

# Bicentennial Day Special Edition

## Orienteer

DEFENSE MAPPING AGENCY AEROSPACE CENTER

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1879 Photo of Arsenal Courtesy of National Archives.

*Yesterday*

## St. Louis Arsenal

### **Bldg. 36 Tour Depicts Chart Making Process**

The Open House tour in Building 36 will include eighteen separate display stations; each one depicting a phase in the processes of chart making.

The tour will be clearly marked with directional arrows to guide you along the way. In addition, tour guides will be stationed in the halls to assist you in any way possible. Exhibitors will be on duty at each display to clarify any aspects of the display, so please feel free to talk to them.

When you enter the building, you will be directed to your right to a location in Section B opposite the dispensary. Here, Stations 1 through 4 are located and will have presentations on Research, Cartographic Compilation, Engraving, Color Separation, and Feature Analysis. Actual demonstrations on the making of a terrain emboss model, air brushing and negative scribing can be observed.

You will then proceed to the "A" Section of the first floor

### Open House and Festive Day Planned

## **Rep. Sullivan To Dedicate St. Louis Arsenal Tomorrow**

Several thousand persons are expected to attend the DMAAC Bicentennial Day and hear Congresswoman Leonor K. Sullivan (Rep. Mo. 3rd District), as she delivers the dedicatory address tomorrow morning, recognizing the official placement of the St. Louis Arsenal (St. Louis Air Force Station) on the register of National Historic Places.

Several civic and government leaders will join the general public, Aerospace Center employees and Mrs. Sullivan in recognizing the Arsenal as one of the most significant historical acreages within St. Louis. The property has been a continually active military installation since the first occupants in 1827.

Four professional societies associated with the Aerospace Center have donated a large bronze plaque which will be unveiled to permanently commemorate the dedication. The societies are: American Society of Photogrammetry, American Congress on Surveying and Mapping, American Geophysical Union and the Institute of Navigation.

The property was placed on the National Register in January 1975 and official dedication ceremonies were scheduled for Armed Forces Day, May 15, 1976, to coincide with the 150th anniversary of the Congressional funding authorization (May 1826) to purchase the original Arsenal property.

Other events are scheduled hourly at the Arsenal following the dedication. These include a bicentennial concert by the Air Force Band of Mid-America, special Union and Confederate Drill team presentations, Lafayette High School Junior ROTC

Building 36 dock; military bicentennial film, "Not For Ourselves Alone", at edge of parade ground; continuous demonstration of surveying equipment, satellite observations by the Geodetic Survey Squadron and the Research Department, northeast of parade ground.

Special programs and historical brochures will be available to the public. The programs include a complete tour outline of the production areas with explanations of each station.

Open house will also be held at South Annex with the Aeronautical Information Department presenting a display of their production processes.

Food and drink concessions will be available at both installations.

Shuttle bus service will run continuously between 2nd Street and South Annex. Parking at South Annex and the use of the shuttle bus to 2nd Street is encouraged.

# St. Louis Arsenal 1826 - 1976

During the past 150 years a small tract of land on the Western bank of the mighty Mississippi River has been known by several names - Clothing Depot, Medical Depot, Recruit Depot, Chart Center, St. Louis Air Force Station - but perhaps the one title that has withstood the test of time is the St. Louis Arsenal.

The property's lineage began on May 20, 1826 when congress approved funding for the purchase of land for erection of an arsenal, "...at or in the vicinity of St. Louis, Missouri." Its formal existence began on August 3, 1827 when some 37 acres of land fronting on the Mississippi River about two miles below St. Louis were purchased for \$8,500 from the Arend Rutgers and August Chenie families.

Throughout the years the Arsenal has served as a continually active military installation. Presently it is the home of the Defense Mapping Agency Aerospace Center and the real estate is known as St. Louis Air Force Station. The size has been reduced to 24 acres with the advent of Lyon Park on the West and the U.S. Army Corps of Engineers Depot on the East. The city limits, which lay two miles to the North in 1827, now have engulf-

ed the Arsenal to make it a part of the city's southside industrial area.

