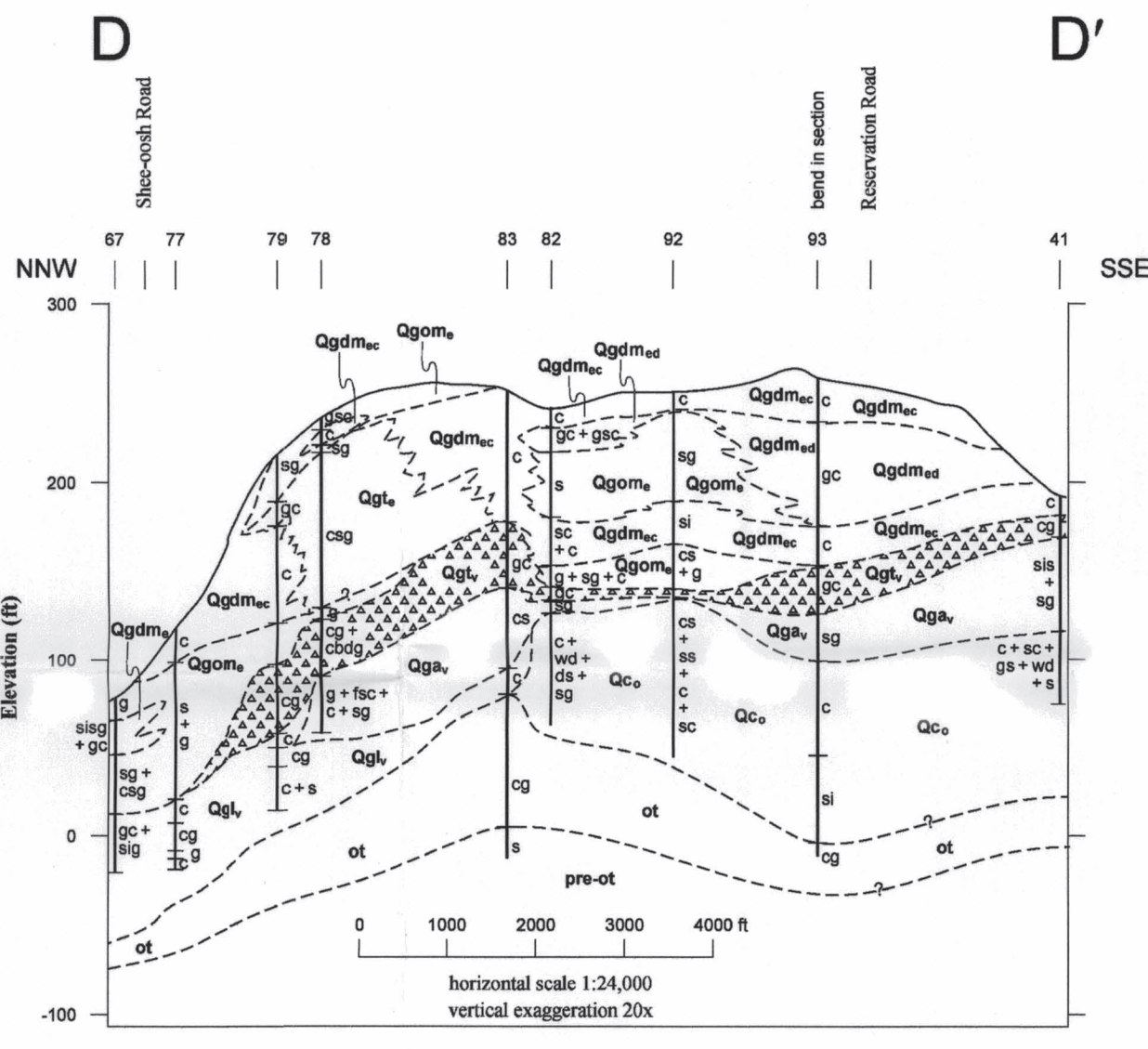
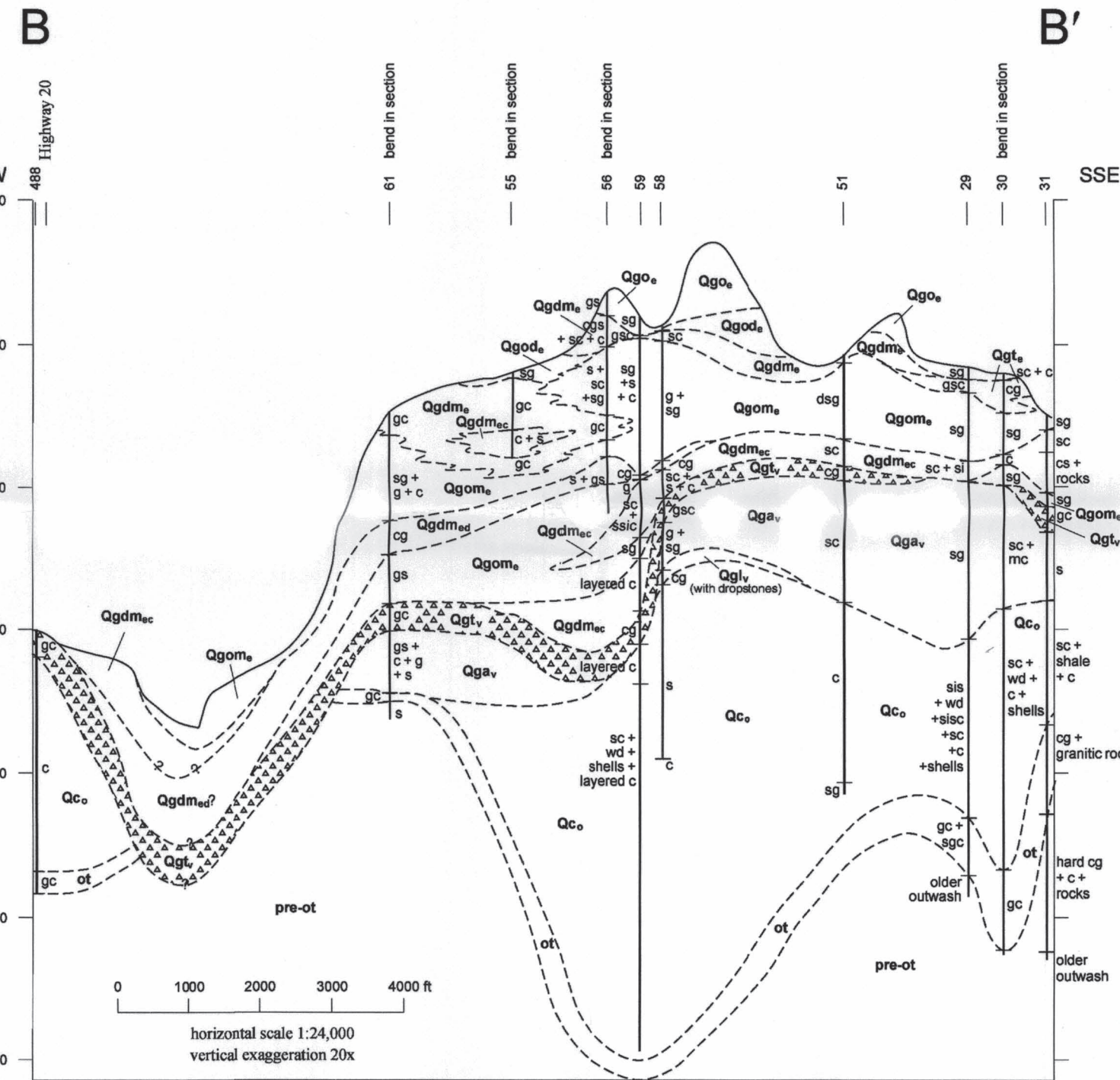
