

**AIRBORNE MAGNETIC GEOPHYSICAL SURVEY OF THE HOLITNA BASIN AREA,
ALASKA, DATA COMPILATION**

Laurel E. Burns, Abraham M. Emond, SIAL Geosciences, Inc., and On-line Exploration Services, Inc.

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AIRBORNE MAGNETIC GEOPHYSICAL SURVEY OF THE HOLITNA BASIN AREA, ALASKA, DATA COMPILATION

Laurel E. burns¹, Abraham M. Emond¹, SIAL Geosciences Inc., and On-line Exploration Services, Inc.

ABSTRACT

The Holitna airborne magnetic geophysical survey covers the Holitna basin, located in the Sleetemute and Lime Hills quadrangles surrounding the town of Stony River in southwest Alaska. Magnetic data were collected September 8th to October 7th 1997. A total of 13,658 line kilometers were collected covering 9,229.1 square kilometers. Line spacing was 800 meters (m). Data were collected using a fixed wing aircraft with a mean ground clearance of 90 m.

PURPOSE

These data were collected to assist the state in assessing the hydrocarbon potential of the Holitna basin area. The aeromagnetic data was intended to be interpreted and integrated with available geoscience data.

SURVEY OVERVIEW DESCRIPTION

This document provides an overview of the survey and includes text and figures of select primary and derivative products of this survey. A table of digital data packages available for download is provided to assist users in data selection. For reference, a catalog of the available maps is presented in reduced resolution. Please consult the metadata, project report, and digital data packages for more information and data.

ACKNOWLEDGMENTS

Funding was provided by the Alaska State Legislature.

REFERENCES

- Burns, L.E., SIAL Geosciences, Inc., and On-line Exploration Services, Inc., 2008, Linedata and gridded data for the aeromagnetic survey of the Holitna basin area, western Alaska: Parts of the Lime Hills and Sleetemute quadrangles: Alaska Division of Geological & Geophysical Surveys Geophysical Report 2008-4, 1 DVD. <http://doi.org/10.14509/16681>
- Burns, L.E., SIAL Geosciences, Inc., and On-line Exploration Services, Inc., 2008, Linedata and gridded data for the aeromagnetic survey of the Holitna basin area, western Alaska: Parts of the Lime Hills and Sleetemute quadrangles: Alaska Division of Geological & Geophysical Surveys Geophysical Report 2008-4, 1 DVD. <http://doi.org/10.14509/16681>
- DGGS Staff, On-line Exploration Services, Inc., and SIAL Geosciences, Inc., 1998, Total field magnetics of the Holitna basin area, western Alaska: Alaska Division of Geological & Geophysical Surveys Report of Investigation 98-14, 2 sheets, scale 1:125,000. <http://doi.org/10.14509/2589>

¹ Alaska Division of Geological & Geophysical Surveys, 3354 College Road, Fairbanks, Alaska 99709-3707

Edcon, Inc., 2001, Edcon land gravity survey, Holitna basin, southwest Alaska: Alaska Division of Geological & Geophysical Surveys Geophysical Report 2001-1, 1 DVD. <http://doi.org/10.14509/2725>

SIAL Geosciences, Inc., and On-line Exploration Services, Inc., 1998, Project report of the aeromagnetic survey for the Holitna basin area, western Alaska: Alaska Division of Geological & Geophysical Surveys Public Data File 98-29, 82 p., 2 sheets, scale 1:125,000. <http://doi.org/10.14509/1854>

AVAILABLE DATA

Data Type	Provider	Description
ascii_data	contractor	ASCII format line data, other ASCII data
databases_geosoft	DGGS	Geosoft format database of final line data, other Geosoft format databases
documents	contractor and DGGS	Project and field reports, survey background information, gridded data explanations, other documentation
grids_ermapper	DGGS	Geographically registered gridded data, ER Mapper ERS format
grids_geosoft	DGGS	Geosoft-format grids, these grids can be viewed in ESRI ArcMap using a free plugin from Geosoft or the free viewer available from Geosoft
images_registered	DGGS	GeoTiff format images of all gridded data
kmz	DGGS	keyhole markup language (kml) kmz archive files of project data. Viewable in Google Earth and other compatible programs
maps_pdf_format	contractor and DGGS	Printable maps in pdf format. Includes a geographically registered pdf (GeoPDF) for use with mobile devices such as GPS enabled smartphones and tablets, other devices, and programs
vector_data	DGGS	Interpretation, data contours, flightpath and survey boundary in ESRI shapefile (SHP) format

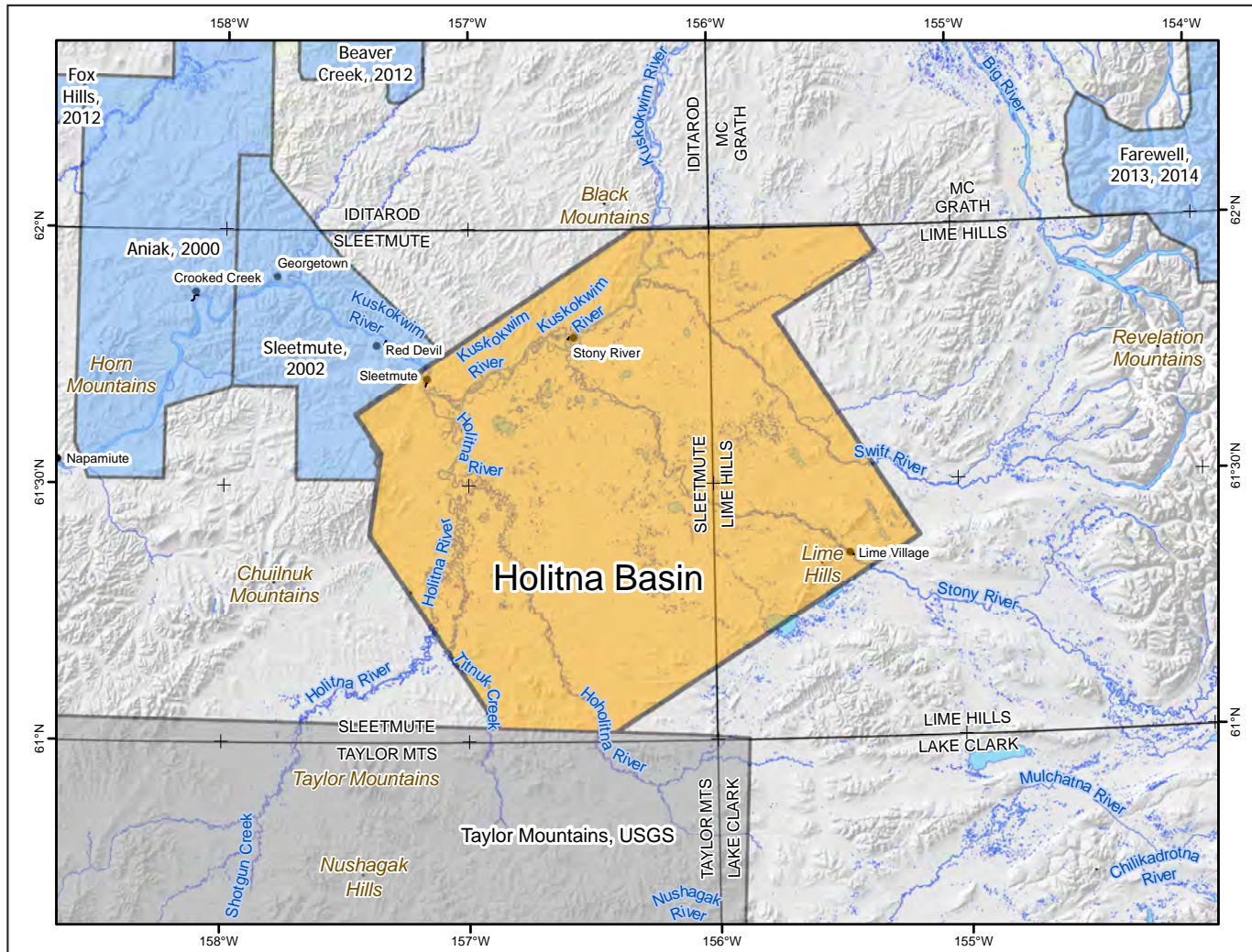


Figure 1. Holitna magnetic airborne geophysical survey location shown in interior Alaska (inset). Holitna survey area shown with adjacent DGGS geophysical surveys, landmarks, relevant 1:250,000-scale quadrangle boundaries, mountain ranges, rivers, glaciers, and elevation hillshade.

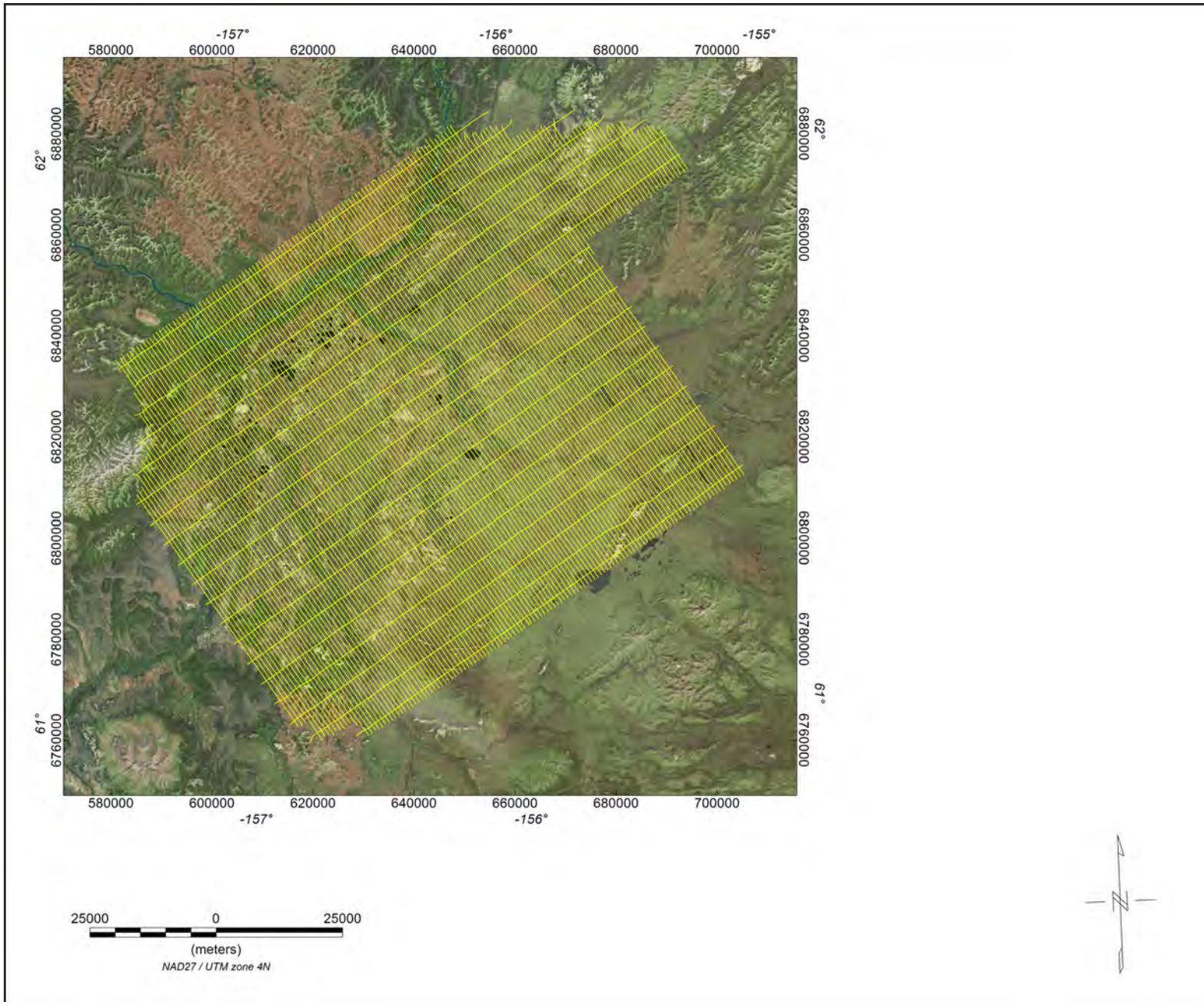


Figure 2. Flight path with orthometric image.

