

BRITISH COLUMBIA
 Ministry of Energy and Mines
 Resources Development Division

**Geological Survey Branch
 Geoscience Map 2003-2**

**COALBED METHANE GEOLOGY OF THE
 PEACE RIVER DISTRICT,
 NORTHEASTERN BRITISH COLUMBIA**

parts of NTS 94A,B and NTS 93I,O,P
 compiled by Andrew S. Legun
 SCALE 1:200 000

0 5 10 15 20 25
 Kilometres

LEGEND
SEDIMENTARY ROCKS

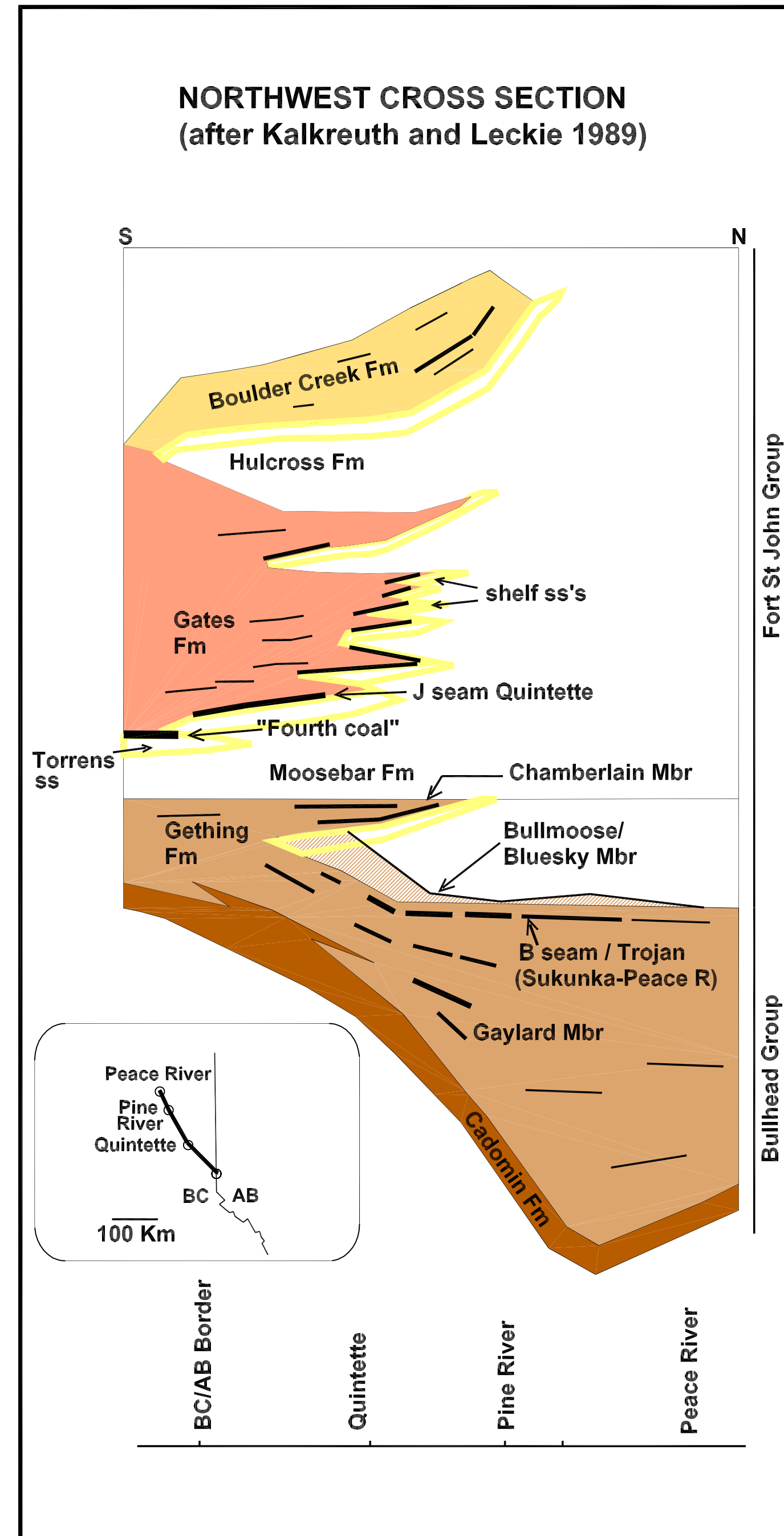
LATE CRETACEOUS

- KU UNDIVIDED YOUNGER BEDS**
 Cardium Fm ss and conglomerate at base followed by sandstone and shales of Muskiki, Marslybank and Puskwaskau Fms Wapiti Fm ss, carbonaceous shale and coal cap the sequence.
- KK KASKAPAU FORMATION**
 Dark grey marine shales; interbedded sandstone and shale in lower part. Gradational contact with Dunvegan Fm below.
- KD DUNVEGAN FORMATION**
 Non-marine and marine fine to coarse grained sandstone, minor siltstone, mudstone, carbonaceous shale (100-400 m thick). Sandstones are large channel bodies which form discontinuous ridges on hillsides. Finer grained, marine and shaly to southeast.

EARLY TO LATE CRETACEOUS

- Kc CRUISER FORMATION**
 Marine, dark grey silty shale with some sandstone in western exposures (110-230 m)
- Kgo GOODRICH FORMATION**
 Fine to medium grained, laminated to x-bedded marine sandstone with minor shale and mudstone (0-400 metres). Not mappable so of Murray F., where it passes laterally into shale.
- Kha HASLER FORMATION**
 Silty dark grey marine shale
- Kb BOULDER CREEK FORMATION**
 Marine sandstone coarsening up to conglomerate overlain by complex sequence of marginal marine to non-marine conglomerate, sandstone, siltstone, shale with paleosols and coal (80-150 m).
- Kup UPPER MEMBER**
 A finer grained coal bearing interval of the Boulder Creek Formation in the Pine River area.
- KH HULCROSS FORMATION**
 A dark grey laminated marine siltstone with sandy interbeds near the top and a thin pebbly zone at its base (130-4 m). Thins to southeast and is only a few metres thick at Alberta border.
- Kg GATES FORMATION**
 Marine and non-marine sandstone, conglomerate, coal, shale and mudstone (100-250 m). Coals associated with regressive marine sandstones described as Fahler A to E in subsurface. The Torrens is the basal shelf sandstone. Gates coals pinch out north of a SSE basin hinge line near Mt Spieker. North of Mt Spieker the formation is essentially a marine sandstone.
