1 G.M. Dawson Discovery Zone - 1877

Photograph taken July 1977

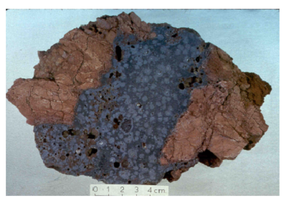
2 Excavation and Bulk Sampling

'A' Trench - July 1977

3 Burnt Zone

'A' Trench - July 1977

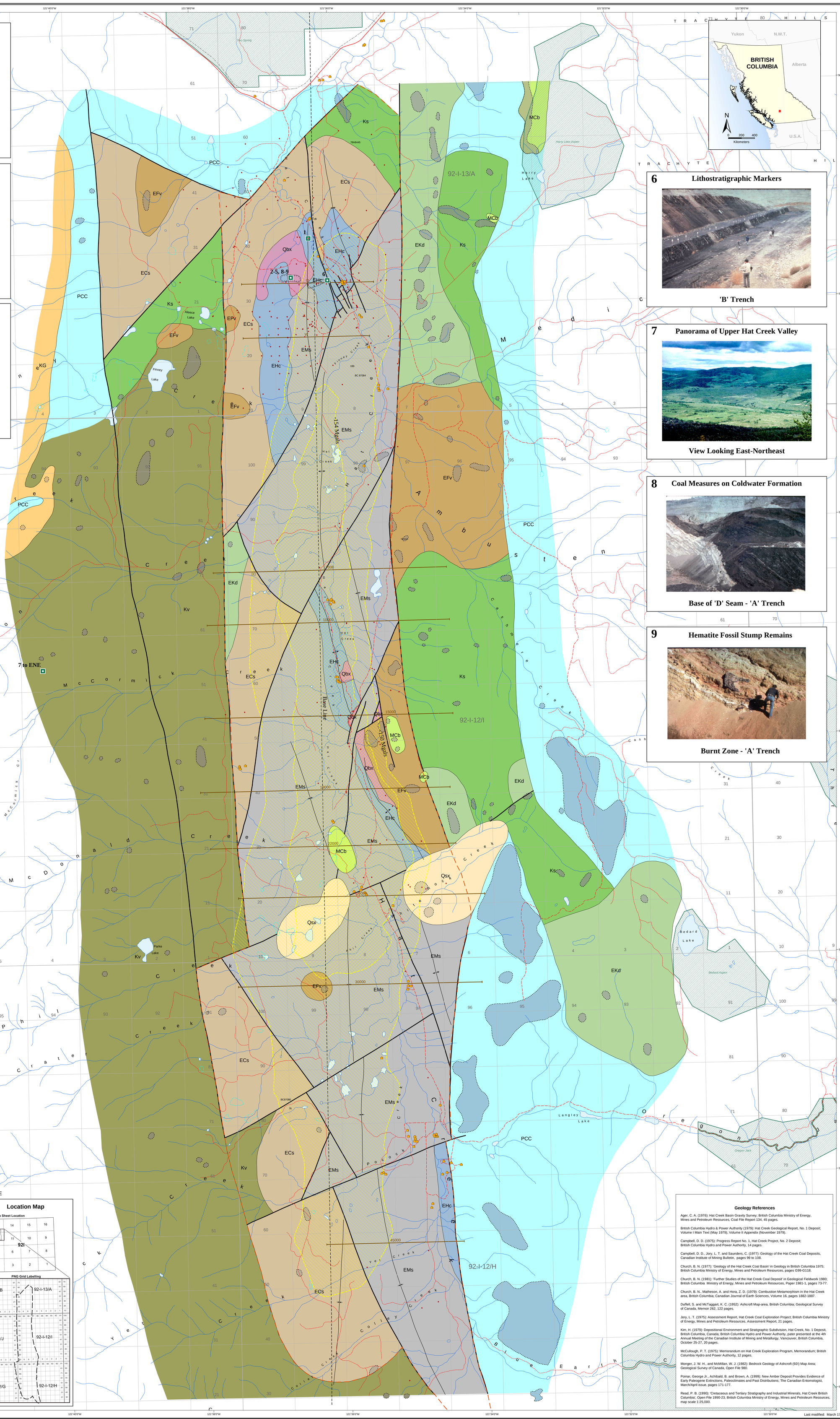
4 Fused Shale



Burnt Zone - 'A' Trench

5 Fused Maghematite 'Stump'

Burnt Zone - 'A' Trench



6 Lithostratigraphic Markers

'B' Trench

7 Panorama of Upper Hat Creek Valley

View Looking East-Northeast

8 Coal Measures on Coldwater Formation

Base of 'D' Seam - 'A' Trench

9 Hematite Fossil Stump Remains

Burnt Zone - 'A' Trench

Petroleum Geology Open File 2003-1

Sheet 1 of 3

Geology of the Hat Creek Coalfield

Cartography by: Mike Fournier

Scale: 1 : 20,000

Projection: Universal Transverse Mercator (NAD83)

0 250 500 1,000 1,500 2,000 Meters

Legend

Infrastructure

- Paved Road
- Gravel Road
- Rough Road
- Transmission Line
- Swamp or Marsh
- Building
- Photo Location
- Coal Exploration Wells
- Coal Field Boundary (estimate)
- Base Line (BC Hydro 10 000' grid)
- Parks and Protected Areas

Geology

Quaternary
- Qbx — Burnt coal
- Qsx — Unconsolidated landslide debri and colluvium

Miocene
- MCb — Chilcotin Group: basalt lava and breccia

Eocene
- EFv — Finney Lake Fm: well lithified lahar and volcanics
- EMs — Medicine Creek Fm: grey claystone, siltstone
- EHc — **Hat Creek Fm: interbeded coal and clastic beds**
- ECs — Coldwater Fm: sandstone, conglomerate, volcanics
- EKd — Kamloops Group: dacitic lava and breccia

Upper Cretaceous
- KG — Mount Lytton batholith

Middle Cretaceous
