

GROUND GRAVITY GEOPHYSICAL SURVEY OF THE HOLITNA BASIN AREA, ALASKA, DATA COMPILATION

David L. LePain, Abraham M. Emond, and Edcon, Inc.

Raw Data File 2020-8

2020
STATE OF ALASKA
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF GEOLOGICAL & GEOPHYSICAL SURVEYS



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Suggested citation:

LePain, D.L., Emond, A.M., and Edcon, Inc., 2020, Ground gravity geophysical survey of the Holitna basin area, Alaska: Alaska Division of Geological & Geophysical Surveys Raw Data File 2020-8, 5p. <http://doi.org/10.14509/30461>



GROUND GRAVITY GEOPHYSICAL SURVEY OF THE HOLITNA BASIN AREA, ALASKA, DATA COMPILATION

David L. LePain¹, Emond, A.M.¹, Edcon, Inc.

ABSTRACT

Gravity data were acquired at 1,175 stations during the period April 13 to May 3, 1982 by EDCON, Inc. using a helicopter-borne inertial surveying system and LaCoste and Romberg G-meters. Of the total number of stations, 1,156 were acquired along one of 19 lines and the remaining 19 stations were control points or gravity bases. The survey is located in southwestern Alaska approximately 325 kilometers west of Anchorage, Alaska. Stations acquired along the 19 lines. In general, gravity stations were spaced approximately 1,600 meters apart along northwest-southeast oriented lines which were spaced 9,500 meters apart.

PURPOSE

These data were collected to assist the state in assessing the hydrocarbon potential of the Holitna Basin area. The gravity data were 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

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>

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AVAILABLE DATA

Data Type	Provider	Description
ascii_data	contractor	ASCII format line data, other ASCII data
documents	contractor	Project and interpretation reports
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
maps_pdf_format	contractor	Printable maps in pdf format
vector_data	contractor and DGGS	survey boundary in ESRI shapefile (SHP) format

