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Remote Sensing
Procurement Package

"Made available under NASA sponsorship
in the interest of early and wide dis-
semination of Earth Resources Survey
Program information and without liability
for any use made thereof."

Remote Sensing
Industry Directory

JUNE 1981

Prepared by:
PUBLIC TECHNOLOGY, INC.
1301 Pennsylvania Ave., N.W.
Washington, DC 20004

With Financial Support from:
THE NATIONAL AERONAUTICS AND
SPACE ADMINISTRATION
Remote Sensing Applications Program
Office of Space and Terrestrial Applications
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ACKNOWLEDGEMENTS

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Procurement document was prepared by PTI's Technology Exchange Program which was managed by C. Nelson Hoy. PTI staff members responsible for the Nonstandard Procurement Technical Guide are Bruce Steinthal, Project Director; Kenneth M. Steil, Analyst; Marcia House, Editor; Walter Webb, Information Specialist.

The Remote Sensing Procurement Package was produced by PTI's Decision Support Systems Program, managed by Jack Barrett. The documentation was compiled and prepared by Cynthia Xahan, Research Associate, under the direction of Matthew Jaro, Project Manager. The project was conceived by Peter Buckman, former Project Manager. David Brooks served as Technical Consultant.
INTRODUCTION

This directory is part of a package of tools designed to assist state and local governments with remote sensing procurements. The complete Remote Sensing Procurement Package consists of four parts.

- Remote Sensing Procurement: An Executive Summary -- A short brochure written for elected officials and chief executives, that discusses the benefits of a structured remote sensing procurement process and describes the package organization, content, and scope.

- Remote Sensing Procurement: A Management Report for State and Local Governments -- A somewhat longer document, written for chief executives and senior administrators, that provides an overview of the remote sensing procurement process and explains how to plan, organize, staff, and implement a remote sensing procurement project.

- Remote Sensing Procurement: A Technical Guide for State and Local Governments -- A step-by-step procedural guide to the techniques of remote sensing procurement, written for administrators, information managers, planners, and procurement specialists who will be directly involved in evaluating bids or proposals, negotiating, awarding, and administering a contract, or evaluating remote sensing procurements.

- Remote Sensing Procurement: The Remote Sensing Industry Directory -- A directory of over 140 firms and organizations which contains detailed information in the types of products, services and equipment which they offer. Also included for each firm or organization are addresses, phone numbers, contact person(s), and experience in the remote sensing field.

SURVEY METHODOLOGY

The information in this directory was obtained from a mail survey of remote sensing firms and organizations which was conducted between the months of June, 1980, and August, 1980. An extensive questionnaire was developed and mailed to over 500 organizations. The original
mailing list was compiled from professional association membership lists, and various remote sensing conference and workshop attendance lists. In addition, notices were placed in several remote sensing newsletters requesting interested firms to contact PTI in order to be included in the mailing list. Over 65 firms and organizations responded to these notices and subsequently were also placed on the mailing list. The Directory contains information on the 143 firms and organizations who returned completed questionnaires. Directory users should be aware that the information contained in the Directory has not been independently verified. All information was supplied by the survey respondent.

DIRECTORY ORGANIZATION

Firms and organizations included in the Directory are listed in alphabetical order. Information on each of these firms is contained on four separate pages. Each page covers a separate category of information. They are as follows:

1. Summary Information
2. Facilities and Special Equipment
3. Products and Services Provided
4. Remote Sensing Equipment/Systems Provided

1. Summary Information

One page of summary information has been compiled for each firm or organization represented in the Directory. This page contains the following:

- Organization name and address
- Years in business
- Projects completed
2. Facilities and Special Equipment

This page contains detailed information on the types of facilities and equipment owned by the organization. This information is catalogued according to the following categories.

- Aircraft
- Cameras/Scanners/Other Remote Sensors
- Field Survey Equipment
- Photographic Processing Equipment
- Photogrammetric Processing Equipment
- Image Interpretation/Viewing/Mapping (non-digital)
- Image Interpretation/Viewing/Mapping (digital)
- Digitizing/Plotting/Graphics
- Other Computer Processing
- Other Equipment or Facilities

3. Products and Services Provided

The third page contains information on the specific types of pro-
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<th>TABLE 1</th>
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<td>Federal Regions</td>
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| Region I | Maine          | Massachusetts |
|          | Vermont        | Connecticut   |
|          | New Hampshire  | Rhode Island  |
| Region II | New York       | Maryland      |
|          | New Jersey     | District of Columbia |
|          | Delaware       |              |
| Region III | Pennsylvania  |              |
|           | West Virginia  |              |
|           | Virginia       |              |
| Region IV | Kentucky       | Mississippi   |
|           | Tennessee      | Alabama       |
|           | North Carolina | Georgia       |
|           | South Carolina | Florida       |
| Region V  | Michigan       | Indiana       |
|           | Wisconsin      | Ohio          |
|           | Illinois       | Minnesota     |
| Region VI | New Mexico     | Arkansas      |
|           | Texas          | Louisiana     |
|           | Oklahoma       |              |
| Region VII | Nebraska     | Kansas        |
|            | Iowa           | Missouri      |
| Region VIII | Montana     | Wyoming       |
|            | North Dakota   | Utah          |
|            | South Dakota   | Colorado      |
| Region IX  | California     | Arizona       |
|            | Nevada         | Hawaii        |
| Region X   | Washington     | Idaho         |
|            | Oregon         | Alaska        |
Products and services offered by the respondent. Products and Services offered are listed according to the following categories.

- Image Products
- Enhanced and Corrected Imagery
- Photogrammetric Products
- Interpreted, Thematic Products
- Project Planning and Support Services
- Aerial Survey
- Image Processing, Interpretation and Analysis
- Photogrammetric Engineering
- Reproduction
- Other Services

In addition, specific items or services which require a custom price quotation or are subcontracted are designated with a letter code. All items preceded by the letter (c) require custom price quotations. All items preceded by the letter (s) are subcontracted. Thus in the following example the first four products require a custom price quotation; the following eight products beginning with Orthophotos are subcontracted.

PHOTOGRAHMETRIC PRODUCTS

(c) Engineering Cross Sections; Earthwork Measurements; Digital Data Bases; Planimetric Maps; (s) Orthophotos; Topographic Maps; Stockpile Measurements; Digital Terrain Models; Photo-Contour Maps; Plan and Profile Sheets; Volumetric Calculations; Distance & Angle Measurements

When no letter code precedes a series of items, as in the following example, they are available from a standard price list.
ENHANCED AND CORRECTED IMAGERY

All following include both Photo & Digital: Multitemporal Composites; Contrast Enhanced; Geometric Correction; Density Slice; Change Detection; Multisensor Composites; Radiometric Correction; Image Resampling; Pseudo Stereo.

4. Remote Sensing Equipment/Systems Provided

The final page contains a detailed listing of the types of hardware, software, and integrated systems which are manufactured, sold, or leased to clients by firms which manufacture or sell equipment or systems. If the firm or organization does not supply equipment or systems, this page is omitted. This information is catalogued according to the following categories.

- Remote Sensor Systems
- Viewing Equipment
- Photogrammetric Equipment
- Digital Image Processing Equipment
- Software
- Integrated Systems
- Other Equipment

Index

This section of the Directory contains several indices to aid in locating firms and organizations included in the Directory. Directory respondents have been catalogued according to geographic region served and type of remote sensing technology used. In addition a list of all hardware and software suppliers and a list of university affiliated remote sensing organizations is also included in the Index.
<table>
<thead>
<tr>
<th>COMPANY NAME</th>
<th>ADDRESS</th>
<th>TELEPHONE</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCU-AIR SURVEYS, INC.</td>
<td>1220 &quot;A&quot; AVE, P.O BOX 763</td>
<td>(812) 522-2300</td>
</tr>
<tr>
<td>AERIAL CARTOGRAPHICS OF AMERICA, INC.</td>
<td>7000 Lake Ellenor Dr. Suite 111</td>
<td>(305) 851-7880</td>
</tr>
<tr>
<td>AERIAL DATA REDUCTION ASSOCIATES, INC.</td>
<td>9285 Commerce Highway - P.O Box 557</td>
<td>(609) 663-7200</td>
</tr>
<tr>
<td>AERIAL INFORMATION SYSTEMS, INC.</td>
<td>23537 Crest Forest Dr./P.O. Box 790</td>
<td>(714) 338-4615/338-4034</td>
</tr>
<tr>
<td>AERIAL SURVEY &amp; PHOTO, INC.</td>
<td>RFD #1, Box 14</td>
<td>(207) 474-8686</td>
</tr>
<tr>
<td>AERO SERVICE DIVISION, WESTERN GEOPHYSICAL COMPANY OF AMERICA</td>
<td>P.O. Box 1939</td>
<td></td>
</tr>
<tr>
<td>AERO METRIC ENGINEERING, INC.</td>
<td>4708 N. 40th Street</td>
<td>(414) 456-3631</td>
</tr>
<tr>
<td>AEROCON PHOTOGRAMMETRIC SURVEYS, INC.</td>
<td>30575 Euclid Ave.</td>
<td>(216) 585-2500</td>
</tr>
<tr>
<td>AEROECO (AERIAL ECOLOGICAL ANALYSTS)</td>
<td>2303 Archdale Rd.</td>
<td>(703) 860-4673</td>
</tr>
<tr>
<td>AEROGRAHICS CORP.</td>
<td>1575 Smithtown Ave. P.O. 248</td>
<td>(516) 589-6045</td>
</tr>
<tr>
<td>AGIMAGES</td>
<td>P.O. Box 395</td>
<td>(916) 756-6028</td>
</tr>
<tr>
<td>AIR PHOTOGRAPHICS, INC.</td>
<td>Route 4, Box 500-Martinsburg Airport</td>
<td>(304) 263-6476</td>
</tr>
<tr>
<td>AIRVIEW SPECIALISTS CORPORATION</td>
<td>3419 Churin Dr.</td>
<td>(415) 965-4433</td>
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<tr>
<td>ALAN GORDON ENTERPRISES, INC. SEE GORDON</td>
<td></td>
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<tr>
<td>ARIX, A PROFESSIONAL CORP.</td>
<td>2021 Clubhouse Drive</td>
<td>(303) 330-2749</td>
</tr>
<tr>
<td>ART-O-GRAPH</td>
<td>529 South 7th</td>
<td>(612) 336-1661</td>
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<tr>
<td>AUTOMATED SCIENCES GROUP, INC.</td>
<td>8555 Sixteenth Street</td>
<td>(301) 587-8750</td>
</tr>
<tr>
<td>AVIS AIRMAP, INC.</td>
<td>Avi's Park @ Washington Street</td>
<td>(617) 848-8080</td>
</tr>
<tr>
<td>COMPANY NAME</td>
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<tr>
<td>BAKER, JR. INC., MICHAEL</td>
<td>4301 Dutch Ridge Rd.</td>
<td>(412) 495-7711</td>
</tr>
<tr>
<td>P.O. Box 280</td>
<td></td>
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<tr>
<td>Beaver, PA 15009</td>
<td></td>
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</tr>
<tr>
<td>(412) 495-7711</td>
<td></td>
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<tr>
<td>BAUSCH AND LOMB INC.</td>
<td>1400 N. Goodman Street</td>
<td>(716) 338-6466</td>
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<tr>
<td>Rochester, NY</td>
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<tr>
<td>BECHTOLD SATELLITE TECHNOLOGY CORP. (BESTEC)</td>
<td>667 Brea Canyon Rd., #26</td>
<td>(714) 598-6037</td>
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<tr>
<td>Walnut, CA 91789</td>
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<tr>
<td>BROOMALL INDUSTRIES, INC.</td>
<td>700 Abbott Dr.</td>
<td>(215) 328-1040</td>
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<tr>
<td>Broomall, PA 19008</td>
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<tr>
<td>BURNS, P.E. JOSEPH P.</td>
<td>P.O. Box 24052</td>
<td>(612) 922-2450</td>
</tr>
<tr>
<td>Edina (Mpls.), MN 55424</td>
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<tr>
<td>BUTLER UNIVERSITY, HOLCOMB RESEARCH INSTITUTE</td>
<td>Butler University, 4600 Sunset</td>
<td>(317) 283-9555</td>
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<td>Indianapolis, IN 46208</td>
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<td>CALSPAN CORPORATION</td>
<td>P.O. Box 400</td>
<td>(716) 632-7500</td>
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<tr>
<td>Buffalo, NY 14225</td>
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<td>CARTWRIGHT AERIAL SURVEYS, INC.</td>
<td>Executive Airport, 6151 Freeport Blvd.</td>
<td>(916) 421-3465</td>
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<tr>
<td>Sacramento, CA 95822</td>
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<td>CHAS. T. MAIN, INC., SEE MAIN, INC.</td>
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<td>CHICAGO AERIAL SURVEY</td>
<td>2140 Wolf Rd.</td>
<td>(312) 298-1480</td>
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<td>Des Plaines, IL 60018</td>
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<tr>
<td>CH2M HILL, INC.</td>
<td>P.O. Box 2088</td>
<td>(916) 243-5831</td>
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<tr>
<td>Redding, CA 96099</td>
<td></td>
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<tr>
<td>COMPUTER SCIENCES CORPORATION</td>
<td>8728 Colesville Rd.</td>
<td>(310) 589-1545</td>
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<tr>
<td>Silver Spring, MD 20910</td>
<td></td>
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<tr>
<td>COMPUTER TALK INC.</td>
<td>24020 HWG 74</td>
<td>(303) 697-5485</td>
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<tr>
<td>Idledale, CO 80453</td>
<td></td>
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</tr>
<tr>
<td>CORNELL UNIVERSITY REMOTE SENSING PROGRAM</td>
<td>School of Civil &amp; Environmental Eng., Hollister Hall</td>
<td>(607) 256-4330</td>
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<tr>
<td>Ithaca, NY 14853</td>
<td></td>
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<tr>
<td>CORNWELL, SALLY BAY, EXECUTIVE CONSULTING</td>
<td>Address not given</td>
<td>(303) 499-0349</td>
</tr>
<tr>
<td>DEADALUS ENTERPRISES, INC.</td>
<td>P.O. Box 1869 (300 Parkland Plaza)</td>
<td>(303) 769-5649</td>
</tr>
<tr>
<td>Ann Arbor, MI 48106</td>
<td></td>
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<tr>
<td>DAMES &amp; MOORE</td>
<td>7101 Wisconsin Ave., Suite 700</td>
<td>(301) 652-2215</td>
</tr>
<tr>
<td>Washington, D.C. 20014</td>
<td></td>
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<tr>
<td>DATA TECHNOLOGY, INC.</td>
<td>4 Gill Street</td>
<td>(617) 935-8820</td>
</tr>
<tr>
<td>Woburn, MA 01801</td>
<td></td>
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<tr>
<td>COMPANY NAME</td>
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<tr>
<td>DAVID C. SMITH &amp; ASSOC. SEE SMITH &amp; ASSOC.</td>
<td>DEANZA SYSTEMS, INC. 118 Charcot Ave. San Jose, CA 95131 (408) 263-7155</td>
<td></td>
</tr>
<tr>
<td>EASTMAN KODAK COMPANY 343 State Street Rochester, NY 14650 (716) 724-4000</td>
<td>ECOSYSTEMS INTERNATIONAL, INC. P.O. Box 225 Gambrills, MD 21054 (301) 987-4976</td>
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</tr>
<tr>
<td>EGBERT SCIENTIFIC SOFTWARE J-74 Driftwood Cove (P.O. Box 42) Greenport, NY 11944 (516) 477-1357</td>
<td>ENVIRONMENTAL RESEARCH &amp; TECHNOLOGY, INC. 696 Virginia Rd. Concord, MA 01742 (617) 369-8910</td>
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<tr>
<td>ENVIRONMENTAL RESOURCE GROUP (ERG) 6380 Wilshire Blvd., Suite 804 Los Angeles, CA 90048 (213) 653-1086</td>
<td>EXECUTIVE RESOURCE ASSOCIATES, INC. 1911 Jefferson Davis Highway, Suite 902A Arlington, VA 22202 (703) 522-5706</td>
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<tr>
<td>EXPLORATION RESEARCH ASSOCIATES, INC. 1701 Clinton Street Suite 212 Los Angeles, CA 90026 (213) 483-5127</td>
<td>FOSTER &amp; COMPANY, JERRY 3611 Oak Lawn #206 Dallas, TX 75219 (214) 521-9630</td>
<td></td>
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<tr>
<td>EARTH SCIENCE CONSULTING AND TECHNOLOGY CORPORATION 3001 Red Hill Ave. Bldg. II, Suite 212 Costa Mesa, CA 92626 (714) 751-3730</td>
<td>EASTMAN KODAK COMPANY 343 State Street Rochester, NY 14650 (716) 724-4000</td>
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<td>EXPLORATION RESEARCH ASSOCIATES, INC. 1701 Clinton Street Suite 212 Los Angeles, CA 90026 (213) 483-5127</td>
<td></td>
</tr>
</tbody>
</table>
MASTER ADDRESS LIST (CONT.)

COMPANY NAME

GREENHORNE & O'MARA, INC.
6715 Kenilworth Ave
Riverdale, MD 20840
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HAMMON, JENSEN, WALLEN & ASSOCIATES, INC.
8407 Edgewater Drive
Oakland, CA 94621
(415) 638-6122

HARDEN ASSOCIATES, INC., M.J.
1019 Admiral Blvd.
Kansas City, MO 64106
(816) 842-0141

HARZA ENGINEERING COMPANY
150 S. Wacker Drive
Chicago, IL 60606
(312) 855-7000

HEIMBUCH-STANTURF, INC.
119 King Rd West
Ithaca, NY 14850
(607) 277-4608

HENDerson AERIAL SURVEYS, INC.
5125 West Broad Street
Columbus, OH 43228
(614) 878-3925

HUNTING SURVEYS & CONSULTANTS
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New York, NY 10021
(212) 988-9600

INTERNATIONAL MAPPING UNLIMITED
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Washington, D.C. 20016
(202) 244-4032

INTERPRETATION SYSTEMS INCORPORATED
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Overland Park, KS 66211
(913) 642-8700

ITEK OPTICAL SYSTEMS
10 Maguire Rd
Lexington, MA 02154
(617) 276-2502

JAMES W. SEWALL COMPANY, SEE SEWALL CO.

JAX STATE GEO-CARTOGRAPHIC SERVICES
Dept. Of Geography; Jacksonville
State University 36265
(205) 435-9820 ext 301

JERRY FOSTER & COMPANY, SEE FOSTER & CO.

JOSEPH BURNS, P.E., SEE BURNS, P.E.

KEDDAL & ASSOCIATES, INC.
1900 Sleepy Hollow Rd.
Library, PA 15129
(412) 835-1115

KERN INSTRUMENTS, INC.
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Brewster, NY 10509
(914) 279-5095

KEUFFEL & ESSER COMPANY
20 Whippany Rd.
Morristown, NJ
(201) 285-5281

KIMBALL & ASSOCIATES, ROBERT L.
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Edensburg, PA 15931
(814) 472-7700

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8338-A Comanche, N.E.
Albuquerque, NM
(505) 294-5051

KREIG & Associates, INC. R.A.
Suite K, 1709 S. Bragaw
Anchorage, AK 99504
(907) 276-2025

L. ROBERT KIMBALL & ASSOC., SEE KIMBALL & ASSOC.

LA. STATE UNIVERSITY, REMOTE SENSING & IMAGE PROCESSING
Louisiana State University
Baton Rouge, LA 70803
(504) 388-8417
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<td>NATIONAL PARK SERVICES, REMOTE SENSING DIVISION, UNIVERSITY OF NEW MEXICO</td>
<td>P.O. Box 26176, Albuquerque, NM 87125</td>
<td>(505) 277-4165</td>
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<td>NORTHERN AERIAL SURVEY</td>
<td>3025 Airport Rd, Hasting, MI 49058</td>
<td>(616) 945-3216</td>
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<td>NORTH PACIFIC AERIAL SURVEYS, INC.</td>
<td>4241 &quot;B&quot; Street, Anchorage, AK 99503</td>
<td>(907) 274-3548</td>
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<td>OKLAHOMA STATE UNIVERSITY CENTER FOR APPLICATIONS OF REMOTE SENSING ENGINE</td>
<td>Engineering South 403, Stillwater, OK 74078</td>
<td>(405) 624-5178</td>
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<td>OMIC CORPORATION OF AMERICA</td>
<td>1319 Powhatan Street, Alexandria, VA 22314</td>
<td>(703) 549-9191</td>
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<td>OPTRONICS INTERNATIONAL, INC.</td>
<td>7 Stuart Rd, Chelmsford, MA 01824</td>
<td>(617) 256-4511</td>
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<td>OWEN AYRES &amp; ASSOCIATES, INC.</td>
<td>2132 Pankratz Street, Madison, WI 53704</td>
<td>(608) 249-0471</td>
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<td>PAN AMERICAN SURVEYS, INC.</td>
<td>8755 S.W. 131 Street, Miami, FL 33176</td>
<td>(305) 235-7051</td>
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<td>PHOTO SCIENCE, INC.</td>
<td>7840 Airpark Rd, Gaithersburg, MD 20760</td>
<td>(301) 948-8550</td>
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<tr>
<td>PHOTOGRAPHIC INTERPRETATION CORPORATION</td>
<td>Box 868, Hanover, NH 03755</td>
<td>(603) 643-2268</td>
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MASTER ADDRESS LIST (CONT)

COMPANY NAME

PICKERING RESEARCH CORPORATION
1444 Wentworth Ave., P.O. Box 986
Pasadena, CA 91102
(213) 795-7557

PRECISION PHOTO LABORATORIES
5758 N. Webster Street
Dayton, OH 45414
(513) 898-7450

PURDUE, LABORATORY FOR APPLICATIONS OF
REMOTE SENSING, LARS
1220 Potter Dr.
West Lafayette, IN 47906
(317) 749-2052

R.A. KREIG & ASSOCIATES, INC. SEE KREIG
& ASSOCIATES, R.A.

RAMTEK
7979 Old Georgetown Rd Suite 900
Bethesda, MD 20014
(301) 656-0557

RAPID COLOR, INC.
1236 S. Central Ave.
Glendale, CA 91204
(213) 240-6100

RCA GOVERNMENT SYSTEMS DIVISION
Rt. #38
Cherry Hill, NJ 08358
(609) 338-4188

RESOURCE INFORMATION ASSOCIATES, INC.
P.O. Box 95
Charlotte, MI 48813
(517) 543-5525

RESOURCE DEVELOPMENT ASSOCIATES
1101 N. San Antonio Rd, Suite 301
Mountain View, CA 94043
(415) 961-9477

RICHARDS CORPORATION
1545 Spring Hill Rd.
McLean, VA 22101
(703) 893-8400

ROBINSON AERIAL SURVEYS, INC.
43 Sparta Ave
Newton, NJ 07860
(201) 383-2511

SALLY BAY CORNWELL, SEE CORNWELL,
SALLY BAY

SAN JOSE STATE UNIVERSITY, CARTEMS
LABORATORY, DEPARTMENT OF GEOGRAPHY
Washington Square
San Jose, CA 95192
(408) 277-3463

SEISCOM DELTA, INC., DIGITAL IMAGES
DIVISION
P.O. Box 36928
Houston, TX 77036
(713) 789-6020

SEWALL COMPANY, JAMES W.
147 Center Street
Old Town, ME 04468
(207) 827-4456

SIDWELL COMPANY, INC.
28W240 North Ave.
West Chicago, IL 60185
(312) 231-0206

SMITH ASSOCIATES, DAVID C.
1734 S.E Tacoma
Portland, OR 97202
(503) 232-5285

SMITH GEOLOGIST, INC., C.S.
14044 NE Eighth Street
Bellevue, WA 98007
(206) 746-0333

SOUTH DAKOTA STATE UNIVERSITY, REMOTE
SENSING INSTITUTE
Wenona Hall
South Dakota State Univ.
Brookings, SD 57007
(605) 688-4184
<table>
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<tr>
<td>SPACE SYSTEMS</td>
<td>P.O. Box 1608</td>
<td>Fairbanks, AK 99701</td>
<td>(207) 479-2924</td>
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<tr>
<td>SPACE-TEK</td>
<td>1666 E. Cypress Ave.</td>
<td>Redding, CA 96002</td>
<td>(916) 243-3024</td>
</tr>
<tr>
<td>SPATIAL DATA SYSTEMS</td>
<td>508 S. Fairview Ave., P.O. Box 249</td>
<td>Goleta, CA 93017</td>
<td>(805) 967-2328</td>
</tr>
<tr>
<td>SPECTRAL DATA CORP.</td>
<td>112 Parkway Drive S.</td>
<td>Hauppauge, NY 11787</td>
<td>(516) 543-4441</td>
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<tr>
<td>STONEROCK AERIAL SURVEYS</td>
<td>7990 M-15</td>
<td>Clarkston, MI</td>
<td>(313) 625-4890</td>
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<tr>
<td>SURDEX CORPORATION</td>
<td>520 Mercury Blvd.</td>
<td>Chesterfield, MO 63017</td>
<td>(314) 532-3427</td>
</tr>
<tr>
<td>SYSTEM PLANNING CORPORATION</td>
<td>1500 Wilson Blvd.</td>
<td>Arlington, VA 22209</td>
<td>(703) 541-2844</td>
</tr>
<tr>
<td>SYSTEMLHOUSE</td>
<td>99 Bank Street, 3rd Floor</td>
<td>Ottawa, Ontario KIP 6B9</td>
<td>(613) 236-9734</td>
</tr>
<tr>
<td>TECHNICOLOR GRAPHIC SERVICES INC.</td>
<td>P.O. Box 1242</td>
<td>Sioux Falls, SD 57101</td>
<td>(605) 594-6511</td>
</tr>
<tr>
<td>TECHNOLOGY DEVELOPMENT CORPORATION</td>
<td>P.O. Box 403</td>
<td>Tullahoma, TN 37388</td>
<td></td>
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</table>
MASTER ADDRESS LIST (CONT.)

COMPANY NAME

UNIVERSITY OF NEW MEXICO, TECHNOLOGY APPLICATIONS CENTER
Albuquerque, NM 87131
(505) 277-3622

UNIVERSITY OF NEBRASKA, REMOTE SENSING APPLICATIONS LAB.
Omaha, NE 68182
(402) 554-2725

UNIVERSITY OF SOUTH CAROLINA COMPUTER GRAPHICS
2712 Middleburg Dr., Suite 104
Columbia, SC 29204
(803) 777-7236

UNIVERSITY OF TENNESSEE SPACE INSTITUTE
Tullahoma, TN 37388
(615) 455-0631

UNIVERSITY OF WASHINGTON, DEPT OF CIVIL ENGINEERING
121 More Hall (FX-10)
Seattle, WA 98195
(206) 543-2684

VIRGINIA INSTITUTE OF MARINE SCIENCE REMOTE SENSING CENTER
Gloucester Point, VA 23062
(804) 642-2111

VERNON GRAPHICS, INC.
400 Executive Blvd.
Elmsford, NY 10523
(914) 592-4890

W.A.C. CORPORATION
520 Conger St.
Eugene, OR 97402
(503) 342-5169

WASHINGTON STATE DEPARTMENT OF NATURAL RESOURCES
Resource Inventory Section QW-21
Olympia, WA 98504
(206) 753-5338

WALKER & ASSOCIATES, INC.
6264 Stanley Ave. S.
P.O. Box c-81430
Seattle, WA 98108
(206) 763-9858

WILSON & COMPANY, ENGINEERS & ARCHITECTS
631 E. Crawford
Salina, KS
(913) 827-0433

WISE-L CONSULTANTS, LTD.
2115 Aspen Ave., N.W.
Albuquerque, NM 87104
(505) 243-2117

WOODWARD-CLYD CONSULTANTS
1350 Baur Blvd.
St. Louis, MO 63132
(314) 997-5700

WOOLPERT CONSULTANTS
2324 Stanley Ave
Dayton, OH 45404
(513) 461-5660
REMOTE SENSING INDUSTRY DIRECTORY
REMOTE SENSING FIRMS SERVING U.S.

COMPANY NAME

AFRIL INFORMATION SYSTEMS, INC.
AERIE SERVICE DIV. WESTERN GEOPHY. CO. OF AM.
AEROCOLL PHOTOGRAMMETRIC SURVEYS, INC.
AFRICO (AERIAL ECOLOGICAL ANALYSTS)
AIRIMAGES
AIRVIEW SPECIALISTS CORPORATION
ALAN GORDON ENTERPRISES, INC. SEE GORDON ENTERPRISES
ART-O-GRAPH
AUTOMATED SCIENCES GROUP, INC.
BAKER, JR., INC., MICHAEL
BALSCH AND LCMB, INC.
BECHTEL SATELLITE TECHNOLOGY CORP. (BESTEC)
BROCKMALL INDUSTRIES, INC.
BURNS, P.E., JOSEPH P.
BUTLER UNIV., HOLCOMBE RESEARCH INSTITUTE
CALSPAN CORPORATION
CAPTIVISION AERIAL SURVEYS, INC.
CHARLES D. MAIN, INC., SEE MAIN, INC.
CHICAGO AERIAL SURVEY
CH2M HILL, INC.
COMPUTER SCIENCE CORPORATION
COMPUTER TALK INC.
COMTAL CORPORATION
CORNELL UNIVERSITY REMOTE SENSING PROGRAM
CREMELL, SALLY BAY, EXECUTIVE CONSULTING
DAEDALUS ENTERPRISES, INC.
DAVIS & MOORE
DATA TECHNOLOGY, INC.
DAVID C. SMITH & ASSOCIATES, SEE SMITH & ASSOCIATES
DEANZA SYSTEMS, INC.
DEARTH SATELLITE CORPORATION
EASTMAN KODAK COMPANY
ECOSYSTEMS INTERNATIONAL, INC.
EFERET SCIENTIFIC SOFTWARE
ENVIRONMENTAL RESEARCH & TECHNOLOGY, INC.
EXPLORATION RESEARCH ASSOCIATES INC.
FOSTER & COMPANY, JERRY
FLUOR GEOMETRIC, INC.
FLUOR, INC.
GENERAL ELECTRIC COMPANY, SPACE SYSTEMS DIV.
GEOETIC SERVICES, INC.
GEORGIA TECH. EES
GERBER SCIENTIFIC INSTRUMENT CO.
GIBBS & HILL
GORDON ENTERPRISES, INC., ALAN
GREENHORNE & O'MARA, INC.
HAMMON, JENSEN, WALLEN & ASSOCIATES, INC.
HEIMBUCH-STANTURF, INC.
HUNTING SURVEYS & CONSULTANTS
INTERNATIONAL MAPPING UNLIMITED
INTERPRETATION SYSTEMS INCORPORATED
ITEK OPTICAL SYSTEMS
JAMES W. SEWALL COMPANY, SEE SEWALL CO.
JERRY FOSTER & COMPANY, SEE FOSTER & CO.
JOSEPH BURNS, P.E., SEE BURNS, P.E.
AKRON INSTRUMENTS, INC.
KIMBALL AND ASSOCIATES, ROBERT L.
KUGLE & POULS ENGINEERING, INC.
L. RUBERT KIMBALL & ASSOC., SEE KIMBALL & AS.
LA. ST. U., REMOTE SENSING & IMAGE PROCESS.,
M & S COMPUTING
MAIN, INC., CHAS. T.
MARS, INC.
MARKEL LABORATORIES, INC.
 MARTINEZ ORTHO-MAPPING CORPORATION
MATRA TECHNOLOGY INC.
MEAD TECHNOLOGY LABORATORIES
METEX MANAGEMENT CORPORATION
METRICS, INC.
MICHAEL BAKER, JR., INC., SEE BAKER, JR., INC
NATIONAL PARK SVC'S, R.S. DIV. UNIV OF N.M.
OKLAHOMA ST. U., CENTRE FOR APPL. OF R.S.
OKLAHOMA UNIVERSITY OF AMERICA
OPTIKUNICS INTERNATIONAL, INC.
UMEN AYKES & ASSOCIATES, INC.
PHOTO SCIENCE, INC.
PHOTOGRAPHIC INTERPRETATION CORPORATION
PICKERING RESEARCH CORPORATION
PRECISION PHOTO LABORATORIES
PURDUE, LAB FOR APPL. OF REMOTE SENSING, LARS
KANTER
KAPIDU COLOR, INC.
RCA GOVERNMENT SYSTEMS DIVISION
RESOURCE INFORMATION ASSOCIATES, INC.
RESOURCES DEVELOPMENT ASSOCIATES
RICHARDS CORPORATION
ROBINSON AERIAL SURVEYS, INC.
SALLY BAY COOKWELL, SEE COOKWELL, SALLY BAY
SAN JUSE ST. U., CARTERS LAB., DEPT OF GEOG.
SEISCOM DELTA, INC., DIGITAL IMAGES DIV.
SEWALL COMPANY, JAMES W.
SMITH & ASSOCIATES, DAVID C.
SOUTH OA. STATE U., REMOTE SENSING INST.,
SPACE-TEK
SPATIAL DATA SYSTEMS
SPECTRAL DATA CORP.
SUDEX CORPORATION
SYSTEM PLANNING CORPORATION
SYSTEMHOUSE
TECHNICOLOR GRAPHIC SERVICES, INC.
TECHNOLOGY DEVELOPMENT CORPORATION
TELLUROMETER-USA
TOPOGRAPHIC SCIENCES CORPORATION
TRW DEFENSE AND SPACE SYSTEMS GROUP
UNIV. OF ARIZONA
UNIV. OF DELAWARE, CENTER FOR REMOTE SENSING
UNIV. OF KANSAS APPLIED R.S. PROGRAM (KARS)
UNIV. OF N.M., TECHNOLOGY APPLICATIONS CTR.
UNIV. OF NEB., REMOTE SENSING APPL. LAB.
UNIV. OF TENN., SPACE INSTITUTE
UNIV. OF WASHINGTON, DEPT. OF CIVIL ENG.
VERNON GRAPHICS, INC.
WOODWARD-CLYDE CONSULTANTS

REGION I

COMPANY NAME
AERIAL DATA REDUCTION ASSOCIATES, INC.
AEROGRAPHICS CORP.
AIR PHOTOGRAPHICS, INC.
AVIS AIRMAP, INC.
WOOLPERT CONSULTANTS

REGION II

COMPANY NAME
AERIAL DATA REDUCTION ASSOCIATES, INC.
AEROGRAPHICS CORP.
AIR PHOTOGRAPHICS, INC.
AVIS AIRMAP, INC.
EARTH SCIENCE CONSULTING & TECH. CORP.
KERR & ASSOCIATES, INC., R.M.
WOOLPERT CONSULTANTS

REGION III

COMPANY NAME
AERIAL DATA REDUCTION ASSOCIATES, INC.
AEROGRAPHICS CORP.
AIR PHOTOGRAPHICS, INC.
AVIS AIRMAP, INC.
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<td>AERIAL CARTOGRAPHICS OF AMERICA, INC.</td>
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<td>AEROGRAFICS CORP.</td>
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<td>HENDERSON AERIAL SURVEYS, INC.</td>
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<td>JAX ST. GEO-CARTOGRAPH. SVCS. JACKSONVILLE STU</td>
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<td>KEUDAL &amp; ASSOCIATES, INC., R.M.</td>
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<td>MISSISSIPPI STATE UNIVERSITY</td>
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<td>PAN AMERICAN SURVEYS, INC.</td>
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<td>SIUNELL COMPANY, INC.</td>
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<td>UNIV. OF FL., REMOTE SENSING APPL. LAB.</td>
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MISSISSIPPI STATE UNIVERSITY
SIUWELL COMPANY, INC.
WISE-L CONSULTANTS, LTD.
WOOLPERT CONSULTANTS

REGION VII

COMPANY NAME

LAKTH SCIENCE CONSULTING & TECH. CORP.
MARLEN ASSOCIATES, INC., M.J.
HENDERSON AERIAL SURVEYS, INC.
SIUWELL COMPANY, INC.
WILSON & COMPANY, ENGINEERS & ARCHITECTS
WOOLPERT CONSULTANTS

REGION VIII

COMPANY NAME

AKIX, A PROFESSIONAL CORP.
LAKTH SCIENCE CONSULTING & TECH. CORP.
ENVIRONMENTAL RESOURCES GROUP (ERG)
LANZA ENGINEERING COMPANY
SIUWELL COMPANY, INC.
SMITH GEOLOGIST, INC., C.S.
TRIUMPH ASSOCIATES
WALKER & ASSOCIATES, INC.
WISE-L CONSULTANTS, LTD.

REGION IA

COMPANY NAME

AKIX, A PROFESSIONAL CORP.
CH2M HILL, INC.
LAKTH SCIENCE CONSULTING & TECH. CORP.
ENVIRONMENTAL RESOURCES GROUP (ERG)
TEKMA IGNITION
WALKER & ASSOCIATES, INC.
REGION X

COMPANY NAME

AEROMETRIC ENGINEERING, INC.
EARTH SCIENCE CONSULTING & TECH. CORP.
ENVIRONMENTAL RESOURCES GROUP (ERG)
HARZA ENGINEERING COMPANY
KREIG & ASSOCIATES, INC., R.A.
NORTHERN PACIFIC AERIAL SURVEYS, INC.
SMYTH GEOLOGIST, INC., C.S.
SPACE SYSTEMS
UNIV. OF ALASKA, NO. REMOTE SENSING LAB.
W.A.C. CORPORATION
WA. STATE DEPT OF NATURAL RESOURCES
WALKER & ASSOCIATES, INC.
REMOTE SENSING INDUSTRY DIRECTORY

LOW & MEDIUM ALTITUDE AERIAL PHOTO

COMPANY NAME

AFFRIL CARTOGRAPHICS OF AMERICA, INC.
AERIAL DATA REDUCTION ASSOCIATES, INC.
AERIAL INFORMATION SYSTEMS, INC.
AERIAL SURVEY & PHOTO, INC.
AECO SERVICE DIV., WESTERN GEOPHY. CO. C.F. AP.
AEROMETRIC ENGINEERING, INC.
AEREOENG PHOTOGRAMMETRIC SURVEYS, INC.
AERECO (AERIAL ECOLOGICAL ANALYSTS)
AEROGRAFICS CORP.
AGIMAGES
AIR PHOTOGRAPHICS, INC.
AIRVIEW SPECIALISTS CORPORATION
AIX, A PROFESSIONAL CORP.
APT-O-GRAPH
AVIS AIRMAP, INC.
BAKER, JR., INC., MICHAEL
BALSCH AND LCMB, INC.
BECHTOLD SATELLITE TECHNOLOGY CORP. (BESTEC)
BUTLER UNIV., HOLCOMB RESEARCH INSTITUTE
CALSPAN CORPORATION
CAFTWRIGHT AERIAL SURVEYS, INC.
CHAS. J. MAIN, INC., SEE MAIN, INC.
CHICAGO AERIAL SURVEY
CHP HILL, INC.
CORNELL UNIVERSITY REMOTE SENSING PROGRAM
CORNELL, SALLY BAY, EXECUTIVE CONSULTING
CAREALLS ENTERPRISES, INC.
CAMES & MCGRE
DAVID C. SMITH & ASSOC., SEE SMITH & ASSOC.
EARTH SATELLITE CORPORATION
EARTH SCIENCE CONSULTING & TECH., CCCP
ECCSYSTE MS INTERNATIONAL, INC.
EGERT SCIENTIFIC SOFTWARE
ENVIRONMENTAL CONTROL & TECHNOLOGY, INC.
ENVIRONMENTAL RESOURCES GROUP (ERG)
EXPLOITATION RESEARCH ASSOCIATES INC.
FCSTER & COMPANY, JEFFY
FLUFO GEOMETRICS, INC.
FLUFO, INC.
GENERAL ELECTRIC COMPANY, SPACE SYSTEMS DIV.
GEOMETRIC SERVICES, INC.
GEOSIGN TECH., EES
GERES & HILL
GREENHORNE & O'MARA, INC.
HAMMON, JENSEN, HALLEN & ASSOCIATES, INC.
ORIGINAL PAGE IS OF POOR QUALITY

HARZIA ENGINEERING COMPANY
HEIMBACH-STANTURF, INC.
HENDRICKSON AERIAL SURVEYS, INC.
HUNTING SURVEYS & CONSULTANTS
INTERNATIONAL MAPPING UNLIMITED
INTERPRETATION SYSTEMS CORPORATION
ITEK OPTICAL SYSTEMS
JAMES W. SEWALL COMPANY, SEE SEWALL CO.
JAX ST. GEO-CARTOGRAPHIC SVCS. JACKSONVILLE STU
JEFFY FOSTER & COMPANY, SEE FOSTER & CO.
KIMBALL AND ASSOCIATES, ROBERT L.
KOCLE & POULS ENGINEERING, INC.
KREIG & ASSOCIATES, INC., R.A.
L. ROBERT KIMBALL & ASSOC., SEE KIMBALL & ASS.
LA. ST. U., REMOTE SENSING & IMAGE PROCESSING
PAINT, INC., CHAS. T.
MARS, INC.
MARTEL LABORATORIES, INC.
MARTINEZ ORTHO-MAPPING CORPORATION
MATFA TECHNOLOGY INC.
MEAD TECHNOLOGY LABORATORIES
METEX MANAGEMENT CORPORATION
METRICS, INC.
MICHAEL BAKER, JR., INC., SEE BAKER, JR., INC
MISSISSIPPI STATE UNIVERSITY
NATIONAL PARK SVCS, R.S. DIV. UNIV OF N.M.
NORTHERN AERIAL SURVEY
NORTHERN PACIFIC AERIAL SURVEYS, INC.
OKLAHOMA ST. U., CENTR. FOR APPL. CF R.S.
OPTRONICS INTERNATIONAL, INC.
OWEN AYRES & ASSOCIATES, INC.
PAN AMERICAN SURVEYS, INC.
PHOT SCIENCE, INC.
PHOTOCOGRAPIC INTERPRETATION CORPORATION
PHOTOCISION PHCO LABORATORIES
PURDUE, LAB FOR APPL. OF REMOTE SENSING, LARS
RESOURCE INFORMATION ASSOCIATES, INC.
RESOURCES DEVELOPMENT ASSOCIATES
ROPINSON AERIAL SURVEYS, INC.
SALLY BAY CORNWELL, SEE CORNWELL, SALLY BAY
SAN JOSE ST. U., CARTEMS LAB., DEPT OF GEOG.
SEWALL COMPANY, JAMES W.
SIEWELL COMPANY, INC.,
SMITH & ASSOCIATES, CAVID C.
SOUTH DAK. STATE U., REMOTE SENSING INST.
SPACE SYSTEMS
SPACE-TEK
SPECTRAL DATA CORP.
STONEWIND AERIAL SURVEYS, LTD.
SUDBOX CORPORATION
SYSTEM PLANNING CORPORATION
SYSTEMHOUSE
HIGH ALTITUDE AERIAL PHOTO

COMPANY NAME

AERIAL CARTOGRAPHICS OF AMERICA, INC.
AERIAL DATA REDUCTION ASSOCIATES, INC.
AERIAL INFORMATION SYSTEMS, INC.
AEROMETRIC ENGINEERING, INC.
AEROCEN PHOTOGRAMMETRIC SURVEYS, INC.
AEREOCO (AERIAL ECOCLOGICAL ANALYSTS)
AEROPHOTOGRAPHS CORP.
AIR PHOTOGRAPHICS, INC.
AIRVIEW SPECIALISTS CORPORATION
AVIS AIRWAF, INC.
FALSCH AND LOMB, INC.
RECHTLAC SATELLITE TECHNOLOGY CORP. (BESTEC)
BUTLER UNIV., HOLCOMB RESEARCH INSTITUTE
CALSPAN CORPORATION
CARTWRIGHT AERIAL SURVEYS, INC.
CHAS. T. MAIN, INC., SEE MAIN, INC.
CHICAGO AERIAL SURVEY
CH2M HILL, INC.
CORNELL UNIVERSITY REMOTE SENSING PROGRAM

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SEWALL COMPANY, JAMES W.
SMITH & ASSOCIATES, DAVID C.
SOUTH DAKOTA STATE U., REMOTE SENSING INST.
SPACE SYSTEMS
SPACE-TEK
SUROHA CORPORATION
SYSTEM PLANNING CORPORATION
SYSTEMHOUSE
TECHNICAL GRAPHIC SERVICES, INC.
TECHNOLOGY DEVELOPMENT CORPORATION
TERRA COGNITA
TOPOGRAPHIC SCIENCES CORPORATION
TRW DEFENSE AND SPACE SYSTEMS GROUP
UNIV. OF ALASKA, NGO REMOTE SENSING LAB
UNIV. OF ARIZONA
UNIV. OF DELAWARE, CENTER FOR REMOTE SENSING
UNIV. OF FL., REMOTE SENSING APPL. LAB
UNIV. OF KANSAS APPLIED R.S. PROGRAM (KARS)
UNIV. OF M.K., TECHNOLOGY APPLICATIONS CTR
UNIV. OF N.D., REMOTE SENSING APPL. LAB
UNIV. OF S.C., COMPUTER GRAPHICS
UNIV. OF TENN., SPACE INSTITUTE
— INSTITUTE OF MAINE SCIENCE, R.S. CENTER
VENNUR GRAPHICS, INC.
WAYNE CORPORATION
WAYNE STATE DEPT. OF NATURAL RESOURCES
WALKER & ASSOCIATES, INC.
WILSON & COMPANY, ENGINEERS & ARCHITECTS
WISE-L CONSULTANTS, LTD.
WOODARD-CLYDE CONSULTANTS
WOOLPERT CONSULTANTS

AERIAL MULTISPECTRAL SCANNER

COMPANY NAME

AERIAL INFORMATION SYSTEMS, INC.
AEROCU (AERIAL ECOLOGICAL ANALYSTS)
AEROLM (AERIAL ECOSYSTEMS SPECIALISTS CORPORATION)
AUTOMATED SCIENCES GROUP, INC.
BAUSCH AND LOMB, INC.
BUTLER UNIV., MULCUMB RESEARCH INSTITUTE
CALSPAN CORPORATION
CARTWRIGHT AERIAL SURVEYS, INC.
CHICAGO AERIAL SURVEY
COMPUTER SCIENCES CORPORATION
CORNELL UNIVERSITY REMOTE SENSING PROGRAM
CORNELL, SALLY DAY, EXECUTIVE CONSULTING
DAEDALUS ENTERPRISES, INC.
DAMES & MOORE
EARTH SATELLITE CORPORATION
EARTH SCIENCE CONSULTING & TECH. CORP.
ECOSYSTEMS INTERNATIONAL, INC.
EBERT SCIENTIFIC SOFTWARE
ENVIRONMENTAL RESEARCH & TECHNOLOGY, INC.
GENERAL ELECTRIC COMPANY, SPACE SYSTEMS DIV.
GEORGIA TECH. EES
GIBBS & HILL
GREENHORNE & O'MARA, INC.
HANIZA ENGINEERING COMPANY
HEIMBUCH-STANTURF, INC.
HUNTING SURVEYS & CONSULTANTS
INTERPRETATION SYSTEMS INCORPORATED
ITEK OPTICAL SYSTEMS
KIMBALL AND ASSOCIATES, ROBERT L.
L. ROBERT KIMBALL & ASSOC., SEE KIMBALL & AS.
LA. ST. U., REMOTE SENSING & IMAGE PROCESS.
MARTEL LABORATORIES, INC.
METRICS, INC.
NATIONAL PARK SVCS, R.S. DIV. UNIV OF N.M.
OKLAHOMA ST. U., CENTR. FOR APPL. OF R.S.
OPTRONICS INTERNATIONAL, INC.
PURIUE, LAB FOR APPL. OF REMOTE SENSING,LARS
KANTEK
RCA GOVERNMENT SYSTEMS DIVISION
RESOURCES DEVELOPMENT ASSOCIATES
SALLY BAY CORMWELL, SEE CORMWELL, SALLY BAY
SAN JOSE ST. U., CARTEMS LAB., DEPT OF GEOG.
SOUTH DAK. STATE U., REMOTE SENSING INST.
SYSTEM PLANNING CORPORATION
TECHNICOLOR GRAPHIC SERVICES, INC.
TEKRA COGNITA
TOPOGRAPHIC SCIENCES CORPORATION
UNIV. OF ARIZONA
UNIV. OF DELAWARE, CENTER FOR REMOTE SENSING
UNIV. OF FL., REMOTE SENSING APPL. LAB.
UNIV. OF N.M., TECHNOLOGY APPLICATIONS CTR.
UNIV. OF WASHINGTON, DEPT OF CIVIL ENG.
VA. INSTITUTE OF MARINE SCIENCE, R.S. CENTER
WOOLLARD-CLYDE CONSULTANTS
AERIAL THERMAL INFRARED SCANNER

COMPANY NAME

AERIAL THERMAL INFRARED SCANNER

AERIAL SERVICE DIV. WESTERN GEOPHY. Co. of AM.
AERJECO (AERIAL ECOLOGICAL ANALYSTS)
AIRVIEW SPECIALISTS CORPORATION
AUTOMATED SCIENCES GROUP, INC.
BAUSCH AND LOMB, INC.
BUCKET UNIV., MULGARE RESEARCH INSTITUTE
CALSPAN CORPORATION
CARTHAIGH AERIAL SURVEYS, INC.
CHICAGO AERIAL SURVEY
CUMPUL PK SCIENCES CORPORATION
CORNELL UNIVERSITY REMOTE SENSING PROGRAM
CORNELL, SALLY BAY, EXECUTIVE CONSULTING
CAEDALUS ENTERPRISES, INC.
CAMES & MUKE
EARTH SATELLITE CORPORATION
EARTH SCIENCE CONSULTING & TECH. CORP.
ECOSYSTEMS INTERNATIONAL, INC.
EUGENE SCIENTIFIC SOFTWARE
ENVIRONMENTAL RESEARCH & TECHNOLOGY, INC.
FJORD, INC.
GENERAL ELECTRIC COMPANY, SPACE SYSTEMS DIV.
GLASSIA TECH. EES
GIBBS & HILL
GREENHURST & BIRKHA, INC.
HUNTING SURVEYS & CONSULTANTS
INTERPRETATION SYSTEMS INCORPORATED
ITL OPTICAL SYSTEMS
KIMBALL AND ASSOCIATES, ROBERT L.
LE ROBERT KIMBALL & ASSOC., SEE KIMBALL & AS.
LEO. ST. U., REMOTE SENSING & IMAGE PROCESSING
LANS, INC.
MAKEL LABORATORIES, INC.
MATRA TECHNOLOGY INC.
MEML TECHNOLOGY LABORATORIES
METRIS, INC.
NATIONAL PARK SVCS, R.0.S. DIV. UNIV OF N.M.
OKLAHOMA ST. U., CENTR. FOR APPL. OF R.O.S.
OPTIMICS INTERNATIONAL, INC.
PHILCO SCIENCE, INC.
PHOTOGRAPHIC INTERPRETATION CORPORATION
PURDUE, LAB FOR APPL. OF REMOTE SENSING, LARS
RAMARK
RCA GOVERNMENT SYSTEMS DIVISION
RESOURCES DEVELOPMENT ASSOCIATES
SALLY BAY CORNELL; SELL CORNELL; SALLY BAY
SOUTH JAR, STATE J., REMOTE SENSING INST.
PHOTOGRAPHIC INTERPRETATION CORPORATION
FORDUDE, LAB FOR APPL. OF REMOTE SENSING, LAKS KAMTEK
KCA GOVERNMENT SYSTEMS DIVISION
RESOURCES DEVELOPMENT ASSOCIATES
SALLY BAY CURNWELL, SEE CURNWELL, SALLY BAY
SMITH VULICIST, INC., CO:
SOUTH U. STATE U., REMOTE SENSING INST.
SPACE SYSTEMS
SYSTEM PLANNING CORPORATION
UNIV. OF ALASKA, NU. REMOTE SENSING LAB.
UNIV. OF ARIZONA
UNIV. OF KANSAS APPLIED RES. PROGRAM (KASS)
VA. INSTITUTE OF MARINE SCIENCE, K.S. CENTER
ALUMRAKU-CLYDE CONSULTANTS

LASER SCANNER

COMPANY NAME

AERJECO (AERIAL ECLOGICAL ANALYSTS)
COMPUTER SCIENCES CORPORATION
CURNWELL, SALLY BAY, EXECUTIVE CONSULTING
EARTH SCIENCE CONSULTING & TECH. CORP.
GENERAL ELECTRIC COMPANY, SPACE SYSTEMS DIV.
GREENHORNE & U'MAKA, INC.
ITER OPTICAL SYSTEMS
NEAD TECHNOLOGY LABORATORIES
OPTRONICS INTERNATIONAL, INC.
KCA GOVERNMENT SYSTEMS DIVISION
SALLY BAY CURNWELL, SEE CURNWELL, SALLY BAY
UNIV. OF ARIZONA
UNIV. OF DELAWARE, CENTER FOR REMOTE SENSING

GEOPHYSICAL SURVEY

COMPANY NAME

AIRO SERVICE DIV., WESTERN GEOPHY. CO. OF AM.
AIROVIVL SPECIALISTS CORPORATION
ART-O-GRAPH
LAUSCH AND LUMD, INC.
DECHUDD SATELLITE TECHNOLOGY CORP. (BESTEC)
OUTER UNIV., HULCUMA RESEARCH INSTITUTE
CHAS. T. MAIN, INC., SEE MAIN, INC.
COMPUTER SCIENCES CORPORATION
LANCSAT MSS

COMPANY NAME

AERIAL INFORMATION SYSTEMS, INC.
AEREC SERVICE DIV. WESTERN GEOPHY. CO. CF AM.
AERECO (AERIAL ECOLOGICAL ANALYSTS)
AIRVIEW SPECIALISTS CORPORATION
AUTOMATED SCIENCES GROUP, INC.
AVIS AIRMAP, INC.
Pausch and Lomb, INC.
BECHTEL SATELLITE TECHNOLOGY CORP. (BESTEC)
BLUMER UNIV., HOLCOMB RESEARCH INSTITUTE
CALSPAN CORPORATION
CHAS. T. MAIN, INC., SEE MAIN, INC.
CH2M HILL, INC.
COMPUTER SCIENCES CORPORATION
CORNELL UNIVERSITY REMOTE SENSING PROGRAM
CORNELL, SALLY BAY, EXECUTIVE CONSULTING
DAMES & MOORE
EARTH SATELLITE CORPORATION
EARTH SCIENCE CONSULTING & TECH. CORP.
EXPLORATION RESEARCH ASSOCIATES INC.
FUGRO GEOMETRICS, INC.
Fugku, INC.
GENERAL ELECTRIC COMPANY, SPACE SYSTEMS DIV.
GEORGIA TECH. EES
GIBBS & HILL
HUNTING SURVEYS & CONSULTANTS
INTERPRETATION SYSTEMS INCORPORATED
ITEK OPTICAL SYSTEMS
MAIN, INC., CHAS. T.
Mars, INC.
MARKET LABORATOKIES, INC.
NATIONAL PARK SVCS, R.S. DIV. UNIV OF N.M.
OPTRONICS INTERNATIONAL, INC.
Purdue, Lab for Appl. Of Remote Sensing, LARS
SALLY BAY COrnwell, SEE CORNWell, SALLY BAY
Seiscom Delta, INC., DIGITAL IMAGES DIV.
Smyth Geologist, INC., C.S.
Univ. OF Arizona
WOOOWARD-CLYDE CONSULTANTS
WOODPERT CONSULTANTS

COMPUTER TALK INC.
CORNELL UNIVERSITY REMOTE SENSING PROGRAM
CORNELL, SALLY BAY, EXECUTIVE CONSULTING
DAEDALUS ENTERPRISES, INC.
DAMES & MOORE
EARTH SATELLITE CORPORATION
EARTH SCIENCE CONSULTING & TECH. CORP.
EXPLORATION RESEARCH ASSOCIATES INC.
FUGRO GEOMETRICS, INC.
Fugku, INC.
GENERAL ELECTRIC COMPANY, SPACE SYSTEMS DIV.
GEORGIA TECH. EES
GIBBS & HILL
HUNTING SURVEYS & CONSULTANTS
INTERPRETATION SYSTEMS INCORPORATED
ITEK OPTICAL SYSTEMS
MAIN, INC., CHAS. T.
Mars, INC.
MARKET LABORATOKIES, INC.
NATIONAL PARK SVCS, R.S. DIV. UNIV OF N.M.
OPTRONICS INTERNATIONAL, INC.
Purdue, Lab for Appl. Of Remote Sensing, LARS
SALLY BAY COrnwell, SEE CORNWell, SALLY BAY
Seiscom Delta, INC., DIGITAL IMAGES DIV.
Smyth Geologist, INC., C.S.
Univ. OF Arizona
WOOOWARD-CLYDE CONSULTANTS
WOODPERT CONSULTANTS
EARTH SCIENCE CONSULTING & TECH. CORP.
ECOSYSTEMS INTERNATIONAL, INC.
EGBERT SCIENTIFIC SOFTWARE
ENVIRONMENTAL RESEARCH & TECHNOLOGY, INC.
ENVIRONMENTAL RESOURCES GROUP (ERG)
EXPLORATION RESEARCH ASSOCIATES INC.
FUGRO, INC.
GENERAL ELECTRIC COMPANY, SPACE SYSTEMS DIV.
GEORGIA TECH. EES
GIBES & MILL
GREENHORNE & O'MARA, INC.
HARZA ENGINEERING COMPANY
HEIMBACH-STANTURF, INC.
HUNTING SURVEYS & CONSULTANTS
INTERNATIONAL MAPPING UNLIMITED
INTERPRETATION SYSTEMS INCORPORATED
ITEK OPTICAL SYSTEMS
JAMES W. SEWALL COMPANY, SEE SEWALL CO.
JAX ST. GEO-CARTOGRAPHY SVCS. JACKSONVILLE ST.
KREIG & ASSOCIATES, INC., R.A.
LA. ST. U., REMOTE SENSING & IMAGE PROCESS.
M & S COMPUTING
MAIM, INC., CHAS. T.
MAFS, INC.
MARTEL LABORATORIES, INC.
MATRA TECHNOLOGY INC.
METRICS, INC.
MISSISSIPPI STATE UNIVERSITY
NATIONAL PARK SVCS, F.S. DIV. UNIV OF N.M
OKLAHOMA ST. U., CENTR. FOR APPL. CF R.S.
OPTRONICS INTERNATIONAL, INC.
PHOTO SCIENCE, INC.
PHOTOGRAFIC INTERPRETATION CORPORATION
PICKERING RESEARCH CORPORATION
PURDUE, LAB FOR APPL. OF REMOTE SENSING, LARS
RAPTEK
RESOURCE INFORMATION ASSOCIATES, INC.
RESOURCES DEVELOPMENT ASSOCIATES
SALLY BAY CORNELL, SEE CORNELL, SALLY BAY
SAN JUAN ST. U., CARTEMS LAB., DEPT OF GEOG.
SEISCOM DELTA, INC., DIGITAL IMAGES DIV.
SEWALL COMPANY, JAMES W.
SMYTH GEOLOGIST, INC., C.S.
SOUTH CAK. STATE U., REMOTE SENSING INST.
SPACE SYSTEMS
SPACE-TEK
SPECTRAL DATA CORP.
SYSTEM PLANNING CORPORATION
TECHNICOLOR GRAPHIC SERVICES, INC.
TECHNOLOGY DEVELOPMENT CORPORATION
TEFRA CCNITA
TOPOGRAPHIC SCIENCES CORPORATION
IRW DEFENSE AND SPACE SYSTEMS GROUP
UNIV. OF ALASKA, NO. REMOTE SENSING LAB.
UNIV. OF ARIZONA
UNIV. OF DELAWARE, CENTER FOR REMOTE SENSING
UNIV. OF FLA., REMOTE SENSING APPL. LAB.
UNIV. OF KANSAS APPLIED R.S. PROGRAM (KARS)
UNIV. OF N.M., TECHNOLOGY APPLICATIONS CTR.
UNIV. OF NEB., REMOTE SENSING APPL. LAB.
UNIV. OF S.C., COMPUTER GRAPHICS
UNIV. OF TENN., SPACE INSTITUTE
UNIV. OF WASHINGTON, DEPT. OF CIVIL ENG.
VA. INSTITUTE OF MARINE SCIENCE, K.S. CENTER
WA. STATE DEPT. OF NATURAL RESOURCES
WOODWARD-CLYDE CONSULTANTS

LANDSAT 76V

COMPANY NAME

AERIAL INFORMATION SYSTEMS, INC.
AEROCO (AERIAL ECOLOGICAL ANALYSTS)
AIRVIEW SPECIALISTS CORPORATION
AUTOMATED SCIENCES GROUP, INC.
BAUSCH AND LUMB, INC.
BECHTLER SATELLITE TECHNOLOGY CORP. (BESTEC)
BRYN MAREK UNIV., HOLCOMB RESEARCH INSTITUTE
CHAS. T. MAIN, INC., SEE MAIN, INC.
CHEN HILL, INC.
COMPUTER SCIENCES CORPORATION
CORNELL UNIVERSITY REMOTE SENSING PROGRAM
CORNEILL, SALARY BAY, EXECUTIVE CONSULTING
DAVES & MOORE
EARTH SATELLITE CORPORATION
EARTH SCIENCE CONSULTING & TECH. CORP.
ECOSYSTEMS INTERNATIONAL, INC.
EGERT SCIENTIFIC SOFTWARE
ENVIRONMENTAL RESEARCH & TECHNOLOGY, INC.
FUKU, INC.
GENERAL ELECTRIC COMPANY, SPACE SYSTEMS DIV.
GEORGIA TECH. EES
GREENHORNE & O'MARA, INC.
HANZA ENGINEERING COMPANY
HUNTING SURVEYS & CONSULTANTS
INTERPRETATION SYSTEMS INCORPORATED
ITEK OPTICAL SYSTEMS
JAX ST. GEU-CARTOGRAPHY SVC. JACKSONVILLE STU.
LA. ST. U., REMOTE SENSING & IMAGE PROCESS.
M & S COMPUTING
MAIN, INC., CHAS. T.
MARS, INC.
METRICS, INC.
NATIONAL PARK SVCs, R.S. DIV. UNIV OF N.M.
OKLAHOMA ST. U., CLENK FOR APPL. OF R.S.
OPTTRONICS INTERNATIONAL, INC.
PHOTO SCIENCE, INC.
PHOTOGRAPIIC INTERPRETATION CORPORATION
PUKDU, LAB FOR APPL. OF REMOTE SENSING, LARS
KAMTEK
RESOURCES DEVELOPMENT ASSOCIATES
SALLY BAY CORKNELL, SEE CORKNELL, SALLY BAY
SAN JOSE ST. U., CARTMELS LAB., DEPT OF GEUG.
SEISCOM DELTA, INC., DIGITAL IMAGES DIV.
SMYTH GEOLOGIST, INC., C.S.
SOUTH UAK. STATE U., REMOTE SENSING INST.
SPACE SYSTEMS
SPACE-TEK
SPECTRAL DATA CORP.
TECHNICOLOR GRAPHIC SERVICES, INC.
TECHNOLOGY DEVELOPMENT CORPULATION
TERRA CogniTA
TUPOGRAPIIC SCIENCES CORPULATION
TRW DEFENSE AND SPACE SYSTEMS GROUP
UNIV. OF ALASKA, NO. REMOTE SENSING LAB.
UNIV. OF ARIZONA
UNIV. OF FL., REMOTE SENSING APPL. LAB.
UNIV. OF KANSAS APPLIED R.S. PROGRAM (KARS)
UNIV. OF N.M., TECHNOLOGY APPLICATIONS CTR.
UNIV. OF NEB., REMOTE SENSING APPL. LAB.
UNIV. OF TENN., SPACE INSTITUTE
VA. INSTITUTE OF MARINE SCIENCE, R.S. CENTER
WA. STATE DEPT OF NATURAL RESOURCES
WOODWARD-CLYDE CONSULTANTS

SEASAT

COMPANY NAME

AIRVIEW SPECIALISTS CORPORATION
AUTOMATED SCIENCES GROUP, INC.
BAUSCH AND LOMB, INC.
BECHTEL SATTELLITE TECHNOLOGY CORP. (BESTEC)
BUTLER UNIV., NOLCOM RESEARCH INSTITUTE
COMPUTER SCIENCES CORPORATION
CORKNELL, SALLY BAY, EXECUTIVE CONSULTING
EARTH SATELLITE CORPORATION
EARTH SCIENCE CONSULTING & TECH. CORP.
EGBERT SCIENTIFIC SOFTWARE
ENVIROMENTAL RESEARCH & TECHNOLOGY, INC.
GENERAL ELECTRIC COMPANY, SPACE SYSTEMS DIV.
HUNTING SURVEYS & CONSULTANTS
INTERPRETATION SYSTEMS INTEGRATED
MARS, INC.
MAKTEL LABORATORIES, INC.
OPTRONICS INTERNATIONAL, INC.
PHOTO SCIENCE, INC.
RATTLA
RESOURCES DEVELOPMENT ASSOCIATES
SALLY BAY CORNWELL, SEE CORNWELL, SALLY BAY
SMITH GEOLOGIST, INC., G.S.
SPACE SYSTEMS
SYSTEM PLANNING CORPORATION
UNIV. OF ARIZONA
UNIV. OF DELAWARE, CENTER FOR REMOTE SENSING
UNIV. OF FL., REMOTE SENSING APPL. LAB.
UNIV. OF KANSAS APPLIED R.S. PROGRAM (KARS)
VA. INSTITUTE OF MARINE SCIENCE, R.S. CENTER
WOODWARD-CLYDE CONSULTANTS

MCMN

COMPANY NAME

AIRVIEW SPECIALISTS CORPORATION
BAUSCH AND LOMB, INC.
BUTLER UNIV., HULCUMB RESEARCH INSTITUTE
CALSPAN CORPORATION
COMPUTER SCIENCES CORPORATION
CORNWELL, SALLY BAY, EXECUTIVE CONSULTING
EARTH SATELLITE CORPORATION
ENVIRONMENTAL RESEARCH & TECHNOLOGY, INC.
GENERAL ELECTRIC COMPANY, SPACE SYSTEMS DIV.
HUNTING SURVEYS & CONSULTANTS
INTERPRETATION SYSTEMS INCORPORATED
LA. ST. U., REMOTE SENSING & IMAGE PROCESS.
OPTIKONICS INTERNATIONAL, INC.
SALLY BAY CORNWELL, SEE CORNWELL, SALLY BAY
SMITH GEOLOGIST, INC., G.S.
SOUTHEASTERN STATE U., REMOTE SENSING INST.
UNIV. OF ALASKA, NG. REMOTE SENSING LAB.
UNIV. OF ARIZONA
UNIV. OF NEB., REMOTE SENSING APPL. LAB.
WOODWARD-CLYDE CONSULTANTS
SKYLAB

COMPANY NAME

AEROCAL (AERIAL ECOLOGICAL ANALYSTS)
AI VIEW SPECIALISTS CORPORATION
BAUSCH AND LOMB, INC.
BECHTOLD SATELLITE TECHNOLOGY CORP., (BESTEC)
BUTLER UNIV., MULCOMB RESEARCH INSTITUTE
CALSPAN CORPORATION
CHAS. T. MAIN, INC., SEE MAIN, INC.
CORNELL UNIVERSITY REMOTE SENSING PROGRAM
CORNWELL, SALLY BAY, EXECUTIVE CONSULTING
DAMES & MUORE
EARTH SATELLITE CORPORATION
EARTH SCIENCE CONSULTING & TECH. CORP.
ECOSYSTEMS INTERNATIONAL, INC.
ELBERT SCIENTIFIC SOFTWARE
ENVIRONMENTAL RESEARCH & TECHNOLOGY, INC.
ENVIRONMENTAL RESOURCES GROUP (ERG)
EXPLORATION RESEARCH ASSOCIATES INC.
FHGRD, INC.
GENERAL ELECTRIC COMPANY, SPACE SYSTEMS DIV.
GIBBS & HILL
HAKA ENGINEERING COMPANY
HUNTING SURVEYS & CONSULTANTS
INTERPRETATION SYSTEMS INCORPORATED
ITEK OPTICAL SYSTEMS
JAX ST. GEO-CARTOGRAPHY, SVC., JACKSONVILLE ST.
MAIN, INC., CHAS. T.
MARKS, INC.
METRICS, INC.
NATIONAL PARK SVCS., K.S. DIV., UNIV OF N.M
OKLAHOMA ST. U., CENTR. FOR APPL. OF K.S.
OPTIKONICS INTERNATIONAL, INC.
PHTU SCIENCE, INC.
PHOTOGRAPIHC INTERPRETATION CORPORATION
PURDUE, LAB FOR APPL. OF REMOTE SENSING, LARS
KANTER
RESOURCE INFORMATION ASSOCIATES, INC.
RESOURCES DEVELOPMENT ASSOCIATES
SALLY BAY COKNWELL, SEE COKNWELL, SALLY BAY
SOUTH DAK. STATE U., REMOTE SENSING INST.
SPACE SYSTEMS
SPACE-TEK
SPECTRAL DATA CORP.
TECHNICOLOR GRAPHIC SERVICES, INC.
TECHNOLOGY DEVELOPMENT CORPORATION
WEATHER SATELLITE
## Digital Image Interpretation

### Company Name

<table>
<thead>
<tr>
<th>Company Name</th>
<th>State</th>
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<tbody>
<tr>
<td>AERIAL INFORMATION SYSTEMS, INC.</td>
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<tr>
<td>AERIUS SERVICE DIV. WESTERN GEOPHY. CO. OF AM.</td>
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<td>AERJECO (AERIAL ECOLOGICAL ANALYSTS)</td>
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<td>AK-VIEW SPECIALISTS CORPORATION</td>
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<td>AUTOMATED SCIENCES GROUP, INC.</td>
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<td>BAKER, JR., INC., MICHAEL</td>
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<td>CARTWRIGHT AERIAL SURVEYS, INC.</td>
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<td>CHAS. T. MA., INC., SEE MAIN, INC.</td>
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<td>CHICAGO AERIAL SURVEY</td>
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<td>COMPUTER SCIENCES CORPORATION</td>
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<td>COMPUTER TALK INC.</td>
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<td>COMIAL CORPORATION</td>
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<td>CORKELL UNIVERSITY REMOTE SENSING PROGRAM</td>
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<td>CORKELL, SALLY BAY, EXECUTIVE CONSULTING</td>
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<td>DAEDELUS ENTERPRISES, INC.</td>
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<td>DAMES &amp; MOURRE</td>
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<td>GIBBS &amp; HILL</td>
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MANUAL IMAGE INTERPRETATION

COMPANY NAME

AERIAL CARTOGRAPHICS OF AMERICA, INC.
AERIAL INFORMATION SYSTEMS, INC.
AFSC SERVICE DIV. WESTERN GEOPHY. CC. CF AP.
AFSCGC (AERIAL ECLOGICAL ANALYSTS)
AIRVIEW SPECIALISTS CORPORATION
AVIS AIRMAP, INC.
BARKER, JR., INC., MICHAEL
BAYSCH AND LOMB, INC.
BECO SATELIT TECHNOLOGY CORP. (BESTEC)
BUTLER UNIV., HOLCOMB RESEARCH INSTITUTE
CALSPLAN CORPORATION
CARTWRIGHT AERIAL SURVEYS, INC.
CHAS. T. MAIN, INC., SEE MAIN, INC.
CHICAGO AERIAL SURVEY
COMPUTER SCIENCES CORPORATION
COMPUTER TALK INC.
CORNELL UNIVERSITY REMOTE SENSING PROGRAM
CORNWELL, SALLY BAY, EXECUTIVE CONSULTING
DAEDALUS ENTERPRISES, INC.
DAKES & MOORE
EARTH SATELLITE CORPORATION
EARTH SCIENCE CONSULTING & TECH. CCRP.
ECOSYSTEMS INTERNATIONAL, INC.
ENVIRONMENTAL RESEARCH & TECHNOLOGY, INC.
ENVIRONMENTAL RESOURCES GROUP (ERG)
EXPLORATION RESEARCH ASSOCIATES INC.
FUGRC GEOMETRICS, INC.
FUGRO, INC.
GENERAL ELECTRIC COMPANY, SPACE SYSTEMS DIV.
GIBBS & HILL
GREENHORNE & D'OMARA, INC.
HAMPSON, JENSEN, WALLEN & ASSOCIATES, INC.
HARZA ENGINEERING COMPANY
HEIMBUCH-STANTURF, INC.
HUNTING SURVEYS & CONSULTANTS
INTERPRETATION SYSTEMS INCORPORATED
JAMES W. SEWALL COMPANY, SEE SEWALL CO.
KREIG & ASSOCIATES, INC., R.A.
LA. ST. U., REMOTE SENSING & IMAGE PROCESSOR
MAIN, INC., CHAS. T.
MARS, INC.
MARTEL LABORATORIES, INC.
MEAC TECHNOLOGY LABORATORIES
METREX MANAGEMENT CORPORATION
METRICS, INC.
MICHAEL BAKER, JR., INC., SEE BAKER, JR., INC
MISSISSIPPI STATE UNIVERSITY
NATIONAL PARK SVCS, R.S. DIV. UNIV OF N.M.
NORTHERN AERIAL SURVEY
OKLAHOMA ST. U., CENTR. FOR APPL. CF R.S.
OPTRONICS INTERNATIONAL, INC.
OWEN AYRES & ASSOCIATES, INC.
PHOTO SCIENCE, INC.
PHOTOGRAPHIC INTERPRETATION CORPORATION
PURDUE, LAB FOR APPL. OF REMOTE SENSING, LARS
RESOURCE INFORMATION ASSOCIATES, INC.
RESOURCES DEVELOPMENT ASSOCIATES
ROBINSON AERIAL SURVEYS, INC.
SALLY BAY CORNWELL, SEE CORNWELL, SALLY BAY
SEISCOM DELTA, INC., DIGITAL IMAGES DIV.
SEWALL COMPANY, JAMES W.
SOUTH DAK. STATE U., REMOTE SENSING INST.
SPACE SYSTEMS
SPACE-TEK
SPECTRAL DATA CORP.
TECHNICOLOR GRAPHIC SERVICES, INC.
REMOTE SENSING INDUSTRY DIRECTORY

UNIVERSITY AFFILIATED REMOTE SENSING PROGRAMS

COMPANY NAME

BOILEY UNIV., HOLCOMB RESEARCH INSTITUTE
CORNELL UNIVERSITY REMOTE SENSING PROGRAM
GEORGIA TECH. EES
JAX ST. GEU-CARTOGRAPH. SVCS. JACKSONVILLE STU
LA. ST. U., REMOTE SENSING & IMAGE PKGSS.,
MISSISSIPPI STATE UNIVERSITY
NATIONAL PARK SVCS, K.S. DIV. UNIV OF N.M.
OKLAHOMA ST. U., CENTR. FOR APPL. OF R.S.
Purdue, Lab for Appl. UF Remote Sensing;LARS
SAN JOSE ST. U., CARTENS LAB., DEPT OF GEOG.
SOUTH DAK. STATE U., REMOTE SENSING INST.
UNIV. OF ALASKA, NO. REMOTE SENSING LAB.
UNIV. OF ARIZONA
UNIV. OF DELAWARE, CENTER FOR REMOTE SENSING
UNIV. OF FL., REMOTE SENSING APPL. LAB.
UNIV. OF KANSAS APPLIED R.S. PROGRAM (KARS)
UNIV. OF N.M., TECHNOLOGY APPLICATIONS CTR.
UNIV. OF NEB., REMOTE SENSING APPL. LAB.
UNIV. OF S.C., COMPUTER GRAPHICS
UNIV. OF TENN., SPACE INSTITUTE
UNIV. OF WASHINGTON, DEPT. OF CIVIL ENG.
VA. INSTITUTE OF MARINE SCIENCE, R.S. CENTER

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REMOTE SENSING INDUSTRY DIRECTORY

SUPPLIERS OF REMOTE SENSING EQUIPMENT AND SYSTEMS

COMPANY NAME

AEROC SERVICE DIV. WESTERN GEOPHY. CO. CF AM.
AEROC,ECO (AERIAL ECOLOGICAL ANALYSTS)
AIR PHOTOGRAPHICS, INC.
ALAN GORDON ENTERPRISES, INC. SEE GORDON ENTERPRISES
ART-G-GRAPH
ALTAMERATED SCIENCES GROUP, INC.
AVIS AIRMAP, INC.
Bales & Hill
BELL AND LEMB, INC.
BELCHMAR INDUSTRIES, INC.
CARTWRIGHT AERIAL SURVEYS, INC.
COMPUTER SCIENCES CORPORATION
COMPUCSTER TALK INC.
CONAL CORPORATION
DAECAUS ENTERPRISES, INC.
DATA TECHNOLOGY, INC.
DEARZA SYSTEMS, INC.
EARTH SATELLITE CORPORATION
FASTMAN KODAK COMPANY
ECOSYSTEMS INTERNATIONAL, INC.
EPERT SCIENTIFIC SOFTWARE
EXPLORATION RESEARCH ASSOCIATES INC.
GENERAL ELECTRIC COMPANY, SPACE SYSTEMS DIV.
GEOSATIC SERVICES, INC.
GEORGIA TECH. EES
GERBER SCIENTIFIC INSTRUMENT CO.
GIES & HILL
GCPCON ENTERPRISES, INC., ALAN
INTERPRETATION SYSTEMS INCORPORATED
ITEK OPTICAL SYSTEMS
JAMES M. SEWALL COMPANY, SEE SEWALL CO.
KEEN INSTRUMENTS, INC.
KEUFFEL & ESSEY COMPANY
L & S COMPUTING
MATRA TECHNOLOGY INC.
MEAD TECHNOLOGY LABORATORIES
METEX MANAGEMENT CORPORATION
METRICS, INC.
CHI CORPORATION OF AMERICA
OPTRONICS INTERNATIONAL, INC.
PICKERING RESEARCH CORPORATION
PRECISION PHOTO LABORATORIES
SANTEK
RCA GOVERNMENT SYSTEMS DIVISION
RESOURCE INFORMATION ASSOCIATES, INC.
RICHARDS CORPORATION
SEISCOM DELTA, INC., DIGITAL IMAGES DIV.
DIRECTORY OF REMOTE SENSING FIRMS & ORGANIZATIONS
NAME: ACCU-AIR SURVEYS, INC.

ADDRESS(ES) & CONTACT(S)
1220 "A" Avenue, P.O. Box 763
Seymour, Indiana 47274
(812) 522-2300
Weldon Carlin

YEARS IN BUSINESS: _______ SMALL BUSINESS CONTRACTOR? _______
PROJECTS COMPLETED: _______ MINORITY-OWNED BUSINESS? _______
REGION SERVED: _______ TOTAL APPLICABLE EMPLOYEES: _______
TYPES OF REMOTE SENSING TECHNOLOGIES: _______

PERSONNEL & SKILLS REPRESENTED:

STATEMENT OF CAPABILITIES:
Accu-Air Surveys, Inc. was established in 1970 with the hope of providing clients with aerial photography and topographic maps to meet their specifications. Today, we maintain a staff of qualified personnel and precision photogrammetric equipment to provide these requirements economically.

NAME: AERIAL CARTOGRAPHICS of America, Inc.

ADDRESS(ES) & CONTACT(S)
7000 Lake Ellenor Drive, Suite 111
Orlando, FL (32809)
(305) 851-7880
Novie P. Cleveland, Pres.

YEARS IN BUSINESS: 10 SMALL BUSINESS CONTRACTOR? Yes
PROJECTS COMPLETED: 10,000 MINORITY-OWNED BUSINESS? _______
REGION SERVED: IV, VI TOTAL APPLICABLE EMPLOYEES: 15
TYPES OF REMOTE SENSING TECHNOLOGIES:
Low Altitude Aerial Photo
Med Altitude Aerial Photo

PERSONNEL & SKILLS REPRESENTED:
Management (2)
Professional (2)
Technical (11)
Cartographers (1)

STATEMENT OF CAPABILITIES:

Draftsmen (3)
Photogrammatists (4)
Photolab Technicians (3)
Pilots (2)
AERIAL CARTOGRAPHICS of America, Inc.

FACILITIES AND SPECIAL EQUIPMENT

AIRCRAFT

Cessna TU 206; Cessna 310K

CAMERAS, SCANNERS, AND OTHER REMOTE SENSORS

Zeiss RMK 15/23; Wild RGA; 12" Fairchild

FIELD SURVEY EQUIPMENT

PHOTOGRAPHIC PROCESSING EQUIPMENT

52" Hope, Color, Roller Transport; C-41 Hope, Color Film; Kodak 244; Durst 2000 CLS Enlarger; Fotar 10x10" Enlarger; Color LogeTronic printer (2) 40" Process Camera.

INTERPRETED, THEMATIC PRODUCTS

(c) Land Use Maps, Acreage Tabulations

PROJECT PLANNING AND SUPPORT SERVICES

Problem Definition, Feasibility Analysis, Air Support Operations; (s) Ground Control Survey, Map Digitizing, Ground Truth Survey.

AERIAL SURVEY

Low Altitude Photography, Thermal Infrared, High Altitude Photography.

IMAGE PROCESSING, INTERPRETATION AND ANALYSIS

Photographic Laboratory Processing

OTHER SERVICES

Consultant Computer Graphics
NAME: AERIAL DATA REDUCTION ASSOCIATES, INC.

