FLIGHT SUMMARY REPORT

Flight Number: 97-006-10

Calendar/Julian Date: 28 June 1997 • 179

Sensor Package: Wild-Heerbrugg RC-30

Area(s) Covered: Mojave

Investigator(s): Stine, USGS

Aircraft #: 798
Department of Energy
B200 King Air

SENSOR DATA

Accession #: 05215

Sensor ID #: 017

Sensor Type: RC-10

Focal Length: 6”
152.75 mm

Film Type: Aerochrome MS
2448

Filtration: HF3 + 2.2 AV

Spectral Band: 420-700 nm

f Stop: Variable

Shutter Speed: Variable

# of Frames: 193

% Overlap: 60

Quality: Excellent

Remarks:

Airborne Science and Applications Program

The Airborne Science Branch at NASA's Dryden Flight Research Center, Edwards, California, operates two ER-2 high altitude aircraft in support of NASA earth science research. The ER-2s are used as readily deployable high altitude sensor platforms to collect remote sensing and in situ data on earth resources, celestial phenomena, atmospheric dynamics, and oceanic processes. Additionally, these aircraft are used for electronic sensor research and development and satellite investigative support.

The ER-2s are flown from various deployment sites in support of scientific research sponsored by NASA and other federal, state, university, and industry investigators. Data are collected from deployment sites in Kansas, Texas, Virginia, Florida, and Alaska. Cooperative international scientific projects have deployed the aircraft to sites in Great Britain, Australia, Chile, and Norway.

Photographic and digital imaging sensors are flown aboard the ER-2s in support of research objectives defined by the sponsoring investigators. High resolution mapping cameras and digital multispectral imaging sensors are utilized in a variety of configurations in the ER-2s' four pressurized experiment compartments. The following provides a description of the digital multispectral sensor(s) and camera(s) used for data collection during this flight.

Department of Energy Remote Sensing Laboratory

The NASA Airborne Science and Applications Program at Ames Research Center contracted with the Department of Energy Remote Sensing Laboratory (RSL) in Las Vegas, Nevada to fly the RSL Multispectral Scanner (MSS) and the NASA Thermal Infrared Multispectral Scanner (TIMS) over the desert southwest. The scanners were flown on the DOE Cessna Citation.

The Cessna Citation is a low and medium altitude, moderate speed aircraft. It can operate from 4,000 to 35,000 feet above sea level at speeds between 135 and 225 knots. There are two instrument ports in the aircraft. The RSL 1268 Multispectral Scanner was mounted over the aft port and the NASA Thermal Infrared Multispectral Scanner was mounted over the forward port.

Camera Systems

Various camera systems and films are used for photographic data collection. Film types include high definition color infrared, natural color, and black and white emulsions. Available photographic systems are as follows:

- Wild-Heerbrugg RC-10/RC-30 metric mapping camera
  - 9 x 9 inch film format
  - 6 inch focal length lens provides area coverage of 16 x 16 nautical miles from 65,000 feet
  - 12 inch focal length lens provides area coverage of 8 x 8 nautical miles from 65,000 feet

- Hycon HR-732 large scale mapping camera
  - 9 x 18 inch film format

- 24 inch focal length lens provides area coverage of 4 x 8 nautical miles from 65,000 feet

- IRIS II Panoramic camera
  - 4.5 x 34.7 inch film format
  - 24 inch focal length lens
  - 90 degree field of view provides area coverage of 2 x 21.4 nautical miles from 65,000 feet

The U.S. Geological Survey's EROS Data Center at Sioux Falls, South Dakota serves as the archive and product distribution facility for NASA-Ames aircraft acquired photographic and digital imagery. For information regarding photography and digital data (including areas of coverage, products, and product costs) contact EROS Data Center, Customer Services, Sioux Falls, South Dakota 57198 (Telephone: 605-594-6151).

