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GEOLOGY OF GRINNELL PENINSULA AND THE PRINCE ALFRED BAY AREA, DEVON ISLAND, DISTRICT OF FRANKLIN, NORTHWEST TERRITORIES

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SECTION 9. This section contains strata of the Douro and Sutherland River formations. It is a west-dipping section across a sea cliff on the south coast of Grinnell Peninsula near Port Refuge. The base of the section is at 76°15'45"N latitude and 94°55'W longitude and is well shown on RCAF air photo A16761-12.

Unit No.	Lithology	Thickness feet	Thickness (m)	Total from base feet	Total from base (m)
	SUTHERLAND RIVER FORMATION				
28	Dolomite very light yellow (cream), medium to massive smooth to slightly uneven continuous bedding, a sucrosic light yellowish brown dolomite with some pin point porosity (<5%Ø), abundant large crinoid stems up to ½ inch across	35	10.7	420	128.0
27	Covered interval; dolomite as in unit 28	10	3.1	385	117.4
	Total thickness of Sutherland River Formation.	45	13.7		
	DOURO FORMATION				
26	Limestone, medium brownish grey, thin discontinuous beds within thick uneven continuous beds, a little orange stained green argillaceous material forms parting planes, abundant silicified crinoids as before but large here, up to ½ inch across	5	1.5	375	14.3
25	Covered interval; limestone as in unit 26	93	28.4	370	112.8
24	Covered interval; very black bluish-grey limestone debris with orange silicified blobs oriented parallel to bedding as before, a grey crinoid biomicrite	34	10.4	277	84.4
23	Limestone, as unit 21	1	0.3	243	74.1
22	Covered interval; limestone rubble as in unit 21	19	5.8	242	73.8
21	Limestone weathers bluish grey with orange stained silicified blobs similar to those of and the last interval; thin lumpy fairly continuous bedding, some scattered brachiopods *Strophomena* sp. and corals *Favosites* sp. and *Syringopora*	16	4.9	223	68.0
20	Covered interval; limestone rubble as in unit 21	13	4.0	207	63.1

Unit No.	Lithology	Thickness feet	Thickness (m)	Total from base feet	Total from base (m)
19	Limestone, light bluish grey with irregular blobs of orange stained, dark grey chert (possibly these are silicified lithoclasts), thin, discontinuous, gently lenticular, very lumpy bedding, grey fossiliferous micrite; some coral *Favosites* sp. but very few brachiopods	12	3.7	194	59.1
18	Covered interval, limestone rubble as in unit 19	21	6.4	182	55.5
17	Limestone, grey with pale greyish green mottling, thin, very continuous anastomosing bedding, a few silicified crinoids and brachiopods, a grey fossiliferous micrite	12	3.7	161	49.1
16	Covered interval; limestone rubble as in unit 17	11	3.4	149	45.4
15	Limestone, brownish grey with a green tint, thin lumpy discontinous anastomosing to lenticular bedding grey crinoid brachiopod biomicrite with only fine biogenic debris	2	.6	138	42.1
14	Covered interval; limestone rubble as in unit 15	24	7.3	136	41.5
13	Limestone, greyish green, thin uneven anastomosing to lenticular bedding, some green argillaceous material on bed surfaces, a grey fine grained crinoid brachiopod biomicrite	5	1.6	112	34.1
12	Covered interval; limestone rubble as in unit 13	9	2.7	107	32.6
11	Limestone, dark brownish grey mottled with yellowish green argillaceous material in depressions on bed surfaces, thin- to medium; uneven fairly continuous bedding, a hard fossiliferous grey micrite with thamnoporid like corals and abundant brachiopods	5	1.5	98	29.9
10	Covered interval; limestone rubble as in unit 11	10	3.1	93	28.4
9	Limestone, dark brownish grey with a very slight green tinge, very little argillaceous material a grey crinoid biomicrite with very sparsely scattered atrypellids, thin to medium, fairly continuous smooth bedding	1	.3	83	25.3
8	Limestone, same as unit 6, only sparse large articulated *Atrypella* sp. shells, a dark grey brachiopod and crinoid biomicrite	10	3.1	82	25.0

Unit No.	Lithology	Thickness feet	Thickness (m)	Total from base feet	Total from base (m)
7	Silty limestone, same as at unit 5 with two medium beds of dark grey limestone in the middle of the interval	28	8.5	72	22.1
6	Limestone, greenish grey, thin discontinuous somewhat lumpy bedding, a few corals and articulated brachiopod shells in a crinoid brachiopod shell hash biomicrite - very little green argillaceous material	3	0.9	44	13.4
5	Silty limestone, weathers medium greyish green bedding surfaces have a micaceous sheen (sericite?) green argillaceous material pervades limestone and is not concentrated in discrete seams, thin to medium, lumpy, nodular to lenticular very poorly defined discontinuous bedding, only a few scattered brachiopods	20	6.1	41	12.5
4	Limestone same as unit 2, but medium bedding not apparent, a grey biomicrite with abundant brachiopods, particularly *Atrypella* sp.	10	3.0	21	6.4
3	Limestone, lower 4 feet as in unit 2 overlain by 1 foot of recessive, lenticularly bedded dark green calcareous shale	5	1.5	11	3.4
2	Limestone, dark greenish grey with dark green argillaceous material; thin lumpy laterally discontinuous beds within medium lumpy fairly continous beds; abundant biogenic material, mainly brachiopods (*Atrypella* sp.) and some gastropods formed lumpy bedding	1	0.3	6	1.8
1	Covered interval; limestone rubble as in unit 2	5	1.5	5	1.5
	Total thickness of Douro Formation	375	114.3		
	Lower limit of exposure.				

SECTION 10. This section includes strata of the Cape Phillips, Douro and Cape Storm formations and an unnamed Silurian-Devonian Limestone that is equivalent to the Devon Island and Barlow Inlet formations. This northeast dipping section extends northward for 1.0 km from the south coast of Sheills Peninsula. The base of the section is at 76°14'15"N latitude and 95°15'W longitude. It is well shown in RCAF air photo A16749-104.

Unit No.	Lithology	Thickness feet	Thickness (m)	Total from base feet	Total from base (m)
	CAPE STORM FORMATION				
52	Covered interval; same as unit 51	83	25.3	1592	485.2
51	Limestone, bluish grey weathering, light tan pelmicrite, medium continuous bedding	15	4.6	1509	460.0
	Exposed thickness of Cape Storm Formation	98	29.8		
	UNNAMED SILURIAN-DEVONIAN LIMESTONE (equivalent to Devon Island Formation?)				
50	Covered interval; same as unit 49	83	25.3	1494	455.4
49	Limestone, medium grey with cream mottling weathering, thin to medium, fairly smooth continuous bedding; a brown silty biomicrite; crinoid brachiopod shell hash	10	3.1	1411	430.0
48	Covered interval; same as unit 49	55	16.8	1401	427.1
47	Limestone, bluish grey weathering, very light tan pelmicrite; no argillaceous material, medium to thick continuous bedding; orange stained silicified corals and brachiopods	20	6.1	1346	410.3
	Total measured thickness of the Unnamed Silurian-Devonian Limestone	168	51.2		
	DOURO FORMATION				
46	Covered interval; same as unit 45	145	44.2	1326	404.2
45	Like unit 44, some silicified crinoids and brachiopods, brownish grey weathering with greenish yellow argillaceous material	4	1.2	1181	360.1
44	Covered interval; same as unit 43	65	19.8	1177	358.8
43	Silty limestone, blocky debris originally thick bedded brown weathering with faint yellowish green mottling; crinoid brachiopod biomicrite	25	7.6	1112	338.9
42	Covered interval, as at last interval	185	56.4	1087	331.3

Unit No.	Lithology	Thickness feet	Thickness (m)	Total from base feet	Total from base (m)
41	Covered interval; limestone, bluish grey weathering, platy to medium bedded; tan crinoid and brachiopod biomicrite	40	12.2	902	274.9
	Total measured thickness of Douro Formation	464	141.4		
	CAPE PHILLIPS FORMATION				
40	Covered interval; as in units 38 and 39	40	12.2	862	262.7
39	Silty limestone thin to platy smooth continuous nearly planar bedding; bluish grey and yellow; weathering dark brownish grey silty micrite	24	7.3	822	250.6
38	Limestone, same as unit 37; thin to medium beds	24	7.3	798	243.2
37	Limestone, medium to dark brown; thick anastomosing lenticular bedding defined by silt seams - a coarse silty biomicrite	5	1.5	774	235.9
36	Limestone, medium brown; thick, very smooth planar continuous bedding; a tan crinoid and brachiopod biomicrite with abundant finely comminuted shell debris	5	1.5	769	234.4
35	Same as unit 34 but predominantly thin to medium anastomosing bedding - a crinoid brachiopod biomicrite, a shell hash	29	8.8	764	232.9
34	Limestone, brownish yellow as before thick to continuous bedding; orange and yellow silty seams outline bedding	25	7.6	735	224.0
33	Limestone, yellowish brown medium slightly uneven continuous bedding; crinoid brachipod silty biomicrite; yellowish green weathering	5	1.5	710	216.4
32	Covered interval; same as unit 31	21	6.4	705	214.9
31	Argillaceous limestone, brownish orange, thin to medium smooth continuous bedding - an argillaceous crinoid biomicrite; dark brown on fresh surface, some zones of load casting and and flow rolls with thin platy beds curving around them; very low angle lenticular crossbedding	8	2.4	684	208.5
30	Covered interval; talus of blocky argillaceous brachiopod biomicrite	91	27.7	676	206.1