- Ks — sandstone, siltstone, conglomerate

Lower Cretaceous
- Kv — Spences Bridge Group: dacitic lava, breccia

Permian
- PCC — Cache Creek Group: limestone, chert, schist

- Geological Contact
- Geological Fault
- Outcrops
- Anticline
- Syncline

Gravity Anomaly

- -150 Mgals
- -154 Mgals

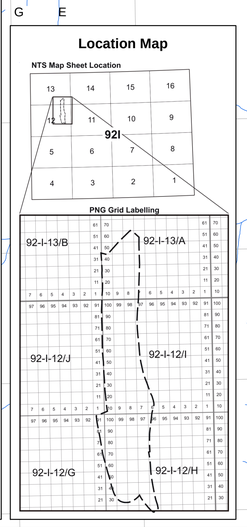
25 000 — Geological Cross Section

Geological interpretation by B. N. Church, based on field observations and compilation from the list of References.

Location Map

NTS Map Sheet Location

PNG Grid Labelling



Geology References

Ager, C. A. (1976): Hat Creek Basin Gravity Survey; British Columbia Ministry of Energy, Mines and Petroleum Resources, Coal File Report 134, 45 pages.

British Columbia Hydro & Power Authority (1979): Hat Creek Geological Report, No. 1 Deposit; Volume I Main Text (May 1979), Volume II Appendix (November 1979).

Campbell, D. D. (1975): Progress Report No. 1, Hat Creek Project, No. 2 Deposit; British Columbia Hydro and Power Authority, 14 pages.

Campbell, D. D., Jory, L. T. and Saunders, C. (1977): Geology of the Hat Creek Coal Deposits, Canadian Institute of Mining Bulletin, pages 99 to 108.

Church, B. N. (1977): 'Geology of the Hat Creek Coal Basin' in Geology in British Columbia 1975; British Columbia Ministry of Energy, Mines and Petroleum Resources, pages G99-G118.

Church, B. N. (1981): 'Further Studies of the Hat Creek Coal Deposit' in Geological Fieldwork 1980; British Columbia Ministry of Energy, Mines and Petroleum Resources, Paper 1981-1, pages 73-77.

