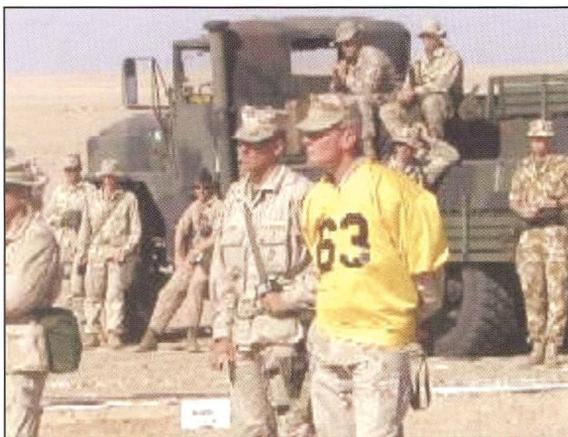


This company specialized in equipment decontamination, and was well organized and equipped. Immediately upon being briefed on the scheme of maneuver and concept of operations, the 101st Chemical realized that they would also be expected to do decontamination of personnel as well. After mission analysis and detailed planning, they were told to be prepared to decon chemical casualties, evacuate chemical casualties from AAVs, and bury contaminated remains. Each new mission got a resounding "Hooah" and the company reviewed the procedures in the manuals or made it up as they went along. At one point the Soldiers of the 101st asked, "While we are doing decon, who is providing our security?" The response went, "Well, in the Marine Corps we have a saying that every Marine is a rifleman...welcome aboard." The hard-chargers from the 101st gave another "Hooah" and embarked on a two-week crash course on infantry training, immediate action to convoy ambushes, and basic tactics. The Company Commander, Captain Kerr, and First Sergeant Edick were committed to mission accomplishment, and what the soldiers lacked in formal infantry training, they made up for in enthusiasm. A strong bond developed between the two services and by the end of the campaign, the Marines of the AA battalion were referring to the 101st Chemical as the 'Devil Doggies'.

Another addition to the Marine's task organization was six M93A3 Nuclear, Biological, and Chemical Reconnaissance Systems, or 'Fox Vehicles'. Six decon sections from the Joint NBC Regiment of the 1st UK Division were also made available. These units would provide a robust and accurate detection capability. Collectively, the NBC team would be prepared to accurately detect any chemical or biological agents employed by the enemy and conduct operational decontamination as required.



Marines observe the first 'Jersey Drill' near LSA Matilda in central Kuwait. The Jersey Drill helped key participants in the Opening Gambit visualize their role in the attack.

Rehearsal of Concept – Jersey Drill Number One

The first comprehensive rehearsal for the Opening Gambit was held on 7 February in Camp Matilda, Kuwait. Positioned on a gently sloping hillside nestled between sandstone outcroppings, the natural arena was made into a miniaturized version of southern Iraq and Northern Kuwait, at a scale large enough for human players to walk through the steps of the attack. This was the first of the 'Jersey drill' series that was born from the Lego Drills conducted earlier in CONUS.

In stunned disbelief, the hard-charging terrain model detail, directed by Master Sergeant Mark Choates and Staff Sergeant Ken Costine, watched as the boundaries of the sand table were laid out, 80 meters on a side. The team quickly designated the project the 'mother of all terrain

models' and commenced digging. The hard charging team spent several days at LSA-Matilda constructing a terrain model depicting major terrain features, objectives, enemy units, and control measures for the first 96 hours of the operation, down to the Kuwaiti berms and the electric fence. Representatives from all Division units attended, as well as key leaders from 3^d MAW, the MEG, 1st Force Reconnaissance Company, the UK 1st Armoured Division, Task Force Tarawa and the MEF.

Individual commanders represented their units by donning their respective color and number coded jerseys, and then talked through their initial organization, task, and purpose. The RCT commanders each talked through his scheme of maneuver while the subordinate battalion representatives simultaneously walked the terrain model. Through a series of exercise turns, the entire Opening Gambit was rehearsed. The exercise successfully oriented participants and attendees to the Division's scheme of maneuver and reinforced the Commander's intent.

