



GEOLOGICAL
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PAPER 66-39

DESCRIPTIONS OF DEVONIAN SECTIONS IN
NORTHERN YUKON TERRITORY AND
NORTHWESTERN DISTRICT OF MACKENZIE
(106 F, G; 107 C; 116 F, G, H, J and P)

A. W. Norris



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ABSTRACT

Twenty-two Devonian sections measured by members of Operation Porcupine in 1962 are described, providing additional data to a preceding report on the Devonian stratigraphy of the northern Yukon Territory and adjacent area.

DESCRIPTIONS OF DEVONIAN SECTIONS IN NORTHERN YUKON TERRITORY AND NORTHWESTERN DISTRICT OF MACKENZIE

INTRODUCTION

This paper provides descriptive data on twenty-two Devonian sections measured by members of Operation Porcupine in 1962. These sections are supplementary to ten sections appendixed in a Geological Survey of Canada bulletin by the writer (in press) entitled "Reconnaissance Devonian stratigraphy of northern Yukon Territory and northwestern District of Mackenzie". The reader is referred to that bulletin for a detailed account of the stratigraphy, fossil lists, distribution, correlations, etc. of the various formations.

The twenty-two stratigraphic sections on the following pages are Nos. 2, 4, 5, 7, 10, 11, 12, 13, 16, 17, 19, 20, 21, 23, 23a, 25, 27, 28, 31, 32, 33, and 34. The locations and illustrations of these twenty-two sections (as well as ten others, viz. Nos. 1, 3, 6, 8, 14, 18, 24, 26, 30, and 35, included in the bulletin) are shown on Figures 3 to 6 inclusive in the above mentioned bulletin. Fossil names preceded by an asterisk refer to forms set aside in the Geological Survey of Canada's index collection. For easy reference each section is designated by a number, which is consistent in this and in the preceding report.

Section 2: MACKENZIE MOUNTAIN FRONT IMMEDIATELY WEST OF
ARCTIC RED RIVER (106G-2)

Section is located on a tributary stream at the Mackenzie Mountain front 5.8 miles west of the Arctic Red River at approximately 65°23'N, 131°20'W where part of the Gossage, all of the Hume, and part of the Canol Formations are exposed.

Section measured by A. W. Norris, assisted by A. J. Jenik, June 16, 1962.

| | |
|---------------------------|--------------------|
| UPPER DEVONIAN | |
| Canol Formation | c. 50' top eroded |
| MIDDLE DEVONIAN | |
| Hume Formation | 398.1' |
| MIDDLE DEVONIAN AND OLDER | |
| Gossage Formation | 411.4'; incomplete |

| Unit | Description | Thickness (feet) | |
|------|-------------|------------------|-----------|
| | | Unit | From Base |

UPPER DEVONIAN

Canol Formation
(c. 50 feet thick)

- | | | |
|---|--|-------|
| 1 | Shale, non-calcareous, jet black, with sparse, scattered clay ironstone nodules weathering orange-brown. | c. 50 |
|---|--|-------|

Sharp disconformable contact with underlying beds. The top of unit is an erosion surface and is disconformably overlain by Recent gravel and soil. Unit is exposed on the north bank of stream and has been eroded away on the south bank.

| Unit | Description | Thickness (feet) | |
|---|--|------------------|-----------|
| | | Unit | From Base |
| MIDDLE DEVONIAN | | | |
| <u>Hume Formation</u> (398.1 feet thick) | | | |
| 33 | Limestone, black, fine grained, medium bedded to massive, resistant vertical cliff-former, coated with an orange stain. | 10.6 | 398.1 |
| | Beds of the Hare Indian Formation presumably have been removed by erosion. | | |
| 32 | Limestone, argillaceous, black, rubbly thin bedded, beds separated by black argillaceous limestone partings, resistant; a falls-former in stream; contains fairly numerous <u>Digono-</u> <u>phyllum</u> sp., and colonial corals (GSC loc. 50238) | 29.6 | 387.5 |
| 31 | Limestone, black, irregular and even bedded, separated by thinner nodular argillaceous limestone beds, relatively resistant; <u>Hexagonaria</u> sp. collected loose (GSC loc. 50196) | 2 | 357.9 |
| 30 | Limestone, very strongly argilla- ceous, dark brownish grey, nodular thin bedded, separated by shale partings, weathers buff brown; richly fossiliferous; <u>Digonophyllum rectum</u> (Meek), <u>Alveolites</u> sp., <u>Hexagonaria</u> sp., <u>Carinatina</u> sp., <u>Spinatrypa</u> sp., and <u>Warrenella</u> sp. (GSC loc. 50195) | 8 | 355.9 |

| Unit | Description | Thickness (feet) | |
|------|---|------------------|-----------|
| | | Unit | From Base |
| 29 | Limestone, argillaceous, black, rubbly thin bedded, separated by strongly argillaceous limestone partings, resistant; richly fossiliferous; sponge spicules, <u>Digonophyllum rectum</u> (Meek), <u>Aulopora</u> sp., <u>Alveolites</u> sp., <u>Favosites</u> sp., fenestellid bryozoa fragment, * <u>Spinatrypa coriacea</u> Crickmay, <u>Emanuella</u> sp., * <u>Plectospirifer</u> sp., planispiral gastropod, *proetid tail with three border spines, and ostracod collected 2.5 feet up (GSC loc. 50612); very large cup coral collected loose (GSC loc. 50613). | 6 | 347.9 |
| | Station 84NB at base of unit 29 on south side of stream just above creek level near small falls. Bedding 080T/17N. | | |
| 28 | Limestone, variably argillaceous, black, rubbly and nodular bedded, but in places massive, unit coated with a yellowish orange stain; contains stromatoporoids, especially numerous in upper 10 feet, <u>Alveolites</u> sp., <u>Favosites</u> sp., and other corals (GSC loc. 50461) | 17 | 341.9 |
| 27 | Limestone, black, rubbly thin bedded, separated by black shale partings, recessive. | 4 | 324.9 |
| 26 | Limestone, slightly argillaceous, black, irregularly thin to medium bedded, separated by black shale partings up to 0.5 inch thick, resistant, cliff-forming; contains <u>Alveolites</u> sp., <u>Favosites</u> sp., undet. gastropod, and <u>Dechenella</u> sp. (GSC loc. 50183). | 12 | 320.9 |

| Unit | Description | Thickness (feet) | |
|------|--|------------------|-----------|
| | | Unit | From Base |
| | <u>Alveolites?</u> sp. from top of unit (GSC loc. 50462). | | |
| | Large cephalopod collected loose (GSC loc. 50464). | | |
| 25 | Limestone, argillaceous, black, nodular thin bedded, beds becoming thicker upwards, slightly recessive, weathers pale brown; contains <u>Atrypa clarkei</u> Warren and <u>Carinata dysmorphostota</u> (Crickmay) (GSC loc. 50463). | 5.7 | 308.9 |
| 24 | Limestone, black, evenly thin bedded, basal bed richly fossiliferous including * <u>Atrypa arctica</u> Warren, * <u>Spinatrypa</u> sp., a few * <u>Carinata</u> sp., and <u>Dechenella</u> sp. (GSC loc. 50193). | 1.3 | 303.2 |
| 23 | Limestone, slightly argillaceous, black, irregularly thick bedded, weathers black; contains <u>Atrypa arctica</u> Warren, and a few <u>Digonophyllum?</u> sp. (GSC loc. 50194). | 3.2 | 301.9 |
| | Bedding 110/15N. | | |
| 22 | Limestone, black, rubbly thin bedded, recessive, weathers black; contains corals including <u>Syringopora</u> sp., and <u>Phillipsastrea</u> sp. (GSC loc. 50192) | 2.5 | 298.7 |

| Unit | Description | Thickness (feet) | |
|------|---|------------------|-----------|
| | | Unit | From Base |
| 21 | Limestone, black, hard, thick bedded, resistant, weathers black; contains a few small stromatoporoids. Station 83NB at base of unit 21. | 5.5 | 296.2 |
| 20 | Limestone, slightly argillaceous, black, aphanitic, rubbly bedded, recessive, contains a few coral fragments (GSC loc. 50595). | 1 | 290.7 |
| 19 | Limestone, medium grey, aphanitic, hard even bed, weathers light grey. | 1.1 | 289.7 |
| 18 | Limestone, argillaceous, black, rubbly and nodular bedded up to 0.7 foot thick, weathers pale brown and dark grey; sparse colonial corals (GSC loc. 50597); corals collected loose: <u>Digonophyllum</u> sp. and <u>Hexagonaria</u> sp. (GSC loc. 50198). | 5 | 288.6 |
| 17 | Limestone, argillaceous, rubbly bedded, weathers dark grey. | 1 | 283.6 |
| 16 | Limestone, dark grey, massive, weathers orange-brown; contains numerous stromatoporoids (GSC loc. 50599). | 10.5 | 282.6 |
| 15 | Limestone, dark grey, fine grained, granular, massive, cliff-forming, weathers medium brown. | 3 | 272.1 |
| 14 | Limestone, argillaceous, irregularly thin bedded, recessive, poorly exposed. | 1.5 | 269.1 |
| 13 | Limestone, massive, similar to unit 11 | 5.2 | 267.6 |

| Unit | Description | Thickness (feet) | |
|------|--|------------------|-----------|
| | | Unit | From Base |
| 12 | Limestone, argillaceous, black, recessive, poorly exposed. | 0.7 | 262.4 |
| 11 | Limestone, medium brown, aphanitic, massive, cliff-forming, weathers medium brown. <u>Favosites</u> sp., <u>Phillipsastrea</u> sp., and cup coral collected loose (GSC loc. 50594). | 6 | 261.7 |
| 10 | Covered. <u>*Sphaerospongia</u> sp., <u>*Atrypa arctica</u> Warren, and <u>*Carinata</u> sp. collected loose (GSC loc. 50197). | 10 | 255.7 |
| 9 | Limestone, dark brown, fine grained, evenly thick bedded, weathers medium brown; contains <u>Coenites</u> sp., <u>Hexagonaria</u> sp., and other corals (GSC loc. 50600). | 3.2 | 245.7 |
| 8 | Limestone, black, hard, rubbly thin bedded, poorly exposed; cup and colonial corals, <u>*Atrypa arctica</u> Warren, <u>Spinatrypa</u> sp., and <u>Emanuella meristoides</u> (Meek) collected loose (GSC loc. 50592). | 11 | 242.5 |
| 7 | Limestone, argillaceous, silty, black, rubbly bedded and in places massive, resistant, cliff-forming; weathers dark grey and orange-brown; contains fragmentary <u>Coenites</u> sp. and cf. <u>Digonophyllum rectum</u> (Meek) (GSC loc. 50225). | 2.5 | 231.5 |

| Unit | Description | Thickness (feet) | |
|------|---|------------------|-----------|
| | | Unit | From Base |
| 6 | <p>Limestone, argillaceous, black, irregularly rubbly thin bedded, beds up to 8 inches thick, with thin interbeds of black shale, poorly exposed; some beds richly fossiliferous: <u>Receptaculites</u> sp., <u>Alveolites</u> sp., <u>Coenites</u> sp., productellid, <u>Atrypa</u> sp., <u>Carinatina</u> sp., <u>Emanuella meristoides</u> (Meek), <u>Plectospirifer</u> sp., <u>Tentaculites</u> sp., *large pelecypod, echinoderm ossicles with single axial canals, and ostracods (GSC loc. 50230).</p> <p>Fossils collected loose: cup coral <u>Alveolites</u> sp., <u>Coenites</u> sp., <u>Utaratuia</u> sp., <u>Spinulicosta</u> sp., <u>Atrypa arctica</u> Warren, <u>Carinatina dysmorphostota</u> Crickmay, <u>Philoxene?</u> sp., <u>Dechenella</u> sp. indet. (GSC loc. 50229).</p> | 28 | 229 |
| 5 | <p>Covered; fossils collected loose: <u>Hexagonaria</u> sp., <u>Atrypa arctica</u> Warren, <u>Spinatrypa coriacea</u> Crickmay (Field No. 82NBg).</p> | 55 | 201 |
| 4 | <p>Limestone, argillaceous, and silty, black, rubbly bedded, separated by black calcareous shale partings, unit 'rib-forming' and resistant, weathers black and medium brown; fossils collected in place include: <u>Phillipsastrea</u> sp., <u>Stringophyllum?</u> sp., <u>Emanuella meristoides</u> (Meek), and <u>Tentaculites</u> sp. (GSC loc. 50196); *<u>Carinatina</u> sp. collected loose (GSC loc. 50593).</p> | c. 8 exposed | 146 |

| Unit | Description | Thickness (feet) | |
|------|--|------------------|-----------|
| | | Unit | From Base |
| 3 | <p>Talus covered on west side of creek; partly exposed on east bank of creek where it appears to consist of limestone, variably argillaceous and silty, rubbly bedded, weathering dark grey to black, present in lower third of interval, overlain by mainly shale with some argillaceous limestone beds.</p> <p>Fossils collected loose: stromatoporoid, <u>Favosites</u> sp., cf. <u>Stringophyllum</u> (<u>Neostrophophyllum</u>) sp., <u>Utaratuia</u> sp., other colonial coral, very large cup coral, <u>Carinatina</u> sp., <u>Spinatrypa</u> sp., <u>Plectospirifer</u> sp., and planispiral gastropod (GSC loc. 50228).</p> | c. 35 | 138 |
| 2 | <p>Limestone, argillaceous, black, very irregularly thin bedded, resistant, weathers medium orange and black, numerous stromatoporoids, and <u>Hexagonaria</u> sp. in lower part of unit (GSC loc. 50227).</p> <p>Unit projects out into stream.</p> | c. 6 | 103 |
| 1 | <p>Covered; talus of richly fossiliferous argillaceous limestone interbedded with shale; <u>Coenites</u> sp., <u>Favosites</u> sp., <u>Phillipsastrea</u> sp., douvillinid, *<u>Schuchertella?</u> sp., <u>Atrypa</u> cf. <u>A. perfimbriata</u> Crickmay, <u>Spinatrypa</u> sp., <u>Emanuella meristoides</u> (Meek), *<u>Plectospirifer</u> sp., planispiral gastropod, <u>Styliolina?</u> sp.,</p> | | |

| Unit | Description | Thickness (feet) | |
|--|---|------------------|-----------|
| | | Unit | From Base |
| | <u>Dechenella</u> sp., ostracods, and echinoderm ossicles with single axial canals (GSC loc. 50598 & 50226). | c. 97 | |
| MIDDLE DEVONIAN AND OLDER | | | |
| <u>Gossage Formation</u> (411.4 feet; incomplete) | | | |
| 40 | Limestone, black, aphanitic, evenly very thick bedded, very resistant, a 0.5 inch black calcareous shale break one-half way up unit, weathers pale brownish grey. | 5.6 | 411.4 |
| | Lithological specimen from top of unit (Field No. 82NBi). | | |
| | Units 37 to 40 stand out as resistant ribs projecting out into stream. | | |
| 39 | Limestone, argillaceous, silty, black, aphanitic, evenly thin bedded, very slightly recessive, weathers dark grey and orange-brown. | 2.7 | 405.8 |
| 38 | Limestone, slightly argillaceous, black, very evenly medium bedded, coated with a pale orange weathering wash. | 1.8 | 403.1 |
| 37 | Limestone, black, aphanitic, irregularly medium bedded, with black shale partings; contains ostracods (GSC loc. 50596 and 50231?), sample from 10 feet up. | 14 | 401.3 |
| | Station 82NB at base of unit 37. Bedding 090T/20N. | | |

| Unit | Description | Thickness (feet) | |
|------|---|------------------|-----------|
| | | Unit | From Base |
| 36 | Inaccessible interval, which appears from a distance to be similar to unit 35. | <u>c.</u> 15 | 387.3 |
| 35 | Limestone, black, aphanitic, pelletoidal, evenly medium bedded, weathers light grey; contains organic? structures near base (GSC loc. 50591). This unit forms the dip slope at top of bank immediately south of a small gully. | 7.4 | 372.3 |
| 34 | Limestone, slightly cherty, black, aphanitic, evenly thin to medium bedded, weathers light grey. | 3.2 | 364.9 |
| 33 | Limestone, black, aphanitic, massive, cliff-forming, weathers light grey. | 7 | 361.7 |
| 32 | Limestone, pale brown, aphanitic, rubbly thin bedded, recessive, weathers medium grey. | 2.8 | 354.7 |
| 31 | Limestone, black, fine grained, massive, cliff-forming, weathers light grey. | 12.2 | 351.9 |
| 30 | Covered. | 1.6 | 339.7 |
| 29 | Limestone, very slightly cherty, similar to unit 28. | 6.6 | 338.1 |
| 28 | Limestone, very slightly cherty, black, fine grained, | | |

| Unit | Description | Thickness (feet) | |
|------|--|------------------|-----------|
| | | Unit | From Base |
| | laminated, massive, scarp-forming, weathers light grey; transitional lower contact. | 8.2 | 331.5 |
| 27 | Limestone, very dark grey, almost black, aphanitic, with fine sparry calcite, massive but closely laminated, resistant, weathers light grey. | 3 | 323.3 |
| | Lithological specimen (GSC loc. 50590). Station 81NB at base of unit 27. Bedding 085T/8N. | | |
| 26 | Covered. | 114.4 | 320.3 |
| 25 | Limestone, dark grey, aphanitic, evenly medium to thick bedded, weathers light grey. | 10 | 205.9 |
| | Unit 25 caps the top of a vertical cliff of canyon. | | |
| 24 | Covered by vegetation. | 6 | 195.9 |
| 23 | Limestone, very dark grey, evenly thick bedded to massive, cliff-forming, weathers light grey. | 8 | 189.9 |
| 22 | Covered, recessive interval. | 3.5 | 181.9 |
| 21 | Limestone, very dark grey to black, aphanitic, medium bedded to massive, vertical scarp-forming, weathers light grey. | 8.8 | 178.4 |
| 20 | Covered by vegetation. | 3.8 | 169.6 |

| Unit | Description | Thickness (feet) | |
|------|---|------------------|-----------|
| | | Unit | From Base |
| 19 | Limestone, very dark grey, aphanitic, massive, weathers light grey. | 5 | 165.8 |
| 18 | Limestone, dark brownish grey, evenly medium bedded, slightly recessive, weathers medium grey. | 8 | 160.8 |
| 17 | Limestone, medium brown, aphanitic, massive, even bed, weathers light grey. | 4.4 | 152.8 |
| 16 | Limestone, light to medium grey, aphanitic, massive, vertical scarp-forming, weathers light grey. | 11 | 148.4 |
| 15 | Limestone, dolomitic, colour laminated, dark grey and black, fine grained to aphanitic, pelletal, evenly thick bedded, cliff-forming, weathers medium to dark grey and in places coated with a pale orange stain. | 8 | 137.4 |
| | Ostracod? cast (GSC loc. 50587) collected loose. | | |
| 14 | Limestone, medium grey, aphanitic, evenly medium to thick bedded, resistant, weathers light to medium grey. | 10 | 129.4 |
| 13 | Limestone, medium brown, aphanitic, thin bedded to massive, weathers medium grey, faintly colour laminated. | 11 | 119.4 |
| 12 | Limestone, dark brownish grey, aphanitic, evenly thick bedded to massive, weathers medium | | |

| Unit | Description | Thickness (feet) | |
|------|---|------------------|-----------|
| | | Unit | From Base |
| | brown; some joint faces coated with a yellowish orange stain. | 11 | 108.4 |
| 11 | Limestone, dark brownish grey, aphanitic, evenly and irregularly medium bedded, weathers medium brown. | 12 | 97.4 |
| 10 | Covered. | 3 | 85.4 |
| 9 | Limestone, medium brown, aphanitic, evenly medium to thick bedded, weathers medium brown. | 8 | 82.4 |
| 8 | Limestone, medium brown, aphanitic, evenly medium to thick bedded, recessive, weathers medium grey. | 13.5 | 74.4 |
| 7 | Covered except for a small patch showing limestone, pale brown, aphanitic, evenly medium bedded, weathers light grey. | 14 | 60.9 |
| 6 | Limestone, medium brownish grey, aphanitic, pelletoidal, very hard, massive, scarp-forming, weathers light grey. | 8.7 | 46.9 |
| | Lithological specimen (GSC loc. 50589). | | |
| 5 | Limestone, medium brown, aphanitic, evenly medium bedded up to 1.5 feet thick, poorly exposed, weathers light grey. | 15 | 38.2 |

| Unit | Description | Thickness (feet) | |
|------|--|------------------|-----------|
| | | Unit | From Base |
| 4 | Limestone, black, aphanitic, evenly very thick bedded, weathers light grey. | 3.2 | 23.2 |
| 3 | Limestone, dark brownish grey, medium grained, evenly thick bedded, weathers light grey, poorly exposed. | 7 | 20 |
| 2 | Covered. | 6 | 13 |
| 1 | Limestone, very dark brownish grey, aphanitic, pelletoidal, even beds up to 1 foot thick, weathers light grey, in places coated with a light yellowish brown patina. | 7 | |
| | Lithological specimen (GSC loc. 50588). | | |
| | Station 80NB at base of unit 1 at creek level at bottom of canyon. Bedding 085T/17N. | | |
| | More beds of the Gossage Formation are exposed in the canyon, but were inaccessible for measurement because of high water level. | | |

Section 4: NEAR HEADWATERS OF CRANSWICK RIVER (106F-5)

Section is located in the Backbone Ranges of the Mackenzie Mountains just over the height of land near the headwaters of Cranswick River in the southeast corner of the area mapped. The lower part of the section, up to the base of the Devonian, was measured along the mountain side immediately east of a small stream gully near 65°07.8'N, 132°16'W. The upper part of the section was measured along the mountain side immediately west of the stream gully southward to 65°07'N, 132°18'W; where the Devonian beds abruptly end by faulting.

Section measured by A. W. Norris, assisted by A. J. Jenik, June 20-24, 1962.

Fault contact

| | |
|---------------------------------------|---------|
| MIDDLE DEVONIAN | |
| Hare Indian tongue | 257' |
| Ogilvie Formation | 1165.8' |
| Cranswick Member of Ogilvie Formation | 656.4' |
| MIDDLE DEVONIAN AND OLDER | |
| Gossage Formation | 536.9' |

Regional unconformity

| | |
|------------|------------------|
| SILURIAN | |
| Carbonates | 616'; incomplete |

| Unit | Description | Thickness (feet) | |
|-----------------|--|------------------|-----------|
| | | Unit | From Base |
| MIDDLE DEVONIAN | | | |
| | <u>Hare Indian tongue</u> (257 feet thick) | | |
| 3 | Shale, black, calcareous, recessive, weathers medium orange-brown. | c. 200 | 257 |

| Unit | Description | Thickness (feet) | |
|------|---|------------------|-----------|
| | | Unit | From Base |
| | <p>About 200 feet of this unit is exposed at top of mountain across valley to the east from where section was measured. The upper contact is faulted and the fault cuts down section westward so that the unit is thinner and is represented only by sparse talus fragments on the west side of the valley. Limestone rocks to the south, in the hanging wall of the fault, are presumed to be of Ordovician age.</p> | | |
| 2 | Covered by snow to fault on west side of valley. | 11 | 57 |
| 1 | Covered by talus; possibly actually underlain by shale. | 46 | |
| | <p style="text-align: center;"><u>Ogilvie Formation</u> (1822.2 feet thick)</p> | | |
| 103 | <p>Fragments of limestone, medium to dark brown, aphanitic, weathers medium grey and light yellowish brown.</p> <p>Station 109NB at base of unit 103.</p> | 12 | 1165.8 |
| 102 | <p>Limestone, black, aphanitic, alternating rubbly and medium irregularly bedded, weathers medium grey; unit contains considerable chert tracery.</p> <p>Lithological specimen (GSC loc. 54554).</p> | 11.5 | 1153.8 |

| Unit | Description | Thickness (feet) | |
|------|---|------------------|-----------|
| | | Unit | From Base |
| 101 | Limestone, dark brownish grey, aphanitic, massive, weathers light grey. | 7 | 1142.3 |
| 100 | Limestone, dark brown, rubbly thin bedded, weathers medium grey, recessive. | 1.4 | 1135.3 |
| 99 | Limestone, dark brownish grey, aphanitic, thin to thick bedded to massive, weathers light grey, considerable light brown chert tracery; recessive layer 1.5 feet thick, 10 feet up. Poorly preserved stromatoporoid? and coral fragments (GSC loc. 54463) collected loose. | 19.5 | 1133.9 |
| 98 | Limestone, dark brownish grey, aphanitic, massive, resistant, weathers light grey; considerable chert tracery in upper part. Poorly preserved corals (GSC loc. 54462) collected loose. | 14.2 | 1114.4 |
| 97 | Limestone, argillaceous, medium brown and red mottling, rubbly bedded, recessive. | 1.5 | 1100.2 |
| 96 | Limestone, medium brown, aphanitic, massive, but in places highly fractured, weathers mainly light grey but in places a hematitic red. Lithological specimen (GSC loc. 54464). | 17.6 | 1098.7 |

| Unit | Description | Thickness (feet) | |
|------|--|------------------|-----------|
| | | Unit | From Base |
| 95 | Limestone, dark grey, aphanitic, massive, resistant, weathers light grey. | 10 | 1081.1 |
| 94 | Limestone, similar to unit 91, rubbly, some beds weather a hematitic red. | 1.5 | 1071.1 |
| 93 | Limestone, medium brown, aphanitic, rubbly bedded towards top and bottom, transitional contacts, weathers medium grey. | 4 | 1069.6 |
| 92 | Limestone, black, aphanitic, massive, very resistant, weathers light grey. | 11 | 1065.6 |
| 91 | Limestone, dark grey, aphanitic, rubbly bedded, weathers medium brown. | 1.8 | 1054.6 |
| | <u>Coenites</u> sp., and trilobite fragments (GSC loc. 54460) collected loose. | | |
| 90 | Limestone, dark grey, rubbly bedded in bottom 4 feet, massive above, weathers light grey. | 15 | 1052.8 |
| 89 | Covered, talus fragments of limestone, dark grey, weathers medium to light grey. | 13 | 1037.8 |
| 88 | Limestone, dark grey, aphanitic, massive, except for recessive layer 1.5 feet thick, 14.5 feet up; considerable chert present as a fine tracery throughout unit. | 23 | 1024.8 |

| Unit | Description | Thickness (feet) | |
|------|---|------------------|-----------|
| | | Unit | From Base |
| 87 | Limestone, pale brown, thin rubbly bedded, beds up to 3 inches thick, weathers very light grey. | 3 | 1001.8 |
| 86 | Limestone, dark grey, aphanitic, massive in upper part, recessive in lower 4 feet, weathers light grey. | 8 | 998.8 |
| 85 | Covered; talus fragments of limestone, medium brown, aphanitic, weathers light grey. | 69 | 990.8 |
| 84 | Limestone, brown, aphanitic, even bed, resistant, weathers light grey. | 2 | 921.8 |
| 83 | Limestone, black, aphanitic, massive, fractured, weathers light grey; numerous brachiopods and some other fossils collected from an argillaceous limestone lens in this unit: stromatoporoid, <u>Alveolites</u> sp., <u>Coenites</u> sp., <u>*Emanuella</u> sp., <u>*Warrenella</u> sp., and <u>*Lazutkinia?</u> sp. (GSC loc. 54459); a short distance away along strike upper part of unit contains numerous stromatoporoids. | 9 | 919.8 |
| 82 | Limestone, medium brown, aphanitic, massive, weathers medium grey; contains organic? structures (GSC loc. 54458) in lower few feet of unit. | 12 | 910.8 |
| 81 | Limestone, black, aphanitic, hackly fracturing, even bed, weathers brownish grey; contains | | |

| Unit | Description | Thickness (feet) | |
|------|---|------------------|-----------|
| | | Unit | From Base |
| | <u>Coenites</u> sp., * <u>Warrenella?</u> sp., and * <u>Lazutkinia</u> sp. (GSC loc. 54457). | 2.4 | 898.8 |
| 80 | Limestone, argillaceous, fetid, black, thin bedded, recessive, weathers medium brownish grey, transitional upper contact. | 4 | 896.4 |
| 79 | Limestone, medium brown, aphanitic, evenly medium bedded, weathers medium brownish grey; <u>Syringopora</u> -like corals, <u>Coenites</u> sp., and poorly preserved brachiopod (GSC loc. 54456) at top of unit. | 4.2 | 892.4 |
| 78 | Covered; <u>Atrypa</u> sp. - finely costate, <u>Atrypa</u> sp. - medium costate, * <u>Warrenella</u> sp., and * <u>Lazutkinia</u> sp. (GSC loc. 54455) collected loose. | 2.5 | 888.2 |
| 77 | Limestone, medium brown, aphanitic, massive, weathers light grey. | 8 | 885.7 |
| 76 | Talus covered. | 4 | 877.7 |
| 75 | Limestone, medium brown, aphanitic, massive, resistant, weathers light grey; <u>Coenites</u> sp., * <u>Emanuella</u> sp., * <u>Lazutkinia</u> sp., and pelecypod fragment (GSC loc. 54454) collected loose. | 10 | 873.7 |
| 74 | Limestone, medium brown, aphanitic, evenly thin to medium bedded, recessive, weathers light brownish grey. | 5.7 | 863.7 |

| Unit | Description | Thickness (feet) | |
|------|---|------------------|-----------|
| | | Unit | From Base |
| 73 | Limestone, medium brown, massive, resistant, weathers light grey. | 13.4 | 858.0 |
| 72 | Talus covered; <u>Syringopora</u> -like coral (GSC loc. 54453) collected loose. | <u>c.</u> 6 | 844.6 |
| 71 | Limestone, brown, aphanitic, evenly medium bedded, weathers light grey; very poorly exposed. | <u>c.</u> 8 | 838.6 |
| 70 | Talus covered; mainly fragments of limestone, black, fine grained, rubbly thin bedded, recessive, weathers medium grey. | 12 | 830.6 |
| 69 | Limestone, medium brown, aphanitic, evenly thick bedded, weathers light grey. | 6.5 | 818.6 |
| 68 | Limestone, dark brownish grey, evenly and irregularly medium bedded, recessive; poorly exposed. | 7 | 812.1 |
| 67 | Limestone, crinoidal, very dark grey, fine grained, massive, resistant, weathers light grey; contains <u>Warrenella</u> sp. and <u>Lazutkinia</u> sp. (GSC loc. 54452). | 13.4 | 805.1 |
| 66 | Limestone, medium brownish grey, fine grained, rubbly bedded, recessive, weathers light grey. | 2.1 | 791.7 |
| 65 | Limestone, medium brown, aphanitic, massive, weathers light grey. | 9.5 | 789.7 |
| 64 | Covered; talus fragments similar to unit 62. | 3 | 780.2 |

| Unit | Description | Thickness (feet) | |
|------|--|------------------|-----------|
| | | Unit | From Base |
| 63 | Limestone, medium brown, aphanitic, massive, weathers medium grey. | 3 | 777.2 |
| 62 | Covered; talus fragments of limestone, dark brownish grey, aphanitic, weathers medium grey. | 3.6 | 774.2 |
| 61 | Limestone, dark grey, aphanitic, massive, weathers light grey. | 4 | 770.6 |
| 60 | Covered; talus fragments of limestone, pale brown, aphanitic, weathers light grey; <u>Syringopora?</u> sp. (GSC loc. 54451) collected loose. | 7 | 766.6 |
| 59 | Limestone, brown, aphanitic, weathers light grey. | 5 | 759.6 |
| 58 | Limestone, dark brown, aphanitic, massive, resistant, weathers light grey; collected <u>Plectospirifer?</u> sp. and echinoderm ossicles with double axial canals (GSC loc. 54450). | 10 | 754.6 |
| 57 | Covered; talus fragments of limestone, brown, aphanitic, rubbly and thin bedded, weathers light grey; contains poorly preserved corals (GSC loc. 54449). | 3 | 744.6 |
| 56 | Limestone, medium brown, aphanitic, resistant, weathers light grey. | 2 | 741.6 |
| 55 | Limestone, argillaceous, dark brown, aphanitic, rubbly bedded, recessive; contains colonial corals, and finely costate * <u>Schuchertella</u> sp., | | |

| Unit | Description | Thickness (feet) | |
|------|---|------------------|-----------|
| | | Unit | From Base |
| | * <u>Actinopteria?</u> sp., and echinoderm ossicles with single axial canals (GSC loc. 54448). | 1.5 | 739.6 |
| 54 | Limestone, medium brown, aphanitic, massive, weathers whitish grey. | 5 | 738.1 |
| 53 | Covered, talus fragments of limestone, pale brown, aphanitic, weathers light grey. | 7.5 | 733.1 |
| 52 | Limestone, brown, aphanitic, massive, highly resistant, weathers whitish grey. | 5.2 | 725.6 |
| 51 | Covered. | 2 | 720.4 |
| 50 | Limestone, aphanitic, medium brown, evenly medium bedded, weathers medium grey; poorly exposed. | 3 | 718.4 |
| 49 | Covered, talus fragments of limestone, black, aphanitic, rubbly thin bedded, weathers dark grey; contains blebs of light brownish grey chert. | 3 | 715.4 |
| 48 | Limestone, medium brown, aphanitic, medium to thick bedded, stylonitic structures, weathers medium grey. | 6 | 712.4 |
| 47 | Covered, talus fragments of limestone, dark grey, rubbly thin bedded, weathers dark grey, recessive. | 3 | 706.4 |
| 46 | Limestone, medium brown, aphanitic, evenly and irregularly thin to medium bedded, weathers light grey, contains fine chert. | 3 | 703.4 |

| Unit | Description | Thickness (feet) | |
|------|---|------------------|-----------|
| | | Unit | From Base |
| 45 | Mainly covered; one even bed of limestone exposed, dark brown, aphanitic, weathers medium grey, 1-foot thick. | 8 | 700.4 |
| 44 | Limestone, aphanitic, evenly thin to medium bedded, weathers pale brown, and light grey towards top and bottom, considerable light brown chert tracery; sparse large colonies of <u>Hexagonaria</u> sp. (GSC loc. 54447) 4.5 feet up. | 9 | 692.4 |
| 43 | Covered. | 8 | 683.4 |
| 42 | Limestone, medium brown, aphanitic, evenly medium bedded, weathers whitish grey. | 4 | 675.4 |
| 41 | Covered interval, recessive. | 15 | 671.4 |
| 40 | Limestone, medium to dark brown, aphanitic, massive, resistant, weathers whitish grey, coarsely vuggy in upper part. | 5.3 | 656.4 |
| 39 | Limestone, medium brown, aphanitic, evenly and rubbly medium bedded, recessive, weathers light grey; poorly exposed. | 6.5 | 651.1 |
| 38 | Limestone, medium brown, aphanitic, medium to thick bedded, weathers light brownish grey. | 11.7 | 644.6 |
| | Lithological specimen oriented (Field No. 108NB1). | | |
| | Bedding 120T/27SW. | | |

| Unit | Description | Thickness (feet) | |
|------|--|------------------|-----------|
| | | Unit | From Base |
| 37 | Limestone, medium brown, aphanitic, evenly thick bedded to massive, weathers whitish grey, resistant. | 14.4 | 632.9 |
| 36 | Covered. | 2.7 | 618.5 |
| 35 | Limestone, aphanitic, massive, resistant, weathers whitish grey. Bedding 120T/25SW. | 9 | 615.8 |
| 34 | Covered; limestone, evenly thin bedded; exposed along strike to east. | 7 | 606.8 |
| 33 | Limestone, medium brown, aphanitic, massive, weathers whitish grey. | 8.6 | 599.8 |
| 32 | Covered; limestone, evenly thin bedded, recessive, exposed along strike to east on opposite side of creek. | 3 | 591.2 |
| 31 | Limestone, medium brown, aphanitic, massive, resistant, weathers very light grey. | 10.5 | 588.2 |
| 30 | Limestone, medium brown, fine grained, massive, resistant, weathers light grey. | 8 | 577.7 |
| 29 | Limestone, similar to upper part of unit 27; recessive. | 2 | 569.7 |
| 28 | Limestone, medium brown, aphanitic, massive, resistant, weathers whitish grey. | 6.5 | 567.7 |
| 27 | Limestone, medium brown, aphanitic, thin to medium bedded, weathers medium | | |

| Unit | Description | Thickness (feet) | |
|------|---|------------------|-----------|
| | | Unit | From Base |
| | brownish grey, recessive; beds in upper 1.3 feet nodular and argillaceous. | 7.3 | 561.2 |
| 26 | Limestone, dark grey, fine grained, massive, weathers medium grey. Station 108NB at base of unit. | 5.7 | 553.9 |
| 25 | Covered. | 1.5 | 548.2 |
| 24 | Limestone, medium brown, aphanitic, massive, weathers whitish grey. | 4.5 | 546.7 |
| 23 | Limestone, medium brown, aphanitic, evenly medium to thick bedded, beds up to 3 feet thick, weathers whitish grey. | 5.5 | 542.2 |
| 22 | Limestone, medium brown, aphanitic, irregularly thin bedded, weathers medium brown. | 2 | 536.7 |
| 21 | Limestone, medium brown, aphanitic, evenly thick bedded, resistant, weathers very light grey. | 9.5 | 534.7 |
| 20 | Covered. | 47 | 525.2 |
| 19 | Limestone, medium brown, aphanitic, evenly thick bedded, resistant, some stylolitic structures, weathers very light grey, almost white. | 10 | 478.2 |
| 18 | Covered; numerous talus fragments of limestone containing layers of black chert. | 5 | 468.2 |
| 17 | Limestone, medium brown, aphanitic, massive, resistant, weathers very light grey. | 7 | 463.2 |

| Unit | Description | Thickness (feet) | |
|------|--|------------------|-----------|
| | | Unit | From Base |
| 16 | Limestone, dark brown, aphanitic, evenly thin bedded, beds up to 2 inches thick, recessive, weathers medium brown. | 1.5 | 456.2 |
| 15 | Covered. | 9 | 454.7 |
| 14 | Limestone, dark brown, aphanitic, massive, resistant, weathers very light grey. | 5.5 | 445.7 |
| 13 | Covered. | 34 | 440.2 |
| 12 | Limestone, medium brown, aphanitic, even bed, very resistant, weathers whitish grey. | 4.2 | 406.2 |
| 11 | Covered. | 7 | 402 |
| 10 | Limestone, medium brown, aphanitic, even bed, weathers whitish grey; contains stromatoporoids and <u>Favosites</u> sp. (GSC loc. 54484). | 5 | 395 |
| 9 | Covered. | 5 | 390 |
| 8 | Limestone, pale brown, aphanitic, massive, weathers whitish grey; contains a few stromatoporoids (GSC loc. 54483); highly resistant and forms a rib cutting across stream. | 5 | 385 |
| | Station 107NB at base of unit. Bedding 125T/25SW. | | |
| 7 | Limestone, medium brown, aphanitic, thick bedded, | | |