ADDRESS(ES) & CONTACT(S)
9285 Commerce Highway - P.O. Box 557
Pennsauken, New Jersey 08110
(609) 663-7200
David K. Nale, Regional Manager

11 North Road
Peace Dale, Rhode Island 02883

YEARS IN BUSINESS: 10
PROJECTS COMPLETED: 2,000
REGION SERVED: I..II, III, IV
TOTAL APPLICABLE EMPLOYEES: 52

TYPES OF REMOTE SENSING TECHNOLOGIES:
Low Altitude Aerial Photo; Med Altitude Aerial Photo; High Altitude Aerial Photo;

PERSONNEL & SKILLS REPRESENTED:
Management (8); Professional (3); Technical (41)

STATEMENT OF CAPABILITIES:
Aerial photography; stereo photogrammetric compilation; analytic aerotriangulation;
ground control surveys; photo lab services; photo interpretation; photo mosaics.

FACILITIES AND SPECIAL EQUIPMENT

AIRCRAFT

CAMERAS, SCANNERS, AND OTHER REMOTE SENSORS

FIELD SURVEY EQUIPMENT
Hewlett Packard 3800, 3810 (2)
Wild Level (1)
Wild T-2 (1)

PHOTOGRAPHIC PROCESSING EQUIPMENT
Log E Robertson Camera, Vacuum Printer (4)
E & E Kargl Horizontal Enlarger
Contact Printer 6' x 4'

PHOTOGAMMETRIC PROCESSING EQUIPMENT
Kern PGZ-Ata (5)
Heig-Street Coordinatograph (1)

IMAGE INTERPRETATION, VIEWING AND MAPPING (NON-DIGITAL)
Light Tables (12)

IMAGE INTERPRETATION, VIEWING AND MAPPING (DIGITAL)
Kern ER34 Digitizer (1)
Wild Point Marking Devices (2)
Kern Monocomparator (3)

DIGITIZING, PLOTTING AND GRAPHICS
PDP-11/40 Computer (1)
PDP-11/44 Computer (on order) (1)

OTHER COMPUTER PROCESSING

OTHER
PRODUCTS AND SERVICES PROVIDED

IMAGE PRODUCTS

B&W Negative Transparencies, Positive Transparencies, Contact Prints & Enlarged Prints; (c) Photo Mosaics; Photo Atlas Sheets; Halftone Image Prints; Digital Magnetic Tape

ENHANCED AND CORRECTED IMAGERY

PHOTOGRAHMERIC PRODUCTS

(c) Orthophotos; Topographic Maps; Engineering Cross Sections; Stockpile Measurements; Earthwork Measurements; Digital Data Bases; Planimetric Maps; Photo-Contour Maps; Plan and Profile Sheets; Volumetric Calculations; Distance & Angle Measurements

INTERPRETED, THEMATIC PRODUCTS

(c) Land Use Maps; Vegetation/Forestry Maps; Utility Maps; Acreage Tabulations; Transportation Maps; Soils Maps; Tax Maps; Digital Magnetic Tapes

PROJECT PLANNING AND SUPPORT SERVICES

Problem Definition; Feasibility Analysis; Selection of Existing Imagery; Ground Control Survey; Map Digitizing; Data Base Preparation; Air Support Operations; Data Management; (c) Ground Truth Survey

AERIAL SURVEY

(c) Low Altitude Photography; Thermal infrared; High Altitude Photography; Multispectral Scanner

IMAGE PROCESSING, INTERPRETATION AND ANALYSIS

Photographic Laboratory Processing; Manual Image Interpretation; (c) Interactive Digital Image/Analysis/Classification

PHOTOGRAHAMERIC ENGINEERING

Aerotriangulation; Orthophotomapping; Planimetric Mapping; Stereo Digitizing; Cross-Sectioning; Stereocompilation; Topographic Mapping-Small Scale; Topographic Mapping-Large Scale; Volumetric Calculation

REPRODUCTION

Drafting & Scribing; Cartographic Reproduction; Automated Drafting/Plotting; Printing

OTHER SERVICES

Consultant Services; Computer Services; (c) Interactive Computer Graphics

NAME: AERIAL INFORMATION SYSTEMS, INC.

ADDRESS(ES) & CONTACT(S)

23537 Crest Forest Dr./P.O. Box 790
Crestline, California 92325
(714) 338-4615/338-4034
Eric Harnden, President

AIS/ESRI Affiliate:

380 New York St.
Redlands, California 92325
(714) 783-2853
Laurie Dangemond

YEARS IN BUSINESS: 5

PROJECTS COMPLETED: 35

REGION SERVED: U.S. & Int'l.

TOTAL APPLICABLE EMPLOYEES: 30

TYPES OF REMOTE SENSING TECHNOLOGIES:

Low Altitude Aerial Photo; Med Altitude Aerial Photo; High Altitude Aerial Photo; Aerial Multispectral Scanner; Radar; Landsat MSS; Landsat RBV; Digital Image Interpretaions; Manual Image Interpretations

PERSONNEL & SKILLS REPRESENTED:

Management (5); Professional (10); Technical (15)

Cartographers; Computer Equip. Oper.; Computer Programmers; Draftsmen; Field Surveyors; Soil Scientists; Social Scientists; Photointerpreters; Photolab Technicians; Physical Scientists; Planners; Geographers

STATEMENT OF CAPABILITIES:

Aerial Information Systems is an environmental inventory and mapping firm. Environmental information collected and interpreted from aerial imagery, field survey, and collateral is reformatted, integrated and mapped using the Integrated Terrain Unit Map (ITUM) process. This process, developed by AIS, integrates, and synthesizes differing environmental factors using geographic units (terrain units). Each unit is a polygon, numerically coded according to its specific environmental characteristics. Each ITUM is then digitized by a computer. An automated data bank can be used to make complete maps of the coded factors. Mathematical modeling can be used to complete the maps. AIS has shown NASA, USFS and many national and international agencies the ITUM process.
FACILITIES AND SPECIAL EQUIPMENT

AIRCRAFT

CAMERAS, SCANNERS, AND OTHER REMOTE SENSORS

FIELD SURVEY EQUIPMENT

PHOTOGRAPHIC PROCESSING EQUIPMENT

Complete photo dark room. Black and white and color processing

PHOTOGALAMMETRIC PROCESSING EQUIPMENT

IMAGE INTERPRETATION, VIEWING AND MAPPING (NON-DIGITAL)

Scanning mirror stereoscopes (1x1.5x3x6x) (3)
Lighttables (11)
1's Color combiner (1)

IMAGE INTERPRETATION, VIEWING AND MAPPING (DIGITAL)

DeAnza Image Processor (1)

DIGITIZING, PLOTTING AND GRAPHICS

Talks Digitizers (4)
3 Color pen plotter (1)
Versatec electrostatic printer (1)

OTHER COMPUTER PROCESSING

Prime Computer (1)
Apple II Mini Computer (1)

OTHER

K and E Kargl optical pantograph (1)

PRODUCTS AND SERVICES PROVIDED

IMAGE PRODUCTS

(a) B&W, Color, Color Infrared, and Color Composite Negative Transparencies, Positive Transparencies, Contact Prints and Enlarged Prints; (c) Photo Mosaics; Digital Mosaics;
(b) Photo Atlas Sheets

ENHANCED AND CORRECTED IMAGERY

(c) Photo Multitemporal Composites; Photo Contrast Enhanced; Photo Density Slice; Photo Change Detection; Photo Multisensor Composites; Digital Contrast Enhanced; Digital Geometric Correction; Geometric Density Slice; Digital Change Detection;
(d) Orthophotos; Topographic Maps; Stockpile Measurements; Earthwork Measurements; Digital Data Bases; Planimeter Maps; Photo-Contour Maps; Volumetric Calculations;
(e) Digital Terrain Models; Distance & Angle Measurements

INTERPRETED, THEMATIC PRODUCTS

(c) Color Thematic Maps; Land Use Maps; Vegetation/Forestry Maps; Contour Weather Maps; Utility Maps: Acreage Tabulations; Geocoded Data Bases; Thematic Map Overlays; Geologic Maps; Transportation Maps; Soils Maps; Tax Maps; Digital Magnetic Tapes; Integrated Terrain Unit Maps; Census Tract Maps

PROJECT PLANNING AND SUPPORT SERVICES

Problem Definition; Feasibility Analysis; Selection of Existing Imagery; Ground Control Survey; Data Base Preparation; Sensor Selection/evaluation; Sampling Strategy Design; Ancillary Data Collection; Ground Truth Survey; (a) Map Digitizing; Air Support Operations; Data Management

AERIAL SURVEY

(a) Low Altitude Photography; Radar; Geophysical; High Altitude Photography; Multispectral Scanner

IMAGE PROCESSING, INTERPRETATION AND ANALYSIS

Manual Image Interpretation; (a) Digital Image Processing; Batch Digital Image/Analysis/ Classification; Interactive Digital Image/Analysis/Classification; Photographic Laboratory Processing

PHOTOGAMMETRIC ENGINEERING

REPRODUCTION

Drafting & Scribing; Cartographic Reproduction; (a) Automated Drafting/Plotting; Printing

OTHER SERVICES

Remote Sensing Research; Remote Sensing Training; Statistical Modeling; Consultant Services; (a) Interactive Computer Graphics; Computer Services; Turnkey Systems Sales/ Leasing/Service; Hardware Design/Development; Sofware Design/Development; Equipment Sales/Leasing/Service; Software Sales/Leasing
NAME: AERO SERVICE DIVISION, WESTERN GEOPHYSICAL COMPANY OF AMERICA

ADDRESS (ES) & CONTACT(S):
P. O. Box 1939
Houston, Texas 77001
(713) 784-5800
George A. Brookes

5680 South Syracuse Circle, Suite 300
Englewood, Colorado 80110
(303) 779-4024
Richard O. Crosby

YEARS IN BUSINESS: 50
PROJECTS COMPLETED: Thousands
REGION SERVED: U.S., Int'l.

SMALL BUSINESS CONTRACTOR? No
MINORITY-OWNED BUSINESS? No
TOTAL APPLICABLE EMPLOYEES: 270

TYPES OF REMOTE SENSING TECHNOLOGIES:
Low Altitude Aerial Photo; Med Altitude Aerial Photo; Aerial Thermal Infrared Scanner; Radar; Geophysical Survey; Landsat MSS; Digital Image Interpretations; Manual Image Interpretations.

PERSONNEL & SKILLS REPRESENTED:
Management (45); Professional (84); Technical (71); Other (70); Cartographers (8); Computer Equip Operators (14); Computer Programmers (6); Draftsmen (31); Engineers (civil, environ.) (2); Field Surveyors (10); Image Processing Equip Oper. (5); Photogrammets (3); Photogrammetric Equip Oper. (33); Photo Interpreters (8); Photolab Technicians (8); Pilots (11); Planners (4); Geographers (9).

STATEMENT OF CAPABILITIES:

ORIGINAL PAGE IS OF POOR QUALITY

AERO SERVICE DIVISION, WESTERN GEOPHYSICAL COMPANY OF AMERICA

FACILITIES AND SPECIAL EQUIPMENT

AIRCRAFT
Caravelle (1); DC-3 (1); Piper Navajo PA 31 (3); Cessna Titan 404 (2)

CAMERAS, SCANNERS, AND OTHER REMOTE SENSORS
Wild Heerbrug BC-8 (3); Wild Heerbrug BC-9 (2); GEMS 1000 Synthetic Aperture Radar (1); Daedalus Thermal Scanner 1230-Type (1)

FIELD SURVEY EQUIPMENT
Wild N-2 Level (4); Wild N-3 Level (10); Hewlett-Packard EDM-3800 (4); K & E Ranger IV (1); AGU Geodimeter Model 6 (1); Wild T-3 Theodolite (4); Wild Illuminated Traverse Targets (3); Wild T-2 Theodolite (10); Cubic Electrotape Model DM-20 (3); Wild T-1 Theodolite (1); K & E Topographic Alidade (2); Hewlett-Packard Calculator Model 9815A (2)

PHOTOGRAPHIC PROCESSING EQUIPMENT
Log-E-Robertson Copy Camera Tri-Color 41 (1); K & E Horizontal Enlarger HE-12 (1); Wild Correction Diapositive U-4 (1); Rectifier-Enlarger SEG-V (1); 30" x 40" Vacuum Frame (1); 54" x 72" Vacuum Frame (1); Versamatic Aerial Film Processor ICM (1); 42" DuPont Film Processor ER9 (1); Log-E Strip Printer SP10/70-C (1); Log-E Contact Printer WE-IV (1); Durat Color Enlarger L-184 (1); Coleta 42" Color Processor (1); 48" Log-E Film Processor LD-48 (1)

DIGITIZING, PLOTTING AND GRAPHICS
Wild A-10 Autograph (2); Wild A-8 Aviograph (6); Wild B-8 Aviograph (6); Kelsh Orthoscan System (1); WILD POG 3 (1); WILD POG 3 with zoom (1); Zeiss P.S.E. Stereo Comparator (1); H. Dell Foster-Mono Comparator (1); 48" x 60" back lit digitizing tables each with a 19" Cathode ray tube display and teletype without keyboard; Century 11/4 disc drive with 30 million character storage capacity (1); 25" per second magnetic tape drive (1); Data General Nova II mini-computer (1); KBR35 Teletype with Keyboard (1)

OTHER COMPUTER PROCESSING
Digital Decwriter II Computer control console & printer (1); Talos 44" x 60" back lit digitizing tables (5); PDP 11/03 micro-computer station drivers (5); LearLear Siegler AIM-3 CRT screens (6); Tektronix 4014-1 CRT screens (5); IBM 11/34 mini-computer as common controller; CDC 9611 80 Megabytes Disk Drives (2); Magnetic Tape Unit 1600/800 BPI, 9 Track 45 IPS (1); MODEN computer to telephone interface (1); Data General Eclipse mini-computer Model S-200 (1); Century 11/4 disc drives interfaced in tandem (2); Decwriter II Model 35 (1); 19" Cathode ray tubes with keyboard (1); 14" Cathode ray tubes with keyboard (2); 45" per second magnetic tape drive (1)

OTHER
Wild B-8 Stereo Instrument interfaced in three dimensional mode to the Eclipse mini-computer (4); 48" x 60 back lit digitizing tables (3); IBM 360/44 (2); 256K Core (2); Magnetic Tape Unit (9); 29 Megabytes Disk Drive (8); 1100 Line/Minute Printer (2) Card Reader/Punch (2); Calcomp Flatbed (2); Calcomp Drum (2); Xynerics Flatbed (1); Optronics Drum (Color Plotter/Digitizer)
AERO SERVICE DIVISION, WESTERN GEOPHYSICAL COMPANY OF AMERICA

PRODUCTS AND SERVICES PROVIDED

**IMAGE PRODUCTS**
(c)B&W, Color, Color Infrared, Color Composite Negative Transparencies, Positive Transparencies, Contact Prints, Enlarged Prints; (c)Photo Mosaics, Photo Atlas Sheets, Thermograms, Digital Mosaics, Halftone Image Prints, Digital Magnetic Tape, Glass Diapositives.

**ENHANCED AND CORRECTED IMAGERY**
(c)Multitemporal Composites, Contrast Enhanced, Geometric Correction, Multisensor Composites, Radiometric Correction Photo Images; (c)Contrast Enhanced, Geometric Correction, Density Slice, Multisensor Composites, Radiometric Correction, Image Resampling, Edge Enhancement, Principal Components, Ratioling Digital Process.

**PHOTOCHEMICAL PRODUCTS**

**INTERPRETED, THEMATIC PRODUCTS**
(c)Color Thematic Maps, Land Use Maps, Vegetation\-Forestry Maps, Utility Maps, Acreage Tabulations, Geocoded Data Bases, Thematic Map Overlays, Geologic Maps, Soils Maps, Tax Maps, Digital Magnetic Tapes.

**PROJECT PLANNING AND SUPPORT SERVICES**
Problem Definition; Feasibility Analysis; Selection of Existing Imagery; Ground Control Survey; Map Digitizing; Data Base Preparation; Air Support Operations; Sensor Selection/Evaluation; Sampling Strategy Design; Ancillary Data Collection; Ground Truth Survey; Gray Level Digitizing; Data Management.

**AERIAL SURVEY**
Low Altitude Photography; Thermal Infrared; Radar; Geophysical; Multispectral Scanner.

**IMAGE PROCESSING, INTERPRETATION AND ANALYSIS**
Digital Image Processing; Batch Digital Image/Analysis/Classification; Photographic Laboratory Processing; Manual Image Interpretation.

**PHOTOCHEMICAL ENGINEERING**
Aerotriangulation; Orthophotomapping; Planimetric Mapping; Stereo Digitizing; Cross-Sectioning; Stereocompilation; Topographic Mapping-Small Scale; Topographic Mapping-Large Scale; Volumetric Calculation.

**REPRODUCTION**
Drafting & Scribing; Cartographic Reproduction; Automated Drafting/Plotting; Printing.

**OTHER SERVICES**
Remote Sensing Research; Remote Sensing Training; Consultant Services; Interactive Computer Graphics; Computer Services; Turnkey Systems Sales/Leasing/Service; Software Design/Development; Software Sales/Leasing.
NAME: AERIAL SURVEY & PHOTO, INC.

ADDRESS(ES) & CONTACT(S)

RFD #1, Box 14
Skowhegan, Maine 04976
(207) 474-8686
Forrest Stevens

YEARS IN BUSINESS: 5
PROJECTS COMPLETED: 450
REGION SERVED: I, II, & III
TOTAL APPLICABLE EMPLOYEES: 3

TYPES OF REMOTE SENSING TECHNOLOGIES:
Low Altitude Aerial Photo; Med Altitude Aerial Photo

PERSONNEL & SKILLS REPRESENTED:

Management (2); Professional (1); Technical (8); Other (1)

Draftsmen (2); Field Surveyors (4); Photogrammatists (1); Photogrammetric Equip. Oper. (2); Photointerpreter (1); Photolab Technicians (1); Pilots (1)

STATEMENT OF CAPABILITIES:

We are geared to handle any flying assignments up to 30,000' altitude and provide in-house best compilation, drafting or enlargement to suit the client's needs or applications. We are presently flying and providing aerial photography to a wide circle of clients throughout New England.

FACILITIES AND SPECIAL EQUIPMENT

AIRCRAFT
Cessna U206 (1)

CAMERAS, SCANNERS, AND OTHER REMOTE SENSORS
Wild RC/8 (1)

FIELD SURVEY EQUIPMENT

Wild T2 (2)

Ziess Auto Level (1)

PHOTOCOPY EQUIPMENT

Complete In-House B/W Processing Equipment

IMAGE INTERPRETATION, VIEWING AND MAPPING (NON-DIGITAL)

Kelsh (3 projector) (2)

IMAGE INTERPRETATION, VIEWING AND MAPPING (DIGITAL)

DIGITIZING, PLOTTING AND GRAPHICS

Brown copy Camera (1)

OTHER COMPUTER PROCESSING

OTHER
Film Dryer (1)
Drum Dryer (1)
NAME: AERO-METRIC ENGINEERING, INC.

ADDRESS(ES) & CONTACT(S)
4708 North 40th Street
Sheboygan, Wisconsin 53081
(414) 436-3631
Bernard S. Schur

YEARS IN BUSINESS: 11
PROJECTS COMPLETED: ...
REGION SERVED: U.S.

TYPES OF REMOTE SENSING TECHNOLOGIES:
Low Altitude Aerial Photo; Med Altitude Aerial Photo; High Altitude Aerial Photo;

PERSONNEL & SKILLS REPRESENTED:
Management (3); Professional (6); Technical (6); Other (55)
Cartographers (6); Computer Equip. Oper. (1); Computer Programmers (1); Draftsmen (6);
Engineers (civil, environ.) (1); Field Surveyors (25); Photogrammatists (6);
Photogrammetric Equip. Oper. (11); Photointerpreters (3); Photolab Technicians (7);
Pilots (3)

STATEMENT OF CAPABILITIES:
Full Service Photogrammetric Mapping Firm.

PRODUCTS AND SERVICES PROVIDED

IMAGE PRODUCTS
B&W, Color, and Color Infrared Contact Prints and Enlarged Prints; (c) B&W, Color, 
Color Infrared and Color Composite Negative Transparencies and Positive Transpare-
cy; (c) Color Composite Contact Prints and Enlarged Prints; Photo Mosaics;
Half-tone Image Prints

PHOTOGRAWMETRIC PRODUCTS
Orthophotos; Topographic Maps; Stockpile Measurements; Earthwork Measurements;
Planimetric Maps; Photo-Contour Maps; Plan and Profile Sheets; Volumetric
Calculations; Distance & Angle Measurements

INTERPRETED, THEMATIC PRODUCTS
Vegetation/Forestry Maps; Acreage Tabulations; Tax Maps

PROJECT PLANNING AND SUPPORT SERVICES

AERIAL SURVEY
Low Altitude Photography

IMAGE PROCESSING, INTERPRETATION AND ANALYSIS

PHOTOGRAWMETRIC ENGINEERING
Planimetric Mapping; Cross-Sectioning; Stereocompilation; Topographic Mapping-Small
Scale; Topographic Mapping-Large Scale; Volumetric Calculation; (a) Aerotriangula-
tion; Orthophotomapping

REPRODUCTION
Drafting & Scribing; Cartographic Reproduction; Printing; (a) Automated Drafting/
Plotting

OTHER SERVICES
Consultant Services
AERO-METRIC ENGINEERING, INC.

FACILITIES AND SPECIAL EQUIPMENT

AIRCRAFT
Rockwell Aero-Commander Twin Engine Aircraft (2); Piper Turbo-Astec Twin Engine Aircraft (1)

CAMERAS, SCANNERS, AND OTHER REMOTE SENSORS
Zeiss-Jena MNB 15/2323 - 6" Precision Lens (3)

FIELD SURVEY EQUIPMENT
Laser Ranger Electronic Distance Measuring Instrument (1); Geodimeter Model No. 76 Electronic Distance Measuring Instruments (3); Wild Model D135 Electronic Distance Measuring Instrument (1); Hewlett Packard Model 3820A Electronic Total Station (1); Topcon Model TM-C-2 (1); Wild T-2 Theodolites (5); Wild T-IA Theodolites and Precision Targets (3); N1 - 007 Zeiss-Jena Precision Levels (4); N1 - 25 Zeiss-Jena Automatic Level (1); DEC 1114 Computer (1); Cushman Trackster - All Terrain Vehicle (1); Ski-Doo Snowmobile (2); Four Wheel Drive Vehicles equipped with a complete Complement of Survey Equipment (3); Two Wheel Drive Vehicles equipped with a complete Complement of Survey Equipment (6)

PHOTOGRAPHIC PROCESSING EQUIPMENT
31" Brown Admiral Overhead Copy Camera (1); Log Etronic Mark III Color Printer (1); Durst CLS-2000 Enlarger (1); Durst V-184 Enlarger (1); Hope Model 129 Automatic Color Processor (1); Hope Model 146 Automatic Black and White Processor (2); Dupont EBF Black and White Processor (1); Clydesdale 66" x 81" Vacuum Frame (1); Clydesdale 42" x 52" Vacuum Frame (1); Dietzgen Diana 42" Diazo Printer (1); Speedmaster Color Analyzer (1); Speedmaster Color Transmission Denistometer (1); Speedmaster Color Reflection Denistometer (1); 3M 527W Master Wipe Film Cleaner (1); Brown Register Punch (1); Gordon 682GE Aerial Film Titling and Numbering Machine (1)

DIGITIZING, PLOTTING AND GRAPHICS
Zeiss-Jena Stereometrograph Model "E" (1); Zeiss-Jena Stereometrograph Model "D" (1); Zeiss-Jena Topocart "C" (1); Zeiss-Jena Topocart "B" (2); Wild A-8 First Order Plotter (1); Wild B-8 Second Order Plotter (1); Kelsh Third Order Plotter (1); Zeiss-Jena Orthophot Units (2); Data Technology DT-1654, 74" x 54" Flat Bed Plotters (2); Hasp SP-1025A Data Collectors with Hasp P-2501 Photogrammetric Systems and CRT Terminal with on Line Connection to a PDP 1134 Computer (2); Zeiss Precision Coordinatograph Drawing Plotters (5); Altek AC-75 MK II & Axis Digitizer with Digital Data Mag. Tape (1); Auto-Trol XYZ Digitizer (1); Wild PUB IV (1); Kern MK-2 Monocomparator (1)

OTHER COMPUTER PROCESSING
Analytical Aero-Triangulation Systems (1)

OTHER
108" x 60" Layout Light Tables (2); Hamilton Dial A Light "L" Drafting Tables (10) (Complete Complement of Drafting Equipment to accomplish the Scribe Draft System.)

AERO-METRIC ENGINEERING, INC.

PRODUCTS AND SERVICES PROVIDED

IMAGE PRODUCTS
(c) B&W, Color, Color Infrared, Color Composite Negative Transparencies, Positive Transparencies, Contact Prints, and Enlarged Prints; Photo Mosaics; Photo Analog Sheets; Halftone Image Prints; Digital Magnetic Tape

ENHANCED AND CORRECTED IMAGERY

PHOTOGRAHAMETRIC PRODUCTS
(c) Orthophotos; Topographic Maps; Engineering Cross Sections; Stockpile Measurements; Earthwork Measurements; Digital Terrain Models; Digital Data Bases; Planimetric Maps; Photo-Contour Maps; Plan and Profile Sheets; Volumetric Calculations; Distance & Angle Measurements; Close Range Photogrammetry

INTERPRETED, THEMATIC PRODUCTS
(c) Land Use Maps; Vegetation/Forestry Maps; Utility Maps; Acreage Tabulations; Transportation Maps; Tax Maps; Digital Magnetic Tapes

PROJECT PLANNING AND SUPPORT SERVICES
Problem Definition; Feasibility Analysis; Selection of Existing Imagery; Ground Control Survey; Map Digitizing; Data Base Preparation; Air Support Operations; Ground Truth Survey

AERIAL SURVEY
Low Altitude Photography; Thermal Infrared; High Altitude Photography; (c) Radar; Geophysical; Multispectral Scanner

IMAGE PROCESSING; INTERPRETATION AND ANALYSIS
Photographic Laboratory Processing

PHOTOGRAHAMETRIC ENGINEERING
Aerotriangulation; Orthophotomapping; Planimetric Mapping; Stereo Digitizing; Cross-Sectioning; Stereocompilation; Topographic Mapping - Small Scale; Topographic Mapping - Large Scale; Volumetric Calculation; Close Range Photogrammetry

REPRODUCTION
Drafting & Scribing; Cartographic Reproduction; Automated Drafting/Plotting; Printing

OTHER SERVICES
Consultant Services; Computer Services; (c) Interactive Computer Graphics
NAME: AEROCON PHOTOGRAMMETRIC SURVEYS, INC.

ADDRESS & CONTACT

30575 Euclid Ave.
Wickliffe, Ohio 44092
(216) 585-2500
J.C. Patterson

YEARS IN BUSINESS: 14
PROJECTS COMPLETED: 2,000
REGION SERVED: U.S.
TOTAL APPLICABLE EMPLOYEES: 12

TYPES OF REMOTE SENSING TECHNOLOGIES:
Low Altitude Aerial Photo; Med Altitude Aerial Photo; High Altitude Aerial Photo

PERSONNEL & SKILLS REPRESENTED:

Management (3); Professional (3); Technical (6)
Draftsmen (3); Engineers (civil, environ.); Photogrammatists (2); Photogrammetric Equip. Oper. (3); Photolab Technicians (2); Pilots (1)

STATEMENT OF CAPABILITIES:

FACILITIES AND SPECIAL EQUIPMENT

AIRCRAFT (1)
Cessna TV 206

CAMERAS, SCANNERS, AND OTHER REMOTE SENSORS (1)
Zeiss Jena

FIELD SURVEY EQUIPMENT (3)
EDM; Theodolite; Level

PHOTOGRAPHIC PROCESSING EQUIPMENT (4)

PHOTOGRAMMETRIC PROCESSING EQUIPMENT (5)

IMAGE INTERPRETATION, VIEWING AND MAPPING (NON-DIGITAL)

IMAGE INTERPRETATION, VIEWING AND MAPPING (DIGITAL)

DIGITIZING, PLOTTING AND GRAPHICS (1)
K&F Dell Foster

OTHER COMPUTER PROCESSING

OTHER
AEREOCO (Aerial Ecological Analysts)

ADDRESS & CONTACT(S)
2303 Archdale Road
Reston, Virginia 22091
(703) 860-4673
Robert T. Macomber

YEARS IN BUSINESS: 15
PROJECTS COMPLETED: 72
REGION SERVED: U.S. & Int'l.
TOTAL APPLICABLE EMPLOYEES: 6

TYPES OF REMOTE SENSING TECHNOLOGIES:
Low Altitude Aerial Photo; Mid Altitude Aerial Photo; High Altitude Aerial Photo;
Aerial Multispectral Scanner; Aerial Thermal Infrared Scanner; Laser Scanner;
Landsat MSS; Landsat ETM; SkyLab; Digital Image Interpretations; Manual Image Interpretations

PERSONNEL & SKILLS REPRESENTED:
Management (2); Professional (2); Technical (2)
Cartographers (1); Photogrammatists (1); Photogrammetric Equip. Oper. (2);
Photointerpreters (2); Photolab Technicians (1); Pilots (2)

STATEMENT OF CAPABILITIES:
Aerial Ecological Analysts (AeroEco) was chartered in 1976 to conduct remote
sensing surveys from aerial photography and photo interpretation. Current
capabilities include small, medium and large scale photo procurement, thermal and
multispectral data acquisition and ground truth data verification. Image enhancement,
photo interpretation and map production functions are supported by a photo lab
and consultant, cartographers. The firm specializes in design and implementation
of operational resource mapping programs in the field of water resources in the
coastal zone.
FACILITIES AND SPECIAL EQUIPMENT

AIRCRAFT

CESSNA TURBO 206 Photo Aircraft (1)
Piper Super Cub Reconnaissance Aircraft (1)
LearJet 24D High Alt. Photo Aircraft (1)
Amphibious Float Equipped Water Sample A/C (1)

CAMERAS, SCANNERS, AND OTHER REMOTE SENSORS

Wild Metric Mapping Camera (1)
Hasselblad Oblique Camera (1)
Nikon (1)
Bendix LN-3 Thermal Scanner (1)

FIELD SURVEY EQUIPMENT

PHOTOGRAPHIC PROCESSING EQUIPMENT

Aerial Film Processor (1)
Aerial Electronic Dodging Contact Printer (1)
Log-Etronics Paper Processor (1)

PHOTOGRAMMETRIC PROCESSING EQUIPMENT

Rectifying Enlarger (1)
Log-Etronics Diapositive/Plate Contact Printer (1)

IMAGE INTERPRETATION, VIEWING AND MAPPING (NON-DIGITAL)

Bausch & Lomb Zoom Stereoscope w/ Richards Light Table (1)
Map-o-Graph (1)
Zoom Transfer Scope (1)
Light Tables & Stereoscopes (1)

IMAGE INTERPRETATION, VIEWING AND MAPPING (DIGITAL)

Bendix MDAS

DIGITIZING, PLOTTING AND GRAPHICS

OTHER COMPUTER PROCESSING

OTHER SERVICES

PROJECT PLANNING AND SUPPORT SERVICES

Problem Definition; Feasibility Analysis; Selection of Existing Imagery; Data Base Preparation; Air Support Operations; Sensor Selection/Evaluation; Sampling Strategy Design; Ancillary Data Collection; Ground Truth Survey; Gray Level Digitizing; Data Management; (a) Map Digitizing

AERIAL SURVEY

Low Altitude Photography; Thermal Infrared; High Altitude Photography; Multispectral Scanner; (s) Radar

IMAGE PROCESSING, INTERPRETATION AND ANALYSIS

Photographic Laboratory Processing; Manual Image Interpretation; (a) Digital Image Processing; Interactive Digital Image/Analysis/Classification

OTHER SERVICES

Remote Sensing Research; Remote Sensing Training; Consultant Services; (s) Interactive Computer Graphics

PRODUCTS AND SERVICES PROVIDED

IMAGE PRODUCTS

B&W Contact Prints; B&W Enlarged Prints; (c) B&W Negative and Positive Transparencies; (c) Color, Color Infrared, and Color Composite Negative Transparencies, Contact Prints and Enlarged Prints; (c) Photo Mosaics; Photo Atlas Sheets; Thermograms; Halftone Image Prints

PHOTOGRAMMETRIC PRODUCTS

(c) Photo Multitemporal Composites; Photo Contrast Enhanced; Photo Geometric Correction; Photo Density Slice; Photo Change Detection

INTERPRETED, THEMATIC PRODUCTS

(c) Color Thematic Maps; Land Use Maps; Vegetation/Forestry Maps; Utility Maps; Acreage Tabulations; Geocoded Data Bases; Thematic Map Overlays; Transportation Maps; Tax Maps

REPRODUCTION

Drafting & Scribing; Cartographic Reproduction; (s) Printing

OTHER SERVICES

Remote Sensing Research; Remote Sensing Training; Consultant Services; (s) Interactive Computer Graphics
REMOTE SENSING EQUIPMENT/SYSTEMS PROVIDED

REMOTE SENSOR SYSTEMS

VIEWING EQUIPMENT

PHOTOGRAHAMMETRIC EQUIPMENT

DIGITAL IMAGE PROCESSING EQUIPMENT

SOFTWARE

INTEGRATED SYSTEMS

OTHER EQUIPMENT
Sell Aerial Film and Photo Processing Equipment

NAME: AEROGRAFICS CORP.

ADDRESS & CONTACT(S)
1575 Smithtown Ave., P.O. Box 248
Bohemia, New York 11716
(516) 589-6045
Thomas J. Rohan, Jr.

YEARS IN BUSINESS: 7
PROJECTS COMPLETED: thousands
REGION SERVED: LI, Ll, III, IV, & V
TOTAL APPLICABLE EMPLOYEES: 12

SMALL BUSINESS CONTRACTOR? Yes
MINORITY-OWNED BUSINESS? ___

TYPES OF REMOTE SENSING TECHNOLOGIES:
Low Altitude Aerial Photo; Med Altitude Aerial Photo; High Altitude Aerial Photo;

PERSONNEL & SKILLS REPRESENTED:
Management (3) Technical (9)
Image Processing Equip. Oper. (2); Photolab Technicians (2); Pilots (3)

STATEMENT OF CAPABILITIES:
Normal remote sensing capabilities. Aircraft may be adapted for custom applications, etc.
FACILITIES AND SPECIAL EQUIPMENT

AIRCRAFT
- CESSNA 310 (1)
- CESSNA 180 (2)
- CESSNA 206 (1)

CAMERAS, SCANNERS, AND OTHER REMOTE SENSORS
- Wild RC-8 (3)

FIELD SURVEY EQUIPMENT

PHOTORECORDING EQUIPMENT
- Oscar Fishers (2)
- Dupont ERF (1)

PHOTOGRAMMETRIC PROCESSING EQUIPMENT
- LOG-E (2)

IMAGE INTERPRETATION, VIEWING AND MAPPING (NON-DIGITAL)

IMAGE INTERPRETATION, VIEWING AND MAPPING (DIGITAL)

DIGITIZING, PLOTTING AND GRAPHICS

OTHER COMPUTER PROCESSING

PRODUCTS AND SERVICES PROVIDED

IMAGE PRODUCTS
- B&W, Color, Color Infrared, Color Composite Neg. & Pos. Transparencies, Contact & Enlarged Prints; Halftone Image Prints; (c) Photo Mosaics

ENHANCED AND CORRECTED IMAGERY
- (c) Contrast Enhanced

PHOTOGRAMMETRIC PRODUCTS

INTERPRETED, THEMATIC PRODUCTS

PROJECT PLANNING AND SUPPORT SERVICES
- Problem Definition; Feasibility Analysis; Selection of Existing Imagery; Air Support Operations; Sensor Selection/Evaluation

AERIAL SURVEY
- Low Altitude Photography; High Altitude Photography

IMAGE PROCESSING, INTERPRETATION AND ANALYSIS
- Photographic Laboratory Processing

PHOTOGRAMMETRIC ENGINEERING

REPRODUCTION
- Cartographic Reproduction

OTHER SERVICES
NAME: AGIMAGES

ADDRESS & CONTACT:
P.O. Box 395
Davis, California 95616
(916) 756-6028
T. Matsumoto

YEARS IN BUSINESS: 5
PROJECTS COMPLETED: 25
REGION SERVED: U.S. & Int'l.

TYPES OF REMOTE SENSING TECHNOLOGIES:
Low Altitude Aerial Photo; Med Altitude Aerial Photo

PERSONNEL & SKILLS REPRESENTED:
Management (2); Professional (2); Technical (1)
Soil Scientists; Photointerpreters; Pilots

STATEMENT OF CAPABILITIES:
AgImages provides aerial photography, photointerpretation and consulting services to the agricultural community. Low and medium altitudes photography are conducted and crop health and soil maps are photointerpreted for use by our clients. The concept of AgImages is to collect, develop and evaluate agricultural technology and incorporate them into a program of practical application at the farm level.

FACILITIES AND SPECIAL EQUIPMENT

AIRCRAFT
(2)
(type unspecified)

CAMERAS, SCANNERS, AND OTHER REMOTE SENSORS
(4)
(type unspecified)

FIELD SURVEY EQUIPMENT
(2)
(type unspecified)

PHOTOGRAPHIC PROCESSING EQUIPMENT

PHOTограмMETRIC PROCESSING EQUIPMENT

IMAGE INTERPRETATION, VIEWING AND MAPPING (NON-DIGITAL)

IMAGE INTERPRETATION, VIEWING AND MAPPING (DIGITAL)

DIGITIZING, PLOTTING AND GRAPHICS

OTHER COMPUTER PROCESSING

OTHER
NAME: AIR PHOTOGRAPHICS, INC.

ADDRESS(ES) & CONTACT(S)

Route 4, Box 500 - Martinsburg Airport
Martinsburg, West Virginia 25401
(304) 263-6976
John Houyoux

Main S 20th Streets - P.O. Box 786
Purcellville, Virginia 22132
(703) 338-7101
Willard Nieth

YEARS IN BUSINESS: 20
PROJECTS COMPLETED: 12,000 (est.)
REGION SERVED: I, II, III
TOTAL APPLICABLE EMPLOYEES: 9

MINORITY-OWNED BUSINESS? No

SMALL BUSINESS CONTRACTOR? Yes

TECHNOLOGIES:

Low Altitude Aerial Photo
Medium Altitude Aerial Photo
High Altitude Aerial Photo

PERSONNEL & SKILLS REPRESENTED:
Management (3); Professional (3); Technical (3); Cartographers (1); Photogrammatists (1); Photolab Technicians (9); Pilots (3).

STATEMENT OF CAPABILITIES:

The company was formed in August of 1960. Its principal objective is to provide an aerial photographic and photo laboratory service. Our normal service area is bounded by Maine (north), South Carolina (south) and as far west as Ohio. Both vertical and oblique aerial photography are provided. Altitudes range from 1000 to 24,000 feet ASL. Laboratory services include enlarging (including murals), copying, contact printing and mosaic preparation. We also specialize in an up-to-date aerial photo library of the adjacent D.C., Maryland, Virginia & West Virginia areas.
AIR PHOTOGRAPHICS, INC.

FACILITIES AND SPECIAL EQUIPMENT

AIRCRAFT
   Piper Aztec (twin) (2)
   Cessna 206 (single) (1)

CAMERAS, SCANNERS, AND OTHER REMOTE SENSORS
   Wild RC-10 aerial cameras (3)
   Various oblique aerial cameras (3)

FIELD SURVEY EQUIPMENT

PHOTOGRAPHIC PROCESSING EQUIPMENT
   Morse film processing tanks, motor (sets) (2)
   Paper and print processors (2)

PHOTOMETRIC PROCESSING EQUIPMENT
   Log-E Automatic dodging printer (2)

IMAGE INTERPRETATION, VIEWING AND MAPPING (NON-DIGITAL)

IMAGE INTERPRETATION, VIEWING AND MAPPING (DIGITAL)

DIGITIZING, PLOTTING AND GRAPHICS

OTHER COMPUTER PROCESSING

OTHER
   Borrowdale copy camera - up to 40" x 60" copy negative (1)

PRODUCTS AND SERVICES PROVIDED

IMAGE PRODUCTS
   B/W Neg. & Pos. Transparencies, Contact & Enlarged Prints; Halftone Image Prints;
   (c) Photo Mosaics; (a) Color and Color Infrared Neg. & Pos. Transparencies, Contact &
   Enlarged Prints

ENHANCED AND CORRECTED IMAGERY

PHOTOMETRIC PRODUCTS

INTERPRETED, THEMATIC PRODUCTS

PROJECT PLANNING AND SUPPORT SERVICES
   Problem Definition; Feasibility Analysis; Selection of Existing Imagery; Air Support
   Operations.

AERIAL SURVEY
   Low Altitude Photography; High Altitude Photography.

IMAGE PROCESSING, INTERPRETATION AND ANALYSIS
   Photographic Laboratory Processing

PHOTOMETRIC ENGINEERING

REPRODUCTION

OTHER SERVICES
REMOTE SENSING EQUIPMENT/SYSTEMS PROVIDED

REMOTE SENSOR SYSTEMS
Lease Reconnaissance Cameras; Lease Handheld Aerial Cameras

VIEWING EQUIPMENT
Sell Stereoscopes

PHOTOMETRIC EQUIPMENT

DIGITAL IMAGE PROCESSING EQUIPMENT

SOFTWARE

INTEGRATED SYSTEMS

OTHER EQUIPMENT

NAME: AIRVIEW SPECIALISTS CORPORATION

ADDRESS(ES) & CONTACT(S)
3419 Churin Drive
Mountain View, CA 94040
(415) 965-4433
Robin I. Welch

Ames Research Center
Moffett Field, CA 94035
(415) 965-5232
Robin I. Welch

YEARS IN BUSINESS: 26

PROJECTS COMPLETED: 120

REGION SERVED: U.S. Int'l.

TOTAL APPLICABLE EMPLOYEES: 5

TYPES OF REMOTE SENSING TECHNOLOGIES:
Low Altitude Aerial Photo
Med Altitude Aerial Photo
High Altitude Aerial Photo
Aerial Multispectral Scanner
Aerial Thermal Infrared Scanner
Radar
Geophysical Survey
Landsat MSS

PERSONNEL & SKILLS REPRESENTED:
Management(2); Professional(2); Technical(1); Engineers(civil, environ.), Photogrammatists, Photointerpreters, Physical Scientists, Pilots.
(# not provided).

STATEMENT OF CAPABILITIES:
Primary experience is in developing and utilizing advanced remote sensing technology and systems through research, consulting, teaching and operational activities in a wide range of earth resource applications. Expertise is focused on assisting others in establishing a capability and facility for remote sensing research and operations and in actual project management and operations in project design, data acquisition, processing and handling, photo interpretation, field and flight operations, mapping and training of technicians and managers. Emphasis is on an integrated man/computer approach to data processing for space, aircraft and ground data information in a multiple resource/multiple use setting.
AIRVIEW SPECIALISTS CORP.

FACILITIES AND SPECIAL EQUIPMENT

AIRCRAFT
(1) (Specific types not provided)

CAMERAS, SCANNERS, AND OTHER REMOTE SENSORS
(3) (Specific types not provided)

FIELD SURVEY EQUIPMENT

PHOTOGRAPHIC PROCESSING EQUIPMENT

PHOTOGRAMMETRIC PROCESSING EQUIPMENT

IMAGE INTERPRETATION, VIEWING AND MAPPING (NON-DIGITAL)
(4) (Specific types not provided)

IMAGE INTERPRETATION, VIEWING AND MAPPING (DIGITAL)
(1) (Specific types not provided)

DIGITIZING, PLOTTING AND GRAPHICS
(1) (Specific types not provided)

OTHER COMPUTER PROCESSING
(1) (Specific types not provided)

OTHER

PRODUCTS AND SERVICES PROVIDED

IMAGE PRODUCTS
(c) B&W, Color, Color Infrared, Color Composite Negative Transparencies, Positive Transparencies, Contact Prints, Enlarged Prints; (s) Photo Mosaics, Photo Alz Sheets, Analog Magnetic Tape, Thermograms, Digital Mosaics, Half-tone Image Prints, Digital Magnetic Tape.

ENHANCED AND CORRECTED IMAGERY
(c) Photo Multitemporal Composites; (s)Digital Multitemporal Composites; (s) Digital Contrast Enhanced, Digital Geometric Correction, Digital Density Slices; (c)Photo Change Detection; (s)Digital Change Detection, Digital Multisensor Composites, Digital Radiometric Correction, Digital Image Resampling, Digital Pseudo Stereo.

PHOTOGRAHAMETRIC PRODUCTS
(s) Orthophotos; (s) Topographic Maps; (c) Digital Data Bases; (s) Planimetric Maps; (s) Photo-Contour Maps; (s) Plan and Profile Sheets; (c) Volumetric Calculations; (s) Distance & Angle Measurements.

INTERPRETED, THEMATIC PRODUCTS
(c) Color Thematic Maps; (c) Land Use Maps; (c) Vegetation/Forestry Maps; (c) Utility Maps; (c) Acreage Tabulations; (s) Geocoded Data Bases; (c) Geologic Maps; (c) Transportation Maps; (c) Soils Maps; (s) Tax Maps; (s) Digital Magnetic Tapes.

PROJECT PLANNING AND SUPPORT SERVICES
Problem Definition; Feasibility Analysis; Selection of Existing Imagery; Ground Control Survey; Data Base Preparation; Air Support Operations; Sensor Selection/Evaluation; Sampling Strategy Design; Ancillary Data Collection; Ground Truth Survey; Gray Level Digitizing; Data Management; (s) Map Digitizing.

AERIAL SURVEY
Low Altitude Photography; (s) Thermal Infrared; (s) Radar; (s) Geophysical; (s) High Altitude Photography; (s) Multispectral Scanner.

IMAGE PROCESSING, INTERPRETATION AND ANALYSIS
Digital Image Processing; Batch Digital Image/Analysis/Classification; Interactive Digital Image/Analysis/Classification; Manual Image Interpretation; (s) Photographic Laboratory Processing.

PHOTOGRAMMETRIC ENGINEERING

REPRODUCTION
(s) Drafting & Scribing, Cartographic Reproduction, Automated Drafting/Plotting, Printing.

OTHER SERVICES
Remote Sensing Research; Remote Sensing Training; Statistical Modeling; Consultant Services; Software Design/Development; (s) Interactive Computer Graphics; Computer Services.
NAME: ARIX, A PROFESSIONAL CORP.

ADDRESS(ES) & CONTACT(S)
2021 Clubhouse Drive
Greeley, CO 80631
(303) 330-2749
Robert O. Thomas, Vice President

625 East Madison
Riverton, Wyoming 82501
(307) 856-5505
Robert D. Regan, Office Manager

760 Horizon Drive
Grand Junction, Colorado 81501
(303) 243-7569
Gordon Bruchner, Vice President

YEARS IN BUSINESS: 10
PROJECTS COMPLETED: 300
REGION SERVED: VIII, IX

TYPES OF REMOTE SENSING TECHNOLOGIES:
Low Altitude Aerial Photo
Med Altitude Aerial Photo

PERSONNEL & SKILLS REPRESENTED:
Management (1); Professional (1); Technical (4); Draftsmen (1); Field Surveyors (1);
Photogrammatists (1); Photogrammetric Equip Oper. (1); Photolab Technicians (2).

STATEMENT OF CAPABILITIES:
Ten years experience in photogrammetries. Small to medium sized mapping project.
Complete photo lab and ortho capabilities. Third order stereo plotters and digitizers.

FACILITIES AND SPECIAL EQUIPMENT

AIRCRAFT

CAMERAS, SCANNERS, AND OTHER REMOTE SENSORS

FIELD SURVEY EQUIPMENT
Theodolites (12); Levels (16); EDM (8).

PHOTOGRAPHIC PROCESSING EQUIPMENT
Kodak 242 Processor (1); Log E Printer (1).

PHOTOMETRIC PROCESSING EQUIPMENT

IMAGE INTERPRETATION, VIEWING AND MAPPING (NON-DIGITAL)

IMAGE INTERPRETATION, VIEWING AND MAPPING (DIGITAL)

DIGITIZING, PLOTTING AND GRAPHICS
Auto Trol Digitizer (1)

OTHER COMPUTER PROCESSING

OTHER
Complete photo lab facilities--copy camera, enlarger, etc.
ARIX, A PROFESSIONAL CORP.

PRODUCTS AND SERVICES PROVIDED

IMAGE PRODUCTS
B&W Contact and Enlarged Prints; Halftone image prints; (c) B&W Pos. & Neg. Transp.; Photo Mosaics; (c) Color, Color Infrared, Color Composite Neg. & Pos. Transp., Contact & Enlarged Prints; Photo Atlas Sheets; Analog Magnetic Tape; Thermograms; Digital Mosaics; Digital Magnetic Tape.

ENHANCED AND CORRECTED IMAGERY

PHOTOMETRIC PRODUCTION
(c) Orthophotos; (c) Topographic Maps; (c) Engineering Cross Sections; (c) Stockpile Measurements; (c) Earthwork Measurements; (c) Digital Terrain Models; (c) Digital Data Bases; (c) Planimetric Maps; (c) Photo-Contour Maps; (c) Plan and Profile Sheets; (c) Volumetric Calculations; (c) Distance & Angle Measurements.

INTERPRETED, THEMATIC PRODUCTS
(c) Utility Maps; (c) Tax Maps.

PROJECT PLANNING AND SUPPORT SERVICES
Problem Definition; Feasibility Analysis; Selection of Existing Imagery; Ground Control Survey; Map Digitizing; Data Base Preparation; Ground Truth Survey; (c) Air Support Operations

AERIAL SURVEY
(s) Low Altitude Photography; (s) Thermal Infrared; (s) High Altitude Photography.

IMAGE PROCESSING, INTERPRETATION AND ANALYSIS
Photographic Laboratory Processing; Manual Image Interpretation.

PHOTOMETRIC ENGINEERING
Orthophotography; Planimetric Mapping; Stereo Digitizing; Cross-Sectioning; Stereocompilation; Topographic Mapping-Small Scale; Topographic Mapping-Large Scale; Volumetric Calculation; (s) Aerotriangulation

REPRODUCTION
Drafting & Scribing; Cartographic Reproduction; (s) Automated Drafting/Plotting; Printing.

OTHER SERVICES

NAME: ART-O-GRAPH

ADDRESS(ES) & CONTACT(S)
529 South 7th.
Minneapolis, MN 55415
(612) 336-1661
Paul Stormo

YEARS IN BUSINESS: 20

PROJECTS COMPLETED: N/A

TOTAL APPLICABLE EMPLOYEES: 

SMALL BUSINESS CONTRACTOR? 

REGION SERVED: U.S., Int'l.

MINORITY-OWNED BUSINESS? 

TYPES OF REMOTE SENSING TECHNOLOGIES:
Low Altitude Aerial Photo; Med Altitude Aerial Photo, Geophysical Survey

PERSONNEL & SKILLS REPRESENTED: 

STATEMENT OF CAPABILITIES:
Manufacture and market scale changing projectors with capability to enlarge or reduce 5 times. Can project opaque copy, 9" x 9" film, 35mm, 70mm, and microfiche. Equipment is easy to operate and simple to learn.
REMOTE SENSING EQUIPMENT/SYSTEMS PROVIDED

REMOTE SENSOR SYSTEMS

VIEWING EQUIPMENT
Sell Scale Change Projectors

PHOTOGRAHAMETRIC EQUIPMENT
Sell Scale Change Projectors

DIGITAL IMAGE PROCESSING EQUIPMENT

SOFTWARE

INTEGRATED SYSTEMS

OTHER EQUIPMENT

NAME: AUTOMATED SCIENCES GROUP, INC.

ADDRESS(ES) & CONTACT(S)
8555 Sixteenth Street
Silver Spring, MD 20910
(301) 587-8750
Arnold Avant or James Vandergraft

YEARS IN BUSINESS: 1
PROJECTS COMPLETED: In progress
REGION SERVED: U.S.

TYPES OF REMOTE SENSING TECHNOLOGIES:
Aerial Multispectral Scanner
Aerial Thermal Infrared Scanner
Landat MSS

LANDSAT RBV
Seasat
Digital Image Interpretations

PERSONNEL & SKILLS REPRESENTED:
Management(3); Professional(2); Technical(2); Computer Programmers, Engineers(civil, environ.)., Engineers(electricial, Physical Scientists (if not provided).

STATEMENT OF CAPABILITIES:

ASC is a full service consulting firm with a staff of over 90 full-time employees, of which more than 35% have advanced degrees. Specific areas of expertise include digital image enhancement and analysis, satellite image processing, mathematical modeling and simulation, data analysis and filtering, statistical analysis and forecasting, minicomputer applications. Current projects include processing and enhancement of TIROS-N data.
PRODUCTS AND SERVICES PROVIDED

IMAGE PRODUCTS

ENHANCED AND CORRECTED IMAGERY

PHOTOGRAMMETRIC PRODUCTS

INTERPRETED, THEMATIC PRODUCTS

PROJECT PLANNING AND SUPPORT SERVICES
Problem Definition; Feasibility Analysis; Map Digitizing; Data Base Preparation; Gray Level Digitizing; Data Management.

AERIAL SURVEY

IMAGE PROCESSING, INTERPRETATION AND ANALYSIS
Digital Image Processing; Batch Digital Image/Analysis/Classification; Interactive Digital Image/Analysis/Classification.

PHOTOGRAMMETRIC ENGINEERING

REPRODUCTION

OTHER SERVICES
Remote Sensing Research; Statistical Modeling; Consultant Services; Interactive Computer Graphics; Computer Services; Turnkey Systems Sales/Leasing/Service; Software Design/Development; Equipment Sales/Leasing/Service; Software Sales/Leasing.

NAME: AVIS AIRMAP, INC.

ADDRESS(ES) & CONTACT(S)
Avis Park @ Washington Street
BRAINTREE, MASSACHUSETTS 02184
(617) 848-8000
Dr. Gordon R. Derman

YEARS IN BUSINESS: 14
PROJECTS COMPLETED: 200
REGION SERVED: L,II,III
TOTAL APPLICABLE EMPLOYEES: 33

TYPES OF REMOTE SENSING TECHNOLOGIES:
Low Altitude Aerial Photo; Med Altitude Aerial Photo; High Altitude Aerial Photo; Landsat MSS; Manual Image Interpretations

PERSONNEL & SKILLS REPRESENTED:
Management (2); Professional (5); Technical (16); Other (10)
Cartographers (6); Computer Programmers (1); Draftsmen (6); Engineers (civil, environ. (1); Field Surveyors (8); Photogrammistats (4); Photogrammetric Equip. Oper. (5); Photointerpreters (3); Geographers (1)

STATEMENT OF CAPABILITIES:
Avis Airmap, Inc. provides a wide spectrum of measurement services to Government and industry including Aerial Survey, Photo-interpretation, Stereo-photogrammetric Mapping, Close-Range Photogrammetry and Land Surveys. The firm has 14 years of experience in color aerial photointerpretation. They have developed several computer-assisted mapping systems including semi-automatic plotting - storage of map data, analytical triangulation and inter-active graphics. The firm uses color infrared film extensively both for interpretation and mapping.
AVIS AIRMAP, INC.

FACILITIES AND SPECIAL EQUIPMENT

AIRCRAFT
(Leased) Twin-engine TC AZTECS (2)

CAMERAS, SCANNERS, AND OTHER REMOTE SENSORS
(Leased) Wild-RC-10 (3)

FIELD SURVEY EQUIPMENT
EDM, Auto Levels (4)

PHOTOGRAPHIC PROCESSING EQUIPMENT

PHOTOGRAMMETRIC PROCESSING EQUIPMENT
Leica Jena Topocarts (3)

IMAGE INTERPRETATION, VIEWING AND MAPPING (NON-DIGITAL)
Miscellaneous (2)

IMAGE INTERPRETATION, VIEWING AND MAPPING (DIGITAL)
Leica Jena Topocarts with Computerized Attachments (1)

DIGITIZING, PLOTTING AND GRAPHICS

OTHER COMPUTER PROCESSING

OTHER

AVIS AIRMAP, INC.

PRODUCTS AND SERVICES PROVIDED

IMAGE PRODUCTS
B & W, Color, and Color Infrared Negative Transparencies, Pos. Transparencies, Contact Prints and Enlarged Prints; Photo Mosaics; Photo Atlas Sheets; Halftone Image Prints; Digital Magnetic Tape; Digital Terrain Models; Auto Plots of DEM's

ENHANCED AND CORRECTED IMAGERY

PHOTOGRAHMETRIC PRODUCTS
Orthophotos; Topographic Maps; Engineering Cross Sections; Stockpile Measurements; Earthwork Measurements; Digital Terrain Models; Digital Data Bases; Planimetric Maps; Photo-Contour Maps; Plan and Profile Sheets; Volumetric Calculations; Distance & Angle Measurements; Close-range Photogrammetry

INTERPRETED, THEMATIC PRODUCTS
Color Thematic Maps; Land Use Maps; Vegetation/Forestry Maps; Utility Maps; Acreage Tabulations; Geocoded Data Bases; Thematic Map Overlays; Geologic Maps; Transportation Maps; Soils Maps; Tax Maps; Digital Magnetic Tapes

PROJECT PLANNING AND SUPPORT SERVICES
Problem Definition; Feasibility Analysis; Selection of Existing Imagery; Ground Control Survey; Map Digitizing; Air Support Operations; Sensor Selection/Evaluation; Ancillary Data Collection; Ground Truth Survey; Data Management; (a) Sampling Strategy Design; Gray Level Digitizing

AERIAL SURVEY
Low Altitude Photography; High Altitude Photography; (a) Thermal Infrared; Geophysical; Multispectral Scanner

IMAGE PROCESSING, INTERPRETATION AND ANALYSIS
Photographic Laboratory Processing; Manual Image Interpretation; (a) Digital Image Processing; Batch Digital Image/Analysis/Classification; Interactive Digital Image/Analysis/Classification

PHOTOGRAHMETRIC ENGINEERING
Aerotriangulation; Orthophotomapping; Planimetric Mapping; Stereo Digitizing; Cross-Sectioning; Stereocompilation; Topographic Mapping-Small Scale; Topographic-Large Scale; Volumetric Calculation; Close-range Photogrammetry

REPRODUCTION
Drafting & Scribing; Cartographic Reproduction; Automated Drafting/Plotting; (a) Printing

OTHER SERVICES
Remote Sensing Research; Remote Sensing Training; Consultant Services; Interactive Computer Graphics; Computer Services; Software Design/Development; Software Sales/Leasing

(a) Statistical Modeling
NAME: MICHAEL BAKER, JR., INC.

ADDRESS(ES) & CONTACT(S)

4301 Dutch Ridge Road  
P. O. Box 280
Beaver, PA  15010

3025 South Parker Road  
Aurora, CO  80014
(303) 750-1958
William O. Baker, Vice President

Wayne A. Cornelius, Vice President

3957-67 Northview Drive, P. O. Box 9947
Jackson, Mississippi  32726
(601) 362-5481
Franz L. Cowart, Vice President

YEARS IN BUSINESS: 10

PROJECTS COMPLETED: 2,000

REGION SERVED: U.S.

TYPES OF REMOTE SENSING TECHNOLOGIES:

Low Altitude Aerial Photo
Med Altitude Aerial Photo
Digital Image Interpretations
Manual Image Interpretations

PERSONNEL & SKILLS REPRESENTED:

Management(10); Professional(10); Technical(67); Other(50); Cartographers(12); Computer Equip Operators(2); Computer Programmers(2); Draftsmen(20); Engineers (civil, environ.) (6); Engineers(electrical)(1); Field Surveyors(40); Soi Scientists(3); Photogrammatists(5); Photogrammetric Equip Operators(22); Photointerpreters(8); Photolab Technicians(5); Pilots(3); Planners(2); Geographers(3); Soil Scientists(3).

TOTAL APPLICABLE EMPLOYEES: 137

SMALL BUSINESS CONTRACTOR? No

MINORITY-OWNED BUSINESS? No

FACILITIES AND SPECIAL EQUIPMENT

AIRCRAFT
Aero-Commanders (2)

CAMERAS, SCANNERS, AND OTHER REMOTE SENSORS
Zeiss RPM 15/23 (2)

FIELD SURVEY EQUIPMENT
All types -- conventional and EDM (200)

PHOTOGRAphic PROCESSING EQUIPMENT
Total B/W including Kodak Supermatic and Dupont ERS Automatic Processors (2)

PHOTOGRAphometric PROCESSING EQUIPMENT
Logetronica Mark III (2); Versamat 411-C (1); K& E RE-12 Horizontal Enlarger (1).

IMAGE INTERPRETATION, VIEWING AND MAPPING (NON-DIGITAL)
Kelsh Plotters (10); Santoni IIIC (1).

IMAGE INTERPRETATION, VIEWING AND MAPPING (DIGITAL)
Wild BBS (2); Kern PC 2 AT (1); Kelsh K-600 (1).

DIGITIZING, PLOTTING AND GRAPHICS
M & S Interactive Graphics System (1); Calcomp Flatbed Plotter (1).

OTHER COMPUTER PROCESSING
IBM 370/115 Computer (1)

OTHER
PUG (2); Space-Optic Monocomparator (1).

STMTEMENT OF CAPABILITIES:

Michael Baker, Jr., Inc. is a diversified consulting engineering firm with offices throughout the United States. The Survey and Mapping Division presently employs 137 people performing a variety of aerial survey and mapping work. The total employment of the company is presently 828 and, therefore, many engineering, architectural and scientific disciplines are available to supplement the Survey and Mapping Division.
MICHAEL BAKER, JR., INC.

PRODUCTS AND SERVICES PROVIDED

IMAGE PRODUCTS
(c) Black & White, Color, Color Infrared Negative Transparencies, Positive Transparencies, Contact Prints and Enlarged Prints; (c) Photo Mosaics; (c) Photo Atlas Sheets; (c) Digital Mosaics; (c) Halftone Image Prints; (2) Digital Magnetic Tape.

ENHANCED AND CORRECTED IMAGERY

PHOTOMETRIC PRODUCTS
(c) Orthophotos; (c) Topographic Maps; (c) Engineering Cross Sections; (c) Stockpile Measurements; (c) Earthwork Measurements; (c) Digital Terrain Models; (c) Digital Data Bases; (c) Planimetric Maps; (c) Photo-Contour Maps; (c) Plan & Profile Sheets; (c) Volumetric Calculations; (c) Distance & Angle Measurements

INTERPRETED, THEMATIC PRODUCTS
(c) Land Use Maps; (c) Vegetation/Forestry Maps; (c) Utility Maps; (c) Acreage Tabulations; (c) Geocoded Data Bases; (c) Geologic Maps; (c) Transportation Maps; (c) Soils Maps; (c) Tax Maps; (c) Digital Magnetic Tapes

PROJECT PLANNING AND SUPPORT SERVICES
Problem Definition; Feasibility Analysis; Selection of Existing Imagery; Ground Control Survey; Map Digitizing; Data Base Preparation; Air Support Operations; Ground Truth Survey; Data Management.

AERIAL SURVEY
Low Altitude Photography; Med Altitude Photography; (a) Thermal Infrared; High Altitude Photography

IMAGE PROCESSING, INTERPRETATION AND ANALYSIS

PHOTOMETRIC ENGINEERING
Aerotriangulation; Orthophotomapping; Planimetric Mapping; Stereo Digitizing; Cross-Sectioning; Stereocompilation; Topographic Mapping-Small Scale; Topographic Mapping-Large Scale; Volumetric Calculation.

REPRODUCTION
Drafting & Scripting; Cartographic Reproduction; Automated Drafting/Plotting; Printing.

OTHER SERVICES
Consultant Services; Interactive Computer Graphics; Computer Services; Software Design/Development/Software Sales/Leasing.

NAME: BAUSCH AND LOMB INC.

ADDRESS(ES) & CONTACT(S)
1400 N. Goodman Street
Rochester, NY 14602
(716) 338-6466
Rex McHail or Bruce Williams

Los Angeles, CA
Cleveland, OH
Freedom, MD
Washington, D.C.

YEARS IN BUSINESS: 30
PROJECTS COMPLETED: N/A
REGION SERVED: U.S., Int'l.
TOTAL APPLICABLE EMPLOYEES:

TYPES OF REMOTE SENSING TECHNOLOGIES:
Low Altitude Aerial Photo; Med Altitude Aerial Photo; High Altitude Aerial Photo; Aerial Multispectral Scanner; Aerial Thermal Infrared Scanner; Radar; Geophysical Survey; LandSat MSS; LandSat RBV; Seasat; HCM; Skylab; Weather Satellite; Manual Image Interpretations.

PERSONNEL & SKILLS REPRESENTED:

STANDARD OUTPUTS:
Bausch & Lomb offers direct viewing instruments for the remote sensing industry for analysis and data transfer. Image analysis equipment includes Zoom 95, Zoom 240 and Zoom 500 stereoscopes and light tables offering magnification up to 135X. The line of Zoom Transfer Scope™ equipment offers efficient transfer capability from photos to data bases of different scales. The Stereo Zoom Transfer Scope™ model is the most flexible, offering both analysis and transfer capability using any materials with magnification over 16X.
BAUSCH AND LOMB INC.

REMOTE SENSING EQUIPMENT/SYSTEMS PROVIDED

REMOTE SENSOR SYSTEMS

VIEWING EQUIPMENT

Sell Monocular Magnifiers; Sell Transfer Scopes* (*Zoom Transfer Scope™ Equipment); Sell Stereoscopes.

PHOTOGRAMMETRIC EQUIPMENT

DIGITAL IMAGE PROCESSING EQUIPMENT

SOFTWARE

INTEGRATED SYSTEMS

OTHER EQUIPMENT

NAME: BECHTOLD SATELLITE TECHNOLOGY CORP. (BESTEC)

ADDRESS(ES) & CONTACT(S)

667 Brea Canyon Rd., #26
Walnut, CA 91789
(714) 598-6037
Ira C. Bechtold, President

YEARS IN BUSINESS: 6

PROJECTS COMPLETED: 60

REGION SERVED: US; Int'l.

TYPES OF REMOTE SENSING TECHNOLOGIES:

Low Altitude Aerial Photo
Med Altitude Aerial Photo
High Altitude Aerial Photo
Radar
Geophysical Survey

SMALL BUSINESS CONTRACTOR? Yes

MINORITY-OWNED BUSINESS? No

TOTAL APPLICABLE EMPLOYEES: 5

PERSONNEL & SKILLS REPRESENTED:

Management (1)
Professional (2)
Technical (2)

STATEMENT OF CAPABILITIES:

BESTEC is a geologic consulting firm involved in petroleum, geothermal, mineral exploration and geologic hazard studies for government and private industry. Thorough study of all data sources (maps and literature); analysis of Landsat, Skylab, U-2, and low-level aerial photography; and field work forms the basis for interpretation. Complete reports with maps, overlays, and imagery (if needed) are supplied. Specific site analysis is stressed for practical application to client's needs, but each investigation involves comprehensive regional tectonic analysis.
FACILITIES AND SPECIAL EQUIPMENT

AIRCRAFT
None

CAMERAS, SCANNERS, AND OTHER REMOTE SENSORS
None

FIELD SURVEY EQUIPMENT
Proton-precision Magnetometer(1); Scintillometers(2); Geiger Counters(2); 4-wheel drive vehicle(1); ultraviolet equipment(1).

PHOTOGRAPHIC PROCESSING EQUIPMENT
Cibachrome processor(1).

PHOTOGRAMMETRIC PROCESSING EQUIPMENT
None

IMAGE INTERPRETATION, VIEWING AND MAPPING (NON-DIGITAL)
International Imaging Systems multispectral viewer(1); stereoscopes(2).

IMAGE INTERPRETATION, VIEWING AND MAPPING (DIGITAL)
None

DIGITIZING, FLOWT I N G AND GRAPHICS
None

OTHER COMPUTER PROCESSING
None

OTHER
Geological/Sciences Libraries(2).

PRODUCTS AND SERVICES PROVIDED

IMAGE PRODUCTS
(c) Color Composite Enlarged Prints.

ENHANCED AND CORRECTED IMAGERY

PHOTOGRAMMETRIC PRODUCTS

INTERPRETED, THEMATIC PRODUCTS
(c) Thematic Map Overlays; (c) Geologic Maps; (a) Digital Magnetic Tapes; (c) Resource Potential Maps.

PROJECT PLANNING AND SUPPORT SERVICES
Problem Definition; Feasibility Analysis; Selection of Existing Imagery; Data Base Preparation; Sensor Selection/Evaluation; Sampling Strategy Design; Ancillary Data Collection; Ground Truth Survey; (a) Air Support Operations

AERIAL SURVEY
(a) Geophysical

IMAGE PROCESSING, INTERPRETATION AND ANALYSIS
Manual Image Interpretation; Photographic Laboratory Processing; (a) Photographic Image Processing

PHOTOGRAMMETRIC ENGINEERING

REPRODUCTION
Drafting & Scribing; Cartographic Reproduction; Printing; (a) Cartographic Reproduction; Printing

OTHER SERVICES
Remote Sensing Research; Consultant Services.
NAME: BROOMALL INDUSTRIES, INC.

ADDRESS(ES) & CONTACT(S)
700 Abbott Drive
Broomall, PA 19008
(215) 328-1040
Kenneth W. Planty

YEARS IN BUSINESS: ___________ SMALL BUSINESS CONTRACTOR: Yes
PROJECTS COMPLETED: ___________ MINORITY-OWNED BUSINESS? ___________
REGION SERVED: U.S. & Int'l.
TOTAL APPLICABLE EMPLOYEES: 49

TYPES OF REMOTE SENSING TECHNOLOGIES:
Graphics Digitizing

PERSONNEL & SKILLS REPRESENTED:
Management (10); Professional (2); Technical (22); Other (15); Computer Equip
Operators (4); Computer Programmers (3); Draftsmen (3); Engineers(electrical) (2).

STATEMENT OF CAPABILITIES:
Manufacture and sell state-of-the-art automatic optical/laser graphics scanning/
digitizing subsystems and interactive systems. Also provide a digitizing service
bureau.

FACILITIES AND SPECIAL EQUIPMENT

AIRCRAFT

CAMERAS, SCANNERS, AND OTHER REMOTE SENSORS

FIELD SURVEY EQUIPMENT

PHOTOGRAPHIC PROCESSING EQUIPMENT

PHOTOGRAFMETRIC PROCESSING EQUIPMENT

IMAGE INTERPRETATION, VIEWING AND MAPPING (NON-DIGITAL)

IMAGE INTERPRETATION, VIEWING AND MAPPING (DIGITAL)

DIGITIZING, PLOTTING AND GRAPHICS
Manual Digitizers (5+); Auto Digitizers (3+); Auto Plotters (3+); Graphic CRTs (12+).

OTHER COMPUTER PROCESSING

OTHER
BROOMALL INDUSTRIES, INC.

PRODUCTS AND SERVICES PROVIDED

IMAGE PRODUCTS
Services are provided as required per contract requirements.

ENHANCED AND CORRECTED IMAGERY

PHOTOGRAFMETRIC PRODUCTS
(standard and custom price) Digital Data Bases.

INTERPRETED, THEMATIC PRODUCTS

PROJECT PLANNING AND SUPPORT SERVICES
Map Digitizing. Services are provided as required per contract requirements.

AERIAL SURVEY

IMAGE PROCESSING, INTERPRETATION AND ANALYSIS

PHOTOGRAFMETRIC ENGINEERING

REPRODUCTION
Services are provided as required per contract requirements.

OTHER SERVICES
Consultant Services; Interactive Computer Graphics; Computer Services; Turnkey Systems Sales/Leasing/Service; Hardware Design/Development; Software Design/Development; Equipment Sales/Leasing/Service; Software Sales/Leasing; Map Digitizing.

REMOTE SENSING EQUIPMENT/SYSTEMS PROVIDED

REMOTE SENSOR SYSTEMS

VIEWING EQUIPMENT

PHOTOGRAFMETRIC EQUIPMENT

DIGITAL IMAGE PROCESSING EQUIPMENT

SOFTWARE

INTEGRATED SYSTEMS

OTHER EQUIPMENT
NAME: JOSEPH P. BURNS, P.E.

ADDRESS(ES) & CONTACT(S)
P.O. Box 24052
Edina (Mpls.), MN 55424
(612) 922-2450
J.P. Burns

YEARS IN BUSINESS: 42
PROJECTS COMPLETED: 3,000
REGION SERVED: U.S. & Int'l.

TYPES OF REMOTE SENSING TECHNOLOGIES:
N/A

PERSONNEL & SKILLS REPRESENTED:
N/A

STATEMENT OF CAPABILITIES:
Consulting services in photogrammetry based on 40 years of varied aerial mapping experience in private and public agencies. 20 years as executive, stockholder in large aerial firm operating internationally. 20 years as engineer, supervisor with Topographic Division, U.S. Geological Survey. Past President, American Society of Photogrammetry (1971-72)

PRODUCTS AND SERVICES PROVIDED

IMAGE PRODUCTS

ENHANCED AND CORRECTED IMAGERY

PHOTOGRAHAMETRIC PRODUCTS
Consulting services only: Aerotriangulation; Orthophotomapping; Planimetric Mapping; Stereo Digitizing; Cross-Sectioning; Stereocompilation; Topographic Mapping-Small Scale; Topographic Mapping-Large Scale

INTERPRETED, THEMATIC PRODUCTS

PROJECT PLANNING AND SUPPORT SERVICES

AERIAL SURVEY

IMAGE PROCESSING, INTERPRETATION AND ANALYSIS

PHOTOGRAHAMETRIC ENGINEERING

REPRODUCTION

OTHER SERVICES
Consultant Services
NAME: BUTLER UNIVERSITY, HOLCOMB RESEARCH INSTITUTE

ADDRESS(ES) & CONTACT(S)
Butler University, 4600 Sunset
Indianapolis, Indiana 46208
(317) 283-9555
Richard F. Hyde

YEARS IN BUSINESS: 8
PROJECTS COMPLETED: 26
REGION SERVED: U.S. Int'l.
TOTAL APPLICABLE EMPLOYEES: 11

TYPES OF REMOTE SENSING TECHNOLOGIES:
Low Altitude Aerial Photo; Med Altitude Aerial Photo; High Altitude Aerial Photo; Aerial Multi-spectral Scanner; Aerial Thermal Infrared Scanner; Ra'dar; Geophysical Survey; Landsat MSS; Landsat RRO; Seasat; HCMM; Skylab; Weather satellite; Digital Image Interpretations; Manual Image Interpretations; Simulated spectral data.

PERSONNEL & SKILLS REPRESENTED:
Management (1); Professional (2); Technical (4); Other (4); Cartographers, Computer Equip Operators, Computer Programmers, Draftsmen, Image Processing Equip Oper., Soil Scientists, Social Scientists, Photointerpreters, Physical Scientists, Pilots, Planners, Geographers (# not indicated).

STATEMENT OF CAPABILITIES:
We have applied most types of remote sensing to resource research projects. We take our own aerial color and infrared photography, process digital data such as Landsat, and interpret some. Maps are constructed to record the interpretations and classifications and these data frequently become map files in our geographic information system for processing.

NAME: BUTLER UNIVERSITY, HOLCOMB RESEARCH INSTITUTE

PRODUCTS AND SERVICES PROVIDED

IMAGE PRODUCTS
(a) B/W, Color, Color Infrared, Color Composite Negative Transp., Positive Transp., Contact Prints, Enlarged Prints; (b) Photo Mosaics, Photo Atlas Sheets, Analog Magnetic Tape, Thermograms, Digital Mosaics, Halftone Image Prints, Digital Magnetic Tape.

ENHANCED AND CORRECTED IMAGERY
(c) Multitemporal Composites, Contrast Enhanced, Geometric Correction, Density Slice, Change Detection, Multi-sensor Composites, Radiometric Correction, Image Resampling, Pseudo Stereo Digital Imagery.

PHOTOMETRIC PRODUCTS
Orthophotos, Topographic Maps, Digital Terrain Models, Digital Data Bases, Photo-Contour Maps, Distance & Angle Measurements

INTEGRATED, THEMATIC PRODUCTS
Color Theme Maps, Land Use Maps, Vegetation/Forestry Maps, Contour Weather Maps, Acreage Tabulations, Geocoded Data Bases, Thematic Map Overlays, Geologic Maps, Transportation Maps, Soils Maps, Tax Maps, Digital Magnetic Tapes

PROJECT PLANNING AND SUPPORT SERVICES
Problem Definition; Feasibility Analysis; Selection of Existing Imagery; Ground Control Survey; Map Digitizing; Data Base Preparation; Sensor Selection/Evaluation; Sampling Strategy Design; Ancillary Data Collection; Ground Truth Survey; Gray Level Digitizing; Data Management; (a) Air Support Operations.

AERIAL SURVEY
(a) Low altitude photography, Thermal Infrared, Radar, Geophysical, High Altitude Photography, Multi-spectral Scanner.

IMAGE PROCESSING, INTERPRETATION AND ANALYSIS
Digital Image Processing; Batch Digital Image/Analysis/Classification; Interactive Digital Image/Analysis/Classification; Manual Image Interpretation; (a) Photographic Laboratory Processing.

PHOTOMETRIC ENGINEERING
(a) Aerotriangulation, Orthophotomapping, Planimetric Mapping, Stereo Digitizing, Cross-Sectioning, Stereocompilation, Topographic Mapping-Large Scale, Volumetric Calculation; Topographic Mapping-Small Scale.

REPRODUCTION
Drafting & Scribing; Automated Drafting/Plotting; (a) Cartographic Reproduction, Printing.

OTHER SERVICES
Remote Sensing Research; Remote Sensing Training; Statistical Modeling; Consultant Services; Interactive Computer Graphics; Computer Services; Hardware Design/Development; Software Design/Development; Software Sales/Leasing; (a) Consultant Services.
NAME: CALSPAN CORPORATION

ADDRESS(ES) & CONTACT(S)
P.O. Box 400
Buffalo, New York 14225
(716) 632-7500

YEARS IN BUSINESS: 32
PROJECTS COMPLETED: Hundreds
REGION SERVED: U.S. & Int'l.
TOTAL APPLICABLE EMPLOYEES: 1

SMALL BUSINESS CONTRACTOR? ___
MINORITY-OWNED BUSINESS? ___

TYPES OF REMOTE SENSING TECHNOLOGIES:
Low Altitude Aerial Photo; Med Altitude Aerial Photo; High Altitude Aerial Photo; Aerial Multispectral Scanner; Aerial Thermal Infrared Scanner; Landsat MSS; HCM; Skylab; Weather Satellite; Digital Image Interpretations; Manual Image Interpretations; Photometric Interpretations

PERSONNEL & SKILLS REPRESENTED:
Management (3); Professional (7); Technical (1)

Computer Equip. Oper.; Image Processing Equip. Oper; Social Scientists; Photo-interpreters; Physical Scientists; The following are provided by other departments of Calspan: Cartographers, Draftsmen, Electrical Engineers, Photolab Technicians, Pilots, Geographers.

STATEMENT OF CAPABILITIES:
Calspan provides remote sensing services where classical methods of analysis (photo/imagy interpretation and digital analysis of raw data) cannot provide the desired user information. Classical methods of analysis are limited, but after decades of R&D Calspan has found methods (Patents: 3,849,006; 3,970,848; and 4,037,048) to compensate for the major limitations. Analysis capabilities cover any aerial or space imaging sensor operating in the visible through thermal regions of the electromagnetic spectrum. Special sensor modifications and development of analysis hardware/software are also offered. Aerial and field surveys are conducted as required.
FACILITIES AND SPECIAL EQUIPMENT

AIRCRAFT
Aztec C (1)
B-26s (2)
Lear Jet (1)

CAMERAS, SCANNERS, AND OTHER REMOTE SENSORS
T-11 (1)
Hasselblad 500 EL’s (5)
Modified Bendix LN-3 Thermal Scanner (1)

FIELD SURVEY EQUIPMENT
A variety of radiometers, photometers and photographic equipment

PHOTOGRAFHC PROCESSING EQUIPMENT
Fako (1)
Versimat (1)

PHOTOGRAFIC PROCESSING EQUIPMENT
N/A

IMAGE INTERPRETATION, VIEWING AND MAPPING (NON-DIGITAL)
Photometric Interpretation Console (1)
SDS Model 702 (1)
Zoom Transfer Scope (1)

IMAGE INTERPRETATION, VIEWING AND MAPPING (DIGITAL)

DIGITIZING, PLOTTING AND GRAPHICS
Modified Mann Microdensitometer/Interdata 7/32 (1)
9830 + 9862A + 9864A (1)
A commercial graphic arts department

OTHER COMPUTER PROCESSING
IBM 370 (1)

OTHER
Photometric Interpretation Lab (1)

PRODUCTS AND SERVICES PROVIDED

IMAGE PRODUCTS
(c) B&W, Color, Color Infrared, Color Composite Negative Transparencies, Positive Transparencies, Contact Prints, Enlarged Prints. (c) Analog Magnetic Tape, Thermograms, Digital Mosaics, Half tone Image Prints, Digital Magnetic Tape, special products as required.