As one of the major industries in the St. Louis area, DMAAC is charged with the responsibility to produce the aerospace charting products which support the nation's military services and the NASA space missions. Both the tactical and strategic aerospace forces of the services are supported with conventional charts and the gravity, geodetic and point positioning data necessary to maintain the national defense posture at its highest level.

Professional, scientific, technical and administrative skills of over 3,000 military and civilian personnel are currently required on the Arsenal grounds to fulfill the Aerospace Center mission.

Important missions to support the military forces are not unusual for the Arsenal. During the historic tract's tenure as an arsenal from 1827 to 1871 the fabrication of artillery and small arms ammunition, repair and refurbishing of artillery carriages, and repair, alteration and refurbishing of cannon, small arms, edged weapons and accoutrements were accomplished on a scale which made the Arsenal the most important ordnance installation in the West.

You will then proceed to the "A" Section of the first floor where Stations 5 through 10 provide information on Aerial Photography, Photographic Reproduction, Ground Point Positioning, Stereo Compilation, Computer Facilities and products generated from photo mapping. This group of displays will include actual precision photo mapping equipment, some of which will be in operation.

Stations 11 and 12 are located in this same area. These displays will show the multitude of Flight Information Products produced

Continued Pg. 4

ette High School Junior ROTC drill team, Cahokia Indian Dancers, Defense Mapping Agency Aerospace Center choir bicentennial concert, a cannon firing demonstration and displays, exhibits and tours of the Center which will demonstrate the chart making process. (see related article on tours this issue)

Outside exhibits include: "Two Centuries of Military Mapping and Charting" located in the dining hall at 2nd Street; half scale Parrott cannon, northeast of parade ground; DMAAC mission and products slide presentation,

couraged.

*Today*



The Arsenal from Lyon Park in 1976.



# Highlights & Sidelights of the St. Louis Arsenal



This two story stone structure was the arsenal hospital built in 1834-35. It stood approximately where the center section of Building 12 is now located. It was torn down in 1919.

## Those Who Made It Famous

The St. Louis Arsenal's formal existence began on August 3, 1827. Its career as an arsenal was terminated on April 24, 1871 when its facilities were taken over by the Cavalry Recruiting Service. Thus, from beginning to end, the arsenal's active life as an ordnance unit spanned 43 years, 8 months, and 21 days.

During that period fifteen officers held the position of arsenal commander. Of these fifteen, three held the command for what may be considered an unusually long tenure.

### —Early Commanders—

**Captain John Symington** was commanding officer of the arsenal from November 15, 1833 to April 30, 1840 — a total of 6 years, 5 months and 15 days. It was Symington who completed construction of the arsenal fa-

These three officers, then, commanded the arsenal for a grand total of 29 years, 5 months and 12 days — more than two-thirds of the period of the arsenal's existence.

In addition to Symington, Bell and Callender twelve other of-

During its years as an arsenal a total of 26 junior officers served there on ordnance duty. (On occasion other officers, not on ordnance duty, served at the arsenal. This was most notably the case during the Civil War period.)

Of the junior officers who performed ordnance duties at the arsenal two of the most distinguished were **Lieutenants Charles P. Kingsbury and Stephen V. Benet.**

Kingsbury was on duty at St. Louis for only a few months in 1850. He had graduated second in his class at West Point in 1840. In the Mexican War he was chief ordnance officer of General Wool's column on its march from San Antonio to Saltillo. For gallant and meritorious conduct at the Battle of Buena Vista in February 1847 he was breveted a

literary pieces whose theme is the great and unique heritage of the United States.

There were other junior officers of the arsenal who went on to gain distinction for themselves in one fashion or another.

