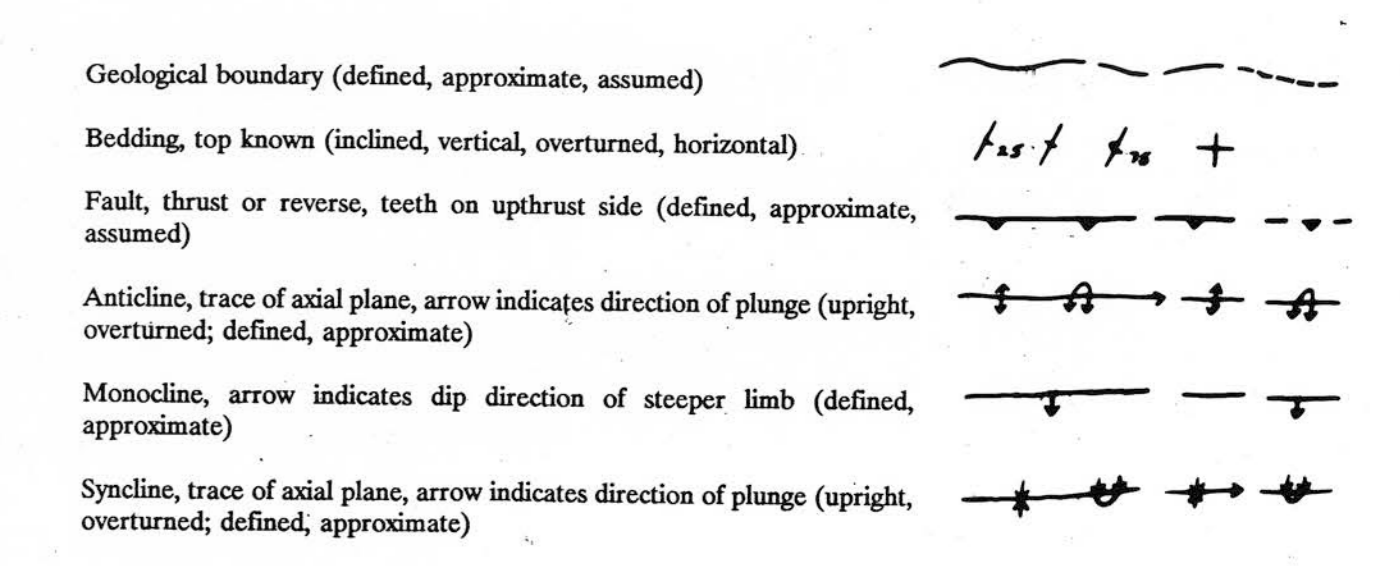


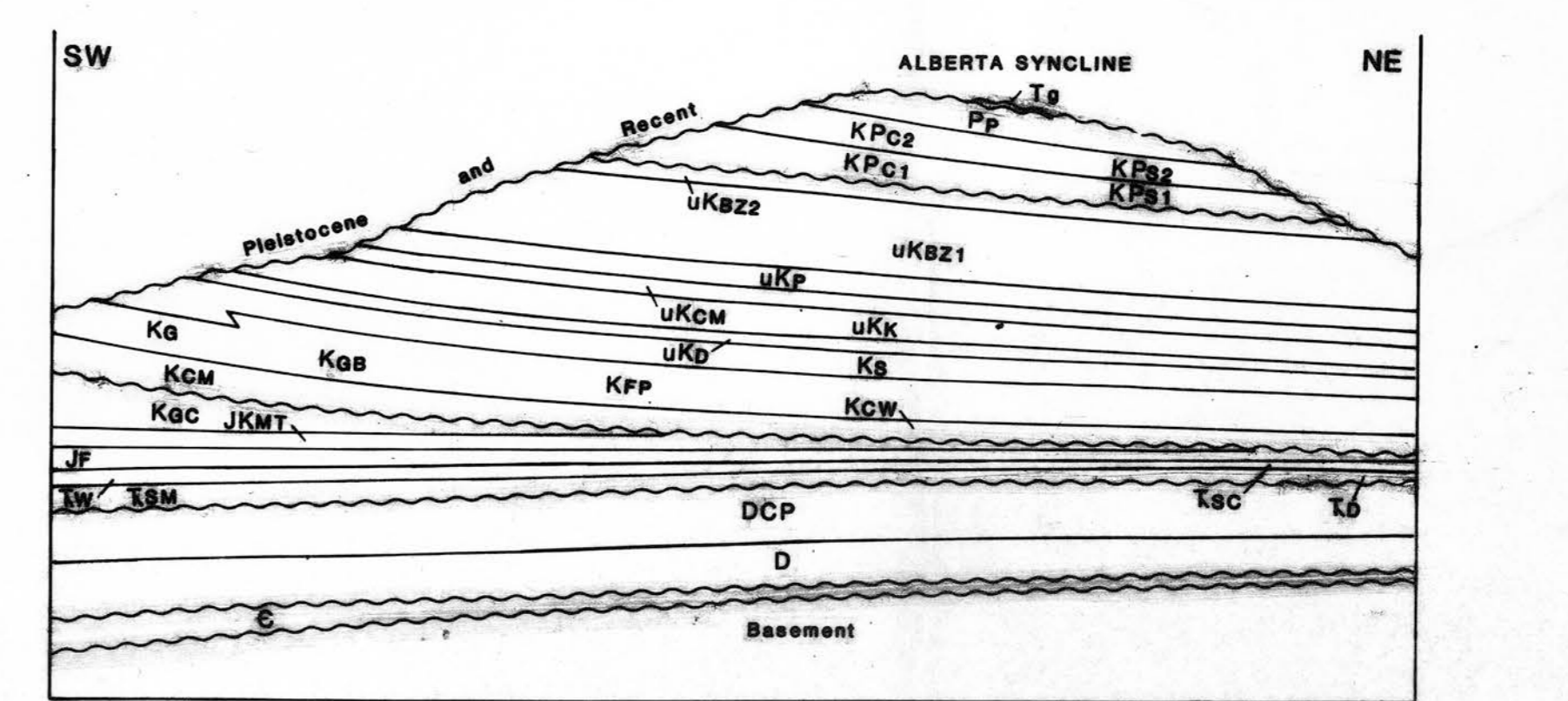


QUATERNARY	
PLEISTOCENE AND RECENT	
Qw	Landfill: blocks from nearby bedrock
TERTIARY	
PALEOCENE	
Pr	PASKAPOO FORMATION Sandstone: light grey or yellowish, medium to fine-grained, crossbedded, brownish weathering, commonly thin bedded and silty; mudstone, silty, green, grey, interbedded with thin sandstone lenses and minor lenses of carbonaceous shale.
CRETACEOUS AND TERTIARY UPPER CRETACEOUS AND PALEOCENE	
COALS PUR FORMATION (KPC1-KPC2); SCOLLARD FORMATION (KPS); east limb of Alberta Syncline	
KPC2 KPS	UPPER PART Sandstone: light grey, fine-grained, argillaceous, brownish weathering; siltstone, mudstone; grey, greenish grey, carbonaceous in fining upward cycles; and coal interbedded with thin beds of claystone. Unit includes the Kabak Coal Measures.
KPC1 KPS1	LOWER PART Sandstone: light grey, fine-grained, argillaceous, commonly crossbedded, brownish weathering; and siltstone, grey, greenish grey, in fining upward cycles. Minor volcanic tuff: 25 to 30 m of light grey, fine to coarse-grained, locally conglomeratic sandstone of the Entrance Member forms the base of the Coals Pur Formation.
CRETACEOUS UPPER CRETACEOUS	
BRAZEAU FORMATION (uKz1-uKz2)	
uKz2	UPPER PART Sandstone: light grey, fine-grained, argillaceous, carbonaceous, commonly crossbedded, brownish weathering; siltstone, mudstone; grey, greenish grey, carbonaceous, and coal. Relatively resistant, ribbed weathering unit. Unit includes the Catbank Coal Measures.
uKz1 uKw	LOWER PART: WAPITI FORMATION (north of Wapiti River) Sandstone: light grey, fine-grained, argillaceous, carbonaceous, locally conglomeratic; mudstone, siltstone; green, brown, grey, carbonaceous; minor coal. Ribbed weathering unit.
