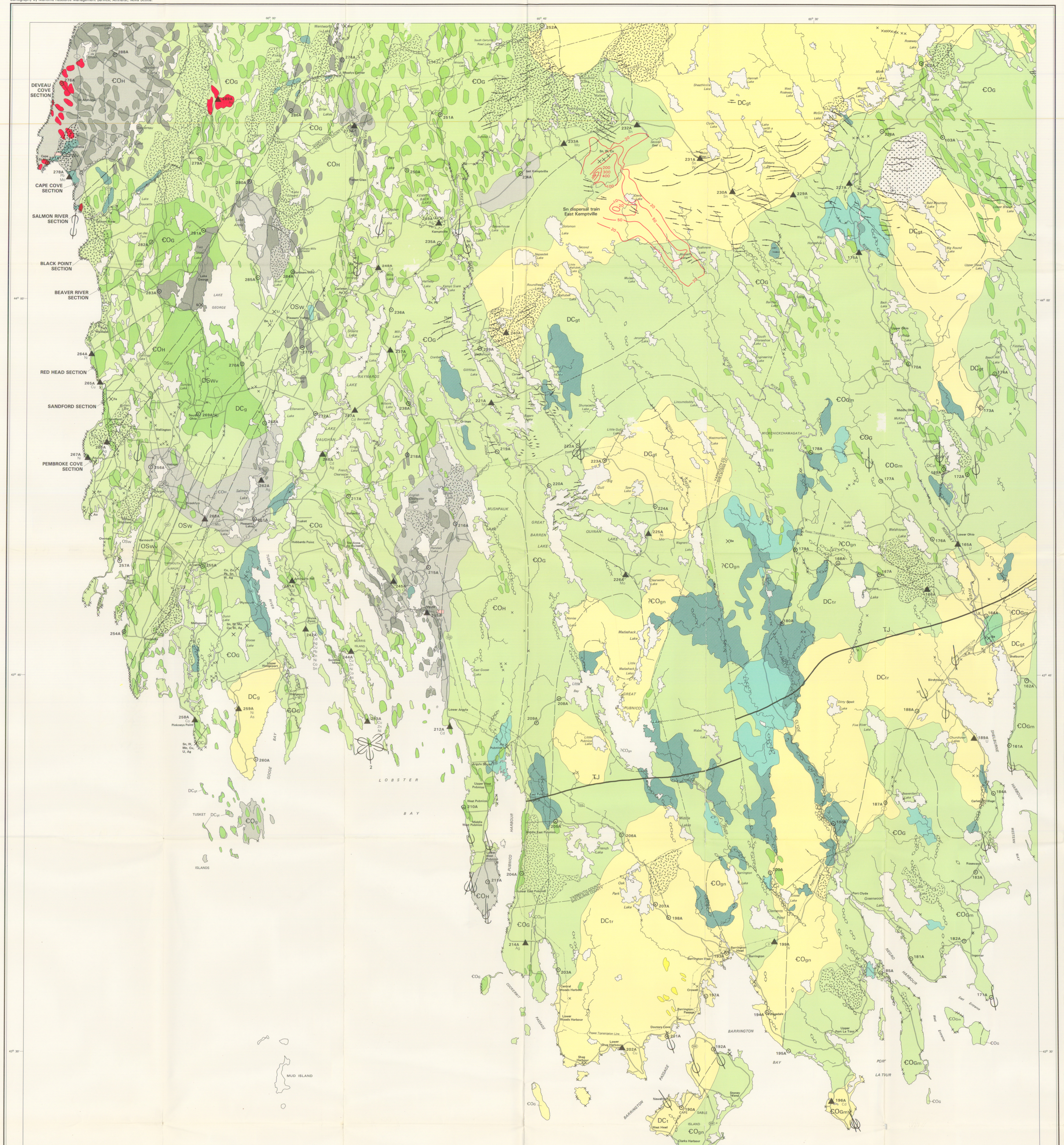
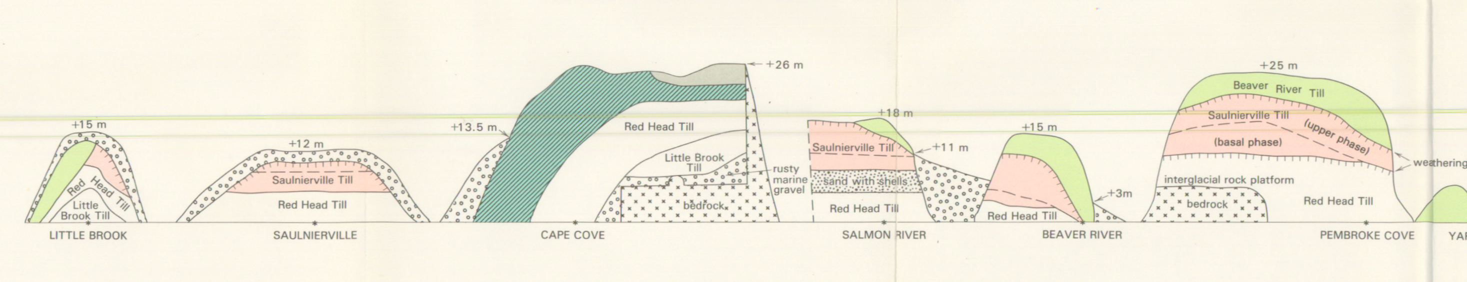
Cartography by Maritime Resource Management Service, Amherst, Nova Scotia.



