

Airborne Science and Applications Program

The Airborne Science and Applications Program (ASAP) is supported by three ER-2 high altitude Earth Resources Survey aircraft. These aircraft are operated by the High Altitude Missions Branch at NASA-Ames Research Center, Moffett Field, California. 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.

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-Heerbrug RC-10 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

CAMERA FLIGHT LINE DATA
 FLIGHT NO. 90-005

Accession No. 03955

Sensor #
 034

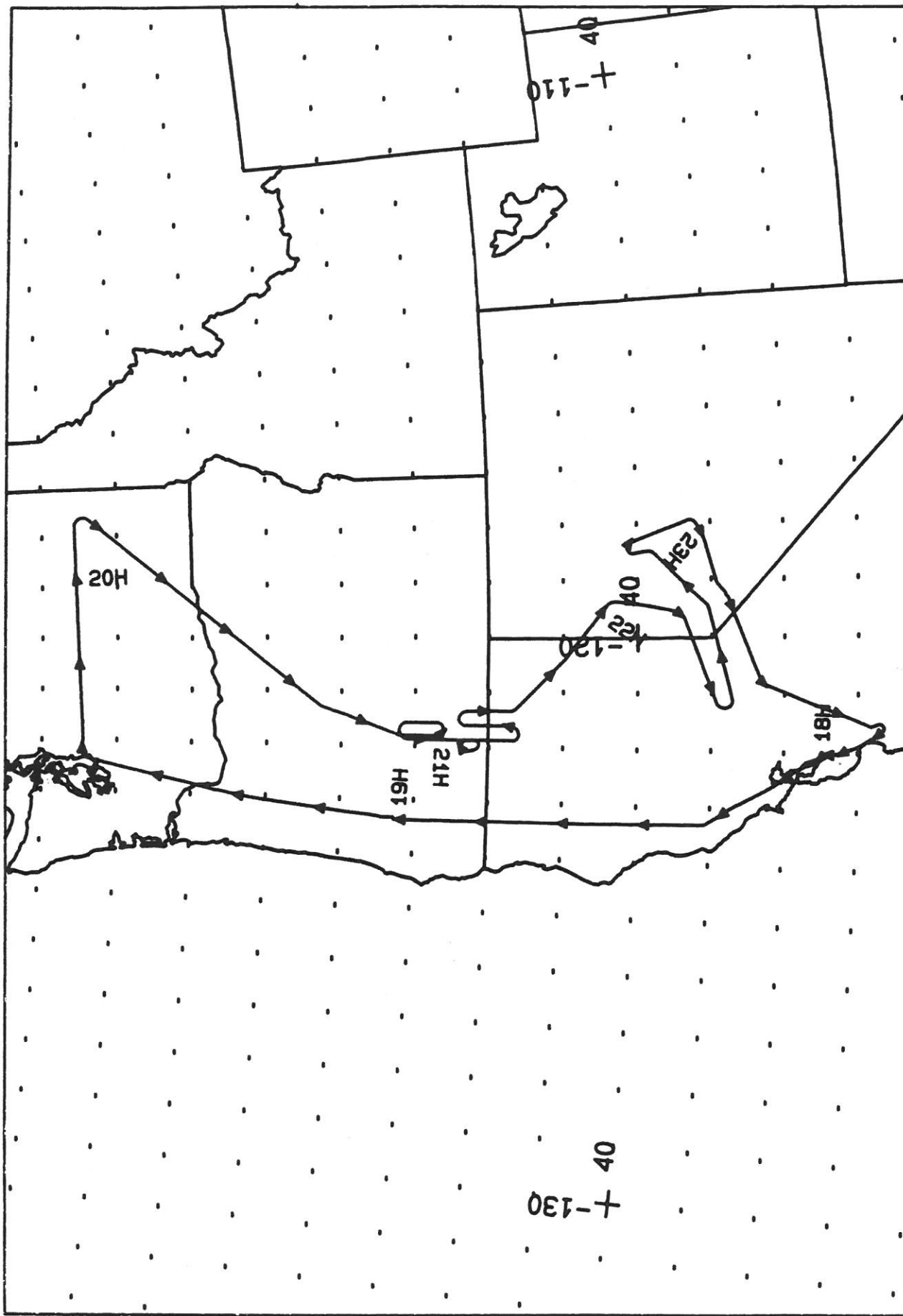
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		START	END		
A - B	4593-4595	21:16:51	21:17:24	65000/19800	Clear
C - D	4596-4621	22:26:32	22:37:01	"	Clear
D - E	4622-4640	22:38:42	22:47:15	"	10-30% cirrus (frames 4624-4634; 4638-4640)

