

# FLIGHT SUMMARY REPORT

**Flight #:** 91-147  
**Date:** 13 August 1991  
**Sensor Package:** Hycon HR-732  
Wild-Heerbrug RC-10  
**Area(s) Covered:** Rogue National Forest, Oregon

**Investigator(s):** Weber, USDA  
**Flight Request:** 91R104

**Aircraft #:** 706  
**Julian Date:** 225

## SENSOR DATA

<b>Accession #:</b>	04269	04270
<b>Sensor ID #:</b>	018	026
<b>Sensor Type:</b>	HR-732	RC-10
<b>Focal Length:</b>	24" 609.6 mm	12" 304.97 mm
<b>Film Type:</b>	High Definition Aerochrome IR SO131	Panatomic X Aerographic EK 2412
<b>Filtration:</b>	cc.10B	Wratten 12
<b>Spectral Band:</b>	510-900 nm	510-700 nm
<b>f Stop:</b>	8	5.6
<b>Shutter Speed:</b>	1/75	1/250
<b># of Frames:</b>	281	147
<b>% Overlap:</b>	60	60
<b>Quality:</b>	Excellent	Excellent
<b>Remarks:</b>		

## 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. The following provides descriptions of the camera systems flown onboard the ER-2s.

### 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

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).

Additional information regarding ER-2 acquired photographic and digital data is available through the Aircraft Data Facility at Ames Research Center. For specific information regarding flight documentation, sensor parameters, and areas of coverage contact the Aircraft Data Facility, NASA-Ames Research Center, Mail Stop 240-6, Moffett Field, California 94035-1000 (Telephone: (415) 604-6252).