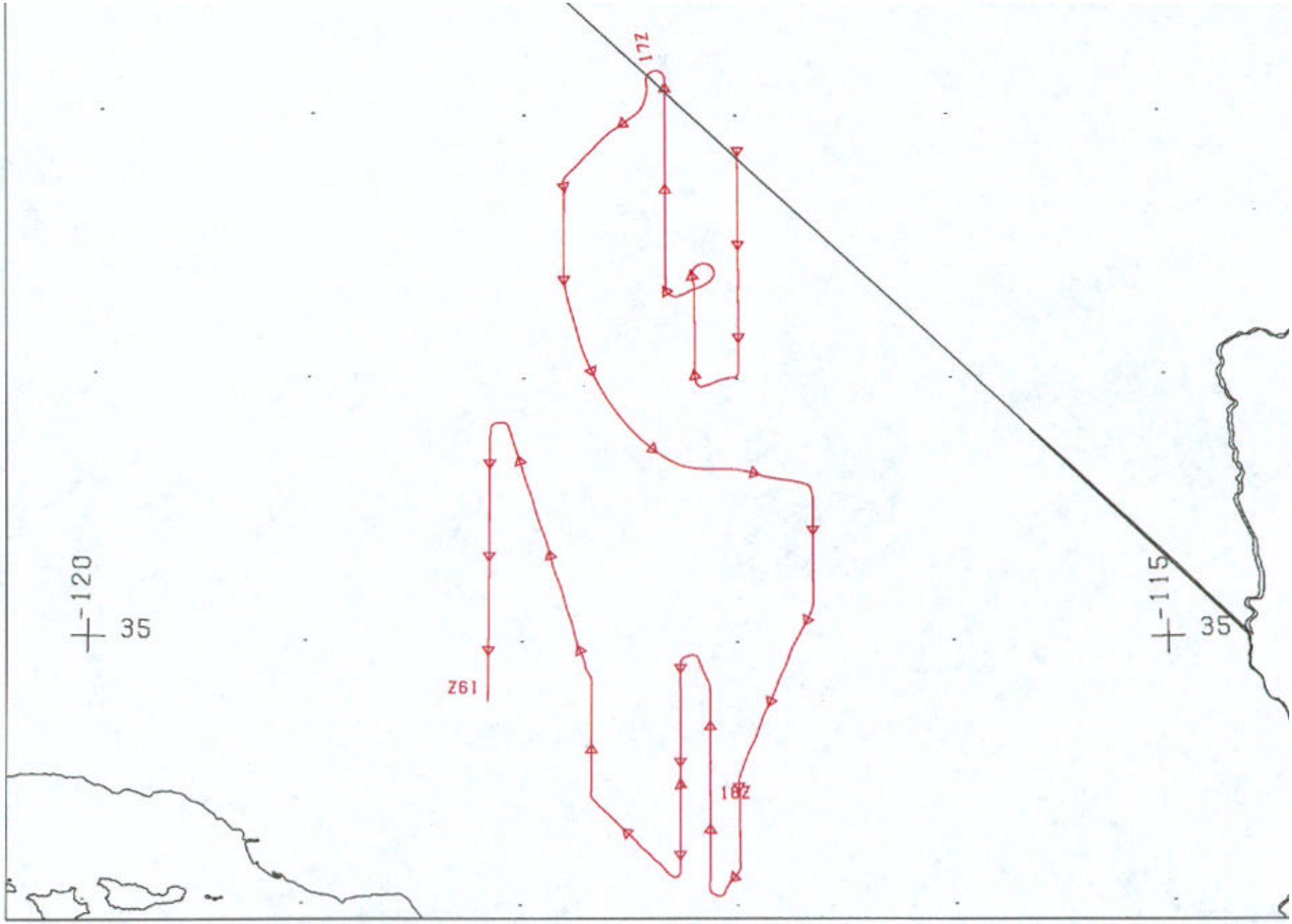
Information on data tape format, logical record format, and scanner calibration data may be obtained from the Aircraft Data Facility, NASA-Ames Research Center, Mail Stop 240-6, Moffett Field, California 94035-1000 (Telephone: 650-604-6252).

CAMERA FLIGHT LINE DATA
FLIGHT NO. 97-006-10

Accession # 05215

Sensor # 017

Site #	Line #	Run #	Frame #	Time (GMT-hr, min, sec) START	Time (GMT-hr, min, sec) END	Altitude, MGL feet/meters	Cloud Cover/Remarks
700	11	1	0001-0013	16:23:48	16:27:13	21800/6645	Clear
700	11	2	0014-0021	16:33:10	16:35:13	21800/6645	Clear
700	14	1	0022-0030	16:40:22	16:42:49	21811/6648	Clear
700	16	1	0031-0055	16:50:54	16:58:26	21700/6614	Clear
700	23	1	0056-0066	17:10:17	17:12:51	21800/6645	Clear
700	6	1	0067-0077	17:33:42	17:36:49	21882/6670	Clear
700	11	3	0078-0085	17:49:42	17:51:53	21788/6641	Clear
700	13	1	0086-0109	17:57:23	18:04:45	21929/6684	Clear
700	15	1	0110-0133	18:10:21	18:18:35	21896/6674	Clear
700	21	1	0134-0144	18:27:52	18:31:05	21800/6645	Clear
700	28	1	0145-0182	18:48:44	19:00:58	21747/6628	Clear
700	15	2	0183-0193	22:48:50	22:52:16	21800/6645	Clear