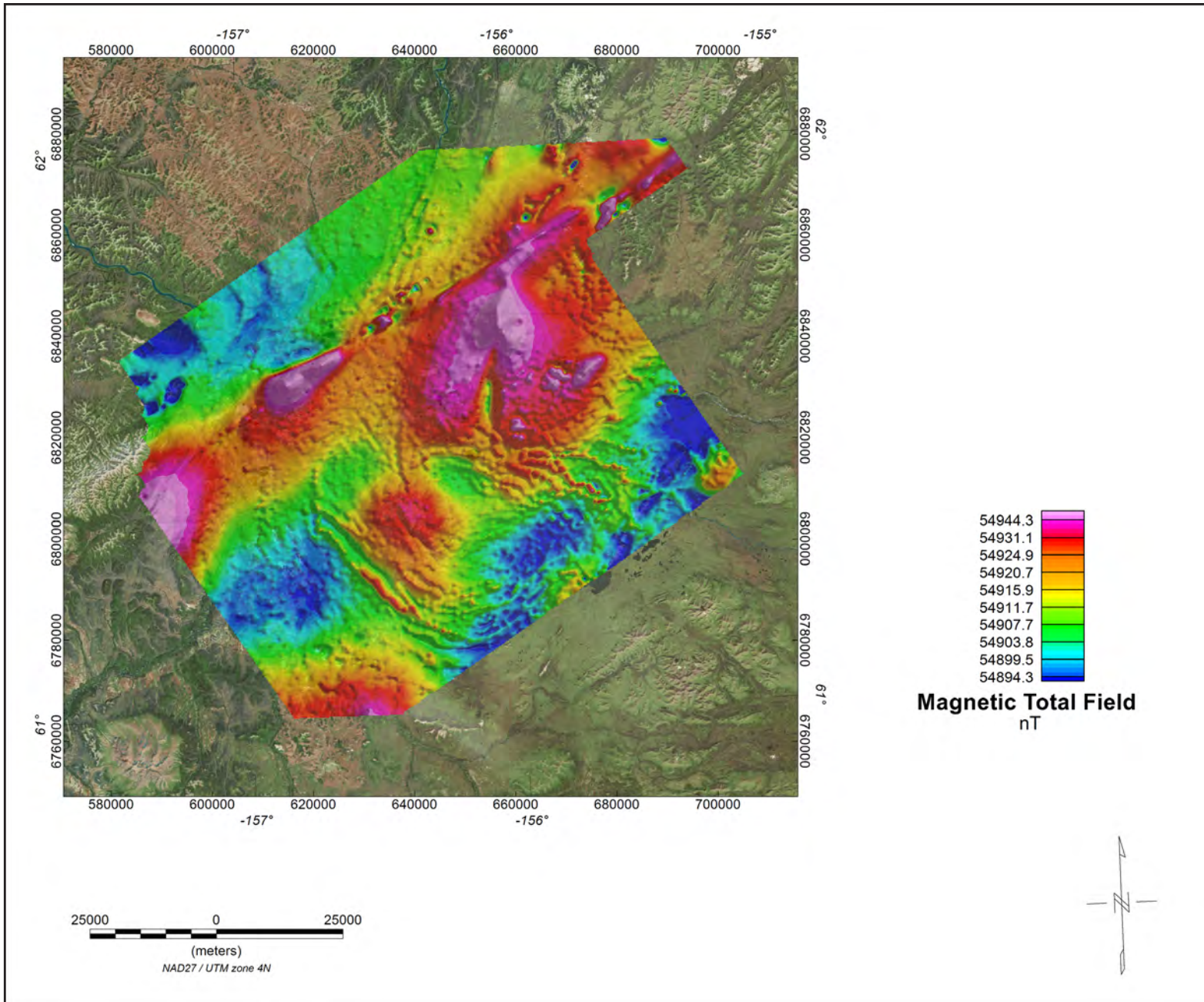


Figure 3. Total magnetic field grid with orthometric image. The total field magnetic data were acquired with a sampling interval of 0.1 seconds. The magnetic data were (1) corrected for diurnal variations by subtraction of the digitally recorded base station magnetic data, (2) leveled to the tie line data, and (3) interpolated onto a regular 200 m grid using a modified Akima (1970) technique.

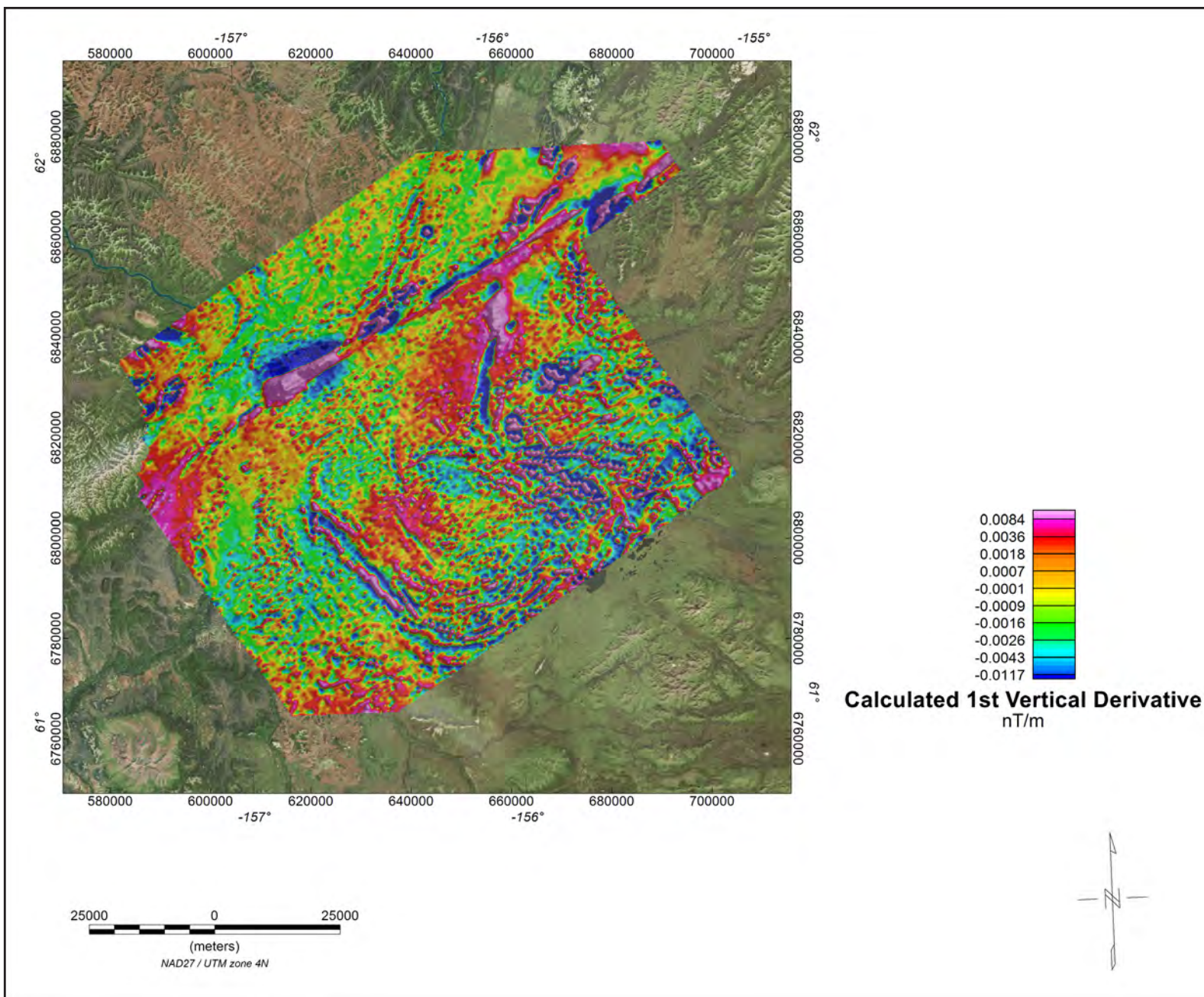


Figure 4. Calculated first vertical derivative grid with orthometric image. The first vertical derivative grid was calculated from the diurnally-corrected, IGRF-corrected total magnetic field grid using a FFT base frequency domain filtering algorithm. The resulting first vertical derivative grid provides better definition and resolution of near-surface magnetic units and helps to identify weak magnetic features that may not be evident on the total field data.

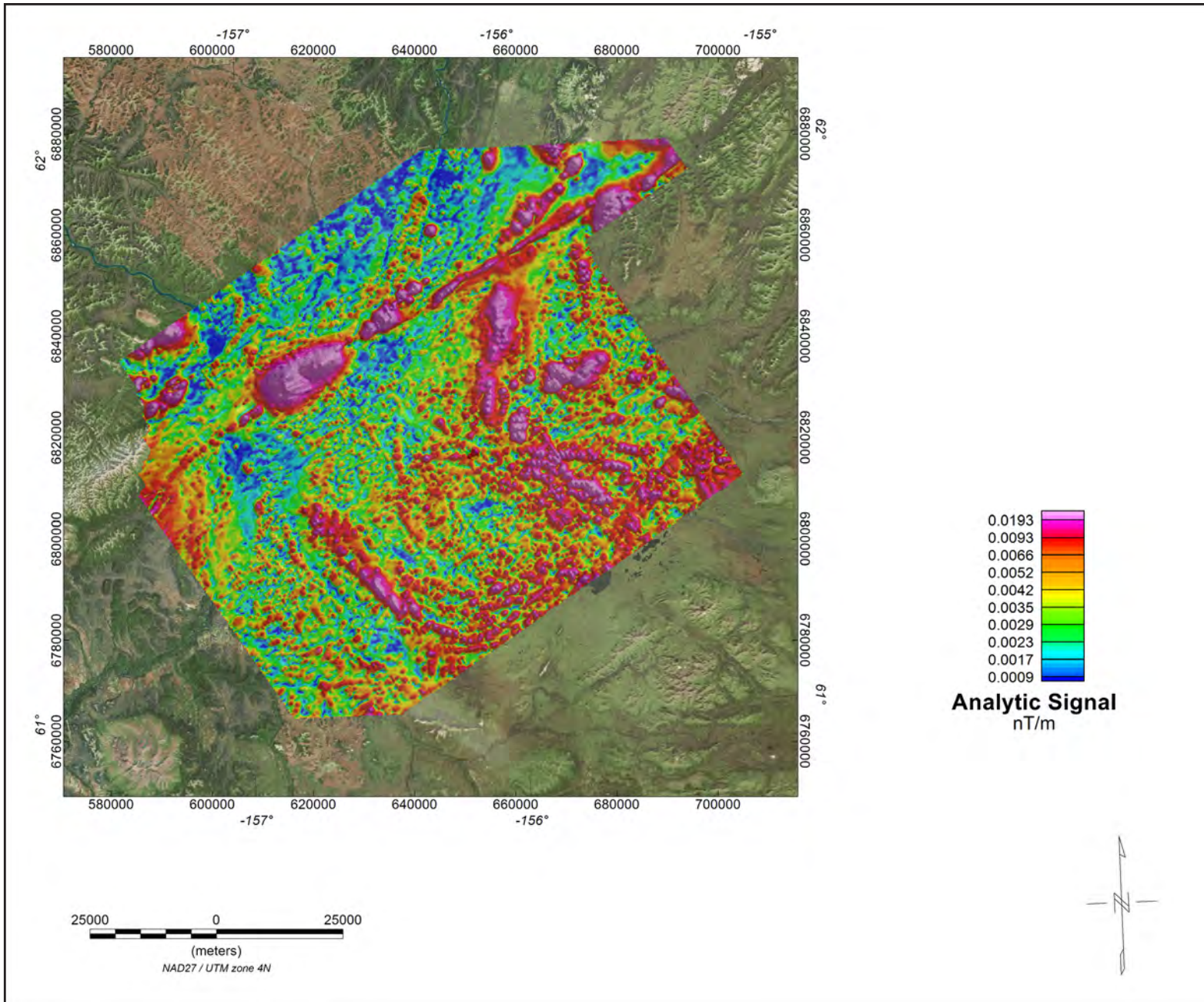


Figure 5. Analytic signal grid with orthometric image. Analytic signal is the total amplitude of all directions of magnetic gradient calculated from the sum of the squares of the three orthogonal gradients. Mapped highs in the calculated analytic signal of magnetic parameter locate the anomalous source body edges and corners (such as contacts, fault/shear zones, etc.). Analytic signal maxima are located directly over faults and contacts, regardless of structural dip, and independent of the direction of the induced and/or remanent magnetizations.