**Lieutenant Alexander Brydie Dyer** was assigned to duty at the St. Louis Arsenal in 1842-1843 and again in 1844-1845. During the Mexican War he was breveted captain for gallantry while commanding an artillery section at Santa Cruz de Rosales. He held many important posts in the Ordnance Department culminating in being named Chief of the Ordnance Department on September 12, 1864. He was breveted major general in 1865. Dyer held the chief ordnance office until his death on May 20, 1874. He was succeeded in that office by Brigadier General Benet.



This was the arsenal commander's quarters. Built in 1833-1834, it was located east of Building 12 approximately where the new wing of Building 36 now stands. It was razed in 1919.

first lieutenant. He was a regular contributor to a number of journals and was the author of the book *Elementary Treatise on*



This building was the principal building was called the Small Arms Arsenal 1828-1830. It was located at the was demolished in 1926 after



construction of the arsenal facilities according to the original plans, and who made of it an important, fully functioning ordnance installation.

**Captain Franklin D. Callender** commanded the St. Louis Arsenal from April 24, 1861 until July 17, 1870 – a total of 9 years, 2 months and 25 days. It was Callender's distinction to have charge of the arsenal during the single most important and active period of its existence – namely, the Civil War. For his wartime accomplishments he was breveted to the rank of brigadier general on April 9, 1865.

**Major William Haywood Bell** exercised command of the St. Louis Arsenal three separate times. He served two tours of duty as commander at the arsenal between 1840 and 1851. He returned for his third tour in 1858 and remained until 1861. In all, he was the assigned commander of the arsenal for a total of 13 years, 9 months and 4 days – the longest total tenure of any of the commanders. It may be of interest to note that Bell resigned his commission in the Army on May 28, 1861. He remained in St. Louis, however, and died here on December 20, 1865. He was buried in Bellefontaine Cemetery where his gravesite, graced by an impressive stone marker, may be seen today.

In addition to Syllington, Benet and Callender, twelve other officers were assigned to command of the St. Louis Arsenal during its career. Together they commanded the installation for 14 years, 3 months and 9 days – an average tenure of 1 year, 2 months and 9 days per man.

One of the short-tenure commanders of the arsenal was **Lieutenant Robert Anderson** who held that position from February 15, 1833 to December 10, 1833. He stayed on as assistant commander until early 1834. Anderson achieved immortality of a sort by being in command of Fort Sumter and surrendering that post to Confederate forces at the outset of the Civil War.

Of its 15 commanders, only one, the last, Captain James Hickman Rollins, was a native of the State of Missouri. Rollins served as assistant commander of the St. Louis Arsenal from 1864 until 1870. He was appointed commander on September 1, 1870 and served in that capacity until it became a cavalry recruit depot in 1871.

The normal officer complement of the arsenal was one commanding officer and one assistant commander. Occasionally there was more than one junior officer assigned to the post, and from time to time only a single officer – the commander – was assigned.

In addition to Syllington, Benet and Callender, twelve other officers were assigned to command of the St. Louis Arsenal during its career. Together they commanded the installation for 14 years, 3 months and 9 days – an average tenure of 1 year, 2 months and 9 days per man.

Benet, a native of Florida which was admitted to statehood in 1845, became the first cadet appointed to West Point from the new state. He graduated from the Military Academy standing third in the Class of 1849. In 1853 he translated Jomini's Campaign of Waterloo from French into English. In 1855 he was granted a Master of Arts degree by the University of Georgia. He served at the St. Louis Arsenal from 1854 to 1859. He taught geography, history and ethics at West Point from 1859 until 1864. In 1862 he wrote a Treatise on Militia, Laws, and the Practice of Court Martial. After a number of responsible assignments in the Ordnance Department, Benet was promoted brigadier general on June 23, 1874 and simultaneously appointed Chief of the Ordnance Department. In this capacity he served until his retirement January 22, 1891. He died exactly four years later on January 22, 1895. Benet may also be remembered as the grandfather of one of America's best known Twentieth Century poets who was also his namesake. This, of course, was Stephen Vincent Benet, author of John Brown's Body and many other



This was the main land gate of the St. Louis Arsenal. Built about 1845 it was originally located in the installation's north wall. Later it was moved to the position of the reservation's present main gate. Later still, it was taken down and stored. In 1952 it was given to St. Louis County's Jefferson Barracks Historical Park where it was reerected and is now on public view as shown here.

