

For More Information

Mark Hayes

Manager, Petroleum and Resource Geology
Phone: (250) 952-0364
Mark.Hayes@gems3.gov.bc.ca

or

Filippo Ferri

Senior Petroleum Geologist
Phone: (250) 952-0377
Fil.Ferri@gems3.gov.bc.ca
Ministry of Energy and Mines
New Ventures Branch
6th Floor, 1810 Blanshard Street
PO Box 9323 STN PROV GOVT
Victoria, BC V8W 9N3
www.gov.bc.ca/em

Source

Ministry of Energy and Mines
Petroleum Geology
Special Paper 2002-3
*Petroleum Exploration Potential
of the Nechako Basin,
British Columbia*
Prepared by:
Petrel Robertson Consulting Ltd.
Available from
Crown Publications
www.crownpubs.bc.ca

NEW VENTURES BRANCH
develops and promotes
BC oil and gas investment
opportunities

BRITISH COLUMBIA OFFERS:

- Pro-business government
- Competitive fiscal regime
- One stop regulatory approval
- Ready access to Canadian and U.S. Markets
- A skilled service sector



**BRITISH
COLUMBIA**
MINISTRY OF
ENERGY AND MINES

Oil and Gas Opportunities in Central British Columbia Nechako Basin

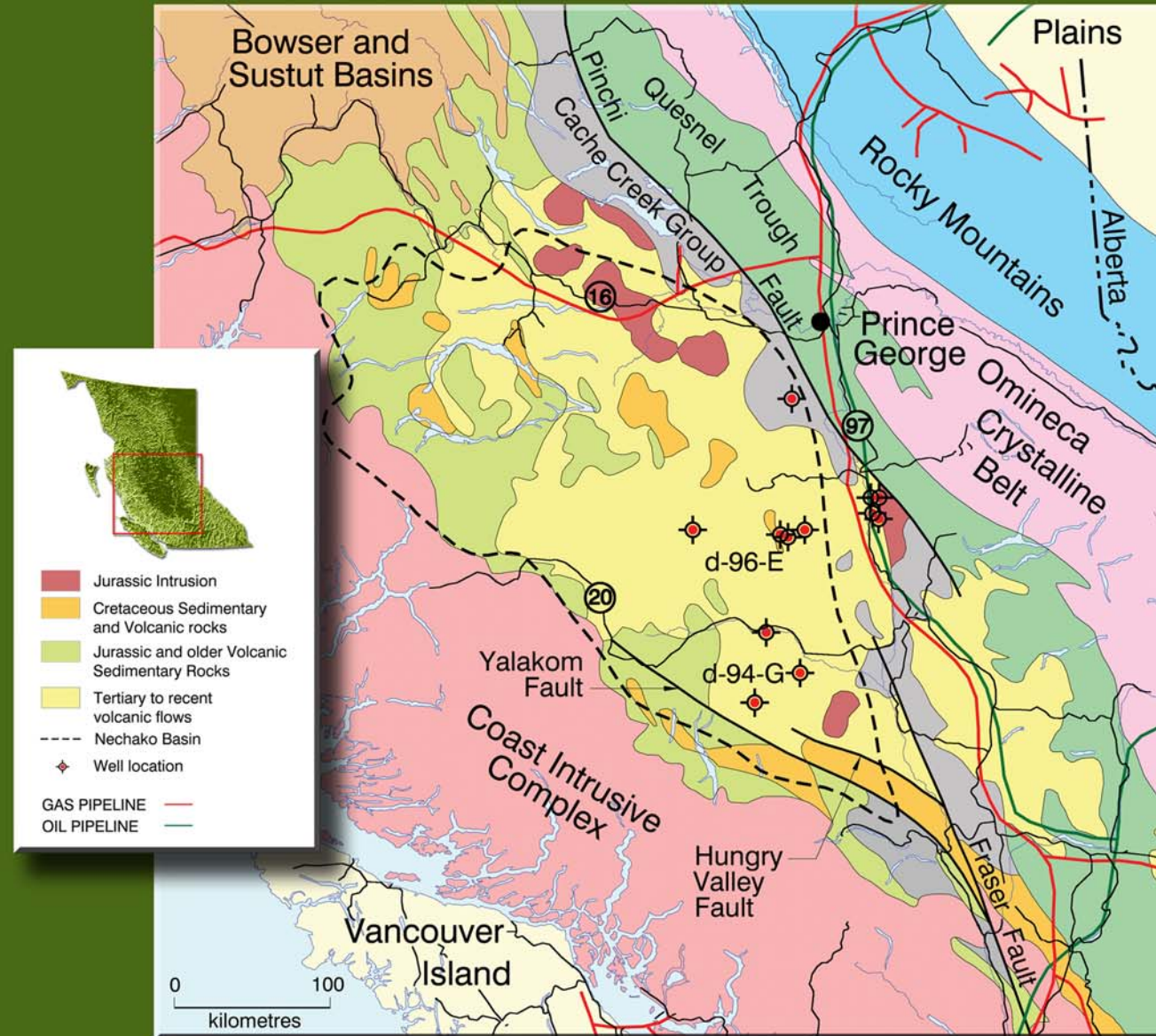


The interior lowlands of British Columbia represent a relatively subdued region of the Canadian Cordillera extending over some 75,000 square kilometres. This area is covered by extensive mafic to felsic volcanic flows of Tertiary to recent age and thick glacial deposits. Underlying these deposits are over 4,000 metres of Middle Jurassic to Tertiary marine and non-marine sediments, and lesser volcanics which informally define the Nechako Basin. Equivalent rocks are found in the Tyaughton-Methow Basin, across the Yalakom and Hungry Valley fault systems. The Nechako Basin represents a post-terranic accretion depocentre bounded to the north by the Skeena Arch, to the west and south by the Coast Plutonic Complex and to the east by the Cache Creek Group. Due to the active nature of the basin boundaries, lithofacies and depocentres within this region varied from Jurassic to Tertiary times, although some generalizations can be made.