Unit No.	Lithology	Thickness feet	Thickness (m)	Total from base feet	Total from base (m)
29	Shale with limestone interbeds as before, load coasts common in limestone beds; some limestone beds rare 2 to 3 foot long boundin-like neckouts	30	9.1	585	178.3
28	Same as cast 30 foot interval; abundant thin bedded dark brown argillaceous limestone near top of interval, graptolites at top of interval	20	6.1	555	169.2
27	Covered interval; same as unit 26	6	1.8	535	163.1
26	Same as unit 23; more shale than limestone	30	9.1	529	161.2
25	Same as unit 23; medium brachiopodal biomicrite bed at top of interval	8	8.5	499	152.1
24	Same as last interval but convolutely bedded	5	1.5	491	149.7
23	1 to 2 foot thick beds of platy black shale that weather greenish grey divided by medium to thick somewhat contorted and load casted slightly argillaceous brownish grey crinoid biomicrite; limestone beds thicker and more numerous towards top at interval	55	16.8	486	148.1
22	Intense convolute bedding - mainly thick beds of argillaceous crinoid brachiopod biomicrite	5	1.5	431	131.4
21	Thinly bedded black shales as before divided into 1 to 2 foot intervals by single medium beds of argillaceous crinoidal biomicrite - a little convolute bedding	16	4.9	426	129.9
20	Scattered 6 foot thick intervals of limestone as in underlying interval but thin bedded black shale predominates fish(?) and graptolites	57	17.4	410	125.1
19	Black argillaceous limestone - medium to thick smooth continuous bedding - weathers bluish and greenish grey; interval capped by a 1 foot thick black shale stringer	26	7.9	353	107.6
18	Minor tectonic folding - shale as at unit 1	25	7.6	327	99.7
17	Black argillaceous limestone and calcareous black shale; thin smooth continuous bedding	7	2.1	302	92.1
16	Convolute bedding, same as previous intervals of convolute bedding	4	1.2	295	89.9
15	Covered interval; same as unit 14	13	4.1	291	88.7

Unit No.	Lithology	Thickness feet	Thickness (m)	Total from base feet	Total from base (m)
14	Black shale, as at unit 1; only a few feet of thin to medium bedded argillaceous limestone	18	5.5	278	84.7
13	Black shale, same as unit 1; a few thin to medium bedded intervals of fetid argillaceous dark brown micrite	22	6.7	260	79.3
12	Convolute bedding; shale interbedded with medium bedded argillaceous crinoid and brachiopod biomicrite, some granule conglomerate of micrite clasts in fold cores - ostracods	11	3.4	238	72.5
11	Black and dark brown calcareous shale; weathers light greyish green, very thin smooth continuous bedding	18	5.5	227	69.2
10	Same as unit 8; convolute bedding - brachiopods from medium fossiferous beds	7	5.2	209	66.8
9	Same as at unit 1; a platy thin bedded shale	27	8.2	202	61.6
8	Gigantic convolute beds; shale, but folds outlined by medium beds of argillaceous concoidal and brachiopod biomicrite	7	2.1	175	53.3
7	Calcareous shale, weathers greyish green, black fresh surface, smooth thin continuous to laminated bedding; individual thick beds separate 5 to 10 foot thick thinly bedded intervals	58	17.7	168	51.2
6	Same as unit 1; graptolites	15	4.6	110	33.5
5	Same as unit 1	25	7.6	95	29.1
4	Calcareous shale and shaly limestone at the basal 3 feet are involved in very contorted convolute bedding; remainder of unit is similar to unit 1	28	8.5	70	21.3
3	Same as unit 1; one very large lenticular crossbed; possibly 5 to 10 feet of strata involved in such low angle crossbeds (convolute laminations) - graptolites	19	5.8	42	12.8
2	Conglomerate; flat pebble conglomerate at base grades upward to conglomerate with poorly sorted and rounded blocky clasts; clasts of brown micrite floating in greyish green silty micrite	2	0.6	23	7.0

Unit No.	Lithology	Thickness feet	Thickness (m)	Total from base feet	Total from base (m)
1	Calcareous shale, weathers light greyish green black on fresh surface smooth thin continuous to laminated bedding, individual medium beds occur throughout the interval; uni- and biserial graptolites; medium beds	21	6.4	21	6.4
	Exposed thickness of Cape Phillips Formation	862	262.7		
	Lower limit of exposure.				

SECTION 11. This section includes strata of the Bay Fiord Thumb Mountain and Bird Fiord formations and four subdivisions ($DU_{2, 3, 4}$ and $_5$) of the Undivided Devonian Carbonates. This east-dipping section begins at 76°16'15"N latitude and 95°21'W longitude and extends eastward about 1.5 km down a small stream valley in the northwest part of Sheills Peninsula on Grinnell Peninsula. This section is best seen on RCAF air photo A16749-103.

	BIRD FIORD FORMATION				
55	Sandy limestone, dark greyish green, thin to medium lenticular bedding; abundant fine sand and fine shell debris; crinoids, trilobites, coral and brachiopods	4	1.2	1965	598.9
54	Covered interval; same as unit 53	71	21.6	1961	597.7
53	Calcareous sandstone and sandy limestone; weathers orange and greenish grey; a dark grey fine sandstone; abundant brachiopods crinoids and corals; a little limonitized pyrite; very lumpy discontinuous to lenticular anastomosing bedding with argillaceous partings	10	3.1	1890	576.1
	Exposed thickness of Bird Fiord Formation	85	25.9		
	Undivided Devonian Carbonates-Du_5 Member (BLUE FIORD FORMATION; Member C_2)				
52	Silty limestone like unit 50	20	6.1	1880	573.0
51	Covered interval; same as unit 50	45	13.7	1860	566.9
50	Silty limestone, weathers brown with argillaceous material mottling bedding surfaces greenish and orangish grey; very lumpy medium to thick fairly continuous bedding; a silty biomicrite, brachiopods and corals abundant in a crinoid-rich matrix	19	5.8	1815	553.2

Unit No.	Lithology	Thickness feet	Thickness (m)	Total from base feet	Total from base (m)
	Total thickness of Du_5 Member	84	25.6		
	Undivided Devonian Carbonates-Du_4 Member (BLUE FIORD FORMATION; Member C_1)				
49	Limestone, weathers bluish grey; a tan pelmicrite; thin to medium fairly smooth continuous bedding	45	13.7	1796	547.4
48	Covered interval; same as unit 47	45	13.7	1751	533.7
47	Limestone, weathers bluish grey, medium to thin, slightly uneven but fairly continuous bedding - a tan pelmicrite - sublithographic	40	12.2	1706	520.1
	Total thickness of Du_4 Member	130	39.6		
	Undivided Devonian Carbonates-Du_3 Member (BLUE FIORD FORMATION; Member B_2)				
46	Covered interval; talus of silty and sandy dolomite conglomerate as at unit 45; most only silty dolomite; weathers brownish yellow; thin to medium smooth continuous bedding	72	22.6	1666	507.8
45	Sandy dolomite conglomerate; weathers medium to dark brown with abundant clasts of light white dolomicrite in a sucrosic sandy rather tabular timely crystalline dolomite matrix; clasts less than 2 inches long are parallel to bedding	55	16.8	1594	485.9
	Total thickness of Du_3 Member	127	38.7		
	Undivided Devonian Carbonates-Du_2 Member (BLUE FIORD FORMATION; Member B_1)				
44	Covered interval; same as unit 43	95	29.1	1539	469.1
43	Same as unit 41 but not as silty; light and dark cream and grey laminations; some crinoids	2	.6	1444	440.1
42	Covered interval; same as unit 41	33	10.1	1442	439.5
41	Slightly calcareous dolomite; medium smooth continuous bedding with thin alternating laminae of pastel pink and green; a silty dolomicrite	2	.6	1409	429.5
40	Dolomitic limestone pale greyish green, thin to medium continuous smooth planar bedding; a silty dolomicrite	4	1.2	1407	428.9
	Total thickness of Du_2 Member	136	41.5		

Unit No.	Lithology	Thickness feet	Thickness (m)	Total from base feet	Total from base (m)
	THUMB MOUNTAIN FORMATION				
39	Dolomite, weathers medium brown with light brown vermiform mottlings; medium to thick slightly lumpy continuous bedding, sponge-like porosity; many zones of white chert nodules	15	4.6	1403	427.6
38	Covered interval; same as unit 35	55	16.8	1312	399.9
37	Limestone, like unit 35 but lumpy continuous medium beds separated by ¼ seams of green argillaceous material with some limonitized pyrite	1	.3	1313	400.2
36	Covered interval; same as unit 35	55	16.8	1312	399.9
35	Limestone, like unit 33, but more continuously bedded; abundant green argillaceous material on bedding planes; a brown skeletal hash biomicrite; (DM-72-3406); some sedimentary pyrite crystals	25	7.6	1257	383.1
34	Covered interval; same as unit 33	10	3.1	1232	375.5
33	Limestone, weathers bluish grey with green mottling of argillaceous material as curvilinear seams along bedding; thin to medium, anastomosing to lumpy discontinuous bedding, a brownish grey skeletal hash biomicrite; receptaculites, halysites, maclurites	8	2.4	1222	372.5
32	Covered interval; same as unit 33	30	9.1	1219	371.6
31	Limestone, weathers brown; medium to thick continuous slightly lumpy bedding; a little greyish green argillaceous material - a brown biomicrite	45	13.7	1184	360.9
30	Covered interval; same as unit 29	24	7.3	1139	347.2
29	Limestone, weathers brown; thin to medium continuous slightly lumpy bedding; some very light brown vermiform mottling; brachiopod and crinoid biomicrite, uppermost bed almost a shell hash	8	2.4	1115	339.9
28	Same as unit 26 without the white nodule zone	15	4.6	1107	341.4
27	Covered interval, same as unit 26	25	7.6	1092	332.8
26	Limestone, weathers brown; thin very lumpy discontinuous to lenticular bedding with abundant white dolomite (some chert?) lumps in bands parallel to bedding; a crinoid biomicrite	14	4.3	1067	325.2

Unit No.	Lithology	Thickness feet	Thickness (m)	Total from base feet	Total from base (m)
25	Limestone, recessive, weathers brown; medium continuous uneven bedding; some greyish green argillaceous material as mottling on bed surface; a crinoid biomicrite	3	.9	1053	321.0
24	Covered interval; same as unit 23	38	11.6	1050	320.0
23	Limestone, same as unit 22	75	22.9	1012	308.5
22	Limestone, weathers light brown; discontinuous thin to medium lumpy bedding; several zones of white weathering, very dark brown chert nodules; *Maclurites* and *Receptaculites*; a brown biomicrite	25	7.6	937	285.6
21	Covered interval; same as unit 22	126	38.4	912	278.0
20	Limestone, weathers brown, thick and lumpy continuous bedding; pale brown vermiform mottlings less pronouned than in lower units; a brown (crinoid) fossiliferous micrite	23	7.0	786	239.6
19	Same as unit 18; but rather lumpy bedded	20	6.1	763	232.6
18	Limestone, weathers brown; medium to thick smooth continuous bedding; brown dismicrite with poor fenestral fabric	20	6.1	743	226.5
17	Covered interval; same as unit 18	68	20.7	723	220.4
16	Limestone, weathers brown; thin continuous bedding; argillaceous seams separate beds	15	4.6	655	199.6
15	Covered interval; same as unit 14	95	29.0	640	195.1
14	Limestone, weathers brown with pale greenish brown dolomitized vermiform mottlings; medium to thick uneven continuous bedding; a crinoid biomicrite	5	1.5	545	166.1
13	Covered interval; same as unit 14	22	6.7	543	165.5
12	Dolomite, weathers pale pinkish brown with dark grey mottling near vertical shear zone with accompanying limonitized pyrite and sphalerite mineralization and coarsely crystalline white calcite	20	6.1	521	158.8
11	Limestone, similar to unit 9; thin to thick lumpy continuous bedding with abundant vermiform light brown mottlings	80	24.4	501	152.7