Young **Lieutenant Adelbert Rinaldo Buffington** was assigned to the St. Louis Arsenal in June 1861 and remained on duty there until October 1862. Subsequently he served increasingly responsible positions within the Ordnance Department eventually being promoted brigadier general and appointed Chief of Ordnance on April 5, 1899. Buffington held this position until his retirement in November 1901.

—Medal of Honor—

**Lieutenant Jesse L. Reno** served at the Arsenal in 1857. During the Civil War he advanced rapidly in

rank. By late summer of 1862 he was a major general commanding the IX Corps of the Army of the Potomac. Reno was killed leading his troops at South Mountain, Maryland on September 14, 1862.

Another young lieutenant who served as an assistant ordnance officer at the St. Louis Arsenal was **William Sully Beebe**. He was assigned to duty at the arsenal from July 1863 to February 1864. Transferred to field duty in the South, he was awarded the Medal of Honor for gallantry in leading a successful assault on a fortified position at Cane River

# enal



g at the St. Louis Arsenal. It was built during the period end of the parade ground and ng 36 had been constructed.



## — Noted Surgeon —

Of the non-ordnance officers who served at the St. Louis Arsenal, one of the most interesting was the noted pioneer surgeon, **William Beaumont**. He had entered the army in 1812. In the early 1820s he was stationed at Fort Mackinac where a young man, Alexis St. Martin, was accidentally shot in the abdomen. Through Dr. Beaumont's ministrations St. Martin completely recovered except for the presence of a fistulous opening to his stomach through his abdominal wall. This highly unusual circumstance provided Beaumont with the rare opportunity to directly observe the processes of gastric digestion. For a period of several years Beaumont did just that and recorded his observations in a series of papers which earned him international renown in his profession.

In 1835 Beaumont was assigned to the St. Louis Arsenal. He served as Post Physician from 1835 until 1840 although he resigned his military commission in 1839. He lived at the arsenal for a number of months early in his career there, but later took up residence in St. Louis. At the arsenal Beaumont was in charge of the hospital which was probably completed the same year he arrived. This was a two story stone building which was located where the center section of Building 12 now stands. The hospital building was torn down in 1919.

After Beaumont took up residence in the city, but while he was still the arsenal physician, he shared his house in St. Louis for a year with a young army officer and his family. The young officer was in the Corps of Engineers and was assigned to a project to alter the channels of the Mississippi River. That young engineering officer was **Robert E. Lee** who, of course, went on to become the premier soldier of the Confederacy in the Civil War.

Following his resignation from the service in 1839 and the termination of his services at the arsenal in 1840, Beaumont built a thriving practice in St. Louis and assumed an important position in the community's medical profession. He was elected president of the Missouri Medical Society in 1841. Beaumont practiced medicine in St. Louis until his death in February 1853.

## —Southern Influence—

Of the 10 officers whose origins were in the South only three resigned their U.S. commissions and served with the armies of the Confederacy. They were:

**Richard Bland Lee** of Virginia. He commanded the St. Louis Arsenal from July 1831 to February 1833. He served in the field during the Seminole War and later held a number of staff positions. He resigned his commission on May 9, 1861. Lee rose to the rank of colonel in Confederate service. He died August 2, 1875.

**William T. Welcker** of Tennessee. He served as a junior officer at the St. Louis Arsenal from October 1851 until March 1853. He was dismissed from the U.S. service July 22, 1861. Welcker thereupon entered Confederate



Special skills are used at the Aerospace Center today. Cartographers, photographers, photogrammetrists, geodesists, mathematicians, geographers, lithographers, are but a few of the professions required.