| Unit | Description | Thickness (feet) | |
|------|---|------------------|-----------|
| | | Unit | From Base |
| | weathers light grey, contains considerable chert in form of fine tracery. | 35 | 380 |
| | <u>Phillipsastrea</u> sp. (GSC loc. 54487) collected loose 20 feet up. | | |
| 6 | Covered; talus fragments of limestone, medium brown, fine grained, presumably evenly medium to thick bedded, weathers light grey. | 70 | 345 |
| | <u>Phillipsastrea</u> sp. (GSC loc. 54541) collected loose 10 feet up. | | |
| | <u>Hexagonaria?</u> sp. (GSC loc. 54486) collected loose 20 feet up. | | |
| 5 | Covered; talus fragments of limestone, medium brown, fine grained, evenly thick bedded, weathers light grey. | 70 | 275 |
| | <u>Hexagonaria</u> sp. (GSC loc. 54490) collected loose at top of unit. | | |
| 4 | Covered; talus fragments of limestone, dark grey, fine grained, weathers medium grey; also large blocks of limestone, medium brown, fine grained, evenly thick bedded, weathers light to medium grey. | 105 | 205 |
| 3 | Covered; talus fragments of limestone, medium to light grey weathering; and fragments of limestone, dolomitic, weathers pale brown. | 35 | 100 |
| 2 | Covered; fragments of limestone, medium brown, presumably thin bedded, weathers medium to light grey. | 55 | 65 |

| Unit | Description | Thickness (feet) | |
|--|--|------------------|-----------|
| | | Unit | From Base |
| 1 | Covered; very small jagged fragments of limestone, black, fine grained, weathers dark grey. Station 105NB at base of unit. | 10 | |
| <u>Cranswick Member of Ogilvie Formation</u> (656.4 feet thick) | | | |
| 48 | Limestone, black, aphanitic, rubbly thin bedded, weathers dark grey, recessive. | 5.5 | 656.4 |
| 47 | Limestone, silty and argillaceous, black, aphanitic, medium bedded to massive, resistant, scarp-forming unit, weathers pale brown. Contains small poorly preserved <u>*Warrenella</u> sp. (GSC loc. 54485). | 18 | 650.9 |
| 46 | Limestone, black, aphanitic, evenly medium bedded, recessive, weathers light grey. | 2 | 632.9 |
| 45 | Limestone, black, aphanitic, evenly medium bedded, weathers medium brownish grey; contains <u>Chonetes</u> sp., <u>Atrypa</u> sp., <u>Warrenella</u> sp., and echinoderm ossicles with single axial canals (GSC loc. 54489). | 4 | 630.9 |
| 44 | Limestone, black, irregularly thin to medium bedded, recessive, weathers dark grey; a homogenous unit; contains poorly preserved <u>Syringopora?</u> sp. and echinoderm ossicles with single axial canals (GSC loc. 54488). | 38 | 626.9 |

| Unit | Description | Thickness (feet) | |
|------|---|------------------|-----------|
| | | Unit | From Base |
| 43 | Limestone, black, aphanitic, beds 6 to 8 inches thick, separated by beds of argillaceous limestone 1/4 to 1/2 inch thick, unit scarp-forming, weathers medium grey. | 17 | 588.9 |
| 42 | Limestone, black, aphanitic, fairly evenly thin to medium bedded, weathers medium grey; contains <u>Grammatodon?</u> sp., <u>Tentaculites</u> sp., ostracod, and echinoderm ossicles with single axial canals (GSC loc. 54491). | 18 | 571.9 |
| 41 | Covered; recessive; talus fragments of black limestone. | 13 | 553.9 |
| 40 | Limestone, black, aphanitic, even bed, weathers medium brownish grey. | 1.2 | 540.9 |
| 39 | Covered; recessive interval. | 4.7 | 539.7 |
| 38 | Limestone, black, aphanitic, rubbly thin bedded, resistant, weathers medium grey. | 2.5 | 535 |
| 37 | Limestone, black, rubbly thin bedded, recessive, weathers dark grey. | 6 | 532.5 |
| 36 | Limestone, black, aphanitic, rubbly weathering, resistant, scarp-forming, weathers medium grey. | 18 | 526.5 |
| 35 | Limestone, dark brownish grey, aphanitic, irregularly thin bedded, recessive, weathers dark grey. | 14 | 508.5 |

| Unit | Description | Thickness (feet) | |
|------|---|------------------|-----------|
| | | Unit | From Base |
| 34 | Limestone, dark brownish grey, aphanitic, scarp-forming, weathers medium grey. | 3 | 494.5 |
| 33 | Limestone, slightly argillaceous, black, aphanitic, recessive, weathers dark grey. | 2 | 491.5 |
| 32 | Limestone, very dark grey almost black, rubbly thin bedded, highly resistant, scarp-forming, weathers dark grey; top of unit forms a prominent dip slope. Station 104NB at base of unit. | 29.5 | 489.5 |
| 31 | Limestone, dark brownish grey, irregularly thick bedded, grades to medium beds towards top, resistant, weathers medium grey. | 8.5 | 460 |
| 30 | Limestone, dark brownish grey, aphanitic, massive, resistant, weathers medium brown; contains sparse large <u>Warrenella</u> sp. but difficult to extract from tough matrix (GSC loc. 54482). | 15 | 451.5 |
| 29 | Limestone, dark brownish grey, aphanitic, massive but rubbly weathering, resistant, weathers medium grey. | 4 | 436.5 |
| 28 | Limestone, dark brownish grey, rubbly weathering, weathers medium grey; transitional contacts. | 3 | 432.5 |
| 27 | Limestone, dark brownish grey, massive but rubbly weathering, scarp-forming, weathers medium grey. | 15 | 429.5 |

| Unit | Description | Thickness (feet) | |
|------|--|------------------|-----------|
| | | Unit | From Base |
| 26 | Covered. | 8 | 414.5 |
| 25 | Limestone, slightly argillaceous, black, irregularly thin bedded, with thin interbeds up to 1.5 inches thick of black, fissile, calcareous shale, unit recessive, weathers dark grey; unit contains <u>Alveolites</u> sp., <u>Hexagonaria?</u> sp., *large <u>Gypidula</u> sp., and * <u>Atrypa</u> cf. <u>A. arctica</u> Warren (GSC loc. 54441). | 19.8 | 406.5 |
| 24 | Covered; * <u>Atrypa</u> cf. <u>A. perfimbriata</u> Crickmay, <u>Emanuella</u> sp., cf. <u>Loxonema</u> sp., <u>Tentaculites</u> sp., ostracods, and echinoderm ossicles with single axial canals, loose (GSC loc. 54442). | c. 60 | 386.7 |
| 23 | Limestone, dark brownish grey, massive but rubbly weathering, weathers medium grey, resistant, vertical scarp-forming; contains *large <u>Gypidula</u> sp., <u>Spinatrypa</u> sp., and echinoderm ossicles with double axial canals (GSC loc. 54449). | 28.5 | 326.7 |
| 22 | Limestone, dark brownish grey, aphanitic, massive, vertical scarp-forming, weathers medium grey; <u>Favosites</u> sp. and punctate brachiopod fragments collected loose (GSC loc. 54440). | 18 | 298.2 |
| 21 | Dolomite, pale brown, fine grained, thin bedded, highly brittle, recessive, along strike this unit changes to limestone; contains rugose coral, | | |

| Unit | Description | Thickness (feet) | |
|------|---|------------------|-----------|
| | | Unit | From Base |
| | <u>Alveolites</u> sp., <u>Aulopora</u> sp., and echinoderm ossicles with single axial canals (GSC loc. 54439) near base. | 4 | 280.2 |
| 20 | Limestone, black, aphanitic, massive, resistant, weathers light grey. | 10 | 276.2 |
| 19 | Dolomite, calcareous, pale brown, thin bedded, laminated, recessive, weathers buff brown. | 5.2 | 266.2 |
| 18 | Limestone, dark brownish grey, fine grained, massive, resistant, weathers medium to dark grey. | 5 | 261 |
| 17 | Limestone, pale brown, aphanitic, thin bedded, weathers buff brown. | 2.5 | 256 |
| | Station 103NB at base of unit 17 and base of high vertical cliff. Bedding 130T/34SW. | | |
| 16 | Limestone, black, aphanitic, massive, resistant, parting planes about 6 feet apart, separated by limestone, pale brown, fine grained, thin to medium bedded up to 2 feet thick, weathering pale brown, recessive. | 21.5 | 253.5 |
| | *Echinoderm ossicles with single, cross-like, and double axial canals collected loose (GSC loc. 54438). | | |
| 15 | Limestone, pale brown, fine grained, granular, thin bedded, weathers pale buff brown; contains poorly preserved <u>Utaratuia</u> sp. (GSC loc. 54437). | 13 | 232 |
| 14 | Covered; talus fragments of limestone, dark brown, aphanitic, mixed with | | |

| Unit | Description | Thickness (feet) | |
|------|--|------------------|-----------|
| | | Unit | From Base |
| | fragments of dolomite, weathering pale brown; brachiopod traces collected loose (GSC loc. 54436). | 15 | 219 |
| 13 | Limestone, brown, fine grained, even bed, resistant, weathers medium brown. | 3 | 204 |
| 12 | Limestone, silty, black, massive to thick bedded, fairly resistant, weathers very dark grey; ghosts of undeterminable brachiopods; upper one-half of unit is mottled showing partial dolomitization. Bedding 130T/35SW. | 21 | 201 |
| 11 | Covered; talus fragments of limestone, colour laminated, pale to medium brown, aphanitic, weathers pale brown. | 11 | 180 |
| 10 | Limestone, black, aphanitic, thick bedded, resistant, weathers dark grey; basal beds contain <u>Moelleritia</u> cf. <u>M. canadensis</u> Copeland and other ostracods (GSC loc. 54435). | c. 16 | 169 |
| 9 | Dolomite, pale brown, laminated, thin bedded, recessive, weathers pale buff brown, contains blebs of coarse calcite. | 5 | 153 |
| 8 | Limestone, dark brown, aphanitic, massive, resistant, scarp-forming, weathers medium brownish grey. | 9 | 148 |
| 7 | Covered; fragments of dolomite, pale brown, aphanitic, presumably thin bedded, weathers buff brown; <u>Coenites</u> sp. noted loose. | 29 | 139 |

| Unit | Description | Thickness (feet) | |
|------|--|------------------|-----------|
| | | Unit | From Base |
| 6 | Limestone, dark grey, fine grained, thick bedded; occasional bed containing <u>Coenites</u> spp. (GSC loc. 54434). | 25 | 110 |
| 5 | Covered; talus of large blocks of limestone, black, aphanitic, massive, weathers very dark grey. | 9 | 85 |
| 4 | Covered; talus fragments of dolomite, dark grey, presumably evenly medium bedded, weathers dark grey; <u>Coenites</u> spp. (GSC loc. 54433) collected loose. | 15 | 76 |
| 3 | Covered; talus fragments of limestone, black, evenly thick bedded, weathers very dark grey. | 5 | 61 |
| 2 | Covered. | 6 | 56 |
| 1 | Limestone, very dark grey, fine grained, granular, fissile, evenly medium bedded to massive, scarp-forming, weathers very dark grey; some beds contain poorly preserved <u>Coenites</u> sp. and <u>Favosites</u> sp. (GSC loc. 54540). | 50 | |
| | Bedding 120T/30SW. | | |

MIDDLE DEVONIAN AND OLDER

Gossage Formation
(536.9 feet thick)

| | | | |
|----|--|--|--|
| 34 | Covered; talus fragments of dolomite, very dark grey, fine grained, granular, weathers very dark grey; <u>Coenites</u> sp., and <u>Moelleritia</u> cf. | | |
|----|--|--|--|

| Unit | Description | Thickness (feet) | |
|------|--|------------------|-----------|
| | | Unit | From Base |
| | <u>M. canadensis</u> Copeland and echinoderm ossicles with cross-like axial canals collected loose (GSC loc. 54432). | 21 | 536.9 |
| | Station 102NB at base of unit. | | |
| 33 | Covered; talus fragments of dolomite, strongly calcareous, dark brownish grey, fine grained, granular, weathers medium to dark grey. | 28 | 515.9 |
| 32 | Dolomite, slightly calcareous, very dark brownish grey, irregularly thick bedded, weathers very dark grey. | 8.5 | 487.9 |
| 31 | Covered; talus fragments of dolomite, fine grained, dark brownish grey; mixed with fragments of dolomite weathering pale brown. | 42 | 479.4 |
| 30 | Dolomite, dark brownish grey, fine grained, minutely vuggy, weathers medium brown, poorly exposed. | 23 | 437.4 |
| 29 | Dolomite, dark brownish grey, evenly medium bedded, resistant, weathers dark brownish grey. | 5 | 414.4 |
| 28 | Covered; talus fragments of dolomite, dark brownish grey, evenly medium bedded, weathers very dark grey. | 24 | 409.4 |
| 27 | Dolomite, dark grey to black, fine grained, massive, resistant, weathers light brownish grey. | 13.5 | 385.4 |
| 26 | Dolomite, medium brown, aphanitic, thick bedded to massive, weathers very dark grey. | 11 | 371.9 |

| Unit | Description | Thickness (feet) | |
|------|--|------------------|-----------|
| | | Unit | From Base |
| | Station 101NB at base of unit 26. Bedding 140T/25SW. | | |
| 25 | Dolomite, silty, very dark grey, thin bedded, weathers dark brownish grey. | 11.6 | 360.9 |
| 24 | Dolomite, colour laminated light to medium brown, thin bedded, weathers medium brownish grey. | 5.4 | 349.3 |
| 23 | Dolomite, silty, fine grained, granular, thin to medium bedded, weathers dark grey. | 9 | 343.9 |
| 22 | Covered; talus fragments similar to unit 20. | 9 | 334.9 |
| 21 | Dolomite, dark brownish grey, fine grained, thin bedded, weathers very dark grey. | 3.8 | 325.9 |
| 20 | Dolomite, colour laminated very light to medium brownish grey, evenly thin to medium bedded, weathers very light grey; poorly exposed. | 18.5 | 322.1 |
| 19 | Dolomite, calcareous slightly argillaceous, dark brownish grey, aphanitic, thick bedded, resistant, weathers medium brown. | 14.9 | 303.6 |
| | Lithological specimen (GSC loc. 54539). Bedding 125T/50S. | | |
| 18 | Dolomite, argillaceous, light brown, aphanitic, medium bedded, weathers light brownish grey. | 11 | 288.7 |

| Unit | Description | Thickness (feet) | |
|-------------------------------------|---|------------------|-----------|
| | | Unit | From Base |
| 17 | Dolomite, silty, very dark brownish grey, aphanitic, thin bedded, weathers dark grey. | 11.5 | 277.7 |
| 16 | Dolomite, with silty laminae, very dark grey almost black, thin bedded, weathers dark grey; very poorly exposed. | 12 | 266.2 |
| 15 | Dolomite, slightly calcareous, colour laminated medium and dark brown, fine grained, some sparry calcite, weathers light grey. Oriented lithological specimen (GSC loc. 54444). | 9 | 254.2 |
| 14 | Dolomite, very dark brownish grey, irregularly thin bedded, stylolitic along some bedding planes, weathers very pale brown. | 6 | 245.2 |
| 13 | Covered; talus fragments of dolomite, dark grey, minutely vuggy, thin bedded, weathers dark grey. Station 100NB at base of unit 13 on west side of small stream. Bedding 140T/30SW. | 47 | 239.2 |
| <u>Orange-Brown Weathering Unit</u> | | | |
| 12 | Dolomite, very slightly calcareous, very light grey, fine grained, granular, weathers pale orange, vuggy weathered surfaces. Station 99NB at top of unit 12 on east side of small stream. Bedding 095T/29S. Lithological specimen (GSC loc. 54543). | 8.6 | 192.2 |

| Unit | Description | Thickness (feet) | |
|------|---|------------------|-----------|
| | | Unit | From Base |
| 11 | Dolomite, light greenish grey, fine grained, medium to thick bedded, unit highly fractured, but fairly resistant, weathers pale orange. | 18 | 183.6 |
| 10 | Limestone, silty and argillaceous, medium brownish grey, evenly thick bedded, with thin greenish grey shale interbeds up to 6 inches thick, unit resistant. | 10 | 165.6 |
| 9 | Shale, greenish grey, poorly exposed, with a 4-foot argillaceous limestone bed in middle, dark greenish grey, resistant, weathers pale orange. | 15 | 155.6 |
| 8 | Limestone, argillaceous and silty, medium greenish grey, nodular thick bedded, resistant, weathers pale orange. | 4 | 140.6 |
| 7 | Covered; talus blocks and smaller fragments of limestone, medium greenish grey, fine grained, medium bedded; mixed with fragments of dolomite, very light grey, fine grained, presumably thin to medium bedded, recessive, weathers bright pale orange. | 76 | 136.6 |
| 6 | Covered; large blocks of limestone, medium brownish grey, with lenses of orange-brown silt, thick bedded, weathers pale brown. | 10 | 60.6 |
| 5 | Dolomite, fine grained, granular, evenly thick bedded, resistant, weathers pale orange-brown. | 4.2 | 50.6 |
| 4 | Covered. | 3.4 | 46.4 |

| Unit | Description | Thickness (feet) | |
|------|--|------------------|-----------|
| | | Unit | From Base |
| 3 | Dolomite, some beds with silty laminae, very light grey, fine grained, evenly medium bedded, weathers pale orange. | 22 | 43 |
| 2 | Dolomite, fine grained, granular, evenly thick bedded, resistant, weathers buff brown and light grey. | 6 | 21 |
| 1 | Covered; dolomite, weathers orange-brown. | 15 | |
| | Regional unconformity mapped at base of unit. | | |

SILURIAN

Light to Medium Grey Weathering Unit

| | | | |
|----|---|----|-------|
| 48 | Dolomite, very light grey, fine grained, granular, thin bedded, recessive, weathers light grey; poorly exposed. | 19 | c.616 |
|----|---|----|-------|

Section 5: CANYON RANGES OF MACKENZIE MOUNTAINS (106F-13)

The northern Canyon Ranges abruptly face lower hills along an east-trending fault zone. The section is just south of the front of the ranges and was measured by staff and by tape across a shallow anticline and associated syncline (65°28'-30'N, 132°57'-133°03'W). The section begins at the base of a quartzite outcrop. Exposures on a neighbouring ridge closer to the core of the anticline show that this quartzite unit is underlain by siliceous shales that weather reddish brown and greyish red-purple. The top of the section is in the axial region of the syncline, at the peak of a ridge trending west from a 4872-foot triangulation point. Much of the section is hidden by felsenmeer and some parts were covered by snow when measured in late June.

A disconformity is present beneath 767 feet of Upper Ordovician and Silurian dolomites that underlie a sequence of yellowish grey and yellowish orange weathering dolomites that may be Devonian.

Section measured by B.S. Norford, assisted by Potts, June 25-26, 1962. Description of only the Devonian and immediately underlying beds is presented here.

| | |
|-------------------------------------|------------------|
| MIDDLE DEVONIAN AND OLDER | |
| Gossage Formation | 925'; incomplete |
| Regional unconformity | |
| SILURIAN AND UPPER ORDOVICIAN | |
| (Mount Kindle Formation Equivalent) | 767' |
| Disconformity | |
| ORDOVICIAN | 1065' |
| CAMBRIAN | 605'; incomplete |

| Unit | Description | Thickness (feet) | |
|------|-------------|------------------|-----------|
| | | Unit | From Base |

MIDDLE DEVONIAN AND OLDER

Gossage Formation
(925 feet; incomplete)

- 6 Siliceous dolomites, some calcareous, very finely crystalline to aphanitic, grey and light olive grey, weather light grey and grey, bedding 3 to 12

| Unit | Description | Thickness (feet) | |
|------|---|------------------|-----------|
| | | Unit | From Base |
| | inches; barren of fossils; contact with unit 5 gradational. | 126 | 925 |
| 5 | Siliceous dolomites, some calcareous, aphanitic to very finely crystalline, light grey, grey, light olive grey, light greenish grey, weather yellowish grey, yellowish orange, light grey, recessive, bedding 1/2 foot to 3 feet; barren. | 314 | 799 |
| 4 | Covered interval with rare outcrops of siliceous dolomites, aphanitic, grey, weather yellowish grey, yellowish orange, light grey. | 195 | 485 |
| 3 | Siliceous dolomites, very finely crystalline, light bluish grey, weather grey, relatively resistant, bedding 1/4 foot to 4 feet; with interbeds of yellowish grey weathering dolomites in upper, less resistant part; barren. | 19 | 290 |
| 2 | Dolomites, mostly siliceous, very finely crystalline to aphanitic, grey, light grey, weather yellowish grey, light yellowish grey, light grey, grey, recessive, bedding 2 to 24 inches; some beds laminated, some mottled grey on light grey, others mottled light grey on yellowish grey, some alternations of light grey and yellowish grey weathering beds; with rare irregular chert nodules; unit poorly exposed, about 60 per cent covered. | 143 | 271 |
| | Undetermined silicified gastropods from 79-100 feet up (GSC loc. 53153). | | |

| Unit | Description | Thickness (feet) | |
|---|---|------------------|-----------|
| | | Unit | From Base |
| 1 | Covered interval with dolomite float; boundary between units 1 and 5 picked at change of float weathering colour from dominantly yellowish grey to dominantly light grey. | 128 | |
| <p>SILURIAN AND UPPER ORDOVICIAN (767 feet thick)</p> | | | |
| 5 | Dolomites, mostly siliceous, very finely to medium crystalline, light grey, grey, yellowish grey, weather light grey, yellowish grey, bedding 1/4 foot to 8 feet, commonly indistinct; with calcite filled vugs common in lower beds; with irregular chert nodules at a few horizons; with very minor brownish grey mottled dolomites; at 254-259 feet up, dark brownish grey biostromal beds with abundant stromatoporoids in growth positions; at 199 feet up, crest of ridge; at 134 feet up, 1 per cent pin-point porosity; covered interval at 296-301; stromatoporoids, corals (Field No. 30NEeF from 255-257 feet up, Field No. 30NEdF from 218-220 feet up, Field No. 30NEcF from 143-147 feet up). | 301 | 767 |

Section 7: KNORR RANGE (106E-14)

Section is located on the southeast flank of Knorr Range at approximately 65°23'N, 134°11'W. On the north side of a fault Ordovician carbonates, overlain by the Silurian Road River Formation, and the Devonian Prongs Creek Formation, are exposed in a north-dipping succession. Only the Devonian part of the succession is described here.

Section measured by A. W. Norris, assisted by D. A. McAuslan, June 6-8, 1962.

LOWER AND MIDDLE DEVONIAN

Prongs Creek Formation 1951.9'; probably nearly complete

SILURIAN

Road River Formation 762.7'

ORDOVICIAN

158.5'; incomplete

| Unit | Description | Thickness (feet) | |
|------|-------------|------------------|-----------|
| | | Unit | From Base |

LOWER AND MIDDLE DEVONIAN

Prongs Creek Formation

(1951.9 feet thick; nearly complete)

| | | | |
|----|---|----|--------|
| 96 | Shale, strongly calcareous, black, fissile, weathers black (wet); some beds contain <u>Styliolina</u> sp. and <u>Tentaculites</u> sp., (GSC loc. 50350) sample from 34 feet up; unit very poorly exposed. | 37 | 1951.9 |
|----|---|----|--------|

Station 60NB at top of unit 96 at peak of mountain ridge. Bedding 105T/47N.

| | |
|----|---|
| 95 | Limestone, black, irregularly and evenly thin bedded, with interbeds of shale, calcareous, black, |
|----|---|

| Unit | Description | Thickness (feet) | |
|------|---|------------------|-----------|
| | | Unit | From Base |
| | fissile, scattered nodules and lenses of black chert; very poorly exposed. | 29 | 1914.9 |
| 94 | Shale, calcareous, black, fissile, with a few thin beds of limestone, argillaceous, black, fissile, one lensing silty limestone up to 0.7 foot thick, which on weathering simulates a volcanic ash bed; upper half of unit with thin lensing beds of black chert; unit weathers black and pale brown. | 24 | 1885.9 |
| 93 | Limestone, argillaceous, black, very thinly interbedded with shale, calcareous, black, fissile; unit moderately resistant. | 17 | 1861.9 |
| | <u>Styliolina</u> sp. (GSC loc. 50343) collected loose. | | |
| 92 | Shale, calcareous, black, fissile, thinly interbedded with limestone, argillaceous, black, fissile. | 10 | 1844.9 |
| 91 | Limestone, argillaceous and variably silty, black, fissile, very evenly bedded up to 2.5 feet; separated by black calcareous shale partings; unit weathers very dark grey almost black; <u>Styliolina</u> sp. and <u>Tentaculites</u> sp. (GSC loc. 50351) present in shale partings. | 16.5 | 1834.9 |
| 90 | Shale, calcareous, black, hard, beds up to 10 inches thick; interbedded with limestone, argillaceous, black, fissile, in beds up to 8 | | |

| Unit | Description | Thickness (feet) | |
|------|---|------------------|-----------|
| | | Unit | From Base |
| | inches thick; unit recessive; numerous * <u>Styliolina</u> sp. and * <u>Tentaculites</u> sp. in shale beds (GSC loc. 50339). | 16.5 | 1818.4 |
| | Bedding 090T/25N. | | |
| 89 | Limestone, black, aphanitic, evenly bedded between 0.7 foot and 1.5 feet thick, weathers black; extremely jointed, and crushed; white calcite along some joint planes; strongly resistant. | 14 | 1801.9 |
| 88 | Covered; fragments of black, fissile, calcareous shale, and black, fissile, argillaceous limestone; <u>Styliolina</u> sp. collected loose (GSC loc. 50340). | 6 | 1787.9 |
| 87 | Limestone, black, aphanitic, irregularly medium to thick bedded, highly jointed, weathers black, also patches of light grey and pale orange staining; calcite along some joint planes. | 22 | 1781.9 |
| 86 | Covered; talus fragments of limestone, evenly thin bedded; and shale, black, fissile, coarsely costate brachiopod fragment, <u>Styliolina</u> sp. and <u>Tentaculites</u> sp. collected loose (GSC loc. 50348). | 10 | 1759.9 |
| 85 | Limestone, black, aphanitic, irregularly thick bedded, moderately resistant, weathers dark grey. | 25.5 | 1749.9 |
| 84 | Limestone, black, massive, very resistant, highly fractured, | | |

| Unit | Description | Thickness (feet) | |
|------|--|------------------|-----------|
| | | Unit | From Base |
| | fissures filled with white calcite, weathers light grey, scarp-forming. | 13 | 1724.4 |
| 83 | Limestone, argillaceous, black, aphanitic, hard, thin to medium bedded, weathers dark grey to pale orange-brown. | 15 | 1711.4 |
| 82 | Covered; talus fragments of limestone, argillaceous, black; and shale, calcareous, black, fissile. | 9.5 | 1696.4 |
| 81 | Limestone, black, aphanitic, very evenly thin bedded, fissile; with black calcareous shale partings; weathers dark grey; in places highly resistant. Bedding 098T/37N. | 11 | 1686.9 |
| 80 | Covered; fragments of shale, calcareous, black, fissile; and limestone, argillaceous, black. <u>Styliolina</u> sp. and <u>Tentaculites</u> sp. (GSC loc. 50341) collected loose 7.5 and 26 feet up. | 31 | 1675.9 |
| 79 | Limestone, silty, black, aphanitic, evenly thin bedded; and partings of shale, calcareous, black, fissile; unit weathers dark grey. | 4.5 | 1644.9 |
| 78 | Covered; talus fragments similar to unit 76. <u>Tentaculites</u> sp. (GSC loc. 50344) collected loose 4 to 6 feet up. <u>Styliolina</u> sp., <u>Tentaculites</u> sp., <u>Cytherella</u> sp., and <u>Adelphobolbina</u> ? | 70 | 1640.4 |

| Unit | Description | Thickness (feet) | |
|------|---|------------------|-----------|
| | | Unit | From Base |
| | sp. (GSC loc. 50345) collected loose 14 feet up. | | |
| | <u>Styliolina</u> sp. and <u>Tentaculites</u> sp. (GSC loc. 50349) exceedingly numerous 46 feet up. | | |
| | <u>Styliolina</u> sp. and <u>Tentaculites</u> sp. collected loose between 47 to 70 feet up (GSC loc. 50342). | | |
| 77 | Limestone, silty, black, irregular bed, with veins of white calcite, weathers very dark grey. | 0.5 | 1570.4 |
| 76 | Covered; talus fragments of shale, strongly calcareous, and limestone, strongly argillaceous, both weathering pale orange, presumably thin interbedded. | 10 | 1569.9 |
| | <u>Styliolina</u> sp. and <u>Tentaculites</u> sp. (GSC loc. 50346) collected loose at base of unit. | | |
| 75 | Limestone, black, aphanitic, hard, irregular bed, weathers dark grey and pale orange. | 1.3 | 1559.9 |
| 74 | Covered; talus fragments of shale, strongly calcareous, silty laminated, black, hard, weathers yellowish brown. | 65.5 | 1558.6 |
| | <u>Michelinoceras</u> sp. (GSC loc. 50338) collected loose 11 feet up. | | |
| | Ostracods collected loose 60 feet up and <u>Styliolina</u> sp. collected loose 62 feet up (GSC loc. 50347). | | |

| Unit | Description | Thickness (feet) | |
|------|--|------------------|-----------|
| | | Unit | From Base |
| 73 | Limestone, pale brown, with black chert lenses, weathers light grey; unit pinches and swells along strike. | 1.5 | 1493.1 |
| 72 | Covered; talus fragments of shale, strongly calcareous, black, hard, breaking into irregular platy fragments, coated with a pale yellowish orange oxidation product. | 5 | 1491.6 |
| | <u>Tentaculites</u> sp. collected loose at base of unit (GSC loc. 50337). | | |
| 71 | Limestone, medium brown, aphanitic; massive, resistant, weathers medium brownish grey. | 12 | 1486.6 |
| | Station 59NB at top of unit 71. Bedding 100T/30N. | | |
| 70 | Limestone, very slightly argillaceous, black, aphanitic, hard, conchoidally fracturing, closely spaced even parting planes, resistant, weathers banded medium grey and almost black. | 12 | 1474.6 |
| 69 | Limestone, slightly argillaceous, black, aphanitic, very hard, evenly bedded up to 0.5 foot thick, weathers medium brown. | 10 | 1462.6 |
| | Station 56NB at base of unit 69. | | |
| 68 | Covered; fragments of shale, calcareous, black; and limestone, argillaceous, black, fissile. | 17 | 1452.6 |
| 67 | Limestone, black, aphanitic, very evenly thin bedded, with lenses | | |

| Unit | Description | Thickness (feet) | |
|------|--|------------------|-----------|
| | | Unit | From Base |
| | of black chert, unit weathers light orange-brown; resistant, scarp-forming. | 5 | 1435.6 |
| 66 | Covered; fragments at top of interval of shale, calcareous, fissile, burnt a brick red. | 34 | 1430.6 |
| 65 | Limestone, argillaceous, black, aphanitic, weathers medium brown. | 1.6 | 1396.6 |
| 64 | Covered. | 4.5 | 1395 |
| 63 | Limestone, silty, argillaceous, black, even bed, weathers dark grey in lower half, pale orange in upper half. | 2.7 | 1390.5 |
| 62 | Limestone, argillaceous, black, irregularly thin bedded, weathers dark grey. | 2.7 | 1387.8 |
| 61 | Shale, calcareous, black; and a limestone bed 1 foot thick 2.6 feet up; very poorly exposed. | 8 | 1385.1 |
| 60 | Limestone, argillaceous, black, platy, weathers a laminated dark grey and pale orange, moderately resistant. | 3.5 | 1377.1 |
| 59 | Shale, calcareous, black, fissile, platy, weathers dark grey. | 10 | 1373.6 |
| 58 | Limestone, fetid, black, medium bedded, separated by black shale partings; brachiopod fragments, <u>Tentaculites</u> sp., echinoderm | | |

| Unit | Description | Thickness (feet) | |
|------|--|------------------|-----------|
| | | Unit | From Base |
| | ossicles with double and cross-like axial canals collected (GSC loc. 50363). | 4.5 | 1363.6 |
| | Bedding 085T/15N. | | |
| 57 | Shale, black, soft, with thin interbeds of limestone, strongly argillaceous, black, platy; unit weathers dark grey; poorly exposed. | 16.5 | 1359.1 |
| 56 | Limestone, slightly argillaceous, black, aphanitic, highly fractured; with thin interbeds of black shale; unit weathers pale orange-brown. | 11.5 | 1342.6 |
| 55 | Shale, calcareous, black, recessive, poorly exposed. | 5 | 1331.1 |
| 54 | Limestone, argillaceous, some silty cross-laminae, irregularly bedded up to 2 feet thick; interbedded with shale, calcareous, black, up to 0.5 foot thick, unit weathers pale orange brown; a 3-foot limestone bed 9 feet up with numerous veins of white calcite; a thin-walled small <i>Favosites</i> sp. from bed 2 feet up (GSC loc. 50352). | 16.5 | 1326.1 |
| 53 | Shale, black, fissile; interbedded with even thin beds of limestone, argillaceous and silty, black, weathering dark orange-brown. | 38 | 1309.6 |
| 52 | Limestone, argillaceous, silty laminated, black, irregularly thin to thick bedded; separated by black shale beds up to 2 inches thick; weathers dark brownish grey. | 5 | 1271.6 |

| Unit | Description | Thickness (feet) | |
|------|---|------------------|-----------|
| | | Unit | From Base |
| 51 | Limestone, black, aphanitic, soft, highly fractured, unit pinches and swells along strike, weathers medium orange-brown. | 3.5 | 1266.6 |
| 50 | Shale, silty, very dark grey, recessive, weathers very dark grey; poorly exposed. | 12.5 | 1263.1 |
| 49 | Limestone, argillaceous, black, even bed, weathers laminated light to dark grey and orange-brown. | 2.2 | 1250.6 |
| 48 | Shale, black, weathers dark grey; poorly exposed. | 3.3 | 1248.4 |
| 47 | Limestone, argillaceous, black, aphanitic, irregularly bedded, weathers dark brownish grey. | 3.4 | 1245.1 |
| 46 | Shale, calcareous, black, recessive, weathers dark grey. | 1.9 | 1241.7 |
| 45 | Limestone, argillaceous, black, rubbly bedded, weathers dark grey. | 6 | 1239.8 |
| 44 | Limestone, black, aphanitic, very hard even bed, weathers very dark brownish grey. | 1.1 | 1233.8 |
| 43 | Limestone, black, aphanitic, weathers dark brownish grey; thinly inter-bedded with black shale. | 8 | 1232.7 |
| 42 | Limestone, argillaceous, aphanitic, fairly soft, weathers medium brown; contains douvillinid?, and echinoderm ossicles with single axial canals (GSC loc. 50358). | 2.7 | 1224.7 |

| Unit | Description | Thickness (feet) | |
|------|---|------------------|-----------|
| | | Unit | From Base |
| 41 | Shale, carbonaceous, black, soft, poorly exposed. | 4.3 | 1222.0 |
| 40 | Limestone, sandy and silty in upper two-thirds of unit, very dark grey, even bed, weathers dark orange-brown. | 0.3 | 1217.7 |
| 39 | Shale similar to unit 37. | 7.5 | 1217.4 |
| 38 | Limestone, black, aphanitic, fissile, resistant, weathers very dark grey. | 4.5 | 1209.9 |
| 37 | Shale, black, very soft, recessive, weathers black. | 3.2 | 1205.4 |
| 36 | Limestone, bioclastic, black, fine- to medium-grained, even thick bed, weathers medium orange brown; contains coarsely costate pentamerid?, echinoderm ossicles with double and cross-like axial canals (GSC loc. 50630). | 3 | 1202.2 |
| 35 | Shale, black; poorly exposed. | 5 | 1199.2 |
| 34 | Limestone, bioclastic, black, medium-grained, even bed, highly resistant, weathers dark brownish grey; stromatoporoids, <u>Coenites</u> sp., and sharply costate rhynchonelloid fragments collected loose from basal part of unit (GSC loc. 50355). | 4.4 | 1194.2 |
| 33 | Shale, black, fissile, recessive; poorly exposed. | 8.6 | 1189.8 |
| 32 | Limestone, slightly argillaceous, black, aphanitic, fairly fissile, highly resistant, weathers dark grey. | 4 | 1181.2 |

| Unit | Description | Thickness (feet) | |
|------|---|------------------|-----------|
| | | Unit | From Base |
| 31 | Shale, calcareous, black, fissile, recessive, weathers very dark grey; transitional contacts. | 1.8 | 1177.2 |
| 30 | Limestone, argillaceous, black, aphanitic, weathers dark brownish grey; transitional contacts. | 7 | 1175.4 |
| 29 | Shale, carbonaceous, black; with widely separated even thin beds of limestone up to 1.5 feet thick, black, aphanitic, weathering medium orange-brown. | 25.5 | 1168.4 |
| 28 | Limestone, argillaceous, dark grey, fine grained, strongly fractured, filled with white and pale orange-weathering calcite. | 2 | 1142.9 |
| 27 | Shale, carbonaceous, black, weathers dark grey, poorly exposed; with widely spaced thin beds of limestone, argillaceous, weathers dark grey. | 28 | 1140.9 |
| 26 | Limestone, crinoidal, bioclastic, coarse grained, contains fragments of limestone, organic debris, and shale chips; irregular thick-bedded, weathers dark grey. Echinoderm ossicles with double axial canals (GSC loc. 50657). | 2 | 1112.9 |
| 25 | Shale, calcareous, black, recessive, poorly exposed; one iron sulphide nodule noted loose. | 51 | 1110.9 |
| 24 | Limestone, sandy, silty, contains granules of black chert, black, fine grained matrix, even bed, very resistant, weathers medium grey. | 1.6 | 1059.9 |

| Unit | Description | Thickness (feet) | |
|------|--|------------------|-----------|
| | | Unit | From Base |
| 23 | Shale, calcareous, black. | 28 | 1058.3 |
| 22 | Limestone, very slightly argillaceous, black, aphanitic, even thick bed, highly resistant, weathers medium grey. | 4 | 1030.3 |
| 21 | Shale, calcareous, black; poorly exposed; <u>Coenites</u> cf. <u>C. rectilineatus</u> (Simpson), * <u>Carinata</u> sp., echinoderm ossicles with double axial canals, and ostracods collected loose 29 feet up (GSC loc. 50357). | 30 | 1026.3 |
| 20 | Limestone, argillaceous, black; interbedded with shale, calcareous, black; moderately resistant. | 9.5 | 996.3 |
| 19 | Shale, strongly calcareous, black, breaks into irregular splintery fragments, weathers pale orange and dark grey; contains widely spaced thin beds up to 0.7 foot thick of black, aphanitic, argillaceous limestone. | 23 | 986.8 |
| 18 | Limestone, slightly argillaceous, black, aphanitic, massive, weathers medium brown. <u>Styliolina</u> sp. and fragmentary corals (GSC loc. 50360) collected loose. | 5 | 963.8 |
| 17 | Shale, slightly calcareous, black, platy, fairly hard, weathers dark grey. <u>Styliolina</u> sp. collected loose 3 feet up (GSC loc. 50362). | 26 | 958.8 |

| Unit | Description | Thickness (feet) | |
|------|---|------------------|-----------|
| | | Unit | From Base |
| | <u>Tentaculites sp. collected loose 16 feet up (GSC loc. 50353).</u> | | |
| 16 | Limestone, slightly argillaceous, black, medium grained, even medium bed, weathers medium brownish grey. | 1.5 | 932.8 |
| 15 | Shale, calcareous, black; very poorly exposed. | 97 | 931.3 |
| | <u>Tentaculites sp. collected loose 90 feet up (GSC loc. 50354).</u> | | |
| 14 | Limestone, argillaceous, black, medium grained, hard, even bed, weathers medium brownish grey. cf. <u>Levenea sp.</u> , other brachiopod fragments, and echinoderm ossicles with double axial canals (GSC loc. 50629) collected loose. | 4 | 834.3 |
| 13 | Shale, calcareous, black, weathers same; poorly exposed. | 18.5 | 830.3 |
| 12 | Limestone, argillaceous, silty, black, aphanitic, even thick bed, weathers medium grey to medium orange-brown; very resistant. | 5.3 | 811.8 |
| 11 | Shale, calcareous; similar to unit 9. | 25 | 806.5 |
| 10 | Limestone, strongly argillaceous, black, aphanitic, evenly thin bedded, weathers dark, and in places pale grey; transitional contacts. | 2.5 | 781.5 |
| 9 | Shale, calcareous, black, fissile, breaks into small irregular | | |

| Unit | Description | Thickness (feet) | |
|------|--|------------------|-----------|
| | | Unit | From Base |
| | fragments, weathers very dark grey; with occasional thin beds of argillaceous silty limestone. | 29 | 779 |
| 8 | Shale, black, with widely spaced thin beds of limestone, argillaceous, black, aphanitic, laminated, weathering pale to medium orange. | 33 | 750 |
| | Spiriferid fragments and echinoderm ossicles with single and double axial canals (GSC loc. 50361) collected loose at base of unit. | | |
| | Stromatoporoid, coral, coarsely costate pentamerid, <u>Plectospirifer?</u> sp., other brachiopod fragments, and echinoderm ossicles with single and double axial canals (GSC loc. 50359) collected loose 21 to 25 feet up. | | |
| 7 | Limestone, argillaceous, black, highly fissile, colour laminated on weathered surface pale to medium orange; ghost of one brachiopod seen. | 7.2 | 717 |
| 6 | Shale, black; with thin even beds of limestone similar to unit 5. | 24 | 709.8 |
| 5 | Limestone, cherty, sandy, and argillaceous, dark grey, fine grained, with rounded small pebbles of black chert, even bed, weathers orange-brown; contains cf. <u>Levenea</u> sp., cf. <u>Spinatrypa</u> sp., and <u>Styliolina</u> sp. (GSC loc. 50356). | 2.7 | 685.8 |
| 4 | Shale, black; with widely spaced thin beds of limestone, conglomeratic, | | |

| Unit | Description | Thickness (feet) | |
|------|---|------------------|-----------|
| | | Unit | From Base |
| | sandy, silty, and argillaceous, very dark grey, contains rounded pebbles of black chert, weathers pale orange. | 17.5 | 683.1 |
| 3 | Limestone, sandy, conglomeratic, very dark grey almost black, medium to very coarse grained, weathers pale orange. | 2.6 | 665.6 |
| | Station 55NB at base of unit 1. Bedding 082T/25N. | | |
| 2 | Covered with vegetation; <u>Tentaculites</u> sp. collected in loose black shale fragments dug out of slope by rodents 360 feet up. | 637 | 663 |
| | This covered interval is across a west-trending valley at the bottom of which is a small creek. The interval is presumably underlain by soft shale. | | |
| 1 | Covered with snow. | 26 | |

SILURIAN

Road River Formation (762.7 feet thick)

| | | | |
|----|--|----|-------|
| 75 | Covered with large frost heaved blocks of limestone, bioclastic, dark grey, medium grained, weathers medium grey | 26 | 762.7 |
| 74 | Covered; scattered small patches of talus fragments of shale, calcareous, black; and limestone, black, aphanitic, weathering dark grey | 60 | 736.7 |

| Unit | Description | Thickness (feet) | |
|------|--|------------------|-----------|
| | | Unit | From Base |
| | <u>Styliolina</u> sp. (GSC loc. 50579) collected loose in limestone fragment 25 feet up. | | |
| 73 | Limestone, bioclastic, black, medium to coarse grained, weathers dark grey; very poorly exposed. | 1 | 676.7 |

Section 10: LOWER PRONGS CREEK (106E-21)

Recessive Silurian rocks dip steeply northwest off the flanks of the Wernecke Mountains near Prongs Creek at 65°18'N, 135°39'-40'W. The lowest Silurian beds are best exposed in a minor flexure that repeats part of the section at 65°17'N, 135°42'W in a tributary creek of Prongs Creek, and the lowest 82 feet of strata were measured on the southwest limb of this syncline. The rest of the section was measured in Prongs Creek itself by staff and by tape in June when high water made the more resistant parts of the section inaccessible. The base of the section is a concordant contact with resistant limestones that form the gorge of Prongs Creek. Upper Ordovician fossils were collected from the top of this unit in a more accessible outcrop farther upstream on the northeast limb of the synclinal flexure where it crosses the gorge of Prongs Creek. Outcrop is poor in the upper part of the section, which ends within siliceous shales and argillites thought to be Devonian. Although exposure is mediocre the section is very important for it shows interbedding of rocks with shelly and graptolitic faunas. Trilobites, brachiopods, and graptolites have previously been described from the lowest Silurian beds by Raasch, Norford, and Wilson, 1961.