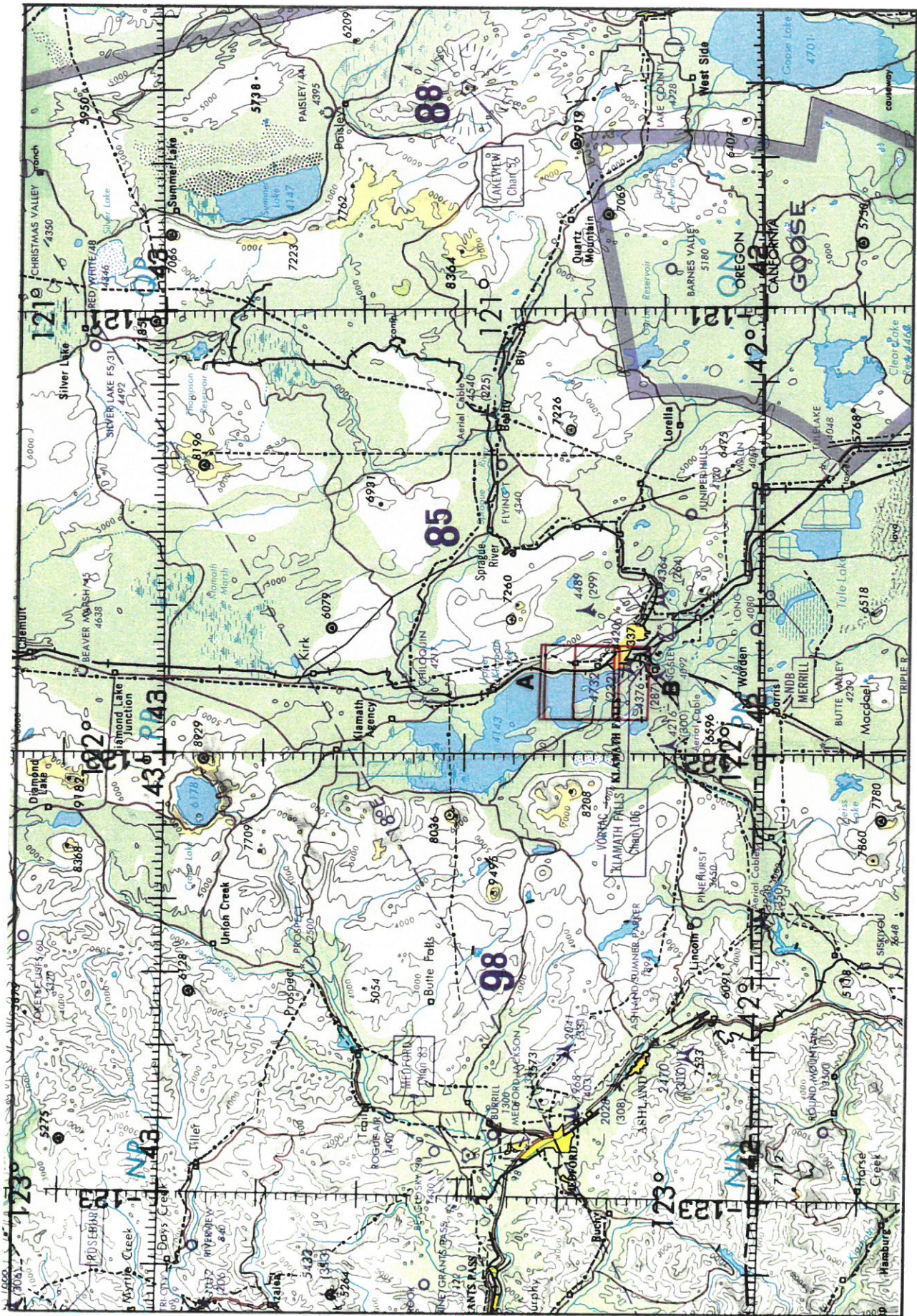
CAMERA FLIGHT LINE DATA
 FLIGHT NO. 90-005

