

SECOND REPORT  
ON THE  
GEOLOGICAL SURVEY  
OF THE PROVINCE OF NEW BRUNSWICK.  
By Abraham Gesner, Provincial Geologist, &c.  
[Continued.]

EXPLORATION OF THE INTERIOR  
PARTS OF THE DISTRICT.

Having given an account of the different formations, as they appear on the coast of the Bay of Fundy and Chignecto Bay, and the minerals contained in them, we now proceed to the examination of the interior of the district submitted to exploration during the past year, and the description of the various minerals contained in it, with due attention to the soil and the proper mode of its improvement.

The deep fosse that separates the limestone of Saint John from the Peninsula of the City, extends eastward about four miles. The calcareous rock pursues its ordinary course in a north-east direction, and is seen on the main road, on both sides, at Robinson's Inn, where, as usual, it is accompanied with trap rock forming naked and steep hills. Near Ferguson's Inn these rocks are met by the granitic and syenitic ridge already described, which, from this place, extends in a north-west direction across the peninsula of Kingston to a mountain, improperly called the "Devil's Back," on the west side of the Saint John; eastward, it occupies the high lands between Hammond River, where the formation is terminated.

HAMMOND RIVER.

Hammond River, after running in a south direction about three miles, passes through a fine belt of intervals, skirted with some good farms. It is then seen rushing through a narrow gorge in the limestone a mile above the bridge. The syenite is met by new red sandstone a short distance from Gondola Point, on the Kennebecasis; from thence the latter formation, accompanied with conglomerate, runs on a course parallel to Hammond River, towards Sussex.

At the farm of Mr. SHERWOOD, one mile south of KETCHUM'S Inn, the limestone forms bold cliffs on each side of the narrow opening where the river passes. On each of its sides there is a belt of syenite. Its strata are nearly perpendicular, and are frequently intersected and separated by dikes of the hornblende rock.

An excellent marble might be quarried in the high hill at Mr. SHERWOOD'S farm, and many of the strata where they have not been fractured in the vicinity of the dikes would supply large slabs. The syenite and trap are seen on both sides of the river as far eastward as TITUS' Mills, twelve miles from the bridge, where it meets the new red sandstone and conglomerate of the Parishes of Hampton and Sussex. By examinations made in a northerly direction from this river, the latter rocks were found to occupy a large tract of country, and north easterly they overlie a part of the coal field of Westmorland.

About four miles farther eastward, at the farm of Mr. WILLIAM GANTER, and on lands owned by ROBERT PAYNE, Esquire, the sandstone contains beds of gypsum and limestone. The gypsum is of an excellent quality, and being surrounded with a dense forest and at an excellent site for mills, it might be calcined and ground upon the spot. Immediately by the side of the road there is a small pond, having in its centre an insulated mass of gypsum.

The water of this pond was discovered to evolve sulphureted hydrogen gas, an effect evidently produced by the decomposition of the sulphate of lime, and perhaps the sulphuret of iron contained in the earth. As this gas is very inflammable, it would not be surprising if the surface of the water at certain seasons of the year would be covered with a flame, if heat were applied to it. The above deposit of sulphate of lime reaches a mile farther eastward, where it again appears above the common level of the tract. Its situation may be always known by the presence of deep pits commonly called "Kettle Holes," which give a peculiar aspect to all plaster districts. These deep cavities are formed by the decomposition of the gypsum in the earth, and hollow caverns are formed beneath, while the soil remains unbroken. In these instances they frequently break in and inhuman animals, and sometimes man himself. We have found pits of this kind a hundred feet deep, and not more than ten feet in diameter. Lofty trees sometimes slide from their foothold into them and disappear, or only have their tops left above ground. In general, however, where the country is unenclosed, they are choked with rubbish.

