

**Center for Army Lessons Learned  
News From The Front**

**PEGASUS III  
Tactical Recovery of Aircraft and Personnel  
Exercise (TRAPEX):  
Developing Proficiency in Joint Recovery**

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CALL LNO to ARCENT Forward  
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**A Marine Provides Perimeter Security While AH-64s from the 3-6 CAV (U.S. Army) Circle Overhead**

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*Combining the capabilities of two or more components gives the Joint Force Commander (JFC) a very potent tool for conducting Personnel Recovery (PR). The successful use of joint capabilities requires preparation and planning for forces to jointly conduct the same PR mission.*

~ Joint Publication 3-50  
Personnel Recovery, Page I-7

## **Introduction / Background**

(U) Joint Publication 3-50, *Personnel Recovery*, defines a Tactical Recovery of Aircraft and Personnel (TRAP) operation as a mission specific to the United States (U.S.) Marine Corps (USMC). In the event that a tactical situation prohibits a response by search and rescue (SAR) assets, the USMC conducts a TRAP mission, using any combination of air, ground, or marine assets, in order to complete the recovery of personnel, equipment, and aircraft. The TRAP mission differs from a SAR mission in three key areas. First, TRAP missions do not include protracted searches to locate isolated personnel. A TRAP mission occurs once the isolated personnel or aircraft has already been located. Second, TRAP missions normally occur in a medium-to-high air threat environment. Third, TRAP elements may be employed for non-recovery missions, and are re-tasked to perform recovery missions as necessary.

(U) The Special Purpose Marine Air-Ground Task Force - Crisis Response - Central Command (SPMAGTF-CR-CC) is a Marine Air-Ground Task Force, as part of the 5<sup>th</sup> Marine Expeditionary Brigade (MEB). The SPMAGTF-CR-CC is a self-mobile, self-supporting, self-sustaining force. The SPMAGTF-CR-CC is U.S. Marine Central's (USMARCENT) crisis response capability in the U.S. Central Command (USCENTCOM) Area of Responsibility (AOR). The task force conducts crisis response, contingency operations, and theater security cooperation through a variety of tasks including embassy reinforcement, TRAP, developing partner nation forces, conducting foreign humanitarian assistance, and operations with Joint, Interagency, Intergovernmental, and Multinational (JIIM) organizations.

(U) The 3<sup>rd</sup> Squadron, 6<sup>th</sup> Heavy Cavalry Regiment (3-6 CAV) is part of the 40<sup>th</sup> Combat Aviation Brigade (CAB). One area in which 3-6 CAV desired to further their experience was in the arena of Joint Fires and Joint Operations. Though the 3-6 CAV has conducted numerous close combat attack (CCA) exercises in the past, and trains their aircrews for conducting joint fires, the 3-6 CAV only recently begun conducting joint exercises with the U.S. Marine Corps.

## **PEGASUS III (TRAPEX) Mission**

(U/FOUO) In January the SPMAGTF-CR-CC and the 3<sup>rd</sup> Squadron, 6<sup>th</sup> Heavy Cavalry Regiment conducted a Tactical Recovery of Aircraft and Personnel Exercise (TRAPEX). The exercise

parameters were:

- Purpose – Conduct a TRAPEX using a TRAP element in a land environment, conduct joint close air support (CAS) using U.S. Army AH-64 Apache aircraft and a U.S. Army RQ-7 Shadow, and ensure that communications and coordination architecture between U.S. Army aircraft and U.S. Marine Corps forward air controllers (FAC) are functional in order to facilitate the recovery of equipment and the destruction of a “downed aircraft”.
- Key Tasks in this exercise:
  - Movement to training area
  - Infiltration of a SPMAGTF-CR-CC TRAP element by MV-22 Osprey
  - Arrival of 3-6 CAV AH-64 Apaches
  - Security of “downed aircraft” site by TRAP element
  - Swift communication between the TRAP element and 3-6 CAV
  - Retrieval of equipment and destruction of “downed aircraft”
  - Exfiltration of the TRAP element by V-22 Osprey
  - ENDEX
- End-state – “Downed aircraft” equipment recovered expeditiously, “downed aircraft” destroyed, and all personnel, aircraft, & vehicles returned safely.

### **PEGASUS III (TRAPEX) Scenario**

(U/FOUO) For the PEGASUS III (TRAPEX) exercise, the scenario involved an U.S. Army UH-60 that had “crashed” in the training area. The “downed aircraft’s” wingman initiated a radio call to the 40th CAB, informing flight operations that the UH-60 had crash-landed. The wingman had recovered the flight crew of the “downed aircraft”, but had to depart the area immediately because of the presence of enemy forces.