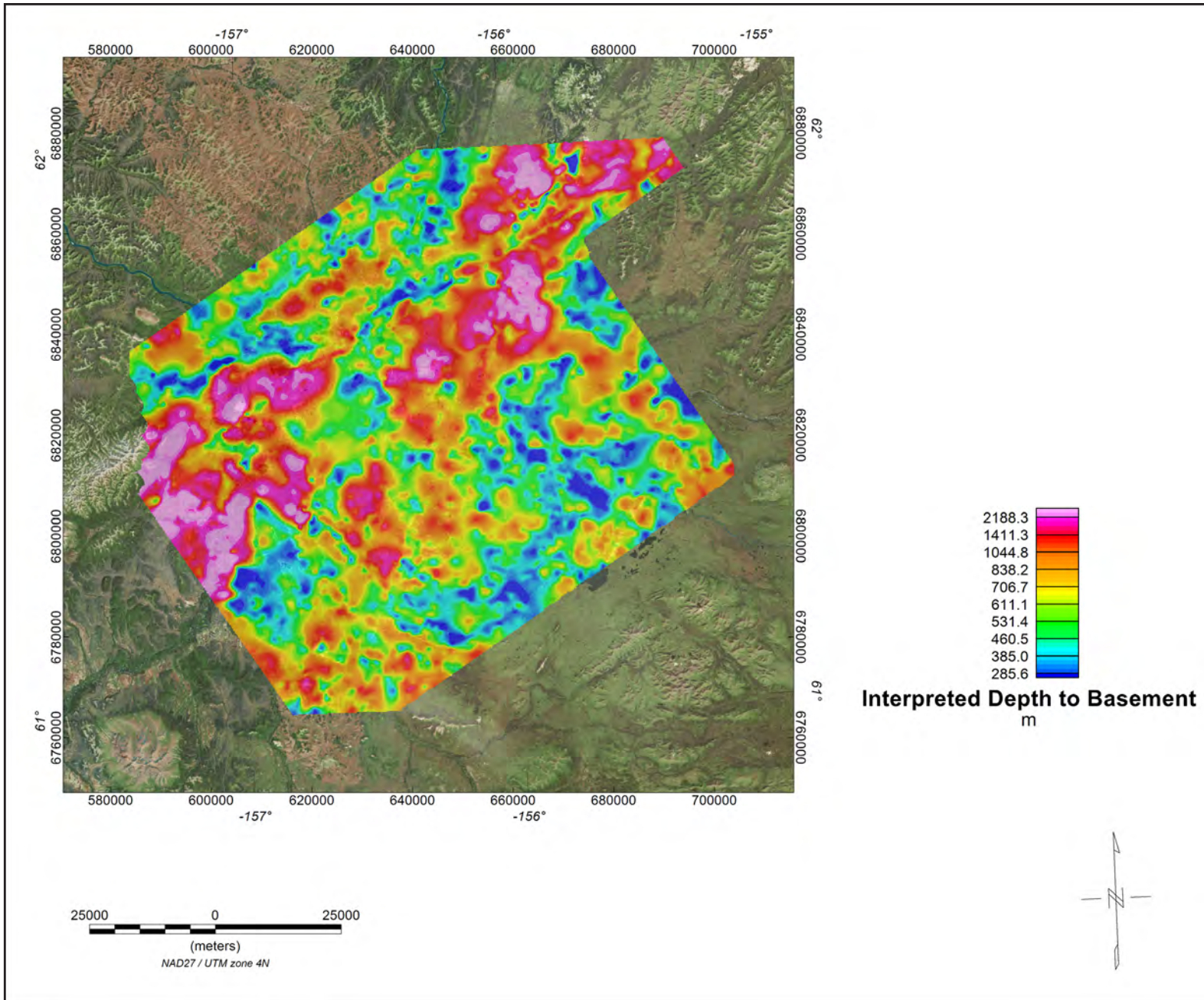


Figure 6. Interpreted depth to basement grid with orthometric image.

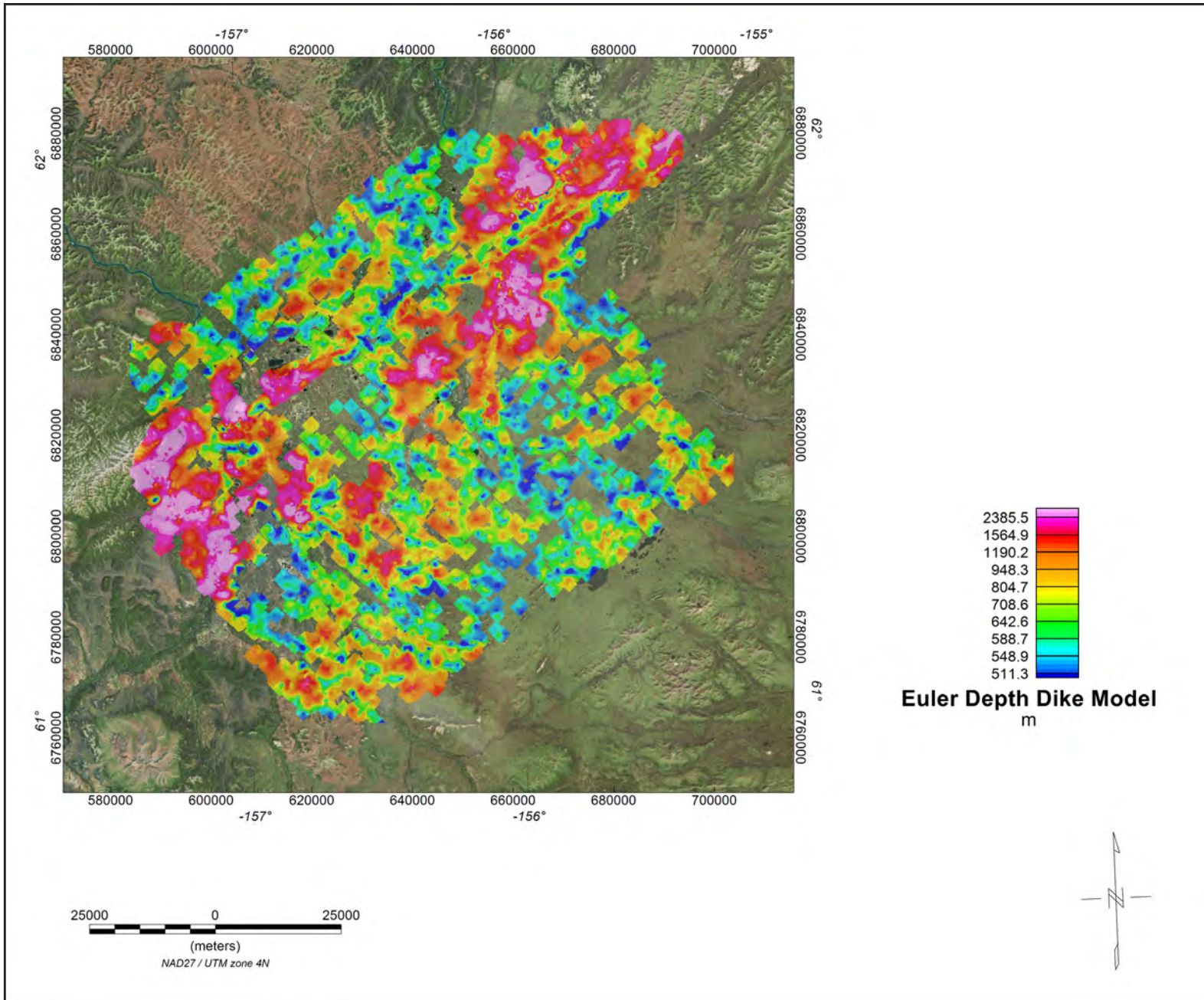


Figure 7. Euler dike model depth to magnetic basement grid and orthometric image.