The limestone is a dark brown slaty rock, reposing upon a bed of conglomerate, and containing the remains of two species of marine shells. It is covered at many places with a fine black marl, derived from the rock beneath. This will be found a cheap and excellent manure, and, with the limestone, offer great advantages to the settlement in its neighbourhood. The river pursues its course in a north-east direction, passing through a narrow tract of intervals of excellent quality, which is spread along the bottom of a deep valley, walled in by lofty hills of the most imposing aspect. Although the lands on each side of this stream are elevated, the mountains of syenite and trap, diverging away towards the coast, may be readily distinguished at a distance from the more oval and undulating hills of conglomerate and sandstone seen stretching away towards Sussex Vale.

The whole surface of the country here, is broken and uneven. In the inhabited portions of it, luxuriant fields are frequently seen at the base of some perpendicular cliff, and almost overshadowed by the lofty trees clinging to the neighbouring slopes. The inhabitants seem to have sought concealment between the hills which send back the echo of their voices, as they pass the friendly salute across the river. The soil, wherever it is derived from the conglomerate, is stony and gravelly. The sandstone yields a red loam, and both are highly productive when they are properly cultivated. The debris covering the syenite, is more scanty, notwithstanding there are some tracts of good land situated upon its surface in this quarter. Excellent freestones may be quarried from the red rock. Southward of

Mr. GANTER'S farm, and at several other places in this district, there is a fine white sandstone, composed of silicious particles strongly cemented together, and capable of bearing the violence of the weather. This rock has been mistaken for granite, and is used for millstones, buildings composed of it would be white, and resemble those built of some varieties of marble. Neither the limestone nor the marl have ever been used for manure. And many farmers suppose their lands do not require the application of any foreign substance; but they may be assured that by a judicious management of the limestone, marl, and sometimes peat, to be found in their neighbourhood, their crops might be greatly increased.

Following the Hammond River still farther eastward, the soil becomes more sandy and meagre. At a new village called the Irish Settlement, sixty miles from Saint John, on the old Shepody Road, the syenitic rock would be distinguished from any other by the appearance of the inhabitants living upon its surface, as their labours to procure a crop far exceed those of settlers upon the fertile sandstone and conglomerate.

We visited three Salt Springs in the Parish of Hampton, and others are said to have been found in the forest bordering on the river. In every instance they issue from the new red sandstone, and evidently from deposits of mineral salt contained in that rock. The water by evaporation yields a very pure chloride of soda, (common salt,) but as none of these Springs differ in any important particular from those of Sussex Vale and other parts occupied by the same formations, it is unnecessary to give particular details of them, those Springs being described more perfectly.

Almost all the high hills in this neighbourhood are composed of conglomerate, large boulders of which are scattered over every part of the country. From the top of every cliff enormous masses have been broken off and rolled downwards into the valleys. There are certainly no causes now in operation that would separate these huge blocks from the parent rock. It is only to the former influence of powerful currents that these phenomena can be attributed, and the evidences of these currents still remain engraved on the hills. Excursions were made into the wild forests on each side of the Hammond River, and the facts observed were only such as coincide with the statements laid down.

The line of junction between the schistose rocks appearing at Saint John and along the coast eastward to Emerson's Creek, and the syenite, was found between Hammond River and Lock Lomond, and other lakes in that quarter. The marking of this line upon the geological map, now in progress, is rather an arbitrary act, as it is exceedingly difficult to determine where it should be drawn, from the interruption of vast masses of trap rock which have obliterated the true line, and produced a confusion in each formation by disorting their borders. In such situations a considerable tract has a most broken and uneven character, being occupied with steep precipices, sharp naked hills, and deep oval cavities of various dimensions. Such of these cavities as become dry in the summer season, appear to have produced by the falling in of the rocks, while the hills on the other hand were evidently raised by protrusion.

Several inconsiderable collections of quartz rock were observed in this quarter. Some of these cross the road between Saint John and Quaco, with colors of the purest white deepened to a bright red. In this rock we found numerous indications of copper: the sulphuret and carbonate of that metal were found in small veins in situations adjacent to the trap: a specimen of the latter ore yielded sixty five per cent. of pure metal. It is by no means improbable that after this range becomes cleared of its timber and the rubbish on its surface, a profitable vein of copper ore will be discovered.