The Jersey drill also helped the situational awareness of senior commanders. Major General Stalder, I MEF Deputy CG, Major General Amos from 3^d MAW, and Rear Admiral Kubic from the MEG each emphasized the critical importance of these rehearsal events. General Amos noted that he would have more assets than any other Wing in history to support I MEF ground forces, and was glad for the opportunity to gain situational awareness for his aircrews. Major General Stalder noted the importance of the drill in helping to integrate I MEF planning and efforts.

Training and Calibration in Kuwait

The Division continued a robust plan of combat training, weapons calibration, and weapons zeroing at the extensive ranges in western Kuwait. The Udairi range complex constituted a significant portion of the land area of western Kuwait. It took an integrated, detailed effort from division, regiment, and battalion staffs to coordinate training on these ranges. Deconflicting training with Army units and the Kuwaitis proved difficult at times, but with a common goal of combat readiness, all parties worked through the issues of airspace coordination, surface danger zones, and safety limits. In many cases, the RCTs coordinated to set up their own small arms ranges just north of the LSAs. This allowed the Marines the opportunity to fully integrate and test the new weapons systems they had recently received.



Marine snipers calibrate their weapons on hasty firing ranges set up near the LSAs in central Kuwait.

One of the significant issues for the Division was calibration of artillery and tank systems. 11th Marines conducted a full-court press to ensure accurate ammunition powder/projectile and muzzle velocity data was obtained, a calibration process that ensured the combinations of ammunition and firing conditions produced the most accurate artillery fires possible. Calibration required firing rounds of each expected type, with various propellants, and carefully measuring muzzle velocities using radar. This can be a tedious process, but is a critical requirement for first-round accuracy in war. Later, in combat, the Marines of the Division learned it was well worth the time and effort to achieve the last critical points of accuracy when required to silence hidden enemy mortars, urban ambushes, and other targets. These were often prosecuted at 'danger close' ranges, and with a high potential for friendly or civilian casualties.

For tankers, this calibration was equally important in order to ascertain the firing characteristics of the various combinations of ammunition and conditions. For both artillery and tank ammunition, however, the Division faced significant challenges in getting war reserve ammunition released for the calibration process. Because of concerns with expending war reserve stocks prior to combat and environmental concerns with depleted uranium ammunition expenditure, getting tank ammunition released for calibration proved difficult.

A similar issue arose with the Tube-launched Optically-tracked Wire-guided (TOW) antitank missiles. The Marines had conducted all their training using the TOW-IIA, with the TOW-IIB reserved for war stocks. When the Marines opened the crate to fire TOW-IIB's for the first time, there were a number of misses. This caused significant concern that the new missiles were defective in either software or hardware. Repeated firings could not determine the cause. Finally, CWO Charles Colleton, the RCT-5 Weapons Officer, discovered the cause of the misses. Because the Marines had only fired the TOW-IIA in training, they had not adjusted to the different aim point required when firing the TOW-IIB. Because the TOW-IIB uses a significantly different flight profile and attack mechanism, using the sighting method the Marines were used to with the TOW-IIA caused the missile to overfly the target. Although easily corrected once discovered, this incident was a warning of the risk of reserving new weapons for combat only and not fully integrating them into the Marine's experience. 'In case of war, break glass' weapons systems can have dangerous unintended consequences.

Each of the battalions trained their TOW Marines to overcome this potential gunnery error. Chief Warrant Officer Thomas Parks, the Weapons Officer for 1/4, trained two Marines, Sergeant David Smith and Sergeant David Kaufer, to serve as 'TOW Snipers'. These Marines received focused training on TOW-IIB gunnery and were allocated all of the battalion's TOW-IIB missiles, while the remaining TOW gunners were allocated TOW-IIA missiles. Iraqi troops and foreign paramilitaries would soon know firsthand the tactical prowess of these two Marines.



Marines test-fire a Javelin missile in Kuwait. This would be one of few opportunities many gunners would have to gain hands-on experience with this lethal new weapon.