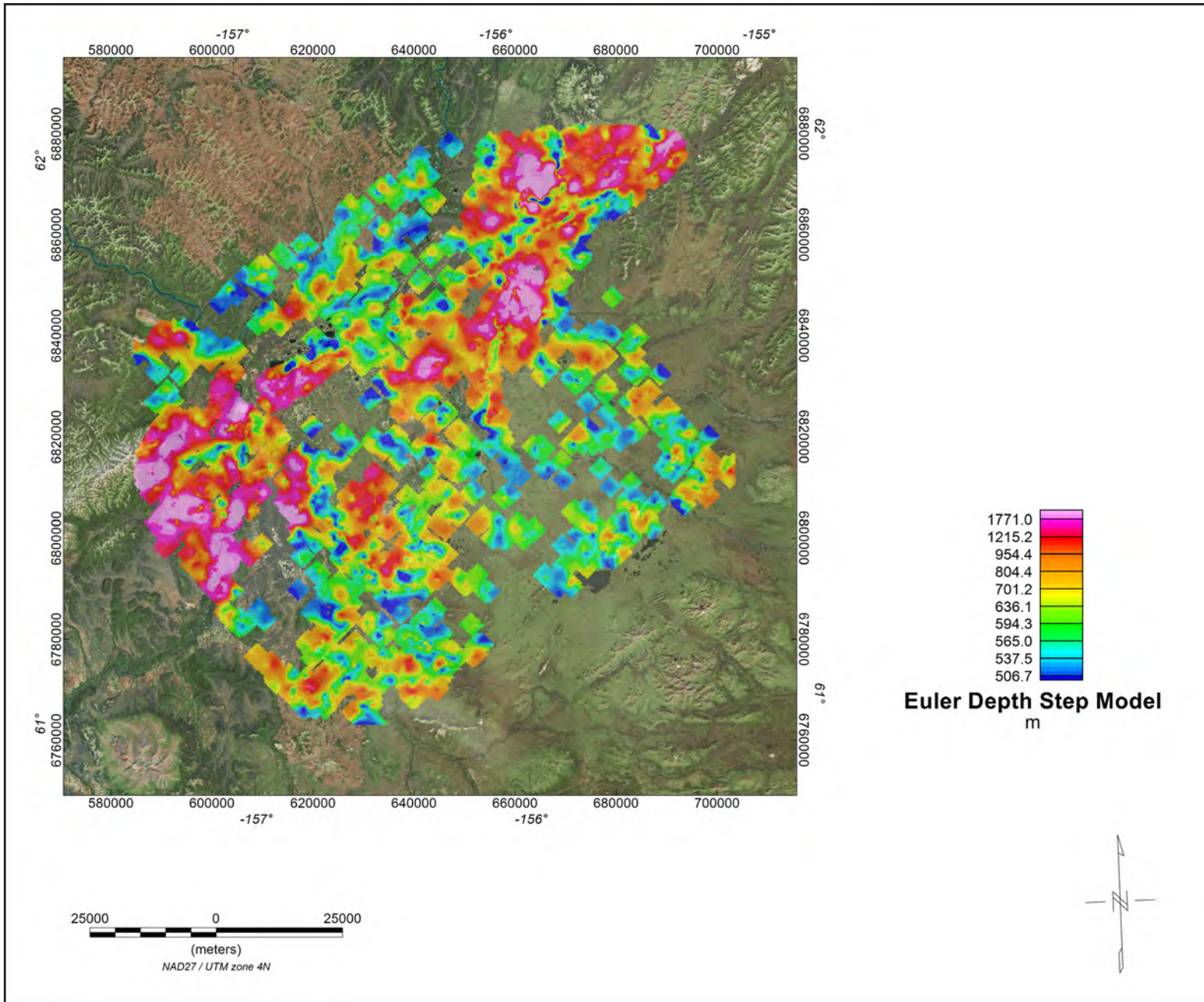
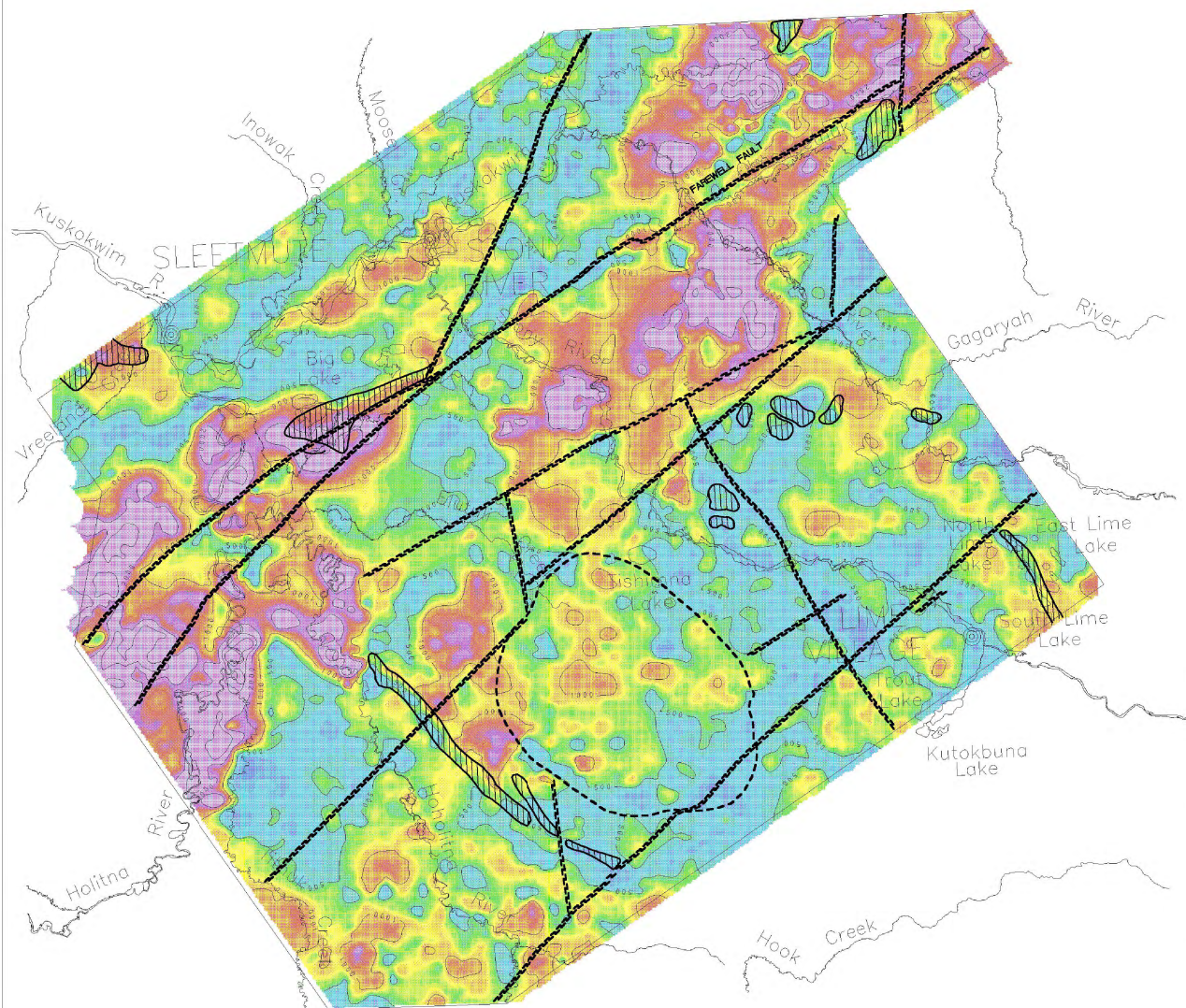


Figure 8. Euler step model depth to magnetic basement grid and orthometric image.

Table 1. Copies of the following maps are included at the end of this booklet. The low-resolution, page-size maps included in this booklet are intended to be used as a search tool and are not the final product. Large-scale, full-resolution versions of each map are available to download on this publication's citation page: <http://doi.org/10.14509/30459>

Map Title	Description
holitnamag_depth_to_basement_topo_map.pdf	depth to basement map
holitnamag_euler_depth_dike_model_topo_map.pdf	Euler depth to magnetic basement using dike model
holitnamag_euler_depth_step_model_topo_map.pdf	Euler depth to magnetic basement using step model
holitnamag_flightlines_topo_map_1of4.pdf	simulated magnetic total field grid with topographic base map
holitnamag_flightlines_topo_map_2of4.pdf	simulated magnetic total field grid with topographic base map
holitnamag_flightlines_topo_map_3of4.pdf	simulated magnetic total field grid and contours with public land survey system base layer
holitnamag_flightlines_topo_map_4of4.pdf	simulated magnetic total field grid and contours with public land survey system base layer
holitnamag_interpretation_plss_map_1of2.pdf	shaded simulated magnetic total field grid with public land survey system base layer
holitnamag_interpretation_plss_map_2of2.pdf	shaded simulated magnetic total field grid with public land survey system base layer
holitnamag_magtf_plss_map_1of2.pdf	magnetic total field grid and public land survey system base layer
holitnamag_magtf_plss_map_2of2.pdf	magnetic total field grid and public land survey system base layer



BASEMENT DEPTH

Map contours are in meters.

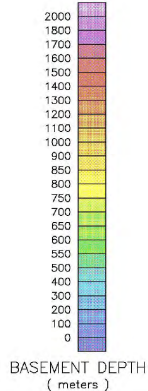
500 m : _____ 500 _____

1000 m : _____ 1000 _____

2000 m : _____ 2000 _____

3000 m : _____ 3000 _____

4000 m : _____ 4000 _____



LEGEND FOR GEOPHYSICAL INTERPRETATION

----- Batholith

----- Presumed Fault

----- Dike / Intrusif



STATE OF ALASKA	
HOLITNA BASIN AIRBORNE GEOPHYSICAL SURVEY SOUTHWESTERN ALASKA	
INTERPRETATION SKETCH MAP	
FIGURE 42	
Map scale :	1: 500 000
Date Compiled :	
Project Ref :	97A03-36 INTHOL500
Date Flown :	