The irregular depressions at the bases of the sharp conical hills are frequently the sites of lakes. The largest of these is Loch Lomond, which is surrounded by high hills and naked cliffs affording some bold and romantic scenery. Large and rounded masses of rock are scattered over the surface, and the soil is composed chiefly of sand and gravel. Wherever there are any considerable collections of detritus, their surfaces are level and they are covered with a growth of hardwood. In the neighbourhood of Loch Lomond there are several fine farms on these beds of debris, while in situations where they are absent, spruce and cedar are the prevailing trees, and peat bogs are numerous.

(To be continued.)

NOTICE.

ALL Persons having legal demands against the Estate of C. L. BECKWITH, of Madawaska, deceased, are requested to present the same, duly attested, within three months from the date hereof, and those indebted to the same are desired to make immediate payment to F. E. BECKWITH, Administrator. L. R. COOMBS, Solicitors. Fredericton, Feb. 24, 1840.—3m.

NOTICE.

ALL Persons having any demands against the Estate of the late EDWARD PICK, deceased, are hereby required to send in their accounts, duly attested, within three months from the date hereof, and all persons indebted to the said Estate are desired to make immediate payment to DEBORAH PICK, Sole Administratrix. Fredericton, February 5, 1840.

NOTICE.

THE Copartnership heretofore existing between the Subscribers, under the Firm of JAMES PAUL & COMPANY, is this day dissolved by mutual consent. All persons having demands against the said Firm are requested to present the same to H. J. Montgomery, for adjustment, and those indebted to the said Firm are requested to make satisfactory arrangements with the said H. J. Montgomery, who alone are authorized to settle and receive all debts due to the said Firm.

JAMES PAUL.  
HUGH MONTGOMERY.  
J. MONTGOMERY.  
Dalhousie, 20th Nov. 1839.

POST OFFICE.  
Fredericton, March 5, 1840.

List of Letters remaining in Office at this date

A  
Mr. T. or J. Allan, Isaac Albert.

B  
Daniel McBean, Mr. Babin, Robert Baird, S. Burk, Messrs. Duncan Barber, & Co. (2.) John Beyley, James Barrett, Thomas Banks, Duncan Buchanan, A. Barten, J. W. Barker, George Bean.

C  
Thomas Camber, Edward Caldwell, Richard Carman, (2.) Owen Conway, Geo. B. Covert, John Campbell, Mary Campbell, John Carson, Wm. Clapperton, James Coy, Enock Currier.

D  
Thos. Day, Wm. Dunn, John Denton. Mrs. Doyle, David Daris, Joseph Drapiers.

E  
Daniel Easty, Wm. Earle.

F  
Bernard Ferney, Wm. Faulkner, Thomas Fuller, A. K. Foster, Wm. Faulkner, Frances, Flanagan. (2.) A. J. Fullerton, James Ferguson.

G  
Thos. Gill, Michael Graham, John Gurdon, Joseph Graham, Dennis Godfrey, Ichabod Grant, Gilbert Golding, Joseph Gibson, Margaret Gallagher, James Groves, Wm. Goodwin.

H  
James Hall, Stephen Hill, Samuel Huston, (2.) Donald Hossack, Edward Hamilton, G. W. Hartt, Alex. Hanning, Timothy Harrington, Michael Harrington, C. L. Hathaway, George Hartt, C. A. Harding.

I & J  
Joseph Joyes, H. Ingram, Sophia Jackson, Margret Jones.

L  
Joshua Lewis, Mrs. G. T. Latham, Andrew Little, M. Latham, Abraham Long, Nathaniel Lock, John Lindsay, A. C. Lowell.

M & Mc.  
James McGregor, John Murray, (2.) C. Mountain, John N. Gibbon, Rev. J. Mann, (2.) M. Keigen, Ann McGuire, James McMahon, Miles & Smith, (3.) John Murphy, William M'George, John L. Marsh, (2.) Jas. M'Bride, P. M'Sorley, John M. Kinna, John M'Vey, John M'Canny.

N  
Matilda Neill.

O  
John O'Brien, Daniel O'Neil, John Osborn.