uKp	SMOKY GROUP (uKp-uKq) PUSKASCAU FORMATION Shale and lower calcareous shale: dark grey, commonly silty, grey or rusty weathering, siltstone concretions (main lower part); thin resistant quartz and chert rich sandstone near top (Chung Member/Chung Sandstone in subsurface) overlies by interbedded grey siltstone and shale (Nomad Member) at top.
uKcm	CARDIUM, MUSKIE AND MARSHBANK FORMATIONS Sandstone: grey, fine-grained, quartz and chert rich; later interbedded shale, siltstone, mudstone and minor conglomerate, rare coal. Resistant Cardium and Marshbank formations. Shale: dark grey, silty, rusty weathering with thin interbed of grey argillaceous siltstone near top. Recession poorly exposed unit.
uKk	KASKAPAU FORMATION Shale: dark grey to black, commonly silty, rusty weathering with siltstone concretions and variable amount of very finely interbedded grey, brown weathering siltstone. Calcareous shale: dark grey, silty, weathering. Recession poorly exposed unit. Commonly faulted and folded.
uKd	DUNVEGAN FORMATION Sandstone and mudstone: grey, brown weathering, commonly carbonaceous, micaceous from thin fining upward cycles. Rare thin coal seams. Resistant, grey quartzite, crossbedded mudstone to coarse-grained sandstone locally occurs. Relatively resistant marker unit with good topographic expression but commonly poor exposure.
UPPER AND LOWER CRETACEOUS	
FORT ST. JOHN GROUP (Kcm Mosbar Fm. - Ks surface north of Kalwa River)	
Ks	SHAPTESHURY FORMATION Shale: dark grey, grey or rusty weathering, with red-brown weathering, laminated siltstone interbeds common near top. Recession, dark weathering unit.
LOWER CRETACEOUS	
Kob Kcp	GATES, HULCROSS AND BOULDER CREEK FORMATIONS (surface north of Kalwa River); FALLEN, NOTKEMAN MEMBERS, SPIRIT RIVER FORMATION AND PEACE RIVER FORMATION (subsurface) Sandstone: fine to coarse-grained, carbonaceous, crossbedded, tan or red-brown weathering interbedded with grey carbonaceous shale and grey, tan weathering carbonaceous siltstone; coal; sandy pebbly conglomerate; granitic pebbly conglomerate; well sorted, sandstone, shale; grey with limestone concretions. Ribbed weathering unit.
Ko	LUSCAR GROUP (Kcm-Kq; surface south of Kalwa River)
Kq	GATES FORMATION (surface south of Kalwa River) Sandstone: fine to coarse-grained, carbonaceous, crossbedded tan or red-brown weathering interbedded with grey carbonaceous shale and grey, tan weathering, carbonaceous siltstone; coal; sandy pebbly conglomerate. Fine-grained, well sorted, resistant sandstone forms the base of the succession in many areas. Ribbed weathering unit.
Kcm Kcw	BULLHEAD GROUP AND FORT ST. JOHN GROUP (Kcm; surface north of Kalwa River) CADOMIN, GLADSTONE (GETHING, north of Kalwa River), MOOSEBAR FORMATIONS, CALDOMIN, GETHING AND BLUESKY FORMATIONS, AND WILKIRCH MEMBER, SPIRIT RIVER FORMATION (subsurface) Sandstone: fine to coarse-grained, carbonaceous, crossbedded, orange-brown weathering and local sandy pebbly conglomerate; interbedded with carbonaceous siltstone, carbonaceous shale and coal (Gladstone, Gething, Wilkirch). Shale: dark grey with limestone concretions and very fine-grained sandstone interbeds (Moosebar, Wilkirch). Resistant, pebbly to cobble conglomerate (Cadomin) occurs at base.
Kic	MINNES GROUP (Kicr-Koc) GORMAN CREEK FORMATION Interbedded sandstone, siltstone, mudstone, carbonaceous shale or coal in repetitive fining upward cycles generally 1 to 5 m thick. Sandstone: fine to coarse-grained, carbonaceous, locally crossbedded or crossbedded, dark chert, locally conglomeratic, orange or brown weathering. Siltstone: grey, carbonaceous, orange or grey weathering. Shale: silty, carbonaceous, grey weathering commonly grading to coal. An orange-brown weathering succession with few marker units, commonly completely folded with minor faults.
