FLIGHT SUMMARY REPORT

Flight Number: 97-006-09

Calendar/Julian Date: 25 June 1997 • 176

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 #:	05210	05211	05212
Sensor ID #:	017	017	017
Sensor Type:	RC-30	RC-30	RC-30
Focal Length:	6” 152.75 mm	6” 152.75 mm	6” 152.75 mm
Film Type:	Aerochrome MS 2448 II	Aerochrome MS 2448 II	Aerochrome MS 2448 II
Filtration:	HF3 + 2.2 AV	HF3 + 2.2 AV	HF3 + 2.2 AV
Spectral Band:	420-700 nm	420-700 nm	420-700 nm
f Stop:	Variable	Variable	Variable
Shutter Speed:	Variable	Variable	Variable
# of Frames:	118	152	90
% Overlap:	60	60	60
Quality:	Excellent	Excellent	Fair
Remarks:			Emulsion yellowed

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. 97-006-09

Accession # 05210

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	39	1	0082-0098	17:10:48	17:16:29	21818/6650	Clear
700	38	1	0099-0115	17:21:28	17:27:05	21853/6661	Clear
700	37	1	0116-0132	17:32:13	17:37:51	21894/6673	Clear
700	36	1	0133-0148	17:42:53	17:48:30	21875/6668	Clear
700	35	1	0149-0165	17:53:39	17:59:09	21918/6681	Clear
700	34	1	0166-0182	18:04:17	18:09:46	21929/6684	Clear
700	33	1	0183-0199	18:15:08	18:20:39	21965/6695	Clear

CAMERA FLIGHT LINE DATA
FLIGHT NO. 97-006-09

Accession # 05211

Sensor # 017

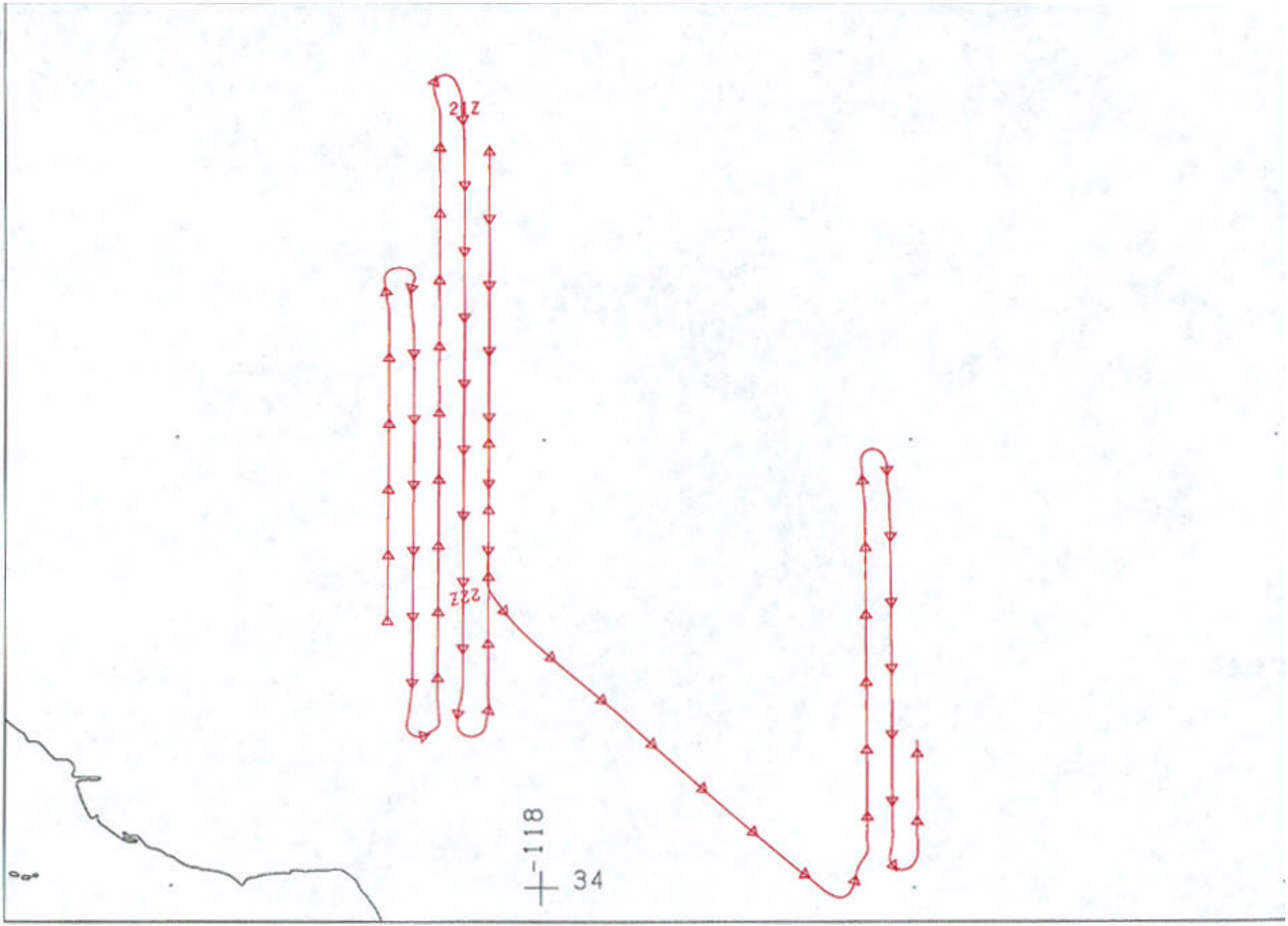
Site #	Line #	Run #	Frame #	Time (GMT-hr, min, sec) START	Time (GMT-hr, min, sec) END	Altitude, MGL feet/meters	Cloud Cover/Remarks
700	32	1	0001-0024	20:15:22	20:23:55	21917/6680	Clear
700	31	1	0025-0053	20:29:00	20:38:30	21917/6680	Clear
700	30	1	0054-0094	20:43:44	20:59:22	21973/6697	Clear
700	29	1	0095-0140	21:03:58	21:19:16	21948/6690	Clear
700	28	1	0141-0152	21:24:21	21:28:15	21925/6683	Clear