DIAGRAMMATIC CROSS-SECTION OF THE PLEISTOCENE SEDIMENTS ALONG THE YARMOUTH - DIGBY COAST



Canada
Regional Economic Expansion
Expansion Economique Régionale

Province of Nova Scotia
Department of Mines and Energy

SHEET 8

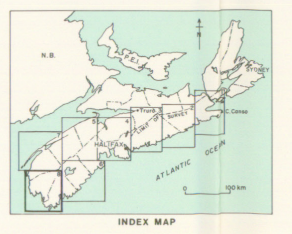
PLEISTOCENE GEOLOGY

SOUTHWESTERN NOVA SCOTIA

1982

Scale = 1:100 000

0 5 10 15 Kilometres



PLEISTOCENE GEOLOGY

UNIT	DESCRIPTION	TOPOGRAPHIC EXPRESSION AND STRATIGRAPHIC RELATIONS	CLAST LITHOLOGY AND PROVENANCE	THICKNESS
RAISED BEACH	Gravelly-sand, imbricated pebbles, well-rounded clasts.	Forms a thin mantle over other units and pinches out inland.	A homogenization of local till clasts.	1-5 m
OUTWASH	Waterlaid sand and gravel, parallel and X-bedding.	Pitted plains, flat plains (outwash plains), elongate discontinuous mounds and ridges (valley trains).	A homogenization of local till clasts.	1-10 m
ICE CONTACT STRATIFIED DRIFT	Waterlaid sand and gravel, abrupt changes in grain sizes between beds, faulting, cut and fill stratification.	Sinuous ridges (eskers), knob and kettle topography on valley margins, (kame terraces, kames).	A homogenization of local till clasts.	3-15 m
ABLATION TILL	Sandy matrix, rounded and angular clasts, sand inclusions and beds, surface boulders may represent matrix-free 'ablation till'.	Knob and kettle topography, (hummocky moraine); overlies other tills.	Usually contains a greater % of far-travelled (allochthonous) clasts than the underlying basal melt-out or lodgement phase (15-30%)	2-10 m, av. 5 m
BEAVER RIVER TILL (1 2 3 4 5) Lithological Facies 1: quartzite till facies including drumlin facies 2: granite till facies including drumlin facies 3: slate till facies including drumlin facies 4: basalt till facies Textural Facies 5: clay till facies	1: Light bluish grey (5 B 7/1), loose, sandy, angular clasts, largely cobble-sized, siltier matrix in metamorphosed terrane, (drumlin facies - can be relatively compact.) 2: Greyish orange (10 YR 7/4) to yellowish brown (10 YR 5/6), loose, sandy, angular, cobble-sized clasts (drumlin facies - similar colour, but in some cases compacted with a finer matrix). 3: Light olive brown (5 Y 5/6), loose, sandy with angular pebble-sized clasts. (drumlin facies-greyish olive (10 Y 4/2), moderately compact, fissile.) 4: Yellowish grey (5 Y 7/2), loose, sandy, with many boulders, sand rims around clasts, inclusions of older tills. 5: Olive grey (5 Y 3/2), compact, fissile, clasts facetted, demonstrates strong fabric mode.	The Beaver River Till is generally thin and mantled over bedrock topography. This till also occurs as a hummocky mantle on drumlins and other thick till masses of older tills. The drumlin facies may in part be lateral facies of older tills. The clay till facies is found in areas of thick till exposure in upland regions underlain by Paleozoic bedrock.	Beaver River Till: oligomictic, contains up to 95% locally derived clasts (i.e. 1-4 km transport); drumlin facies: locally enriched in allochthonous clasts (10-70 km transport) The lithological facies of the Beaver River Till demonstrate rapid transition over bedrock contact zones; in these areas the tills form hybrids containing varying proportions of the bedrock listed below. granite till facies: 1. biotite granodiorite 2. biotite muscovite granite — Devonian granitic rocks; basalt till facies: 1. tholeiitic basalt — North Mountain Formation; quartzite till facies: 1. meta-greywacke 2. gneiss 3. quartzite — Meguma Group (Cambro-Ordovician) White Rock Formation (Silurian); slate till facies: 1. slate 2. schist — Meguma Group; clay till facies: Oligomictic, contains clasts of shale, siltstone and sandstone (Meguma Group rocks 80-95%), locally with a high percentage of reworked components (e.g. from Saulnierville Till.)	Beaver River Till Lithological facies: 1-10 m, av. 3 m Drumlin facies: 2-20 m Clay till facies: 1-5 m
