

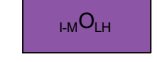
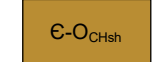
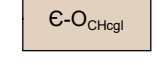
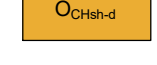
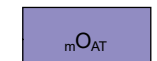



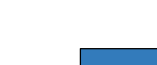

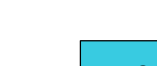

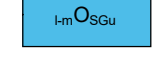
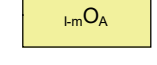











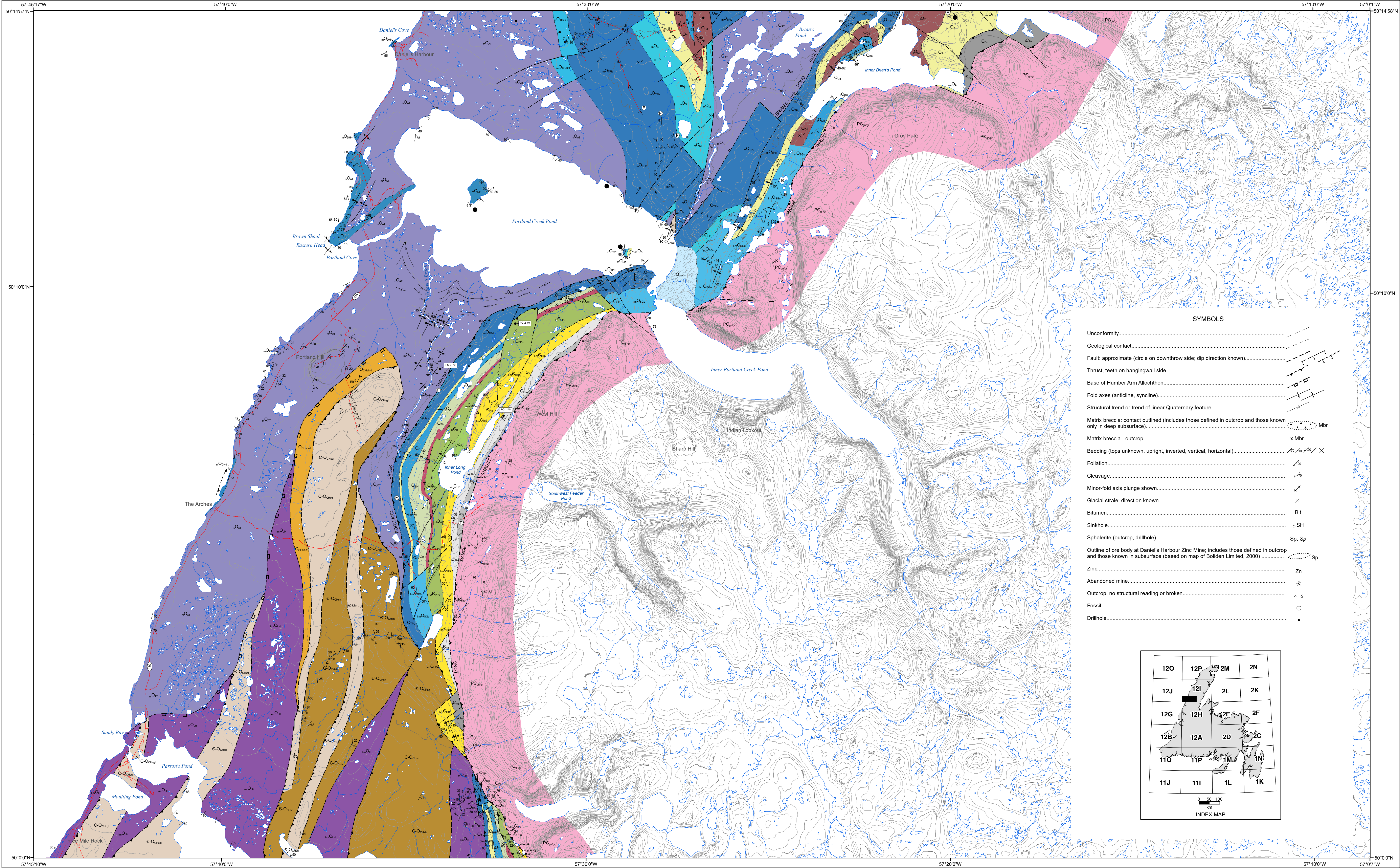
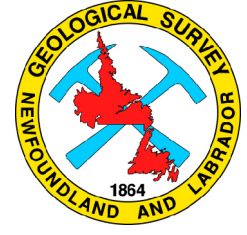