Accession No. 03956

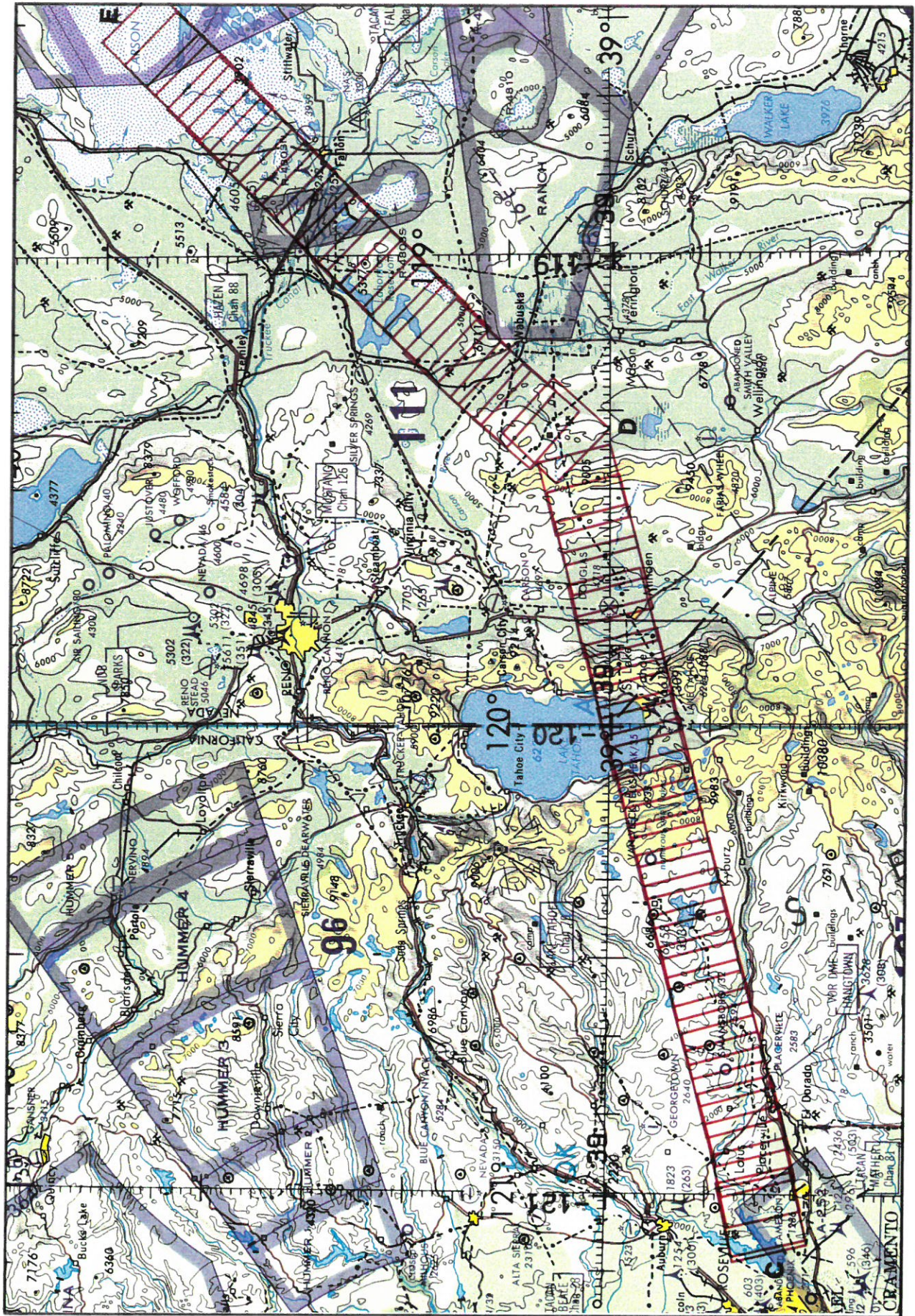
Sensor #
 039

Check Points	Frame Numbers	Time (GMT-hr, min, sec)		Altitude, MSL feet/meters	Cloud Cover/Remarks
		START	END		
C - D	0001-0047	22:26:10	22:37:20	65000/19800	Clear
D - E	0048-0082	22:38:13	22:46:28	"	10-20% cirrus (frames 0054-0058; 0062-0066)

