R-5383

#### **UNITED STATES**

#### DEPARTMENT OF THE INTERIOR

**ORIGINAL** 

**BUREAU OF LAND MANAGEMENT** 

# FIELD NOTES

OF THE

REMONUMENTATION OF THE CORNER COMMON TO THE STATES OF COLORADO, NEW MEXICO, ARIZONA AND UTAH,

OF THE

NEW MEXICO PRINCIPAL MERIDIAN, GILA AND SALT RIVER MERIDIAN, AND SALT LAKE MERIDIAN,

## **EXECUTED BY**

DARRYL A. WILSON

SUPERVISORY CADASTRAL SURVEYOR

UNDER SPECIAL INSTRUCTIONS DATED AND APPROVED JULY 16, 1982, WHICH PROVIDED FOR THE REMONUMENTATION INCLUDED UNDER GROUP NUMBER 750, COLORADO AND ASSIGNMENT INSTRUCTIONS DATED FEBRUARY 6, 1992.

REMONUMENTATION COMMENCED SEPTEMBER 1, 1992 REMONUMENTATION COMPLETED OCTOBER 17, 1992

Index Diagram

## FOUR CORNERS REMONUMENTATION



#### CHAINS

The following field notes are those of the remonumentation of the corner common to the states of Colorado, New Mexico, Arizona and Utah.

The first survey in this area was of the north boundary of the New Mexico Territory in 1868 by Ehud N. Darling, U.S. Surveyor and Astronomer. Darling was instructed to survey the 37th Parallel of North Latitude, commencing at the 103rd degree and terminating at the 109th degree of West Longitude from Greenwich, England. Darling commenced his survey at the northeast corner of the New Mexico Territory on July 19, 1868, and completed the survey on November 18, 1868. Darling's terminal monument, which served both as his Astronomical Station No. 11 and the common corner to the Territories of Colorado, New Mexico, Arizona and Utah, was a sandstone, 5 feet 10 inches in length, by 18 inches, by 10 inches, set 2 1/2 feet in the ground, in a circular mound of stone, 7 foot base by 3 feet high.

In 1875, Chandler Robbins, U.S. Deputy Surveyor, surveyed the line between the Territories of Arizona and New Mexico. This territorial line was located on a longitudinal meridian determined by reference to a landmark peak called "The Needles" as described by George M. Wheeler, U.S.G.S., in his topographical survey of 1874. Robbins called it "the southwest needle point of Wilson's Peak". Today, this prominent peak is known as "Ship Rock" in the state of New Mexico. From this prominent point, Robbins surveyed west then north to the point where the 32nd Meridian west of Washington, D.C. intersected the north boundary of the Territory of New Mexico. The point established by Robbins was 1 mile and 45 chains east of the terminal monument that had been set by Darling in 1868 as the corner of the Territories of Colorado, New Mexico, Arizona and Utah. Robbin's point was accepted, and thus became the only monument in the United States marking the common corner to four states; Colorado, New Mexico, Arizona and Utah.

Rollin J. Reeves, U.S. Surveyor, duly identified the Robbin's monument, and beginning at this point, surveyed the meridian running north, establishing and marking the boundary between the State of Colorado and the Territory of Utah in 1878.

In 1899, Hubert D. Page and James M. Lentz, U.S. Surveyors, were engaged in subdividing a portion of Township 43 South, Range 26 East, Salt Lake Meridian, the southeasterly most township in Utah. While closing their fractional sections on the Utah and Colorado Boundary, as previously established, they recovered the position of the Robbins monument at the corner of the four states, finding the stone had been disturbed and broken. Page and Lentz marked and set a new stone at the original Robbins location.