Section measured by B.S. Norford, June 18-23, 1962. Devonian fossils identified by A. W. Norris. Description of only the Devonian and immediately underlying beds is presented here.

| | |
|---------------------------|-------------------|
| LOWER AND MIDDLE DEVONIAN | |
| Prongs Creek Formation | 1212'; incomplete |
| SILURIAN | |
| Road River Formation | 702' |
| UPPER ORDOVICIAN | |
| Limestone | 25'; incomplete |

| Unit | Description | Thickness (feet) | |
|---------------------------|--|------------------|-----------|
| | | Unit | From Base |
| LOWER AND MIDDLE DEVONIAN | | | |
| | <u>Prongs Creek Formation</u> (1212 feet; incomplete) | | |
| 16 | Silty argillites, silty shales, thinly bedded argillaceous limestones, moderately recessive; outcrop of higher beds continues. | 60 | 1212 |

| Unit | Description | Thickness (feet) | |
|------|---|------------------|-----------|
| | | Unit | From Base |
| | Fossils from 0-60 up (GSC loc. 53131): | | |
| | <u>Styliolina</u> sp. | | |
| | <u>Tentaculites</u> sp. | | |
| | <u>Coleolus</u> sp. | | |
| | undet. pelecypod | | |
| | orthoconic cephalopod | | |
| | <u>Spyroceras</u> sp. | | |
| | <u>Bactrites</u> sp. | | |
| | cf. <u>Agoniatites</u> sp. | | |
| 15 | Limestones, argillaceous limestones, argillites, weather light grey and grey, slightly resistant. | 20 | 1152 |
| 14 | Shales, some silty, some calcareous, others non-calcareous, greyish black, weather dark grey and greyish black, recessive somewhat platy. Argillaceous limestones, grey, weather dull grey, bedding 1 inch to 8 inches. Cherts and cherty shales, greyish black, weather dark grey and greyish black, bedding 1/4 inch to 2 inches. Calcareous siltstones, dark grey, weather dull grey, bedding 1 foot to 3 feet; some slump structures; poorly exposed; <u>Tentaculites?</u> sp. at 20 feet up. | 209 | 1132 |
| 13 | Covered interval. | 598 | 923 |
| 12 | Shales, calcareous, greyish black, weather greyish black, very recessive, fissile; with minor calcareous argillites at base, slightly siliceous, dark grey, weather light grey, bedding 1/2 to 1 inch; barren. | 28 | 325 |

| Unit | Description | Thickness (feet) | |
|------|---|------------------|-----------|
| | | Unit | From Base |
| 11 | <p>Limestones, very finely crystalline, grey, weather grey and yellowish grey, bedding 6 to 12 inches; shale, some calcareous, greyish black, weather greyish black and platy; some limestones very fossiliferous.</p> <p>Fossils from 0-22 feet up (GSC loc. 53132):</p> <p>echinoderm ossicles with single axial canals</p> <p><u>Favosites</u> sp. <u>Tentaculites</u> sp. orthoconic cephalopod fragment cf. <u>Chonostrophia</u> sp. <u>Cymostrophia</u> sp. <u>Dalmanella?</u> sp. <u>Atrypa?</u> sp. - finely costate <u>Atrypa</u> cf. <u>A. parva</u> Hume "<u>Camarotoechia</u>" sp. leiorhynchid? fragments <u>Hysterolites</u> sp. ostracods</p> | 22 | 297 |
| 10 | <p>Shales, non-calcareous, greyish black, weather greyish black, recessive, fissile; argillaceous limestones, some siliceous, very finely crystalline, grey and dark grey, weather grey and light grey, somewhat resistant, bedding 1/2 to 1 inch; with minor bedded cherts; barren.</p> | 44 | 275 |
| 9 | <p>Shales, non-calcareous, greyish black, weather greyish black with rusty stains; argillaceous limestones, very finely crystalline to aphanitic, dark grey, weather grey and light grey, bedding 3 to 18 inches; minor limestones,</p> | | |

| Unit | Description | Thickness (feet) | |
|------|---|------------------|-----------|
| | | Unit | From Base |
| | <p>very finely crystalline, grey, weather light grey and grey, bedding 6 to 12 inches; only limestone beds fossiliferous.</p> <p>Fossils from 18-19 feet up (GSC loc. 53133):</p> <p><u>Tentaculites</u> sp. fenestellid bryozoa <u>Lingula</u> sp. strophomenacid <u>Cymostrophia</u> sp. pentamerid <u>Dalmanella</u> sp. <u>Atrypa</u> sp. <u>Spinatrypa</u> sp. spiriferid impression <u>Delthyris</u>? sp. leiorhynchid fragment "Rhynchotrema" sp. <u>Meristella</u>? sp. trilobite pygidium fragment ostrocods</p> | 24 | 231 |
| 8 | Covered interval. | 6 | 207 |
| 7 | <p>Limestones, very finely crystalline, dark grey, weather light grey, bedding 6 to 24 inches, some beds nodular; with minor shaly limestones; richly fossiliferous.</p> <p>Fossils from 8 feet up (GSC loc. 53134):</p> <p>rugose coral fragments spirally coiled gastropod fragment <u>Tentaculites</u> sp. <u>Michelinoceras</u> sp. - fragment <u>Dalmanella</u>? sp.</p> | 10 | 201 |

| Unit | Description | Thickness (feet) | |
|------|---|------------------|-----------|
| | | Unit | From Base |
| | <p><u>Dicaloesia?</u> sp. <u>Atrypa</u> sp. - large irregular, finely costate form <u>Atrypa</u> cf. <u>A. parva</u> Hume spiriferid <u>Delthyris?</u> sp. <u>Merista?</u> sp. "<u>Camarotoechia</u>" sp. rhynchonellid 'pustulose' trilobite fragments ostracods</p> | | |
| 6 | Covered interval. | 31 | 191 |
| 5 | <p>Limestones, very finely crystalline, dark grey, weather dull grey, bedding 3 to 24 inches, nodular; with minor shales; with rare chert nodules.</p> <p>Fossils from 0-1 foot up (GSC loc. 53135):</p> <p><u>Favosites</u> sp. <u>Atrypa</u> cf. <u>A. parva</u> Hume proetid tail fragment ostracod</p> | 12 | 160 |
| 4 | <p>Argillites, slightly calcareous, greyish black, weather light grey, poorly fissile; with minor limestones, some argillaceous, some bioclastic, very finely crystalline, grey and dark grey, weather grey, dull grey, dull bluish grey, yellowish grey, bedding 3 to 6 inches; unit poorly exposed; covered intervals at 51-86, 35-43, 20-25, and 0-14 feet up.</p> | 88 | 148 |

| Unit | Description | Thickness (feet) | |
|------|---|------------------|-----------|
| | | Unit | From Base |
| | Fossils from 35 feet up (GSC loc. 53136): | | |
| | rugose coral fragments fenestellid-like bryozoa fragment chonetid? <u>Cymostrophia</u> sp. cf. <u>Schellwienella</u> sp. <u>Atrypa?</u> sp. <u>Atrypa</u> cf. <u>A. parva</u> Hume <u>Spinatrypa</u> sp. - finely costate trilobite head fragments ostracods | | |
| 3 | Limestones, some bioclastic, very finely crystalline, grey, weather light grey and yellowish grey, somewhat resistant, bedding 3 to 12 inches; with minor shaly argillites. | 14 | 60 |
| 2 | Calcareous argillites with minor argillaceous limestones and shales, recessive; some contortion in bedding. | 16 | 46 |
| 1 | Covered interval. | 30 | |

SILURIAN

Road River Formation
(702 feet thick)

| | | | |
|----|--|--|--|
| 21 | Shales, non-calcareous, black, weather black, very fissile; with minor calcareous shales, greyish black, weather black and greyish black, fissile, graptolitic; with minor argillaceous limestones, some bioclastic, very finely crystalline, dark grey, weather dark grey and | | |
|----|--|--|--|

| Unit | Description | Thickness (feet) From Base |
|------|---|----------------------------------|
| | grey, bedding 1 inch to 6 inches; unit poorly exposed, covered intervals at 37-42, 23-35, and 0-18 feet up; graptolites, bra- chiopods and echinoderm frag- ments from 0-53 feet up (GSC loc. 53137). | 53 702 |

Section 11: UPPER PRONGS CREEK (106E-1)

Section is located in the northern flank of the Wernecke Mountains near the upper reaches of Prongs Creek and was measured from a point about 65°18'N, 135°44'W, just within the mountains northeastward to a point about 65°14.5'N, 135°41.5'W, one mile beyond the mountain front. The strike of the beds in the area is northwest and the dip is northeast, so that the older beds are exposed in the southwest and progressively younger beds are exposed toward the northeast. Resistant Ordovician carbonates make up the mountain front whereas shales, cherts, and sandstones form the closely spaced valleys and cuesta-like ridges beyond the mountain front where exposure is generally poor. Only the Devonian formations are described here.

Section measured by A. W. Norris, assisted by D. A. McAuslan, June 4-5, 1962.

| | |
|---------------------------|------------------|
| UPPER DEVONIAN | |
| Imperial Formation | 3726.2' |
| Canol Formation (?) | 501.5' |
| LOWER AND MIDDLE DEVONIAN | |
| Prongs Creek Formation | 1530.5' |
| SILURIAN | |
| Road River Formation | c. 700' |
| UPPER ORDOVICIAN | |
| carbonates | 476'; incomplete |
| fault contact | |

| Unit | Description | Thickness (feet) | |
|----------------|---|------------------|-----------|
| | | Unit | From Base |
| UPPER DEVONIAN | | | |
| | <u>Imperial Formation</u> (3726.2 feet thick) | | |
| 84 | Covered to bottom of slope; presumably underlain by shale. | c. 150 | 3726.2 |
| | Station 47NB located within 100 yards of the bottom of the slope and within unit 84. Beyond the edge of the slope | | |

| Unit | Description | Thickness (feet) | |
|------|---|------------------|-----------|
| | | Unit | From Base |
| | is a low-lying heavily vegetated area extending for some miles beyond. | | |
| 83 | Covered by muskeg; noted one small patch of black shale in this interval. | 52 | 3576.2 |
| 82 | Covered interval. | 144 | 3524.2 |
| | At 15 feet up and beyond, scattered patches of black shale; sandstone fragments associated with black shale at 105 feet up. | | |
| 81 | Covered interval. | 15 | 3380.2 |
| 80 | Sandstone, quartzose, fine grained, hard, salt and pepper grey, presumably thick or medium bedded, weathers light grey (wet); lithological specimen (GSC loc. 50483). | 22 | 3365.2 |
| | Present as large angular frost-heaved blocks along slope. | | |
| 79 | Shale, non-calcareous, black, breaks into very small irregular fragments; interbeds of sandstone, up to 1 foot thick, appear 10 feet up from base, quartzose, fine grained, hard, light grey. | 14 | 3343.2 |
| | Shale for microfossils (Field No. 46NB2). | | |
| 78 | Covered interval | 29 | 3329.2 |
| 77 | Shale, black; with some interbeds of sandstone, quartzose, fine grained, light grey, hard. | 7 | 3300.2 |

| Unit | Description | Thickness (feet) | |
|------|---|------------------|-----------|
| | | Unit | From Base |
| 76 | Sandstone, quartzose, fine grained, light grey, hard, thick bedded, weathers light grey; with thin interbeds of rusty brown weathering siltstone. | 13 | 3293.2 |
| 75 | Mainly black shale; with an occasional bed of sandstone, quartzose, fine grained, light grey. Shale for microfossils (GSC loc. 50645). | 19 | 3280.2 |
| 74 | Covered; talus fragments suggests black shale thinly interbedded with sandstone. | 78 | 3261.2 |
| 73 | Mainly sandstone, quartzose, fine grained, light grey, resistant, with some beds of black siltstone and minor black shale. Specimen of sandstone (GSC loc. 50482). Unit represented by frost-heaved fragments along ridge. Station 46NB at top of unit 73. | 95 | 3183.2 |
| 72 | Covered interval; talus fragments suggest sandstone interbedded with shale. | 24 | 3088.2 |
| 71 | Sandstone, quartzose, fine grained, light grey, medium bedded, weathers light grey; interbedded with siltstone in upper 20 feet of unit; present as numerous large frost-heaved blocks; specimen of typical sandstone (GSC loc. 50624). | 65 | 3064.2 |
| 70 | Sandstone, quartzose, fine grained, hard, weathers light grey (wet); | | |

| Unit | Description | Thickness (feet) | |
|------|--|------------------|-----------|
| | | Unit | From Base |
| | interbedded with black shale at 12 feet up; unit present as large frost-heaved blocks; specimen of sandstone (GSC loc. 50623). | 30 | 2999.2 |
| 69 | Covered; talus fragments of shale, black, fissile; and minor sandstone, quartzose, hard, fine grained, weathering light brownish grey. | 45 | 2969.2 |
| 68 | Covered. | 36 | 2924.2 |
| 67 | Covered; occasional patches of soft, black shale. | 8 | 2888.2 |
| 66 | Covered; occasional patches of frost-heaved fragments of sandstone, quartzose, fine grained, weathers light grey. | 18 | 2880.2 |
| 65 | Covered. | 34 | 2862.2 |
| 64 | Covered; fragments of shale, black, fissile, intermixed with small fragments of sandstone, quartzose, fine grained, weathering rusty brown; shale for microfossils from base of unit (GSC loc. 50644). | 15 | 2828.2 |
| 63 | Covered; heavily vegetated with Arctic Willow. | 25 | 2813.2 |
| 62 | Moss and lichen covered interval. | 24.5 | 2788.2 |
| 61 | Covered, trench-forming, heavily vegetated. | 45.5 | 2763.7 |
| 60 | Talus covered; scattered patches of shale, black, fissile, soft, weathers dark grey. | 14 | 2718.2 |

| Unit | Description | Thickness (feet) | |
|------|--|------------------|-----------|
| | | Unit | From Base |
| 59 | Covered. | 59.5 | 2704.2 |
| 58 | Covered; at 13 and 34 feet up frost-heaved fragments of sandstone, quartzose, fine grained, dark grey, weathering rusty brown; at 87 feet up fragments of black shale mixed with fragments of quartzose sandstone. | 87 | 2644.7 |
| 57 | Covered; at 29 and 101 feet up small patches of black shale; at 89 feet up large fragments of sandstone, quartzose, fine grained, weathering light grey. | 127 | 2557.7 |
| 56 | Covered; scattered patches of shale, silty, black, weathering rusty brown. | 15 | 2430.7 |
| 55 | Covered interval. | 22 | 2415.7 |
| 54 | Covered; small patches of shale, black, at 40 and 56 feet up; shale for microfossils from 56 feet up (GSC loc. 50643). | 59 | 2393.7 |
| 53 | Sandstone, quartzose, fine grained, light grey, weathering rusty brown; outcrops along a narrow ridge. | 5 | 2334.7 |
| 52 | Covered; scattered patches of shale, silty, black, fissile, weathering dark grey; intermixed with fragments of siltstone of same colour. | 25 | 2329.7 |
| 51 | Covered; scattered fragments of sandstone, quartzose, ferruginous, dark grey, very hard, fine grained, associated with fragments of shale, silty, black, between 20 to 39 feet up; lithological specimen (GSC loc. | | |

| Unit | Description | Thickness (feet) | |
|------|--|------------------|-----------|
| | | Unit | From Base |
| | 50619); upper 11 feet of unit consists of strongly resistant sandstone forming a pronounced ridge that is evident on air photograph; lithological specimen (GSC loc. 50481). | 51 | 2304.7 |
| | Station 45NB at top of unit 51. | | |
| 50 | Covered; fragments of black shale between 17 and 50 feet up. | 50 | 2253.7 |
| 49 | Covered; closely spaced patches of sandstone, quartzose, cherty? fine grained, black, weathering rusty brown; lithological specimen (GSC loc. 50618). | 44 | 2203.7 |
| 48 | Covered; small scattered patches of shale, non-calcareous, black; and occasional fragments of rusty brown weathering sandstone. | 43 | 2159.7 |
| 47 | Numerous fragments of sandstone, argillaceous, black, fine grained, weathering rusty orange; intermixed with fragments of shale, silty, black; and an occasional clay ironstone nodule; unit forms pronounced ridge. | 16.5 | 2116.7 |
| 46 | Covered; scattered fragments of sandstone, fine grained, black, presumably thin bedded, weathering rusty brown; intermixed with fragments of shale, silty, black, platy, and hard. | 40 | 2100.2 |
| 45 | Covered; at 2 feet up fragments of clay ironstone nodules; at 25 feet up fragments of black shale; at 40 feet up fragments of black chert. | 113 | 2060.2 |

| Unit | Description | Thickness (feet) From Base |
|------|---|----------------------------------|
| | <p>A recessive saddle-forming unit. Station 43NB at base of unit 45. Dip of beds in cuesta to west is 30 degrees in 040T direction, which is probably close to true dip of strata.</p> | |
| 44 | <p>Shale, silty and sandy, black to dark grey; mixed with a lesser amount of sandstone, quartzose, strongly ferruginous, very dark grey, fine grained, weathers rusty brown .</p> <p>Discontinuous patches of fragments down slope to creek gully .</p> | 30 1947.2 |
| 43 | <p>Covered; sparse fragments of sand- stone; also black shale fragments at about 14 feet up .</p> | 22.5 1917.2 |
| 42 | <p>Sandstone, quartzose, very fine grained, almost white; mixed with fragments of silty and sandy dark grey shale .</p> <p>Unit forms a ridge of frost heaved fragments.</p> | 14.5 1894.7 |
| 41 | <p>Covered .</p> | 16 1880.2 |
| 40 | <p>Sandstone, quartzose, fine grained, dark grey, weathers rusty brown; mixed with fragments of black shale and dark grey silty and sandy shale .</p> <p>Unit forms a ridge of frost heaved fragments.</p> | 18.5 1864.2 |
| 39 | <p>Covered trench-forming unit.</p> | 28 1845.7 |
| 38 | <p>Sandstone, quartzose, fine grained, black, cross-laminated, thin bedded, weathers dark rusty</p> | |

| Unit | Description | Thickness (feet) | |
|------|--|------------------|-----------|
| | | Unit | From Base |
| | brown; mixed with fragments of black, fissile shale; unit forms a pronounced ridge at top of a gently rounded hill. | 9 | 1817.7 |
| | Sample of typical sandstone (GSC loc. 50621); shale for microfossils (GSC loc. 50642). | | |
| 37 | Covered trench-forming unit. | 14 | 1808.7 |
| 36 | Sandstone, quartzose, ferruginous, very dark grey, cross-laminated, weathers rusty brown; mixed with a few fragments of black silty shale; unit forms a ridge of frost-heaved fragments. | 15 | 1794.7 |
| | Sample of sandstone (GSC loc. 50480). | | |
| 35 | Covered; at 17 feet up patch of shale, black, fissile, mixed with some fragments of sandstone, quartzose, ferruginous, weathers rusty brown; between 40 to 89 feet up numerous patches of fragments of sandstone, almost black, fine grained, weathers rusty brown, mixed with fragments of black shale. | 89 | 1779.7 |
| 34 | Fragments of sandstone, quartzose, highly ferruginous, fine grained, dark grey, weathers rusty brown; mixed with shale, silty, black, and an occasional rusty brown weathering clay ironstone nodule. | 34.5 | 1690.7 |
| | Unit forms a conspicuous ridge of frost-heaved fragments. Sample of sandstone (GSC loc. 50620); shale for microfossils (GSC loc. 50641). | | |

| Unit | Description | Thickness (feet) | |
|------|---|------------------|-----------|
| | | Unit | From Base |
| 33 | Covered; at 8.5 feet up fragments of black silty and sandy shale weathering light grey; at 22.5 feet up fragments of sandstone, quartzose, fine grained, dark grey, well indurated, presumably evenly medium-bedded, weathers dark grey (GSC loc. 50479); between 55 to 105.5 feet up numerous patches of ferruginous sandstone. | 105.5 | 1656.2 |
| 32 | Covered. Station 42NB at top of unit 32. | 95 | 1550.7 |
| 31 | Shale, silty and sandy, hard, black, fissile, weathers dark grey. Present as small frost-heaved fragments. | 3.5 | 1455.7 |
| 30 | Covered. | 69.5 | 1452.2 |
| 29 | Chert, black, evenly thin bedded, weathers laminated light and dark grey. Present as frost-heaved fragments. | 33 | 1382.7 |
| 28 | Shale, non-calcareous, sandy, silty, black, fissile, weathers light to dark grey; also fragments of black to dark grey laminated chert. <u>Tentaculites</u> sp. (GSC loc. 50476) collected loose at 15 feet up. Sample of shale and chert (GSC loc. 50474). Unit present as a large patch of frost-heaved fragments. | 71.5 | 1349.7 |

| Unit | Description | Thickness (feet) | |
|------|--|------------------|-----------|
| | | Unit | From Base |
| 27 | Shale, non-calcareous, sandy and silty, black, highly fissile, weathers laminated light to dark grey; from between 25 to 50 feet up shale mixed with fragments of chert, black, evenly thin bedded; unit present as discontinuous patches of fragments up slope of hill; sample of shale (GSC loc. 50473). | 50 | 1278.2 |
| 26 | Covered; at 33 feet up a small patch of fragments of shale, black, fissile, weathering light grey. | 44 | 1228.2 |
| 25 | Covered; scattered patches of shale, non-calcareous, black, fissile, weathers light to medium grey; mixed with fragments of chert, black, thin bedded, weathering medium grey. | 25 | 1184.2 |
| 24 | Covered; fragments of chert, black to light grey, evenly thin bedded, laminated, from about 6 to 12.5 feet up chert mixed with fragments of shale, silty, laminated light to dark grey, fissile, platy, weathers same. Sample of chert (GSC loc. 50472). | 12.5 | 1159.2 |
| 23 | Shale, black, fissile, platy, weathers dark grey; present as frost-heaved fragments on steep south-facing slope; sample for microfossils (GSC loc. 50640). | 27.5 | 1146.7 |
| 22 | Covered; at 38.5 feet up small patch of fragments of shale, non-calcareous, sandy and silty, black, fissile | | |

| Unit | Description | Thickness (feet) | |
|------|---|------------------|-----------|
| | | Unit | From Base |
| | (GSC loc. 50475); at 46 feet up a patch of fragments of shale, colour laminated light to dark grey. | 84 | 1119.2 |
| 21 | Covered; interval across a valley; wet spongy muskeg and a thick cover of spruce trees; between 307 to 389 feet up small patches of fragments of shale, silty, black, fissile, weathering dark grey. | 389 | 1035.2 |
| 20 | Covered; a few fragments of very fine grained sandstone in this interval. | 145 | 646.2 |
| 19 | Covered; between 55 to 105 feet up discontinuous patches of fragments of sandstone, argillaceous and silty, fine grained, black, presumably thin bedded, weathers rusty brown; mixed with minor black silty shale fragments. | 105 | 501.2 |
| 18 | Covered; an occasional fragment of sandstone, laminated, very dark grey to black, weathers rusty brown; between 107 to 137 feet patches of shale, silty, black, mixed with fragments of sandstone, very fine grained, weathering rusty brown; sample of silty shale and sandstone (GSC loc. 50622). | 137 | 396.2 |
| 17 | Sandstone, quartzose, fine grained, dark grey, weathers rusty brown; unit represented by low closely spaced ridges of frost-heaved fragments; sample of sandstone (GSC loc. 50478). | 55 | 259.2 |

Station 41NB at top of unit 17.

| Unit | Description | Thickness (feet) | |
|------|---|------------------|-----------|
| | | Unit | From Base |
| 16 | Sandstone, similar to unit 17 above; unit present as closely spaced patches of frost-heaved fragments (GSC loc. 50477). | 45 | 204.2 |
| 15 | Sandstone, very fine grained, black, weathers rusty brown; also some small fragments of black shale; unit present as scattered patches. | 7.9 | 159.2 |
| 14 | Covered. | 4.7 | 151.3 |
| 13 | Sandstone, very fine grained, faintly colour laminated, very dark grey to black, weathers rusty brown; present as frost-heaved fragments. | 1.8 | 146.6 |
| 12 | Covered. | 7.2 | 144.8 |
| 11 | Covered; scattered loose fragments of siltstone, very dark grey, hard, thin bedded, weathers rusty brown. | 3.1 | 137.6 |
| 10 | Covered. | 8.5 | 134.5 |
| | Station 40NB at base of unit 10. | | |
| 9 | Covered interval across a closely spaced series of ridges and trenches; occasional patches of fragments of shale, siltstone, and fine grained sandstone. | 103 | 126 |
| 8 | Shale, silty, dark grey, fissile, weathers pale orange; with thin interbeds of sandstone, ferruginous, dark grey, fine grained, weathers pale orange; unit shows as light grey on air photograph. | 23 | |

| Unit | Description | Thickness (feet) | |
|--|---|------------------|-----------|
| | | Unit | From Base |
| <u>Canol Formation (?)</u> (501.5 feet thick) | | | |
| 7 | Fragments of shale, non-calcareous, black, fissile, mixed with sandstone, quartzose, ferruginous cement, weathers orange-brown; and an occasional nodule of clay ironstone; between 19 to 70 feet, shale - 60%, sandstone - 40%; between 71 to 124 feet, sandstone - 70%, shale - 25%, clay ironstone nodules - 5%. | 124 | 501.5 |
| 6 | Covered; at 9 feet up fragments of clay ironstone nodules; at 15 feet up fragments of silty shale and clay ironstone nodules; at 35 feet up fragments of sandstone, shale, and clay ironstone nodules. | 65 | 377.5 |
| 5 | Covered; scattered patches of shale, silty, and sandy, dark grey, weathers rusty brown; mixed with fragments of sandstone, fine grained, weathering orange-brown, at 28 feet up; mixed with clay ironstone fragments at 40 feet up. | 115 | 312.5 |
| 4 | Covered; scattered patches of fragments of sandstone, quartzose, ferruginous cement, fine grained, medium brown, weathers rusty brown; mixed with fragments of clay ironstone nodules at 34 feet up. | 74 | 197.5 |
| 3 | Covered; at 27 feet up fragments of rusty orange-weathering clay ironstone; at 35 feet up fragments of sandstone, quartzose, ferruginous, fine grained, medium brown, weathers rusty brown. | 35 | 123.5 |

| Unit | Description | Thickness (feet) | |
|--|--|------------------|-----------|
| | | Unit | From Base |
| 2 | Covered; scattered patches of numerous fragments of shale, silty, blocky, hard, weathers medium grey; mixed with fragments of orange-weathering clay ironstone nodules. | 45 | 88.5 |
| 1 | Covered; at 29 feet up fragments of shale, silty, dark grey, chunky habit; associated with fragments of rusty orange weathering clay ironstone nodules. | 43.5 | |
| | Arbitrary contact between Prongs Creek Formation below and Canol Formation (?) above. | | |
| LOWER AND MIDDLE DEVONIAN | | | |
| <u>Prongs Creek Formation</u> (1530.5 feet thick) | | | |
| 26 | Covered interval across a shallow valley; at 15 feet up black chert fragments; between 30 and 45 feet up fragments of shale, non-calcareous, black, highly friable; at 101 feet up patches of fragments of shale, silty, black, weathers medium grey, chunky habit, and small fragments of clay ironstone nodules. | 101 | 1530.5 |
| 25 | Covered; fragments of shale, non-calcareous, black, fissile; mixed with chert, black, evenly thin bedded, weathers medium bluish grey. | 102 | 1429.5 |
| | Station 53NB at top of unit 25 at north edge of knoll in saddle. Knoll probably underlain by resistant chert. | | |

| Unit | Description | Thickness (feet) | |
|------|---|------------------|-----------|
| | | Unit | From Base |
| 24 | Covered; scattered patches of fragments of shale, non-calcareous, black, hard, platy, fissile, weathers medium grey; associated with fragments of silty shale near top of unit. | 44 | 1327.5 |
| 23 | Covered; at 69 and 99 feet up fragments of shale, strongly silty and sandy, non-calcareous, fissile, platy, weathers medium slate grey; shale for microfossils (GSC loc. 50617) from 99 feet up. | 148 | 1283.5 |
| 22 | Covered. | 5 | 1135.5 |
| 21 | Mainly covered; scattered patches of shale, non-calcareous, black, fissile, hard, platy, weathers light to medium grey; associated with fragments of chert, light to dark grey, thin bedded; at 25 feet up, limestone bed, 1 foot thick, black, weathers light grey. A few * <u>Tentaculites</u> sp. collected loose (GSC loc. 50656). | 28 | 1130.5 |
| 20 | Covered with moss and lichen. | 29 | 1102.5 |
| 19 | Covered with small trees. | 38 | 1073.5 |
| 18 | Fragments of shale, non-calcareous, black, fissile; mixed with fragments of chert, black, thin bedded; <u>Tentaculites</u> sp., and goniatite? impression collected loose (GSC loc. 50659) 11 feet up; <u>Tentaculites</u> sp. collected loose (GSC loc. 50616) 15 feet up. | 55 | 1035.5 |
| 17 | Covered, at 15 feet up fragments of limestone, argillaceous, black, | | |

| Unit | Description | Thickness (feet) | |
|------|--|------------------|-----------|
| | | Unit | From Base |
| | aphanitic, evenly thin bedded, weathers dark grey. | 25 | 980.5 |
| 16 | Limestone, dark grey, aphanitic, thinly interbedded with dark grey to black chert. | 21 | 955.5 |
| 15 | Covered; two moss-covered trenches separated by a low ridge. | 21 | 934.5 |
| 14 | Limestone, argillaceous, pale grey, aphanitic, evenly thin bedded, weathers light grey; with thin lenses of black chert. | 30 | 913.5 |
| 13 | Covered; a moss-covered trench, which crosses crest of hill. | 9 | 883.5 |
| 12 | Covered; fragments of shale, calcareous, black, fissile, weathers dark grey. | 55 | 874.5 |
| 11 | Covered interval, thickly vegetated with Arctic Willow. | 15 | 819.5 |
| 10 | Covered; scattered fragments of shale, slightly calcareous, very dark grey to black, fissile, platy, weathers dark grey. | 13.5 | 804.5 |
| | Station 51NB at top of unit 10; traversed westward along strike to line up with a saddle connecting with ridge to north. Continued measuring up section from station 52NB. | | |
| 9 | Shale, slightly calcareous, dark brownish grey, fissile, platy, weathers light to medium brownish grey; with thin interbeds of dark bluish grey chert. | 110 | 791 |

| Unit | Description | Thickness (feet) | |
|------|--|------------------|-----------|
| | | Unit | From Base |
| | Unit poorly exposed. <u>Tentaculites</u> sp. numerous (GSC loc. 50331). | | |
| 8 | Shale, calcareous, dark grey to black, fissile, platy, hard, weathers pale to dark brown; an occasional bed of chert, dark bluish grey; also a few thin beds of limestone, laminated light to medium grey, aphanitic; poorly exposed; arbitrary cut-off. | 98 | 681 |
| | <u>Tentaculites</u> sp. (GSC loc. 50660) from 13 feet up. | | |
| | * <u>Chonetes</u> sp., * <u>Tentaculites</u> sp., and echinoderm ossicles with double axial canals (GSC loc. 50335) from 29 feet up. | | |
| | <u>Styliolina</u> sp., and echinoderm ossicles with double and cross-like axial canals (GSC loc. 50364) from top of unit. | | |
| 7 | Covered; fragments of limestone, strongly argillaceous, black, thin bedded, weathers dark grey, containing numerous <u>Tentaculites</u> sp. (Field No. 50NBe); associated with fragments of shale, black, and dark brownish grey, fissile, thin bedded; and an occasional nodule of black chert. | 86 | 583 |
| | Echinoderm ossicles with double axial canals collected loose in calcareous vuggy shale fragments (GSC loc. 50655) from 34 feet up. | | |
| | Goniatite? impression (GSC loc. 50333) from 86 feet up. | | |

| Unit | Description | Thickness (feet) | |
|------|--|------------------|-----------|
| | | Unit | From Base |
| 6 | Covered; fragments of shale, black, fissile, platy, weathering dark brownish grey. <u>Lingula</u> sp. and <u>Tentaculites?</u> sp. (GSC loc. 50332) in shale fragments from 10 feet up. <u>Coleolus?</u> sp., and <u>Styliolina</u> sp. (GSC loc. 50658) collected loose between 14 to 18 feet up. | 55.5 | 497 |
| 5 | Covered; fragments of shale, black, fissile, weathering dark brownish grey; associated with fragments of silty shale, and argillaceous limestone. <u>Michelinoceras?</u> sp. (GSC loc. 50661) collected loose. | 13.5 | 441.5 |
| 4 | Covered. | 10 | 428 |
| 3 | Covered; fragments of shale, non-calcareous, medium brown, weathers light brownish grey; mixed with fragments of limestone, argillaceous, dark brownish grey, thin bedded; one fragment of mudstone, strongly calcareous, highly porous (GSC loc. 50335) noted 6 feet up, containing echinoderm ossicles with double axial canals. | 22.5 | 418 |
| 2 | Covered; at 35.5 feet up fragments of limestone, silty and sandy, black, aphanitic, weathers very dark grey; containing stromatoporoid fragments, <u>Atrypa?</u> sp., and echinoderm ossicles with single and double axial canals (GSC loc. 50330). | 45.5 | 395.5 |

| Unit | Description | Thickness (feet) | |
|------|---|------------------|-----------|
| | | Unit | From Base |
| 1 | Covered interval across north side of valley and up south-facing slope on north side of stream gully; at 345 feet up fragments of limestone, black, fine grained, weathering very dark grey; at 350 feet up fragments of shale, non-calcareous, hard, containing * <u>Coleolus?</u> sp. (GSC loc. 50662). | 350 | |

SILURIAN

Road River Formation (?)
(c. 700 feet thick)

| | | | |
|---|---|--------|--|
| 1 | Covered interval across a heavily vegetated valley is 1050 feet thick, of which the lower 700 feet is probably underlain by beds of the Road River Formation. Estimate of thickness is based on section 106E-21 located nearby where the Road River Formation is exposed. | c. 700 | |
|---|---|--------|--|

Section 12: ANTICLINE SIX MILES WEST OF CLEAR CREEK (116H-5)

Section was measured across the north limb of an anticlinal fold about 6 miles west of Clear Creek from a point about 65°24'N, 136°12.8'W near the axis of the fold northward to a point about 65°24.8'N, 136°12.8'W. Resistant Upper Ordovician carbonates are exposed in the core of the uplift and less resistant shales, cherts, and sandstones are poorly exposed in the flanks.