CORRECTED AND RECTIFIED IMAGERY
(c) Photo Multitemporal Composites, Contrast Enhanced, Geometric Correction, Density Slice, Change Detection, Multisensor Composites, Radiometric Correction, Reflectance Enhancements; (c) Digital Geometric Correction, Density Slice, Change Detection, Radiometric Correction, Reflectance Enhancements

INTERPRETED, THEMATIC PRODUCTS
(c) Color Thematic Maps; Land Use Maps; Vegetation/Forestry Maps; Acreage Tabulations; Thematic Map Overlays; Digital Magnetic Tapes; Steam Line Thermograms; Power Plant Thermal Discharges

PROJECT PLANNING AND SUPPORT SERVICES
Problem Definition; Feasibility Analysis; Selection of Existing Imagery; Ground Control Survey; Map Digitizing; Data Base Preparation; Air Support Operations; Sensor Selection/ Evaluation; Sampling Strategy Design; Ancillary Data Collection; Ground Truth Survey; Gray Level Digitizing; Data Management

AERIAL SURVEY
Low Altitude Photography; Thermal Infrared; Video

IMAGE PROCESSING, INTERPRETATION AND ANALYSIS
Digital Image Processing; Batch Digital Image/Analysis/Classification; Photographic Laboratory Processing; Manual Image Interpretation; Analogue of Digital Photometric Interpretation

PHOTOGRAFIC ENGINEERING

REPRODUCTION
Drafting & Scribing

OTHER SERVICES
Remote Sensing Research; Remote Sensing Training; Statistical Modeling; Consultant Services; Computer Services; Hardware Design/Development; Software Design/Development
STATEMENT OF AIRCRAFT AND FACILITIES

Name: CARTWRIGHT AERIAL SURVEYS, INC.

Address: Executive Airport, 6151 Freeport Blvd. Sacramento, California 95822 (916) 421-3465

Vern W. Cartwright, President

YEARS IN BUSINESS: 34
PROJECTS COMPLETED: 10,000
REGIONS SERVED: Int'l.

SMALL BUSINESS CONTRACTOR: Yes
MINORITY-OWNED BUSINESS: Yes
TOTAL APPLICABLE EMPLOYEES: 57

TYPES OF REMOTE SENSING TECHNOLOGIES:
Low Altitude Aerial Photo; Med Altitude Aerial Photo; High Altitude Aerial Photo; Aerial Multispectral Scanner; Aerial Thermal Infrared Scanner; Digital Image Interpretations; Manual Image Interpretations

PERSONNEL & SKILLS REPRESENTED:
Management (5); Professional (5); Technical (23); Other (4);
Cartographers (2); Computer Equip. Operators (2); Computer Programmers (2); Draftsmen (2); Engineers civil, environ. (2); Field Surveyors (1); Image Processing Equip. Oper. (1); Photogrammatists (2); Photogrammetric Equip. Oper. (4); Photointerpreters (2); Photolab Technicians (4); Pilots (3); Geographers (2); Other Geographers and Soil Scientists

STATEMENT OF CAPABILITIES:
Cartwright Aerial Surveys, Inc., organized in 1946 by Vern W. Cartwright, is a professional mapping organization which has provided private industry and government agencies worldwide with services in aerial photography, photogrammetry and remote sensing. Recent expansion has enhanced the firm's capabilities in computer cartography and analytical aerotriangulation and has complemented the entire interactive graphics department. Modern facilities, including photo lab, drafting and computer rooms, aircraft hangar (which houses a Cessna 206 and Beechcraft Baron) and various offices, were designed to accommodate the key operations of this company and are located at Sacramento's Executive Airport.

FACILITIES AND SPECIAL EQUIPMENT

AIRCRAFT
Turbo Beechcraft Baron (1); Turbo Cessna 206 (1); Lear Jet (leased when needed) (1);
CAMEAS, SCANNERS, AND OTHER SENSORS
Zeiss RMI/A 14/12 Metric 9 x 9 Camera (2); Zeiss RMI/A 21/23 Metric 9 x 9 Camera (1);
Bendix Thermal (8 to 14 Micron) Scanner (1); 155 Multispectral (4 lens) Camera (1);
Hasselblad 70mm Camera (with 100' magazines) (4); Curtis 9 x 18 format 24" F.L. (1);
Fairchild 9 x 18 format 12" F.L. (1); Fairchild 9 x 18 format 36" F.L. (1); Neumark Sequential 70mm Camera (1); Bomb Spotter (A-4) 35mm (1)

FIELD SURVEY EQUIPMENT
Complete portable photographic laboratory (1); Barnes PRT-5 Radiometers (4)

PHOTOGRAPHIC PROCESSING EQUIPMENT
Zeiss SEG-V Enlarger (1); Lanston 43 Copy Camera (1); Plan Line Camera (1); Paco Color Processor (1); Eastman Kodak VERSANAT Processor (2); DuPont Graphic Arts Processor (1); Multicolor Large Format Dye Whirler (1); Quality Control Spectrometer (1); Logetronic Continuous Printers (3); Mark IV Logetronic Printers (1)

PHOTOGRAHMETRIC PROCESSING EQUIPMENT
Santoni IIC Stereoplotters (3); Santoni ICC Stereoplotters with Orthophoto (1); H. Dell Foster Monocomparator and Wild Zoom Pug (2);

IMAGE INTERPRETATION, VIEWING AND MAPPING (NON-DIGITAL)
ITEK 40" x 40" Correlation Viewers (8); Santoni Micro Comparator (1); Zoom Three Dimensional Stereoscope (2)

IMAGE INTERPRETATION, VIEWING AND MAPPING (DIGITAL)
All items listed in photogrammetric and image interpretation above have digital capabilities (16)

DIGITIZING, PLOTTING AND GRAPHICS
40 x 70 Digitizers (4); 40 x 70 Flatbed plotter (1); Macro input stations (4)

OTHER COMPUTER PROCESSING
NOVA 4x (256K) Computer (1); NOVA 1200 (64K) Computer (1)

OTHER
H. Dell Foster Interactive Graphics System (1); Sangamo Instrumentation Recorder for IR Scanner (1); Filmaster Titlers (3); Electronic Scanning Reduction Printer (1)
PRODUCTS AND SERVICES PROVIDED

IMAGE PRODUCTS
- Black and White, Color, Color Infrared, Color Composite Negative Transparencies, Positive Transparencies, Contact Prints, and Enlarged Prints
- Photo mosaics; Photo Atlas Sheets; Analog Magnet Tape
- Thermograms; Digital Mosaics; Halftone Image Prints; Digital Magnetic Tape

ENHANCED AND CORRECTED IMAGERY
- Photo Multitemporal Composites, Contrast Enhanced, Geometric Correction, Density Slice, Multisensor Composites, Image Resampling; Digital Geometric Correction
- (a) Digital Multitemporal Composites, Contrast Enhanced, Density Slice, Pseudo Stereo

PHOTOGRAMMETRIC PRODUCTS
- (c) Orthophotographic Maps, Engineering Cross Sections, Stockpile Measurements, Earthwork Measurements, Digital Terrain Models, Digital Data Bases, Planimetric Maps, Photo-Contour Maps, Plan and Profile Sheets, Volumetric Calculations, Distance & Angle Measurements

INTERPRETED, THEMATIC PRODUCTS
- (c) Color Thematic Maps, Land Use Maps, Vegetation/Forestry Maps, Contour Weather Maps, Utility Maps, Acreage Tabulations, Geocoded Data Bases, Thematic Map Overlays, Geologic Maps, Transportation Maps, Soils Maps, Tax Maps, Digital Magnetic Tapes

PROJECT PLANNING AND SUPPORT SERVICES
- Problem Definition; Feasibility Analysis; Selection of Existing Imagery; Map Digitizing
- (a) Data Base Preparation; Air Support Operations; Sensor Selection/Evaluation; Sampling Strategy Design
- (s) Ground Control Survey, Ancillary Data Collection, Ground Truth Survey, Gray Level Digitizing

AERIAL SURVEY
- Low Altitude Photography; Thermal Infrared; Geophysical; High Altitude Photography; Multispectral Scanner; (r) Radar

IMAGE PROCESSING, INTERPRETATION AND ANALYSIS
- Photographic Laboratory Processing; Manual Image Interpretation; Interactive Graphics Software; (s) Digital Image Processing, Batch Digital Image/Analysis/Classification, Interactive Digital Image/analysis/Classification

PHOTOGRAMMETRIC ENGINEERING
- Aerotriangulation; Orthophotomapping; Planimetric Mapping; Stereo Digitizing
- Cross-sectioning; Stereocompilation; Topographic Mapping-Small Scale; Topographic Mapping-Large Scale; Volumetric Calculations

REPRODUCTION
- Drafting & Scribing; Cartographic Reproduction; Automated Drafting/Plotting; Printing

OTHER SERVICES
- Remote Sensing Research; Consultant Services; Interactive Computer Graphics; Computer Services; Software Design/Development; Software Sales/Leasing; Geo Data Banks
NAME: CHICAGO AERIAL SURVEY

ADDRESS & CONTACT:
2140 Wolf Road
Des Plaines, Illinois 60018
(312) 298-1480 (800) 323-6020
Glenn C. Summerfelt, Vice President

YEARS IN BUSINESS: 50
PROJECTS COMPLETED: 2,000 +
REGION SERVED: U.S. & Int'l.

TYPES OF REMOTE SENSING TECHNOLOGIES:
Low Altitude Aerial Photo; Med Altitude Aerial Photo; High Altitude Aerial Photo;
Aerial Multispectral Scanner; Aerial Thermal Infrared Scanner; Digital Image Interpretations; Manual Image Interpretations

PERSONNEL & SKILLS REPRESENTED:
Management (25); Professional (50); Technical (50); Other (10)
Cartographers; Computer Equip. Oper.; Computer Programmers; Draftsmen; Engineers (civil, environ.); Field Surveyors; Image Processing Equip. Oper.; Photogrammatists; Photogrammetric Equip. Oper.; Photointerpreters; Photolab Technicians; Pilots; Planners; Geographers

STATEMENT OF CAPABILITIES:
By effectively combining classical photogrammetric technology with analytical stereo instrumentation, interactive graphics, and computerized data base systems, CHICAGO AERIAL SURVEY (CAS) has gained a leading position in providing Resource Information Services. CAS has over 50 years experience serving Federal and Local Governmental Agencies, Consulting Engineers, Public Utilities, Resource Companies (Forestry, Coal, Oil), Industrial and Private Institutions. Services include: Digital Terrain Services and Data Bases, Facilities and Resource Mapping, Volumetric Analysis, Computer Plotted Mapping, Aerial Photography (High/Low - Vertical/Oblique), Field Surveys, Aerotriangulation, Photogrammetric Map Compilation (Plan, Topo, Plan and Profile), Orthophoto Mapping, Cartographic Scribbling, and Photo Lab Processing.

FACILITIES AND SPECIAL EQUIPMENT

AIRCRAFT
Cessna 310 (1); Cessna 207 (1)

CAMERAS, SCANNERS, AND OTHER REMOTE SENSORS
Zeiss RMK 15/23, 6" (2); Zeiss RMK 8.5/23, 3-1/2" (1); T-5, 6" camera (1);
KA-2, 12" camera (1); K-17, 12" camera (1); K-18. 24" camera with 9" x 18" format (1); K-22, 12" cameras (2); Sonne continuous strip camera (1)

FIELD SURVEY EQUIPMENT
Hewlett Packard Model 3800a (4); Cubic electrotape unit, Model DM-20 (remote and master) (1); Wild Model T-2 theodolites (5); Wild Model N-3 first order precision levels (2); Wild Model NA-2 automatic levels (2); Wild Model N-2 second order precision levels (2); Tapes, tension handles, spring balances, clinometers, and other supporting equipment; Wild precise traverse targets (4); 15' folding aluminum stadia boards (4); 12' one-piece Invar level rods (precise) (2);
Roelox solar prism (1); Johnson walkie-talkie radio sets (6); 14' aluminum boat (1)

PHOTOGRAPHIC LABORATORY EQUIPMENT
W.A. Brown copy camera (1); Log-E-Tronic printer, Mark II (1); Log-E-Tronic SP-10-70 (1); 14" x 17" McIntyre (1); horizontal KAE, HE-12 (1); Burst enlarger (1);
DuPont ERF film and paper automatic processors (2); Colight 4' x 6' vacuum printer frame, Borrowdale 50" x 60" vacuum frame, 42" x 52" vacuum printing frame (1 each);
Zeiss (400' roll) developing units (2); Simplex 50" double drum dryer (1); Zeiss aerial film dryer (1); Ditto diazo reproduction machine with 54" throat (1);
Varityper headline typemaster (1); Dry mounting presses (48" x 60" and 18" x 22") (2); complete facilities for mosaicing, indexing, and binding; Brown automatic film and paper dispensers (2); Speedmaster densitometer, Model T80B (1); Sonne
strip printer, Model W10A

PHOTOGRAHMETRIC PROCESSING EQUIPMENT
H. Dell Foster RSS-600 mono-digital comparator (1)

IMAGE INTERPRETATION, VIEWING AND MAPPING (NON-DIGITAL)
Zeiss C-100 Plancomp analytical stereo instrument, first order (1); Galileo-Santoni Model IV stereo-cartograph universal, first order (1); Galileo-Santoni MILL stereo instrument, first order (1); Kern FG-2 (2); K-5 Kelsh plotter (1)
Kelsh plotter (1)

IMAGE INTERPRETATION, VIEWING AND MAPPING (DIGITAL)
Wild B-8 stereo instrument (interfaced to H. Dell Foster ETP automated plotter) (1);
Jena Topocart orthophot (3); M8S Computing, Inc. Interactive Graphics Design System with Data Management and Retrieval System (IGDS/MRIS) (1); Lear Sieglers ADM-3A terminals (2); Tektronics 4010 terminal, 600 LPM Document Liner printer (1); Xynetics 1101 Automated Drafting System with C-62 controller (1)
DIGITIZING, PLOTTING AND GRAPHICS

Texas Inst. Silent 700 terminal interfaced to the H. Dell Foster ETP automated plotter (1); H. Dell Foster ETP automated plotter (1); H. Dell Foster graphic digital readout systems (3)

OTHER COMPUTER PROCESSING

Data 100 remote batch terminal interfaced to the UCS-6600 and UCS-7600 computers (batch) (1); simultaneous (bundle) adjustment program; IBM-026 card punch units (3); PDS-1020 minicomputer (1)

OTHER

Normal drafting equipment and supplies. 13 light tables

PRODUCTS AND SERVICES PROVIDED

IMAGE PRODUCTS
B & W Negative Transparencies, Positive Transparencies, Contact Prints, & Enlarged Prints; (c) Color, Color Infrared, & Color Composite Negative Transparencies, Positive Transparencies, Contact Prints, & Enlarged Prints; Halftone Image Prints;
(c) Digital Magnetic Tape

ENHANCED AND CORRECTED IMAGERY

PHOTOGRAFOMETRIC PRODUCTS
(c) Orthophotos; Topographic Maps; Engineering Cross Sections; Stockpile Measurements; Earthwork Measurements; Digital Terrain Models; Digital Data Bases; Planimetric Maps; Photo-Contour Maps; Plan and Profile Sheets; Volumetric Calculations; Distance & Angle Measurements

INTERPRETED, THEMATIC PRODUCTS
(c) Land Use Maps; Vegetation/Forestry Maps; Utility Maps; Acreage Tabulations; Geocoded Data Bases; Transportation Maps; Digital Magnetic Tapes

PROJECT PLANNING AND SUPPORT SERVICES
Problem Definition; Feasibility Analysis; Selection of Existing Imagery; Ground Control Survey; Map Digitizing; Data Base Preparation; Air Support Operations; Ground Truth Survey; Data Management

AERIAL SURVEY
Low Altitude Photography; Thermal Infrared

IMAGE PROCESSING, INTERPRETATION AND ANALYSIS
Digital Image Processing; Batch Digital Image/Analysis/Classification; Interactive Digital Image/Analysis/Classification; Photographic Laboratory Processing; Manual Image Interpretation

PHOTOGRAFOMETRIC ENGINEERING
Aerotriangulation; Orthophotomapping; Planimetric Mapping; Stereo Digitizing; Cross-Sectioning; Stereocompilation; Topographic Mapping-Small Scale; Topographic Mapping-Large Scale; Volumetric Calculation; Digital Terrain Modeling

REPRODUCTION
Drafting & Scribing; Cartographic Reproduction; Automated Drafting/Plotting; Printing

OTHER SERVICES
Consultant Services; Interactive Computer Graphics; Software Sales/Leasing
NAME: CH2M HILL, INC.

ADDRESS(ES) & CONTACT(S)
P.O. Box 2088
Redding, California 96099
(916) 243-5831
Donald R. Mayer
For other locations see attached list

YEARS IN BUSINESS: SMALL BUSINESS CONTRACTOR? No
PROJECTS COMPLETED: MINORITY-OWNED BUSINESS?
TYPES OF REMOTE SENSING TECHNOLOGIES:
Low Altitude Aerial Photo; Med Altitude Aerial Photo; High Altitude Aerial Photo;
LandSat MSS; LandSat RRV; Manual Image Interpretations

PERSONNEL & SKILLS REPRESENTED:
Cartographers; Computer Equip. Oper.; Computer Programmers; Draftsmen; Engineers
(civil, environ., electrical); Field Surveyors; Soil Scientists; Social Scientists;
Photogrammatists; Photogrammetric Equip. Oper. Photointerpreters; Photolab
Technicians; Pilots; Planners; Geographers

STATEMENT OF CAPABILITIES:
CH2M HILL applies remote sensing to engineering, planning, and environmental
studies. Examples of applications are: Agriculture—Inventories of crops and
land uses; detection of disease or salinity; planning for irrigation, fertilizer,
pesticide, and labor and equipment needs. Urban Planning—Inventories and assessment
of land use, monitoring growth, prediction of utility requirements. Forestry—
Resource inventory and classification, mapping, yield predictions, detection of disease,
and fire damage assessment. Water Resources—Sedimentation analyses, pollution source
monitoring, delineation of land/water boundaries and flood basins, assessment of
potential flood damage value, identification of seepage areas and phreaticophytes.

CH2M HILL

NORTHWEST OFFICES
Anchorage, Alaska 99501
310 K Street
907/278-2551

Bellevue, Washington 98004
1500 - 114th Avenue, S.E.
206/453-5000

Boise, Idaho 83707
700 Clearwater Lane
208/345-5310

Calgary, Alberta T2P 1G7
640 8th Avenue, S.W.
403/269-6758

Corvallis, Oregon 97330
1600 S.W. Western Blvd.
503/752-4271

Portland, Oregon 97201
200 S.W. Market Street
503/224-9190

Spokane, Washington 99201
W. 905 Riverside Ave., #507
509/747-2000

Yakima, Washington 98903
1800 Rainier Place
509/248-9210

SOUTHWEST OFFICES
Costa Mesa, California 92626
666 Baker St., Suite 253
714/569-7511

Redding, California 96001
1525 Court Street
916/243-5831

Sacramento, California 95814
555 Capitol Mall
916/441-3955

San Diego, California 92101
411 W. C St., Suite 905
714/239-9661

San Francisco, California 94111
450 Sansome Street
415/398-8950

MIDWEST OFFICES
Denver, Colorado 80222
1-25 at Orchard Place
303/771-0900

Milwaukee, Wisconsin 53222
2929 N. Mayfair Road
414/774-5530

Minneapolis, Minnesota 55420
7851 Metro Parkway, #205
612/854-1100

St. Louis, Missouri 63108
12 Maryland Plaza
314/361-4600

EASTERN OFFICES
Altanta, Georgia 30308
401 W. Peachtree St., N.E.
404/588-1990

Boca Raton, Florida 33432
1700 S.W. 12th Avenue
305/395-3800

Clearwater, Florida 33756
1454 U.S. Highway 19, So.
813/536-9454

Columbia, South Carolina 29210
Dutch Center, 810 Dutch Square Blvd
803/798-4511

Gainesville, Florida 32601
720 N.W. 11th Place
904/377-2442

Montgomery, Alabama 36104
807 S. McDonough Street
205/834-2870

Naples, Florida 33940
1063 Fifth Avenue, No.
813/262-6693

Philadelphia, Penna. 19103
1819 JFK Boulevard
215/561-6650

Rinston, Virginia 22090
1930 Isaac Newton Sq., E.
703/471-9710

INTERNATIONAL OFFICES
Portland, Oregon 97201
200 S.W. Market Street
503/224-9190

Headquarters
Cairo, Egypt

Calgary, Alberta, Canada

Damascus, Syria

Damman, Saudi Arabia

Port of Spain, Trinidad, West Indies
FACILITIES AND SPECIAL EQUIPMENT

AIRCRAFT

Photo plane: Cessna 185 (1)

CAMERAS, SCANNERS, AND OTHER REMOTE SENSORS

Zeiss WMR A 15/23 aerial camera (1); Wild RCS automatic film camera (6" Aviogon lens) (1); ACTI special Model 405 copius camera with GAM III photoelectric exposure computer system (1); ACTI 4250H Centaur precision overhead process camera (1)

FIELD SURVEY EQUIPMENT

K&E Autoranger (4); K&E Ranger IV (1); MRA-J Tellurometer systems (2); EDM 70’s (3); Wild Dl-10 electronic distance measuring (EDM) device (1); Wild DI-4 EDM (1); Hewlett Packard 1808-A (1); Hewlett Packard ’800 EDM’s (4); Cubitape (6); MAG 1 (1); Spectra Physics laser unit (1); Transits: David White, Deitzen, Kern, K&E, Leitz, Tamaya (23); Wild T-3 (1); Wild T-2 theodolites (9); Wild T-1 and T-1A theodolites (11); Wild T-1AE theodolites (7); Wild T-16 (2); K&E theodolite (1); K&E T-10E theodolite (1); Zeiss N12 levels (17); Wild N12 levels (2); Wild N3 levels (2); Levels: Berger, Buff, D’etzen, Fennel, Gurley, Leitz, Watts (26); Fathometer depth recorders: Bendix DR 19 and Raytheon 9E 1190 (3); Motorola Mini-Ranger III (1); Subtense bars (2); Schonstedt model GA22 and GAS2 pipefinders (10); Fisher M-cope pipefinders (3)

PHOTOGRAVING PROCESSING EQUIPMENT

Berkeley Ascoulux pulsed Xenon lamp (1); 45" x 110" vacuum frame (1); K&E HE-12 rectifier (1); Durat enlarger with open-face vacuum projection board (1); Log-Etronic printer (1); DuPont Cronoflex engineering film processor (1)

PHOTOGRAVING PROCESSING EQUIPMENT

Wild Avionavigator Model AM with digitizing equipment (1); Zeiss Planicart, Model EZ (1); Santoni Orthophoto-Simplex Plotter Model 11c (1); Santoni Stereo-Simplex Plotter Model 1lc with electronic Data Tech digitizing system (1); Exaggerated profile plotter (1); Haag-Streit Coordinateograph (48" x 48") (1); Zeiss Transmark B laser point-transfer instrument (1); Wild PUG-4 zoom point-transfer instrument (1); Kern MK2 monocomparator interfaced to DECsystem-10 computer (1); Haush and Lomb zoom transfer scope (1); Kelsh plotter with stero image alternator (1)

PRODUCTS AND SERVICES PROVIDED

IMAGE PRODUCTS

(c) B&W, Color, and Color Infrared Negative Transparencies, Positive Transparencies, Contact Prints, and Enlarged Prints; Photo Mosaics; Photo Atlas Sheets; Halftone Image Prints; (a) Color Composite Negative Transparencies, Positive Transparencies, Contact Prints, and Enlarged Prints; Analog Magnetic Tape; Thermograms; Digital Mosaics; Digital ENHANCED AND CORRECTED IMAGERY

PHOTOMETRIC PRODUCTS

(a) Orthophotos; Topographic Maps; Engineering Cross Sections; Stockpile Measurements; Earthwork Measurements; Digital Terrain Models; Digital Data Bases; Planimetric Maps; Photo-Contour Maps; Plan and Profile Sheets; Volumetric Calculations; Distance & Angle Measurements

INTERPRETED, THEMATIC PRODUCTS

(c) Land Use Maps; Vegetation/Forestry Maps; Contour Weather Maps; Utility Maps; Acreage Tabulations; Soils Maps; Tax Maps; (a) Color Thematic Maps

PROJECT PLANNING AND SUPPORT SERVICES

Problem Definition; Feasibility Analysis; Selection of Existing Imagery; Ground Control Survey; Map Digitizing; Data Base Preparation; Air Support Operations; Sensor Selection/Evaluation; Sampling Strategy Design; Ancillary Data Collection; Ground Truth Survey; Gray Level Digitizing; Data Management

AERIAL SURVEY

Low Altitude Photography; High Altitude Photography; (a) Thermal Infrared; Geophysical; Multispectral Scanner

IMAGE PROCESSING, INTERPRETATION AND ANALYSIS

Photographic Laboratory Processing; Manual Image Interpretation; (a) Digital Image Processing; Batch Digital Image/Analysis/Classification; Interactive Digital Image/ Analysis/Classification

PHOTOMETRIC ENGINEERING

Aerotriangulation; Orthophotomapping; Planimetric Mapping; Stereo Digitizing; Cross-Sectioning; Stereocompilation; Topographic Mapping-Small Scale; Topographic Mapping-Large Scale; Volumetric Calculation

REPRODUCTION

Drafting & Scribing; Cartographic Reproduction; Printing

OTHER SERVICES

Remote Sensing Research; Statistical Modeling; Consultant Services
NAME: COMPUTER SCIENCES CORPORATION

ADDRESS(ES) & CONTACT(S)
8728 Colesville Road
Silver Spring, Maryland 20910
(301) 589-1565
Robert W. Cecil

10210 Greenbelt Road
Seabrook, Maryland 20801
(301) 794-6360
Clinton A. Frum

YEARS IN BUSINESS: 10
PROJECTS COMPLETED: over 25
REGION SERVED: U.S.

TOTAL APPLICABLE EMPLOYEES: 170

TYPES OF REMOTE SENSING TECHNOLOGIES:
Aerial Multispectral Scanner; Aerial Thermal Infrared Scanner;
Radar; Laser Scanner; Geophysical Survey; Landsat MSS; Landsat RBV;
Seasat; HCMM; Weather Satellite; Digital Image Interpretations;
Manual Image Interpretations

PERSONNEL & SKILLS REPRESENTED:
Management (10); Professional (50); Technical (100); Other (10)
Computer Equp. Operators; Computer Programmers; Draftmen; Image Processing
Equip. Oper.; Photointerpreters; Photolab Technicians; Physical Scientist;
Geographers; Soil Scientists

STATEMENT OF CAPABILITIES:
CSC employs over 14,000 persons who specialize in the design and
development of computer based systems. Specialties include systems
engineering, system integration, telecommunications, custom software
development, scientific and mathematical analysis, modeling and
simulation, turnkey system installation, and facilities management.
The company has particular strengths in remote sensing, digital image
processing, interactive graphics, photographic product generation,
and high speed data processing. It has a major involvement in
aircraft and satellite-borne remote sensors for programs including
Landsat, SMS/GOES, HCMM, SEASAT, NIMBUS, and TIROS. Disciplines
supported include geology, hydrology, oceanography, meteorology,
geophysics, and climatology.

PRODUCTS AND SERVICES PROVIDED

IMAGE PRODUCTS

ENHANCED AND CORRECTED IMAGERY

PHOTOGRAHMATIC PRODUCTS

INTERPRETED, THEMATIC PRODUCTS

PROJECT PLANNING AND SUPPORT SERVICES

Problem Definition; Feasibility Analysis; Selection of Existing Imagery;
Data Base Preparation; Sensor Selection/Evaluation; Sampling Strategy
Design; Data Management

AERIAL SURVEY

IMAGE PROCESSING, INTERPRETATION AND ANALYSIS

Digital Image Processing; Batch Digital Image/Analysis/Classification;
Interactive Digital Image/Analysis/Classification; Photographic Laboratory
Processing; Manual Image Interpretation

PHOTOGRAHMATIC ENGINEERING

REPRODUCTION

OTHER SERVICES
Remote Sensing Research; Remote Sensing Training; Statistical Modeling;
Consultant Services; Interactive Computer Graphics; Computer Services;
Turnkey Systems Sales/Leasing/Service; Software Design/Development;
Software Sales/Leasing
REMOTE SENSING EQUIPMENT/SYSTEMS PROVIDED

REMOTE SENSOR SYSTEMS

VIEWING EQUIPMENT

PHOTOGRAMMETRIC EQUIPMENT

DIGITAL IMAGE PROCESSING EQUIPMENT

SOFTWARE

Sell Geometric Correction; Radiometric Correction; Image Enhancement;
Multispectral Classification; Geometric Correction; Radiometric Correction;
Image Enhancement; Multispectral Classification

INTEGRATED SYSTEMS

OTHER EQUIPMENT

NAME: COMPUTER TALE INC.

ADDRESS(ES) & CONTACT(S)

24020 HWY 74
Idledale, Colorado 80453
(303) 697-5485
W. M. Barnes

1408 Hague Avenue
St. Paul, MN
(612) 646-7340
E.D. Bower

YEARS IN BUSINESS: 8
PROJECTS COMPLETED: 23
REGION SERVED: 
TOTAL APPLICABLE EMPLOYEES: 23

SMALL BUSINESS CONTRACTOR? 
MINORITY-OWNED BUSINESS? 

TYPES OF REMOTE SENSING TECHNOLOGIES:

Geophysical Survey; Digital Image Interpretations; Manual Image Interpretations.

PERSONNEL & SKILLS REPRESENTED:

Management (2); Professional (1); Technical (3); Other (17); Computer Programmers (1); Draftsmen (1); Engineers(electrical)(1).

STATEMENT OF CAPABILITIES:

We manufacture custom, digitizer, plotting, interactive digitizing, graphic and sensing systems, which are used to automate business and industrial applications.
REMOTE SENSING EQUIPMENT/SYSTEMS PROVIDED

REMOTE SENSOR SYSTEMS

VIEWING EQUIPMENT

PHOTOGRAFMETRIC EQUIPMENT

DIGITAL IMAGE PROCESSING EQUIPMENT
- Sell B&W Image Displays, Image Digitizers, Color Image Displays.

SOFTWARE

INTEGRATED SYSTEMS
- Sell Geometric Correction, Image Enhancement.

OTHER EQUIPMENT

NAME: COMTAL CORPORATION

ADDRESS(ES) & CONTACT(S)
- 505 West Woodbury Road
  - Altadena, CA 91001
  - (213) 797-1175
- Harvey J. Raider

YEARS IN BUSINESS: 7

PROJECTS COMPLETED: ___

REGION SERVED: U.S., Int'l.

TYPES OF REMOTE SENSING TECHNOLOGIES:
- Digital Image Interpretations

PERSONNEL & SKILLS REPRESENTED:
- System designers, hardware, software

STATEMENT OF CAPABILITIES:
- Manufacturer of sophisticated image enhancement and exploitation systems with real-time arithmetic and multispectral capability.
PRODUCTS AND SERVICES PROVIDED

IMAGE PRODUCTS

ENHANCED AND CORRECTED IMAGERY
Multitemporal Composites, Contrast Enhanced, Density Slice, Multisensor Composites, Radiometric Correction, Image Resampling, Pseudo Stereo Digital Imagery

PHOTOGRAHAMETRIC PRODUCTS

INTERPRETED, THEMATIC PRODUCTS

PROJECT PLANNING AND SUPPORT SERVICES

AERIAL SURVEY

IMAGE PROCESSING, INTERPRETATION AND ANALYSIS
Digital Image Processing; Interactive Digital Image/Analysis/Classification.

PHOTOGRAHAMETRIC ENGINEERING

REPRODUCTION

OTHER SERVICES

REMOTE SENSING EQUIPMENT/SYSTEMS PROVIDED

REMOTE SENSOR SYSTEMS

VIEWING EQUIPMENT

PHOTOGRAHAMETRIC EQUIPMENT

DIGITAL IMAGE PROCESSING EQUIPMENT
Sell and Lease B&W Image Displays, Image Digitizers, Color Image Displays.

SOFTWARE

INTEGRATED SYSTEMS
Sell and Lease Image Enhancement, Multispectral Classification.

OTHER EQUIPMENT
Sell and Lease Interactive Graphics Systems.
NAME: CORNELL UNIVERSITY REMOTE SENSING PROGRAM

ADDRESS(ES) & CONTACT(ES):
School of Civil & Environmental Engineering, Hollister Hall
Ithaca, New York 14853
(607) 256-4330
Warren R. Phillipson or Ta Liang

YEARS IN BUSINESS: 30+
PROJECTS COMPLETED: 100+
REGION SERVED: U.S. & Int’l.

SMALL BUSINESS CONTRACTOR? No
MINORITY-OWNED BUSINESS? No
TOTAL APPLICABLE EMPLOYEES: variable

TYPES OF REMOTE SENSING TECHNOLOGIES:
Low Altitude Aerial Photo; Medium Altitude Aerial Photo; High Altitude Aerial Photo; Aerial Multispectral Scanner; Aerial Thermal Infrared Scanner; Radar; Geophysical Survey; Landsat MSS; Landsat ETM; Skylab; Weather Satellite; Digital Image Interpretations; Manual Image Interpretations; Field Spectroradiometry Balloon; Airfoil: Biplane

PERSONNEL & SKILLS REPRESENTED:
Interdisciplinary teams of faculty and students involving various departments, as needed.

STATEMENT OF CAPABILITIES:
For over 30 years, the staff of Cornell’s School of Civil and Environmental Engineering has pioneered in the development of aerial photographic interpretation and remote sensing, conducting engineering, geologic, agricultural and land use investigations in some 40 countries. With primary strength in visual analysis of aircraft and satellite data, the staff maintains an active file of routines for digital image analysis.

FACILITIES AND SPECIAL EQUIPMENT

AIRCRAFT

CAMERAS, SCANNERS, AND OTHER REMOTE SENSORS

FIELD SURVEY EQUIPMENT
Topographic survey—numerous types portable spectroradiometers (3)

PHOTOGRAPHIC PROCESSING EQUIPMENT
B & W darkroom equipment

PHOTOMETRIC PROCESSING EQUIPMENT
Stereoplotters (Balplex, Wild A9) (2)

IMAGE INTERPRETATION, VIEWING AND MAPPING (NON-DIGITAL)
Density Slicer (1) Zoom Stereoscopes (2)
Light tables - various Zoom Transfer Scopes (Mono & Stereo) (2)
Color Additive Viewer (1)

IMAGE INTERPRETATION, VIEWING AND MAPPING (DIGITAL)
Digital analysis routines used on IBM 370/168 computer (primarily ORSER)

DIGITIZING, PLOTTING AND GRAPHICS

OTHER COMPUTER PROCESSING

OTHER
CORNELL UNIVERSITY REMOTE SENSING PROGRAM

PRODUCTS AND SERVICES PROVIDED

IMAGE PRODUCTS

ENHANCED AND CORRECTED IMAGERY

PHOTOGRAMMETRIC PRODUCTS

INTERPRETED, THEMATIC PRODUCTS
(c) Color Thematic Maps; Land Use Maps; Acreage Tabulations; Thematic Map Overlays; Geologic Maps; Soils Maps

PROJECT PLANNING AND SUPPORT SERVICES
Problem Definition; Feasibility Analysis; Selection of Existing Imagery; Sensor Selection/ Evaluation; Sampling Strategy Design; Ancillary Data Collection; Ground Truth Survey; Data Management; (7) Ground Control Survey; Air Support Operations

AERIAL SURVEY
(a) Low Altitude Photography; Thermal Infrared; Radar; Geophysical; High Altitude Photography; Multispectral Scanner

IMAGE PROCESSING, INTERPRETATION AND ANALYSIS
Digital Image Processing; Batch Digital Image/Analysis/Classification; Manual Image Interpretation; (7) Interactive Digital Image/Analysis/Classification; Photographic Laboratory Processing

PHOTOGRAMMETRIC ENGINEERING
(a) Aerotriangulation; Orthophotomapping; Stereo Digitizing; Cross-Sectioning; Stereocompilation; Topographic Mapping-Small Scale; Topographic Mapping-Large Scale; Volumetric Calculation

REPRODUCTION
(a) Drafting & Scribing; Cartographic Reproduction; Automated Drafting/Plotting; Printing

OTHER SERVICES
Remote Sensing Research; Consultant Services; (7) Interactive Computer Graphics

NAME: SALLY BAY CORNWELL, EXECUTIVE CONSULTING

ADDRESS(ES) & CONTACT(S)
Address not given
(303) 499-0349
Sally Bay Cornwell

YEARS IN BUSINESS: 6

SMALL BUSINESS CONTRACTOR? Yes

PROJECTS COMPLETED: 0

MINORITY-OWNED BUSINESS? Yes

REGION SERVED: U.S. & Int'l.

TOTAL APPLICABLE EMPLOYEES: 1

TYPES OF REMOTE SENSING TECHNOLOGIES:
Low Altitude Aerial Photo; Med Altitude Aerial Photo; High Altitude Aerial Photo; Aerial Multispectral Scanner; Aerial Thermal Infrared Scanner; Radar; Laser Scanner; Geophysical Survey; Landsat MSS; Landsat ETM; Seasat; JGOSS; Skylab; Weather Satellite; Digital Image Interpretations; Manual Image Interpretations

PERSONNEL & SKILLS REPRESENTED:
Management (1)

STATEMENT OF CAPABILITIES:
I offer experience in state/local information systems, "user needs assessments" for natural resources related data, and computer/remote sensing technology transfer expertise in natural resources programs.
**NAME:** DAEDALUS ENTERPRISES, INC.

**ADDRESS(S) & CONTACT(S)**
P.O. Box 1869 (300 Parkland Plaza)
Ann Arbor, MI  48106
(303) 769-5649
Thomas R. Ory, VP-Marketing

**YEARS IN BUSINESS:** 12
**PROJECTS COMPLETED:** 250
**REGION SERVED:** U.S., Int'l.

**TOTAL APPLICABLE EMPLOYEES:** 19

**TYPES OF REMOTE SENSING TECHNOLOGIES:**
- Low Altitude Aerial Photo
- Med Altitude Aerial Photo
- Aerial Multispectral Scanner
- Aerial Thermal Infrared Scanner
- Photogeophysical Survey
- Digital Image Interpretations
- Manual Image Interpretations
- Analog Tape Playback Services

**PERSONNEL & SKILLS REPRESENTED:**
- Management (7); Professional (15); Technical (15); Other (2); Computer Equip Operators (1); Draftsmen (2); Engineers (electrical (10); Image Processing Equip Operator (1); Photointerpreters(1); Photolab Technicians (1); Planners (1); Geologist (1); Meteorologist (1).

**STATEMENT OF CAPABILITIES:**
Daedalus Enterprises, recognized as the world's leading manufacturer of commercial airborne line scanners, has over 50 scanners operational in 16 countries. Daedalus offers both analog and digital thermal infrared scanners. In addition, the Company manufactures an 11-channel Landsat compatible multispectral scanner. Daedalus also provides international survey service programs which investigate new and innovative applications of airborne remote sensing technology.

**FACILITIES AND SPECIAL EQUIPMENT**

**AIRCRAFT**

**CAMERAS, SCANNERS, AND OTHER REMOTE SENSORS**
- (4) (Specific types not provided)

**FIELD SURVEY EQUIPMENT**

**PHOTOGRAVMETRIC PROCESSING EQUIPMENT**

**IMAGE INTERPRETATION, VIEWING AND MAPPING (NON-DIGITAL)**
- (1) (Specific types not provided)

**IMAGE INTERPRETATION, VIEWING AND MAPPING (DIGITAL)**
- (1) (Specific types not provided)

**DIGITIZING, PLOTTING AND GRAPHICS**

**OTHER COMPUTER PROCESSING**
- (1) (Specific types not provided)

**OTHER**
- Analog tape to film conversion including color products (2)
- Digital HDUT to CCT tape conversion system (1)
DAEDALUS ENTERPRISES, INC.

PRODUCTS AND SERVICES PROVIDED

IMAGE PRODUCTS
(c)B&W, Color, Color Infrared, Color Composite Negative Transparencies, Positive Transparencies, Contact Prints, Enlarged Prints; (c)Photo Mosaics, Analog Magnetic Tape, Thermograms, Halftone Image Prints, Digital Magnetic Tape.

ENHANCED AND CORRECTED IMAGERY
(c)Multitemporal Composites, Multisensor Composites, Radiometric Correction, Image Resampling Photo Imagery; (s)Multitemporal Composites, Contrast Enhanced, Geometric Correction, Density Slice, Change Detection, Multisensor Composites, Radiometric Correction, Image Resampling, Pseudo Stereo Digital Process.

PHOTOGRAMMETRIC PRODUCTS

INTERPRETED, THEMATIC PRODUCTS
(s)Color Thematic Maps, Land Use Maps, Vegetation/Forestry Maps, Acreage Tabulations, Geocoded Data Bases, Thematic Map Overlays, Geologic Maps, Transportation Maps, Soils Maps; (c)Digital Magnetic Tapes.

PROJECT PLANNING AND SUPPORT SERVICES
Problem Definition; Feasibility Analysis; Selection of Existing Imagery; Sensor Selection/Evaluation; Sampling Strategy Design; Gray Level Digitizing; Data Management; (s)Ground Control Survey, Map Digitizing, Data Base Preparation, Air Support Operations, Ancillary Data Collection, Ground Truth Survey, Gray Level Digitizing.

AERIAL SURVEY
Thermal Infrared, Multispectral Scanner; (s)Low Altitude Photography, Geophysical, High Altitude Photography.

IMAGE PROCESSING, INTERPRETATION AND ANALYSIS
Photographic Laboratory Processing; Manual Image Interpretation; (s)Digital Image Processing, Batch Digital Image/Analysis/Classification, Interactive Digital Image/Analysis/Classification, Photographic Laboratory Processing.

PHOTOGRAMMETRIC ENGINEERING

REPRODUCTION
Drafting & Scribing; (s)Cartographic Reproduction, Automated Drafting/Plotting, Printing

OTHER SERVICES
Remote Sensing Research; Consultant Services, Hardware Design/Development; Equipment Sales/Leasing/Service; (s)Interactive Computer Graphics, Computer Services.

REMOTE SENSING EQUIPMENT/SYSTEMS PROVIDED

REMOTE SENSOR SYSTEMS
Sell and Lease Aerial TIR Scanners, Multispectral Scanners

VIEWING EQUIPMENT

PHOTOGRAMMETRIC EQUIPMENT

DIGITAL IMAGE PROCESSING EQUIPMENT
Sell and Lease Film Output Recorders

SOFTWARE

INTEGRATED SYSTEMS

OTHER EQUIPMENT

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NAME: DAMES & MOORE

ADDRESS(es) & CONTACT(s):
7101 Wisconsin Avenue, Suite 700
Washington, D.C. 20014
(301) 652-2215
A.D. Becasio, Principal, Remote Sensing
1626 Cole Boulevard
Golden, Colorado 80401
(303) 931-2600
Larry Welborn, Senior Engineer

YEARS IN BUSINESS: 8
PROJECTS COMPLETED: over 200
REGION SERVED: U.S. & Int'l.

TYPES OF REMOTE SENSING TECHNOLOGIES:
Low Altitude Aerial Photo; Med Altitude Aerial Photo; High Altitude Aerial Photo;
Aerial Multispectral Scanner; Aerial Thermal Infrared Scanner; Radar; Geophysical
Survey; Landsat MSS; Landsat RBV; Skylab; Digital Image Interpretations; Manual Image
Interpretations

PERSONNEL & SKILLS REPRESENTED:
Management (2); Professional (6); Technical (3)
Cartographers; Computer Equip. Oper.; Computer Programmers; Draftsmen; Engineers (civil,
environ.); Soil Scientists; Social Scientists; Photointerpreters; Photolab Technicians;
Physical Scientists; Planners; Geographers; Geologists; Ecologists; Hydrologists

STATEMENT OF CAPABILITIES:
Dames & Moore remote sensing capabilities cover a broad range of application areas,
including major facility siting, waste disposal siting, planning, terrain analysis,
and resource inventories, transmission line and highway route assessments, flood
plain studies, environmental analyses, and mineral resources exploration. Project
areas typically range from thousands of square kilometers for regional studies
to less than one kilometer for site specific investigations. We use LANDSAT, Skylab,
and aircraft imagery of various types, including photographic, scanner, thermal
infrared and SLAR in support of project activities.

1100 Glendon Avenue, Suite 100
Los Angeles, California 90024
(213) 879-9700
John Robinson, Manager of Planning Systems

Other U.S. Locations:
Chicago, Illinois Salt Lake City, Utah
Cranford, New Jersey Boca Raton, Florida
San Francisco, California Houston, Texas
Cincinnati, Ohio
Atlanta, Georgia

Foreign Locations:
Lydd, England Toronto, Canada
Riyadh, Saudi Arabia

MINORITY-OWNED BUSINESS? No
SMALL BUSINESS CONTRACTOR? No

TOTAL APPLICABLE EMPLOYEES: 11

PRODUCTS AND SERVICES PROVIDED

IMAGE PRODUCTS
(s) B&W, Color, Color Infrared, and Color Composite Negative Transparencies, Positive
Transparencies, Contact Prints, and Enlarged Prints; (s) Photo Mosaics; Photo Atlas;
Sheets; Analog Magnetic Tape; Thermograms; Halftone Image Prints; Digital Magnetic Tape

ENHANCED AND CORRECTED IMAGERY
All following include both Photo & Digital: Multitemporal Composites; Contrast Enhanced;
Geometric Correction; Density Slice; Change Detection; Multisensor Composites; Radiometric
Correction; Image Resampling; Pseudo Stereo

PHOTOGRAMMETRIC PRODUCTS
(c) Engineering Cross Sections; Earthwork Measurements; Digital Data Bases;
Planimetric Maps; (a) Orthophotos; Topographic Maps; Stockpile Measurements;
Digital Terrain Models; Photo-Contour Maps; Plan and Profile Sheets; Volumetric
Calculations; Distance & Angle Measurements

INTERPRETED, THEMATIC PRODUCTS
(c) Color Thematic Maps; Land Use Maps; Vegetation/Forestry Maps; Utility Maps;
Acreage Tabulations; Geocoded Data Bases; Thematic Map Overlays; Geologic Maps;
Transportation Maps; Soils Maps

PROJECT PLANNING AND SUPPORT SERVICES
Problem Definition; Feasibility Analysis; Selection of Existing Imagery; Map Digitizing;
Data Base Preparation; Sensor Selection/Evaluation; Sampling Strategy Design;
Ancillary Data Collection; Ground Truth Survey; Gray Level Digitizing; Data Management;
(s) Ground Control Survey; Air Support Operations

AERIAL SURVEY
Geophysical; (a) Low Altitude Photography; Thermal Infrared; Radar; High Altitude
Photography; Multispectral Scanner

IMAGE PROCESSING, INTERPRETATION AND ANALYSIS
Digital Image Processing; Batch Digital Image/Analysis/Classification; Manual Image
Interpretation; (a) Interactive Digital Image/Analysis/Classification; Photographic
Laboratory Processing

PHOTOGRAMMETRIC ENGINEERING
Planimetric Mapping; (a) Orthophotomapping; Stereo Digitizing; Topographic Mapping-
Small Scale; Topographic Mapping-Large Scale; Volumetric Calculation

REPRODUCTION
Drafting & Scribing; Cartographic Reproduction; (a) Automated Drafting/Plotting;
Printing

OTHER SERVICES
Remote Sensing Research; Remote Sensing Training; Consultant Services; Computer
Software; Design/Development; (a) Interactive Computer Graphics
FACILITIES AND SPECIAL EQUIPMENT

AIRCRAFT

CAMERAS, SCANNERS, AND OTHER REMOTE SENSORS

FIELD SURVEY EQUIPMENT

Yes

PHOTOGRAPHIC PROCESSING EQUIPMENT

Yes

PHOTOMETRIC PROCESSING EQUIPMENT

IMAGE INTERPRETATION, VIEWING AND MAPPING (NON-DIGITAL)

Yes

IMAGE INTERPRETATION, VIEWING AND MAPPING (DIGITAL)

DIGITIZING, PLOTTING AND GRAPHICS

Yes

OTHER COMPUTER PROCESSING

OTHER

Cartographic Scribing Facility

NAME: DATA TECHNOLOGY, INC.

ADDRESS(ES) & CONTACT(S)

4 Gill Street
Woburn, Massachusetts 01801
(617) 935-8820
Dean A. Coe

530 Atlantic Avenue
Boston, Massachusetts
(617) 451-0430
Dean A. Coe

YEARS IN BUSINESS: 10

PROJECTS COMPLETED: N/A

REGION SERVED: U.S. & Int'l.

TOTAL APPLICABLE EMPLOYEES: 4

SMALL BUSINESS CONTRACTOR? Yes

MINORITY-OWNED BUSINESS? No

TYPES OF REMOTE SENSING TECHNOLOGIES:

PERSONNEL & SKILLS REPRESENTED:

Professional (4)
Computer Programmers (2); Electrical Engineer (1); Photogrammist (1)

STATEMENT OF CAPABILITIES:

DATA TECHNOLOGY's dedication to photogrammetry and remote sensing is best represented by the well accepted DT3454 flatbed plotter. It is available with a stereoplottter interface and/or a computer interface. Other major devices and systems include a variety of optical encoders, computer aided photogrammetric system (CAPS) and a computer drafter aid system (C.D.A.), both based on DEC systems.
DATA TECHNOLOGY, INC.

PRODUCTS AND SERVICES PROVIDED

IMAGE PRODUCTS

ENHANCED AND CORRECTED IMAGERY

PHOTOGRAMMETRIC PRODUCTS

INTERPRETED, THEMATIC PRODUCTS

PROJECT PLANNING AND SUPPORT SERVICES

AERIAL SURVEY

IMAGE PROCESSING, INTERPRETATION AND ANALYSIS

PHOTOGRAMMETRIC ENGINEERING

REPRODUCTION

OTHER SERVICES

Interactive Computer Graphics; Computer Services; Turnkey Systems Sales/Leasing/Service;
Hardware Design/Development; Software Design/Development; Equipment Sales/Leasing/Service
Software Sales/Leasing

REMOTE SENSING EQUIPMENT/SYSTEMS PROVIDED

REMOTE SENSOR SYSTEMS

VIEWING EQUIPMENT

PHOTOGRAMMETRIC EQUIPMENT

DIGITAL IMAGE PROCESSING EQUIPMENT

SOFTWARE

INTEGRATED SYSTEMS

OTHER EQUIPMENT

Sell & Lease Interactive Graphics Systems; Measurement Equipment; Plotters;
Photogrammetric Computer Systems

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NAME: DeAnza SYSTEMS, INC.

ADDRESS(ES) & CONTACT(S)
118 Charcot Avenue
San Jose, CA 95131
(408) 263-7155
C. W. Nordby

3918 Prosperity Avenue #204
Fairfax, Virginia 22031
(703) 560-6210
Dave Drewry

100 First Avenue N.E. #114G
Cedar Rapids, IA 52401
(319) 366-5758
Robert Pekkonen

Newbury Park, CA
Geneva, Switzerland
Tokyo, Japan
Sydney, Australia
Munich, W. Germany

YEARS IN BUSINESS: _______
PROJECTS COMPLETED: _______
REGION SERVED: _______

TYPES OF REMOTE SENSING TECHNOLOGIES:

PERSONNEL & SKILLS REPRESENTED:

REMOTE SENSING EQUIPMENT/SYSTEMS PROVIDED

REMOTE SENSOR SYSTEMS

VIEWING EQUIPMENT

PHOTOGRAFMETRIC EQUIPMENT

DIGITAL IMAGE PROCESSING EQUIPMENT

Sell B&W Image Displays, Image Digitizers, Color Image Displays.

SOFTWARE

INTEGRATED SYSTEMS

OTHER EQUIPMENT

STATEMENT OF CAPABILITIES:

Image Display and Processing Systems with resolution of 256x256x8 up to 1024x1024x48 bits. Master scan systems with 256 levels of gray scale or up to 16 M colors (2²⁵) High speed image array processors, video signal digitizers and associated peripherals. Digital Equipment Corp, PDP11 UNIBUS compatible interfaces standard. Other computer interfaces optionally available.
NAME: EARTH SATELLITE CORPORATION

ADDRESS(ES) & CONTACT(S)
7222 47th Street (Chevy Chase
Washington, D.C. 20015
(301) 652-7130
Dr. Charles Sheffield

2150 Shattuck Avenue
Berkeley, CA 94704
(415) 845-5140
Dr. Philip Langley

YEARS IN BUSINESS: 11
PROJECTS COMPLETED: 250+
REGION SERVED: U.S., Int'l.

TOTAL APPLICABLE EMPLOYEES: 67

TYPES OF REMOTE SENSING TECHNOLOGIES:
Low Altitude Aerial Photo; Med Altitude Aerial Photo; High Altitude Aerial Photo;
Aerial Multispectral Scanner; Aerial Thermal Infrared Scanner; Radar; Geophysical
Survey; Landsat MSS; Landsat RBV; Seasat; HCM; Skylab; Weather Satellite; Digital
Image Interpretations; Manual Image Interpretations.

PERSONNEL & SKILLS REPRESENTED:
Management (5); Professional (39); Technical (15); Other (8); Cartographers (4);
Computer Equip Operators (2); Computer Programmers (3); Draftsmen (2); Image Process-
ing Equip Oper. (1); Soil Scientists (1); Photogrammatists (2); Photointerpreters*
(*48 employees have PI skills in addition to principal skill.); Photolab Technicians
(6); Physical Scientists (1); Planners (3); Geographers (8); Geologists (12);
Foresters/Botanists (5); Meteorologists (4); Agronomist (1); Administrative/
Management (13).

STATEMENT OF CAPABILITIES:
Products and consulting services in remote sensing; crop forecasting services,
computer enhanced Landsat images, geographic information systems, oil and gas
exploration services, timber inventories, meteorological services, land cover/land
use inventories, cartography and photo processing services, geology and ground
water surveys, integrated resource surveys.

EARTH SATELLITE CORPORATION

FACILITIES AND SPECIAL EQUIPMENT

AIRCRAFT
Subcontract

CAMERAS, SCANNERS, AND OTHER REMOTE SENSORS
Hasselblad EL-500 (1)
Misc. 35mm SLR cameras (4)

FIELD SURVEY EQUIPMENT
Various ground truth survey instruments

PHOTOGRAPHIC PROCESSING EQUIPMENT
Complete Color and B&W Research and Production Photo Processing Laboratory (1)

PHOTOMETRIC PROCESSING EQUIPMENT
Area calculator, point markets, comparator, stereo transfer multiscopes.

IMAGE INTERPRETATION, VIEWING AND MAPPING (NON-DIGITAL)
Additive color viewer, mapograph, light tables, stereoscopes, transfer scopes,
density slicers, magnifiers, drafting equipment, sketch master, etc.

IMAGE INTERPRETATION, VIEWING AND MAPPING (DIGITAL)
1'S Digicol (1)
1'S Digital Image Combiner (1)

DIGITIZING, PLOTTING AND GRAPHICS
Electronic Graphics Calculator
HP 9100 Calculator, printer, plotter

OTHER COMPUTER PROCESSING
LANDPAK Geographic Information System (1)

OTHER
Prime 456 Computer with peripherals (1)
Optronics P-1500 photewriter (1)
EARTH SATELLITE CORPORATION

PRODUCTS AND SERVICES PROVIDED

IMAGE PRODUCTS
B&W, Color, Color Infrared, Color Composite Contact Prints and Enlarged Prints; (c) B&W, Color, Color Infrared, Color Composite Neg. & Pos. Transparencies; Photo Mosaics; Photo Atlas Sheets; Thermograms; Digital Mosaics; Halftone Image Prints; Digital Magnetic Tape; Photomaps

ENHANCED AND CORRECTED IMAGERY
Photo & Digital Contrast Enhanced; Digital: Density Slice; Radiometric Correction; Image Resampling; Pseudo Ratio and Ratios; Eigen (principal component); (c) Photo: Geometric Correction; Density Slice; Radiometric Correction; Image Resampling; Pseudo Ratio and Ratios; Eigen (principal component); Photo & Digital: Multitemporal Composites; Change Detection; Multisensor Composites; Pseudo Stereo

PHOTограмMETRIC PRODUCTS
(s)Orthophotos, Topographic Maps, Engineering Cross Sections, Stockpile Measurements, Earthwork Measurements, Phot Contour Maps, Plan and Profile Sheets; (c)Digital Terrain Models, Digital Data Bases, Planimetric Maps, Volumetric Calculations, Distance & Angle Measurements.

INTERPRETED, THEMATIC PRODUCTS

PROJECT PLANNING AND SUPPORT SERVICES
Problem Definition; Feasibility Analysis; Selection of Existing Imagery; Ground Control Survey; Map Digitizing; Data Base Preparation; Sensor Selection/Evaluation; Sampling Strategy Design; Ancillary Data Collection; Ground Truth Survey; Gray Level Digitzing; Data Management; (s)Air Support Operations.

AERIAL SURVEY
(s)Low Altitude Photography, Thermal Infrared, Radar, Geophysical, High Altitude Photography, Multispectral Scanner.

IMAGE PROCESSING, INTERPRETATION AND ANALYSIS
Digital Image Processing; Batch Digital Image/Analysis/Classification; Interactive Digital Image/Analysis/Classification; Photographic Laboratory Processing; Manual Image Interpretation.

PHOTограмMETRIC ENGINEERING
Aerotriangulation; Planimetric Mapping; Stereo Digitizing; Volumetric Calculation; Area Calculations; (s)Orthophotomapping, Cross-Sectioning, Steroconversion, Photographic Mapping-Small Scale, Photographic Mapping-Large Scale.

REPRODUCTION
Drafting & Scribing; Cartographic Reproduction; Automated Drafting/Plotting; (s)Printing.

OTHER SERVICES
Remote Sensing Research; Remote Sensing Training; Statistical Modeling; Consultant Services; Interactive Computer Graphics; Computer Services; Turnkey Systems Sales/Leasing/Service; Software Design/Development; Software Sales/Leasing; System Design/Development; "5"/Leasing; (s)Hardware Design/Development, Equipment Sales/Leasing/Service.
ADDRESS(ES) & CONTACT(S)          Other locations: Albuquerque, New Mexico
3001 Red Hill Ave.
Bldg. II, Suite 212
Costa Mesa, California 92626
(714) 751-3730
James L. Cradduck, Senior Vice President
Mike Mel
33749 9th Ave, South
Federal Way, Washington 98003
(206) 838-9192
Jacques Lorain
YEARS IN BUSINESS: 6
PROJECTS COMPLETED: 30
REGION SERVED: II, III, VI, VII, VIII, IX, X & Int'l.
TYPES OF REMOTE SENSING TECHNOLOGIES:
Low Altitude Aerial Photo; Med Altitude Aerial Photo; High Altitude Aerial Photo;
Aerial Multispectral Scanner; Aerial Thermal Infrared Scanner; Radar; Laser Scanner;
Geophysical Survey; Landsat MSS; Landsat ETV; SEASAT; Skylab; Digital Image
Interpretations; Manual Image Interpretations; Digital Data Link

PERSONNEL & SKILLS REPRESENTED:
Management (2); Professional (16); Other (2)
Cartographers; Computer Equip. Oper.; Computer Programmers; Draftsmen; Engineers (civil,
environ.); Image Processing Equip. Oper.; Soil Scientists; Social Scientists;
Photogrammatists; Photogrammetric Equip. Oper.; Photointerpreters; Photolab Technicians;
Geographers; Foresters; Archeologists; Geologists; Botanists

STATEMENT OF CAPABILITIES:
SATELLITE AND AERIAL PHOTOINTERPRETATION - Analysis of remote sensor imagery has
long been an important tool for scientific studies in several disciplines at ESCA-
Tech. Image interpretations are performed in a number of disciplines, including geology,
oceanography, forestry, ecology, and geography.

Previous experience includes execution of aerial surveys, field data collection,
and analysis of a variety of image types, including all types of photography,
ultraviolet, infrared, passive microwave, radar, and multispectral scanner
images. ESCA-Tech has also performed a number of projects using LANDSAT, SKYLAB,
and SEASAT satellite imagery which involved digital computer image processing
for image enhancement and automated information extraction.

(cont'd.)

STATEMENT OF CAPABILITIES: (cont'd.)

The remote sensing lab maintained by ESCA-Tech includes such equipment as a 32
color Spatial Data system, Joyce-LoebL scanning microdensitometer, precision
spot densitometer, zoom transferscope, stereoscopes, stereomicroscope, light
tables, and associated interpretation equipment. We also maintain working
relationships with aerial survey firms and have the capability to initiate
photographic, thermal infrared and other remote sensor surveys on short
notice.
FACILITIES AND SPECIAL EQUIPMENT

CAMERAS, SCANNERS, AND OTHER REMOTE SENSORS

Hasselblad 500EL 70mm Cameras (100 ft. magazine w/motor drive); 35 mm SLR Cameras

PHOTOGRAPHIC PROCESSING EQUIPMENT

50" x 70" Millington Vacuum Frame (1); 20" x 24" B.T.C. Film Punch (1); 5KW Berkey Addalux High-Intensity Printing Light (1); KAM Point Light Source (1)

PHOTOGRAMMETRIC PROCESSING EQUIPMENT

K.E.K. Direct Viewing Stereoplotter (1)

IMAGE INTERPRETATION, VIEWING AND MAPPING (NON-DIGITAL)

Zeiss Stereoscope Direct Viewing Plotter (1); 36" x 48" Light Table (1); 37" x 50" Hamilton Dial-A-Light Light Tables (4); 32 Color Spatial System (1); Fairchild F-71 Stereoscopes (4); Field Stereoscopes (12); Stationary Light Tables (4); Bausch and Lomb Zoom Transferscope (1); Portable Light Tables (3)

IMAGE INTERPRETATION, VIEWING AND MAPPING (DIGITAL)

Joyce-Label Scanning Microdensitometer (1); MacBeth Precision Spot Densitometer (1)

OTHER COMPUTER PROCESSING

Numonics Model 1224 Electronic Digitizer (1); Apple II Computer with Incremental Digitizing Pad (1); E&I Mark II Drating Machine (Vertical Arm) (1); Miscellaneous Inking Tools: Rigid gravers, Swiven Gravers, Freehand Gravers;

OTHER

Leroy Lettering Set (1); Kob-i-noor Lettering Set (1); 60K Measuring Microscope (Linoscope) (1); Miscellaneous Inking Tools: Ruling Pens, Contour Pens, Railroad Pens; Drafting Sundries: Registration Pens, Templates, Triangles; Art-O-Graph Reflecting Projector (1)

PRODUCTS AND SERVICES PROVIDED

IMAGE PRODUCTS

(c) Photo Mosaics; Photo Atlas Sheets; Analog Magnetic Tape; Thermograms; Digital Mosaics; Halftone Image Prints; 1) B&W, Color, Color Infrared, and Color Composite Negative Transparencies, Positive Transparencies, Contact Prints, and Enlarged Prints

ENHANCED AND CORRECTED IMAGERY

Photo and Digital: Geometric Correction, Change Detection; Pseudo k, Pseudo to Image Resampling: (c) Digital Image Resampling: Photo and Digital: Multi-temporal Composites; Density Slice; Multisensor Composites

PHOTOGRAMMETRIC PRODUCTS

Topographic Maps; Stockpile Measurements; Earthwork Measurements; Digital Terrain Models; Planimetric Maps; Photo-Contour Maps; Plan and Profile Sheets; Volumetric Calculations; Distance & Angle Measurements; (m) Topographic Maps; Engineering Cross Sections; Digital Data Bases

INTERPRETED, THEMATIC PRODUCTS

Color Thematic Maps; Land Use Maps; Vegetation/Forestry Maps; Contour Weather Maps; Utility Maps; Acreage Tabulations; Geocoded Data Bases; Thematic Map Overlays; Geologic Maps; Transportation Maps; Soils Maps; Tax Maps; (s) Digital Magnetic Tapes

PROJECT PLANNING AND SUPPORT SERVICES

Problem Definition; Feasibility Analysis; Selection of Existing Imagery; Map Digitizing; Data Base Preparation; Sensor Selection/Evaluation; Sampling Strategy Design; Ancillary Data Collection; Ground Truth Survey; Data Management; (s) Ground Control Survey; Air Support Operations; Gray Level Digitizing

AERIAL SURVEY

(s) Low Altitude Photography; Thermal Infrared; Radar; Geophysical; High Altitude Photography; Multispectral Scanner

IMAGE PROCESSING, INTERPRETATION AND ANALYSIS

Batch Digital Image/Analysis/Classification; Interactive Digital Image/Analysis/Classification; Photographic Laboratory Processing; Manual Image Interpretation; (s) Digital Image Processing

PHOTOGRAMMETRIC ENGINEERING

Aerotriangulation; Orthophotomapping; Planimetric Mapping; Stereo Digitizing; Cross-Sectioning; Stereocompilation; Topographic Mapping-Small Scale; Topographic Mapping-Large Scale; Volumetric Calculation

REPRODUCTION

Drafting & Scribing; Cartographic Reproduction; Automated Drafting/Plotting; Printing

OTHER SERVICES

Remote Sensing Research; Remote Sensing Training; Statistical Modeling; Consultant Services; Hardware Design/Development; Software Design/Development; (s) Interactive Computer Graphics; Computer Services
NAME: EASTMAN KODAK COMPANY

ADDRESS(ES) & CONTACT(3)
343 State Street
Rochester, New York 14650
(716) 724-4000

YEARS IN BUSINESS: 
PROJECTS COMPLETED: 
REGION SERVED: 
TYPES OF REMOTE SENSING TECHNOLOGIES: 

PERSONNEL & SKILLS REPRESENTED:

STATEMENT OF CAPABILITIES:
"Eastman Kodak Company does not engage in aerial photography or remote sensing. We manufacture products used in this field, such as photographic films, plates, papers, chemicals, processors, and related equipment."

NAME: ECOSYSTEMS INTERNATIONAL, INC.

ADDRESS(ES) & CONTACT(3)
P.O. Box 225
Gambrills, Maryland 21054
(301) 987-4976
Carroll F. Sauer
Foreign Location:
c/o ITALICO
Via Messina 46
Rome, Italy

YEARS IN BUSINESS: 8
PROJECTS COMPLETED: 20
REGION SERVED: U.S., Int'l.
TOTAL APPLICABLE EMPLOYEES:

TYPES OF REMOTE SENSING TECHNOLOGIES:
Low Altitude Aerial Photo; Mid Altitude Aerial Photo; High Altitude Aerial Photo; Aerial Multispectral Scanner; Aerial Thermal Infrared Scanner; Radar; Landsat MSS; Landsat ETM; Skylab; Weather Satellite; Digital Image Interpretations; Manual Image Interpretations; Mixed Interpretation.

PERSONNEL & SKILLS REPRESENTED:
Management(3); Professional (8); Technical (5); Other (5); Cartographers, Computer Equip Operators, Computer Programmers, Draftsmen, Engineers(civil, environ., electrical), Field Surveyors, Image Processing Equip Oper., Soil Scientists, Photointerpreters, Photolab Technicians, Physical Scientists, Planners, Agronomists, Land Use Specialists (* not indicated).

STATEMENT OF CAPABILITIES:
ECOSystems provides a wide range of remote sensing services including image analysis and interpretation and application to such fields as Agriculture, Geology, Land use Planning, Hydrology, Water and Air Quality and Resources, Natural Resources, Soil Conservation and Oceanography. The analysis package developed by ECOSystems is low cost both in terms of hardware (less than $40,000) and Analysis cost. Capabilities include Remote Sensing Systems, Environmental Systems, Data and Communication Systems, Modelling and Simulation Packages, Engineering Economics, Market and Business Analysis; Applications Development, Technology Transfer and Training and Information Extraction Services.
FACILITIES AND SPECIAL EQUIPMENT

AIRCRAFT
Leased as needed.

CAMERAS, SCANNERS, AND OTHER REMOTE SENSORS

FIELD SURVEY EQUIPMENT

PHOTOGRAPHIC PROCESSING EQUIPMENT

PHOTOGRAHMETRIC PROCESSING EQUIPMENT

IMAGE INTERPRETATION, VIEWING AND MAPPING (NON-DIGITAL)
ECOSytems Universal Image Analyzer

IMAGE INTERPRETATION, VIEWING AND MAPPING (DIGITAL)
ECOSystems Universal Image Analyzer

DIGITIZING, PLOTTING AND GRAPHICS
Digital PDP 11/34 Apple II & III Color Graphics

OTHER COMPUTER PROCESSING
ECOS - Environmental Control Observation System

OTHER

PRODUCTS AND SERVICES PROVIDED

IMAGE PRODUCTS
(c) BW, Color, Color Composite Neg. Transp., Pos. Transp.; (c) BW, Color Cont. Prints; (c) BW, Enlgd. Prints; (c) Color Enlgd. Prints; (c) Color Infrared Neg. Transp., Pos. Transp., Cont. Prints, Enlgd. Prints; (c) Color Composite Contact Prints, Enlgd. Prints; (c) Photo Mosaics, Photo Atlas Sheets, Analog Magnetic Tape, Thermograms, Half-tone Image Prints; (c) Digital Mosaics, Digital Magnetic Tape.

ENHANCED AND CORRECTED IMAGERY
(c) Multitemporal Composites Photo Imagery; (a) Contrast Enhanced, Geometric Correction, Density Slices, Change Detection, Multisensor Composites, Radiometric Correction, Image Resampling, False Stereo Photo Imagery.

PHOTOGRAHMETRIC PRODUCTS

INTERPRETED, THEMATIC PRODUCTS

PROJECT PLANNING AND SUPPORT SERVICES
Problem Definition; Feasibility Analysis; Selection of Existing Imagery; Map Digitizing; Data Base Preparation; Sensor Selection/Evaluation; Sampling Strategy Design; Ancillary Data Collection; Grav Level Digitizing; Data Management; (a) Ground Control Survey, Air Support Operations, Ground Tr-r'h Survey.

AERIAL SURVEY
(s) Low Altitude Photography, Thermal Infrared, Radar, Geophysical, High Altitude Photography, Multispectral Scanner.

IMAGE PROCESSING, INTERPRETATION AND ANALYSIS
Digital Image Processing; Batch Digital Image/Analysis/Classification; Interactive Digital Image/Analysis/Classification; Photographic Laboratory Processing; Manual Image Interpretation.

PHOTOGRAHMETRIC ENGINEERING

REPRODUCTION
Drafting & Scribing, Cartographic Reproduction; Automated Drafting/Plotting; Printing; (a) Automated Drafting/Plotting, Printing.

OTHER SERVICES
Remote Sensing Research; Remote Sensing Training; Statistical Modeling; Consultant Services; Interactive Computer Graphics; Computer Services; Turnkey Systems Sales/Leasing/Service; Hardware Design/Development; Software Design/Development; Software Sales/Leasing; (a) Equipment Sales/Leasing/Service.
REMOTE SENSING EQUIPMENT/SYSTEMS PROVIDED

REMOTE SENSOR SYSTEMS

VIEWING EQUIPMENT
Sell and lease image analyzers

PHOTOGRAHMETRIC EQUIPMENT

DIGITAL IMAGE PROCESSING EQUIPMENT

SOFTWARE
Sell and lease geometric correction, radiometric correction, image enhancement, multispectral classification

INTEGRATED SYSTEMS

OTHER EQUIPMENT
Sells and leases interactive graphics systems

NAME: EGBERT SCIENTIFIC SOFTWARE

ADDRESS(ES) & CONTACT(S)
J-74 Driftwood Cove (P.O. Box 42)
Greenport, NY 11944
(516) 477-1357
Dwight D. Egbert, President

YEARS IN BUSINESS: 15

PROJECTS COMPLETED: 6

REGION SERVED: U.S., Int'l.

TOTAL APPLICABLE EMPLOYEES: 1

TYPES OF REMOTE SENSING TECHNOLOGIES:

Low Altitude Aerial Photo; Med Altitude Aerial Photo; High Altitude Aerial Photo; Aerial Multispectral Scanner; Aerial Thermal Infrared Scanner; Radar; Lamsat MSS; Landsat ERS; Seasat; Skylab; Weather Satellite; Digital Image Interpretations.

PERSONNEL & SKILLS REPRESENTED:

Engineers (electrical) (1)

STATEMENT OF CAPABILITIES:

In October 1979, ESS began delivery of IMPAC, a very low-cost image analysis microcomputer package. IMPAC is not an "enhancement" system or an intelligent terminal. As a completely stand-alone computer system, it is capable of interactively creating and displaying full color multispectral classification maps, has full statistical analysis capabilities (including histogram generation), and provides image ratioing and transformation. A complete IMPAC system with microcomputer, terminal, printer, color TV, disk memory, installation, and training costs $10,000 to $15,000.
EGBERT SCIENTIFIC SOFTWARE

REMOTE SENSING: EQUIPMENT/SYSTEMS PROVIDED

REMOTE SENSOR SYSTEMS

VIEWING EQUIPMENT

PHOTOMGRAMMETRIC EQUIPMENT

DIGITAL IMAGE PROCESSING EQUIPMENT

SOFTWARE

INTEGRATED SYSTEMS

OTHER EQUIPMENT

NAME: ENVIRONMENTAL RESEARCH & TECHNOLOGY, INC.

ADDRESS(ES) & CONTACT(S)

696 Virginia Road
Concord, MA 01742
(617) 369-8910
Mr. Michael D. Smallwood
Suite 360, 2625 Townsgate Road
Westlake Village, CA 91361
(805) 497-0821
Dr. George Hidy

P.O. Box 2105, 1716 Heath Parkway
Fort Collins, Colorado 80522
Dr. Steve Martin
(303) 493-8878
Houston, Texas
Billings, Montana
Lombard, Illinois

YEARS IN BUSINESS: 10

PROJECTS COMPLETED: 100

REGION SERVED: U.S., Int'l.

TOTAL APPLICABLE EMPLOYEES: 7

SMALL BUSINESS CONTRACTOR? No

MINORITY-OWNED BUSINESS? No

TYPES OF REMOTE SENSING TECHNOLOGIES:

Low Altitude Aerial Photo; Med Altitude Aerial Photo; High Altitude Aerial Photo;
Aerial Multispectral Scanner; Aerial Thermal Infrared Scanner; Radar; Landsat MSS;
Landsat RBV; Seasat; HCM; Skylab, Weather Satellite; Manual Image Interpretations.

PERSONNEL & SKILLS REPRESENTED:

Management (2); Professional (2); Technical (2); Other (1); Cartographers,
Computer Programmers, Image Processing Equip. Oper., Photointerpreters, Photolab
Technicians, Physical Scientists, Planners, Geographers (# not indicated).

STATEMENT OF CAPABILITIES:

In response to the need for remote sensing services to aid resource planning in all
forms, ERT has assembled a group of scientists experienced in designing and conducting
remote sensing studies for a wide variety of projects. As a multi-disciplinary
environmental consulting organization, ERT has the capabilities to provide services
both in remote sensing and in the detailed field verification studies that may
be required.

ERT has dedicated its program in remote sensing to the transfer of applications to
the widest possible sphere of the user community. In its unique position as member
of both the technical applications development family and as provider of services
to both government and private sector clients, ERT in particular is well suited for,
and will continue to participate as much as possible in, the rapid and meaningful
transfer to users of the technical and economic benefits of state-of-the-art earth
resources remote sensing developments.

ERT was founded in 1968 with the primary objective of providing services and products
in the environmental sciences. The firm maintains its corporate offices in Concord,
Massachusetts with additional technical offices in Fort Collins, Colorado; Lombard, Illinois; Westlake, California; and Lexington, Massachusetts.

ERT has extensive experience in performing environmental studies having completed more than 500 projects. In these projects the firm has applied its in-house capabilities in air pollution meteorology, water quality and resource management, hydrology, geology, acoustics and noise control, terrestrial ecology, land use and transportation planning, economics, sociology and demographics. In addition to a staff of more than 700 professionals in the environmental disciplines, ERT maintains over 200,000 square feet of office space. Support facilities include air, water, noise, biology, electronics, remote sensing, photography and chemistry laboratories; computer facilities, a printing and publications shop and instrumentation service facilities.

The size and facilities of ERT enable it to offer total environmental services using in-house resources exclusively. This has permitted us to satisfy both large and small scale needs in the most efficient manner possible.

FACILITIES AND SPECIAL EQUIPMENT

AIRCRAFT

CAMERAS, SCANNERS, AND OTHER REMOTE SENSORS

FIELD SURVEY EQUIPMENT

All standard equipment associated with comprehensive terrestrial and aquatic ecology surveys.

PHOTOGRAPHIC PROCESSING EQUIPMENT

Fully equipped color and black and white photo lab.

PHOTOMETRIC PROCESSING EQUIPMENT

IMAGE INTERPRETATION, VIEWING AND MAPPING (NON-DIGITAL)

Old Delft stereoscopes, light tables, mirror stereoscopes, Bausch & Lomb stereoscopes, M&L ZIS, map-o-graph, variscan projector.

IMAGE INTERPRETATION, VIEWING AND MAPPING (DIGITAL)

Automated contouring program.

DIGITIZING, PLOTTING AND GRAPHICS

Numronics digitizer, drafting tables and equipment.

OTHER COMPUTER PROCESSING

Raster to vector (polygon) conversion software.

OTHER
PRODUCTS AND SERVICES PROVIDED

IMAGE PRODUCTS

ENHANCED AND CORRECTED IMAGERY

PHOTOMGRAMMETRIC PRODUCTS

(c) Digital Data Bases

INTERPRETED, THEMATIC PRODUCTS

(c) Color Thematic Maps, Land Use Maps, Vegetation/Forestry Maps, Contour Weather Maps, Utility Maps, Acreage Tabulations, Geocoded Data Bases, Thematic Map Overlays, Transportation Maps, Digital Magnetic Tapes.

PROJECT PLANNING AND SUPPORT SERVICES

Problem Definition; Feasibility Analysis; Selection of Existing Imagery; Map Digitizing; Sensor Selection/Evaluation; Sampling Strategy Design; Ancillary Data Collection; Ground Truth Survey; Data Management; (g) Ground Control Survey, Data Base Preparation, Air Support Operations, Gray Level Digitizing.

AERIAL SURVEY

IMAGE PROCESSING, INTERPRETATION AND ANALYSIS

Photographic Laboratory Processing; Manual Image Interpretation.

PHOTOMGRAMMETRIC ENGINEERING

REPRODUCTION

Drafting & Scribbling; Printing

OTHER SERVICES

Remote Sensing Research; Remote Sensing Training; Statistical Modeling; Consultant Services; Computer Services; (g) Interactive Computer Graphics.

NAME: ENVIRONMENTAL RESOURCES GROUP (ERG)

ADDRESS(ES) & CONTACT(S)

6380 Wilshire Blvd., Suite 804
Los Angeles, CA 90048
(213) 653-1086
R. Keith Julian

YEARS IN BUSINESS: 3

PROJECTS COMPLETED: 11

REGION SERVED: VI, VIII, IX, X

TOTAL APPLICABLE EMPLOYEES: 20

TYPES OF REMOTE SENSING TECHNOLOGIES:

Low Altitude Aerial Photo; Med. Altitude Aerial Photo; High Altitude Aerial Photo; High Altitude Aerial Photo; Landsat MSS; Skylab, Manual Image Interpretations.

PERSONNEL & SKILLS REPRESENTED:

Management (1); Professional (18); Technical (1); Cartographers (1); Draftsmen (1); Engineers (civil, environ.) (3); Social Scientists (2); Photointerpreters (1); Planners (2); Geographers (3); Biologists (3); Archaeologists (2); Air and Water Quality Specialists (3).

STATEMENT OF CAPABILITIES:

ERG can provide a range of remote sensing interpretation, planning, and utilization services as well as necessary subcontracting and consultation for remote sensing products. ERG's disciplinary expertise includes land use planning and analysis, cultural resource survey, economic feasibility and location studies, biologic and agricultural resource analysis, and general environmental assessment using remote sensing techniques.
FACILITIES AND SPECIAL EQUIPMENT

AIRCRAFT

CAMERAS, SCANNERS, AND OTHER REMOTE SENSORS

FIELD SURVEY EQUIPMENT

PHOTOGRAPHIC PROCESSING EQUIPMENT

(Limited)

PHOTограмMETRIC PROCESSING EQUIPMENT

IMAGE INTERPRETATION, VIEWING AND MAPPING (NON-DIGITAL)

(X) (Specific type not provided)

IMAGE INTERPRETATION, VIEWING AND MAPPING (DIGITAL)

DIGITIZING, PLOTTING AND GRAPHICS

OTHER COMPUTER PROCESSING

OTHER

Cartographic Production Lab

PRODUCTS AND SERVICES PROVIDED

IMAGE PRODUCTS

(s) B&W, Color, Color Infrared, Color Composite Neg. & Pos. Transparencies, Contact & Enlarged Prints; Photo Mosaics; Photo Atlas Sheets; Analog Magnetic Tape; Thermographs; Digital Mosaics; Halftone Image Prints; Digital Magnetic Tape

ENHANCED AND CORRECTED IMAGERY

(s) Multitemporal Composites, Contrast Enhanced, Geometric Correction, Density Slice, Change Detection, Multisensor Composites, Radiometric Correction, Image Resampling, Pseudo Stereo Photo and Digital Imagery.