Thus, of the 36 St. Louis Arsenal ordnance officers available for service North or South during the Civil War, 32 continued in the service of the Federal Union during that conflict.

## —Top Ordnance Officers—

Still speaking of the loyalties of the 36 officer alumni of the St. Louis Arsenal, it is worth noting that four of these men went on to achieve the highest position in the U.S. Ordnance service, that of

Chief of the Ordnance Department. Three of these, Benet, Dyer and Buffington, have been mentioned before. The fourth was **Brigadier General George D. Ramsey** who commanded the St. Louis Arsenal from 1855 to 1858 and was Chief of the Ordnance Department in 1863-1864. Interestingly, all four of these men were natives of states which formed the Confederacy. Benet, as has been mentioned, was a native of Florida. Dyer, Buffington and Ramsey were all originally from Virginia.



Various types of sophisticated equipment are used today at the arsenal to accomplish the mission of the Aerospace Center.

Crossing in Louisiana on April 23, 1864. Beebe resigned from the service in 1874 although he later served as a major of volunteer troops during the Spanish-American War. His death occurred October 12, 1898.

Of the 41 officers who commanded or otherwise served on ordnance duty at the St. Louis Arsenal from 1827 to 1871, two were killed and six others wounded in battle. Both of the men killed died in the Civil War. Of these two, one had also been wounded

in combat during the Mexican War. Of the other six who were wounded, one was wounded in the War of 1812, one in the Seminole War, three in the Mexican War, and one in the Civil War.

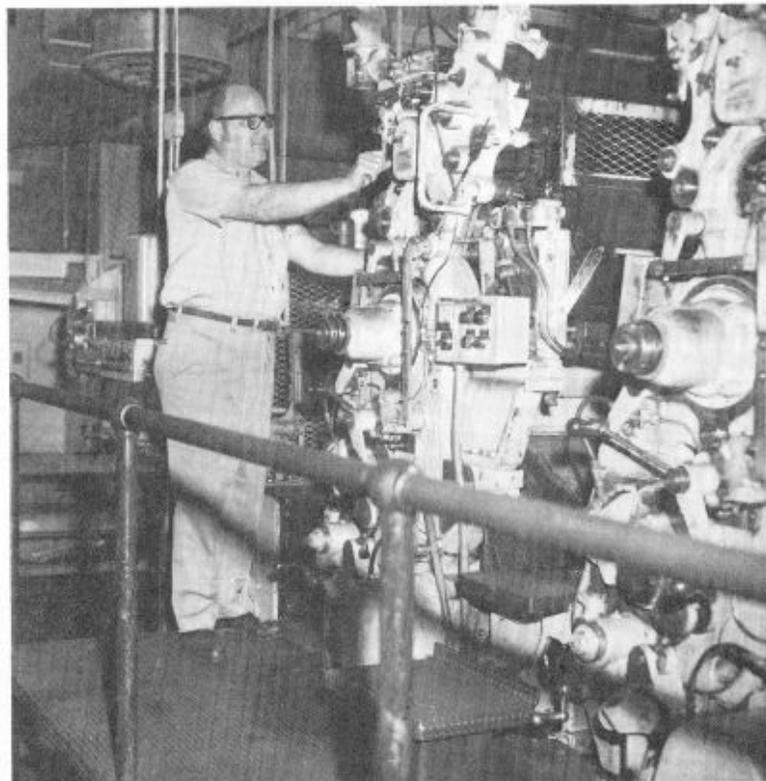
Speaking of the Civil War, of the total 41 officers serving on ordnance duty at the St. Louis Arsenal during its existence, 36 were available for service during the period of the Civil War. Of these 36, 20 were natives of Northern States, 6 of Border States, and 10 of Southern States.

thereupon entered Confederate service as an artillery captain. He died November 3, 1900.