CAMERA FLIGHT LINE DATA
FLIGHT NO. 97-006-09

Accession # 05212

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	28	2	0001-0035	21:47:00	21:58:47	21900/6675	Clear
700	13	1	0036-0059	22:17:32	22:25:30	21875/6668	Clear
700	12	1	0060-0085	22:29:58	22:38:37	21885/6671	Clear; oblique (frame 0060)
700	11	1	0086-0090	22:43:27	22:44:50	21800/6645	Clear



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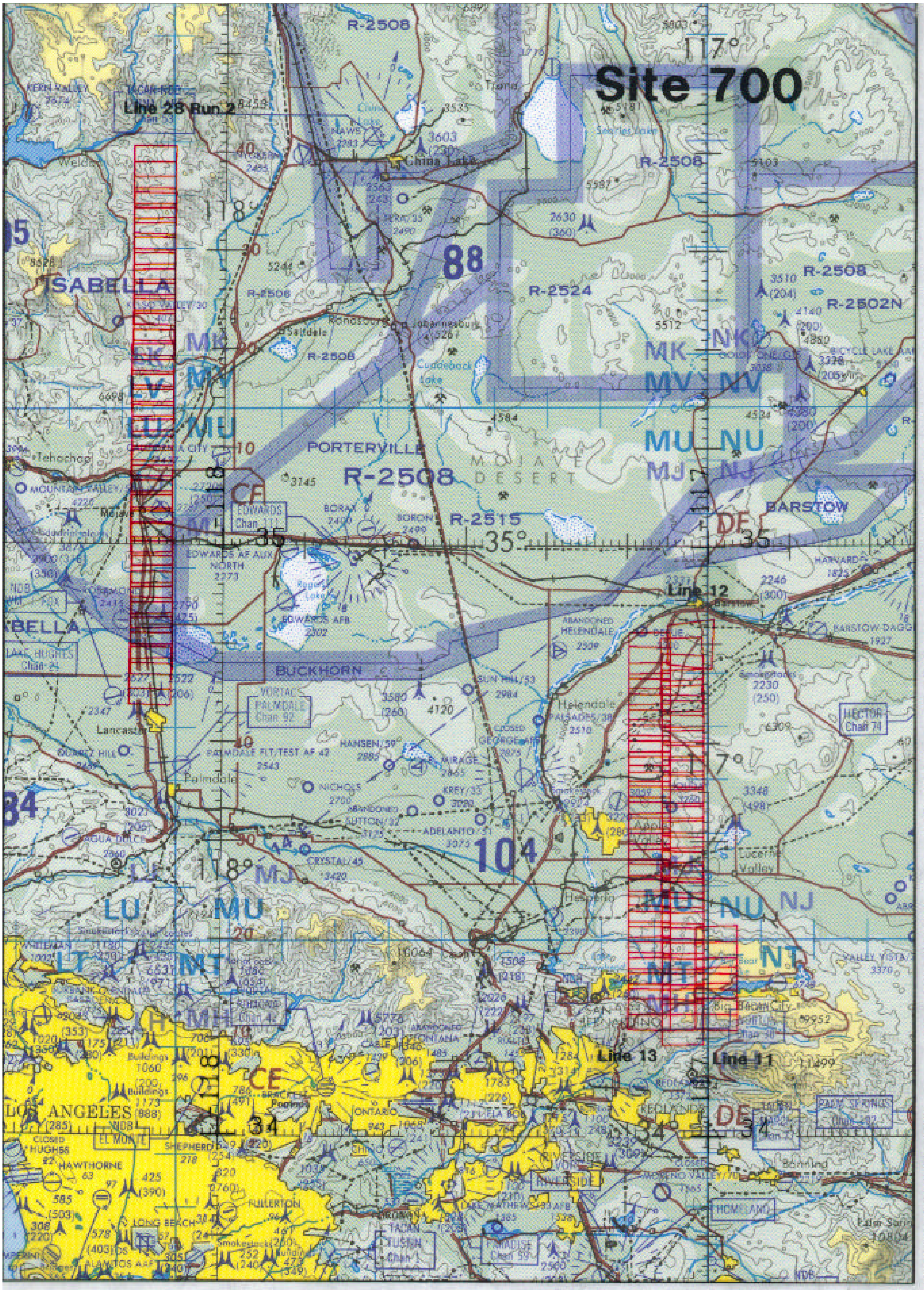