P  
Amos Pickard, Mrs. R. Porter, William Pringle, D. Palmer, Mary Ann Playforth, Charles Paterson, John L. Paterson, John Partley.

Q  
Thomas Quigley.

S  
Mrs. E. Sloat, Samuel Sharp, Isabell Sharp, David Smith, Hugh Savage, Mary Stevenson, Thomas Sennet, John Swift, Geo. Sutherland, H. Smith, Loretta Smith, John Lane, Robt. Steward, Stephen Smith.

T  
John Temple, Wm. Torrens, Margt. Topping, Miss. M. Thompson, John Thompson, Daniel Timmings.

U & V  
Wm. Upton, Edward Vincent.

W  
Hugh Wiley, Wm. Wilnot, Ellin Winn, B. J. Wheeler, George Wightman, John Wiley, George White, Thos. Wilson, David White, Alex. Wilson, Thos. Woods, John Wilson, E. Wire.

Y  
Elias Yerxa.

N. B. Persons asking for any of the above will please say that they are advertised.

W. B. PHAIR, Post Master.

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James H. Wells, F. J. Huntington.  
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H. Huntington, Jun., R. B. Ward.

ALPHALET TERRY, President.

James G. Bolles, Secretary.

THE Subscriber having been appointed Agent at Fredericton for the above mentioned Company, it now prepared to take risks on every description of Property against loss or damage by Fire.

ASA COY.

NOTICE.

IF this should meet the eyes of SETH GRISWOLD and JOHN GRISWOLD, sons of JOHN GRISWOLD, late of Litchfield, in the State of Connecticut, and Grand Nephews of SETH GRISWOLD of Queensbury, in the County of York and Province of New Brunswick, deceased, and if they will come to this Province of New Brunswick, and apply to DAVID M'ROBERTS, IRA INGRAM or LEWIS HUESTIS, of the said Parish of Queensbury, Executors of the last Will and Testament of the said SETH GRISWOLD, deceased, they will hear of something to their advantage.

Queensbury, 29th Oct. 1839.

The Editors of the New York Albion or Emigrant, Montreal and Quebec Gazettes, are requested to give the above three insertions in their respective papers, and forward their accounts to this Office for payment.

DEEDS, LEASES,  
Bonds and Mortgages.

For sale at this Office.

By Authority.

RETURN of sums which became due at the Crown Land's Office from the 1st December 1839, to the 29th February, 1840, inclusive, for Land, and which have not been paid. Published for the information of the Parties, by order of His Excellency the Lieutenant Governor.