Church, B. N., Matheson, A. and Hora, Z. D. (1979): Combustion Metamorphism in the Hat Creek area, British Columbia; Canadian Journal of Earth Sciences, Volume 16, pages 1882-1887.

Duffell, S. and McTaggart, K. C. (1952): Ashcroft Map-area, British Columbia; Geological Survey of Canada, Memoir 262, 122 pages.

Jory, L. T. (1975): Assessment Report, Hat Creek Coal Exploration Project; British Columbia Ministry of Energy, Mines and Petroleum Resources, Assessment Report, 21 pages.

Kim, H. (1979): Depositional Environment and Stratigraphic Subdivision, Hat Creek, No. 1 Deposit, British Columbia, Canada; British Columbia Hydro and Power Authority, pater presented at the 4th Annual Meeting of the Canadian Institute of Mining and Metallurgy, Vancouver, British Columbia, October 25-27, 20 pages.

McCullough, P. T. (1975): Memorandum on Hat Creek Exploration Program, Memorandum; British Columbia Hydro and Power Authority, 12 pages.

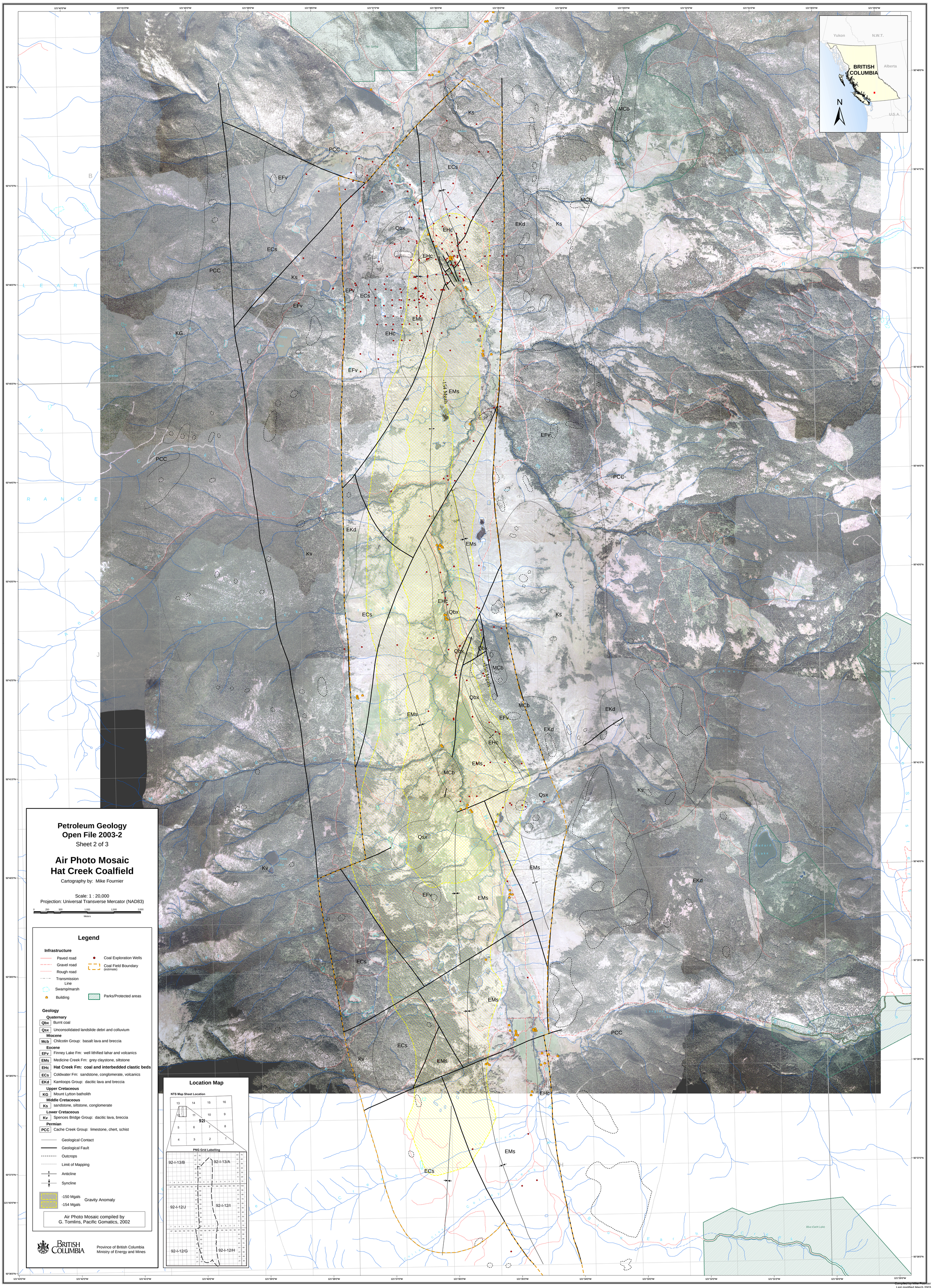
Monger, J. W. H., and McMillan, W. J. (1982): Bedrock Geology of Ashcroft (92I) Map Area; Geological Survey of Canada, Open File 980.