PHOTограмMETRIC PRODUCTS


INTERPRETED, THEMATIC PRODUCTS

(c) Color Thematic Maps, Land Use Maps, Vegetation/Forestry Maps, Utility Maps, Acreage Tabulations, Themathic Map Overlays, Geologic Maps, Transportation Maps, Soils Maps, Tax Maps.

PROJECT PLANNING AND SUPPORT SERVICES

Problem Definition; Feasibility Analysis; Selection of Existing Imagery; Data Base Preparation; Sensor Selection/Evaluation; Sampling Strategy Design; Ancillary Data Collection; Data Management; (s) Ground Control Survey, Map Digitizing, Air Support Operations, Ground Truth Survey.

AERIAL SURVEY

(s) Low Altitude Photography, Thermal Infrared, Geophysical, High Altitude Photography, Multispectral Scanner.

IMAGE PROCESSING, INTERPRETATION AND ANALYSIS

Photographic Laboratory Processing; Manual Image Processing; (s) Digital Image Processing; Batch Digital Image/Analysis/Classification; Interactive Digital Image/Analysis/Classification

PHOTограмMETRIC ENGINEERING

(s) Orthophotomapping, Planimetric Mapping, Stereo Digitizing, Stereocompilation, Topographic Mapping—Small Scale, Topographic Mapping—Large Scale, Volumetric Calculation.

REPRODUCTION

Drafting & Scribing; Cartographic Reproduction; (s) Automated Drafting/Plotting, Printing.

OTHER SERVICES

Remote Sensing Research; Statistical Modeling; Consultant Services; (s) Computer Services.
NAME: EXECUTIVE RESOURCE ASSOCIATES, INC.

ADDRESS(ES) & CONTACT(S)
1911 Jefferson Davis Highway, Suite 902A
Arlington, Virginia 22202
(703) 522-5706
Louis B. C. Fong, Executive Director, Center for Engineering and Technology.

YEARS IN BUSINESS: 10+* SMALL BUSINESS CONTRACTOR? Yes
PROJECTS COMPLETED: ____ MINORITY-OWNED BUSINESS? Yes
REGION SERVED: ____ TOTAL APPLICABLE EMPLOYEES: ____
*Senior Associates are recent civil service retirees.

TYPES OF REMOTE SENSING TECHNOLOGIES:
Weather Satellite.

PERSONNEL & SKILLS REPRESENTED:
Management (1); Professional (3); Engineers(civil, environ.) (1); Engineers(electrical) (2); Physical Scientists(1).

STATEMENT OF CAPABILITIES:
ERA, Inc. is a broad-based international management consulting firm organized to provide management services in the following areas: computer sciences, management information systems, systems analysis & management, feasibility studies, planning and program management, organization development, health care management, management development & training, space engineering & technology needs analysis surveys, industrial security, energy conservation, electric power systems.

PRODUCTS AND SERVICES PROVIDED

IMAGE PRODUCTS

ENHANCED AND CORRECTED IMAGERY

PHOTOGRAHMETRIC PRODUCTS

INTERPRETED, THEMATIC PRODUCTS

PROJECT PLANNING AND SUPPORT SERVICES

AERIAL SURVEY

IMAGE PROCESSING, INTERPRETATION AND ANALYSIS

PHOTOGRAHMETRIC ENGINEERING

REPRODUCTION

OTHER SERVICES
Consultant Services; Computer Services; Software Design/Development; Planning and Program Management; Systems Management.
NAME: EXPLORATION RESEARCH ASSOCIATES INC.

ADDRESS(ES) & CONTACT(S)
1701 Clinton Street/Suite 212
Los Angeles, CA 90026
(213) 483-5127
Mark A. Liggett, President

YEARS IN BUSINESS: 8
PROJECTS COMPLETED: 100
REGION SERVED: VI, VII, IX, X, Int'l.

TYPES OF REMOTE SENSING TECHNOLOGIES:
Low Altitude Aerial Photo; Med. Altitude Aerial Photo; High Altitude Aerial Photo; Geophysical Survey; Landsat MSS; Skylab; Manual Image Interpretations.

PERSONNEL & SKILLS REPRESENTED:
Professional (5); Technical (1); Draftsmen (1); Physical Scientists (Geologists) (5).

STATEMENT OF CAPABILITIES:
Exploration Research Associates is an independent consulting firm specializing in integration of remote sensing technology with geological, geophysical and geochemical survey methods for reconnaissance mineral, geothermal energy, and ground water exploration programs.

The company has an extensive collection of satellite and high-altitude aircraft imagery, specialized photomechanical image processing and analysis equipment, petrographic and photomicrographic facilities, plane-table surveying equipment, and field vehicles. The company's research library includes over 10,000 indexed technical references on regional geology and mineral occurrences.

FACILITIES AND SPECIAL EQUIPMENT

AIRCRAFT
Subcontract

CAMERAS, SCANNERS, AND OTHER REMOTE SENSORS
Subcontract

FIELD SURVEY EQUIPMENT
4-wheel drive field vehicles (3)
Scintillometers (2)
Surveying equipment (1)

PHOTOGRAPHIC PROCESSING EQUIPMENT
Subcontract

PHOTOMETRIC PROCESSING EQUIPMENT
Subcontract

IMAGE INTERPRETATION, VIEWING AND MAPPING (NON-DIGITAL)
Spectral Data Corp., Multispectral Viewer (1)
Large format stereoscopes (4)
Richards light table and film transport (1)

IMAGE INTERPRETATION, VIEWING AND MAPPING (DIGITAL)
Subcontract

DIGITIZING, PLOTTING AND GRAPHICS
Subcontract

OTHER COMPUTER PROCESSING
Subcontract

OTHER
Petrographic microscope (1)
Geotechnical research library (10,000 references) (1)
LANDSAT, Skylab & U-2 aircraft imagery collection (2,500 images) (1)
EXPLORATION RESEARCH ASSOCIATES, INC.

PRODUCTS AND SERVICES PROVIDED

IMAGE PRODUCTS

ENHANCED AND CORRECTED IMAGERY
Multitemporal Composites, Contrast Enhanced, Change Detection, Multisensor Composites, Spectral Ratiocing Photo Imagery; Geometric Correction, Density Slice, Radiometric Correction, Image Resampling, Pseudo Stereo Digital Imagery.

PHOTOGRAMMETRIC PRODUCTS

INTERPRETED, THEMATIC PRODUCTS
(c) Land Use Maps, Vegetation/Forestry Maps, Geocoded Data Bases, Thematic Map Overlays, Geologic Maps, Soils Maps, Mineral & Geothermal Prospects, Hydrological Maps.

PROJECT PLANNING AND SUPPORT SERVICES
Problem Definition; Feasibility Analysis; Selection of Existing Imagery; Ground Control Survey; Data Base Preparation; Sensor Selection/Evaluation; Sampling Strategy Design; Ancillary Data Collection; Ground Truth Survey; Data Management; (c) Map Digitizing, Air Support Operations, Gray Level Digitizing.

AERIAL SURVEY
(a) Low Altitude Photography, Thermal Infrared, Radar, Geophysical, High Altitude Photography, Multispectral Scanner.

IMAGE PROCESSING, INTERPRETATION AND ANALYSIS
Photographic Laboratory Processing; Manual Image Processing; (a) Digital Image Processing; Batch Digital Image/Analysis/Classification; Interactive Digital Image/Analysis/Classification

PHOTOGRAMMETRIC ENGINEERING

REPRODUCTION
Drafting & Scribing; (a) Cartographic Reproduction, Automated Drafting/Plotting, Printing.

OTHER SERVICES

NAME: JERRY FOSTER & COMPANY

ADDRESS(ES) & CONTACT(S)
3611 Oak Lawn #206
Dallas, Texas 75219
(214) 521-9630
Jerry Foster

YEARS IN BUSINESS: 6
SMALL BUSINESS CONTRACTOR? Yes
PROJECTS COMPLETED: 200
REGION SERVED: U.S.
MINORITY-OWNED BUSINESS?
TOTAL APPLICABLE EMPLOYEES: 3

TYPES OF REMOTE SENSING TECHNOLOGIES:
Low Altitude Aerial Photo; Med Altitude Aerial Photo; High Altitude Aerial Photo; Oblique Aerial Photo

PERSONNEL & SKILLS REPRESENTED:
Management (1); Professional (1); Technical (1)
Image Processing Equip. Oper.; Photolab Technicians; Pilots

STATEMENT OF CAPABILITIES:
In business since 1976, with 16 years previous experience, I/we provide vertical and oblique aerial photography to government and industry. We specialize in custom mosaics and rectified prints and film positives. We perform photo lab services for other aerial mapping firms. We maintain a current negative file on the Dallas Fort Worth Metroplex.
FACILITIES AND SPECIAL EQUIPMENT

AIRCRAFT (1)
Specific type not provided.

CAMERAS, SCANNERS, AND OTHER REMOTE SENSORS (4)
Specific types not provided.

FIELD SURVEY EQUIPMENT

PHOTOGRAPHIC PROCESSING EQUIPMENT (2)
Specific types not provided.

PHOTOGRAMMETRIC PROCESSING EQUIPMENT

IMAGE INTERPRETATION, VIEWING AND MAPPING (NON-DIGITAL)

IMAGE INTERPRETATION, VIEWING AND MAPPING (DIGITAL)

DIGITIZING, Plotting AND GRAPHICS

OTHER COMPUTER PROCESSING

PRODUCTS AND SERVICES PROVIDED

IMAGE PRODUCTS
B&W Enlarged Prints; (c) B&W Negative Transparencies and Contact Prints; Color and Color Infrared Negative Transparencies, Positive Transparencies; Contact Prints, and Enlarged Prints; Photo Mosaics; Photo Atlas Sheets; Halftone Image Prints

ENHANCED AND CORRECTED IMAGERY

PHOTограмMETRIC PRODUCTS
(c) Plan and Profile Sheets

INTERPRETED, THEMATIC PRODUCTS
(c) Tax Maps

PROJECT PLANNING AND SUPPORT SERVICES
Problem Definition; Selection of Existing Imagery; Air Support Operations;
(a) Data Base Preparation

AERIAL SURVEY
Low Altitude Photography; High Altitude Photography

IMAGE PROCESSING, INTERPRETATION AND ANALYSIS
Photographic Laboratory Processing

PHOTOGRAMMETRIC ENGINEERING

REPRODUCTION

OTHER SERVICES
NAME: FUGRO GEOMETRICS, INC.

ADDRESS(ES) & CONTACT(S)
2200 East 27th Street
Long Beach, CA 90806
(213) 595-4865
Jack Van Eden/Dudley W. Line
444 NE Ravenna Blvd
Seattle, Washington 98115
(206) 522-1028
Mr. George Lamb
2777 Long Beach Blvd.
Long Beach, CA 90807
(213) 595-4865
Mr. Jack J. Schoustra
Denver, Colorado
Warren, New Jersey
Leidschendam, The Netherlands.

YEARS IN BUSINESS: 34
PROJECTS COMPLETED: 350
REGION SERVED: U.S., Int.

TYPES OF REMOTE SENSING TECHNOLOGIES:
Low Altitude Aerial Photo; Med Altitude Aerial Photo; High Altitude Aerial Photo;
Geophysical Survey; Manual Image Interpretations.

PERSONNEL & SKILLS REPRESENTED:
Management (5); Professional (5); Technical (32); Cartographers (6); Computer
Equip Operators (3); Computer Programmers (1); Draftsmen (2); Engineers(civil,
environ.) (1) Field Surveyors (4); Photogrammatists (5); Photogrammetric Equip
Oper. (10); Photointerpreters (2); Photolab Technicians (4); Pilots (1);
Geographers (3); Other (150)

STATEMENT OF CAPABILITIES:
Fugro Geometrics was formed in 1977 as a subsidiary of Fugro, Inc. Consulting
Engineers and Geologists, to complement Fugro's experience in engineering geology,
soil mechanics and earth resources assessment. This combination results in a
unique comprehensive service providing industry and government with a firm
planning basis for resource exploration, mining, transportation corridors, land
development, facility installations, utilities, terminals, and conservation works.

FACILITIES AND SPECIAL EQUIPMENT

AIRCRAFT
Aero Commander 680E (1)
Survey Aircraft N10065

CAMERAS, SCANNERS, AND OTHER REMOTE SENSORS
Geometrics G-803 proton magnetometer (1)
Scintrex CAD-6 spectrometer (1)
Scintrex GSA-144 gamma ray detectors (1024 in²) (2)

FIELD SURVEY EQUIPMENT
Four-wheel drive trucks (2)
EDM's (Geodimeter 78, AGA) (2)
Wild T-2 Theodolites/Wild T-3 Theodolites (2/3)

PHOTOGRAPHIC PROCESSING EQUIPMENT
Acti Copius computer controlled copy camera 4' x 7' (1)
Fairchild rectification camera (1)
LogEtronic Mark III automatic dodger/DuPont Cronaflex Automatic Processor (1/1)

PHOTOGRAFMETRIC PROCESSING EQUIPMENT
Kern PG2/AT/DC28 semi-automated plotters (4)
Wild B-B Avigraph (1)
Zoom point transfer device (Kern & Wild) (2)

IMAGE INTERPRETATION, VIEWING AND MAPPING (NON-DIGITAL)
Bausch & Lomb Zoom stereoscope (1)
Mirror Stereoscopes (2)

IMAGE INTERPRETATION, VIEWING AND MAPPING (DIGITAL)
Kern PG2/AT/DC28 with Kennedy Model 9832 tapes (4)

DIGITIZING, PLOTTING AND GRAPHICS
CalComp 936 Drum Plotter (1)

OTHER COMPUTER PROCESSING
Terminals to Univac 1108 (2)

OTHER
M&S Interactive Graphics system (IGDS07) (1)
(Fugro B.V., The Netherlands)

See Attached Statement of Capabilities
PRODUCTS AND SERVICES PROVIDED

IMAGE PRODUCTS
- Contrast Enhanced, Geometric Correction, Radiometric Correction, Pseudo Stereo Photo Imagery; (c)Contrast Enhanced, Geometric Correction, Radiometric Correction, Pseudo Stereo Digital Imagery.

PHOTOMETRIC PRODUCTS

INTERPRETED, THEMATIC PRODUCTS
- (c)Utility Maps, Acreage Tabulations, Geologic Maps, Transportation Maps, Soils Maps, Digital Magnetic Tapes; (s) Geocoded Data Bases.

PROJECT PLANNING AND SUPPORT SERVICES
- Problem Definition; Feasibility Analysis; Selection of Existing Imagery; Ground Control Survey; Map Digitizing; Air Support Operations; Sensor Selection/Evaluation; Sampling Strategy Design; Ancillary Data Collection; Ground Truth Survey; (s) Data Base Preparation; Data Management.

AERIAL SURVEY
- Low Altitude Photography; Geophysical; (s)Thermal Infrared, Radar, High Altitude Photography, Multispectral Scanner.

IMAGE PROCESSING, INTERPRETATION AND ANALYSIS
- Digital Image Processing; Photographic Laboratory Processing; Manual Image Interpretation; (s)Interactive Digital Image/Analysis/Classification.

PHOTOMETRIC ENGINEERING
- Aerotriangulation; Orthophotomapping; Planimetric Mapping; Stereo Digitizing; Cross-Sectioning; Stereocompilation; Topographic Mapping-Small Scale; Topographic Mapping-Large Scale; Volumetric Calculation; Close Range.

REPRODUCTION
- Drafting & Scribing; Cartographic Reproduction; Automated Drafting/Plotting; (s) Printing.

OTHER SERVICES
- Remote Sensing Training; Statistical Modeling; Consultant Services; Interactive Computer Graphics; Computer Services; Turnkey Systems Sales/Leasing/Service; Software Design/Development.

NAME: FUGRO, INC.

ADDRESS(ES) & CONTACT(S)
- 3777 Long Beach Blvd. (Fugro, Inc.)
  Long Beach, CA 90807
  (213) 595-6611
  Mr. Jack J. Schoustra, Dr. J. Carl Stepp
  2200 East 27th Street (Fugro Geometrics, Inc.)
  Long Beach, CA 90806
  (213) 595-4865
  Mr. Jack Van Eden, Mr. Dudly W. Line

YEARS IN BUSINESS: 30
PROJECTS COMPLETED: 350
REGION SERVED: U.S., int'l.
TOTAL APPLICABLE EMPLOYEES: 54

TYPES OF REMOTE SENSING TECHNOLOGIES:
- Low Altitude Aerial Photo; Med Altitude Aerial Photo; High Altitude Aerial Photo; Aerial Thermal Infrared Scanner; Radar; Geophysical Survey; Landsat MSS; Landsat RBV; Skylab; Digital Image Interpretations; Manual Image Interpretations.

PERSONNEL & SKILLS REPRESENTED:
- Management (6); Professional (11); Technical (37); Cartographers (6); Computer Equip Operators (3); Computer Programmers (1); Draftsmen (2); Engineers (civil, environ.) (1); Field Surveyors (4); Photogrammatists (5); Photogrammetric Equip. Oper. (10); Photointerpreters (2); Photolab Technicians (4); Physical Scientists (10); PIlots (1); Geographers (5).

STATEMENT OF CAPABILITIES:
- Fugro has complete in-house capabilities for obtaining aerial photography; field control surveys' analytical aerotriangulation; photo lab reproduction; compilation of controlled photo mosaics, planimetric and topographic maps; close-range photogrammetry, cross-sections or profiles; earthwork computations, digital terrain models, airborne magnetometer and airborne airborne radiometric surveys, Photogeology and photo interpretation. In association with outside consultants, we can provide high altitude aerial photography, thermal infrared scanning, multispectral photography, landsat interpretations, orthophotography and side looking radar imagery, geologic, engineering, hydrologic and environmental interpretations. These services are offered on a worldwide basis.
FACILITIES AND SPECIAL EQUIPMENT

AIRCRAFT

Aero Commander 680E (1)
Survey Aircraft N1006S

CAMERAS, SCANNERS, AND OTHER REMOTE SENSORS

Geometrics G-803 proton magnetometer (1)
Scintrex GAD-6 spectrometer (1)
Scintrex GSA-144 gamma ray detectors (1024 in$^2$) (2)

FIELD SURVEY EQUIPMENT

Four-wheel drive trucks (2)
EDM's (Geodimeter 78, Aga) (2)
Wild T-2 Theodolites/Wild T-3 theodolites (2/3)

PHOTOGRAPHIC PROCESSING EQUIPMENT

Acti Copius computer controlled copy camera 4' x 7' (1)
Fairchild rectification camera (1)
LegEtronic Mark III automatic dodger/DuPont Cronaflex Automatic Processor (1/1)

PHOTOGRAMMETRIC PROCESSING EQUIPMENT

Kern PC1/AT/D2/2B semi-automated plotters (4)
Wild B-8 Aviograp (1)
Zoom point transfer device (Kern & Wild) (2)

IMAGE INTERPRETATION, VIEWING, AND MAPPING (NON-DIGITAL)

Bausch & Lomb Zoom stereoscope (Model SIS-95) (1)
Mirror and Abrams CB-1 Stereoscopes (10)

IMAGE INTERPRETATION, VIEWING, AND MAPPING (DIGITAL)

Kern PC1/AT/D2/2B with Kennedy Model 9832 tapes (4)

DIGITIZING, PLOTTING, AND GRAPHICS

CalComp 936 Drum Plotter (1)

OTHER COMPUTER PROCESSING

Terminals to Univac 1108 (2)

OTHER SERVICES

Remote Sensing Training; Statistical Modeling; Consultant Services; Interactive Computer Graphics; Computer Services; Turnkey Systems Sales/Leasing/Service;
Software Design/Development.
NAME: GENERAL ELECTRIC COMPANY, SPACE SYSTEM DIVISION

ADDRESS(ES) & CONTACT(S):
5030 Hersel Place
Beltsville, MD 20705
(301) 937-3500
William J. Conroy

P.O. Box 8555
Philadelphia, PA 19101
(215) 962-2000
Charles J. Dannemann

4701 Forbes Blvd.
Lanham, MD 20801
(301) 459-2900
William J. Conroy

YEARS IN BUSINESS: 20
PROJECTS COMPLETED: 100+
REGION SERVED: US, Int'l

SMALL BUSINESS CONTRACTOR? No
MINORITY-OWNED BUSINESS? No
TOTAL APPLICABLE EMPLOYEES: 50

TYPES OF REMOTE SENSING TECHNOLOGIES:
Low Altitude Aerial Photo, Mid Altitude Aerial Photo, High Altitude Aerial Photo,
Aerial Multispectral Scanner, Aerial Thermal Infrared Scanner, Radar, Laser Scanner,
Geophysical Survey, Landsat MSS, Seasat, HCM, Skylab, Weather
Satellite, Digital Image Interpretations, Manual Image Interpretations, Mosaicing
Images, Combining Aerial Photos and Landsat

PERSONNEL & SKILLS REPRESENTED:
Management (5), Professional (25), Technical (15), Other (5); Cartographers, Computer
Eqip Operators, Computer Programmers, Draftsmen, Engineers (civil, environ.),
Engineers (electrical), Field Surveyors, Image Processing Equip Oper, Soil Scientists,
Social Scientists, Photogrammatists, Photogrammetric Equip Oper, Photointerpreters,
Photolab Technicians, Physical Scientists, Planners, Geographers, Agronomists,
Foresters, Geologists.

STATEMENT OF CAPABILITIES:
GE offers remote sensing products, services and systems. Products and services:
digitally enhanced imagery (Satellite and Aircraft), thematic classification and
analysis, photo interpretation, end use analysis (e.g., environmental impact,
geologic analysis) and remote sensing training. Standard products: a geologic
analysis package, GEOPAK; a standard classification package; and standard enhanced
imagery. Application data system: digital image extraction processing systems
(Image 100, Image 270, and Image 970); customized hardware and software. User
mission studies based on practical experience with remote sensing and a familiarity
with the evolving technology. Digital Image Analysis Laboratory, and interactive
and batch image processing system, used by our discipline scientists on customer
projects and customers on an hourly rate. Complete photo science laboratory
offers precision custom and standard production photo services.

FACILITIES AND SPECIAL EQUIPMENT

AIRCRAFT

CAMERAS, SCANNERS, AND OTHER REMOTE SENSORS

FIELD SURVEY EQUIPMENT

PHOTOGRAPHIC PROCESSING EQUIPMENT

Complete Photo Lab

PHOTOMETRIC PROCESSING EQUIPMENT

IMAGE INTERPRETATION, VIEWING AND MAPPING (NON-DIGITAL)

IMAGE INTERPRETATION, VIEWING AND MAPPING (DIGITAL)

DIGITIZING, PLOTTING AND GRAPHICS

GE Image 100 Multispectral Analyzer

OTHER COMPUTER PROCESSING

PDP 11/35, 3 MDS Bucode (Model 4025) May Tape Drives, DEC RP06 Mass Storage Disc

OTHER

Dicomed D47, Transparency Scanner/Digitizer
GENERAL ELECTRIC COMPANY, SPACE SYSTEM DIVISION

PRODUCTS AND SERVICES PROVIDED

IMAGE PRODUCTS
Black & White, Color, Color Composite, Negative Transparencies, Positive Transparencies, Contact Prints, Enlarged Prints; Photo Mosaics; (c) Color Infrared, Negative Transparencies, Positive Transparencies, Contact Prints, Enlarged Prints; Digital Mosaics; Halftone Image Prints; Digital Magnetic Tape; Ph. Mosaic's

ENHANCED AND CORRECTED IMAGERY
Digital: Contrast Enhanced; Geometric Correction; Density Slice; Spatial Enhanced
(c) Photo: Contrast Enhanced; Geometric Correction; Density Slice; Spatial Enhanced;
(c) Photo and Digital: Multitemporal Composites; Change Detection; Multisensor Composites; Radiometric Correction; Image Resampling

PHOTOGRAMMETRIC PRODUCTS
(c) Distance and Angle Measurements

INTERPRETED, THEMATIC PRODUCTS
Color Thematic Maps, Geologic Maps
(c) Land Use Maps; Vegetation/Forestry Maps; Acreage Tabulations; Thematic Map Overlays; Transportation Maps; Soils Maps; Digital Magnetic Tapes

PROJECT PLANNING AND SUPPORT SERVICES
Problem Definition; Feasibility Analysis; Selection of Existing imagery; Map Digitizing; Data Base Preparation; Sensor Selection/Evaluation; Sampling Strategy Design; Ground Truth Survey; Gray Level Digitizing; Data Management (s) Ground Control Survey; Air Support Operations; Ancillary Data Collection

AERIAL SURVEY
(s) Low altitude photography; Thermal Infrared; Radar; Geophysical; High Altitude Photography; Multispectral Scanner

IMAGE PROCESSING, INTERPRETATION AND ANALYSIS
Digital Image Processing; Batch Digital Image/Analysis/Classification; Interactive Digital Image/Analysis/Classification; Photographic Laboratory Processing; Manual Image Interpretation

PHOTOGRAMMETRIC ENGINEERING
(s) Aerotriangulation; Orthophotomapping; Planimetric Mapping; Stereo Digitizing; Cross-Sectioning; Stereocompilation; Topographic Mapping-Small Scale; Topographic Mapping-Large Scale; Volumetric Calculation

REPRODUCTION
Drafting & Scribing; Printing (s) Cartographic Reproduction; Automated Drafted/Plotting

OTHER SERVICES
Remote Sensing Research; Remote Sensing Training; Statistical Modeling; Consultant Services; Computer Services; Turkey Systems Sales/Leasing/Service; Hardware Design/Development; Software Design/Development; Equipment Sales/Leasing/Service; Software Sales/Leasing; (s) Interactive Computer Graphics

REMOTE SENSING EQUIPMENT/SYSTEMS PROVIDED

REMOTE SENSOR SYSTEMS
Sell Satellites

VIEWING EQUIPMENT

PHOTOGRAMMETRIC EQUIPMENT

DIGITAL IMAGE PROCESSING EQUIPMENT
Sell B&W Image Displays, Color Image Displays, Digital Image Processing System

SOFTWARE
Sell Geometric Correction, Radiometric Correction, Image Enhancement, Multispectral Classification

INTEGRATED SYSTEMS
Sell Geometric Correction, Radiometric Correct, Image Enhancement, Multispectral Classification

OTHER EQUIPMENT
NAME: GEODETIC SERVICES, INC.

ADDRESS & CONTACT:
1511 S. Riverview Drive
Melbourne, FL 32901
(305) 724-6831
Daane C. Brown or John A. Strahle.

YEARS IN BUSINESS: 12
PROJECTS COMPLETED: 350
REGION SERVED: U.S., Int'l.

TYPES OF REMOTE SENSING TECHNOLOGIES:
Low Altitude Aerial Photo; Med. Altitude Aerial Photo, High Altitude Aerial Photo.

PERSONNEL & SKILLS REPRESENTED:
Management (2); Professional (5); Technical (5); Other (1); Computer Equip Operators,
Computer Programmers, Engineers(electrical), Field Surveyors, Photogramm traction,
Photogrammetric Equip Oper., Photolab Technicians (# not provided).

STATEMENT OF CAPABILITIES:
Geodetic Service, Inc. offers specialized services to government and industry in the disciplines of analytical aerotriangulation, industrial (close range) photogrammetry and satellite Doppler surveying.

For applications to industrial photogrammetry, GSI has perhaps the most extensive inventory of specialized equipment in existence. Proprietary programs and procedures yield extremely high accuracies - as high as 1 part in 200,000 of the maximum dimension of the object photographed.

In its satellite Doppler surveying service (based on the short arc method of adjustment), GSI routinely produces accuracies in relative positioning of a few decimeters. GSI's services have been employed by clients in support of mapping and geodetic projects throughout the world.

FACILITIES AND SPECIAL EQUIPMENT

AIRCRAFT

CAMERAS, SCANNERS, AND OTHER REMOTE SENSORS
Aerial Mapping Camera Zeiss RMK 8.5/23 (1)
Remotely Controlled Automatic Plate Changing Cameras (3)
Close Range Metric Cameras for Structural Measurements (7)

FIELD SURVEY EQUIPMENT
JMR 1 Satellite Doppler Receivers (4)
Topcon Level (1)
Paulin Surveying Barograph (5)

PHOTOMETRIC PROCESSING EQUIPMENT
Specialized Plate Processing Facility (1)

PHOTOMETRIC PROCESSING EQUIPMENT
H. Dell Foster Monocamor (2)
David Mann Monocamor (1)
Wild PFG Stereoscopic Point Transfer Instrument (3)

IMAGE INTERPRETATION, VIEWING AND MAPPING (NON-DIGITAL)

Bausch and Lomb Zoom Transfer Scope (1)

IMAGE INTERPRETATION, VIEWING AND MAPPING (DIGITAL)

DIGITIZING, PLOTTING AND GRAPHICS
Bendix Digitizer (48" x 60") (1)

OTHER COMPUTER PROCESSORS
Systems Engineering Laboratories 32/52 Computer, 256K Bytes Memory (1)

OTHER
Engineering Offices and Facilities, 7000 sq. ft.
PRODUCTS AND SERVICES PROVIDED

IMAGE PRODUCTS

ENHANCED AND CORRECTED IMAGERY

PHOTOGRAHMETRIC PRODUCTS
(c) Engineering Cross Sections, Volumetric Calculations, Structural Measurement by Close Range Photogrammetry.

INTERPRETED, INTERPRETATION PRODUCTS

PROJECT PLANNING AND SUPPORT SERVICES
Problem Definition; Feasibility Analysis; Ground Control Survey; Sensor Selection/ Evaluation; Sampling Strategy Design.

AERIAL SURVEY
(a) Low Altitude Photography, High Altitude Photography.

IMAGE PROCESSING, INTERPRETATION AND ANALYSIS

PHOTOGRAHMETRIC ENGINEERING
Aerotriangulation; Volumetric Calculation; Structural Measurements.

REPRODUCTION

OTHER SERVICES
Consultant Services; Turnkey Systems Sales/Leasing/Service(Close Range Photogrammetry); Hardware Design/Development; Software Design/Development; Equipment Sales/Leasing/ Service; Satellite Doppler Positioning; Reduction of Data from Doppler Receivers.

REMOTE SENSING EQUIPMENT/SYSTEMS PROVIDED

REMOTE SENSOR SYSTEMS
Sell and Lease Metric Cameras.

VIEWING EQUIPMENT

PHOTOGRAHMETRIC EQUIPMENT

DIGITAL IMAGE PROCESSING EQUIPMENT

SOFTWARE

INTEGRATED SYSTEMS

OTHER EQUIPMENT
Lease JMR 1 Doppler Receivers.
NAME: GEORGIA TECH EES

ADDRESS(ES) & CONTACT(S)
EES/EML - Baker Bldg.
Atlanta, Georgia 30332
(404) 894-3357
Nickolas L. Faust

YEARS IN BUSINESS: 8
PROJECTS COMPLETED: 16
REGION SERVED: U.S., Int'l.
TOTAL APPLICABLE EMPLOYEES: 10

SMALL BUSINESS CONTRACTOR?
MINORITY-OWNED BUSINESS?

TYPES OF REMOTE SENSING TECHNOLOGIES:
Low Altitude Aerial Photo; Med Altitude Aerial Photo; High Altitude Aerial Photo;
Aerial Multispectral Scanner; Aerial Thermal Infrared Scanner; Geophysical Survey;
Landsat MSS; Landsat RBV; Digital Image Interpretations.

PERSONNEL & SKILLS REPRESENTED:
Management (2); Professional (5); Technical (3); Cartographers, Computer Programmers
Engineers (electrical), Image Processing Equip Oper., Planners, Geographers (# not
indicated).

STATEMENT OF CAPABILITIES:
Computer processing of Landsat data and integration into polygon and gridded
geographic data bases. EES has successfully processed Landsat data for total
state of Georgia and locations worldwide. Research and development and design of
special purpose Landsat/Geodata base hardware and software using minicomputers,
array processors, color image processing systems, etc. Design and implementation of
software and hardware for geophysical exploration using Landsat and other geo-
physical data. Training courses and technology transfer move R&D work into
operational status.

GEORGIA TECH EES

FACILITIES AND SPECIAL EQUIPMENT

AIRCRAFT
Convair 240

CAMERAS, SCANNERS, AND OTHER REMOTE SENSORS

FIELD SURVEY EQUIPMENT

PHOTOCOPYING MACHINE

PHOTOGRAHMATIC PROCESSING EQUIPMENT

IMAGE INTERPRETATION, VIEWING AND MAPPING (NON-DIGITAL)
Light tables, Zoom Stereoscope (3)

IMAGE INTERPRETATION, VIEWING AND MAPPING (DIGITAL)
Complete Image Processing Systems, based on Eclipse Minicomputers (2).

DIGITIZING, PLOTTING AND GRAPHICS
Digitizer (1); Plotters (3); Line Graphics Plotters (soft) (10); Printer/Plotter (1);
Dot Matrix Printers (2)

OTHER COMPUTER PROCESSING
Array Processors (3); Modified INGRID Geodata Base System, Modified MOSS Geodata
Base System (2).

OTHER
16-bit Minicomputer systems (15); Microcomputer systems; VAX 32-bit minicomputer;
SBC/32-bit minicomputer.
PRODUCTS AND SERVICES PROVIDED

IMAGE PRODUCTS

ENHANCED AND CORRECTED IMAGERY
(c) Multitemporal Composites, Contrast Enhanced, Geometric Correction, Density Slice, Change Detection, Radiometric Correction, Image Resampling Digital Imagery.

PHOTOGRAMMETRIC PRODUCTS
(c) Digital Terrain Models, Digital Data Bases.

INTERPRETED, THEMATIC PRODUCTS
(c) Color Thematic Maps, Land Use Maps, Vegetation/Forestry Maps, Utility Maps, Acreage Tabulations, Geocoded Data Bases, Thematic Map Overlays, Transportation Maps, Soils Maps, Tax Maps, Digital Magnetic Tapes.

PROJECT PLANNING AND SUPPORT SERVICES
Problem Definition; Feasibility Analysis; Selection of Existing Imagery; Map Digitizing; Data Base Preparation; Sensor Selection/Evaluation; Sampling Strategy Design; Ancillary Data Collection; Ground Truth Survey; Data Management.

AERIAL SURVEY

IMAGE PROCESSING, INTERPRETATION AND ANALYSIS
Digital Image Processing; Batch Digital Image/Analysis/Classification; Interactive Digital Image/Analysis/Classification; Photographic Laboratory Processing; (a) Manual Image Interpretation.

PHOTOGRAMMETRIC ENGINEERING

REPRODUCTION

OTHER SERVICES

REMOTE SENSING EQUIPMENT/SYSTEMS PROVIDED

REMOTE SENSOR SYSTEMS

VIEWING EQUIPMENT

PHOTOGRAMMETRIC EQUIPMENT

DIGITAL IMAGE PROCESSING EQUIPMENT

SOFTWARE

INTEGRATED SYSTEMS
Sell R&Donly Geometric Correction; Sell Radiometric Correct, Image Enhancement, Multispectral Classification.

OTHER EQUIPMENT
Sell R&Donly Plotters.
NAME: THE GERBER SCIENTIFIC INSTRUMENT COMPANY (CSI)

ADDRESS (ES) & CONTACT (S)
P.O. Box 305
Hartford, CT 06101
Fred Dudley
(203) 644-1551

1300 Piccard Drive, Suite LL4
Rockville, MD 20850
Doe Wick
(301) 840-0555

Brussels, Belgium; Tokyo, Japan; Melbourne, Australia

YEARS IN BUSINESS: 0
PROJECTS COMPLETED: 0
REGION SERVED: U.S., Int'l.

TYPES OF REMOTE SENSING TECHNOLOGIES:

REMOTE SENSING EQUIPMENT/SYSTEMS PROVIDED

REMOTE SENSOR SYSTEMS

VIEWING EQUIPMENT

PHOTOGRAMMETRIC EQUIPMENT

DIGITAL IMAGE PROCESSING EQUIPMENT

SOFTWARE

INTEGRATED SYSTEMS

OTHER EQUIPMENT

Sell and Lease X-Y Coordinate Digitizer, Interactive Graphics, Plotters.

PERSONNEL & SKILLS REPRESENTED:

Computer Equip Operators, Computer Programmers, Draftsmen, Engineers(electrical), Photolab Technicians (# not provided).

STATEMENT OF CAPABILITIES:

Drawings of complex machinery, electronic circuits, vehicles, construction projects and other industrial activities demand an accuracy and speed beyond the capabilities of human hands. GSI has combined mechanical drafting machines and photoplotters of extreme precision, accuracy, and speed with the technology of computers to meet industry's complex drawing needs. Gerber's computer-controlled drafting machines are used extensively throughout the world to produce engineering drawings for automobiles, aircraft, ships, electronic products, buildings and maps. Gerber photoplotters have become basic business tools in the electronics industry to generate master artwork for printed circuit boards and microcircuits.
NAME: GIBBS & HILL

ADDRESS(ES) & CONTACT(S)
393 Seventh Avenue
New York, New York 10001
(212) 760-842
Donald R. Johnston
9229 L.B.J. Freeway, Suite 200
Dallas, Texas 75243
(214) 783-0209

8420 West Dodge Road
Omaha, Nebraska 68114
(402) 391-0330

FACILITIES AND SPECIAL EQUIPMENT

AIRCRAFT

CAMERAS, SCANNERS, AND OTHER REMOTE SENSORS
(2)

FIELD SURVEY EQUIPMENT (2)

PHOTOGRAHMATIC PROCESSING EQUIPMENT

IMAGE INTERPRETATION, VIEWING AND MAPPING (NON-DIGITAL) (1)

IMAGE INTERPRETATION, VIEWING AND MAPPING (DIGITAL) (1)

DIGITIZING, PLOTTING AND GRAPHICS (2)

OTHER COMPUTER PROCESSING (2)

OTHER

One of the largest A/E - CAD/CAM facilities, complete model shop
PRODUCTS AND SERVICES PROVIDED

IMAGE PRODUCTS
(c) B&W, Color, & Color Infrared Neg. & Pos. Transparencies, Contact & Enlarged Prints;
(a) Photo Mosaics; Photo Atlas Sheets; Analog Magnetic Tape; Thermograms; Digital Mosaics; Halftone Image Prints; Digital Magnetic Tape

ENHANCED AND CORRECTED IMAGERY
(c) Photo Density Slice; Photo & Digital Change Detection; (a) Photo & Digital:
Multitemporal Composites; Contrast Enhanced; Geometric Correction; Multipsensor Composites;
Radiometric Correction; Image Resampling; Pseudo Stereo; Digital Density Slice

PHOTOGRAHMETRIC PRODUCTS
(c) Engineering Cross Sections; Stockpile Measurements; Earthwork Measurements;
Digital Terrain Models; Digital Data Bases; Planimetric Maps; Plan and Profile Sheets;
Volumetric Calculations; (a) Photo-Contour Maps

INTERPRETED, THEMATIC PRODUCTS
(c) Color Thematic Maps; Land Use Maps; Vegetation/Forestry Maps; Contour Weather Maps;
Utility Maps; Acreage Tabulations; Geocoded Data Bases; Thematic Map Overlays; Geologic Maps; Transportation Maps; Soils Maps; Tax Maps; Digital Magnetic Tapes; Bathymetric Maps

PROJECT PLANNING AND SUPPORT SERVICES
Problem Definition; Feasibility Analysis; Selection of Existing Imagery; Ground Control Survey; Map Digitizing; Data Base Preparation; Air Support Operations; Sensor Selection/ Evaluation; Sampling Strategy Design; Ancillary Data Collection; Ground Truth Survey;
Data Management; (a) Ancillary Data Collection; Ground Truth Survey

AERIAL SURVEY
(a) Low Altitude Photography; Thermal Infrared; Radar; Geophysical; High Altitude Photography; Multispectral Scanner

IMAGE PROCESSING, INTERPRETATION AND ANALYSIS
Digital Image Processing; Interactive Digital Image/Analysis/Classification;
Photographic Laboratory Processing; Manual Image Interpretation

PHOTOGRAHMETRIC ENGINEERING:
Planimetric Mapping; Cross-Sectioning; Topographic Mapping-Small Scale; Topographic Mapping-Large Scale; Volumetric Calculation; (a) Aerotriangulation; Orthophotomapping;

REPRODUCTION
Drafting & Scribing; Cartographic Reproduction; Automated Drafting/Plotting; Printing

OTHER SERVICES
Remote Sensing Research; Remote Sensing Training; Statistical Modeling; Consultant Services; Interactive Computer Graphics; Computer Services; Turnkey Systems Sales/Leasing/Service; Hardware Design/Development; Software Design/Development; Equipment Sales/Leasing/Service; Software Sales/Leasing

REMOTE SENSING EQUIPMENT/SYSTEMS PROVIDED

REMOTE SENSOR SYSTEMS

VIEWING EQUIPMENT

PHOTOGRAHMETRIC EQUIPMENT

DIGITAL IMAGE PROCESSING EQUIPMENT

SOFTWARE

INTEGRATED SYSTEMS
Sell & Lease Geometric Correction

OTHER EQUIPMENT
Sell & Lease: X-Y Coordinate Digitizer; Interactive Graphics Systems; Geographic Information Systems
NAME: ALAN GORDON ENTERPRISES, INC.

ADDRESS(ES) & CONTACT(S)
5362 Cahuenga Blvd.
No. Hollywood, CA 91601
(213) 983-5500
Don Sahlein
1430 Cahuenga Blvd.
Hollywood, CA 90028
(213) 466-3561
Grant Loucks

YEARS IN BUSINESS: _______
PROJECTS COMPLETED: _______
REGION SERVED: _______

TYPES OF REMOTE SENSING TECHNOLOGIES:

PERSONNEL & SKILLS REPRESENTED:

STATEMENT OF CAPABILITIES:

REMOTE SENSING EQUIPMENT/SYSTEMS PROVIDED

REMOTE SENSOR SYSTEMS

VIEWING EQUIPMENT
Sell Monocular Magnifiers, Transfer Scopes, Stereoscopes, Sell and Lease: Stereo Comparator, Stereoscope Accessories, Sketchmaster, Slotted Templet Cutter, Slotted Templet Set

PHOTOGRAMMETRIC EQUIPMENT
Sell Stereo Plotters, Point Transfer Devices, Orthoprojectors.

DIGITAL IMAGE PROCESSING EQUIPMENT

SOFTWARE

INTEGRATED SYSTEMS

OTHER EQUIPMENT
Sell Aerial Film, Measurement Equipment, Photo Processing Equip., Plotters, Field Equip., Sell and Lease: Camera Accessories, Intervalometers, Magazines, Filters, Mounts, all Aerial Film Printing: Processing, Titlers, Cutting, Splicing, Viewing
NAME: GREENHORNE & O'MARA, INC.

ADDRESS(ES) & CONTACT(S)
6715 Kenilworth Avenue
Riverdale, MD 20840
(301) 277-2121
Michael G. Pavilides

7718 Lincolnd Highway
North Huntingdon, PA 15642
(412) 863-2400
Bernard W. Solomon

FACILITIES AND SPECIAL EQUIPMENT

AIRCRAFT

CAMERAS, SCANNERS, AND OTHER REMOTE SENSORS

FIELD SURVEY EQUIPMENT
Trucks and full complement of equipment (10) Slump Cone (1)
HP Ranger-Electric measuring device (1) Chase Air Meter (1)
Watercraft (1)
Speedy Moisture Test Kit (1)

PHOTOGRAPHIC PROCESSING EQUIPMENT
Douhitt Vacuum Frames (with point light source) (2)
Buckingham Graphics model 3060 Peel Coat Dryer (1)
Macbeth Dagger Light (1)
Thiemer Violus H-Intensity Light Source (Metal Halide) (1)

OTHER PHOTOGRAMMETRIC PROCESSING EQUIPMENT

IMAGE INTERPRETATION, VIEWING AND MAPPING (NON-DIGITAL)

IMAGE INTERPRETATION, VIEWING AND MAPPING (DIGITAL)

DIGITIZING, PLOTTING AND GRAPHICS

OTHER COMPUTER PROCESSING

OTHER

Type-setting/Word Processing Equipment:
IBM "Electronic Selectric Composer" (1)
Addressograph-Multigraph "AM 860" Headliner (1)
Xerox 850-CRT Word Processing Systems (4)
Oxy Level III Electronic Typewriter (1)
Compugraphic "Eastycoast 14" Waxer (2)

TEARS IN BUSINESS: 12
PROJECTS COMPLETED: 100
MINORITY-OWNED BUSINESS? No
TOTAL APPLICABLE EMPLOYEES: 68

PERSONNEL & SKILLS REPRESENTED:
Management (5); Professional (18); Technical (20); Other (25); Cartographers (42);
Computer Equip Operators (3); Computer Programmers (7); Draftsmen (35); Engineers
civil, environ.)(55); Field Surveyors (60); Image Processing Equip Oper. (2);
Social Scientists(2); Photogrammatists (6); Photogrammetric Equip Oper.(6);
Photointerpreters (20); V-tolab Technicians (6); Physical Scientists (10);
Pilots (2); Planners (5); Geographers (11).

STATEMENT OF CAPABILITIES:
Provide services in Photo Interpretation, Remote Sensing, Cartography & Graphics,
Aerial Photogrammetry, Geography, Geology, Earth Sciences, Environmental Science,
Technical Writing & Editing, Word Processing, Architecture, Land & Site Planning,
Land Surveying, and all facets of Civil Engineering including Water Resources,
Development & Environmental Engineering.
FACILITIES AND SPECIAL EQUIPMENT

AIRCRAFT

n206 Cessna Turbocharged Skywagon (High altitude, long range, all weather navigational) (1)

CAMERAS, SCANNERS, AND OTHER REMOTE SENSORS

Zeiss RMK 15/23 Aerial Camera (color Corrected lens, IR Film Adaptor) (1) Parks Precision 6" F/L Aerial Camera (1)

FIELD SURVEY EQUIPMENT

Topcon DM-C2 (1) Hewlett-Packard Electric Distance Meters (HP500A) (3), T-2 Wild Theodolites (4), Precision Rods and 2nd order level equipment (2 metric rods, 3 Wild TIA levels), Trucks and full complement of equipment (10), Slump Cone (1), HP Ranger-Electric measuring device (1), Chase Air Meter (1), Watercraft (1), Speedy Moisture Test Kit (1)

PHOTOGRAPHIC PROCESSING EQUIPMENT

LogE Robertaon Copy and Enlarging/Reducing Camera (copy board 48"x72", Film Holder 54"x48", accuracy ± 0.001) (1), DuPont ERF Cronoflex II Film Processor (1), NuArc VP46 Vacuum Frame (with point light source) (1), Doubitt Vacuum Frames (with point light source) (2), Buckingham Graphics model 3040 Peel Coat Dryer (1), Macheth Dagger Light (1), NuArc H65T Hi-Intensity Light Source (Carbon Arc Light) (1), Berkey 2583-17 Stripping Punch (Triangular Control) (1), Hot Water immersion header (1), Morris Contact Printer (1), Curtis Aerial Film Dryer (1)

IMAGE INTERPRETATION, VIEWING AND MAPPING (NON-DIGITAL)

Kelsh three projector stereo plotter (1), Microscope camera (1), Kern PG2-AT stereo plotter (1), Kern PG-2 SFL stereo plotter (1), Sci-Tex Laser Scanner (1)

IMAGE INTERPRETATION, VIEWING AND MAPPING (DIGITAL)

H.Deil Foster Digitizer -3 axil (1), Kern PG2-AT-BC2B Digital Computerized stereo plotter (1)

DIGITIZING, PLOTTING AND GRAPHICS

Kern PG2-AT stereo plotter (1), Kern PG2-AT-BC2B Digital Computerized stereo Plotter (1), Kern GS-2-SFL stereo plotter (1)

OTHER COMPUTER PROCESSING

CDC System 1872 computer (1), CDC 752-10 CRTs (3), Magnetic Tape Drive/Disk storage units (3), High Speed Printers (2), calcomp 80: Drum Plotter (1), Timesharing with CDC systems 6400, 6600, 7600, Cyber 175 (Have had previous experience in developing Geographic Information Systems and currently provide this service.)

OTHER

Photo Interpretation Equipment: MS-27 Lietz Mirror Stereoscopes with Swing-In 1.5x magnifier, 3x binoculars and stereometer parallax measuring bar (2), Art-O-Graph Scale Change Projector (1), Five Drawer Flat Files (metal & wood) (50), Light Tables (dimensions indicate lighted area), Cartographic Equipment: Benedum Scribing Tool Sets (40), LeRoy Sets (15), Rapidograph Pen Sets (15), Locking Scribbling Tool Cabinets (8); Typesetting/Word Processing Equipment: IBM "Electronic Selectric Composer" (1), Addressograph-Multigraph "AM 850" Headliner (1), Xerox 850-CRT Word Processing Systems (4), Qx Level III Electronic Typewriter (1), Compugraphic "Easycoat 14" Waxer (2)
PRODUCTS AND SERVICES PROVIDED

**IMAGE PRODUCTS**
- Photo Mosaics; Photo Atlas Sheets; Halftone Image Prints; (s)Digital Mosaics; Digital Magnetic Tape.

**ENHANCED AND CORRECTED IMAGERY**
- Multitemporal Composites, Contrast Enhanced, Geometric Correction, Density Slice,
- Change Detection, Pseudo Stereo Photo Imagery; (s)Multisensor Composites Photo Imagery;
- Multitemporal Composites, Contrast Enhanced, Geometric Correction, Multisensor Composites Digital Imagery.

**PHOTOMETRIC PRODUCTS**
- Orthophotographs; Topographic Maps; Engineering Cross Sections; Stockpile Measurements;
- Earthwork Measurements; Digital Terrain Models; Digital Data Bases; Planimetric Maps;
- Photo-Contour Maps; Plan and Profile Sheets; Volumetric Calculations; Distance & Angle Measurements.

**INTERPRETED, THEMATIC PRODUCTS**
- Color Thematic Maps; Land Use Maps; Vegetation/Forestry Maps; Contour Weather Maps;
- Utility Maps; Acreage Tabulations; Geocoded Data Bases; Thematic Map Overlays;
- Geologic Maps; Transportation Maps; Soils Maps; Tax Maps; Digital Magnetic Tapes.

**PROJECT PLANNING AND SUPPORT SERVICES**
- Problem Definition; Feasibility Analysis; Selection of Existing Imagery; Ground Control Survey; Data Base Preparation; Air Support Operations; Sensor Selection/Evaluation;
- Sampling Strategy Design; Ancillary Data Collection; Ground Truth Survey; Data Management; (s)Map Digitizing, Gray Level Digitizing.

**AERIAL SURVEY**
- Low Altitude Photography; High Altitude Photography; CIR; (s)Thermal Infrared, Radar,
- Geophysical, Multispectral Scanner.

**IMAGE PROCESSING, INTERPRETATION AND ANALYSIS**
- Photographic Laboratory Processing; Manual Image Interpretation; (s) Digital Image Processing;
- Batch Digital Image/Analysis/Classification; Interactive Digital Image/Analysis/Classification

**PHOTOMETRIC ENGINEERING**
- Aerotriangulation; Orthophotomapping; Planimetric Mapping; Stereo Digitizing; Cross-Sectioning; Stereocompilation; Topographic Mapping-Small Scale; Topographic Mapping-Large Scale; Volumetric Calculation; RAD Mapping (microscope camera).

**REPRODUCTION**
- Drafting & Scribing; Cartographic Reproduction; Automated Drafting/Plotting;
- Printing.

**OTHER SERVICES**
- Remote Sensing Research; Remote Sensing Training; Statistical Modeling; Consultant Services;
- Interactive Computer Graphics; Computer Services; (s)Turnkey Systems
- Sales/Leasing/Service, Hardware Design/Development, Software Design/Development,
- Equipment Sales/Leasing/Service, Software Sales/Leasing.

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**NAME:** HAMMON, JENSEN, WALLEN & ASSOCIATES, INC.

**ADDRESS:**
8407 Edgewater Drive
Oakland, California 94621
(415) 638-6122
Axel R. Hoffman
665 F Street
Arcata, CA

**YEARS IN BUSINESS:** 30

**PROJECTS COMPLETED:** 3,000

**REGION SERVED:** U.S., Int'l.

**TOTAL APPLICABLE EMPLOYEES:** 10

**TYPES OF REMOTE SENSING TECHNOLOGIES:**
- Low Altitude Aerial Photo
- Med Altitude Aerial Photo
- High Altitude Aerial Photo
- Manual Image Interpretations

**PERSONNEL & SKILLS REPRESENTED:**
- Management (2); Professional (3); Technical (5); Cartographers, Computer Equip Operators, Computer Programmers, Draftsmen, Engineers (civil, environ), Field Surveyors, Photogrammatists, Photogrammetric Equip Oper., Photo Interpreters, Photolab Technician, Pilots, Geographers (# not indicated).

**STATEMENT OF CAPABILITIES:**
Hammon, Jensen, Wallen and its subsidiary, Pacific Aerial Surveys, is an aerial photography, mapping and forestry consulting firm. Our mapping services cover the complete range of mapping from aerial photography, surveying, aerotriangulation, compilation, drafting to reproduction. Recently, we extended our capabilities into the computer cartography field. Our forestry department has utilized remote sensing for over 30 years and developed many techniques and procedures over this time period. At present, we are implementing software on an in-house computer system for Landsat tape processing.
HAMMON, JENSEN, WALLEN & ASSOCIATES, INC.

FACILITIES AND SPECIAL EQUIPMENT

AIRCRAFT
CESSNA 206, Turbocharged (1)

CAMERAS, SCANNERS, AND OTHER REMOTE SENSORS
Zeiss RMK A 15/23 (1)
RMK A 21/23 (1)

FIELD SURVEY EQUIPMENT
Hewlett-Packard 3820A (1)
Wild T2 (1)
Zeiss N12 (2)

PHOTOGRAPHIC PROCESSING EQUIPMENT
Kodak Supermatic Processor (1)
Log-Etronics (1)

PHOTOMETRIC PROCESSING EQUIPMENT
Zeiss Topocart (1)
Santoni G6 (1)
Kern H82 (1)

IMAGE INTERPRETATION, VIEWING AND MAPPING (NON-DIGITAL)
Stereoscopes (10)
Enlarger (2)

IMAGE INTERPRETATION, VIEWING AND MAPPING (DIGITAL)

DIGITIZING, PLOTTING AND GRAPHICS
Talos Digitizer (1)
Data Technology Plotter (1)
PDP III Computer + Graphics Software (1)

OTHER COMPUTER PROCESSING
Zeiss Orthophotoscopes (1)
K & E Rectifier (1)

HAMMON, JENSEN, WALLEN & ASSOCIATES, INC.

PRODUCTS AND SERVICES PROVIDED

IMAGE PRODUCTS

ENHANCED AND CORRECTED IMAGERY
(c) Geometric Correction, Pseudo Stereo Photo Imagery; (d) Geometric Correction Digital Imagery.

PHOTOMETRIC PRODUCTS

INTERPRETED, THEMATIC PRODUCTS
(c) Land Use Maps, Vegetation/Forestry Maps, Utility Maps, Acreage Tabulations, Geocoded Data Bases, Thematic Map Overlays; (d) Geologic Maps, Transportation Maps, Soils Maps, Digital Magnetic Tapes; (e) Tax Maps.

PROJECT PLANNING AND SUPPORT SERVICES
Problem Definition; Feasibility Analysis; Selection of Existing Imagery; Ground Control Survey; Map Digitizing; Data Base Preparation; Air Support Operations; Sensor Selection/Evaluation; Sampling Strategy Design; Ground Truth Survey; Data Management; (a) Ancillary Data Collection, Gray Level Digitizing.

AERIAL SURVEY
Low Altitude Photography; (a) Thermal Infrared, High Altitude Photography.

IMAGE PROCESSING, INTERPRETATION AND ANALYSIS
Photographic Laboratory Processing; Manual Image Interpretation; (a) Digital Image Processing.

PHOTOMETRIC ENGINEERING
Aerotriangulation; Orthophotomapping; Planimetric Mapping; Stereo Digitizing; Cross-Sectioning; Stereocompilation; Topographic Mapping-Small Scale; Topographic Mapping-Large Scale; Volumetric Calculation; Digital Mapping.

REPRODUCTION
Drafting & Scribing; Cartographic Reproduction; Automated Drafting/Plotting; (a) Printing.

OTHER SERVICES
Remote Sensing Training; Statistical Modeling; Consultant Services; Interactive Computer Graphics; Computer Services; Software Design/Development; Software Sales/Leasing.
NAME: M. J. HARDEN ASSOCIATES, INC.

ADDRESS(ES) & CONTACT(S)
1019 Admiral Blvd.
Kansas City, Missouri 64106
(816) 842-0141
Robert V. Boushaha, Pres.

YEARS IN BUSINESS: _______ SMALL BUSINESS CONTRACTOR? _______
PROJECTS COMPLETED: _______ MINORITY-OWNED BUSINESS? _______
REGION SERVED: _______ TOTAL APPLICABLE EMPLOYEES: 50

TYPES OF REMOTE SENSING TECHNOLOGIES:

PERSONNEL & SKILLS REPRESENTED:
(not directly involved in remote sensing)
Management (3); Professional (2); Technical (35); Cartographers (2); Computer Equip.
Operators (3); Computer Programmers (1); Draftsmen (4); Engineers (civil, environ.) (1);
Photogrammatists (2); Photogrammetric Equip. Oper. (9); Photointerpreters (2);
Photolab Technicians (6); Pilots (2); Aerial Camera man (2).

STATEMENT OF CAPABILITIES:
Aerial photography; ground control surveys; analytical acro-triangulation; stereo-
compilation; drafting; photo lab reproductions; interactive computer graphics;
stockpile inventories.

M. J. HARDEN ASSOCIATES, INC.

FACILITIES AND SPECIAL EQUIPMENT

AIRCRAFT
Cessna 206 (1)
Aero Commander (1)

CAMERAS, SCANNERS, AND OTHER REMOTE SENSORS
Zeiss RMK-A-15/23 6" (2)

FIELD SURVEY EQUIPMENT
Everything.

PHOTOGRAPHIC PROCESSING EQUIPMENT
Brown Admiral 31" copy camera; K & E HE-12 Camera; Log-E-Tronic Printers (2).

PHOTOGRAMMETRIC PROCESSING EQUIPMENT

IMAGE INTERPRETATION, VIEWING AND MAPPING (NON-DIGITAL)

IMAGE INTERPRETATION, VIEWING AND MAPPING (DIGITAL)

DIGITIZING, PLOTTING AND GRAPHICS
M & S Interactive Graphic System with 4 stations, 2 stereo-plotter interfaces.

OTHER COMPUTER PROCESSING

OTHER
PRODUCTS AND SERVICES PROVIDED

IMAGE PRODUCTS
(a)Color Composite Neg. Transp., Pos. Transp., Cont. Prints, Enlgd. Prints; (c)Photo
Mosaics, Photo Atlas Sheets, Halftone Image Prints.

ENHANCED AND CORRECTED IMAGERY

PHOTOGRAVIMETRIC PRODUCTS
(c)Orthophotos, Topographic Maps, Engineering Cross Sections, Stockpile Measurements,
Earthwork Measurements, Digital Data Bases, Planimetric Maps, Photo-Contour Maps,
Plan and Profile Sheets, Volumetric Calculations, Distance & Angle Measurements.

INTERPRETED, THEMATIC PRODUCTS
(c)Utility Maps, Acreage Tabulations, Geocoded Data Bases, Tax Maps, Digital Magnetic
Tapes.

PROJECT PLANNING AND SUPPORT SERVICES
Problem Definition; Feasibility Analysis; Ground Control Survey; Map Digitizing;
Data Base Preparation; Air Support Operations; Ground Truth Survey.

AERIAL SURVEY
Low Altitude Photography; Thermal Infrared; High Altitude Photography.

IMAGE PROCESSING, INTERPRETATION AND ANALYSIS

PHOTOGRAVIMETRIC ENGINEERING
Aerotriangulation: Orthophotomaps; Planimetric Mapping; Stereo Digitizing; Cross-
Sectioning; Stereocompilation; Topographic Mapping-Small Scale; Topographic Mapping-
Large Scale; Volumetric Calculation.

REPRODUCTION
Drafting & Scribing; Cartographic Reproduction; Automated Drafting/Plotting.

OTHER SERVICES
Consultant Services; Interactive Computer Graphics.

NAME: HARZA ENGINEERING COMPANY
ADDRESS(ES) & CONTACT(S)
150 S. Wacker Drive
Chicago, IL 60606
(312) 855-7000
Elaine I. Marinello
Phoenix, AZ
Minneapolis, MN
Denver, CO

YEARS IN BUSINESS: 3
SMALL BUSINESS CONTRACTOR? No
PROJECTS COMPLETED: 
MINORITY-OWNED BUSINESS? No
REGION SERVED: Pa, La, V, VII
TOTAL APPLICABLE EMPLOYEES: 65

TYPES OF REMOTE SENSING TECHNOLOGIES:
Low Altitude Aerial Photo; Med Altitude Aerial Photo; High Altitude Aerial Photo;
Aerial Multispectral Scanner; Radar; Landsat MSS; Landsat RBV; Skylab; Weather
Satellite; Digital Image Interpretations (Landsat MSS); Manual Image Interpretations
(Landsat, Radar, Aerial Photos and Imagery).

PERSONNEL & SKILLS REPRESENTED:
Management (3); Professional (37); Technical (17); Other (8); Cartographers (1);
Computer Equip Operators (2); Computer Programmers (2); Draftsmen (2); Engineers
(civil, environ.) (10); Engineers (electrical) (3); Field Surveyors (2); Soil
Scientists (4); Social Scientists (1); Photointerpreters (10); Physical Scientists
(10); Planners (5); Geographers (2); Geologists (5); Hydrologists (3).

STATEMENT OF CAPABILITIES:
Manual and automatic classification of land and vegetative cover types, surface
gleologic features, drainage networks, water quality parameters. Generation of color-
coded digital classification maps. Applications: watershed management; environmental
monitoring; water quality analysis; stability analysis; transmission line routing;
visual impact analysis; recreation planning; streamflow forecasting; reservoir rim
demarcation.
FACILITIES AND SPECIAL EQUIPMENT

AIRCRAFT

CAMERAS, SCANNERS, AND OTHER REMOTE SENSORS

FIELD SURVEY EQUIPMENT

PHOTOGRAPHIC PROCESSING EQUIPMENT
Diazor Contact Print Processor (1)

PHOTOGRAMMETRIC PROCESSING EQUIPMENT

IMAGE INTERPRETATION, VIEWING AND MAPPING (NON-DIGITAL)
Stereo-Microscope (1)
Stereoscopes (3)

IMAGE INTERPRETATION, VIEWING AND MAPPING (DIGITAL)
Harris 800 (1)
Amphal V8 (1)

DIGITIZING, PLOTTING AND GRAPHICS
Tektronix Graphics Terminal (1)
Calcomp Plotter (1)

OTHER COMPUTER PROCESSING

OTHER

PRODUCTS AND SERVICES PROVIDED

IMAGE PRODUCTS
(c) Color Composite Pos. Transp.; Photo Mosaics; Digital Mosaics; Digital Magnetic Tape; (a) B&W, Color, Color Infrared Neg. Transp., Pos. Transp., Cont. Prints, Enlarged Prints; Color Composite Cont. Prints, Enlarged Prints

ENHANCED AND CORRECTED IMAGERY
Psuedo Stereo Photo Imagery; Density Slice Digital Imagery.

PHOTOGRAMMETRIC PRODUCTS
Engineering Cross Sections; Digital Terrain Models; Volumetric Calculations; (c) Planimetric Maps, Photo-Contour Maps.

INTERPRETED, THEMATIC PRODUCTS
Land Use Maps; Vegetation/Forestry Maps; Acreage Tabulations; Geologic Maps; Soils Maps.

PROJECT PLANNING AND SUPPORT SERVICES
Problem Definition; Feasibility Analysis; Selection of Existing Imagery; Ground Control Survey; Ma digitizing; Ground Truth Survey; Gray Level Digitizing; Data Management; (a) Map digitizing.

AERIAL SURVEY
(a) Low Altitude Photography, Thermal Infrared, Radar, Geophysical, High Altitude Photography, Multispectral Scanner.

IMAGE PROCESSING, INTERPRETATION AND ANALYSIS
Digital Image Processing; Manual Image Interpretation.

PHOTOGRAMMETRIC ENGINEERING

REPRODUCTION
Drafting & Scribing; Automated Drafting/Plotting.

OTHER SERVICES
Statistical Modeling; Consultant Services; Interactive Computer Graphics
NAME: HEIMBach-STANTURF, INC.

ADDRESS(ES) & CONTACT(S)
119 King Road West
Ithaca, NY 14850
(607) 277-4468
John Stanturf

YEARS IN BUSINESS: 1
PROJECTS COMPLETED: 2
REGION SERVED: U.S., Int'l.

TYPES OF REMOTE SENSING TECHNOLOGIES:
Low Altitude Aerial Photo; Med Altitude Aerial Photo; High Altitude Aerial Photo;
Aerial Multispectral Scanner; Landsat MSS; Manual Image Interpretations.

PERSONNEL & SKILLS REPRESENTED:
Professional (1); Technical (1); Computer Programmers (1); Soil Scientists (1);
Photointerpreters (2).

STATEMENT OF CAPABILITIES:
Heimbuch-Stanturf, Inc. specializes in quantitative methods for natural resources
management. We are oriented toward computer-assisted analysis and interpretation
of remotely sensed data, especially for applications to management problems in
forestry, fisheries, and land use planning. We maintain a small permanent staff
and draw on students and faculty at Cornell University as needed. Staff members
have academic backgrounds in forestry, fishery management, soil science, and
statistics, as well as remote sensing.

PRODUCTS AND SERVICES PROVIDED

IMAGE PRODUCTS
(s)B&W, Color, Color Infrared, Color Composite, Negative Transparencies, Positive
Transparencies, Contact Prints, Enlarged Prints.

ENHANCED AND CONNECTED IMAGERY
(s) Multitemporal Composites

PHOTOGRAMMETRIC PRODUCTS

INTERPRETED, THEMATIC PRODUCTS
(c) Color Thematic Maps, Land Use Maps, Vegetation/Forestry Maps, Average Tabulations,
Geocoded Data Bases, Thematic Map Overlays, Soils Maps.

PROJECT PLANNING AND SUPPORT SERVICES
Problem Definition; Feasibility Analysis; Selection of Existing Imagery; Data Base
Preparation; Sensor Selection/Evaluation; Sampling Strategy Design; Ancillary Data
Collection; Ground Truth Survey; Data Management; (s) Ground Control Survey, Map
Digitizing, Air Support Operations, Gray Level Digitizing.

AERIAL SURVEY
(s) Low Altitude Photography, High Altitude Photography, Multispectral Scanner.

IMAGE PROCESSING, INTERPRETATION AND ANALYSIS
Manual Image Interpretation; Analysis of Data Derived from Remotely Sensed Products;
(s) Digital Image Processing, Batch Digital Image/Analysis/Classification, Interactive
Digital Image/Analysis/Classification, Photographic Laboratory Processing.

PHOTOGRAMMETRIC ENGINEERING

REPRODUCTION
(s) Drafting & Scribing, Cartographic Reproduction, Printing.

OTHER SERVICES:
Remote Sensing Research; Remote Sensing Training; Statistical Modeling; Consultant
Services; Computer Services; Software Design/Development.
NAME: HENDERSON AERIAL SURVEYS, INC.

ADDRESS(ES) & CONTACT(S)
5125 West Broad Street
Columbus, Ohio 43228
(614) 878-3925
Norman L. Henderson/Larry A. Humford

YEARS IN BUSINESS: 20
PROJECTS COMPLETED: 2,500
REGION SERVED: III, IV, V, VII

TYPES OF REMOTE SENSING TECHNOLOGIES:
Low Altitude Aerial Photo; Med Altitude Aerial Photo

PERSONNEL & SKILLS REPRESENTED:
Management (2); Professional (2); Technical (8); Engineers (civil, environ.) (1);
Photogramatists (3); Photolab Technicians (2); Pilots (1); Photogrammetric Equip.
Oper. (3)

STATEMENT OF CAPABILITIES:
Photo Lab - Complete B&W Services including Copy Camera.
Stereo Instrumentation - Wild A-8 & A-10 with direct readout to Data General Nova
2/10 Computer.
Aerotriangulation - Fully analytical Kern Comparator point transfer instrument with
Data General Computer and program by John F. Kenefick. Specialty is large scale
topo maps for Engineers, 1:240 to 1:600

FACILITIES AND SPECIAL EQUIPMENT

AIRCRAFT
Piper Aztec (1)

CAMERAS, SCANNERS, AND REMOTE SENSORS
Wild RC-8 (1)

FIELD SURVEY EQUIPMENT:
Wild T-2 (1)
Ranger EDM (1)

PHOTOGRAPHIC PROCESSING EQUIPMENT
DuPont ERF (1)
Kodak Versanet (1)

PHOTOGRAMMETRIC PROCESSING EQUIPMENT
ACTI Engineering Copy Camera (1)

IMAGE INTERPRETATION, VIEWING AND MAPPING (NON-DIGITAL)
Kelsh (1)

IMAGE INTERPRETATION, VIEWING AND MAPPING (DIGITAL)
Wild A-8 (1)
Wild A-10 (1)

DIGITIZING, PLOTTING AND GRAPHICS

OTHER COMPUTER PROCESSING

OTHER
Kern Comparator (CPMI) Point Transfer Instrument (1)
Data General Computer (1)
HENDERSON AERIAL SURVEYS, INC.

PRODUCTS AND SERVICES PROVIDED

IMAGE PRODUCTS
B&W, Color, Color Infrared, Color Composite Neg. Transp., Pos. Transp; B&W Contact Prints, Enlarged Prints; (s) Color, Color Infrared, Color Composite Contact Prints, Enlarged Prints; Photo Mosaics; Photo Atlas Sheets; Analog Magnetic Tape; Halftone Image Prints; Digital Magnetic Tape.

PHOTOGRAVOMETRIC PRODUCTS
Topographic Maps; Engineering Cross Sections; Stockpile Measurements; Earthwork Measurements; Digital Data Bases; Planimetric Maps; Photo-Contour Maps; Plan and Profile Sheets; Volumetric Calculations; Distance & Angle Measurements; (s) Orthophotos

INTERPRETED, THEMATIC PRODUCTS
Acreage Tabulations; (c) utility Maps.

PROJECT PLANNING & SUPPORT SERVICES
Ground Contrl Survey; Map Digitizing.

AERIAL SURVEY
Low Altitude Photography; High Altitude Photography

IMAGE PROCESSING, INTERPRETATION AND ANALYSIS
Photographic Laboratory Processing

PHOTOGRAVOMETRIC ENGINEERING
Aerotriangulation; Planimetric Mapping; Stereo Digitizing; Cross-Sectioning; Stereocompilation; Topographic Mapping-Small Scale; Topographic Mapping-Large Scale; Volumetric Calculation; (s) Orthophotomapping.

REPRODUCTION
Drafting & Scribing; Cartographic Reproduction; Printing (s) Automated Drafting/Plotting.

OTHER SERVICES
Computer Services.

NAME: HUNTING SURVEYS & CONSULTANTS

ADDRESS(ES) & CONTACT(S)
790 Madison Avenue
New York, NY 10021
(212) 988-9600
R. H. Brower
Borehamwood, England
Herts, England

YEARS IN BUSINESS: 30

PROJECTS COMPLETED: 500 (est.)

REGION SERVED: Int’l.

TYPES OF REMOTE SENSING TECHNOLOGIES:
Low Altitude Aerial Photo; Med Altitude Aerial Photo; High Altitude Aerial Photo; Aerial Multispectral Scanner; Aerial Thermal Infrared Scanner; Radar; Geophysical Survey; Landsat MSS; Landsat RBV; Seasat; HCM; Skylab; Digital Image Interpretations.

PERSONNEL & SKILLS REPRESENTED:

STATEMENT OF CAPABILITIES:
Remote sensing techniques have been applied by Hunting to the study of Earth resources for 30 years. Developments in aerial photography, satellite sensors, image processing, fracture analysis, airborne geophysics and side-look-radar interpretation have been made parts of projects in over 150 countries. Interactive interpretation of digital imagery is applied to studies of all natural resources; land use, water resources, minerals, petroleum.

*Staff total 700. Approximately half involved periodically.
HUNTING SURVEYS & CONSULTANTS

FACILITIES AND SPECIAL EQUIPMENT

AIRCRAFT
Dove, Navaho, DC-3 (2 owned; 20 lease arrangements)

CAMERAS, SCANNERS, AND OTHER REMOTE SENSORS
All types conventional aerial cameras (2-BC10)
Gamma Ray Spectrometers (5)
Airborne Magnetometers (high sensitivity to normal) (5)

FIELD SURVEY EQUIPMENT
Full range of the most modern field equipment, including tellurometers, distomat, etc., for staff of over 100 surveyors.

PHOTOGRAPHIC PROCESSING EQUIPMENT
Full photo laboratories.

PHOTOMETRIC PROCESSING EQUIPMENT
Digital mapping system connected to Wild A8 Stereoplotter through computer to Flatbed plotter.

IMAGE INTERPRETATION, VIEWING AND MAPPING (NON-DIGITAL)
I²'S Density Slicer, IDP 300P (Plessy) equipment. Television Viewers.

IMAGE INTERPRETATION, VIEWING AND MAPPING (DIGITAL)
International Imaging System facilities fully operational. Technical maintenance in-house.

DIGITIZING, PLOTTING AND GRAPHICS
Ferranti graphic digitizer.

OTHER COMPUTER PROCESSING
(2) HP-1000 units in-house, plus FDP used for photogrammetric processing equipment.

OTHER

PRODUCTS AND SERVICES PROVIDED

IMAGE PRODUCTS

ENHANCED AND CORRECTED IMAGERY
(c) Multitemporal Composites, Contrast Enhanced, Geometric Correction, Density Slice, Change Detection, Multi-sensor Composites, Radiometric Correction, Image Resampling Photo and Digital Imagery.

PHOTOMETRIC PRODUCTS
(c) Topographic Maps, Engineering Cross Sections, Stockpile Measurements, Earthwork Measurements, Digital Terrain Models, Digital Data Bases, Planimetric Maps, Photo-Contour Maps, Plan and Profile Sheets, Volumetric Calculations, Distance & Angle Measurements.

INTERPRETED, THEMATIC PRODUCTS
(c) Land Use Maps, Vegetation/Forestry Maps, Acreage Tabulations, Geocoded Data Bases, Thematic Map Overlays, Geologic Maps, Transportation Maps, Soils Maps, Digital Magnetic Tapes.

PROJECT PLANNING AND SUPPORT SERVICES
Selection of Existing Imagery; Ground Control Survey; Map Digitizing; Data Base Preparation; Sensor Selection/Evaluation; Sampling Strategy Design; Ground Truth Survey.

AERIAL SURVEY
Low Altitude Photography; Thermal Infrared; Radar; Radar Interpretation; Geophysical; High Altitude Photography; Multi-spectral Scanner.

IMAGE PROCESSING, INTERPRETATION AND ANALYSIS
Digital Image Processing; Batch Digital Image/Analysis/Classification; Interactive Digital Image/Analysis/Classification; Photographic Laboratory Processing; Manual Image Interpretation.

PHOTOMETRIC ENGINEERING
Aerotriangulation; Planimetric Mapping; Stereo Digitizing; Cross-Sectioning; Stereocompilation; Topographic Mapping-Small Scale; Topographic Mapping-Large Scale; Volumetric Calculation.

REPRODUCTION
Drafting & Scribing; Cartographic Reproduction; Automated Drafting/Plotting; Printing.

OTHER SERVICES
Remote Sensing Research; Remote Sensing Training; Consultant Services.
**NAME:** INTERNATIONAL MAPPING UNLIMITED

**ADDRESS:*** 4343 39th Street, N.W. Washington, D.C. 20016
(202) 244-4032

**YEARS IN BUSINESS:** 17

**PROJECTS COMPLETED:** 50

**REGION SERVED:** Int’l

**TOTAL APPLICABLE EMPLOYEES:** 2

**TYPES OF REMOTE SENSING TECHNOLOGIES:**
- Low Altitude Aerial Photo; Mid Altitude Aerial Photo; Landsat MSS; Digital Image Interpretations

**PERSONNEL & SKILLS REPRESENTED:**
- Management (1); Professional (1)
- Geographers (1)

**STATEMENT OF CAPABILITIES:**
Develop Special map subject methodologies, execute that methodology, compile map, construct printing components, construct country LandSat mosaics from computer generated edge-enhanced color transparencies with infrastructure and subject annotations.

**PRODUCTS AND SERVICES PROVIDED**

**IMAGE PRODUCTS**
- (a) Raw, Color, Color Infrared, and Color Composite Positive Transparencies, Contact Prints and Enlarged Prints; Halftone Image Prints; Digital Magnetic Tape
- (c) Photo Mosaics; Digital Mosaics

**ENHANCED AND CORRECTED IMAGERY**
- Multitemporal Composites; Contrast Enhanced; Geometric Correction; Density Slice; Change Detection

**PHOTOGRAFMETRIC PRODUCTS**
- (c) Planimetric Maps

**INTERPRETED, THEMATIC PRODUCTS**
- (c) Color Thematic Maps; Land Use Maps; Vegetation/Forestry Maps; Acreage Tabulations; Geocoded Data Bases; Thematic Map Overlays; Geologic Maps; Transportation Maps; Soils Maps; Tax Maps

**PROJECT PLANNING AND SUPPORT SERVICES**
- Problem Definition; Feasibility Analysis; Selection of Existing Imagery; Ground Control Survey; Data Base Preparation; Ground Truth Survey; Data Management; (c) Map Digitizing; Air Support Operations

**AERIAL SURVEY**
- Multispectral Scanner; (c) Low Altitude Photography; Thermal Infrared; Radar; Geophysical; High Altitude Photography

**IMAGE PROCESSING, INTERPRETATION AND ANALYSIS**
- Batch Digital Image/Analysis/Classification; Interactive Digital Image/Analysis/Classification; Manual Image Interpretation; (c) Digital Image Processing; Photographic Laboratory Processing

**PHOTOGRAFMETRIC ENGINEERING**
- Planimetric Mapping; (c) Cross-Sectioning; Stereocompilation

**REPRODUCTION**
- Drafting & Scribing; Cartographic Reproduction; (c) Printing

**OTHER SERVICES**
- Remote Sensing Research; Statistical Modeling; Consultant Services; (c) Interactive Computer Graphics; Hardware Design/Development; Software Design/Development
NAME: INTERPRETATION SYSTEMS INCORPORATED

ADDRESS(ES) & CONTACT(S)
6322 College Blvd.
Overland Park, Kansas 66211
(913) 642-8700
D.C. Koger or J.D. Lent

(Log/Tronics Inc.)
7001 Loisdale Road
Springfield, Virginia 22150
(703) 971-1490

YEARS IN BUSINESS: 11
PROJECTS COMPLETED: 250
REGION SERVED: U.S. & Int'l.

TYPES OF REMOTE SENSING TECHNOLOGIES:
Low Altitude Aerial Photo; Med Altitude Aerial Photo; High Altitude Aerial Photo;
Aerial Multispectral Scanner; Aerial Thermal Infrared Scanner; Radar; Geophysical
Survey; Landsat MSS; Landsat RRV; Seasat; COM: Skylab; Weather Satellite;
Digital Image Interpretations; Manual Image Interpretations

PERSONNEL & SKILLS REPRESENTED:
Management (2); Professional (1); Technical (2)
Computer Equip Oper. (1); Computer Programmers (2); Electrical Engineers (2);
Image Processing Equip. Oper. (1); Social Scientists (1); Photointerpreters

STATEMENT OF CAPABILITIES:
Manufactures analog and digital systems for image analysis applications. Digital
systems permit high-speed processing, image manipulation, and enhancements.
A patented hardware technique allows color image composites consistent with human
visual perception, providing added advantages over traditional red-green-blue
additive color techniques. EARTHVIEW, designed specifically for LANDSAT feature
classifications, affords a full range of image statistics, enhancements, and
hardcopy storage of results. It accommodates various inputs and outputs: floppy disks,
hard disks, magnetic tapes, and color fiber hardcopy. Standard video input digitizing
and pseudo 3-dimensional display are options. Heavy emphasis is placed on system's
ease of use. Personnel with no computer experience can operate the system after only
a week's training.