SAULNIERVILLE TILL (including drumlin facies)	A composite of one or more till sheets and oxidized upper phases. Upper phase: Moderate brown (5 YR 4/4) to reddish brown (10 R 4/6), moderately compact, fissile, silty, Fe-Mn oxide staining on fissility planes. Basal phase: Dusky yellowish brown (10 YR 2/2), compact, massive, locally with sand and silt inclusions, boulder horizons.	Together with older drifts underlies and forms cover of drift mounds and drumlins that have been carved by later ice movements; underlies the Beaver River Till and overlies the Red Head Till and older sediments.	The upper phase tends to have a higher percentage of far-travelled material (10-70 km transport) than the basal phase which is dominated by locally derived Meguma Group lithology.	2-15 m
R.H.T. RED HEAD TILL (seen in section only)	Greyish red (10 R 4/2) to reddish brown (10 R 4/6), very compact, massive, locally with subconchoidal fracturing, silty, some sandy partings.	Forms the bulk of thick blanketing drift bodies that have been molded by later ice movements. Generally underlies one or more surface till sheets.	Polymictic, largely made up of comminuted Triassic red bed material from the Bay of Fundy as matrix, with indicator erratics such as basalt from the North Mountain, hornblende bearing pink granites and green conglomerates from New Brunswick, and shells from Quaternary and pre-Quaternary marine sediment in the Bay of Fundy.	5-? m
L.B.T. LITTLE BROOK TILL (seen in section only)	Greyish brown (5 YR 3/2), compact, massive, silty matrix.	Only very locally preserved as cores on lee side drift buildups and drumlinoid features, typically underlies the Red Head Till.	Oligomictic, mainly greywacke and slate from the Meguma Group.	?
BR BEDROCK OR THIN TILL VENEER	40% of the area is bedrock exposure thin till veneer and boulders.			

SUMMARY OUTLINE OF GLACIAL GEOLOGY

The Yarmouth-Digby area, especially along the coast, is deeply mantled with a complex sequence of Quaternary deposits. Inland the drift cover is much shallower, but the transport sequence of till units is equally complex. Thirteen lithostratigraphic units are recognized; these record four marine phases intercalated with four glacial events of greatly different age and widely ranging provenance and dynamic style. Individual till sheets have characteristic lithology, texture and maturity. Lodgement, melt-out, subaquatic and ablation phases are represented and their contacts, both horizontally and vertically, range from abrupt to transitional. The older tills, largely in the subsurface, but locally outcropping in windows, have truncated profiles of weathering (subaerial oxidation). This horizontal and vertical variation in physical attributes, is also manifested in the till geochemistry and therefore important in the application of surficial geology to mineral prospecting and environmental geochemistry.

Present landscape morphology and drainage reflects several phases of glacial deposition over bedrock features. Preglacial relief has been largely obscured by infilling, though a largely buried system of valleys may still be discerned trending westward and southward whereas present drainage has been diverted southward. As a result, much of the local relief is glacio-depositional and rock outcrops mainly in lower areas if at all.