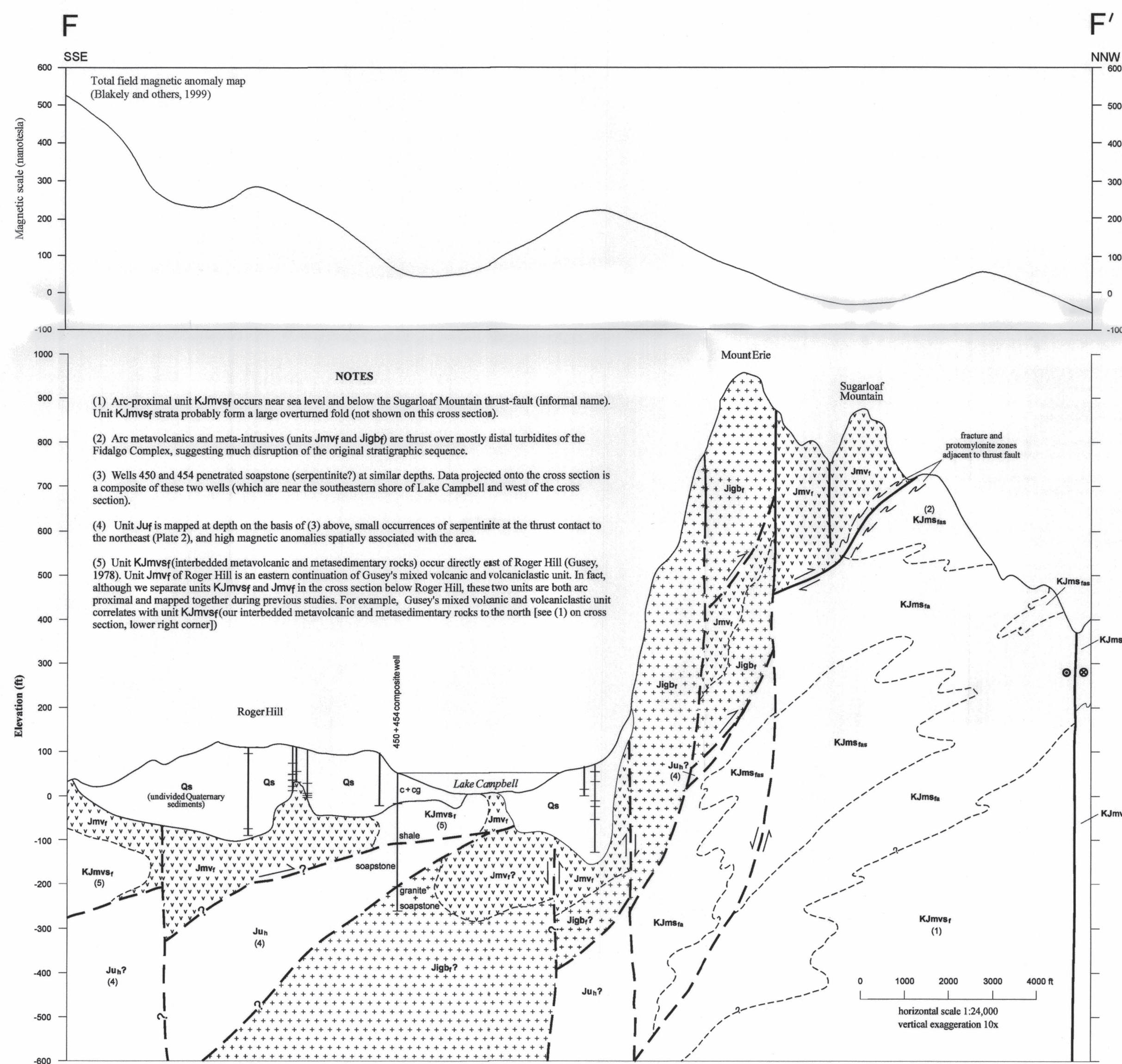