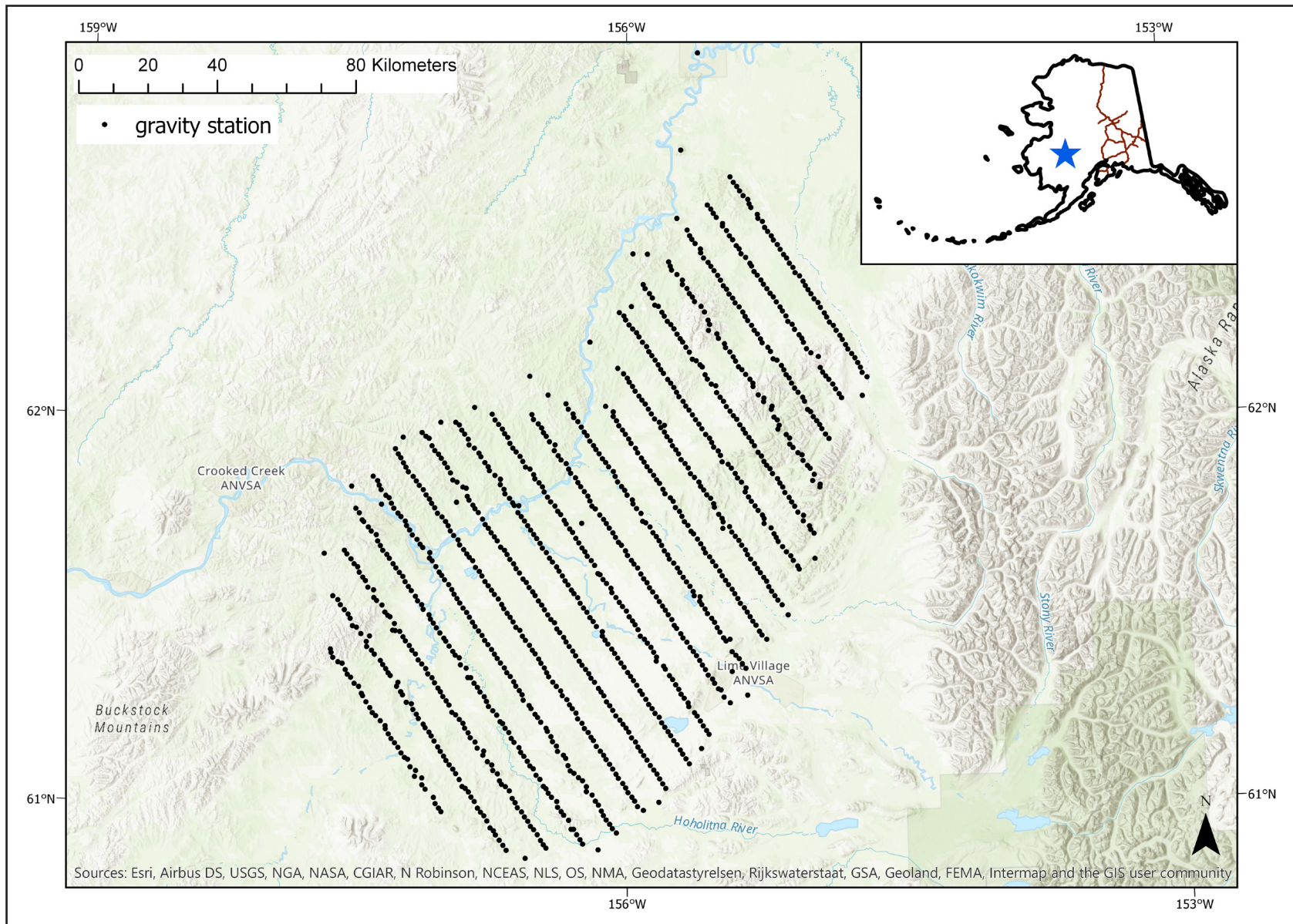


Figure 1. Holitna gravity station map with topographic basemap.