Most of the drift cover is relict from early ice movements from New Brunswick. The surface till is thin and locally derived deposited by an inland ice cap. Four main till forming movements are recognized: the first, from the east and possible pre-Wisconsinan, laid down a grey locally derived till (Little Brook); the second, a regional southward ice flood from New Brunswick, produced a thick blanket of red shelly drift (Red Head Till) of mostly offshore provenance; an intermediate-age flow, parallel to the coast presumably from ice over Nova Scotia, produced a hybrid mixture of local and distant components (Saulnierville Till); and, after an interval of subaerial exposure when tills and associated sediments were weathered, a final episode of weak short-lived dispersal from a Southern Upland ice cap, which deposited a loose, sandy immature drift (Beaver River Till).

SYMBOLS

- Bedrock geological boundary
- Surficial geological boundary
- Fault
- Glacial striae (sense of ice movements known, unknown) Note: numbers indicate relative age, 1 being older)
- Stoss and lee bedrock forms
- Tin dispersal train contour (Analysis of entire -10 + 100 mesh fraction of till, value in ppm) —20—
- Drumlin
- Moraine (ribbed)
- Esker (direction of flow unknown) <><><>
- Multiple till section
- Spot thickness of Pleistocene cover (metres) +15 m
- Mineral occurence X Co
- Bedrock outcrop x

BEDROCK GEOLOGY

PLUTONIC ROCKS

- CARBONIFEROUS (LATE, EARLY) / DEVONIAN (LATE, MID, E):
  - DC_{gt} granitoid
  - DC_g granite
  - DC_t tonalite (t)
  - DC_{tr} trondjhemite (tr)
- SILURIAN (LATE, MID, E):
  - OSw — *WHITE ROCK FORMATION* (OSw) quartzite, slate, siltstone with rhyolitic tuff and basalt at base
  - OSwv — *WHITE ROCK FORMATION* (OSwv) at Yarmouth and Cape St. Mary rhyolite, basalt, mafic and felsic tuff and metamorphosed equivalents
- ORDOVICIAN (LATE, E) / CAMBRIAN (LATE, MID, E):
  - **MEGUMA GROUP**
  - *HALIFAX FORMATION* — $€O_H$ slate, siltstone, rare limestone
  - *GOLDENVILLE FORMATION* — $€O_G$ greywacke, slate; $€O_{Gm}$ metamorphosed equivalent
  - $?€O_{gn}$ gneiss and migmatite

MINERALS

Antimony	Sb	Iron	Fe
Arsenic	As	Lead	Pb
Barite	Ba	Manganese	Mn
Beryllium	Be	Molybdenum	Mo
Cobalt	Co	Silver	Ag
Copper	Cu	Tin	Sn
Fluorine	F	Tungsten	W
Gold	Au	Uranium	U
Gypsum	gyp	Vanadium	V
Zinc	Zn		

SOURCES OF GEOLOGICAL INFORMATION

Belliveau, R.
1978: Clare natural resources study; Clare Municipality Planning Advisory Committee.

Cann, D.B., and Hilchey, J.D.
1959: Soil survey of Queens County, Nova Scotia; Nova Scotia Soil Survey, Report No.8.

Grant, D.R.
1980: Quaternary stratigraphy of southeastern Nova Scotia: glacial events and sea level changes; Geological Association of Canada/Mineralogical Association of Canada, Halifax '80 Guidebook, Department of Geology, Dalhousie University, 64 p.

Hilchey, J.D., Cann, D.B., and MacDougall, J.I.
1960: Soil survey of Yarmouth County, Nova Scotia; Nova Scotia Soil Survey, Report No. 9
1962: Soil survey of Digby County, Nova Scotia; Nova Scotia Soil Survey, Report No. 11.

Keppie, J.D. (compiler)
1979: Geological map of Nova Scotia (mineral occurrence edition) 1:500 000; Nova Scotia Department of Mines and Energy.

MacDougall, J.I., Cann, D.B., and Hilchey, J.D.
1961: Soil survey of Shelburne County, Nova Scotia; Nova Scotia Soil Survey, Report No. 10.

MacDougall, J.I., Nowland, J.L., and Hilchey, J.D.
1969: Soil survey of Annapolis County, Nova Scotia; Nova Scotia Soil Survey, Report No. 16.

MacNeill, R.H.
1956: Surficial geology maps of Nova Scotia; Nova Scotia Research Foundation.

Stea, R.R., and Fowler, J.H.
1979: Minor and trace element variations in Wisconsinan tills, Eastern Shore region, Nova Scotia; Nova Scotia Department of Mines and Energy, Paper 79-4.