The Combat Engineers knew that combined arms rehearsals were the key to any successful deliberate breaching operation. While the breach of the Kuwait border obstacles was expected to be lightly opposed, the breach of the Iraqi border obstacle system was more uncertain. To ensure the quality and thoroughness of the Division's preparations, CEB constructed a full-scale mockup of the Kuwaiti border obstacles near LSA-Ripper. Each Obstacle Clearing Detachment (OCD) performed combined-arms rehearsals through the breach lanes with their supported battalions. The rehearsals allowed the engineers and infantry to practice the complexities of a deliberate breach and work out timing and control issues prior to combat. During this period, the new Towed Assault Bridges (TABs) arrived in theater, and CEB and MARCORSSYSCOM trained RCT-5 and RCT-7 on the employment of this new type of bridge over wet and dry gaps.



Marine Engineers created a full-scale mockup of the border obstacles to rehearse breaching and bridging techniques.

The training also had a material cost on men and machines. The Division carefully balanced the desire to train with the necessity of keeping all of the AAVs, tanks, and other equipment ready to reorient to the north. Maintaining the AAVs was a special challenge, as the Division was in the process of transitioning from the old AAV7A1 'straight leg' track, to the upgraded model, the 'RAM/RS'. Old 'straight leg' parts were no longer stocked in the supply system in anticipation of the completion of the upgrades.

Many of the vehicles contained on MPS ships, however, were the old models. For the year prior, 3^d Assault Amphibian Battalion had systematically built up very large Pre Expended Bins (PEBs) of parts. These stocks of high usage, low cost items also included large stocks of oil, fuel, and air filters. The Amphibian Vehicle Test Branch (AVTB) also gave the AA battalion all of its 'straight leg' parts to add to their stocks a few months prior to their deployment. The battalion also stockpiled parts scrounged from AAVs going to the depot for upgrade. The battalion embarked and mobile loaded all these parts and expendables and brought them into theater. The Division immediately began low mileage mechanized infantry training in the local Kuwaiti desert, designed to limit wear and tear. Despite the low mileage, this hard training expectedly took a toll on the MPS amtracs that had sat in storage on ships at sea. The AAV Company and battalion maintenance crews worked often around the clock to keep all these vehicles in top running condition. The supply system for repair parts in Kuwait was not functioning anywhere near capacity and the only parts to be had were the ones the battalion had embarked themselves, or parts selectively interchanged off of dead AAVs. A month later, 3^d AA Battalion's parts and supplies were down to only 10% remaining. Because of a lack of resupply in theater, a good share of the items they had painstakingly laid in for combat operations had been required just to ensure the Division was ready to cross the LD at a moment's notice. The repair parts challenge, identified early on, would continue to bedevil Division and CSS Marines in the months ahead.

The Desensitization Plan

The Division's actions in Kuwait would likely be observed and reported by a well-developed Iraqi intelligence network, including observers on *Jabal Sanam*. Nothing the Division did in Northern Kuwait north of the LSAs would go unobserved by the enemy. By the same token, this network was susceptible to deception, or saturation of the network with repeated reports of US forces repositioning in Kuwait. The G-2 laid it out quite simply, "Since we cannot hide, we must deceive." The Division crafted a 'desensitization' plan to accustom the Iraqis to large-scale ground movements in Kuwait. This desensitization plan became a significant theme of the Division's planned rehearsals prior to crossing the Line of Departure.

Since late February, the Division had been conducting rehearsals across Northern Kuwait. Combat elements of the Division in transit between the LSAs and Udairi range areas began to take detours through more northern areas. Small units of Marines became a regular presence near the Kuwaiti berms (At one point, this presence became too aggressive when the United Nations (UN) observers complained vigorously to the UN Headquarters, and alerted the international press. After this, Marines pursued their reconnaissance in a less overt manner.) The Division also took the opportunity to habituate the Iraqis to the presence of the Pioneer UAV, as missions began to fly over southern Iraq.

The Division continued to lean forward, and took advantage of each day of diplomatic maneuvering as an opportunity to train for military action. This training included several CP displacements for the Division Forward and Main CPs as well as all

of the RCTs and separate Battalions. During combat operations, the Division planned to employ the Main and Forward CPs in a leapfrog manner, each displacing as far forward as possible in an attempt to extend communications ranges as the Division moved into and through Iraq. As each CP displaced in succession, it would travel just behind the lead element of the column to ensure Division C2 was continuous. The idea of 'desensitizing' the Iraqi border forces became an operational reality, as the Division conducted a CP displacement exercise on 23 February.