(See Plate 1 for cross section locations and Table 2.1 for explanation of lithology abbreviations)



PLEISTOCENE GLACIAL UPLAND UNITS						
Unit	Dominant lithology	Secondary lithology	Minor lithology	Unit density; diagnostic clast compositions (unit sorting)	Notes ( <i>well-drifter descriptions</i> ); correlations	
<b>Everett Invertebrate deposits</b>						
Q <sub>Qme</sub>	gs, sp, B			Low density; <i>reworked older units (typically well sorted)</i>	<i>Reworked deposits from older glacial units</i>	
Q <sub>Qme</sub>	c, sils, sil	sl	s, sils, cs	Low density ( <i>moderately to well sorted</i> )	<i>Described as soft, rare reports of oil and methane; fining-upward sequence</i>	
Q <sub>Qme</sub>	csq, gss, gss, sils, gss (diamonites)		sl, sil	Low density ( <i>poorly sorted</i> )	<i>Commonly described as soft till or clay with scattered gravel; local fining-upward sequences commonly described as clay strips in hardpan</i>	
Q <sub>Qme</sub>	sp, B, B	slgs, sils, cs, gss, sil		Low density ( <i>typically well sorted</i> )	<i>(Often noted as black (Derivation: <i>Plyfite</i>) sands; locally layered on a scale of centimeters; contains rare wood; typically dense fining-upward sequences; rarely described as <i>flint sand</i> with layers of hard clay)</i>	
<b>Yahson Stage deposits</b>						
Q <sub>Ys</sub>	sl, csilg, sil, sils, sils (diamonites)	sg, sl interlayers	locally boulders	Moderate to high density; polymictic clast composition or locally described as shaley (phyllitic) ( <i>poorly sorted</i> )	<i>Commonly described as dense or hardpan; locally with sandy gravel interlayers</i>	
Q <sub>Ys</sub>	slg, gss, sil, sils, sils, sil	c, csq, wd		Moderate to high density, polymictic clast compositions ( <i>typically well sorted</i> )	<i>Locally may contain mass-wasting deposits (4–10 ft thick); locally coarsening-upward</i>	
<b>Free-Yahson glacial deposits</b>						
Q <sub>Ys</sub>	sl, sl, sils, sils, csil		cg	Moderate to high density; polymictic clast compositions? ( <i>typically well sorted</i> )	<i>Thickly interbedded diamonites probably are mass-wasting deposits; sand and gravels commonly interstratified with clays, correlated with the "transitional beds" of Peal and others (1989)</i>	
Q <sub>Ys</sub>	c, cs, sl	sl, sgc	gs, Bc	Moderate to high density; local clast compositions? ( <i>moderately to well sorted</i> )	<i>Commonly contains wood and peat; correlated with the "Middle inter-glacial unit" of Armstrong and others (1965)</i>	
older unit (older till)	gss, cs, gss (diamonites)	slgs	sg, g locally boulders	Moderate to high density; polymictic clast compositions? ( <i>poorly sorted</i> )	<i>sg rare; gravel commonly described as scattered; typically correlated with the Possession drift or Easterbrook (for example, 1994)</i>	