Due.	Name.	County.	Nature of Debt.	Amount.
Dec. 2,	Hamilton, George	Charlotte,	4th Instalment.	£25 0 0
" 5,	Wetmore, Justus S.	Queen's,	4th ..	30 0 0
" "	Millican, James	St. John,	4th ..	75 0 0
" "	Robinson, George D.	"	4th ..	75 0 0
" 8,	Robinson, Daniel L.	"	4th ..	75 0 0
" 9,	Smith, Thomas	King's,	4th ..	6 0 0
" 10,	M'Carthy, Michael	Northumberland,	4th ..	6 0 0
" "	M'Kim, Robert	Queen's,	4th ..	5 0 0
" 13,	M'Kim, George	"	4th ..	5 0 0
" "	Ruel, Robert	Carleton,	4th ..	34 10 7½
" 15,	Ruel, John	St. John,	4th ..	2 8 9
" "	Kinne, James	"	4th ..	4 2 6
" "	Greaves, Riley	"	4th ..	5 0 0
" "	Farley, Nathaniel	Carleton,	4th ..	8 3 1½
" "	Robicheau, John B.	Kent,	4th ..	4 7 6
" "	Pearce, Robert	Carleton,	4th ..	6 5 0
" "	Cornac, William E.	"	4th ..	21 17 6
" "	Fitzherbert, James	"	4th ..	7 10 0
" "	Matthews, John	St. John,	4th ..	4 2 6
" "	Hogan John	Northumberland,	4th ..	3 10 0
" "	Hunter, William	King's,	4th ..	5 9 4½
" "	Sinkler, Finlay	St. John,	4th ..	10 0 0
" "	Dumaresq, Perry Jr.	Gloucester,	4th ..	8 15 0
" "	Cox, Abraham	Carleton,	4th ..	4 7 6
" "	Maddox, Patrick	Northumberland,	4th ..	7 0 0
" "	Starrett, William	Carleton,	4th ..	4 7 6
" "	Pye, John	Charlotte,	4th ..	2 9 0
" "	Long, John	York,	4th ..	5 0 0
" "	Smith, James	King's,	4th ..	6 5 0
" "	Tunny, James	"	4th ..	4 2 6
" "	Tuff, Richard	St. John,	4th ..	2 10 0
" "	Tippin, Joseph	"	4th ..	5 0 0
" "	Donavan, Timothy	"	4th ..	5 0 0
" "	Downing, Alexander	Carleton,	4th ..	7 10 0
" 16,	Dunlop, James	Kent,	4th ..	4 7 6
" "	Corbit, William	Charlotte,	4th ..	5 5 0
" "	Ellis, Francis	Gloucester,	4th ..	2 3 9
" 17,	M'Elheny, Thomas	Northumberland,	4th ..	5 0 0
" "	Coglan, John	St. John,	4th ..	4 10 0
" "	Ellis, George	York,	4th ..	7 10 0
" "	Delong, Aaron	St. John,	4th ..	7 10 0
" "	Chaison, Frederick	Gloucester,	4th ..	1 10 0
" "	Barber, Duncan	Charlotte,	4th ..	12 10 0
" "	Fraser, James, Jr.	"	4th ..	8 15 0
" 19,	Laundrie, Peter	Gloucester,	4th ..	8 15 0
" "	King, Joseph	Charlotte,	4th ..	6 3 9
" "	Godine, Moyes	Gloucester,	4th ..	2 10 0
" "	Fitzgerald, Patrick	Westmorland,	4th ..	3 15 0
" "	Duncan, Andrew	Gloucester,	4th ..	15 0 0
" "	M'Clelland, William	Charlotte,	4th ..	10 0 0
" "	M'Kenzie, John	York,	4th ..	17 10 0
" 20,	M'Quey, Thomas	"	4th ..	10 0 0
" "	Dowd, William	Charlotte,	4th ..	5 0 0
" "	Black, Samuel	Carleton,	4th ..	3 0 0
" "	M'Lawren, Archibald	St. John,	4th ..	18 2 6
" "	M'Millin, Mary	Northumberland,	4th ..	6 5 0
" 21,	M'Curdy, Peter	Charlotte,	4th ..	4 8 6
" "	Broder, James	King's,	4th ..	7 0 0
" 23,	Bedell, William J.	York,	4th ..	357 7 11
" 28,	Hutson, John	Northumberland,	4th ..	4 7 6
" 29,	Mazrall, Lazard	Gloucester,	4th ..	3 15 0
" "	Starrett, William	York,	4th ..	2 19 6
" "	Burns, Peter	Northumberland,	4th ..	10 0 0
" 30,	Hooke, Bridges J.	Sunbury,	4th ..	21 17 6
" 26,	Wright, Caleb	York,	2d ..	12 10 0
Jan. 4,	Smith, Samuel	St. John,	4th ..	9 0 0
