Ministry of Energy, Mines and Natural Gas
Geoscience and Strategic Initiatives Branch

Liard Basin Drilling and Landsale Activity, Northeast British Columbia

Geology Compilation: Warren Walsh
Geology Compiled from Geological Survey of Canada

NTS 94N, 94O, 95B, 95C

Scale: 1:200 000

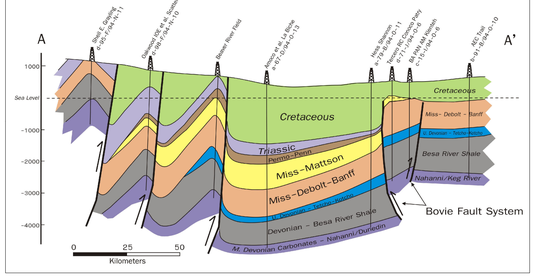
0 3.25 6.5 13 19.5
Kilometers

Universal Transverse Mercator (Zone 10N) Projection
North American Datum 1927 (NAD 27)
Contour Interval 200 metres; Altitude in metres above mean sea level

Digital base maps from BC Ministry of Energy and Mines,
BC Ministry of Sustainable Resource Management and National Topographic Database

GIS Cartography by E.A.M. Macdonald
Revised by C. Lee, and Talitha Castillo January 2013

Liard Basin – Schematic Cross Section



Legend

- Waterbody
- Marsh
- River
- Road
- Provincial Boundary
- Pipeline
- Contour
- Active Tenure
- Experimental Scheme

Wells and Land Sales

- Gas Injection/Disposal
- Abandoned Gas
- Abandoned Oil & Gas
- Abandoned Oil
- Abandoned
- Water Disposal
- Water Injection
- Water Source
- Gas
- Oil and Gas
- Oil
- Water
- Cased
- Observation
- Drilled
- Spudded
- Suspended Gas
- Suspended Oil & Gas
- Suspended Oil
- Suspended
- Suspended Water
- Well Authorization Granted
- 2011
- 2010
- 2009
- 2008
- 2007

Geology Linework

- Fault
- Fault (displacement unknown; assumed)
- Normal Fault
- Thrust Fault
- Thrust (projected under cover)
- Anticline
- Anticline (approximate)
- Thrust (assumed)
- Anticline (assumed)
- Anticline (projected under cover)
- Geological boundary
- Geological boundary (projected under cover)
- Location of Measured Section

CENOZOIC

QUATERNARY

Till, alluvium, colluvium, lake silts; alluvial sands and silts

TERTIARY?

Trachyte

MESOZOIC

CRETACEOUS?

Coarse-grained syenite

CRETACEOUS

Upper Cretaceous

WAPITI FORMATION (Maastrichtian): banded feldsparic sandstone, mudstone, coal

KOTANELEE FORMATION (Santonian and Campanian): dark grey concretionary marine shale and siltstone, mudstone, sandstone; minor conglomerate

DUNVEGAN FORMATION (Cenomanian): carbonaceous sandstone, massive pebble conglomerate, dark grey shale; siltstone

Lower Cretaceous

SULLY FORMATION (Albian and Cenomanian): dark grey, siderific, concretionary shale, gyssiferous in part

SIKANNI FORMATION: greenish grey sandstone, siltstone, shale

LEPINE FORMATION: concretionary and siderific, rusty weathering shale

SCATTER FORMATION: undivided; greenish grey sandstone; siltstone

GARBUTT FORMATION: siderific, concretionary and rusty weathering shale; basal pebble conglomerate and grey sandstone

BUCKINGHORSE FORMATION: dark marine shale and siltstone & minor undivided shale, siltstone and sandstone of the Fort St. John Group

TRIASSIC

Upper Triassic

LUDINGTON, BALDONNEL AND PARDONET FORMATIONS: dolomitic siltstone, light grey limestone, dark grey limestone

Middle and Upper Triassic

LIARD FORMATION: orange-brown dolomite and calcareous sandstone, siltstone; minor limestone

Lower and Middle Triassic

TOAD FORMATION: dark grey calcareous siltstone and shale; minor fine grained sandstone

GRAYLING FORMATION: silver grey, locally calcarous shale; basal finegrained sandstone

PALEOZOIC

PERMIAN

FANTASQUE FORMATION: dark grey, banded chert; grey sandstone; mudstone

CARBONIFEROUS AND PERMIAN

KINDLE FORMATION: grey brown, fine grained calcareous sandstone, siltstone, dark grey shale; includes correlatives of Mattson Formation, Stoddart Group and Fantasque Formation

Mattson Formation:

MATTSON FORMATION: fine and medium grained quartzose sandstone, shale; undivided (may include Fantasque Formation)

Upper part: grey sandstone; limestone; shale

Middle part: massive bedded, grey to brown sandstone

Lower part: thinly bedded grey sandstone; shale; coal

MISSISSIPPIAN

FLETT FORMATION: grey limestone; shale

CLAUSEN FORMATION: black shale, thin limestone

YOHIN FORMATION: sandstone

DEVONIAN

BESA RIVER FORMATION: dark grey, pyritic, siliceous shale; minor siltstone

Middle Devonian

DUNEDIN FORMATION: medium grey, well bedded, fine grained limestone; minor calcarenite

MANETOE FORMATION: dolomite, coarsely crystalline, veggy

ARNICA FORMATION: dolomite, finely crystalline

Undivided carbonate of middle Devonian and older

STONE FORMATION: light grey, very finely crystalline dolomite, dolomite breccia

Lower Devonian

WOKKPASH FORMATION: yellow weathering, finegrained sandstone, dolomite, siltstone; minor solution breccia

SILURIAN AND DEVONIAN

Upper Silurian and Lower Devonian

MUNCHO-McCONNELL FORMATION: medium grey, finely crystalline dolomite; minor shale and sandstone

SILURIAN

Lower Silurian

NONDA FORMATION: dark grey, medium crystalline, cherty dolomite; minor white orthoquartzite

ORDOVICIAN

Middle Ordovician and Older

May include middle Ordovician and older carbonates (extended from adjacent map-area)

Boulder conglomerate (may be Hadrynian)

Lower Ordovician

KECHICKA GROUP: light grey limestone, argillaceous limestone

CAMBRIAN

Lower and (?)Middle Cambrian

red weathering, coarse conglomerate, sandstone; minor limestone

PROTEROZOIC

HELIKIAN

Includes green laminated argillite

TUCHODI FORMATION: dolomite, dolomitic siltstone, sandstone, shale

References:

Geology modified from:

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