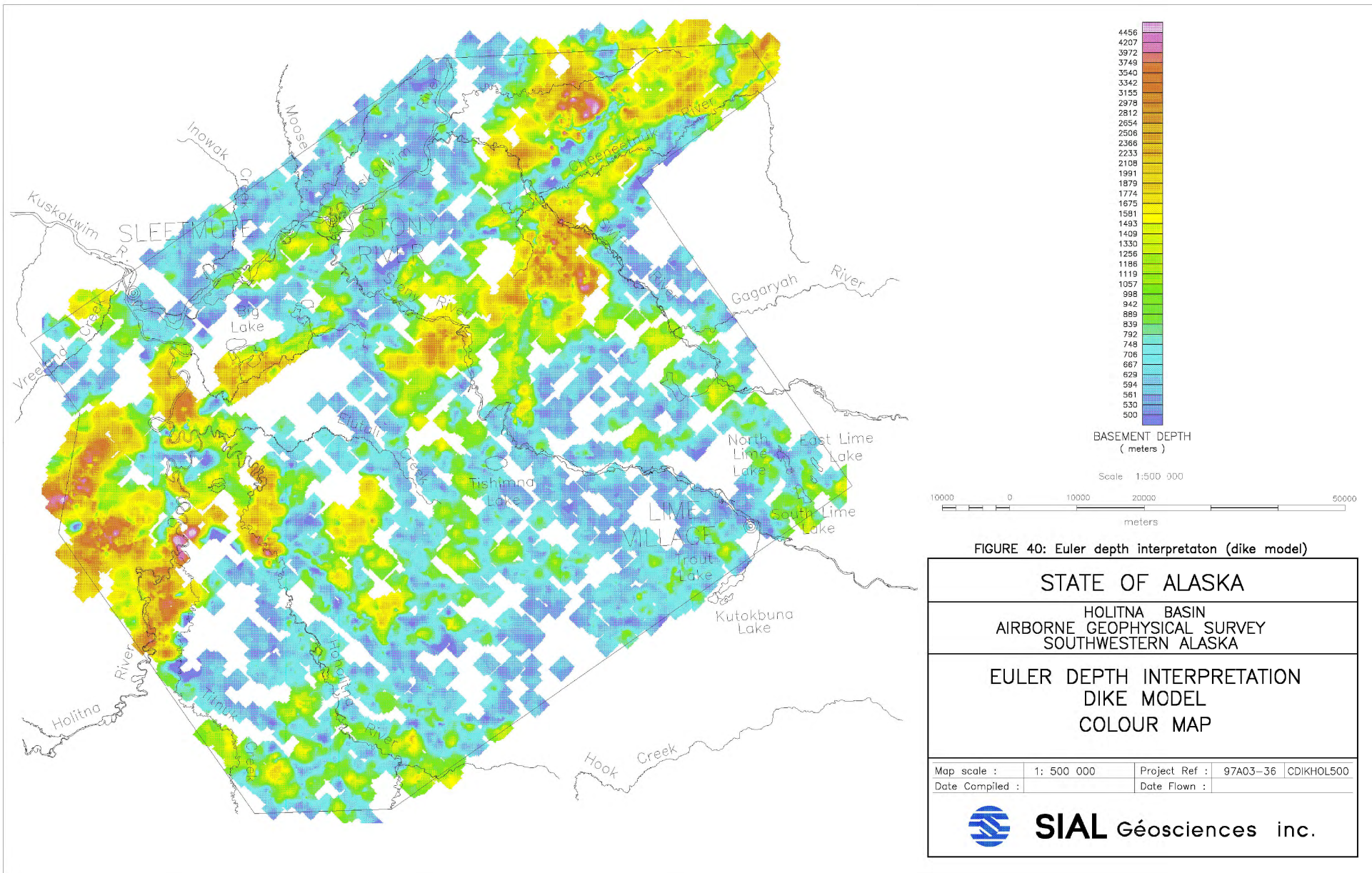

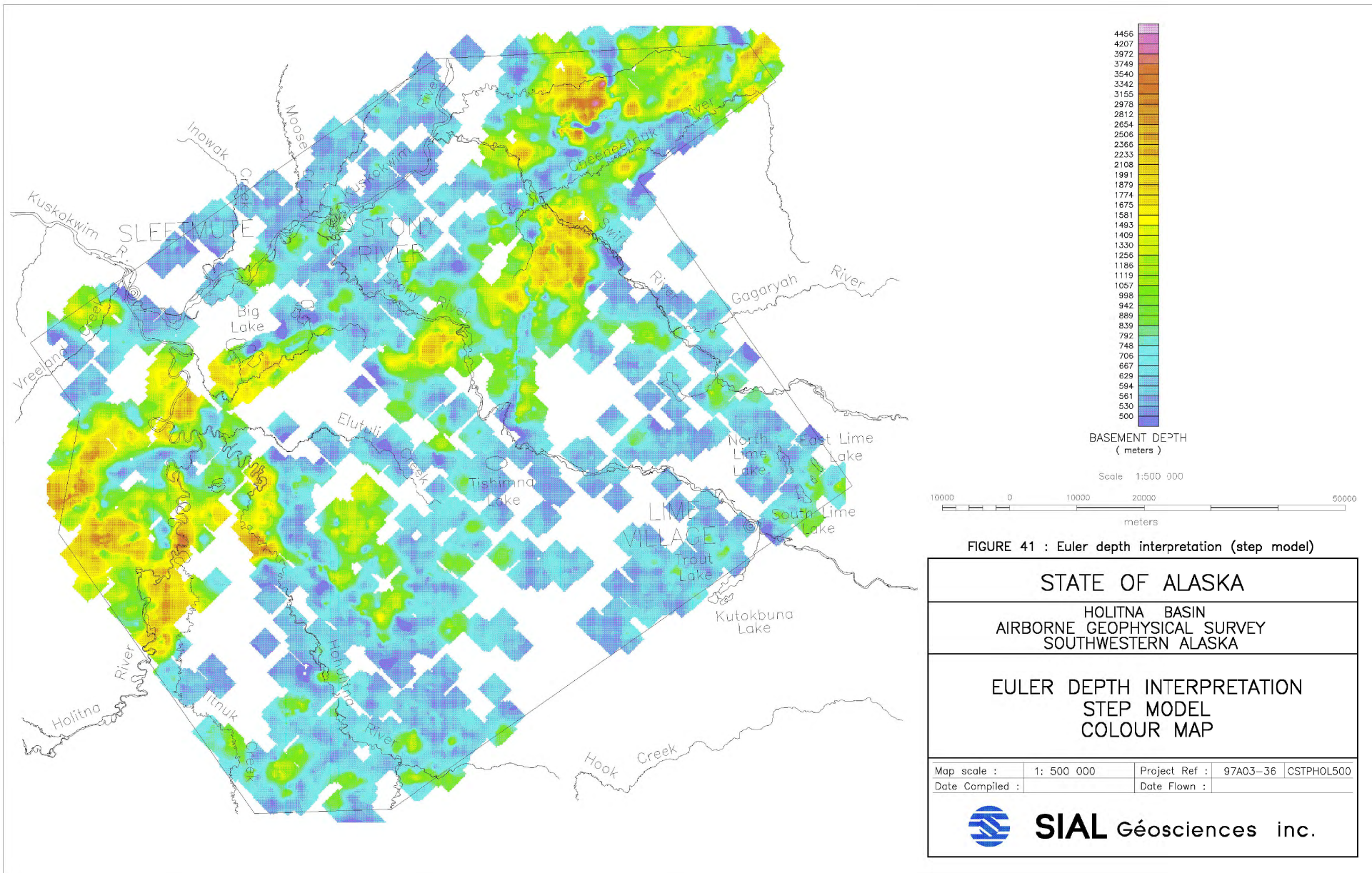
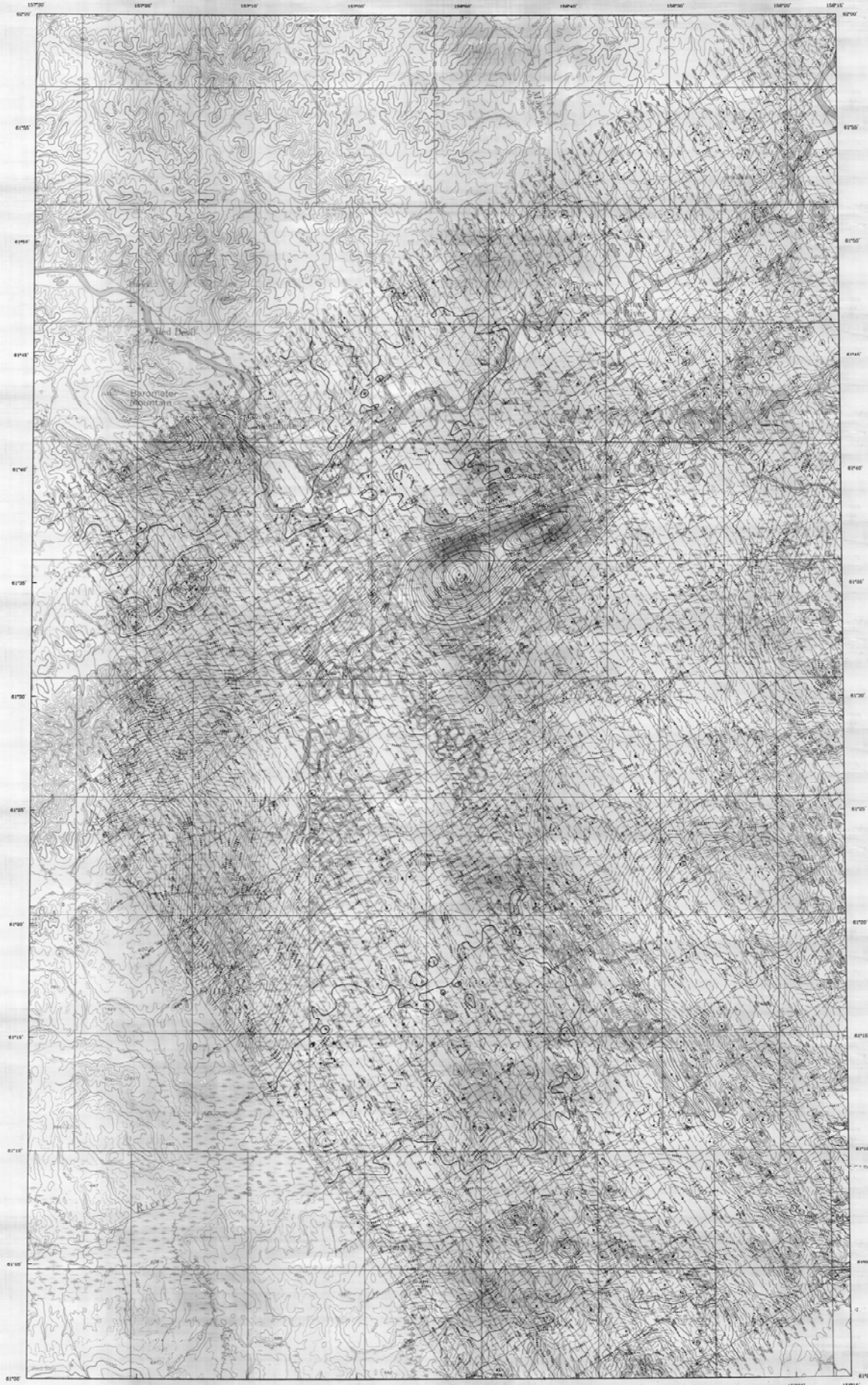


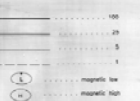
FIGURE 40: Euler depth interpretation (dike model)

STATE OF ALASKA			
HOLITNA BASIN AIRBORNE GEOPHYSICAL SURVEY SOUTHWESTERN ALASKA			
EULER DEPTH INTERPRETATION DIKE MODEL COLOUR MAP			
Map scale :	1: 500 000	Project Ref :	97A03-36 CDIKHOL500
Date Compiled :		Date Flown :	
 SIAL Géosciences inc.			





MAGNETIC CONTOURS



FLIGHT PATH INFORMATION



SURVEY HISTORY

This map has been compiled and drawn under contract between the State of Alaska, Department of Natural Resources, Division of Geological & Geophysical Surveys, and On-Line Expedition Services, Inc. Airborne geophysical data for the area were acquired by Soil Geosciences, Inc., in 1997.

This map and other products from this survey are derived from the Alaska Division of Geological & Geophysical Surveys, 224 University Ave., Suite 200, Fairbanks, Alaska, 99701.

DESCRIPTIVE NOTES

The geophysical data were acquired with a MEG OM-25/MSB data acquisition system, and a Geometrics GDC-A cesium magnetometer installed in a Piper Navajo 310 (C-440) airplane. In addition, the survey received data from a radar altimeter (King KR-10), GPS navigation system, and video camera. Flights were performed at a mean terrain clearance of 300 ft along survey flight lines with a spacing of a half of a mile. The lines were flown perpendicular to the flight lines at intervals of approximately three miles.

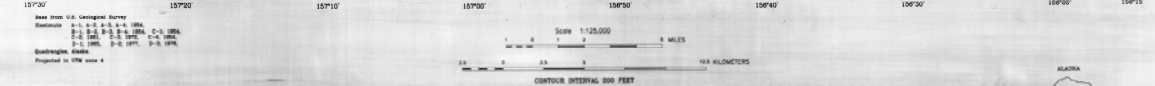
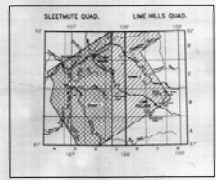
Two Trimble-4000 3C Differential Post-processing Global Positioning Systems were used for both navigation and flight path recovery. The distance solution was derived every one second to a relative accuracy of better than 10 m. Flight path positions were projected onto the Clarke 1886 (LHA) spheroid 1927 North American datum using a Central Meridian (CM) of 159° W, a north constant of 0 and an east constant of 500,000. Precision accuracy of the presented data is better than 10 m with respect to the UTM grid.

TOTAL FIELD MAGNETICS

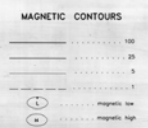
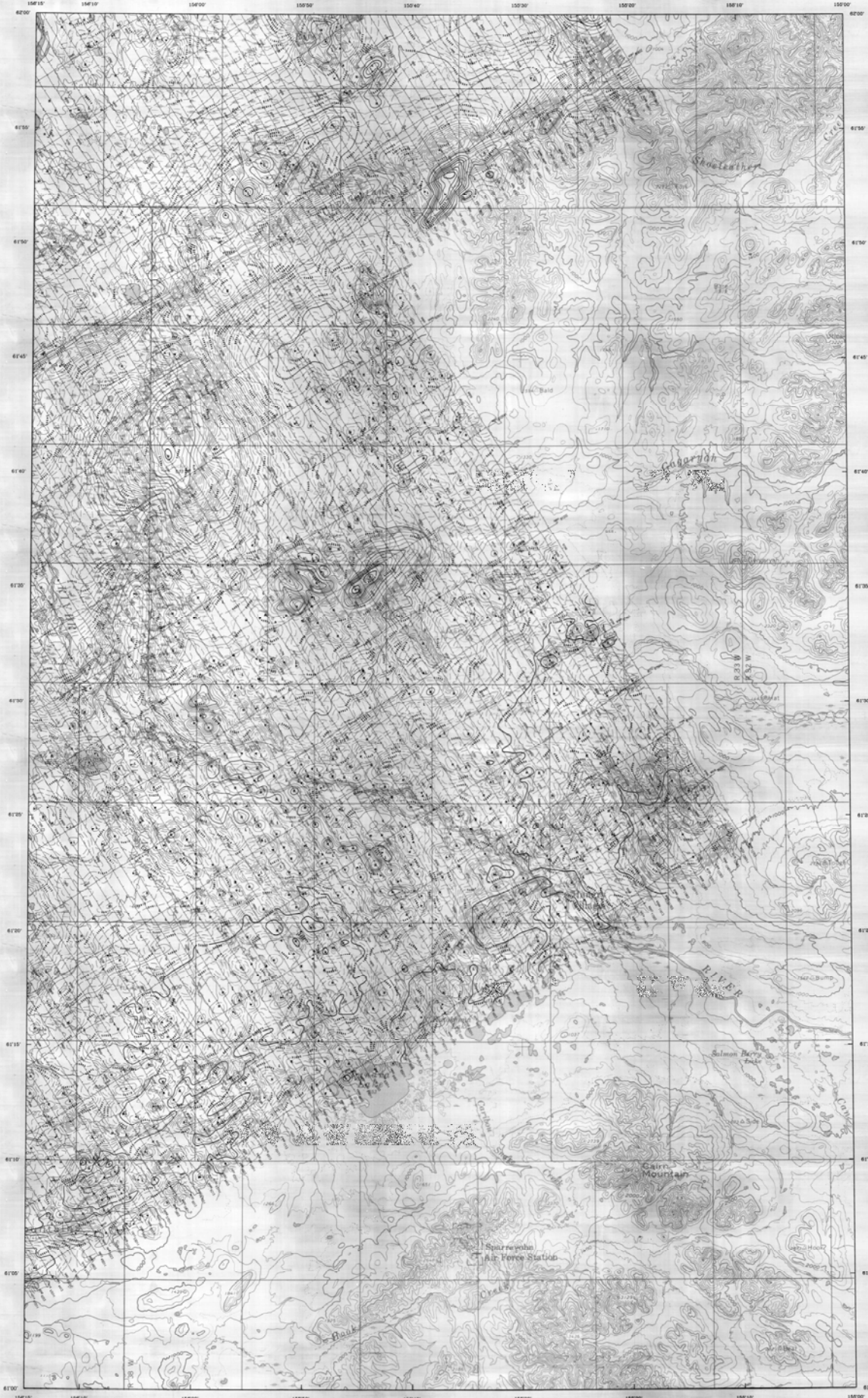
The total field magnetic data were acquired with a cesium magnetometer (1) corrected for diurnal variations by subtraction of the nighttime recorded base station magnetic data, (2) leveled to the base data, and (3) interpolated to a regular 100 m grid using a modified Akima (1970) technique. A regional trend (OM 1995, updated to August 1997) was then removed from the leveled magnetic data.