Poinar, George Jr., Achibald, B. and Brown, A. (1999): New Amber Deposit Provides Evidence of Early Paleogene Extinctions, Paleoclimates and Past Distributions; The Canadian Entomologist, March/April issue, pages 171-177.

Read, P. B. (1990): 'Cretaceous and Tertiary Stratigraphy and Industrial Minerals, Hat Creek British Columbia', Open File 1990-23, British Columbia Ministry of Energy, Mines and Petroleum Resources, map scale 1:25,000.

Province of British Columbia
Ministry of Energy and Mines
New Ventures Branch

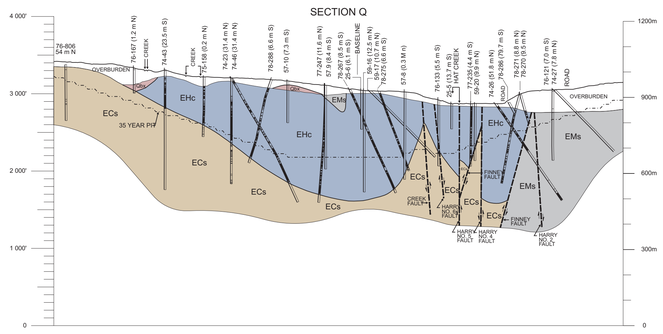
Last modified: March 17, 2003

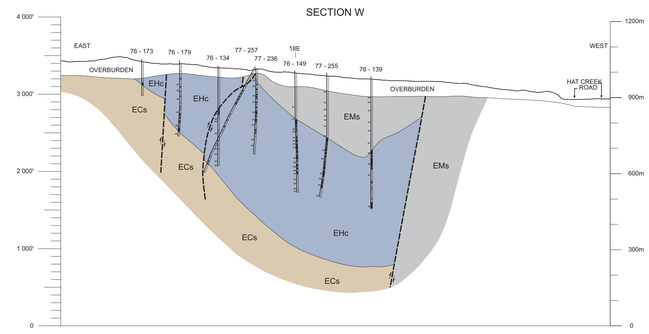

Yukon
N.W.T.
BRITISH COLUMBIA
Alberta
U.S.A.
N
Petroleum Geology
Open File 2003-2
Sheet 2 of 3
Air Photo Mosaic
Hat Creek Coalfield
Cartography by: Mike Fournier
Scale: 1 : 20,000
Projection: Universal Transverse Mercator (NAD83)
Meters
Legend
Infrastructure
Paved road
Gravel road
Rough road
Transmission Line
Swamp/marsh
Building
Coal Exploration Wells
Coal Field Boundary (estimate)
Parks/Protected areas
Geology
Quaternary
Qbx Burnt coal
Qsx Unconsolidated landslide debri and colluvium
Miocene
Mcb Chilcotin Group: basalt lava and breccia
Eocene
EFv Finney Lake Fm: well lithified lahar and volcanics
EMs Medicine Creek Fm: grey claystone, siltstone
EHc Hat Creek Fm: coal and interbedded clastic beds
ECs Coldwater Fm: sandstone, conglomerate, volcanics
EKd Kamloops Group: dacitic lava and breccia
Upper Cretaceous
KG Mount Lytton batholith
Middle Cretaceous
Ks sandstone, siltstone, conglomerate
Lower Cretaceous
Kv Spences Bridge Group: dacitic lava, breccia
Permian
PCC Cache Creek Group: limestone, chert, schist
Geological Contact
Geological Fault
Outcrops
Limit of Mapping
Anticline
Syncline
-150 Mgals
-154 Mgals
Gravity Anomaly
Air Photo Mosaic compiled by
G. Tomlins, Pacific Gomatics, 2002
Location Map
NTS Map Sheet Location
92I
PNG Grid Labelling
92-I-13/B
92-I-13/A
92-I-12/J
92-I-12/I
92-I-12/G
92-I-12/H
British Columbia
Province of British Columbia
Ministry of Energy and Mines
Compiled by Mike Fournier
Last modified March 2003