Section measured by A. W. Norris, assisted by A. J. Jenik, May 21-22, 1962.

| | |
|----------------------------|--------------------|
| MISSISSIPPIAN? or YOUNGER? | 1392' |
| UPPER DEVONIAN | |
| Imperial Formation | 1851' |
| LOWER AND MIDDLE DEVONIAN | |
| Prongs Creek Formation | 991' |
| SILURIAN? | |
| Road River Formation? | <u>c.</u> 390' |
| UPPER ORDOVICIAN | |
| Carbonates | 499.5'; incomplete |

| Unit | Description | Thickness (feet) | |
|------|-------------|------------------|-----------|
| | | Unit | From Base |

MISSISSIPPIAN? OR YOUNGER?

(1392 feet; incomplete)

| | | | |
|----|---|----|------|
| 12 | Sandstone, quartzose, medium grey, white and translucent, very fine grained, very hard, irregularly medium bedded, weathers very light grey and pale orange-brown; interbedded with black shale; flow cast structures present towards top (GSC loc. 50535). | 65 | 1392 |
|----|---|----|------|

Sample of sandstone (GSC loc. 50639 & 50534).

| Unit | Description | Thickness (feet) | |
|------|--|------------------|-----------|
| | | Unit | From Base |
| | Station 8NB at top of unit 12 at about 65°24.8'N, 136°12.8'W. | | |
| 11 | Fragments of shale, black, fissile; with thin beds of black silty shale; and fragments of sandstone, light grey and light brown, very fine grained, weathering light brown. | 65 | 1327 |
| | Shale for microfossils at 47 feet up (GSC loc. 50638). | | |
| 10 | Muskeg and snow covered interval; at 35 and 45 feet up small patches of black shale; a patch of black shale associated with minor fragments of sandstone at 304 feet up; shale for microfossils from 304 feet up (Field No. 7NBa). | 314 | 1262 |
| | Station 7NB at top of unit 10. | | |
| 9 | Covered; closely spaced patches of fragments of shale, black, soft, weathering medium to dark grey; also some fragments of sandstone, dark grey, laminated, fine grained; and an occasional fragment of clay ironstone nodule weathering rusty orange. | 115 | 948 |
| | Shale for microfossils from near base of unit (GSC loc. 50635). | | |
| | Shale for microfossils from 95 feet up (GSC loc. 50637). | | |
| 8 | Mainly covered, but with linear and irregular ridges of frost-heaved fragments in line with strike of | | |

| Unit | Description | Thickness (feet) | |
|------|--|------------------|-----------|
| | | Unit | From Base |
| | bedrock, of sandstone, dark grey, fine grained; and shale, black, weathering to a medium brown clay. | 123 | 833 |
| | Shale for microfossils from top of unit (GSC loc. 50636). | | |
| 7 | Covered with snow down a north-facing slope. | 405 | 710 |
| 6 | Covered; fragments of granule sandstone, weathering light grey. | 179 | 305 |
| 5 | Sandstone, medium grey, medium grained, rubbly thin bedded, weathers light grey, poorly exposed. | 15 | 126 |
| 4 | Sandstone, conglomeratic, quartzose, medium grey, contains rounded pebbles of black chert, milky white and grey chert, and feldspar?, fairly evenly thin bedded, much less resistant than unit below, unit weathers very light grey. | 19 | 111 |
| | Lithological specimen (GSC loc. 50533). | | |
| 3 | Thickly interbedded medium and coarse granule sandstone, lithology somewhat similar to unit 2. | 22 | 92 |
| | Bedding 100T/42N at top of unit. | | |
| 2 | Sandstone, quartzose, light grey, fine grained, hard, medium bedded; interbedded with sandstone, light grey, coarse granule size, irregularly thick bedded, weathers light grey. | 20 | 70 |

| Unit | Description | Thickness (feet) | |
|--|--|------------------|-----------|
| | | Unit | From Base |
| | Sample of granule sandstone (GSC loc. 50531). | | |
| 1 | Sandstone, very hard almost a quartzite, very fine grained, medium bedded, weathers light grey; interbedded with thick layers of sandstone, granule, and conglomeratic, cross-laminated on a large scale, containing an occasional nodule of clay ironstone, some of which show septarian structure, and weather a light orange-brown. | 50 | |
| | Nodules containing poorly preserved woody tissue (GSC loc. 50532). | | |
| | Station 6NB at base of unit 1. This resistant sandstone unit is easily seen on air photograph. | | |
| UPPER DEVONIAN | | | |
| <u>Imperial Formation</u> (1851 feet thick) | | | |
| 26 | Covered; a patch of clay, dark grey, sticky, weathers dark grey, similar to unit 25; sample for microfossils (GSC loc. 50634); associated with fragments of sandstone, dark grey, very fine grained, very hard, weathering rusty orange-brown; sample of sandstone showing flow casting (GSC loc. 50536). | 545 | 1851 |
| 25 | Clay, medium grey, sticky (wet), weathers medium grey; sample for | | |

| Unit | Description | Thickness (feet) | |
|------|--|------------------|-----------|
| | | Unit | From Base |
| | microfossils (GSC loc. 54546); also loose fragments of shale, silty, very dark grey, platy, hard, fissile, weathering medium grey. | 8 | 1306 |
| | Station 5NB at base of unit 25. | | |
| 24 | Covered; small patches of fragments of sandstone, dark grey, medium grained, weathering rusty orange-brown, at 18, 28, and 53 feet up. | 63 | 1298 |
| | Sandstone fragments with plant stem impressions (GSC loc. 50528). | | |
| 23 | Covered; patches of fragments of sandstone, dark grey, fine grained, weathering rusty brown, at 35 and 83 feet up; fragments of sandstone associated with fragments of black silty shale at 95 and 115 feet up. | 125 | 1235 |
| 22 | Covered; closely spaced patches of sandstone, quartzose, dark grey and rusty brown, fine grained, weathers rusty brown; also fragments showing layers up to one inch thick of granule sandstone; sample of sandstone (GSC loc. 50530). | 55 | 1110 |
| 21 | Covered. | 8 | 1055 |
| 20 | Covered; fragments of sandstone, quartzose, black, fine grained, granular, weathers rusty brown; associated with fragments of black shale and black silty shale. | 8 | 1047 |

| Unit | Description | Thickness (feet) | |
|------|---|------------------|-----------|
| | | Unit | From Base |
| 19 | Covered; small patch of sandstone fragments at 30 feet up. | 60 | 1039 |
| 18 | Covered; fragments of sandstone, rusty brown, fine to medium grained; associated with fragments of chert pebble conglomerate weathering rusty brown; some fragments of black fissile shale, and minor fragments of black siltstone. | 35 | 979 |
| 17 | Covered. | 47 | 944 |
| 16 | Covered; scattered patches of fragments of sandstone, quartzose, dark grey, very fine grained, presumably thin bedded, weathers dark grey and rusty brown (GSC loc. 50529); mixed with fragments of shale, black, soft, fissile. | 28 | 897 |
| 15 | Covered; patches of fragments of sandstone, very fine grained, weathers brown, at 70 and 103 feet up. | 118 | 869 |
| 14 | Covered with snow. | 23 | 751 |
| 13 | Sandstone, quartzose, very fine grained, conglomeratic, containing rounded pebbles of black chert (GSC loc. 50526); interbedded with shale, black, soft, fissile. | 60 | 728 |
| | Station 4NB at top of unit 13 on the south edge of a prominent step, which appears as a dark band on air photograph. | | |
| 12 | Covered. | 14 | 668 |

| Unit | Description | Thickness (feet) | |
|------|--|------------------|-----------|
| | | Unit | From Base |
| 11 | <p>Covered; scattered patches of fragments of sandstone, conglomeratic, laminated medium to brownish grey, very fine grained, weathering rusty brown, containing pebbles of black chert and white quartz; mixed with fragments of shale, black, fissile, weathering medium brown.</p> <p>Plant stem impressions in fragments of sandstone at 45 feet up (GSC loc. 50527).</p> | 60 | 654 |
| 10 | <p>Shale, black, soft, fissile, weathers brown, poorly exposed; numerous loose fragments of sandstone, quartzose, dark grey, fine grained, very hard, weathering rusty brown; also some fragments of chert pebble conglomerate.</p> <p>Sample of sandstone and conglomerate from top of unit (GSC loc. 50525).</p> <p>Shale for microfossils from top of unit (GSC loc. 50633).</p> <p>Bedding 095T/36N.</p> | 163 | 594 |
| 9 | <p>Shale, black, soft, weathers medium brown; interbedded with thin layers of sandstone, black, very fine grained, weathers medium brown; and siltstone, black, weathers medium brown.</p> <p>Shale for microfossils (GSC loc. 50632).</p> <p>Plant stem impressions in sandstone and siltstone (GSC loc. 50524).</p> | 50 | 431 |

| Unit | Description | Thickness (feet) | |
|------|---|------------------|-----------|
| | | Unit | From Base |
| | Station 3NB at top of unit 9. | | |
| 8 | Covered by snow. | 14 | 381 |
| 7 | Shale, black, soft, fissile, weathering to a clay, poorly exposed; loose fragments of brown clay ironstone nodules; an occasional loose fragment of sandstone, conglomeratic, brown, coarse grained, very hard, weathering medium brown, contains pebbles of black chert. | 19 | 367 |
| | Shale for microfossils (GSC loc. 50631). | | |
| | Sample of conglomeratic sandstone (GSC loc. 50523). | | |
| | Bedding 095T/30N. | | |
| 6 | Covered by snow. | 74 | 348 |
| 5 | Covered; numerous scattered patches of fragments of sandstone, very fine grained; very small fragments of shale, black; and clay ironstone nodules, weathering rusty brown. | 40 | 274 |
| | Sample of clay ironstone nodule (GSC loc. 50522). | | |
| 4 | Covered; scattered patches of fragments of black shale containing <u>Tentaculites?</u> sp. (GSC loc. 50520); and medium brown sandstone; brown laminated clay ironstone nodules; and a single slab of conglomeratic sandstone containing rounded pebbles of black chert and grey and brown chert at 15 feet up. | 35 | 234 |

| Unit | Description | Thickness (feet) | |
|---|---|------------------|-----------|
| | | Unit | From Base |
| | Sample of conglomeratic sandstone (GSC loc. 50537). | | |
| 3 | Covered by snow and muskeg. | 110 | 199 |
| 2 | Covered; loose fragments of shale, black, platy. | 14 | 89 |
| 1 | Shale, black, platy, highly fissile, weathers medium grey; poorly exposed in gentle saddle; a complete absence of chert. | c. 75 | |
| LOWER AND MIDDLE DEVONIAN | | | |
| <u>Prongs Creek Formation</u> (991 feet thick) | | | |
| 29 | Covered by snow. | 10 | 991 |
| 28 | Shale, non-calcareous, black, highly fissile, laminae up to 1/3 inch thick, weathers medium grey; an occasional bed of chert up to 1 inch thick. | 65 | 981 |
| | Lithological specimen (GSC loc. 50519). | | |
| | Chert with indeterminate markings from top of unit (GSC loc. 50521). | | |
| | Station 2NB at top of unit 28. | | |
| 27 | Covered with lichen, and snow; loose fragments of black shale at 10 and 23 feet up. | 28 | 916 |
| 26 | Shale, non-calcareous, black, fissile, weathers medium grey; chert absent; very poorly exposed. | 40 | 888 |

| Unit | Description | Thickness (feet) | |
|------|---|------------------|-----------|
| | | Unit | From Base |
| | Shale for microfossils (GSC loc. 50518). | | |
| 25 | Covered. | 24 | 848 |
| 24 | Shale, siliceous, hard, black, very thinly bedded, highly fissile, weathers medium grey; interbedded with chert, black, in even beds up to 3 inches thick; thin fissures of white carbonate mineral parallel to bedding planes. | 10 | 824 |
| | Lithological specimen (GSC loc. 50517). | | |
| 23 | Chert, black, hard, conchoidally fracturing, even beds up to 3 inches thick; poorly exposed. | 55 | 814 |
| | Lithological specimen (GSC loc. 50516). | | |
| 22 | Covered by vegetation and snow. | 55 | 759 |
| 21 | Limestone, strongly argillaceous, black, highly fissile, platy, weathers light grey; interbedded with shale, strongly calcareous, black; poorly exposed; contains <u>Tentaculites</u> sp. (GSC loc. 50515). | 30 | 704 |
| | Typical lithologies (GSC loc. 50515). | | |
| 20 | Covered; fragments of limestone similar to unit 19 at 15 feet up; <u>Tentaculites</u> sp. collected loose (Field No. 1NBa). | 35 | 674 |

| Unit | Description | Thickness (feet) | |
|------|---|------------------|-----------|
| | | Unit | From Base |
| 19 | Limestone, strongly fetid, fine grained, granular, irregularly thin to medium bedded, weathers medium grey; highly resistant; contains scattered lenticular nodules and layers of black chert; some ostracods present (GSC loc. 50514). | 35 | 639 |
| | This unit underlies the sharp edge of the cuesta. Bedding 090T/47N. | | |
| | Station 1NB at top of unit 19. | | |
| 18 | Covered. | 6 | 604 |
| 17 | Limestone, black, fine grained, medium bedded, with interbeds of silty limestone, weathers medium to dark grey; silty layers with highly irregular laminae. | 18 | 598 |
| | Typical lithology (GSC loc. 50436). | | |
| 16 | Limestone, very dark grey, evenly thin to medium bedded, weathers light to medium grey; an occasional layer of black chert; poorly exposed. | 47 | 580 |
| 15 | Limestone, strongly fetid, almost black, fine grained, evenly thin to medium bedded, weathers medium brown to light grey; some interbeds of black chert up to 3 inches thick. | 36 | 533 |
| 14 | Covered. | 28 | 497 |
| 13 | Shale, strongly calcareous, silty, dark brownish grey, irregularly fissile, weathers dark grey; poorly exposed; <u>Bactrites</u> ? sp. (GSC loc. 50627). | 28 | 469 |

| Unit | Description | Thickness (feet) | |
|------|--|------------------|-----------|
| | | Unit | From Base |
| 12 | Limestone, banded light and dark grey, dark beds strongly argillaceous, fairly evenly thin to medium bedded, weathers light to medium grey; interbedded with shale, strongly calcareous, fissile; one limestone bed contains numerous echinoderm ossicles with double axial canals. * <i>Chonetes</i> ? sp., echinoderm ossicles with single and *double axial canals (GSC loc. 50430). | 10 | 441 |
| 11 | Shale, strongly calcareous, moderately silty, black, fissile, platy, weathers medium grey. | 42 | 431 |
| 10 | Covered; talus fragments of shale, strongly calcareous, black, irregularly fissile, weathers medium grey. | 16 | 389 |
| 9 | Limestone, with some dark grey silty laminae, medium grey, medium grained, medium bedded; an occasional thin bed of black chert; unit very poorly exposed. Echinoderm ossicles with *single and *double axial canals collected loose 42 feet up (GSC loc. 50435). | 60 | 373 |
| 8 | Shale, strongly calcareous, slightly silty, dark grey, evenly thin bedded, weathers medium grey; poorly exposed; sponge? spicules, <i>Tentaculites</i> sp., <i>Bactrites</i> ? sp., and * <i>Agoniatites</i> ? sp. collected from lower 45-foot interval (GSC loc. 50433). | 63 | 313 |

| Unit | Description | Thickness (feet) | |
|------|--|------------------|-----------|
| | | Unit | From Base |
| 7 | Shale, calcareous, black, fissile, platy, weathers medium grey; * <u>Tentaculites</u> sp., and * <u>goniatites</u> collected 24 feet up (GSC loc. 50434). | 75 | 250 |
| 6 | Covered. | 17 | 175 |
| 5 | Shale, with silty laminae, calcareous, black, platy, weathers medium grey; very poorly exposed. | 26 | 158 |
| 4 | Limestone, strongly argillaceous, crinoidal, dark grey, aphanitic, platy, weathers medium grey; contains echinoderm ossicles with double and cross-like axial canals in basal beds (GSC loc. 50432). Bedding 090T/40N. | 11 | 132 |
| 3 | Covered. | 10 | 121 |
| 2 | Shale, increasingly silty towards top, black to dark grey, weathers medium grey; <u>Tentaculites</u> sp. and plant impression near base of unit (GSC loc. 50428); <u>Tentaculites</u> sp. and * <u>goniatite</u> from 10 feet up (GSC loc. 50425); and * <u>Styliolina</u> sp., * <u>Tentaculites</u> sp. and <u>Bactrites?</u> sp. from between 20 and 30 feet up (GSC loc. 50426). | 30 | 111 |
| 1 | Covered; fragments of shale, calcareous, black, fissile, weathers very dark grey; <u>Tentaculites</u> sp. and <u>Bactrites?</u> sp. from 22 feet up (GSC loc. 50431); <u>Styliolina</u> sp., <u>Tentaculites</u> sp., and <u>goniatites</u> from 37 feet up (GSC loc. 50429); plant impression, * <u>Coleolus</u> | | |

| Unit | Description | Thickness (feet) | |
|--|---|------------------|-----------|
| | | Unit | From Base |
| | <p>sp., and *goniatite from 55 feet up (GSC loc. 50427); indet. parallel markings, <u>Styliolina</u> sp., <u>Tentaculites</u> sp., <u>Bactrites?</u> sp. and *goniatite at base of unit (GSC loc. 50628).</p> | 81 | |
| | <p>Stations 11NB and 12NB on north side of valley and east and west respectively of small creek gully at base of unit 1.</p> | | |
| <p>SILURIAN?</p> | | | |
| <p><u>Road River Formation?</u> (c. 390 feet thick)</p> | | | |
| 1 | Covered interval across a valley. | c. 390 | |
| <p>UPPER AND MIDDLE ORDOVICIAN</p> | | | |
| <p><u>Limestone and Dolomite Unit</u> (499.5 feet; incomplete)</p> | | | |
| 30 | <p>Limestone, dark grey, irregularly medium bedded, weathers medium grey; contains thin irregular layers of black chert, and a rich silicified fauna.</p> | 21 | 499.5 |
| | <p>Fossils from base of unit: cf. <u>Aulacera</u> sp., cf. <u>Streptelasma</u> sp., <u>Palaeofavosites</u> sp., <u>Catenipora</u> cf. <u>C. rubra</u> Sinclair and Bolton (GSC loc. 50499).</p> | | |
| | <p>Fossils from 15 feet up: cf. <u>Aulacera</u> sp., stromatoporoid, <u>Palaeofavosites</u> 2 spp., <u>Catenipora</u> cf. <u>C. rubra</u> Sinclair and Bolton (GSC loc. 50501).</p> | | |

| Unit | Description | Thickness (feet) | |
|------|-------------|------------------|-----------|
| | | Unit | From Base |

Fossils from 21 feet up: stromatoporoids, cf. Streptelasma sp., favositid coral, Catenipora sp. (GSC loc. 50500).

Fossils collected loose on dip slope at top of unit: cf. Streptelasma sp., cf. Manipora sp.

The above fauna indicates a Late Ordovician age according to B. S. Norford.

Station 10NB at top of unit 30 on the south side of valley. Bedding 085T/40N.

Description of lower beds measured, here omitted.

Section 13: LOWER PORCUPINE RIVER (1160-7)

River bluffs form the outcrop (67°34'N, 138°10'W) on the north bank of the Porcupine River 7 miles above its junction with the Driftwood River. The section was measured by staff and by tape in early August when low water allowed examination of beach outcrop below the bluffs. A pronounced angular unconformity separates recessive Silurian and Devonian rocks from two resistant, synclinal, Permian outcrops. The base of the section is the lowest bed presently exposed beneath the unconformity, the top of the Devonian is the highest bed locally exposed beneath the unconformity, and the top of the section is against a fault beyond which outcrop is lacking.

Summary of section measured by B. S. Norford, assisted by U. Upitis, August 3, 1962. Devonian fossils identified by A. W. Norris.

| | |
|---------------------------|------------------|
| PERMO-PENNSYLVANIAN | 517'; incomplete |
| Angular unconformity | |
| LOWER AND MIDDLE DEVONIAN | |
| Prongs Creek Formation | 212' |
| SILURIAN | |
| Road River Formation | 238'; incomplete |

| Unit | Description | Thickness (feet) | |
|------|-------------|------------------|-----------|
| | | Unit | From Base |

PERMO-PENNSYLVANIAN

(517 feet; incomplete)

- 1 Conglomerates, weather light brown-grey, with subangular to rounded fine pebbles to coarse cobbles that include chert and tabulate corals, with siliceous sandstone matrix, amounting to 30 per cent of rock at base and becoming preponderant above, bedding 2 to 6 inches at base, 2 to 3 feet above. Basal 10 inches, clay, very light brown and off-white, weathers very light yellow-grey, very recessive,

| Unit | Description | Thickness (feet) From Base |
|---|---|----------------------------------|
| | contains 5 percent of randomly scattered, rounded chert pebbles and angular plates of brown, weathered shale similar to that of unit 3. | 9 |
| | Lower contact of unit 1 is an angular unconformity, discordance is variable but 71 degrees locally. Unit 1 rests on units 1 and 3 of the Prongs Creek Formation in adjacent outcrops. Shales of unit 3 are weathered dull brown against the surface of the contact. | |
| LOWER AND MIDDLE DEVONIAN | | |
| <u>Prongs Creek Formation</u> (212 feet thick) | | |
| 3 | Cherts, variably argillaceous, dull dark grey and grey-black, weather dull dark grey, and grey with red-brown, yellow-brown, and light yellow stains, recessive, bedding 1/2 inch to 1 1/2 inches; interbedded shales, non-calcareous, grey-black, weather dark grey, recessive, poorly to moderately fissile, barren; covered intervals at 15-21, 24-26, 27-30, 33-40, 77-101, and 102-103 feet; contact with unit 2 concordant, picked at first appearance of chert; higher beds referable to unit 3 outcrop to the east beyond the Permo-Pennsylvanian outcrops. | 103 212 |

| Unit | Description | Thickness (feet) | |
|------|-------------|------------------|-----------|
| | | Unit | From Base |

SILURIAN AND DEVONIAN

Road River Formation (238 feet thick), and
Prongs Creek Formation (109 feet)

- 2 Shales, calcareous, non-siliceous, grey-black and dark grey, weather grey-black with off-white mineral dusting, recessive, fissility poor to excellent (paper-shale); with rare calcareous argillites in upper part, poorly fissile, dark grey, weather dark grey, bedding 1/2 inch to 2 inches; two thin beds (1/2 and 1 inch) of calcareous chert at 68 feet up; covered intervals at 0-49, 78-88, 93-108, 118-122; Tentaculites (?) sp. present throughout, Monograptus below 69 feet up, brachiopods and straight cephalopods above 127 feet up.

178

Fossils from 141 feet up (GSC loc. 53254):

Tentaculites sp. - numerous
leiorhynchid - crushed specimen
indet. brachiopod

The Silurian-Devonian contact is arbitrarily drawn at 69 feet up immediately above highest occurrence of monograptids.

SILURIAN

Road River Formation

- 1 Shale, non-calcareous, grey-black, weather dark grey, recessive,

| Unit | Description | Thickness (feet) From Base |
|------|---|----------------------------------|
| | fissility moderate to good; with about 15 per cent cherty argillite at 11-20 feet up; an 8-inch bed of soft, non-fissile black argillite at 87 feet up; covered intervals at 20-27, 35-44, 57-63, 127-138, 149-150, 157-162 feet up; monograptids common more or less throughout. | 169 |

Section 16: NORTHERN OGILVIE MOUNTAINS ABOUT ONE MILE EAST OF HART RIVER (116H-11)

Section is located in the northern Ogilvie Mountains about one mile east of Hart River and was measured up the north slope and part way down the south slope of an east-trending mountain ridge at about 65°27.5'N, 137°00'W. The upper part of the Silurian Road River Formation is exposed towards the bottom of the north slope of the ridge and is overlain up the slope by the Devonian Michelle and Ogilvie Formations. The exposed beds strike about 085T and dip between 40 and 45 degrees south. Only the Devonian Formations are described here.

Section measured by A. W. Norris, assisted by A. J. Jenik, June 1-2, 1962.

| | |
|---------------------------|------------------|
| MIDDLE DEVONIAN | |
| Ogilvie Formation | 615' |
| MIDDLE DEVONIAN AND OLDER | |
| Michelle Formation | 380' |
| SILURIAN | |
| Road River Formation | 852'; incomplete |

| Unit | Description | Thickness (feet) | |
|------|-------------|------------------|-----------|
| | | Unit | From Base |

MIDDLE DEVONIAN

Ogilvie Formation
(615 feet thick)

- 47 Limestone, crinoidal, very dark grey, massive, highly resistant, rubbly weathering, weathers light grey; beds contain large echinoderm ossicles with single axial canals, echinoderm ossicles with double and cross-like axial canals (GSC loc. 50368); cup coral, Alveolites sp., cf. Paracyclas sp., echinoderm ossicles with single axial canals, double axial canals, and cross-like

| Unit | Description | Thickness (feet) | |
|------|---|------------------|-----------|
| | | Unit | From Base |
| | axial canals from top 3 feet of unit, large cf. <u>Paracyclas</u> sp. fragments from 2 feet from top (GSC loc. 50367). | 18 | 615 |
| | Station 39NB at top of unit 47 part way down south-facing dip slope of mountain ridge. Bedding 090T/42S. | | |
| 46 | Covered by vegetation. | 20 | 597 |
| 45 | Limestone, crinoidal, fetid, dark brownish grey, nodular thin-bedded, resistant, weathers light grey; beds contain cf. <u>Paracyclas</u> sp., and echinoderm ossicles with double and cross-like axial canals (GSC loc. 50370). | 3 | 577 |
| 44 | Covered by vegetation. | 9 | 574 |
| 43 | Limestone, medium brown, aphanitic, thin bedded, weathers light grey; interbedded with recessive, fissile, argillaceous limestone of same colour; small stromatoporoids, echinoderm ossicles with single and double axial canals present in upper beds (GSC loc. 50371). Bedding 090T/35S. | 12 | 565 |
| 42 | Limestone, medium brown, fine grained, irregularly medium bedded, resistant, weathers light grey. Lithological specimen (GSC loc. 50366). | 4.5 | 553 |

| Unit | Description | Thickness (feet) | |
|------|---|------------------|-----------|
| | | Unit | From Base |
| 41 | Mainly covered; 1 foot of argillaceous limestone in sight. | 4.5 | 548.5 |
| 40 | Limestone, crinoidal, dark grey, irregularly medium bedded, weathers light grey; poorly exposed. | 4 | 544 |
| 39 | Covered by vegetation. | 7 | 540 |
| 38 | Limestone, medium brownish grey, fine-grained, evenly medium bedded, separated by very thin argillaceous limestone beds, resistant, weathers light grey. | 6.5 | 533 |
| 37 | Similar to unit 35. | 1.5 | 526.5 |
| 36 | Limestone, medium brown, fairly evenly thin bedded, resistant, weathers light grey. | 5 | 525 |
| 35 | Limestone, argillaceous, medium brown, very thin bedded, fissile, recessive, weathers light grey. | 2 | 520 |
| 34 | Limestone, medium brown, aphanitic, very evenly medium bedded, scarp-forming, weathers medium (bluish) grey; lithological specimen from 3 feet up (GSC loc. 50377). | 19 | 518 |
| | Top of this unit forms the crest of mountain ridge; units above measured down the dip slope. Bedding 090T/45S. | | |
| 33 | Dolomite, strongly calcareous, medium brown, aphanitic, evenly medium bedded, weathers medium grey. | 8.5 | 499 |

| Unit | Description | Thickness (feet) | |
|------|--|------------------|-----------|
| | | Unit | From Base |
| 32 | Covered. | 4.5 | 490.5 |
| 31 | Dolomite, slightly calcareous, pale brown, fine grained, even bed, weathers light grey. | 1 | 486 |
| 30 | Covered; talus fragments of calcareous dolomite. | 18 | 485 |
| 29 | Dolomite, slightly calcareous, pale brown, fine grained, even bed, poorly exposed. | 4 | 467 |
| 28 | Covered. | 16 | 463 |
| 27 | Dolomite, calcareous, pale brown, fine-grained, evenly thick bedded, weathers light brown and light grey; white coarse calcite replacement in some beds. | 15 | 447 |
| 26 | Limestone, dolomitic, pale grey, evenly thin bedded, recessive, weathers light grey. | 4 | 432 |
| 25 | Limestone, dolomitic, very pale brown, fine grained, evenly thick bedded, moderately resistant, weathers light grey. | 23 | 428 |
| | Lithological specimen (GSC loc. 50376). | | |
| 24 | Covered. | 3 | 405 |
| 23 | Dolomite, calcareous, pale brown, very fine grained, evenly very thick bedded, well exposed but not a cliff-former, weathers light grey. | 29 | 402 |

| Unit | Description | Thickness (feet) | |
|------|---|------------------|-----------|
| | | Unit | From Base |
| 22 | Dolomite, strongly calcareous, pale brown, very fine grained, evenly medium bedded, moderately resistant, weathers pale grey. | 18 | 373 |
| 21 | Dolomite, calcareous, recessive, poorly exposed, presumably similar to unit 20. | 24 | 355 |
| 20 | Dolomite, slightly calcareous, pale grey; strongly jointed; irregular masses of white coarsely crystalline calcite in some beds; poorly exposed. Bedding 089T/40S. | 28 | 331 |
| 19 | Dolomite, calcareous, pale brown, fine grained, evenly very thick bedded to massive, resistant, weathers light grey. Lithological specimen (GSC loc. 50375). | 18 | 303 |
| 18 | Limestone, pale brownish grey, very fine grained, massive but highly jointed, weathers light grey and pale brownish grey. | 12 | 285 |
| 17 | Dolomite, slightly calcareous, very pale grey, very fine grained, evenly thick bedded to massive, more resistant than unit below, weathers pale brownish grey; weathered markings on surface suggestive of <u>Amphipora</u> sp. | 42 | 273 |
| 16 | Covered. | 1 | 231 |

| Unit | Description | Thickness (feet) | |
|------|---|------------------|-----------|
| | | Unit | From Base |
| 15 | Dolomite, very slightly calcareous, pale brown, very fine grained, evenly thick bedded, highly fractured, weathers pale brownish grey. Lithological specimen (GSC loc. 50374). | 17 | 230 |
| 14 | Covered; talus fragments similar to unit 13. | 3 | 213 |
| 13 | Dolomite, slightly calcareous, pale grey, very fine grained, very evenly thick bedded, weathers pale yellowish grey. | 19 | 210 |
| 12 | Poor exposure; lithology similar to unit 11. | 15.5 | 191 |
| 11 | Dolomite, pale grey, aphanitic, evenly bedded up to 2.5 feet thick, weathers pale yellowish grey; lithological specimen (GSC loc. 50373). | 27 | 175.5 |
| 10 | Covered. | 3 | 148.5 |
| 9 | Limestone, dolomitic, mottled pale greenish grey and light grey, thin to medium bedded, weathers pale yellowish grey; in places faintly colour laminated. | c. 20 | 145.5 |
| 8 | Covered. | 12 | 125.5 |
| 7 | Limestone, pale brownish grey, fine grained, massive, resistant, weathers light grey. This is the top of the lower resistant beds so conspicuous on air photographs. | 13 | 113.5 |

| Unit | Description | Thickness (feet) | |
|------|--|------------------|-----------|
| | | Unit | From Base |
| 6 | Limestone, with argillaceous limestone partings, which thicken towards top, medium grey, fine grained, evenly thick bedded up to 2 feet thick, resistant, weathers light grey. Bedding 085T/40S. | 8 | 100.5 |
| 5 | Limestone, medium grey, rubbly bedded in lower part and thicker bedded towards top, weathers light grey; numerous stromatoporoids present in lower beds. | 10 | 92.5 |
| 4 | Limestone, argillaceous, dark grey, fine grained, massive, but rubbly weathering, weathers dark brownish grey; recessive; numerous stromatoporoids present (Field No. 38NBg). | 6 | 82.5 |
| 3 | Limestone, light brownish grey, fine grained, massive but irregularly fractured, weathers medium brownish grey; contains numerous stromatoporoids, some cup corals, and <u>Alveolites</u> sp. (GSC loc. 50365); cup corals and <u>Favosites</u> sp. collected loose (GSC loc. 50625), | 12 | 76.5 |
| 2 | Limestone, dark grey, evenly thick bedded to massive, resistant, but less so than unit below, weathers brownish grey; contains numerous stromatoporoids and echinoderm ossicles with single axial canals, fossils collected at 18 feet up (GSC loc. 50372). <u>Receptaculites</u> sp. seen in place. | 22 | 64.5 |

| Unit | Description | Thickness (feet) | |
|---|---|------------------|-----------|
| | | Unit | From Base |
| 1 | Limestone, dark grey, fine grained, massive, to very thick bedded towards top, very resistant, scarp-forming, weathers light to medium grey; <u>Alveolites</u> sp. from base of unit (GSC loc. 50369) stromatoporoid cup coral, and echinoderm ossicles with double axial canals collected loose 20 feet up (GSC loc. 50366); cup corals collected loose 34 feet up (GSC loc. 50378). | 42.5 | |
| | Station 38NB at base of unit 1 on south slope of mountain ridge. | | |
| MIDDLE DEVONIAN AND OLDER | | | |
| <u>Michelle Formation</u> (380 feet thick) | | | |
| 19 | Talus covered; talus fragments suggest interval underlain by interbedded black shale and nodular and thick bedded argillaceous limestone weathering pale orange. | 66 | 380 |
| | Cup coral fragment, <u>Gypidula</u> sp., and <u>Atrypa</u> sp. (GSC loc. 50307) collected loose. | | |
| | Station 37NB at top of unit 18 and one-half mile east of station 38NB. Bedding 100T/44S taken on basal beds of overlying unit. Large cup corals and brachiopod traces from base of overlying unit (GSC loc. 30635). | | |
| 18 | Talus covered; lithology presumably similar to unit 17; large cup coral, | | |

| Unit | Description | Thickness (feet) | |
|------|---|------------------|-----------|
| | | Unit | From Base |
| | colonial coral, <u>Chonetes?</u> sp., and <u>Michelinoceras</u> sp. collected loose (GSC loc. 50308). | 30 | 314 |
| 17 | Covered; talus fragments mainly of black shale and a few of argillaceous limestone; cup coral, <u>Levenea</u> sp., <u>Schizophoria</u> sp., <u>Atrypa</u> cf. <u>A. arctica</u> Warren, and echinoderm ossicles with single axial canals from lower part of interval (GSC loc. 50306); cup corals, <u>Chonetes</u> sp. L, * <u>Schizophoria</u> sp., * <u>Dalmanella</u> sp., *costate pentamerid, large * <u>Gypidula?</u> sp., <u>Atrypa</u> sp., * <u>Atrypa</u> cf. <u>A. parva</u> Hume, <u>Michelinoceras</u> sp., trilobite fragments, cf. <u>Kloedenella</u> sp., and echinoderm ossicles with single axial canals from upper part of interval (GSC locs. 50297 and 50303). | 33 | 284 |
| 16 | Covered; talus fragments of black shale and thin beds of black, nodular, argillaceous limestone; * <u>Receptaculites</u> sp., cup corals, <u>Thamnopora?</u> sp., <u>Gypidula</u> sp., douvillinid, * <u>Levenea?</u> sp., * <u>Schizophoria</u> sp., * <u>Carinatina</u> sp., and * <u>Atrypa</u> sp. collected loose (GSC loc. 50302). | 18 | 251 |
| 15 | Shale, black, soft, fissile, with thin to medium nodular beds of black, argillaceous limestone; very poorly exposed; a rich fauna collected loose: <u>Receptaculites</u> sp., cup corals, <u>Chonetes</u> sp., douvillinid, * <u>Schizophoria</u> sp., <u>Levenea</u> sp., very large <u>Gypidula</u> sp., <u>Delthyris?</u> | | |

| Unit | Description | Thickness (feet) | |
|------|--|------------------|-----------|
| | | Unit | From Base |
| | <u>sp.</u> , <u>Warrenella sp.</u> , <u>Styliolina sp.</u> , <u>Tentaculites sp.</u> , and <u>Bactrites sp.</u> (GSC locs. 50300 and 50305). | 39 | 233 |
| 14 | Limestone, argillaceous, black, nodular bedded, weathers pale orange. | 2.5 exposed | 194 |
| 13 | Covered; cup coral fragment, * <u>Schuchertella sp.</u> , * <u>Schizophoria sp.</u> , <u>Levenea sp.</u> , * <u>Atrypa cf. A. parva Hume</u> , and <u>Warrenella sp.</u> collected loose (GSC loc. 50299). | 12 | 191.5 |
| 12 | Limestone, argillaceous, black, nodular, resistant, with thin, black, soft, shale partings; contains cup corals, <u>Favosites sp.</u> , * <u>Atrypa sp.</u> , and ostracods (GSC loc. 50297). | 6 | 179.5 |
| 11 | Shale, black, fissile, very soft, with thin even and nodular beds of limestone, argillaceous, weathering orange-brown; cup coral, auloporida, * <u>douvillina</u> , * <u>Levenea sp.</u> , * <u>Schizophoria sp.</u> , <u>Chonetes sp.</u> , leptaenid, * <u>Atrypa sp.</u> , * <u>Warrenella sp.</u> , * <u>Nematopora sp.</u> , * <u>Dechenellurus sp.</u> , <u>Otarion sp. C.</u> , and cf. <u>Libumella sp.</u> (GSC loc. 50298) collected loose at base of unit; cup corals, <u>Favosites sp.</u> , * <u>Schizophoria sp.</u> , * <u>Levenea? sp.</u> , <u>douvillina</u> , * <u>Atrypella? sp.</u> , and <u>Atrypa sp.</u> collected loose from upper part of interval (GSC loc. 50301). | 29 | 173.5 |
| 10 | Limestone, argillaceous, dark grey, medium nodular bedded, very hard, weathers pale orange; coral fragments present in basal bed. | 12 | 144.5 |

| Unit | Description | Thickness (feet) | |
|------|--|------------------|-----------|
| | | Unit | From Base |
| | Stromatoporoid collected loose (GSC loc. 50296); <u>Receptaculites</u> sp. collected loose near base of unit (Field No. 36NBn); *douvillinid, <u>Schizophoria</u> sp., <u>Levenea</u> sp., <u>Chonetes</u> sp., <u>Atrypa</u> sp., and <u>Warrenella</u> sp. collected from upper 6 feet of unit (GSC loc. 50304). | | |
| 9 | Limestone, black, medium nodular bedded, interbedded with thin layers of black shale; cup coral, douvillinid, * <u>Chonetes</u> sp. L, very large * <u>Gypidula</u> sp., <u>Atrypa</u> sp., <u>Warrenella</u> sp., cf. <u>Paracyclas</u> sp., <u>Styliolina</u> sp., and ostracods (GSC loc. 50295). | 8 | 132.5 |
| 8 | Limestone, black, hard, nodular, thick bedded, resistant, weathers medium brown; contains * <u>Chonetes</u> sp. L, and <u>Tentaculites</u> sp. (GSC loc. 50294). | 10 | 124.5 |
| 7 | Limestone, argillaceous?, splashes of marcasite, thin to medium bedded; with black shale partings; limestone beds weather medium brown. | 12 | 114.5 |
| 6 | Talus covered; fragments of black shale and thin beds of black argillaceous limestone; <u>Alveolites</u> sp., <u>Coenites</u> sp., * <u>Dalmanella?</u> sp., <u>Douvillina</u> sp., <u>Chonetes</u> sp. L, pentamerid, * <u>Carinatina?</u> sp., <u>Atrypa</u> sp., <u>Warrenella?</u> sp., <u>Tentaculites</u> sp., * <u>Dechenellurus</u> sp. B, and <u>Leonaspis</u> sp. collected loose (GSC loc. 50292); Age: Emsian. | c. 30 | 102.5 |

| Unit | Description | Thickness (feet) | |
|------|---|------------------|-----------|
| | | Unit | From Base |
| 5 | Talus covered where measured, clean exposure nearby is cliff-forming and inaccessible; unit consists of shale, black; interbedded with limestone, argillaceous, black, weathering medium rusty brown; large pentamerid collected loose at base of unit (Field No. 36NBg); * <u>Receptaculites</u> sp., * <u>Chonetes</u> sp. L, * <u>Atrypa</u> sp., and echinoderm ossicles collected loose 4 feet up (GSC loc. 50290). | 10 | 72.5 |
| 4 | Limestone, argillaceous, black, fissile, thinly interbedded with black soft shale; brachiopods collected loose 12 feet up (GSC loc. 50289). | 18 | 62.5 |
| 3 | Limestone, black, hard, evenly thick bedded, with a few black shale partings; contains crinoid ossicles and fragmentary brachiopod remains. | 10.5 | 44.5 |
| 2 | Limestone, strongly argillaceous, black, evenly thick bedded, breaks into irregular fragments, weathers medium brownish grey; interbedded with thin layers of black fissile shale; <u>Schizophoria</u> sp. and <u>Atrypa?</u> sp. from base of unit (GSC loc. 50286); douvillinid? collected loose (GSC loc. 50287); * <u>Tentaculites</u> sp., <u>Michelinoceras</u> sp., <u>Cornuproetus</u> sp., <u>Dechenellurus</u> sp. B, <u>Leonaspis</u> sp., <u>Otarion</u> sp. C, <u>Ozarkodina denckmanni</u> Ziegler (conodont), ostracods, and echinoderm ossicles | | |

| Unit | Description | Thickness (feet) | |
|---|--|------------------|-----------|
| | | Unit | From Base |
| | with single axial canals from 6 feet up (GSC loc. 50288); Age: Emsian. | 16 | 34 |
| 1 | Shale, strongly calcareous, black, highly resistant, inaccessible where exposure is clean. | | |
| | Cup coral, <u>Coenites</u> cf. <u>C. rectilineatus</u> (Simpson), <u>Favosites</u> sp., <u>Atrypa</u> sp., <u>Atrypa</u> cf. <u>A. parva</u> Hume, ribbed gastropod, and echinoderm ossicles with single axial canals, collected loose (GSC loc. 50310). | | |
| | | | c. 18 |
| SILURIAN | | | |
| <u>Road River Formation</u> (852 feet; incomplete) | | | |
| 18 | Shale, black, soft, recessive. | 8 | 852 |
| | <u>Spinatrypa</u> sp. collected loose in limestone fragment derived from above (GSC loc. 50285). | | |
| 17 | Shale, carbonaceous, black, containing thin beds of yellowish orange weathering ochre and alum; <u>Styliolina</u> sp., <u>Tentaculites</u> sp. collected loose 30 feet up (GSC loc. 50284). | 46 | 844 |
| 16 | Shale, carbonaceous, black, very soft, poorly exposed. | 42 | 798 |
| 15 | Shale, carbonaceous, jet black, soft, but slightly more resistant than unit 14; scattered thin layers up to 2 inches thick of green and orange weathering alum and ochre. | 23 | 756 |

Section 17: NORTHERN OGILVIE MOUNTAINS ABOUT ONE MILE EAST OF
HART RIVER (116H-9)

Section is located in the northern Ogilvie Mountains about one mile east of Hart River and was measured up the north slope of a cuesta-like mountain ridge at about 65°25.2'N, 137°06'W. The uppermost part of the Silurian Road River Formation, and overlying Devonian Michelle and Ogilvie Formations are exposed along the ridge. Beds in the ridge strike 085T and dip between 40 and 45 degrees south.