Atkinson, M., 1970. A new method of interpolation and smooth curve fitting based on local pseudo-convolution of the Resonator of Computing Machinery, v. 11, no. 4, p. 589-602.

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**TOTAL FIELD MAGNETICS CONTOURS
OF THE HOLITNA BASIN AREA, WESTERN ALASKA**



SURVEY HISTORY

This map has been compiled and drawn under contract between the State of Alaska, Department of Natural Resources, Division of Geological & Geophysical Surveys, and On-Line Exploration Services, Inc. Airborne geophysical data for the area were acquired by SRI Geosciences, Inc. in 1997.

This map and other products from this survey are available from the Alaska Division of Geological & Geophysical Surveys, 794 University Ave., Suite 200, Fairbanks, Alaska, 99709.

DESCRIPTIVE NOTES

The geophysical data were acquired with a RUS GP-33/MS500 data acquisition system, and a Geometrics GR22A section magnetometer installed on a Piper Navajo 310 (C-GRAM) airplane. In addition, the survey recorded data from a total station (Scripps 100), a GPS navigation system, and video camera. Flights were performed at a mean terrain clearance of 350 ft along survey flight lines with a spacing of a half of a mile. Tie lines were flown perpendicular to the flight lines at intervals of approximately three miles.

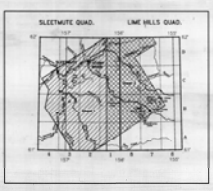
Two Trimble-4000 SE Differential Post-processing Global Positioning Systems were used for both navigation and flight path recovery. The airplane position was derived every one second to a relative accuracy of better than 10 m. Flight path positions were projected onto the Clarke 1866 spheroid, 1927 North American datum using a Clarke spheroid (1879) $k = 0$ north correction of 0 and an east constant of 500,000. Positional accuracy of the prepared data is better than 10 m with respect to the UTM grid.

TOTAL FIELD MAGNETICS

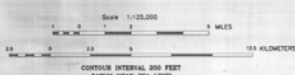
The total field magnetic data were acquired with a sampling interval of 0.1 seconds, and were (1) corrected for diurnal variations by subtraction of the digitally recorded base station magnetic data, (2) leveled to the tie line data, and (3) interpolated onto a regular 100 m grid using a modified Akima (1970) technique. A regional trend (Goff 1965, updated to August 1997) was then removed from the leveled magnetic data.

Akima, H., 1970. A new method of interpolation and smooth curve fitting based on local procedures. *Journal of the Association of Computing Machinery*, v. 17, no. 6, 589-602.

LOCATION INDEX

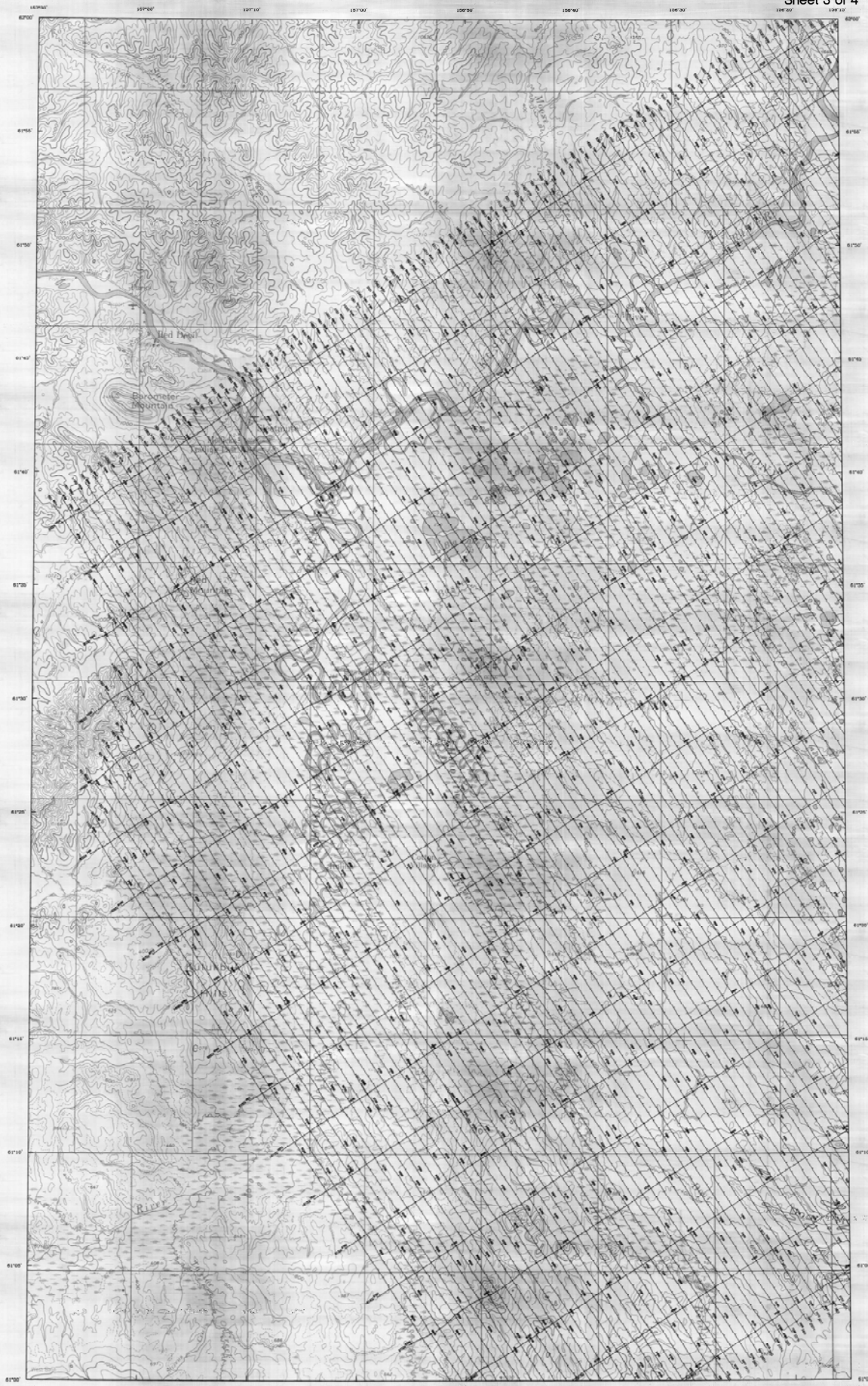


Base Data: U.S. Geological Survey
 Data: A-B, 1984; C-E, 1984; F-H, 1984; I-K, 1984; L-N, 1984; O-P, 1984; Q-R, 1984; S-T, 1984; U-V, 1984; W-X, 1984; Y-Z, 1984.
 Geographical Names: Projected to 1983 datum.



**TOTAL FIELD MAGNETICS CONTOURS
 OF THE HOLITNA BASIN AREA, WESTERN ALASKA**





FLIGHT PATH INFORMATION



SURVEY HISTORY

This map has been compiled and drawn under contract between the State of Alaska, Department of Natural Resources, Division of Geological & Geophysical Surveys, and On-Line Exploration Services, Inc. Airborne geophysical data for this area were acquired by Skui Geoservices, Inc., in 1992.

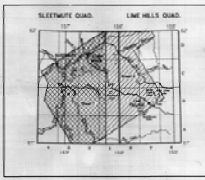
This map and other products from this survey are available from the Alaska Division of Geological & Geophysical Surveys, 724 University Ave., Suite 200, Fairbanks, Alaska, 99709.

DESCRIPTIVE NOTES

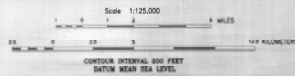
The geophysical data were acquired with a RMS CR-25/40000 data acquisition system, and a Geometrics G25A cesium magnetometer (model) or a Piper Hango 210 (C-CAM) dipmeter, in addition, the survey reported data from a rotor altimeter (King KKA-10), GPS navigation system, and video camera. Flights were performed at a mean terrain clearance of 300 ft along survey flight lines with a spacing of a half of a mile. Flight lines were flown perpendicular to the flight lines at intervals of approximately three miles.

Two Trimble-4000 SE Differential Post-processing Global Positioning Systems were used for both navigation and flight path recovery. The airplane position was derived every one second to a relative accuracy of better than 10 m. Flight path positions were projected onto the Clarke 1859 UTM spheroid 197 North American datum using a Central Meridian (CM) of 150° W, a north constant of 0 and an east constant of 500,000. Positional accuracy of the projected data is better than 10 m with respect to the UTM grid.

LOCATION INDEX

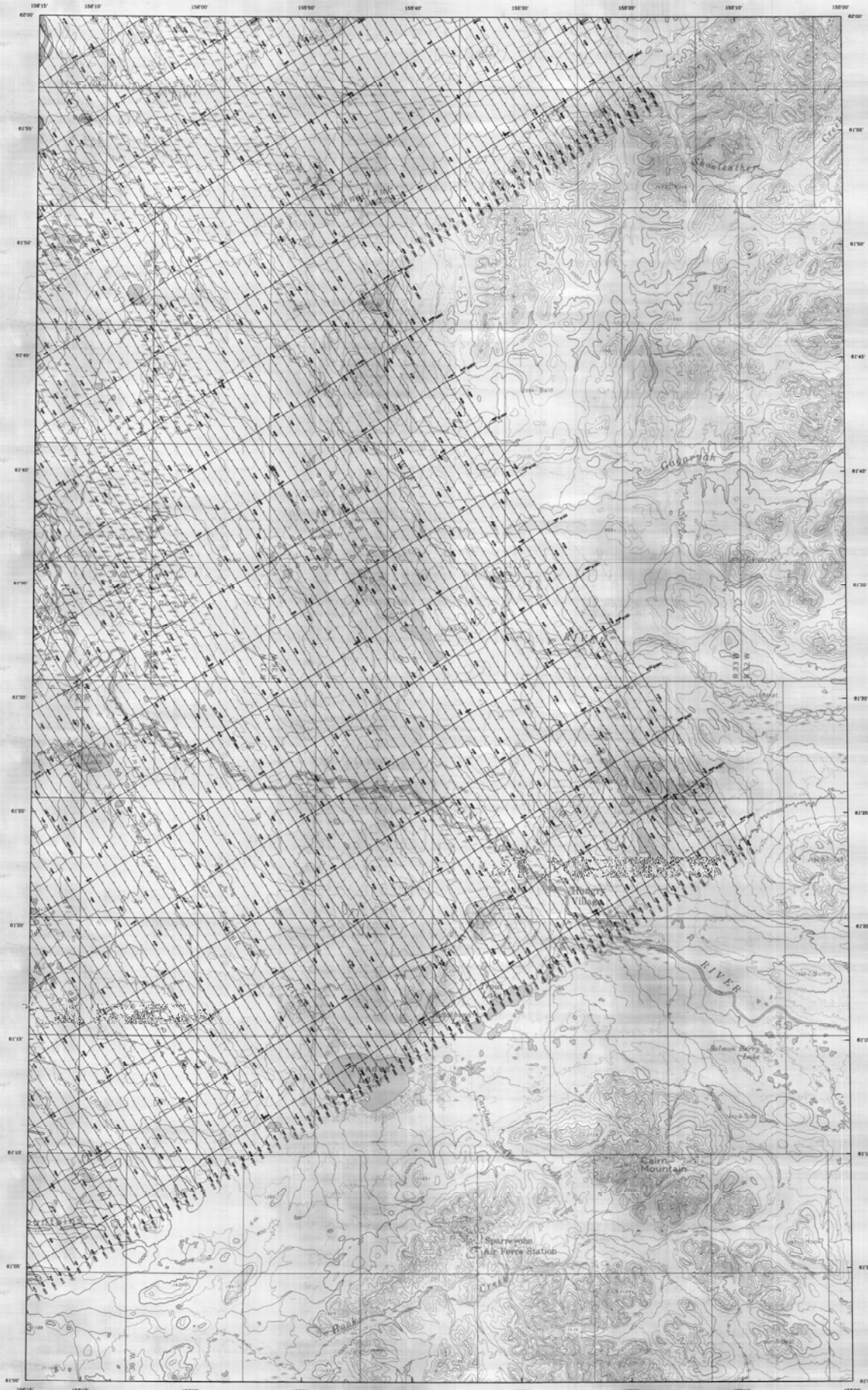


Map from U.S. Geological Survey
 Reference: G-1, G-2, G-3, G-4, 1984
 G-5, 1985; G-6, G-7, G-8, 1986
 G-9, 1987; G-10, 1988; G-11, 1989
 G-12, 1990; G-13, 1991; G-14, 1992