JURASSIC AND CRETACEOUS UPPER JURASSIC AND LOWER CRETACEOUS	
Kjcr	MONTEITH FORMATION Sandstone: very fine-grained, light brown grey, laminated, pinkish or light grey weathering with minor grey shale interbeds (thick lower part); dark chert rich, ripple, crossbedded, carbonaceous shale and siltstone (thin upper part). Resistant weathering unit.
Kjn	NIKANASSIN FORMATION Sandstone: light grey, very fine-grained, orange brown weathering, in thin to very thick beds, interbedded with minor dark grey shale, silty shale and argillaceous sandstone (lower part). Interbedded sandstone, siltstone, mudstone, carbonaceous shale of upper part is lithologically equivalent to Gorman Creek Formation. Lower part is resistant weathering upper part is a ribbed, generally orange weathering unit.
JURASSIC	
Kj	FERNE FORMATION Shale: dark grey, locally rusty weathering, ironstone concretions; and minor quartz sandstone (upper part); brown grey and silty sandstone interbedded with grey, silty, brown weathering shale (upper part). Recession weathering unit. Includes a few metres of interbedded black limestone and shale at base (Noadag Member).
TRIASSIC	
Kt Kt1 Kt2	SPRAY RIVER GROUP (Tsm-Tw) WHITEHORSE FORMATION: SCHOOLES CREEK GROUP (east of Foothills) Interbedded silty dolomite, sandstone, siltstone, sandy limestone, interstratified oolitic, solution breccia, anhydrite; limestone: light grey weathering with minor dolomite and interstratified conglomerate; cherty dolomite and limestone. A distinctive brightly weathering ribbed unit.
Ktd Ktd1 Ktd2	SULPHUR MOUNTAIN FORMATION: DIABER GROUP (east of Foothills) Siltstone, silty limestone: grey, red-brown play to flaggy weathering with phosphatic fossils; minor interbedded shale, dolomite and sandstone. A distinctive, red-brown, moderately resistant weathering unit.
SUBSURFACE ONLY	
DEVONIAN, CARBONIFEROUS AND PERMIAN	
Kdp	ESSIAW AND BANFF FORMATIONS, RUNDLE GROUP, KISKATNAW AND BELLO FORMATIONS Limestone, shale, dolomite, minor sandstone.
DEVONIAN MIDDLE AND UPPER DEVONIAN	
Kd	ELK POINT, BEAVERHILL LAKE AND FAIRHOLME (WOODBEND east of Foothills) GROUPS; SIMLA AND FALLER (WARTON east of Foothills) FORMATIONS Limestone, argillaceous limestone, shale, calcareous shale, dolomite, evaporites, sandstone.
CAMBRIAN	
Kc	CAMBRIAN (unfaded) Limestone, dolomite, shale.



NOTE: Formation boundaries east of the defined belt were determined by surface mapping and the projection of data from coal and petroleum exploration boreholes.

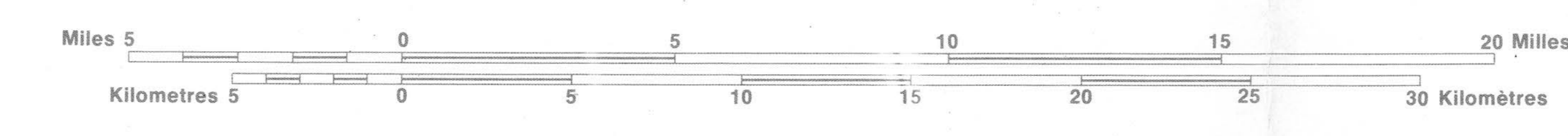
Geological compilation of M.E. McMillan and P.M. Dawson based on 1:50,000 scale maps of the defined belt (G.S.C. Open File Reports 1710, 1785; A-series maps in press) and surface and subsurface data from the Wapiti Coal project (G.S.C. Open File, in preparation Fall, 1990).



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