Section measured by A. W. Norris, assisted by A. J. Jenik, May 30, 1962.

| | |
|---------------------------|----------------|
| MIDDLE DEVONIAN | |
| Ogilvie Formation | 1138' |
| MIDDLE DEVONIAN AND OLDER | |
| Michelle Formation | 375.5' |
| SILURIAN | |
| Road River Formation | 8'; incomplete |

| Unit | Description | Thickness (feet) | |
|--|--|------------------|-----------|
| | | Unit | From Base |
| MIDDLE DEVONIAN | | | |
| <u>Ogilvie Formation</u> (1138 feet thick) | | | |
| <u>Thinly Bedded Light Grey</u> <u>Weathering Limestone</u> | | | |
| <u>Unit</u> (64 feet thick) | | | |
| 39 | Limestone, silty, pale brown, very thin bedded, platy, fissile, beds up to 0.5 inch thick, weathers medium grey. | c. 50 | 1138 |
| | Lithological specimen (GSC loc. 50336). | | |

| Unit | Description | Thickness (feet) | |
|---|---|------------------|-----------|
| | | Unit | From Base |
| | Unit 39 present as fragments on dip slope (north-facing) of mountain ridge. Dark grey weathering and pinkish red (burnt) shales underlie valley to the south. | | |
| 38 | Limestone, black, aphanitic, hard, evenly thin bedded, weathers light grey; as beds capping dip slope of ridge. | <u>c.</u> 10 | 1088 |
| | Station 34NB at top of unit 38 on south side of peak of mountain ridge. Bedding 070T/40S. | | |
| 37 | Covered. | 4 | 1078 |
| <p><u>Resistant Light Grey</u> <u>Weathering Limestone</u></p> <p>Unit (638 feet thick)</p> | | | |
| 36 | Limestone, pale brown, coarse-grained, bioclastic, containing very numerous corals; <u>Alveolites</u> sp., <u>Favosites</u> sp., <u>Warrenella</u> sp., <u>Tentaculites</u> sp., and echinoderm ossicles with single axial canals (GSC loc. 50270). | 17 | 1074 |
| 35 | Covered; talus fragments similar to unit 34 but rubbly thin bedded. | 19 | 1057 |
| 34 | Limestone, crinoidal, pale brown, bioclastic, coarse grained, friable, massive, weathers light grey. | 25 | 1038 |
| 33 | Limestone, pale brown, medium-grained, very thick bedded to | | |

| Unit | Description | Thickness (feet) | |
|------|---|------------------|-----------|
| | | Unit | From Base |
| | massive, resistant, scarp-former, weathers light grey; rugose corals and brachiopods from top of unit (GSC loc. 50321); <u>Gypidula</u> sp. and echinoderm ossicles with double axial canals from base of unit (GSC loc. 50283). | 30 | 1013 |
| 32 | Limestone, recessive, weathers light grey; poorly exposed. | 2 | 983 |
| 31 | Limestone, crinoidal, black, coarse-grained, friable, massive, resistant cliff-former, weathers light grey. | 38 | 981 |
| 30 | Limestone, medium brown, fine-grained, granular, medium bedded, weathers medium grey. | 36 | 943 |
| 29 | Covered by vegetation. | 36 | 907 |
| 28 | Limestone, pale brown, fine grained, massive, very resistant, even parting planes 2 to 4 feet apart, weathers pale grey, contains <u>Alveolites</u> sp. and another colonial coral (GSC loc. 50313). | 66 | 871 |
| 27 | Limestone, dark grey, fine grained, evenly medium bedded, becoming thick bedded and massive towards top, resistant, weathers medium to dark grey; silicified <u>Aulopora</u> sp. and echinoderm ossicles with double axial canals (GSC loc. 50267). | 55 | 805 |
| 26 | Covered. | 4 | 750 |
| 25 | Limestone, crinoidal, black, fine grained, evenly medium bedded, weathers dark grey; poorly exposed; | | |

| Unit | Description | Thickness (feet) | |
|------|---|------------------|-----------|
| | | Unit | From Base |
| | echinoderm ossicles with double axial canals, and cup coral from top of unit (GSC loc. 50266). | 26 | 746 |
| 24 | Covered. | 12 | 720 |
| 23 | Limestone, pale brown, medium grained, granular, even bed, weathers light grey. | 3 | 708 |
| 22 | Covered with vegetation. | 10 | 705 |
| 21 | Limestone, crinoidal, medium brown, medium grained, granular, recessive in lower part, more resistant upwards, weathers light grey; stromatoporoid and cup coral collected loose (GSC loc. 50264). | 10 | 695 |
| 20 | Limestone, black, fine grained, massive, resistant, highly fractured, weathers light grey; coral, douvillinid, <u>Atrypa?</u> sp., <u>Warrenella</u> cf. <u>W. franklini</u> (Meek), and <u>Conocardium</u> sp. collected from between 0 and 40 feet up (GSC loc. 50262); <u>Phillipsastrea</u> sp., <u>Atrypa</u> sp., <u>Warrenella</u> cf. <u>W. franklini</u> (Meek), and echinoderm ossicles with double axial canals collected 62 feet up (GSC loc. 50263). | 72 | 685 |
| 19 | Limestone, dark grey, aphanitic, recessive, poorly exposed. | 22 | 613 |
| 18 | Covered by vegetation. | 8 | 591 |
| 17 | Limestone, black, fine grained, massive but rubbly and nodular weathering, weathers medium grey; echinoderm ossicles with double axial canals collected loose (GSC loc. 50259). | 40 | 583 |

| Unit | Description | Thickness (feet) | |
|---|--|------------------|-----------|
| | | Unit | From Base |
| 16 | Covered; cup corals, * <u>Gypidula</u> sp., * <u>Atrypa</u> sp., <u>Warrenella?</u> sp., and echinoderm ossicles with double axial canals collected loose (GSC loc. 50260). | 12 | 543 |
| 15 | Limestone, black, fine grained, thick bedded to massive, moderately resistant, weathers light grey. | 12 | 531 |
| 14 | Limestone, very dark grey, evenly thick bedded, fine grained, weathers medium grey; poorly exposed; <u>Alveolites</u> sp., <u>Favosites</u> sp., and silicified echinoderm ossicles with double axial canals collected loose at 8 feet up (GSC loc. 50257). | 35 | 519 |
| 13 | Limestone, pale brown, aphanitic, massive, resistant, weathers light grey; stromatoporoids and corals seen in basal beds of unit but these could not be extracted from tough matrix; <u>Alveolites</u> sp., rugose corals, and <u>Atrypa</u> sp. collected loose 6 feet up (GSC loc. 50256); <u>Alveolites</u> sp., <u>Trachypora</u> sp., and echinoderm ossicles with double axial canals collected loose from top of unit (GSC loc. 50314). | 48 | 484 |
| <u>Light Grey Weathering</u> <u>Recessive Limestone</u> <u>Unit</u> (261 feet thick) | | | |
| 12 | Limestone, crinoidal, fetid, very dark grey, massive, parting planes 6 to 10 | | |

| Unit | Description | Thickness (feet) | |
|------|---|------------------|-----------|
| | | Unit | From Base |
| | feet apart, weathers light grey; rugose corals collected 4 feet up (GSC loc. 50275). | 18 | 436 |
| 11 | Limestone, dark grey, fine grained, massive, parting planes about 6 feet apart, weathers light grey. Bedding 085T/40S. | 34 | 418 |
| 10 | Limestone, dark grey, fine grained, evenly thick bedded, weathers medium grey; poorly exposed; contains scattered stromatoporoids, <u>Alveolites</u> sp., and ostracods (GSC loc. 50254). | 28 | 384 |
| 9 | Limestone, fetid, pale brown, aphanitic, massive, weathers medium grey; <u>Alveolites</u> sp., <u>Trachypora</u> sp., and echinoderm ossicles with double axial canals from 8 feet up (GSC loc. 50278); rugose coral and echinoderm ossicles with double axial canals collected loose 3 feet up (GSC loc. 50312). | 12 | 356 |
| 8 | Limestone, dark grey, fine grained, very thick bedded to massive, weathers medium grey; poorly exposed; numerous <u>Amphipora</u> sp. in bed 14 feet up; planispiral gastropod collected loose 26 feet up (GSC loc. 50281). | 28 | 344 |
| 7 | Covered; ostracods collected loose 12 feet up; and <u>Favosites</u> sp. collected loose 34 feet up (GSC loc. 50250). | 38 | 316 |
| 6 | Limestone, pale brown, fine grained, massive, weathers light grey; contains <u>Hexagonaria</u> sp., brachiopod traces, and ostracod fragments (GSC loc. 50278) | 7 | 278 |

| Unit | Description | Thickness (feet) | |
|---|--|------------------|-----------|
| | | Unit | From Base |
| 5 | Covered; talus fragments of limestone, medium brown, medium grained, medium? bedded, weathers light grey; <u>Coenites?</u> sp. and small cup coral collected loose 48 feet up (GSC loc. 50563); <u>Hexagonaria</u> sp. collected loose 54 feet up (GSC loc. 50245); colonial coral, and echinoderm ossicles with single, double, and cross-like canals collected loose at 74 feet up (GSC loc. 50247). | 96 | 271 |
| <p><u>Massive Light Grey Weathering Dolomite Unit</u></p> <p>(175 feet thick)</p> | | | |
| 4 | Limestone, dolomitic, pale brown, aphanitic, very hard, massive, weathers light grey; large rugose coral collected from base of unit (GSC loc. 50271). | 42 | 175 |
| 3 | Dolomite, very light grey, fine grained, massive but recessive weathering, weathers light grey. | 20 | 133 |
| 2 | Dolomite, slightly calcareous, pale brown, aphanitic, massive, highly fractured, weathers light grey; contains numerous silicified stromatoporoids, some fragmentary rugose corals (GSC loc. 50273); <u>Spinatrypa?</u> sp. collected loose 15 feet up (GSC loc. 50265). | 47 | 113 |
| 1 | Dolomite, pale brown, fine grained, massive, very strongly resistant, weathers light grey; contains | | |

| Unit | Description | Thickness (feet) | |
|---|---|------------------|-----------|
| | | Unit | From Base |
| | numerous stromatoporoids and a few corals (GSC loc. 50269); fossils silicified but poorly preserved. | 66 | |
| MIDDLE DEVONIAN AND OLDER | | | |
| <u>Michelle Formation</u> (375.5 feet thick) | | | |
| 24 | Dolomite, slightly calcareous, dark brownish grey, fine grained, evenly medium bedded, weathers medium brownish grey. Bedding 095T/45S. | 13 | 375.5 |
| 23 | Limestone, dolomitic, black, evenly bedded between 0.5 to 1 foot thick, weathers medium brownish grey; stromatoporoids and <u>Favosites</u> sp. present 3 feet up (GSC loc. 50268). | 27 | 362.5 |
| 22 | Covered. | 8 | 335.5 |
| 21 | Limestone, strongly dolomitic, black, aphanitic, massive, irregularly jointed, weathers medium brownish grey; <u>Receptaculites</u> sp., <u>Coenites</u> sp., and echinoderm ossicles with single axial canals collected from 29 feet up (GSC loc. 50272); <u>Coenites</u> sp. and <u>Favosites</u> sp. collected loose at 29 feet up (GSC loc. 50280). | 33 | 327.5 |
| 20 | Dolomite, black, fine grained, granular, hard, resistant, weathers medium brown; contains rugose corals and <u>Atrypa</u> sp. (GSC loc. 50265). | 16 | 294.5 |

| Unit | Description | Thickness (feet) | |
|------|---|------------------|-----------|
| | | Unit | From Base |
| 19 | Covered. | 4 | 278.5 |
| 18 | Dolomite, black, fine grained, very hard, evenly bedded between 0.8 foot and 1.5 feet thick, highly resistant, weathers light brown; large cup corals and <u>Coenites rectilineatus</u> (Simpson) collected loose (GSC loc. 50282). | 15 | 274.5 |
| 17 | Covered. | 16 | 259.5 |
| 16 | Limestone, slightly silty, and dolomitic, in lower beds, black, evenly thick bedded, irregularly jointed, fairly resistant, weathers brownish grey; irregular masses of white coarsely crystalline calcite. | 6 | 243.5 |
| 15 | Limestone, dolomitic, slightly sandy, black, hard, irregularly very thick bedded, resistant, weathers medium brown; contains a few crinoid remains. | 10 | 237.5 |
| 14 | Limestone, similar to unit 13 but thinner bedded and recessive, poorly exposed; <u>Tentaculites</u> sp., and <u>Michelinoceras</u> sp. collected loose (GSC loc. 50315). | 12 | 227.5 |
| 13 | Limestone, argillaceous, silty, black, irregularly medium bedded; separated by irregular thin beds of black calcareous shale; weathers medium grey; unit fairly resistant; some limestone beds crinoidal; <u>Levenea?</u> sp., <u>Spinatrypa?</u> sp., <u>Dechenella</u> sp., <u>Libumella</u> sp., <u>Bardiocypris?</u> sp., and echinoderm ossicles with single axial canals in bed 6 feet up (GSC loc. 50261). | 10 | 215.5 |

| Unit | Description | Thickness (feet) | |
|------|---|------------------|-----------|
| | | Unit | From Base |
| 12 | Covered; <u>Atrypa</u> sp. and <u>Michelinoceras</u> sp. collected loose (GSC loc. 50276). | 12 | 205.5 |
| 11 | Limestone, argillaceous, black, evenly thin bedded, separated by thinner beds of black calcareous shale; unit weathers rusty orange, poorly exposed; contains coral fragments, * <u>Chonetes</u> sp. L, <u>Warrenella?</u> sp., <u>Paracyclas?</u> sp., <u>Styliolina</u> sp., <u>Dechenella</u> sp., <u>Bythocypris</u> sp., echinoderm ossicles with single axial canals, and five-sided echinoderm ossicles with single axial canals (GSC loc. 50258). | 14 | 193.5 |
| 10 | Covered; <u>Receptaculites</u> sp., stromatoporoid, <u>Favosites</u> sp., <u>Chonetes</u> sp. L, <u>Spinatrypa</u> sp., <u>Tentaculites</u> sp., ? <u>Dechenellurus</u> sp., <u>Cyathocypris</u> sp., and echinoderm ossicle with single axial canal collected loose (GSC loc. 50274). | 42 | 179.5 |
| 9 | Limestone, strongly argillaceous black, fissile, poorly exposed. | 3 | 137.5 |
| 8 | Covered; <u>Warrenella</u> sp. and other fossils collected loose (Field No. 33NBk). | 7.5 | 134.5 |
| 7 | Limestone, strongly argillaceous, slightly silty, crinoidal, black, evenly bedded, up to 2 feet thick; with black shale partings, weathers medium rusty brown and brownish grey; stromatoporoid, <u>Chonetes</u> sp. L, * <u>Warrenella</u> sp., <u>Michelinoceras</u> sp., <u>Styliolina</u> sp., <u>Tentaculites</u> sp., * <u>Dechenellurus</u> sp. indet., and other trilobite fragments | | |

| Unit | Description | Unit | Thickness (feet) From Base |
|------|--|------|----------------------------------|
| | (GSC loc. 50255); <u>Favosites</u> sp., <u>Dechenellurus</u> cf. <u>D.</u> sp. B, and echinoderm ossicles with single axial canals collected loose (GSC loc. 50277); Age: probably Emsian. | 8 | 127 |
| 6 | Limestone, argillaceous, black, evenly thin bedded, becoming thicker bedded upwards, highly fissile; interbedded with black calcareous shale; unit contains <u>Chonetes</u> sp. L, <u>Atrypa</u> sp., <u>Warrenella</u> sp., *undet. pelecypod, <u>Michelinoceras?</u> sp., <u>Tentaculites</u> sp., <u>Dechenella</u> sp., and echinoderm ossicles with single axial canals (GSC loc. 50253). | 13 | 119 |
| 5 | Covered; fossils collected loose between 0 and 30 feet up: cup coral, <u>Chonetes?</u> sp. L, <u>Styliolina</u> sp., * <u>Dechenellurus</u> sp. B. and echinoderm ossicles with single axial canals (GSC loc. 50251); fossils collected loose between 31 and 44 feet up: * <u>Chonetes</u> sp. L, <u>Schuchertella?</u> sp., leiorhynchid fragments, <u>Warrenella</u> sp., <u>Tentaculites</u> sp., and * <u>Dechenellurus</u> sp. B (GSC loc. 50252); age: Emsian. | 44 | 106 |
| 4 | Lithology similar to unit 3 but thinner bedded and poorly exposed; <u>Tentaculites</u> sp. and trilobite tail collected loose (GSC loc. 50279). | 8 | 62 |
| 3 | Limestone, strongly argillaceous, silty laminae, evenly thin bedded, platy; interbedded with black calcareous shale; fossils fairly numerous but poorly preserved; fossils collected in place include: | | |

| Unit | Description | Thickness (feet) | |
|------|--|------------------|-----------|
| | | Unit | From Base |
| | <u>Warrenella</u> sp., <u>Styliolina</u> sp., <u>Tentaculites</u> sp., echinoderm ossicles with single axial canals, and cf. ' <u>Bythocypris</u> ' sp. (GSC loc. 50249); fossils collected loose: * <u>Styliolina</u> sp., <u>Tentaculites</u> sp., and echinoderm ossicles with single axial canals (GSC loc. 50248). | 15 | 54 |
| 2 | Limestone, argillaceous, black, irregularly thin bedded, with thin interbeds of black fissile calcareous shale; unit poorly exposed. | 17 | 39 |
| 1 | Limestone, argillaceous, black, evenly thick bedded, up to 3.5 feet thick, separated by thin beds of black, calcareous shale; irregular veins of white calcite; ghosts of brachiopods seen in place; fossils collected loose include: * <u>Chonetes</u> sp. L, <u>Warrenella</u> sp., <u>Tentaculites</u> sp., *indet. proetid, and echinoderm ossicles with single axial canals (GSC loc. 50244). | 22 | |

SILURIAN

Road River Formation
(8 feet; incomplete)

| | | |
|---|---|-----------------|
| 1 | Shale, calcareous, black, fissile, irregularly platy, weathers black; poorly exposed. | 8 (measured) |
|---|---|-----------------|

Station 33NB at base of unit 1 at base of exposure on lower part of south-facing mountain slope.
Bedding 085T/43S.

Section 19: NORTHERN EDGE OF OGILVIE MOUNTAINS IMMEDIATELY EAST OF BLACKSTONE RIVER (116H-13)

Section is located at the Ogilvie Mountains front immediately east of Blackstone River and was measured from a point about 65°42'N, 137°26.5'W northward across an east-trending mountain ridge to a point about 65°42.5'N, 137°26'W. Bedding of exposed strata strikes 095T to 100T and dips 20 to 40 degrees north, with the dip steepening gradually northward. The upper part of the Road River Formation is exposed along a creek gully in the valley on the south side of the mountain ridge, and the overlying Michelle Formation is exposed along the bottom of the south flank of the mountain. Capping the mountain is an unusually thick succession of resistant carbonates of the Ogilvie Formation, which appears to be in part repeated by faulting about half way across the mountain. Description given here is up to the presumed fault.

Section measured by A. J. Jenik, June 5-6, 1962.

| | |
|---------------------------|------------------|
| MIDDLE DEVONIAN | |
| Ogilvie Formation | 2665' |
| MIDDLE DEVONIAN AND OLDER | |
| Michelle Formation | 613.5' |
| SILURIAN | |
| Road River Formation | 135'; incomplete |

| Unit | Description | Thickness (feet) | |
|--|--|------------------|-----------|
| | | Unit | From Base |
| MIDDLE DEVONIAN | | | |
| <u>Ogilvie Formation</u> (2638 feet thick) | | | |
| 32 | Covered; fragments of limestone, dark grey, fine-grained, weathering light grey and brownish orange. | 50 | 2665 |
| A fault is presumed to be present at the top of unit 50 on the apparent repetition of strata to the north. | | | |

| Unit | Description | Thickness (feet) | |
|------|---|------------------|-----------|
| | | Unit | From Base |
| 31 | Covered; fragments of light grey weathering limestone. | 160 | 2615 |
| 30 | Covered by vegetation and talus; fragments of light grey weathering limestone. | 120 | 2455 |
| 29 | Covered; fragments of limestone, medium grey, weathering light grey. | 12 | 2335 |
| 28 | Covered; fragments of limestone, light grey, weathering brownish grey. | 30 | 2323 |
| 27 | Limestone, light grey, aphanitic, hard, conchoidally fracturing, weathers light grey, poorly exposed; lithological specimen from top of unit (GSC loc. 54569). Bedding 095T/35N. | 75 | 2293 |
| 26 | Covered; fragments of limestone, dark grey, fine-grained, weathering brownish grey. | 110 | 2218 |
| 25 | Limestone, silty in lower 30 feet, brownish grey, finely crystalline, weathers light grey to brownish grey. Lithological specimen from 35 feet up (GSC loc. 54599). | 210 | 2108 |
| 24 | Dolomite and dolomitic limestone, light grey and very light brown, very fine grained, weathers light grey. Lithological specimen (GSC loc. 54604). | 205 | 1898 |
| 23 | Limestone, dark grey, very fine grained, weathers light grey; some oil? staining; contains <u>Favosites</u> sp. (GSC loc. 54603). | 34 | 1693 |

| Unit | Description | Thickness (feet) | |
|------|--|------------------|-----------|
| | | Unit | From Base |
| 22 | Limestone, slightly dolomitic, medium grey, hard, very fine grained, pelletoid, beds 1 foot to 2.5 feet thick, weathers light grey and pale orange-brown. Lithological specimen (GSC loc. 54598). | 90 | 1659 |
| 21 | Limestone, fetid, medium grey and brownish grey, medium bedded, weathers light grey; unit discontinuously exposed. | 30 | 1569 |
| 20 | Covered; fragments of limestone, similar to unit 19; stromatoporoids and <u>Favosites</u> sp. present (GSC loc. 54576). | 50 | 1539 |
| 19 | Limestone, argillaceous, brownish grey, finely crystalline, weathering grey and orange-brown; fossils moderately abundant, including <u>Alveolites</u> sp., <u>Favosites</u> sp., and <u>Hexagonaria</u> sp., and brachiopods (GSC loc. 54577); <u>Schizophoria</u> sp., * <u>Atrypa</u> sp., echinoderm ossicles with double axial canals, and <u>Libumella</u> sp. (GSC loc. 54581). | 45 | 1489 |
| 18 | Limestone, fetid, medium to brownish grey, fine grained, medium bedded, weathers light grey and brownish grey; moderately fossiliferous, <u>Atrypa?</u> sp., <u>Gypidula?</u> sp., echinoderm ossicles with double and cross-like axial canals from 0 to 25 feet up (GSC loc. 54584). Lithological specimen (Field No. 5NB-J1). | 70 | 1444 |

| Unit | Description | Thickness (feet) | |
|------|---|------------------|-----------|
| | | Unit | From Base |
| | Brachiopods from 25 feet up (Field No. 5NB-Jg). | | |
| 17 | Limestone, fetid, brecciated? appearance, medium brownish grey, weathers light grey; contains <u>Atrypa</u> sp., echinoderm ossicles with double and cross-like axial canals (GSC loc. 54586); unit poorly exposed. | c. 77 | 1374 |
| 16 | Limestone, fetid, medium brownish grey, fine grained, weathers light grey and brownish grey; contains favositids (Field No. 5NB-Jd). | 13 | 1297 |
| 15 | Covered; talus appears similar to unit 32; crinoid ossicles present. | 32 | 1284 |
| 14 | Limestone, slightly silty, crinoidal, fetid, medium grained, finely crystalline, beds between 0.5 foot to 2 feet thick, weathers brownish grey; <u>Favosites</u> sp. and echinoderm ossicles with single axial canals present (GSC loc. 54606). | 20 | 1252 |
| 13 | Limestone, fetid, medium brownish grey, finely crystalline, beds between 0.5 and 1 foot thick, weathers brownish grey; contains <u>Favosites</u> sp., and <u>Atrypa</u> sp. (GSC loc. 54605). | 20 | 1232 |
| 12 | Covered; fragments similar to unit 11. | 4 | 1212 |
| 11 | Limestone, slightly silty, in part crinoidal, medium grey, highly fractured, weathers light grey and orange-brown; contains <u>Favosites</u> | | |

| Unit | Description | Thickness (feet) | |
|------|---|------------------|-----------|
| | | Unit | From Base |
| | sp., echinoderm ossicles with single, double, and cross-like axial canals (GSC loc. 50688 and 54601). | 15 | 1208 |
| | Station 5NB-J at top of unit 10 at peak of mountain ridge. | | |
| 10 | Limestone, crinoidal, medium brownish grey, fine grained, hard, weathers light grey and brownish orange. Bedding 095T/40N. | 27 | 1193 |
| 9 | Limestone, black to dark grey, finely crystalline, vuggy, strongly fractured, weathers light grey with brown mottling; contains echinoderm ossicles with double and cross-like axial canals (GSC loc. 54595). | 40 | 1166 |
| 8 | Limestone, medium grey, finely crystalline, weathers light grey with brown mottling. Bedding 095T/25N. | 28 | 1126 |
| 7 | Limestone, dark grey to black, fine grained, massive, hard, highly fractured, weathers brownish orange; <i>Spinatrypa</i> sp., and echinoderm ossicles with single, double, and cross-like axial canals collected loose at base of unit (GSC loc. 50687). | 26 | 1098 |
| 6 | Limestone, medium to dark grey, aphanitic, hard, beds from 3 to 5 feet thick, weathers light grey. Lithological specimen (GSC loc. 54571). | 32 | 1072 |

| Unit | Description | Thickness (feet) | |
|------|---|------------------|-----------|
| | | Unit | From Base |
| 5 | Limestone, black to very dark grey, aphanitic, hard, weathers light grey with brown mottling; contains brachiopod fragments, ostracods, and echinoderm with single and double axial canals (GSC locs. 50686 and 54602). | 5 | 1040 |
| | Station 4NB-J at base of unit 5 at base of cliff on top of mountain. | | |
| 4 | Covered; at 196 feet up are fragments of dolomitic limestone, light to medium grey with purple mottling, very finely crystalline, pelletoid, massive, strongly fractured; contains a few echinoderm ossicles. | 406 | 1035 |
| | Lithological specimen from 196 feet up (GSC loc. 50683). | | |
| 3 | Limestone, slightly dolomitic, light grey, very fine grained, pelletoid, beds 1.5 to 2 feet thick, weathers medium grey with orange-brown mottling. | 4 | 629 |
| | Lithological specimen (GSC loc. 50685). | | |
| 2 | Covered; fragments of dolomite, calcareous, weathering medium grey with brown and purple mottling. | | |
| | Lithological specimen from 150 feet up (GSC loc. 50682). | | |
| | Fragments of dolomite with brecciated limestone layers at 260 feet up. | | |

| Unit | Description | Thickness (feet) | |
|---|---|------------------|-----------|
| | | Unit | From Base |
| | Fragments of dolomitic limestone, silty, fetid, medium grey, with purple mottling at 405 feet up. | 500 | 625 |
| 1 | Dolomitic limestone, silty, fetid, light grey with purple mottling, aphanitic, flocculent, slightly vuggy, massive, hard, weathers medium to dark grey with brownish grey mottling; unit becomes more dolomitic upwards. | 125 | |
| | Lithological specimen (GSC loc. 54596). | | |
| | Cup coral fragments collected loose 30 feet up (GSC loc. 50682). | | |
| | Station 3NB-J at base of unit 1. | | |
| MIDDLE DEVONIAN AND OLDER | | | |
| <u>Michelle Formation</u> (613.5 feet thick) | | | |
| 19 | Limestone, black to very dark grey, aphanitic, thin bedded, weathering brownish yellow; contains cup corals and <u>Favosites</u> sp. (GSC loc. 50678). | 14.5 | 613.5 |
| 18 | Covered; fragments of limestone, argillaceous, dark grey to black, hard to soft, weathering brownish yellow; fossils collected loose: <u>Atrypa</u> sp., <u>Ptiloporina</u> sp., * <u>Edmondia</u> ? sp., <u>Tentaculites</u> sp., ostracods, echinoderm ossicles with double axial canals, and ? <u>Dechenellurus</u> sp. (GSC locs. 50669 and 50674). | 40 | 599 |

| Unit | Description | Thickness (feet) From Base |
|------|--|----------------------------------|
| 17 | Limestone, crinoidal, black, finely crystalline, highly fractured, resistant, cliff-forming, weathers brownish yellow; moderately fossiliferous: <u>Thamnopora</u> sp., * <u>Chonetes</u> sp., * <u>Atrypa</u> sp., <u>Warrenella?</u> sp., <u>Tentaculites</u> sp., echinoderm ossicles with single, double, and cross-like axial canals (GSC locs. 50679 and 54594). | 35 559 |
| 16 | Covered; fragments of limestone, argillaceous, black, beds between 0.5 foot to 1.5 feet thick, weathers brownish yellow; fossils collected loose <u>Chonetes</u> sp., <u>Levenea</u> sp., <u>Atrypa</u> sp., and ostracods (GSC loc. 50666). | 93 524 |
| 15 | Limestone, slightly argillaceous, fetid, black, thin bedded to massive, strongly fractured, weathers brownish yellow. | 77 431 |
| | Fossils from 8 feet up: * <u>Lingula</u> sp., * <u>Chonetes</u> sp., * <u>Eospirifer</u> sp., <u>Tentaculites</u> sp., and trilobite tail (GSC loc. 50663) | |
| | Fossils from 17 feet up: <u>Levenea</u> sp., * <u>douvillinid</u> , <u>Ptiloporella?</u> sp., <u>Cypricardella?</u> sp., * <u>Bactrites?</u> sp., <u>Tentaculites</u> sp., trilobite tail fragment, and ostracods (GSC loc. 50668). | |
| | Fossils from 47 feet up: * <u>Chonetes</u> sp., * <u>Gypidula</u> sp., <u>Atrypa</u> sp., <u>Warrenella</u> sp., <u>Tentaculites</u> sp., <u>Dechenella?</u> sp., ' <u>Bythocypris</u> ' sp., <u>Eukloedenella?</u> sp. and echinoderm ossicles with small single canals (GSC loc. 54591). | |

| Unit | Description | Thickness (feet) | |
|------|---|------------------|-----------|
| | | Unit | From Base |
| | Fossils from 62 feet up: * <u>Chonetes</u> sp., * <u>Dalmanella</u> sp. C, <u>Libumella</u> sp., <u>Bairdiocypris?</u> sp., and <u>Adelphobolbina?</u> sp. (GSC loc. 54591). | | |
| 14 | Covered; fragments of limestone, black, platy, weathers brownish yellow; fossiliferous. | 23 | 354 |
| 13 | Same as unit 11. | 2 | 331 |
| 12 | Covered; talus fragments similar to unit 11. | 6 | 329 |
| 11 | Limestone, fetid, black, fissile, platy, weathers brownish yellow. | 7 | 323 |
| 10 | Limestone, fetid, very dark grey, very finely crystalline, massive, resistant, weathers brownish yellow; fossils (Field No. 2NB-Jr). | 10 | 316 |
| 9 | Limestone, argillaceous, fetid, black, very finely crystalline, evenly bedded, beds between 2 and 2.5 feet thick, strongly fractured; fossils from lower part of unit: <u>Tentaculites</u> sp., <u>Bactrites?</u> sp., *goniatite, and <u>Tubulibairdia</u> sp. (GSC loc. 50677); fossils from upper part of unit: * <u>Chonetes</u> sp., <u>Levenea</u> sp., <u>Bactrites?</u> sp., and echinoderm ossicles with single axial canals (GSC loc. 50670). | 22.5 | 306 |
| 8 | Limestone, black, thin bedded and platy to massive, fine grained, slightly recessive; contains * <u>Dalmanella?</u> sp. A, * <u>Dalmanella?</u> | | |

| Unit | Description | Thickness (feet) | |
|------|--|------------------|-----------|
| | | Unit | From Base |
| | sp. B, <u>Atrypa</u> sp. * <u>Plectospirifer?</u> sp., <u>Michelinoceras?</u> sp., and ostracods (GSC loc. 54590). | 23 | 283.5 |
| 7 | Limestone, interbedded with argillaceous limestone, fetid, black, finely crystal- line, thin bedded to massive, weathers brownish yellow. | 34 | 260.5 |
| | Fossils from base of unit: <u>Tentaculites</u> sp., <u>Bactrites</u> sp., and <u>Dechenella</u> sp. (GSC loc. 50680). | | |
| | Inarticulate brachiopod fragments, <u>Chonetes</u> sp., <u>Tentaculites</u> sp., and ostracods (GSC loc. 54597). | | |
| | Fossils from 20 feet up: * <u>Chonetes</u> sp., cephalopod, <u>Tentaculites</u> sp., and <u>Libumella</u> sp., <u>Adelphobolbina?</u> sp., and ' <u>Bythocypris</u> ' sp. (GSC loc. 50675). | | |
| | Crinoid ossicles and brachiopods from top of unit (GSC loc. 50676). | | |
| 6 | Limestone, argillaceous, black, highly fissile; contains <u>Michelinoceras</u> sp., and trilobite fragments (GSC loc. 54593). | 8 | 226.5 |
| 5 | Covered; fragments of limestone, argillaceous, black to very dark grey, thin bedded, platy, fissile; contains <u>Chonetes</u> sp., douvillid?, <u>Brevispirifer?</u> sp., <u>Bactrites?</u> sp., <u>Tentaculites</u> sp., and <u>Dechenellurus</u> sp. and <u>Libumella</u> sp. (GSC loc. 50671). | 40 | 218.5 |

| Unit | Description | Thickness (feet) | |
|------|--|------------------|-----------|
| | | Unit | From Base |
| 4 | <p>Limestone, with thin argillaceous limestone interbeds, black, aphanitic, thin to thick bedded, weathers brownish yellow,</p> <p>Fossils from 15 feet up: *<u>Chonetes</u> sp., *<u>douvillinid</u>, *<u>Dechenella</u> sp., and echinoderm ossicles with small single axial canals (GSC loc. 54589).</p> <p>Fossils from 40 feet up: *<u>Chonetes</u> sp., <u>Carinatina?</u> sp., <u>Styliolina</u> sp., and <u>Tentaculites</u> sp. (GSC loc. 50665).</p> <p>Fossils from 67 feet up: <u>Favosites</u> sp., <u>Chonetes</u> sp., <u>Levenea</u> sp., cf. <u>Cypricardella</u> sp., <u>Bactrites?</u> sp., <u>Dechenella</u> sp., and '<u>Bythocypris</u>' sp. (GSC loc. 50667).</p> | 57 | 178.5 |
| 3 | <p>Limestone, and argillaceous limestone, black, thin bedded, with interbedded softer fissile layers, moderately resistant, weathers brownish yellow.</p> <p>Fossils from lower part of unit: <u>Chonetes</u> sp., <u>Atrypa</u> sp., *<u>Ptychospirina?</u> sp., <u>Michelinoceras</u> sp., <u>Styliolina</u> sp., and *<u>Dechenellurus</u> sp. B. (GSC loc. 54592); age: Emsian.</p> <p>Fossils from upper part of unit: stromatoporoid fragments, <u>Favosites</u> sp., other coral fragments, and <u>Atrypa</u> sp. (GSC loc. 50664).</p> | 55 | 121.5 |
| 2 | <p>Limestone, fetid, black, even bed, weathers brownish yellow; contains</p> | | |

| Unit | Description | Thickness (feet) | |
|------|---|------------------|-----------|
| | | Unit | From Base |
| | <u>Warrenella</u> sp., <u>Bactrites?</u> sp., and <u>Tentaculites</u> sp. (GSC loc. 50673). | 1.5 | 66.5 |
| 1 | Limestone, fetid, black to very dark grey, thin bedded, fissile, weathers brownish yellow; contains * <u>Chonetes</u> sp., <u>Styliolina</u> sp., * <u>Tentaculites</u> sp., <u>Dechenella</u> (<u>Dechenella</u>) sp., and ostracods (GSC loc. 50674). | 65 | |

Station 2NB-J at base of unit 2 on east side of creek gully.

