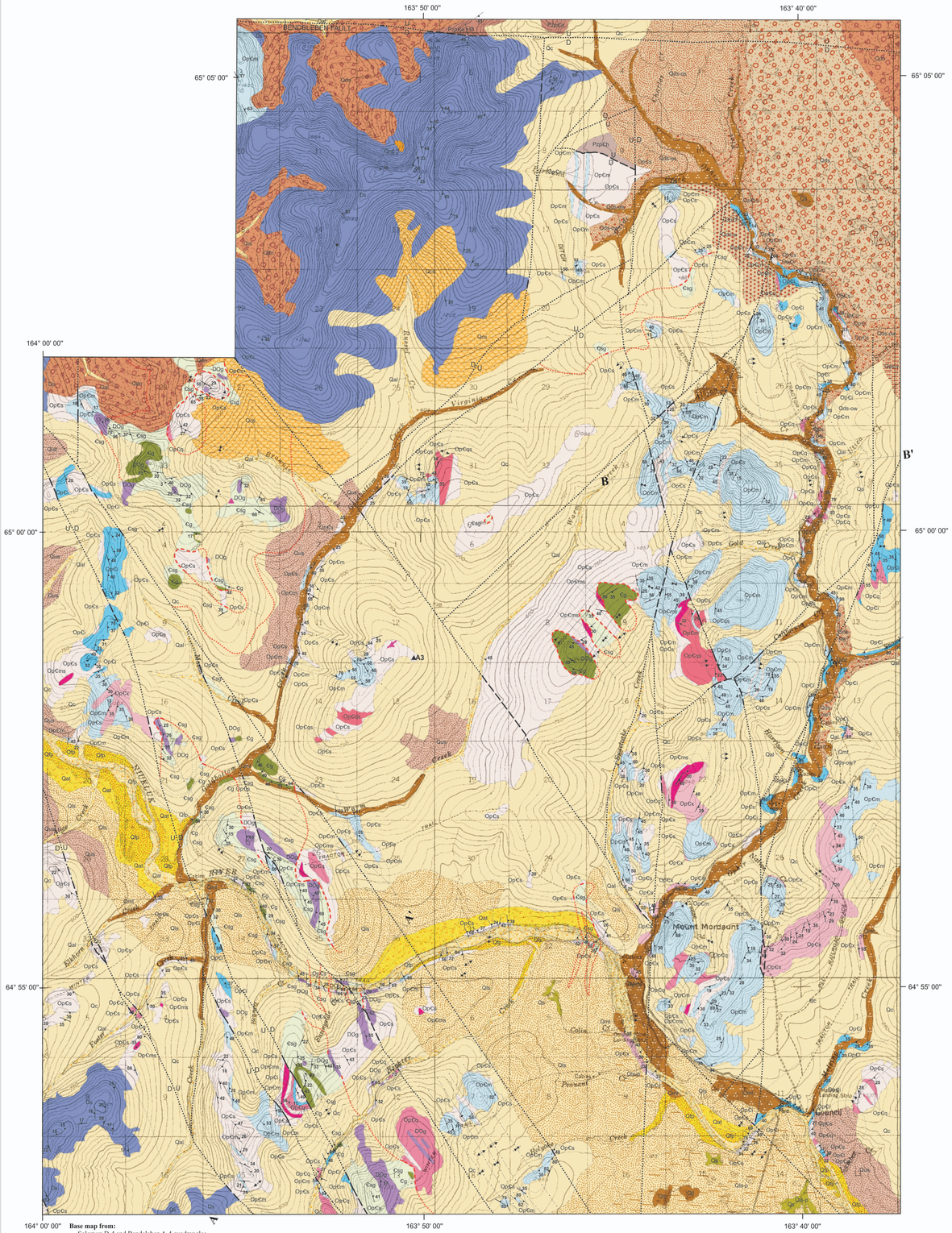
ALASKA DIVISION OF GEOLOGICAL &
GEOPHYSICAL SURVEYS

REPORT OF INVESTIGATION 2005-1d
Newberry and others (2005)
Explanatory booklet accompanies map



Base map from:
Solomon D-4 and Bendeleben A-4 quadrangles,
U.S. Geological Survey digital raster graphic images, 1997.
Map projection: UTM zone 3
Datum: NAD 27

SCALE 1:50,000

1 1/2 0 1 2 3 4 MILES
3000 0 3000 6000 9000 12000 15000 18000 21000 FEET
1 .5 0 1 2 3 4 5 KILOMETERS

CONTOUR INTERVAL 50 FEET
DATUM IS MEAN SEA LEVEL

15°
TRUE NORTH
MAGNETIC NORTH
APPROXIMATE MEAN
DECLINATION, 2005

Bedrock geologic field investigations by:
M.B. Werdon (2003, 2004), D.J. Szumigala (2004), J.E. Athey (2004), and R.J. Newberry (2004)

Surficial geologic field investigations by:
D.S.P. Stevens (2002, 2003, 2004) and R.L. Smith (2002, 2003).