**CAMERA FLIGHT LINE DATA  
FLIGHT NO. 91-147**

Accession # 04269

Sensor # 018

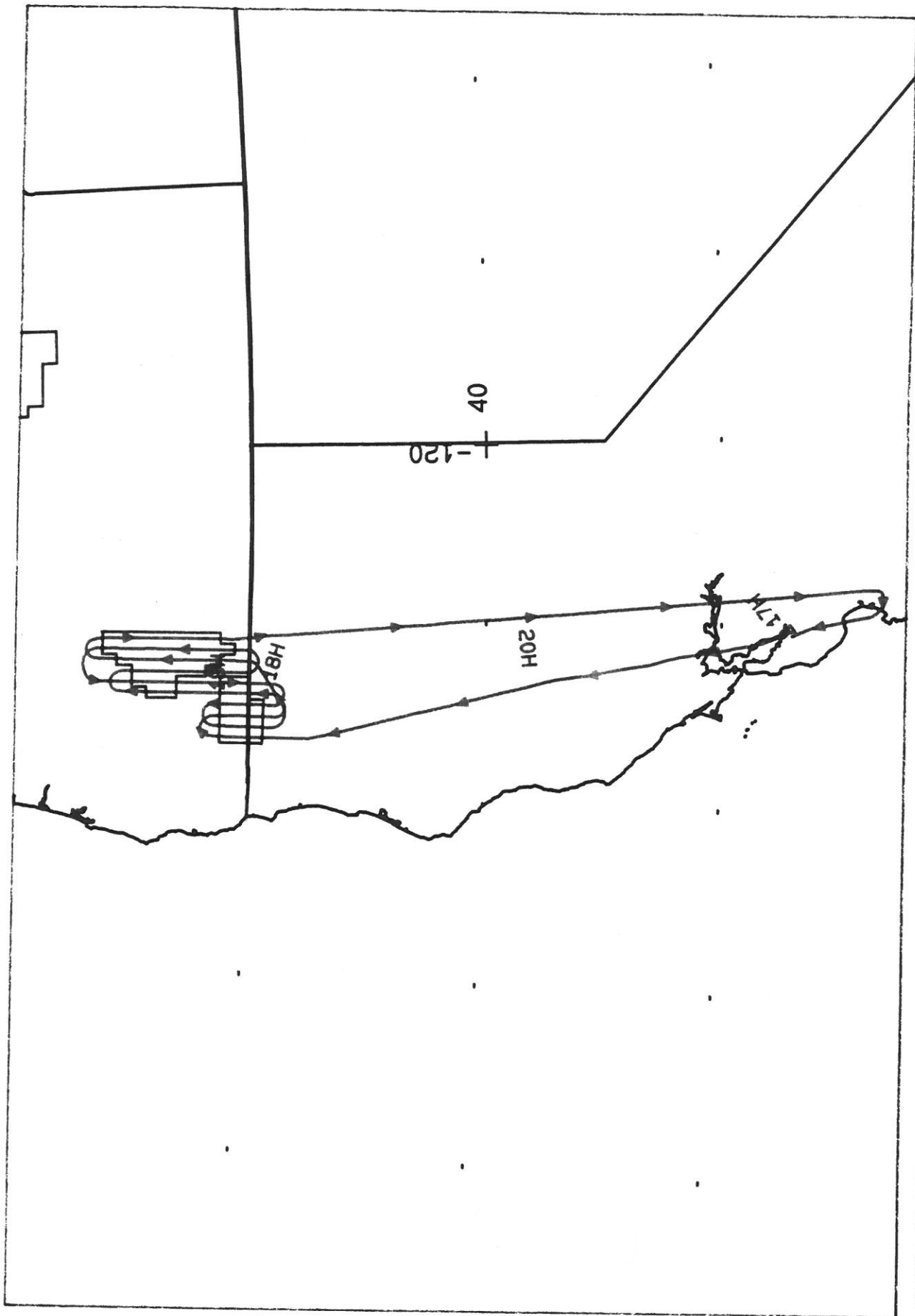
Check Points	Frame Numbers	Time (GMT-hr, min, sec)		Altitude, MSL feet/meters	Cloud Cover/Remarks
		START	END		
A - B	0001-0017	17:44:51	17:48:31	65000/19800	Clear
C - D	0018-0035	17:52:00	17:55:54	"	Clear
E - F	0036-0054	17:59:25	18:03:32	"	Clear
G - H	0055-0066	18:06:22	18:08:53	"	Clear
I - J	0067-0092	18:13:52	18:19:34	"	Clear
K - L	0093-0139	18:25:37	18:36:06	"	Clear
M - N	0140-0156	18:42:22	18:46:00	"	Clear
O - P	0157-0169	18:49:09	18:51:53	"	Clear
Q - R	0170-0187	18:55:32	18:59:24	"	Clear
S - T	0188-0203	19:02:52	19:06:17	"	Clear
U - V	0204-0239	19:15:55	19:23:52	"	Clear
W - X	0240-0281	19:28:01	19:37:20	"	Clear

**CAMERA FLIGHT LINE DATA**  
**FLIGHT NO. 91-147**

Accession # 04270

Sensor # 026

Check Points	Frame Numbers	Time (GMT-hr, min, sec)		Altitude, MSL feet/meters	Cloud Cover/Remarks
		START	END		
A - B	8766-8775	17:46:19	17:53:28	65000/19800	Clear
C - D	8776-8783	17:53:28	17:57:18	"	Clear
E - F	8784-8793	18:00:53	18:05:12	"	Clear
G - H	8794-8801	18:07:52	18:10:44	"	Clear
I - J	8802-8814	18:15:20	18:21:05	"	Clear
K - L	8815-8837	18:27:05	18:37:38	"	Clear
M - N	8838-8846	18:43:49	18:47:39	"	Clear
O - P	8847-8853	18:50:37	18:53:29	"	Clear
Q - R	8854-8862	18:57:01	19:00:50	"	Clear
S - T	8863-8872	19:04:21	19:08:11	"	Clear
U - V	8873-8890	19:17:25	19:25:32	"	Clear
W - X	8891-8912	19:29:30	19:39:04	"	Clear