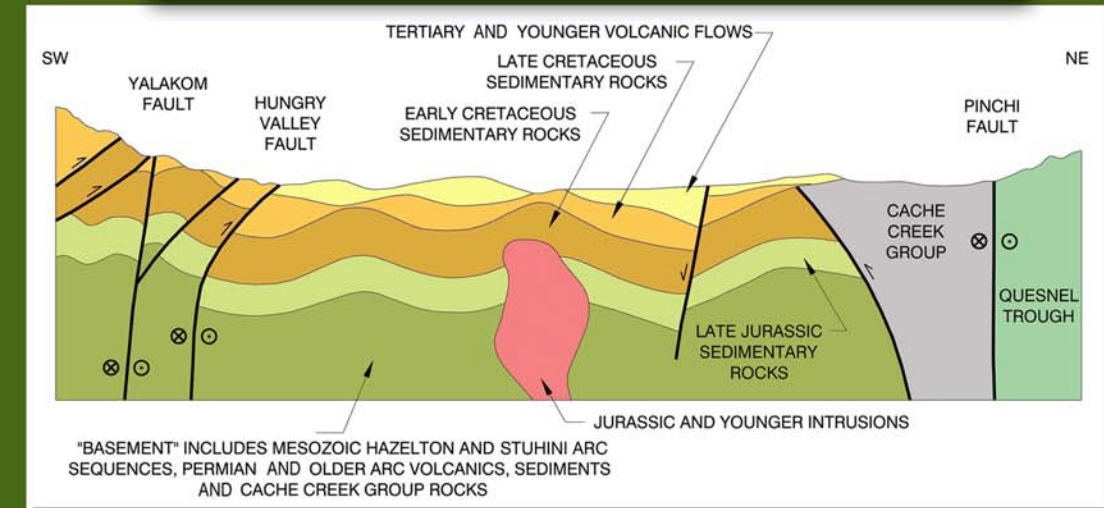
Shaded Relief Map of Nechako Basin Area



Simplified Geological Map of Nechako Basin and surrounding regions



Simplified Cross-section of south-central Nechako Basin

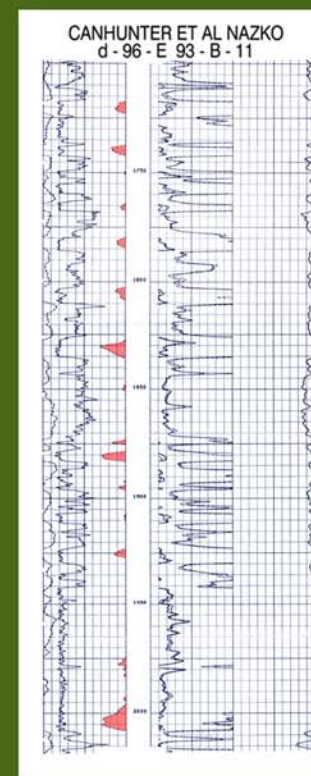


Since the 1930's, the Nechako Basin has been the object of limited hydrocarbon exploration and, to date has had only 12 exploratory wells drilled into it. Oil staining on drill chip samples and the presence of gas in drill stem test and gas cuttings indicates the presence of a hydrocarbon system. Maturation data from surface and subsurface locations suggests much of the mid to Late Cretaceous strata to be within the oil window. Clastics with good reservoir characteristic occur within sections of Jurassic and Cretaceous sediments. Source rocks with moderate to good potential have locally been recognized within Cretaceous sediments. The possibility exists for an organic-rich Early to Middle Jurassic sequence at the base of the basin, similar to uppermost Spatsizi Formation shales in the Bowser Basin. Analysis of organic-rich sediments within Cretaceous sequences indicates a dominance of Type III kerogens, although Types I and II are also present.

Crown Petroleum and Natural Gas Tenure is available for the entire Nechako Basin area.

Resource Potential - (Hannigan, et al., 1994)

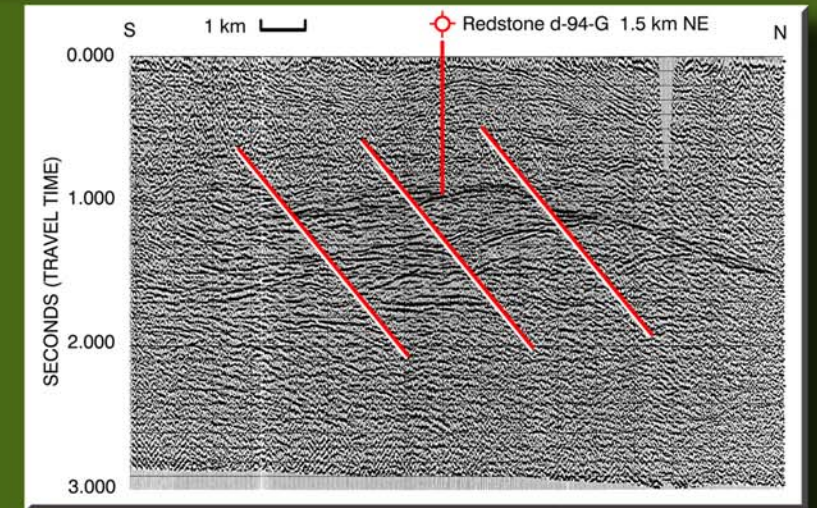
	Gas (TCF)	Oil (BBO)
Tertiary	0.502	0.136
Mid to Late Cretaceous	0.023	0.013
Early to Mid Cretaceous	8.723	4.871



Resource Estimate

Dual induction log across conglomeratic section of Jackass Mountain Formation Nazko d-96-E well

Seismic line from the southern Nechako Basin showing deformed Cretaceous sediments



Basal Jurassic sediments consist of over 1,000 metres of shallow marine to deltaic, arkosic and chert-rich sandstone and conglomerate, together with siltstone and shale. These are followed by several thousand metres of Early to mid Cretaceous non-marine sandstone and conglomerate, with lesser dark shale and siltstone. Mid to Late Cretaceous sediments are upwards of 2,500 metres thick and are characterized by chert-rich marine and non-marine sediments consisting of conglomerate, sandstone and lesser siltstone and shale. In the northern and southern parts of the basin, the upper part of this sequence contains sections of volcanic rocks. Tertiary rocks are dominated by volcanic rocks, although non-marine sedimentary sequences are locally well developed.

These rocks were faulted and folded in Cretaceous and later times and may now delineate structures similar to the Skeena Fold Belt found to the north, within the Bowser Basin. Imaging these structures by seismic techniques was challenging to early explorationists, but modern processing and acquisition techniques should overcome the impedance to seismic energy from overlying volcanics.