

# Space Operations Officers Visit New Mexico Facility

By Tom Coleman, FWC DCD Training

Eighteen students and four instructors from last summer's first Space Operations Officer Qualification Course (SOOQC) made the long journey to New Mexico's Kirtland Air Force Base in July on the first of three site visits that are part of the 11-week course.

Since the start of class, the students, all Army officers, were exposed to a demanding classroom curriculum at the Future Warfare Center, Directorate for Combat Development (FWC DCD) training facility in Colorado Springs, Colo. The students participated in a total of three site visit trips to various Space agencies in the Continental United States to receive hands on training and to give them an overview of the full scope of some of the capabilities of selected Space organizations.

The students were accompanied by Tom Coleman, Dave Berge, Lenny Gehrke, and LTC Jorge Rangel, all part of the FWC DCD Training Cadre. July 6 - 7 were spent visiting various Space-mission oriented units on the Air Force Base. The first place students were able to visit was the Big Crow Program Office where they received an overview briefing and facilities tour.

They learned that the Big Crow Program was established in 1996 with a charter to provide Electronic Warfare environments for testing U.S. military radio frequency sensor, communication and navigation systems. However, over the years the need to exercise ever

more sophisticated systems has led to the development of an in-house capability that far exceeds Big Crow's original charter and to a customer base that extends throughout and beyond the military services.

Big Crow's mission and capabilities now span the electronic spectrum, encompassing Electronic Warfare, telemetry, radar and electro-optical systems. Mobile and deployable worldwide, the Big Crow program offers a variety of unique capabilities to the nation's research, development, test and evaluation (RDT&E), training and commercial communities. The students were also able to visit a variety of these related organizations and learn firsthand, how Space support is provided to the warfighter.

The students then visited the Air Force Research Laboratory (AFRL) headquarters building and received an overview briefing and guided tour of the facilities. Part of the tour included the Composite Materials Lab where students asked lots of questions and the laboratory folks were quick to provide thorough and accurate answers.

In addition to the AFRL Composite Material Lab tour, the students received a briefing and tour at the AFRL's Aerospace Engineering Facility.

Located on the west side of Kirtland, the facility is a "one-stop shop" for Space experiment integration, verification and testing. Its scientists and engineers test



**Left: A lone U.S. Marine, one of the Space Operations Officer Qualification Course students contemplates a site feature during the tour at Kirtland Air Force Base, N.M.**

**Below: Members of the course pose at Kirtland Air Force Base during a recent tour of the SMDC facility on the base.**



components and payloads, integrating them for Space and near-space (high altitude balloon) flights.

The 16,500 square foot facility is equipped to provide: vibration, shock acceleration, environmental and thermal variation testing to flight components and payloads. Experimenters and contractors at AFRL's Space Vehicles Directorate conduct integrated payload testing under realistic launch and orbit environments. This facility is operated by the AFRL's Space Technology Integration and Demonstration Division. Again, students asked lots of questions and received professional answers from all the sites visited over the two days at Kirtland.

On the second day, the students were able to visit the Operations Center to take a look at Research and Development Spacecraft Operations as well as visit and talk to folks at the Department of Defense Space Test Program facility.

The students also visited the Mobile Spacecraft Telemetry, Tracking and Commanding range and the Starfire Optical Range before heading back to Colorado Springs to get ready for the Space 200 portion of the course.

Once the students completed the four-week Space 200 course, they attended another site visit, this time to Vandenberg Air Force Base, Calif., where they visited the Northrup Grumman facility to receive information about Space Technology as well as to participate in a Boeing Satellite Industry Tour. The visit to Vandenberg included site visits and tours to the 14 Air Force, Space Air Operation Center, 30th Space

Wing, 614th SIS, 2nd Range Operations Squadron, Western Range Control Center tour, Ground-based Midcourse Defense (GMD) facilities tour, Launch Control Center/Readiness Control Room, and the Missile Assembly Building. The third major field trip for the class was a week-long trip to the Washington, D.C., area where students had the opportunity to visit a variety of Space-related agencies such as SMC HQs, National Security Space Office, National Reconnaissance Office, National Security Agency, Army Space Program Office, Topographic Engineering Center, National Ground Intelligence Center and other agencies.

The field trips are an integral and vital part of each of the Space Operations Officer Qualification Course — providing hands on experiences to complement classroom instruction throughout the 11-week experience.

Tom Coleman serves as Chief, Curriculum and Faculty Development for the Future Warfare Center, Directorate of Combat Development. Coleman graduated from Brigham Young University with a Bachelor's Degree in Communications and holds a Master of Science Degree in Human Resource Management from Troy State University. Coleman enlisted in the U.S. Air Force in 1971 then entered Officer Training School in 1979 and was commissioned as an Imagery Intelligence Officer. In 1983, Coleman cross trained and began serving as an Air Force Education and Training Officer. His training assignments included tours with HQ ROTC, USAF Occupational Measurement Center, USAF Academic Instructor School (AIS), and serving as Chairman, Evaluation Department, AIS, Ira C. Eaker Center for Professional Development, Air University. Prior to his current position, he served as Senior Aerospace Science Instructor in JROTC, and was a full time instructor and Assistant Director of Faculty Development at the U.S. Air Force Academy.