GIS layers created by:
M.B. Werdon, D.S.P. Stevens, J.E. Athey, R. Lessard, and W.A. Smith II

Digital cartography by:
M.B. Werdon and D.S.P. Stevens

Technical reviews of bedrock geology by:
A.B. Till and L.E. Burns

Editorial review by:
P.K. Davis

GEOLOGIC MAP OF THE COUNCIL AREA, SOLOMON D-4 AND BENDELEBEN A-4 QUADRANGLES, SEWARD PENINSULA, ALASKA

by
R.J. Newberry[2], M.B. Werdon[1], D.S.P. Stevens[1], J.E. Athey[1], and D.J. Szumigala[1]

2005

Affiliation
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MAP SYMBOLS

Contact - Dashed where approximately located or inferred

Fault - Dashed where approximately located or inferred. Dip shown where measured. Arrows indicate apparent direction of relative movement; U, upthrown block; D, downthrown block

Mixed Unit - Casadepaga Schist contact- Dashed where approximately located or inferred; lithologic units often truncated along this contact

Fold - Showing trace of axial surface; arrows located on the axial trace indicate direction of plunge

Antiform

Overturned antiform, showing direction of dip of limbs

Synform

Overturned synform, showing direction of dip of limbs

Strike and dip of foliation

Horizontal foliation

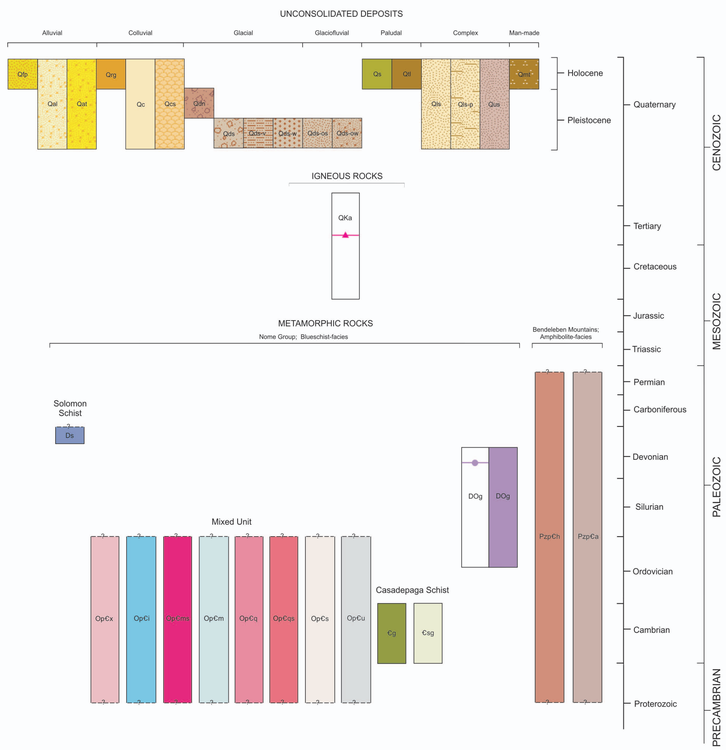
Strike of vertical foliation

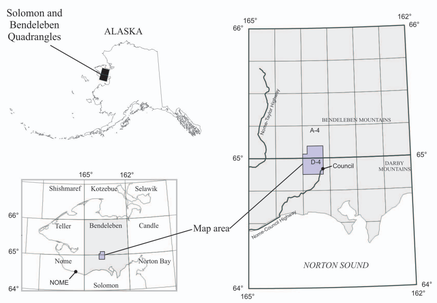
$^{40}Ar/^{39}Ar$ localities - numbers refer to map and table 1

Dikes - shown on geologic map as lines where orientation recorded. Example of a dike symbol. See 'Description of Map Units' for explanation of compositional variations