(See Plate 1 for cross section locations)



65.4  
PERIOD EPOCH AGE

MAASTRICHTIAN 70  
CAMPANIAN 80  
SANTONIAN 90  
TURGIDIAN 100  
CENOMANIAN 110  
ALBION 120  
ATTON 130  
BARREMAN 140  
BACTERIAN 150  
VALANGINIAN 160  
MIRANIAN 170  
TITHONIAN 180  
KIMBERLIDIAN 190  
COPISEAN 200  
CALLISTON 210  
BATHONIAN 220  
BRANCON 230  
ALBION 240  
TURGIDIAN 250  
PUNJABIAN 260  
BATHONIAN 270  
HETTONIAN 280

Millions of years before present

MESOSZOIC  
JURASSIC  
EARLY  
LATE  
MIDDLE  
EARLY

Approximate time of thrust faulting in the San Juan Islands and Northwest Cascades system (for example, Misch, 1966; Brandon and others, 1988; Brown, 1987)

Ghost Island terrane

AGE CONTROL FOR GEOLOGIC UNITS IN THE FIDALGO COMPLEX

Isotopic dates from Fidalgo Complex intrusive rocks

Radiolarian fossil age ranges for Fidalgo Complex metasedimentary rocks (units KJ<sub>10</sub>m, KJ<sub>10</sub>m<sub>1</sub>, KJ<sub>10</sub>m<sub>2</sub>, KJ<sub>10</sub>m<sub>3</sub>, and KJ<sub>10</sub>m<sub>4</sub>)

see Garver (1985) for an interpretation of the maximum age of Fidalgo metamorphisms and their relationship to the Laramie Orogen north of the study area

Oldest direct fission track age obtained by Johnson and others (1986) for the sedimentary rocks of the Decatur terrane, the probable or approximate first depositional age of these terranes and, if not partially reset, provides a younger terrane age for this volcanoclastic granulite

K/Ar age of hornblende in diorite (Brown, 1977)

K/Ar age of hornblende in hornblende-gabbro (Brown, 1977)

K/Ar age of hornblende in hornblende (Brown, 1977)

U-Th-Pb age of zircon in tonalite (Whitman and others, 1978)

U-Th-Pb age of zircon in plagiogranite (3 samples, 2 sample localities; Whitman and others, 1978)

U-Th-Pb age of zircon in quartz diorite (Whitman and others, 1978)

References

1. Olney (1973)  
2. Garver (1985)  
3. Whitman and others (1978)  
4. Whitman and others (1980)  
5. Condit (1980)  
6. Brandon and others (1988)

Lithologies

A. pelagic argillite  
B. siliceous argillite interbedded with pillow basalt  
C. siliceous argillite  
D. chert interbedded with pillow basalt  
E. effusive argillite interbedded with clastic rocks

\* Whitman and others (1978) place these rocks in the Sinclair terrane; Brandon and others (1988) include them in the Fidalgo Complex.  
+ Whitman and others (1978) place these rocks in the Condit terrane; Brandon and others (1988) include them in the Fidalgo Complex.  
# Two different sample groups gave the same results

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