Bedding 100T/20N.

SILURIAN

Road River Formation (135 feet; incomplete)

| | | | |
|---|---|-----|--|
| 1 | Shale, strongly calcareous, black, highly fissile, weathers black; thin interbeds of limestone, argillaceous, black, weathers dark brownish grey; exposure discontinuous. | 135 | |
|---|---|-----|--|

Fossils in shale from lower part of unit: Lingula sp., Styliolina sp., and Tentaculites sp. (GSC loc. 54588).

Fossils from upper of unit: Lingula sp., *Orbiculoidea sp., Chonetes sp., *Douvillina sp., Bactrites? sp., Styliolina sp., trilobite tail, and ostracod (GSC loc. 50681).

Station 1NB-J at base of unit 1 at base of exposure on west side of tributary stream immediately east of Blackstone River at approximately 65°42'N, 137°26'W.

Section 20: OGILVIE RIVER (116G-8)

The Ogilvie River cuts through an anticline at 65°23'-24'N, 138°15'W. A thrust cuts across the northern part of the structure and the section was measured on the right bank of the river in the southern limb. The core exposes the upper part of a resistant siliceous dolomite unit that is probably Ordovician. A covered interval represents the Road River Formation and probably also recessive Devonian rocks and is overlain by very resistant Middle Devonian limestones of the Ogilvie Formation. Measurement was by staff and by tape in August when low water allowed access to the eastern bank of the river.

Section measured by B.S. Norford, August 16-17, 1962. Devonian fossils identified by A.W. Norris.

| | |
|---------------------------|------------------------|
| MIDDLE DEVONIAN | |
| Ogilvie Formation | 170'; incomplete |
| MIDDLE DEVONIAN AND OLDER | |
| Michelle Formation | 360' ?; covered |
| SILURIAN | |
| Road River Formation | 840' ?; mainly covered |
| ORDOVICIAN AND EARLIER? | 1424'; incomplete |

| Unit | Description | Thickness (feet) | |
|------|-------------|------------------|-----------|
| | | Unit | From Base |

MIDDLE DEVONIAN

Ogilvie Formation
(170 feet; incomplete)

- | | | |
|---|--|-----|
| 1 | Limestone, grey, dark grey, very finely to finely crystalline, bedding 1 foot to 15 feet, resistant, with bioclastic layers (chiefly echinoderm) in some beds, weather light grey, pale yellowish grey; some beds with sparse calcite-filled vugs. | 170 |
|---|--|-----|

Fossils from between 90 and 110 feet above base of unit: stromatoporoid,

| Unit | Description | Thickness (feet) | |
|------|-------------|------------------|-----------|
| | | Unit | From Base |

cup corals, Alveolites sp., Favosites sp., Hexagonaria sp., cf. Phillipsastrea sp., and echinoderm ossicles with double axial canals (GSC loc. 53264).

Fossils from 0-15 feet above base of unit: Favosites sp., and cf. Hexagonaria sp. (GSC loc. 53265).

Unit not completely measured; total thickness of unit estimated at several hundred feet.

MIDDLE AND LOWER DEVONIAN
AND SILURIAN

Michelle (c. 360? feet) and Road River
(c. 840? feet) Formations

- 1 Covered interval with very rare outcrops of shales, calcareous and non-calcareous, greyish black and brownish black, weather greyish black and yellowish grey; with minor bedded cherts, impure, some calcareous, dark grey, weather dark grey, bedding 1/4 to 1 inch; with minor argillaceous limestones, dark grey, weather dark grey and brownish grey, bedding 2 to 6 inches, irregular.

c. 1200

Graptolites, trilobites, brachiopods, and corals (GSC loc. 53266) from upper part of interval, 1 mile east of the river.

Fossils from lower part of interval (GSC loc. 53267) in northern limb, 1/4 mile east of river.

| Unit | Description | Thickness (feet) | |
|------|-------------|------------------|-----------|
| | | Unit | From Base |

ORDOVICIAN AND EARLIER?

(1424 feet; incomplete)

- | | | |
|---|---|------|
| 1 | <p>Siliceous dolomites, very finely to very coarsely crystalline, grey, dark grey, weather grey, bluish grey, dull grey, with buff stains, resistant, bedding 1 foot to massive, commonly indistinct; with vugs, veins, and stringers of coarse dolomite and quartz; with rare, irregular dark chert nodules in lower half of unit; with 3 to 5 per cent vuggy porosity at 1200, 860, 655, and 200 feet up. Barren.</p> | 1424 |
|---|---|------|

Only upper part of unit is exposed and thickness given is only a minimum.

Section 21: SOUTHEAST FLANK OF NAHONI RANGE (116G-10)

Section is in the southeast flank of Nahoni Range and was measured from the axis of a north-trending anticlinal fold at about 65°33'N, 138°46'W, eastward across the east limb of the anticline to about 65°33'N, 138°42.5'W. The uppermost part of the Silurian Road River Formation and overlying Devonian Michelle Formation are exposed near the bottom of a basin-like valley along the core of the anticline. The valley is rimmed by resistant carbonate beds of the Middle Devonian Ogilvie Formation exposed on the limbs of the anticline. The Ogilvie Formation is in turn overlain by relatively soft shales of unknown age, which form low gentle hills flanking the area of carbonate uplift.

Section measured by A. W. Norris, assisted by D. L. Jordan, August 21-24, 1962.

| | |
|---|--------------------|
| MIDDLE AND UPPER DEVONIAN OR YOUNGER | |
| Unnamed Shale Unit | 818.5'; incomplete |
| MIDDLE DEVONIAN | |
| Ogilvie Formation | 2379.7' |
| MIDDLE DEVONIAN AND OLDER | |
| Michelle Formation | 184' |
| SILURIAN | |
| Road River Formation | 143.1' |

| Unit | Description | Thickness (feet) | |
|---|--|------------------|-----------|
| | | Unit | From Base |
| MIDDLE AND UPPER DEVONIAN OR YOUNGER | | | |
| <u>Unnamed Shale Unit</u> (818.5 feet; incomplete) | | | |
| 8 | Mainly covered to top of hill; interval appears to consist of shale similar to unit 7; not measured. | c. 500 | 818.5 |
| 7 | Shale, non-calcareous, black, soft, weathers black. | 3 | 318.5 |

| Unit | Description | Thickness (feet) | |
|------|--|------------------|-----------|
| | | Unit | From Base |
| | Shale for microfossils (Field No. 335NBd). | | |
| | Station 336NB at top of unit 7 at about 65°33'N, 138°42.5'W. | | |
| 6 | Covered; fragments of shale, non-calcareous, black, soft; with thin interbeds of shale, siliceous, black, hard, weathers medium bluish grey. | 35 | 315.5 |
| | Shale for microfossils from 5 feet up (Field No. 335NBb). | | |
| | Woody tissue collected loose from 6 feet up (GSC loc. 54163). | | |
| 5 | Covered; talus fragments of shale, non-calcareous, siliceous, black, hard, platy, fissile, weathers light to medium bluish grey. | 49 | 280.5 |
| | Weathered out sphere-like nodules from 30 feet up (GSC loc. 54162). | | |
| 4 | Covered by vegetation. | 5 | 231.5 |
| 3 | Shale, non-calcareous, dark grey to black, highly fissile, weathers light bluish grey; some beds stained an orange-yellow; discontinuously exposed up slope. | 18.5 | 226.5 |
| | Shale for microfossils (GSC loc. 54161). | | |
| | Bedding 006 T/41E. | | |
| 2 | Covered; fragments of shale, siliceous, non-calcareous, dark grey, highly fissile, platy, weathers medium bluish grey. | 10 | 208 |

| Unit | Description | Thickness (feet) | |
|---|--|------------------|-----------|
| | | Unit | From Base |
| | Shale for microfossils from lower part of unit (GSC loc. 54160). | | |
| | Station 335NB at base of unit 2. | | |
| i | Covered; across a soft muskeg; shale fragments appear 170 feet up. | 198 | |
| MIDDLE DEVONIAN | | | |
| <u>Ogilvie Formation</u> (2379.7 feet thick) | | | |
| 166 | Limestone, dark grey, aphanitic, with large nodules of black chert up to 6 inches in diameter, unit resistant, weathers dark grey (wet). | 5.4 | 2379.7 |
| | <u>Alveolites</u> sp. and <u>Syringopora</u> sp. from top of unit (GSC loc. 54159). | | |
| | Station 334NB at top of unit 166 on north side of stream. | | |
| | Bedding 010T/20E. | | |
| 165 | Covered; talus fragments of limestone and chert. | 7.5 | 2374.3 |
| | <u>Atrypa</u> cf. <u>A. arctica</u> Warren, * <u>Paracyclas</u> sp., <u>Centroceras</u> ? sp., and echinoderm? fragment, collected loose at base of interval (GSC loc. 54158). | | |
| 164 | Limestone, dark brownish grey, aphanitic, irregularly thin to medium bedded; with irregular | | |

| Unit | Description | Thickness (feet) | |
|------|--|------------------|-----------|
| | | Unit | From Base |
| | layers and nodules of dark grey to black chert up to 4 inches thick. | 26 | 2366.8 |
| | <u>Paracyclas</u> sp., and cephalopod from 7 feet up (GSC loc. 54156). | | |
| | Silicified <u>Coenites</u> sp. and other corals collected loose from 22 feet up (GSC loc. 54157). | | |
| 163 | Limestone, dark grey to black, massive but rubbly weathering; with irregular beds and nodules of black chert up to 3 inches thick spaced 0.5 to 0.8 foot apart; unit highly resistant. | 17 | 2340.8 |
| 162 | Limestone, black, aphanitic, massive to very thick bedded, in part nodular, resistant, vertical scarp-forming, contains nodules of black chert. | 4.2 | 2323.8 |
| 161 | Limestone, dark grey, aphanitic, massive, highly fractured, vertical cliff-forming; contains rusty brown weathering irregular chert nodules; unit weathers medium grey, and in places stained a medium orange. | 8.5 | 2319.6 |
| | Specimen of chert (GSC loc. 54155). | | |
| 160 | Limestone, black, aphanitic, massive, nodular, silty limestone surrounding nodules, resistant, scarp-forming, highly fractured, weathers dark grey, in places stained a medium orange. | 17.2 | 2311.1 |
| | <u>Atrypa</u> sp. fragment from 3 feet up (GSC loc. 54154). | | |
| | Station 333NB at base of unit 160. Bedding 155T/15NE. | | |

| Unit | Description | Thickness (feet) | |
|------|---|------------------|-----------|
| | | Unit | From Base |
| 159 | Limestone, dark grey to black, aphanitic, rubbly but resistant, highly fractured; with small nodules of black chert; arbitrary cut-off. Cephalopod cast and echinoderm ossicles with single axial canals from 5 feet up (GSC loc. 54152). <u>Schizophoria?</u> sp. interior collected loose at base of unit (GSC loc. 54153). | 11.9 | 2293.9 |
| 158 | Covered; talus fragments of limestone, dark brown, fine grained, granular, thin bedded, weathers dark grey; unit contains nodules and thin beds of black chert. | 14.2 | 2282 |
| 157 | Limestone, dark greenish grey, beds up to 4 inches thick, thinly interbedded with black chert; block may be slumped. | 1.1 | 2267.8 |
| 156 | Covered. Units 156 and above were measured on the north side of stream; units below were measured on the south side of the stream. | 35 | 2266.7 |
| 155 | Limestone, medium brown, fine grained, rubbly bedded, resistant, weathers medium brownish grey; contains * <u>Gypidula?</u> sp., <u>Dechenella?</u> sp., and <u>Aparchites?</u> sp. (GSC loc. 54151). | 1.2 | 2231.7 |
| 154 | Covered. | 3 | 2230.5 |
| 153 | Limestone, with argillaceous limestone partings, medium brownish grey, aphanitic, nodular bedded, fairly resistant, weathers dark brownish grey. | 10.7 | 2227.5 |

| Unit | Description | Thickness (feet) | |
|------|--|------------------|-----------|
| | | Unit | From Base |
| | <u>Syringopora?</u> sp., <u>Atrypa nasuta hearnel</u> Norris, and <u>Dechenella</u> sp. from 2.5 to 3 feet up (GSC loc. 54148). | | |
| | <u>Alveolites</u> sp., * <u>Schuchertella?</u> sp., * <u>Longispina?</u> sp., * <u>Gypidula?</u> sp., ostracods, and echinoderm ossicles with single axial canals from 7 feet up (GSC loc. 54149). | | |
| | <u>Alveolites</u> sp., * <u>Atrypa</u> cf. <u>A. arctica</u> Warren, and * <u>Emanuella</u> sp. from 8.9 feet up (GSC loc. 54150). | | |
| 152 | Limestone, argillaceous, dark grey, aphanitic, very thin nodular and rubbly bedded, weathers dark brownish grey; arbitrary cut-off. | 7.5 | 2216.8 |
| | <u>Alveolites</u> sp. collected loose at base of unit (GSC loc. 54146). | | |
| | Algal? structures from base of unit (GSC loc. 54147). | | |
| 151 | Limestone, dolomitic, argillaceous, evenly very thin bedded, weathers dark brownish grey; contains very poorly preserved <u>Coenites</u> sp. | 3.5 | 2209.3 |
| 150 | Covered. | 12.5 | 2205.8 |
| 149 | Limestone, dark brown, aphanitic, evenly and irregularly thin bedded, weathers medium brownish grey; upper bed contains poorly preserved stromatoporoids (GSC loc. 54145). | 4.9 | 2193.3 |
| | Unit discontinuously exposed along south bank of stream. | | |

| Unit | Description | Thickness (feet) | |
|------|--|------------------|-----------|
| | | Unit | From Base |
| | Station 332NB at base of unit 149. Bedding 012T/19E. | | |
| 148 | Limestone, argillaceous, dark brownish grey, aphanitic, and fine grained, evenly, rubbly and nodular thin bedded, weathers light brownish grey. | 7.5 | 2188.4 |
| | Bedding 016T/21E. | | |
| 147 | Limestone, argillaceous, pale to medium brown, aphanitic, nodular and rubbly bedded, recessive to resistant, weathers pale brownish grey; contains small stromatoporoids and coral fragments (GSC loc. 54144). | 5.6 | 2180.9 |
| 146 | Covered; faulted in this interval. | 6 | 2175.3 |
| 145 | Limestone, medium brown, aphanitic, even bed, resistant, weathers medium grey. | 3 | 2169.3 |
| 144 | Limestone, pale grey, aphanitic, rubbly thin bedded, recessive, weathers dark brownish grey; poorly exposed. | 5 | 2166.3 |
| 143 | Covered. | 3.5 | 2161.3 |
| 142 | Limestone, dark grey, aphanitic, massive, weathers medium brownish grey; resistant. | 2.5 | 2157.8 |
| 141 | Covered; recessive. | 8.4 | 2155.3 |
| 140 | Limestone, medium brown, aphanitic, hard, even bed, resistant, weathers medium brownish grey. | 2.9 | 2146.9 |
| | Bedding 174T/60E. | | |

| Unit | Description | Thickness (feet) | |
|------|--|------------------|-----------|
| | | Unit | From Base |
| 139 | Limestone, dolomitic, argillaceous, rubbly thin bedded, recessive, weathers medium brown, poorly exposed. | 2.6 | 2144 |
| 138 | Covered. | 15 | 2141.4 |
| 137 | Limestone, slightly dolomitic, dark brown, fine grained, massive, resistant, weathers medium brownish grey. | 17.3 | 2126.4 |
| 136 | Covered. | 6 | 2109.1 |
| 135 | Limestone, dolomitic, dark brown, finely and coarsely crystalline, massive, resistant, weathers medium brownish grey. | 5.5 | 2103.1 |
| 134 | Covered; large blocks of limestone, dolomitic, dark grey and dark brownish grey, thick bedded to massive, weathers medium grey. | 35 | 2097.6 |
| 133 | Limestone, slightly dolomitic, dark brownish grey, irregularly medium bedded, resistant, weathers medium brownish grey. | 10.8 | 2062.6 |
| 132 | Limestone, dark brown, aphanitic, massive, highly resistant, weathers medium grey; contains crinoid ossicles, gastropods, and coral fragments. | 11.8 | 2051.8 |
| 131 | Limestone, dark brown, aphanitic, nodular and thin bedded, weathers medium brown; recessive. | 3 | 2040 |
| 130 | Limestone, dark brown, aphanitic, even bed, resistant, weathers medium grey. | 3 | 2037 |

| Unit | Description | Thickness (feet) | |
|------|--|------------------|-----------|
| | | Unit | From Base |
| 129 | Limestone, very dark brown, aphanitic, massive, highly resistant, weathers medium grey; unit 'rib-forming' along flank of anticline; unit slightly recessive. Station 331NB at base of unit 129. Bedding 015T/75E. | 3.3 | 2034 |
| 128 | Limestone, dolomitic, medium brown, aphanitic, thin bedded, recessive; poorly exposed. | 9.9 | 2030.7 |
| 127 | Covered by vegetation. | 4.8 | 2020.8 |
| 126 | Limestone, dark brown, aphanitic, medium to thick bedded, weathers medium grey; upper bed contains small pentamerids?, and small ostracods (GSC loc. 54143); unit poorly exposed. | 9.4 | 2016 |
| 125 | Covered by vegetation and talus. | 5 | 2006.6 |
| 124 | Limestone, dark grey, aphanitic, thin to medium bedded, weathers medium grey; poorly exposed. | 7.5 | 2001.6 |
| 123 | Limestone, medium brown, aphanitic, thin to medium bedded, weathers medium grey; poorly exposed; arbitrary cut-off. | 27 | 1994.1 |
| 122 | Covered by vegetation and talus. | 8 | 1967.1 |
| 121 | Limestone, black, aphanitic, thin bedded, weathers light brownish grey; poorly exposed along low ridge; stromatoporoid from basal bed (GSC loc. 54141); large silicified <u>Favosites</u> sp. from 6 feet up (GSC loc. 54142). | 8 | 1959.1 |

| Unit | Description | Thickness (feet) | |
|------|--|------------------|-----------|
| | | Unit | From Base |
| 120 | Covered by vegetation and talus. | 7.2 | 1951.1 |
| 119 | Limestone, dark grey, fine grained, evenly thin to medium bedded, weathers light brownish grey; poorly exposed along ridge. | 7.1 | 1943.9 |
| 118 | Covered by vegetation. | 3.2 | 1936.8 |
| 117 | Limestone, medium brown, aphanitic, thin bedded, weathers medium grey; contains stromatoporoids and corals; <u>Syringopora?</u> sp., and echinoderm ossicles with single axial canals from basal 1 foot, and silicified stromatoporoids from 4 feet up (GSC loc. 54140). | 18.3 | 1933.6 |
| 116 | Covered by vegetation. | 2.8 | 1915.3 |
| 115 | Limestone, dark grey, aphanitic, evenly thick bedded, weathers medium grey; poorly exposed. | 2.3 | 1912.5 |
| 114 | Covered by vegetation. | 4 | 1910.2 |
| 113 | Limestone, dark grey, aphanitic, medium to thick bedded, weathers medium brownish grey; poorly and discontinuously exposed along ridge. | 18 | 1906.2 |
| 112 | Limestone, medium brown, aphanitic, medium bedded, weathers medium brown; numerous <u>Alveolites</u> sp., <u>Coenites</u> sp., and <u>Syringopora?</u> sp. in bed 1 foot thick, 12 feet up (GSC loc. 54139); unit discontinuously exposed. | 26.7 | 1888.2 |

| Unit | Description | Thickness (feet) | |
|------|---|------------------|-----------|
| | | Unit | From Base |
| 111 | Limestone, medium brown, aphanitic, thin bedded, weathers medium brownish grey; very poorly exposed. | 19 | 1861.5 |
| 110 | Limestone, medium brown, faintly colour laminated, aphanitic, medium bedded to massive, resistant, weathers medium brown. | 21.2 | 1842.5 |
| 109 | Limestone, medium brown, aphanitic, medium bedded, weathers medium brownish grey, poorly and discontinuously exposed. Bedding 012T/77E. | 20 | 1821.3 |
| 108 | Limestone, medium brown, aphanitic, medium bedded, weathers medium brown; contains silicified <u>Alveolites</u> sp. (GSC loc. 54138). | 8 | 1801.3 |
| 107 | Limestone, dolomitic, medium brown, aphanitic, medium bedded, weathers light to medium brown; contains silicified stromatoporoids, <u>Alveolites</u> sp., <u>Aulopora</u> sp., <u>Favosites</u> spp., and <u>Syringopora?</u> sp. (GSC loc. 54137). | 10 | 1793.3 |
| 106 | Limestone, dark brown, aphanitic, medium-bedded, weathers medium brown; ostracods collected loose 10 feet up (GSC loc. 54136). | 30 | 1783.3 |
| 105 | Limestone, black, aphanitic, thin bedded, weathers dark grey; arbitrary cut-off. | 25 | 1753.3 |
| 104 | Limestone, medium brown, aphanitic medium-bedded, weathers medium grey; ostracods present in basal beds | | |

| Unit | Description | Thickness (feet) | |
|------|--|------------------|-----------|
| | | Unit | From Base |
| | (GSC loc. 54135); unit present as large frost-heaved blocks. | 30 | 1728.3 |
| 103 | Limestone, medium brownish grey, medium bedded, weathers medium grey. | 5.8 | 1698.3 |
| 102 | Limestone, medium brown, aphanitic, brittle, irregularly thin to medium bedded, weathers light and medium brownish grey. Bedding 002T/63E. | 11.9 | 1692.5 |
| 101 | Dolomite, slightly calcareous, medium brown, aphanitic, very thin bedded, weathers medium orange-brown. | 7 | 1680.6 |
| 100 | Limestone, medium brown, aphanitic, evenly medium bedded, weathers light and medium brownish grey; small ostracods in basal beds (GSC loc. 54134). | 8 | 1673.6 |
| 99 | Limestone, medium brown, aphanitic, weathers medium brownish grey. Station 330NB at base of unit 99. | 10.5 | 1665.6 |
| 98 | Limestone, medium brown, aphanitic, evenly medium bedded, weathers light to medium brownish grey. | 6 | 1655.1 |
| 97 | Limestone, dark grey, aphanitic, weathers medium grey; present as frost-heaved fragments. | 4 | 1649.1 |
| 96 | Limestone, medium brown, aphanitic, thin to medium bedded, weathers light to medium grey; present as large talus blocks. | 5 | 1645.1 |

| Unit | Description | Thickness (feet) | |
|------|--|------------------|-----------|
| | | Unit | From Base |
| 95 | Limestone, slightly dolomitic, medium grey, weathers light grey to medium brownish grey; present as relatively small talus fragments. | 10 | 1640.1 |
| 94 | Limestone, dolomitic, colour laminated black to dark grey, fine grained, granular, platy, thin to medium bedded, weathers medium grey; poorly preserved ostracods from 8 feet up (GSC loc. 54133). | 9.5 | 1630.1 |
| 93 | Dolomite, medium brown, very fine grained, granular, very thin to medium bedded, weathers medium orange-brown. | 13.5 | 1620.6 |
| 92 | Covered. | 1.5 | 1607.1 |
| 91 | Dolomite, dark brown, fine grained, weathers medium brownish grey and light brownish grey; coral fragments collected loose 12 feet up (GSC loc. 54132); unit present as frost-heaved fragments. | 14 | 1605.6 |
| 90 | Covered; talus fragments of limestone, dark brownish grey, fine grained, weathers medium grey. | 27 | 1591.6 |
| 89 | Dolomite, dark grey, fine grained, weathers medium grey; present as frost-heaved fragments; small ostracods collected loose 2 feet up (GSC loc. 54131). | 16.4 | 1564.6 |
| 88 | Dolomite, calcareous, dark grey, fine grained, medium to thick bedded, weathers medium to dark medium brownish grey; present as large frost-heaved blocks. | 6 | 1548.2 |

| Unit | Description | Thickness (feet) | |
|------|--|------------------|-----------|
| | | Unit | From Base |
| 87 | Dolomite, medium brown, very fine grained, granular, weathers very light brownish grey; present as small frost-heaved fragments. | 10 | 1542.2 |
| 86 | Dolomite, calcareous, dark grey, fine grained, granular, vuggy weathering, evenly medium bedded, weathers light brownish grey; large frost-heaved blocks. | 8 | 1532.2 |
| 85 | Limestone, dolomitic, dark brownish grey, fine grained, weathers light grey; contains ostracods including <u>Moelleritia</u> sp. in basal 2 feet of unit (GSC loc. 54130); present as large frost-heaved blocks. | 7.5 | 1524.2 |
| 84 | Covered by vegetation. | 10 | 1516.7 |
| 83 | Limestone, dark brownish grey, aphanitic, evenly medium bedded, weathers light brownish grey. | 5.5 | 1506.7 |
| 82 | Covered by vegetation. | 4 | 1501.2 |
| 81 | Dolomite, strongly calcareous, medium brown, aphanitic, weathers light brownish grey; large and small frost-heaved blocks. | 15 | 1497.2 |
| 80 | Covered by vegetation. | 9 | 1482.2 |
| 79 | Dolomite, calcareous, medium brown, aphanitic, medium bedded in lower 3 feet, thinner bedded above, weathers light brownish grey. | 10 | 1473.2 |
| 78 | Covered by vegetation. | 3.5 | 1463.2 |

| Unit | Description | Thickness (feet) | |
|------|--|------------------|-----------|
| | | Unit | From Base |
| 77 | Dolomite, calcareous, medium brown, fine grained, granular, medium bedded, weathers medium brownish grey; <u>Moelleritia</u> sp. collected 5 feet up (GSC loc. 54129). | 11 | 1459.7 |
| 76 | Covered; talus fragments of dolomite, medium brown, fine-to medium-crystalline, weathers light brownish grey to medium grey. | 18 | 1448.7 |
| 75 | Covered; fragments of dolomite, pale brown, aphanitic, weathers light brownish grey. | 15 | 1430.7 |
| 74 | Dolomite, pale brown, aphanitic, vuggy weathering, thin bedded, weathers light brown; poorly exposed. Lithological specimen (GSC loc. 54128). | 4.5 | 1415.7 |
| 73 | Covered; large frost-heaved talus blocks of dolomite, medium brownish grey, aphanitic, weathers light brownish grey. Lithological specimen from 1 foot up (GSC loc. 54127). | 40 | 1411.2 |
| 72 | Covered; fragments of dolomite, slightly calcareous, medium brown, fine grained, weathers light brownish grey; arbitrary cut-off. | 40 | 1371.2 |
| 71 | Dolomite, mottled light brown and dark grey, fine grained, granular, weathers light and medium brown; contains fragmentary cf. <u>Moelleritia</u> sp. (GSC loc. 54126). | 4.5 | 1331.2 |

| Unit | Description | Thickness (feet) | |
|------|--|------------------|-----------|
| | | Unit | From Base |
| 70 | Covered; fragments of dolomite, mottled medium brown and dark grey, aphanitic, weathers very light grey. Station 329NB at base of unit 70 in stream gully, south of station 328NB. | 40 | 1326.7 |
| 69 | Dolomite, dark grey, fine grained, granular, weathering dark grey, containing <u>Coenites</u> sp; interbedded with dolomite, light grey, fine grained, weathering very light grey, also with some <u>Coenites</u> sp. Sample from basal bed (GSC loc. 54125). Station 328NB at top of unit 69 on crest of ridge near peak of mountain. | 35.5 | 1286.7 |
| 68 | Covered; frost-heaved fragments of dolomite, dark grey, medium to coarsely crystalline, weathers medium and dark grey; some of the beds contain very numerous recrystallized <u>Coenites</u> ? sp. | 57 | 1251.2 |
| | Sample from 12 feet up (GSC loc. 54124). | | |
| 67 | Dolomite, calcareous, dark grey, aphanitic, massive, weathers dark grey; unit contains small veins of white dolomite; unit discontinuously exposed along ridge. | 18 | 1194.2 |
| 66 | Covered by vegetation. | 6.6 | 1176.2 |
| 65 | Dolomite, dark grey, aphanitic, massive, resistant, weathers dark grey. | 21 | 1169.6 |

| Unit | Description | Thickness (feet) | |
|------|---|------------------|-----------|
| | | Unit | From Base |
| 64 | Dolomite, calcareous, aphanitic, medium bedded, some beds vuggy, weathers a banded medium and dark grey; poorly exposed. | 24 | 1148.6 |
| 63 | Dolomite, dark grey, aphanitic, brittle, evenly medium bedded, contains poorly preserved recrystallized <u>Coenites</u> sp. or <u>Amphipora</u> sp. (GSC loc. 54123). | 5 | 1124.6 |
| 62 | Dolomite, slightly calcareous, dark grey, aphanitic, evenly medium bedded to massive, weathers medium brownish grey. | 5 | 1119.6 |
| 61 | Dolomite, dark brownish grey, aphanitic, medium bedded, weathers medium brownish grey; poorly exposed. Station 327NB at base of unit 61. Bedding 045T/45SE. | 30 | 1114.6 |
| 60 | Dolomite, dark brownish grey, aphanitic, fairly evenly medium bedded, weathers medium grey; poorly exposed. | 23 | 1084.6 |
| 59 | Covered. | 6 | 1061.6 |
| 58 | Dolomite, medium brownish grey, aphanitic, evenly thick bedded to massive, weathers medium brownish grey; poorly exposed. | 12 | 1055.6 |
| 57 | Covered. | 6 | 1043.6 |
| 56 | Dolomite, dark grey, aphanitic, massive, weathers medium grey. | 6.5 | 1037.6 |
| 55 | Covered; frost-heaved fragments of dolomite, medium brownish grey, fine grained, medium bedded, weathers | | |

| Unit | Description | Thickness (feet) | |
|------|--|------------------|-----------|
| | | Unit | From Base |
| | light to dark grey; poorly preserved <u>Coenites?</u> sp. from 4 feet up (GSC loc. 54115). | 12 | 1031.1 |
| 54 | Dolomite, pale brown, aphanitic, medium bedded, weathers pale brown. | 4.2 | 1019.1 |
| 53 | Dolomite, medium grey, fine grained, medium bedded, weathers a banded light and medium grey, and light brown. | 10 | 1014.9 |
| 52 | Covered; talus fragments of dolomite, medium grey, fine grained, granular, weathers light grey. | 39 | 1004.9 |
| 51 | Dolomite, medium grey, aphanitic, and fine grained, granular, thin bedded, weathers medium grey. | 6 | 965.9 |
| 50 | Dolomite, dark grey, aphanitic, medium bedded, weathers medium grey and medium brown; fossils replaced by coarsely crystalline calcite; unit poorly exposed. | 10 | 959.9 |
| 49 | Dolomite, medium brown, stylolitic, evenly medium bedded, weathers medium brown. | 17 | 949.9 |
| 48 | Covered; fragments of dolomite, medium to dark grey, weathers medium grey. | 21 | 932.9 |
| 47 | Covered. | 6.4 | 911.9 |
| 46 | Covered; large frost-heaved blocks of dolomite, dark grey, fine grained, porous, slightly friable, minutely vuggy, medium to thick bedded, | | |

| Unit | Description | Thickness (feet) | |
|------|---|------------------|-----------|
| | | Unit | From Base |
| | weathers medium grey; oriented lithological specimen from top of unit (GSC loc. 54113). | 15 | 905.5 |
| 45 | Covered; fragments of dolomite, very dark grey, fine grained, granular, porous, weathers medium grey. | 19.5 | 890.5 |
| 44 | Covered; frost-heaved fragments of dolomite, dark grey, aphanitic, weathers medium grey. | 96 | 871 |
| 43 | Dolomite, dark grey, aphanitic, brittle, thin to medium bedded, weathers medium grey and light orange; ostracods collected loose 9 feet up (GSC loc. 54114). | 18 | 775 |
| 42 | Dolomite, medium grey, aphanitic, brittle, evenly medium bedded, weathers orange-brown. | 3.9 | 757 |
| 41 | Covered; fragments of dolomite, calcareous, dark grey, aphanitic, weathers light to dark grey. | 9 | 753.1 |
| 40 | Dolomite, with some dark grey argillaceous dolomite partings, medium greenish grey, aphanitic, thin to medium bedded, cliff-forming, weathers medium grey and medium brown. | 6.7 | 744.1 |
| 39 | Dolomite, medium grey, aphanitic, medium to thick bedded, weathers brownish grey. | 8 | 737.4 |
| | Oriented lithological specimen from 1 foot up (GSC loc. 54112). | | |
| | Bedding 030T/50SE. | | |

| Unit | Description | Thickness (feet) | |
|------|---|------------------|-----------|
| | | Unit | From Base |
| 38 | Covered; talus fragments of dolomite, fine grained, granular, weathers medium to dark grey. | 71 | 729.4 |
| 37 | Dolomite, very slightly argillaceous, medium brownish grey, massive, weathers pale orange. | 4 | 658.4 |
| 36 | Covered; fragments of dolomite, medium grey, aphanitic, weathering light to medium grey. | 24 | 654.4 |
| | Station 326NB at base of unit 36. | | |
| 35 | Dolomite, strongly calcareous, argillaceous and silty laminae, evenly thick bedded, weathers medium orange. | 5 | 630.4 |
| | Bedding 032T/36SE. | | |
| 34 | Dolomite, calcareous, argillaceous, rubbly thin bedded, recessive, weathers pale to medium orange. | 1 | 625.4 |
| 33 | Dolomite, dark grey, aphanitic, even bed, resistant, weathers medium orange; oriented lithological specimen (GSC loc. 54122). | 2 | 624.4 |
| 32 | Dolomite, medium grey, aphanitic, evenly thin bedded, recessive, weathers medium orange. | 0.6 | 622.4 |
| 31 | Covered by vegetation. | 56.8 | 621.8 |
| 30 | Dolomite, medium brown, aphanitic, even bed, weathers medium orange. | 2.5 | 565 |
| 29 | Covered; talus fragments of dolomite, weathering orange; mixed with fragments of limestone, medium grey, | | |

| Unit | Description | Thickness (feet) | |
|------|--|------------------|-----------|
| | | Unit | From Base |
| | aphanitic, evenly medium bedded, weathers light grey; ostracods collected loose 7 feet up (GSC loc. 54102). | 20 | 562.5 |
| 28 | Dolomite, slightly calcareous, medium grey, aphanitic, even bed, weathers medium orange. | 3 | 542.5 |
| 27 | Covered; fragments of dolomite, weathering pale orange; mixed with fragments of dolomitic limestone, weathering light to medium grey. | 60 | 539.5 |
| 26 | Covered; fragments of dolomite, argillaceous, silty, and slightly calcareous, rubbly thin bedded, weathering medium orange; mixed with fragments of limestone, medium grey, aphanitic, weathering light grey; cf. <u>Herrmannina</u> sp. collected loose in limestone fragments 3 and 15.5 feet up (GSC loc. 54111). | 15.5 | 479.5 |
| 25 | Limestone, dark grey, aphanitic, even bed, weathers medium grey, contains a few cf. <u>Briartina</u> ? sp. (GSC loc. 54108). | 7.5 | 464 |
| 24 | Dolomite, light grey, aphanitic, rubbly thin bedded, weathers pale orange; discontinuously and poorly exposed. | 40 | 456.5 |
| 23 | Dolomite, light grey, aphanitic, rubbly thin bedded, weathers light grey; contains cf. <u>Briartina</u> sp. (GSC loc. 54110); unit discontinuously exposed. | c. 2 | 416.5 |
| 22 | Covered; fragments of dolomite, light grey, very thin bedded; cf. <u>Herrmannina</u> sp. collected loose 4 feet up (GSC loc. 54107). | 22 | 414.5 |

| Unit | Description | Thickness (feet) | |
|------|---|------------------|-----------|
| | | Unit | From Base |
| 21 | Dolomite, medium grey, aphanitic, even bed, weathers light grey. | 2.2 | 392.5 |
| 20 | Covered; fragments of dolomite, pale brown, aphanitic, thin bedded, weathers pale orange. | 12.2 | 390.3 |
| 19 | Dolomite, medium brownish grey, aphanitic, massive, weathers medium grey. Lithological specimen (GSC loc. 54121). | 3.3 | 378.1 |
| 18 | Covered; fragments of dolomite, light grey, aphanitic, weathers pale orange. | 8 | 374.8 |
| 17 | Dolomite, light grey, aphanitic, evenly bedded, weathers pale orange. | 14.5 | 366.8 |
| 16 | Covered; fragments of both light grey and pale orange weathering dolomite. | 8.5 | 352.3 |
| 15 | Covered; fragments of dolomite, calcareous, medium brownish grey, aphanitic, weathers pale orange; also fragments of light grey weathering dolomite. Lithological specimen (GSC loc. 54120). | 12.5 | 343.8 |
| 14 | Covered; large frost-heaved blocks of dolomite, medium brown, aphanitic, brittle, evenly medium bedded, weathers light grey. | 23 | 331.3 |
| 13 | Covered; fragments of dolomite, medium grey, aphanitic, weathers light grey, mixed with fragments of dolomite, weathering light orange. | 40 | 308.3 |

| Unit | Description | Thickness (feet) | |
|------|--|------------------|-----------|
| | | Unit | From Base |
| 12 | Covered; fragments of dolomite, pale greenish grey, thin bedded, weathers pale orange; arbitrary cut-off (GSC loc. 54119). Lithological specimen from base of unit (GSC loc. 54119). | 30 | 268.3 |
| 11 | Covered; fragments of dolomite, medium grey, aphanitic, weathers very light grey. | 55 | 238.3 |
| 10 | Dolomite, medium to light grey, evenly medium bedded, weathers light grey. Lithological specimen (GSC loc. 54116). | 2 | 183.3 |
| 9 | Covered; predominant talus fragments of dolomite, light brownish grey, aphanitic, weathers light grey; cephalopod moulds collected loose in pale orange weathering dolomite fragments at 27 feet up (GSC loc. 54109). | 99 | 181.3 |
| 8 | Dolomite, light to medium grey, aphanitic, massive, resistant, weathers light grey and pale orange. | 3 | 82.3 |
| 7 | Covered by vegetation. | 3.4 | 79.8 |
| 6 | Dolomite, slightly calcareous, light grey, aphanitic, massive, resistant, weathers pale brown; contains traces of organic remains replaced by coarsely crystalline calcite. Lithological specimen from base of unit (GSC loc. 54118). | 8.9 | 76.4 |

| Unit | Description | Thickness (feet) | |
|------|--|------------------|-----------|
| | | Unit | From Base |
| 5 | Dolomite, medium grey, aphanitic, medium bedded to massive, stylonitic, slightly recessive, weathers light grey to pale brown. | 7 | 67.5 |
| 4 | Dolomite, medium grey, aphanitic, massive, highly resistant, scarp-forming, weathers pale brown. Lithological specimen (GSC loc. 54117). Bedding 041T/45SE. | 25 | 60.5 |
| 3 | Dolomite, medium grey, aphanitic, massive, weathers medium grey; transitional upper contact; slightly less resistant than overlying unit. | 13 | 35.5 |
| 2 | Covered. | 15 | 22.5 |
| 1 | Dolomite, dark grey, aphanitic, massive, highly fractured, weathers medium grey; 'ghosts' of brachiopods and large crinoid ossicles evident. Station 325NB at base of unit 1 at south-east end of valley (65°34.1'N, 138°46.3'W). | 7.5 | |