FACILITIES AND SPECIAL EQUIPMENT

AIRCRAFT

CAMERAS, SCANNERS, AND OTHER REMOTE SENSORS
TV Cameras; Vidicon

FIELD SURVEY EQUIPMENT

PHOTONIC PROCESSING EQUIPMENT

PHOTOGRAMMETRIC PROCESSING EQUIPMENT

IMAGE INTERPRETATION, VIEWING AND MAPPING (NON-DIGITAL)
System 130 for in-house demonstration (1)

IMAGE INTERPRETATION, VIEWING AND MAPPING (DIGITAL)
VIEWs, EARTHVIEW for in-house demonstration (2)

DIGITIZING, PLOTTING AND GRAPHICS
Capabilities offered as options to digital system technology. (1)

OTHER COMPUTER PROCESSING
Array Processor capabilities (1)

OTHER
INTERPRETATION SYSTEMS INCORPORATED

PRODUCTS AND SERVICES PROVIDED

IMAGE PRODUCTS

B&W, Color, Color Infrared, and Color Composite Negative Transparencies, Positive Transparencies, Contact Prints and Enlarged Prints; Digital Magnetic Tape

ENHANCED AND CORRECTED IMAGERY

Photo & Digital; Multitemporal Composites; Contrast Enhanced; Density Slice; Change Detection; Multisensor Composites; (c) Photo & Digital Geometric Correction; Image Resampling; Radiometric Correction; Pseudo Stereo

PHOTOGRAHAMMETRIC PRODUCTS

INTERPRETED, THEMATIC PRODUCTS

Color Thematic Maps; Thematic Map Overlays; Digital Magnetic Tapes; (c) Color Thematic Maps; Thematic Map Overlays

PROJECT PLANNING AND SUPPORT SERVICES

AERIAL SURVEY

(c) High Altitude Photography; Multispectral Scanner

IMAGE PROCESSING, INTERPRETATION AND ANALYSIS

Digital Image Processing; Interactive Digital Image/Analysis/Classification

PHOTOGRAHAMMETRIC ENGINEERING

REPRODUCTION

OTHER SERVICES

Remote Sensing Training; Turnkey Systems Sales/Leasing/Service; (c) Consultant Services

REMOTE SENSING EQUIPMENT/SYSTEMS PROVIDED

REMOTE SENSOR SYSTEMS

VIEWING EQUIPMENT

Sell & Lease Density Slicers

PHOTOGRAHAMMETRIC EQUIPMENT

DIGITAL IMAGE PROCESSING EQUIPMENT

Sell Film Output Recorders; Sell & Lease B&W Image Displays; Image Digitizers; Color Image Displays

SOFTWARE

INTEGRATED SYSTEMS

Sell & Lease Image Enhancement; Multispectral Classification

OTHER EQUIPMENT

Sell & Lea. • Interactive Graphics Systems
NAME: ITEK OPTICAL SYSTEMS

ADDRESS(ES) & CONTACT(S)

10 Maguire Road
Lexington, Massachusetts 02134
(617) 276-2502
Ron Ondrejka

1700 North Moore Street, Suite 1910
Arlington, Virginia 22209
(703) 533-2030
Lloyd Ball

YEARS IN BUSINESS: 23
PROJECTS COMPLETED: __________
REGION SERVED: __________

TYPES OF REMOTE SENSING TECHNOLOGIES:
Low Altitude Aerial Photo; Med Altitude Aerial Photo; High Altitude Aerial Photo; Aerial Multispectral Scanner; Aerial Thermal Infrared Scanner; Radar; Laser Scanner; Geophysical Survey; Landsat MSS; Landsat RBV; Skylab; Digital Image Interpretations

PERSONNEL & SKILLS REPRESENTED:
Management (4); Professional (10); Technical (20)
Computer Equip. Oper.; Computer Programmers; Photogrammatists; Photointerpreters; Photolab Technicians

STATEMENT OF CAPABILITIES:
Itek means Information Technology. The principal business of Itek's Optical Systems Division is the collection, processing, and display of information associated with images. Itek is a world leader in the technologies of advanced optics, photography, and electro-optics. The Optical Systems Division applies these technologies to customer needs in the fields of military reconnaissance and surveillance, mapping and remote sensing, scientific exploration, and industrial measurement

PRODUCTS AND SERVICES PROVIDED

IMAGE PRODUCTS

ENHANCED AND CORRECTED IMAGERY

PHOTOGRAMMETRIC PRODUCTS

INTERPRETED, THEMATIC PRODUCTS

PROJECT PLANNING AND SUPPORT SERVICES
Problem Definition; Feasibility Analysis; Selection of Existing Imagery; Data Base Preparation; Sensor Selection/Evaluation; Data Management

AERIAL SURVEY

IMAGE PROCESSING, INTERPRETATION AND ANALYSIS
Digital Image Processing; Interactive Digital Image/Analysis/Classification; Manual Image Interpretation

PHOTOGRAMMETRIC ENGINEERING

REPRODUCTION

OTHER SERVICES
Remote Sensing Research; Remote Sensing Training; Consultant Services; Interactive Computer Graphics; Computer Services; Turnkey Systems Sales/Leasing/Service; Hardware Design/Development; Software Design/Development; Equipment Sales/Leasing/Service; Software Sales/Leasing
ITEK OPTICAL SYSTEMS

REMOTE SENSING EQUIPMENT/SYSTEMS PROVIDED

REMOTE SENSOR SYSTEMS
Sell Reconnaissance Cameras; Panoramic Cameras; Metric Cameras; Multispectral Cameras; Multispectral Scanners

VIEWING EQUIPMENT
Sell Color Additive Viewers

PHOTOGRAMMETRIC EQUIPMENT

DIGITAL IMAGE PROCESSING EQUIPMENT
Sell Image Digitizers; Film Output Recorders

SOFTWARE
Sell Geometric Correction; Radiometric Correction; Image Enhancement

INTEGRATED SYSTEMS
Sell Geometric Correction; Radiometric Correction; Image Enhancement

OTHER EQUIPMENT
Sell X-Y Coordinate Digitizer; Interactive Graphics Systems; Geographic Information Systems; Sensor Evaluation; Sensor Test/Checkout; Lease Geographic Information Systems

NAME: JAX STATE GEO-CARTOGRAPHIC SERVICES

ADDRESS(ES) & CONTACT(S)
Dept. of Geography; Jacksonville State University
Jacksonville, Alabama 36265
(205) 435-9820 Ext. 301
Dr. Thomas F. Baucom

YEARS IN BUSINESS: 1

PROJECTS COMPLETED: 1

REGION SERVED: IV

TOTAL APPLICABLE EMPLOYEES: 6

TYPES OF REMOTE SENSING TECHNOLOGIES:
Low Altitude Aerial Photo; Med Altitude Aerial Photo; High Altitude Aerial Photo; Landsat MSS; Landsat HRV; Skylab

PERSONNEL & SKILLS REPRESENTED:
Professional (2); Technical (2); Other (2)
Cartographers (1); Draftsmen (2); Photointerpreters (2); Physical Scientists (1)

STATEMENT OF CAPABILITIES:
Services include photo interpretation of existing or requested imagery involving urban/rural land cover and land use inventory and analysis, and the inking or scribing of reproducible general purpose and thematic maps. Emphasis in general purpose mapping is upon planimetry; however, low level topographic mapping is available at a reasonable cost.
JAX STATE GEO-CARTOGRAPHIC SERVICES

FACILITIES AND SPECIAL EQUIPMENT

AIRCRAFT

CAMERAS, SCANNERS, AND OTHER REMOTE SENSORS

FIELD SURVEY EQUIPMENT

PHOTOGRAPIHIC PROCESSING EQUIPMENT

PHOTOGRAPIHIC PROCESSING EQUIPMENT

IMAGE INTERPRETATION, VIEWING AND MAPPING (NON-DIGITAL)

Stereo Zoom Transfer Scope (1)
Map-a-Graph (1)
Mirror Stereoscopes (6)

IMAGE INTERPRETATION, VIEWING AND MAPPING (DIGITAL)

DIGITIZING, PLOTTING AND GRAPHICS

OTHER COMPUTER PROCESSING

PRODUCTS AND SERVICES PROVIDED

IMAGE PRODUCTS

(s) B&W, Color, Color Infrared & Color Composite Negative Transparencies, Positive Transparencies, Contact Prints, and Enlarged Prints; (c) Photo Mosaics; (a) Halftone Image Prints

ENHANCED AND CORRECTED IMAGERY

PHOTOGRAPIHIC PRODUCTS

(c) Topographic Maps; Planimetric Maps; Photo-Contour Maps; Plan and Profile Sheets;
(a) Engineering Cross Sections; Distance & Angle Measurements

INTERPRETED, THEMATIC PRODUCTS

(c) Color Thematic Maps; Land Use Maps; Vegetation/Forestry Maps; Utility Maps;
Acreage Tabulations; Geocoded Data Bases; Thematic Map Overlays; Transportation Maps;
Soils Maps; Tax Maps

PROJECT PLANNING AND SUPPORT SERVICES

Problem Definition; Feasibility Analysis; Selection of Existing Imagery; Data Base
Preparation; Sensor Selection/Evaluation; Sampling Strategy Design; Ancillary Data
Collection; Ground Truth Survey; Data Management; (c) Ground Control Survey; Air
Support Operations

AERIAL SURVEY

(c) Low Altitude Photography; Multispectral Scanner

IMAGE PROCESSING, INTERPRETATION AND ANALYSIS

Manual Image Interpretation; (c) Photographic Laboratory Processing

PHOTOGRAPIHIC ENGINEERING

Planimetric Mapping; Stereocompilation; Topographic Mapping-Small Scale; (c) Aero-
triangulation; Cross-Sectioning; Topographic Mapping-Large Scale; Volumetric Calculation

REPRODUCTION

Drafting & Scribing; (c) Cartographic Reproduction; Printing

OTHER SERVICES

Remote Sensing Research; Remote Sensing Training; Statistical Modeling; Consultant
Services; Computer Services
NAME: R.M. KEDDL & ASSOCIATES, INC.

ADDRESS(ES) & CONTACT(S)
1900 Sleepy Hollow Road
Library, Pennsylvania 15129
(412) 833-1115
Robert M. Keddal

YEARS IN BUSINESS: 
PROJECTS COMPLETED: 
REGION SERVED: II, III, IV, V
TYPES OF REMOTE SENSING TECHNOLOGIES:

PERSONNEL & SKILLS REPRESENTED:
Management (2); Professional (4); Technical (12); Other (2)
Cartographers (3); Computer Programmers (1); Civil, Environ. Engineers (2);
Field Surveyors (6); Soil Scientists (1); Photogrammatists (2); Photogrammetric
Equip. Oper. (1); Photointerpreters (1); Photolab Technicians (2); Pilots (1)

STATEMENT OF CAPABILITIES:
R.M. Keddal and Associates, Inc. has 14 years of experience in mapping and mapping
survey control. Typical projects, flood plain, highways, deep and surface mining.
Residential and commercial developments.

NAME: R.M. KEDDL & ASSOCIATES, INC.

FACILITIES AND SPECIAL EQUIPMENT

AIRCRAFT
Cessna 310 (1)

CAMERAS, SCANNERS, AND OTHER REMOTE SENSORS
Ziess FmK - 15/23 (1)
Pleogon Lens A4

FIELD SURVEY EQUIPMENT
Wild T2 and T1 (5)
E.D.M. Equipment (4)
Levels (5)

PHOTOGRAPIHIC PROCESSING EQUIPMENT
Kodak starter processor (1)

PHOTOCGRAMMETRIC PROCESSING EQUIPMENT
Ziess KG 30 Contact Printer (1)
Ziess TG 24 Aerial Film Dryer (1)
Ziess FE 120 Aerial Film Rewind Processor (1)

IMAGE INTERPRETATION, VIEWING AND MAPPING (NON-DIGITAL)

IMAGE INTERPRETATION, VIEWING AND MAPPING (DIGITAL)

DIGITIZING, PLOTTING AND GRAPHICS
Kelsh 3 Projector FPV Stereo Instrument (1)
Dell Foster X-4-2 Digitizer (1)
Jena Topocart 1900 x 1200 precision coordinated (1)

OTHER COMPUTER PROCESSING

OTHER
PRODUCTS AND SERVICES PROVIDED

IMAGE PRODUCTS

(c) B&W, Color, and Color Infrared Contact Prints and Enlarged Prints; (c)4(s)
B&W, Color, and Color Infrared Negative Transparencies and Positive Transparencies

ENHANCED AND CORRECTED IMAGERY

PHOTOGRAHMETRIC PRODUCTS

(c) Topographic Maps; Engineering Cross Sections; Stockpile Measurements; Earthwork Measurements; Planimetric Maps; Plan and Profile Sheets; Volumetric Calculations;
(c)4(s) Orthophotos; Photo-Contour Maps

INTERPRETED, THEMATIC PRODUCTS

(c) Tax Maps

PROJECT PLANNING AND SUPPORT SERVICES

Air Support Operations; Ground Control Survey

AERIAL SURVEY

Low Altitude Photography; High Altitude Photography

IMAGE PROCESSING, INTERPRETATION AND ANALYSIS

Photographic Laboratory Processing

PHOTOGRAHMETRIC ENGINEERING

Planimetric Mapping; Stereo Digitizing; Cross-Sectioning; Stereocompilation; Topographic Mapping-Small Scale; Topographic Mapping-Large Scale; Volumetric Calculation;
(c) Aerotriangulation; Orthophotomapping

REPRODUCTION

Drafting & Scribing; Cartographic Reproduction; Printing

OTHER SERVICES

NAME: KERN INSTRUMENTS, INC.

ADDRESS(ES) & CONTACT(S)

Geneva Road
Brewster, New York 10509
(914) 279-5095
Jon Hescock

Kern & Co Ltd. (Parent Co.)
50001 AARAU, Switzerland

YEARS IN BUSINESS: 150

PROJECTS COMPLETED:

REGION SERVED: U.S. & Int’l.

TYPES OF REMOTE SENSING TECHNOLOGIES:

Manufacturer

PERSONNEL & SKILLS REPRESENTED:

Management (3); Professional (4); Technical (4); Other (10)

Field Surveyors (2); Photogrammatists (5)

STATEMENT OF CAPABILITIES:

Manufacturer of Photogrammetric & Geodetic Instruments in U.S.A. Sales & Service.
PRODUCTS AND SERVICES PROVIDED

IMAGE PRODUCTS

ENHANCED AND CORRECTED IMAGERY

PHOTOGRAMMETRIC PRODUCTS

INTERPRETED, THEMATIC PRODUCTS

PROJECT PLANNING AND SUPPORT SERVICES

AERIAL SURVEY

IMAGE PROCESSING, INTERPRETATION AND ANALYSIS

PHOTOGRAMMETRIC ENGINEERING

REPRODUCTION

OTHER SERVICES

Turnkey Systems Sales/Leasing/Service; Equipment Sales/Leasing/Service; Software Sales/Leasing

FACILITIES AND SPECIAL EQUIPMENT

AIRCRAFT

CAMERAS, SCANNERS, AND OTHER REMOTE SENSORS

FIELD SURVEY EQUIPMENT

PHOTOGRAHAMMETRIC PROCESSING EQUIPMENT

PHOTOGRAMMETRIC PROCESSING EQUIPMENT
Manufacturer & Supplier PG2, DC2B, MK2, FMG2, CPNI, DSRI

IMAGE INTERPRETATION, VIEWING AND MAPPING (NON-DIGITAL)

IMAGE INTERPRETATION, VIEWING AND MAPPING (DIGITAL)

DIGITIZING, PLOTTING AND GRAPHICS
Manufacturer & Supplier AT, GP-1

OTHER COMPUTER PROCESSING

OTHER
REMOTE SENSING EQUIPMENT/SYSTEMS PROVIDED

REMOTE SENSOR SYSTEMS

VIEWING EQUIPMENT

PHOTOGRAMMETRIC EQUIPMENT
Sell & Lease Stereo Plotters; Point Transfer Devices; Orthoprojectors; Monocomparators; Geodetic

DIGITAL IMAGE PROCESSING EQUIPMENT

SOFTWARE

INTEGRATED SYSTEMS

OTHER EQUIPMENT
Sell & Lease Plotters

NAME: KEUFFEL & ESSER COMPANY

ADDRESS(ES) & CONTACT(S)

20 Whippany Road
Morristown, New Jersey 07960
(201) 285-5281
D. Michael

309 Era Drive
Northbrook, Illinois 60062
(312) 564-0880
P. Sandoz

1321 South Olive Street
Los Angeles, California 90015
(213) 747-7601
A. Cicolelli

Also in: Anchorage, Alaska
Fleurus, Belgium

YEARS IN BUSINESS:

PROJECTS COMPLETED:

REGION SERVED:

TOTAL APPLICABLE EMPLOYEES:

TYPES OF REMOTE SENSING TECHNOLOGIES:

PERSONNEL & SKILLS REPRESENTED:

STATEMENT OF CAPABILITIES:
Through its DAPS Group, K&E offers a system of sophisticated photogrammetric instrumentation manufactured by the K&E Kargl plant in San Antonio, Texas. Instruments are available for all phases of photogrammetric engineering: from enlargers to multi-component systems incorporating the latest developments in digital electronics, which can be integrated to fulfill individual customer's requirements. Newest K&E addition is the DSC-3/80 Analytical Stereocompiler. Applications include precise observation and recovery of three dimensional object coordinates from stereo photographs, acquisition of structured digital terrain models, topographic manuscript preparation, semi-automatic profiling and cross sectioning of predetermined areas or corridors, and aero-triangulation and photo-analysis and interpretation.
NAME: L. ROBERT KIMBALL AND ASSOCIATES

ADDRESS(ES) & CONTACT(S):
615 West Highland Avenue
Ebensburg, Pennsylvania 15931
(814) 472-7700
James L. Morgan
3160 Fifth Avenue North
St. Petersburg, Florida 33713
(813) 895-5716
Jack C. Hamilton
202 Rosemont Drive
Corapolis, Pennsylvania 15931
(412) 331-6868
Paul McDermott
Huntington, West Virginia
Abington, Pennsylvania
Charlotte, North Carolina

YEARS IN BUSINESS: 27
PROJECTS COMPLETED: 2,000
REGION SERVED: U.S. & Int'l.
TOTAL APPLICABLE EMPLOYEES: 102

SMALL BUSINESS CONTRACTOR? No
MINORITY-OWNED BUSINESS? No

TYPES OF REMOTE SENSING TECHNOLOGIES:
Low Altitude Aerial Photo; Medium Altitude Aerial Photo; High Altitude Aerial Photo; Aerial Multispectral Scanner; Aerial Thermal Infrared Scanner

PERSONNEL & SKILLS REPRESENTED:
Management (5); Professional (39); Technical (27); Other (31)

Cartographers; Computer Equip. Oper.; Computer Programmers; Draftsmen; Engineers (civil, environ.); Engineers (electrical); Field Surveyors; Soil Scientists; Photogrammatists; Photogrammetric Equip. Oper.; Photointerpreters; Photolab Technicians; Physical Scientists; Pilots; Planners; Geographers

STATEMENT OF CAPABILITIES:
The firm of L. Robert Kimball & Associates was founded in 1953 to provide consulting services to governmental, industrial and private clients. Our offices, strategically located throughout the United States, employ over 450 professional technical personnel including architects, civil, sanitary, structural and mechanical engineers; site and urban planners; surveyors, geologists, geographers, economists, photogrammatrists, foresters, chemists, appraisers, computer programmers, systems analysts; draftsmen; pilots, specifications writers and engineering technicians. These skilled personnel have the latest in aerial photographic and photogrammetric equipment, electronic digitizers, plotters and calculators; soils and chemistry labs; laser and electronic surveying equipment, engr., mass storage and high speed electronic data processing systems in daily operation.
L. ROBERT KIMBALL & ASSOCIATES

FACILITIES AND SPECIAL EQUIPMENT

AIRCRAFT

g_Cessna 206 (a)

Dell Foster 580/A dual engine aircraft

CAMERAS, SCANNERS, AND OTHER REMOTE SENSORS

Wild RC8 Aerial Camera 6" Focal length

Zeiss Jena A15/23 Aerial Camera 6" Focal length

FIELD SURVEY EQUIPMENT

Model 3800A Hewlett-Packard Distance Meters (6); Ranger Laser EDM Unit (1); Micro- Ranger EDM Unit (1); AGA Model 68 Geodimeters (4); 2 Sets Cubic Corp. Electrotapecs; 1 Set MRA-3 Tellurometers; All Terrain Vehicles (2); One-Second Reading Theodolites (15); Levels Transportation (15)

PHOTOGRAPHIC PROCESSING EQUIPMENT

Durst Enlarger (1); Borrowdale 42" Process Camera (1); LogEtronic Contact Printers (1); f' Vacuum Frames (2); Pako Automatic 48-1 Processor (1); DuPont 42" Engineering Processor (1); Oscar.isher Aerial Film Processor (1); 1250W Offset Press 11"x17" (1); 126 Zenith Offset Press 18"x24" (1); 510 Computer System (1); 9200 Xerox (1); Color Separation Facilities

PHOTOGRAFOMETRIC PROCESSING EQUIPMENT

Santoni Stere simplex Model III (1); Santoni Model IIc's (5); S.F.O.M. Orthophotoscopes (3); Zeiss Jena Topocart with Orthophot (2)

IMAGE INTERPRETATION, VIEWING AND MAPPING (NON-DIGITAL)

Space Optic Monocomparator (1); Wild PUG Point Transfer Devices (2)

IMAGE INTERPRETATION, VIEWING AND MAPPING (DIGITAL)

Digital Planimeter & Volume Computer (Dell Foster) RSS-400P/4VC (1); Dell Foster Coordinatograph Table interfaced to RSS-400 Quantizer System (1); Xynetics Flat Bed Plotter interfaced to the IBM 1130 Computer and Computervision Drafting System (1); RSS-4-MCT Dell Foster Metograph Terminal (1); IBM Systems 3 Model 15D Computer System (1); Computervision Corp. Interactive Design & Drafting System (1)

DIGITIZING, PLOTTING AND GRAPHICS

IBM 1130 Computer System - 16K (1); Dell Foster RSS-400 Graphic Quantizer System (1)

OTHER COMPUTER PROCESSING

Property Plotting; Inverse Digitized Values; Co-Go (Coordinate Geometry); Revised Schut Strip & Block Adjustment for Analytical Aerial Triangulation on IBM 1130 16K Computer; Profile Plot; Highway Cross Section Plots; Stockpile Inventory; Traverse Adjustment; Manuscript Grid and Control Plot; Graphic Applications (Interactive System)

L. ROBERT KIMBALL & ASSOCIATES

PRODUCTS AND SERVICES PROVIDED

IMAGE PRODUCTS

B & W Contact Prints; Photo Mosaics; Photo Atlas Sheets; Analog Magnetic Tape; Half-tone Image Prints; (c) B & W Positive & Negative Transparencies; B & W Enlarged Prints; Color, Color Infrared, & Color Composite Positive Transparencies & Enlarged Prints; (e) Color, Color Infrared, & Color Composite Negative Transparencies & Contact Prints

ENHANCED AND CORRECTED IMAGERY

PHOTOGRAFOMETRIC PRODUCTS

Orthophotos; Topographic Maps; Engineering Cross Sections; Stockpile Measurements; Earthwork Measurements; Digital Terrain Models; Digital Data Bases; Planimetric Maps; Photo-Contour Maps; Plan & Profile Sheets; Volumetric Calculations; Distance & Angle Measurements

INTERPRETED, THEMATIC PRODUCTS

Land Use Maps; Vegetation/Forestry Maps; Contour Weather Maps; Utility Maps; Acreage Tabulations; Geocoded Data Bases; Thematic Map Overlays; Geologic Maps; Transportation Maps; Soils Maps; Tax Maps; Digital Magnetic Maps

PROJECI PLANNING AND SUPPORT SERVICES

Problem Definition; Feasibility Analysis; Ground Control Survey; Map Digitizing; Data Base Preparation; Air Support Operations; Ground Truth Survey; Data Management

AERIAL SURVEY

Low Altitude Photography; Thermal Infrared; High Altitude Photography

IMAGE PROCESSING, INTERPRETATION AND ANALYSIS

Photographic Laboratory Processing; Manual Image Interpretation

PHOTOGRAFOMETRIC ENGINEERING

Aerotriangulation; Orthophotomapping; Planimetric Mapping; Stereo Digitizing; Cross- Sectioning; Stereocompilation; Topographic Mapping-Small Scale; Topographic Mapping-Large Scale; Volumetric Calculation; Close Range

REPRODUCTION

Drafting & Scribing; Cartographic Reproduction; Automated Drafting/Plotting; Printing

OTHER SERVICES

Consultant Services; Interactive Computer Services; Computer Services; Software Sales/Leasing/Service
KOOGLE & POULS ENGINEERING, INC.

FACILITIES AND SPECIAL EQUIPMENT

AIRCRAFT

Cessna U-206 Turbo/Charged for High Altitude (1)

CAMERAS, SCANNERS, AND OTHER REMOTE SENSORS

Aerial Camera Zeiss RMK-A 15/23 (6 inch) (1)
Terrestrial Camera Kelsh K-470 (1)

FIELD SURVEY EQUIPMENT

DGPS Equipment: Geodimeter Models 12, 76, 68L & 8 (5)
Kern DM-3 Theodolite (1)
Kern DM 2AE Theodolites (5)

PHOTOGRAPHIC PROCESSING EQUIPMENT

KAE HE-12 Horizontal Automatic Rectifying Enlarger (1)
LogEttronic Printer (1)
Precision Copy Camera 48" x 72”
Automatic Protographic Print Processor (1)

PHOTOGRAPIHIC PROCESSING EQUIPMENT

Kern Close Range Terrestrial Stereo Plotter (1)

IMAGE INTERPRETATION, VIEWING AND MAPPING (NON-DIGITAL)

KBA Plotting Table (1)

IMAGE INTERPRETATION, VIEWING AND MAPPING (DIGITAL)

Kern PG-2/AT-DC28 (1)
Kern PG-2/AT (1)
Kern MI-2 Monocomparator (1)

DIGITIZING, PLOTTING AND GRAPHICS

Coordinatographs with Digitizing Systems (1)
K-E Plotting Table and Digitizer (1)
Zeta Plotter (1)

OTHER COMPUTER PROCESSING

PDP 11/34 90 Mega Byte Disk 128K (1)

OTHER

A fleet of Field Vehicles (FVD) (7)
3 Orta, two dec writers, high speed printer, punched card reader, card punch (Univac) two-way FM band communication radios, field use, specific computer programs for analytical triangulation, survey adjustments, volumetric, intergraphs.
Kooler & Pouls Engineering, Inc.

Products and Services Provided

Image Products
B&W Negative Transparencies, Positive Transparencies, and Contact Prints; (s) Color and Color Infrared Negative Transparencies, Positive Transparencies, Contact Prints and Enlarged Prints. (c) Photo Mosaics; Photo Atlas Sheets; Halftone Image Prints; Digital Magnetic Tape Enhanced and Corrected Imagery

Photogrammetric Products
(c) Topographic Maps; Engineering Cross Sections; Stockpile Measurements; Earthwork Measurements; Digital Terrain Models; Digital Data Bases; Planimetric Maps; Photo-Contour Maps; Plan and Profile Sheets; Volumetric Calculations; Distance & Angle Measurements; (a) Orthophotos

Interpreted, Thematic Products
(c) Land Use Maps; Vegetation/Forestry Maps; Utility Maps; Acreage Tabulations; Geocoded Data Bases; Thematic Map Overlays; Tax Maps; Digital Magnetic Tapes

Project Planning and Support Services
Ground Control Survey; Map Digitizing; Ground Truth Survey

Aerial Survey
Low Altitude Photography; High Altitude Photography

Image Processing, Interpretation and Analysis
Digital Image Processing; Photographic Laboratory Processing; Manual Image Interpretation

Photogrammetric Engineering
Aerotriangulation; Planimetric Mapping; Stereoscopic Digitizing; Cross-Sectioning; Stereocompilation; Topographic Mapping-Small Scale; Topographic Mapping-Large Scale; Volumetric Calculation; (c) Orthophotomapping

Reproduction
Drafting & Scribing; Cartographic Reproduction; Automated Drafting/Plotting

Other Services
Consultant Services; Interactive Computer Graphics; Computer Services


Address(es) & Contact(s)
Suite K, 1709 S. Bragaw
Anchorage, Alaska 99504
(907) 276-2025
Ray Krieg

Years in Business: 10
Projects Completed: 100
Region Served: X

Types of Remote Sensing Technologies:
Low Altitude Aerial Photo; Med Altitude Aerial Photo; High Altitude Aerial Photo; Landsat MS; Manual Image Interpretations

Personnel & Skills Represented:
Management (1); Professional (2); Technical (1); Other (1)
Draftsmen; Soil Scientists; Photointerpreters; Geologists

Statement of Capabilities:
PRODUCT AND SERVICES PROVIDED

IMAGE PRODUCTS

ENHANCED AND CORRECTED IMAGERY

PHOTOGRAMMETRIC PRODUCTS

INTERPRETED, THEMATIC PRODUCTS

(c) Land Use Maps; Vegetation/Forestry Maps; Thematic Map Overlays; Geologic Maps; Soils Maps; Tax Maps; Land Ownership Maps; Terrain Analysis Maps; Permafrost Maps

PROJECT PLANNING AND SUPPORT SERVICES
Problem Definition; Feasibility Analysis; Selection of Existing Imagery; Sensor Selection/Evaluation; Sampling Strategy Design; Ancillary Data Collection; Ground Truth Survey; Data Management; (c) Map Digitizing; Data Base Preparation; Air Support Operations

AERIAL SURVEY

IMAGE PROCESSING, INTERPRETATION AND ANALYSIS
Manual Image Interpretation

PHOTOGRAMMETRIC ENGINEERING

REPRODUCTION
Drafting & Scribing; (c) Cartographic Reproduction; Automated Drafting/Plotting; Printing

OTHER SERVICES
Remote Sensing Research; Remote Sensing Training; Consultant Services; (c) Statistical Modeling; Interactive Computer Graphics; Computer Services

R. A. KREIG & ASSOCIATES, INC.

NAME: LOUISIANA STATE UNIVERSITY, REMOTE SENSING AND IMAGE PROCESSING

ADDRESS(ES) & CONTACT(S)
College of Engineering
Remote Sensing and Image Processing
Division of Engineering Research
Louisiana State University
Baton Rouge, Louisiana 70803
(504) 388-8417
Charles Harlow

YEARS IN BUSINESS: 9

PROJECTS COMPLETED: over 50

REGION SERVED: U.S. & Int'l.

TOTAL APPLICABLE EMPLOYEES: 31

TYPES OF REMOTE SENSING TECHNOLOGIES:
Low Altitude Aerial Photo; Med Altitude Aerial Photo; High Altitude Aerial Photo; Aerial Multispectral Scanner; Aerial Thermal Infrared Scanner; Radar; Landsat MSS; Landsat RBV; HCM; Weather Satellite; Digital Image Interpretation; Manual Image Interpretations

PERSONNEL & SKILLS REPRESENTED:
Management (3); Professional (10); Technical (3); Other (15)
Cartographers; Computer Equip. Oper.; Computer Programmers; Draftsmen; Engineers (civil, environ., electrical); Image Processing Equip. Oper.; Photogrammets: Photogrammetric Equip. Oper.; Photointerpreters; Physical Scientists; Pilots; Geographers

STATEMENT OF CAPABILITIES:
LOUISIANA STATE UNIVERSITY,
REMOTE SENSING AND IMAGE PROCESSING

FACILITIES AND SPECIAL EQUIPMENT

AIRCRAFT
Owned by State (Beechcraft) (1)

CAMERAS, SCANNERS, AND OTHER REMOTE SENSORS
MS Scanner (1)

FIELD SURVEY EQUIPMENT

PHOTOGRAPHIC PROCESSING EQUIPMENT

PHOTOMETRIC PROCESSING EQUIPMENT

IMAGE INTERPRETATION, VIEWING AND MAPPING (NON-DIGITAL)

IMAGE INTERPRETATION, VIEWING AND MAPPING (DIGITAL)
Photo I. Lab. (1)

DIGITIZING, PLOTTING AND GRAPHICS
Talos Digitizer (1)
Electrostatic & Hardcopy Plotters (1)

OTHER COMPUTER PROCESSING
Interdata 8/32 System (1)

OTHER

LOUISIANA STATE UNIVERSITY,
REMOTE SENSING AND IMAGE PROCESSING

PRODUCTS AND SERVICES PROVIDED

IMAGE PRODUCTS
(c) Thermograms; Digital Mosaics; Digital Magnetic Tape

ENHANCED AND CORRECTED IMAGERY
(c) Digital Multitemporal Composites; Contrast Enhanced; Geometric Correction; Change Detection; Multisensor Composites; Image Resampling

PHOTOMETRIC PRODUCTS
(c) Orthophotos; Topographic Maps; Engineering Cross Sections; Digital Terrain Models; Digital Data Bases

INTERPRETED, THEMATIC PRODUCTS
(c) Color Thematic Maps; Land Use Maps; Vegetation/Forestry Maps; Utility Maps; Acreage Tabulations; Geocoded Data Bases; Thematic Map Overlays; Transportation Maps; Soils Maps

PROJECT PLANNING AND SUPPORT SERVICES
Problem Definition; Feasibility Analysis; Selection of Existing Imagery; Ground Control Survey; Map Digitizing; Data Base Preparation; Sensor Selection/Evaluation; Sampling Strategy Design; Ancillary Data Collection; Ground Truth Survey; Gray Level Digitizing; Data Management; (a) Air Support Operations

AERIAL SURVEY
Multispectral Scanner; (a) Low Altitude Photography; Thermal Infrared; Radar

IMAGE PROCESSING, INTERPRETATION AND ANALYSIS
Digital Image Processing; Batch Digital Image/Analysis/Classification; Interactive Digital Image/Analysis/Classification; Photographic Laboratory Processing; Manual Image Interpretation

PHOTOMETRIC ENGINEERING
Aerotriangulation; Orthophotomapping; Planimetric Mapping; Stereo Digitizing; Cross-Sectioning; Stereocompilation

REPRODUCTION
Drafting & Scribing

OTHER SERVICES
Remote Sensing Research; Remote Sensing Training; Statistical Modeling; Consultant Services; Interactive Computer Graphics
NAME: M & S Computing, Inc.

ADDRESS(ES) & CONTACT(S)
P.O. Box 5183
Huntsville, AL 35805
(205) 772-3411
Ludie G. Richard

17629 El Camino Road, Suite 122
Houston, TX 7708
(713) 486-5620

El Toro, CA
Englewood, CO
San Antonio, TX
Ridgewood, NJ
Schaumburg, IL
Dallas, TX
Charlotte, NC

YEARS IN BUSINESS: 11
PROJECTS COMPLETED:
REGION SERVED: US, Int'l

TYPES OF REMOTE SENSING TECHNOLOGIES:
Radar, Landsat MSS, Landsat RRV, Digital Image Interpretations

PERSONNEL & SKILLS REPRESENTED:
The M & S imagery effort is managed by a small staff (approximately 10) that can call on our staff of over 200 programmers and specialists.

STATEMENT OF CAPABILITIES:
With over 200 major installations worldwide, M & S Computing, Inc., is a leader in providing turn-key systems to support CAD/CAM and mapping applications for both government and industry. In the mapping area, these systems allow complete interactive control of integrated graphic and non-graphic data bases with total map analysis and generation services (precision project/deproject, grid-to-vector conversion, multiple map integration, complete analysis and data base services, etc.).

M & S now offers an imagery analysis capability to integrate with and compliment the current vector graphics system. This will make available to the imagery analyst the full capability of the interactive graphics system and provide data handling and analysis for multispectral and other imagery sources from raw data through final product.
PRODUCTS AND SERVICES PROVIDED

IMAGE PRODUCTS

ENHANCED AND CORRECTED IMAGERY
Various products

PHOTограмMETRIC PRODUCTS
Various products

INTERPRETED, THEMATIC PRODUCTS
Various products

PROJECT PLANNING AND SUPPORT SERVICES

AERIAL SURVEY

IMAGE PROCESSING, INTERPRETATION AND ANALYSIS
Digital Image Processing, Batch Digital Image/Analysis/Classification, Interactive Digital Image/Analysis/Classification

PHOTограмMETRIC ENGINEERING

REPRODUCTION

OTHER SERVICES

REMOTE SENSING EQUIPMENT/SYSTEMS PROVIDED

REMOTE SENSOR SYSTEMS

VIEWING EQUIPMENT

PHOTограмMETRIC EQUIPMENT

DIGITAL IMAGE PROCESSING EQUIPMENT
Sell and Lease B&W Image Displays, Color Image Displays

SOFTWARE
Sell and Lease Geometric Correction, Radiometric Correct, Image Enhancement, Multispectral Classification

INTEGRATED SYSTEMS

OTHER EQUIPMENT
Sell and Lease Interactive Graphics
CHAS. T. MAIN, INC.

ADDRESS(ES) & CONTACT(S)

1800 S. W. First Avenue
Portland, Oregon 97201
(503) 221-6200
Preben B. Sorensen

Additional locations: Denver, Colorado;
New York City, New York
(602) 262-3200
Maurice E. Foley

YEARS IN BUSINESS: 7

PROJECTS COMPLETED: 120

REGION SERVED: U.S. & Int'l.

TYPES OF REMOTE SENSING TECHNOLOGIES:

Low Altitude Aerial Photo; Mid Altitude Aerial Photo; High Altitude Aerial Photo;
Geophysical Survey; Landsat MSS; Landsat RBV; Skylab; Digital Image Interpretations;
Manual Image Interpretations

PERSONNEL & SKILLS REPRESENTED:

Management (3); Professional (26); Technical (31)

Cartographers (2); Computer Equip. Oper. (12); Computer Programmers (6); Draftsmen (12);
Engineers (civil, environ.) (10); Field Surveyors (4); Soil Scientists (2); Social
Scientists (2); Photogrammatists (2); Photogrammetry Equip. Oper. (6); Photo-
interpreters (10); Photolab Technicians (2); Physical Scientists (6); Planners (3);
Geographers (1)

STATEMENT OF CAPABILITIES:

Provides engineering services in the major fields of power systems, transmission
and distribution systems, environmental assessment, monitoring, planning and
controls, thermal and hydropower generation, industrial facilities design, and
multi-purpose land-use and water resource management.

Photogrammetric capabilities include: ground surveys, aerial photography and remote
sensing, analytical aerotriangulation, conventional and digital stereocompilation;
digital data extraction, orthophotography and a photographic laboratory.

Digital data bases are recorded directly from a stereo instrument to MAIN's CTARS
interactive graphics system.

MAIN's graphic information systems capabilities include the CTARS interactive
graphics systems, developed by MAIN, computer-aided design drafting, digital
mapping and record conversion services.

FACILITIES AND SPECIAL EQUIPMENT

PHOTOGRAPHIC PROCESSING EQUIPMENT

Brown Admiral 30" Copy Camera (1); Omega D-5 Enlarger (1); Douthitt 60" X 80"
Vacuum Frame (1); DuPont ERF 42" Automatic Processor (1); DuPont Crevex II Processor (1);
Log Electron Mark IV Printer (1); Brown Punch Registration System (1); Kargi
Rectifying Enlarger (1);

PHOTOGRAVMETRIC PROCESSING EQUIPMENT

Zeiss Planicart Stereoplotter (1); Wild Aviomap Stereoplotter (1); Kelah K-5
Stereoplotter w/4 projectors (1); Kelah E320 Orthoscan (1); Kelah 5030
Stereoplotter w/2 projectors (1); Data Technology Automatic Drafting Plotters (2);
Dell Poster 3 Axis Digitizers with Digital Planimeters (2); Space Optic
Monocomparator (1); IBM 029 Cardpunch Units (3); Aristo Coordinatograph (1);
Wild PFGA Point Transfer Device (1); Drafting/Scriber Light Tables (4);
Prime 300 Computer with 64K Memory (1), Talos Backlit 36" x 48" Digitizing
Data Tablet (1); Tektronix 19" Display CRT with Keyboard (1); Threshold
Technology Voice Data Entry Terminal (1); Versatec 36: Electrostatic Plotter (1);

DIGITIZING, PLOTTING AND GRAPHICS

Prime 300 Computers w/64k of Memory (6); Prime 200 Computers with 64k of
Memory (1); Talos 36" x 48" Backlit Tablet (3); Summagraphics 36" x 48"
Tables (3); Tektronix 19" Electrostatic Plotter (1); Calcomp 960-36" Plotter
(1); Shugard Diskette Drives (14);

OTHER COMPUTER PROCESSING

IBM 370/148VM Computer System; Cour Phase Data IV-70 Remote Batch Entry Terminal;
Calcomp 136 Plotter; Calcomp 960 Plotter;

CHAS. T. MAIN, INC.
PRODUCTS AND SERVICES PROVIDED

IMAGE PRODUCTS
B&W Positive Transparencies, Contact Prints, and Enlarged Prints; (c) B&W Negative Transparencies; Photo Mosaics; Photo Atlas Sheets; Analog Magnetic Tape; Digital Mosaics; Halftone Image Prints; Digital Magnetic Tape; (a) Color, Color Infrared, and Color Composite Negative Transparencies, Positive Transparencies, Contact Prints, and Enlarged ENHANCED AND CORRECTED IMAGERY Prints.

PHOTOGEOGRAPHIC PRODUCTS
(c) Orthophotos; Topographic Maps; Engineering Cross Sections; Stockpile Measurements; Earthwork Measurements; Digital Terrain Models; Digital Data Bases; Planimetric Maps; Photo-Contour Maps; Plan and Profile Sheets; Volumetric Calculations; Distance & Angle Measurements

INTERPRETED, THEMATIC PRODUCTS
(c) Color Thematic Maps; Land Use Maps; Vegetation/Forestry Maps; Utility Maps; Acreage Tabulations; Geocoded Data Bases; Thematic Map Overlays; Geologic Maps; Transportation Maps; Soils Maps; Tax Maps; Digital Magnetic Tapes

PROJECT PLANNING AND SUPPORT SERVICES
Problem Definition; Feasibility Analysis; Selection of Existing Imagery; Ground Control Survey; Map Digitizing; Data Base Preparation; Sensor Selection/Evaluation; Sampling Strategy Design; Ancillary Data Collection; Ground Truth Survey; Data Management; (a) Ground Control Survey; Air Support Operations; Sensor Selection/Evaluation

AERIAL SURVEY
(a) Low Altitude Photography; Thermal Infrared; Radar; Geophysical; High Altitude Photography; Multispectral Scanner

IMAGE PROCESSING, INTERPRETATION AND ANALYSIS
Photographic Laboratory Processing; Manual Image Interpretation; (a) Digital Image Processing; Batch Digital Image/Analysis/Classification; Interactive Digital Image/Analysis/Classification

PHOTOGEOGRAPHIC ENGINEERING
Aerotriangulation; Orthophotomapping; Planimetric Mapping; Stereo Digitizing; Cross-Sectioning; Stereocompilation; Topographic Mapping-Small Scale; Topographic Mapping-Large Scale; Volumetric Calculation

REPRODUCTION
Drafting & Scribing; Automated Drafting/Plotting; (c) Cartographic Reproduction; Printing

OTHER SERVICES
Remote Sensing Research; Remote Sensing Training; Statistical Modeling; Consultant Services; Interactive Computer Graphics; Computer Services; Software Design/Development

NAME: MARS, INC.

ADDRESS(ES) & CONTACT(S)
3644 East McDowell Road
Phoenix, Arizona 85008
(602) 267-8008
Mars. Ltighetcap, Gelnott, Gardener

Foreign Location: Calgary, Canada

YEARS IN BUSINESS: 6

SMALL BUSINESS CONTRACTOR? Yes

PROJECTS COMPLETED: 64

MINORITY-OWNED BUSINESS? No

REGION SERVED: U.S. & int'l.

TOTAL APPLICABLE EMPLOYEES: 10

TYPES OF REMOTE SENSING TECHNOLOGIES:
Low Altitude Aerial Photo; Mid Altitude Aerial Photo; Aerial Thermal Infrared Scanner; Radar; Geophysical Survey; Landsat MSS; Landsat RBV; Seamsat; Skylab; Manual Image Interpretations

PERSONNEL & SKILLS REPRESENTED:
Management (2); Professional (6); Technical (1); Other (1)
Engineers (civil, environ.) (2); Photogrammatists (1); Photointerpreters/Geologists (3); Photolab Technicians (1); Pilots (2)

STATEMENT OF CAPABILITIES:
MARS (formerly MotorolaMARS) is a full service remote sensing company with in-house capability to fly, process and interpret image products. It owns its own aircraft and multi-sensor systems and operates world-wide. MARS performs customized services primarily for natural resources exploration and exploitation, such as hydrocarbons, mineral deposits, geothermal, groundwater, hydrology, forestry, agriculture, sea ice dynamics, siting major engineering structures, land use and mapping remote regions. Side-looking airborne radar is the primary sensor system. In-house staff of geologists and interpretation specialists are internationally recognized experts.
PRODUCTS AND SERVICES PROVIDED

IMAGE PRODUCTS
B&W, Color, and Color Infrared Negative Transparencies, Positive Transparencies, Contact Prints, and Enlarged Prints; Radar Strip Imagery; Radar Mosaics; (c) Photo Mosaics; Photo Atlas Sheets; Halftone Image Prints; Digital Magnetic Tape

ENHANCED AND CORRECTED IMAGERY
Photo Pseudo Stereo; (c) Photo Multitemporal Composites; Contrast Enhanced; Geometric Correction; Change Detection; Radiometric Correction; Image Resampling

PHOTOGRAFMETRIC PRODUCTS
(c) Digital Terrain Models; Digital Data Bases; (a) Orthophotos; Topographic Maps; Planimetric Maps; Photo-Contour Maps; Distance & Angle Measurements

INTERPRETED, THEMATIC PRODUCTS
(c) Color Thematic Maps; Land Use Maps; Vegetation/Forestry Maps; Utility Maps; Acreage Tabulations; Geocoded Data Bases; Thematic Map Overlays; Geologic Maps; Transportation Maps; Soils Maps; Tax Maps

PROJECT PLANNING AND SUPPORT SERVICES
Problem Definition; Feasibility Analysis; Selection of Existing Imagery; Air Support Operations; Sensor Selection/Evaluation; Ancillary Data Collection; Ground Truth Survey; Data Management; (a) Ground Control Survey; Map Digitizing; Data Base Preparation; Gray Level Digitizing

AERIAL SURVEY
Low Altitude Photography; Thermal Infrared; Radar; Geophysical; Multiband Photography

IMAGE PROCESSING, INTERPRETATION AND ANALYSIS
Photographic Laboratory Processing; Manual Image Interpretation; (a) Digital Image Processing; Batch Digital Image/Analysis/Classification; Interactive Digital Image/Analysis/Classification

PHOTOGRAFMETRIC ENGINEERING
(a) Planimetric Mapping; Topographic Mapping-Small Scale; Topographic Mapping-Large Scale

REPRODUCTION
Printing; (a) Drafting & Scribing; Cartographic Reproduction; Automated Drafting/Plotting

OTHER SERVICES
Remote Sensing Research; Remote Sensing Training; Statistical Modeling; Consultant Services; (a) Interactive Computer Graphics; Computer Services

FACILITIES AND SPECIAL EQUIPMENT

AIRCRAFT
Gulfstream G-159 (36,000 lb. twin-engine turbo-prop.) (1)

CAMERAS, SCANNERS, AND OTHER REMOTE SENSORS (6)
2 each Wild RC-8 metric cameras; 1 1⁄2 multiband camera; 1 35 mm strip camera; 1 Daedalus IR Scanner; 1 Airborne magnetometer

FIELD SURVEY EQUIPMENT

PHOTOGRAFMETRIC PROCESSING EQUIPMENT
Standard photo-lab

PHOTOGRAFMETRIC PROCESSING EQUIPMENT

IMAGE INTERPRETATION, VIEWING AND MAPPING (NON-DIGITAL)
Richards variable-intensity night tables (5); Single and dual binocular mirror stereoscopes (3); Diffraction gratings; color density screens, etc.

IMAGE INTERPRETATION, VIEWING AND MAPPING (DIGITAL)

DIGITIZING, PLOTTING AND GRAPHICS

OTHER COMPUTER PROCESSING

OTHER
NAME: MARTEL LABORATORIES, INC.

ADDRESS(ES) & CONTACT(S)
1025 Cromwell Bridge Road
Baltimore, Maryland 21204
(301) 825-7790
James D. Russell
P.O. Box 22141
Savannah, Georgia 31402
(912) 352-5012
W. E. Savage
4501 126th Avenue North
Clearwater, Florida 33751
(813) 576-0100
J. Gary Reed

OTHER LOCATIONS: Fayetteville, North Carolina

YEARS IN BUSINESS: 6
PROJECTS COMPLETED: 12
REGION SERVED: U.S. & Int'l.

TYPES OF REMOTE SENSING TECHNOLOGIES:
Low Altitude Aerial Photo; Med Altitude Aerial Photo; High Altitude Aerial Photo; Aerial Multispectral Scanner; Aerial Thermal Infrared Scanner; Geophysical Survey; Landsat MSS; SeaSat; Digital Image Interpretations; Manual Image Interpretations

PERSONNEL & SKILLS REPRESENTED:
Management (5); Professional (12); Technical (24); Other (40)

Cartographers; Draftsmen; Engineers (civil, environ.); Image Processing Equip. Oper.; Photogrammetrists; Photointerpreters; Photolab Technicians; Physical Scientists; Pilots; Planners; Geographers

STATEMENT OF CAPABILITIES:
Martel offers a full service cartographic laboratory completely staffed and equipped to produce maps and charts of all kinds. Martel's professional cartographers undertake all aspects of mapmaking from initial compilation through camera ready copy. Professional staff includes environmental analysts, photogrammetrists, cartographers, pilots, geologists, photographers, geographers, foresters, soils scientists, planners, and systems analysts. Technical support staff is assigned within each discipline. Total staff numbers some 110 persons.

PRODUCTS AND SERVICES PROVIDED

IMAGE PRODUCTS
(e) Halftone Images; Contact Prints, and Enlarged Prints; (a) B&W Negative Transparencies, Color, Color Infrared, and Color Composite Negative Transparencies, Positive Transparencies, Contact Prints, and Enlarged Prints; Photo Mosaics

ENHANCED AND CORRECTED IMAGERY

PHOTOGRAPHIC PRODUCTS
(c) Orthophotos; Topographic Maps; Engineering Cross Sections; Stockpile Measurements; Earthwork Measurements; Digital Terrain Models; Planimetric Maps; Photo-Contour Maps; Plan and Profile Sheets; Volumetric Calculations; Distance & Angle Measurements

INTERPRETED, THEMATIC PRODUCTS
(c) Land Use Maps; Vegetation/Forestry Maps; Utility Maps; Acreage Tabulation; Tax Maps

PROJECT PLANNING AND SUPPORT SERVICES
(a) Ground Control Survey; Map Digitizing

AERIAL SURVEY
(a) Low Altitude Photography

IMAGE PROCESSING, INTERPRETATION AND ANALYSIS

PHOTOGRAFIC ENGINEERING
Orthophotomapping; Planimetric Mapping; Cross-Sectioning; Stereocompilation; Topographic Mapping-Small Scale; Topographic Mapping-Large Scale; Volumetric Calculation; (a) Aerotriangulation; Stereo Digitizing

REPRODUCTION
Drafting & Scribing; Cartographic Reproduction; (a) Automated Drafting/Plotting

OTHER SERVICES
Consultant Services; Software Design/Development
MARTINEZ ORTHO-MAPPING CORPORATION

FACILITIES AND SPECIAL EQUIPMENT

AIRCRAFT

CAMERAS, SCANNERS, AND OTHER REMOTE SENSORS

Modified 6' Kargle mapping camera (1)

FIELD SURVEY EQUIPMENT

PHOTOGRAPHIC PROCESSING EQUIPMENT

Large vacuum frames (2); DuPont ERF processor (1); Durst 184 enlarger (1); MK III Log-E printer (1); Tobias Densitometer model TBS (1); Logetronic Contact Printer (1); Nu Arc Pulsed Xenon High Intensity Light (1); Diazo Dart Blueline Printer (1)

IMAGE INTERPRETATION, VIEWING AND MAPPING (NON-DIGITAL)

Complete Scribing/Drafting Stations (3)

IMAGE INTERPRETATION, VIEWING AND MAPPING (DIGITAL)

Jena Stereometricograph F with 900 mm x 1200 mm Precision Coordinatograph (1); Jena Topocart B with 900 mm x 1200 mm Precision Coordinatograph (1); Jena Topocart C with 900 mm x 1200 mm Precision Coordinatograph (1); Kelsh KFP3 (1); Kelsh K-320 Orthoscan (1)

DIGITIZING, PLOTTING AND GRAPHICS

OTHER COMPUTER PROCESSING

OTHER

NAME: MARTINEZ ORTHO-MAPPING CORPORATION

ADDRESS(ES) & CONTACT(S)

240 E. Fillmore Avenue
St. Paul, Minnesota 55107
(612) 291-1127
Anthony Martinez
240 Chester Street
St. Paul, Minnesota 55107
(612) 293-0695
William R. Block

YEARS IN BUSINESS: 5 1/2

PROJECTS COMPLETED: 570

REGION SERVED: U.S.

TOTAL APPLICABLE EMPLOYEES: 21

TYPES OF REMOTE SENSING TECHNOLOGIES:

Low Altitude Aerial Photo; Med Altitude Aerial Photo; High Altitude Aerial Photo;

PERSONNEL & SKILLS REPRESENTED:

Management (2); Professional (1); Technical (17); Other (1)
Cartographers (5); Computer Programmers; Engineers (civil, environ.); Photogrammatists(1); Photogrammetric Equip. Oper. (7); Photointerpreters (1); Photolab Technicians (1); Planners (1)

STATEMENT OF CAPABILITIES:

Company established, October 1974, and present capabilities include Aerial Photography, Surveying, Analytical Triangulation; Stereocompilation on first and second order plotters, Orthophotography, Ink Drafting & Scrib ing and Computer Software Development. Our Photo lab services consist of enlargements, various contact vacuum frame products and Log-E dodged contact prints and diapositives. In November, 1979 an Engineering Division was established, offering engineering services in the disciplines of Civil, Sanitary and Electrical Engineering.
PRODUCTS AND SERVICES PROVIDED

IMAGE PRODUCTS
(c) Photo Mosaics; Photo Atlas Sheets; B&W Negative Transparencies, Positive Transparencies, and Contact Prints; (s) B&W Enlarged Prints; Color, Color Infrared, and Color Composite Negative Transparencies, Color Transparencies, Contact Prints, and Enlarged Prints; Analog Magnetic Tape; Thermograms; Digital Mosaics; Half-tone Image Prints; Digital Magnetic ENHANCED AND CORRECTED IMAGERY Tape
(c) Photo and Digital Multisensor Composites; Radiometric Correction; Image Resampling; Pseudo Stereo; Photo Multitemporal Composites; Contrast Enhanced; Geometric Correction; Density Slice; Change Detection; (s) Digital Multitemporal Composites; Contrast Enhanced; Geometric Correction; Density Slice; Change Detection

PHOTOCARTOGRAPHIC PRODUCTS
(c) Orthophotos; Topographic Maps; Engineering Cross Sections; Stockpile Measurements; Earthwork Measurements; Digital Terrain Models; Digital Data Bases; Planimetric Maps; Photo-Contour Maps; Plan and Profile Sheets; Volumetric Calculations; Distance & Angle Measurements

INTERPRETED, THEMATIC PRODUCTS
(c) Color Thematic Maps; Land Use Maps; Vegetation/Forestry Maps; Utility Maps; Acreage Tabulations; Thematic Map Overlays; Geologic Maps; Transportation Maps; Soils Maps; Tax Maps; (s) Contour Weather Maps; Digital Magnetic Tapes

PROJECT PLANNING AND SUPPORT SERVICES
Problem Definition; Feasibility Analysis; Selection of Existing Imagery; Ground Control Survey; Data Base Preparation; Sensor Selection/Evaluation; Sampling Strategy Design; Ancillary Data Collection; Ground Truth Survey; Data Management; (s) Map Digitizing; Air Support Operations; Gray Level Digitizing

AERIAL SURVEY
(s) Low Altitude Photography; Thermal Infrared; Radar; Geophysical; High Altitude Photography; Multispectral Scanner

IMAGE PROCESSING, INTERPRETATION AND ANALYSIS
Photographic Laboratory Processing; Manual Image Interpretation; (s) Digital Image Processing; Batch Digital Image/Analysis/Classification

PHOTOCARTOGRAPHIC ENGINEERING
Aerotriangulation; Orthophotomapping; Planimetric Mapping; Stereo Digitizing; Cross-Sectioning; Stereocompilation; Topographic Mapping-Small Scale; Topographic Mapping-Large Scale; Volumetric Calculation

REPRODUCTION
Drafting & Scribing; Cartographic Reproduction; Automated Drafting/Plotting; Printing

OTHER SERVICES
Remote Sensing Research; Remote Sensing Training; Statistical Modeling; Consultant Services; (s) Interactive Computer Graphics; Computer Services; Turnkey Systems Sales/Leasing/Service; Software Design/Development; Software Sales/Leasing

FACILITIES AND SPECIAL EQUIPMENT

AIRCRAFT
CAMERAS, SCANNERS, AND OTHER REMOTE SENSORS

FIELD SURVEY EQUIPMENT (2)
Specific type not indicated.

PHOTOGRAPHIC PROCESSING EQUIPMENT (8)
Specific type not indicated.

PHOTOCARTOGRAPHIC PROCESSING EQUIPMENT (8)
Specific type not indicated.

IMAGE INTERPRETATION, VIEWING AND MAPPING (NON-DIGITAL) (1)
Specific type not indicated.

IMAGE INTERPRETATION, VIEWING AND MAPPING (DIGITAL)

DIGITIZING, P/FTING AND GRAPHICS

OTHER COMPUTER PROCESSING

OTHER
NAME: MATRA TECHNOLOGY, INC.

ADDRESS(ES) & CONTACT(S)
120C Albright Way
Los Gatos, California 95030
(408) 866-6606
R.C. Jensen
P.O. Box 1211
Point Pleasant Beach, New Jersey 08742
(201) 295-1882
Karl Kleinn

YEARS IN BUSINESS: 12
PROJECTS COMPLETED: 10
REGION SERVED: U.S.
TOTAL APPLICABLE EMPLOYEES: 14

TYPES OF REMOTE SENSING TECHNOLOGIES:
Low Altitude Aerial Photo; Med Altitude Aerial Photo; High Altitude Aerial Photo;
Aerial Thermal Infrared Scanner; Landsat MSS

PERSONNEL & SKILLS REPRESENTED:
Management (1); Professional (4); Technical (4); Other (5)
Computer Equip. Oper.; Computer Programmers; Draftsmen; Engineers (electrical);
Image Processing Equip. Oper.; Photogrammatists; Photogrammetric Equip. Oper.

STATEMENT OF CAPABILITIES:
Manufacturer analytical stereo plotting instruments which combine remote sensing
data with aerial mapping information.

FACILITIES AND SPECIAL EQUIPMENT

AIRCRAFT

CAMERAS, SCANNERS, AND OTHER REMOTE SENSORS (2)
Specific types not indicated.

FIELD SURVEY EQUIPMENT

PHOTOGRAPHIC PROCESSING EQUIPMENT (1)
Specific type not indicated.

PHOTOGRAVMETRIC PROCESSING EQUIPMENT (2)
Specific type not indicated.

IMAGE INTERPRETATION, VIEWING AND MAPPING (NON-DIGITAL) (1)
Specific type not indicated.

IMAGE INTERPRETATION, VIEWING AND MAPPING (DIGITAL) (1)
Specific type not indicated.

DIGITIZING, PLOTTING AND GRAPHICS (1)
Specific type not indicated.

OTHER COMPUTER PROCESSING:

OTHER
PRODUCTS AND SERVICES PROVIDED

IMAGE PRODUCTS

Digital Magnetic Tape

ENHANCED AND CORRECTED IMAGERY

Digital Multisensor Composites; Radiometric Correction; Image Resampling; Pseudo Stereo; Contrast Enhanced; Geometric Correction; Density Slice; Change Detection

PHOTOGRAMMETRIC PRODUCTS

Topographic Maps; Engineering Cross Sections; Stockpile Measurements; Earthen Measurements; Digital Terrain Models; Digital Data Bases; Planimetric Maps; Photo-Contour Maps; Plan and Profile Sheets; Volumetric Calculations; Distance & Angle Measurements

INTERPRETED, THEMATIC PRODUCTS

Land Use Maps; Vegetation/Forestry Maps; Contour Weather Maps; Utility Maps; Thematic Map Overlays; Geologic Maps; Transportation Maps; Soils Maps; Tax Maps; Digital Magnetic Tapes

PROJECT PLANNING AND SUPPORT SERVICES

Problem Definition; Feasibility Analysis; Selection of Existing Imagery; Map Digitizing; Database Preparation; Sensor Selection/Evaluation; Data Management

AERIAL SURVEY

IMAGE PROCESSING, INTERPRETATION AND ANALYSIS

Interactive Digital Image/Analysis/Classification

PHOTOGRAMMETRIC ENGINEERING

Aerotriangulation; Planimetric Mapping; Stereo Digitizing; Cross-Sectioning; Stereocompilation; Topographic Mapping-Small Scale; Topographic Mapping-Large Scale; Volumetric Calculation

REPRODUCTION

OTHER SERVICES

Turnkey Systems Sales/Leasing/Service; Hardware Design/Development; Software Design/Development; Equipment Sales/Leasing/Service

REMOTE SENSING EQUIPMENT/SYSTEMS PROVIDED

REMOTE SENSOR SYSTEMS

Sell and Lease Handheld Aerial Cameras; Terrestrial Cameras

VIEWING EQUIPMENT

Sell and Lease Stereoscopes

PHOTOGRAMMETRIC EQUIPMENT

Sell and Lease Stereo Plotters; Point Transfer Devices; Monocomparators

DIGITAL IMAGE PROCESSING EQUIPMENT

Sell and Lease Image Digitizers

SOFTWARE

INTEGRATED SYSTEMS

OTHER EQUIPMENT

Sell and Lease X-Y Coordinate Digitizer; Interactive Graphics Systems; Plotters
NAME: MEAD TECHNOLOGY LABORATORIES

ADDRESS(ES) & CONTACT(S):
3481 Dayton-Xenia Road
Dayton, Ohio 45432
(513) 426-3111
R.K. Zimmerman

YEARS IN BUSINESS: 20
PROJECTS COMPLETED: Many...
REGION SERVED: U.S. & Int’l.

TYPES OF REMOTE SENSING TECHNOLOGIES:
Low Altitude Aerial Photo; Med Altitude Aerial Photo; Aerial Thermal Infrared Scanner;
Radar; Laser Scanner; Digital Image Interpretations; Manual Image Interpretations;
Software program exploitation of digital and analog imagery data

PERSONNEL & SKILLS REPRESENTED:
Management (13); Professional (40); Technical (19); Other (19)
Computer Equip. Oper.; Computer Programmers; Draftsmen; Engineers (civil, environ., electrical); Field Surveyors; Image Processing Equipment Oper.; Photointerpreters;
Photolab Technicians; Physical Scientists; Pilots; Planners; Geographers

STATEMENT OF CAPABILITIES:
Mead Technology Laboratories (MTL) has been recognized for nearly 30 years as an organization highly proficient in sensor analysis, test, and evaluation efforts on virtually all classes of reconnaissance equipments for airborne, ground and laboratory applications. Particularly noteworthy is MTL work in: (1) image processing, manipulation; analysis, and recording; (2) Aerial photographic and infrared mapping; (3) development of computer software programs to more quickly and effectively exploit imagery data; and (4) collecting, processing, analyzing, and evaluating air quality sensor data. Past high quality MTL performance for state, regional, and local government agencies is widely recognized. MTL personnel have gained extensive experience in both actual operational programs and controlled laboratory environments.

FACILITIES AND SPECIAL EQUIPMENT

AIRCRAFT
Fairchild-Hill Porter Turbo-prop (FC-6) (1)

CAMERAS, SCANNERS, AND OTHER REMOTE SENSORS
K-45 Cameras; KC-18 Cameras; KS-67 Cameras AAD-5 IR Scanners

FIELD SURVEY EQUIPMENT
HP-3810 Distance measurement equipment (1); Magnavox satellite positioning equipment - MX - 1102 (1); Engineering transits

PHOTOGRAPHIC PROCESSING EQUIPMENT
Sensitometer, Head STAR (1); Sensitometric spray processor, mod SP 6707 (1); Processor, continuous roll, EK Versamat 110M (1); Printer, continuous roll EK Niagara (1); Tempering unit for tray processing, Mead Technology Laboratories TU-3 (1); Processor, heated plate, 3M (1); Processor, ammonia fumes, Scott Graphics (1); Densitometer, transmission, Macbeth TD528 (1); Densitometer, transmission and reflection, Macbeth TRS24 (1); Printer, microimage, David Mann (3); Printer, U-V, Miller Holzwarth 1119 (1); Enlarger, Simonon Omega D2 (3); Enlarger, Durst L84 (1); assorted contact and projection printers, timers, laboratory glassware, calculators and miscellaneous photographic tools; Vaccum printer, UV, 33 X 43, Ascor 1601-49 (1); Laminator, Cromalin, Dupont (1); Toning Console, Cromalin, Dupont (1)

IMAGE INTERPRETATION, VIEWING AND MAPPING (NON-DIGITAL)
Photomicrography stand, 4" x 5", Wild (1); Microscope, Unitron mod TM 25-1000 (1); Microscope, Zeiss WL (1); Microscope, reflection, Wild MS-72643 (1); Light table, Richards GFL 940MC (1); Light table, Richards GFL 940BELT (1); Light table Aristo DA-10 (1)

DIGITIZING, PLOTTING AND GRAPHICS
Microdensitometer, Mann-Data Microanalyzer mod I (1); Microdensitometer, Mann-Data Microanalyzer mod II (1); Comparator, x-y position, David Mann (1)

OTHER
Calculator, Hewlett-Packard 9810 (1); Computer, IBM 370-55 (1); Computer, DEC PDP 11/34 (1); Melting point apparatus, Thermolyne mod NP 12645 (1); Balance, Mettler H30 (1); Balance, Mettler P163 (1); Balance, O'Haus 700 (1); Surface tensiometer, Fisher (1); Conductivity bridge, YSI mod 31 (1); Polargraph, Sargent mod FS (1); Plantinizer, YSI mod 3139 (1); Centrifuge, International Equipment, mod CL (1); pH meter, Orion mod 811 (1); pH meter, Orion mod 701 (1); Automatic titrator-potentiograph, Metrohm E436 (1); Incubator, Precision Scientific mod 805 (1); Test chamber, Precision Scientific, mod 1236 (1); Test chamber, Blue II, mod PCM-5880-35SP (1); Test chamber, Statham mod SD-6-1-2 (1); Test chamber, BMA mod TH-8 (1); Test chamber, P-0 mod 20-270 (1); Flex tester, belbo mod 5000 (1); Viscometer, Brookfield mod LVF (1)
FACILITIES AND SPECIAL EQUIPMENT

OTHER (cont.)

Spectrophotometer, atomic absorption, Beckman (1); Spectrophotometer, UV & visible, Beckman Acta C III (1); Spectrophotometer, UV, visible, near IR, Diano/Hardy (1); Spectrophotometer, UV, visible, near IR, Beckman DEZ (1); Spectrophotometer, infrared, Beckman IR-20A (1); Spectrophotometer, Baush & Lomb Spectronic 20 (1); Gas chromatograph, Hewlett-Packard 5700A, with pyrolysis unit (1); Microtome, American Optical mod 821 (1); Machine Shop Mills, Lathes, Welders, Sheet Metal, and Drillpresses; Triber Resolution Target (1); 5/6/10 - Step Grey Scale Targets; 6 and 12 Targets; Ground Meterological Equipment (1); Radiosonde* (1); 100-channel contact temperature measuring device* (1); Dual Channel (3-5, 6-14) Radiometers; Dual Channel (3-5, 6-14) Imaging Radiometers**; Ground-to-ground & Ground-to-air Radio Communications; Cameras for Ground Documentation

* Mounted in self-contained mobile data collection van.
** Mounted on 50-ft boom truck.

OTHER COMPUTER PROCESSING

DEC 11/10, 11/20, & 11/34 (1 each)
REMOTE SENSING EQUIPMENT/SYSTEMS PROVIDED

REMOTE SENSOR SYSTEMS

VIEWING EQUIPMENT

PHOTOCOGRAMMETRIC EQUIPMENT

DIGITAL IMAGE PROCESSING EQUIPMENT
Sell B&W Image Displays; Image Digitizers; Film Output Recorders; Color Image Displays

SOFTWARE
Sell Geometric Correction; Radiometric Correction; Image Enhancement; Multispectral Classification

INTEGRATED SYSTEMS
Sell Geometric Correction; Radiometric Correction; Image Enhancement; Multispectral Classification

OTHER EQUIPMENT
Sell X-Y Coordinate Digitizer; Measurement Equipment; Photo Processing Equip.; Field Equipment; Sensitometers; Spectroscopic Equipment

NAME: METREX MANAGEMENT CORPORATION

ADDRESS(ES) & CONTACT(S)
131 N. San Gabriel Blvd.
Pasadena, California 91107
(213) 449-8162
A.H. Trinkle

YEARS IN BUSINESS: 14
PROJECTS COMPLETED: 2,000

TYPES OF REMOTE SENSING TECHNOLOGIES:
Low Altitude Aerial Photo; Med Altitude Aerial Photo; High Altitude Aerial Photo; Digital Image Interpretations; Manual Image Interpretations

PERSONNEL & SKILLS REPRESENTED:
Management (5); Professional (4); Technical (7); Other (5)
Cartographers; Computer Equip. Operators; Computer Programmers; Draftsmen; Engineers (civil, environ.); Field Surveyors; Image Processing Equip. Oper.; Soil Scientists; Photogrammetrists; Photogrammetric Equip. Oper.; Photointerpreters; Photolab Technicians; Physical Scientists; Geographers

STATEMENT OF CAPABILITIES:
Aerial photography, surveying, mapping, applied photogrammetry, cadastral mapping, thematic mapping, analytical bridging, digital mapping, photographic interpretation, geographic data base mapping, polygon extraction, color plots, land use surveys, radius maps, demographic mapping
FACILITIES AND SPECIAL EQUIPMENT

AIRCRAFT

CAMERAS, SCANNERS, AND OTHER REMOTE SENSORS

FIELD SURVEY EQUIPMENT

PHOTOGRAPHIC PROCESSING EQUIPMENT

PHOTOMGRAMMETRIC PROCESSING EQUIPMENT

IMAGE INTERPRETATION, VIEWING AND MAPPING (NON-DIGITAL)

IMAGE INTERPRETATION, VIEWING AND MAPPING (DIGITAL)

DIGITIZING, PLOTTING AND GRAPHICS

701 Interactive Console (1)
875 Interactive Console (1)
Drum Plotter Cal Comp 936 (1)

OTHER COMPUTER PROCESSING

OTHER

PRODUCTS AND SERVICES PROVIDED

IMAGE PRODUCTS
BW Neg. & Pos. Transparencies, Contact and Enlarged Prints; Photo Mosaics; Photo Atlas Sheets; (c) BW Neg. & Pos. Transparencies, Contact and Enlarged Prints; Photo Mosaics; Photo Atlas Sheets; Analog Magnetic Tape; Thermograms; Digital Mosaics; Halftone Image Prints; Digital Magnetic Tape; (a) Color, Color Infrared, Color Composite Neg. & Pos. ENHANCED AND CORRECTED IMAGERY
(c) Photo Pseudo Stereo; (a) Digital: Change Detection; Pseudo Stereo

PHOTOMGRAMMETRIC PRODUCTS
(c) Topographic Maps; Engineering Cross Sections; Stockpile Measurements; Earthwork Measurements; Digital Terrain Models; Digital Data Bases; Planimetric Maps; Photo-Contour Maps; Plan and Profile Sheets; Volumetric Calculations; Distance & Angle Measurements;
(a) Orthophotos

INTERPRETED THEMATIC PRODUCTS
(c) Color Thematic Maps; Land Use Maps; Vegetation/Forestry Maps; Contour Weather Maps;
Utility Maps; Acreage Tabulations; Geocoded Data Bases; Thematic Map Overlays; Geologic Maps; Transportation Maps; Soils Maps; Tax Maps; Digital Magnetic Tapes

PROJECT PLANNING AND SUPPORT SERVICES
Problem Definition; Feasibility Analysis; Selection of Existing Imagery; Ground Control Survey; Map Digitizing; Data Base Preparation; Ancillary Data Collection; Ground Truth Survey; Gray Level Digitizing; Data Management; (a) Air Support Operations; Sensor Selection/Evaluation; Sampling Strategy Design

AERIAL SURVEY
(a) Low Altitude Photography; Thermal Infrared; Radar; Geophysical; High Altitude Photography; Multispectral Scanner

IMAGE PROCESSING, INTERPRETATION AND ANALYSIS
Digital Image Processing; Batch Digital Image/Analysis/Classification; Interactive Digital Image/Analysis/Classification; Photographic Laboratory Processing; Manual Image Interpretation

PHOTOMGRAMMETRIC ENGINEERING
Aerotriangulation; Planimetric Mapping; Stereo Digitizing; Cross-Sectioning; Stereo-compilation; Topographic Mapping-Small Scale; Topographic Mapping-Large Scale; Volumetric Calculation; (a) Orthophotomapping

REPRODUCTION
Drafting & Scribing; Cartographic Reproduction; Automated Drafting/Plotting; Printing

OTHER SERVICES
Statistical Modeling; Consultant Services; Interactive Computer Graphics; Computer Services; Software Design/Development; (a) Remote Sensing Research
NAME: METRICS, INC.

ADDRESS(ES) & CONTACT(S)
290 Interstate North, Suite 116
Atlanta, Georgia 30339
(404) 955-1975
C. William Spann

YEARS IN BUSINESS: 7
PROJECTS COMPLETED: 50
REGION SERVED: U.S.
TOTAL APPLICABLE EMPLOYEES: 5

TYPES OF REMOTE SENSING TECHNOLOGIES:
Low Altitude Aerial Photo; Mid Altitude Aerial Photo; High Altitude Aerial Photo;
Aerial Multispectral Scanner; Aerial Thermal Infrared Scanner; Landsat MSS;
Landsat R RV; Skylab; Digital Image Interpretations; Manual Image Interpretations

PERSONNEL & SKILLS REPRESENTED:
Computer programmers; Photointerpreters; Pilots

STATEMENT OF CAPABILITIES:
METRICS, INC. provides a wide range of consulting services designed to assure
the cost effective utilization of remote sensing data. METRICS' personnel have
education and experience in remote sensing, physics, mathematics, computer programming,
and economics. METRICS has provided management and technical assistance to local,
regional, state, and federal government agencies, as well as to planning agencies
and private industry, in planning, organizing, and conducting remote sensing projects.
PRODUCTS AND SERVICES PROVIDED

IMAGE PRODUCTS

ENHANCED AND CORRECTED IMAGERY

PHOTOGRAFOMETRIC PRODUCTS

INTERPRETED, THEMATIC PRODUCTS

PROJECT PLANNING AND SUPPORT SERVICES
Problem Definition; Feasibility Analysis; Selection of Existing Imagery; Sampling Strategy Design; Ancillary Data Collection; Ground Truth Survey; Data Management

AERIAL SURVEY
Low Altitude Photography

IMAGE PROCESSING, INTERPRETATION AND ANALYSIS
Manual Image Interpretation; (a) Digital Image Processing; Batch Digital Image/Analysis/Classification; Interactive Digital Image/Analysis/Classification; Photographic Laboratory Processing; Manual Image Interpretation

PHOTOGRAFOMETRIC ENGINEERING

REPRODUCTION

OTHER SERVICES
Remote Sensing Research; Remote Sensing Training; Statistical Modeling; Consultant Services; Turnkey Systems Sales/Leasing/Service; Hardware Design/Development; Software Design/Development; Software Sales/Leasing

REMOTE SENSING EQUIPMENT/SYSTEMS PROVIDED

REMOTE SENSOR SYSTEMS

VIEWING EQUIPMENT

PHOTOGRAFOMETRIC EQUIPMENT

DIGITAL IMAGE PROCESSING EQUIPMENT

SOFTWARE
Sell Geometric Correction; Radiometric Correction; Image Enhancement; Multispectral Classification

INTEGRATED SYSTEMS
Sell Geometric Correction; Radiometric Correction; Image Enhancement; Multispectral Classification

OTHER EQUIPMENT
NAME: MISSISSIPPI STATE UNIVERSITY

ADDRESS(ES) & CONTACT(S)
P.O. Box FD
Mississippi State, Mississippi 39762
(601) 325-2946
W. Frank Miller

YEARS IN BUSINESS: 8
PROJECTS COMPLETED: 14
REGION SERVED: LV & VI

TYPES OF REMOTE SENSING TECHNOLOGIES:
Low Altitude Aerial Photo; Med Altitude Aerial Photo; High Altitude Aerial Photo; Landsat MSS; Digital Image Interpretations; Manual Image Interpretations; Data Base Development

PERSONNEL & SKILLS REPRESENTED:
Management (1); Professional (7); Technical (2); Other (2)
Computer Programmers; Engineers (civil, environ.); Soil Scientists; Photogrammatists; Photointerpreters; Geographers; Foresters; Wildlife Biologists

STATEMENT OF CAPABILITIES:
Provide demonstration projects and remote sensing support for units of local, state and federal agencies, also private industry and individuals. Both manual and digital analysis expertise in archeology, forestry, wildlife, land use planning, resource management, wetlands, environmental impact assessments.

FACILITIES AND SPECIAL EQUIPMENT

AIRCRAFT

CAMERAS, SCANNERS, AND OTHER REMOTE SENSORS

FIELD SURVEY EQUIPMENT

PHOTOGRAPHIC PROCESSING EQUIPMENT

PHOTOGRAFMETRIC PROCESSING EQUIPMENT

IMAGE INTERPRETATION, VIEWING AND MAPPING (NON-DIGITAL)
B&L Zoom 240, Richards Light Tables (2)
ZTS (1)
Mirror Stereoscopes and Vert. Sketchmasters (6)

IMAGE INTERPRETATION, VIEWING AND MAPPING (DIGITAL)
Univac 1100/80 (1)
Data General Eclipse Minicomputer with graphics and image pricing peripherals (1)

DIGITIZING, PLOTTING AND GRAPHICS
Numonics Graphic Calculators; TI Silent 700 (1)
Color CRT, Printer-Plotter (1)

OTHER COMPUTER PROCESSING
Entire System used for GIS

OTHER
MISSISSIPPI STATE UNIVERSITY

PRODUCTS AND SERVICES PROVIDED

IMAGE PRODUCTS
Photo Mosaics

ENHANCED AND CORRECTED IMAGERY
(c) Digital Geometric Correction; Density Slice; Change Detection; Multitemporal Composites

PHOTограмMETRIC PRODUCTS
(c) Digital Terrain Models; Digital Data Bases; Planimetric Maps

INTERPRETED, THEMATIC PRODUCTS
(c) Land Use Maps; Vegetation/Forestry Maps; Utility Maps; Acreage Tabulation; Geocoded Data Bases; Thematic Map Overlays; Geologic Maps; Transportation Maps; Soils Maps; Tax Maps

PROJECT PLANNING AND SUPPORT SERVICES
Problem Definition; Feasibility Analysis; Selection of Existing Imagery; Ground Control Survey; Map Digitizing; Data Base Preparation; Sensor Selection/Evaluation; Sampling Strategy Design; Ancillary Data Collection; Ground Truth Survey; Gray Level Digitizing; Data Management; (a) Air Support Operations

AERIAL SURVEY
(s) Low Altitude photography

IMAGE PROCESSING, INTERPRETATION AND ANALYSIS
Digital Image Processing: Batch Digital Image/Analysis/Classification; Interactive Digital Image/analysis/Classification; Manual Image Interpretation; (a) Photographic Laboratory Processing

PHOTограмMETRIC ENGINEERING
Planimetric Mapping

REPRODUCTION
Drafting & Scribbling; (a) Cartographic Reproduction; Printing

OTHER SERVICES
Remote Sensing Research; Remote Sensing Training; Consultant Services; Interactive Computer Graphics; Computer Services; Software Design/Development

NAME: NATIONAL PARK SERVICES, REMOTE SENSING DIVISION,
UNIVERSITY OF NEW MEXICO

ADDRESS(es) & CONTACT(s)
P.O. Box 26176
Albuquerque, New Mexico 87125
(505) 277-4165
Dr. Thomas R. Lyons

YEARS IN BUSINESS: 10
PROJECTS COMPLETED: 25
REGION SERVED: ___
TOTAL APPLICABLE EMPLOYEES: 8

TYPES OF REMOTE SENSING TECHNOLOGIES:
Low Altitude Aerial Photo; Med Altitude Aerial Photo; High Altitude Aerial Photo; Aerial MultiSpectral Scanner; Aerial Thermal Infrared Scanner; Geophysical Survey; Landsat MSS; Landsat ETM; Skylab; Digital Image Interpretations; Analog electronic image enhancement

PERSONNEL & SKILLS REPRESENTED:
Management (1); Professional (2); Technical (3); Other (2)
Computer Programmers; Social Scientists; Photointerpreters; Physical Scientists

STATEMENT OF CAPABILITIES:
Research into the application of remote sensing techniques for the purposes of cultural resource management in National Park Service areas. Consultation can be undertaken for State, local, and Federal Government agencies on a cooperative basis.
FACILITIES AND SPECIAL EQUIPMENT

AIRCRAFT

CAMERAS, SCANNERS, AND OTHER REMOTE SENSORS

FIELD SURVEY EQUIPMENT

PHOTOGRAPHIC PROCESSING EQUIPMENT

PHOTOGRAMMETRIC PROCESSING EQUIPMENT

IMAGE INTERPRETATION, VIEWING AND MAPPING (NON-DIGITAL)
Mirror stereoscopes/zoom microscopic stereoscopes 3/2
1'S Digicol and Mini-Addcol (1 ea)
Light tables (2)

IMAGE INTERPRETATION, VIEWING AND MAPPING (DIGITAL)

DIGITIZING, PLOTTING AND GRAPHICS
Numonics 1224 Planimetric Digitizer (1)
Tektronix 405I Graphics Terminal (1)

OTHER COMPUTER PROCESSING

OTHER

PRODUCTS AND SERVICES PROVIDED

IMAGE PRODUCTS

ENHANCED AND CORRECTED IMAGERY

PHOTOGRAMMETRIC PRODUCTS
Consultation of suggested specifications and techniques

INTERPRETED, THEMATIC PRODUCTS
Identification of cultural anomalies

PROJECT PLANNING AND SUPPORT SERVICES
Problem Definition; Feasibility Analysis; Selection of Existing Imagery; Sensor Selection/Evaluation; Sampling Strategy Design

AERIAL SURVEY

IMAGE PROCESSING, INTERPRETATION AND ANALYSIS

PHOTOGRAMMETRIC ENGINEERING

REPRODUCTION

OTHER SERVICES
Remote Sensing Research; Remote Sensing Training; Consultant Services
NAME: NORTHERN AERIAL SURVEY

ADDRESS(ES) & CONTACT(S)
3025 Airport Road
Hastings, Michigan 49058
(616) 945-3216
Charles F. Murphy

YEARS IN BUSINESS: 6
PROJECTS COMPLETED: 400
REGION SERVED: V
TOTAL APPLICABLE EMPLOYEES: 4

TYPES OF REMOTE SENSING TECHNOLOGIES:
Low Altitude Aerial Photo; Med Altitude Aerial Photo; Manual Image Interpretations

PERSONNEL & SKILLS REPRESENTED:
Management (1); Professional (1); Technical (2)
Computer Programmers (1); Photogrammatists (1); Photolab Technicians

STATEMENT OF CAPABILITIES:
Northern Aerial Survey provides a full range of services associated with Photogrammetry. We have a Santoni Model IIC Stereo Plotter (First Coder Plotter) which is monitored at all times by computer and digitized on all axes; and a staff experienced in all types of mapping, topographic, volumetric, cross sections, flood insurance, triangulation and tax base mapping. Also, we have a complete photo lab equipped for computer rectified enlargements to 48" x 42" and contact prints to 48" x 72". Our drafting department is well experienced and able to produce the finest scribed final sheets with title block.