Although moving the CPs and maneuver units forward to the border area then moving back to the LSAs was designed to have the affect of desensitizing enemy observers both in Kuwait and on *Jabal Sanam*, these movements to and from the training areas also provided excellent opportunities for all CPs to refine their movement plans, convoy procedures, CP setups, communications support plans, communications equipment installations and operation. During this drill, the Division moved the Forward CP to a position in northern Kuwait. Once the Forward had assumed control, the Division Main CP displaced to a point even further to the north, at the outer limits of the range fans of the Iraqi's long-range tube artillery (and well within the line-of-sight from *Jabal Sanam*.) After operating for several days from this location, the Division Main retrograded to Camp Matilda. The Division Forward followed, returning to Camp Matilda on 1 March. As they departed these northern Kuwait areas, the Marines registered the terrain in their minds. All knew that the next time they stood on this ground, it would be to direct the Division across the LD into the face of the enemy.



Even as war tensions heightened, Marine Corps business continued as usual. Here, a promotion ceremony is held at the Division's Forward CP, very near the Iraqi border.



The Division Forward CP exercises in northern Kuwait as part of the 'Desensitization' plan. This isolated stretch of desert was referred to by the Marines as 'Camp Nowhere.'

As part of the desensitization plan, the Division developed an Emissions Control (EMCON) plan that ensured there would be no unexpectedly abrupt change in the level of the Division's communications during any portion of the rehearsal phase. Lieutenant Colonel Brian Barton, the Deputy G-6, drafted a series of EMCON standards. These EMCON Standards were designed to control the Division radio emissions to support the Division scheme of maneuver while also providing the ability to mask movements by limiting the Iraqi Signals Intelligence gathering ability. Prior to the commencement of hostilities, the Division also implemented the I MEF G-6 Information Assurance plan called 'River City'. This plan imposed three different security levels on non-secure data transmission within the MEF. The rotating restriction on the non-secure data was designed to keep a level of uncertainty on the network as a primary defense against hackers from outside of the Division and I MEF.

Final Preparation Efforts - Intelligence

As a result of the successful teaming effort with 3^d MAW at the Jersey drills, another successful teaming effort between the Wing and Division was born. Major General Amos had been a tremendous advocate for the Division to date, and the employment of VMU was no exception. Through the strong support of Gen Amos, the VMU employment scheme was finalized, with both VMU's flying in direct support of the Division as they seized their initial objectives. As a result of the shared vision, a special relationship was established between the Division and both of the Marine Corps Pioneer Unmanned Aerial Vehicle (UAV) squadrons (VMU-1 and VMU-2.) These squadrons

would be operating in direct support of the Division for much of the operation, leapfrogging forward to fly off improved airstrips, paved roads, and even dirt strips. The cooperation and aggressive spirit of the VMU's were to play an important role in supporting the Division fight. The Division G-2 convened a special UAV planning conference, where the VMU staffs and the Division G-2 were able to devise a support scheme that included the attachment of Remote Receive Teams (RRTs) directly to two of the Division's maneuver RCTs and the Division CP. This placed an additional burden on the G-6 to establish an unplanned communications link to the VMU Squadrons in order to tie them into the Division's voice and data systems, as they would typically be too far forward to receive support from 3^d MAW during combat operations. For the Opening Gambit, this allowed for a direct support relationship between each attacking RCT and a supporting VMU squadron. An airfield was identified near Camp Matilda in central Kuwait that would allow the Pioneers to cover the Division's initial objectives. An airfield was identified in Camp Matilda in central Kuwait that would allow the Pioneers to cover the Division's initial objectives. In March, permission was granted for UAV operations over Iraq, and the VMUs began providing the Division with their first real-time look at the battlespace. Having both VMUs fly in support of the Opening Gambit was essential. The Division was willing to accept the corresponding gap in Pioneer coverage afterward, as the VMU squadrons displaced from the southern airfield to positions that could support the attack further to the north.