MIDDLE DEVONIAN AND OLDER

Michelle Formation
(278 feet thick)

| | | | |
|----|--|-------|-------|
| 38 | Covered by vegetation; <u>Receptaculites</u> sp., <u>Spinatrypa?</u> sp., and planispiral gastropod collected loose 5 feet up (Field No. 323NBil). | c. 52 | 278.1 |
|----|--|-------|-------|

| Unit | Description | Thickness (feet) | |
|------|--|------------------|-----------|
| | | Unit | From Base |
| | Station 324NB at top of unit 38 at south end of valley (65°33.7'N, 138°47'W). | | |
| 37 | Limestone, argillaceous and silty, dark grey, thin bedded, weathers orange-brown. | 2.5 | 226.1 |
| 36 | Covered; fragments of limestone, argillaceous, black, fine grained, weathers orange-brown; <u>Emanuella?</u> sp. and harpid fragments collected loose in this interval (GSC loc. 54088). | 4 | 223.6 |
| 35 | Mudstone, calcareous, black, medium to thick bedded, weathers orange-brown, softer than unit below; basal beds contain a rich fauna of dalmanellid, leiorhynchid, <u>Tentaculites</u> sp., and <u>Dechenella</u> (<u>Dechenella</u>) sp. (GSC loc. 54087); * <u>Dechenella</u> sp. collected loose 2 feet up (GSC loc. 54092). | 15.5 | 219.6 |
| 34 | Limestone, strongly argillaceous and silty, black, evenly medium to thick bedded, weathers medium orange-brown; contains numerous fossils; <u>Atrypa</u> sp. and <u>Warrenella?</u> sp. collected loose in basal 3 feet (GSC loc. 54248); * <u>Schuchertella?</u> sp. and <u>Atrypa</u> sp. S from 5 feet up (GSC loc. 54103); proetid tail collected loose 7 feet up (GSC loc. 54249); <u>Atrypa</u> sp. from 12 feet up (Field No. 323NBdl); *harpid from 20 feet up and dalmanellid, leiorhynchid, and spiriferid from 22 feet up (GSC loc. 54086). | 24 | 204.1 |

| Unit | Description | Thickness (feet) | |
|------|---|------------------|-----------|
| | | Unit | From Base |
| 33 | Mudstone, calcareous, black, evenly thick bedded to massive, weathers orange; moderately fossiliferous; ostracods and <u>Styliolina</u> sp. from base of unit (GSC loc. 54105); <u>Spinatrypa</u> sp. and other brachiopods collected loose (GSC loc. 54106). | 13.5 | 180.1 |
| 32 | Covered; fragments of black shale and thin beds of orange-brown weathering limestone. | 4.5 | 166.6 |
| 31 | Mudstone, calcareous, black, massive, resistant, weathers orange-brown; contains undet. brachiopods, <u>Styliolina</u> sp., trilobite fragment, and echinoderm ossicles with single axial canals (GSC loc. 54091). | 18.4 | 162.1 |
| 30 | Mudstone, slightly calcareous, black, thin bedded, breaks into thin rectangular fragments, weathers orange-brown; brachiopod fragments, <u>Styliolina</u> sp., <u>Dechenellurus</u> sp. B, and <u>Harpes</u> cf. <u>H. reticulatus</u> Hawle and Corda collected loose (GSC loc. 54104); age: Emsian. | 8.5 | 143.7 |
| 29 | Limestone, silty and argillaceous, black, aphanitic, hard, thick bedded to massive, resistant, scarp-forming, weathers orange-brown; contains numerous fossils: *stropheodontid? genus A, undet. gastropod, <u>Dechenellurus</u> sp., B, <u>Harpes</u> cf. <u>H. reticulatus</u> Hawle and Corda, other trilobite fragments, and echinoderm ossicles (GSC loc. 54098); age: Emsian. | 12.5 | 135.2 |
| 28 | Limestone, argillaceous and silty, evenly medium to thick bedded, | | |

| Unit | Description | Thickness (feet) | |
|------|--|------------------|-----------|
| | | Unit | From Base |
| | weathers orange-brown; interbedded with mudstone, calcareous, splintery fracturing, weathers rusty orange-brown. | 6.8 | 122.7 |
| 27 | Shale, black, splintery; with thin interbeds of limestone, argillaceous, weathering orange-brown; unit poorly exposed. | 5.8 | 115.9 |
| 26 | Limestone, argillaceous and silty, even and nodular thin bedded, resistant, weathers medium orange-brown; contains scattered <i>Warrenella</i> sp. and <i>Styliolina</i> sp. (GSC loc. 54097). | 3 | 110.1 |
| 25 | Covered by shale fragments, fossils collected loose: <i>Schuchertella?</i> sp., undet. gastropod, <i>Styliolina</i> sp., and <i>Harpes</i> cf. <i>H. reticulatus</i> Hawle and <i>Corda</i> (GSC loc. 54096); age: Emsian. | 3.4 | 107.1 |
| 24 | Mudstone, strongly calcareous, evenly and nodular medium bedded, weathers very dark grey; contains <i>Warrenella</i> sp. (GSC loc. 54095). | 1.6 | 103.7 |
| 23 | Covered; fragments of shale, carbonaceous, black, with thin interbeds of calcareous mudstone; <i>Dechenella</i> sp. collected loose in calcareous mudstone fragment (GSC loc. 54091). | 4 | 102.1 |
| 22 | Mudstone, calcareous, black, resistant, medium orange-brown; contains <i>Styliolina</i> sp. and <i>Tentaculites</i> sp. (GSC loc. 54101). | 4 | 98.1 |
| 21 | Shale, calcareous, black, hard and soft beds, softer beds carbonaceous. | 4.3 | 94.1 |

| Unit | Description | Thickness (feet) | |
|------|---|------------------|-----------|
| | | Unit | From Base |
| 20 | Mudstone, strongly calcareous, black, weathers medium orange-brown. | 1.5 | 89.8 |
| 19 | Shale, calcareous, black, breaks into pencil-like fragments; <u>Styliolina</u> sp. noted loose. | 5 | 88.3 |
| 18 | Limestone, strongly argillaceous, black, resistant, weathers medium brownish grey. *Orthid brachiopod-genus A, leiorhynchid, *cf. <u>Palaeoneilo</u> sp., undet. pelecypod, <u>Styliolina</u> sp., <u>Tentaculites</u> sp., and * <u>Dechenella</u> sp. collected loose derived from above (GSC loc. 54094). | 1.4 | 83.3 |
| 17 | Shale, calcareous, black, hard, irregularly fissile, <u>Coleolus</u> sp. noted loose; unit poorly exposed. | 12 | 81.9 |
| 16 | Limestone, strongly argillaceous, black, fairly hard, irregularly thin bedded, relatively resistant, weathers medium brownish grey; contains * <u>Goniophora?</u> sp., and <u>Tentaculites</u> sp. (GSC loc. 54099). | 5.3 | 69.9 |
| 15 | Shale, calcareous, black, recessive. | 2 | 64.6 |
| 14 | Limestone, silty, argillaceous, black, irregularly thin bedded, resistant, weathers rusty brown; contains trilobite and brachiopod fragments (GSC loc. 54100). | 2.4 | 62.6 |
| 13 | Shale, calcareous, black, irregularly thin bedded, with interbeds of softer black shale, recessive, weathers black; contains <u>Coleolus</u> sp. (GSC loc. 54090). | 11.1 | 60.2 |

| Unit | Description | Thickness (feet) | |
|------|---|------------------|-----------|
| | | Unit | From Base |
| 12 | Covered; fragments of black shale; <u>Styliolina</u> sp. and <u>Tentaculites</u> sp. collected loose (GSC loc. 54093). | 4.2 | 49.1 |
| 11 | Limestone, silty and argillaceous, black, irregularly thin bedded, relatively resistant, weathers medium brownish grey. | 2.4 | 44.9 |
| 10 | Shale, presumably calcareous, black, thin bedded, hard and soft beds, recessive, weathers black; contains <u>Styliolina</u> sp. | 4.8 | 42.5 |
| 9 | Limestone, argillaceous and silty laminae, beds between 1 inch and 3 inches thick, weathers medium orange-brown; <u>Styliolina</u> sp. and <u>Tentaculites</u> sp. from base of unit (GSC loc. 54091). | 2.8 | 37.7 |
| 8 | Shale, carbonaceous, black, soft, recessive, weathers jet black. | 2.7 | 34.9 |
| 7 | Shale, strongly calcareous, black, fairly hard, weathers dark grey. | 2.2 | 32.2 |
| 6 | Shale, black, soft, recessive; poorly exposed. | 2.7 | 30.0 |
| 5 | Shale, black, soft; thinly interbedded with shale, calcareous, harder, unit resistant, weathers black and dark rusty brown; harder beds contain <u>Styliolina</u> sp. | 4.1 | 27.3 |
| 4 | Shale, calcareous, carbonaceous, black, fissile, recessive, weathers black; poorly exposed; harder calcareous beds contain numerous <u>Styliolina</u> sp. and <u>Tentaculites</u> sp. (GSC loc. 54084). | 6.5 | 23.2 |

| Unit | Description | Thickness (feet) | |
|---|---|------------------|-----------|
| | | Unit | From Base |
| 3 | Shale, calcareous, silty, black, hard, fissile, weathers dark orange; with thin interbeds of shale, calcareous, black, very soft; shale for microfossils from middle of unit (GSC loc. 54089). | 3.9 | 16.7 |
| 2 | Shale, calcareous, carbonaceous, black, soft; interbedded with thin harder beds of shale, calcareous, silty, weathering rusty brown. | 8.1 | 12.8 |
| | <u>Styliolina</u> sp. and <u>Tentaculites</u> sp. from hard calcareous bed 5 feet up (GSC loc. 54088). | | |
| | Undetermined gastropod, undetermined cephalopod, <u>Styliolina</u> sp., <u>Tentaculites</u> sp., and echinoderm ossicles with single canals collected loose 0.5 foot up (GSC loc. 54087). | | |
| | <u>Lingula?</u> sp. and <u>Schizoproetoides</u> sp. from 0.5 foot up (GSC loc. 54092); age: Emsian or Eifelian. | | |
| 1 | Limestone, argillaceous, silty and sandy, dark brownish grey, rubbly thin bedded, weathers dark brownish grey; beds separated by black shale partings; unit relatively resistant; noted poorly preserved brachiopods. | 4.7 | |
| | Bedding 130T/24SW. | | |
| SILURIAN | | | |
| <u>Road River Formation</u> (49 feet measured; incomplete) | | | |
| 3 | Covered; fragments of shale, carbonaceous, black, weathers jet black. | 39 | 49 |

| Unit | Description | Thickness (feet) | |
|------|--|------------------|-----------|
| | | Unit | From Base |
| | Gastropod collected loose 13 feet up (GSC loc. 54085). Macerated inarticulate brachiopod, undet. pelecypod, <u>Tentaculites</u> sp., and harpid indet. collected loose 35 feet up (GSC loc. 54086). | | |
| 2 | Shale, carbonaceous, black, with thin beds of argillaceous limestone, dark grey, irregularly fissile; <u>Styliolina</u> sp., <u>Coleolus</u> sp., and monograptids present in limestone bed (GSC loc. 54247); shale for microfossils (GSC loc. 54103). | 1.5 | 10.0 |
| 1 | Covered; talus fragments of shale, carbonaceous, black, soft; and fragments of limestone, dark grey, thin bedded, fissile, weathering orange-brown. | 8.5 | |
| | *Orthoid brachiopod and * <u>Coleolus</u> sp. collected loose at base of unit (GSC loc. 54246). | | |
| | Station 323NB at base of unit 1 and lowest exposure at southern end of valley at about 65°33'N, 138°46'W. | | |

Section 23: SOUTHERN END OF NAHONI RANGE (116G-4)

Section is located in the southern end of Nahoni Range and was measured southward across an east-trending mountain from about 65°29'N, 139°09'W to about 65°28'N, 139°09'W. In this area the beds strike about 070T and dip steeply southward. Graptolitic shales of the Road River Formation form the valley on the north side of the mountain. Overlying the Road River Formation is a thin unit of interbedded limestones and shales of the Devonian Michelle Formation that outcrops along the bottom of the north slope of the mountain. Most of the mountain is made up of and capped by resistant carbonates of the Middle Devonian Ogilvie Formation, which is fairly well exposed on both the north and south slopes. Strata of Carboniferous age overlie the Devonian and form the parallel mountainous ridge immediately to the south.

Section measured by A. W. Norris, assisted by D. L. Jordan, August 25-27, 1962.

| | |
|---------------------------|--------------------|
| MIDDLE DEVONIAN | |
| Ogilvie Formation | 2393.1' |
| MIDDLE DEVONIAN AND OLDER | |
| Michelle Formation | 279.1' |
| SILURIAN | |
| Road River Formation | 384.2'; incomplete |

| Unit | Description | Thickness (feet) | |
|------|-------------|------------------|-----------|
| | | Unit | From Base |

MIDDLE DEVONIAN

Ogilvie Formation
(2393.1 feet thick)

Medium Grey Recessive Limestone Unit

| | | | |
|-----|--|----|--------|
| 200 | Limestone, crinoidal, medium brown, massive, weathers medium grey. | 15 | 2393.1 |
|-----|--|----|--------|

Station 343NB at top of unit 200 towards the bottom of the south flank of mountain at approximately 65°28'N, 139°09'W.

| Unit | Description | Thickness (feet) | |
|------|---|------------------|-----------|
| | | Unit | From Base |
| | Station is at or very near the top of Ogilvie Formation. Bedding 070T/85S. | | |
| 199 | Limestone, dark grey, fine grained, thick bedded to massive, weathers dark grey; contains very numerous poorly preserved stromatoporoids and <u>Coenites</u> sp., sample (GSC loc. 54226) from 6 feet up. | 80 | 2378.1 |
| 198 | Limestone, dark grey, aphanitic, massive, resistant, weathers light grey; contains numerous silicified stromatoporoids and <u>Coenites</u> sp. | 33 | 2298.1 |
| 197 | Limestone, dark grey, fine grained, evenly thick bedded to massive, weathers light grey; contains numerous poorly preserved silicified stromatoporoids and <u>Coenites</u> sp. (GSC loc. 54225). | 25 | 2265.1 |
| 196 | Limestone, dark brownish grey, aphanitic, thick bedded to massive, resistant, weathers light grey; numerous poorly preserved stromatoporoids and <u>Coenites</u> sp. in upper part of unit; arbitrary cut-off. | 20.3 | 2240.1 |
| | Station 342NB at base of unit 196 on south slope of mountain. Bedding 075T/71S. | | |
| 195 | Limestone, dark grey, aphanitic, massive, resistant, weathers light grey; several layers up to 3 feet thick at 6 feet up and above with numerous poorly preserved silicified corals, sample (GSC loc. 54224) from 18 feet up. | 21 | 2219.8 |

| Unit | Description | Thickness (feet) | |
|---|---|------------------|-----------|
| | | Unit | From Base |
| <u>Light Grey Weathering Variably Resistant</u> | | | |
| <u>Limestone Unit</u> | | | |
| 194 | Limestone, black, aphanitic, massive, resistant, weathers light grey; transitional upper contact. | 12 | 2198.8 |
| 193 | Limestone, black, aphanitic, irregularly thin bedded, recessive, weathers light grey. | 5 | 2186.8 |
| 192 | Limestone, medium brown, aphanitic, thick bedded to massive, weathers light grey. | 16 | 2181.8 |
| 191 | Limestone, with fine chert tracery, medium to dark grey, aphanitic, thick bedded, weathers light grey; poorly preserved silicified <u>Coenites</u> sp. (GSC loc. 54223) from upper bed. | 14 | 2165.8 |
| 190 | Limestone, medium brown, aphanitic, evenly thin bedded, weathers light grey. | 3.6 | 2151.8 |
| 189 | Limestone, dark brownish grey, fine grained to aphanitic, evenly thick bedded to massive, resistant. | 24.8 | 2148.2 |
| 188 | Limestone, dark grey, fine grained, medium bedded to massive, weathers light grey. | 24 | 2123.4 |
| 187 | Limestone, light grey to dark grey and medium brown, very fine to medium grained, massive, resistant, weathers light grey. | 18.4 | 2099.4 |
| 186 | Limestone, medium brown, aphanitic, evenly thick bedded, weathers medium brown. | 19 | 2081 |

| Unit | Description | Thickness (feet) | |
|------|--|------------------|-----------|
| | | Unit | From Base |
| 185 | Limestone, dark grey, aphanitic, irregularly thin to medium bedded, weathers light grey. | 4 | 2062 |
| 184 | Limestone, dark brown, fine grained, granular, massive, recessive, weathers medium grey. | 5 | 2058 |
| 183 | Limestone, dark grey, medium to thick bedded, resistant, weathers light grey; contains a small amount of fine chert tracery. | 8.5 | 2053 |
| 182 | Limestone, black, aphanitic, evenly and irregularly medium to thick bedded, resistant, weathers light grey; arbitrary cut-off. | 15 | 2044.5 |
| 181 | Limestone, dark brown, fine grained, evenly medium bedded, recessive, weathers light grey. | 2 | 2029.5 |
| 180 | Limestone, dark grey, aphanitic, irregularly thick bedded, resistant, weathers light grey. | 13.9 | 2027.5 |
| 179 | Limestone, medium brown, aphanitic, evenly thin bedded, resistant, weathers light grey. | 6 | 2013.6 |
| 178 | Limestone, medium grey, aphanitic, evenly thin to medium bedded, recessive, weathers light grey. | 6.3 | 2007.6 |
| 177 | Limestone, black, fine grained, evenly very thick bedded, resistant, weathers light grey. | 15 | 2001.3 |
| 176 | Limestone, dark grey, aphanitic, massive, weathers light grey; transitional upper contact. | 21.5 | 1986.3 |

| Unit | Description | Thickness (feet) | |
|------|---|------------------|-----------|
| | | Unit | From Base |
| 175 | Limestone, black, aphanitic, massive, weathers light grey. | 4 | 1964.8 |
| 174 | Limestone, black, aphanitic, massive, resistant, weathers light grey. | 12 | 1960.8 |
| 173 | Limestone, dark grey, aphanitic, thick bedded, resistant, weathers light grey; contains numerous silicified stromatoporoids and <u>Alveolites</u> sp., sample (GSC loc. 54222) from base of unit. | 11.2 | 1948.8 |
| 172 | Covered; recessive interval. | 4 | 1937.6 |
| 171 | Limestone, dark brownish grey, aphanitic, rubbly thin bedded, beds from 2 to 4 inches thick, resistant, weathers medium orange-grey; numerous silicified stromatoporoids, <u>Coenites</u> sp., a few <u>Favosites</u> sp. (GSC loc. 54221) at 5 feet up and at top of unit. | 11.4 | 1933.6 |
| 170 | Limestone, fetid, dark brownish grey, irregularly medium bedded, recessive, weathers light grey; contains silicified stromatoporoids, <u>Coenites</u> sp. and <u>Favosites</u> sp. (GSC loc. 54220) at 6 feet up. | 12 | 1922.2 |
| 169 | Limestone, fetid, dark brown, fine grained, massive, resistant, weathers light grey. | 11 | 1910.2 |
| 168 | Limestone, medium brown, aphanitic, irregularly thin to medium bedded, recessive, weathers light grey. | 3.7 | 1899.2 |
| 167 | Limestone, medium brown, aphanitic, massive, resistant, rib-forming, weathers light grey; contains trilobite fragments and echinoderm ossicles | | |

| Unit | Description | Thickness (feet) | |
|------|---|------------------|-----------|
| | | Unit | From Base |
| | with single axial canals (GSC loc. 54219) from 12 feet up. | 18 | 1895.5 |
| 166 | Limestone, dark grey, fine grained, rubbly and massive, recessive and resistant, weathers medium grey. | 13 | 1877.5 |
| 165 | Limestone, black, aphanitic, thick bedded to massive, very resistant, rib-forming, weathers medium grey; contains a few stromatoporoids at 6 feet up. | 20.8 | 1864.5 |
| 164 | Limestone, medium brown, aphanitic, even and nodular, thin to medium bedded, recessive, weathers medium brownish grey. | 8 | 1843.7 |
| 163 | Limestone, very dark grey, aphanitic, thick bedded, resistant, weathers medium brownish grey. | 6 | 1835.7 |
| 162 | Limestone, medium brown, aphanitic, evenly and nodular thin bedded, weathers light grey and medium orange-brown. | 17.4 | 1829.7 |
| | <u>Resistant Medium Grey Weathering Limestone Unit</u> | | |
| 161 | Limestone, dark grey, aphanitic, rubbly thin bedded, weathers light orange-brown; a few stromatoporoids present (GSC loc. 54218) in basal beds of unit. | 7.5 | 1812.3 |
| 160 | Limestone, medium grey, fine grained, evenly bedded, weathers light grey. | 4.5 | 1804.8 |
| 159 | Covered. | 25 | 1800.3 |
| 158 | Limestone, dark brownish grey, aphanitic, evenly medium to thick bedded, resistant, weathers medium grey. | 18 | 1775.3 |

| Unit | Description | Thickness (feet) | |
|------|--|------------------|-----------|
| | | Unit | From Base |
| 157 | Covered. | 4.5 | 1757.3 |
| 156 | Limestone, medium brownish grey, aphanitic, irregularly medium bedded, weathers light grey. | 10.8 | 1752.8 |
| 155 | Limestone, medium grey, aphanitic, evenly and rubbly thin bedded, recessive, weathers medium grey. | 8 | 1742 |
| 154 | Limestone, medium brownish grey, aphanitic, very resistant, weathers light grey. | 5 | 1734 |
| 153 | Covered. | 11 | 1729 |
| 152 | Limestone, very dark grey, thick bedded to massive, weathers medium brownish grey. | 2.1 | 1718 |
| 151 | Covered. | 21 | 1715.9 |
| 150 | Limestone, aphanitic, medium brown, evenly thick bedded, resistant, weathers light brownish grey. | 7.2 | 1694.9 |
| 149 | Limestone, dark brownish grey, aphanitic, thin to medium bedded, recessive, trench-forming, weathers medium brownish grey. | 7 | 1687.7 |
| 148 | Limestone, dark brownish grey, aphanitic, thick bedded to massive, weathers medium brownish grey. | 18.1 | 1680.7 |
| 147 | Limestone, dark grey, fine grained, thin bedded, recessive, weathers medium brownish grey. | 2.8 | 1662.6 |
| 146 | Limestone, very dark grey, aphanitic, thick bedded, weathers medium brownish grey. | 14 | 1659.8 |

| Unit | Description | Thickness (feet) | |
|------|---|------------------|-----------|
| | | Unit | From Base |
| 145 | Covered. | 9.5 | 1645.8 |
| 144 | Limestone, black, aphanitic, massive, resistant, weathers medium brownish grey. | 3.7 | 1636.3 |
| 143 | Limestone, black, fine grained, irregularly and evenly thin to medium bedded, weathers medium brownish grey; interbedded with evenly medium beds; contains a few planispiral gastropods (GSC loc. 54217) collected 4 feet up. | 8.1 | 1632.6 |
| 142 | Limestone, very dark grey, aphanitic, evenly thick bedded, hard, resistant, weathers medium brownish grey. | 9 | 1624.5 |
| 141 | Covered. | 5 | 1615.5 |
| 140 | Limestone, very dark grey, aphanitic, hard, even bed, resistant, weathers medium brownish grey. | 2 | 1610.5 |
| 139 | Covered. | 6.2 | 1608.5 |
| 138 | Limestone, dark grey, aphanitic, thick bedded, weathers medium grey. | 2.8 | 1602.3 |
| 137 | Covered. | 10.4 | 1599.5 |
| 136 | Limestone, dark grey, aphanitic, evenly medium to thick bedded, weathers very light grey; contains poorly preserved <u>Syringopora?</u> sp. (GSC loc. 54216) at 9 feet up. Bedding 072/63S. | 17.8 | 1589.1 |
| 135 | Limestone, very dark grey, fine grained, irregularly thin bedded, weathers medium brownish grey; poorly exposed. | 18 | 1571.3 |

| Unit | Description | Thickness (feet) | |
|------|---|------------------|-----------|
| | | Unit | From Base |
| 134 | Limestone, dark grey, aphanitic, evenly medium bedded, weathers light brownish grey. | 12.7 | 1553.3 |
| 133 | Covered. | 8 | 1540.6 |
| 132 | Limestone, argillaceous, very dark grey, fine grained, rubbly, very thin bedded, weathers light brownish grey; poorly exposed. | 1.4 | 1532.6 |
| 131 | Covered. | 5 | 1531.2 |
| 130 | Limestone, argillaceous, medium brown, fine grained, rubbly very thin bedded, weathers medium brown; interbedded with limestone, dark grey, aphanitic, evenly thin bedded, weathers medium brown. | 1.5 | 1526.2 |
| 129 | Covered. | 8.5 | 1524.7 |
| 128 | Limestone, black, fine grained, porous, evenly medium bedded, weathers medium grey; poorly exposed. | 9.5 | 1516.2 |
| 127 | Covered. | 9.2 | 1506.7 |
| 126 | Limestone, dark grey, aphanitic, evenly thick bedded, beds between 1.5 and 3 feet thick, very hard, resistant, weathers medium brownish grey. | 7.1 | 1497.5 |
| 125 | Covered. | 35.5 | 1490.4 |
| 124 | Limestone, medium brown, aphanitic, in part replaced by coarsely crystalline white calcite, massive, resistant, weathers very light grey; contains a few cf. <u>Moelleritia</u> sp. (GSC loc. 54215). | 10.2 | 1454.9 |

| Unit | Description | Thickness (feet) | |
|------|--|------------------|-----------|
| | | Unit | From Base |
| 123 | Covered by talus and vegetation. | 58.6 | 1444.7 |
| 122 | Limestone, replaced by white coarsely crystalline calcite, weathers light grey; poorly exposed. | 4 | 1386.1 |
| 121 | Covered by vegetation. | 6 | 1382.1 |
| 120 | Limestone, very dark grey, fine grained, granular, even bed, resistant, weathers medium brown; poorly exposed. | 1.8 | 1376.1 |
| 119 | Covered. | 45 | 1374.3 |
| 118 | Limestone, dark grey, aphanitic, evenly bedded, resistant, weathers medium brownish grey. | 10.5 | 1329.3 |
| 117 | Covered; fragments of limestone, medium brown, aphanitic, very thin bedded, weathers medium brownish grey. | 9.5 | 1318.8 |
| 116 | Limestone, dolomitic, medium brownish grey, even bed, weathers medium brown. | 1.5 | 1309.3 |
| 115 | Dolomite, dark brown, fine grained, granular, porous, rubbly thin bedded, recessive, weathers medium orange-brown. | 5.4 | 1307.8 |
| 114 | Covered by vegetation. | 9 | 1302.4 |
| 113 | Limestone, dark brown and dark grey, thin bedded, recessive, weathers medium brownish grey; poorly exposed; ostracods (GSC loc. 54214) from 2.5 feet up. | 15.8 | 1293.4 |
| 112 | Limestone, medium brown, aphanitic, even bed, weathers light grey. | 2.2 | 1277.6 |

| Unit | Description | Thickness (feet) | |
|------|---|------------------|-----------|
| | | Unit | From Base |
| 111 | Covered by vegetation. Station 341NB at base of unit 111 at peak of ridge. | 8.5 | 1275.4 |
| 110 | Limestone, dark grey, fine grained, thin bedded, weathers dark brownish grey; contains a few ostracods (GSC loc. 54213); unit poorly exposed. | 3 | 1266.9 |
| 109 | Covered by vegetation. | 8.8 | 1263.9 |
| 108 | Limestone, medium brown, aphanitic, thick bedded to massive, weathers medium grey. | 7.4 | 1255.1 |
| 107 | Covered. | 4.8 | 1247.7 |
| 106 | Limestone, pale brown, aphanitic, even bed, highly resistant, weathers light brownish grey. | 7 | 1242.9 |
| 105 | Covered. | 4 | 1235.9 |
| 104 | Limestone, medium brown, aphanitic, evenly medium bedded, beds 1 foot to 2 feet thick, weathers medium brown. | 7.4 | 1231.9 |
| 103 | Limestone, pale brown, aphanitic, evenly thick bedded to massive, resistant, weathers medium brownish grey. | 7.5 | 1224.5 |
| 102 | Limestone, medium brown, aphanitic, thin bedded, recessive, weathers light brownish grey. | 5.7 | 1217 |
| 101 | Limestone, dark brownish grey, aphanitic, thick bedded to massive, resistant, weathers light brownish grey. | 10.5 | 1211.3 |

| Unit | Description | Thickness (feet) | |
|------|--|------------------|-----------|
| | | Unit | From Base |
| 100 | Limestone, dark grey, aphanitic, thin bedded, recessive, weathers light to medium brownish grey. Bedding 060/61S. | 3.8 | 1200.8 |
| 99 | Limestone, medium brown, aphanitic, thick bedded to massive, weathers light brownish grey. | 18.5 | 1197 |
| 98 | Limestone, dark grey, fine grained, thin bedded, recessive, weathers medium brownish grey. | 2 | 1178.5 |
| 97 | Same as unit 95. | 4 | 1176.5 |
| 96 | Covered. | 3 | 1172.5 |
| 95 | Limestone, very dark grey, very fine grained, thick bedded to massive, weathers light brownish grey. | 25.5 | 1169.5 |
| 94 | Limestone, pale brown, fine grained, massive, very resistant, except for upper 4 feet, closely and highly jointed, weathers light brownish grey. | 15.5 | 1144 |
| 93 | Limestone, dark grey, fine grained, medium bedded, fairly resistant, weathers light brownish grey. | 9.5 | 1128.5 |
| 92 | Limestone, dark grey, fine grained, evenly medium bedded, recessive, weathers light brownish grey. | 6 | 1119 |
| 91 | Limestone, medium brown, aphanitic, thick bedded to massive, resistant, weathers light brownish grey. | 11 | 1113 |
| 90 | Limestone, medium brown, aphanitic, thin to medium bedded, recessive, weathers light brownish grey. | 5 | 1102 |

| Unit | Description | Thickness (feet) | |
|------|---|------------------|-----------|
| | | Unit | From Base |
| 89 | Limestone, dark brownish grey, aphanitic, medium to thick bedded, resistant, weathers medium brownish grey. | 6.4 | 1097 |
| 88 | Limestone, dark brown, aphanitic, evenly medium bedded, recessive, weathers light brownish grey. | 7.6 | 1090.6 |
| 87 | Limestone, medium brown, fine grained, evenly medium to thick bedded, fairly resistant, weathers medium brownish grey. | 6 | 1083 |
| 86 | Limestone, dark grey, fine grained, thick bedded to massive, weathers medium brownish grey; <u>Alveolites</u> sp. (GSC loc. 54212) collected loose 5 feet up. | 18.9 | 1077 |
| 85 | Covered. | 12.8 | 1058.1 |
| 84 | Limestone, dark grey, fine grained, massive, weathers dark brownish grey; poorly exposed. | 9 | 1045.3 |
| 83 | Covered. | 9 | 1036.3 |
| 82 | Limestone, dark brownish grey, fine grained, massive, highly jointed and fractured, weathers dark brownish grey; unit contains numerous corals; <u>Hexagonaria</u> sp. and <u>Favosites</u> sp. (GSC loc. 54210) from 6 feet up; stromatoporoids, <u>Alveolites</u> sp., and <u>Favosites</u> sp. and <u>Hexagonaria</u> sp. (GSC loc. 54211) from 8 feet up. | 18 | 1027.3 |
| 81 | Limestone, dark brownish grey, fine grained, thick bedded to massive, weathers dark brownish grey; contains large crinoid ossicles. | 17 | 1009.3 |

| Unit | Description | Thickness (feet) | |
|------|---|------------------|-----------|
| | | Unit | From Base |
| 80 | Limestone, dark brownish grey, fine to medium grained, thin bedded, nodular, weathers medium brownish grey, highly fractured; contains numerous <u>Favosites</u> sp., <u>Hexagonaria</u> sp., and <u>Atrypa</u> sp. (GSC loc. 54206). | 15 | 992.3 |
| 79 | Limestone, dark brownish grey, aphanitic, massive, resistant, weathers dark brownish grey. | 24.8 | 977.3 |
| 78 | Limestone, dolomitic, dark grey, fine grained, massive, cliff-forming, weathers light brownish grey; <u>Alveolites</u> sp., other corals and brachiopod mould (GSC loc. 54208) collected loose; transitional upper contact. | 7.5 | 952.5 |
| 77 | Limestone, dark grey, aphanitic, thin bedded, highly fractured, recessive, trench-forming, weathers medium brownish grey; contains a few small stromatoporoids and <u>Favosites</u> sp. (GSC loc. 54209). | 4.5 | 945 |
| 76 | Limestone, dark brown, aphanitic, massive, cliff-forming, weathers medium brownish grey; more resistant than unit below; <u>Favosites</u> sp., and <u>Atrypa</u> cf. <u>A. arctica</u> Warren collected loose at base of unit (GSC loc. 54207). | 12.6 | 940.5 |
| 75 | Limestone, dolomitic, aphanitic, massive, resistant, cliff-forming, weathers medium brownish grey. | 13.7 | 927.9 |
| 74 | Limestone, dark brownish grey, aphanitic, thin to medium bedded, weathers medium brownish grey; highly fractured. | 22.1 | 914.2 |

| Unit | Description | Thickness (feet) | |
|------|---|------------------|-----------|
| | | Unit | From Base |
| 73 | Limestone, dark brown, aphanitic, rubbly thick bedded, weathers medium brownish grey; arbitrary cut-off. | 12.5 | 892.1 |
| 72 | Limestone, dark grey, aphanitic, evenly thick bedded, scarp-forming, weathers medium grey; contains ostracods (GSC loc. 54206). | 9.4 | 879.6 |
| 71 | Limestone, dark grey, aphanitic, massive, evenly thick bedded, resistant, weathers medium brownish grey; poorly exposed. | 15 | 870.2 |
| | Station 340NB at base of unit 71 about three-quarters up northern face of mountain. Bedding 067T/67S. | | |
| | <u>Light Grey Weathering Recessive Dolomite Unit</u> | | |
| 70 | Dolomite, fine grained to aphanitic, massive, poorly exposed, weathers light brownish grey. | 12.1 | 855.2 |
| 69 | Dolomite, dark grey, fine grained, granular, thick bedded to massive, highly fractured, recessive, weathers light grey. | 8.6 | 843.1 |
| 68 | Dolomite, dark grey, fine grained, granular, massive, resistant, weathers medium brownish grey; arbitrary cut-off. | 24.1 | 834.5 |
| 67 | Dolomite, light brownish grey, fine grained, recessive, weathers light brownish grey; poorly exposed. | 3.7 | 810.4 |
| 66 | Dolomite, dark brown, fine grained, granular, minutely vuggy, fairly evenly medium to thick bedded, weathers light grey. | 8.4 | 806.7 |

| Unit | Description | Thickness (feet) | |
|------|--|------------------|-----------|
| | | Unit | From Base |
| 65 | Dolomite, dark grey, fine grained, very evenly thin to medium bedded, weathers light brownish grey, slightly colour banded; poorly exposed. | 26.9 | 798.3 |
| 64 | Covered. | 2.8 | 771.4 |
| 63 | Dolomite, very dark grey, fine grained, thick bedded to massive, weathers very light grey. | 10.8 | 768.6 |
| 62 | Covered. | 9.3 | 757.8 |
| 61 | Dolomite, dark grey, fine grained, massive, to evenly medium bedded towards top, weathers light brownish grey. | 16.5 | 748.5 |
| 60 | Covered. | 4.1 | 732 |
| 59 | Dolomite, calcareous, dark grey, aphanitic, massive, weathers light brownish grey; <u>Favosites</u> sp. (GSC loc. 54184) collected loose and derived from above. | 20.1 | 727.9 |
| 58 | Covered. | 6 | 707.8 |
| 57 | Dolomite, dark grey, aphanitic, massive, falls-forming in creek gully, weathers light brownish grey. | 11.3 | 701.8 |
| 56 | Dolomite, dark brown, aphanitic, massive, weathers light brownish grey; poorly exposed. | 12 | 690.5 |
| 55 | Covered. | 5.3 | 678.5 |
| 54 | Dolomite, aphanitic, dark grey, medium to thick bedded, weathers light grey. | 5.5 | 673.2 |

| Unit | Description | Thickness (feet) | |
|------|--|------------------|-----------|
| | | Unit | From Base |
| 53 | Dolomite, aphanitic, evenly medium bedded, weathers very light brownish grey. | 10 | 667.7 |
| 52 | Dolomite, very dark grey, aphanitic to medium crystalline, massive, falls-forming in gully, weathers light brownish grey. | 19.1 | 657.7 |
| 51 | Covered. | 6.3 | 638.6 |
| 50 | Dolomite, very dark grey, fine to medium crystalline, massive, weathers light brownish grey; <u>Moelleritia</u> sp. in lower 2 feet (GSC loc. 54183). | 8.8 | 632.3 |
| 49 | Dolomite, slightly calcareous, medium brown, aphanitic, thick bedded to massive, weathers medium brownish grey; transitional upper contact. | 18.1 | 623.5 |
| 48 | Dolomite, pale brown and dark grey, aphanitic, thick bedded, weathers medium brownish grey; a few large crinoid ossicles with single holes seen in talus. | 23.6 | 605.4 |
| 47 | Dolomite, light to medium brown, aphanitic, massive, very resistant, scarp-forming, weathers light brownish grey; contains sparse ostracods in lower 2 feet (GSC loc. 54182). | 32.4 | 581.8 |
| 46 | Dolomite, medium brown, aphanitic, massive, weathers light brownish grey; stylolitic lower contact; contains blebs of hematitic red-weathering argillaceous dolomite; sharp upper contact. | 7.1 | 549.4 |