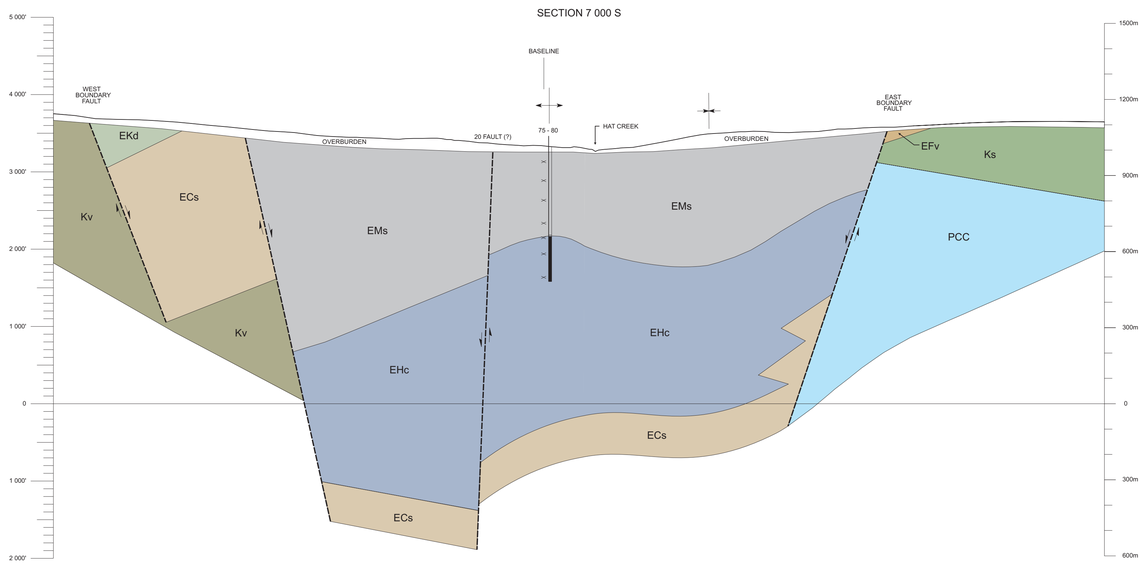
Petroleum Geology Open File 2003-2

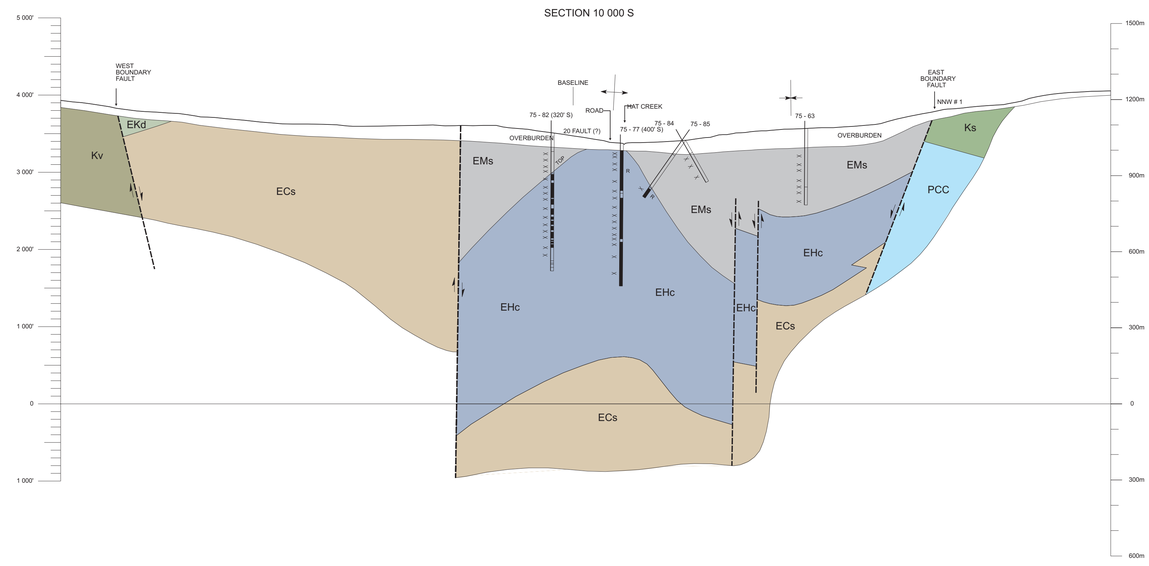
Hat Creek Coalfield - Geological Cross-Sections