Howard B. Carpenter, U.S. Surveyor and Astronomer, surveyed and established the boundary between the State of Utah and the Territory of Arizona, running from West to East along the 37th Parallel of Latitude in 1901. Carpenter intersected and closed the survey at the Page/Lentz monument marking the corner of the four states, finding the stone well marked and in good condition. In 1902, this was the initial point of the Carpenter survey along the redetermination of the 37th Parallel of Latitude, running eastward between the State of Colorado and the Territory of New Mexico.

#### **CHAINS**

In 1931, Everett H. Kimmell, U.S. Surveyor, General Land Office, Department of the Interior, on field work in cooperation with a party of the U.S. Coast and Geodetic Survey, Department of Commerce, identified the Page/Lentz stone and the marked stone deposited alongside, finding the larger stone again broken. Kimmell remonumented the corner with a regulation U.S. General Land Office brass tablet, set in a concrete monument, 14 inches square at top, 28 inches square at base, 56 inches long, set 38 inches in the ground.

In 1962, the Bureau of Land Management and the Bureau of Indian Affairs poured a 32 foot square concrete paving block with stair steps that lead up to a 20 foot square surface which was flush with the top of the Kimmell monument. This top surface also included the four state names constructed of tile, state lines constructed of tile extending from the Kimmell monument, the words whose letters were constructed of brass and set flush with the top surface in a clockwise arrangement - "HERE MEET (Colorado) IN FREEDOM (New Mexico) UNDER GOD (Arizona) FOUR STATES (Utah)", 2 foot diameter bronze state seals (four), and a bronze plaque with the information;

#### UNITED STATES

### DEPARTMENT OF THE INTERIOR

**SEPTEMBER 16, 1962** 

#### BUREAU OF LAND MANAGEMENT - BUREAU OF INDIAN AFFAIRS

The corner common to the states of Colorado, New Mexico, Arizona and Utah was found to be monumented with a regulation U.S. General Land Office brass tablet, set in a concrete monument, flush with the surface of the 1962 concrete paving block. The surface of this brass tablet has been worn smooth with no remaining, recognizable marks. The four state seals and brass lettering were found intact as was the bronze plaque set in 1962. The condition of the top surface of the 1962 concrete paving block was found to be severely weathered with broken and missing tile. (See pictures included herein.)

The 1931 brass tablet, the 2 foot diameter bronze state seals (four), and the bronze plaque were removed from the monument and deposited with the Bureau of Land Management's Anasazi Heritage Center at Dolores, Colorado.

CHAINS

#### At the corner point

Set a 7 foot diameter, 6 inch thick, 5,000 pound granite plate, with an aluminum-bronze disc, 8 inches in diameter, 1 inch thick, at the center and flush with the surface of the plate with disc marked



#### from which

"Ute Peak", the highest point on Sleeping Ute Mountain, bears N. 36°45′E., approximately 25 miles distance. (Record: N. 36°30′ E., approximately 20 miles distance).

"Chimney Rock", (the toes of Sleeping Ute Mountain), bears N. 45°33′ E., approximately 20 miles distance. (Record: N. 45°16′ E., approximately 20 miles distance).

A "conical point on north end of mesa", bears N. 52°26' E., approximately 30 chains distance. (Record: N. 52°07' E., 28.75 chains distance).

A regulation U.S. General Land Office brass tablet, set in a concrete post, 12 inches square at top, 18 inches square at base, 34 inches long, set 4 inches below the asphalt-surfaced parking lot, marked "REFERENCE No. 1 1931" and an arrow pointing to the corner, bears N. 89°55.4' E., 1.137 chains distance. (Record: Easterly, 1.1369 chains distance).

The highest peak on "Shiprock", bears S. 28°24' E., approximately 24 miles distance. (Record: S. 28°17' E.).

"Pastora Peak" in the Carrizo Mountains, bears S. 28°45′ W., approximately 16 miles distance. (New reference point).

The "most northwest point" of the Carrizo Mountains, bears S. 53°47′ W., approximately 15 miles distance. (Record: S. 53°30′ W., approximately 12 miles distance).