**FLIGHT LINE PATH
OF THE HOLITNA BASIN AREA, WESTERN ALASKA**





FLIGHT PATH INFORMATION



SURVEY HISTORY

This map has been compiled and drawn under contract between the State of Alaska, Department of Natural Resources, Division of Geological & Geophysical Surveys, and On-Line Exploration Services, Inc. Aerial geophysical data for the area were acquired by SGI Geoscience, Inc., in 1987.

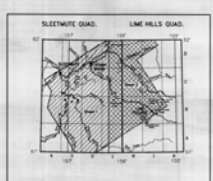
This map and other products from this survey are available from the Alaska Division of Geological & Geophysical Surveys, The University Ave., Suite 200, Fairbanks, Alaska, 99709.

DESCRIPTIVE NOTES

The geophysical data were acquired with a RME GR-33/HC300 data acquisition system, and a Geometrics G823A cesium magnetometer installed in a Piper Navajo 310 (C-440) airplane. In addition, the survey reported data from a radar altimeter (King KRA-10), GPS navigation system, and video camera. Flights were performed at a mean terrain clearance of 300 ft along survey flight lines with a spacing of a half of a mile. The lines were flown perpendicular to the flight lines at intervals of approximately three miles.

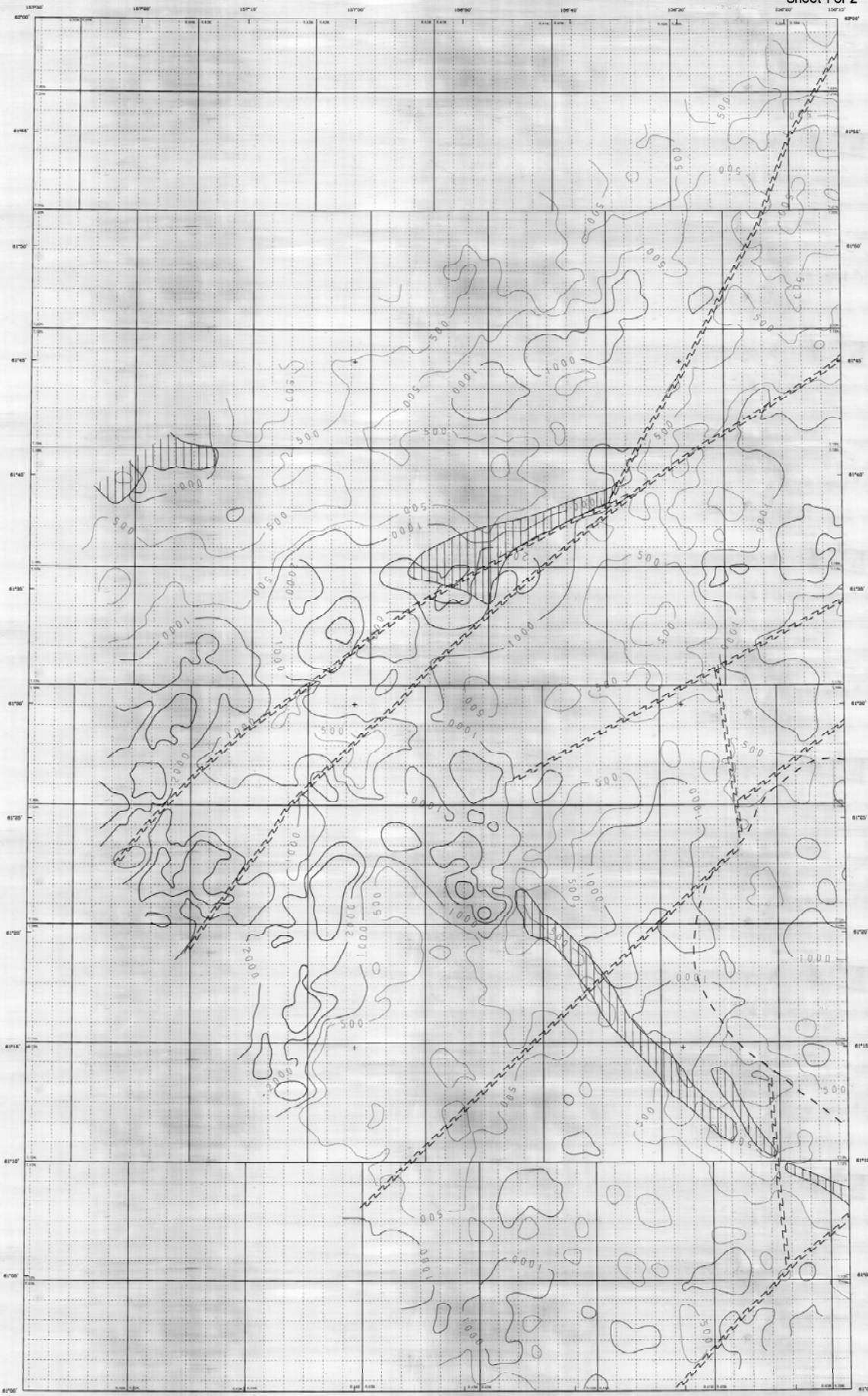
Two Trimble-4000 SE Differential Post-processing Global Positioning Systems were used for both magnetic and flight path recovery. The airplane position was derived every one second to a relative accuracy of better than 10 m. Flight path positions were projected onto the Clarke 1866 (CMA) spheroid, 1927 North American datum using a Central Meridian (CM) of 155° W, a north constant of 0 and an east constant of 800,000. Horizontal accuracy of the presented data is better than 10 m with respect to the UTM grid.

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Map from U.S. Geological Survey
 Line Hills A-1, 1970; B-1, 1970; C-1, 1970; D-1, 1970; E-1, 1970; F-1, 1970; G-1, 1970; H-1, 1970; I-1, 1970; J-1, 1970; K-1, 1970; L-1, 1970; M-1, 1970; N-1, 1970; O-1, 1970; P-1, 1970; Q-1, 1970; R-1, 1970; S-1, 1970; T-1, 1970; U-1, 1970; V-1, 1970; W-1, 1970; X-1, 1970; Y-1, 1970; Z-1, 1970; AA-1, 1970; AB-1, 1970; AC-1, 1970; AD-1, 1970; AE-1, 1970; AF-1, 1970; AG-1, 1970; AH-1, 1970; AI-1, 1970; AJ-1, 1970; AK-1, 1970; AL-1, 1970; AM-1, 1970; AN-1, 1970; AO-1, 1970; AP-1, 1970; AQ-1, 1970; AR-1, 1970; AS-1, 1970; AT-1, 1970; AU-1, 1970; AV-1, 1970; AW-1, 1970; AX-1, 1970; AY-1, 1970; AZ-1, 1970; BA-1, 1970; BB-1, 1970; BC-1, 1970; BD-1, 1970; BE-1, 1970; BF-1, 1970; BG-1, 1970; BH-1, 1970; BI-1, 1970; BJ-1, 1970; BK-1, 1970; BL-1, 1970; BM-1, 1970; BN-1, 1970; BO-1, 1970; BP-1, 1970; BQ-1, 1970; BR-1, 1970; BS-1, 1970; BT-1, 1970; BU-1, 1970; BV-1, 1970; BW-1, 1970; BX-1, 1970; BY-1, 1970; BZ-1, 1970; CA-1, 1970; CB-1, 1970; CC-1, 1970; CD-1, 1970; CE-1, 1970; CF-1, 1970; CG-1, 1970; 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**FLIGHT LINE PATH
OF THE HOLITNA BASIN AREA, WESTERN ALASKA**



BASAMENT DEPTH

Map contours are in meters.

500 m	1000
1000 m	2000
2000 m	3000
3000 m	4000

LEGEND FOR GEOPHYSICAL INTERPRETATION

	Basin
	Basement Fault
	Shear / Fault

SURVEY HISTORY

This map has been compiled and drawn under contract between the State of Alaska, Department of Natural Resources, Division of Geological & Geophysical Surveys, and On-Line Exploration Services, Inc. All geophysical data for the area were acquired by Sol Geosciences, Inc. in 1997.

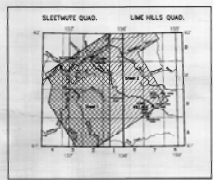
This map and other products from this survey are available from the Alaska Division of Geological & Geophysical Surveys, 701 University Ave., Suite 200, Fairbanks, Alaska, 99709.

DESCRIPTIVE NOTES

The geophysical data were acquired with a BRIS CH-11/10000 data acquisition system, and a Quantum GEESA cesium magnetometer installed in a Piper Navajo 310 C-19000 airplane. In addition, the survey recorded data from a rotor altimeter (King 400-10), GPS navigation system, and video camera. Flights were performed at a mean barometric pressure of 100 ft along survey flight lines with a spacing of a half of a mile. The lines were flown perpendicular to the flight lines at intervals of approximately three miles.

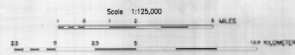
Two Trimble-4000 SE Differential Post-processing Global Positioning Systems were used for both navigation and flight path recovery. The accurate position was derived every one minute to an accuracy of better than 10 m. Flight path positions were projected onto the Corne 1980 (UTM) datum. 1927 North American datum using a Clarke Spheroid (74) of 1907 M, a north constant of 0 and an east constant of 500,000. Positional accuracy of the presented data is better than 10 m with respect to the UTM grid.