- Km MOOSEBAR FORMATION**
 Dark grey marine shale, upward coarsening in a regressive sequence to sandy intervals at base of Gates. Thins from 500 m near Pine River southeast to 70 m near the Alberta border.
- Kge GETHING FORMATION**
 Siliceous sandstone (occasionally calcareous), coal, shale, mudstone (100-1100 m thick). Thins to southeast along coalbelt, also eastward into the plains. Lower Gething (Gaylard member) is conglomeratic south of Burnt River. South of Burnt River an upper coal-bearing member (Chamberlain) is developed above a marine tongue.
- Kod CADOMIN FORMATION**
 Thick units of sandstone and pebbly sandstone with minor intervals of finer, carbonaceous beds north of the Burnt River. Massive pebble and chert conglomerate south of Burnt River. Thickness variable (50-200 metres).

UNDIVIDED BEDS
 Fort St. John Group



SYMBOLS

| | |
|---|-------|
| Geological boundary | ----- |
| Thrust fault; teeth in upper plate | ----- |
| Normal fault; downthrown side indicated | ----- |
| Axial trace of overturned antiform, synform | ----- |
| Axial trace of upright antiform, synform | ----- |
| Topographic contour (100 metre interval) | ----- |
| Quaternary Limit | ----- |
| Coal lease | ----- |
| CBM Experimental Schemes and Land Sales (as of February 2003) | ----- |
| Oil and Gas Well | ----- |
| Elevation contour (200 m interval) | ----- |
| Spot height at mountain peak (feet) | ----- |

BASEMAP INFO

The basemap source is digital vector map files described as Topographic Mapping 1:250 000 (Version: Original) from LandData BC (British Columbia Ministry of Environment, Lands and Parks). Magnetic declination in the central part of the map area (latitude 53.37, longitude 121.30) is 21.41° east for the year 2003.

North American Datum 1983, Zone 10, Universal Transverse Mercator Projection.

MAP SOURCES

Map sources include coal assessment reports, 1:50 000 mapping by the Geological Survey Branch, and G.S.C. maps, particularly map 1859A by McMechan 1994.

NOTE!

Digital version of this map with well formation-top database is available from Geological Survey Branch website: www.em.gov.bc.ca/geology.