The Pioneer UAV system was used extensively in direct support of the Division. The VMU squadrons gave the Division its first look at the battlespace in real time.

Final Preparation Efforts - Force Flow

As February turned to March, units anxiously awaited the arrival of Follow On Echelon (FOE) shipping to round out their combat requirements. The Division had received most of its combat equipment from MPS ships, amphibious shipping, or inter-theater airlift, but critical components remained on FOE shipping. The FOE was carried on a mix of US Naval Service (USNS) and contracted ships, and included much-needed 1st and 4th Marine Division communications equipment, the balance of weapon systems, and a large portion of unit logistics trains. RCT 1, in particular, looked forward to the arrival of the AAVs that would mechanize two of their battalions. Faced with the possibility that the FOE shipping would not arrive before G-day, Division planners redistributed medium lift trucks from RCT-5 and RCT-7 to motorize all of RCT-1's battalions. This belt tightening had a ripple effect, as the RCTs took most of the trucks

from their logistics trains. The burden of carrying their now-stranded supplies fell to CSSG 11 who also awaited assets from the FOE. Colonel Pomfret's gung-ho team took this challenge in stride, just as they had the previous ones. Much to the relief of operators and logisticians across the Division, the arrival of the *USNS Soderman* on 12 March and the *MV Greenlake* on 17 March eased this burden by bringing over 140 AAVs and hundreds of trucks. The continuing diplomatic dialogue had provided time that the Marines took full advantage of. The much needed assets that these and other FOE ships brought enabled the Division to move itself in a single lift and supported the equipment requirements of multiple CPs operating independently of each other. This capability would be essential in the fight on the road to Baghdad, unleashing significant Division fighting power.

TIME	EVENT	RED						DALLAS	GREEN					ORANGE			
		1	2	3	4	5	6		1	2	3	4	5	1	2	3	4
H-8	Salwan takedown																
H-6 hrs									A Co, 3d LAR		A Co, 3d LAR		RCT-7 OCD's			RCT	
H-5:45																	
H-5:30		RCT-5 OCD's/ 1st LAR															
H-5:15																	
H-5:00																	
H-4:45		RCT-5 LAR Element															
H-4:30																	
H-4:15																	
H-4																	
H-3:45																	
H-3:30									3/11	5/11	5/11						
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H+2																	
H+2:15																	

The G-4's Breach Lane Movement Matrix gave traffic management and logistics Marines a reliable indicator of the sequence of units crossing the breaches.

Final Preparation Efforts - Logistics

The G-4 joined in the staff effort to refine the first hours of the Opening Gambit as depicted on the Execution Checklist. Led by Major Chris Snyder, the G-4 produced the breach lane movement matrix for flow of units through the breach into Iraq. This single page document graphically depicted when, and by which route, every US and UK unit would cross the LD. It would prove especially useful for tactical movement control Marines who could know at a glance how to deconflict movements at their breach lane.

It became clear that fuel would be the Division's greatest concern in the first 48 hours, so the G-4 staff reviewed and updated its fuel culminating point analysis. Taking each unit's equipment density list, they projected fuel usage in order to more precisely place Rapid Refueling Points (RRP). With more than 5000 Division vehicles (plus those non-Division vehicles from units in direct support of the Division) consuming 220,000 gallons of fuel daily, precision was crucial. Set up in an assembly-line fashion, the RRP's were important as pre-staged fuel distribution points, positioned at critical points in the fight. RRP's would serve as a transfer points for fuel, water, food, and ammunition from the CSSG to the supporting CSSCs and their units. This rigorous analysis revealed the need to focus on RRP-7 near Jalibah airfield in order to sustain the Division's momentum during the Opening Gambit. CSSG-11 displayed the first of many instances of operational flexibility and readjusted their concept of support. The addition of Highway 1 to the Division's scheme of maneuver not only provided new maneuver opportunities, but also provided CSSG-11 options for locating and establishing RRP's that Iraqi forces would have a hard time locating. It also obviated the requirement to send half-loaded fuel and ammo trucks over unimproved roads that would have severely limited the speed of advance by Division forces. Shifting the anticipated Division main effort to Highway 1 also dictated that RCT-1, operating along the Highway 7 corridor, would have to exist on a radical 'logistics light' diet in order to accomplish its mission of fixing the Baghdad RG Division in Al Kut.

