is 602 feet long and has a 104 foot flight deck. In addition to the helicopters, it could also operate Harrier VSTOL fighters. It has air defense guns and regular guns, but no real missile defenses. Its maximum speed is 23 knots, It carries 47 officers and 562 crew and a landing force of 144 officers and 1,602 enlisted personnel. It was commissioned on July 20, 1963. New York Times, July 30, 1987, p. A-1 and Washington Post, July 30, 1987, p. A-1.

Aviation Week, August 3, 1987, pp. 25-26; Washington Post, August 4, 1987, p. A-1.

Washington Post, July 21, 1987, p. A-1; USN*WR, August 30, 1987, p. 30..

Washington Post, November 30, 1987, p. A-1 and December 2, 1987, p. A-33.

Any firing incidents were limited by the armament of the Saudi officers involved. Shuarah II, verse 197, of the Korean, forbids any violence or even verbal abuse in the holy area, and Saudi policemen in the Mosque area are not allowed to carry pistols. In 1979, the Saudi leaders had to obtain a Fatwa to allow the use of force to put down insurgents that seized the Grand Mosque. Even the head of the Iranian Red Crescent, Dr. Vahid Dastjerdi, made much more modest claims during a press conference on August 16. He talked about pilgrims being stoned and gassed and killed underfoot or from poor medical care. Iran obviously was backtracking on claims about massed gunfire. He stated that there were 155,000 Iranians in Mecca and 332 were killed, and 40 to 50 missing. He again claimed 4,000 were hurt, but described them as injured rather than as casualties. He made no effort to substantiate claims about large numbers of deaths from bullets, although he state all but 90 of the dead had been returned, and made no effort to substantiate the unrealistically round number of 4,000. Washington Times, July 2, 1987, p. A-8, July 7, 1987, p. A-1, July 20, 1987, P. A-6; Washington Post, July 2, 1987, p. A-23, July 8, 1987, P. A-24, July 14, 1987, P A-10, July 18, 1987, p. A-20, July 19, 1987, p. A-17, July 21, 1987, p. A-16, July 22, 1987, p. A-14, July 29, 1987, p. A-19, August 10, 1987, p. A-1, August 17, 1987, p. A-16; Christian Science Monitor, July 2, 1987, p. 11; New York Times, July 18, 1987, p. 1, July 19, 1987, p. 12; July 21, 1987, p. A-8, July 23, p. A-1; August 17, 1987, p. A-1; Baltimore Sun, July 4, 1987, p. A-1, July 19, 1987, p. 1A, July 24, 1987, p. 2A; Wall Street Journal, July 9, 1987, p. 24, ; Philadelphia Inquirer, July 3, 1987, p. 10A, August 11, 1987, p. 4A, ; Los Angeles Times, July 17, 1987, p. I-1; Insight, August 3, 1987, p. 30; USN&WR, August 17, 1987, p. 23.

These claims were never substantiated. Saudi Arabia returned most of the bodies involved. While some did have what appeared to be bullet wounds, these were only a relatively small number. No indications of large numbers of wounded were made public.

Iran claimed at least some Iranians were dead that Saudi Arabia had actually arrested after the riot.

According to one report, the riots were triggered early. They were supposed to be led by Mahdi Karoubi, and involve a tightly organized effort to use nearly 150,000 Shi'ite pilgrims and take over the mosque. While such reports are uncertain, Khomeini did send a message on July 29, 1987, to to Iranian pilgrims in Mecca that stated, "if Moslems cannot denounce the enemies of God in their own home, where can they... With confidence, I tell you... that Islam will eliminate all the great obstacles, internally as well as externally beyond its frontiers and will conquer the principal bastion in the world." Washington Post, August 10, 1987, p. A-l

New York Times, July 5, 1987, p. 11; Wall Street Journal, July 13, 1987, p. 18

There was one minor incident between Iraq and Syria Syria. Iraq shot down a Syrian fighter that blundered into Iraqi territory on July 28, 1987. Washington Post, July 26, 1987, p. A-25, and July 12, 1987, p. A-22.

The U.S. Navy was having a substantial quality control and reliability problem with virtually all of its radar guided air-to-air missiles. It is not surprising, however, that the AIM-7M failed to achieve a hit. Radar guided air combat general requires large numbers of carefully orchestrated aircraft to achieved high kill rates. Washington Post, August 11, 1987, p. A-1 and August 12, p. A-20; Aviation Week, August 17, 1987, pp. 22-24; New York Times, August 11, 1987, p. 2.

Washington Post, August 12, 1987, p. A-1; New York Times, August 11, 1987, p. A-3.