Unit No.	Lithology	Thickness feet	Thickness (m)	Total from base feet	Total from base (m)
10	Covered interval; black calcareous shale; weathers dark greyish green	13	4.0	421	128.3
9	Limestone, weathers dark brown medium to thick, very lumpy continuous bedding, greyish green argillaceous material marks bedding planes; bed surfaces abundantly burrowed; a crinoid biopelmicrite	4	1.2	408	124.4
	Total thickness of Thumb Mountain Formation	999	304.5		
	BAY FIORD FORMATION				
8	Covered interval; same as unit 7	84	25.6	404	123.1
7	Dolomite, weathers medium greyish brown with a greenish tint; thin smooth to slightly lumpy continuous bedding; small vugs elongate parallel to bedding; limonitized pyrite and sphalenite in vugs finely crystalline dolomite some pockets of solution collapse breccia	5	1.5	320	97.5
6	Covered interval; same as unit 7	155	47.2	315	96.0
5	Dolomitic limestone, weathers pale green with an orange stain; medium lumpy bedding; very finely crystalline	1	.3	160	48.8
4	Covered interval; same as unit 1	140	46.7	159	48.5
3	Dolomite, same as unit 1	2	.6	19	5.8
2	Covered interval; same as unit 1	16	4.9	17	5.2
1	Dolomite, weathers pale yellowish green with an orange mottling; some green argillaceous material; medium irregular bedding; sucrosic, finely crystalline pale to medium grey; slightly vuggy with small (½ inch long) vugs that probably represents fenestral fabric	1	.3	1	.3
	Exposed thickness of Bay Fiord Formation	404	123.1		
	Lower limit of exposure.				

SECTION 12. This section includes strata of the Thumb Mountain Formation and of four subdivisions ($Du_{2, 3, 4}$ and $_5$) of the Undivided Devonian Carbonates that may be equivalent in part to the Blue Fiord Formation. The east-dipping section begins at 76°17'20"N latitude and 95°22'W longitude and extends eastward about 1.0 km down a small stream valley near the northwest tip of Sheills Peninsula. It is well shown on RCAF air photo A16749-103. This section is 1.5 km north of section 11.

Unit No.	Lithology	Thickness feet	Thickness (m)	Total from base feet	Total from base (m)
	Undivided Devonian Carbonates-Du_5 Member (BLUE FIORD FORMATION, Member C_2)				
25	Same as unit 23; fairly continuous anastomosing beds with some lenticular beds, some brachipods	7	2.1	609	185.6
24	Covered interval; same as unit 23	13	4.0	602	183.5
23	Silty limestone, weathers greyish brown, thick bedded with discontinuous interval thin anastomosing beds outlined by brown silty seams a recrystallized brown crinoid biomicrite	10	3.1	589	179.5
	Total thickness of Du_5 Member	30	9.1		
	Undivided Devonian Carbonates-Du_4 Member (BLUE FIORD FORMATION, Member C_1)				
22	Covered interval; same as unit 23	33	10.1	579	176.5
21	Same as unit 20, but medium to thick continuous bedding; small fault here	37	11.3	546	166.4
20	Limestone, light bluish grey weathering, thin- to medium, slightly uneven smooth continuous bedding, a light grey and light brown micrite, (intramicrite??)	8	2.4	509	155.1
	Total thickness of Du_4 Member	78	23.8		
	Undivided Devonian Carbonates-Du_3 Member (BLUE FIORD FORMATION, Member B_2)				
19	Covered interval; same as unit 18, some slabby debris and greyish green silty dolomite	107	32.6	501	152.7
18	Dolomite, same as before but darker grey, porosity as at last 2 foot interval; black mineralization in porosity	4	1.2	394	120.1
17	Covered interval; same as unit 16	7	2.1	390	118.9
16	Dolomite, same as unit 14	3	.9	383	116.7
15	Covered interval; same as unit 16	12	3.7	380	115.8

Unit No.	Lithology	Thickness feet	Thickness (m)	Total from base feet	Total from base (m)
14	Dolomite, light grey, medium- to thick smooth continuous bedding; homogeneously porous with abundant small unoriented pores (<¼ inch long) that are probably fenestral fabric	2	.6	368	112.2
13	Covered interval; same as unit 14	21	6.4	366	111.6
12	Dolomite, weathers light cream, medium- to thick, uneven continuous bedding; grey finely crystalline dolomite, some poorly developed fenestral fabric; some large vugs that are mainly gastropod steinkerns; some brachiopods	8	2.4	345	105.2
11	Covered interval; same as unit 12	33	10.1	337	102.7
10	Dolomite, same as unit 5 with abundant laminoid fenestral fabric, but is thick to massive bedded	5	1.5	304	95.7
9	Covered interval; same as unit 10	5	1.5	299	91.1
8	Same as unit 5, but medium bedded only	10	3.1	294	89.6
7	Covered interval; same as unit 8	63	19.2	284	85.6
6	Same as unit 5, but very coarse vuggy porosity lined with coarsely crystalline dogtooth calcite and limonitized pyrite and sphalerite	7	2.1	221	67.4
5	Dolomite, weathers light grey, thin to medium smooth continuous bedding, finely crystalline grey dolomite, good laminoid fenestral fabric (tidal flat origin) provides 2 to 3% porosity	6	1.8	214	65.2
4	Covered interval as at 80 foot interval	14	4.3	208	63.4
3	Covered interval; same as at unit 2 but abundant breccia of angluar white dolomite, (some chert?) clasts	20	6.1	194	59.1
2	Covered interval; silty dolomite debris as slabs; weathers dark orange and greenish brown greyish green silty dolomite	80	24.4	174	53.0
	Total thickness of Du_3 Member	407	124.1		
	THUMB MOUNTAIN FORMATION				
1	Covered interval; limestone debris, weathers bluish grey with orange staining, a brown micrite; mineralization near the top of the interval - pyrite and sphalerite - some biogenic material *Maclurites* sp. and *Receptaculites* sp.	94	28.7	94	28.7

Unit No.	Lithology	Thickness feet	Thickness (m)	Total from base feet	Total from base (m)
	Exposed thickness of Thumb Mountain Formation	94	28.7		
	Lower limit of exposure.				

SECTION 13. This section includes strata of the Allen Bay, Cape Storm and Bird Fiord formations and the Undivided Devonian Carbonate (Du_3 and Du_4). The upper part of Allen Bay Formation in this section is transitional with the Cape Phillips Formation. This southwest dipping section extends 1.5 km southwestward down a stream valley in the southwestern part of Grinnell Peninsula. The section begins at 76°28'N latitude and 95°16"W longitude and is well shown on RCAF air photo A16749-100.

	BIRD FIORD FORMATION				
34	Sandstone, weathers dark greenish brown, thin, fairly discontinuous bedding; a dark grey calcite cemented impure quartzarenite	10	3.1	3168	965.6
	Exposed thickness of Bird Fiord Formation	10	3.1		
	Undivided Devonian Carbonate-Du_4 Member and possibly the Du_5 Member (BLUE FIORD FORMATION, Member C_1)				
33	Covered interval; (probably conceals the Du_5 Member	100	30.5	3158	962.6
32	Limestone, same as unit 29; thick to massive continuous bedding	54	16.5	3058	932.1
31	Limestone, as at previous interval; but thin rather knobbly bedding	10	3.1	3004	915.6
30	Covered interval; same as at previous interval	70	21.3	2994	932.6
29	Limestone, weathers bluish grey, medium to thick smooth continuous bedding, a light brown packed intramicrite (intraclasts < 2 mm across)	40	12.2	2924	974.2
	Total thickness of members Du_4 (and Du_5?)	274	83.5		

Unit No.	Lithology	Thickness feet	Thickness (m)	Total from base feet	Total from base (m)
	Du_3 Member				
28	Covered interval; dolomite cemented sandstone slabby and platy debris; weathers light yellow to medium brown, probably originally medium to thick bedded sequence with some thin bedded intervals a grey dolomite cemented quartzarenite sandstone, some zones of light grey dolomicrite clast (DM-72-377a from base, DM-72-377b from top)	245	74.7	2884	899.0
	Total thickness of Du_3 Member	245	74.7		
	Total thickness of Undivided Devonian Carbonates	519	158.2		
	CAPE STORM FORMATION				
27	Calcareous dolomite, weathers bluish grey medium to thick continuous bedding; a grey finely crystalline partly dolomitized intrapelsparite	210	64.0	2639	824.4
26	Dolomite, same as in units 20 to 25; thick to massive continuous bedding light brown, intrapelsparite texture faintly visible; fairly abudant pentamerids	42	12.8	2429	760.4
25	Covered interval; same lithology as in unit 24	59	18.0	2387	747.6
24	Dolomite same as in unit 23; some brachiopods and corals	185	56.4	2328	100.0
23	Dolomite, weathers very light grey, thick to massive bedded; very light brown (almost white) medium crystalline somewhat crinoidal dolomite	13	4.0	2143	673.2
22	Covered interval; same lithology as in unit 21	22	6.7	2130	669.2
21	Dolomite, same as in unit 20 but only very smooth continuous thick to massive bedding	115	35.1	2108	662.6
20	Dolomite, weathers very light grey; massive, smooth continuously bedded intervals alternate with medium to thick bedded intervals	145	44.2	1993	607.5
19	Covered interval; same lithology as in unit 20	155	47.2	1898	578.5
18	Limestone, same as in unit 12 but with one 6 foot interbed of dolomite as in unit 17 - 20 feet from the top of this unit	242	76.8	1693	516.0