**Moses Hannibal Wright** also of Tennessee. He was assigned to the St. Louis Arsenal in March 1860 and served there until he resigned his commission on May 30, 1861. He entered the Confederate Army and rose to the rank of Colonel in that service. He was accidentally killed on January 8, 1886.

On the subject of accidents, it may be of interest to note that Moses H. Wright was not the only arsenal ordnance officer to fall victim to fatal accident. John W. Todd served as a junior officer at the arsenal in 1852-1853, 1855-1856, and again in 1861. In 1879 while commanding an ordnance detachment at Jefferson Barracks, he was thrown from the buggy in which he was riding and died from the injuries thus sustained on May 10, 1879. So we see that threats to life and limb from vehicular accidents are not so exclusively modern as might at first be supposed.

**Major William H. Bell** of North Carolina was commander of the St. Louis Arsenal in early 1861. Although he did not join the Confederacy, his sympathies for that cause and scruples about fighting against it apparently led him to resign his U.S. commission on May 28, 1861. As noted before he remained in the St. Louis area where he died in 1865.



Large five color presses print the several million copies of DMAAC products that are produced annually.

# *Arsenal Continues To Affect History*

Members of DMAAC employed at the St. Louis Air Force Station in St. Louis are reminded daily of the existence of the historic old arsenal. The old stone and brick buildings, the sun dial, the enclosing wall - all of these are constant visual memorials to that illustrious institution and persons associated with its history.

There are other less obvious reminders of the old arsenal and some of the personalities whose names are forever linked with it. For example, the St. Louis area abounds with places and institutions, whether private, public or commercial, which bear names evocative of the arsenal and its history.

There is Arsenal Street itself. The relationship of this name with the old arsenal is self-evident. In addition to the street, a credit union, a grocery store, an automotive repair shop and a womens' organization also bear the arsenal name.

At one time the east end of what is now Utah Street was called Wall Street presumably because it terminated (or originated) at the southwest corner of the arsenal's enclosing wall. Similarly, the east end of what is now Wyoming Street was once called Gate Street because its point of termination (or origin) was at one of the gates in the arsenal wall.

Arend Rutgers and his wife owned the principal part of the land which the government purchased for establishment of the St. Louis Arsenal. The Rutgers' name is perpetuated in a street by the name in St. Louis.

achieved prominence as a businessman. He, too, has a city street named after him.

Major William Haywood Bell who served as the arsenal commander for over 13 years, also furnished his name to one of St. Louis' streets.

Dr. William Beaumont, arsenal physician from 1835 to 1840, not only had a St. Louis street named in his honor, but also contributed his name to one of its schools and fittingly, to one of its most prominent medical buildings.

Francis (Frank) P. Blair, Jr., whose Union Clubs furnished much of the volunteer manpower to guard the arsenal against threats from Seseessionist forces in early 1861 served at the arsenal during those stirring days. His name is preserved in the city's Blair Street and Blair School.

Brigadier General Nathaniel Lyon commanded the arsenal in early 1861 when the threat to it from pro-Confederate interests was presumably greatest. His later actions in clearing the Missouri Valley of anti-Union forces and, then, his gallant death at the Battle of Wilson's Creek earned him national prominence as a military leader. His stature is recognized in St. Louis by Lyon Street, Lyon School, and Lyon Park - the latter donated by the Federal government to be made into a perpetual memorial to the man.

General William Tecumseh Sherman was never assigned to duty at the St. Louis Arsenal. (In March of 1849, however, the

at St. Louis early in his military career and, at the beginning of the Civil War was in business there. During the exciting days of the Camp Jackson affair in St. Louis Sherman visited old army friends at the arsenal and was a spectator of the momentous events there. Not only is Sherman's name preserved in St. Louis by a street name, but also a park, a school, a church and even a St. Louis County Municipality bear the Sherman name.