LOCATION INDEX



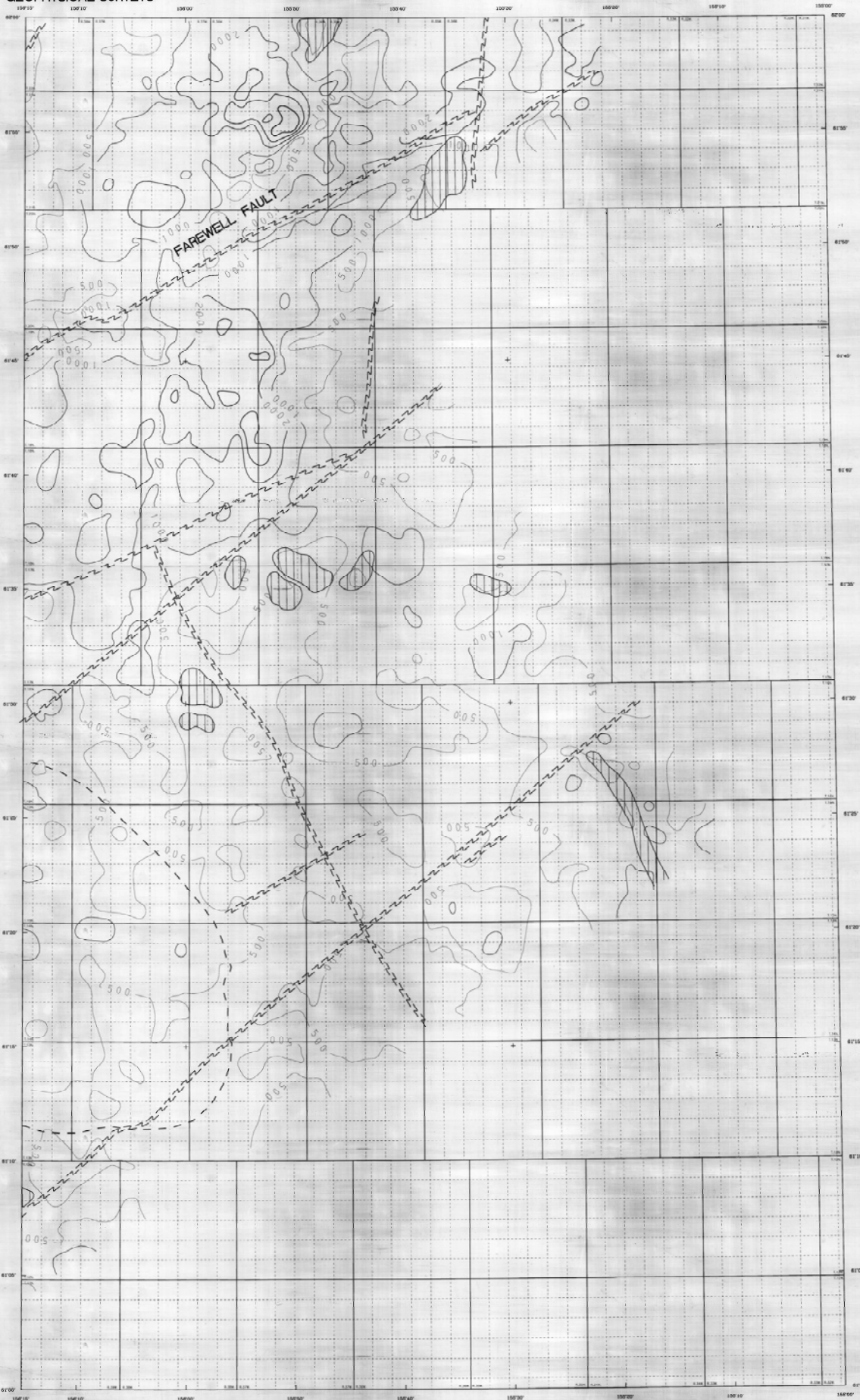
Section line from U.S. Geological Survey
 Resection: 4-1, 4-2, 4-3, 4-4, 1984, 2-1, 1984,
 2-2, 1984, 2-3, 1984, 2-4, 1984,
 2-5, 1984, 2-6, 1984, 2-7, 1984,
 2-8, 1984, 2-9, 1984, 2-10, 1984.

Projected to UTM zone 4



**INTERPRETATION SKETCH MAP
 OF THE HOLITNA BASIN AREA, WESTERN ALASKA**





BASEMENT DEPTH

Map contours are in meters

500 m	1000 m
1000 m	2000 m
2000 m	3000 m
3000 m	4000 m

LEGEND FOR GEOPHYSICAL INTERPRETATION

	Basement
	Fracture zone
	Shale / siltstone

SURVEY HISTORY

This map has been compiled and drawn under contract between the State of Alaska, Department of Natural Resources, Division of Geological & Geophysical Surveys, and Geologic Exploration Services, Inc. Airborne geophysical data for this area were acquired by Sog Geosciences, Inc. in 1997.

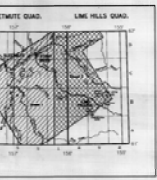
This map and other products from this survey are available from the Alaska Division of Geological & Geophysical Surveys, 794 University Ave., Suite 200, Fairbanks, Alaska, 99709.

DESCRIPTIVE NOTES

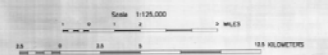
The geophysical data were acquired with a F405 DR 357/40200 data acquisition system, and a Geometrics G222A cesium magnetometer installed in a Piper Navajo 310 (C-440A) airplane. In addition, the survey recorded data from a radar altimeter (King 404-10), GPS navigation system, and video camera. Flights were performed at a mean terrain clearance of 300 ft above survey flight lines with a spacing of 0.75 mi. The 1998 data were flown perpendicular to the flight lines of intervals of approximately 1000 m.

Two Trimble-4000 SC Differential Post-processing Global Positioning Systems were used for both navigation and flight path recovery. The airborne position was derived every one second to a relative accuracy of better than 10 m. Flight path positions were projected onto the Alaska Albers (1983) North American datum using a Central Meridian (CM) of 159° W, a north constant of 0 and an east constant of 800,000. Horizontal accuracy of the presented data is better than 10 m with respect to the 1983 datum.

LOCATION INDEX



Scale from U.S. Geological Survey
 Date: 1998
 Author: G. J. ...
 Projected to NAD 83 datum

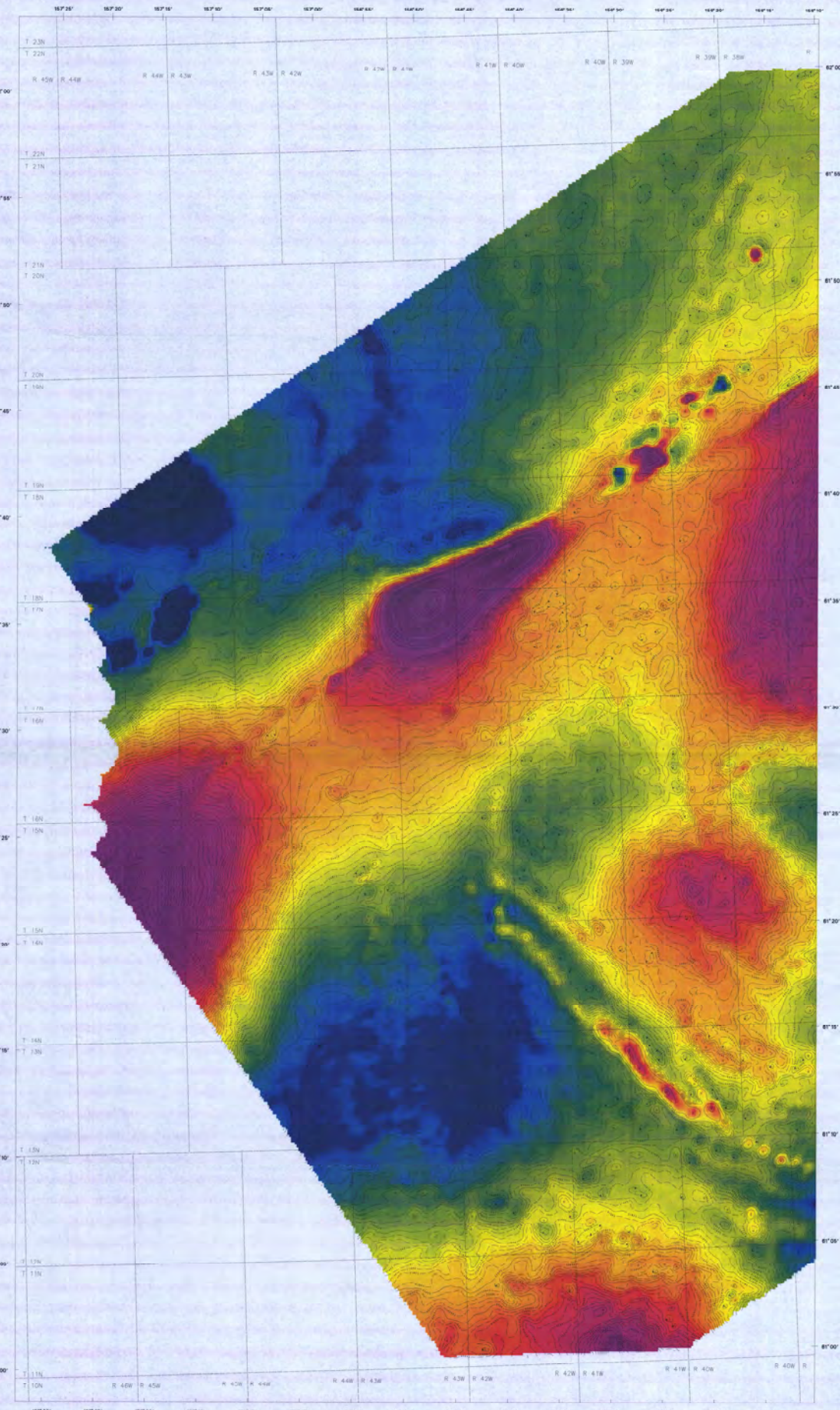
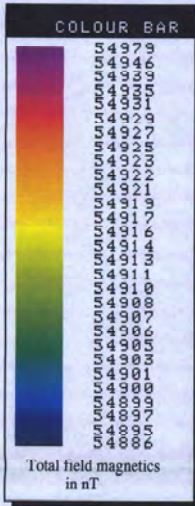


**INTERPRETATION SKETCH MAP
 OF THE HOLITNA BASIN AREA, WESTERN ALASKA**





Department of Natural Resources
Division of Geological & Geophysical Surveys
Geologic Data Modeling System



SURVEY HISTORY
This map has been compiled and drawn under contract between the State of Alaska, Department of Natural Resources, Division of Geological & Geophysical Surveys (DGGS), and On-line Exploration Services, Inc. All magnetic geophysical data for the area were acquired by On-line Exploration Services, Inc. in 1992.

This map and other products from this survey are available from DGGS, 724 University Ave., Suite 200, Fairbanks, Alaska, 99709. Phone: (907) 451-6500. FAX: (907) 451-6566.

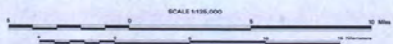
DISCUSSIVE NOTES
The geophysical data were acquired with a RMS CR-33 HD500 data acquisition system, and a Geometrics G822A cesium magnetometer installed in a Fair River 250 (C-GAM) airplane. In addition, the survey recorded data from a radio altimeter (RGA), GPS navigation system, and video camera. Data were processed on a main frame computer at 300 m along survey flight lines with a spacing of 100 m. The data were then processed to the flight lines at intervals of approximately 100 m.

Two Trimble 4000 SE Differential Post-processing Global Positioning Systems were used for both navigation and flight path recovery. The airplane position was derived every one second to a relative accuracy of better than 10 m. Flight path positions were projected onto the ground using differential GPS. The datum used was using a Central Meridian (CM) of 159 degrees west, a north coordinate of 0 and an east coordinate of 500,000. Positional accuracy of the processed data is better than 10 m with respect to size of the grid.

TOTAL FIELD MAGNETICS
The total field magnetic data were acquired with a sampling interval of 0.1 seconds. The magnetic data were processed to a regular 200 m grid using a method known as the "smooth curve fitting" method.

Alkins, H., 1970. A new method of interpolation and smooth curve fitting based on local procedures. *Journal of the Association of Computing Machinery* v. 17, no. 4, p. 589-602.

Section outlines from U.S. Geological Survey topographic bases: Sheetwise A-1, A-2, A-3, A-4; 194A, B-1, B-2, B-3, A-1; 195A, C-1; 195A, C-2; 1972, C-4; 195A, D-1, 1991; D-2; 1971-9; 1975; Unalaska, Alaska.



**TOTAL FIELD MAGNETICS OF THE
HOLITNA BASIN AREA, WESTERN ALASKA**

The State of Alaska makes no express or implied warranties (including warranties for merchantability and fitness) with respect to the character, functions, or capabilities of the electronic services or products or their interoperation with any other system, or the extent, whether or not, of the electronic services or products, nor the results of their use. The State of Alaska shall not be liable for any damages, including consequential or other damages, suffered by the user or any other person or entity, whether or not, of the electronic services or products, nor the results of their use, and in no event will the State of Alaska be liable for the negligence or anyone else who used the fee paid for the electronic service or product.