Unit No.	Lithology	Thickness feet	Thickness (m)	Total from base feet	Total from base (m)
17	Slightly calcareous dolomite, weathers light grey with a brownish orange mottling; light brown medium crystalline dolomite, a dolomitized packed intrapelsparite fabric with rounded intraclasts less than 2 mm long	3	0.9	1451	442.3
16	Limestone, same as unit 15	67	20.4	1448	441.4
15	Limestone, same as unit 12; with some probable pentamerid cross-sections	90	27.4	1381	420.9
14	Mainly limestone as in unit 13, but a 4 foot thick interval at 45 feet of thin, continuously bedded limestone; a gently cross-bedded poorly washed, slightly silty, packed intrasparite with well sorted rounded intraclasts, (clasts <2 mm long)	65	19.8	1291	393.5
13	Limestone, same as unit 12	85	25.9	1226	373.7
12	Limestone, weathers bluish grey; thick to massive fairly smooth but undulatory continuous bedding; a very light brown and grey (nearly white) packed pelsparite or intrasparite with some scattered large star-holed crinoids	35	10.7	1141	347.8
11	Covered interval, debris same lithology as unit 12	85	25.9	1106	337.1
	Total thickness of Cape Storm Formation	1618	493.1		
	ALLEN BAY FORMATION				
10	Covered interval; same lithology as in unit 9	60	18.3	1021	311.2
9	Dolomite, weathers very light brown; thick smooth continuous bedding	80	24.4	961	292.9
8	Dolomite, weathers very light grey and brown; medium smooth continuous bedding	15	4.6	881	268.5
7	Covered interval; same lithology as in unit 6	230	70.1	866	264.0
6	Dolomite, weathers very light grey; thin to thick, smooth to uneven continuous bedding; some pin-point porosity, very finely crystalline	10	3.0	636	193.9
5	Covered interval; dolomite weathers very light brown and grey, finely to very finely crystalline dolomite, probably medium smooth, continuous bedding, some pin-point porosity	365	111.3	626	190.8

Unit No.	Lithology	Thickness feet	Thickness (m)	Total from base feet	Total from base (m)
4	Covered interval; same lithology as in unit 3	60	18.3	261	79.6
3	Dolomite, as in unit 1; but crinoids segregated into lenticular placers; very rough weathering	26	7.9	201	61.3
2	Covered interval; same lithology as unit 1	145	44.2	175	53.3
1	Dolomite, weathers light brown, thick to massive continuous fairly smooth bedding; a medium crystalline, medium brown dolomite, abundant crinoids, scattered small vugs; some 2 to 4 foot interbeds of medium bedded dark brown dolomite with abundant crinoids	30	9.1	30	9.1
	(Several interbeds of Cape Phillips shale occur near the top of the Allen Bay dolomite)				
	Exposed thickness of Allen Bay Formation	1021	311.2		
	Lower limit of exposure.				

SECTION 14. This section includes strata of the Copes Bay and Baumann Fiord formations. It is an eastward dipping section that extends 2.0 km eastward down a stream valley on the west side of Grinnell Peninsula. This section begins at 76"38'45"N latitude and 95°48'W longitude and is best seen on RCAF air photo A16753-74.

	BAUMANN FIORD FORMATION				
61	Dolomitic limestone, dark brown stromatolite biolithite	17	5.2	659	200.9
60	Dolomitic limestone, light grey (gypsiferous) thin to medium smooth bedding; silty	2	.6	642	195.7
59	Stromatolite biolithite, greyish brown	3	.9	640	195.0
58	Covered interval; stromatolite biolithite debris	12	3.7	637	194.2
57	Dolomitic, limestone and gypsum, a 1 foot thick brown intraclastic layer overlies a 1 foot thick layer of white gypsum and carbonate sand containing some laminar porcellaneous white dolomite	6	1.8	625	190.5

Unit No.	Lithology	Thickness feet	(m)	Total from base feet	(m)
56	Dolomitic limestone, brownish grey digitate stromatolites in orange weathering matrix	5	1.5	623	189.9
55	Covered interval; same lithology as unit 56	32	9.5	618	188.4
54	Silty dolomicrite, light greyish brown, darker towards top of interval, medium to thick continuous bedding	10	3.0	586	178.6
53	Dolomite limestone, dark grey, platy and lithographic	13	4.0	576	175.6
52	Stromatolite biolithite as before, greyish brown with huge 3 foot hemispheriodal stromatolites	6	1.8	563	171.6
51	Silty limestone, greenish grey, medium to thin smooth continuous bedding	2	.6	567	172.8
50	Calcareous dolomite and limestone, medium bedded light grey stromatolite biolithite	9	2.7	555	169.2
49	Covered interval; same lithology as in unit 48	12	3.7	546	166.4
48	Dolomite, brown dolomitized stromatolite biolithite with abundant light grey argillaceous material between stromatolite digitations	4	1.2	534	162.8
47	Covered interval; same lithology as in unit 46	5	1.5	530	161.5
46	Dolomite, brown, a dolomitized stromatolite biolithite, small digitate stroms form thick anastomosing beds	6	1.8	525	160.0
45	Covered interval; dolomite solifluction material	8	2.4	519	158.2
44	Calcareous silty dolomite, light greenish grey, thin bedded at base to medium smooth continuous bedding at top, lithographic with a little conglomerate at top	30	9.1	511	155.8
43	Calcareous dolomite, medium to thick bedded, intraclastic intervals alternate with dolomicrite intervals; one stromatolite interval in centre	11	3.4	481	149.6
42	Covered interval; same lithology as in underlying unit	15	4.6	470	143.3
41	Calcareous dolomite, smooth medium continuous bedding, silty greenish grey	2	.6	455	138.7

Unit No.	Lithology	Thickness feet	Thickness (m)	Total from base feet	Total from base (m)
40	Covered interval; same lithology as in unit 39	3	0.9	453	138.0
39	Calcareous dolomite, brownish to bluish grey, thin to medium anastomosing bedding defined by thin greenish grey argillaceous stringers-some mud cracks	21	6.4	450	137.1
38	Dolomite, white porcellaneous texture, gypsiferous, very thin continuous bedding	.5	.15	429	130.8
37	Dolomite, very silty yellow, fine laminated (yellow and grey) dolomite; platy with mud cracks and mud lumps	14	4.3	428.5	134.7
36	Dolomitic limestone, intraclastic, greyish brown, medium to thick continuous bedding	2	.6	414.5	126.4
35	Covered interval; same lithology as in unit 34	18	5.5	412.5	125.8
34	Dolomitic limestone, grey, massive bedded stromatolite biolithite with some black chert nodule zones	4	1.2	394.5	120.2
33	Covered interval; same lithology as in unit 32	18	5.5	390.5	119.1
32	Dolomitic limestone, very light grey and platy	2	.6	372.5	113.6
31	Limestone, grey stromatolite biolithite, as at last stromatolite bearing interval; black chert nodule zone at base of interval	2	.6	370.5	113.0
	Exposed thickness of Baumann Fiord Formation	290.5	88.5		
	COPES BAY FORMATION				
30	Dolomite, platy brownish grey and lithographic	2	.6	368.5	112.4
29	Covered interval; same lithology as in unit 28	15	4.6	366.5	111.8
28	Dolomite, brownish grey, thick to massive bedded, intraclasts up to 4 inches across, very poorly sorted, some intraclasts silicified with very dark grey chert	3	.9	351.5	107.2
27	Covered interval; same lithology as in unit 26	30	9.1	348.5	106.2
26	Dolomite, as before; thin to medium smooth continuous bedding	6	1.8	318.5	97.1

Unit No.	Lithology	Thickness feet	Thickness (m)	Total from base feet	Total from base (m)
25	Dolomite, greyish green platy and lithographic	10	3.0	312.5	95.3
24	Dolomite, greyish and brownish green lithographic dolomite, medium bedded, lower part intraclastic, upper 1 foot has load casts on upper surface	4	1.2	302.5	92.2
23	Covered interval; same lithology as in unit 22	12	3.7	298.5	91.0
22	Dolomite, greyish green platy lithographic, abundant silty green argillaceous material	7	2.1	286.5	87.4
21	Covered interval; same lithology as in unit 18	11	3.4	279.5	85.2
20	Dolomite, brown and thick bedded, intraclastic	3	.9	268.5	81.9
19	Dolomite, as in unit 18, platy beds; at the top of the unit minor fold viewed east	15	4.6	265.5	81.0
18	Dolomite, thick to massive beds of intraclastic dolomite, as before separated by ½ inch platy dolomite intervals	13	4.0	250.5	76.4
17	Dolomitic limestone, greenish grey and brown, similar to first 5 foot interval, colour banded due to differential silt content	14	4.3	237.5	72.4
16	Covered interval; lithology as in underlying unit	27	8.2	223.5	68.2
15	Dolomite, brownish grey, medium anastomosing continuous bedding, very finely crystalline recrystallized dolomicrite	9	2.7	196.5	59.9
14	Covered interval; lithology as in underlying unit	47	14.3	187.5	57.2
13	Dolomite, greyish green, silty medium continuous bedding, intraclastic as before, almost an edgewise conglomerate	15	4.6	140.5	42.9
12	Dolomite, silty, green and platy	9	2.7	125.5	38.3
11	Dolomite, greenish grey, medium, smooth continuous bedding, some intraclastic zones, very finely crystalline dolomite	15	4.6	116.5	35.6
10	Silty dolomite, greyish green very rough medium bedding, almost entirely intraclastic finely crystalline dolomite, with intraclasts in a matrix of greyish-green argillaceous material	7	2.1	101.5	40.0

Unit No.	Lithology	Thickness feet	Thickness (m)	Total from base feet	Total from base (m)
9	Dolomite, dark brownish green, medium smooth continuous bedding, greenish grey argillaceous material abundant; horizontal worm burrows	5	1.5	94.5	28.8
8	Covered interval; same lithology as in unit 7 with interbeds of platy intervals as at first 5 foot interval	42	12.8	89.5	27.3
7	Brown dolomite, LLH-C stromatolite biolithite with greyish green argillaceous material between individual stromatolite digitations within an individual hemipheroidal stromatolite colony	2	.6	47.5	14.5
6	Slightly silty dolomite, greenish brown, thin to medium continuous bedding, very finely crystalline recrystallized dolomicrite, flat pebbles intraclasts on some bedding surfaces; some polished round quartz sand grains in intraclastic layers	5.5	1.7	45.5	13.9
5	Silty platy dolomite, as at first 5 foot interval	3	.9	40	12.2
4	Silty dolomicrite, thin to medium anastomosing bedding with large (1 ft λ) linear ripples, grey with 1½ inch long dark brown intraclasts (flat pebble conglomerate) between ripples; a large amount of greenish grey argillaceous material	7	2.1	37	11.3
3	Very silty dolomite, grey with thin wavy green argillaceous seams that form partings for thin, platy, gently anastomosing bedding, very finely crystallized, some chicken wire mud cracks	15	4.6	30	9.1
2	Very silty (muddy) slightly calcareous dolomite, brown with a greenish grey tint, thin continuous smooth bedding, internally laminated, some mud cracks, a silty dolomicrite, 2 to 3 inches concretions elongate to parallel bedding	5	1.5	15	4.6
1	Calcareous dolomite, medium to thin, anastomosing to lumpy discontinuous bedding, dark brown smooth weathering very finely crystalline dolomite, a little argillaceous material, lumpy bedding due to load casting	10	3.0	10	3.0
	Exposed thickness of Copes Bay Formation	368.5	112.4		
	Lower limit of exposure.				