Taylor, F.C.
1967: Reconnaissance geology of Shelburne map-area, Queens, Shelburne and Yarmouth Counties, Nova Scotia; Geological Survey of Canada, Memoir 349.
1967: Geology of the Annapolis-St. Mary's Bay map-area, Nova Scotia (21A, 21B east half); Geological Survey of Canada, Memoir 358.

Wilson, B.H., and Richardson, J.
1980: Report on geochemical surveys of the East Kemptville area, Yarmouth County, Nova Scotia; Shell Canada Resources Limited, Nova Scotia Department of Mines and Energy, Assessment Report 21A/04A 54-R-25(03).

GEOCHEMISTRY

ANALYSES

SAMPLE	Cd	Ag	Cu	Ni	Pb	Zn	Co	Fe%	Mn	Mo	U	As	Sn	W	DEPTH (m)
102A	<.20	<.10	26	20	35	55	12	3.90	500	7	8.80	110	30	12	1.0
103A	<.20	<.10	58	34	18	73	16	2.75	550	3	5.30	34	30	22	2.0
161A	<.20	<.10	20	13	3	33	3	2.00	265	2	6.10	122	50	12	1.5
162A	<.20	<.10	110	65	5	105	22	4.30	410	1	10.10	44	50	16	1.5
164A	.20	<.10	80	28	6	80	12	2.90	460	2	11.40	14	50	12	1.0
165A	.20	<.10	86	44	5	54	20	3.40	525	3	15.40	80	30	8	1.0
166A	.10	<.10	79	46	6	64	18	3.05	525	3	37.00	18	420	16	1.5
167A	<.20	<.10	19	10	<2	15	4	.80	150	2	2.20	<2	—	—	1.0
168A	<.20	<.10	51	38	2	42	14	2.35	250	2	7.20	3	135	12	1.0
169A	<.20	<.10	155	100	5	122	30	4.90	600	2	12.10	192	35	8	1.5
170A	<.20	<.10	60	30	5	45	12	3.25	265	3	10.80	71	30	16	1.5
171A	<.20	<.10	27	17	13	23	7	2.95	100	2	4.30	110	30	8	1.5
172A	<.20	<.10	22	14	1	20	8	.96	150	1	1.00	47	20	16	2.0
173A	<.20	<.10	42	32	10	63	17	2.50	300	2	10.80	—	63	8	1.0
174A	<.20	<.10	64	58	23	112	22	4.00	400	2	6.70	14	55	14	1.0
175A	.10	<.10	191	90	8	109	47	3.40	830	2	28.00	18	5	8	1.5
176A	<.20	<.10	36	20	2	26	7	1.30	170	1	6.50	11	80	12	1.5
177A	.10	<.10	41	26	3	29	12	1.80	250	1	2.90	3	130	14	1.5
178A	.10	<.10	138	77	4	64	30	3.85	650	4	12.40	12	85	8	1.0
179A	<.20	<.10	138	20	66	73	12	6.65	500	3	2.40	10	85	10	1.5
180A	.30	<.10	43	27	7	22	10	2.65	315	2	11.90	19	55	10	1.5
181A	<.20	<.10	50	23	13	33	17	2.55	415	2	4.90	9	40	14	1.5
182A	.20	<.10	60	32	20	36	14	3.30	240	4	4.30	18	10	4	1.5
183A	<.20	<.10	128	48	64	38	18	5.20	340	4	5.60	400	20	8	1.5
184A	<.20	<.10	49	36	12	95	15	3.75	430	3	6.60	57	105	6	1.5
185A	.40	.10	97	30	25	75	20	2.90	680	2	13.80	36	20	6	1.5
186A	<.20	<.10	20	15	5	45	8	1.50	450	2	12.80	38	55	8	1.0
187A	<.20	<.10	32	8	12	24	4	2.25	240	2	7.60	9	15	4	1.0
188A	.20	<.10	8	10	7	12	2	.45	100	2	9.20	16	125	10	1.5
189A	<.20	<.10	50	20	15	55	10	2.30	550	2	11.60	41	60	4	1.0
190A	.10	<.10	43	24	12	36	16	2.50	330	2	3.40	16	15	6	1.0
191A	<.20	<.10	88	28	15	62	18	2.70	430	1	4.80	4	5	30	1.5
192A	<.20	<.10	20	5	5	20	5	2.40	210	2	7.90	19	5	2	1.5
193A	<.20	<.10	40	10	17	43	7	2.90	285	3	9.90	16	15	2	1.0
194A	<.20	<.10	30	10	13	26	7	2.10	395	3	4.10	7	5	2	1.5