LEGEND

	Quaternary gravel, sand
HUMBER ARM ALLOCHTHON, COW HEAD SUCCESSION	
	Lower Head Formation
	Interbedded green-grey to grey lithic sandstone, siltstone and shale, thick sequences of lithic sandstone, locally pebbly; graptolites
COW HEAD GROUP	
	Grey, black shale, red and green shale, beds of light-grey fine-grained limestone, limestone conglomerate and grey sandstone
	Light-grey, limestone conglomerate, lime grainstone and thin bedded lime mudstone intercalated with multicoloured shale
	Black shale interbedded with yellow-weathering dolostone (possible equivalent of Lobster Cove Member)
AUTOCHTHONOUS LOWER PALEOZOIC SHELF AND FORELAND BASIN SEQUENCE	
GOOSE TICKLE GROUP	
American Tickle Formation	
	Interbedded green-grey to grey-lithic sandstone, siltstone and shale; thick sequences of amalgamated lithic sandstone, locally pebbly and convoluted; slump beds; graptolites common
Daniel's Harbour Member	
	Thick amalgamated, clast- to matrix-supported limestone conglomerate consisting of mega oololiths, boulders and pebbles of limestone derived from the Table Point and Table Cove formations set in a dolomitic to shaly limestone matrix; some shale and sandstone lithoclasts. Top of the conglomerate is overlain by lime grainstone and lime mudstone. The member rests directly on the Table Point Formation at several localities and is intercalated within the American Tickle Formation at others. ->Dm -> dolomitized
Black Cove Formation	
	Black shale, graptolitic, with thin beds and laminae of siltstone and lime mudstone; ->Dm -> undivided Black Cove and American Tickle formations
TABLE HEAD GROUP	
Table Cove Formation	
	Interbedded dark grey, thin bedded, stylonodular, bioturbated and fossiliferous limestone passing up into thin bedded lime mudstone and grey shale; slump scars, slides and slump beds throughout; ->Dm -> undivided Table Cove and Black Cove formations
Table Point Formation (->Dm -> undivided)	
	Dark grey, well bedded, massive, bioturbated, stylonodular and lesser thin bedded, lime mudstone and peloidal and fossiliferous lime wackestone and packstone; lime grainstone and sponge-rich mudstone mounds locally; slump beds; fossils include trilobites, brachiopods, high to planispiral gastropods, large straight to coiled cephalopods, ostracods, bryozoan, and sponges; mudcrack fossils commonly replaced by white calcite spar; dark-grey chert common on bedding surfaces; the dark-grey limestone constitutes the bulk of the formation above the Spring Inlet Member; ->Dm -> White-weathering, dull grey, medium to finely crystalline, success dolostone rich in porosity and irregular vugs; dolomite spar replaces fossils especially nodules
Spring Inlet Member	
	Well-bedded, fenestral-rich, off-white to light grey, peloidal and fossiliferous, lime grainstone to mudstone, laminated limestone, fossil-rich beds and oolites; and meta-thick, shallowly upward sequences of bioturbated and stylonodular grey dolomitic limestone and laminated lime mudstone and dolostone. The fenestral limestone facies varies in thickness and dominates the member in the map area. The meta-thick, limestone-dolostone sequences locally intercalate with fenestral limestone generally at or near the base of the formation; ->Dm -> White to cream, finely crystalline dolostone generally preserving depositional fabrics and rich in porosity
ST. GEORGE GROUP	
St George Group: Undivided (SG -> dolomitized)	
Aguathuna Formation	
	Yellow to buff weathering, pale grey to green-grey, finely crystalline to microcrystalline dolostone and green-grey shale; dolostone includes bioturbated and laminated types, the former often displaying a light and dark mottling and the latter associated with shale interbeds with mudcracks and megacrystalline nodules; a few beds of stromatolitic dolostone and stromatolite infillational breccia. The latter mostly reflect surface karst but others display evidence of subsurface collapse (matrix breccia); horizons of white to pale grey chert mark bedding planes, breccias and algal mounds; a dolostone bed near the base of the formation contains graptolites; high-spired gastropods occur locally; an upper member of mottled and laminated dolostone having several beds of small pebbles and sand layers of chert and dolostone lithoclasts mark the top 15 m of the formation in the Bellfarms map area overlying the cryptic St. George Uniformity. Fractures, filled with chert and dolostone sand and silt, link to the Unconformity; they may penetrate underlying beds stratigraphically as deep as the Calotte Formation
Calotte Formation	