SECTION 15. This section includes strata of the Copes Bay, Baumman Fiord and Eleanor River formations. It extends about 1.5 km eastward across a low east-trending ridge about 5 km north of Barrow Harbour on western Grinnell Peninsula. The base of the section is at 76°39'20"N latitude and 95°46'30"W longitude. The section is well shown on RCAF air photo A16753-74.

Unit No.	Lithology	Thickness feet	Thickness (m)	Total from base feet	Total from base (m)
	ELEANOR RIVER FORMATION (lower member)				
6	Limestone, micrite with significant amounts of stromatolite biolithite. Bedding has become massive and the weathering pattern has changed from a pale grey-brown to a brown-orange	100	30.5	2050	624.8
	Exposed thickness of Eleanor River Formation	100	30.5		
	BAUMANN FIORD FORMATION contact gradational				
5	Lithology continues largely the same as unit 4 micrite seems to be more common and is often thin bedded and platy. Near the top and this unit the bedding becomes thicker	135	41.1	1950	594.4
4	Limestone, almost entirely thick bedded micrite and stromatolite biolithite. Also a significant amount of fine grained homogeneous grey limestone with conchoidal fracture and porcelain texture. About half of thin unit is platy. negligible amounts of gypsum and white limestone	300	91.4	1815	553.2
3	Limestone, several outcrops of stromatolite biolithite, thick bedded, dark brown, interbedded with platy white limestone and very thin beds of gypsum except near the top where bedding is more massive. Chert present randomly, and at 400 foot level there is an oolite zone	545	166.1	515	157.0
2	Thin bedded, platy, fissile white limestone at base, bedding increasing to medium to top. Pure gypsum present at extreme top only. Quite homogeneous up to 300 feet, then a quartz sandstone appears, (WS-72-76a). A flat pebble conglomerate also appears, (WS-72-76b) with a lot of sand in its matrix and the cement is commonly spar replaced (WS-72-76b). At about 505 feet large stromatolites are first observed with a white, soft, gypsiferous lime mud infill. Chert is common throughout and some samples suggest it exists in thin beds	605	184.4	970	295.7

Unit No.	Lithology	Thickness feet	Thickness (m)	Total from base feet	Total from base (m)
	Total thickness of Baumann Fiord Formation	1585	483.1		
	COPES FORMATION				
1	Massive dark brown micrite, medium to thick bedded, chert common and stromatolites are present. Generally homogeneous and dark brown with minor amounts of pelsparite. Interbedded with small amounts of thin bedded porcelain textured grey limestone and dolomite. Quartz sand laminae are common in the dolomite. Conodonts collected at base (WS-72-75a F)	365	111.3	365	111.3
	Exposed thickness of Copes Bay Formation	365	111.3		
	Lower limit of exposure.				

SECTION 16. This section includes strata of the Baumann Fiord, Eleanor River, Bay Fiord and Thumb Mountain formations. It extends southwest about 3.0 km down a stream valley on western Grinnell Peninsula near Barrow Harbour. The base of the section is at 76°41'45"N latitude and 95°13'30"W longitude and it is well shown on RCAF air photo A16749-95.

	THUMB MOUNTAIN FORMATION				
83	Dolomite, weathers dark brown, medium to thick slightly lumpy bedding; a dark grey finely crystalline dolomite	15	4.6	2810	856.5
	Exposed thickness of Thumb Mountain Formation	15	4.6		
	BAY FIORD FORMATION				
82	Covered interval; dolomitic limestone as unit 81	28	8.5	2795	852.0
81	Dolomitic limestone, weathers light yellowish and greenish grey thin to medium smooth to continuous bedding with silty bedding plane partings, a light greyish green micrite	22	6.7	2767	843.4

Unit No.	Lithology	Thickness feet	Thickness (m)	Total from base feet	Total from base (m)
80	Covered interval; debris same as unit 81	32	9.8	2745	836.7
79	Same as last unit 77	26	7.9	2713	826.9
78	Covered interval; dolomitic limestone rubble same as unit 77	39	11.9	2687	819.0
77	Dolomitic limestone, weathers light greenish yellow; thin to medium continuous bedding; very silty light grey partly dolomitized micrite	40	12.2	2648	807.1
76	Dolomite, weathers dark brown, medium to thick slightly lumpy bedding, a dark grey finely crystalline dolomite	15	4.6	2608	794.9
75	Covered interval; dolomitic limestone rubble same at unit 73	31	9.4	2593	790.3
74	Dolomitic limestone, same as in unit 73, but thick rather lumpy bedding	20	6.1	2562	780.9
73	Dolomitic limestone, weathers light greenish brown, thin to medium smooth continuous bedding, a light grey partly dolomitized micrite	40	12.2	2542	774.8
72	Limestone; same as in unit 70	14	4.3	2502	762.6
71	Covered interval; limestone rubble same as in unit 70	6	1.8	2488	758.3
70	Limestone, weathers light greenish brown with green and yellow mottling; medium continous slightly lumpy bedding; brown, somewhat bioturbated micrite	23	7.0	2482	756.6
69	Covered interval, limestone rubble same as in unit 68	40	12.2	2459	749.5
68	Limestone, weathers grey with greenish argillaceous mottlings on bed surfaces; medium continous smooth bedded micrite	23	7.0	2419	737.3
67	Covered interval; dolomite and limestone rubble same as in unit 66	13	4.0	2396	730.3
66	Same as unit 64, but some 6 foot intervals of yellow weathering, medium to thick, smooth bedded brownish grey micrite (DM-72-363b)	40	12.2	2383	726.3
65	Covered interval; dolomite and limestone rubble same as in unit 64	25	7.6	2343	714.2
64	Dolomite and limestone interbedded, thin, smooth continuous bedding, light yellowish and greenish orange weathering, light greyish green dolomicrite and micrite	13	4.0	2318	706.5

Unit No.	Lithology	Thickness feet	Thickness (m)	Total from base feet	Total from base (m)
63	Covered interval; some dolomite and limestone rubble, same as in unit 64, yellowish orange mud	85	19.2	2305	702.6
62	Dolomite conglomerate in limestone; weathers light yellowish green; subangular poorly sorted clasts (<4 inches across) of silty, light grey, green and yellow dolomicrite in a finely crystalline light grey limestone matrix (a solution collapse breccia)	9	2.7	2220	676.7
61	Covered interval; calcareous yellowish brown solifluction material	8	2.4	2211	673.9
	Total thickness of Bay Fiord Formation	592	180.4		
	ELEANOR RIVER FORMATION (Member 3)				
60	Limestone, same as in unit 60 but poorly exposed	52	15.8	2203	671.5
59	Limestone; weathers dark brown, medium to massive continuous bedding, an intramicrite, abundant worm trails on bed surfaces	27	8.2	2151	655.6
58	Covered interval; limestone debris, weathers dark brown, thick to massive continuous bedding, a fetid brown intramicrite, several zones of white chert nodules	24	7.3	2124	647.4
57	Limestone, same as in unit 55, with several white chert nodule zones	60	18.3	2100	640.1
56	Limestone, yellow weathering, thin to laminated smooth continuous bedding with argillaceous material forming partings	27	8.2	2040	621.8
55	Limestone, massive bedded dark brown weathering "leopard" stone alternates with nonmottled dark brown weathering intramicrite; sparse crinoids	75	22.9	2013	613.6
54	Covered interval; same lithology as unit 55	11	3.4	1938	590.7
53	Limestone, weathers very dark brown, thick continuous uneven bedding, an intramicrite	3	.9	1927	587.3
52	Covered interval; same lithology as in unit 51	18	5.5	1924	586.4
51	Same lithology as in unit 50 but some colour mottling	30	9.1	1906	580.9

Unit No.	Lithology	Thickness feet	Thickness (m)	Total from base feet	Total from base (m)
50	Limestone, weathers very dark brown, medium to thick continuous planar somewhat lumpy bedding, fetid poorly washed intrasparite	39	11.9	1876	571.8
	Total thickness of Eleanor River Formation, Member 3	366	111.6		
	ELEANOR RIVER FORMATION (Member 2)				
49	Covered interval; same lithology as unit 50	13	4.0	1837	559.9
48	Mostly limestone, yellow weathering, thin to laminated bedding, brownish grey micrite with silty partings; some thin to medium bedded 3 foot thick resistant intervals	110	33.5	1824	556.1
47	Slightly silty limestone, weathers brown with leopard stone mottling, massive continuous bedding, dark brown intramicrite with two 2 foot thick interbeds silty, yellow weathering thick bedded light brown and grey micrite	45	13.7	1714	522.4
46	Almost all the same lithology as unit 43, except for three 3 foot thick intervals of light yellowish grey weathering, thin to laminated silty mud cracked limestone	27	8.2	1669	508.7
45	Limestone, weathers medium brown, thick to massive undulating bedding, a dark brown stromatolite biolithite, these beds alternate with thick brown intramicrite beds	8	2.4	1642	500.5
44	Covered interval; limestone debris same as unit 43	41	12.5	1634	498.0
43	Limestone, weathers brown, medium to thin smooth bedding, slightly silty on parting planes with that pebble conglomerate on bedding planes, internally laminated light and dark brown	33	10.1	1593	485.6
42	Silty limestone, weathers brown, thin to laminated smooth bedding, abundant mud cracks, brown micrite; recessive	70	21.3	1560	475.5
41	Limestone, weathers medium brown; medium continuous bedding with a discontinuous interval nodular bedding due to brown argillaceous wisps medium smooth bedded at top, a light brown laminated micrite	70	21.3	1490	454.2