195A	<.20	<.10	56	30	7	56	13	2.85	460	3	4.30	17	15	6	1.5
196A	.30	<.10	30	13	7	43	8	2.65	315	3	4.60	12	5	4	1.0
197A	.10	<.10	21	14	9	41	7	1.90	265	2	4.60	14	40	16	1.5
198A	<.20	<.10	33	17	7	40	8	2.50	275	2	6.90	10	20	6	1.5
199A	.10	<.10	29	14	8	51	12	2.85	405	4	6.60	15	20	36	1.5
200A	.20	<.10	64	36	24	64	28	3.15	780	4	9.20	15	20	8	2.0
201A	.20	<.10	15	5	10	20	5	2.80	125	5	5.60	15	10	8	1.0
202A	<.20	<.10	128	15	8	98	10	2.90	325	5	7.60	17	15	4	1.0
203A	<.20	<.10	82	40	12	64	20	4.00	520	2	2.10	49	15	8	1.5
204A	<.20	<.10	69	30	12	49	16	4.65	465	2	.80	35	10	4	1.5
205A	<.20	<.10	89	38	20	58	20	3.25	635	2	4.10	75	10	4	1.5
206A	<.20	<.10	30	10	5	25	10	1.90	275	2	3.80	22	25	6	1.5
207A	<.20	<.10	38	22	9	53	12	2.90	400	2	5.50	8	20	8	1.5
208A	.10	.10	52	30	8	44	18	2.55	510	1	6.60	56	20	4	1.5
209A	<.20	<.10	55	40	8	35	25	3.25	450	2	3.10	52	20	4	1.5
210A	<.20	<.10	156	62	20	121	24	4.85	535	4	—	—	5	4	1.5
211A	<.20	.20	118	34	58	62	20	6.50	465	6	2.10	74	5	4	1.5
212A	.40	.10	132	79	75	70	68	3.97	976	5	—	—	10	8	1.5
213A	<.20	1.60	245	96	55	131	47	10.50	920	6	6.10	—	10	8	2.5
214A	.20	.80	72	58	48	50	28	4.25	700	4	—	—	15	8	1.0
215A	.20	<.10	209	88	60	73	46	6.10	633	5	—	—	10	8	1.5
216A	<.20	.30	64	42	20	55	28	3.45	620	4	—	—	15	10	1.5
217A	<.20	.40	65	56	43	74	21	4.43	886	8	—	—	20	4	1.5
218A	.10	.30	95	29	101	72	10	7.10	320	8	—	—	10	6	2.0
219A	<.20	<.10	66	29	86	41	8	6.36	533	8	—	—	70	12	1.0
220A	<.20	<.10	58	33	65	32	13	5.13	423	13	—	—	85	12	1.0
221A	<.20	<.10	118	69	78	69	39	5.59	1176	19	—	—	30	8	1.0
222A	<.20	<.10	69	56	69	55	14	4.37	694	14	—	—	115	16	1.0
223A	<.20	<.10	39	21	46	32	9	3.57	299	9	—	—	35	8	2.0
224A	<.20	<.10	37	17	41	28	9	3.14	278	7	—	—	55	8	1.5
225A	<.20	<.10	70	286	82	82	31	5.51	816	31	—	—	30	8	1.5
226A	<.20	<.10	77	59	100	94	24	4.46	941	18	3.10	—	20	6	1.5
227A	<.20	<.10	75	37	55	63	26	3.77	739	8	—	—	180	—	1.5
228A	.10	<.10	55	42	27	84	20	2.70	420	3	6.80	208	5	8	1.5
229A	<.20	<.10	57	27	61	61	14	3.86	522	7	—	—	145	60	1.0
230A	<.20	<.10	27	18	54	54	9	2.50	363	9	—	—	800	—	1.0
231A	<.20	<.10	12	8	27	56	2	1.60	180	4	—	—	600	97	1.0
232A	<.20	<.10	30	18	28	52	5	3.74	413	6	—	—	190	16	1.0
233A	<.20	<.10	64	62	78	109	62	4.22	2187	16	—	—	25	12	1.0
234A	<.20	<.10	84	51	56	89	51	6.63	1301	5	—	—	20	12	1.5
235A	<.20	<.10	117	70	79	112	56	5.84	2591	5	—	—	30	30	1.5
236A	<.20	.20	95	70	50	124	36	5.50	1175	3	—	—	20	16	1.0
237A	<.20	.30	67	38	152	72	20	8.25	1125	2	—	—	20	8	1.5
238A	<.20	.20	81	72	33	82	37	4.64	1056	3	—	—	30	12	1.5
239A	<.20	.20	84	51	46	74	40	4.86	1401	4	—	—	30	4	1.5
240A	<.20	.20	94	47	75	75	47	4.72	1980	19	—	—	—	—	1.0
241A	.50	.30	145	74	114	310	44	5.30	1075	3	6.30	480	70	16	4.0
