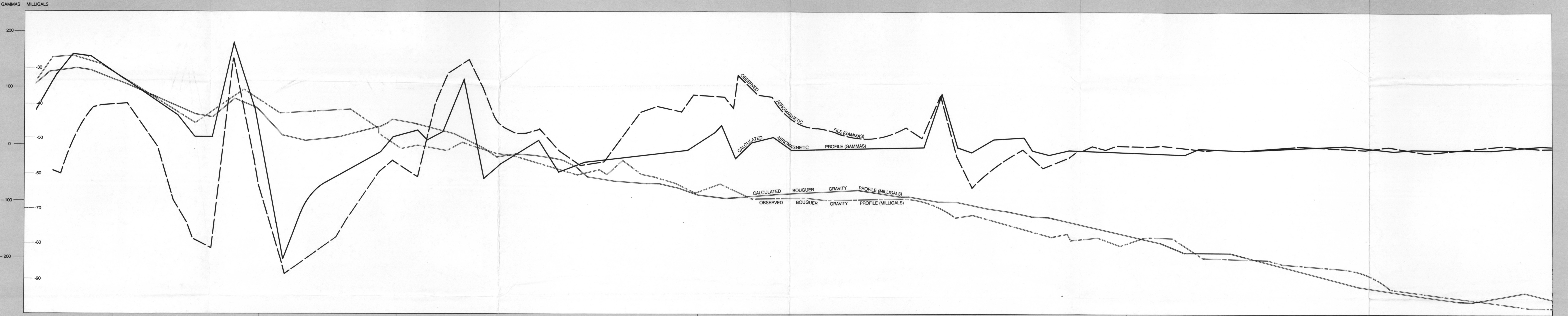


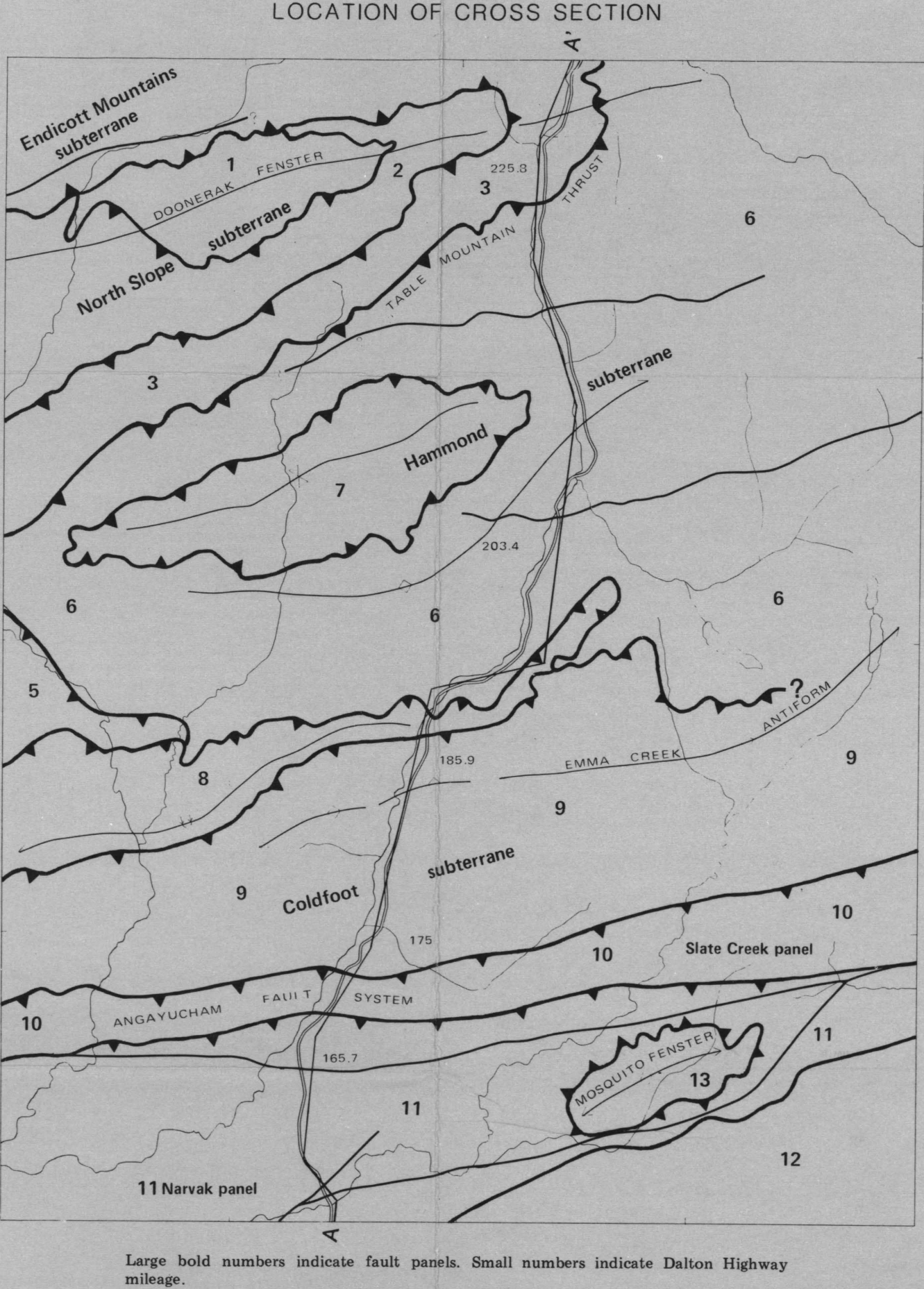
DESCRIPTION OF CROSS SECTION UNITS

(Units are arranged in fault panels or groups of fault panels from south to north. Within the fault panels units are ordered by age and metamorphic fabric. Some units are unique to individual fault panels while others are found in more than one fault panel. Fault panels 4, 5, and 7 are located west of this cross-section. See figure 139 for distribution of fault panels.)

- FAULT PANEL 11**
- TERTIARY AND CRETACEOUS SEDIMENTARY ROCKS, UNMETAMORPHOSED**
- Tg GRAVEL DEPOSITS (TERTIARY)—Pebble to cobble deposits in an oxidized coarse-sand matrix
 - Ksc SANDSTONE AND CONGLOMERATE (UPPER TO LOWER CRETACEOUS-CENOMANIAN TO ALBIAN)—Predominantly sandstone and conglomerate composed of vein quartz and schist clasts. Nonmarine deposit
 - Kic METASEDIMENTARY-CLAST CONGLOMERATE (UPPER TO LOWER CRETACEOUS-CENOMANIAN TO ALBIAN)—Predominantly cobble conglomerate and subordinate sandstone composed mostly of metagraywacke clasts. Nonmarine deposit
 - Km IGNEOUS-CLAST CONGLOMERATE (LOWER CRETACEOUS-ALBIAN)—Predominantly cobble conglomerate and subordinate sandstone composed mostly of mafic-igneous clasts. Nonmarine deposit
 - Km SANDSTONE, CONGLOMERATE, AND SHALE (LOWER CRETACEOUS-ALBIAN)—Predominantly sandstone and abundant conglomerate and shale. Transitional marine to nonmarine deposits
