



CARBONIFEROUS

- CHR** Hart River Formation: Limestone, dolostone, chert, brown-weathering, marine. May include Canol Formation locality.
- Ford Lake Shale**
- CF** Shale: calcareous, pyritic, marine. May be Upper Devonian in part.
- CF-ss** Sandstone rib.

DEVONIAN AND CARBONIFEROUS Tuttle Formation

- DCT-sh** Shale unit: Shale-dominated lithofacies.
- DCT-ss** Sandstone unit: Sandstone-dominated lithofacies.
- DCT-es** Sandstone and conglomerate unit: Sandstone and conglomerate-dominated lithofacies.

DEVONIAN Imperial Formation

- Di-u** Upper member: Shale, dark grey laminated, weathers medium grey; siltstone, dark grey; minor sandstone, pyritic.

Contacts

- Approximate
- Inferred

Faults

- Normal fault, approximate
- Thrust fault, approximate

Folds

- Anticline, upright, approximate
- Syncline, upright, approximate

Traces

- Marker bed

Geological Unit Construct

- Nomenclature change

Station

- Station

Bedding

- Horizontal, estimated remotely
- Upright, measured at station
- Upright, estimated remotely

Fossil Locality

- Fossil

Well

- Petroleum well, dry and abandoned

Catalogue Number	Fossil	Age	Easting, Northing (NAD83)	Report
C-029996	spores	Lower Devonian	416969, 7370510	WWB 1974
C-029998	spores	Lower Devonian	430059, 7366250	WWB 1974
C-432278	spores	Famennian	423982, 7365437	JU-2006-06
C-432281	spores	Not determined	417856, 7349455	JU-2006-06
C-432282	spores	Not determined	418178, 7349925	JU-2006-06
C-432283	spores	Viséan	418558, 7350230	JU-2006-06
C-432285	spores	Viséan	422464, 7358004	JU-2006-06
C-432286	spores	Viséan	422395, 7359349	JU-2006-06
C-432288	spores	Famennian	423969, 7364760	JU-2006-06
C-486312	spores	Tournaisian	429810, 7365235	DOLBY-2011
C-486351	spores	Famennian	416862, 7373934	DOLBY-2011
C-486426	spores	Viséan	413587, 7365266	DOLBY-2011
C-491913	spores	Viséan	422581, 7359150	DOLBY-2011
C-048794	spores	Barren	423095, 7362270	FL-1976-DCM
C-092524	spores	Strunian	423959, 7364730	FL-3-1983-DCM
C-092525	spores	Early to middle Viséan	422519, 7369120	JU-3-1982
V-000389	conodonts	Viséan	417825, 7349449	20.MJO-2009

Table 1. Fossil Localities.

UWID	FULL NAME	SPUD DATE	TD(m)	SURFACE LOCATION EASTING, NORTHING (NAD83)
300N056630136450	S. TUTTLE YT N -05	1965-02-18	3413.4	420742, 7367186

Table 2. Wells Table.

Abstract

This map is dominated by a single broad structure, the Tuttle anticline, developed in shale and coarse clastic rocks of the uppermost Imperial and Tuttle formations and Ford Lake Shale. A limited expanse of Hart River Formation is preserved in the southwest. Biostratigraphic ages vary from Famennian (Late Devonian) in the Imperial Formation in the north, the Viséan or Serpukhovian (Early Carboniferous) in the Hart River Formation in the southwest. Similar to the adjacent Mount Joyal map area to the north, the sandstone and conglomerate of the Tuttle Formation display rapid lateral variations in thickness and facies. This is reflected in the delineation of four mappable lithofacies with no specific stratigraphic order. Although poor exposure precludes a definitive explanation, a channelized depositional system is inferred. The trace of the Tuttle anticline deflects abruptly eastward in the map area. The fold axis appears to be localized where both the lowest and highest thick sandstone-dominated units of the Tuttle Formation thin abruptly eastward. At depth, the Tuttle anticline is poorly resolved in a short seismic reflection profile. However, farther north, seismic images show that the anticline is accommodated at the level of the Ogilvie Formation (limestone) by steep reverse faults.

Résumé

La présente carte porte l'empreinte prédominante d'une seule structure de grande envergure, l'anticlinal de Tuttle, qui s'est formée dans le schiste et les roches détritiques à grain grossier de la partie sommitale de la Formation d'Imperial, de la Formation de Tuttle et du Schiste de Ford Lake. Une étendue limitée de la Formation de Hart River est conservée au sud-ouest. Les âges biostratigraphiques varient du Famennien (Dévonien tardif) dans la Formation d'Imperial, au nord, au Viséan ou au Serpukhovien (Carbonifère précoce) dans la Formation de Hart River, au sud-ouest. De façon semblable à ce que l'on peut observer dans la région cartographique adjacente de Mount Joyal au nord, les grès et conglomérats de la Formation de Tuttle affichent des variations rapides d'épaisseur et de faciès latéralement. Ceci est reflété par la délimitation sur carte de quatre lithofaciés sans ordre stratigraphique particulier. Bien que le peu d'affleurements ne permette de l'affirmer sans ambiguïté, on croit qu'il s'agit d'un système sédimentaire canalisé. Le trace de l'anticlinal de Tuttle s'incurve abruptement vers l'est au sein de la région cartographique. L'axe de pli semble se situer là où la plus basse et la plus haute des épaisses unités à prédominance précoce de la Formation de Tuttle s'amincissent abruptement vers l'est. En profondeur, l'anticlinal de Tuttle est mal défini dans une courte coupe de sismique-réflexion. Toutefois, plus au nord, l'image sismique montre que l'arrangement de l'anticlinal au niveau de la Formation Ogilvie (calcaire) est assuré par des failles inverses fortement inclinées.

National Topographic System reference and Index to adjoining published Geological Survey of Canada maps

116R1	116R6	116R9
	CGM 73	CGM 72
116R8	116R7	116R6
	CGM 70	CGM 71
116R5	116R2	116R1

Cover illustration

Aerial view southwestward toward the Dempster Highway's Eagle River bridge (foreground). Near this historic site, the famed Mad Trapper of Rat River, Albert Johnson, was killed in February 1932, after eluding capture for more than a month. Beyond the highway is an abandoned quarry formerly used for roadbed aggregate. On the skyline is a long ridge underlain by sandstone of the Tuttle Formation. Rectangular light patch in the distance marks the location of the Socony Mobil WM S Tuttle YT N-05 exploration well, completed in July 1965 at a total depth of 3513 m. Photograph by L.S. Lane, July 2009. 2012-149

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