#### CHAINS

A regulation U.S. General Land Office brass tablet, set in a concrete post, 12 inches square at top, 18 inches square at base, 34 inches long, set flush with the asphalt-surfaced parking lot, marked "REFERENCE No. 2 1931" and an arrow pointing to the corner, bears S. 89°53.4′ W., 1.136 chains distance. (Record: Westerly, 1.1364 chains distance).

A "conical point on long mesa bears NE, and SW," bears N. 37°28′ W., approximately 67 chains distance. (Record: N. 37°30′ W., approximately 60 chains distance).

Corner is located on a N-S mesa overlooking the San Juan River valley to the northeast.

From this point, the terminal monument set by Darling in 1868, a sandstone, 24 inches by 10 inches, projecting 20 inches from the ground, surrounded by a scattered mound of stone, then marking the corner of the Territories of Colorado, New Mexico, Arizona and Utah, bears S. 89°52′39" W., 124.128 chains distance. This monument had several small pieces broken off the top with several remaining, visible chisel marks found on the sides of the stone. Rebuild original circular mound of stone, 7 foot base, 3 foot high.

A formal dedication of the new monument was held on October 17, and an estimated 1,700 people attended the ceremony to celebrate in the history of the area. Prior to the dedication ceremony, the new Four Corners Monument was blessed by representatives of the Navajo and Ute Mountain Ute tribes. Featured speakers included representatives from each of the four states, the Navajo Nation, Ute Mountain Ute Nation, Four Corners Heritage Council, and the Grand Canyon Trust; the keynote address was delivered by Colorado B.L.M. State Director Bob Moore. Following the speeches, Darryl Wilson, Chief, Field Section, Branch of Cadastral Survey in Colorado BLM, conducted the ceremonial resurvey of the bearing objects taken by Chandler Robbins in 1875. Representatives from the four states and the two indian Nations then set the crosshairs of the surveyor's transit on the bearing objects within their respective areas. Following the official ceremony, a huge lunch of Navajo tacos was served and everybody was treated to Native American dances and singing.