Washington Post, August 14, 1987, p. A-29, September 20, 1987, p. A-25; New York Times, August 12 and 14, 1987, p. A-1; Baltimore Sun, August 14, 1987, p. 1A; Economist, August 22-28, 1987, pp. 42-43; Wall Street Journal, August 14, 1987, p. 11.

Washington Post, August 12, 1987, p. A-1 and August 13, 1987, p. A-29; New York Times, August 12, 1987, p. A-1; Baltimore Sun, August 13, 1987, p. 1A; Economist, August 22-28, 1987, pp. 42-43; Washington Times, August 14, 1987, p. A-9.

The costs can be calculated either as the total cost of the forces involved, or as the incremental cost of the operation. On August 21, 1987, the Pentagon announced that roughly 10,000 of the U.S personnel in the Gulf would get danger pay of $110 a month. This alone raised the incremental costs by $1.1 million per month. Ironically, David J. Armor -- the acting Assistant Secretary of Defense for Personnel who announced the raise in pay -- had told the House Armed Services Committee only three weeks earlier that, "The Threat to U.S. warships in the Gulf is lower than the threat of terrorism ashore in many Middle Eastern countries. A general threat of terrorism has never been a basis for declaring imminent danger." Washington Post, August 27, 1987, p. A-21; Wall Street Journal, August 27, 1987, p. 22.

Washington Post, August 19, 1987, p. A-1 and August 20, 1987, p. A-1; New York Times, August 19, 1987, p. A-1.

Washington Post, August 29, 1987, p. A-18; New York Times, August 30, 1987, p. 14, August 31, 1987, p. A-1.

Iranian production levels are somewhat controversial. U.S. intelligence exports estimated that Iran produced 2.2 MMBD in January,1987, 1.7MMBD in February, 2.1 MMBD in March, 2.2 MMBD in April, 2.6 MMBD in May, 2.4 MMBD in June, 2.5 MMBD in July, and 2.8 MMBD in August. These estimates, however, do not seem to include a careful effort to ensure that all domestic production and consumption is included in the total. Some commercial export estimates go as low as 1.1 MMBD, but it is difficult to find any supporting evidence.

Iran faced the same problems in attack tankers with light weapons and anti-tank guided missiles.

Statistical data are taken from the Economist, October 17, 1987, p. 51.

Larak is roughly 750 miles from Iraq.

Ibid.

This analysis is based on work by Gary Sick, the Center for Defense Analysis, and data furnished by the U.S. Navy. The reader should be aware that different sources provide substantially different estimates of the number and timing of the strikes on each side..

New York Times, September 4, 1987, p. A1, September 5, 1987, p. 5, September 6, p. 3; Washington Post, , September 4, 1987, p. A-1, September 5, 1987, p. A-1, September 7, 1987, p. A-23; Washington Times, September 7, 1987, p. A-2.

Basra was, in fact, being shelled daily from Iranian positions only nine miles away, and had only about half of its normal p[population of 1.5 million.

Washington Post, September 12, 1987, p. A-1 and A-17, September 13, 1987, p. A-25, September 14, 1987, p. A-25, September 16, 1987, p. A-1 and A-24, September 20, 1987, p. A-25, September 21, 1987, p. A-20; New York Times, September 3, 1987, p. A-1, September 14, 1987, p. A-2, September 15, p. A-3, September 17, 1987, p. A-3, September 23, 1987, p. A-14; Christian Science Monitor, September 9, 1987, p. 1; Washington Times, September 7, 1987, p. A-1, September 16, 1987, p. A-8, September 21, 1987, p. A-10; Baltimore Sun, September 3, 1987, p. 2A; Chicago Tribune, September 17, 1987 p. I-5.

Jane's Defense Weekly, October 24, 1987, p. 938.

Jane's Defense Weekly, September 26, 1987, pp. 671-673.

The Vinh Long had sailed from Brest on August 17, but had to turn back because of engine problems. It was replaced with the Orion.

All were old Soviet-made M-08 contact mines which weigh 600 kilograms and have 115

kilograms of explosive. While Iran was reported to have modern influence mines, not were recovered.

The Barricade system was fitted to the Hunt-class MCMVs and Abdiel as a result of the attack on the Stark. It included chaff, flare, and other countermeasure rockets. It was fitted in 72 hours. Each Hunt was also armed with two Oerlikon-BMARC 20 mm cannon, a Bofors 40mm dual purpose gun, and two 7.62mm machine guns. The mine vessels were given Marconi satellite communications systems, , and passive "Replica" missile defenses consisting of electronic countermeasures that made the cross section of the ship seem much larger than it was and created a false apparent location, and "Matilda" missile attack and ESM warning systems. Their sonars were modernized to include the EDO Alconbury 2059 sonar, which linked the standard sonar in the ship to a PAP-104 remotely operated vehicle. This extended the range and pinpointing capability of the ship's sonar system.