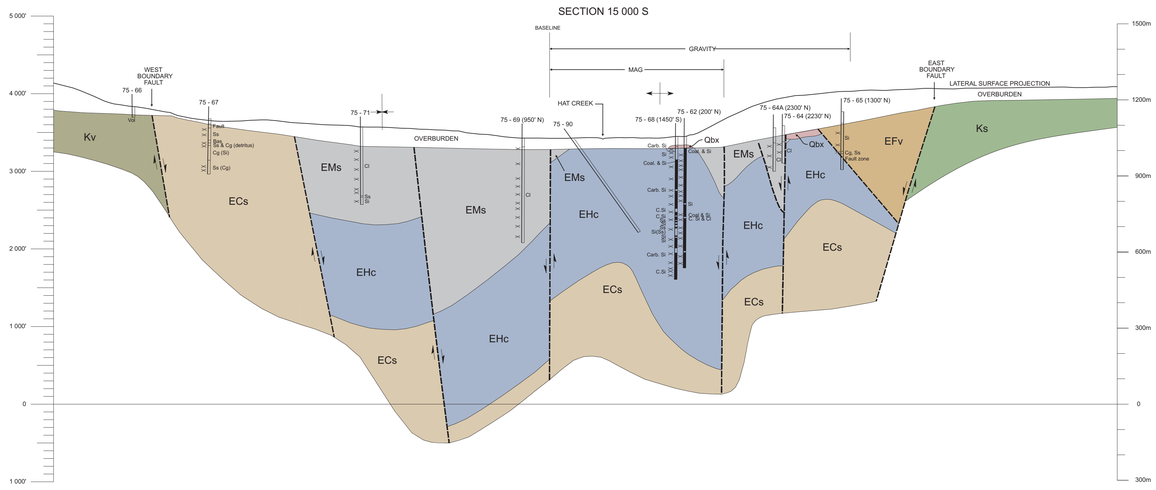
Sheet 3 of 3

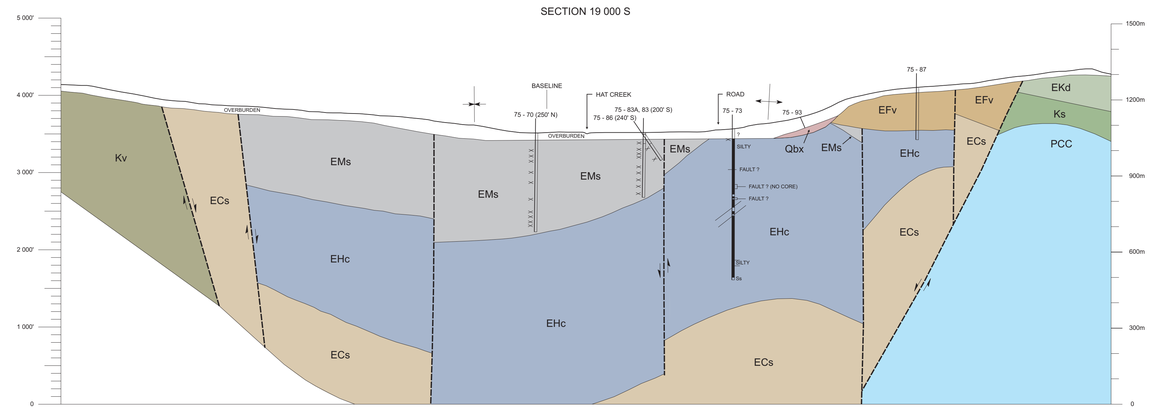


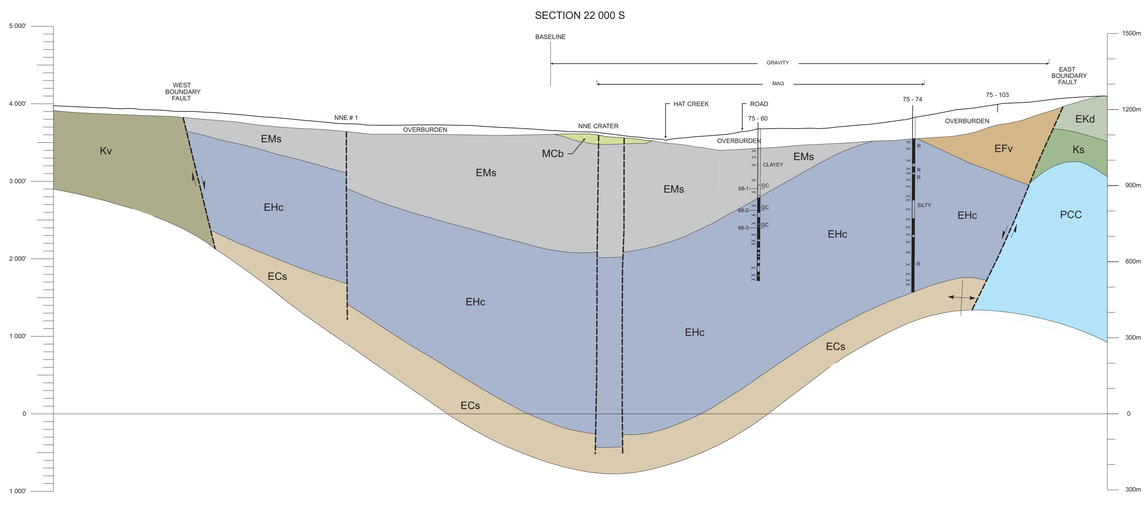


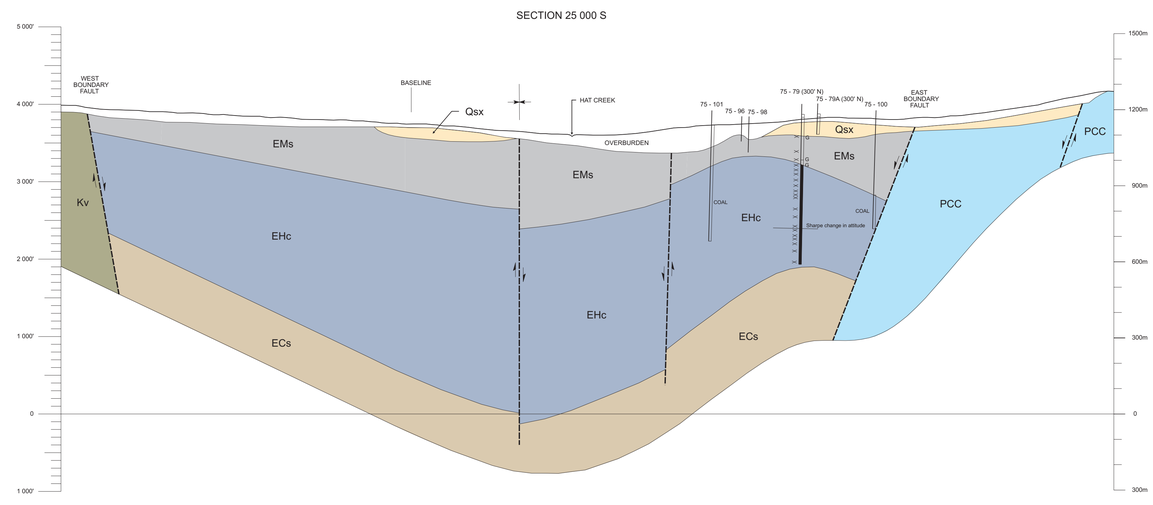


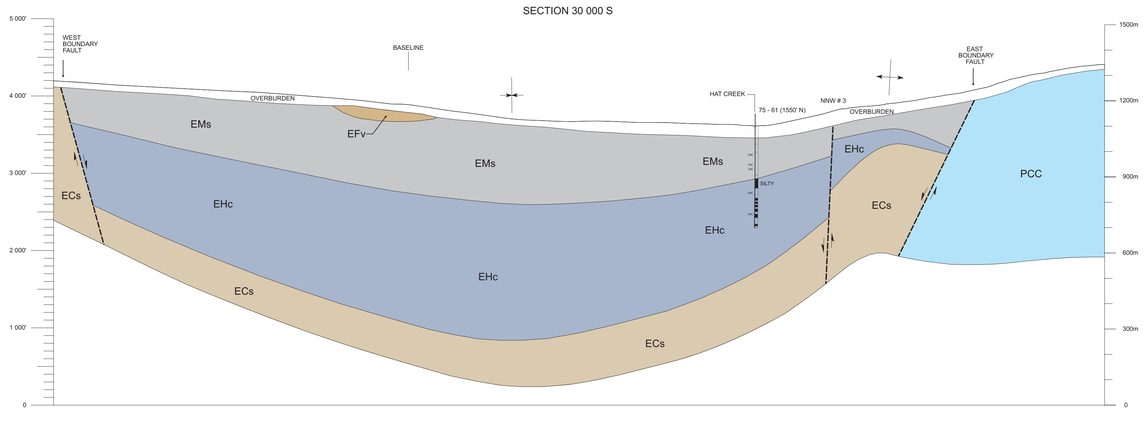


