U.S. DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY

HUT POINT PENINSULA

ANTARCTICA
SATELLITE IMAGE MAP

DELLBRIDGE ISLANDS
Tent Island
Big Razorback Island
ROSS ISLAND
EREBUS GLACIER TONGUE
Erebus Glacier
EREBUS BAY
Sultans Head Rock
Descent Cliff
Hutton Cliffs
HUT POINT PENINSULA
Turtle Rock
Centipede Nunatak
Ford Rock
Rodgers Point
Cone Hill
Sheppard Point
Knob Point
Castle Rock
Boulder Cones
Half Moon Crater
Danger Slopes
Polar Bear Point
Second Crater
Hooker Ridge
First Crater
Field safety training site
Storr Lake
Arrival Heights
Black Knob
Twin Crater
Crater Hill
Barnes Rocks
Hut Point
Winter Quarters Bay
McMURDO STATION
Pram Point
SCOTT BASE
Observation Hill
Cape Armitage
Williams Field
Sea-ice runway
Pegasus ice runway

166° 20' 25' 30' 35' 40' 45' 50' 55' 167° 00' 05' 10' 167° 13'
77° 40' 30' 41' 42' 43' 44' 45' 46' 47' 48' 49' 50' 51' 52' 53' 54' 55' 56' 57' 58' 77° 58' 20'

SPOT Panchromatic component © CNES 1995

DATA EXPLANATION

The satellite images were recorded by the Landsat thematic mapper in the multispectral mode and are composed of spectral bands 2 (525-605 nanometers, green-yellow), 4 (775-900 nanometers, near-infrared) and 7 (2090-2350 nanometers, middle-infrared) and by SPOT high-resolution visible recorded in the panchromatic mode.

The imagery was controlled using geodetic control points identified on aerial photographs held in the U.S. Antarctic Resource Center and supplemented by the field collection of coordinates for clearly identifiable topographic or geologic features. Satellite platform modeling was used during the geocorrections of the satellites data to insure uniform error distribution through the scenes. The Landsat thematic mapper imagery was resampled in 15 meter cells, and the scenes were mosaicked, tone matched and filtered using a 21x21 adaptive filter to which 85 percent of the unfiltered data were added back. The Spot panchromatic imagery was resampled in 5-meter cells, the geocorrected SPOT scenes were tone balanced, mosaicked and filtered using a 55x55 adaptive filter to which 50 percent of the unfiltered data were added back. The geocorrected Landsat thematic mapper data were then registered to the geocorrected SPOT panchromatic data for each map quadrangle separately, both data were merged using the Chavez filter method and the resulting image was tone enhanced.

Merged bands 7, 4, and 2 are shown in red, green, and blue on the map. The two merged satellites data sets were acquired at two different times and dates, and the sun had two different azimuths and (or) elevations, often creating two different shadows for the same relief.

SATELLITE IMAGE INDEX

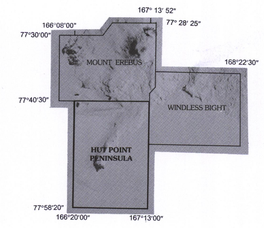
LANDSAT TM	***SPOT HRV P***
Path 54 / Row116	***K42 / J556***
Of 24 Dec. 1986	***Of Jan. 1995***
Sun elevation: 15°	***Sun elevation 24°***
Sun azimuth: 85°	***Sun azimuth 73°***
Root mean square error 16 meters	***Root mean square error 10 meters***

OBLIQUE PHOTOGRAPHS

Left oblique photograph, 18 February 1965
(U.S. Antarctic Resource Center)

Left oblique photograph, 14 November 1959
(U.S. Antarctic Resource Center)

IMAGE MAP INDEX

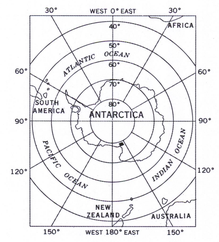


SCALE 1: 25 000

1 ½ 0 1 MILES
1 .5 0 1 2 KILOMETERS

Lambert conformal conic projection
Standard parallels 76°40'S and 79°20'S
International Terrestrial Reference Frame 1996

LOCATION DIAGRAM



At the image map location, this diagram and the image map are oriented in opposite directions.

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Technical information related to this image map and access to the digital data can be obtained from the Antarctica Resource Center, Mail Stop 515, U.S. Geological Survey National Center, Reston, VA 20192

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SATELLITE IMAGE MAP