The Seafoxes are 11 meter light special warfare boats which can go 32 knots and can carry four weapons, including machine guns, mortars, anti-tank weapons, grenade launchers, and 20mm cannons.

Washington Post, September 5, 1987, p. A-29.

Washington Post, August 20, 1987, p. A-25, September 29, 1987, p. A-25; Economist, August 22, 1987, pp. 42-43 and September 26, 1987, p. 60; Journal of Commerce, September 17, 1987, p. 3B; Philadelphia Inquirer, September 16, 1987, p. 10; Jane's Defense Weekly, August 29, 1987, p. 361.

Jane's Defense Weekly, October 24, 1987, p. 941.

The group is nicknamed the "deathstalkers" and its motto is "Death waits in the dark."

Aviation Week, September 28, 1987, p. 32; Time, October 5, 1987, pp. 20-23; Washington Post, September 22, 1987, p. A-1, September 23, 1987, p. A-26 and A-27, September 24, 1987, p. A-27; New York Times, September 22, 1987, p. A-1, September 23, 1987, p. A-14; USN&WR, October 5, 1987, pp. 26-28.

New York Times, September 24, 1987, p. A-13, October 1, 1987, p. A-1; Washington Post, September 24, 1987, p. A-1.

The NLA claimed to have conducted 94 operations in Iran between January and mid-October, 1987, and to have killed or wounded 4,300 "Khomeini agents". Its largest claimed offensive was in the Marivan region on October 16, when it claimed to have caused over 400 casualties and taken 108 prisoners. The Khomeini regime, in turn claimed to have arrested 1,000 Mujahideen agents at the border and capture 100 agents in Sistan-Baluchistan Province. Even if all the claims made on both sides were true, they added up to a token level of military activity. See various editions of Iran Liberation, especially No. 63, November 27, 1987, and Washington Post, December 8, 1987, p. A-1.

Insight, September 4, 1987, p. 34; Christian Science Monitor, August 19, 1987, p. 2;

New York Times, August 18, 1987, p. A-1, August 30, 1987, September 29, 1987, p. A-1; Washington Post, September 29, 1987, p. A-19; James Bruce, "IRGC-Iran's Shock Troops", Jane's Defense Weekly, October 24, 1987, pp. 960-961.

Jane's Defense Weekly, October 3, 1987, p. 712 and October 10, 1987, p. 792.

Tehran Radio, September 22, 1987.

Tehran radio, November 12 and 13, 1989, and November 13 1989. For a political analysis of these developments, see Chubin and Tripp, Iran and Iraq at War, pp. 46-49.

Washington Post, October 4, 1987, p. A-1, October 5, 1987, p. A-21; Philadelphia Inquirer, October 4, 1987, p. 5A

Chicago Tribune, October 6, 1987, p. I-1.

Philadelphia Inquirer, October 5, 1987, p. 3A; Chicago Tribune, October 5, 1987, p. I-5.

Ibid.

Washington Post, November 29, 1987, p. A-41

This is unclear. Guards on an Iranian oil platform in the lower Gulf fired on another U.S. helicopter about 40 minutes later.

U.S. companies had 454 ships under the U.S. flag (363 active), and 429 merchant ships registered in other countries, on July 1, 1987 -- 227 of the foreign flagged ships were registered in Liberia. These U.S. owned ships flew the flags of 18 different nations. A ship with a foreign crew could cost $700,000 to operate versus $3.4 million for a ship under the U.S. flag which required a 75% U.S. crew. The U.S. flag also meant stringent safety requirements, and that 50% of any repairs done outside U.S. yards had to be paid in duty.

This exercise in "overkill" was supposed to demonstrate that the U.S. could have used far more power if it had wanted to. The guns involved were radar guided guns with track-while scan capabilities coupled to a digital computer. They fire 5" 54 caliber ammunition at a rate of 16 to 20 rounds a minute. Each round cost $1,154 dollars, and the total exercise cost well over $1 million.

Christian Science Monitor, October 19, 1987, p. 2 and p. 16; New York Times, October 21, 1987, p. A-10.

New York Times, October 21, 1987, p. A-10; Washington Post, October 21, 1987, p. A-27.

New York Times, October 20, 1987 p. A-1, October 23, 1987, p. A-1, October 24, 1987, p.3; Washington Post, October 20, 1987, p. A-1 and A-26, October 23, 1987, p. A-1; Christian Science Monitor, November 30, 1987, p. 9..

The U.S. also announced it would send five dolphins to the Gulf to improve its mine detection capability.