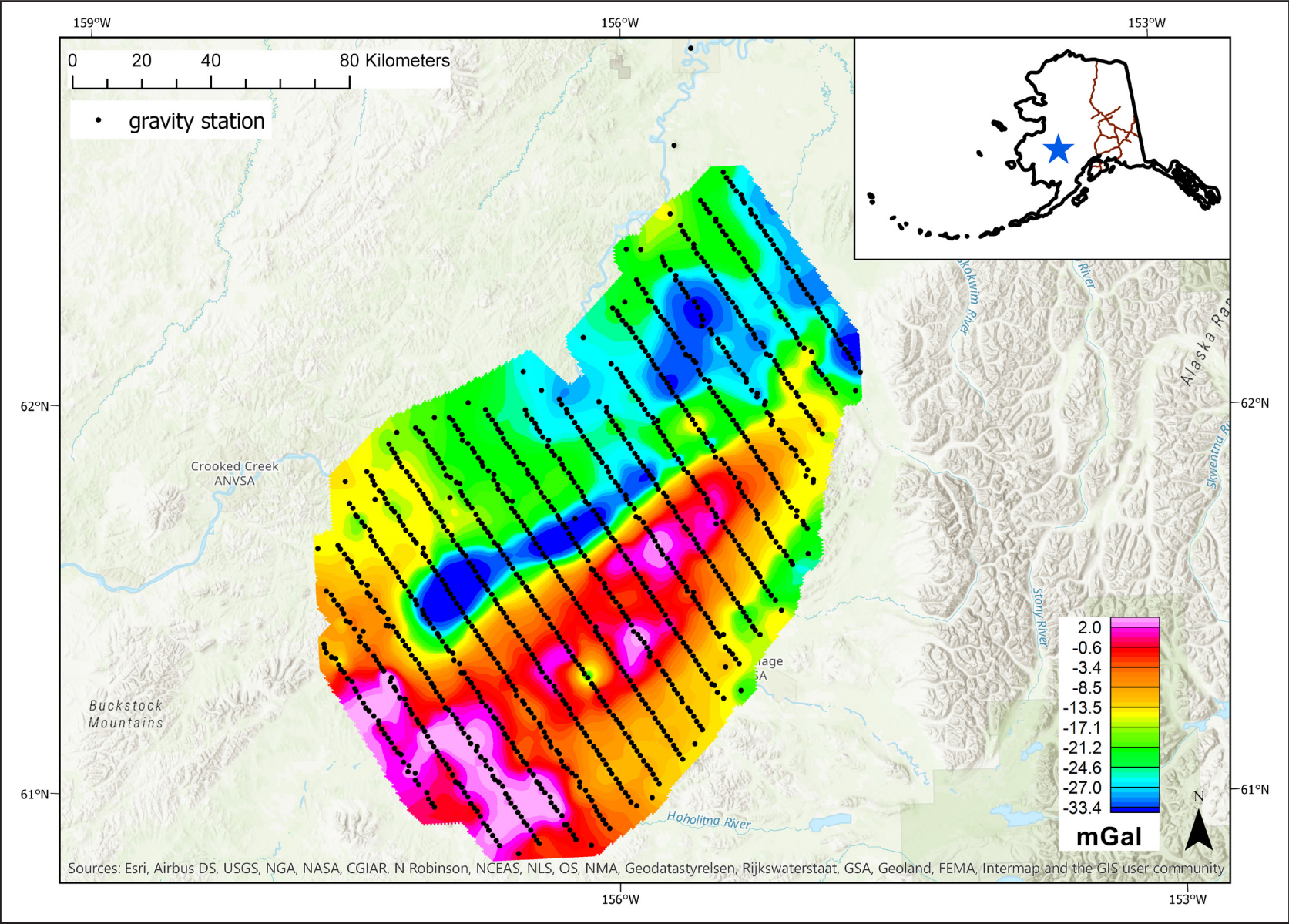


Figure 2. Holitna gravity complete Bouguer Anomaly grid with topographic basemap.

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/10.14509/30461>

Map Title	Description
holitnagrav_dembw.pdf	color map of 2.67 g/cc Complete Bouguer gravity contoured at 1 mGal
holitnagrav_boug.pdf	black and white map of 2.67 g/cc Complete Bouguer gravity contoured at 1 mGal
holitnagrav_bougbw.pdf	color map of terrain contoured at 40 meters with station locations annotated
holitnagrav_dem.pdf	black and white map of terrain contoured at 40 meters with station locations annotated

157°W

156°W

155°W

62° 30'N

62° 00'N

61° 30'N

61° 00'N

6900000

6850000

6800000

6750000

250000

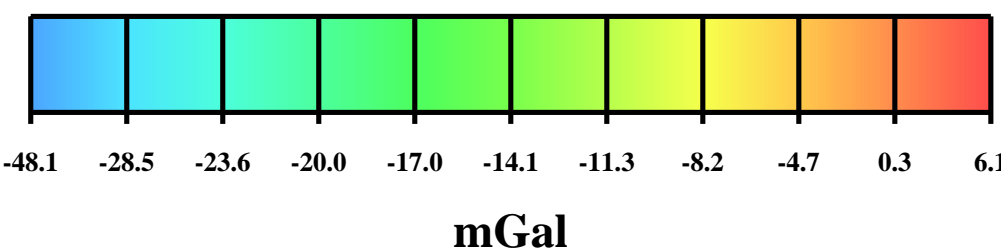
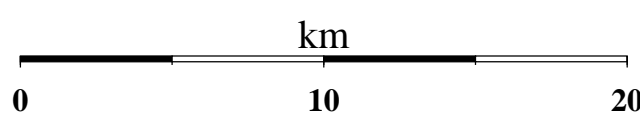
300000

350000

400000



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MAPPING PARAMETERS	
PROJECTION:	Universal Transverse Mercator
ELLIPSOID:	Clarke 1866
CENTRAL MERIDIAN:	153° West
Y-AXIS ORIGIN:	0° North
SCALE FACTOR:	0.9996
FALSE EASTING:	500,000.0 Meters
FALSE NORTHING:	0.0 Meters
GRID INTERVAL:	1,000 Meters
GEODETTIC DATUM:	NAD-27

STATE OF ALASKA		
DIVISION OF GEOLOGICAL & GEOPHYSICAL SURVEYS		
HOLITNA BASIN, ALASKA		
COMPLETE BOUGUER GRAVITY		
Bouguer Density = 2.67 g/cm ³		
Terrain Corrected to Hayford-Bowie Zone O		
SCALE: 1 / 250,000	C.I. = 1.0 mGal	DATE: Nov., 2000
REF NO. 8217 64 01		
REVISED BY:	CHKD. BY:	APPRVD. BY:
EDCON, INC.		
DENVER, COLORADO		

