FLIGHT SUMMARY REPORT

Flight #: 91-176

Date: 24 September 1991

Sensor Package: Wild-Heerbrug RC-10
Hycon HR-732

Area(s) Covered: Eastern Oregon, S.E. Washington, Idaho

Investigator(s): Weber, USDA

Aircraft #: 706

Flight Request: 91R104

Julian Date: 267

SENSOR DATA

Accession #:	04313	04314
Sensor ID #:	026	038
Sensor Type:	RC-10	HR-732
Focal Length:	12" 304.97 mm	24" 609.6 mm
Film Type:	High Definition Aerochrome IR SO-131	High Definition Aerochrome IR SO-131
Filtration:	cc.10B	cc.20B
Spectral Band:	510-900 nm	510-900 nm
f Stop:	4	8
Shutter Speed:	1/125	1/75
# of Frames:	187	336
% Overlap:	60	60
Quality:	Excellent	Good
Remarks:		Underexposed

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. 91-176

Accession # 04313

Sensor # 026

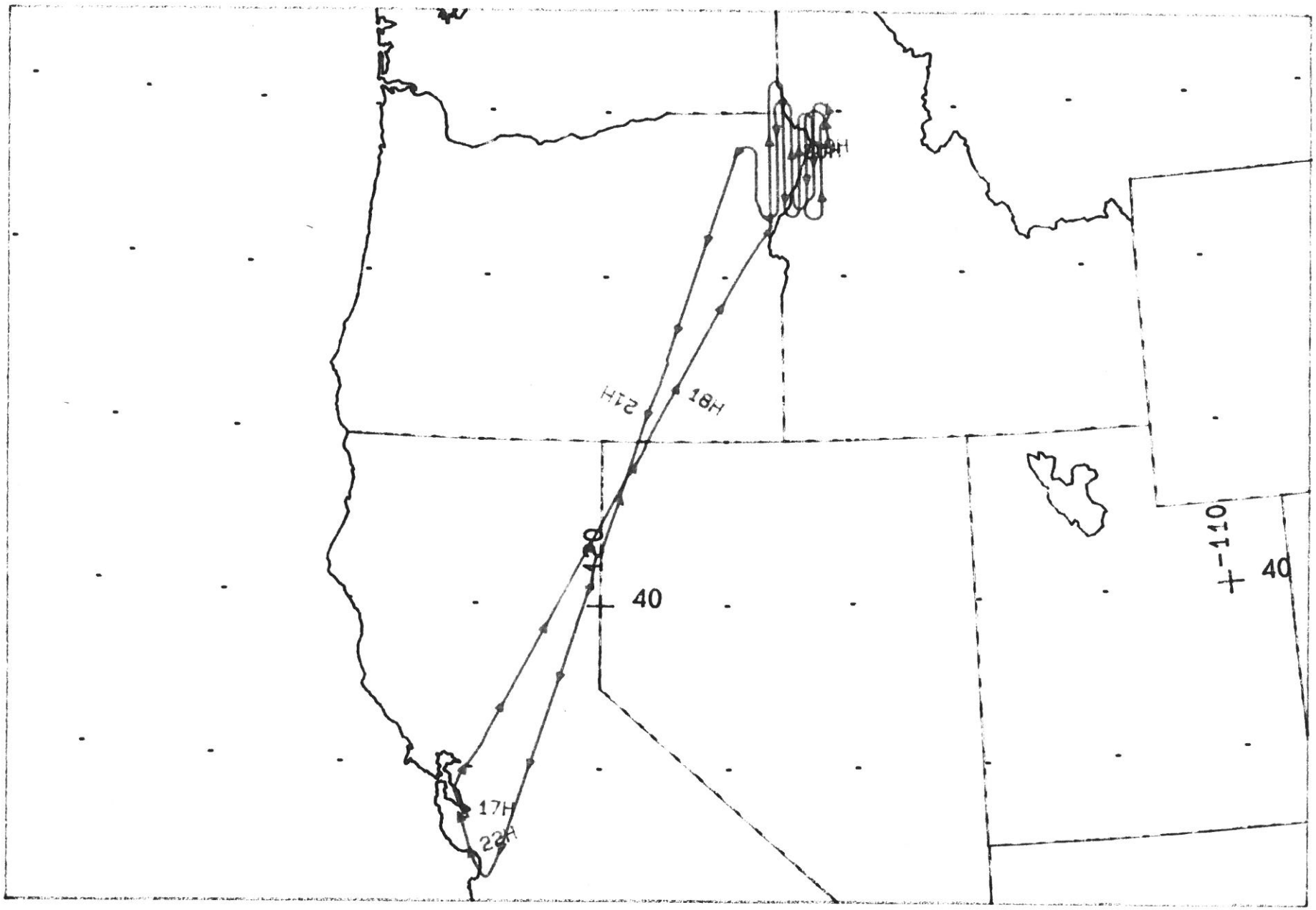
Check Points	Frame Numbers	Time (GMT-hr, min, sec)		Altitude, MSL feet/meters	Cloud Cover/Remarks
		START	END		
A - B	8885-8914	18:22:16	18:35:50	65000/19800	Clear
C - D	8915-8937	18:41:02	18:51:24	"	Clear
E - F	8938-8959	18:54:24	19:03:50	"	Clear
G - H	8960-8972	19:08:18	19:13:31	"	Clear
I - J	8973-8992	19:19:18	19:27:46	"	Clear
K - G	8993-9000	19:32:55	19:35:47	"	Clear
L - M	9001-9017	19:44:13	19:51:16	"	Clear
N - O	9018-9040	19:55:30	20:05:21	"	Clear
P - Q	9041-9063	20:08:58	20:18:48	"	Clear
R - S	9064-9071	20:24:56	20:27:47	"	Clear