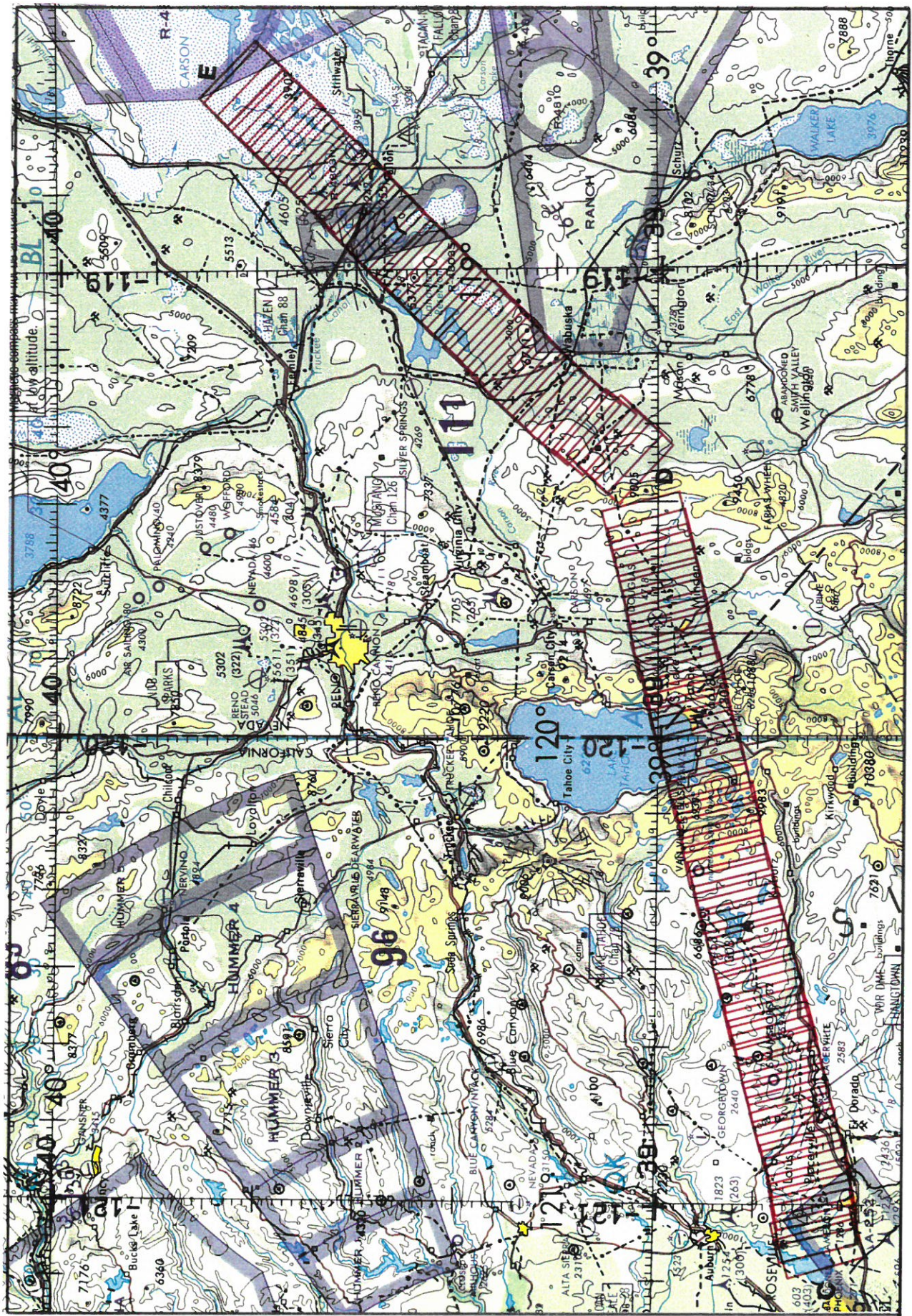




FLIGHT 90-005 5 October 1989 A/C 706 Accession # 03955 RC-10 SO-131 ONC F-16



FLIGHT 90-005 5 October 1989 A/C 706 Accession # 03955 RC-10 SO-131 ONC 6-18



FLIGHT 90-005 5 October 1989 A/C 706 Accession # 03956 HR-732 SO-131 ONC 6-18