# 07

# UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT

#### FIELD ASSISTANTS

**NAMES** 

**CAPACITY** 

#### **BUREAU OF LAND MANAGEMENT - COLORADO**

Jack A. Eaves

Principal Assistant and

Chief Cadastral Surveyor for Colorado

Danny L. McDonald

Supervisory Cadastral Surveyor

Lucious L. Burns

Cadastral Surveyor

Glenn Kohlerschmidt

Cadastral Surveyor

Roger H. Alexander

Public Affairs Officer

Sheri Bell

Public Affairs Specialist

Donald McClelland

Civil Engineer

#### **BUREAU OF LAND MANAGEMENT - NEW MEXICO**

Kelley R. Williamson

Supervisory Cadastral Surveyor

Thomas A. Maestas

Cadastral Surveyor

Ronald A. Martinez

Survey Technician

Tony M. Martinez

Survey Technician

#### **BUREAU OF LAND MANAGEMENT - ARIZONA**

James P. Kelley

Chief Cadastral Surveyor for Arizona

Dale C. Wilson

Supervisory Cadastral Surveyor

Joseph A. Shotwell

Supervisory Cadastral Surveyor

Bill F. Olver

Supervisory Cadastral Surveyor

Jones Curtiss

Survey Technician

# 08

#### UNITED STATES

# DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT

#### **FIELD ASSISTANTS**

NAMES CAPACITY

**BUREAU OF LAND MANAGEMENT - UTAH** 

Kent E. Walter Supervisory Cadastral Surveyor

**BUREAU OF INDIAN AFFAIRS** 

Gary P. Norton Realty Specialist

**U.S. DEPARTMENT OF COMMERCE** 

Richard S. Cohen N.G.S. Regional Geodetic Coordinator

**STATE OF COLORADO** 

Mary Jo Dennis Director, Colorado Commission of Indian Affairs

Carl B. O'Loughlin State Survey Coordinator

**STATE OF NEW MEXICO** 

Brian Lee Information Specialist, Office of Indian Affairs

**STATE OF ARIZONA** 

Jim Garrison State Historic Preservation Officer

**STATE OF UTAH** 

Wilson Martin Deputy State Historic Preservation Officer

**UTE MOUNTAIN UTE NATION** 

Ernest House Ute Mountain Ute Tribal Councilman

# 09

#### **UNITED STATES**

# DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT

#### FIELD ASSISTANTS

NAMES CAPACITY

#### THE NAVAJO NATION

Charley John Chief Executive Administrator of The Navajo Nation

Melvin F. Bautista Director, Office of Navajo Land Administration

Alfred Dehiya Administrative Service Officer

Barney Woodie Engineering Technician

Nelson Kinsel Engineering Technician

**VOLUNTEERS** 

Kenneth D. Witt Chief Cadastral Surveyor for Colorado (Retired)

John E. Walker President, Professional Land Surveyors of Colorado

Arthur W. Hipp Executive Director and Treasurer, Professional Land

Surveyors of Colorado

#### **CERTIFICATE OF SURVEY**

I, Darryl A. Wilson, Cadastral Surveyor, HEREBY CERTIFY upon honor that, in pursuance of special instructions bearing date of the 16th day of July, 1982, I have remonumented the corner common to the states of Colorado, New Mexico, Arizona, and Utah, of the New Mexico Principal Meridian, Gila and Salt River Meridian, and Salt Lake Meridian, in the States of Colorado, New Mexico, Arizona, and Utah, which is represented in the foregoing field notes as having been executed by me and under my direction; and that said remonumentation has been made in strict conformity with said special instructions, the Manual of Instructions for the Survey of the Public Lands of the United States, and in specific manner described in the foregoing field notes.

<u>OI-04-93</u>

(Cadastral Surveyor)

#### **CERTIFICATE OF APPROVAL**

BUREAU OF LAND MANAGEMENT Denver, Colorado

The foregoing field notes of the remonumentation of the corner common to the states of Colorado, New Mexico, Arizona, and Utah, of the New Mexico Principal Meridian, Gila and Salt River Meridian, and Salt Lake Meridian, in the States of Colorado, New Mexico, Arizona, and Utah, executed by Darryl A. Wilson, Cadastral Surveyor, having been critically examined and found correct, are hereby approved.

1-11-23

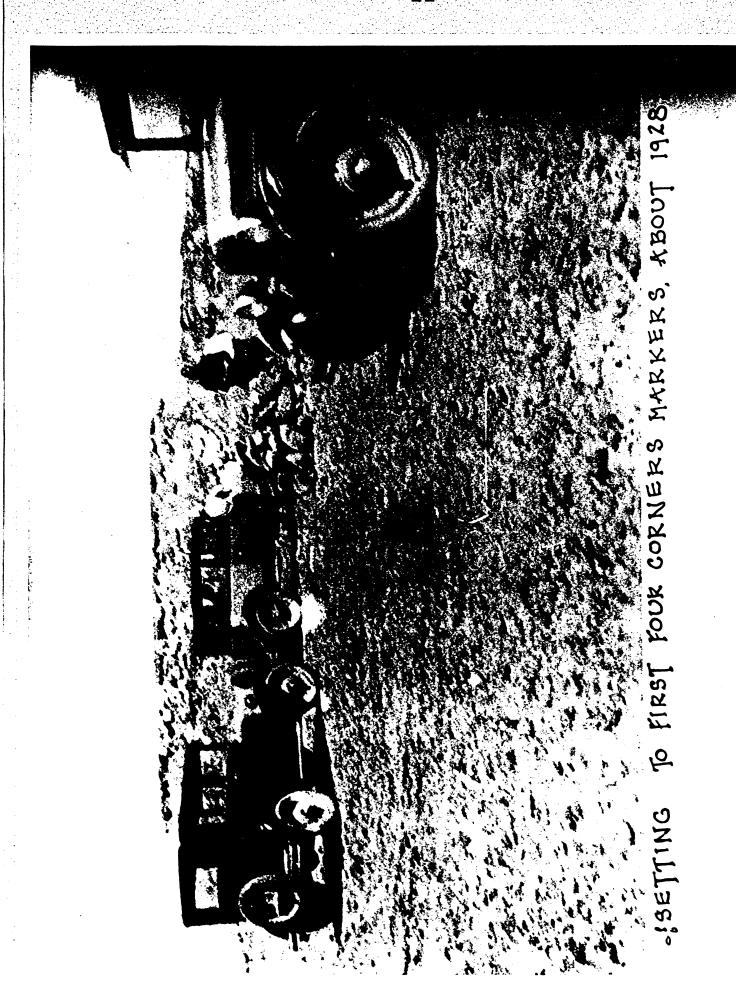
(Date)