17Z
-120
35
-115
35
Z61
18Z
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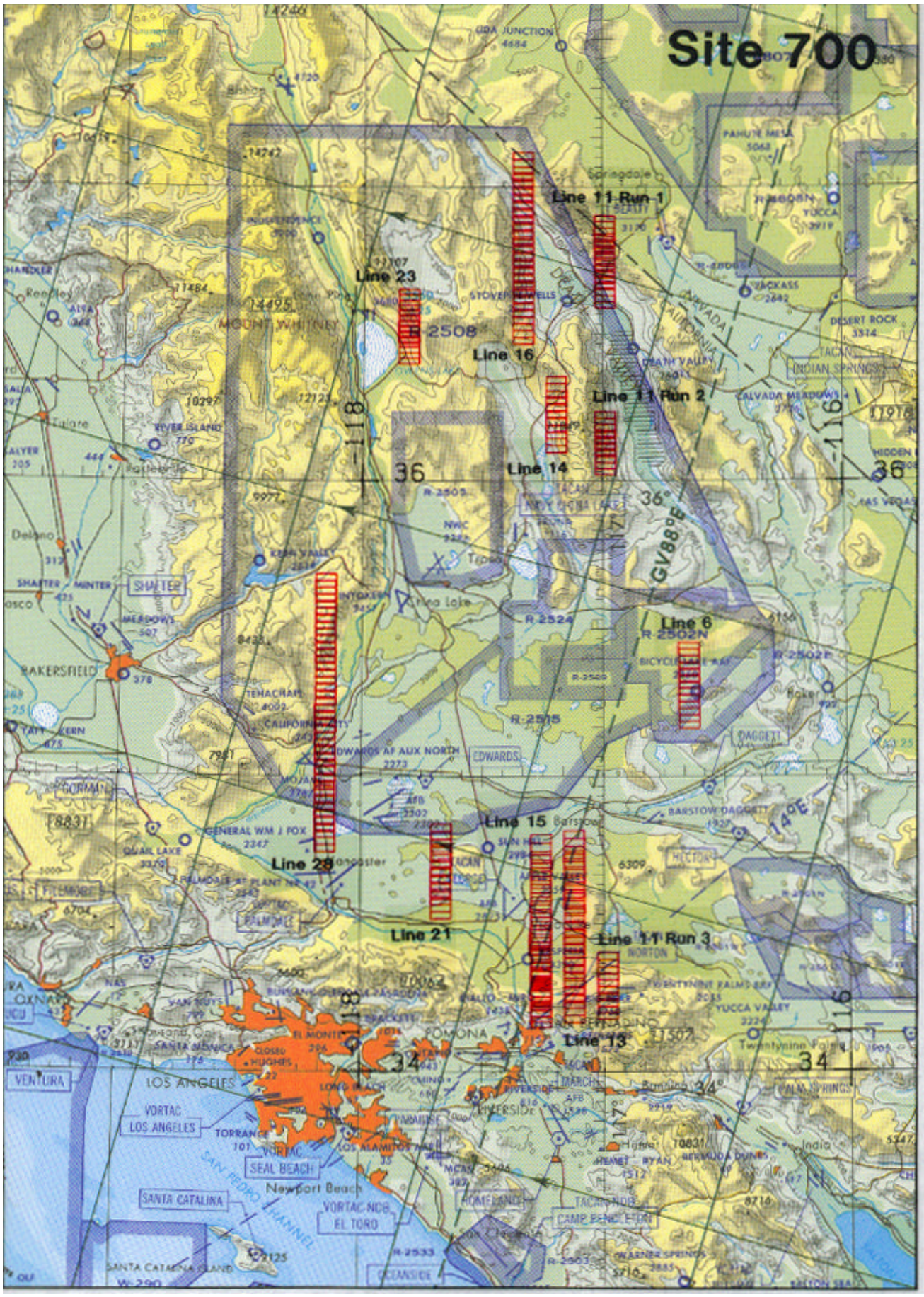
A/C 798
RC-30


Site 700
Line 11 Run 1
Line 23
Line 16
Line 11 Run 2
Line 14
Line 6
Line 15
Line 28
Line 21
Line 11 Run 3
Line 13
R-2508
R-2524
R-2515
R-2502N
R-2502P
R-2503
R-2533
MOUNT WHITNEY
BAKERSHEELD
EDWARDS AF AUX NORTH
EDWARDS
GENERAL WM J FOX
LOS ANGELES
VORTAC LOS ANGELES
SEAL BEACH
Newport Beach
VORTAC NDB EL TORO
SANTA CATALINA
SAN PEDRO CHANNEL
VENTURA
POMONA
BARSTOW DAGGETT
TWENTYNINE PALMS
YUCCA VALLEY
INDIAN SPRINGS
LAS VEGAS
GV88°E
14°E
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