(U/FOUO) In the scenario, the 40th CAB notified U.S. Army Central (USARCEN) of the “downed aircraft” and the requirement to retrieve equipment from the “downed aircraft”. USARCEN submitted a request for a TRAP mission to CENTCOM due to the enemy threat in the area and the need to retrieve equipment. CENTCOM coordinated the request with USMARCENT, which then flowed to the 5th Marine Expeditionary Brigade, and finally to the SPMAGTF-CR-CC. The SPMAGTF-CR-CC tasked the TRAP element to execute the mission. The SPMAGTF-CR-CC coordinated for temporary battlespace around the objective site, and for attack aviation support from the 3-6 CAV, under 40th CAB.

(U) Upon execution of the exercise, the activation of the scenario and coordination were conducted directly between the SPMAGTF-CR-CC and the 3-6 CAV. A myriad of factors (such as terrain, distances, equipment, enemy action, etc.) influence the time required to execute a TRAP operation. ( All the times listed for this exercise execution are approximate and only reflect this specific exercise, and are not indicative of any real-world TRAP operation.)



Two USMC MV-22 Ospreys insert the SPMAGTF-CR-CC's TRAP element on the objective

### **PEGASUS III (TRAPEX)**

(U) The TRAPEX Observer-Controller-Trainer (OC/T) element departed for the training area at 1130 on the morning of 25 January. Upon arrival, the OCT element emplaced wreckage to simulate the "downed aircraft" for the exercise. At 1300, the exercise (OIC) briefed the OPFOR element on the exercise scenario and timeline.

(U) Personnel from the 82nd Air Support Operations Squadron (ASOS) performed the role of the OPFOR, with 17 Airmen and 5 Mine Resistant Ambush Protected (MRAP) All-Terrain Vehicles (M-ATVs) for the exercise. The OIC divided the OPFOR into a mortar team, a team of M-ATVs to the west, two teams of OPFOR dismounts, and a team of M-ATVs to the south. Following the completion of all preparations and the staging of the OPFOR elements, an exercise radio call was executed, reporting the downing of an U.S. Army UH-60 and initiating the TRAPEX.



TRAP Element Preparing to Move to the "Downed Aircraft"

(U) Once the "downed aircraft" report was sent, the OC/T element moved to the landing zone (LZ) and waited for the TRAP element. At approximately 1530, two U.S. Marine Corps MV-22 Ospreys,



Marines Transporting a Notional

attached to Marine Medium Tiltrotor Squadron 268, inserted the TRAP element to the east of the reported location of the “downed aircraft”. The TRAP element began receiving notional mortar fire from the OPFOR before the Ospreys vacated the LZ. At approximately 1533, the two MV-22 Ospreys departed from the LZ and the TRAP element began moving west towards the reported location of the “downed aircraft”. At approximately 1535, four AH-64 Apaches from 3-6 CAV arrived at a location approximately five kilometers south of the TRAP element.

(U) After an approximate 200-meter movement towards the objective, the TRAP element received their first casualty, due to notional mortar fire. The TRAP element secured the “casualty” onto a stretcher and continued movement to the objective. Concurrently, the TRAP element identified two OPFOR M-ATVs 600 meters to the south, on open terrain and moving towards their location. The TRAP’s Forward Air Controller (FAC) communicated with the AH-64s from 3-6 CAV to engage the OPFOR M-ATVs to the south, and then locate and engage the OPFOR mortar team that was believed to be located north of the TRAP’s position.

(U) Coordination with the AH-64s, providing medical treatment for the wounded Marine, and the continuing notional mortar fire resulted in the TRAP element significantly slowing its movement and causing them to lose momentum. At approximately 1550, the TRAP element received another casualty from the notional mortar fire.

(U) Following the second casualty, the TRAP element’s leadership accelerated the unit’s movement, seized the objective, and commenced sending CCA missions to the four 3-6 CAV AH-64s to suppress the OPFOR indirect fires. The TRAP element extended their perimeter and commenced suppressing the dismounted OPFOR with direct fires. Once the “downed aircraft” equipment had been secured, the explosive ordnance disposal (EOD) team with the TRAP element set charges to notionally destroy the aircraft wreckage.

(U) At approximately 1710, the TRAP element moved back to the LZ and requested exfiltration by the two MV-22 Ospreys. While moving to the LZ, the FAC maintained two AH-64s on station to the south and another two AH-64s on station to the east. At approximately 1730, the MV-22 Ospreys departed the LZ with all personnel and equipment from the TRAP element onboard.

(U) In conclusion, the TRAP element successfully secured the “downed aircraft”, retrieved the equipment, notionally destroyed the “downed aircraft”, and executed a total of six CCA missions with the four 3-6 CAV AH-64s.