 - Km SANDSTONE, SHALE, AND CONGLOMERATE (LOWER CRETACEOUS-ALBIAN)—Predominantly sandstone and abundant shale and conglomerate. Marine deposits
- FAULT PANELS 10, 11**
- MIDDLE PALEOZOIC TO MESOZOIC ROCKS WITH ONE METAMORPHIC FABRIC**
- MePzc CHERT (LOWER JURASSIC TO MISSISSIPPIAN)—White, gray, green, red, and black, banded radiolarian chert
 - MePzv VOLCANIC ROCKS (LOWER JURASSIC TO DEVONIAN)—Includes pillow basalt, breccia, tuff, gabbro, and minor argillite
 - MePzg METAGRAYWACKE (TRIASSIC? TO DEVONIAN)—Brown-weathering, medium-grained metagraywacke with abundant phyllite interlayers and local interlayers of bedded radiolarian chert
 - MePzp PHYLLITE (TRIASSIC? TO DEVONIAN)—Flat, black phyllite and dark-gray metagraywacke with minor greenstone
- FAULT PANELS 9, 12**
- DEVONIAN ROCKS WITH TWO METAMORPHIC FABRICS**
- Dh PELITIC SCHIST (UPPER DEVONIAN?)—Probably correlative with Upper Devonian Hunt Fork Shale
- PROTEROZOIC TO PALEOZOIC ROCKS WITH THREE METAMORPHIC FABRICS**
- PzPsv GREENSCHIST AND AMPHIBOLITE (LOWER PALEOZOIC? TO PROTEROZOIC)—Present as interlayers in quartzite (PzPqs) and calcareous schist (PzPcs) units
 - PzPqs QUARTZITE AND SCHIST (LOWER PALEOZOIC? OR PROTEROZOIC)—Quartzite with 1- to 10-cm-thick lenses of graphitic schist
 - PzPcs CALCAREOUS SCHIST (LOWER PALEOZOIC? OR PROTEROZOIC)—Graphitic, quartzose calcareous schist and thin marble interlayers
 - PzPtm MARBLE (LOWER PALEOZOIC? TO PROTEROZOIC)—Thick, gray marble layers in calcareous schist (PzPcs) unit