FACILITIES AND SPECIAL EQUIPMENT

AIRCRAFT

CAMERAS, SCANNERS, AND OTHER REMOTE SENSORS

FIELD SURVEY EQUIPMENT

PHOTOGRAPHIC PROCESSING EQUIPMENT
Kodak Supermatic Star Processor Model 342A (1)

PHOTOCOPYING EQUIPMENT

IMAGE INTERPRETATION, VIEWING AND MAPPING (NON-DIGITAL)
Santoni Stereoscope (1)

IMAGE INTERPRETATION, VIEWING AND MAPPING (DIGITAL)

DIGITIZING, PLOTTING AND GRAPHICS

OTHER COMPUTER PROCESSING

OTHER
48" x 48" Rectifying Enlarger (1)
NORTHERN AERIAL SURVEY

PRODUCTS AND SERVICES PROVIDED

IMAGE PRODUCTS
B&W Negative Transparencies, Positive Transparencies, and Contact Prints; (c) B&W Enlarged Prints; Photo Mosaics; Photo Atlas Sheets; Halftone Image Prints; (a) Color, Color Infrared Negative Transparencies, Positive Transparencies, and Contact Prints

ENHANCED AND CORRECTED IMAGERY

PHOTOGRAMMETRIC PRODUCTS
(c) Topographic Maps; Engineering Cross Sections; Stockpile Measurements; Digital Terrain Models; Digital Data Bases; Planimetric Maps; Photo-Contour Maps; Plan and Profile Sheets; Volumetric Calculations; Distance & Angle Measurements

INTERPRETED, THEMATIC PRODUCTS
(c) Land Use Maps; Vegetation/Forestry Maps; Utility Maps; Transportation Maps; Tax Maps

PROJECT PLANNING AND SUPPORT SERVICES
(a) Ground Control Survey; Map Digitizing

AERIAL SURVEY
(a) Low Altitude Photography; Thermal Infrared

IMAGE PROCESSING, INTERPRETATION AND ANALYSIS
Photographic Laboratory Processing; Manual Image Interpretation

PHOTOGRAMMETRIC ENGINEERING
Planimetric Mapping; Stereo Digitizing; Cross-Sectioning; Stereocompilation; Topographic Mapping-Small Scale; Topographic Mapping-Large Scale; Volumetric Calculations

REPRODUCTION
Drafting & Scribning; Cartographic Reproduction; Printing

OTHER SERVICES
Hardware Design/Development

NAME: NORTH PACIFIC AERIAL SURVEYS, INC.

ADDRESS(ES) & CONTACT(S)
4241 "B" Street
Anchorage, Alaska 99503
(907) 274-3548
Anthony B. Pullett

8989 S.E. McLoughlin Blvd.
Portland, Oregon 97222
(503) 652-1529
Al HANDLEY

YEARS IN BUSINESS: 8

PROJECTS COMPLETED: over 500

TOTAL APPLICABLE EMPLOYEES: 9

PERSONNEL & SKILLS REPRESENTED:
Management (2); Professional (3); Technical (4)
Cartographers (4); Draftsmen (4); Engineers (civil, environ.) (1); Image Processing Equip. Oper.; Photogrammatists (2); Photogrammetric Equip. Oper. (6); Photolab Technicians (4); Pilots (3)

STATEMENT OF CAPABILITIES:
North Pacific is a full-service photogrammetric firm serving the Western U.S. and Alaska. The company specializes in aerial photography, related photo lab products, numerical photogrammetric, topographic mapping, digitizing, cartographic drafting, and professional consulting.
FACILITIES AND SPECIAL EQUIPMENT

AIRCRAFT
Cessna 320D Skyknight (3)
Cessna 206 (1)

CAMERAS, SCANNERS, AND OTHER REMOTE SENSORS
Zeiss RME-A 15/23 (2)
Zeiss RME-A 21/23 (1)

FIELD SURVEY EQUIPMENT
HP 3800 (2)
HP 3805 (1)

PHOTOGRAPHIC PROCESSING EQUIPMENT
LogE SP 10-70 CP 18-6 (2)
Kodak 242 Processor (1)
Acti Process Copy Camera (1)

PHOTOGRAMMETRIC PROCESSING EQUIPMENT
Kern P-2 AT-DC2 & DC2B Plotters (2)
Kern Plotters (6)
Kern Monocomparator & Point Transfer Device (2)

IMAGE INTERPRETATION, VIEWING AND MAPPING (NON-DIGITAL)

IMAGE INTERPRETATION, VIEWING AND MAPPING (DIGITAL)

DIGITIZING, PLOTTING AND GRAPHICS
Kern PGZ-AT-DC2 & DC2B Plotters (2)

OTHER COMPUTER PROCESSING

OTHER

PRODUCTS AND SERVICES PROVIDED

IMAGE PRODUCTS
(c) NW Negative Transparencies, Positive Transparencies, Contact Prints, and Enlarged Prints; Photo Mosaics; Photo Atlas Sheets; Halftone Image Prints; Digital Magnetic Tape;
(s) Color, Color Infrared, and Color Composite Negative Transparencies, Positive Transparencies, Contact Prints, and Enlarged Prints

ENHANCED AND CORRECTED IMAGERY

PHOTOGAMMETRIC PRODUCTS
(c) Topographic Maps; Engineering Cross Sections; Stockpile Measurements; Earthwork Measurements; Digital Terrain Models; Digital Data Bases; Planimetric Maps; Photo-Contour Maps; Plan and Profile Sheets; Volumetric Calculations; (s) Orthophotos; Distance & Angle Measurements

INTERPRETED, THEMATIC PRODUCTS
(c) Digital Magnetic Tapes

PROJECT PLANNING AND SUPPORT SERVICES
Selection of Existing Imagery; Air Support Operations; Sensor Selection/Evaluation;
(c) Problem Definition; Feasibility Analysis; Ground Control Survey; Map Digitizing;
Data Base Preparation; Ground Truth Survey; Data Management

AERIAL SURVEY
Low Altitude Photography; (s) High Altitude Photography

IMAGE PROCESSING, INTERPRETATION AND ANALYSIS
Photographic Laboratory Processing; (s) Manual Image Interpretation

PHOTOGAMMETRIC ENGINEERING
Aerotriangulation; Planimetric Mapping; Stereo Digitizing; Cross-Sectioning; Stereo-compilation; Topographic Mapping-Small Scale; Topographic Mapping-Large Scale;
Volumetric Calculation

REPRODUCTION
Drafting & Scribing; Cartographic Reproduction; Automated Drafting/Plotting; Printing

OTHER SERVICES
Consultant Services
NAME: OKLAHOMA STATE UNIVERSITY CENTER FOR APPLICATIONS OF REMOTE SENSING

ADDRESS (ES) & CONTACT(S)
Engineering South 403
Stillwater, Oklahoma 74078
(405) 624-5178
Dr. Stephen J. Walsh, Director

YEARS IN BUSINESS: 1
PROJECTS COMPLETED: 5
REGION SERVED: U.S. & int'l.

TYPES OF REMOTE SENSING TECHNOLOGIES:
Low Altitude Aerial Photo; Med Altitude Aerial Photo; High Altitude Aerial Photo;
Aerial Multispectral Scanner; Aerial Thermal Infrared Scanner; Radar; Landsat MSS;
Landsat RSV; Skylab; Weather Satellite; Digital Image Interpretations; Manual Image Interpretations

PERSONNEL & SKILLS REPRESENTED:
Management (3); Professional (7); Technical (4); Other (2)
Cartographers; Computer Equip. Oper.; Computer Programmers; Draftsmen; Engineers
(electrical); Image Processing Equip. Oper.; Social Scientists; Photogrammatists;
Photointerpreters; Physical Scientists; Planners; Geographers

STATEMENT OF CAPABILITIES:
Remote Sensing Research and applications in resource management and environmental analysis. Landsat digital and analog analysis and interpretation through a dedicated computer hardware and software system. Aerial photographic interpretation of large to small scale color infrared, natural color, and black and white photography. Analysis of thermal and SAR data. Workshops offered featuring extensive hands-on experience and supporting lecture.

FACILITIES AND SPECIAL EQUIPMENT

AIRCRAFT

CAMERAS, SCANNERS, AND OTHER REMOTE SENSORS

FIELD SURVEY EQUIPMENT
Olympus OM-1-35 mm (2)
Miscellaneous equipment

PHOTOGRAPHIC PROCESSING EQUIPMENT
Plate maker (1)
Ozalid Processor (1)
Kale Projector (1)

PHOTOMETRIC PROCESSING EQUIPMENT

IMAGE INTERPRETATION, VIEWING AND MAPPING (NON-DIGITAL)
Zoom Transfer Scope (1)
Mirror Stereoscope (2)
Light table (2)

IMAGE INTERPRETATION, VIEWING AND MAPPING (DIGITAL)
Perkin-Elmer 8/32 mini-computer (1)
300 mega-byte disc (1)
1600 BPI Tape Drive (2)

DIGITIZING, PLOTTING AND GRAPHICS
Graphic Digitizer (Alttek) (1)

OTHER COMPUTER PROCESSING

OTHER
OKLAHOMA STATE UNIVERSITY

PRODUCTS AND SERVICES PROVIDED

IMAGE PRODUCTS
Color Composite Negative Transparencies, Positive Transparencies, & Contact Prints;
Analog Magnetic Tape; Halftone Image Prints; Digital Magnetic Tape; (e) Photo Mosaics;
Photo Atlas Sheets; Thermograms; Digital Mosaics; B & W, Color, & Color Infrared Negative Transparencies, Positive Transparencies, Contact Prints, & Enlarged Prints;
Color Composite Enlarged Prints

ENHANCED AND CORRECTED IMAGERY
(c) Photo & Digital: Multitemporal Composites; Contrast Enhanced; Geometric Correction; Density Slice; Change Detection; Multisensor Composites; Radiometric Correction;
Image Resampling; Pseudo Stereo

PHOTOGRAMMETRIC PRODUCTS
Topographic Maps; (c) Engineering Cross Sections; Stockpile Measurements; Earthwork Measurements; Digital Terrain Models; Digital Data Bases; Planimetric Maps; Plan and Profile Sheets; Volumetric Calculations; Distance & Angle Measurements (a) Orthophotos;
Photo-Contour Maps

INTERPRETED, THEMATIC PRODUCTS
Digital Magnetic Tapes; (c) Color Thematic Maps; Land Use Maps; Vegetation/Forestry Maps;
Contour Weather Maps; Utility Maps; Acreage Tabulations; Geocoded Data Bases; Thematic Map Overlays; Geologic Maps; Transportation Maps; Soils Maps; Tax Maps

PROJECT PLANNING AND SUPPORT SERVICES
Problem Definition; Feasibility Analysis; Selection of Existing Imagery; Ground Control Survey; Map Digitizing; Data Base Preparation; Sensor Selection/Evaluation; Sampling Strategy Design; Ancillary Data Collection; Ground Truth Survey; Gray Level Digitizing; Data Management; (a) Air Support Operations

AERIAL SURVEY
High Altitude Photography; (a) Low Altitude Photography; Thermal Infrared; Radar;
Geophysical; Multispectral Scanner

IMAGE PROCESSING, INTERPRETATION AND ANALYSIS
Digital Image Processing; Batch Digital Image/Analysis/Classification; Interactive Digital Image/Analysis/Classification; Manual Image Interpretation; (a) Photographic Laboratory Processing

PHOTOGRAMMETRIC ENGINEERING
Aerotriangulation; Orthophotomapping; Planimetric Mapping; Stereo Digitizing; Cross-Sectioning; Stereocompilation; Topographic Mapping-Small Scale; Topographic Mapping-Large Scale; Volumetric Calculation

REPRODUCTION
Drafting & Scribing; Cartographic Reproduction; Automated Drafting/Plotting; Printing

OTHER SERVICES
Remote Sensing Research; Remote Sensing Training; Statistical Modeling; Consultant Services; Interactive Computer Graphics; Computer Services; Hardware Design/Development; Software Design/Development; (a) Turnkey Systems Sales/Leasing/Service; Equipment Sales/Leasing/Service; Software Sales/Leasing

NAME: OMI CORPORATION OF AMERICA

ADDRESS(ES) & CONTACT(S)
1319 Powhatan Street
Alexandria, Virginia 22314
(703) 549-9191
Jack Friedman

YEARS IN BUSINESS: 25
PROJECTS COMPLETED: 
REGION SERVED: Intl.

SMALL BUSINESS CONTRACTOR? Yes

MINORITY-OWNED BUSINESS? 

TOTAL APPLICABLE EMPLOYEES: 

PERSONNEL & SKILLS REPRESENTED:

TYPES OF REMOTE SENSING TECHNOLOGIES:

STATMENT OF CAPABILITIES:
Manufacturer of photogrammetric instruments and systems and remote sensing image transfer device (stereofacet plotter).
NAME: Optronics International, Inc.

ADDRESS(ES) & CONTACT(S)
7 Stuart Road
Chelmsford, MA 01824
(617) 256-4511
Mr. James Deigan, Manager, Remote Sensing Systems.

880 South Saratoga Ave., Apt. G-707
San Jose, CA 95129
(408) 296-3717
Mr. Glenn Coppleman

YEARS IN BUSINESS: 8

PROJECTS COMPLETED: N/A

REGION SERVED: U.S. Int'l.

TOTAL APPLICABLE EMPLOYEES: 11

TYPES OF REMOTE SENSING TECHNOLOGIES:
Low Altitude Aerial Photo; Mid Altitude Aerial Photo; High Altitude Aerial Photo; Aerial Multispectral Scanner; Aerial Thermal Infrared Scanner; Radar; Laser Scanner; Geophysical Survey; Landsat MSS; Landsat TM; Seasat; HCOM; Skylab; Weather Satellite; Digital Image Interpretations; Manual Image Interpretations; Map Scan.

PERSONNEL & SKILLS REPRESENTED:
Professional (1); Technical (3); Other (7); Computer Equip Operators (1); Computer Programmers (1); Engineers(electrical)(1); Photogrammatists(1); Photolab Technicians(1); Other(6). (90-120 total employees.)

STATEMENT OF CAPABILITIES:
Optronics, in its 11 years of existence, has grown to become the world leader in the manufacture and sales of color and black-and-white digital image scanning and film recording systems. Over 400 computer controlled high precision systems have been installed throughout the world. Specifications include: 80 line per mm map spatial resolution; 8-bit spectral resolution over a variety of optical density ranges; input from film, non-transparent media, and magnetic tape; output to color or black-and-white film or magnetic tape; formats 10 x 10" (standard) or larger; and systems available on-line or in stand-alone configurations. Sales and service worldwide.
FACILITIES AND SPECIAL EQUIPMENT

AIRCRAFT

CAMERAS, SCANNERS, AND OTHER REMOTE SENSORS

FIELD SURVEY EQUIPMENT

PHOTOGRAPHIC PROCESSING EQUIPMENT

Photogrammetric Processing Equipment

IMAGE INTERPRETATION, DRAWING AND MAPPING (NON-DIGITAL)

IMAGE INTERPRETATION, VIEWING AND MAPPING (DIGITAL)

OTHER COMPUTER PROCESSING

OTHER

PRODUCTS AND SERVICES PROVIDED

IMAGE PRODUCTS

(c) B&W, Color, Color Composite Positive Transparencies; (c) B&W Contact Prints; (c) B&W, Color, Color InfraRed, Color Composite Enlarged Prints; (c) Digital Magnetic Tape.

ENHANCED AND CORRECTED IMAGERY

(c) Contrast Enhanced, Density Slice, Multisensor Composites Digital Imagery.

PHOTOGRAFMETRIC PRODUCTS

INTERPRETED, THEMATIC PRODUCTS

PROJECT PLANNING AND SUPPORT SERVICES

AERIAL SURVEY

IMAGE PROCESSING, INTERPRETATION AND ANALYSIS

PHOTOGRAFMETRIC ENGINEERING

REPRODUCTION

OTHER SERVICES

Remote Sensing Training; Turnkey Systems Sales/Leasing/Service; Hardware Design/Development; Equipment Sales/Leasing/Service; Software Sales/Leasing.
REMOTE SENSING EQUIPMENT/SYSTEMS PROVIDED

REMOTE SENSOR SYSTEMS

Viewing Equipment
Sell Density Slicers.

Photogrammetric Equipment
Sell Orthoprojectors.

Digital Image Processing Equipment
Sell and Lease Image Digitizers, Film Output Recorders.

Software
Sell Image Enhancement

Integrated Systems
Sell Image Enhancement

Other Equipment

NAME: OWEN AYRES & ASSOCIATES, INC.

ADDRESS(ES) & CONTACT(S)
2132 Pankratz Street
Madison, Wisconsin 53704
(608) 249-0471
L.R. Evans

1300 West Clairmont Avenue
Eau Claire, Wisconsin 54701
(715) 834-3161
Pat Quinn

YEARS IN BUSINESS: 31
PROJECTS COMPLETED: 3,500
REGION SERVED: U.S. & Int'l.

TYPES OF REMOTE SENSING TECHNOLOGIES:
Low Altitude Aerial Photo; Med Altitude Aerial Photo; High Altitude Aerial Photo; Manual Image Interpretations

PERSONNEL & SKILLS REPRESENTED:
Management (7); Professional (10); Technical (40); Other (8)
Cartographers (2); Computer Equip. Oper. (2); Computer Programmers (2); Draftsmen (10); Engineers (civil, environ.*) (8); Engineers (electrical) (2); Field Surveyors (10); Image Processing Equip. Oper. (1); Soil Scientists (3); Photogrammats (9); Photogrammetric Equip. Oper. (8); Photointerpreters (2); Photolab Technicians (2); Physical Scientists (2); Planners (2)

STATEMENT OF CAPABILITIES:
Optonics International, Inc. is an internationally recognized, quality photographic contractor and service provider, with over 30 years of experience and an extensive list of specialized equipment and personnel. The company provides a full range of services, including photography, photogrammetry, geodetic surveying, field and base mapping, aerial photography, and urban and community planning services.
FACILITIES AND SPECIAL EQUIPMENT

AIRCRAFT
Cessna 180 (2)
Cessna 206 (1)
Cessna 310 (1)

CAMERAS, SCANNERS, AND OTHER REMOTE SENSORS
Zeiss RMK 15/23 - 6" (2)
Wild RBG - 6" (1)
Wild Nc10 - 6" & 3 1/2" (1)

FIELD SURVEY EQUIPMENT
Wild T-2 Theodolites (4)
Wild N-2 automatic levels (4)
Laser Ranger & Hewlett Packard EDM equipment (4)

PHOTOCOPY EQUIPMENT
40" copy camera (1)
Log-O-Tronic contact & strip printers (1)
DuPont 42" and Pako 24" automatic processors (1)

PHOTOGRAPHIC PROCESSING EQUIPMENT
Wild B8S stereo plotters (4)
Kern PG2 stereo plotters (1)
Kelsh stereo plotters (4)

IMAGE INTERPRETATION, VIEWING AND MAPPING (NON-DIGITAL)
Stereo plotting instruments (9)
Hand and mirror stereoscopes (4)

IMAGE INTERPRETATION, VIEWING AND MAPPING (DIGITAL)
Stereo plotting instruments (2)

DIGITIZING, PLOTTING AND GRAPHICS
H. Dell Foster Digital Quantizer interfaced with Stereo-ploter equipment (2)

OTHER COMPUTER PROCESSING
Hewlett Packard 3000 System (1)
General Automation 1830 System (1)

OTHER
S.P.O.S. orthophotoscopes (2)
Calcomp flat bed plotter (1)
Terminal (2) time share service with United Computing: Boeing; McDonnell-Douglas;
Watstore-U.S.G.S.; USS Engineers & Consultants, Inc.; University of Wisconsin Academic
Computer Center, Univac System

PRODUCTS AND SERVICES PROVIDED

IMAGE PRODUCTS
(c) B&W and Color Composite Negative Transparencies, Positive Transparencies, Contact
Prints, and Enlarged Prints; Photo Mosaics; Photo Atlas Sheets; Halftone Image Prints;
(s) Color and Color Infrared Negative Transparencies, Positive Transparencies, Contact
Prints and Enlarged Prints; Analog Magnetic Tape; Thermograms; Digital Mosaics; Digital
ENHANCED AND CORRECTED IMAGERY
Magnetic Tape
(s) Photo & Digital: Multitemporal Composites; Contrast Enhanced; Geometric Correction;
Density Slice; Multisensor Composites; Radiometric Correction; Image Resampling;
Pseudo Stereo; Photo Change Detection

PHOTOGRAMMETRIC PRODUCTS
(c) Orthophotos; Topographic Maps; Engineering Cross Sections; Stockpile Measurements;
Earthwork Measurements; Planimetric Maps; Photo-Contour Maps; Plan and Profile Sheets;
Volumetric Calculation; Distance & Angle Measurements; (s) Digital Terrain Models;
Digital Data Bases

INTERPRETED, THEMATIC PRODUCTS
(c) Color Thematic Maps; Land Use Maps; Vegetation/Forestry Maps; Contour Weather Maps;
Utility Maps; Acreage Tabulations; Geocoded Data Bases; Thematic Map Overlays; Geologic
Maps; Transportation Maps; Soils Maps; Tax Maps; Digital Magnetic Tapes; Digital Card
Decks

PROJECT PLANNING AND SUPPORT SERVICES
Problem Definition; Feasibility Analysis; Selection of Existing Imagery; Ground Control
Survey; Map Digitizing; Data Base Preparation; Air Support Operations; Sensor Selection/
Evaluation; Sampling Strategy Design/ Ancillary Data Collection; Ground Truth Survey;
Data Management; (s) Gray Level Digitizing

AERIAL SURVEY
Low Altitude Photography; Thermal Infrared; High Altitude Photography; (s) Radar;
Geophysical; Multispectral Scanner

IMAGE PROCESSING, INTERPRETATION AND ANALYSIS
Manual Image Interpretation; Photographic Laboratory Processing; (s) Digital Image
Processing; Batch Digital Image/Analysis/Classification; Interactive Digital Image/
Analysis/Classification;

PHOTOGRAMMETRIC ENGINEERING
Aerotriangulation; Orthophotomapping; Planimetric Mapping; Stereo Digitizing; Cross-
Sectioning; Stereocompilation; Topographic Mapping-Small Scale; Topographic Mapping-
Large Scale; Volumetric Calculation

REPRODUCTION
Drafting & Scribing; Cartographic Reproduction; Automated Drafting/Plotting; Printing

OTHER SERVICES
Statistical Modeling; Consultant Services; Computer Services; (s) Remote Sensing
Research; Remote Sensing Training; Interactive Computer Graphics
NAME: PAN AMERICAN SURVEYS, INC.

ADDRESS(ES) & CONTACT(S)
8755 S.W. 131 Street
Miami, Florida 33176
(305) 235-7051
Donald A. Walker

YEARS IN BUSINESS: 34
PROJECTS COMPLETED: 1,500
REGION SERVED: IV, Int'l.

TYPES OF REMOTE SENSING TECHNOLOGIES:
Low Altitude Aerial Photo; Med Altitude Aerial Photo

PERSONNEL & SKILLS REPRESENTED:
Management (1); Professional (2); Technical (2); Other (2)
Draftmen; Engineers (civil, environ.); Field Surveyors (2); Photogrammatists (1); Photolab Technicians (1); Pilots (1)

STATEMENT OF CAPABILITIES:
This company has over thirty years experience in Aerial Photography and Photogrammetry. Its activities include but are not limited to the following:
High and low level vertical Aerial Photography in Black and White, Color, Infrared, Color Infrared, complete lab processing of black and white and infrared photography. Photogrammetric and topographic maps, mosaics, rectified and unrectified enlargements and reproducibles, plan and profile sheets, volume and area abstraction from photographs for progress reports, stock piles etc. The company also provides ground control survey using the latest surveying instruments with experienced staff.

FACILITIES AND SPECIAL EQUIPMENT

AIRCRAFT
Piper Appache Twin Aircraft (1)

CAMERAS, SCANNERS, AND OTHER REMOTE SENSORS
Cameras 6", 8", 12" (8)

FIELD SURVEY EQUIPMENT
2nd Order Theodolite, Levels (2)
1st Order Distancers (2)

PHOTOMICROGRAPHIC PROCESSING EQUIPMENT
Fully equipped Lab for Black & White Photography (1)
Floor area 3600 sq.ft., Developer, Printer, Enlarger, etc.

PHOTOMICROGRAPHIC PROCESSING EQUIPMENT
Rectifier

IMAGE INTERPRETATION, VIEWING AND MAPPING (NON-DIGITAL)
1st Order Plotter (1)
2nd Order Plotter (1)

IMAGE INTERPRETATION, VIEWING AND MAPPING (DIGITAL)

DIGITIZING, PLOTTING AND GRAPHICS (1)

OTHER COMPUTER PROCESSING

OTHER
PAN AMERICAN SURVEYS, INC.

PRODUCTS AND SERVICES PROVIDED

IMAGE PRODUCTS
B&W Contact and Enlarged Prints; (c) B&W Negative and Positive Transparencies; Photo Mosaics; Photo Atlas Sheets; Halftone Image Prints; (s) Color, Color Infrared, and Color Composite Negative Transparencies, Positive Transparencies, Contact Prints, and Enlarged Prints

ENHANCED AND CORRECTED IMAGERY

PHOTограмmetric PRODUCTS
(c) Orthophotos; Topographic Maps; Engineering Cross Sections; Stockpile Measurements; Earthwork Measurements; Digital Terrain Models; Digital Data Bases; Photo-Contour Maps; Plan and Profile Sheets; Volumetric Calculations; Distance & Angle Measurements

INTERPRETED, THEMATIC PRODUCTS

PROJECT PLANNING AND SUPPORT SERVICES
Ground Control Survey

AERIAL SURVEY
Low Altitude Photography

IMAGE PROCESSING, INTERPRETATION AND ANALYSIS
Photographic Laboratory Processing; Manual Image Interpretation

PHOTограмmetric ENGINEERING
Planimetric Mapping; Stereo Digitizing; Cross-Sectioning; Stereocompilation; Topographic Mapping-Large Scale; Volumetric Calculation; (s) Aerotriangulation; Orthophotomapping

REPRODUCTION
Printing; Drafting & Scribing

OTHER SERVICES

NAME: PHOTO SCIENCE, INC.

ADDRESS(ES) & CONTACT(S)
7840 Airpark Road
Gaithersburg, Maryland 20760
(301) 948-8550
Richard G. Crouse
PHOTO SCIENCE, INC. OF S.C.
401 National Cemetery Road
Florence, South Carolina 29503
(803) 662-8405
D.C. Barbot

YEARS IN BUSINESS: 25
PROJECTS COMPLETED: 4,500
REGION SERVED: U.S. & Int’l.

TOTAL APPLICABLE EMPLOYEES: 60

TYPES OF REMOTE SENSING TECHNOLOGIES:
Low Altitude Aerial Photo; Med Altitude Aerial Photo; Aerial Thermal Infrared Scanner; Landsat MSS; Landsat ETM; Seesat; Skylab; Weather Satellite; Digital Image Interpretations Manual Image Interpretations

PERSONNEL & SKILLS REPRESENTED:
Management (6); Professional (26); Technical (27); Other (2)

Cartographers (8); Draftsmen (8); Field Surveyors (4); Image Processing Equipment Operators (2); Photogrammatists (4); Photogrammetric Equipment Operators (10); Photointerpreters (4); Photolab Technicians (11); Pilots (3)

STATEMENT OF CAPABILITIES:
Acquisition of aerial, photography, image processing, data interpretation and mapping.
FACILITIES AND SPECIAL EQUIPMENT

AIRCRAFT
Beechcraft Queen Air 65/80 (dual camera capabilities) (1); Aztec (1); Cessna 320 (1)

CAMERAS, SCANNERS, AND OTHER REMOTE SENSORS
RCA Wild (2); ECS Wild (1); Strip Camera 9" (1); Bendix LN 3 Thermal Mapper (1); Halcher 70mm Aerial Camera w/1000' Mag. (1); Richardson Aerial Viewers; Multi-camera 70mm Sensor System (1)

FIELD SURVEY EQUIPMENT
Wild T-1 Theodolites (1); Wild T-2 Theodolites (1); Wild N-2 Levels (1); Zeiss TN-2 Theodolites (1); Zeiss N-12 Levels (Self Leveling) (1); Plane Table and Alidade (1); Geodimeters (Day/Night) (1); K&E Microranger (1) Level Rods, Range Poles, Tapes

PHOTOGRAPHIC PROCESSING EQUIPMENT
Hope Color Processor (2); Dupont ERF Cronaflex Processors (3); Dupont Cromalin Color Processors (2); Precise Scale Camera Projector (1); Dupont Cromalin Color Proofing System (1); Pako-Pokoral Super G-48 Processor (1); Robertson Tri-Color Process Camera (1); Polaroid MP-4 Copy System (1); Durat G-184 Enlarger (2); Durat 138 Micro Spec Enlarger (1); Halcher 70mm Processing System (1); Nikor 100' Open-Reel Processing System - 35mm, 70mm, 1055mm; Zeiss 120 Aerial Film Processing System (1); LogEtromic Printers - Mark IV for Color and B/W; Horse Contact Printers; Vacuum Frames - B&W, 28"x48", 52"x68", 52"x74"

PHOTOCOGRAPHIC PROCESSING EQUIPMENT
Kelsh Stereo Mapping Plotters (7); K&E Multiple Projector (5) Stereo Plotter (2)

IMAGE INTERPRETATION, VIEWING AND MAPPING (NON-DIGITAL)
Panscan; Stereo sketch

IMAGE INTERPRETATION, VIEWING AND MAPPING (DIGITAL)

DIGITIZING, PLOTTING AND GRAPHICS
Kongsberg ES 5000 High speed automatic drafting table (1); Dell Foster Electronic Digitizer with X, Y, and Z capability (2)

OTHER
HAAS-STREIT Coordinatograph (1); Olivetti Underwood Computer (1); Computer Time Sharing - Tech-Mac, Honeywell (1)

PRODUCTS AND SERVICES PROVIDED

IMAGE PRODUCTS
(c) B&W, Color, Color Infrared, and Color Composite Negative Transparencies, Positive Transparencies, Contact Prints and Enlarged Prints; Photo Mosaics; Photo Atlas Sheets; Thermograms; Halftone Image Prints; (s) Analog Magnetic Tape; Digital Mosaics; Digital Magnetic Tape

ENHANCED AND CORRECTED IMAGERY
(c) Photo; Multitemporal Composites; Contrast Enhanced; Geometric Correction; Density Slice; Change Detection; Multisensor Composites; Pseudo Stereo; (s) Photo; Radiometric Correction

PHOTOGRAMMETRIC PRODUCTS
(c) Topographic Maps; Engineering Cross Sections; Stockpile Measurements; Earthwork Measurements; Planimetric Maps; Photo-Contour Maps; Plan and Profile Sheets; Volumetric Calculations; Distance & Angle Measurements; Orthophotos; Digital Data Bases; Photo-Contour Maps

INTERPRETED, THEMATIC PRODUCTS
(c) Color Thematic Maps; Land Use Maps; Vegetation/Forestry Maps; Utility Maps; Acreage Tabulation; Photographic Map Overlays; Transportation Maps; Slope Mapping; (s) Geocoded Data Bases; Geologic Maps; Digital Magnetic Tapes

PROJECT PLANNING AND SUPPORT SERVICES
Problem Definition; Feasibility Analysis; Selection of existing Imagery; Ground Control Survey; Map Digitizing; Data Base Preparation; Air Support Operations; Sensor Selection / Evaluation; Ancillary Data Collection; Ground Truth Survey; Gray Level Digitizing; Data Management

AERIAL SURVEY
Low Altitude Photography; Thermal Infrared

IMAGE PROCESSING, INTERPRETATION AND ANALYSIS
Photographic Library Processing; Manual Image Interpretation; (s) Digital Image Processing; Batch Digital Image/Analysis/Classification; Interactive Digital Image/Analysis/Classification

PHOTOCGRAPHIC ENGINEERING
Planimetric Mapping; Stereo Digitizing; Cross-Sectioning; Stereocompilation; Topographic Mapping-Small Scale; Topographic Mapping - Large Scale; Volumetric Calculations; Natural Tree Mapping for Power Lines; (s) Aerotriangulation; Orthophotomapping

REPRODUCTION
Drafting & Scribing; Cartographic Reproduction; Automated Drafting/Plotting; (s) Printing

OTHER SERVICES
Remote Sensing Research; Remote Sensing Training; Consultant Services; (s) Statistical Modeling; Interactive Computer Graphics; Computer Services
NAME: PHOTOGRAPHIC INTERPRETATION CORPORATION

ADDRESS(ES) & CONTACT(S)
Box 868
Hanover, New Hampshire 03755
(603) 643-2268
V.H. Anderson or Roger B. Arend

YEARS IN BUSINESS: 10
PROJECTS COMPLETED: over 100
REGION SERVED: U.S. & Int'l.

TYPES OF REMOTE SENSING TECHNOLOGIES:
Low Altitude Photography; Med Altitude Photography; High Altitude Photography; Aerial Thermal Infrared Scanner; Radar; Landsat MSS; Landsat RBV; Skylab; Manual Image Interpretations

PERSONNEL & SKILLS REPRESENTED:
Professional (9)
Engineers (civil, environ.) (2); Physical Scientists (2); Planners (2); Geographers (1); Biological Scientists (2)

STANDARD OF CAPABILITIES:
The Photographic Interpretation Corporation, an interdisciplinary consulting firm, has extensive experience in the application of remote sensing techniques for the creation of environmental data bases. PIC's staff includes engineers, geologists, and ecologists and represents many years of experience in the research and application of imagery interpretation to environmental problem solving. Since 1970, PIC has successfully completed projects in twenty-seven states, Canada, Ghana, and Latin America. These projects have been performed for clients from federal, state and local governments and the private sector to develop solutions to problems such as streambank erosion, flood control, water quality, site selection, wildlife habitat, and wetland delineation.

FACILITIES AND SPECIAL EQUIPMENT

AIRCRAFT

CAMERAS, SCANNERS, AND OTHER REMOTE SENSORS

FIELD SURVEY EQUIPMENT
SOIL SAMPLER (1)
GEOLOGIC FIELD EQUIPMENT (1)

PHOTOGRAPHIC PROCESSING EQUIPMENT

PHOTOGRAHMETRIC PROCESSING EQUIPMENT

IMAGE INTERPRETATION, VIEWING AND MAPPING (NON-DIGITAL)
Stereoscopes (6)
Light Tables (3)
Monocular Enlargers (3)

IMAGE INTERPRETATION, VIEWING AND MAPPING (DIGITAL)

DIGITIZING, PLOTTING AND GRAPHICS

OTHER COMPUTER PROCESSING

OTHER
Diazco Reproduction
PHOTOGRAPHIC INTERPRETATION CORP.

PRODUCTS AND SERVICES PROVIDED

IMAGE PRODUCTS
(c) Photo Mosaics; (s) B&W Neg. Transparencies, Contact & Enlarged Prints; Color Neg. Transparencies; Color and Color Infrared Pos. Transparencies, Contact and Enlarged Prints

ENHANCED AND CORRECTED IMAGERY
(c) Photo: Multitemporal Composites; Change Detection; (s) Photo: Contrast Enhanced; Geometric Correction

PHOTOGRAMMETRIC PRODUCTS
(c) Engineering Cross Sections; Stockpile Measurements; Earthwork Measurements; Volumetric Calculations; (s) Topographic Maps; Planimetric Maps; Photo-Contour Maps

INTERPRETED, THEMATIC PRODUCTS
(c) Color Thematic Maps; Land Use Maps; Vegetation/Forestry Maps; Acreage Tabulations; Thematic Map Overlays; Geologic Maps; Transportation Maps; Soils Maps; Tax Maps

PROJECT PLANNING AND SUPPORT SERVICES
Problem Definition; Feasibility Analysis; Selection of Existing Imagery; Data Base Preparation; Air Support Operations; Sensor Selection/Evaluation; Sampling Strategy Design; Ancillary Data Collection; Ground Truth Survey; Data Management; (s) Ground Control Survey; Map Digitizing

AERIAL SURVEY
Low Altitude Photography

IMAGE PROCESSING, INTERPRETATION AND ANALYSIS
Manual Image Interpretation; (s) Photographic Laboratory Processing

PHOTOGRAMMETRIC ENGINEERING
(s) Aerotriangulation; Planimetric Mapping; Stereo Digitizing; Stereocompilation; Topographic Mapping-Small Scale; Topographic Mapping-Large Scale

REPRODUCTION
Printing; (a) Drafting & Scribing; Cartographic Reproduction; Automated Drafting/Plotting

OTHER SERVICES
Remote Sensing Research; Remote Sensing Training; Consultant Services;

NAME: PICKERING RESEARCH CORPORATION

ADDRESS(ES) & CONTACT(S)
1444 Wentworth Ave., (P.O. Box 986)
Pasadena, California 91102
(213) 795-7557
J. B. Pickering

YEARS IN BUSINESS: 4
PROJECTS COMPLETED: 2
REGION SERVED: U.S. & Int'l.

TOTAL APPLICABLE EMPLOYEES: 10

SMALL BUSINESS CONTRACTOR? Yes
MINORITY-OWNED BUSINESS?

TYPES OF REMOTE SENSING TECHNOLOGIES:
Landsat MSS; Digital Image Interpretations

PERSONNEL & SKILLS REPRESENTED:
Management (3); Professional (5); Technical (2)
Cartographers; Computer Equipment Operators; Engineers (electrical); Image Processing Equipment Operators; Photolab Technicians; Pilots; Planners; Geographers

STATEMENT OF CAPABILITIES:
The Pickering Research Corporation has expertise in computer systems, software development and production of products for remote sensed imagery. It provides complete systems and/or software packages for data management and processing of imaged data. Processing includes error correction, enhancement; mosaicking, geological and land use classification, matching to map projections, statistical listing and analysis. It also furnishes data processing systems to meet customer specifications and products from remote imaged data to satisfy customer requirements.
FACILITIES AND SPECIAL EQUIPMENT

AIRCRAFT

CAMERAS, SCANNERS, AND OTHER REMOTE SENSORS

FIELD SURVEY EQUIPMENT

PHOTOGRAPHIC PROCESSING EQUIPMENT

PHOTOGRAMMETRIC PROCESSING EQUIPMENT

IMAGE INTERPRETATION, VIEWING AND MAPPING (NON-DIGITAL)
Basic System IBM 3033 Computer (1)

IMAGE INTERPRETATION, VIEWING AND MAPPING (DIGITAL)
Basic System IBM 3033 Computer (1)

DIGITIZING, PLOTTING AND GRAPHICS

OTHER COMPUTER PROCESSING

OTHER

PRODUCTS AND SERVICES PROVIDED

IMAGE PRODUCTS
(c) B/W, Color, Color Infrared, and Color Composite Negative Transparencies and Positive Transparencies; Analog Magnetic Tape; Digital Mosaics; Halftone Image Prints; Digital Magnetic Tape; (a) B/W, Color, Color Infrared, and Color Composite Contact Prints and Enlarged Prints

PHOTOGRAMMETRIC AND CORRECTED IMAGERY
(c) Photo & Digital: Multitemporal Composites; Contrast Enhanced; Geometric Correction; Density Slice; Change Detection; Multisensor Composites; Radiometric Correction; Image Resampling

PHOTOGRAMMETRIC PRODUCTS
(c) Digital Data Bases; Planimetric Maps

INTERPRETED, THEMATIC PRODUCTS

PROJECT PLANNING AND SUPPORT SERVICES
Problem Definition; Feasibility Analysis; Selection of Existing Imagery; Ground Control Survey; Map Digitizing; Data Base Preparation; Sensor Selection/Evaluation; Sampling Strategy Design; Ancillary Data Collection; Gray Level Digitizing; Data Management; (s) Air Support Operations; Ground Truth Survey

AERIAL SURVEY

IMAGE PROCESSING, INTERPRETATION AND ANALYSIS
Digital Image Processing; Batch Digital Image/Analysis/Classification; Interactive Digital Image/Analysis/Classification; (a) Photographic Laboratory Processing

PHOTOGRAMMETRIC ENGINEERING
Aerotriangulation; Orthophotomapping; Planimetric Mapping; Cross-Sectioning; Topographic Mapping-Small Scale; Topographic Mapping-Large Scale

REPRODUCTION
(a) Drafting & Scribing; Cartographic Reproduction; Automated Drafting/Plotting; Printing

OTHER SERVICES
Remote Sensing Research; Remote Sensing Training; Statistical Modeling; Consultant Services; Interactive Computer Graphics; Turnkey Systems Sales/Leasing/Service; Software Design/Development; Equipment Sales/Leasing/Service; Software Sales/Leasing; (a) Hardware Design/Development
REMOTE SENSING EQUIPMENT/SYSTEMS PROVIDED

REMOTE SENSOR SYSTEMS

VIEWING EQUIPMENT

PHOTOGRAMMETRIC EQUIPMENT

DIGITAL IMAG. PROCESSING EQUIPMENT

SOFTWARE
Sel & Lease: Geometric Correction; Radiometric Correction; Image Enhancement; Multispectral Classification

INTEGRATED SYSTEMS
Sel & Lease: Geometric Correction; Radiometric Correction; Image Enhancement; Multispectral Classification

OTHER EQUIPMENT

NAME: PRECISION PHOTO LABORATORIES

ADDRESS(ES) & CONTACT(S)
5758 N. Webster Street
Dayton, Ohio 45414
(513) 896-7450
Fred Tuzzi, Mel Kruser

4241 "B" Street, Suite 102
Anchorage, Alaska 99503
(907) 274-3596
Keith Nelson

YEARS IN BUSINESS: 13

SMALL BUSINESS CONTRACTOR? Yes

PROJECTS COMPLETED: _____

MINORITY-OWNED BUSINESS? _____

REGION SERVED: U.S. & Int'l.

TOTAL APPLICABLE EMPLOYEES: 43

TYPES OF REMOTE SENSING TECHNOLOGIES:
Low Altitude Aerial Photo; Med Altitude Aerial Photo; High Altitude Aerial Photo

PERSONNEL & SKILLS REPRESENTED:
Management (6); Professional (1); Technical (27); Other (9)
Photolab Technicians; Photo Scientist

STATEMENT OF CAPABILITIES:

Precision Photo Laboratories is a full service photographic laboratory offering complete color and black and white service to the aerial photographic industry. The laboratory is equipped with two Kodak RT Ektachrome processors and a Kodak Model 11 Versamat film processor. These, along with complete sensitometric and densitometric capabilities, provide processing services which are of the highest precision obtainable. Printing services include the ability to produce color enlargements up to 48" x 100" on Eastman Ektacolor Paper and up to 40" x 100" on Cibachrome reversal material. Three LogEltronic Mark III & Mark IV printers are used to produce color contact prints from color negative film. Also provided at Precision Color Laboratories are black and white and color film diapositives, color and black and white aerial film duplication in roll form or single frames, and a complete mounting and laminating service.
FACILITIES AND SPECIAL EQUIPMENT

AIRCRAFT

CAMERAS, SCANNERS, AND OTHER REMOTE SENSORS

FIELD SURVEY EQUIPMENT

PHOTOGRAPHIC PROCESSING EQUIPMENT

PHOTOGRAMMETRIC PROCESSING EQUIPMENT

10x10 enlargers (6) 4'x8' dry mount press (2)  
Color Aerial Film Processor (2) Log-E contact printers 5"x7" enlargers (2)  
B&W 35mm Slide processor (1) B&W Aerial Film processor (1)  
52" Cibachrome processors (3) 52" Cibachrome processor  
Cold Lamination Machine (3) Log-E Robertson Copy Camera (1)  
IMAGE INTERPRETATION, VIEWING AND MAPPING (NON-DIGITAL)

IMAGE INTERPRETATION, VIEWING AND MAPPING (DIGITAL)

DIGITIZING, PLOTTING AND GRAPHICS

OTHER COMPUTER PROCESSING

PRODUCTS AND SERVICES PROVIDED

IMAGE PRODUCTS

B&W, Color, and Color Infrared Negative Transparencies, Positive Transparencies, Contact Prints and Enlarged Prints; (c) Color Composite Negative Transparencies, Positive Transparencies, Contact Prints, and Enlarged Prints; Photo Mosaics  
ENHANCED AND CORRECTED IMAGERY

PHOTOGRAMMETRIC PRODUCTS

INTERPRETED, THEMATIC PRODUCTS

PROJECT PLANNING AND SUPPORT SERVICES

Feasibility Analysis

AERIAL SURVEY

IMAGE PROCESSING, INTERPRETATION AND ANALYSIS

Photographic Laboratory Processing

PHOTOGRAMMETRIC ENGINEERING

REPRODUCTION

Printing (Photographic)

OTHER SERVICES
REMOTE SENSING EQUIPMENT/SYSTEMS PROVIDED

REMOTE SENSOR SYSTEMS

VIEWING EQUIPMENT

PHOTOGRAHMETRIC EQUIPMENT

DIGITAL IMAGE PROCESSING EQUIPMENT

SOFTWARE

INTEGRATED SYSTEMS

OTHER EQUIPMENT
Sell: Aerial Film; Photo Processing Equip.; Silver Recovery Systems

NAME: PURDUE, LABORATORY FOR APPLICATIONS OF REMOTE SENSING, (LARS)

ADDRESS(es) & CONTACT(s)
1220 Potter Drive
West Lafayette, 74415 47906
(317) 749-2052
David A. Landgrebe, Director

YEARS IN BUSINESS: 14

PROJECTS COMPLETED: over 100


TOTAL APPLICABLE EMPLOYEES: 133

TYPES OF REMOTE SENSING TECHNOLOGIES:
Low Altitude Aerial Photo; Med Altitude Aerial Photo; High Altitude Aerial Photo; Aerial Multispectral Scanner; Aerial Thermal Infrared Scanner; Radar; Geophysical Survey; Landsat MSS; Landsat RBV; Skylab; Weather Satellite; Digital Image Interpretations; Manual Image Interpretations

PERSONNEL & SKILLS REPRESENTED:
Management (3); Professional (50); Technical (22); Other (58)
Computer Equip Oper.; Computer Programmers; Civil, environ., & electrical Engineers; Field Surveyors; Image Processing Equip. Oper.; Soil Scientists; Photogrammatists; Photogrammetric Equip. Oper.; Photointerpreters; Physical Scientists; Geographers;

STATEMENT OF CAPABILITIES:
Purdue University's Laboratory for Applications of Remote Sensing (LARS) is an interdisciplinary research organization established to develop techniques and applications for the timely analysis of earth resource information; utilizing data collected from field, aircraft and spacecraft sensor systems. The LARS team is drawn from the staffs of various departments primarily within the schools of agriculture, engineering and science. This team has been responsible for pioneering many of the developments in remote sensing technology. In the process, LARS has become one of the world's leading research and training centers in the areas of computer-assisted processing, analysis and interpretation of remotely sensed data and its applications.
PURDUE, LABORATORY FOR APPLICATIONS OF REMOTE SENSING (LARS)

FACILITIES AND SPECIAL EQUIPMENT

AIRCRAFT (1)
Specific type not indicated.

CAMERAS, SCANNERS, AND OTHER REMOTE SENSORS (6)
Specific type not indicated.

FIELD SURVEY EQUIPMENT (4)
Specific type not indicated.

PHOTOGRAPHIC PROCESSING EQUIPMENT

PHOTOGRAMMETRIC PROCESSING EQUIPMENT (2)
Specific type not indicated.

IMAGE INTERPRETATION, VIEWING AND MAPPING (NON-DIGITAL) (1)
Specific type not indicated.

IMAGE INTERPRETATION, VIEWING AND MAPPING (DIGITAL) (3)
Specific type not indicated.

DIGITIZING, PLOTING AND GRAPHICS (2)
Specific type not indicated.

OTHER COMPUTER PROCESSING (2)
Specific type not indicated.

OTHER

OF POOR QUALITY

PRODUCTS AND SERVICES PROVIDED

IMAGE PRODUCTS
Half tone Image Prints; Digital Magnetic Tapes; Infrared and Color Negative Transparencies; Contact prints; and Color Composite Negative Transparencies, Positive Transparencies, Contact Prints and Enlarged Prints; (c) Color Infrared and Color Composite Negative Transparencies; Positive Transparencies, Contact prints and Enlarged Prints; Photo Mosaics; Thermograms; ENHANCED AND CORRECTED IMAGERY; Photo Atlas Sheets; Digital Mosaics;

(c) Photo & Digital: Multitemporal Composites; Contrast Enhanced; Geometric Correction; Density Slice; Change Detection; Multisensor Composites; Radiometric Correction; Image Resampling

PHOTOGRAMMETRIC PRODUCTS

INTERPRETED, THEMATIC PRODUCTS
(c) Color Thematic Maps; Land Use Maps; Vegetation/Forestry Maps; Acreage Tabulations; Geocoded Data Bases; Thematic Map Overlays; Geologic Maps; Soils Maps; Digital Magnetic Tapes

PROJECT PLANNING AND SUPPORT SERVICES
Feasibility Analysis; Selection of Existing Imagery; Map Digitizing; Data Base Preparation; Sensor Selection/Evaluation; Sampling Strategy Design; Ancillary Data Collection; Ground Truth Survey; Gray Level Digitizing; Data Management; (a) Air Support Operations

AERIAL SURVEY
Low Altitude Photography; (a) Thermal Infrared; Radar; Geophysical; High Altitude Photography; Multispectral Scanner

IMAGE PROCESSING, INTERPRETATION AND ANALYSIS
Digital Image Processing; Batch Digital Image/Analysis/Classification; Interactive Digital Image/Analysis/Classification; Manual Image Interpretation; (a) Photographic Laboratory Processing

PHOTOGRAMMETRIC ENGINEERING

REPRODUCTION

OTHER SERVICES
Remote Sensing Research; Remote Sensing Training; Statistical Modeling; Consultant Services; Interactive Computer Graphics; Computer Services; Software Design/Development; Software Sales/Leasing
NAME: RAMTEK

ADDRESS(ES) & CONTACT(S)
RAMTEK CORPORATION
7979 Old Georgetown Road, Suite 900
Bethesda, Maryland 20814
(301) 656-0350
TX 710-824-0557
Ted Dyer
Pepper Pike, OH 44122
Burlington, MA 01803
East Brunswick, NJ 08816

Dayton, OH 45414
Huntsville, AL 35805
Santa Clara, CA 95050
Santa Ana, CA 92704
Albuquerque, NM 87110
Plano, TX 75074
Arlington Heights, IL 60006
Federal Way, WA 98003

YEARS IN BUSINESS: 9
PROJECTS COMPLETED: over 50
REGION SERVED: U.S. & Int’l.

SMALL BUSINESS CONTRACTOR? No
MINORITY-OWNED BUSINESS? No
TOTAL APPLICABLE EMPLOYEES:

TYPES OF REMOTE SENSING TECHNOLOGIES:
Aerial Multispectral Scanner; Aerial Thermal Infrared Scanner; Radar; LandSat MSS;
LandSat RRV; Seasat; Skylab; Weather Satellite; Digital Image Interpretations

PERSONNEL & SKILLS REPRESENTED:
N/A

STATEMENT OF CAPABILITIES:
Design and manufacture of digital image processing systems for remote sensing
applications. Features include ultra-high resolution gray scale and/or color display
with pan and zoom hardware and video lookup tables for image enhancement and pseudo
coloring.

REMOTE SENSING EQUIPMENT/SYSTEMS PROVIDED

REMOTE SENSOR SYSTEMS

VIEWING EQUIPMENT

PHOTOGRAHMETRIC EQUIPMENT

DIGITAL IMAGE PROCESSING EQUIPMENT
Sell: Raw Image Displays; Color Image Displays

SOFTWARE

INTEGRATED SYSTEMS

OTHER EQUIPMENT

OF POOR QUALITY
NAME: RAPID COLOR, INC.

ADDRESS(ES) & CONTACT(S)
1236 So. Central Ave.
Glendale, California 91204
(213) 240-6100
Mark Kramer

16661 Milliken Ave.
Irvine, California 92714
(714) 979-5050
Barry Henshaw

YEARS IN BUSINESS: 11
PROJECTS COMPLETED: N/A
REGION SERVED: U.S.

TOTAL APPLICABLE EMPLOYEES:

TYPES OF REMOTE SENSING TECHNOLOGIES:

PERSONNEL & SKILLS REPRESENTED:
Management (2); Technical (2)
Image Processing Equip. Oper.

STATEMENT OF CAPABILITIES:
Color film processing negative and positive 70mm through 96" format. I.E. processing a specialty. LogE Printing as well as large print capabilities to 44x144" type "C" and cibachrome prints and transparencies. Eleven years experience in the production of the finest imagery obtainable.

FACILITIES AND SPECIAL EQUIPMENT

AIRCRAFT
CAMERAS, SCANNERS, AND OTHER REMOTE SENSORS
FIELD SURVEY EQUIPMENT
PHOTOREMOTELY SENSING EQUIPMENT
PHOTOGRAPHIC PROCESSING EQUIPMENT
PHOTOMETRIC PROCESSING EQUIPMENT
IMAGE INTERPRETATION, VIEWING AND MAPPING (NON-DIGITAL)
IMAGE INTERPRETATION, VIEWING AND MAPPING (DIGITAL)

DIGITIZING, PLOTTING AND GRAPHICS

OTHER COMPUTER PROCESSING

OTHER
Log-E Printers (3)
Enlargers (1)
Large Print Mounting Equipment
RAPID COLOR, INC.

PRODUCTS AND SERVICES PROVIDED

IMAGE PRODUCTS
B&W Contact Prints; Color, Color Infrared, and Color Composite Negative Transparencies, Positive Transparencies, Contact Prints, and Enlarged Prints; (c) Photo Mosaics; B&W Enlarged Prints; (a) B&W Negative Transparencies, and Positive Transparencies

ENHANCED AND CORRECTED IMAGERY

PHOTOGRAHAMETRIC PRODUCTS

INTERPRETED, THEMATIC PRODUCTS

PROJECT PLANNING AND SUPPORT SERVICES

AERIAL SURVEY

IMAGE PROCESSING, INTERPRETATION AND ANALYSIS

PHOTOGRAHAMETRIC ENGINEERING

REPRODUCTION

OTHER SERVICES

NAME: RCA GOVERNMENT SYSTEMS DIVISION

ADDRESS(ES) & CONTACT(S)
Rt. #38, Cherry Hill, New Jersey 08358
(609) 338-6188
R.B. Stevens, Bldg. 206-1
Marne Highway
Moorestown, New Jersey 08057
(609) 755-2372
J.G. Durbin, Bldg. 127-201

Front & Cooper Sts.
Camden, New Jersey 08102
(609) 338-2105
P.H. Stelter, Bldg. 13-4

Additional Locations: Washington, D.C.
Dayton, Ohio
Los Angeles, Ca

YEARS IN BUSINESS: 15
PROJECTS COMPLETED: 50
REGION SERVED: U.S.

TYPES OF REMOTE SENSING TECHNOLOGIES:
Aerial Multispectral Scanner; Aerial Thermal Infrared Scanner; Radar; Laser Scanner; Weather Satellite; Digital Image Interpretations

PERSONNEL & SKILLS REPRESENTED:
Management (10); Professional (50); Technical (50)
Computer Equip. Oper.; Computer Programmers; Draftsmen; Engineers (electrical); Image Processing Equip. Oper.; Photointerpreters; Photolab Technicians; Physical Scientists

STATEMENT OF CAPABILITIES:
Design and manufacture products and systems and supply services for Aerospace and Defense.
PRODUCTS AND SERVICES PROVIDED

IMAGE PRODUCTS

ENHANCED AND CORRECTED IMAGERY

PHOTOGRAFMETRIC PRODUCTS

INTERPRETED, THEMATIC PRODUCTS

PROJECT PLANNING AND SUPPORT SERVICES

Problem Definition; Feasibility Analysis; Selection of Existing Imagery; Map Digitizing; Data Base Preparation; Sensor Selection/Evaluation; Sampling Strategy Design; Ancillary Data Collection; Gray Level Digitizing; Data Management; (e) Ground Control Survey

AERIAL SURVEY

IMAGE PROCESSING, INTERPRETATION AND ANALYSIS

Digital Image Processing; Batch Digital Image/Analysis/Classification; Interactive Digital Image/Analysis/Classification

PHOTOGRAFMETRIC ENGINEERING

REPRODUCTION

REMOTE SENSING EQUIPMENT/SYSTEMS PROVIDED

REMOTE SENSOR SYSTEMS

Sell: Radars Synthetic Aperture; Radars-Real Aperture; Multispectral Cameras

VIEWING EQUIPMENT

PHOTOGRAFMETRIC EQUIPMENT

DIGITAL IMAGE PROCESSING EQUIPMENT

Sell: B&W Image Displays; Color Image Displays

SOFTWARE

Sell: Image Enhancement; Multispectral Classification

INTEGRATED SYSTEMS

Sell: Image Enhancement; Multispectral Classification

OTHER EQUIPMENT

OTHER SERVICES

Remote Sensing Research; Computer Services; Hardware Design/Development; Software Design/Development; Equipment Sales/Leasing/Service
NAME: RESOURCE INFORMATION ASSOCIATES, INC.

ADDRESS(ES) & CONTACT(S)

P.O. Box 95
Charlotte, Michigan 48813
(517) 543-5525
Stephen E. Tilman

YEARS IN BUSINESS: 9
PROJECTS COMPLETED: over 12
REGION SERVED: U.S. & Int'l.

TYPES OF REMOTE SENSING TECHNOLOGIES:

Low Altitude Aerial Photo; Med Altitude Aerial Photo; High Altitude Aerial Photo; Landsat MSS; Skylab; Manual Image Interpretations

PERSONNEL & SKILLS REPRESENTED:

Management (2); Professional (2); Technical (2)

Computer Programmers; Photointerpreters; Pilots; Soil Scientists

STATMENT OF CAPABILITIES:

Resource inventories; specializing in light aircraft aerial surveys; microcomputer geographic information systems; photo interpretation and mapping; forest management; and land assessment systems.

PRODUCTS AND SERVICES PROVIDED

IMAGE PRODUCTS

B&W, Color, and Color Infrared Negative Transparencies, Positive Transparencies, Contact Prints, and Enlarged Prints; (c) Color Composite Negative Transparencies, Positive Transparencies, Contact Prints, and Enlarged Prints; Photo Mosaic; Photo Atlas Sheets; Enhanced and Corrected Imagery

(c) Photo & Digital: Multitemporal Composites; Contrast Enhanced; Geometric Correction; Density Slice; Change Detection; Multisensor Composites; Image Resampling

PHOTOMGRAMMETRIC PRODUCTS

Digital Data Bases; (a) Orthophotos; Topographic Maps; Digital Terrain Models; Planimetric Maps; Photo-Contour Maps; Plan and Profile Sheets

INTERPRETED, THEMATIC PRODUCTS

Geocoded Data Bases; Thematic Map Overlay; Tax Maps; (c) Color Thematic Maps; Land Use Maps; Vegetation/Forestry Maps; Acreage Tabulations; Soils Maps

PROJECT PLANNING AND SUPPORT SERVICES

Problem Definition; Feasibility Analysis; Selection of Existing Imagery; Map Digitizing; Data Base Preparation; Air Support Operations; Sensor Selection/Evaluation; Sampling Strategy Design; Ancillary Data Collection; Ground Truth Survey; Data Management;

(a) Ground Control Survey; Gray Level Digitizing

AERIAL SURVEY

Low Altitude Photography; Thermal Infrared; Radar; Geophysical; (a) High Altitude Photography; Multispectral Scanner

IMAGE PROCESSING, INTERPRETATION AND ANALYSIS

Manual Image Interpretation; (a) Digital Image Processing; Batch Digital Image/Analysis/Classification; Interactive Digital Image/Analysis/Classification; Photographic Laboratory Processing

PHOTOMGRAMMETRIC ENGINEERING

(a) Aerotriangulation; Orthophotomapping; Planimetric Mapping; Stereo Digitizing; Cross-Sectioning; Stereocompilation; Topographic Mapping-Small Scale; Topographic Mapping-Large Scale

REPRODUCTION

Drafting & Scribing; Cartographic Reproduction; Printing

OTHER SERVICES

Remote Sensing Research; Remote Sensing Training; Statistical Modeling; Consultant Services; Interactive Computer Graphics; Computer Services; Turnkey Systems Sales/Leasing/Service; Hardware Design/Development; Software Design/Development; Software Sales/Leasing; (e) Equipment Sales/Leasing/Service
FACILITIES AND SPECIAL EQUIPMENT

AIRCRAFT
172 Cessna - modified for aerial surveys (1)

CAMERAS, SCANNERS, AND OTHER REMOTE SENSORS
35mm Nikon & 70mm Hasselblad (1 ea)

FIELD SURVEY EQUIPMENT

PHOTOGRAPHIC PROCESSING EQUIPMENT

PHOTOGRAHMETRIC PROCESSING EQUIPMENT

IMAGE INTERPRETATION, VIEWING AND MAPPING (NON-DIGITAL)

IMAGE INTERPRETATION, VIEWING AND MAPPING (DIGITAL)
Various plotting tables & equip. (1)

DIGITIZING, PLOTTING AND GRAPHICS

OTHER COMPUTER PROCESSING
Mic-computer based machinery (1)

OTHER

REMOTE SENSING EQUIPMENT/SYSTEMS PROVIDED

REMOTE SENSOR SYSTEMS

VIEWING EQUIPMENT

PHOTOGRAHMETRIC EQUIPMENT

DIGITAL IMAGE PROCESSING EQUIPMENT

SOFTWARE

INTEGRATED SYSTEMS

OTHER EQUIPMENT
Sell & Lease: Aerial Film; Geographic Information Systems
NAME: RESOURCES DEVELOPMENT ASSOCIATES

ADDRESS(ES) & CONTACT(S)
1101 N. San Antonio Road, Suite 301
Mountain View, California 94043
(415) 961-9477
Kenneth B. Craib

Main Location: P.O. BOX 239
Los Altos, California 94022
(415) 961-7477
Kenneth B. Craib

YEARS IN BUSINESS: 9
PROJECTS COMPLETED: 26
REGION SERVED: U.S. & Int'l.

TOTAL APPLICABLE EMPLOYEES: 35

TYPES OF REMOTE SENSING TECHNOLOGIES:
Low Altitude Aerial Photo; High Altitude Aerial Photo; Aerial Multispectral Scanner; Aerial Thermal Infrared Scanner; Radar; LANDSAT MSS; LANDSAT ETM; Seasat; Skylab; Weather Satellite; Digital Image Interpretations; Manual Image Interpretations

PERSONNEL & SKILLS REPRESENTED:
Management (2); Professional (17); Technical (14); Other (2)
Cartographers (3); Computer Equip. Oper. (2); Computer Programmers (2); Draftsmen (2);
Image Processing Equip. Oper. (2); Soil Scientists (3); Photogrammatists (1);
Photogrammetric Equip. Oper. (1); Photointerpreters (5); Photolab Technicians (1);
Physical Scientists (5); Pilots (1); Geographers (3)

STATEMENT OF CAPABILITIES:
Resources Development Associates (RDA), an international technical assistance and consulting organization, engages in a broad range of activities related to the application of advanced technology to regional development of natural resources. RDA specializes in all phases of natural resource development work including exploration, inventory and analysis. Data acquisition ranges from the classical ground survey to the state-of-the-art technology of remote sensing.

RDA personnel have been responsible for major projects in the fields of remote sensing technology and applications of this technology to problems of water pollution, vegetation management, agronomy, soils, geology, forestry, range and urban planning. Recent emphasis has been placed on the economics of remote sensing.

FACILITIES AND SPECIAL EQUIPMENT

AIRCRAFT

CAMERAS, SCANNERS, AND OTHER REMOTE SENSORS
35mm SLR (3)

FIELD SURVEY EQUIPMENT
Misc - mapping hardware

PHOTOGRAPHIC PROCESSING EQUIPMENT
Complete b/w and color darkroom (1)

PHOTOGRAHAMETRIC PROCESSING EQUIPMENT

IMAGE INTERPRETATION, VIEWING AND MAPPING (NON-DIGITAL)
Stereoscopes (4)
Density Slicer (1)

IMAGE INTERPRETATION, VIEWING AND MAPPING (DIGITAL)

DIGITIZING, PLOTTING AND GRAPHICS
Digital Planimeter (1)

OTHER COMPUTER PROCESSING
Micro-computer (1)

OTHER
Light tables (2)
RESOURCES DEVELOPMENT ASSOCIATES

PRODUCTS AND SERVICES PROVIDED

IMAGE PRODUCTS
(c) Photo Mosaics; (a) B&W, Color, Color Infrared, Color Composite Negative Transparencies, Positive Transparencies, Contact Prints, and Enlarged Prints; Halftone Image Prints;
Digital Magnetic Tape

ENHANCED AND CORRECTED IMAGERY
(c) Photo: Multitemporal Composites; Contrast Enhanced; Density Slice; Change Detection;
Multisensor Composites; (a) Digital: Multitemporal Composites; Contrast Enhanced;
Geometric Correction; Density Slice; Change Detection; Multisensor Composites; Photo &
Digital Radiometric Correction; Image Resampling; Pseudo Stereo

PHYSICAL, METRIC PRODUCTS

INTERPRETED, THEMATIC PRODUCTS
(c) Color Thematic Maps; Land Use Maps; Utility Maps; Acreage Tabulations; Geocoded Data
Bases; Thematic Map Overlays; Geologic Maps; Soils Maps; Tax Maps; (a) Digital Magnetic
Tapes

PROJECT PLANNING AND SUPPORT SERVICES
Problem Definition; Feasibility Analysis; Selection of Existing Imagery; Data Base
Preparation; Sensor Selection/Evaluation; Sampling Strategy Design; Ancillary Data
Collection; Ground Truth Survey; Data Management; (a) Ground Control Survey; Air
Support Operations; Gray Level Digitizing

AERIAL SURVEY
(a) Low Altitude photography; Thermal Infrared; Radar; High Altitude Photography;
Multispectral Scanner

IMAGE PROCESSING, INTERPRETATION AND ANALYSIS
Interactive Digital Image/Analysis/Classification; Manual Image Interpretation;
(a) Digital Image Processing; Batch Digital Image/Analysis/Classification; Photographic
Laboratory Processing

PHOTOGRAFMETRIC ENGINEERING

REPRODUCTION
Drafting & Scribing; (a) Cartographic Reproduction; Automated Drafting/Plotting; Printing

OTHER SERVICES
Remote Sensing Research; Remote Sensing Training; Statistical Modeling; Consultant
Services; Software Design/Development; (a) Interactive Computer Graphics

NAME: THE RICHARDS CORP.

ADDRESS(ES) & CONTACT(S)
1545 Spring Hill Road
McLean, Virginia 22101
(703) 893-8400
Jack D. Brunton

YEARS IN BUSINESS: 22

PROJECTS COMPLETED:

REGION SERVED:

TYPES OF REMOTE SENSING TECHNOLOGIES:

PERSONNEL & SKILLS REPRESENTED:

STATEMENT OF CAPABILITIES:
R&D on equipment primarily used for optical viewing, display and handling of aerial
photography.
Manufacture of same equipment.

ORIGINAL PAGE IS
OF POOR QUALITY
PRODUCTS AND SERVICES PROVIDED

IMAGE PRODUCTS

ENHANCED AND CORRECTED IMAGERY

PHOTOGAMMETRIC PRODUCTS

INTERPRETED, THEMATIC PRODUCTS

PROJECT PLANNING AND SUPPORT SERVICES

AERIAL SURVEY

IMAGE PROCESSING, INTERPRETATION AND ANALYSIS

PHOTOGAMMETRIC ENGINEERING

REPRODUCTION

OTHER SERVICES
Hardware Design/Development; Equipment Sales/Leasing/Service

REMOTE SENSING EQUIPMENT/SYSTEMS PROVIDED

REMOTE SENSOR SYSTEMS

VIEWING EQUIPMENT
Sell: Stereoscopes; Lighttables

PHOTOGAMMETRIC EQUIPMENT

DIGITAL IMAGE PROCESSING EQUIPMENT

SOFTWARE

INTEGRATED SYSTEMS

OTHER EQUIPMENT
Sell: Measurement Equipment; Photo Processing Equipment
NAME: ROBINSON AERIAL SURVEYS, INC.

ADDRESS(ES) & CONTACT(S)
43 Sparta Avenue
Newton, New Jersey 07860
(201) 333-2511

YEARS IN BUSINESS: 44
PROJECTS COMPLETED: 5,000
REGION SERVED: U.S.

TOTAL APPLICABLE EMPLOYEES: 12

TYPES OF REMOTE SENSING TECHNOLOGIES:
Low Altitude Aerial Photo; Med Altitude Aerial Photo; Manual Image Interpretations

PERSONNEL & SKILLS REPRESENTED:
Management (2); Professional (3); Technical (5); Other (2)
Draftsmen; Photogrammatists; Photogrammetric Equip. Oper.; Photolab Technicians

STATEMENT OF CAPABILITIES:
Robinson Aerial Surveys, Inc. is a Photogrammetric Mapping firm having capabilities of in-house large scale topographic mapping geared to serve the engineering/surveying public, utilizing the latest in stereo plotting instrumentation. In addition we maintain and operate an in-house photo lab for reproduction needs of our clients.

FACILITIES AND SPECIAL EQUIPMENT

AIRCRAFT

CAMERAS, SCANNERS, AND OTHER REMOTE SENSORS

FIELD SURVEY EQUIPMENT

PHOTOGRAPHIC PROCESSING EQUIPMENT
Kodak Royal Print (1)
LogE Mark 4 (1)
Levy Copy Camera (1)

IMAGE INTERPRETATION, VIEWING AND MAPPING (NON-DIGITAL)

IMAGE INTERPRETATION, VIEWING AND MAPPING (DIGITAL)

DIGITIZING, PLOTTING AND GRAPHICS
Kern FG-2 with DC28 (1)
Kalash (2)
H. Dell Foster (1) Jena Stereometrograph (1)

OTHER COMPUTER PROCESSING
Haig-Streit Coordinatograph (1)

OTHER
ROBINSON AERIAL SURVEYS, INC.

PRODUCTS AND SERVICES PROVIDED

IMAGE PRODUCTS
(c) B&W Neg. & Pos. Transparencies; Photo Mosaics; Halftone Image Prints; (d) Color, Color Infrared, Color Composite Neg. & Pos. Transparencies, Contact and Enlarged Prints

ENHANCED & CORRECTED IMAGERY

PHOTOMETRIC PRODUCTS
(c) Topographic Maps; Engineering Cross Sections; Stockpile Measurements; Earthwork Measurements; Planimetric Maps; Photo-Contour Maps; Plan and Profile Sheets; (a) Orthophotos; Digital Terrain Models; Digital Data Bases; Volumetric Calculations; Distance & Angle Measurements

INTERPRETED, THEMATIC PRODUCTS
(c) Arealage Tabulations; (a) Land Use Maps; Vegetation/Forestry Maps; Utility Maps; Geologic Maps; Transportation Maps; Soils Maps; Tax Maps; Digital Magnetic Tapes

PROJECT PLANNING AND SUPPORT SERVICES
Problem Definition; Feasibility Analysis; Selection of Existing Imagery; Data Base Preparation; Sampling Strategy Design; (a) Ground Control Survey; Map Digitizing; Air Support Operations; Ground Truth Survey; Gray Level Digitizing; Data Management

AERIAL SURVEY
Low Altitude Photography; (a) Thermal Infrared; Radar; Geophysical; High Altitude Photography; Multispectral Scanner

IMAGE PROCESSING, INTERPRETATION AND ANALYSIS
Photographic Laboratory Processing; Manual Image Interpretation

PHOTOMETRIC ENGINEERING
Planimetric Mapping; Stereocompilation; Topographic Mapping—Small Scale; Topographic Mapping—Large Scale; (a) Aerotriangulation; Orthophotomapping; Stereo Digitizing; Cross-Sectioning; Volumetric Calculation

REPRODUCTION
Drafting & Scribing; Cartographic Reproduction; Automated Drafting/Plotting; Printing

OTHER SERVICES
CONSULTANT SERVICES; (a) Interactive Computer Graphics

NAME: SAN JOSE STATE UNIVERSITY, CARTENS LABORATORY, DEPARTMENT OF GEOGRAPHY

ADDRESS(ES) & CONTACT(S)
Washington Square
San Jose, California 95192
(408) 277-3463
Dr. Richard Elledsen

YEARS IN BUSINESS: 10

PROJECTS COMPLETED: 12

REGION SERVED: SW & Int'l

TOTAL APPLICABLE EMPLOYEES: 6

TYPES OF REMOTE SENSING TECHNOLOGIES:
Low Altitude Aerial Photo; Med Altitude Aerial Photo; High Altitude Aerial Photo; Aerial Multispectral Scanner; Landsat MSS; Landsat RBV; Skylab

PERSONNEL & SKILLS REPRESENTED:
Management (1); Professional (5)

Cartographers; Draftsmen; Image Processing Equip. Oper.; Social Scientists; Photointerpreters; Physical Scientists; Geographers

STATEMENT OF CAPABILITIES:
We are engaged primarily in contract remote sensing, mapping, and analysis. Most of our work supports our primary education mission and emphasizes providing practical work experience for students under faculty direction. Contract work has been done for U.S. Geological Survey, U.S. Navy, U.S. Army, U.S. Agency for International Development, State of California, NASA, NSF, and numerous local planning and resources agencies.
IMAGE PRODUCTS

ENHANCED AND CORRECTED IMAGERY

PHOTOMETRIC PRODUCTS

INTERPRETED, THEMATIC PRODUCTS
(c) Color Thematic Maps; Land Use Maps; Vegetation/Forestry Maps; Acreage Tabulations; 
Thematic Map Overlays; Urban Buildings; Urban Spatial Patterns

PROJECT PLANNING AND SUPPORT SERVICES
(a) Problem Definition; Selection of Existing Imagery; Map Digitizing; Data Base 
Preparation; Sensor Selection/Evaluation

AERIAL SURVEY

IMAGE PROCESSING, INTERPRETATION AND ANALYSIS
(a) Digital Image Processing; Batch Digital Image/Analysis/Classification; Interactive 
Digital Image/Analysis/Classification; Manual Image Interpretation

PHOTOMETRIC ENGINEERING:

REPRODUCTION
(a) Drafting & Scribing; Cartographic Reproduction

OTHER SERVICES
(a) Remote Sensing Research; Remote Sensing Training; Consultant Services

NAME: SEISCOM DELTA, INC., DIGITAL IMAGES DIVISION

ADDRESS(ES) & CONTACT(S)
P.O. Box 36928
Houston, Texas 77036
(713) 789-6020
Brian T. Fine

YEARS IN BUSINESS: 4
TOTAL APPLICABLE EMPLOYEES: 7

PROJECTS COMPLETED: 400

REGION SERVED: U.S. & Int'l.

SMALL BUSINESS CONTRACTOR? No

MINORITY-OWNED BUSINESS? No

TYPES OF REMOTE SENSING TECHNOLOGIES:
Geophysical Survey; Landsat MSS; Landsat ETM; Digital Image Interpretations; Manual 
Image Interpretations; Digital Laser Recording

PERSONNEL & SKILLS REPRESENTED:
Management (1); Professional (2); Technical (3)
Cartographers; Computer Equip. Oper.; Computer Programmers; Image Processing Equip Oper.; 
Physical Scientists; Geographers

STATEMENT OF CAPABILITIES:
Provide digital image processing and large format laser recording of digital imagery. 
Seiscom Delta provides services in image processing and cartographic preparation 
of digital imagery (i.e., Landsat, digitized maps, aircraft scanner, etc.). Seiscom 
Delta sells the large format (40" x 73") laser recorders.
FACILITIES AND SPECIAL EQUIPMENT

AIRCRAFT

CAMERAS, SCANNERS, AND OTHER REMOTE SENSORS

FIELD SURVEY EQUIPMENT
Seismic Collection (Marine and Land)

PHOTOGRAPHIC PROCESSING EQUIPMENT
DuPont Cromalin (2), Agfa Film processors (1)
Selschro IV Laser Recorder (1)

PHOTOGRAMMETRIC PROCESSING EQUIPMENT

IMAGE INTERPRETATION, VIEWING AND MAPPING (NON-DIGITAL)

IMAGE INTERPRETATION, VIEWING AND MAPPING (DIGITAL)
Selschro IV (1); Calcomp 42" pen plotter (1); Selschro IV VIS (1)

DIGITIZING, PLOTTING AND GRAPHICS

OTHER COMPUTER PROCESSING
Megasels (SEL 32/77 with AP120B) (2)

OTHER
Full suite of image enhancement software implemented on the SEL 32/77.

PRODUCTS AND SERVICES PROVIDED

IMAGE PRODUCTS
B & W Negative & Positive Transparencies & Contact Prints; Color Separations Negative & Positive Transparencies & Contact Prints; Color, Color Infrared & Color Composite Contact Prints; (c) B & W, Color, Color Infrared, Color Composite, Color Separation Enlarged Prints; Halftone Image Prints; Digital Magnetic Tape; (a) Color, Color Infrared & Color Composite Negative & Positive Transparencies; Photo Mosaics; Digital Mosaics

ENHANCED AND CORRECTED IMAGERY
Digital: Contrast Enhanced; Geometric Correction; Density Slice; Radiometric Correction; Image Resampling; (c) Multitemporal Composites; Multisensor Composites; (a) Change Detection

PHOTOGRAMMETRIC PRODUCTS
(c) Planimetric Maps; Photo-Contour Maps; (a) Digital Terrain Models; Digital Data Bases

INTERPRETED, THEMATIC PRODUCTS
(c) Color Thematic Maps; Land Use Maps; Vegetation/Forestry Maps; Utility Maps; Acreage Tabulations; Thematic Map Overlays; Geologic Maps; Transportation Maps; Soils Maps; Tax Maps; Digital Magnetic Tapes; (a) Encoded Data Bases

PROJECT PLANNING AND SUPPORT SERVICES
Problem Definition; Feasibility Analysis; Selection of Existing Imagery; (a) Map Digitizing; Data Base Preparation; Sampling Strategy Design; Ancillary Data Collection; Gray Level Digitizing; Data Management

AERIAL SURVEY
(a) Radar; Geophysical

IMAGE PROCESSING, INTERPRETATION AND ANALYSIS
Digital Image Processing; Batch Digital Image/Analysis/Classification; Photographic Laboratory Processing; (a) Manual Image Interpretation; Interactive Digital Image/Analysis/Classification

PHOTOGRAMMETRIC ENGINEERING

REPRODUCTION
Drafting & Scribing; Cartographic Reproduction; Automated Drafting/Plotting; Printing

OTHER SERVICES
Remote Sensing Training; Consultant Services; Computer Services; Turnkey Systems Sales/Leasing/Service; Hardware Design/Development; Software Design/Development; Equipment Sales/Leasing/Service; Software Sales/Leasing (a) Statistical Modeling; Interactive Computer Graphics
SEISCOM DELTA, INC.