By this time, most of the CSSCs had been fully integrated into the RCT they were supporting, fully participating in staff meetings and planning sessions. The habitual relationships thus established were crucial. The CSSCs were also doing their own final preparations for crossing the LD. In addition to completing combat skills training, they had been providing CSS on a daily basis. In the final days before leaving the dispersal positions, the CSSC's ensured each RCT was fully supplied, giving them a 48-hour capability to operate without any re-supply. To enhance the logistics capability of the CSSCs, they were augmented by a detachment from CSSB-10. By adding this extra capability, the CSSCs were able to carry enough additional supplies to completely sustain the Division for the first 96 hours of the fight.

Current Operations - Final Adjustments

By late February, the Division was combat-capable, and prepared to respond to the President's direction, or to react if the Iraqis decided to initiate actions themselves. RCT-7 and RCT-5 were both combat capable, each having at least three mechanized/tank battalion maneuver elements (plus supporting capabilities.) RCT-1 was still steaming to Kuwait on schedule and 11th Marine Regiment had two battalions with five batteries each and its organic counter-fire capability.

When the offload of the FSS was completed on 13 March, the Division had the capability to mechanize two additional infantry battalions, and it gained the requisite mobility for both the Division's Main CP and 11th Marine Regiment's Main CP. The additional 'Cannon Cockers' allowed 11th Marines to reorganize into four battalions. Additionally, the US Army's 1st Field Artillery Detachment with two 'Firefinder' Q-37



At Camp Matilda, the CG, ADC, and Regimental Commanders make final preparations.

radars joined the 11th Marines team. By the first of March, RCT-1, 1st CEB, and 1st Reconnaissance Battalion had also become combat ready with the offload and integration of their remaining gear from the FSS West ships and the arrival of ATF West. The arrival of additional FOE shipping would continue to enhance the Division's combat capabilities. Piece by piece, the Division's combat power came together at the 11th hour. The Marines could always use more time to integrate and train with fully equipped units, but were now ready to fight when the call came.

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The Division's C2 plan was flexible enough to handle any number of situations that might arise. As the plan stood, the Division Forward CP would move forward and

establish control immediately upon receipt of a Warning Order. The Forward CP would be in control while units pushed to their Dispersal Areas, allowing the Division Main CP to break down and displace. The Main CP would be pushed as far forward in northern Kuwait as possible, in a risk trade-off between communications coverage of the battlespace and the threat of enemy indirect fires. The ability of the Division Main to move to its battle position without drawing indirect fire would depend on the success of the desensitization plan. The Main CP would have time to ‘burn-in’ communications links and gain situational awareness while the Division moved from Dispersal Areas to Attack Positions. The Main CP would also coordinate actions against the *Jabal Sanam* outposts. The Division Forward CP would break down during this period and stage with RCT-7, prepared to move across the border quickly to establish the first Division CP in Iraq. If the desensitization plan had been effective, these movements would match the patterns the Iraqis had seen previously, and would not draw a large reaction from them. The Division adjusted its expected timing to the new attack dates.

Jersey Drill Two – Amphitheater in the Desert

The second Jersey drill was held just east of LSA-Matilda on 27 February. This drill was to be the capstone event for the planning efforts up to this point. The terrain model was to be expanded and the ground prepared such that it would have a greater ‘amphitheater’ effect. This time, no mere shovels and picks would do, and the Division’s engineers prepared the ground with D-7 bulldozers. By pushing around a great deal of sand, they expertly constructed a multi-tiered amphitheater in the desert, complete with an angled sand table surface, 100 meters on a side, with plenty of seating around the perimeter. There was a ‘vulture’s row’ for key leaders, allowing them to look down on



The second Jersey Drill was the capstone event for planning efforts. The scale of the terrain model required a major preparation effort on the part of Division engineers and intelligence Marines.