- FAULT PANELS 3, 6, 8**
- PALEOZOIC ROCKS WITH TWO METAMORPHIC FABRICS**
- Dhf HUNT FORK SHALE (UPPER DEVONIAN)—Phyllite, wacke, sandstone, conglomerate, and limestone. In some places, grades downward into Beaucoup Formation; in other places, unconformably overlies upper Middle Devonian and older rocks
- Middle and Upper Devonian Beaucoup Formation
- Units grade downward and southward into Skagit Limestone and are laterally equivalent to Whiteface Mountain and Ambler volcanic and sedimentary rocks
- Dh CHLORITIC SILTSTONE, BLACK SILTSTONE, AND SLATE (UPPER TO MIDDLE DEVONIAN)
 - Dhpc CALCAREOUS, CHLORITIC SANDSTONE AND CONGLOMERATE (UPPER AND MIDDLE DEVONIAN)—Locally contains limestone
 - Dbl BLACK TO PLATY GRAY LIMESTONE (LOWER UPPER AND UPPER MIDDLE DEVONIAN)
 - Dbs BLACK SILTSTONE, PHYLLITE, AND SLATE (UPPER AND MIDDLE DEVONIAN AND LOWER PALEOZOIC?)—Contains lenses of limestone and dolomite
- Middle to Upper Devonian Whiteface Mountain volcanics
- Units consist of metavolcanic and metasedimentary rocks stratigraphically and lithologically equivalent to parts of Beaucoup Formation and Ambler metavolcanic rocks. Locally includes middle Paleozoic rocks of units Dwe and Dwb.
- Dw BLACK PHYLLITE, PURPLE AND GREEN PHYLLITE, CHLORITIC QUARTZITE, AND GRAYWACKE (UPPER TO MIDDLE DEVONIAN)
 - Dwg GRAYWACKE, QUARTZITE, PHYLLITE, AND FOSSILIFEROUS LIMESTONE (UPPER TO MIDDLE DEVONIAN)
- Devonian carbonate and clastic rocks
- Dc CHLORITIC AND CARBONATE ROCKS (UPPER AND MIDDLE DEVONIAN)—Calcareous, chloritic sandstone, siltstone, conglomerate, graphitic phyllite, dolomitic phyllite, and marble
 - Dsk SKAGIT LIMESTONE (DEVONIAN)—Massive, gray marble, dolomite, and carbonate conglomerate with minor graphitic and calcareous schist and quartzite
 - Dsc CHLORITE-QUARTZITE SANDSTONE, CONGLOMERATE, LIMESTONE, AND PHYLLITE (MIDDLE TO LOWER? DEVONIAN)
- Lower Paleozoic clastic and carbonate rocks
- Scb BLACK PHYLLITE AND METASILTSTONE (SILURIAN TO CAMBRIAN)—Contains minor quartzite, limestone, and red and green phyllite
 - Obpm BLACK PHYLLITE AND MARBLE (MIDDLE ORDOVICIAN)—Black, graphitic, pelitic phyllite interlayered with thin, black, crinoidal marble
 - Om MARBLE (MIDDLE ORDOVICIAN)—Gray to black, crinoidal marble. Contains conodonts
 - Obv VOLCANIC PHYLLITE (ORDOVICIAN OR CAMBRIAN)—Gray, purple, and green laminated phyllite and interlayered volcanic rocks
 - Obvc VOLCANIC CONGLOMERATE (ORDOVICIAN? TO CAMBRIAN?)—Polymictic conglomerate with abundant clasts of intermediate volcanic rocks