Washington Post, November 30, 1987, p. A-1 and December 2, 1987, p. A-33.

Senator Dennis DeConcini and Representative Mel Levine announced they would introduce legislation to block the sale of Stinger for one year because of the risk of transfer to Iran that had been illustrated by the fact Iran had gotten six systems from the Afghan Mujahideen.

Washington Post, October 31, 1987, p. A-2; Washington Times, October 8, 1987, p. I-6,

The attack on October 21 hit the Khark 4, a 284,000 dwt VLCC.

By this time, the oil platform at Rostam had been burning for 17 days.

Washington Post, November 7, 1987, p. A-16; Washington Times, November 7, 1987, p. I-6.

Washington Post, November 12, 1987, p. A-25

Washington Post, November 17, 1987, p. A-22, November 18, 1987, p. A-29; Chicago Tribune, November 21, 1985, p. I-5; Philadelphia Inquirer, November 30, 1987, p. 13D.

The U.S. force ended up consisting of five, rather than six, Aggressive-class MSOs. Three arrived under their own power from the Atlantic fleet. Two more were towed from the West Coast of the U.S. by an amphibious landing ship. The third MSO developed engineering problems and had to return to base after service in Pearl Harbor. The MSOs coming from the East Coast did not enter the Gulf until late October. The Dutch force consisted of the Hellevoetsluis and Maassluis. It was operating with the British force in the Gulf of Oman and lower Gulf. It was then committed for 10 weeks. The Netherlands had still not finalized efforts to sell Kuwait two Alkmaar-class minehunters.

Washington Post, November 28, 1987, p. A-23.

Philadelphia Inquirer, November 22, 1987, p. 9a; Chicago Tribune, November 21, 1987, p. I-5; Washington Times, November 23, 1987, p. A-8.

Baltimore Sun, January 2, 1988.

Based on USCENTCOM briefing data.

Washington Times, December 23, 1987, p. A-8. Philadelphia Inquirer, December 23, 1987, p. 7A.

Department of Energy working data.

New York Times, February 4, 1988, p. D-18; Economist, January 30, 1988, p. 32.

Based on USCENTCOM briefing data.

New York Times, December 6, 1987, p. 11.

Washington Post, December 8, 1987, p. A-24.

Philadelphia Inquirer, December 8, 1987, p. 12C.

Washington Post, December 2, 1988, p. A-33; Philadelphia Inquirer, December 5, 1987, p. 3A.

Philadelphia Inquirer, December 5, 1987, p. 3A.

The U.S. did, however, seriously consider intercepting the ships carrying the weapons and turning them away. The basic design of the Styx SS-N-2 dates back to 1960. It is a a 21 foot long missile with a 350 pound warhead. The Chinese C-801 is a more refined version of the Styx which was deployed in 1984. It has sea skimming capability. The U.S. put heavy pressure on the PRC not to sell this system to Iran.

Iraq did begin to fire such missiles successfully in early March. Iraqi Mirage F-1 pilots continued to fire blind at targets in the Gulf, many far from Iranian waters. During the last week of 1987, Iraq claimed to have hit four naval targets with Exocets. None were actually hit, but Iraq did hit a neutral Greek-owned freighter that sailed out of Kuwait at some point during the first week of 1988. An Iraqi Mirage F-1 also flew virtually the same kind of attack profile on the USS Portland on January 27, 1988, that had been flown against the USS Stark. This time, however, another U.S. warship obtained radio contact with the Iraqi pilot in time to warn it away. The USS Chandler came within seconds of firing on a similar type of attack on February 13, 1988. This led to another series of talks between Iraq and the U.S. designed to avoid such incidents. Philadelphia Inquirer, January 3, 1988, 20A; Washington Post, January 28, 1988, p. A-21, February 17, 1988, p. A-15; New York Times, February 14, 1988, p. 1; Christian Science Monitor, March 3, 1988, p. 10.

Washington Times, February 19, 1988, p. A-10; Baltimore Sun, February 17, 1988, p. 2A.

The new commander was Rear Admiral Anthony Less, who replaced Rear Admiral Harold Bernsen, commanding the forces in the Gulf, and Rear Admiral Dennis M. Brooks on the Iowa. The U.S. was particularly concerned with the risk of multiple lines of command because these had created serious problems during the invasion of Grenada. Reports of similar formal command changes among the European forces in the Gulf that put British, French, and Italian forces under a common command were false, although the coordination of mining and convoy efforts by all Western naval forces present in the area was steadily improving. New York Times, December 18, 1987, p. A-11; Washington Post, January 24, 1988, p. A-1.

New York Times, December 22, 1987, p. A-7.