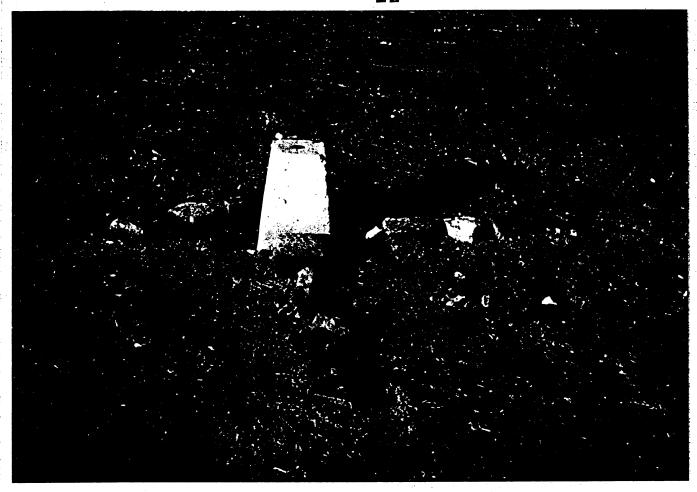
Chief Cadastral Surveyor for Colorado)

1-11-93

(Date)

(Director, Office of Cadastral Survey)

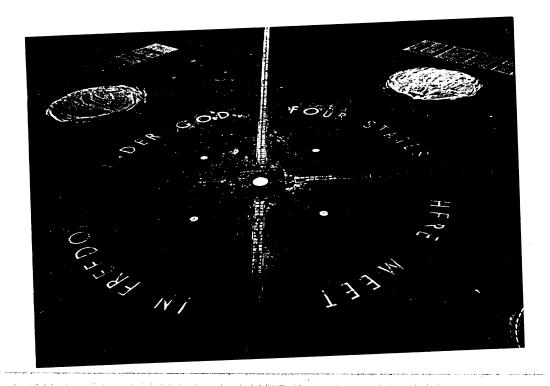




1947 photo of Four Corners monument

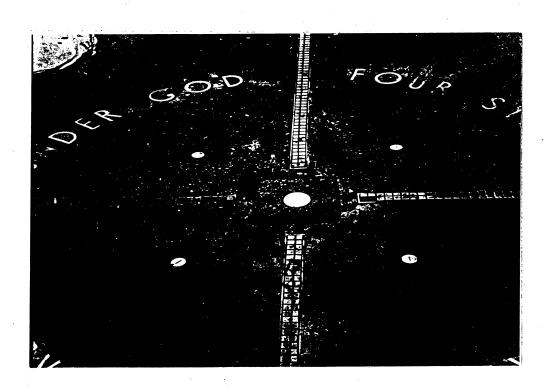
Elevated view of the 1962 concrete paving block. Molds were being made to duplicate the two-foot diameter bronze state seals.