- Gl SANDY MARBLE (LOWER MIDDLE CAMBRIAN)—Locally contains trilobites
 - Ecq MUSCOVITE-ALBITE-CHLORITE QUARTZ SCHIST (CAMBRIAN?)
 - Ecs CHLORITIC QUARTZ CALC-SCHIST, DOLOMITIC PHYLLITE, AND MARBLE (CAMBRIAN?)
 - PzPqs QUARTZITE AND SCHIST (LOWER PALEOZOIC? OR PROTEROZOIC)—Quartzite with 1- to 10-cm thick lenses of graphitic schist
- FAULT PANELS 1, 2**
- UPPER PALEOZOIC SEDIMENTARY ROCKS, SLIGHTLY METAMORPHOSED**
- Units exhibit two regional metamorphic fabrics. Metamorphic grade increases southward from that of lowermost to middle greenschist facies. Sedimentary textures are well preserved.
- Fm LISBURN GROUP (PENNSYLVANIAN TO MISSISSIPPIAN)—Gray, cherty limestone and dolomite
 - Mk KAYAK SHALE AND KEEKITUK CONGLOMERATE (LOWER MISSISSIPPIAN)—Kayak consists predominantly of black shale and minor brown limestone; KEEKITUK consists of quartzite and minor conglomerate
- LOWER PALEOZOIC ROCKS WITH TWO METAMORPHIC FABRICS**
- Scb BLACK PHYLLITE AND METASILTSTONE (SILURIAN TO CAMBRIAN)—Contains minor quartzite, limestone, and red and green phyllite
- FAULT PANELS 3, 6, 9, 11, 12**
- IGNEOUS AND THERMALLY METAMORPHOSED ROCKS**
- Kg GRANITE (CRETACEOUS)—Medium- to coarse-grained, porphyritic biotite-hornblende granite
 - MePzd MAFIC DIKES AND SILLS (LOWER JURASSIC? TO DEVONIAN?)
 - Dgr MUSCOVITE-BIOTITE GRANITE ORTHOGNEISS (DEVONIAN)
 - Dt TREMOLITE SKARN, CALC-SILICATE HORNFELS, AND SLICEOUS HORNFELS (DEVONIAN?)—Formed during emplacement of Devonian(?) plutons
 - Dg DIABASE, GABBRO, AND DIORITE DIKES AND SILLS (DEVONIAN)
 - Df FELSIC VOLCANIC ROCKS (DEVONIAN)—Unit includes flows, tuffs, lahars, and hypabyssal intrusive rocks of Ambler and Whiteface Mountain volcanic rocks and Devonian granitic plutonic rocks
 - Dfm BIMODAL INTRUSIVE COMPLEXES (DEVONIAN)
 - Dbr BLASTOPORPHYRITIC FELSIC INTRUSIVE ROCKS (DEVONIAN)—Part of Ambler and Whiteface Mountain volcanic rocks and Devonian granitic plutonic rocks



GRAVITY AND AREOMAGNETICALLY MODELED CROSS SECTION OF THE DALTON HIGHWAY CORRIDOR THROUGH THE SOUTHERN BROOKS RANGE, ALASKA

by
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