REMOTE SENSING EQUIPMENT/SYSTEMS PROVIDED

REMOTE SENSOR SYSTEMS

VIEWING EQUIPMENT

PHOTOGRAPHIC EQUIPMENT

DIGITAL IMAGE PROCESSING EQUIPMENT
Sell & Lease B&W Image Displays; Film Output Recorders

SOFTWARE
Sell: Geometric Correction; Radiometric Correction; Image Enhancement

INTEGRATED SYSTEMS
Sell: Geometric Correction; Radiometric Correction; Image Enhancement

OTHER EQUIPMENT
Sell & Lease: Photo Processing Equip.; Plotters

NAME: JAMES W. SEWALL COMPANY

ADDRESS(ES) & CONTACT(S)
147 Center Street
Old Town, Maine 04468
(207) 827-4456
Stephen Balley

YEARS IN BUSINESS: 35
PROJECTS COMPLETED: ---

TOTAL APPLICABLE EMPLOYEES: 43

TYPES OF REMOTE SENSING TECHNOLOGIES:
Low Altitude Aerial Photo; Med. Altitude Aerial Photo; High Altitude Aerial Photo;
Landsat MSS; Digital Image Interpretations; Manual Image Interpretations

PERSONNEL & SKILLS REPRESENTED:
Management (5); Professional (8); Technical (30)
Cartographers (6); Computer Equip. Oper. (1); Computer Programmers (3); Draftsmen (6);
Field Surveyors (10); Photogrammatists (3); Photogrammetric Equip. Oper. (2);
Photointerpreters (3); Photolab Technicians (3); Pilots (4)

STATEMENT OF CAPABILITIES:
The Sewall Company is a multi-disciplined consulting firm specializing in aerial
surveys, computer services, engineering, forestry, tax mapping, appraisal, photog-
grammetry and surveying. Much of our work revolves around the use of aerial
photography for photogrammetric mapping, engineering design, tax mapping, and forestry
and land use mapping. We specialize in a complete in-house service including
the aerial survey and photo processing. More recently we have expanded our photo-
grammeteric and forest mapping capabilities around the use of computer graphics and
digitizing.
**FACILITIES AND SPECIAL EQUIPMENT**

**AIRCRAFT**
Aztec C (PA23-250) Twin Engine (1)
Cherokee-Six (PA28-200) six place (1)
Cherokee Lance (PA28-300) (1)

**CAMERAS, SCANNERS, AND OTHER REMOTE SENSORS**
Zeiss MMK-A, 15/21 6" focal length (1)
Zeiss MMK-A 21/23 8½" focal length (1)
Zeiss MMK-A 15/23 6½" focal length (f-4 lens) (1)

**FIELD SURVEY EQUIPMENT**
Geodimeters—Mode 8 Laser & Mode 76 Laser (2)
Hewlett-Packard 3800 Distance Meters (3)
Hewlett-Packard 3820A Electronic Total Station (1)

**PHOTOGRAPHIC PROCESSING EQUIPMENT**
Mark IV 4 CP 18 Log E Contact Prints (2)
Aero 20 Logeflo film processor (1)
10"x10" Simon Enlarger with 60"x40" projection board (1)

**PHOTOGRAMMETRIC PROCESSING EQUIPMENT**
Wild Pug 4
Haag-Streit Coordinatograph (0.0015" accuracy) (1)

**IMAGE INTERPRETATION, VIEWING AND MAPPING (NON-DIGITAL)**
Model No. 5030 Kelah Plotters (3)
Bausch & Lomb Zoom Transferscope (1)

**IMAGE INTERPRETATION, VIEWING AND MAPPING (DIGITAL)**
Kern PG-2, Stereo Plotter with Data Tech AT table (1)
and H.Del Foster 3 Axes Digitizer

**DIGITIZING, PLOTTING AND GRAPHICS**
Telos Digitizer (1)
H.Del Foster digitizer (interfaced to PG-2) (1)
Numonics Digitized Planimeter (1)

**OTHER COMPUTER PROCESSING**
Digital DEC Data System PDP 11/34 computer (1)

**PRODUCTS AND SERVICES PROVIDED**

**IMAGE PRODUCTS**
- B/W Negative Transparencies, Color Transparencies, Contact Prints, and Enlarged Prints;
- (c) Color and Color Infrared Negative Transparencies, Color Transparencies, Contact Prints, and Enlarged Prints; Color Composite Negative Transparencies, Positive ENHANCED AND CORRECTED IMAGERY Transparencies, Contact Prints and Enlarged Prints
- (a) Digital Multitemporal Composites; Contrast Enhanced; Geometric Correction; Density Slice; Change Detection; Radiometric Correction

**PHOTOGRAMMETRIC PRODUCTS**
- (c) Topographic Maps; Engineering Cross Sections; Stockpile Measurements; Earthwork Measurements; Digital Terrain Models; Digital Data Bases; Planimetric Maps; Photo-Contour Maps; Plan and Profile Sheets; Volumetric Calculations; Distance & Angle Measurements (a) Orthophotos
- INTERPRETED, THEMATIC PRODUCTS
  - (c) Land Use Maps; Vegetation/Forestry Maps; Utility Maps; Acreage Tabulations;
  - Geocoded Data Bases; Transportation Maps; Tax Maps; (a) Color Themetic Maps;
  - Themetic Map Overlays; Soils Maps; Digital Magnetic Tapes

**PROJECT PLANNING AND SUPPORT SERVICES**
- Problem Definition; Feasibility Analysis; Selection of Existing Imagery; Ground Control Survey; Map Digitizing; Data Base Preparation; Air Support Operations;
- Sensor Selection/Evaluation; Sampling Strategy Design; Ancillary Data Collection;
- Ground Truth Survey; Gray Level Digitizing; Data Management

**AERIAL SURVEY**
- Low Altitude Photography; (a) Thermal Infrared; High Altitude Photography; Multi-spectral Scanner

**IMAGE PROCESSING, INTERPRETATION AND ANALYSIS**
- Photographic Laboratory Processing; Manual Image Interpretation; (a) Digital Image Processing; Batch Digital Image/Analysis/Classification

**PHOTOGRAMMETRIC ENGINEERING**
- Aerotriangulation; Orthophotomapping; Planimetric Mapping; Stereo Digitizing; Cross-Sectioning; Stereocompilation; Topographic Mapping-Small Scale; Topographic Mapping-
- Large Scale; Volumetric Calculations

**REPRODUCTION**
- Drafting & Scribbling; Cartographic Reproduction; Automated Drafting/Plotting; Printing

**OTHER SERVICES**
- Remote Sensing Research; Statistical Modeling; Consultant Services; Interactive
- Computer Graphics; Computer Services; Software Design/Development; Software Sales/Leasing
REMOTE SENSING EQUIPMENT/SYSTEMS PROVIDED

REMOTE SENSOR SYSTEMS

VIEWING EQUIPMENT

PHOTOMASMETRIC EQUIPMENT

DIGITAL IMAGE PROCESSING EQUIPMENT

SOFTWARE

INTEGRATED SYSTEMS

OTHER EQUIPMENT
Lease 3820 Total Station and 2810 Total Station

NAME: THE SIDWELL COMPANY, INC.

ADDRESS(ES) & CONTACT(S)
28W240 North Ave.
West Chicago, Illinois 60185
(312) 231-0206
Robert W. Meiborg

YEARS IN BUSINESS: 53

PROJECTS COMPLETED: unknown

REGION SERVED: IV, V, VI, VII, VIII

TOTAL APPLICABLE EMPLOYEES: 101

TYPES OF REMOTE SENSING TECHNOLOGIES:
Low Altitude Aerial Photo; Med Altitude Aerial Photo

PERSONNEL & SKILLS REPRESENTED:
Management (5); Professional (10); Technical (34); Other (32); Computer Equipment Operators (2); Computer Programmers (1); Draftsmen (40); Field Surveyors (2); Photogrammetrists (4); Photogrammetric Equipment Operators (5); Photolab Technicians (6); Pilots (4)

STATEMENT OF CAPABILITIES:
Acquisition of aerial photography, image processing, data interpretation and mapping.
FACILITIES AND SPECIAL EQUIPMENT

AIRCRAFT
Cessna UC-206 (1)
Cessna 180 (1)

CAMERAS, SCANNERS, AND OTHER REMOTE SENSORS
Emea 8.5/23 (1)
Emea 14/23 (2) Eme 30/23 (2)

FIELD SURVEY EQUIPMENT
EDM Equipment

PHOTOGRAPHIC PROCESSING EQUIPMENT
Versimat 11-C
DuPont EFR

PHOTOGRAMMETRIC PROCESSING EQUIPMENT
Kern KG-2 with tables (3)

IMAGE INTERPRETATION, VIEWING AND MAPPING (NON-DIGITAL)

IMAGE INTERPRETATION, VIEWING AND MAPPING (DIGITAL)

DIGITIZING, PLOTTING AND GRAPHICS
H.D. Foster Quantizer (1)
Altek AC-189 (1)

OTHER COMPUTER PROCESSING
Mini computer-Systems Marketing Consolidated Ltd. (1)

OTHER
Rectifiers (3)

PRODUCTS AND SERVICES PROVIDED

IMAGE PRODUCTS
B & W Negative & Positive Transparencies & Contact & Enlarged Prints; Color & Color Infrared Negative & Positive Transparencies; Photo Mosaics; Photo Atlas Sheets; Halftone Image Prints; (c) Analog Magnetic Tape; Digital Magnetic Tape; Photo Mosaics; Photo Atlas Sheets; Halftone Image Prints; Color Composite Negative & Positive Transparencies; B & W Contact & Enlarged Prints; B & W, Color & Color Infrared Negative & Positive Transparencies; B & W Contact & Enlarged Prints; (a) Color, Color Infrared & Color Composite Contact & Enlarged Prints

PHOTOGRAFMETRIC PRODUCTS
(c) Orthophotos; Topographic Maps; Engineering Cross Sections; Stockpile Measurements; Earthwork Measurements; Digital Terrain Models; Digital Data Bases; Planimetric Maps; Photo-Contour Maps; Plan & Profile Sheets; Volumetric Calculations; Distance & Angle Measurements

INTERPRETED, THEMATIC PRODUCTS
(c) Tax Maps

PROJECT PLANNING AND SUPPORT SERVICES
Problem Definition; Feasibility Analysis; Selection of Existing Imagery; (a) Map Digitizing; Data Base Preparation; Sampling Strategy Design; Ancillary Data Collection; Gray Level Digitizing; Data Management

AERIAL SURVEY
Low Altitude Photography; (a) Thermal Infrared

IMAGE PROCESSING, INTERPRETATION AND ANALYSIS
Photographic Laboratory Processing; Manual Image Interpretation

PHOTOGRAFMETRIC ENGINEERING
Aerotriangulation; Orthophotomapping; Planimetric Mapping; Stereo Digitizing; Cross-Sectioning; Stereocompilation; Topographic Mapping-Small Scale; Topographic Mapping-Large Scale; Volumetric Calculations

REPRODUCTION
Drafting & Scribing; Cartographic Reproduction; Automated Drafting/Plotting

OTHER SERVICES
Consultant Services; Interactive Computer Graphics; Computer Services; Turnkey Systems Sales/Leasing/Service.
NAME: DAVID C. SMITH & ASSOCIATES

ADDRESS(ES) & CONTACT(S)
1734 S.E. Tacoma
Portland, Oregon 97202
(503) 232-5285
David C. Smith

YEARS IN BUSINESS: 15
PROJECTS COMPLETED: 1,000
REGION SERVED: U.S.

TYPES OF REMOTE SENSING TECHNOLOGIES:
Low Altitude Aerial Photo; Med Altitude Aerial Photo; High Altitude Aerial Photo

PERSONNEL & SKILLS REPRESENTED:
Management (1); Professional (3); Technical (3)
Cartographers; Draftsmen; Field Surveyors; Photogrammatists; Photogrammetric Equip. Oper.; Photolab Technicians

STATEMENT OF CAPABILITIES:
Topographic, orthophoto mapping, aerotriangulation, digitizing and cross sections. Drafting and complete photo lab services. Local & round control for aerial surveys.

FACILITIES AND SPECIAL EQUIPMENT

AIRCRAFT
Subcontract

CAMERAS, SCANNERS, AND OTHER REMOTE SENSORS
Subcontract

FIELD SURVEY EQUIPMENT
MSA 101 Tellurometer (1); H.P. Distance Meters (2); Kern DMM-2 (1); Zeiss one-second theodolites (1); Kern DMM-1 ten second theodolite (1); Zeiss automatic levels and rods (5); 4-wheel drive vehicles (3)

PHOTOGRAPHIC PROCESSING EQUIPMENT
LogElectronics Printer (1)
Vacuum Frame 38x50" (1)
Acti 32x62 camera (1)

PHOTOMGRAMMETRIC PROCESSING EQUIPMENT
OGM plotters (2)
Kern FG-2 plotters (2)
Orthophoto - SPOH (1)

IMAGE INTERPRETATION, VIEWING AND MAPPING (NON-DIGITAL)

IMAGE INTERPRETATION, VIEWING AND MAPPING (DIGITAL)

DIGITIZING, PLOTTING AND GRAPHICS
Kern DC-2 Graphics (1)
Kern DC-28 Graphic (1)
Kern AT Tables (2)

OTHER COMPUTER PROCESSING

OTHER
Office & lab 4,000 sq.ft.
complete supporting equipment for above main items
Olivetti computers (2); H.P. programmable calculator (1); HP 9810 programmable calculator with photogrammetric software package (1); Teletype with paper tape punch (1); IBM 026 card punch with paper tape reader (1)
DAVID C. SMITH & ASSOCIATES

PRODUCTS AND SERVICES PROVIDED

IMAGE PRODUCTS
B&W Positive Transparencies, Contact Prints, and Enlarged Prints; (c) Photo Mosaics; Photo Atlas Sheets; Halftone Magnetic Tape; (a) Color, Color Infrared, and Color Composite Negative Transparencies, Positive Transparencies, Contact Prints and Enlarged Prints; ENHANCED AND CORRECTED IMAGERY

PHOTOGRAMMETRIC PRODUCTS
(c) Orthophotos; Topographic Maps; Engineering Cross Sections; Stockpile Measurements; Earthwork Measurements; Digital Terrain Models; Digital Data Bases; Planimetric Maps; Photo-Contour Maps; Plan and Profile Sheets; Volumetric Calculations; Distance & Angle Measurements
INTERPRETED, THERMATIC PRODUCTS

PROJECT PLANNING AND SUPPORT SERVICES
Problem Definition; Feasibility Analysis; Selection of Existing Imagery; Ground Control Survey; Map Digitizing; Data Base Preparation; Air Support Operations

AERIAL SURVEY
(c) Low Altitude Photography; Thermal Infrared; Radar; Geophysical; High Altitude Photography; Multispectral Scanner

IMAGE PROCESSING, INTERPRETATION AND ANALYSIS
Photographic Laboratory Processing

PHOTOGRAMMETRIC ENGINEERING
Aerotriangulation; Orthophotomapping; Planimetric Mapping; Stereo Digitizing; Cross-Sectioning; Stereocompilation; Topographic Mapping-Small Scale; Topographic Mapping-Large Scale; Volumetric Calculation

REPRODUCTION
Drafting & Scribing; Cartographic Reproduction; Automated Drafting/Plotting; Printing

OTHER SERVICES
Consultant services

NAME: C.S. SMYTH GEOLOGIST, INC.

ADDRESS(ES) & CONTACT(S)
14044 NE Eighth Street
Bellevue, WA 98007
(206) 746-0333
Steve Smyth

YEARS IN BUSINESS: 54
SMALL BUSINESS CONTRACTOR? Yes
PROJECTS COMPLETED: 92
MINORITY-OWNED BUSINESS? No
REGION SERVED: VIII, X
TOTAL APPLICABLE EMPLOYEES: 7

TYPES OF REMOTE SENSING TECHNOLOGIES:
Radar; Geophysical Survey; Landsat MSS; Landsat RBV; Seasat; HCM; Skylab; Weather Satellite; Digital Image Interpretations.

PERSONNEL & SKILLS REPRESENTED:
Management (1); Professional (3); Technical (1); Other (2); Computer Programmers (1); Photolab Technicians (1); Physical Scientists (2).

STATEMENT OF CAPABILITIES:
Design, analysis, and development of computer programs for, and custom processing of earth satellite (LANDSAT, NOAA, GOES, NMBBS, SEASAT, HCM) digital image data; rectification and reformatting of digital image and terrain data; construction of digital terrain models; ore reserve estimation and raster graphics for mining simulations.
FACILITIES AND SPECIAL EQUIPMENT

AIRCRAFT

CAMERAS, SCANNERS, AND OTHER REMOTE SENSORS

FIELD SURVEY EQUIPMENT

PHOTOGRAPHIC PROCESSING EQUIPMENT
Color Darkroom (1).

PHOTOGRAMMETRIC PROCESSING EQUIPMENT

IMAGE INTERPRETATION, VIEWING AND MAPPING (NON-DIGITAL)

IMAGE INTERPRETATION, VIEWING AND MAPPING (DIGITAL)
Master CRT Display (3)
Electrostatic Plotter (1)
Graphic Digitizer (1)

DIGITIZING, PLOTTING AND GRAPHICS
Digital Plotter (1)

OTHER COMPUTER PROCESSING
Digital Equipment Corp. PDP-11/34 Computer (1)
Proprietary Image Processing Software (1)

OTHER
LandSat Digital Image Library for W. Washington (120 tapes)

C.S. SMITH GEOLoGIST, INC.

PRODUCTS AND SERVICES PROVIDED

IMAGE PRODUCTS
B&W, Color, Color Infrared, Color Composite Negative Transparencies, Positive Transparencies, Enlarged Prints; B&W Contact Prints; Digital Mosaics; Halftone Image Prints; Digital Magnetic Tape; Resampled Digital Image Data.

ENHANCED AND CORRECTED IMAGERY
Digital: Multitemporal Composites; Contrast Enhanced; Geometric Correction; Density Slice; Change Detection; Multisensor Composites; Radiometric Correction; Image Resampling; Pseudo Stereo; Perspective Scene Synthesis; Image Annotation

PHOTOGRAMMETRIC PRODUCTS
Digital Terrain Models; Digital Data Bases; Volumetric Calculations; Point-to-point Visibility Maps; (c) Stockpile Measurements; Earthwork Measurements

INTERPRETED, THEMATIC PRODUCTS
Color Thematic Maps; Land Use Maps; Vegetation/Forestry Maps; Utility Maps; Geologic Maps; Soils Maps; Digital Magnetic Tapes; Visibility Maps; Digital Map Magnetic Tapes; (c)Acreage Tabulations, Geocoded Data Bases.

PROJECT PLANNING AND SUPPORT SERVICES
Problem Definition; Feasibility Analysis; Selection of Existing Imagery; Map Digitizing; Data Base Preparation; Sampling Strategy Design; Ancillary Data Collection; Data Management; (a)Ground Control Survey, Air Support Operations, Sensor Selection/ Evaluation, Ground Truth Survey, Gray Level Digitizing.

AERIAL SURVEY
(a)Radar, Geophysical, Multispectral Scanner.

IMAGE PROCESSING, INTERPRETATION AND ANALYSIS
Digital Image Processing; Batch Digital Image/Analysis/Classification; Interactive Digital Image/Analysis/Classification; Photographic Laboratory Processing; (a)Manual Image Interpretation.

PHOTOGRAMMETRIC ENGINEERING

REPRODUCTION
Automated Drafting/Plotting; (a) Drafting & Scribing; Cartographic Reproduction; Printing

OTHER SERVICES
Remote Sensing Research; Remote Sensing Training; Statistical Modeling; Consultant Services; Interactive Computer Graphics; Computer Services; Turnkey Systems Sales/ Leasing/Service; Software Design/Development; Equipment Sales/Leasing/Service; Software Sales/Leasing (a) Hardware Design/Development.
NAME: SOUTH DAKOTA STATE UNIVERSITY, REMOTE SENSING INSTITUTE

ADDRESS(ES) & CONTACT(S)

Wenona Hall
South Dakota State University
Brookings, South Dakota 57007
(605) 688-4184
Victor I. Myers

YEARS IN BUSINESS: 11
PROJECTS COMPLETED: 50
REGION SERVED: U.S. & Int’l.
TOTAL APPLICABLE EMPLOYEES: 29

TYPES OF REMOTE SENSING TECHNOLOGIES:
Low Altitude Aerial Photo; Med Altitude Aerial Photo; High Altitude Aerial Photo; Aerial Multispectral Scanner; Aerial Thermal Infrared Scanner; Radar; Landsat MSS; Landsat ERS; HCM; Skylab; Weather Satellite; Digital Image Interpretations; Manual Image Interpretations

PERSONNEL & SKILLS REPRESENTED:
Management (3); Professional (21); Other (8)

Computer Equipment Operators (1); Computer Programmers (2); Draftsmen (1); Engineers (civil, environmental) (2); Engineers (electrical) (2); Soil Scientists (3); Photogrammatists (1); Photointerpreters (1); Photolab Technicians (2); Pilots (1); Geographers (1); Wildlife (1)

STATEMENT OF CAPABILITIES:
RSI was established in 1969 and is devoted to research, applications, education, training, and information dissemination in the field of remote sensing. Major emphasis is placed on agriculture, hydrology, and engineering. There are 21 full-time professional employees and additional consultants, part-time employees and student assistants. Support capability includes research and training facilities, aircraft data collection facilities, computer facilities, photographic laboratory, photo-interpretation capability, and graphic arts laboratory. The Institute has successfully participated in many domestic and foreign activities involving South Dakota State agencies, federal agencies, international organizations and foreign governments.

REMOTE SENSING EQUIPMENT/SYSTEMS PROVIDED

REMOTE SENSORS SYSTEMS

VIEWING EQUIPMENT

PHOTOGRAMMETRIC EQUIPMENT

DIGITAL IMAGE PROCESSING EQUIPMENT

SOFTWARE

Sell and Lease Geometric Correction, Radiometric Correction, Image Enhancement, Multispectral Classification.

INTEGRATED SYSTEMS

Sell Geometric Correction, Radiometric Correction, Image Enhancement, Multispectral Classification.

OTHER EQUIPMENT

Sell and Lease Geographic Information Systems; Sell Topographic Data Bases, Geological Data Bases.
FACILITIES AND SPECIAL EQUIPMENT

AIRCRAFT
Beechcraft 18 (1)

CAMERAS, SCANNERS, AND OTHER REMOTE SENSORS
Hasselblad 70mm (5)
K-17 6" and 12" 9x9 (2)
Thermal Scanner (also L-Band Microwave Radiometer (1 ea)

FIELD SURVEY EQUIPMENT
Solometers
Precision Radiation Thermometer
Osco Radiometers also Exotect Todiometer

PHOTOGRAPHIC PROCESSING EQUIPMENT
Completely equipped Black and White and Color Photo labs

PHOTOGRAHMETRIC PROCESSING EQUIPMENT
Complete photo lab for special processing of imagery for photo enhancement, generation of many special photo products

IMAGE INTERPRETATION, VIEWING AND MAPPING (NON-DIGITAL)
I2's (1)
Zoom Transfer also Reflecting Projector (1 ea)

IMAGE INTERPRETATION, VIEWING AND MAPPING (DIGITAL)
Signal Analysis System (1)

DIGITIZING, PLOTTING AND GRAPHICS
Coordinate Digitizer (1)
Calcomp Plotter (1)

OTHER "PUTER PROCESSING"
Areas Information System (1)

OTHER
Film Densitometers (3)

PRODUCTS AND SERVICES PROVIDED

IMAGE PRODUCTS
B&W and Color Negative Transparencies, Color Transparencies, Contact Prints and Enlarged Prints; Color Infrared and Color Composite Positive Transparencies, Contact Prints and Enlarged Prints; (c) Photo Mosaics; Analog Magnetic Tape; Thermograms; Halftone Image Prints; Digital Magnetic Tapes; (a) Digital Mosaics

PHOTOGRAHMETRIC PRODUCTS
(c) Digital Data Bases

INTERPRETED, THEMATIC PRODUCTS
(c) Color Thematic Maps; Land Use Maps; Vegetation/Forestry Maps; Utility Maps; Acreage Tabulations; Geocoded Data Bases; Thematic Map Overlays; Geologic Maps; Transportation Maps; Soils Maps; Tax Maps; Digital Magnetic Tapes

PROJECT PLANNING AND SUPPORT SERVICES
Problem Definition; Selection of Existing Imagery; Ground Control Survey; Map Digitizing; Data Base Preparation; Sensor Selection/Evaluation; Sampling Strategy Design; Ancillary Data Collection; Ground Truth Survey; Gray Level Digitizing; Data Management

AERIAL SURVEY
Low Altitude Photography; Thermal Infrared; Radar; Geophysical

IMAGE PROCESSING, INTERPRETATION AND ANALYSIS
Digital Image Processing; Batch Digital Image/analysis/Classification; Interactive Digital Image/Analysis/Classification; Photographic Laboratory Processing; Manual Image Interpretation

PHOTOGRAHMETRIC ENGINEERING

REPRODUCTION
Drafting & Scribing; Printing

OTHER SERVICES
Remote Sensing Research; Remote Sensing Training; Statistical Modeling; Consultant Services; Interactive Computer Graphics; Computer Services; Software Design/Development
NAME: SPACE SYSTEMS

ADDRESS(ES) & CONTACT(S)
P.O. Box 1608
Fairbanks, Alaska 99701
(907) 679-2524
William R. Themer

YEARS IN BUSINESS: 2
PROJECTS COMPLETED: 3
REGION SERVED: X & Int'l.

TYPES OF REMOTE SENSING TECHNOLOGIES:
Low Altitude Aerial Photo; Med Altitude Aerial Photo; High Altitude Aerial Photo; Radar; Landsat MSS; Landsat ETM; Seasat; Skylab (not available in Alaska); Digital Image Interpretations; Manual Image Interpretations

PERSONNEL & SKILLS REPRESENTED:
Management (1); Professional (1); Technical (2); Cartographers; Computer Programmers; Draftsmen; Field Surveyors; Social Scientists; Photogrammists; Photogrammetric Equip. Oper. Photointerpreters; Pilots; Planners

STATEMENT OF CAPABILITIES:
Value added interpretive services utilizing high altitude photography, satellite imagery and radar; small format aerial photography and processing; economic resource planning management and development

ORIGINAL PAGE IS OF POOR QUALITY

PRODUCTS AND SERVICES PROVIDED

IMAGE PRODUCTS
(c) B&W and Color Infrared Positive Transparencies, Contact Prints; Photo Mosaics;
(a) B&W, Color Infrared Enlarged Prints

ENHANCED AND CORRECTED IMAGERY
(c) Photo: Multitemporal Composites; Density Slice; Change Detection; Multisensor Composites

PHOTOGRAVEMETRIC PRODUCTS
(c) Topographic Maps; Plan and Profile Sheets; Volumetric Calculations

INTERPRETED, THEMATIC PRODUCTS
(c) Color Thematic Maps; Land Use Maps; Vegetation/Forestry Maps; Utility Maps; Acreage Tabulations; Geocoded Data Bases; Thematic Map Overlays; Geologic Maps; Transportation Maps; Soils Maps; Wood Fuels/Energy Maps; Marine Plants/Energy Maps

PROJECT PLANNING AND SUPPORT SERVICES
Problem Definition; Feasibility Analysis; Selection of Existing Imagery; Data Base Preparation; Air Support Operations; Sensor Selection/Evaluation; Sampling Strategy Design; Ground Truth Survey; Data Management; (a) Ground Control Survey; Map Digitizing; Ancillary Data Collection

AERIAL SURVEY
Low Altitude Photography; High Altitude Photography; Radar; Multispectral Scanner

IMAGE PROCESSING, INTERPRETATION AND ANALYSIS
Photographic Laboratory Processing; Manual Image Interpretation

PHOTOGRAVEMETRIC ENGINEERING
Topographic Mapping—Small Scale; Topographic Mapping—Large Scale; Volumetric Calculation

REPRODUCTION
Drafting & Scribing; Cartographic Reproduction; Printing

OTHER SERVICES
Remote Sensing Research; Remote Sensing Training; Statistical Modeling; Consultant Services; Turnkey Systems Sales/Leasing/Service; (a) Software Design/Development; Equipment Sales/Leasing/Service; Software Sales/Leasing
SPACE SYSTEMS

FACILITIES AND SPECIAL EQUIPMENT

AIRCRAFT
Cessna 206 or 172 (1)

CAMERAS, SCANNERS, AND OTHER REMOTE SENSORS
Small format reconnaissance cameras (2)

FIELD SURVEY EQUIPMENT
Transit/chain crew equipment

PHOTOGRAPHIC PROCESSING EQUIPMENT

PHOTOMETRIC PROCESSING EQUIPMENT

IMAGE INTERPRETATION, VIEWING AND MAPPING (NON-DIGITAL)"U" DELTA stereoscope microcomputer (1)

IMAGE INTERPRETATION, VIEWING AND MAPPING (DIGITAL)

DIGITIZING, PLOTTING AND GRAPHICS

OTHER COMPUTER PROCESSING

NAME: SPACE-TEX

ADDRESS(ES) & CONTACT(S)
1666 E. Cypress Avenue
Redding, California 96002
(916) 243-3024
Kent D. Rozelle, President

YEARS IN BUSINESS: 1
PROJECTS COMPLETED: 1
REGION SERVED: U.S.
SMALL BUSINESS CONTRACTOR? Yes
MINORITY-OWNED BUSINESS? No
TOTAL APPLICABLE EMPLOYEES: 3

TYPES OF REMOTE SENSING TECHNOLOGIES:
Low Altitude Aerial Photo; Med Altitude Aerial Photo; High Altitude Aerial Photo; Landsat MSS; Landsat RS; Skylab; Manual Image Interpretation

PERSONNEL & SKILLS REPRESENTED:
Management (1); Professional (2)
Photointerpreters; Planners; Geographers

STATEMENT OF CAPABILITIES:
SPACE-TEX offers a broad range of services to both government and private sectors. We specialize in resource inventories and analysis for forestry and vegetation, land use and land cover, wetlands and water resources, agricultural studies, and geologic investigations. Our remote sensing services include interpretation of satellite, high flight, and low altitude aerial photography or imagery. We specialize in false color photointerpretation for vegetation in stress analysis. Other services include development site screening, thematic mapping, data collection and management, and environmental impact assessments.
FACILITIES AND SPECIAL EQUIPMENT

AIRCRAFT

CAMERAS, SCANNERS, AND OTHER REMOTE SENSORS

FIELD SURVEY EQUIPMENT

PHOTOGRAPHIC PROCESSING EQUIPMENT

PHOTOGRAMMETRIC PROCESSING EQUIPMENT

IMAGE INTERPRETATION, VIEWING AND MAPPING (NON-DIGITAL)
Topcon mirror stereoscope 6x (2)
Light tables (2)

IMAGE INTERPRETATION, VIEWING AND MAPPING (DIGITAL)

DIGITIZING, PLOTTING AND GRAPHICS

OTHER COMPUTER PROCESSING

OTHER

PRODUCTS AND SERVICES PROVIDED

IMAGE PRODUCTS
(a) B&W, Color, Color infrared, & Color Composite Negative Transparencies, Positive Transparencies, Contact Prints & Enlarged Prints; Photo Mosaics; Photo Atlas Sheets; Digital Mosaics; Half-tone Image Prints; Digital Magnetic Tape

ENHANCED AND CORRECTED IMAGERY
(a) Photo & Digital: Multitemporal Composites; Contrast Enhanced; Geometric Correction; Density Slice; Change Detection; Multisensor Composites; Radiometric Correction; Image Resampling; Pseudo Stereo

PHOTOGRAMMETRIC PRODUCTS
(a) Orthophotos; Topographic Maps; Engineering Cross Sections; Stockpile Measurements; Earthwork Measurements; Digital Terrain Models; Digital Data Bases; Planimetric Maps; Photo-Contour Maps; Plan and Profile Sheets; Volumetric Calculations; Distance & Angle Measurements

INTERPRETED, THEMATIC PRODUCTS
Color Thematic Maps; Land Use Maps; Vegetation/Forestry Maps; Contour Weather Maps; Utility Maps; Acreage Tabulations; Thematic Map Overlays; Geologic Maps; Transportation Maps; Soils Maps; Tax Maps; (a) Geocoded Data Bases; Digital Magnetic Tapes

PROJECT PLANNING AND SUPPORT SERVICES
Problem Definition; Feasibility Analysis; Selection of Existing Imagery; Data Base Preparation; Sensor Selection/Evaluation; Sampling Strategy Design; Ancillary Data Collection; Ground Truth Survey; Data Management; (a) Ground Control Survey; Map Digitizing; Air Support Operations; Gray Level Digitizing

AERIAL SURVEY
(a) Low Altitude Photography; Thermal Infrared; High Altitude Photography; Multispectral Scanner

IMAGE PROCESSING, INTERPRETATION AND ANALYSIS
Manual Image Interpretation; (a) Digital Image Processing; Batch Digital Image/Analysis/Classification; Interactive Digital Image/Analysis/Classification; Photographic Lab Processing

PHOTOGRAPHIC ENGINEERING
(a) Aerotriangulation; Orthophotomapping; Planimetric Mapping; Stereo Digitizing; Cross-Sectioning; Stereo-compilation; Topographic Mapping-Small Scale; Topographic Mapping-Large Scale; Volumetric Calculation

REPRODUCTION
Drafting & Scribing; (a) Cartographic Reproduction; Drafting & Scribing; Automated Drafting/Plotting; Printing

OTHER SERVICES
Remote Sensing Research; Remote Sensing Training; Consultant Services; (a) Interactive Computer Graphics; Computer Services
NAME: SPATIAL DATA SYSTEMS

ADDRESS(ES) & CONTACT(S)
505 So. Fairview Ave., (P.O. Box 249)
Goleta, California 93017
(805) 967-2328
M. Stanley Schlosser

YEARS IN BUSINESS: ___
PROJECTS COMPLETED: ___
REGION ___

TYPES OF REMOTE SENSING TECHNOLOGIES:
Digital & Analog Image Processing

PERSONNEL & SKILLS REPRESENTED:

STATEMENT OF CAPABILITIES:
Analog System: Datascan as color density slicer edge enhancer to measure density, area, enhance edges in film images; Digital Systems: Eyecom Multispectral image processing systems provide software and hardware to analyze film or computer compatible tapes to ratio, classify; density slice, measure areas, determine histograms, edge enhance and color code features.

REMOTE SENSING EQUIPMENT/SYSTEMS PROVIDED

REMOTE SENSOR SYSTEMS

VIEWING EQUIPMENT
Sell: Density Slicers

PHOTOGRAFIIC EQUIPMENT

DIGITAL IMAGE PROCESSING EQUIPMENT
Sell: B&W Image Displays; Image Digitizers; Color Image Displays

SOFTWARE

INTEGRATED SYSTEMS
Sell: Image Enhancement; Multispectral Classification

OTHER EQUIPMENT
NAME: SPECTRAL DATA CORP.

ADDRESS(ES) & CONTACT(ES)
112 Parkway Drive South
Hauppauge, New York 11787
(516) 543-4441
Dr. Edward Tost

1500 Wilson Blvd., Suite 810
Arlington, Virginia 22209
(703) 243-0660
William Smith

YEARS IN BUSINESS: 11
PROJECTS COMPLETED: OVER 50
REGION SERVED: I, II, III, IV, V, IX, & Int'l.

TYPES OF REMOTE SENSING TECHNOLOGIES:
Low Altitude Aerial Photo; Med Altitude Aerial Photo; Landsat MSS; Landsat RBV; Skylab;
Digital Image Interpretations; Manual Image Interpretations

PERSONNEL & SKILLS REPRESENTED:
Management (2); Professional (10); Technical (3); Other (4)
Engineers (electrical); Image Processing Equip. Oper. (1); Photogrammatists (1);
Photointerpreters (2); Photolab Technicians (2); Physical Scientists (2);
Geographers (1)

STATEMENT OF CAPABILITIES:
Spectral Data incorporated in New York in 1969. Company personnel; principal investigations; Landsat & Skylab; Applications programs agriculture, forestry, range resources, interpretation techniques development, mineral resources. Principal contractor to USAID operating remote sensing applications and training centers in developing nations. Conducted Landsat mapping programs for USGS using Landsat imagery; Manufacturers multispectral cameras, additive color viewers, photographic printers and spectroradiometers.
PRODUCTS AND SERVICES PROVIDED

IMAGE PRODUCTS
B&W, Color, Color Infrared, and Color Composites Negative Transparencies, Positive Transparencies, Contact Prints, and Enlarged Prints; Halftone Image Prints; Thermograms; (a) Photo Mosaics; Photo Atlas Sheets

ENHANCED AND CORRECTED IMAGERY
Photo: Multitemporal Composites; Contrast Enhanced; Digital: Density Slice; (c) Photo: Multisensor Composites

PHOTOGRAVIMETRIC PRODUCTS

INTERPRETED, THEMATIC PRODUCTS
(c) Color Thematic Maps; Land Use Maps; Vegetation/Forestry Maps; Utility Maps; Acreage Tabulations; Thematic Map Overlays; Geologic Maps; Soils Maps

PROJECT PLANNING AND SUPPORT SERVICES
Problem Definition; Feasibility Analysis; Selection of Existing Imagery; Data Base Preparation; Sensor Selection/Evaluation; Sampling Strategy Design; Ancillary Data Collection; Ground Truth Survey; Gray Level Digitizing; Data Management; (a) Air Support Operations

AERIAL SURVEY
Low Altitude Photography; Multispectral Photography; (a) Thermal Infrared; Radar; Geophysical; High Altitude Photography; Multispectral Scanner

IMAGE PROCESSING, INTERPRETATION AND ANALYSIS
Photographic Laboratory Processing; Manual Image Interpretation; (a) Digital Image Processing; Batch Digital Image/Analysis; Classification; Interactive Digital Image/Analysis/Classification

PHOTOGRAVIMETRIC ENGINEERING
(a) Aerotriangulation; Orthophotomapping; Planimetric Mapping; Stereo Digitizing; Cross-Sectioning; Stereocompilation; Topographic Mapping-Small Scale; Topographic Mapping-Large Scale; Volumetric Calculation

REPRODUCTION
(a) Drafting & Scribing; Cartographic Reproduction; Automated Drafting/Plotting; Printing

OTHER SERVICES
Remote Sensing Research; Remote Sensing Training; Statistical Modeling; Consultant Services; Turnkey Systems Sales/Leasing/Service; Hardware Design/Development; Equipment Sales/Leasing/Service; (a) Interactive Computer Graphics; Computer Services; Software Design; Development

REMOTE SENSING EQUIPMENT/SYSTEMS PROVIDED

REMOTE SENSOR SYSTEMS
Sell & Lease: Reconnaissance Cameras; Multispectral Cameras; Handheld Aerial Cameras; Lease: Metric Cameras

VIEWING EQUIPMENT
Lease: Density Slicers; Sell & Lease: Monocular Magnifiers; Stereoscopes; Color Additive Viewers

PHOTOGRAVIMETRIC EQUIPMENT

DIGITAL IMAGE PROCESSING EQUIPMENT

SOFTWARE

INTEGRATED SYSTEMS

OTHER EQUIPMENT
Sell: Aerial Film; Sell & Lease: Spectrometers; Measurement Equipment; Photo Processing Equip.; Field Equipment
NAME: STONE ROCK AERIAL SURVEYS

ADDRESS(ES) & CONTACT(S)
7990 M-15
Clarkston, Michigan 48016
(313) 625-4890
Gary K. Stonerock

YEARS IN BUSINESS: 15
PROJECTS COMPLETED: ___
REGION SERVED: U.S.

TYPES OF REMOTE SENSING TECHNOLOGIES:
Low Altitude Aerial Photo; Med Altitude Aerial Photo

PERSONNEL SKILLS REPRESENTED:
Management (1); Professional (2); Technical (3); Other (9)
Computer Equip. Oper.; Draftsmen; Field Surveyors; Photogrammatists; Photogrammetric Equip. Oper.; Photolab Technicians; Pilots

STATEMENT OF CAPABILITIES:
Offer aerial photogrammetric mapping, photography, and land surveying and construction layout.

FACILITIES AND SPECIAL EQUIPMENT

AIRCRAFT
Twin 320-D Skyknight, Turbo (1)

CAMERAS, SCANNERS, AND OTHER REMOTE SENSORS
Wild RC-8, Certified (1)
T-12, Fairchild (1)
17" & 8" Cameras (1 ea.)

FIELD SURVEY EQUIPMENT
T-1 Theodolite's, Wild (2)
NIZ Levels, Zeiss (2)
EDM 3800 Hewlett Packard (1)

PHOTOGRAPHIC PROCESSING EQUIPMENT
Kodak Versimat (1)
Log-E Printer - Black & White (1)

PHOTOMETRIC PROCESSING EQUIPMENT
Santaña Z-C Plotter (1)
Kalab Stereo Plotter (2)
K&E (1)

IMAGE INTERPRETATION, VIEWING AND MAPPING (NON-DIGITAL)

IMAGE INTERPRETATION, VIEWING AND MAPPING (DIGITAL)

DIGITIZING, PLOTTING AND GRAPHICS

OTHER COMPUTER PROCESSING
Computer - Hewlett Packard (1)

OTHER
STONEROCK AERIAL SURVEYS

PRODUCTS AND SERVICES PROVIDED

IMAGE PRODUCTS
(c) B&W and Color Negative Transparencies; Photo Mosaics; B&W Contact Prints; (s) B&W Pos.
Transparencies and Enlarged Prints; Color Positive Transparencies, Contact Prints, and
Enlarged Prints

ENHANCED AND CORRECTED IMAGERY

PHOTOGRAMMETRIC PRODUCTS
(c) Topographic Maps; Engineering Cross Sections; Stockpile Measurements; Earthwork
Measurements; Planimetric Maps; Photo-Contour Maps; Plan and Profile Sheets; Volumetric
Calculations; Distance & Angle Measurements; (s) Orthophotos; Digital Data Bases

INTERPRETED, THEMATIC PRODUCTS

PROJECT PLANNING AND SUPPORT SERVICES
Ground Control Survey; Map Digitizing; Air Support Operations; Ground Truth Survey

AERIAL SURVEY
Low Altitude Photography; High Altitude Photography

IMAGE PROCESSING, INTERPRETATION AND ANALYSIS
Photographic Laboratory Processing

PHOTOGRAMMETRIC ENGINEERING
Planimetric Mapping; Cross-Sectioning; Stereocompilation; Topographic Mapping-Small Scale;
Topographic Mapping-Large Scale; Volumetric Calculation; (s) Aerotriangulation;
Orthophotomapping; Stereo Digitizing

REPRODUCTION
(s) Drafting & Scribing; Cartographic Reproduction

OTHER SERVICES
Computer Services

NAME: SURDEX CORPORATION

ADDRESS(ES) & CONTACT(S)
520 Mercury Boulevard
Chesterfield, Missouri 63017
(314) 532-3427
Glen R. Buckland, Vice President

YEARS IN BUSINESS: 24
SMALL BUSINESS CONTRACTOR? No
PROJECTS COMPLETED: 
MINORITY-OWNED BUSINESS? No
REGION SERVED: U.S.
TOTAL APPLICABLE EMPLOYEES: 46

TYPES OF REMOTE SENSING TECHNOLOGIES:
Low Altitude Aerial Photo; Mid Altitude Aerial Photo; High Altitude Aerial Photo

PERSONNEL & SKILLS REPRESENTED:
Management (4); Professional (6); Technical (36)
Computer Equip. Oper. (2); Computer Programmers (1); Draftsmen (6); Field Surveyors (3)
Photogrammatists (6); Photogrammetric Equip. Oper. (11); Photolab Technicians (5);
Pilots (4); Planners (4); Photographers, Aerial (4)

STATEMENT OF CAPABILITIES:
Specializing in aerial photography, topographic mapping, analytical photogrammetry,
volumetric inventories, electronic field surveys, resource surveys for engineers,
public utilities, industrial clients, and government agencies.
Staff with a wide variety of background experience.
FACILITIES AND SPECIAL EQUIPMENT

AIRCRAFT
- Aero Commander 500 Turbo-Charged (1)
- Aero Commander 680 Super-Charged (1)
- Cessna 206 Turbo-Charged (1)

CAMERAS, SCANNERS, AND OTHER REMOTE SENSORS
- Zeiss Aerial Camera (153mm FL) (2)
- Zeiss Aerial Camera (93mm FL) (1)

FIELD SURVEY EQUIPMENT
- Ten second Theodolite (1)
- One second Theodolite (2)
- EDM measuring instrument (3)
- Automatic and semi-automatic level (4)

PHOTOGRAPHIC PROCESSING EQUIPMENT
- Kodak Versimat (1)
- LogE Printer (2)
- Kargyl copy camera (1)
- EAE horizontal enlarger (1)

PHOTOINTERPRETATION, VIEWING AND MAPPING (NON-DIGITAL)
- Altek Digitizer AC 100 (1)
- Kern Monocomparator (1)

PHOTOINTERPRETATION, VIEWING AND MAPPING (DIGITAL)
- Dell Foster RSS 400 Quantizer (1)
- Wild Pug Transfer (1)
- Data Tech Auto Plotting Table (2)
- Altek Transducer Digitizing Table (1)
- Hewlett Packard 1000 Computer System (1)
- Altek Microprocessor (1)

OTHER COMPUTER PROCESSING

PRODUCTS AND SERVICES PROVIDED

IMAGE PRODUCTS
- (c) B&W, Color, Color Infrared, and Color Composite Negative Transparencies, Positive Transparencies, Contact Prints, and Enlarged Prints; Photo Mosaics; Photo Atlas Sheets; Analog Magnetic Tape; Halftone Image Prints; Digital Magnetic Tape

ENHANCED AND CORRECTED IMAGERY

PHOTOGRAHMERIC PRODUCTS
- (c) Topographic Maps; Engineering Cross Sections; Stockpile Measurements; Earthwork Measurements; Digital Terrain Models; Digital Data Bases; Planimetric Maps; Photo-Contour Maps; Plan and Profile Sheets; Volumetric Calculations; Distance & Angle Measurements
- (a) Orthophotos

INTERPRETED, THEMATIC PRODUCTS
- (c) Land Use Maps; Vegetation/Forestry Maps; Utility Maps; Acreage Tabulations; Transportation Maps; Tax Maps; Digital Magnetic Tapes

PROJECT PLANNING AND SUPPORT SERVICES
- Selection of Existing Imagery; Ground Control Survey; Map Digitizing; Data Base Preparation; Air Support Operations

AERIAL SURVEY
- Low Altitude Photography; High Altitude Photography

IMAGE PROCESSING, INTERPRETATION AND ANALYSIS
- Batch Digital Image/Analysis/Classification; Photographic Laboratory Processing

PHOTOGRAHMERIC ENGINEERING
- Aerotriangulation; Planimetric Mapping; Stereo Digitizing; Cross-Sectioning; Stereocompilation; Topographic Mapping-Small Scale; Topographic Mapping-Large Scale; Volumetric Calculation; (a) Orthophotomapping

REPRODUCTION
- Drafting & Scribing; Cartographic Reproduction; Automated Drafting/Plotting; Printing

OTHER SERVICES
- Interactive Computer Graphics; Computer Services
NAME: SYSTEM PLANNING CORPORATION

ADDRESS(ES) & CONTACT(S)
1500 Wilson Blvd.
Arlington, Virginia 22209
(703) 841-2844 or 8863
Andy Schulteisz, Vice President, System Engineering
Cliff McLain, Vice President, Product Development
Central Bank Bldg., 200 W. Court Sq., Suite 920
Huntsville, Alabama 35801
(205) 536-6671
Jack Farrington, Manager Huntsville Office

YEARS IN BUSINESS: 9
PROJECTS COMPLETED: over 30
REGION SERVED: U.S. & Int’l.

TYPES OF REMOTE SENSING TECHNOLOGIES:
Low Altitude Aerial Photo; Med Altitude Aerial Photo; High Altitude Aerial Photo; Aerial Multispectral Scanner; Aerial Thermal Infrared Scanner; Radar; LandSat MSS; Seasat; Weather Satellite; Digital Image Interpretations; Laser Remote Sensing

PERSONNEL & SKILLS REPRESENTED:
Management (6); Professional (16); Technical (28); Other (5)
Draftsmen/Technicians (5); Engineers (civil, environ.) (8); Engineers (electrical) (15); Social Scientists (5); Physical Scientists (11); Planners (5); Computer Analysts (6)

STATEMENT OF CAPABILITIES:
System Planning Corporation is active in the development of remote sensing systems (sensors and real-time data processing) through evaluation of customer needs, design and assembly of prototypes to meet these needs, and field testing of these prototypes to validate performance and carry out research. We emphasize our ability to develop unique system alternatives which incorporate the best capabilities from a variety of component manufacturers in short periods of time. Customers get field experience on minor alternatives using design breadboards, prior to committing to a separate competitive manufacturing phase for multiple buys. SFC also has procured and operated remote sensing facilities for customers.

FACILITIES AND SPECIAL EQUIPMENT

AIRCRAFT
Leased as needed

CAMERAS, SCANNERS, AND OTHER REMOTE SENSORS
25 channel VRIR Scanner (1)
5 frequency coherent radars (to be 7 channels) (1)
X band coherent radar (1)

FIELD SURVEY EQUIPMENT
FIR Field Instrumentation (1)

PHOTOMICROGRAPhic PROCESSING EQUIPMENT

PHOTOMATIC PROCESSING EQUIPMENT

IMAGE INTERPRETATION, VIEWING AND MAPPING (NON-DIGITAL)

IMAGE INTERPRETATION, VIEWING AND MAPPING (DIGITAL)

DIGITIZING, PLOTTING AND GRAPHICS
RANTEC Facility (1)

OTHER COMPUTER PROCESSING

OTHER
Instrumented support van (1)
PRODUCTS AND SERVICES PROVIDED

IMAGE PRODUCTS
Thermograms

ENHANCED AND CORRECTED IMAGERY

PHOTOGRAMMETRIC PRODUCTS

INTERPRETED, THEMATIC PRODUCTS

PROJECT PLANNING AND SUPPORT SERVICES
Problem Definition; Feasibility Analysis; Selection of Existing Imagery; Ground Control Survey; Map Digitizing; Data Base Preparation; Air Support Operations; Sensor Selection/Evaluation; Sampling Strategy Design; Ancillary Data Collection; Ground Truth Survey; Gray Level Digitizing; Data Management

AERIAL SURVEY
Thermal Infrared; Radar; Multispectral Scanner; (a) Low Altitude Photography; High Altitude Photography

IMAGE PROCESSING, INTERPRETATION AND ANALYSIS

PHOTOGRAMMETRIC ENGINEERING

REPRODUCTION

OTHER SERVICES
Remote Sensing Research; Remote Sensing Training; Statistical Modeling; Consultant Services; Interactive Computer Graphics; Computer Services; Hardware Design/Development; Software Design/Development

REMOTE SENSING EQUIPMENT/SYSTEMS PROVIDED

REMOTE SENSOR SYSTEMS
Sell: Radars Synthetic Aperture; Radars-Real Aperture; Multispectral Scanners; Millimeter Wave Sensors; Remote Laser Sensing

VIEWING EQUIPMENT

PHOTOGRAMMETRIC EQUIPMENT

DIGITAL IMAGE PROCESSING EQUIPMENT

SOFTWARE

INTEGRATED SYSTEMS

OTHER EQUIPMENT
NAME: SYSTEMHOUSE

ADDRESS(ES) & CONTACT(S)
99 Bank Street, 3rd Floor
Ottawa, Ontario K1P 6B9
(613) 236-9734
C.C. Newell

#2-700 Princess Street
Alexandria, Virginia 22314
(703) 549-8488
W.R. Detwiler

YEARS IN BUSINESS: 6
PROJECTS COMPLETED: 25
REGION SERVED: U.S. & Int'l.

TYPES OF REMOTE SENSING TECHNOLOGIES:
Low Altitude Aerial Photo; Mod Altitude Aerial Photo; High Altitude Aerial Photo;
Close Range Photogrammetry; Terrestrial Photography

PERSONNEL & SKILLS REPRESENTED:
Management (5); Professional (40)
Computer Programmers; Photogrammatists; Photogrammetric Equip. Oper.

STATEMENT OF CAPABILITIES:
Systemhouse is a major computer systems design and development company employing
over 600 professionals. During the last five years the company has successfully
installed turnkey automated cartographic systems for both government and private
organizations in the United States, Australia, India and Canada. Systemhouse has
also developed a very successful universal analytical stereoplott er called AUTOPLOT,
that is now being used in many areas in the photogrammetric industry. Systemhouse
is prepared to consider any form of turnkey photogrammetric or cartographic system
that is required.

PRODUCTS AND SERVICES PROVIDED

IMAGE PRODUCTS

ENHANCED AND CORRECTED IMAGERY

PHOTOGRAHMETRIC PRODUCTS
Engineering Cross Sections; Stockpile Measurements; Earthwork Measurements; Digital
Terrain Models; Digital Data Bases; Planimetric Maps; Photo-Contour Maps; Plan and
Profile Sheets; Volumetric Calculations; Distance & Angle Measurements

INTERPRETED, THEMATIC PRODUCTS

PROJECT PLANNING AND SUPPORT SERVICES
Feasibility Analysis; Map Digitizing; Data Base Preparation

AERIAL SURVEY

IMAGE PROCESSING, INTERPRETATION AND ANALYSIS

PHOTOGRAHMETRIC ENGINEERING
Stereo Digitizing; Cross-Sectioning; Stereocompilation; Topographic Mapping-Small Scale;
Topographic Mapping-Large Scale; Volumetric Calculation

REPRODUCTION

OTHER SERVICES
Consultant Services; Interactive Computer Graphics; Computer Services; Turnkey
Systems Sales/Leasing/Service; Hardware Design/Development; Software Design/
Development; Equipment Sales/Leasing/Service; Software Sales/Leasing
SYSTEMHOUSE

REMOTE SENSING EQUIPMENT/SYSTEMS PROVIDED

REMOTE SENSORS

VIEWING EQUIPMENT

PHOTOMETRIC EQUIPMENT
Sell & Lease: Stereo Plotters

DIGITAL IMAGE PROCESSING EQUIPMENT

SOFTWARE
Sell: Geometric Correction

INTEGRATED SYSTEMS

OTHER EQUIPMENT
Sell & Lease: Interactive Graphics Systems; Plotters; Geographic Information Systems

NAME: TECHNOCOLOR GRAPHIC SERVICES, INC.

ADDRESS(ES) & CONTACT(S)
P.O. Box 1242
Sioux Falls, South Dakota 57101
(605) 394-6511
H.E. Lockwood
Mail Stop 242-4
Moffett Field, California 94035
(415) 965-2961

YEARS IN BUSINESS: 16
PROJECTS COMPLETED: 100
REGION SERVED: U.S. & Int'l.

SMALL BUSINESS CONTRACTOR? ___
MINORITY-OWNED BUSINESS? ___
TOTAL APPLICABLE EMPLOYEES: 345

TYPES OF REMOTE SENSING TECHNOLOGIES:
Low Altitude Aerial Photo; Med Altitude Aerial Photo; High Altitude Aerial Photo;
Aerial Multispectral Scanner; Aerial Thermal Infrared Scanner; Landsat MSS; Landsat RBV;
Skylab; Digital Image Interpretations; Manual Image Interpretations

PERSONNEL & SKILLS REPRESENTED:
Management (25); Professional (70); Technical (250)
Computer Equip. Oper.; Computer Programmers; Draftsmen; Engineers (civil, environ.);
Engineers (electrical); Image Processing Equip. Oper.; Soil Scientists; Social
Scientists; Photogrammatists; Photogrammetric Equip. Oper.; Photointerpreters; Photolab
Technicians; Physical Scientists; Planners; Geographers

STATEMENT OF CAPABILITIES:
Government support services contractor for NASA, U.S. Geological Survey, and Bureau
of Land Management. Provide data processing and analysis of electronic and photo-
graphic imagery from LANDSAT and aircraft image gathering platforms; also provide
image interpretation of images from remotely sensed data; produce high quality visual
imagery as well as image enhancement for scientific study.
FACILITIES AND SPECIAL EQUIPMENT***

AIRCRAFT

CAMERAS, SCANNERS, AND OTHER REMOTE SENSORS

FIELD SURVEY EQUIPMENT

PHOTOGRAPHIC PROCESSING EQUIPMENT
Color (24) B&W (24)

PHOTOGRAHMETRIC PROCESSING EQUIPMENT

IMAGE INTERPRETATION, VIEWING AND MAPPING (NON-DIGITAL) (6)

IMAGE INTERPRETATION, VIEWING AND MAPPING (DIGITAL) (9)

DIGITIZING, PLOTTING AND GRAPHICS (7)

OTHER COMPUTER PROCESSING (3)

OTHER

**Note: All facilities and equipment are government owned.

PRODUCTS AND SERVICES PROVIDED***

IMAGE PRODUCTS
B&W, Color, Color Infrared, and Color Composite Negative Transparencies, Positive Transparencies, Contact Prints, and Enlarged Prints; Photo Mosaics; Analog Magnetic Tape; Therograms; Digital Mosaics, Halftone Image Prints; Digital Magnetic Tape

ENHANCED AND CORRECTED IMAGERY
Photo & Digital: Multitemporal Composites; Contrast Enhanced; Geometric Correction; Density Slice; Change Detection; Multisensor Composites; Radiometric Correction; Image Resampling; Pseudo Stereo

PHOTOGRAHMETRIC PRODUCTS
Orthophotos; Digital Terrain Models; Digital Data Bases

INTERPRETED, THEMATIC PRODUCTS
Color Thematic Maps; Land Use Maps; Vegetation/Forestry Maps; Acreage Tabulations; Geocoded Data Bases; Geologic Maps; Soils Maps; Digital Magnetic Tapes

PROJECT PLANNING AND SUPPORT SERVICES
Problem Definition; Feasibility Analysis; Selection of Existing Imagery; Ground Control Survey; Map Digitizing; Data Base Preparation; Sensor Selection/Evaluation; Sampling Strategy Design; Ancillary Data Collection; Ground Truth Survey; Gray Level Digitizing; Data Management; (a) Air Support Operations

AERIAL SURVEY

IMAGE PROCESSING, INTERPRETATION AND ANALYSIS
Digital Image Processing: Batch Digital Image/Analysis/Classification; Interactive Digital Image/Analysis/Classification; Photographic Laboratory Processing; Manual Image Interpretation

PHOTOGRAHMETRIC ENGINEERING

REPRODUCTION
Cartographic Reproduction; Automated Drafting/Plotting; Printing

OTHER SERVICES
Remote Sensing Research; Remote Sensing Training; Statistical Modeling; Consultant Services; Interactive Computer Graphics; Computer Services; Hardware Design/Development; Software Design/Development

***Note: Products and services listed here are routinely provided as part of government contracts.
NAME: TECHNOLOGY DEVELOPMENT CORPORATION

ADDRESS(ES) & CONTACT(S)
P.O. Box 403
Tullahoma, Tennessee 37388
Dr. F. Shahrokhi

P.O. Box 22027
Nashville, Tennessee 37202
Dr. F. Shahrokhi

YEARS IN BUSINESS: 6
PROJECTS COMPLETED: 6
REGION SERVED: U.S. & Int'l.

SMALL BUSINESS CONTRACTOR? Yes
MINORITY-OWNED BUSINESS?

TOTAL APPLICABLE EMPLOYEES: 10

TYPES OF REMOTE SENSING TECHNOLOGIES:
Low Altitude Aerial Photo; Med Altitude Aerial Photo; High Altitude Aerial Photo;
Landsat MSS; Landsat KEV; Skylab; Digital Image Interpretations; Manual Image Interpretaions

PERSONNEL & SKILLS REPRESENTED:
Management (1); Professional (5); Technical (3); Other (1)
Engineers (civil, environ.) (3); Engineers (electrical) (1); Image Processing Equip.
Oper. (1); Photolab Technicians (1); Physical Scientists (2); Pilots (1); Geographers (1)
Secretary (1)

STATEMENT OF CAPABILITIES:
Training seminars in remote sensing, environmental, and earth sciences. Design
of complete facilities. Consultation on start-up and continued operations. Data
analysis. Cooperative activities with Univ. of Tennessee Space Institute.

FACILITIES AND SPECIAL EQUIPMENT

AIRCRAFT
Single-engine (1)

CAMERAS, SCANNERS, AND OTHER REMOTE SENSORS
Multispectral Camera (1)
70mm Camera (1)

FIELD SURVEY EQUIPMENT

PHOTOMICROGRAPHIC PROCESSING EQUIPMENT

PHOTOMIOMICROGRAPHIC PROCESSING EQUIPMENT
Digital-to-photograph equipment (1)

IMAGE INTERPRETATION, VIEWING AND MAPPING (NON-DIGITAL)
Color Additive Projector (1)
Zoom Transfer Scopes (2)
Stereoscopes (6)

IMAGE INTERPRETATION, VIEWING AND MAPPING (DIGITAL)
Mini-computer & peripherals (1)

DIGITIZING, PLOTTING AND GRAPHICS
Photo-to-digital tape equipment (1)

OTHER COMPUTER PROCESSING
ISI Analog Analysis System (1)

OTHER
TECHNOLOGY DEVELOPMENT CORPORATION

PRODUCTS AND SERVICES PROVIDED

IMAGE PRODUCTS
(c) Digital Magnetic Tape; (s) Photo Mosaics

ENHANCED AND CORRECTED IMAGERY
(c) Photo: Density Slice; (s) Digital: Radiometric Correction; Image Resampling; Photo and Digital Geometric Correction

PHOTOGRAMMETRIC PRODUCTS
(c) Planimetric Maps; (s) Topographic Maps;

INTERPRETED, THEMATIC PRODUCTS
(c) Color Thematic Maps; Land Use Maps; Vegetation/Forestry Maps; Acreage Tabulations; Geocoded Data Bases; Thematic Map Overlays; Geologic Maps; Transportation Maps; Soils Maps; Digital Magnetic Tapes

PROJECT PLANNING AND SUPPORT SERVICES
Problem Definition; Feasibility Analysis; Selection of Existing Imagery; Sensor Selection/Evaluation; Sampling Strategy Design; Ancillary Data Collection; Ground Truth Survey; Gray Level Digitizing; Data Management; (s) Map Digitizing; Air Support Operations

AERIAL SURVEY
Low Altitude Photography; (s) Thermal Infrared; Multispectral Scanner

IMAGE PROCESSING, INTERPRETATION AND ANALYSIS
Digital Image Processing; Interactive Digital Image/Analysis/Classification; Photographic Laboratory Processing; Manual Image Interpretation

PHOTOGRAMMETRIC ENGINEERING
Planimetric Mapping; (s) Topographic Mapping-Small Scale; Topographic Mapping-Large Scale

REPRODUCTION
Drafting & Scribing; (s) Cartographic Reproduction; Printing

OTHER SERVICES
Remote Sensing Research; Remote Sensing Training; Statistical Modeling; Consultant Services; Interactive Computer Graphics; Computer Services; Turnkey Systems Sales/Leasing/Service; Software Design/Development; Equipment Sales/Leasing/Service; Software Sales/Leasing

NAME: TELLURIGEOMETER-USA

ADDRESS(ES) & CONTACT(S)
89 Marcus Blvd.
Hauppauge, New York 11787
(516) 231-7710
Roger N. Justice

YEARS IN BUSINESS: 
PROJECTS COMPLETED: 
REGION SERVED: Int'l.

TYPES OF REMOTE SENSING TECHNOLOGIES:

PERSONNEL & SKILLS REPRESENTED:

STATEMENT OF CAPABILITIES:
Manufacture and distribute electronic distance measuring equipment.
TELLUROMETER-USA

REMOTE SENSING EQUIPMENT/SYSTEMS PROVIDED

REMOTE SENSOR SYSTEMS

VIEWING EQUIPMENT

PHOTO RANMETRIC EQUIPMENT

DIGITAL IMAGE PROCESSING EQUIPMENT

SOFTWARE

INTEGRATED SYSTEMS

OTHER EQUIPMENT
Sell & Lease: Measurement Equipment; EIM

NAME: TERRA COGNITA

ADDRESS(ES) & CONTACT(S)
P.O. BOX 59
Lake Elsinore, California 92330
(714) 674-6455
Gary M. Washburn

YEARS IN BUSINESS: 6

PROJECTS COMPLETED: 4

REGION SERVED: III, IX

TOTAL APPLICABLE EMPLOYEES: 12

MINORITY-OWNED BUSINESS?

SMALL BUSINESS CONTRACTOR?

TYPES OF REMOTE SENSING TECHNOLOGIES:
Low Altitude Aerial Photo; Med Altitude Aerial Photo; High Altitude Aerial Photo;
Aerial Multispectral Scanner; Aerial Thermal Infrared Scanner; Landsat MSS; Landsat ETM;
Skylab; Digital Image Interpretations; Manual Image Interpretations

PERSONNEL & SKILLS REPRESENTED:
Management (3); Professional (5); Technical (3); Other (1)
Cartographers; Draftsmen; Field Surveyors; Image Processing Equip. Oper.; Soil
Scientists; Photointerpreters; Physical Scientists; Planners; Geographers

STATEMENT OF CAPABILITIES:
Terra Cognita works in the field of land use and land evaluation for regional planning
and now compiles land data banks for investors of real estate. Training courses
are provided to state, local and overseas requesters who desire to learn technical
aspects in manual remote sensing. Staff training from ITC International
Inst. for Aerial Surveying and Earth Science, Holland
FACILITIES AND SPECIAL EQUIPMENT

AIRCRAFT

CAMERAS, SCANNERS, AND OTHER REMOTE SENSORS

FIELD SURVEY EQUIPMENT
Soil text equip., field camera

PHOTOGRAPHIC PROCESSING EQUIPMENT
Copy camera, lab and lessor processing equip.

PHOTOGRAMMETRIC PROCESSING EQUIPMENT

IMAGE INTERPRETATION, VIEWING AND MAPPING (NON-DIGITAL)

Image Projector, Topcon Stereoscopes; B&L Stereoscopes, 125 Color Combiner, Light tables

IMAGE INTERPRETATION, VIEWING AND MAPPING (DIGITAL)

Tectronics Screen, PDP 11/25 computer system

DIGITIZING, PLOTTING AND GRAPHICS

Dell Plotter Digitizer

OTHER COMPUTER PROCESSING

OTHER

PRODUCTS AND SERVICES PROVIDED

IMAGE PRODUCTS
(c) Full Pos. Transparencies, Contact Prints, and Enlarged Prints; Color Pos. Transparencies, Contact Prints; Color Infrared Pos. Transparencies, Contact Prints; Color Composite Pos. Transparencies, Contact Prints; Photo mosaics; Halftone Image Prints; (a) Color Infrared Enlarged Prints; Color Composite Enlarged Prints

ENHANCED AND CORRECTED IMAGERY

Change Detection; (c) Photo; Multitemporal Composites; Multisensor Composites; Image Resampling; Digital: Contrast Enhanced; Geometric Correction; Density slice

PHOTOCOPIER PRODUCTS
(a) Planimetric Maps

INTERPRETED, THEMATIC PRODUCTS

Land Use Maps; Vegetation/Forestry Maps; Utility Maps; Geocoded Data Bases; (c) Acreage Calculations; Thematic Map Overlays; Transportation Maps; Soils Maps; Tax Maps; Digital Magnetic Tapes; (a) Color Thematic Maps; Contour Weather Maps; Geologic Maps

PROJECT PLANNING AND SUPPORT SERVICES

Problem Definition; Feasibility Analysis; Selection Existing Imagery; Ground Control Survey; Map Digitizing, Data Base Preparation; Sensor Selection/Evaluation; Ancillary Data Collection; Ground Truth Survey; City Level Digitizing; Project Management; (a) Aerial Survey Operations; Sampling Strategy Design

AERIAL SURVEY

Low Altitude Photography; (a) Thermal Infrared; Radar; Geophysical; Hi Altitude Photography; Multipath Sounding

IMAGE PROCESSING, INTERPRETATION AND ANALYSIS

Batch Digital Image/Analysis/Classification; Interactive Digital Image/Analysis/Classification; Manual Image Interpretation; (a) Digital Image Processing; Photographic Laboratory Processing

PHOTOGRAMMETRIC ENGINEERING

REPRODUCTION

Drafting & Scribing; Cartographic Reproduction; Printing; (a) Automated Drafting/Plotting

OTHER SERVICES

Remote Sensing Research; Remote Sensing Training; Consultant Services; (a) Statistical Modeling; Interactive Computer Graphics; Computer Services; Equipment Sales/Leasing/Service
NAME: TOPOGRAPHIC SCIENCES CORPORATION

ADDRESS(ES) & CONTACT(S)
One Tyson Corner Center Office Bldg., Suite 208, McLean, Virginia 22102
(703) 827-9501
Juan Cornejo

YEARS IN BUSINESS: 2
PROJECTS COMPLETED: 3
REGION SERVED: U.S.
TOTAL APPLICABLE EMPLOYEES: 20

SMALL BUSINESS CONTRACTOR? Yes
MINORITY-OWNED BUSINESS? Yes

TYPES OF REMOTE SENSING TECHNOLOGIES:
Low Altitude Aerial Photo; Med Altitude Aerial Photo; High Altitude Aerial Photo;
Aerial Multispectral Scanner; Aerial Thermal Infrared Scanner; Landsat MSS;
Manual Image Interpretations; Landsat RBV

PERSONNEL & SKILLS REPRESENTED:
Management (1); Professional (15); Technical (4)
Cartographers (2); Draftsmen (4); Engineers (civil, environ.) (1); Soc. Scientist (1)
Photogrammatists (2); Photointerpreters (1); Physical Scientists (5); Planners (1);
Geographers (2)

STATEMENT OF CAPABILITIES:
Topographic Sciences Corporation provides mapping, photogrammetric, and photo
interpretation services to the general business community and to governmental
agencies. The services provided include map compilation and revision, color
separation and editing. In the photo interpretation field, we provide manual
interpretation of soils, woodlands, wetlands, archaeological sites, and volumetric
measurements of stockpiled materials.
TOPOGRAPHIC SCIENCES CORPORATION

FACILITIES AND SPECIAL EQUIPMENT

AIRCRAFT

CAMERAS, SCANNERS, AND OTHER REMOTE SENSORS

FIELD SURVEY EQUIPMENT

Wild Heerbrug model T-2 one second theodolite (1)

PHOTOGRAMMETRIC PROCESSING EQUIPMENT

Brown Process Camera with Nikon f1.9 305mm (1)
Lens, blow-back capability, full instrument panel, internal rectifier and roll film adapter

PHOTOGRAMMETRIC PROCESSING EQUIPMENT

OGM EPIII stereo photogrammetric plotter (1)
OGM EPIII stereo photogrammetric plotter (1)

IMAGE INTERPRETATION, VIEWING AND MAPPING (NON-DIGITAL)

Bausch & Lomb S1595 Stereo Interpretation System (3)
4X Mirror Stereoscope (1)
Parallax Bar (1)

IMAGE INTERPRETATION, VIEWING AND MAPPING (DIGITAL)

DIGITIZING, PLOTTING AND GRAPHICS

OTHER COMPUTER PROCESSING

OTHER

Complete facility equipped for the compilation, drafting, and edit of topographic maps, special products, and manual aerial photo interpretation (1)

PRODUCTS AND SERVICES PROVIDED

IMAGE PRODUCTS

(c) B&W Neg. Transparencies, Pos. Transparencies, Contact Prints, and Enlarged Prints; Photo Mosaics, Photo Atlas Sheets; Halftone Image Prints; Digital Magnetic Tape;
(a) Color, Color Infrared, and Color Composite Neg. Transparencies, Pos. Transparencies, Contact Prints, and Enlarged Prints
ENHANCED AND CORRECTED IMAGERY

(c) Photo Fasudo Stereo

PHOTOGRAMMETRIC PRODUCTS

(c) Topographic Maps; Engineering Cross Sections; Stockpile Measurements; Earthwork Measurements; Digital Data Bases; Planimetric Maps; Photo-Contour Maps; Plan and Profile Sheets; Volumetric Calculations; Distance & Angle Measurements

INTERPRETED, THEMATIC PRODUCTS

(c) Color Thematic Maps; Land Use Maps; Vegetation/Forestry Maps; Utility Maps; Acreage Tabulations; Geocoded Data Bases; Thematic Map Overlays; Transportation Maps; Soils Maps; Tax Maps; Tax Maps; Digital Magnetic Tapes; Wetland Inventories

PROJECT PLANNING AND SUPPORT SERVICES

Problem Definition; Feasibility Analysis; Selection of Existing Imagery; Ground Control Survey; Map Digitizing; Data Base Preparation; Sensor Selection/Evaluation; Sampling Strategy Design; Ancillary Data Collection; Ground Truth Survey; Data Management

AERIAL SURVEY

(s)Low Altitude Photography

IMAGE PROCESSING, INTERPRETATION AND ANALYSIS

Photographic Laboratory Processing; Manual Image Interpretation

PHOTOGRAMMETRIC ENGINEERING

Aero triangulation; Planimetric Mapping; Stereo Digitizing; Cross-Sectioning; Stereo-compilation; Topographic Mapping-Small Scale; Topographic Mapping-Large Scale; Volumetric Calculation

REPRODUCTION

Drafting & Scribing; (s) Cartographic Reproduction

OTHER SERVICES

Remote Sensing Research; Remote Sensing Training; Statistical Modeling; Software Design/Development; Consultant Services
NAME: TREMBLY ASSOCIATES

ADDRESS(ES) & CONTACT(S)
119 Quincy N.E.
Albuquerque, New Mexico 87108
(505) 266-8616
Rod Chambers

2124 S. Birch Street
Denver, Colorado 80222
(303) 759-1195
Dave Dykehouse

835 W. 22nd Street, Suite A
Tempe, Arizona 85282
(602) 967-2058
Dave Clarkson

Additional Locations:
Salt Lake City, Utah (801) 486-5292
Las Vegas, Nevada (702) 739-6816

YEARS IN BUSINESS: 42
PROJECTS COMPLETED: hundreds
REGION SERVED:

TYPES OF REMOTE SENSING TECHNOLOGIES:

PERSONNEL & SKILLS REPRESENTED:
Management (1); Professional (1); Technical (2)

STATEMENT OF CAPABILITIES:
Trembly Associates is an electronic manufacturer representative that sells electronic
and electro-optic equipment to government agencies and private businesses—sales
personnel have many years experience in thermal sensing, infrared surveys, and
equipment and systems usage with expert back-up from engineers and sales personnel
in those fields.

PRODUCTS AND SERVICES PROVIDED:

IMAGE PRODUCTS
Single line Thermal Scanners; Non-contact Thermometers; (c) Thermograms

ENHANCED AND CORRECTED IMAGERY

PHOTOGRAphic PRODUCTS

INTERPRETED, THEMATIC PRODUCTS

PROJECT PLANNING AND SUPPORT SERVICES
Ground Truth Survey

AERIAL SURVEY
Thermal Infrared

IMAGE PROCESSING, INTERPRETATION AND ANALYSIS

PHOTOGRAphic ENGINEERING

REPRODUCTION

OTHER SERVICES
Remote Sensing Research; Turnkey Systems Sales-Leasing/Service; Hardware Design/
Development; Software Design/Development; Equipment Sales-Leasing/Service; Soft-
ware Sales/Leasing
REMOTE SENSING EQUIPMENT/SYSTEMS PROVIDED

REMOTE SENSORS SYSTEMS
Sell: Multispectral Cameras; Multispectral Scanners

VIEWING EQUIPMENT

PHOTOGRAMMETRIC EQUIPMENT

DIGITAL IMAGE PROCESSING EQUIPMENT

SOFTWARE

INTEGRATED SYSTEMS
Sell: Radiometric Correction

OTHER EQUIPMENT
Sell: Spectrometers; Measurement Equipment

NAME: TRW DEFENSE AND SPACE SYSTEMS GROUP

ADDRESS(ES) & CONTACT(S)
One Space Park
Redondo Beach, California 90278
(213) 535-4321
David M. McKinnon, Donald C. Brabston

YEARS IN BUSINESS: 20
PROJECTS COMPLETED: 28
REGION SERVED: U.S. & Int'l.

TOTAL APPLICABLE EMPLOYEES: 16

TYPES OF REMOTE SENSING TECHNOLOGIES:
Low Altitude Aerial Photo; Med Altitude Aerial Photo; High Altitude Aerial Photo; Landsat MSS; Landsat RBV; Digital Image Interpretations Landsat MSS

PERSONNEL & SKILLS REPRESENTED:
Management (3); Professional (10); Technical (2); Other (1)
Computer Equip. Operators; Computer Programmers; Engineers (electrical); Physical Scientists

STATEMENT OF CAPABILITIES:
Remote sensing activities of TRW's Defense and Space Systems Group center on design/development of high volume, throughput, precision digital image processing systems; e.g., the TRW designed and built USGS EROS Data Center Digital Image Processing System (EDIPS), or the TRW engineered Japanese Landsat Ground Station, or the analyses, software provided to CE for NASA's Landsat-D image processing system. TRW's activities are supported by sensor data services using the facility's interactive capability; this software/firmware is for sale/lease. TRW's subsidiary, ESL, provides data services and turnkey systems (IDIMS).
FACILITIES AND SPECIAL EQUIPMENT

AIRCRAFT

CAMERAS, SCANNERS, AND OTHER REMOTE SENSORS

FIELD SURVEY EQUIPMENT

PHOTOGRAPHIC PROCESSING EQUIPMENT
Full-scale photographic laboratory for color or reproduction work

PHOTOGRAMMETRIC PROCESSING EQUIPMENT

IMAGE INTERPRETATION, VIEWING AND MAPPING (NON-DIGITAL)
254mm roll film light table

IMAGE INTERPRETATION, VIEWING AND MAPPING (DIGITAL)

DIGITIZING, PLOTTING AND GRAPHICS
Ring of 5 computer systems; (2) 512x512 color comtal displays; (1) 1-24x1024 comtal disp. (1) Evans & Sotherland picture system; (20) graphics display terminals; 636 MBbytes core and disk data storage; (1) Optronics image reader/writer; (1) optronics photo writer; (1) FPS AP 120-8 Array Processor; (7) magnetic tape drives; (7) line printers; (2) Gould OTHER COMPUTER PROCESSING: Electrostatic Plotters; (1) 30x70" X,Y Digitizer; (7) line printers; (8) Decwriter Terminals; D/A and A/D converters

OTHER

PRODUCTS AND SERVICES PROVIDED

IMAGE PRODUCTS
(c) B&W and Color Neg. and Pos. Transparencies, Contact and Enlarged Prints; Color Composite Enlarged Prints; Digital Mosaics; Halftone Image Prints; Digital Magnetic Tape

ENHANCED AND CORRECTED IMAGERY
(c) Digital: Multitemporal Composites; Contrast Enhanced; Geometric Correction; Density Slice; Change Detection; Multisensor Composites; Radiometric Correction; Image Resampling; Pseudo Stereo

PHOTOGRAMMETRIC PRODUCTS
(c) Digital Terrain Models; Digital Data Bases

INTERPRETED, THEMATIC PRODUCTS
(c) Color Thematic Maps; Digital Magnetic Tapes

PROJECT PLANNING AND SUPPORT SERVICES
Problem Definition; Feasibility Analysis; Selection of Existing Imagery; Sensor Selection/ Evaluation; Sampling Strategy Design; Gray Level Digitizing; Data Management;

AERIAL SURVEY

IMAGE PROCESSING, INTERPRETATION AND ANALYSIS
Digital Image Processing; Interactive Digital Image/Analysis/Classification; Photographic Laboratory Processing

PHOTOGRAMMETRIC ENGINEERING

REPRODUCTION

OTHER SERVICES
Remote Sensing Research; Statistical Modeling; Consultant Services; Interactive Computer Graphics; Computer Services; Turnkey Systems Sales/Leasing/Service; Hardware Design/ Development; Software Design/Development; Software Sales/Leasing
REMOTE SENSING EQUIPMENT/SYSTEMS PROVIDED

REMOTE SENSOR SYSTEMS

VIEWING EQUIPMENT

PHOTOGRAMMETRIC EQUIPMENT

DIGITAL IMAGE PROCESSING EQUIPMENT

SOFTWARE

Lease: Geometric Correction; Radiometric Correction; Sell & Lease: Image Enhancement; Multispectral Classification

INTEGRATED SYSTEMS

Sell: Geometric Correction; Radiometric Correction; Image Enhancement; Multispectral Classification

OTHER EQUIPMENT

NAME: UNIVERSITY OF ALASKA, NORTHERN REMOTE SENSING LABORATORY

ADDRESS(ES) & CONTACT(S)

Geophysical Institute
University of Alaska
Fairbanks, Alaska 99701
(907) 479-7163
John M. Miller

YEARS IN BUSINESS: 8

PROJECTS COMPLETED: over 50

TOTAL APPLICABLE EMPLOYEES: 20

TYPES OF REMOTE SENSING TECHNOLOGIES:

Low Altitude Aerial Photo; Med Altitude Aerial Photo; High Altitude Aerial Photo; Aerial Thermal Infrared Scanner; Radar; Landsat MSS; Landsat RBV; HIRM; Weather Satellite; Digital Image Interpretations; Manual Image Interpretations; Real-Time Landsat Data

PERSONNEL & SKILLS REPRESENTED:

Management (2); Professional (6); Technical (9); Other (3)

Computer Equip. Oper.; Computer Programmers; Draftsmen; Engineers (electrical); Image Processing Equip. Oper.; Photointerpreters; Photolab Technicians; Physical Scientists; Botanists: Geologists.