CAMERA FLIGHT LINE DATA
FLIGHT NO. 91-176

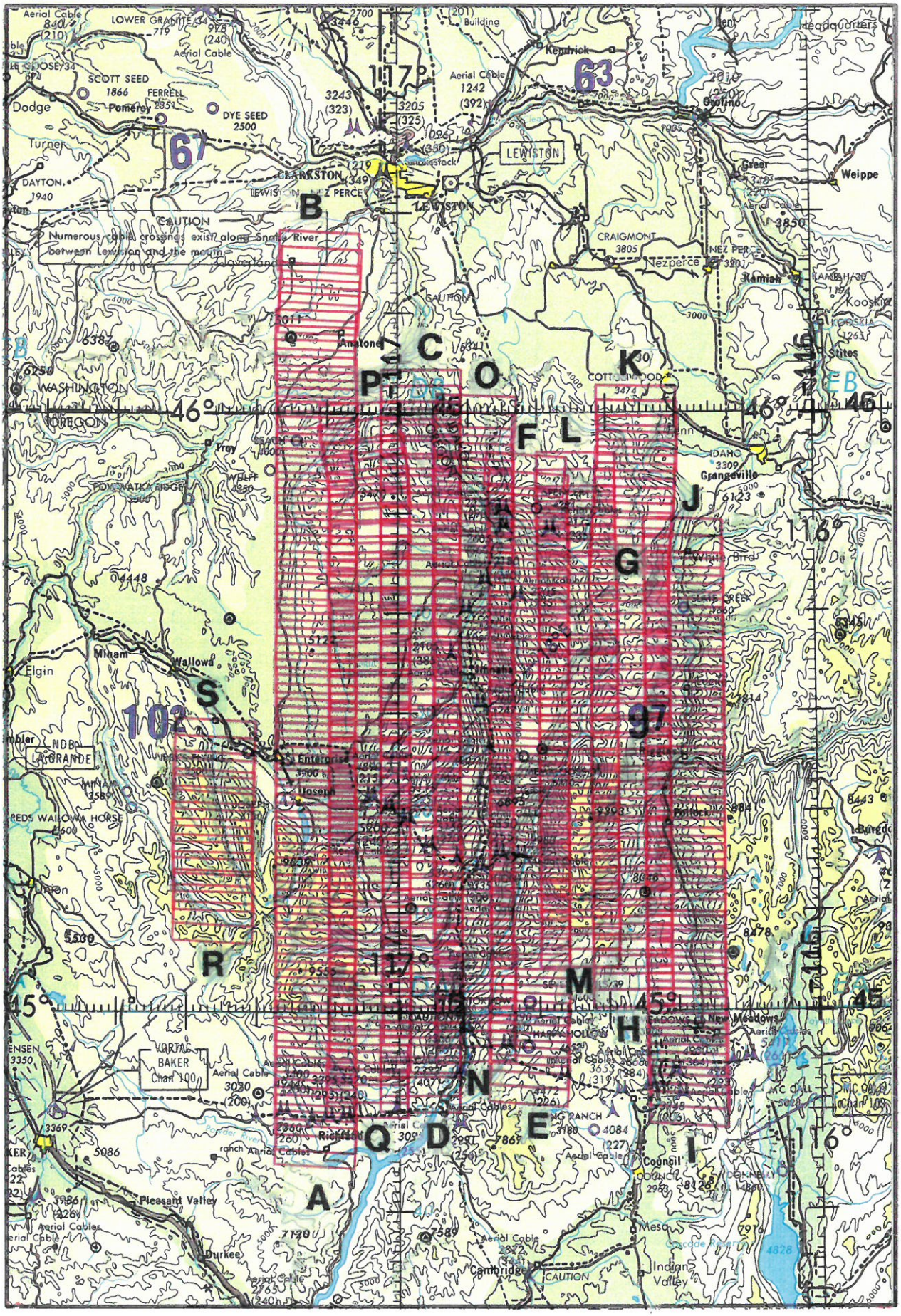
Accession # 04314

Sensor # 038

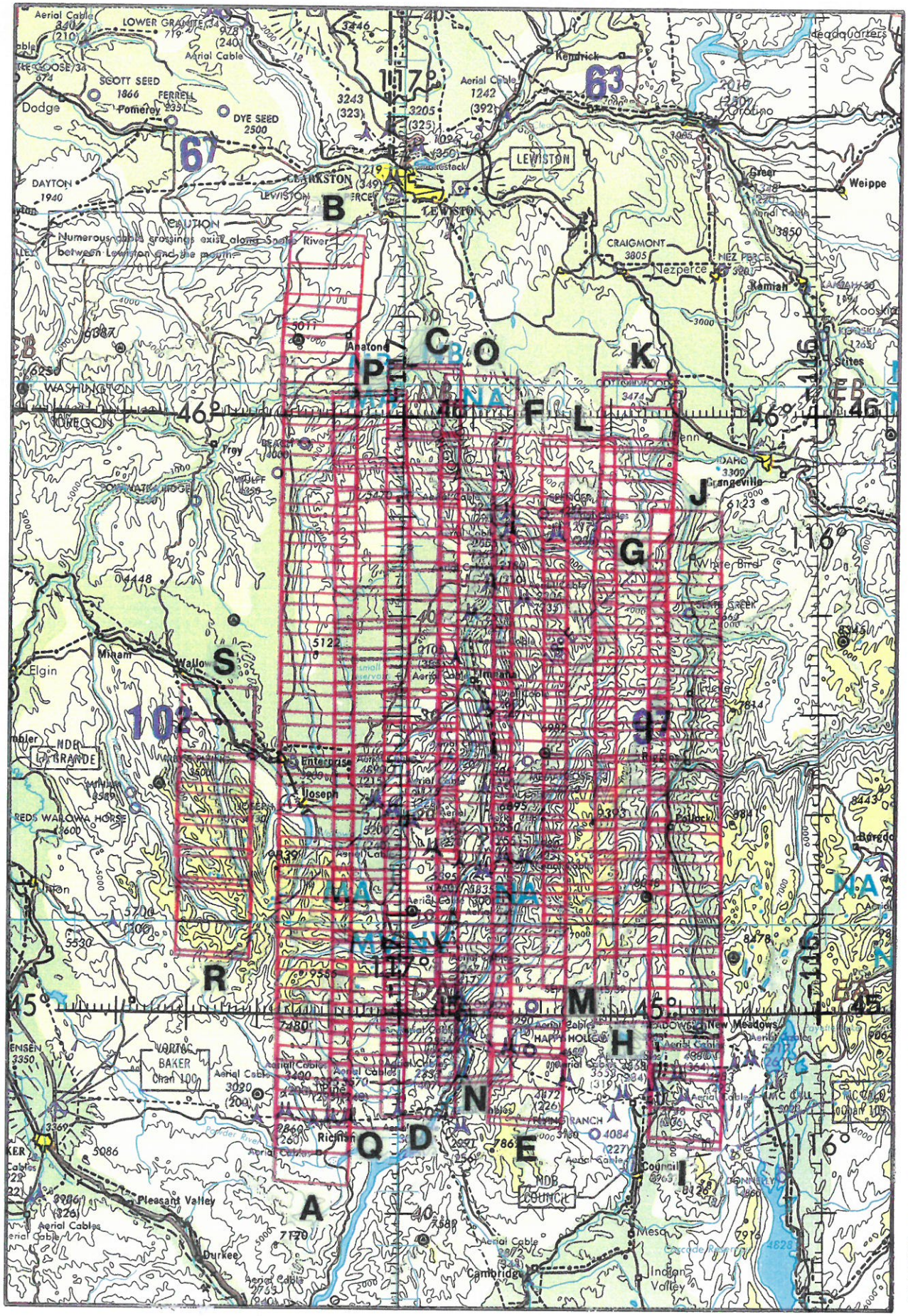
Check Points	Frame Numbers	Time (GMT-hr, min, sec)		Altitude, MSL feet/meters	Cloud Cover/Remarks
		START	END		
A - B	0001-0058	18:20:56	18:34:48	65000/19800	Clear
C - D	0059-0101	18:39:43	18:49:56	"	Clear
E - F	0102-0140	18:53:09	19:02:24	"	Clear
G - H	0141-0163	19:07:02	19:12:23	"	Clear
I - J	0164-0199	19:18:03	19:26:34	"	Clear
K - G	0200-0211	19:31:40	19:34:20	"	Clear
L - M	0212-0241	19:42:58	19:50:00	"	Clear
N - O	0242-0282	19:54:16	20:03:59	"	Clear
P - Q	0283-0324	20:07:41	20:17:39	"	Clear
R - S	0325-0336	20:23:40	20:26:21	"	Clear



FLIGHT 91-176 24 September 1991 A/C 706 Dual HR-732 / RC-10 Eastern Oregon / Idaho



FLIGHT 91-176 24 September 1991 A/C 706 HR-732 80-131 Accession # 04314 ONC F-16



FLIGHT 91-176 24 September 1991 A/C 706 RC-10 80-131 Accession # 04313 ONC F-16