242A	.40	.50	320	128	153	328	126	6.94	1500	6	—	—	170	40	1.5
243A	.10	.30	295	172	38	220	55	7.50	1050	4	—	—	25	12	2.0
244A	.20	.20	270	158	46	208	82	6.20	1250	4	—	448	40	24	1.5
245A	.10	.10	360	105	300	129	52	10.80	1250	4	—	—	10	8	1.5
246A	.60	.80	93	55	110	79	48	5.86	1600	9	—	—	10	12	1.5
247A	.40	.40	162	67	87	118	72	5.52	1950	4	—	—	40	12	1.0
248A	.50	.20	52	53	126	57	40	4.05	1775	5	—	—	15	16	1.5
249A	.30	.40	77	27	264	107	29	5.63	934	7	—	—	20	40	1.5
250A	<.20	.20	42	32	15	45	32	2.70	600	2	1.60	36	10	8	1.5
251A	.10	.20	46	24	51	100	25	4.60	840	2	6.10	47	15	10	1.0
252A	.10	.20	40	32	47	88	16	3.45	580	4	8.70	184	25	24	1.0
254A	<.20	.20	128	68	20	146	36	5.60	1175	4	1.20	33	10	8	1.0
255A	<.20	<.10	55	36	57	98	25	4.60	740	3	2.60	53	10	8	1.0
256A	<.20	<.10	36	36	10	52	28	4.35	390	4	1.10	26	10	8	1.0
257A	<.20	<.10	45	36	11	95	35	4.40	650	3	.50	68	10	8	1.0
258A	.10	<.10	227	127	40	205	70	7.50	1600	6	3.10	312	15	10	1.5
259A	.10	<.10	48	74	49	141	22	3.75	780	8	9.30	657	120	80	1.5
260A	<.20	.20	32	36	35	82	36	2.10	450	5	5.60	264	110	60	1.5
261A	.10	.20	65	41	290	97	30	5.05	700	5	2.50	280	—	—	1.5
262A	<.20	.40	55	108	92	58	27	5.35	780	6	1.00	50	10	10	1.5
263A	.20	.30	78	44	125	86	22	7.50	760	2	4.00	56	10	2	1.5
264A	<.20	.10	236	140	31	184	50	7.10	1000	3	2.70	26	15	4	1.5
265A	<.20	.20	250	100	33	136	32	6.80	1775	3	4.80	25	10	4	1.5
266A	.20	.40	168	128	50	153	49	6.35	2200	4	2.60	72	10	8	1.0
267A	.10	.10	109	128	59	124	61	7.30	2150	2	4.40	256	10	2	1.5
268A	.50	.20	75	33	105	82	10	9.00	350	15	6.10	208	5	4	1.0
269A	.10	.20	135	102	22	126	49	15.50	700	9	2.70	52	5	2	1.5
270A	.10	<.10	113	84	54	126	36	7.70	730	6	2.90	110	10	4	1.5
271A	<.20	.30	137	74	63	155	45	8.00	930	6	3.90	112	10	10	1.5
272A	<.20	.30	80	38	33	72	31	3.30	1500	8	1.30	43	15	6	1.5
273A	.40	.30	100	64	88	129	84	6.10	1500	8	4.20	136	5	4	1.5
274A	<.20	.20	218	44	124	95	20	18.00	880	7	5.90	58	15	2	1.5
276A	.10	.20	93	66	38	138	26	6.45	810	2	2.30	27	15	8	1.5
277A	<.20	<.10	72	58	33	117	33	5.95	1275	2	1.30	26	30	10	1.5
278A	.20	.30	95	13	220	101	44	28.00	1375	26	2.00	280	<2	12	1.0
279A	.10	.30	133	48	190	112	30	9.90	660	7	4.00	296	<2	4	1.5
280A	.10	.30	97	40	72	75	11	19.00	340	14	3.60	140	<2	6	1.5
281A	.10	.20	97	40	40	77	31	6.25	1200	4	3.30	83	5	4	1.5
282A	.10	.20	36	28	27	65	22	5.30	660	4	3.60	56	5	—	1.5
283A	<.20	<.10	281	80	20	143	34	7.95	1550	2	2.00	33	5	2	1.5
284A	<.20	.20	95	54	24	86	38	6.15	1050	2	2.70	224	5	2	1.5
285A	<.20	.30	236	98	57	117	49	17.00	1075	10	4.20	112	10	4	1.5
286A	<.20	.30	245	106	29	143	45	7.20	1050	3	4.70	35	10	4	1.0
288A	<.20	.20	77	26	68	123	10	9.00	460	4	2.40	39	10	8	1.5
289A	.30	.50	108	80	35	165	36	7.30	1200	2	7.30	39	—	—	1.5