A couple of other facts about Sherman may be of interest to St. Louis area residents. After Grant became president in 1869 Sherman became Commanding General of the U.S. Army. As commanding general, Sherman maintained his headquarters in Washington, D.C. as was customary. In 1874, however, Sherman and Secretary of War William Belknap fell into dispute on some matters which so irritated the general that he moved his headquarters to St. Louis. So, from 1874 to 1875, with Sherman conducting official business from St. Louis, the headquarters of the U.S. Army was located in that city. Sherman continued as Commanding General of the Army until his retirement in 1884. He died in 1891 and was buried in Calvary Cemetery in St. Louis.

Another interested spectator present at the arsenal while the stirring episodes of early 1861 were taking place was Ulysses S. Grant. He, of course, had long personal and professional connections in the St. Louis area. Rising ultimately to the highest

AMERICA'S ARMED FORCES

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**Commander's Conference  
Termed Success**

Lieutenant Martin Thomas was the first commander of the arsenal and served in that capacity from 1827 to 1831. He left the military service in 1831, but remained in the St. Louis area where he

Ordnance Department in Washington ordered the arsenal to issue Sherman ". . . one Colts' pistol - he will pay twenty-eight (\$28.00) dollars for the same.") Sherman was stationed

office in the country, Grant's association with St. Louis has resulted in streets, roads, schools, restaurants, municipalities, and even private residences being named in his honor.

## Plant Tour

Continued From Pg. 1

for the free-flying areas of the world. Video charts/plates used in conjunction with electronic navigation devices in air traffic controls, air surveillance and tactical air operations are also on display here.

Proceeding to the second floor, Section "A", there will be a walk-thru of the photo lab. The world's largest camera will be shown, as well as a number of products produced by the photo lab.

At Stations 14, 15 and 16, new Advanced Cartographic Equipments will be on display with some in operation. These devices are producing charting information in a new form called digital data. Station 14 is located on the 5th floor in the LIS area.

Stations 17 and 18 will display plate processing and the printing presses. Visual operation of the 5 color press will conclude the tour.



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## Shifts in GS-15 Assignments

Eight of the Aerospace Center's GS-15 employees will be moving to new positions within the next six months, according to announcement made by the Director, Colonel St. Clair, to his staff recently.

The movement of personnel is associated with the reorganization announced in the April 16 issue of the Orientor and the continually career broadening programs of the Center.

Changes announced included: Penman Gilliam to Assistant Deputy Director of Plans, Requirements and Technology, effective May 2; John Kristmann to PRRN, Gerald Johnson to PPC and Stanley Hanson to PPI, effective June 1; effective October 1 in conjunction with the reorganization transition completion date will be the movement of John Bathe to chief, Geopositional Department; Frank Roth, chief Aerospace Cartography Department; Joe Platte, chief Scientific Data Department and Thomas Seppelin, chief PPT.

The changes were approved during early May by DMA headquarters.



Commanders of the Center's geographically separated units pose with the Director and Deputy Director prior to the beginning of a week long commander's conference. From left to right are: Major Holmes, commander Latin America Flight Information Division Office; Major Fiddler, commander FIO-Europe; Lt. Col. Swanson, commander designee for the Cartographic Technical Squadron; Colonel Negus, commander of the Cartographic Technical Squadron; Colonel Sheldon, commander of the Geodetic Survey Squadron; Deputy Director, Colonel Burns; Director, Colonel St. Clair; Captain Rose, commander designee for the GSS Det. 4; Lt. Col. Smith, commander DMA Depot Hawaii; Lt. Col. Clark, commander GSS Det. 4; Major Millians, commander GSS Det. 1 and Major Skinner, commander FIO-Alaska. In critiquing the conference Colonel St. Clair said that it was one of the most successful held at the Aerospace Center from both the viewpoint of the GSU commanders and the Aerospace Center staff.

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Col. James H. St. Clair  
Director  
David L. Black  
Chief, Public Affairs Office  
Editor

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