STATEMENT OF CAPABILITIES:

Applied remote sensing technology with special emphasis upon northern environments, including evaluation of land suitability, transportation corridors; assessment of timber, minerals, soils and rangeland; real-time surveillance of wildfires, floods, sea-ice and episodic events such as surging glaciers and volcanic activity; mapping of land cover, landforms, lineaments, bedrock, drainage and environmental hazards.
### Facilities and Special Equipment

**Aircraft**

- Exotech 100 AX-M Radiometer (1)

**Field Survey Equipment**

**Photographic Processing Equipment**

- 8x10 Color Enlarger (1);
- LogEtronics Mark IV Dodging Printer (1)

**Photogrammetric Processing Equipment**

**Image Interpretation, Viewing and Mapping (Non-Digital)**

- VP-8 Image Analyzer (1);
- 1² Color Additive (1);
- Bausch & Lomb ZTS Zoom Transfer Scope (1)

**Image Interpretation, Viewing and Mapping (Digital)**

**Digitalizing, Plotting and Graphics**

**Other Computer Processing**

- DEC VAX 11/780 (1);
- 67MB Disk Drives (3);
- La-120 Console (1);
- LP-11-VA 300 LPM Printer (1);
- TEU-77A Magnetic Tape Drives (2);
- Printronics 300 Digital Line Printer (1);
- HIS 66/40 256K Word + Computer Graphics (1);
- Tek 4663 2-Pen Plotter (1);
- Tek 4662 Pen Plotter (1);
- Tek 4006 CRT Display (1);
- Tek 4010 CRT Display (1);
- Tek 4013 CRT Display (1);
- Tek 4051 CRT Display (1);
- Tek 4631 Hard Copy Unit (1);
- Calcomp 10" Drum Plotter (1);
- Calcomp 30" Drum Plotter (1);
- Tek 2647A Intelligent Graphics Memory (1);
- Tek 9872B 4-Pen Plotter (1);
- Tek 2631G Printer Plotter (1)

**Other**

- Muirhead K-560 Facsimile Recorder (1);
- Nagra 4.2L Tape Recorder (1);
- Photo Library and Browse File (satellite and aircraft imagery of Alaska, including 30,000 accessions and 200 Landsat digital tapes)

### Image Products

- B&W Negative Transparencies, Contact Prints, and Enlarged Prints;
- Color, Color Infrared, and Color Composite Positive Transparencies, Contact Prints and Enlarged Prints; Photo Mosaics;
- B&W Positive Transparencies; Color, Color Infrared, and Color Composite Negative Transparencies

### Enhanced and Corrected Imagery

- Photo Multitemporal Composites; Change Detection; Photo & Digital: Contrast Enhanced; Densit Slic; Multisensor Composites; Digital: Multitemporal Composites; Geometric Correction; Change Detection; Radiometric Correction; Image Resampling; Pseudo 5 eeo

### Photogrammetric Products

### Interpreted, Thematic Products

- Color Thematic Maps; Land Use Maps; Vegetation/Forestry Maps; Contour Weather Maps;
- Utility Maps; Acreage Tabulation; Thematic Map Overlays; Geologic Maps; Transportation Maps; Soils Maps; Tax Maps;
- Geocoded Data Bases; Digital Magnetic Tapes

### Project Planning and Support Services

- Problem Definition; Feasibility Analysis; Selection of Existing Imagery; Data Base Preparation; Sensor Selection/Evaluation; Sampling Strategy Design; Ancillary Data Collection; Ground Truth Survey; Gray Level Digitizing; Data Management;
- Ground Control Survey; Map Digitizing; Air Support Operations

### Aerial Survey

- Low Altitude Photography; (a) Thermal Infrared; Radar; High Altitude Photography; Multi-spectral Scanner

### Image Processing, Interpretation and Analysis

- Digital Image Processing; Batch Digital Image/Analysis/Classification; Interactive Digital Image/Analysis/Classification; Photographic Laboratory Processing; Manual Image Interpretation

### Photogrammetric Engineering

### Reproduction

- Drafting & Scribing

### Other Services

- Remote Sensing Research; Remote Sensing Training; Consultant Services; Computer Services; Software Design/Development (a) Interactive Computer Graphics
NAME: UNIVERSITY OF ARIZONA

ADDRESS: UNIVERSITY OF ARIZONA
Tucson, Arizona 85721
(602) 626-4242
F.H. Slater, Chm., Committee on Remote Sensing

YEARS IN BUSINESS: over 15
PROJECTS COMPLETED: over 100
REGION SERVED: U.S. & Int'l.

TOTAL APPLICABLE EMPLOYEES: 100

TYPES OF REMOTE SENSING TECHNOLOGIES:
- Low Altitude Aerial Photo; Med Altitude Aerial Photo; High Altitude Aerial Photo;
- Aerial Multispectral Scanner; Aerial Thermal Infrared Scanner; Radar; Laser Scanner;
- Geophysical Survey; Landsat MSS; Landsat RBV; Seasat; HCM; Skylab; Weather Satellite;
- Digital Image Interpretations; Manual Image Interpretations; Digital Classification;
- Spectroradiometer; Spectrophotometer; Scanning microdensitometer

PERSONNEL & SKILLS REPRESENTED:
- Professional (20); Technical (60); Other (20)
- Cartographers; Computer Equip. Oper.; Computer Programmers; Draftsmen; Engineers
(civil, environ.); Engineers (electrical); Field Surveyors; Image Processing Equip. Oper.; Soil Scientists; Photogrammatists; Photogrammetric Equip. Oper.; Photointerpr.; Photolab Technicians; Physical Scientists; Planners; Geographers

STATEMENT OF CAPABILITIES:
The University of Arizona offers excellent facilities for support of remote sensing research. The Digital Image Analysis Laboratory contains a PDP 11/70 computer and a color interactive digital image video display. Comprehensive software is operational for image processing and classification. A CDC Cyber 175 and DEC PDP10 is available for batch and interactive processing; Several units on campus are particularly active in applications of remote sensing to state and local government agency problems. Examples include inventory and hazard mapping of Arizona surface mines, vegetation mapping of parks, rangeland resource assessment, and agricultural analysis.

FACILITIES AND SPECIAL EQUIPMENT

AIRCRAFT

CAMERAS, SCANNERS, AND OTHER REMOTE SENSORS

(10)

FIELD SURVEY EQUIPMENT

extensive

PHOTOGRAPHIC PROCESSING EQUIPMENT

complete photo lab

PHOTOGRAHMETRIC PROCESSING EQUIPMENT

IMAGE INTERPRETATION, VIEWING AND MAPPING (NON-DIGITAL)

Stereoscopes (6)
Zoom transferscopes (1)

IMAGE INTERPRETATION, VIEWING AND MAPPING (DIGITAL)

Interactive System with color display(1)

DIGITIZING, PLOTING AND GRAPHICS

Digitizers (3)

OTHER COMPUTER PROCESSING

Software

OTHER

film scanners (1)
PRODUCTS AND SERVICES PROVIDED

IMAGE PRODUCTS
(c) Digital Mosaics; Halftone Image Prints; Digital Magnetic Tapes

ENHANCED AND CORRECTED IMAGERY
(c) Digital: Multitemporal Composites; Contrast Enhanced; Geometric Correction; Density Slice; Change Detection; Multisensor Composites; Radiometric Correction; Image Resampling; Pseudo Stereo

PHOTOGRAHMETRIC PRODUCTS
(c) Digital Data Bases

INTERPRETED, THEMATIC PRODUCTS
(c) Color Thematic Maps; Land Use Maps; Vegetation/Forestry Maps; Acreage Tabulations; Thematic Map Overlays; Geologic Maps; Transportation Maps; Soil Maps; Digital Magnetic Tapes

PROJECT PLANNING AND SUPPORT SERVICES
Problem Definition; Feasibility Analysis; Selection of Existing Imagery; Ground Control Survey; Map Digitizing; Data Base Preparation; Sensor Selection/Evaluation; Sampling Strategy Design; Ancillary Data Collection; Ground Truth Survey; Gray Level Digitizing; Data Management; (a) Air Support Operations

AERIAL SURVEY
(a) Low Altitude Photography; Thermal Infrared; Radar; Geophysical; High Altitude Photography; Multispectral Scanner

IMAGE PROCESSING, INTERPRETATION AND ANALYSIS
Digital Image Processing; Batch Digital Image/Analysis/Classification; Interactive Digital Image/Analysis/Classification; Photographic Laboratory Processing; Manual Image Interpretation; (a) Photographic Laboratory Processing

PHOTOGRAHMETRIC ENGINEERING

REPRODUCTION
Drafting & Scribing; Cartographic Reproduction; Automated Drafting/Plotting; Printing; (a) Automated Drafting/Plotting; Printing

OTHER SERVICES
Remote Sensing Research; Remote Sensing Training; Statistical Modeling; Consultant Services; Interactive Computer Graphics; Computer Services; Hardware Design; Development; Software Design/Development
PRODUCTS AND SERVICES PROVIDED

**IMAGE PRODUCTS**
- B&W, Color, Color Infrared Neg. & Pos. Transparencies, Contact & Enlarged Prints;
- Photo Mosaics; Photo Atlas Sheets

**ENHANCED AND CORRECTED IMAGERY**
- Digital: Multitemporal Composites; Contrast Enhanced; Geometric Correction; Density Slice;
- Change Detection; Multisensor Composites; Radiometric Correction

**PHOTOGRAMMETRIC PRODUCTS**

**INTERPRETED, THEMATIC PRODUCTS**
- Color Thematic Maps; Land Use Maps; Vegetation/Forestry Maps; Utility Maps; Acreage Tabulations; Thematic Map Overlays; Geologic Maps; Transportation Maps; Tax Maps

**PROJECT PLANNING AND SUPPORT SERVICES**
- Problem Definition; Feasibility Analysis; Selection of Existing Imagery; Ground Control Survey; Map Digitizing; Data Base Preparation; Air Support Operations; Sensor Selection/ Evaluation; Sampling Strategy Design; Ancillary Data Collection; Ground Truth Survey;
- Gray Level Digitizing; Data Management

**AERIAL SURVEY**
- Low Altitude Photography; Thermal Infrared; High Altitude Photography; Multispectral Scanner

**IMAGE PROCESSING, INTERPRETATION AND ANALYSIS**
- Digital Image Processing; Batch Digital Image/Analysis/Classification; Photographic Laboratory Processing; Manual Image Interpretation

**PHOTOGRAMMETRIC ENGINEERING**

**REPRODUCTION**
- Drafting & Scribing; Cartographic Reproduction; Automated Drafting/Plotting; Printing

**OTHER SERVICES**
- Remote Sensing Research; Remote Sensing Training; Statistical Modeling; Consultant Services; Interactive Computer Graphics; Computer Services; Software Design/Development

**FACILITIES AND SPECIAL EQUIPMENT**

**AIRCRAFT**
- (SPECIFIC TYPES NOT INDICATED)

**CAMERAS, SCANNERS, AND OTHER REMOTE SENSORS**
- (4)

**FIELD SURVEY EQUIPMENT**
- (8)

**PHOTOGRAPHIC PROCESSING EQUIPMENT**
- (3)

**PHOTOGRAMMETRIC PROCESSING EQUIPMENT**

**IMAGE INTERPRETATION, VIEWING AND MAPPING (NON-DIGITAL)**
- (3)

**IMAGE INTERPRETATION, VIEWING AND MAPPING (DIGITAL)**
- (3)

**DIGITIZING, PLOTTING AND GRAPHICS**
- (1)

**OTHER COMPUTER PROCESSING**
- (2)

**OTHER**

NAME: UNIVERSITY OF FLORIDA, REMOTE SENSING APPLICATIONS LABORATORY

ADDRESS(ES) & CONTACT(S)
Dept. of Civil Engineering
346 Weil Hall
University of Florida
Gainesville, Florida 32611
(904) 392-1436 or (904) 392-6590
Janet Degner or Byron Ruth

YEARS IN BUSINESS: 5
PROJECTS COMPLETED: 8
REGION SERVED: IV_Florida only
TYPES OF REMOTE SENSING TECHNOLOGIES:
Low Altitude Aerial Photo; Med Altitude Aerial Photo; High Altitude Aerial Photo;
Aerial Multispectral Scanner; Landsat MSS; Landsat RBV; Seasat

PERSONNEL & SKILLS REPRESENTED:
Professional (2); Technical (1)
Engineers (civil, environ.)

STATEMENT OF CAPABILITIES:
Remote Sensing Applications Laboratory's purpose is to assist and involve government agencies in solving geological or engineering problems and other physical and technical problems. Analysis includes Landsat imagery, aerial photography, and other scientific data. The laboratory is applications-oriented.

FACILITIES AND SPECIAL EQUIPMENT
AIRCRAFT
CESSNA 210 (1)
CAMERAS, SCANNERS, AND OTHER REMOTE SENSORS
FIELD SURVEY EQUIPMENT
available through U of Florida Survey Program
PHOTOGRAPHIC PROCESSING EQUIPMENT
Available through U of Florida
PHOTOMETRIC PROCESSING EQUIPMENT
IMAGE INTERPRETATION, VIEWING AND MAPPING (NON-DIGITAL)
Zoom Transfer scopes, stereoscopes, etc.
Stereo ZTS
IMAGE INTERPRETATION, VIEWING AND MAPPING (DIGITAL)
Available through Kennedy Space Center
DIGITIZING, PLOTTING AND GRAPhICS
Available through U of Florida
OTHER COMPUTER PROCESSING
University computer system
OTHER
University computer system
UNIVERSITY OF FLORIDA, REMOTE SENSING APPLICATIONS LABORATORY

PRODUCTS AND SERVICES PROVIDED

IMAGE PRODUCTS

ENHANCED AND CORRECTED IMAGERY

PHOTOGRAMMETRIC PRODUCTS

INTERPRETED, THEMATIC PRODUCTS
(c) Color Thematic Maps; Land Use Maps; Vegetation/Forestry Maps; Acreage Tabulations; Thematic Map Overlays; (d) Color Thematic Maps; Vegetation/Forestry Maps; Geologic Maps

PROJECT PLANNING AND SUPPORT SERVICES
Problem Definition; Feasibility Analysis; Map Digitizing; Database Preparation; Sampling Strategy Design; Ground Truth Survey; Gray Level Digitizing; (e) Feasibility Analysis; Map Digitizing; Database Preparation; Air Support Operations; Sampling Strategy Design; Ground Truth Survey; Gray Level Digitizing

AERIAL SURVEY

IMAGE PROCESSING, INTERPRETATION AND ANALYSIS
Digital Image Processing; Batch Digital Image/Analysis/Classification; Interactive Digital Image/Analysis/Classification; Manual Image Interpretation; (f) Digital Image Processing; Batch Digital Image/Analysis/Classification; Interactive Digital Image/Analysis/Classification; Photographic Laboratory Processing; Manual Image Interpretation

PHOTOGRAMMETRIC ENGINEERING

REPRODUCTION
Drafting & Scribing; (g) Cartographic Reproduction; Drafting & Scribing; Automated Drafting/Plotting; Printing

OTHER SERVICES
Remote Sensing Research; (h) Remote Sensing Research

NAME: UNIVERSITY OF KANSAS APPLIED REMOTE SENSING PROGRAM (KARS)

ADDRESS(ES) & CONTACT(S)
2291 Irving Hill Road
Lawrence, Kansas 66045
(913) 864-4775
Dr. Edward A. Martinko

YEARS IN BUSINESS: 8
PROJECTS COMPLETED: 41
REGION SERVED: US, Int'l

TOTAL APPLICABLE EMPLOYEES: 20

TYPES OF REMOTE SENSING TECHNOLOGIES:
Low Altitude Aerial Photo; Med Altitude Aerial Photo; High Altitude Aerial Photo; Aerial Thermal Infrared Scanner; Radar; Landsat MSS; Landsat RBV; SeaSat; Skylab; Digital Image Interpretations; Manual Image Interpretations

PERSONNEL & SKILLS REPRESENTED:
Cartographers (3); Computer Equip Operators (1); Computer Programmers (1); Draftsmen (1); Engineers Mech. (1); Photointerpreters (4); Photolab Technicians (1); Geographers (4); Others: Biologists/Ecologists (4)

STATEMENT OF CAPABILITIES:
The KARS Program conducts applied remote sensing research and provides a complete range of services including remote sensing data analysis, field investigations, customized mapping, geocoding, and statistical analysis.

Projects are designed to aid public agencies and other organizations in using remote sensing technology in decision-making, policy formulation, and in meeting other needs and responsibilities.

Major program areas include land use/land cover inventory and mapping, irrigated lands inventories, wildlife habitat evaluation, strip mined lands assessment, crop and rangeland evaluation, integrated natural resources inventories, geographic information system development and utilization, thematic mapping, and technology transfer/remote sensing education.
FACILITIES AND SPECIAL EQUIPMENT

AIRCRAFT:
Cessna 180 Skywagon with factory installed camera bay (1)

CAMERAS, SCANNERS, AND OTHER REMOTE SENSING:
500 EL/M 70mm-hasselblad Multispectral Camera Array (4)
Fairchild CA-8 9 inch Catographic Camera (1)

PHOTOGRAPHIC PROCESSING EQUIPMENT:
Complete photo lab including: Agfa - Gevaert PMT Processor; Agfa - Gevaert Process Camera; Omega Enlarger; Polaroid MP-3 Copy Camera/Nikon 35mm Camera; Log Etronic Contact Printer; Peco Print Dryer; Nu-Arc 30" x 40" Flip-Top Plate Maker; Nu-Arc 20" x 24" Horizontal Camera; PMT Processor; IBM Composer

IMAGE INTERPRETATION/VIEWING/MAPPING (non-digital):
Bausch and Lomb Zoom Transfer Scope (1); Itex Color Additive Viewer (1); Variscan Rear Projection Viewer/Enlarger (1); Richards CFL-918 LM Light Tables (2); Richards CFL-940 NCE Light Table with Bausch and Lomb Zoom 240 Stereoscope (1); Richards CFL-940 NC Light Tables with Bausch and Lomb Zoom 240 Stereoscopes (2); Saltzman Projector (Reducer/Enlarger) (1); MacBeth Color Spot Densitometer (1); Interpretation Systems Incorporated (ISI) VP-8 Color Video Image Analyzer (1); Old Def Scanning Stereoscope (1); Bausch and Lomb Multipower Roll Film Stereoscopes, scales, grids, parallax measurement, and other manual image interpretation equipment

IMAGE INTERPRETATION/VIEWING/MAPPING (digital):
Intertele SuperBrain Intelligent Terminal interfaced to University of Kansas Honeywell Level 66 Computer System (KU Shared Mass Storage System); KARS/LANDSAT image enhancement and multispectral classification software; Interpretation Systems Incorporated (ISI) VDI Image Analyzer (image enhancements, digital image analysis);

DIGITIZING/Plotting/Graphics:
Tektronix 4051 DeskTop Graphic Computer with plotter and digitizer; Tektronix 4052 DeskTop Graphic Computer with plotter and floppy disc unit; Hewlett-Packard 7221A Plotter Calcomput 1038 Plotter; ALTEK AWCOSM Advanced Micro-Processor Digitizing System (1)

OTHER COMPUTER PROCESSING:
Computer software (e.g., STMAP, SURFACE II, SPSS/BIOD) available through the University of Kansas

OTHER EQUIPMENT:
Complete graphic arts darkroom; Berkey Register Punch; Complete range of cartographic drafting and negative scribing equipment
UNIVERSITY OF KANSAS APPLIED REMOTE SENSING PROGRAM
(KARS)

PRODUCTS AND SERVICES PROVIDED

IMAGE PRODUCTS
Black & White Negative Transparencies, Positive Transparencies, Contact
Prints, Enlarged Prints;

ENHANCED AND CORRECTED IMAGERY

PHOTOGRAMMETRIC PRODUCTS

INTERPRETED, THEMATIC PRODUCTS
(c) Color Thematic Maps; Land Use Maps; Vegetation/Forestry Maps; Acreage
Tabulations; Geocoded Data Bases; Thematic Map Overlays

PROJECT PLANNING AND SUPPORT SERVICES
Problem Definition: Feasibility Analysis; Selection of Existing Imagery;
Map Digitizing Data Base Preparation; (a) Air Support Operations

AERIAL SURVEY
Low altitude photography multispectral in support of KARS Research

IMAGE PROCESSING, INTERPRETATION AND ANALYSIS
Digital Image Processing; Batch Digital Image/Analysis/Classification;
Interactive Digital Image/Analysis/Classification; Manual Image Interpretation

PHOTOGRAMMETRIC ENGINEERING
Planimetric Mapping

REPRODUCTION
Drafting & Scribing; Cartographic Reproduction; Automated Drafting/Plotting;
(a) Printing

OTHER SERVICES
Remote Sensing Research; Remote Sensing Training; Statistical Modeling; Consultant
Services; Interactive Computer Graphics

NAME: UNIVERSITY OF NEW MEXICO, TECHNOLOGY APPLICATIONS CENTER

ADDRESS(ES) & CONTACT(S)
University of New Mexico
Albuquerque, New Mexico 87131
(505) 277-3622
Michael H. Inglis

YEARS IN BUSINESS: 10
PROJECTS COMPLETED: 65
REGION SERVED: U.S. & Int'l.

TOTAL APPLICABLE EMPLOYEES: 8

TYPES OF REMOTE SENSING TECHNOLOGIES:
Low Altitude Aerial Photo; Med Altitude Aerial Photo; High Altitude Aerial Photo;
Aerial Multispectral Scanner; Aerial Thermal Infrared Scanner; Landsat MSS; LandsatENV;
Skylab; Digital Image Interpretations; Manual Image Interpretations

PERSONNEL & SKILLS REPRESENTED:
Management (2); Professional (3); Technical (3);
Cartographers (1); Computer Equip. Oper. (2); Computer Programmers (1); Image
Processing Equip. Oper. (1); Photointerpreters (3)

STATEMENT OF CAPABILITIES:
The Technology Application Center Remote Sensing-Natural Resource Division's primary
goal is to lend assistance to industry and government in a variety of ways through
skilled application of remote sensing technology. We have experience in a number
of natural resource areas including water resources, geology, vegetation/habitat mapping,
computer processing of Landsat and scanner data, and digitizing. We also have vast
experience in conducting remote sensing workshops on remote sensing fundamentals
as well as in several of the natural science disciplines.
FACILITIES AND SPECIAL EQUIPMENT

AIRCRAFT

CAMERAS, SCANNERS, AND OTHER REMOTE SENSORS

FIELD SURVEY EQUIPMENT

HANDHELD THERMAL SENSORS (2)

PHOTOGRAPHIC PROCESSING EQUIPMENT

IMAGE INTERPRETATION, VIEWING AND MAPPING

Zoom Transfer Scope (1)
Dietgen Mirror Stereoscope (1)

IMAGE INTERPRETATION, VIEWING AND MAPPING

Printronix Impact Line Printer (1)

DIGITIZING, PLOTTING AND GRAPHICS

Conrac CRT (1)
Summagraphics Digitizers 36"x48" (1)
Grinnell CRT Interface (1)
DECewriter II (1)
VT-100 Terminal (2)

OTHER

ADM Terminal (1)
Minolta Microfiche Reader-Printer (1)
Texas Instruments Silent-700 Terminal (1)
Numonics Electronic Calculator and Area Planimeter (1)

PRODUCTS AND SERVICES PROVIDED

IMAGE PRODUCTS

B&W, Color, Color Infrared, and Color Composite Negative Transparencies, Color Transparencies, Contact Prints, and Enlarged Prints; Photo Mosaics, Photo Atlas Sheets;
(c) Halftone Image Prints; Digital Magnetic Tape; (a) Analog Magnetic Tape; Thermograms; Digital Mosaics

PHOTOGRAMMETRIC PRODUCTS

(c) Photo: Multitemporal Composites; Photo&Digital: Contrast Enhanced; Change Detection; Digital: Radiometric Correction; Image Resampling; (a) Digital: Multitemporal Composites; Photo & Digital: Density Slice; Multisensor Composites; Radiometric Correction; Pseudo Stereo

INTERPRETED, THEMATIC PRODUCTS

(c) Color Thematic Maps; Land Use Maps; Vegetation/Forestry Maps; Utility Maps; Acreage Tabulations; Geocoded Data Bases; Thematic Map Overlays; Digital Magnetic Tapes;
(a) Contour Weather Maps; Geologic Maps; Transportation Maps; Soil Maps; Tax Maps

PROJECT PLANNING AND SUPPORT SERVICES

Problem Definition; Feasibility Analysis; Selection of Existing Imagery; Map Digitizing;
Data Base Preparation; Sensor Selection/Evaluation; Sampling Strategy Design; Ancillary Data Collection; Ground Truth Survey; Data Management; (a) Ground Control Survey; Gray Level Digitizing; Air Support Operations

AERIAL SURVEY

(a) Low Altitude Photography; Thermal Infrared; Radar; Geophysical; High Altitude Photography; Multispectral Scanner

IMAGE PROCESSING, INTERPRETATION AND ANALYSIS

Digital Image Processing; Interactive Digital Image/Analysis/Classification; Manual Image Interpretation; (a) Photographic Laboratory Processing

PHOTOGRAMMETRIC ENGINEERING

(a) Areal triangulation; Orthophotomapping; Planimetric Mapping; Stereo Digitizing;
Cross-Sectioning; Stereocompilation; Topographic Mapping-Small Scale; Topographic Mapping-
Large Scale; Volumetric Calculation

REPRODUCTION

Drafting & Scribing; Cartographic Reproduction; Printing; (a) Automated Drafting/Plotting

OTHER SERVICES

Remote Sensing Research; Remote Sensing Training; Consultant Services; Interactive Computer Graphics; Computer Services; Software Design/Development; (a) Statistical Modeling
NAME: UNIVERSITY OF NEBRASKA, REMOTE SENSING APPLICATIONS LABORATORY

ADDRESS(ES) & CONTACT(S)
University of Nebraska at Omaha
Omaha, Nebraska 68182
(402) 554-2725
Dr. Donald Rundquist
Mr. Scott Samsen

YEARS IN BUSINESS: 6
PROJECTS COMPLETED: 12
REGION SERVED: U.S. & Int'l.

TYPES OF REMOTE SENSING TECHNOLOGIES:
Low Altitude Aerial Photo; High Altitude Aerial Photo;
Aerial Thermal Infrared Scanner; Landsat MSS; Landsat RBV; HCM; Skylab; Digital
Image Interpretations; Manual Image Interpretations

PERSONNEL & SKILLS REPRESENTED:
Management (3); Professional (6); Technical (2); Other (6)
Cartographers; Computer Equip. Oper.; Computer Programmers; Engineers (electrical);
Soil Scientists; Social Scientists; Photointerpreters; Photolab Technicians; Physical
Scientists; Planners; Geographers

STATEMENT OF CAPABILITIES:
RSAL has expertise and capabilities appropriate for general image analysis, both
visual and digital. Our system experience lies in two principal areas; Landsat
digital analysis and interpretation of CIR imagery. Projects have included several
relating to Wetland research. Others have addressed land use classification, glacier
inventory, vegetative mapping, archaeology, urban analysis, and environmental
impacts; worldwide.

FACILITIES AND SPECIAL EQUIPMENT

AIRCRAFT

CAMERAS, SCANNERS, AND OTHER REMOTE SENSORS

FIELD SURVEY EQUIPMENT

PHOTOGRAPHIC PROCESSING EQUIPMENT
Vivitar VI Color Enlarger
Simon-Omka Enlarger
Pull Photo Lab facilities

PHOTOMGRAMMETRIC PROCESSING EQUIPMENT

IMAGE INTERPRETATION, VIEWING AND MAPPING (NON-DIGITAL)
3 BAE Z72 (stereo, vertical & horizontal)
Reference Projector (1)
Stereo Interp. System (4)

IMAGE INTERPRETATION, VIEWING AND MAPPING (DIGITAL)
Calcomp Plotter (1)
Gould Electrostatic Plotter (1)
Compucolor II Microprocessor (1)

DIGITIZING, PLOTTING AND GRAPHICS
Numonics 1224 Digitizer/Planimeter (1)

OTHER COMPUTER PROCESSING
DEC Writer LA-36

OTHER
Spatial Data Density Slicer (1)
Joyce-Loebel Scanning Microdensitometer (1)
Macbeth Point Densitometer (1)

RCA CRTs (25)
IBM 370-158 (2)
CDC CYBER -172 (1)
UNIVERSITY OF NEBRASKA, REMOTE SENSING APPLICATIONS LABORATORY

PRODUCTS AND SERVICES PROVIDED

IMAGE PRODUCTS
(c) B&W and Color Positive Transparencies, Contact Prints, and Enlarged Prints; Photo Mosaics; Digital Mosaics; Halftone Image Prints; Digital Magnetic Tapes

ENHANCED AND CORRECTED IMAGERY
(c) Digital: Contrast Enhanced; Geometric Correction; Radiometric Correction; Image Resampling; Photo & Digital: Multitemporal Composites; Density Slice; Change Detection

PHOTOGRAMMETRIC PRODUCTS

INTERPRETED, THEMATIC PRODUCTS
(c) Color Thematic Maps; Land Use Maps; Vegetation/Forestry Maps; Acreage Tabulations; Geocoded Data Bases; Thematic Map Overlays; Soils Maps; Digital Magnetic Tapes; Wetland Mapping

PROJECT PLANNING AND SUPPORT SERVICES
Problem Definition; Feasibility Analysis; Selection of Existing Imagery; Ground Control Survey; Map Digitizing; Data Base Preparation; Air Support Operations; Sensor Selection/Evaluation; Sampling Strategy Design; Ancillary Data Collection; Ground Truth Survey; Gray Level Digitizing; Data Management

AERIAL SURVEY
(a) Low Altitude Photography; Thermal Infrared; High Altitude Photography

IMAGE PROCESSING, INTERPRETATION AND ANALYSIS
Digital Image Processing; Batch Digital Image/Analysis/Classification; Interactive Digital Image/Analysis/Classification; Photographic Laboratory Processing; Manual Image Interpretation

PHOTOGRAMMETRIC ENGINEERING

REPRODUCTION
Drafting & Scribing; Cartographic Reproduction; Automated Drafting/Plotting; Printing

OTHER SERVICES
Remote Sensing Research; Remote Sensing Training; Statistical Modeling; Consultant Services; Software Design/Development; Software Sales/Leasing

REMOTE SENSING EQUIPMENT/SYSTEMS PROVIDED

REMOTE SENSOR SYSTEMS

VIEWING EQUIPMENT

PHOTOGRAMMETRIC EQUIPMENT

DIGITAL IMAGE PROCESSING EQUIPMENT

SOFTWARE
Sell: Image Enhancement; Multispectral Classification

INTEGRATED SYSTEMS

OTHER EQUIPMENT
NAME: UNIVERSITY OF SOUTH CAROLINA COMPUTER GRAPHICS

ADDRESS(ES) & CONTACT(S)
2712 Middleburg Dr., Suite 104
Columbia, South Carolina 29204
(803) 777-7236
Gerald R. Minick

YEARS IN BUSINESS: 3
PROJECTS COMPLETED: 28
REGION SERVED: III, IV

TYPES OF REMOTE SENSING TECHNOLOGIES:
Low Altitude Aerial Photo; Med Altitude Aerial Photo; High Altitude Aerial Photo; Landsat MSS; Digital Image Interpretation; Manual Image Interpretation

PERSONNEL & SKILLS REPRESENTED:
Management (2); Professional (8); Technical (4)
Cartographers (4); Computer Equip. Oper. (2); Forester (1); Mathematician (1); Physicist (3); Programmer (1); Secretary (1); Business Relations (1)

STADMINENT OF CAPABILITIES:
Management of the South Carolina Geographical Information System

FACILITIES AND SPECIAL EQUIPMENT

AIRCRAFT
Cessna 206 (1)

CAMERAS, SCANNERS, AND OTHER REMOTE SENSORS
Fairchild T-R (1)

FIELD SURVEY EQUIPMENT

PHOTOMIC DOCUMENT PROCESSING EQUIPMENT

IMAGE INTERPRETATION, VIEWING AND MAPPING (NON-DIGITAL)
Light tables (3)

IMAGE INTERPRETATION, VIEWING AND MAPPING (DIGITAL)
COMTRAL Vision 1/20 (1)
Data General Eclipse S/230 (1)

DIGITIZING, PLOTTING AND GRAPHICS
Bendix Digitizing Stations (2)
Kongsburg Flatbed Plotter (1)
Goud Electrostatic Plotter (2)
Textronic (2)

OTHER COMPUTER PROCESSING
AMDAC V6 Main Frame (1)

OTHER
UNIVERSITY OF TENNESSEE SPACE INSTITUTE

ADDRESSES & CONTACTS
Tullahoma, Tennessee 37388
(615) 155-0631
Dr. F. Shahrokhi

YEARS IN BUSINESS: 10
PROJECTS COMPLETED: 35
REGION SERVED: U.S. & Int'l.

TYPES OF REMOTE SENSING TECHNOLOGIES:
Low Altitude Aerial Photo; Med Altitude Aerial Photo; High Altitude Aerial Photo; Landsat MSS; Landsat ETM; Skylab; Digital Image Interpretations; Analog Image Interpretations

PERSONNEL & SKILLS REPRESENTED:
Management (1); Professional (4); Technical (1)
Engineers (civil, environ.) (3); Photolab Technicians (1); Pilots (1); Geographers

STATEMENT OF CAPABILITIES:
Graduate academic program in physics, mathematics, or engineering with remote sensing emphasis. Special short courses. Annual Conference on Remote Sensing of Earth Resources; 8th volume of proceedings recently published. Laboratory equipped for photogrammetric, analog, and digital analysis of data; and for cartography. Aircraft equipped for multispectral photography.

PRODUCTS AND SERVICES PROVIDED

IMAGE PRODUCTS
BW, Color, Color Composite Neg. & Pos. Transparencies, Contact & Enlarged Prints; Halftone Image Prints; Digital Magnetic Tape; (c) Digital Mosaics

ENHANCED AND CORRECTED IMAGERY
Digital Multitemporal Composites; Photo & Digital: Contrast Enhanced; Geometric Correct; Density Slice; Radiometric Correction; Image Resampling; (c) Change Detection

PHOTOGRAHAMTRIC PRODUCTS
Engineering Cross Sections; Stockpile Measurements; Earthwork Measurements; Digital Terrain Models; Digital Data Bases; Plan and Profile Sheets; Volumetric Calculations; Distance & Angle Measurements; (c) Modeling from multivariable digital data base

INTERPRETED, THEMATIC PRODUCTS
Color Thematic Maps; Land Use Maps; Vegetation/Forestry Maps; Contour Weather Maps; Util. Maps; Acreage Tabulations; Geocoded Data Bases; Thematic Map Overlays; Geologic Maps; Transportation Maps; Soils Maps; Tax Maps; Digital Magnetic Tapes

PROJECT PLANNING AND SUPPORT SERVICES
Problem Definition; Feasibility Analysis; Selection of Existing Imagery; Ground Control Survey; Map Digitizing; Data Base Preparation; Sensor Selection/Evaluation; Sampling Strategy Design; Ancillary Data Collection; Ground Truth Survey; Data Management; (s) Air Support System

AERIAL SURVEY
(s) Low Altitude Photography

IMAGE PROCESSING, INTERPRETATION AND ANALYSIS
Digital Image Processing; Batch Digital Image/Analysis/Classification; Photographic Laboratory Processing; Manual Image Interpretation

PHOTOGRAHAMTRIC ENGINEERING

REPRODUCTION
Drafting & Scribing; Cartographic Reproduction; Automated Drafting/Plotting; (s) Printing

OTHER SERVICES
Remote Sensing Research; Remote Sensing Training; Statistical Modeling; Interactive Computer Graphics; Computer Services; Software Design/Development; Software Sales/Leasing
AIRCRAFT
- Single-engine Otter (1)

CAMERAS, SCANNERS, AND OTHER REMOTE SENSORS
- Multispectral Camera (1)
- 70mm camera (1)

FIELD SURVEY EQUIPMENT

PHOTOGRAPHIC PROCESSING EQUIPMENT
- Darkroom with equipment for black & white processing (1)

PHOTOGRAHMETRIC PROCESSING EQUIPMENT
- Optronics photowrite (1)

IMAGE INTERPRETATION, VIEWING AND MAPPING (NON-DIGITAL)
- Color Additive Projector (1)
- Zoom Transfer Scopes (2)
- Stereoscopes (4)

IMAGE INTERPRETATION, VIEWING AND MAPPING (DIGITAL)
- Cal-Data I computer (1)

DIGITIZING, FLOTATING AND GRAPHICS
- Optronics photoscan (1)
- Versatech printer (1)

OTHER COMPUTER PROCESSING
- ISI Analog Analysis System (1)

OTHER
- Dicomed quick-look tape drive and display (1)

IMAGE PRODUCTS
- (c) Photo Mosaics; Maps; Digital Magnetic Tape

ENHANCED AND CORRECTED IMAGERY
- Density Slice

PHOTOGRAHMETRIC PRODUCTS
- (c) Planimetric Maps

INTERPRETED, THEMATIC PRODUCTS
- (c) Color Thematic Maps; Land Use Maps; Vegetation/Forestry Maps; Acreage Tabulations; Thematic Map Overlays; Geologic Maps; Transportation Maps; Digital Magnetic Tapes

PROJECT PLANNING AND SUPPORT SERVICES
- Problem Definition; Feasibility Analysis; Selection of Existing Imagery; Air Support Operations; Sensor Selection/Evaluation; Sampling Strategy Design; Ancillary Data Collection; Ground Truth Survey; Gray Level Digitizing; Data Management; (s) Air Support Operations

AERIAL SURVEY
- Low Altitude Photography; (s) Thermal Infrared; Multispectral Scanner

IMAGE PROCESSING, INTERPRETATION AND ANALYSIS
- Digital Image Processing; Interactive Digital Image/Analysis/Classification; Photographic Laboratory Processing; Manual Image Interpretation

PHOTOGRAHMETRIC ENGINEERING

REPRODUCTION
- Drafting & Scrib;ing; (s) Cartographic Reproduction; Printing

OTHER SERVICES
- Remote Sensing Research; Remote Sensing Training; Statistical Modeling; Consultant Services; Interactive Computer Graphics; Software Design/Development
NAME: UNIV. OF WASHINGTON, DEPT. OF CIVIL ENGINEERING

ADDRESS(ES) & CONTACT(S)
121 More Hall (FX-10)
Seattle, Washington 98195
(206) 543-2684

YEARS IN BUSINESS: 20
PROJECTS COMPLETED: 20
REGION SERVED: U.S.

TECHNOLOGIES:
Low Altitude Aerial Photo; Aerial Multispectral Scanner; Aerial Thermal Infr.Scanner;
Landsat MSS; Manual Image Interpretations; Terrestrial Systems

PERSONNEL & SKILLS REPRESENTED:
Professional (6);
Cartographers; Engineers (civil, environ.); Field Surveyors; Photogrammatists;
Photointerpreters; Planners

STATEMENT OF CAPABILITIES:
Consultants and researchers in photogrammetry and remote sensing with emphasis
on multi-spectral and thermal imagery including analysis and interpretation and
aerial and terrestrial photogrammetric mapping for non-routine projects with emphasis
on deformation studies and including close range photogrammetric applications.

FACILITIES AND SPECIAL EQUIPMENT

AIRCRAFT
Available by subcontract

CAMERAS, SCANNERS, AND OTHER REMOTE SENSORS
KE60; TAF; Hasselblads; I'S; HRB Singer Anlas 14 (9)

FIELD SURVEY EQUIPMENT
T-3/DRM-3 T-2/Th-2/DRM-2 T-1/DKH (20)
HP 3810 A (1)
Levels (6)

PHOTOCOPYING EQUIPMENT
Available on campus

PHOTOMATIC PROCESSING EQUIPMENT
Balplex, Kelsh, Multiplex Systems (5)
APC (1)
Comparator Zeiss 1818 (1)

IMAGE INTERPRETATION, VIEWING AND MAPPING (NON-DIGITAL)
I'S(1)
Usual Delf Stereoscopes, etc. (6)

IMAGE INTERPRETATION, VIEWING AND MAPPING (DIGITAL)
APC

DIGITIZING, PLOTTING AND GRAPHICS
Available on campus

OTHER COMPUTER PROCESSING
Complete Computer & Library
Cartographic Systems in Geography
planning facilities in Urban Planning
PRODUCTS AND SERVICES PROVIDED

IMAGE PRODUCTS
(a) B&W, Color, Color Infrared, & Color Composite Neg. & Pos. Transparencies, Contact and Enlarged Prints; Photo Atlas Sheets; (c) Photo Mosaics; Thermograms

ENHANCED AND CORRECTED IMAGERY

PHOTOGRAMMETRIC PRODUCTS
(c) Topographic Maps; Engineering Cross Sections; Stockpile Measurements; Earthwork Measurements; Digital Terrain Models; Digital Data Bases; Planimetric Maps; Plan & Profile Sheets; Volumetric Calculations; Distance & Angle Measurements; (a) Orthophotos

INTERPRETED, THEMATIC PRODUCTS
(c) Land Use Maps; Vegetation/Forestry Maps; Utility Maps; Acreage Tabulations; Geocoded Data Bases; Thematic Map Overlays; Transportation Maps; Soils Maps

PROJECT PLANNING AND SUPPORT SERVICES
Problem Definition; Feasibility Analysis; Selection of Existing Imagery; Ground Control Survey; Map Digitizing; Data Base Preparation; Sensor Selection/Evaluation; Sampling Strategy Design; Ancillary Data Collection; Ground Truth Survey; Data Management; (a) Gray Level Digitizing

AERIAL SURVEY
(a) Low Altitude Photography; Thermal Infrared

IMAGE PROCESSING, INTERPRETATION AND ANALYSIS
Batch Digital Image/Analysis/Classification; Manual Image Interpretation; (a) Photographic Laboratory Processing

PHOTOGRAMMETRIC ENGINEERING
Aerotriangulation; Planimetric Mapping; Cross-Sectioning; Stereocompilation; Topographic Mapping-Small Scale; Topographic Mapping-Large Scale; Volumetric Calculation; (a) Orthophotomapping; Stereo Digitizing

REPRODUCTION
Drafting & Scribing; Cartographic Reproduction

OTHER SERVICES
Remote Sensing Research; Remote Sensing Training; Statistical Modeling; Consultant Services; Software Design/Development; (a) Interactive Computer Graphics; Computer Services;

REMOTE SENSING EQUIPMENT/SYSTEMS PROVIDED

REMOTE SENSOR SYSTEMS
Lease: Aerial TIR Scanners; Multispectral Cameras

VIEWING EQUIPMENT
Lease: Monocular Magnifiers; Transfer Scopes; Stereoscopes; Color Additive Viewers

PHOTOGRAMMETRIC EQUIPMENT
Lease: Sterco Plotters

DIGITAL IMAGE PROCESSING EQUIPMENT

SOFTWARE

INTEGRATED SYSTEMS

OTHER EQUIPMENT
Lease: Spectrometers; Measurement Equipment
NAME: VIRGINIA INSTITUTE OF MARINE SCIENCE REMOTE SENSING CENTER

ADDRESS (ES) & CONTACT(S)
Gloucester Point, Virginia 23062
(804) 642-2111
Dr. John C. Monday, Jr. (ext. 254)

YEARS IN BUSINESS: 10
PROJECTS COMPLETED: 25
REGION SERVED: III

TYPES OF REMOTE SENSING TECHNOLOGIES:
Low Altitude Aerial Photo; Med Altitude Aerial Photo; High Altitude Aerial Photo;
Aerial Multispectral Scanner; Aerial Thermal Infrared Scanner; Radar; Landsat MSS;
Landsat RBV; Seasat; Skylab; Weather Satellite; Digital Image Interpretations;
Manual Image Interpretations; Coastal Circulation Photogrammetry

PERSONNEL & SKILLS REPRESENTED:
Management (1); Professional (3); Technical (4); Other (1)
Computer Programmers (1); Field Surveyors (1); Photointerpreters (3); Photolab Technicians (1); Physical Scientists (1); Pilots (1); Geographers (1)

STATEMENT OF CAPABILITIES:
Landsat CCT digital data processing and image interpretation. Thermal infrared data processing and evaluation. Satellite radar data analysis. Aerial photography in 9"x9" format, 70-mm, and 35-mm format, to altitudes of 13,000 feet; films: color, color infrared, black and white, black and white infrared; photographic interpretation; photogrammetric plotting and resection for currents and shorelines. Surface data acquisition: vessels, all types of oceanographic and marine sampling equipment, laboratory analysis; wetlands and coastal land use evaluation. Applications: facility siting, land use mapping; shoreline analysis, wetlands and subaquatic vegetation mapping, algal blooms, turbidity dynamics, and coastal currents and circulation.

VA INSTITUTE OF MARINE SCIENCE

FACILITIES AND SPECIAL EQUIPMENT

AIRCRAFT
DeHavilland Beaver, nadir metric port. (1)

CAMERAS, SCANNERS, AND OTHER REMOTE SENSORS
Fairchild CA-8 9-Inch (1)
Nikon 35 mm (1)
Hasselblad 70mm (2)

FIELD SURVEY EQUIPMENT
Transits (1)
Current meters (50)
Turbidimeters (3)

PHOTOGRAPHIC PROCESSING EQUIPMENT
Standard black and white processing equipment in Institute photo laboratory (1)

PHOTOMETRIC PROCESSING EQUIPMENT
Kelsh plotter (1)

IMAGE INTERPRETATION, VIEWING AND MAPPING (NON-DIGITAL)
Light tables (5)
Bausch & Lomb Zoom Transfer Scope ZT4-H (1)
Photo Viewer (1)

IMAGE INTERPRETATION, VIEWING AND MAPPING (DIGITAL)
IBM 370-158 computer (1)
Apple II 48 K RAM microcomputer, disk, color and B&W TV, micromodem (1)

DIGITIZING, PLOTTING AND GRAPHICS
Numonics electronic planimeter and graphics calculator (1)
Calcomp plotter (1)
Tektronix plotter (1)

OTHER COMPUTER PROCESSING
GIS under development by state government in Richmond as part of VARIS (Virginia Resource Information System)

OTHER
Full marine science, oceanographic capabilities
VA INSTITUTE OF MARINE SCIENCE

PRODUCTS AND SERVICES PROVIDED

IMAGE PRODUCTS
 RAW Neg. & Pos. Transparencies, Contact & Enlarged Prints; Photo Mosaics; Analog Magnetic Tape; Digital Mosaics; Halftone Image Prints; Digital Magnetic Tape; (a) Color, Color Infrared, and Color Composite Neg. & Pos. Transparencies, Contact and Enlarged Prints

ENHANCED AND CORRECTED IMAGERY
 Digital: Geometric Correction; Density Slice; Multisensor Composites; Radiometric Correction; Photo & Digital: Multitemporal Composites; Contrast Enhanced

PHOTOMETRIC PRODUCTS
 Planimetric Maps; Plan and Profile Sheets; Volumetric Calculations; Distance & Angle Measurements

INTERPRETED, THEMATIC PRODUCTS
 Color Thematic Maps; Land Use Maps; Vegetation/Forestry Maps; Acreage Tabulations; Geocoded Data Bases; Thematic Map Overlays; Geologic Maps; Transportation Maps; Tax Maps; Digital Magnetic Tapes

PROJECT PLANNING AND SUPPORT SERVICES
 Problem Definition; Feasibility Analysis; Selection of Existing Imagery; Ground Control Survey; Map Digitizing; Data Base Preparation; Air Support Operations; Sensor Selection/ Evaluation; Sampling Strategy Design; Ancillary Data Collection; Ground Truth Survey; Gray Level Digitizing; Data Management

AERIAL SURVEY
 Low Altitude Photography; Thermal Infrared; Multispectral Scanner

IMAGE PROCESSING, INTERPRETATION AND ANALYSIS
 Digital Image Processing; Batch Digital Image/Analysis/Classification; Photographic Laboratory Processing; Manual Image Interpretation; (a) Interactive Digital Image/ Analysis/Classification

PHOTOMETRIC ENGINEERING
 Planimetric Mapping; Topographic Mapping-Large Scale; Volumetric Calculation

REPRODUCTION
 Drafting & Scribing; Cartographic Reproduction; Automated Drafting/Plotting; Printing

OTHER SERVICES
 Remote Sensing Research; Remote Sensing Training; Statistical Modeling; Consultant Services; Interactive Computer Graphics; Computer Services

NAME: VERNON GRAPHICS, INC.

ADDRESS(ES) & CONTACT(S)
 400 Executive Blvd.
  Elmsford, New York 10523
  (914) 592-4890
  Herman Kahrs
  9748 Varial Avenue
  Chatsworth, California 91311
  (213) 882-6311
  William Reid

YEARS IN BUSINESS: 33

PROJECTS COMPLETED: 352

REGION SERVED: U.S.

TOTAL APPLICABLE EMPLOYEES: 360

PERSONNEL & SKILLS REPRESENTED:
 Management (23); Professional (40); Technical (297)
 Cartographers (11); Computer Equip. Oper. (53); Computer Programmers (14); Draftsmen (192); Photogrammatists (2); Photogrammetric Equip. Oper. (14); Photolab Technicians (28)

STATEMENT OF CAPABILITIES:
 Vernon Graphics, Inc. is a service company with thirty three years of experience responding to the map and record system need of utilities and municipalities. The scope of the company's services in the photogrammetric, interactive graphics, and computerized data processing fields includes acquisition of aerial photography, direct digitization from stereo models, orthophotography, plotting, and data base creation and management. Individualized software systems are developed to meet the specific requirements of the clients' data collection, record conversion, and data base maintenance needs.
FACILITIES AND SPECIAL EQUIPMENT

AIRCRAFT

CAMERAS, SCANNERS, AND OTHER REMOTE SENSORS

FIELD SURVEY EQUIPMENT

PHOTOGRAPHIC PROCESSING EQUIPMENT
Brown "Admiral 31" overhead camera with projection back (1)
Olga Seg V Rectified with 39"x39" vacuum table (1)

PHOTOGRAMMETRIC PROCESSING EQUIPMENT

IMAGE INTERPRETATION, VIEWING AND MAPPING (NON-DIGITAL)
Kern PG-2 Stereo Compiler with internal microprocessor support and Data Technology
Plotter (1); Jena Topocart Stereo Compiler and orthophoto restitute with microprocessor
interface to a host computer (1)

IMAGE INTERPRETATION, VIEWING AND MAPPING (DIGITAL)

DIGITIZING, PLOTTING AND GRAPHICS
Table digitizing stations including Data Technology tables with microprocessor,
Tektronix 401401 or GMA 102A storage tube graphic monitors and ADOS, Hazeltine or
MFCs alpha/numeric screens (15); Calcomp 748 Flatbed plotter with 925 controller (1);
Calcomp 1051 drum plotter with 906 controller (1)

OTHER COMPUTER PROCESSING
Two station Calma system with an Eclipse S130 (1)
Eclipse S 250 Processors (2)

OTHER
Nova 3/12 Processors (4)
Nova 2 Processors (2)
Data Entry alpha/numeric stations (25)
Disk storage devices (9)
Support peripherals (magnetic tape I/O and line printers) (8)

PRODUCTS AND SERVICES PROVIDED

IMAGE PRODUCTS
(c) B&W Negative and Positive Transparencies, Contact and Enlarged Prints;
Photo Mosaics; Photo Atlas Sheets; Halftone Image Prints; Digital Magnetic Tape

ENHANCED AND CORRECTED IMAGERY

PHOTOGRAMMETRIC PRODUCTS
(c) Orthophotos; Topographic Maps; Digital Data Bases; Planimetric Maps; Photo-Contour
Maps; Distance & Angle Measurements

INTERPRETED, THEMATIC PRODUCTS
(c) Land Use Maps; Vegetation/Forestry Maps; Utility Maps; Acreage Tabulations; Geocodes
Data Bases; Thematic Map Overlays; Tax Maps; Digital Magnetic Tapes

PROJECT PLANNING AND SUPPORT SERVICES
Problem Definition; Feasibility Analysis; Selection of Existing Imagery; Map Digitizing
Data Base Preparation; Sensor Selection/Evaluation; Sampling Strategy Design; Ancilary;
Data Collection; Data Management; (a) Ground Control Survey; Air Support Operations;
Ground Truth Survey

AERIAL SURVEY
(a) Low Altitude Photography; High Altitude Photography

IMAGE PROCESSING, INTERPRETATION AND ANALYSIS
Photographic Laboratory Processing; Manual Image Interpretation

PHOTOGRAMMETRIC ENGINEERING
Orthophotomapping; Planimetric Mapping; Stereo Digitizing; Stereocompilation;
Topographic Mapping-Small Scale; Topographic Mapping-Large Scale; (a) Aerotriangulation

REPRODUCTION
Drafting & Scribing; Cartographic Reproduction; Automated Drafting/Plotting; Printing

OTHER SERVICES
Consultant Services; Computer Services; Software Design/Development; Software Sales/Le.
NAME: W.A.C. CORP.

ADDRESS(ES) & CONTACT(S)

520 Conger St.
Eugene, Oregon 97402
(503) 342-5169
Robert Nelson

YEARS IN BUSINESS: 
PROJECTS COMPLETED: 
REGION SERVED: 

TYPES OF REMOTE SENSING TECHNOLOGIES:
Low Altitude Aerial Photo; Med Altitude Aerial Photo; High Altitude Aerial Photo

PERSONNEL & SKILLS REPRESENTED:
Draftsmen (1); Photolab Technicians (15); Pilots (5)

STATEMENT OF CAPABILITIES:
We are in the aerial photography business. All of our 6" 8½"and 12" cameras are precision and have gone through the National Bureau of Standards. We have five mapping airplanes with altitude capabilities up to 30,000 ft. and equipped with 3 axis auto pilots. Our radius of operation is anywhere in the continental U.S. but mainly west of Denver. We have a full service lab in both black and white and color with copy cameras that will make negatives up to 42" x 52".

FACILITIES AND SPECIAL EQUIPMENT

AIRCRAFT
Twin Engine Turbocharged (2)
Single Engine Turbocharged (3)

CAMERAS, SCANNERS, AND OTHER REMOTE SENSORS
6" Zeiss Cameras (4)
8½" Zeiss Cameras (2)
12" W.A.C. Cameras (3)

FIELD SURVEY EQUIPMENT

PHOTOCOPY EQUIPMENT

PHOTOGRAPHIC PROCESSING EQUIPMENT
1411 Color Film Processor (1)
11C B & W Film Processor (1)
42" Kreonite Color Paper Processor (1)
9"x9" Durat Enlargers (2)

IMAGE INTERPRETATION, VIEWING AND MAPPING (NON-DIGITAL)

IMAGE INTERPRETATION, VIEWING AND MAPPING (DIGITAL)

DIGITIZING, PLOTTING AND GRAPHICS

OTHER COMPUTER PROCESSING

OTHER
REMOTE SENSING EQUIPMENT/SYSTEMS PROVIDED

REMOTE SENSOR SYSTEMS
Lease: Reconnaissance Cameras

VIEWING EQUIPMENT

PHOTOGRAHAMETRIC EQUIPMENT

DIGITAL IMAGE PROCESSING EQUIPMENT

SOFTWARE

INTEGRATED SYSTEMS

OTHER EQUIPMENT

PRODUCTS AND SERVICES PROVIDED

IMAGE PRODUCTS
B&W, Color, Color Infrared Neg. & Pos. Transparencies, Contact & Enlarged Prints; Photo Mosaics

ENHANCED AND CORRECTED IMAGERY

PHOTOGRAHAMETRIC PRODUCTS

INTERPRETED, THEMATIC PRODUCTS

PROJECT PLANNING AND SUPPORT SERVICES

AERIAL SURVEY
Low Altitude Photography; High Altitude Photography

IMAGE PROCESSING, INTERPRETATION AND ANALYSIS
Photographic Laboratory Processing

PHOTOGRAHAMETRIC ENGINEERING

REPRODUCTION

OTHER SERVICES

ORIGINAL PAGE IS OF POOR QUALITY
**NAME:** WASHINGTON STATE DEPARTMENT OF NATURAL RESOURCES

**ADDRESS(S) & CONTACT(S):**
Resource Inventory Section Q4-21
Olympia, Washington 98504
(206) 753-5338
Roger Harding

**YEARS IN BUSINESS:** 25  
**PROJECTS COMPLETED:** 1000  
**REGION SERVED:** X  
**TOTAL APPLICABLE EMPLOYEES:** 46

**TYPES OF REMOTE SENSING TECHNOLOGIES:**
Low Altitude Aerial Photo; Med Altitude Aerial Photo; High Altitude Aerial Photo; Aerial Thermal Infrared Scanner; Landsat MSS; Landsat ETM; Digital Image Interpretations; Manual Image Interpretations

**PERSONNEL & SKILLS REPRESENTED:**
Cartographers (17); Computer Equip Operators (1); Computer Programers (1); Image Processing Equip Oper. (1); Photogrammatists (1); Photogrammetric Equip Oper. (7); Photointerpreters (1); Photolab Technicians (1); Other (Forest) (16)

**STATEMENT OF CAPABILITIES:**
The DNR provides aerial photography, orthophotographic maps, and planimetric maps of the state of Washington.

**PRODUCTS AND SERVICES PROVIDED**

**IMAGE PRODUCTS**
Black & White, Color, Color Infrared Positive Transparencies, Contact Prints, Enlarged Prints;

**ENHANCED AND CORRECTED IMAGERY**

**PHOTOGRAHMETRIC PRODUCTS**
Orthophotos; Topographic Maps; Planimetric Maps  
(c) Digital Data Bases

**INTERPRETED, THEMATIC PRODUCTS**
Soils Maps

**PROJECT PLANNING AND SUPPORT SERVICES**

**AERIAL SURVEY**

**IMAGE PROCESSING, INTERPRETATION AND ANALYSIS**

**PHOTOGRAHMETRIC ENGINEERING**

**REPRODUCTION**

**OTHER SERVICES**
WASHINGTON STATE DEPARTMENT OF NATURAL RESOURCES

FACILITIES AND SPECIAL EQUIPMENT

AIRCRAFT

CAMERAS, SCANNERS, AND OTHER REMOTE SENSORS

FIELD SURVEY EQUIPMENT

PHOTOGRAPHIC PROCESSING EQUIPMENT

PHOTOGRAHMETRICAL PROCESSING EQUIPMENT

IMAGE INTERPRETATION, VIEWING AND MAPPING (NON-DIGITAL)

IMAGE INTERPRETATION, VIEWING AND MAPPING (DIGITAL)

DIGITIZING, PLOTTING AND GRAPHICS
Specific type not indicated (4)

OTHER COMPUTER PROCESSING

OTHER

NAME: WALKER & ASSOCIATES, INC.

ADDRESS(ES) & CONTACT(S)
6264 Stanley Ave So.
P.O. Box c-81430
Seattle, Washington 98108
(206) 763-9858
George F. Walker, President

YEARS IN BUSINESS: 27

PROJECTS COMPLETED: 5,000

REGION SERVED: VIII, IX, X

TOTAL APPLICABLE EMPLOYEES: 24

TYPES OF REMOTE SENSING TECHNOLOGIES:
Low Altitude Aerial Photo; Med Altitude Aerial Photo; High Altitude Aerial Photo

PERSONNEL & SKILLS REPRESENTED:
Management (3); Professional (4); Technical (15); Other (2)
Draftsmen; Field Surveyors; Image Processing Equip. Oper.; Photogrammatists; Photogrammertical Equip. Oper.; Photointerpreters; Photolab Technicians; Pilots

STATEMENT OF CAPABILITIES:
Walker & Associates is a full service aerial survey firm that offers aerial photogrammetry, low and high altitude aerial photography, and photogrammetrical mapping services.
FACILITIES AND SPECIAL EQUIPMENT

ECRAFT
- Isana 337 Skymaster (1)
- Isana Turbo 180 (1)

MERAS, SCANNERS, AND OTHER REMOTE SENSORS
- Isana RMCA 15/23 (1)
- Isana RMCA 21/22 (1)
- Survey View 12" (1)

FIELD SURVEY EQUIPMENT
- E&E Trisits; Zeiss Levels (2); Wild T-2 (1)
- Theodolite (1) & HP 3800 (1)

PHOTOCYANIC PROCESSING EQUIPMENT
- AKO Film processor
- Hitman 242
- Image Printer & Processor

PHOTOCYANIC PROCESSING EQUIPMENT
- Hitman Model III D (2)
- Plotter (1)
- Orthophotometer (1)

DIGITAL INTERPRETATION, VIEWING AND MAPPING (NON-DIGITAL)

DIGITAL INTERPRETATION, VIEWING AND MAPPING (DIGITAL)

DIGITIZING, PLOTTING AND GRAPHICS
- Autotrol (1)
- Data Tech Flatbed (1)

OTHER COMPUTER PROCESSING:

OTHER
- Robertson process camera

PRODUCTS AND SERVICES PROVIDED

IMAGE PRODUCTS
- BW, Color, & Color Infrared Neg. & Pos. Transparencies, Contact and Enlarged Prints;
  Photo Mosaics; Photo Atlas Sheets; Halftone Image Prints; Digital Magnetic Tape;
  (c) Color Composite Neg. & Pos. Transparencies, Contact and Enlarged Prints

ENHANCED AND CORRECTED IMAGERY

PHOTOCYANIC PRODUCTS
- Orthophotos; Topographic Maps; Engineering Cross Sections; Stockpile Measurements;
  Earthwork Measurements; Digital Terrain Models; Digital Data Bases; Planimetric Maps;
  Photo-Contour Maps; Plan and Profile Sheets; Volumetric Calculations; Distance & Angle
  Measurements

INTERPRETED, THEMATIC PRODUCTS
- Land Use Maps; Vegetation/Forestry Maps; Utility Maps; Acreage Tabulations; Geocoded Maps;
  Soils Maps; Tax Maps; Digital Magnetic Tapes

PROJECT PLANNING AND SUPPORT SERVICES
- Problem Definition; Feasibility Analysis; Selection of Existing Imagery; Ground Control
  Survey; Map Digitizing; Data Base Preparation; Air Support Operations; Sensor Selection/
  Evaluation; Ancillary Data Collection; Ground Truth Survey

AERIAL SURVEY
- Low Altitude Photography; High Altitude Photography; (a) Thermal Infrared

IMAGE PROCESSING, INTERPRETATION AND ANALYSIS
- Photographic Laboratory Processing; Manual Image Interpretation

PHOTOCYANIC ENGINEERING
- Aerotriangulation; Orthophotomapping; Planimetric Mapping; Stereo Digitizing; Cross-
  Sectioning; Stereoncompilation; Topographic Mapping-Small Scale; Topographic Mapping-
  Large Scale; Volumetric Calculation

REPRODUCTION
- Drafting & Scribing; Cartographic Reproduction; Automated Drafting/Plotting

OTHER SERVICES
- Consultant Services; Computer Services; Software Design/Development; Interactive Computer
  Graphics
NAME: WILSON & COMPANY, ENGINEERS & ARCHITECTS

ADDRESS(ES) & CONTACT(S)
617 E. Crawford
Salina, Kansas 67401
(913) 827-0433
Craig Roberts, Partner
8047 Parallel Parkway
Kansas City, Kansas 66112
(913) 334-0447
David Youtsey

ADDITIONAL LOCATIONS:
218 North Waco
Wichita, Kansas 67201
(316) 264-9175
Ron Chandler
Additional Locations: Albuquerque, NM
Hayi, Kansas
Foreign: Riyadh, Saudi Arabia

YEARS IN BUSINESS: N/A
PROJECTS COMPLETED: ___
REGION SERVED: ___

TYPES OF REMOTE SENSING TECHNOLOGIES:
Low Altitude Aerial Photo; Med Altitude Aerial Photo; High Altitude Aerial Photo

PERSONNEL & SKILLS REPRESENTED:

STATEMENT OF CAPABILITIES:
Acquisition of aerial photography, image processing, data interpretation and mapping.

FACILITIES AND SPECIAL EQUIPMENT

AIRCRAFT
Twin-engine aircraft (Beech King Air) (1); Cessna TU206 aircraft, equipped for aerial photography at altitudes to 30,000 feet A.S.L. (1) (leasel)

CAMERAS, SCANNERS, AND OTHER REMOTE SENSORS
Zeiss RMK A 15/23 Aerial Mapping Camera with 153mm (6") high performance Pleogon wide-angle lens for panchromatic (B&W), infrared and color photography (1);
Zeiss RMK 8.5/23 Aerial Mapping Camera with 85mm (3-1/2") high performance S-Pleogon super wide-angle lens for panchromatic (B&W), infrared and color photography (lease) (1)

FIELD SURVEY EQUIPMENT
Electronic Distance Measuring Instruments (4 Tellurometer CA-1000, 2 - Geodimeter Model 76 and 1 - Wild DI-10) (8); Geodimeter Model 78 (1); Wild Theodolites (5 - Wild T-2 and 3 - Wild T-16) (8)

PHOTOGRAPHIC PROCESSING EQUIPMENT
Morse B-5-A Aerial Film Developing Unit (1); EL-10-A Aerial Film Dryer (1);
Mark II Logitronic Automatic Printer (1); Copy Camera equipped with 19- and 30-
inch Coerz Red Dot Artar lens, 96"x54" vacuum easel (1); Kargl Autofocus Rectifying Enlarger (1); Nauc Model VF4 46 Contacting Frame (36"x46") (1)
Pako Model 26 Print Dryer (1); Dupont Cromaflex Engineering Reproduction Processor (44" width) (1)

PHOTOSTRUCTOMETRIC PROCESSING EQUIPMENT
Wild PUG4 Point Transfer Device (1); Kern MK2 Monocular, interfaced with H. Dell Foster Electronic Digitizer for Aerotriangulation (1)

OTHER COMPUTER PROCESSING
Operational software includes J.F. Kenefick's RABATS Programs for Aerotriangulat...
PRODUCTS AND SERVICES PROVIDED

IMAGE PRODUCTS
(c) B&W, Color, & Color Infrared Contact Prints and Enlarged Prints; Photo Mosaics; Halftone Image Prints

ENHANCED AND CORRECTED IMAGERY

PHOTOMETRIC PRODUCTS
(c) Topographic Maps; Engineering Cross Sections; Stockpile Measurements; Earthwork Measurements; Digital Terrain Models; Digital Data Bases; Planimetric Maps; Photo-Contour Maps; Plan and Profile Sheets; Volumetric Calculations; Distance & Angle Measurements;
(a) Orthophotos

INTERPRETED, THEMATIC PRODUCTS
(c) Land Use Maps; Acreage Tabulations; Transportation Maps; Soils Maps; Tax Maps

PROJECT PLANNING AND SUPPORT SERVICES
(a) Problem Definition; Feasibility Analysis; Selection of Existing Imagery; Ground Control Survey; Map Digitizing; Data Base Preparation; Air Support Operations; Data Management

AERIAL SURVEY
(a) Low Altitude Photography; High Altitude Photography

IMAGE PROCESSING, INTERPRETATION AND ANALYSIS
(a) Photographic Laboratory Processing

PHOTOMETRIC ENGINEERING
Aerotriangulation; Planimetric Mapping; Stereo Digitizing; Cross-Sectioning; Stereocompilation; Topographic Mapping-Small Scale; Topographic Mapping-Large Scale; Volumetric Calculation (a) Orthophotomapping

REPRODUCTION
Drafting & Scribing; Cartographic Reproduction; Automated Drafting/Plotting; Printing

OTHER SERVICES
Statistical Modeling; Consultant Services; Interactive Computer Graphics; Computer Services
PRODUCTS AND SERVICES PROVIDED

IMAGE PRODUCTS

ENHANCED AND CORRECTED IMAGERY

PHOTOGRAMMETRIC PRODUCTS

INTERPRETED, THEMATIC PRODUCTS

PROJECT PLANNING AND SUPPORT SERVICES
Problem Definition; Feasibility Analysis; (s) Selection of Existing Imagery; Data Base Preparation; Ancillary Data Collection; Data Management

AERIAL SURVEY

IMAGE PROCESSING, INTERPRETATION AND ANALYSIS

PHOTOGRAMMETRIC ENGINEERING

REPRODUCTION

OTHER SERVICES
Consultant Services

WISE-L CONSULTANTS, LTD.

NAME: WOODWARD-CLYD CONSULTANTS

ADDRESS (ES) & CONTACT (S)
1350 Bauer Blvd.
St. Louis, Missouri 63132
(314) 997-5700
William Prosser

1425 Broad Street
Clifton, New Jersey 07012
(201) 471-2000
Ray Hinkle, Jim Smith

Three Embarcadero Center, Suite 700
San Francisco, California 94111
((415) 956-7070
Kath Ritchie, Jon Lovegreen, Bob Glynn

Other Locations: Los Angeles, California
Plymouth Meeting, Penn.
Denver, Colorado

Foreign: Lausanne, Switzerland

YEARS IN BUSINESS: 15
PROJECTS COMPLETED: 1,000
REGION SERVED: U.S. & Int'l.

TOTAL APPLICABLE EMPLOYEES: 70

TYPES OF REMOTE SENSING TECHNOLOGIES:
Low Altitude Aerial Photo; Med Altitude Aerial Photo; High Altitude Aerial Photo; Aerial Multispectral Scanner; Aerial Thermal Infrared Scanner; Radar; Geophysical Survey; Landsat MSS; Landsat RBV; Seasat; HCM; Skylab; Digital Image Interpretations
Manual Image Interpretations; Analog Image Interpretations

PERSONNEL & SKILLS REPRESENTED:
Management (10); Professional (50); Technical (10)
Cartographers (10); Computer Equip. Operators (10); Computer Programmers (10);
Draftsmen (30); Engineers (civil, environ.) (178); Engineers (electrical) (2); Image Processing Equip. Oper. (5); Soil Scientists (4); Social Scientists (1); Photogram. (5); Photogrammetric Equip. Oper. (5); Photointerpreters (50); Physical Scientists (370); Pilots (5); Planners (4); Geographers (3)

STATEMENT OF CAPABILITIES:
WCC is a national, multidisciplinary consulting firm employing 1000 persons, including over 600 professionals practicing in the fields of geotechnical engineering, geology, hydrology, environmental sciences and remote sensing. Our firm operates 22 offices located in major U.S. cities. Systematic use of remote sensing techniques is an everyday part of our practice. We maintain a state-of-the-art practice in remote sensing and have facilities specifically directed toward the use and interpretation of remote sensor imagery. These include image processing. Our broad experience background is applied practically in our remote sensing practice.
FACILITIES AND SPECIAL EQUIPMENT

AIRCRAFT

CAMERAS, SCANNERS, AND OTHER REMOTE SENSORS

FIELD SURVEY EQUIPMENT

PHOTOGRAPHIC PROCESSING EQUIPMENT

PHOTOGRAHMETRIC PROCESSING EQUIPMENT

IMAGE INTERPRETATION, VIEWING AND MAPPING (NON-DIGITAL)

SI 130 System VP-8 Image Analyzer (1)
Bausch & Lomb Zoom Stereoscope (1)
Delft Stereoscope (1)

IMAGE INTERPRETATION, VIEWING AND MAPPING (DIGITAL)

DIGITIZING, PLOTTING AND GRAPHICS

OTHER COMPUTER PROCESSING:

Computer Geographic Information System (1)
Digital Computer System for Geotechnical engineering analyses (1)

OTHER

PRODUCTS AND SERVICES PROVIDED

IMAGE PRODUCTS
(c) Analog Color Densitometry; (a) B&W, Color, Color Infrared, Color Composite Neg. & Pos. Transparencies, Contact Prints & Enlarged Prints; Photo Mosaics; Photo Atlas Sheets; Analog Magnetic Tape; Thermograms; Digital Mosaics; Halftone Image Prints; Digital Magnetic Tape

ENHANCED AND CORRECTED IMAGERY
(a) Photo & Digital: Multitemporal Composites; Contrast Enhanced; Geometric Correction; Density Slice; Change Detection; Multisensor Composites; Radiometric Correction; Image Resampling; Pseudo Stereo

PHOTOGRAHMETRIC PRODUCTS
(c) Engineering Cross Sections; Stockpile Measurements; Earthwork Measurements; Plan and Profile Sheets; Volumetric Calculations; (a) Orthophotos; Topographic Maps; Digital Terrain Models; Digital Data Bases; Planimetric Maps; Photo-Contour Maps

INTERPRETED, THEMATIC PRODUCTS
(c) Acreage Tabulations; Thematic Map Overlays; Geologic Maps; Soils Maps; (a) Color Thematic Maps; Land Use Maps; Vegetation/Forestry Maps; Contour Maps; Utility Maps; Transportation Maps

PROJECT PLANNING AND SUPPORT SERVICES
Problem Definition; Feasibility Analysis; Selection of Existing Imagery; Sensor Selection/ Evaluation; Sampling Strategy Design; Ancillary Data Collection; Ground Truth Survey; Gray Level Digitizing; Data Management

AERIAL SURVEY
(a) Low Altitude Photography; Thermal Infrared; Radar; Geophysical; High Altitude Photography; Multiplespectral Scanner

IMAGE PROCESSING, INTERPRETATION AND ANALYSIS
Manual Image Interpretation; Analog Image Processing; (a) Digital Image Processing; Batch Digital Image/Analysis/Classification; Interactive Digital Image/Analysis/Classification; Photographic Laboratory Processing

PHOTOGRAHMETRIC ENGINEERING
(a) Aerotriangulation; Orthophotomapping; Planimetric Mapping; Stereo Digitizing; Cross-Sectioning; Stereocompilation; Topographic Mapping-Small Scale; Topographic Mapping-Large Scale; Volumetric Calculation

REPRODUCTION
(a) Drafting & Scribing; Cartographic Reproduction; Automated Drafting/Plotting; Printing

OTHER SERVICES
Remote Sensing Research; Remote Sensing Training; Statistical Modeling; Consultant Services; (a) Interactive Computer Graphics; Computer Services
NAME: WOOLPERT CONSULTANTS

ADDRESS(ES) & CONTACT(S)

2324 Stanley Avenue
Dayton, Ohio 45404
(513) 461-5660
Wallace E. Smith

602 Bel Air Blvd.
Mobile, Alabama 36606
(205) 478-4554
Don Sumney

YEARS IN BUSINESS: 10

PROJECTS COMPLETED: 3500

REGION SERVED: US, L, II, III, IV, V, VI, VII

TYPES OF REMOTE SENSING TECHNOLOGIES:
Low Altitude Aerial Photo; Med Altitude; High Altitude Aerial Photo;
Geophysical Survey, Digital Image Interpretations, Manual Image Interpretations

PERSONNEL & SKILLS REPRESENTED:
Management (2); Professional (21); Cartographers (1); Computer Equip Operators (2);
Computer Programmers (1); Draftsmen (6); Engineers (civil, environ.) (5); Field
Surveyors (45); Image Processing Equip. Oper. (4); Soil Scientists (3); Social
Scientists (2); Photogrammatists (3); Photogrammatic Equip Oper. (12); Photo-
interpreters (2); Photolab Technicians (6); Physical Scientists (1); Pilots (1);
Planners (6); Geographers (4);

STATEMENT OF CAPABILITIES:
Woolpert Consultants supplies the full range of photogrammetric services including
B&W, Color IR, B&W IR, aerial photography ground control, topographic
mapping, interactive digital data banks, computerized mapping and land use maps.
These capabilities are supported by Engineering, Environmental, & Planning
personnel from our other divisions.

FACILITIES AND SPECIAL EQUIPMENT

AIRCRAFT:
Cessena Stationair (1); Zeiss MMK 15/23 (6" lens) (1); Zeiss Film Magazines (2)

FIELD SURVEY EQUIPMENT:
AGA-12a Geodimeters (2); Hewlett-Packard H-3800 AEOM (2MB) (2); Hewlett-Packard
H-3808 AEOM (6MB) (2); Hewlett-Packard H-3820 Complete Survey Stations (2);
Lietz Levels (7); Wild NA #2 Levels (5); Zeiss Levels (4); Lietz Theodolite (1);
Wild T-2 (One Second) Theodolites (7); Burger Transit (1); K&E Paragon Transits
(18); Wild T-16 (Ten Second) Optical Transit (1); Raytheon Recording Depth
Finders (2); Detectron Metal Locators (4); N Scope TW Pipe Locator (1); K&E
Alidades & Plane Tables (3); Streeter Avnet MK101B (15 Minutes) Traffic Counters
(4); Monroe Compucorp 322 Scientist Electronic Calculators (5); Monroe Surveyor
354 Electronic Calculators (10); Texas Instrument Silent 700 AEOR Electronic Data
(4); 5 Watt Trascivers (6); 1 Watt Trascivers (20);

PHOTOCHEMICAL PROCESSING EQUIPMENT:
Arkay (Model 150 Ferotype) Dryer (1); Brown (Commodore) Copy Camera (1); Dupont
(Cronaflex) ERF Processor (1); Iconics (48" x 72") Vacuum Frame (1); K&E (Model
HE-12) Horizontal Enlargers (2); K&E (48" x72") Vacuum Board (1); Kreonite (DE-
RP-1-42) Processor (1); Logetronic (Mark III) Printer (1); Logetronic (Mark IV)
Printer (1); Horse Contact Printer (1);

PHOTOMETRIC PROCESSING EQUIPMENT:
Santoni Simplex II-C Stereo Plotters (3); Santoni Simplex G-6 Stereo Plotter (1)
Santoni Ortho-Photo Scope (1); K&E 3-Projector Stereo Plotters (2); K&E 5-Pro-
jector Stereo Plotters (1);

DIGITIZING/PLOTTING/GRAPHICS:
Dell Foster Automatic Terrain Plotting Table (1); Data-Tech Automatic Terrain
Plotting Table (1); Dell Foster (3-axis) Digitizers (2);

OTHER COMPUTER PROCESSING:
Nova (K-32) Mini Computer (1);

OTHER EQUIPMENT OR FACILITIES:
Dell Foster Mono-Comparator (1); Wild PUG-4 Point Transfer Device (1);
PRODUCTS AND SERVICES PROVIDED

IMAGE PRODUCTS
B & W, Color, Negative Transparencies, Positive Transparencies Contact Prints, Enlarged Prints; Color Infrared Contact Prints, Enlarged Prints; Photo Atlas Sheets; Halfsize Image Prints; (c) Color Infrared Neg. & Pos. Trans.; Colorcomposite Neg. & Pos. Transp., Contact Prints, Enlarged Prints; Photo Mosaics; Analog Magnetic Tape;

ENHANCED AND CORRECTED IMAGERY
Digital Mosaics; Digital Mag. Tape;

Photo: Contrast Enhanced; Geometric Correction; Density Slice; Pseudo Stereo;
(c) Digital: Contrast Enhanced; Geometric Correction; Density Slice; Pseudo Stereo

PHOTOGRAHMERTRIC PRODUCTS
(c) Orthophotos; Topographic Maps; Engineering Cross Sections; Stockpile Measurements; Earthwork Measurements; Digital Terrain Models; Digital Data Bases; Planimetric Maps; Photo-Contour Maps; Plan and Profile Sheets; Volumetric Calculations; Distance & Angle Measurements

INTERPRETED, THEMATIC PRODUCTS
(c) Color Thematic Maps; Land Use Maps; Vegetation/Forestry Maps; Contour Weather Maps; Utility Maps; Acreage Tabulations; Geocoded Data Bases; Thematic Map Overlays; Geological Maps; Transportation Maps; Soil Maps; Tax Maps; Digital Magnetic Tapes

PROJECT PLANNING AND SUPPORT SERVICES
Problem Definition; Feasibility Analysis; Selection of Existing Imagery; Ground Control Survey; Map Digitizing; Data Base Preparation; Air Support Operations; Sensor Selection/Evaluation Sampling Strategy Design; Ancillary Data Collection; Ground Truth Survey; Gray Level Digitizing; Data Management

AERIAL SURVEY
Low Altitude Photography; Geophysical; High Altitude Photography

IMAGE PROCESSING, INTERPRETATION AND ANALYSIS
Digital Image Processing; Batch Digital Image/Analysis/Classification; Interactive Digital Image/Analysis/Classification; Photographic Laboratory Processing; Manual Image Interpretation

PHOTOGRAHMERTRIC ENGINEERING
Aerotriangulation; Orthophotomapping; Planimetric Mapping; Stereo Digitizing; Cross-Sectioning; Stereocompilation; Topographic Mapping-Small Scale; Topographic Mapping Large Scale; Volumetric Calculation

REPRODUCTION
Drafting & Scribing; Cartographic Reproduction; Automated Drafting/Plotting; Printing

OTHER SERVICES
Statistical Modeling; Consultant Services; Interactive Computer Graphics