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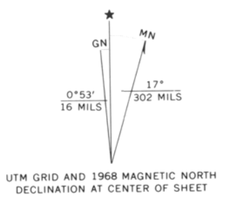
PROVISIONAL GEOLOGIC MAP OF THE LIMEKILN KNOLL QUADRANGLE, BOX ELDER COUNTY, UTAH



UTM GRID AND 1968 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

QUADRANGLE LOCATION

by
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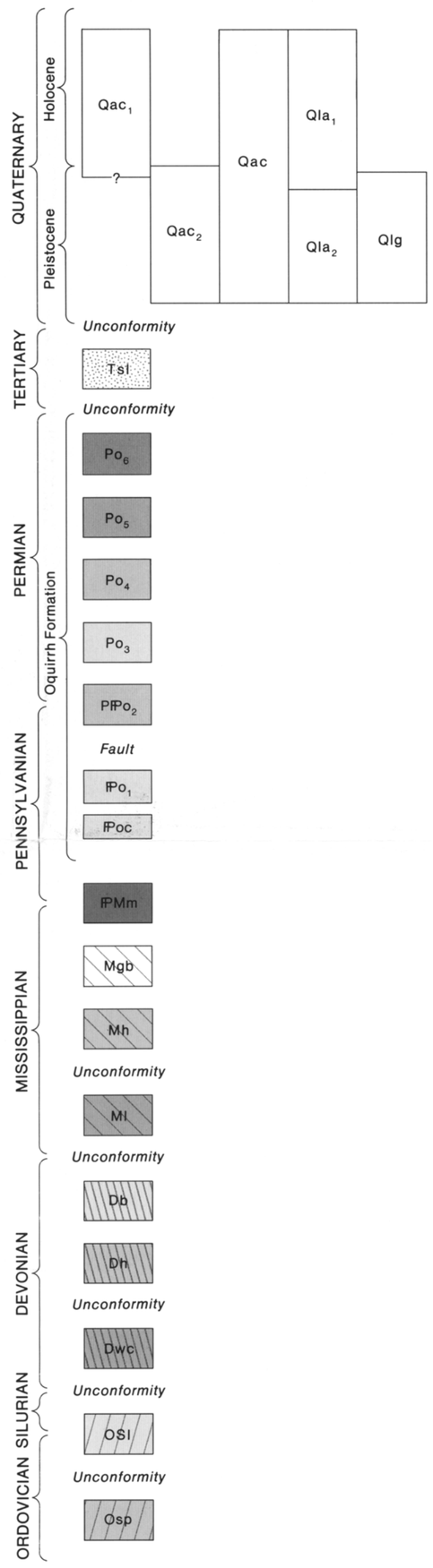
1985

FORMATION		SYMBOL	LITHOLOGY	THICKNESS feet (meters)
OQUIRRH FORMATION	Unit 6	Po_6		1650 (503)
	Unit 5	Po_5		1400 (427)
	Unit 4	Po_4		1450 (442)
	Unit 3	Po_3		4000 (1220)
	Unit 2	$PIPo_2$		2450 (747)
	Unit 1	IPo_1		2200 (671)
		IPoc		
Manning Canyon Fm.		IPMm		300 (91)
Great Blue Limestone		Mgb		1220 (372)
Humbug Formation		Mh		980 (299)
Lodgepole Limestone		Ml		400 (122)
Beirdneau Sandstone		Db		990 (302)
Hyrum Dolomite		Dh		820 (250)
Water Canyon Formation		Dwc		540 (165)
Laketown-Fish Haven Dolomite		OSl		1540 (470)
Swan Peak Quartzite		Osp		400+ (122+)

CORRELATION OF MAP UNITS



DESCRIPTION OF MAP UNITS

Qac_1 — *Stream alluvium and slope wash along major streams and mouths of tributaries.*

Qac_2 — *Older slope wash and stream alluvium underlying dissected terrace remnants.*

Qac — *Stream alluvium, alluvial fans, and slope wash in Whites Valley.*

Qla_1 — *Lacustrine sand and gravel and intertonguing alluvial deposits of Provo and post-Provo age.*

Qla_2 — *Lacustrine sand and gravel and intertonguing alluvial deposits above lacustrine shore-zone gravel.*

Qlg — *Lacustrine shore-zone gravels.*

Tsl — *Unconsolidated, interbedded buff to light tan tuffs and tuffaceous conglomerates, grayish-white.*

Po_6 — *Interbedded cherty gray limestone and tan to red quartzose sandstone with two massive crossbedded calcareous orthoquartzite ledges near the base.*

Po_5 — *Interbedded ledgy limestone, soft calcareous sandstone and cherty siltstone.*

Po_4 — *Cherty brown, finely laminated siltstone.*

Po_3 — *Thick-bedded brown quartzose to subarkosic sandstone and medium- to thick-bedded silty and bioclastic limestone.*

$PIPo_2$ — *Bioclastic thick-bedded gray limestone and thick-bedded brown to gray calcareous sandstone.*

IPo_1, IPoc — *Interbedded silty limestone and calcareous sandstone. Poc represents similar beds at the lower part of this sequence in the autochthonous block northeast of the North Canyon fault.*

IPMm — Manning Canyon Formation—*Poorly exposed black shale, green to brown shale, yellow-brown quartz sandstone, and yellowish-weathering skeletal limestone.*

Mgb — Great Blue Limestone—*Medium- to dark-gray ledgy and cliffy limestone separated by slope-forming shales. The limestones are locally cherty and fossiliferous.*

Mh — Humbug Formation—*Slope-forming fine-grained calcareous sandstone or siltstone and a few thin beds of dark gray limestone.*

Ml — Lodgepole Limestone—*Predominantly dark limestone containing abundant black chert nodules with a prominent persistent basal cliff in outcrop, 50 feet thick. Contains abundant marine fossils.*

Db — Beirdneau Sandstone—Light- to medium-gray dolomite and calcareous quartz sandstone. The medial quartz sandstone is more resistant than the upper and lower dolomites and forms a prominent ledge.