Unit No.	Lithology	Thickness feet	Thickness (m)	Total from base feet	Total from base (m)
40	Silty limestone, light yellowish and bluish grey weathering; thin to laminated smooth bedding, abundant mud cracks, very recessive	25	7.6	1420	432.8
39	Limestone, very resistant massive beds of brown limestone, a dark brown intramicrite	3	.9	1395	425.2
38	Very silty limestone, medium bluish grey weathering, thin to laminated smooth bedding with abundant mud cracks	9	2.7	1392	424.3
37	Limestone, light yellowish grey, weathering thin to laminated smooth continuous bedding, an argillaceous micrite; several 5 foot intervals the same lithology as in unit 36	86	26.2	1383	421.5
36	Silty limestone, weathers light brown, smooth medium continuous bedding, flat pebble conglomerate on upper surface interval yellowish brown and brown laminations which pinch and swell	8	2.4	1297	395.3
35	Covered interval; mainly platy yellowish and yellowish green weathering, light grey silty micrite same as unit 24, some mud cracks and ripple marks	68	20.7	1889	575.8
	Total thickness of Eleanor River Formation, Member 2	616	187.8		
	ELEANOR RIVER FORMATION (Member 1)				
34	3 and 4 foot intervals like unit 33 alternate with yellowish grey and yellow weathering platy mud cracks, brown micrite, silty along parting planes; uppermost 7 feet of interval a thin to medium bedded inverse leopard stone with greyish yellow predominant and brown micrite as isolated blobs parallel to bedding; some scattered gastropods	27	8.2	1221	372.2
33	Same lithology as in unit 31, but a dark brown intramicrite	57	17.4	1194	363.9
32	Covered interval; same lithology as in unit 31	19	5.8	1137	346.6
31	Same lithology as in unit 30 but more medium continuous bedded argillaceous intraclastic beds than before than weather yellowish brown	36	11.1	1118	340.8

Unit No.	Lithology	Thickness feet	Thickness (m)	Total from base feet	Total from base (m)
30	Limestone, very dark brown weathering, not quite a leopard stone but wisps of yellowish grey argillaceous material outlines larger intraclasts; cliff forming, thick to massive, fairly smooth continuous bedding, an intramicrite; the more massive beds have more micrite and are less argillaceous and intraclastic	90	27.4	1082	332.8
29	Covered interval; same lithology as in unit 28	17	5.2	992	302.4
28	Limestone, weathers very dark brown with leopard stone mottling, medium to massive uneven continuous bedding; dark brown poorly wasted intrasparite and micrite	145	44.2	975	297.2
27	Limestone, weathers dark brown, some leopard stone mottling of light grey argillaceous blobs which weather out to form some surface porosity, a poorly washed intrasparite	25	7.6	830	253.1
26	Limestone, weathers dark brown, thick to massive continuous uneven bedding, some light grey argillaceous mottling towards top of interval; dark brown micrite and intramicrite	65	19.8	805	245.4
25	Limestone, weathers dark brown, massive bedded each massive bed (4 feet thick) composed of a rhythm of 2½ feet of intrasparite as at 354 but it is dark brown weathering overlain by one foot or more of hemispherical wrinkled stromatolites and capped by ½ foot of platy argillaceous light yellowish grey weathering limestone	40	12.2	740	225.6
24	Limestone, thin continuous smooth bedding, a light grey argillaceous limestone, one medium bed of dark brown limestone in the centre of the interval; a zone of black chert nodules in the centre of the bed	18	5.5	700	213.4
23	Massive stromatolite biolithite as before, some giant spherical stromatolites	7	2.1	682	207.9
22	Covered interval; same lithology as in unit 21	40	12.2	675	205.7
21	Stromatolitic as before, weathers dark brown; stromatolites capped by undulatory thin bedded yellow weathering brown micrite	3	.9	635	193.6

Unit No.	Lithology	Thickness feet	Thickness (m)	Total from base feet	Total from base (m)
20	Limestone, weathers dark brown with streaks of light brown argillaceous micrite that weathers yellow	5	1.5	632	192.6
19	Limestone, medium greyish yellow and grey weathering platy dark brownish grey argillaceous micrite (DM-72-355c); chicken wire mud cracks in thin laminated smooth bedding	25	7.6	627	191.1
18	Covered interval; same lithology as in unit 17	5	1.5	602	183.5
17	Limestone, weathers dark grey, massive continuous bedding; a stromatolite biolithite with grey mud between stromatolite digitations, stromatolite layers capped by platy argillaceous yellowish grey limestone laminae with some gastropods	10	3.0	597	182.1
16	Covered interval; same lithology as unit 15; with some like unit 13	51	15.5	587	178.9
15	Limestone, medium grey weathering, medium continuous bedding of undulating stromatolites bedding partings at zones of digitate stromatolites with yellowish grey argillaceous material	2	.6	536	163.3
14	Covered interval; same lithology as in unit 15	17	5.2	534	162.7
13	Limestone, weathers light olive-grey, very smooth thin planar continuous bedding with very thin gentle crossbeds outlined by dark brown argillaceous layers (DM-72-354c)	2	.6	517	157.6
12	Covered interval; debris of first half as unit 11, and second half platy limestone - a medium brown micrite	227	69.2	515	157.1
11	Limestone; medium grey weathering; medium fairly smooth continuous bedding; a good intrasparite with packed rounded intraclasts up to 1½ inches across elongate blobs and stringers of greyish green argillaceous material strung out parallel to bedding (DM-72-354b)	3	.9	288	87.8
10	Covered interval; stromalite biolithite as unit 9, dark grey, large hemispherical digitate stromatolite beds 4 feet across	81	24.7	285	86.9

Unit No.	Lithology	Thickness feet	Thickness (m)	Total from base feet	Total from base (m)
9	Limestone; medium grey, massive irregular bedding large stromatolite heads (3 feet across) with light mud in between; very dark grey stromatolite biolithite, some intraclasts between stromatolite digitations, some scattered interbeds of intramicrite	23	7.0	204	62.2
8	Covered interval; same lithology as unit 7	23	7.0	181	55.2
7	Limestone; same as unit 6; micrite mud lump type intraclasts in depressions between stromatolite digitations	3	.9	158	48.2
6	Covered interval; same as unit 5 but no light grey gypsiferous mud	30	9.1	155	47.2
	Total thickness of Eleanor River Formation (Member 1)	1046	318.8		
	BAUMANN FIORD FORMATION				
5	Limestone, reaches medium grey with light grey (gypsiferous?) mud in between individual stromatolite depressions grey micrite, a stromatolite biolithite	4	1.2	125	38.1
4	Covered interval; same lithology as in unit 3	35	10.7	121	36.9
3	Covered interval; same as unit 2; but very thin bedded, light grey weathering, some light grey gypsiferous mud	10	3.0	86	26.2
2	Limestone, very light greyish brown, medium continuous smooth bedding, a medium brown silty micrite, some dark brown chert nodules parallel to bedding	1	.3	76	23.2
1	Covered interval; most of block debris as unit 2 interval, but some light grey weathering, light grey micrite, fairly abundant gypsiferous, flour-like dust on rock surface	75	22.9	75	22.9
	Exposed thickness of Baumann Fiord Formation	125	38.1		
	Lower limit of exposure.				

SECTION 17. This section includes strata of the Bay Fiord, Thumb Mountain, Allen Bay and Cape Storm formations. It is a west-dipping section that extends southwestward down a stream valley in western Grinnell Peninsula north of Barrow Harbour. The base of the section is at 76°43'30"N latitude and 95°20'W longitude. The section is well shown on RCAF air photo A16749-95.

Unit No.	Lithology	Thickness feet	Thickness (m)	Total from base feet	Total from base (m)
	CAPE STORM FORMATION				
40	Same as in underlying unit but with some thick bedded zones	70	21.3	1955	595.9
39	Limestone, weathers bluish grey; medium, continuous fairly smooth and even bedding; a very light brown well sorted packed intrasparite with well rounded intraclasts (~1-2 mm across)	15	4.6	1885	574.5
	Incomplete thickness of Cape Storm Formation	85	25.9		
	ALLEN BAY FORMATION				
38	Dolomite, light brown and sucrosic, same as at unit 34	25	7.6	1870	570.1
37	Covered interval; dolomite rubble like that in unit 34	57	17.4	1845	562.4
36	Dolomitic limestone, weathers dark to medium grey, thin to medium very discontinuous uneven bedding, a medium brown, coarsely crystalline dolomitic limestone with some grey silt	19	5.8	1787	544.7
35	Covered interval; dolomite rubble like that in unit 34	65	19.8	1769	539.2
34	Dolomite, weathers greyish brown compact, thick continuous bedding, brown finely crystalline dolomite	19	5.8	1714	522.4
33	Covered interval; dolomite rubble like that in unit 32	32	9.8	1685	513.6
32	Dolomite, weathers dark to medium orangish brown; very thick continuous bedding containing an internal discontinuous bedding of thick beds, alternates with massive beds containing thin lenticularly bedded friable brown dolomite	80	24.4	1653	503.8
31	Covered interval; dolomite rubble, medium brown weathering	95	29.1	1573	479.5

Unit No.	Lithology	Thickness feet	Thickness (m)	Total from base feet	Total from base (m)
30	Dolomite, weathers light brown, thick to massive (about 1½ feet thick) continuous somewhat uneven bedding; large 2 inch vugs partly filled with calcite; a light brown fine to medium crystalline dolomite	26	7.9	1478	450.5
29	Covered interval; dolomite, weathers yellowish brown a lot of friable, sucrosic light brown dolomite, probably originally massive bedded; some large zones (6 feet wide) of white chert nodules in basal 25 feet of interval	70	21.3	1452	442.6
28	Dolomite, weathers light brownish yellow, medium to massive uneven dicontinuous bedding, a medium brownish grey finely crystalline dolomite	12	3.7	1382	421.2
27	Covered interval; dolomite rubble like that in unit 30	15	4.6	1370	112.8
	Total thickness of Allen Bay Formation	515	157.1		
	CAPE PHILLIPS FORMATION				
26	Covered interval, calcareous shale rubble as in underlying unit	15	4.8	1355	413.0
25	Calcareous shale and argillaceous limestone 3 foot intervals of medium, smooth, continuously bedded, yellowish brown weathering dark grey fetid micrite alternates with 6 inches to 1 foot thick beds of greenish and yellowish grey weathering; thin, smooth bedded, black shale; trilobites, graptolites and straight cephalopds	18	5.5	1340	408.4
	Total thickness of Cape Phillips Formation	33	10.1		
	IRENE BAY FORMATION				
24	Limestone, bluish grey weathering; thin to medium discontinuous slight uneven bedding, grey micrite	12	3.7	1322	403.1
23	Limestone, same as in unit 19	18	5.5	1310	399.3
22	Same as in underlying unit	25	7.6	1292	393.8
21	Argillaceous limestone, very silty limestone, yellowish to grey and brownish green anastomosing and lenticular bedding; a little limonitized sedimentary pyrite, a brownish grey silty biomicrite; abundant fine crinoid and brachiopod debris	7	2.1	1267	386.2