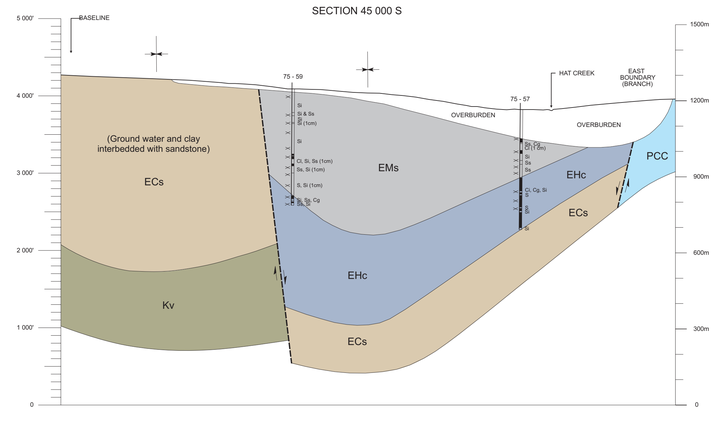












For all Cross-Sections

Scale = 1 : 10 000
No vertical exaggeration
Looking North

Geology Interpretation by Neil Church, based on field observations and compilation from the list of references on Sheet 1.

Computer graphics by John Armitage, ArmitageCAD and Mike Fournier, British Columbia Ministry of Energy and Mines, 2002.

Last updated March 13, 2003