" "	DeCantillon, John	Northumberland,	4th ..	3 2 6
" 19,	Burke, Robert	Gloucester,	4th ..	5 0 0
" 20,	Wilson, Martin	Westmorland,	4th ..	4 2 6
" "	Parlee, Abraham	King's,	4th ..	7 10 0
" 21,	M'Laughlin, Daniel	Charlotte,	4th ..	4 7 6
" "	O'Shea, James	Northumberland,	4th ..	4 7 6
" "	Wall, John	Gloucester,	4th ..	8 15 0
" "	Dougherty, Bernard	Westmorland,	4th ..	2 19 6
" 24,	Carruthers, Mathew	Northumberland,	4th ..	3 15 0
" "	Donavan, Florence	St. John,	4th ..	7 10 0
" 25,	Maher, Thomas	Northumberland,	4th ..	3 15 0
" "	Robicheau, Charles	Gloucester,	4th ..	10 16 0
" "	Pratt, James	York,	4th ..	4 10 0
" 26,	Shaw, James	Charlotte,	4th ..	2 10 0
" "	Robinson, Joseph	Gloucester,	4th ..	4 7 6
" "	Pinnette, Marcelle	"	4th ..	6 9 9
" "	Rodgers, Andrew	Carleton,	4th ..	5 12 6
" "	M'Brien, William Jr.	Charlotte,	4th ..	2 10 0
" "	Stone, Thomas	Queen's,	4th ..	3 5 0
" 27,	Cardiff, Edward	Northumberland,	4th ..	3 14 4½
" "	Wilson, John	Charlotte,	4th ..	25 0 0
" "	Pemroy, Joseph Y.	"	4th ..	7 15 0
" "	Clarke, William	Queen's,	4th ..	5 19 10½
" "	Jepson, Robert	Northumberland,	4th ..	3 0 0
" "	Vernon, James	Charlotte,	4th ..	20 12 6
" 30,	Killgrace, Noble	Queen's,	4th ..	3 15 0
" "	Christal, John	Kent,	4th ..	3 15 0
" "	Meny, L'Ange	"	4th ..	3 15 0
" 16,	Watson, George	King's,	4th ..	3 0 0
" 18,	Ross, James	Charlotte,	3d Instalment.	3 15 0
" 22,	Heafy, James	Carleton,	3d ..	3 15 0
" "	M'Clusky, James	Sunbury,	3d ..	3 15 0
" 23,	Hetherington, Joseph	Charlotte,	3d ..	3 15 0
" 31,	Price, Robert	King's,	3d ..	2 1 3
" 29,	Dowling, William	York,	2d Instalment.	8 15 0
Feb. 6,	Crosil, William	Charlotte,	4th Instalment.	3 10 0
" 8,	Coughlan, Charles	Gloucester,	4th ..	3 0 0
" 10,	Leak, Jacob	King's,	4th ..	4 7 6
" "	Moran, James	St. John,	4th ..	31 5 0
" "	Moore, Josephus	Charlotte,	4th ..	12 10 0
" "	Hayes, James	Gloucester,	4th ..	2 10 0
" "	Hill, John	York,	4th ..	375 0 0
" 15,	Maille, Firman	Gloucester,	4th ..	3 15 0
" "	Bluemortier, Charles G.	Charlotte,	4th ..	2 3 9
" "	Parle, John	Gloucester,	4th ..	2 10 0
" 17,	Boudreaux, Jerome	"	4th ..	3 13 6
" "	Eady, William Jr.	"	4th ..	3 2 6
" "	Eady, William	"	4th ..	3 2 6
" "	Eady, John	Gloucester,	4th ..	3 2 6
" "	Good, Edward	"	4th ..	1 17 6
" "	Good, William	"	4th ..	1 17 6
" "	Collis Timothy	"	4th ..	2 0 7½
" "	Murphy, Jeremiah	"	4th ..	3 19 4½
" "	Mahoney, Thomas	"	4th ..	4 6 3
" "	Dailey, Joseph	"	4th ..	3 2 6
" "	Caro, John	"	4th ..	2 10 0
" "	Smith, James	"	4th ..	3 2 6
" "	Smith, John	"	4th ..	3 2 6
" "	Kerr, Gavin	"	4th ..	5 0 0
" 20,	Smith, William	"	4th ..	4 7 6
" 8,	Marshall, Joseph	King's,	3d Instalment.	3 15 0
" "	Marshall, John	"	3d ..	3 15 6
" 19,	Waters, Patrick	Charlotte,	3d ..	3 15 0
" "	White, Robert	King's,	2d Instalment.	3 15 0
" "	Manning, Robert	"	2d ..	3 15 0
" "	Avery, Peter	"	2d ..	3 15 0
" 1,	Melvin, John	York,	4th Instalment.	9 2 0