Unit No.	Lithology	Thickness feet	Thickness (m)	Total from base feet	Total from base (m)
20	Covered interval; argillaceous limestone rubble as in overlying unit	40	12.2	1260	384.0
19	Limestone, bluish grey weathering, thick to massive uneven continuous bedding with very discontinuous interval medium lumpy bedding and vermiform mottlings parallel to bedding of greyish green argillaceous material, strongly mottled in colour, a silty brownish grey biomicrite crinoid and brachiopod fragments abundant	78	23.8	1220	371.9
	Total thickness of Irene Bay Formation	180	54.9		
	THUMB MOUNTAIN FORMATION				
18	Limestone, weathers bluish grey with a pattern of light brown, predominantly vertically oriented mottlings, medium to thick uneven bedding, some zones of white and orange weathering chert nodules, some zones of abundant *Receptaculites* sp., *Halysites* sp., and *Gonioceras* sp., silicified but nonetheless poorly preserved; a brown biomicrite, wisps and greyish green argillaceous material outlines uneven lumpy bedding	75	22.9	1142	348.1
17	Limestone, bluish grey weathering with zones of orange weathering chert nodules, massive continuous uneven bedding containing thin to medium, knobbly lenticular bedding; wisps of green argillaceous material outlines knobbly bedding, silicified brachiopods on bed surfaces; a brown crinoidal biomicrite	85	25.9	1067	325.2
16	Limestone, bluish grey weathering, medium to thick uneven continuous bedding, light yellowish green argillaceous material on bed surfaces, some zones of orange stained chert nodules, a brown fossiliferous micrite and intramicrite (poor *Receptaculites* sp. and *Maclurites* sp.)	30	9.1	982	299.3
15	Covered interval; limestone rubble as in overlying unit	100	30.5	952	290.2
14	Limestone, weathers bluish grey with some greenish yellow argillaceous material on bed surfaces, thin to medium, smooth continuous bedding a brown micrite	30	9.1	852	259.7

Unit No.	Lithology	Thickness feet	Thickness (m)	Total from base feet	Total from base (m)
13	Limestone, as in underlying unit with some three and four foot intervals of medium to thick lumpy bedded calcareous dolomite; dark, orangish brown weathering	47	14.3	822	250.6
12	Limestone, weathers medium bluish grey with light brown (leopard stone) mottling that weathers out in relief; a brown crinoid biomicrite, light brown mottlings partly dolomitized, *Maclurites* sp., in scree	96	29.3	775	236.2
11	Same as mottled limestone in unit 9 but with more greyish green mottling	34	10.4	679	207.1
10	Covered interval; limestone rubble same as in underlying unit	30	9.1	645	196.6
9	Limestone, weathers medium to dark brown (bluish grey on some long exposed surfaces), thick to massive continuous bedding containing a thin discontinuous lumpy internal bedding, a brown fossiliferous (crinoid) micrite, a little greyish yellow argillaceous as discontinuous seams parallel to bedding	40	12.2	615	187.5
8	Covered interval; limestone same as in overlying unit	60	18.3	575	175.3
	Total thickness of Thumb Mountain Formation	427	130.2		
	BAY FIORD FORMATION				
7	Covered interval; silty dolomite rubble same as in underlying unit	15	4.6	515	157.1
6	Silty dolomite weathers very light yellowish and greenish grey, thin to medium smooth continuous bedding, dark grey with some greyish green argillaceous seams	4	1.2	500	152.4
5	Covered interval; this unit is covered with very fine grained solifluction material	26	7.9	496	151.2
4	Covered interval; dolomite, same as in unit 2	275	83.8	470	143.3
3	Covered interval; dolomite debris, weathers dark orangish brown, probably medium to thick uneven continuous bedding; dark brownish grey finely crystalline dolomite	75	22.9	195	59.4
2	Covered interval; blocky calcareous dolomite debris, weathers brownish and greenish yellow a greenish grey argillaceous finely crystalline dolomite	100	30.5	120	36.6

Unit No.	Lithology	Thickness feet	Thickness (m)	Total from base feet	Total from base (m)
1	Calcareous dolomite, weathers greenish yellow and orange, thin to laminated, smooth continuous bedding; a light grey dolomicrite with pink and light green streaks, some medium to thick lumpy bedded dark grey calcareous finely crystalline dolomite that also contains yellowish green argillaceous material	20	6.1	20	6.1
	Exposed thickness of Bay Fiord Formation	515	157.1		
	Lower limit of exposure.				

SECTION 18. This section includes strata of the Baumann Fiord, the Eleanor River, Bay Fiord, Thumb Mountain, Irene Bay, Cape Phillips and Bathurst Island formations. The section dips steeply westward and it extends westward for 2.5 km along the coastline south of Mount Percy on the west coast of Grinnell Peninsula. The base of section is at 76°41'45"N latitude and 96°50'W longitude. It is well shown on RCAF air photo A16202-79.

	BATHURST ISLAND FORMATION				
39	Siltstone, limey, chocolate brown, thin to medium bedded, weathering medium brown, slightly rusty specks intensely folded	200(+)	61.1	8477	2583.8
38	Siltstone rubble of Bathurst Island Formation, probably tightly folded, thickness unknown but probably more than 2000 feet	2000(+)	609.0	8227	2507.6
37	Siltstone, limey, argillaceous, fresh surface medium chocolate brown, weathers light yellow brown, medium specks, contains grapolite fragments and fish plates	25	7.6	6277	1913.2
36	Siltstone, calcareous as in overlying unit, rubble of granule sized fragments	75	22.9	6252	1905.6
	Exposed thickness of the Bathurst Island Formation	2300	701.0		
	CAPE PHILLIPS FORMATION				
35	Calcareous siltstone and shale, granule sized rubble as in underlying unit	75	22.9	6177	1882.7

Unit No.	Lithology	Thickness feet	Thickness (m)	Total from base feet	Total from base (m)
34	Largely covered with sporadic outcrops some being overturned probably with internal folding outcroppings and rubble consist of limey shale and limey siltstone, chocolate brown, thin to medium bedded, weathering rusty brown, in place at middle are outcrops with small curved graptolites - *M. bohemius*?	400	121.9	6102	1859.9
33	Covered interval; rubble entirely composed of granule sized fragments of Cape Phillips Lithology (Probably no folding in this interval)	270	82.3	5702	1738.1
32	Limey shale, argillaceous limestone and limey siltstone, dark chocolate brown, weathering tan brown, thin to medium bedded. At a height of 260 feet is a 2 foot thick pyrite rich layer stained brownish orange	350	106.7	5432	1655.7
31	Limestone, argillaceous, thin to medium bedded and limey shale, fresh surfaces dark grey brown to black weathering tan brown, grades to the slightly more coarse grained unit above	65	19.8	5082	1549.1
30	Limestone, argillaceous, thin to medium bedded dark grey brown to black on fresh surfaces weathering tan brown; spherical limestone and limey shale nodules (concretions) present throughout but not abundant; top of unit drawn where nodules diappear	195	59.4	5017	1529.2
29	Nodular unit spectacular limestone nodules separated by thin bedded shaly limestone, the volume of rock being overwhelmingly nodular; top drawn at sharp decrease in abundance of nodules which generally decrease in size upward from average 8 inches diameter to average 3 inches diameter *Monograptus* is present	50	15.2	4822	1469.7
28	Limestone, argillaceous, same as unit 26	16	4.9	4772	1454.5
27	Chert, black	1	.3	4756	1449.6
26	Limestone, argillaceous, thin bedded, medium brown to dark grey with only minor black limey shale interlayers, all weather light tan brown	45	13.7	4755	1449.3

Unit No.	Lithology	Thickness feet	Thickness (m)	Total from base feet	Total from base (m)
25	Limestone, very argillaceous, thin to medium bedded, variations in limestone bed thickness are common and where extreme, beds are nodular, dark grey brown to black on fresh surfaces, weathering tan to light brown, interbedded with true fissile black shale, both with petroliferous odour, biserial grapolites, trilobite pygidia and nautiloids); at upper contact this unit grades into overlying unit which contains nonfissile shale	28	8.5	4710	1435.6
24	Limestone, argillaceous, dark grey submicritic, petroliferous	10	3.0	4682	1427.1
23	Dolomite, medium brown, saccharoidal petroliferous odour, limey mottling at base resistant unit, minor chert nodules	42	12.8	4672	1424.0
22	Limestone, submicritic, medium dark brown, weathering medium brown and light brown, resistant; grading sharply upward to mottled limestone and dolomite mixture	3	.9	4630	1411.2
	Total thickness of Cape Phillips Formation	1550	472.4		
	IRENE BAY FORMATION contact conformable				
21	Shale, dark green on fresh surfaces, weathering light green, recessive	6	1.8	4627	1410.3
20	Limestone, lumpy bedding, with abundant greenish shale interlayers alternating with greenish limestone intervals, the shale being dark green on fresh surfaces, weathering light green; pyrite nodules and iron staining are common; abrupt gradation to overlying shale	50	15.2	4621	1408.5
19	Limestone, medium grey, thin bedded with abundant greenish shale interlayers that are wavy and irregular; by separating on the shale partings the limestone weathers to small lumps; pyrite nodules, iron staining	14	4.3	4571	1393.2
18	Covered interval presumed to be greenish shale and argillaceous limestone	14	14.3	4557	1389.0
	Total thickness of Irene Bay Formation	84	25.6		