Dh — Hyrum Dolomite—*Dark-gray dolomite and limestone that form resistant ledges and cliffs.*

Dwc — Water Canyon Formation—*Consists of a lower Card member of locally sandy or silty light-gray-weathering aphanitic dolomite and an upper Grassy Flat member of reddish-brown to gray-weathering fine-grained to aphanitic dolomite.*

OSl — Laketown-Fish Haven Dolomite—*Thick sequence of dark-and light-gray dolomite that forms irregular resistant cliffs. The lower 300 feet of the 1450-ft unit are believed to be Ordovician in age. Locally fossiliferous.*

Osp — Swan Peak Quartzite—*Light-gray to buff or brown quartz sandstone only partially exposed on the quadrangle.*

CONTACT
Dotted where covered

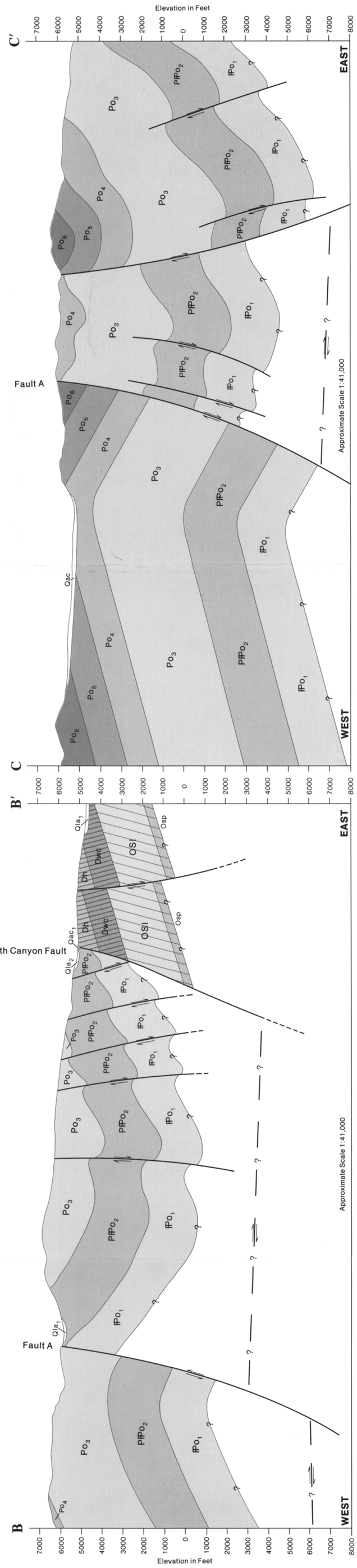
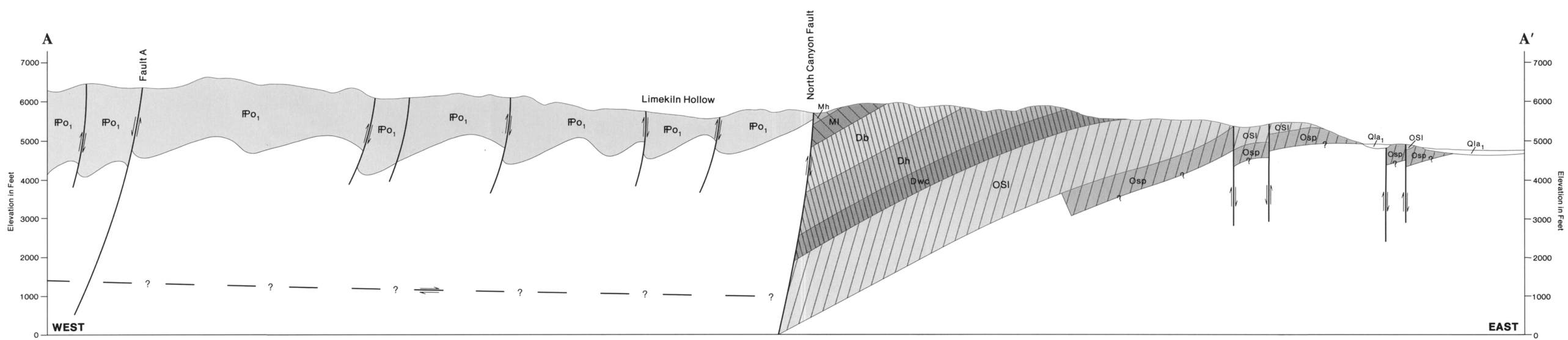
FAULT
Dashed where location inferred; dotted where covered; bar and ball on downthrown side

STRIKE AND DIP OF BEDDING
Inclined (45) — Vertical — Horizontal

STRIKE AND DIP OF CLEAVAGE
Inclined (30) — Vertical

TRACE OF AXIAL SURFACE OF FOLD
Anticline — Syncline

Location of Paleontological sample

Trace of Bonneville shoreline dashed where inferred

Trace of Provo shoreline dashed where inferred