157°W

156°W

155°W

62° 30'N

62° 00'N

61° 30'N

61° 00'N

6900000

6850000

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6750000

250000

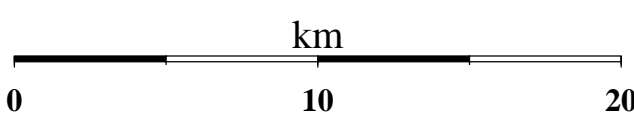
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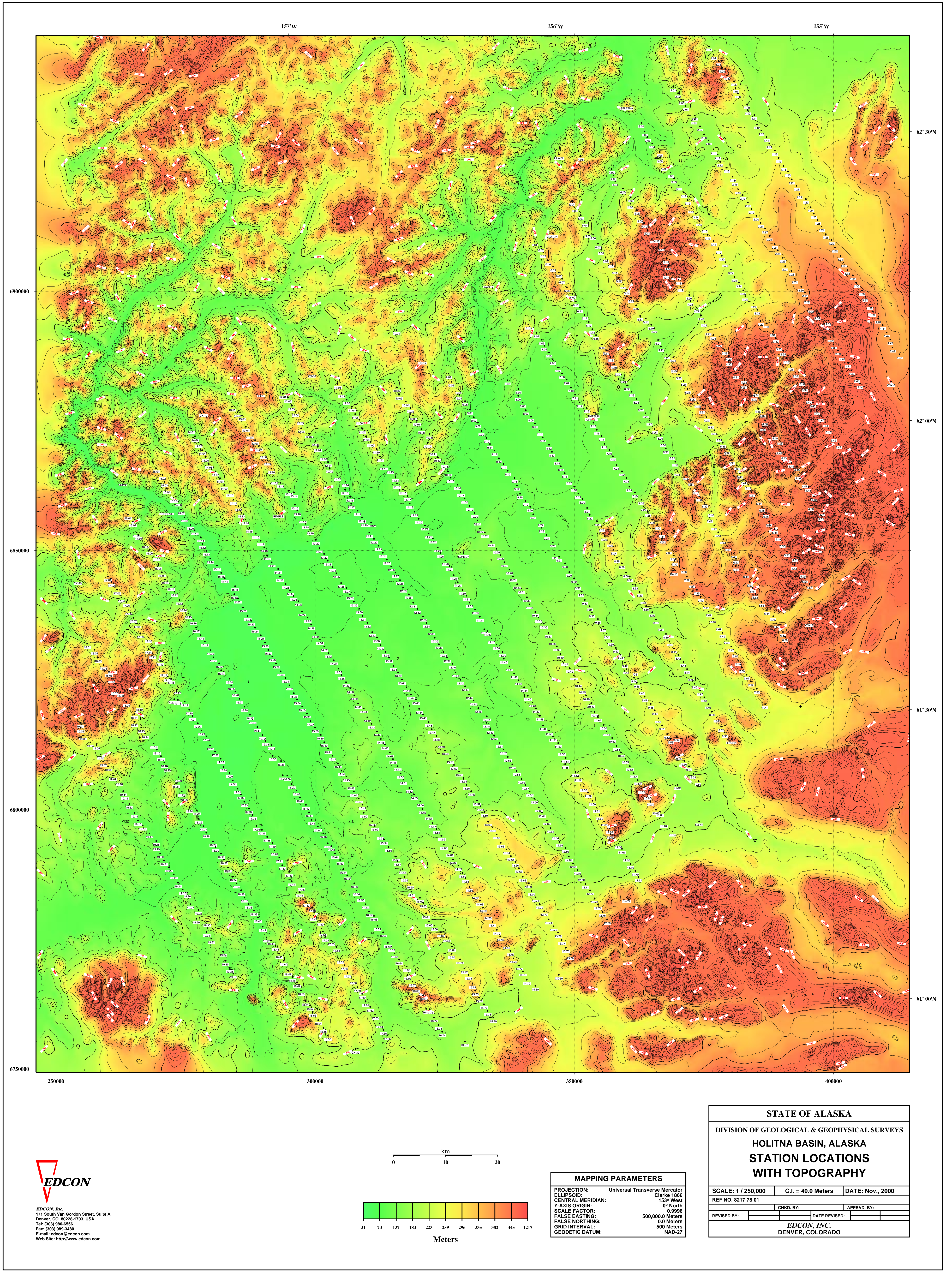


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CENTRAL MERIDIAN:	153° West
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Terrain Corrected to Hayford-Bowie Zone O		
SCALE: 1 / 250,000	C.I. = 1.0 mGal	DATE: Nov., 2000
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REVISED BY:		DATE REVISED:
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MAPPING PARAMETERS	
PROJECTION:	Universal Transverse Mercator
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CENTRAL MERIDIAN:	153° West
Y-Axis ORIGIN:	0° North
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FALSE EASTING:	500,000.0 Meters
FALSE NORTHING:	0.0 Meters
GRID INTERVAL:	500 Meters
GEODETIC DATUM:	NAD-27

STATE OF ALASKA		
DIVISION OF GEOLOGICAL & GEOPHYSICAL SURVEYS		
HOLITNA BASIN, ALASKA		
STATION LOCATIONS		
WITH TOPOGRAPHY		
SCALE: 1 / 250,000	C.I. = 40.0 Meters	DATE: Nov., 2000
REF NO. 8217 78 02		
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REVISED BY:		DATE REVISED:
EDCON, INC.		
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