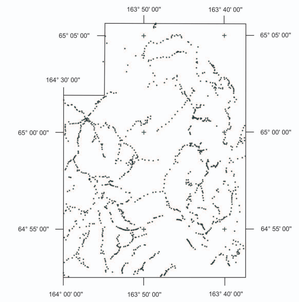
Questioned or uncertain identification

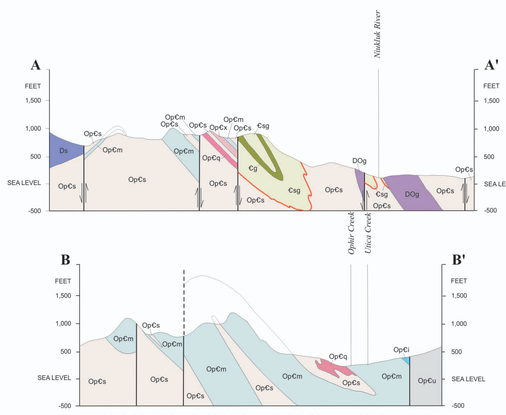
CORRELATION OF MAP UNITS





Maps Showing Location of Study Area





3X VERTICAL EXAGGERATION IN SCHEMATIC CROSS SECTIONS

DESCRIPTION OF MAP UNITS

UNCONSOLIDATED DEPOSITS

ALLUVIAL DEPOSITS

- Qfp — FLOODPLAIN ALLUVIUM (Holocene)
- Qal — ALLUVIUM, UNDIFFERENTIATED (Quaternary)
- Qat — TERRACE ALLUVIUM (Quaternary)

COLLUVIAL DEPOSITS

- Qrg — ROCK GLACIER DEPOSITS (Holocene)
- Qc — COLLUVIUM, UNDIFFERENTIATED (Quaternary)
- Qcs — SOLIFLUCTION DEPOSITS (Quaternary)

GLACIAL DEPOSITS

NOME RIVER GLACIATION

- Qdn — DRIFT OF NOME RIVER AGE (Pleistocene)

SINUK GLACIATION

- Qds — DRIFT OF SINUK AGE (early? Pleistocene)
- Qds-v — DRIFT OF SINUK AGE, VENEER (early? Pleistocene)
- Qds-w — DRIFT OF SINUK AGE, WASHED (early? Pleistocene)

GLACIOFLUVIAL DEPOSITS

SINUK GLACIATION

- Qds-os — SANDY OUTWASH OF SINUK AGE (early? Pleistocene)
- Qds-ow — OUTWASH OF SINUK AGE (early? Pleistocene)

PALUDAL DEPOSITS

- Qs — SWAMP DEPOSITS (Holocene)
- Qtl — THAW LAKE DEPOSITS (Holocene)

COMPLEX DEPOSITS

- Qls — LOWLAND SILT (Quaternary)
- Qls-p — PERMAFROST-RICH LOWLAND SILT (Quaternary)
- Qus — UPLAND SILT (Quaternary)

MANMADE DEPOSITS

- Qmt — MINE TAILINGS (Holocene)

BEDROCK

IGNEOUS ROCKS

- QKa — ALKALI GABBRO DIKES (Quaternary to Cretaceous)

METAMORPHIC ROCKS

SEDIMENTARY AND IGNEOUS ROCKS METAMORPHOSED TO BLUESCHIST FACIES: NOME GROUP

SOLOMON SCHIST

- Ds — QUARTZ-WHITE MICA SCHIST (Devonian)

EXTENSION-RELATED MAFIC INTRUSIONS

- DOg — MAFIC SCHIST AND GRANOFELS (Devonian to Ordovician)

MIXED UNIT

- OpCx — MIXED METASEDIMENTARY ROCKS (Ordovician to Precambrian)
- OpCi — IMPURE MARBLE (Ordovician to Precambrian)
- OpCms — MAFIC SCHIST (Ordovician to Precambrian)
- OpCm — MARBLE (Ordovician to Precambrian)
- OpCq — QUARTZITE (Ordovician to Precambrian)
- OpCqs — QUARTZITE AND SCHIST (Ordovician to Precambrian)
- OpCs — SCHIST (Ordovician to Precambrian)

CASADEPAGA SCHIST

- Cg — MAFIC SCHIST AND GRANOFELS (Cambrian?)
- Csg — METASEDIMENTARY ROCKS AND METAGRAYWACKE (Cambrian?)

UNDIFFERENTIATED NOME GROUP ROCKS

- OpCu — UNDIFFERENTIATED NOME GROUP ROCKS (Ordovician to Precambrian)

SEDIMENTARY AND IGNEOUS ROCKS METAMORPHOSED TO AMPHIBOLITE FACIES

- P2pCh — STAUROLITE SCHIST (Paleozoic to Precambrian)
- P2pCa — SCHIST AND AMPHIBOLITE (Paleozoic to Precambrian)

ACKNOWLEDGMENTS

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