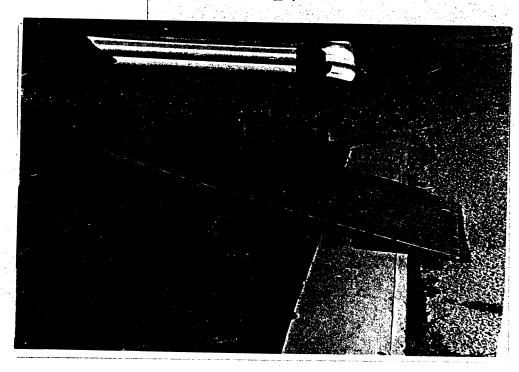




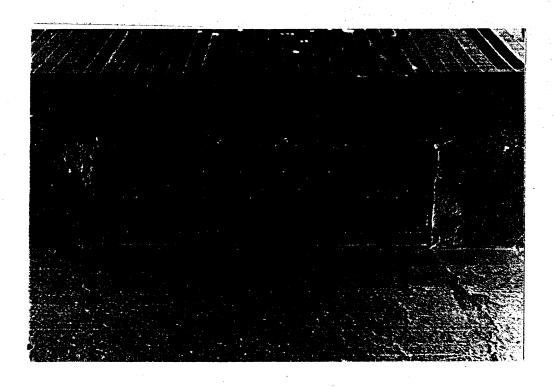
Center of the 1962 concrete paving block.

Close up of damage in center of concrete paving block. The Kimmell monument has been worn smooth from tourists standing on the brass tablet.

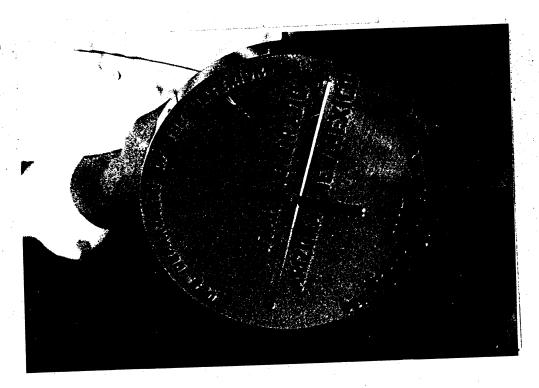




Make-shift handicap access.



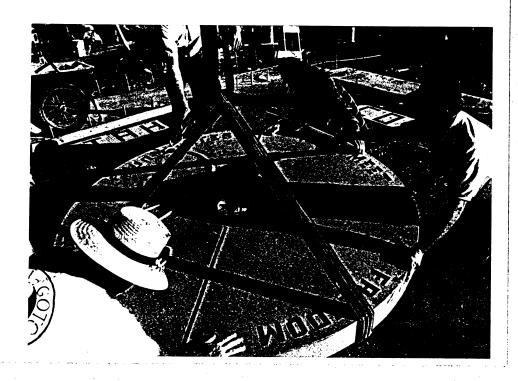
Plaque on the top step of the 1962 concrete paving block.



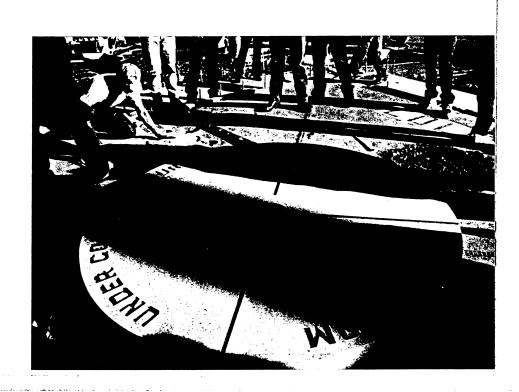
New 8 inch diameter aluminum/bronze monument.



Darryl Wilson holding new monument.



Lifting new 7 foot diameter, 6 inch thick, 5000 pound granite plate into place.