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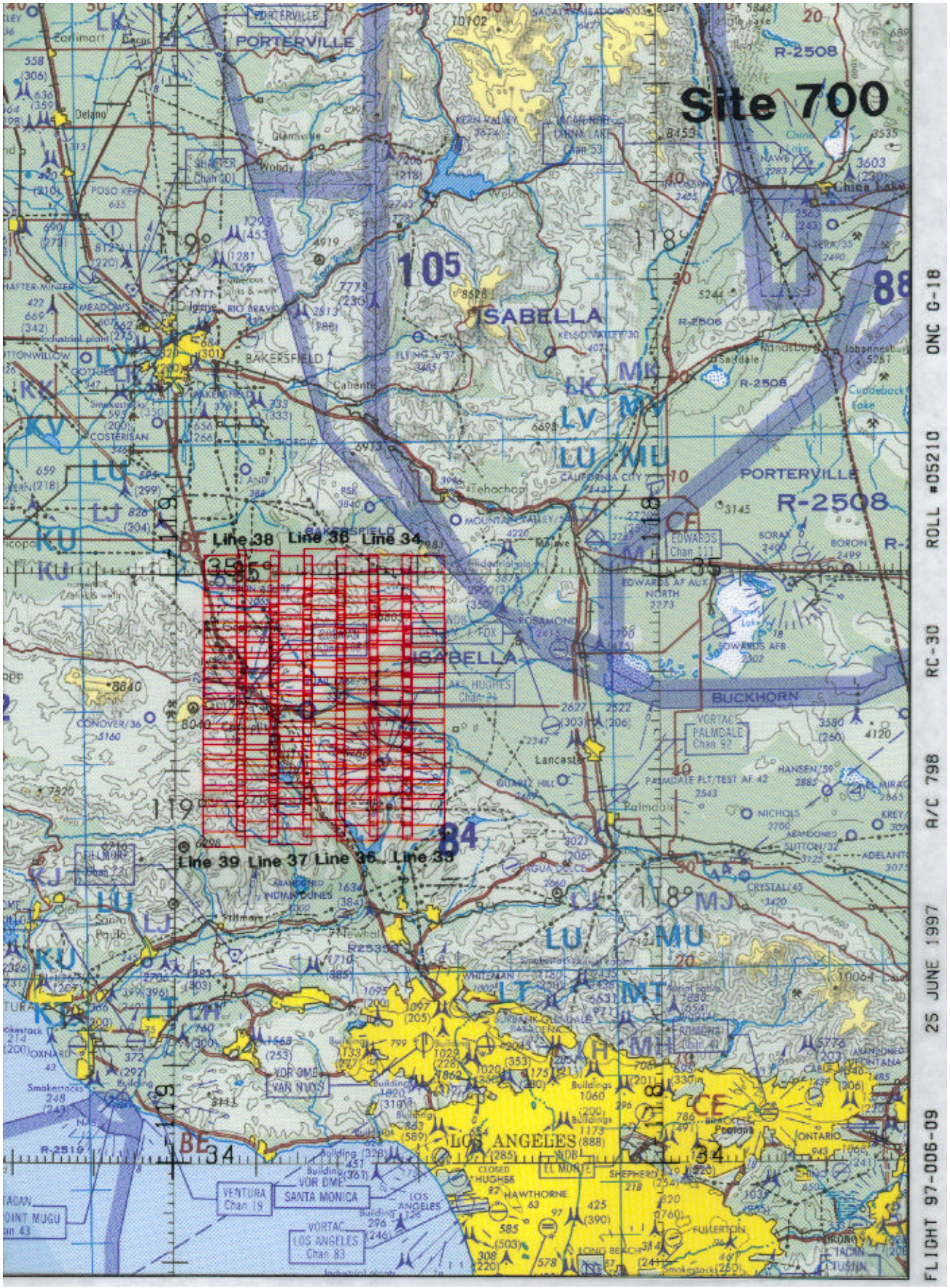
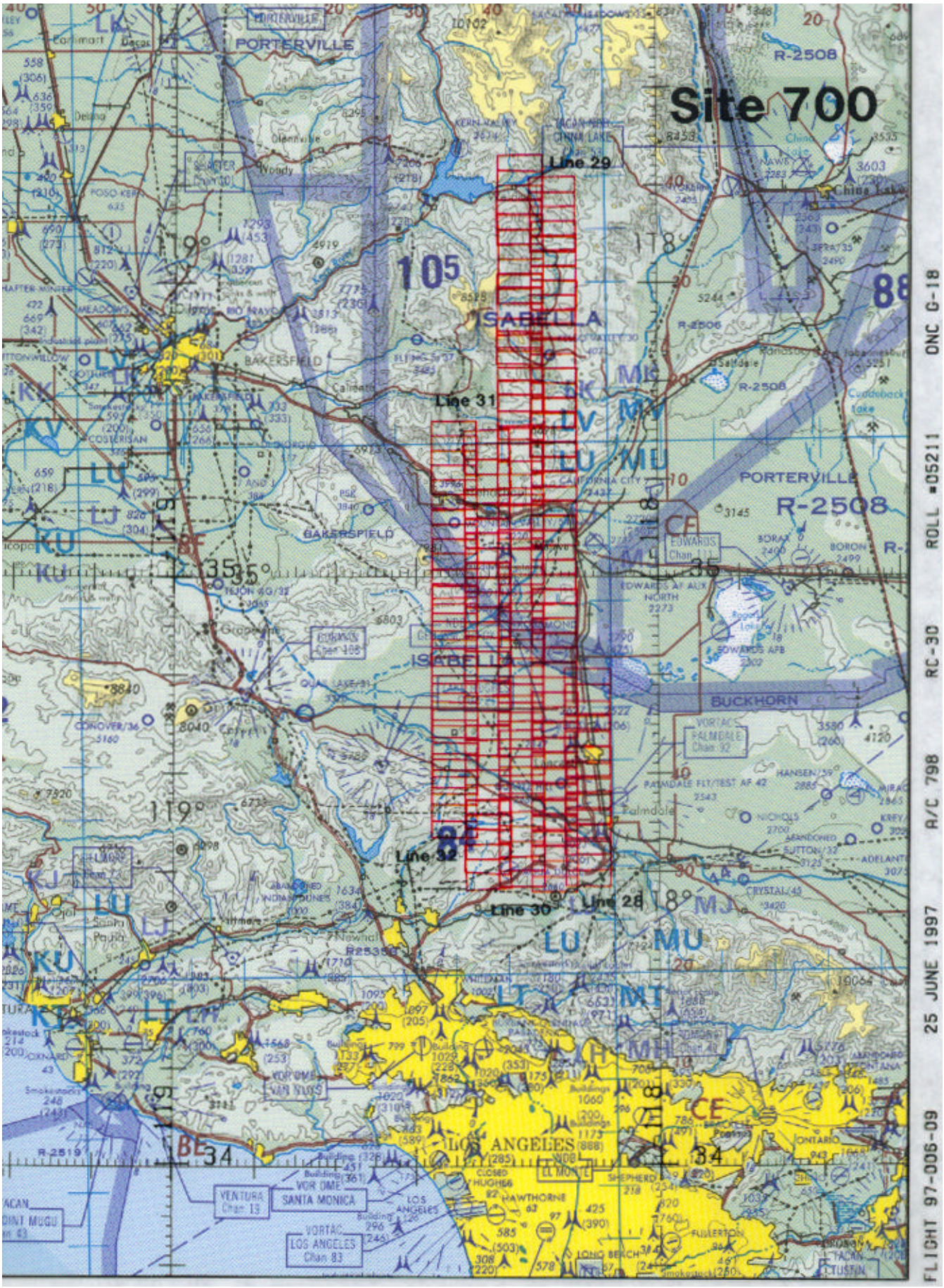

Site 700
Line 38
Line 36
Line 34
Line 39
Line 37
Line 35
PORTERVILLE
R-2508
ISABELLA
BAKERSFIELD
R-2506
R-2519
BUCKHORN
LOS ANGELES
FLIGHT 97-006-09 25 JUNE 1997 A/C 798 RC-30 ROLL #05210 ONC G-18


Site 700
Line 29
Line 31
Line 32
Line 30
Line 28
PORTERVILLE
BAKERSPIELD
SABELLA
R-2508
BUCKHORN
LOS ANGELES
VENTURA
SANTA MONICA
VORTAC
LOS ANGELES
FLIGHT 97-006-09 25 JUNE 1997 A/C 798 RC-30 ROLL #05211 ONC G-18