Unit No.	Lithology	Thickness feet	Thickness (m)	Total from base feet	Total from base (m)
	THUMB MOUNTAIN FORMATION contact conformable				
17	Limestone, medium bedded, slightly wavy bedding surfaces caused by greenish shale interlayers a fraction of an inch thick; no discrete shale concentrations (The Thumb Mountain - Irene Bay contact is drawn where shales becomes abundant enough so that the limestone is lumpy bedded	45	13.7	4543	1384.7
16	Dolomite, saccharoidal, light brown, weathering light brown	68	20.7	4498	1371.1
15	Limestone, thick bedded submicritic chocolate brown, weathers medium brown, grades up to dolomite of next unit	205	62.5	4430	1350.3
14	Dolomite, medium bedded, chocolate brown, weathering chocolate brown abundant fossil debris finely comminuted, fine grained gradational with unit below distinguished from it by more recessive nature and thinner and smoother bedding, grades in several feet to overlying limestone unit	315	96.0	4225	1287.8
13	Dolomite chocolate brown with common white dolomite crystal bands parallel to bedding and common white fossil fragments, mainly echinoderm columnals and brachiopod fragments; chocolate brown limestone is present but very rare; very resistant, weathers mainly chocolate brown, thick bedded, bedding surfaces rough	285	86.9	3910	1191.8
	Total thickness of Thumb Mountain Formation	918	279.8		
	BAY FIORD FORMATION contact conformable				
12	Dolomite, thin to medium bedded, mixed types, very hard and dense, finely crystalline to porcellaneous; dark grey brown, weathering slightly rusty tan; light grey weathering light grey; tan and chocolate brown on fresh surfaces, weathering medium brownish grey, bedding often very smooth. The rock is hard and dense but outcrops only sporadically amid felsenmeer. Upper contact well exposed is drawn where the rock forms a bluff, which coincides with an upward change to more coarsely crystalline and thicker bedded strata	550	167.6	3625	1104.9

Unit No.	Lithology	Thickness feet	Thickness (m)	Total from base feet	Total from base (m)
11	Dolomite rubble, change of character of rubble fragments and a change in the slope suggest an upward change of the underlying bedrock to more resistant and finer grained harder dolomite similar to that in the overlying unit	60	18.3	3075	937.3
10	Covered interval, probably Bay Fiord Formation. At the base is abundant brecciated dolomite rubble, (possibly with gypsum). In rest of interval rubble of small pieces of salty textured fine grained medium light grey dolomite	1050	320.0	3015	919.1
	Total thickness of Bay Fiord Formation	1660	506.0		
	ELEANOR RIVER FORMATION (upper member)				
9	Dolomite, dark chocolate brown, very petroliferous odour, weathers dark grey, resistant, finely porous; upper contact is coverd and drawn at the last occurrence of blocks of this resistant unit; the upper contact is assumed to be conformable but is covered	290	88.4	1965	598.9
8	Limestone, fine grained, dense dark grey brown weathering dark grey resistant, upward becomes more dolomitic and finally grades into dolomite	30	9.1	1675	510.5
	ELEANOR RIVER FORMATION (middle member)				
7	Limestone, light grey to tan, fissile to laminated, recessive, in beds 3 to 5 feet thick alternating with thinner beds of dense dark grey limestone and laminated sorty textured dolomite weathering light yellow grey, flat pebble conglomerate common; the unit predominantly with smooth even fissile bedding and recessive, light weathering colours. The top is at a very prominent break separating light weathering recessive rocks below from darker weathering resistant rocks above; intermittent exposure	800	243.8	1645	501.4

Unit No.	Lithology	Thickness feet	Thickness (m)	Total from base feet	Total from base (m)
	ELEANOR RIVER FORMATION (lower member)				
6	Limestone, dark grey, resistant. A few fissile limestone beds that increase in abundance upward; they become predominant at the upper contact. In upper few feet occasional stromatolite layers	75	22.9	845	257.6
5	Limestone and dolomite dark with tan dolomitic mottling, resistant, largely exposed	110	33.5	770	234.7
4	At base are the four stromatolite cycles of the Eleanor River Formation characteristic of the lower part; these pass upward to more resistant rock unit, grey limestone with tan dolomitic mottling, minor chert nodules, grades to overlying unit which is more strongly mottled and dolomitic. The contact is drawn where thin bedded to fissile limestones are replaced upwards by resistant rocks. The first resistant rock is the lowest stromatolite cycle, each cycle being about 5 feet thick. The stromatolites are columnar, with pattern of circular elements with each element about 4 feet in diameter and 2 feet thick	260	79.2	660	201.2
	Total thickness of Eleanor River Formation	1565	477.0		
	BAUMANN FIORD FORMATION (contact conformable)				
3	Limestone, thin to medium bedded (average 3") mainly dark grey mottled with dark brown minor interbeds of sooty light grey dolomite weathering light grey; abundant interbeds of fissile limestone and dolomite sooty texture on fresh surfaces and weathering light grey. Generally a recessive weathering unit	70	21.3	400	121.9
2	Largely covered, limestone rubble	300	91.4	330	100.6
1	Limestone, thin bedded to medium bedded (1-3"). About 3/4 is a dark grey brown mottled limestone, the remainder being light grey, minor chert beds, about 30 feet of exposure	30	9.1	30	9.1
	Exposed thickness of Baumman Fiord Formation	400	121.9		
	Lower limit of exposure.				

SECTION 19. This section includes strata of the Parrish Glacier, Copes Bay, Baumann Fiord and Eleanor River formations. It extends about 7.0 km up a north-trending stream valley through southward-dipping strata close to Cape Briggs on the north coast of Grinnell Peninsula. The base of the section is at 77°01'30"N latitude and 95°40'W longitude. It is well shown in RCAF air photo A16749-89. Section measured by Wayne Savigny.

Unit No.	Lithology	Thickness feet	Thickness (m)	Total from base feet	Total from base (m)
	ELEANOR RIVER FORMATION				
18	Limestone, this unit is a massive brown stromatolitic limestone; the stromatolites grade out at about 900 feet and the rest is homogeneous micrite; a 200 foot zone in the middle contains a significant amount of platy green limestone	1011	308.2	6836	2083.6
	Exposed thickness of Eleanor River Formation	1011	308.2		
	BAUMANN FIORD FORMATION contact gradational				
17	Limestone and gypsum; this unit is characterized by the thin bedded intervals as in unit 16 and gypsum-bearing strata occur throughout the entire unit except in its uppermost beds, the upper part of this contains very thick bedded or massive intervals similar to those in unit 16	446	135.9	5825	1775.5
16	Limestone and gypsum; medium bedded to massive micrite and stromatolitic biolithite the latter often being infilled with a white gypsiferous limestone; resistant brown grey to dark brown; interbedded regularly with recessive zones containing white to pale blue very thin bedded gypsum, thin bedded often platy pale grey brown fine grained limestone, dolomitic limestone and dolomite, thin bedded grey quartzose limestone and sandstone (especially about 1000 ft), thin bedded limy flat pebble conglomerate. Chert is randomly present and sometimes occurs in discontinuous thin beds	1438	438.3	5379	1639.5
	Total thickness of Baumann Fiord Formation	1884	574.2		
	COPES BAY FORMATION contact conformable				
15	Limestone, homogeneous micrite as in unit 13	131	39.9	3941	1201.2

Unit No.	Lithology	Thickness feet	Thickness (m)	Total from base feet	Total from base (m)
14	Limestone, thin bedded finely crystalline limestone and dolomitic limestone, mainly grey with a lot of argillaceous mottling	350	106.7	3810	1161.3
13	Limestone composed of homogeneous micrite as in unit 12; chert appears and becomes quite common. Quartz laminae formed in many samples	1019	310.6	3460	1054.6
12	Limestone; most of the unit is a dark brown micrite, medium bedded at base and becoming thick then massive and homogeneous near top with stylites common. In the lower part zones of stromatolitic biolithite and intramicrite are common. About 211 feet above the base there is a zone of fine to medium grained; thin bedded, dark brown limestone and dolomitic limestone. Around this zone there are beds of grey green badly weathered, thin bedded limestone. Throughout there is a lot of fine grained grey, thin bedded limestone with argillaceous mottling	681	207.6	2441	744.0
11	Limestone, massive, cliff-forming unit, generally a micrite but frequent zones of intramicrite; a dolomite interbed occurs 100 feet below the top; no stromatolites were found in this interval	320	97.5	1760	536.4
	Total thickness of Copes Bay Formation	2501	762.3		
	PARRISH GLACIER FORMATION contact conformable				
10	Limestone and dolomite; finely crystalline recrystallized quartzose micrite and dolomitic micrite, declines near the top; flat pebble conglomerate is no longer present but stromatolites more abundant than in underlying units	385	117.3	1440	438.9
9	Limestone and dolomite, thick, recessive unit interbedded as follows; fine grained, thin bedded limestone shot through with laminae of fine grained quartz sand, brownish red or rust colour up to 175 feet; platy, fine grained, homogeneous grey limestone sometimes medium bedded; thin bedded fine grained dolomite containing laminae of quartz sand, pale, buff brown and beige on a fresh surface; traces of flat pebble conglomerate and stromatolites persist	260	79.2	1055	321.6

Unit No.	Lithology	Thickness feet	Thickness (m)	Total from base feet	Total from base (m)
8	Limestone; thick bedded stromatolitic biomicrite zone	39	11.9	795	242.3
7	Limestone and calcareous shale; like unit 5 but the flat pebble conglomerate is almost entirely absent and the shale becomes interbedded with a stromatolitic biomicrite (zones 10-25 ft thick). The biomicrite frequently shows thin interbeds of limestone with buff brown argillaceous mottling. The shale zones contain a little thin bedded dolomite	115	35.1	756	230.4
6	Limestone and calcareous shale; like unit 5, but that pebble conglomerate decreases in abundance and the shale becomes very argillaceous higher in the unit	200	61.1	641	195.3
5	Limestone and calcareous shale; medium bedded flat pebble conglomerate interbedded with a calcareous shale, thin bedded, sometimes fissile, frequently containing ripple marks but otherwise unfossiliferous; light grey green weathering	125	38.1	441	134.4
4	Similar to unit 3 except for a consistent abundance of lenticular stromatolite colonies	80	24.4	316	96.3
3	Argillaceous limestone; half of the unit is flat pebble conglomerate; grey, weathering pale green, fine grained with the pebbles ranging up to 2½ inches across; otherwise unit is thin bedded and fissile as described before; toward the top more medium bedded; homogeneous micrite at the very top contains an unusual algal growth	121	36.9	236	71.9
2	Similar to unit 1 but more medium bedded, argillaceous material appears and towards the top of the unit forms discrete beds; load casts and ripple marks found in scree as were several stromatolite fragments; that pebble conglomerate also present	82	25.1	115	35.1
1	Limestone, thin, frequently fissile to medium bedded, generally grey but often with blue and red hues; fresh surface is grey brown (WS-72-57a). The remainder of the interval is a grey, fine grained, homogeneous micrite, slightly dolomitic in places, grey brown fresh surface, medium bedded (WS-72-57b)	33	10.1	33	10.1

Unit No.	Lithology	Thickness feet	Thickness (m)	Total from base feet	Total from base (m)
	Total exposed thickness of Parrish Glacier Formation	1440	438.9		
	Lower part of Parrish Glacier Formation is overlain unconformably by the Canyon Fiord Formation of Permian age.				