	A thick upper succession of alternating well-bedded, finely crystalline, burrow-mottled and unevenly thin stratified (razor bedded) dolostone displaying ghosts of fossils, and dark grey, spongy, medium to coarse crystalline dolostone rich in white sparry dolomite veins and vuggy cavities; beds and wedges of grey limestone are present locally. The limestone ranges from fossiliferous to peloidal, bioturbated wackestone-dolostone to cross-bedded peloidal grainstone
	A thick uniform, lower succession of dark grey, burrow-mottled, dolomitic lime wackestone to packstone rich in fossils, peloids and microbial lithoclasts; beds of intracrystalline and skeletal-rich mudstone mark the lower part of the formation alternating with undulose thinly stratified to nodular dolomitic limestone and a rare thin bed of mudcracked, dolomitic and argillaceous lime laminae; thick beds of thrombotic boundstone (rich in large gastropods, cephalopods, brachiopods, trilobites, crinoids and the sponge Archeoscyphia are spaced throughout the succession including one round bed just above the base of the formation; horizons of black, coalesced chert nodules are locally present
Boat Harbour Formation	
	Meter-scale sequences of dark to light grey dolomitic limestone and dolostone. The sequences include bioturbated dolomitic limestone, microbial limestone, uneven, thinly stratified dolomitic limestone and laminated limestone and dolostone. The formation is extensively dolomitized in the map area except at the top of the formation, the Barbacoe Member
Barbacoe Member	
	Meter-scale sequences of bioturbated, fossil-rich packstone and grainstone, beds of intracrystalline and skeletal-rich mudstone, undulose thinly stratified dolomitic limestone and beds of mudcracked, dolomitic and argillaceous, laminated limestone. A basal mudstone rich in chert pebbles, silicified fossils, and dolostone pebbles marks the base of the member at the contact of the Boat Harbour disconformity
Watts Right Formation	
	Dark grey and black, light grey and white-mottled, fine- to medium-crystalline dolostone. Mottling is related to bioturbation and fabrics of large thrombotic boundstone mounds. Dolostone is bluish-grey and has extensive chert
PORT AU PORT GROUP	
undivided Port au Port Group of fine dolostone, shale and minor limestone	
Berry Head Formation	
	Well bedded, buff to light grey-weathering, pale grey, thinly stratified and lesser burrow-mottled, microcrystalline dolostone with beds of dark grey medium to finely crystalline dolostone after columnar, stromatolitic boundstone; chert is common; rare dark grey shale
Pelt's Landing Formation	
	Well bedded, buff to yellow-weathering, pale grey, thinly stratified, laminated and lesser burrow-mottled, microcrystalline dolostone with beds of dorsal stromatolitic dolostone, sparry dolomite and clear quartz lined vugs; green-grey shale occurs associated with thinly stratified and laminated dolostone; beds of infillational edge-wise dolostone and red and green shale occur near the base; dolostone collapse breccias occur locally; minor chert near the top of the formation; stromatolitic, oolitic and fossiliferous limestone beds occur locally in the middle of the formation in the Bellfarms map area
March Point Formation	
	Dark grey, burrow-mottled to thinly bedded, argillaceous, finely crystalline dolostone; trilobites present locally; sparry dolomite and clear quartz lined vugs
LABRADOR GROUP	
Hawke Bay Formation	
	Thick units of well-bedded and cross-bedded, fine to coarse grained, white, pink, purple and red quartz arenite alternating with units of thinly stratified grey sandstone, siltstone and shale
Forteau Formation	
	Undivided of dark grey grainy limestone, grey shale and siltstone, minor sandstone and pink to grey limestone
	Upper limestone of dark grey oolitic, oolitic and skeletal grainstone, grey shale and thin-bedded sandstone, rich in olenellid and phytoplanktonic trilobites and small cone fossil Sallerella
	Middle shale of a lower succession of dark grey to grey shale rich in olenellid trilobites, scattered limestone nodules and some nodular fossiliferous limestone interbeds and an upper succession of grey, extensively bioturbated siltstone, lesser shale and minor sandstone
IC De Devils Cove Member - Pink, white to pale grey, nodular to locally grainy, fossil-rich limestone with thin shale partings and interbeds, sandy at the base	
Bradore Formation	
	Pink, red, and brown arkosic, fine to coarse grained, locally pebbly sandstone overlain by grey to dark green and pinkish grey, micaceous and glauconitic, fine-grained sandstone and siltstone with minor trace fossils; a thick bed of rusty weathering, coarse-grained to granular sandstone rich in quartz and shale pebbles mark the top of the formation capping an upper unit of cross-bedded red sandstone
PROTEROZOIC	
GRENVILLE GROUP	
	Undivided, pink to red, fine to coarsely crystalline granite; local quartz mica schist and mafic and granite gneiss