Remonumentation complete at 9:00 AM, September 1, 1992.



New granite components in place. Standing (l. to r.) Ronald Martinez, Jones Curtiss, Dale Wilson, Thomas Maestas, Jack Eaves, Lucious Burns, Tony Martinez, Glenn Kohlerschmidt, John Walker, Danny McDonald, Bill Olver, Art Hipp, Nelson Kinsel, Ken Witt. Kneeling (l. to r.) Kent Walter, Darryl Wilson, Barney Woodie



Professional Land Surveyors of Colorado President John E. Walker pointing to marks on the 1868 Darling four corners monument.



1868 Darling monument. Standing (l. to R.) Lucious Burns, Nelson Kinsel, Jones Curtiss, Richard Cohen (rear) Barney Woodie, Jack Eaves, Ken Witt, Glenn Kohlerschmidt, Melvin Bautista, Darryl Wilson, Art Hipp, Bill Olver, John Walker, Don McClelland, Kneeling (l. to r.) Carl O'Loughlin, Dale Wilson, Kent Walter

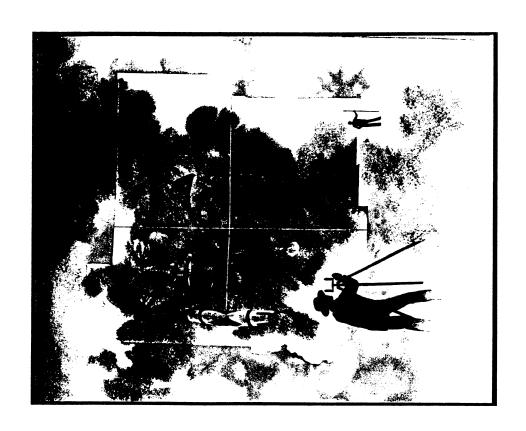
Inspecting marks on 1868 Darling Monument. Front to rear, Darryl Wilson, Bill Olver, Dale Wilson, Danny McDonald





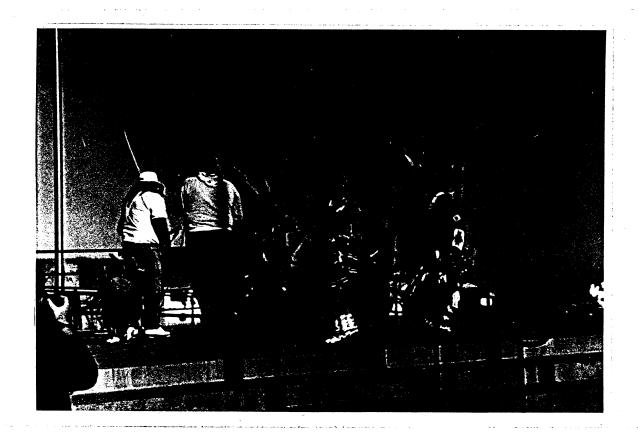
Chisel marks on Darling Monument.

Poster featuring the art of Dyanne Strongbow commemorated the dedication of the Four Corners Remonumentation.





Standing on the four corners monument (l. to r.) John Bennett, Chief, Branch of Cadastral Survey, New Mexico, Jim Kelley, Chief, Branch of Cadastral Survey, Arizona, Don Buhler, Chief, Branch of Cadastral Survey, Utah, Fran Eickbush, Director, Office of Cadastral Survey, Washington D.C., Jack Eaves, Chief, Branch of Cadastral Survey, Colorado.



Ute Mountain Ute Ceremonial Dance on the new Four Corners Monument.



Preparing to sight Pastora Peak in the Carrizo Mts. (l. to r.) Darryl Wilson, Charley John, Chief Executive Administrator, Navajo Nation.



Sighting the top of Ute Peak. (l. to r.) Darryl Wilson, Martha Hahn, Associate State Director, BLM Colo., Ernest House, Ute Mt. Ute. Tribal Councilman.