FLIGHT SUMMARY REPORT

Flight #:   91-174

Date: 19 September 1991

Sensor Package: Wild-Heerbrug RC-10

Area(s) Covered: Eastern Oregon

Investigator(s): Weber, USDA

Flight Request: 91R104

Aircraft #: 706

Julian Date: 262

SENSOR DATA

Accession #:   04312

Sensor ID #:   034

Sensor Type: RC-10

Focal Length: 12"
304.66 mm

Film Type: High Definition
Aerochrome IR
SO131

Filtration: cc.10B

Spectral Band: 510-900 nm

f Stop: 4

Shutter Speed: 1/125

# of Frames: 158

% Overlap: 60

Quality: Excellent

Remarks:

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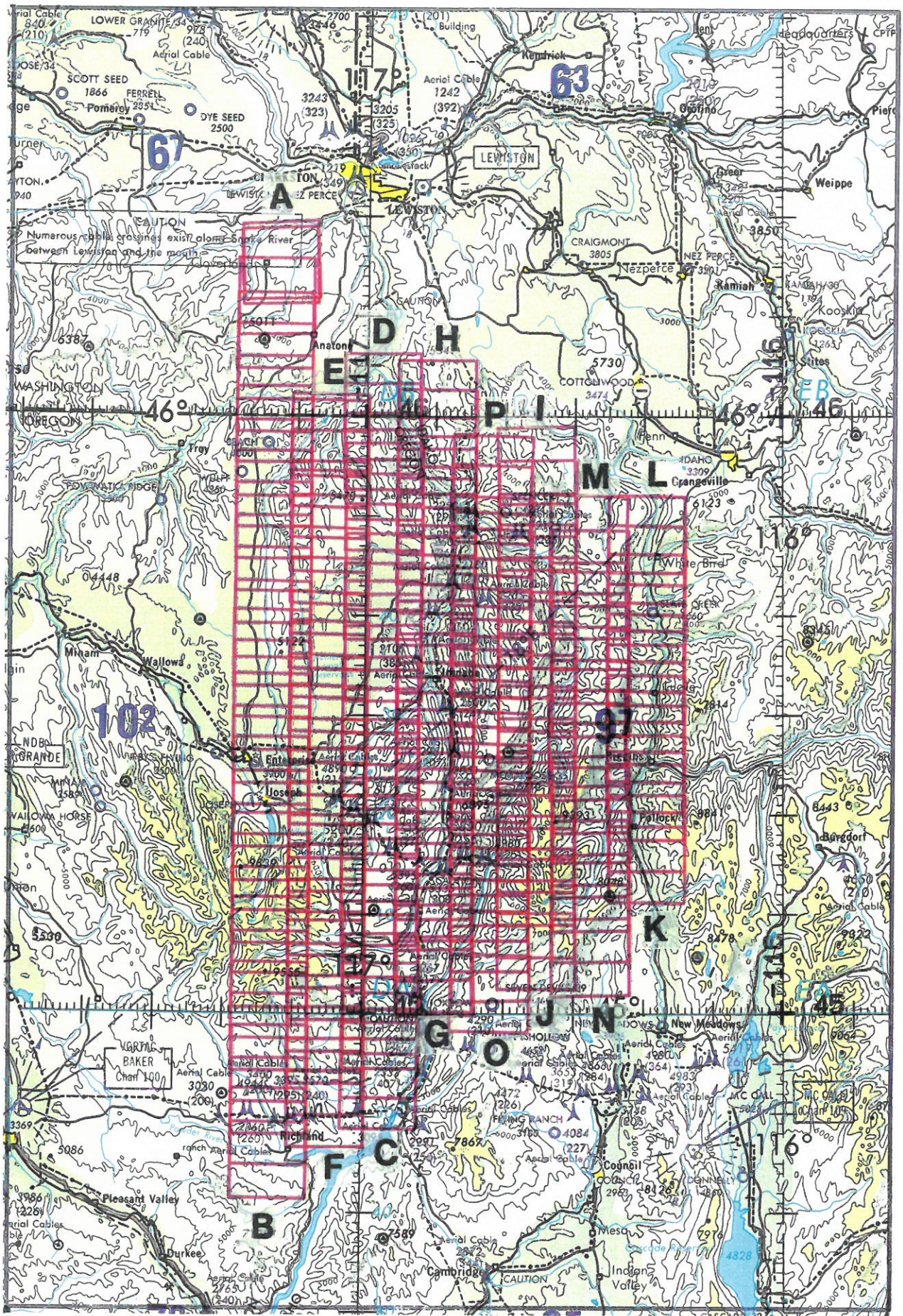
Additional information regarding ER-2 acquired photographic and digital data is available through the Aircraft Data Facility at Ames Research Center. For specific information regarding flight documentation, sensor parameters, and areas of coverage contact the Aircraft Data Facility, NASA-Ames Research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

CAMERA FLIGHT LINE DATA
FLIGHT NO. 91-174

Accession #   04312

Sensor #   034

Check Points	Frame Numbers	Time (GMT-hr, min, sec) START	Time (GMT-hr, min, sec) END	Altitude, MSL feet/meters	Cloud Cover/Remarks
A - B	5429-5458	18:39:15	18:52:24	65000/19800	Clear
C - D	5459-5482	18:56:59	19:07:43	"	Clear
E - F	5483-5505	19:14:22	19:24:15	"	Clear
G - H	5506-5526	19:29:25	19:38:22	"	Clear
I - J	5527-5542	19:41:40	19:48:40	"	Clear
K - L	5543-5554	19:52:32	19:57:40	"	Clear
M - N	5555-5568	20:02:20	20:08:24	"	Clear
O - P	5569-5586	20:12:53	20:20:49	"	Clear