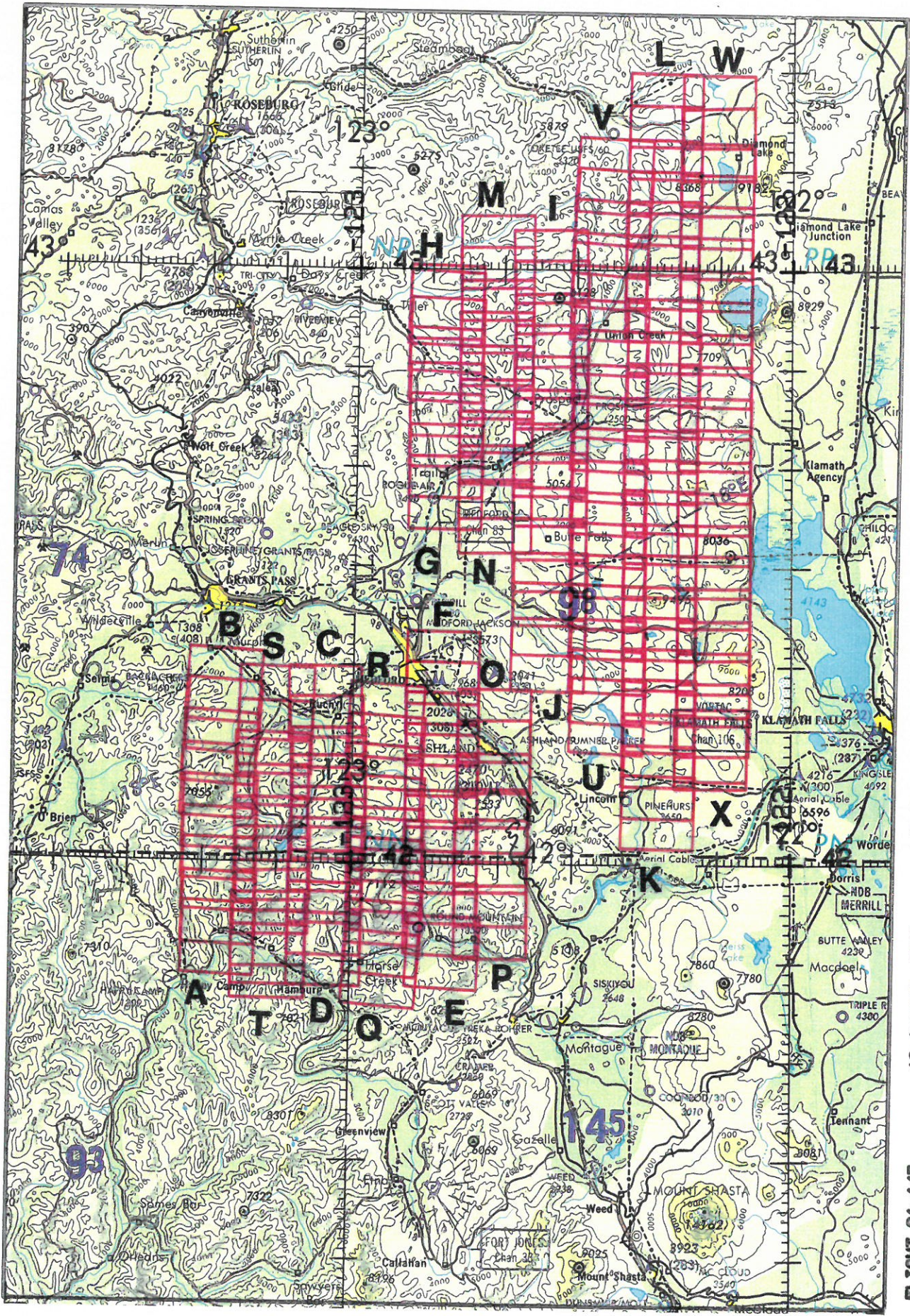
FLIGHT 91-147

13 August 1991

A/C 706

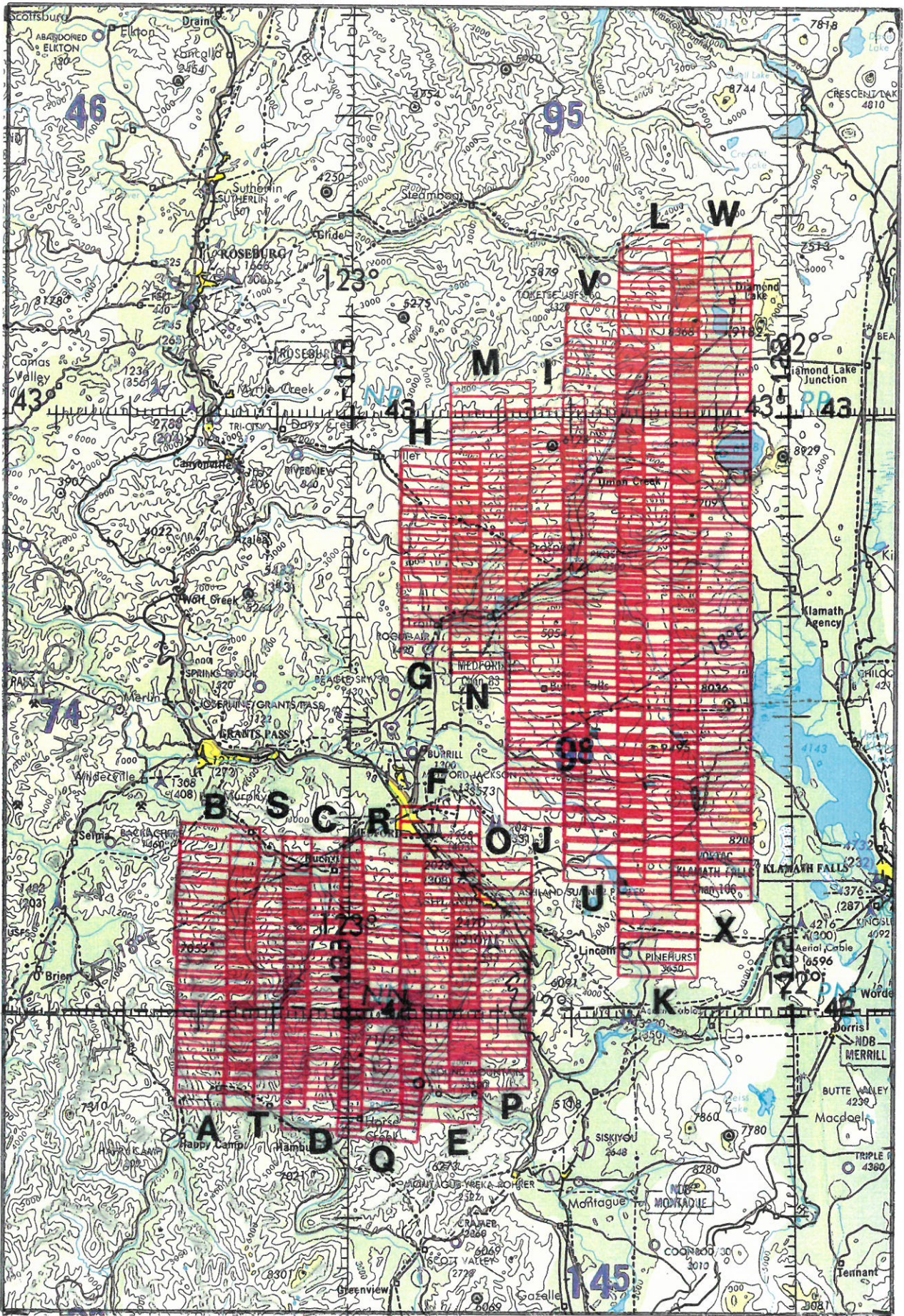
Dua1 HR-732 / RC-10





FLIGHT 91-147  
13 August 1991  
A/C 706  
Duo1 HR-792 / RC-10  
Accession # 04270  
UNC F-16





FLIGHT 91-147

13 August 1991

A/C 706

Dual HR-792 / RC-10

Accession # 04269

ONC F-16