## Best Practices and Lessons Learned

1. (U) The importance of Joint Training Exercises: PEGASUS III was the SPMAGTF's first equipment recovery TRAP exercise (non-personnel recovery), and the first TRAP exercise that integrated U.S. Army AH-64 Apaches and a RQ-7 Shadow. The significance of conducting joint training exercises cannot be understated. Real world operations involving joint services occur more often than not, and it is very likely that an actual TRAP operation will include multiple services with varying levels of understanding of TRAP. Understanding and appreciation of dissimilarities between the services will assist unit leaders in communicating the various courses of action (COAs).
2. (U) Train for Adaptability: Conducting training exercises in different environments with other services is an excellent method to force U.S. Marines and Soldiers to adapt. Training is vital to developing quicker reactions and proficiency in war. Greater proficiency can build habitual behaviors. Routinely varying the training scenario and services involved strengthens decisiveness in execution and simultaneously reduce the penchant for indecisiveness when faced with uncertainty.
3. (U) Equipment Recovery: Conducting TRAP in a non-personnel (PR) recovery scenario is very different than conducting as a personnel recovery scenario. PR scenarios are executed quickly because once the TRAP element locates the isolated personnel, they immediately conduct an exfiltration. In an equipment recovery scenario, the TRAP element must spend a much longer amount of time on the objective in order to secure the site, secure the equipment, and potentially destroy any equipment that will be left behind. Units conducting TRAP exercises almost always conduct PR scenarios and rarely focus on the recovery of equipment. This aspect of TRAP should be trained and exercised more often.
4. (U/FOUO) Rehearsals for "Destroying Downed Aircraft":
  - The required altitude and horizontal distance from the explosion from "destroying the downed aircraft" should have been known ahead of time. The SPMAGTF-CR-CC TRAP element did not have this information readily available, and therefore allowed the 3-6 CAV AH-64s to approach too close to the "downed aircraft" three minutes prior to EOD team's simulated demolitions explosion.
  - All aspects of recovering/destroying equipment, and the coordination that goes into such an operation, must be incorporated into TRAP mission planning. Additionally, various options could have been employed for destroying the "downed aircraft", such as utilizing the AH-64s that were available to the TRAP element. Standardized planning processes for TRAP missions involving downed aircraft can easily address these issues.
5. (U/FOUO) Understanding Joint Fires:
  - The U.S. Marine Corps FAC used a CCA 5-Line to communicate with the 3-6 CAV AH-64s, rather than the standard CAS 9-Line customarily used in U.S. Marine Corps operations. The FAC was familiar with the CAS 9-line version however.
  - The FAC's knowledge of joint fires resulted in effective communication to the 3-6



CAV AH-64s with no inter-service language barriers to inhibit the prosecution of the OPFOR.

6. (U/FOUO) Equipment Checks: The TRAP force could not receive the SHADOW feed from the 3-6 CAV because the TRAP force failed to bring the Army compatible antenna equipment with them. The lesson here is for the TRAP force to re-examine their equipment checks prior to exercises/missions, to ensure joint interoperability.
7. (U) Understanding Small Differences:
  - During one point in the TRAPEX, the nose of an AH-64 was pointing towards friendlies just prior to a simulated engagement of the OPFOR. The USMC FAC saw the aircraft's orientation and was about to abort the mission, until he realized the AH-64's guns were pointed at the OPFOR. USMC FACs, who normally operate with the Marine Corps' AH-1Z Super Cobra/Viper, train to give heading restrictions to aircraft prior to target engagement, in order to avoid and reduce such confusion. In contrast, U.S. Army AH-64 Apaches routinely engage targets while the aircraft is flying in a direction away or abreast of the target.
  - Familiarization with the tactics, techniques, and procedure (TTPs) of the other services aids in reducing such misunderstandings. Additionally, rehearsals involving FACs and pilots afford the opportunity to identify these small differences.

### **The way forward**

(U) In view of the success of the PEGASUS III TRAPEX, and the amount of lessons learned, supplementary joint TRAPEXs should be scheduled. Additionally, other services should continue to be included in the exercises. The nature of TRAP missions necessitates rapid reaction with all available assets. Given those parameters, it is extremely likely that a USMC TRAP element would conduct a TRAP mission supported by elements of the U.S. Army, Navy, or Air Force.

### **Conclusion**

(U) Overall, the PEGASUS III / TRAPEX was an excellent training exercise for the U.S. Army's 3-6 CAV and the U.S. Marines Corps' SPMAGTF-CR-CC. The SPMAGTF-CR-CC further developed their TRAP procedures, as well as successfully integrating an additional level of complexity in the form of U.S. Army aircraft. The joint exercises between U.S. services are vital to ensuring the successful recovery of aircraft and personnel in a real world incident. The SPMAGTF-CR-CC and 3-6 CAV have made major accomplishments in building joint interoperability, and these units will undoubtedly build upon this achievement.

*"Documenting the training and interoperability of Joint Forces in theater will be increasingly relevant as we reduce force strengths and therefore increasingly rely on each other to meet training objectives and desired Commander's end-states."*

Captain, USMC  
SPMAGTF-CR-CC Operations