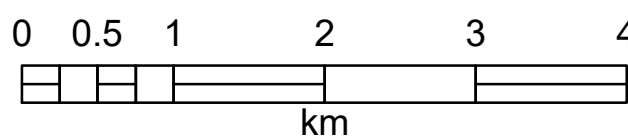


MAP 2020-17



GEOLOGY OF THE
INDIAN LOOKOUT (NTS 121/03)
AND
PORTLAND CREEK (NTS 121/04) MAP AREAS

Scale 1:50 000



GIS/digital cartography by K. Morgan.
Base map in digital format published by Geomatics Canada, Earth Sciences Sector, Natural Resources Canada, Ottawa.
Elevations in feet above mean sea level. Contour interval 100 feet.
Universal Transverse Mercator (UTM) projection Zone 21.
North American Datum (NAD) 1927.
Open File 01210325 (includes notes for map users as a separate document).
Copies of this map may be obtained from the Natural Resources Publications and Information, Geological Survey, Department of Natural Resources, Government of Newfoundland and Labrador, P.O. Box 8700, St. John's, NL, Canada A1B 4X6 (pub@geovnl.ca).
Department Website: <http://www.ni.gov.nl.ca/nr>
Geological Survey Website: <http://www.ni.gov.nl.ca/nr/mines/Geoscience/>
This map is subject to revision and modification.
Published 2020.

Note
Open File reports and maps issued by the Geological Survey Division of the Newfoundland and Labrador Department of Natural Resources are made available for public use without being formally edited or peer reviewed. They are based upon preliminary data and evaluation. The purchaser agrees not to provide a digital reproduction or copy of this product to a third party. Derivative products should acknowledge the source of the data.

Disclaimer
The Geological Survey, a division of the Newfoundland and Labrador Department of Natural Resources (the "authors and publishers"), retains the sole right to the original data and information found in any product produced. The authors and publishers assume no legal liability or responsibility for any alterations, changes or misrepresentations made by third parties with respect to these products or the original data. Furthermore, the Geological Survey assumes no liability with respect to digital reproductions or copies of original products or for derivative products made by third parties. Please consult with the Geological Survey to ensure originality and correctness of data and/or products.

Reference
Bolden Ltd.
2000. Test geophysical and geochemical surveys Daniel's Harbour property Great Northern Peninsula of Newfoundland, Licence 6914M. Report by D.A. Terry, Newfoundland and Labrador Geological Survey Assessment File 012102627, 36 pages plus appendices.

Recommended Citation
Knight, I.
2020. Geology of the Indian Lookout (NTS 121/03) and Portland Creek (NTS 121/04) map areas, Scale 1:50 000. Government of Newfoundland and Labrador, Department of Natural Resources, Geological Survey, Map 2020-17, Open File 01210325 (includes notes for map users as a separate document).