Note: all values in ppm except Fe%

- ⊙ Sample location
- ▲ Anomalous sample location

Sample number → 259A; Sample depth notation; Cd ← Anomalous element

Note:

1. The letter A represents a surface till sample. Ensuing letters represent deeper samples. Map-unit block above sample depth notation indicates till type at that depth. Sample depths are listed with the analyses. Anomalous elements are listed under corresponding sample depth notation.
2. "Anomalous" values are taken to be all values greater than or equal to the 95th percentile of the cumulative frequency distribution for each till type listed in the *Summary Statistics* table below. Anomalies in other units were calculated using Quartzite till facies percentile values.
3. All elements except Sn and W were analyzed using the clay fraction (< 2 microns) (see Stea and Fowler, 1979). Sn and W were analyzed from heavy mineral separates (Tetrabromethane, S.G. = 2.96) of the fine and medium sand fractions (-50 + 230 mesh) of the till sample.
4. All elements done by Atomic Absorption Spectrophotometry except As and W (Colorimetry) and U (Flourimetry). Analyses by Bondar-Clegg and Co. Ltd., Ottawa.

Pleistocene geology by R.R. Stea and D.R. Grant, 1981. Bedrock geology adapted from "Geological Map of the Province of Nova Scotia", Nova Scotia Department of Mines and Energy, 1979.

SUMMARY STATISTICS

ELEMENT \ TILL TYPE		SAULNIERVILLE TILL N=4		BEAVER RIVER TILL: Granite till facies N=22		Quartzite till facies N=83		Slate till facies N=16	
Cd	mean / range	.15	.10-.30	.12	.10-.30	.14	.10-.60	.13	.10-.50
	std. dev. / 95th	.10	.31	.05	.21	.11	.40	.10	.49
Ag	mean / range	.59	.05-1.60	.06	.05-.20	.13	.05-.80	.19	.05-.40
	std. dev. / 95th	.70	1.60	.04	.18	.14	.40	.11	.38
Cu	mean / range	130	72-245	41	8-128	94	19-320	143	45-360
	std. dev. / 95th	78	248	27	96	65	241	97	295
Pb	mean / range	40	33-55	24	7-75	44	1-264	94	10-300
	std. dev. / 95th	10	57	20	59	47	132	88	295
Zn	mean / range	138	117-165	55	12-141	85	15-328	94	52-155
	std. dev. / 95th	20	169	30	103	57	206	35	154
Ni	mean / range	75	58-96	23	5-74	56	5-286	59	26-108
	std. dev. / 95th	17	97	16	48	44	129	31	109
Co	mean / range	36	26-47	13	2-47	29	3-126	28	10-52
	std. dev. / 95th	9	48	10	31	21	69	14	53
Mo	mean / range	3	2-6	5	2-19	5	1-31	6	2-15
	std. dev. / 95th	2	8	4	11	5	15	4	15
U	mean / range	4.3	1.3-7.3	7.0	2.6-11.6	6.3	.5-37.0	3.2	1.0-6.1
	std. dev. / 95th	2.9	7.3	2.7	11.4	6.2	15.3	1.8	5.9
Sn	mean / range	18	10-30	102	5-800	42	1-420	9	1-15
	std. dev. / 95th	10	34	205	197	60	150	4	18
W	mean / range	9	8-10	18	2-97	12	2-60	6	2-10
	std. dev. / 95th	1	12	27	95	10	35	3	12
As	mean / range	31	26-39	75	7-657	88	1-480	96	26-280
	std. dev. / 95th	7	48	163	657	113	405	83	273

MEAN / RANGE; STANDARD DEVIATION / 95TH PERCENTILE

N = number of samples. All values in ppm.