| Unit | Description | Thickness (feet) | |
|------|---|------------------|-----------|
| | | Unit | From Base |
| 45 | Dolomite, dark grey, aphanitic, thin bedded, recessive, weathers pale brownish grey to dark grey. | 17 | 542.3 |
| 44 | Dolomite, medium brown, aphanitic, massive, resistant, weathers pale brownish grey. Bedding 063T/55SE. | 23.1 | 525.3 |
| 43 | Covered; small fragments of dolomite, dark brownish grey, aphanitic, weathers light to medium grey. <u>Favosites</u> sp. (GSC loc. 54181) collected loose 9 feet up in limestone fragment. | 102 | 502.2 |
| 42 | Covered; large blocks of limestone, dolomitic, dark grey, fine grained, thick bedded, weathers orange-brown; contains <u>Leptodesma?</u> sp., ' <u>Primitia</u> ' sp., and leperditiid ostracod (GSC loc. 54180). | 9 | 400.2 |
| 41 | Covered; fragments of dolomite, dark and medium grey, fine grained, weathers light grey. <u>Orange and Dusky Red Weathering Dolomite and Shale Unit</u> | 7.5 | 391.2 |
| 40 | Covered. Station 338NB at top of unit 40 on north flank of mountainous ridge. | 31 | 383.7 |
| 39 | Dolomite, slightly calcareous, dark grey, fine grained, even bed, resistant, weathers bright medium orange. | 2.5 | 352.7 |
| 38 | Covered. | 7.3 | 350.2 |

| Unit | Description | Thickness (feet) | |
|------|---|------------------|-----------|
| | | Unit | From Base |
| 37 | Dolomite, calcareous, medium grey, aphanitic, rubbly medium bedded, weathers medium grey with pale orange mottling. | 4.2 | 342.9 |
| 36 | Covered. | 7.5 | 338.7 |
| 35 | Dolomite, calcareous, medium greenish grey, fine grained, weathers mottled orange and medium grey. | 1.1 | 331.2 |
| 34 | Covered. | 11.2 | 330.1 |
| 33 | Dolomite, calcareous, medium brownish grey, hard, aphanitic, massive, in places rubbly weathering, weathering medium orange and pale pinkish orange. | 4.8 | 318.9 |
| 32 | Covered; trilobite fragments and ostracods (GSC loc. 54175) collected loose 35 feet up. | 41 | 314.1 |
| 31 | Dolomite, slightly calcareous, mottled pink and greenish grey, fine grained, even bed, weathers same. | 1 | 273.1 |
| 30 | Covered. | 6 | 272.1 |
| 29 | Dolomite, slightly calcareous, aphanitic, medium brownish grey, massive, hard, brittle, resistant, weathers light pink and medium pinkish orange; contains macerated brachiopod fragments (GSC loc. 54174). | 4 | 266.1 |
| 28 | Covered; poorly preserved brachiopod fragments (Field No. 337NBh) collected loose 2 feet up. | 17 | 262.1 |
| 27 | Dolomite, calcareous, medium grey, aphanitic, even bed, weathers medium pink; contains poorly preserved | | |

| Unit | Description | Thickness (feet) | |
|------|--|------------------|-----------|
| | | Unit | From Base |
| | inarticulate brachiopod fragments and small ostracods (GSC loc. 54173). | 1 | 245.1 |
| 26 | Covered. | 3.9 | 244.1 |
| 25 | Dolomite, calcareous, aphanitic, pink, even bed, weathers medium orange and pink. | 1.9 | 240.2 |
| 24 | Covered. | 2.5 | 238.3 |
| 23 | Limestone, dolomitic, argillaceous, aphanitic, medium brownish grey with pink mottling, weathers pale orange and pale pink; contains brachiopod 'ghosts' (GSC loc. 54172); unit discontinuously exposed. | 5 | 325.8 |
| 22 | Covered. | 6 | 320.8 |
| 21 | Limestone, slightly dolomitic, also slightly silty and argillaceous, medium brownish grey, even bed, weathers mottled light orange and pink; contains poorly preserved brachiopod fragments (GSC loc. 54171). | 2 | 314.8 |
| 20 | Limestone, medium brownish grey, aphanitic, rubbly thin bedded, weathers mottled light orange, light and medium grey. | 2 | 312.8 |
| 19 | Dolomite, slightly calcareous, with an occasional argillaceous dolomite parting, aphanitic, massive, weathers bright yellowish orange; poorly preserved ostracods collected loose (GSC loc. 54170) at base of unit and probably derived from it. | 7 | 310.8 |
| 18 | Covered; fragments of light pinkish grey weathering shale. | 7.5 | 303.8 |

| Unit | Description | Thickness (feet) | |
|--|---|------------------|-----------|
| | | Unit | From Base |
| 17 | Limestone, dark grey, aphanitic, evenly thick bedded, resistant, weathers pale orange. | 4.4 | 296.3 |
| 16 | Covered; fragments of red silty shale. | 36 | 291.9 |
| 15 | Limestone, dolomitic, dark grey, aphanitic, massive, resistant, weathers pale orange-brown. Oriented lithological specimen (GSC loc. 54168) from top of unit. Bedding 063T/72SE. | 12 | 255.9 |
| 14 | Covered; fragments of hematitic red silty shale. | 21.2 | 243.9 |
| 13 | Limestone, slightly dolomitic, medium brownish grey, aphanitic, massive, resistant, weathers pale orange; ostracod (GSC loc. 54169) collected loose. Oriented lithological specimen (GSC loc. 54167) from top of unit. | 4.4 | 222.7 |
| <u>Pale Orange and Grey Weathering Dolomite Unit</u> | | | |
| 12 | Covered; predominant talus of dolomite, dark grey, aphanitic, evenly medium to thick bedded, weathers medium orange. <u>Hexagonaria</u> sp. collected loose at 42 and 53 feet up (GSC loc. 54166). | 114 | 218.3 |
| 11 | Dolomite, slightly calcareous, dark brownish grey, evenly thick bedded, weathers light grey. | 1.6 | 104.3 |

| Unit | Description | Thickness (feet) | |
|------|---|------------------|-----------|
| | | Unit | From Base |
| 10 | Covered. | 11 | 102.7 |
| 9 | Dolomite, medium brownish grey, massive, very hard, weathers light brownish grey, exposed in small creek gully. | 5.8 | 91.7 |
| | <u>Hexagonaria</u> sp. collected loose (GSC loc. 54165). | | |
| 8 | Limestone, medium grey, fine grained, even bed, weathers light grey; present as a large block and probably slumped from above. | 2 | 85.9 |
| 7 | Covered. | 15 | 83.9 |
| 6 | Dolomite, light brownish grey, fine grained, massive, weathers light brownish grey; poorly exposed. | 11 | 68.9 |
| 5 | Covered. | 2 | 57.9 |
| 4 | Dolomite, slightly calcareous, dark grey, massive, resistant, closely jointed, cliff-forming, weathers pale orange-brown; lithological specimen (GSC loc. 54164) from base of unit. | 20.4 | 55.9 |
| 3 | Dolomite, dark grey, fine grained, hard, massive, resistant, but poorly exposed; recrystallized crinoid ossicles seen. Bedding 070T/61S. | 7 | 35.5 |
| 2 | Covered. | 11.5 | 28.5 |
| 1 | Dolomite, light grey, fine grained, massive, resistant, closely jointed, weathers buff and medium grey. | 17 | |

| Unit | Description | Thickness (feet) | |
|---|---|------------------|-----------|
| | | Unit | From Base |
| | Station 337NB at base of unit 1 towards the bottom of north-facing slope of mountain ridge. | | |
| MIDDLE DEVONIAN AND OLDER | | | |
| <u>Michelle Formation</u> (279.1 feet thick) | | | |
| 7 | Covered; scattered fragments of black shale and orange weathering limestone. | 235 | 279.1 |
| | <u>Lyriopecten?</u> sp., <u>Tentaculites</u> sp., orthoconic cephalopod, trilobite fragments, and ostracods collected loose in orange weathering limestone fragments 26 feet up (GSC loc. 54204). | | |
| | Brachiopods collected loose 65 feet up (GSC loc. 54176). | | |
| | <u>Harpes</u> cf. <u>H. reticulatus</u> Hawle and Corda, proetids, and brachiopods collected loose about 50 feet up (GSC loc. 54177); age: Emsian. | | |
| 6 | Limestone, silty, argillaceous, black, medium crystalline, evenly very thin bedded, fissile; interbedded with black shale; poorly exposed; <u>Warrenella?</u> sp., <u>Tentaculites</u> sp., trilobite tail fragments, and ostracods collected loose (GSC loc. 54203). | 5.5 | 44.1 |
| 5 | Covered by vegetation; <u>Dechenellurus</u> sp. indet. collected loose (GSC loc. 54178); age: probably Emsian. | 11 | 38.6 |

| Unit | Description | Thickness (feet) | |
|------|--|------------------|-----------|
| | | Unit | From Base |
| 4 | Shale, silty, sandy, dark grey, hard, evenly thin bedded, highly fissile, weathers light orange-brown. | 4 | 27.6 |
| 3 | Covered; fragments of shale, black; and shale, silty, black, fissile, weathering rusty brown. | 11 | 23.6 |
| 2 | Shale, black, hard, fissile, weathers black; poorly exposed; fossils collected loose: leiorhynchid, other brachiopod fragments, <u>Tentaculites</u> sp., and ostracods (GSC loc. 54205). | 2 | 12.6 |
| 1 | Covered by vegetation. | 10.6 | |

SILURIAN

Road River Formation
(384.2 feet; incomplete)

| | | | |
|----|--|-----|-------|
| 36 | Limestone, sandy, dark grey, medium crystalline, thin bedded, weathers pale orange-brown; thinly interbedded with black shale; monograptids present in some limestone beds (GSC loc. 54202). | 6.3 | 384.2 |
| 35 | Shale, black, soft, mainly fissile, some beds hackly fracturing, recessive, weathers black. | 9 | 377.9 |
| 34 | Shale, black, fairly soft; with large clay ironstone nodules weathering brown. | 5.5 | 368.9 |

Section 23a: SECTION BETWEEN ETTRAIN AND JUNGLE CREEKS NEAR
YUKON-ALASKA BOUNDARY (116F-15)

Section is exposed in a north-trending ridge located between Ettrain and Jungle Creeks about 5.2 miles east of the Yukon-Alaska boundary. Devonian carbonate beds in the ridge strike 350T and dip 33 degrees west. The ridge was traversed from the south end (65°22.8'N, 140°49'W) northward along east face to 65°23.2'N, 140°49'W and then northwestward up section to crest of ridge (c. 65°23.5'N, 140°49.3'W).

Section measured by E. W. Bamber, assisted by A. C. Kuhme, July 1, 1963.

MIDDLE AND UPPER DEVONIAN
OR YOUNGER

| | |
|--|------------------|
| Unnamed Shale Unit | not measured |
| MIDDLE DEVONIAN Ogilvie Formation | 547' |
| MIDDLE DEVONIAN AND OLDER Gossage Formation | 573'; incomplete |

| Unit | Description | Thickness (feet) | |
|------|-------------|------------------|-----------|
| | | Unit | From Base |

MIDDLE AND UPPER DEVONIAN
OR YOUNGER

Unnamed Shale Unit
(not measured)

- 1 Shale, weathers medium brownish grey, and in places has red patches in it.

Shale outcrops on hill immediately west of ridge that is capped by uppermost unit of Ogilvie Formation. Shale unit was seen only from a distance from crest of ridge.

| Unit | Description | Thickness (feet) | |
|--|--|------------------|-----------|
| | | Unit | From Base |
| MIDDLE DEVONIAN | | | |
| <u>Ogilvie Formation</u> (547 feet thick) | | | |
| 8 | Limestone. This unit caps the dip (west) slope of resistant carbonate ridge. Unit was seen only from a distance. | c. 100 | 547 |
| 7 | Limestone, medium greyish brown, very coarse grained, fragmental, composed mainly of fossil fragments, beds up to 10 feet thick, weathers medium grey. Unit forms massive cliff at top of ridge (c. 65°23.5'N, 140°49.3'W). Lithological specimen from 25 feet up. | 40 | 447 |
| 6 | Limestone, medium grey, medium crystalline, weathers medium grey; fossiliferous (GSC loc. 57061): <u>Tentaculites</u> sp., crinoid ossicles with single canals, inarticulate brachiopod fragments, <u>Dechenella</u> sp., and ostracods. | 9 | 407 |
| 5 | Limestone, medium to dark brownish grey, fine to medium-crystalline, beds 1 foot to 2 feet thick, resistant, weathers medium grey with yellowish brown patches. | 47 | 398 |
| 4 | Limestone, fragmental, medium greyish brown with some dark brownish grey beds, medium to very coarse grained, composed mainly of fossil fragments, | | |

| Unit | Description | Thickness (feet) | |
|------|--|------------------|-----------|
| | | Unit | From Base |
| | beds 0.3 to 0.6 foot thick, weathers light to medium grey; resistant. | 43 | 351 |
| | Lithological specimen 4 feet from top. | | |
| 3 | Limestone, slightly silty, finely crystalline, dark grey, beds 2 to 5 feet thick, weathers medium grey with yellowish brown patches, unit slightly recessive; breaks into irregular fragments up to 0.25 foot thick. | 18 | 308 |
| | Lithological specimen from 11 feet up. | | |
| 2 | Limestone, fragmental, medium brownish grey, coarse grained, composed almost entirely of fossil fragments, beds 1 foot to 3 feet thick, weathers medium grey with considerable medium brown staining, unit slightly recessive; beds break into thin irregular fragments. | 60 | 290 |
| | <u>Atrypa</u> sp. from 8 feet up. | | |
| 1 | Limestone, medium to coarsely fragmental in about 40 per cent of unit, fine to medium crystalline in remainder of unit, medium to dark grey with a slight brown tinge, beds 2 to 3 feet thick, weathers light to medium grey, breaks into fragments 0.3 to 1 foot thick, blocky; a cliff-forming unit. | 230 | 230 |
| | Richly fossiliferous between 40 to 42 feet above base (GSC locs. 56929, 56983, 57056 and 57253): rugose coral, <u>Favosites</u> sp., <u>Heliolites</u> sp., <u>Hexagonaria</u> sp., undet. gastropod, * <u>Paracyclas?</u> sp., undet. cephalopods, echinoderm ossicles with single axial canals, echinoderm ossicles with | | |

| Unit | Description | Thickness (feet) From Base |
|--|---|----------------------------------|
| | <p>cross-like axial canals, *echinoderm ossicles with double axial canals, <u>Gypidula?</u> sp., *<u>Schuchertella?</u> sp., <u>Atrypa</u> sp., *<u>Plectospirifer</u> sp., <u>Cupulorostrum</u> sp., <u>Cleiothyris</u> sp., *<u>Dechenella (D.)</u> sp. and <u>Schizoproetoides richteri</u> (Tolmachoff); age: Eifelian.</p> | |
| | <p>Fossils from same stratigraphic interval as above but located on strike to the south near south end of ridge (65°22.8'N, 140°49'W; GSC locs. 57149 and 57252): <u>Favosites</u> sp., <u>Hexagonaria</u> sp., echinoderm ossicles with double axial canals, <u>Schuchertella?</u> sp., and *<u>Plectospirifer</u> sp.</p> | |
| MIDDLE DEVONIAN AND OLDER | | |
| <u>Gossage Formation</u> (573 feet; incomplete) | | |
| 10 | Covered. | 20 573 |
| 9 | <p>Dolomite, calcareous, light and medium grey, fine-to medium-crystalline, beds 0.5 to 1 foot thick, weathers light grey, resistant; breaks into slabs and blocks 2 to 6 inches thick.</p> | 91 553 |
| | Lithological specimen from 16 feet up. | |
| 8 | <p>Limestone, pelletoid, similar to unit 2, light to medium brown, with no dark mottling.</p> | 55 462 |
| 7 | Dolomite, similar to unit 5. | 49 407 |
| | Lithological specimen from 45 feet up. | |

| Unit | Description | Thickness (feet) | |
|------|---|------------------|-----------|
| | | Unit | From Base |
| 6 | Limestone, same as in unit 4, pellets indistinct; less than 5 per cent of unit consists of dolomite, microcrystalline, light brownish grey, beds about 1 foot thick. Lithological specimen from 27 feet up. | 33 | 358 |
| 5 | Dolomite, calcareous, slightly silty, medium grey-brown with minor intervals of light greyish brown, finely crystalline, beds 2 to 5 feet thick, weathers medium grey with much orange-brown mottling, resistant; breaks into blocks 0.3 to 1 foot thick. Lithological specimen from 10 feet up. | 20 | 325 |
| 4 | Limestone, similar to unit 2 but darker in colour and with some dark grey intervals. | 35 | 305 |
| 3 | Dolomite, calcareous, light grey with minor medium to dark grey intervals, coarsely crystalline, massive, weathers medium to dark grey with large patches of yellowish brown. | 16 | 270 |
| 2 | Limestone, pelletoid, dolomitic, medium greyish brown, coarsely mottled with dark greyish brown, pellets in an aphanitic matrix, beds from 2 to 10 feet thick; about 20 per cent of unit consists of limestone, dolomitic, very light grey, coarsely crystalline, in beds up to 5 feet thick; unit weathers medium grey with light yellowish brown and dark grey patches, a cliff-former, breaks into large | | |

| Unit | Description | Thickness (feet) | |
|------|---|------------------|-----------|
| | | Unit | From Base |
| | blocks up to 5 feet thick; some beds show silty or siliceous laminae on weathered surfaces. | 116 | 254 |
| | Lithological specimen from 42 feet up. | | |
| 1 | Dolomite, calcareous, varies to dolomitic limestone in 10 per cent of unit, light brownish grey, aphanitic, beds 0.3 foot to 2 feet thick, weathers light to medium grey, unit forms small cliffs; breaks into slabs and blocks 2 inches to 1 foot thick. | 138 | |
| | Unit 1 exposed along east face of ridge and measured at 65°23.2'N, 140°49'W. | | |

Section 25: NORTH OF MOUNT DEWDNEY (116J-12)

An unnamed tributary of the Miner River cuts through a sharp anticline at 66°10'N, 139°10'W. Beds of the Gossage Formation are the lowest exposed in the core of the anticline and the section ends on a stripped bedding-plane surface at the top of a ridge-forming limestone of the Ogilvie Formation. Unit 2 (376 feet thick) appears to be an excellent potential reservoir rock. Measurement was by staff.

Section measured by B.S. Norford, assisted by D. McAuslan; August 22-23, 1962. Fossils identified by A. W. Norris.

| | |
|---------------------------|----------------------------|
| MIDDLE DEVONIAN | |
| Ogilvie Formation | 285'; very nearly complete |
| MIDDLE DEVONIAN AND OLDER | |
| Gossage Formation | 907'; incomplete |

| Unit | Description | Thickness (feet) | |
|------|-------------|------------------|-----------|
| | | Unit | From Base |

MIDDLE DEVONIAN

Ogilvie Formation
(285 feet thick)

- | | | |
|---|---|-----|
| 1 | Limestones, very finely crystalline to aphanitic, dark grey and grey, weather light grey, resistant, bedding 1 foot to 10 feet, a few beds rubbly when well weathered; covered interval at 4-8 feet up. | 285 |
|---|---|-----|

Fragments of fossils locally present, chiefly crinoidal debris; fossils from 240 feet up: rugose coral fragment, internal mould of a productellid?, and echinoderm ossicles with double axial canals (GSC loc. 53284).

Fossils from 224-225 feet up:
Chonetes sp., Pholidostrophia? sp.,

| Unit | Description | Thickness (feet) | |
|--|--|------------------|-----------|
| | | Unit | From Base |
| | <p>stropheodontid?, cf. <u>Ambocoelia</u> sp., <u>Emanuella</u> sp., spirally coiled gas- tropod, echinoderm ossicles with single, double, and cross-like axial canals (GSC loc. 53283).</p> <p>Fossils from 30-31 feet up: <u>Alveolites</u> sp. (GSC loc. 53282).</p> | | |
| <p>MIDDLE DEVONIAN AND OLDER</p> <p><u>Gossage Formation</u> (907 feet; incomplete)</p> | | | |
| 5 | <p>Limestones, aphanitic, mostly pelletoid, dark grey and grey, weather light grey and grey with buff stains, more resist- ant than unit 4, bedding 1/4 foot to 2 feet, a few beds weather platy. Covered intervals at 97-108 feet and 44-51 feet. Large ostracods common.</p> | 108 | 907 |
| | <p>Ostracods from 8-8.7 feet up (GSC loc. 53281): <u>Moelleritia</u> sp.</p> | | |
| 4 | <p>Limestones, aphanitic, to very finely crystalline, some pelletoid, dark grey, weather light grey and grey with buff stains, less resistant than unit 3, bedding 1/2 foot to 2 feet, with 40 to 70 per cent of beds weathering platy; covered intervals at 112-119, 97-108, 71-82, and 17-35 feet.</p> | 119 | 799 |
| | <p>Large ostracods common (GSC loc. 53280) from 35 feet up: leperditiid- like ostracods.</p> | | |
| 3 | <p>Limestones, aphanitic to very finely crystalline, mostly pelletoid, grey,</p> | | |

| Unit | Description | Thickness (feet) | |
|------|---|------------------|-----------|
| | | Unit | From Base |
| | <p>dark grey, light olive-grey, light brownish grey, and brownish grey, weather light grey, bedding 1/2 foot to 4 feet, rare stylolites, fine vugs, calcite filled in lower part of unit; covered intervals at 266-274, 241-254, 226-236, 149-206, 113-143, 37-53, and 3-18; large ostracods common.</p> | 274 | 680 |
| | <p>GSC loc. 53279, from 214-215 feet up: <u>Moelleritia</u> sp.</p> | | |
| | <p>GSC loc. 53278, from 89-90 feet up: <u>Moelleritia</u> sp.</p> | | |
| 2 | <p>Siliceous dolomites, very finely crystalline, to finely crystalline, brownish grey, grey, grey-brown, and dark grey, weather dull brownish grey, light brownish grey, light yellowish grey, and light yellowish brown, bedding 1/4 foot to 6 feet, mostly 1/2 foot to 2 feet, some lamination, rare stylolites; covered intervals at 353-376, 309-322, 174-182, 88-100, and 0-2 feet; many beds fetid; fine vugs, dolomite-filled, present throughout unit, 5 per cent vuggy porosity 245-353 feet, 5 to 10 per cent pin-point porosity 45-120 feet.</p> | 376 | 406 |
| | <p>Barren except for linear vugs, some filled with calcite, suggestive of <u>Coenites rectilineatus</u> (Simpson) from 338 feet up (GSC loc. 53277).</p> | | |
| 1 | <p>Limestones, finely to coarsely crystalline, grey and light grey, weather light grey, resistant,</p> | | |

| Unit | Description | Thickness (feet) | |
|------|---|------------------|--------------|
| | | Unit | From Base |
| | bedding 2 to 10 feet, some beds weather somewhat rubbly; very fossiliferous. | 30 | |
| | Fossils from 12 to 25 feet up: stromatoporoid, <u>Alveolites</u> sp., <u>Favosites</u> sp., cf. <u>Hexagonaria</u> sp., large cup coral, <u>Atrypa</u> cf. <u>A.</u> sp. E (of Blue Fiord Fm.) " <u>Camarotoechia</u> " cf. " <u>C.</u> " sp. C (of Blue Fiord Fm.) - two fragmentary specimens, <u>Michelinoceras</u> sp. fragment, and leperditiid-like ostracods in a different matrix (GSC loc. 53276). | | |

Section 27: OGILVIE MOUNTAINS, 7.2 MILES BEARING 338T FROM
BEAR CAVE MOUNTAIN (116J-3)

Section is in the northeastern edge of the Ogilvie Mountains and was measured from the bottom of a small west-facing cirque-like gully at approximately 66°36.5'N, 139°25.1'W, up the gully eastward to the top of the mountain at approximately 66°37'N, 139°24'W. The upper part of the Gossage Formation and most if not all of the Ogilvie Formation, both consisting of resistant carbonates, are exposed in this vicinity.

Section measured by A. W. Norris, assisted by D. L. Jordan,
August 9-10, 1962.

| | |
|---------------------------|--------------------|
| MIDDLE DEVONIAN | |
| Ogilvie Formation | 443.4' |
| MIDDLE DEVONIAN AND OLDER | |
| Gossage Formation | 779.8'; incomplete |

| Unit | Description | Thickness (feet) | |
|-----------------|--|------------------|-----------|
| | | Unit | From Base |
| MIDDLE DEVONIAN | | | |
| | <u>Ogilvie Formation</u> (443.4 feet thick) | | |
| 20 | Limestone, medium brown, medium grained, weathers light grey, very poorly exposed; unit 96 caps the top of mountain. | 10 | 443.4 |
| | Station 275NB at top of unit 96 at top of mountain (66°37'N, 139°24'W). | | |
| 19 | Limestone, crinoidal, dark brown, medium grained, massive but rubbly, slightly recessive weathering in places, weathers light grey; <u>Amphipora</u> sp., and echinoderm ossicles with single and double axial canals near top of unit (GSC loc. 54824). | 20 | 433.4 |

| Unit | Description | Thickness (feet) | |
|------|---|------------------|-----------|
| | | Unit | From Base |
| | Selenite rosettes collected loose (GSC loc. 54825). | | |
| 18 | Limestone, medium brown, fine to medium grained, massive, vertical cliff-forming, weathers light grey; <u>Favosites</u> sp., echinoderm ossicles with single, and double axial canals (GSC loc. 54823) from 22 feet up. | 31.5 | 413.4 |
| | Transitional upper contact. | | |
| 17 | Limestone, crinoidal, medium brown, medium grained, massive, resistant, weathers light grey; arbitrary cut-off; echinoderm ossicles with double, and cross-like axial canals (GSC loc. 54821) from 7.5 feet up. | 102.5 | 381.9 |
| | <u>Favosites</u> sp. and echinoderm ossicles with double axial canals (GSC loc. 54822) from 36 feet up. | | |
| | <u>Favosites</u> sp. (GSC loc. 54974) from 41 feet up. | | |
| | <u>Alveolites</u> sp. and <u>Favosites</u> sp. (GSC loc. 54823) from 61 feet up. | | |
| 16 | Limestone, medium to light brown, very fine grained, massive, vertical cliff-forming, weathers light grey; upper part crinoidal and bioclastic; arbitrary cut-off. | 19.5 | 279.4 |
| 15 | Limestone, medium to dark brown, medium grained, bioclastic, massive, vertical cliff-forming, weathers light grey; contains stromatoporoids but unable to extract from tough matrix. | 9.5 | 259.9 |

| Unit | Description | Thickness (feet) | |
|------|---|------------------|-----------|
| | | Unit | From Base |
| 14 | Limestone, crinoidal, fetid, dark brownish grey, medium grained, bioclastic, massive, weathers light grey. | 20.4 | 250.4 |
| 13 | Limestone, crinoidal in part, dark brown, massive, vertical cliff-forming, weathers light grey; echinoderm ossicles and <u>Phillipsastrea</u> sp. (GSC loc. 54819) from 9 to 12 feet up; cup coral and <u>Favosites</u> sp. from 15 feet up (GSC loc. 54820). | 27 | 230 |
| 12 | Limestone, dark brown, aphanitic, massive, irregularly fractured, cliff-forming, weathers light grey. | 58 | 203 |
| | Echinoderm ossicles with single, and double axial canals (GSC loc. 54815) from 4 feet up. | | |
| | <u>Paracyclas</u> sp. and echinoderm ossicles with double axial canals (GSC loc. 54816) from 38 feet up. | | |
| | <u>Favosites</u> sp. and echinoderm ossicles with double axial canals (GSC loc. 54817) collected loose from 48 feet up. | | |
| | <u>Atrypa</u> sp. and echinoderm ossicles with single axial canals collected loose (GSC loc. 54818) from 58 feet up. | | |
| 11 | Limestone, very dark grey, aphanitic, thick bedded to massive, weathers light grey. | 13.4 | 145 |
| 10 | Limestone, dark brownish grey, aphanitic, thick bedded to massive, weathers light grey. | 10 | 131.6 |

| Unit | Description | Thickness (feet) | |
|------|--|------------------|-----------|
| | | Unit | From Base |
| 9 | Limestone, dark grey, rubbly thin bedded, recessive, weathers light grey with orange-brown mottling. | 3.4 | 121.6 |
| 8 | Limestone, dark brown, aphanitic, massive, cliff-forming, weathers light grey. Productellid and echinoderm ossicles with single axial canals collected (GSC loc. 54812) loose 5 feet up. Douvillinid? (GSC loc. 54813) from 8 feet up. <u>Alveolites</u> sp. and part of cup coral (GSC loc. 54814) collected loose 11 feet up. | 12.7 | 118.2 |
| 7 | Limestone, dark brownish grey, aphanitic, massive, cliff-forming, weathers light grey. <u>Atrypa</u> sp. (GSC loc. 54810) collected loose 22 feet up. Cup corals and echinoderm ossicles with double axial canals (GSC loc. 54811) from upper 3 feet. | 36 | 105.5 |
| 6 | Limestone, very dark brownish grey, aphanitic, massive, vertical cliff-forming, weathers light grey. | 6.8 | 69.5 |
| 5 | Limestone with widely separated argillaceous limestone partings, very dark grey, almost black, very fine grained, thick bedded to massive, weathers light grey; crinoid ossicles with cross-like and double canals noted loose. | 13.4 | 62.7 |

| Unit | Description | Thickness (feet) | |
|--|--|------------------|-----------|
| | | Unit | From Base |
| 4 | Limestone, very dark grey, aphanitic, evenly bedded, beds up to 2 feet thick, vertical cliff-forming. <u>Atrypa?</u> sp., <u>Plectospirifer?</u> sp., echinoderm ossicles with single, and double axial canals (GSC loc. 54809) collected loose at top of unit. | 20.8 | 49.3 |
| 3 | Limestone, very dark grey, evenly thick bedded to massive, very resistant, weathers light grey. Echinoderm ossicles with single, double, and cross-like axial canals (GSC loc. 54808) collected loose from 8 feet up. | 11.5 | 28.5 |
| 2 | Limestone, medium brown, fine grained, rubbly bedded and recessive in places, and massive and resistant at other places, weathers light grey. | 6 | 17 |
| 1 | Limestone, dark brownish grey, fine grained, thick bedded to massive, vertical cliff-forming, weathers light grey. Station 274NB at base of unit 77 on the west side of a cirque-like gully. Bedding 180T/22W. | 11 | |
| MIDDLE DEVONIAN AND OLDER | | | |
| <u>Gossage Formation</u> (779.8 feet; incomplete) | | | |
| 76 | Limestone, dark grey, irregularly thin to medium bedded, weathers light grey; discontinuously exposed. | 12.3 | 779.8 |

| Unit | Description | Thickness (feet) | |
|------|--|------------------|-----------|
| | | Unit | From Base |
| 75 | Limestone, dark brownish grey, almost black, aphanitic, thick bedded to massive, resistant, weathers medium grey. | 6 | 767.5 |
| 74 | Limestone, dark brown, fine grained, evenly medium bedded, weathers light grey, poorly exposed. | 2.1 | 761.5 |
| 73 | Covered by talus and vegetation. | 5 | 759.4 |
| 72 | Limestone, fetid, dark brownish grey, fine grained, irregularly medium bedded, fairly resistant, weathers light grey. Bedding 010T/17W. | 4.4 | 754.4 |
| 71 | Limestone, argillaceous, medium brown, aphanitic, nodular, recessive, weathers light brownish grey. | 1.1 | 750 |
| 70 | Limestone, very dark brownish grey, irregularly medium bedded, weathers light grey; discontinuously exposed. | 12.7 | 748.9 |
| 69 | Limestone, fetid, black, irregularly and evenly bedded, beds between 0.25 foot and 1.2 feet thick, fairly resistant, weathers light grey. | 17 | 736.2 |
| 68 | Limestone, dark grey to black aphanitic, irregularly thick bedded, with thin interbeds of limestone, argillaceous, nodular and rubbly, unit weathers light grey. | 10 | 719.2 |
| 67 | Covered by talus; <u>Coenites</u> cf. <u>C. rectilineatus</u> (Simpson), and *fish fragment (GSC loc. 54807) collected loose. | 3.5 | 709.2 |
| 66 | Limestone, dark brownish grey, very fine grained, even bed, resistant, weathers light grey. | 2.1 | 705.7 |

| Unit | Description | Thickness (feet) | |
|------|---|------------------|-----------|
| | | Unit | From Base |
| 65 | Covered by talus; poorly preserved <u>Amphipora</u> sp., and ostracod fragments (GSC loc. 54800) collected loose. | 3 | 703.6 |
| 64 | Limestone, very dark grey, almost black, aphanitic, evenly medium to thick bedded, weathers light grey; contains numerous well preserved <u>Moelleritia canadensis</u> Copeland (GSC loc. 54804) in basal bed. Fish(?) fragment (GSC loc. 54805) collected loose 1.5 feet up. | 10.3 | 700.6 |
| 63 | Covered by talus and vegetation. | 1.9 | 690.3 |
| 62 | Limestone, dark brown, aphanitic, even bed, weathers medium brownish grey. | 1.7 | 688.4 |
| 61 | Covered by talus; poorly preserved <u>Moelleritia?</u> sp. (GSC loc. 54803) collected loose. | 1.9 | 686.7 |
| 60 | Limestone, medium brown, aphanitic, massive, resistant, weathers medium brownish grey. | 4.1 | 684.8 |
| 59 | Covered by talus. | 3.5 | 680.7 |
| 58 | Limestone, dark brownish grey, aphanitic, irregularly thick bedded to massive, resistant, with thin interbeds of nodular argillaceous limestone, weathers medium grey; ostracods (GSC loc. 54801) from 6 feet up. Colonial coral, echinoderm ossicles with single, double, and cross-like axial canals (GSC loc. 54802) collected loose 6 feet up. | 10 | 677.2 |

| Unit | Description | Thickness (feet) | |
|------|--|------------------|-----------|
| | | Unit | From Base |
| 57 | Limestone, black, aphanitic, slightly irregularly thin bedded, beds between 0.1 and 1 foot thick, weathers medium grey. | 8.5 | 667.2 |
| 56 | Limestone, fetid, dark grey, evenly medium bedded to massive, resistant, weathers medium grey with some patches of orange staining. | 7.5 | 658.7 |
| 55 | Limestone, argillaceous, strongly fetid, dark grey, medium-grained, rubbly thin bedded, weathers pale orange-brown. | 3.2 | 651.2 |
| 54 | Limestone, dark brown, aphanitic, even bed, resistant, weathers light grey. | 3.1 | 648 |
| 53 | Covered by talus, <u>Moelleritia canadensis</u> Copeland collected loose (GSC loc. 54800) between 0 and 3 feet up. | 15 | 644.9 |
| 52 | Limestone, medium brown, aphanitic, fairly evenly bedded, beds between 0.5 foot and 1.5 feet thick, weathers light grey; with some bright orange ocherous staining. | 7 | 629.9 |
| 51 | Limestone, dark brownish grey, aphanitic, evenly bedded, beds up to 2.5 feet thick, weathers medium brownish grey; interbedded with limestone, argillaceous, silty, rubbly thin bedded, beds between 1 inch and 3 inches thick, weathers light to medium grey. | 8.7 | 622.9 |
| 50 | Covered by talus. | 7 | 614.2 |
| 49 | Limestone, silty, slightly ocherous, dark brownish grey, evenly bedded, beds up to 2.2 feet thick, weathers medium grey; | | |

| Unit | Description | Thickness (feet) | |
|------|--|------------------|-----------|
| | | Unit | From Base |
| | interbedded with limestone, argillaceous, silty, very dark grey, rubbly thin bedded, weathers medium orange; unit poorly exposed. | 11.4 | 607.2 |
| 48 | Covered by talus. | 3.3 | 595.8 |
| 47 | Limestone, dark brown, aphanitic to fine grained, evenly medium bedded, resistant, weathers medium brownish grey. | 4.2 | 592.5 |
| 46 | Limestone, dark grey, aphanitic, even bed, resistant, weathers medium grey. | 4.5 | 588.3 |
| 45 | Covered by talus; <u>Moelleritia canadensis</u> Copeland (GSC loc. 54799) collected loose 2 feet up. | 5 | 583.8 |
| 44 | Limestone, dolomitic, dark brown, aphanitic, pelletoid, evenly thick bedded, beds up to 2.5 feet thick, resistant, weathers medium brownish grey; one bed 6 feet up contains numerous poorly preserved small <u>Coenites</u> sp., and ostracod fragments (GSC loc. 54798). | 12 | 578.8 |
| 43 | Covered by talus; <u>Moelleritia</u> sp. collected loose 5 feet up (GSC loc. 54797). | 6.5 | 566.8 |
| 42 | Limestone, dark brown, aphanitic, massive, highly resistant, weathers medium orange-brown. | 7.5 | 560.3 |
| 41 | Covered by talus. | 3.6 | 552.8 |
| 40 | Limestone, dark brown, aphanitic, evenly bedded, beds up to 2.5 feet thick, resistant, weathers medium brownish grey. | 7.4 | 549.2 |

| Unit | Description | Thickness (feet) | |
|------|--|------------------|-----------|
| | | Unit | From Base |
| 39 | Covered by talus. | 1.4 | 541.8 |
| 38 | Limestone, medium brown, evenly medium bedded, weathers medium orange-brown; poorly exposed except for upper 2 feet; cf. <u>Coenites rectilineatus</u> (Simpson) collected loose (GSC loc. 54796). | 4.8 | 540.4 |
| 37 | Covered by talus. | 13.5 | 535.6 |
| 36 | Limestone, medium brown, aphanitic, evenly bedded, beds up to 2.5 feet thick, highly resistant, weathers medium orange-brown. | 6 | 522.1 |
| 35 | Covered by talus. | 4.2 | 516.1 |
| 34 | Limestone, pale brown, aphanitic, evenly thick bedded, weathers medium grey; outcrops as a series of steps. | 11 | 511.9 |
| 33 | Limestone, medium brown, aphanitic, evenly very thick bedded to massive, resistant coated with a medium orange stain. Bedding 152T/17NE. | 9 | 500.9 |
| 32 | Limestone, dark brown, aphanitic, irregularly thin bedded, recessive, weathers light brown. | 2 | 491.9 |
| 31 | Limestone, dark brown, aphanitic, massive, highly resistant, weathers medium brown. | 13 | 489.9 |
| 30 | Limestone, silty, dark grey, irregularly thin bedded between 1 inch and 4 inches thick, recessive, coated with a medium orange stain. | 3.5 | 476.9 |

| Unit | Description | Thickness (feet) | |
|------|--|------------------|-----------|
| | | Unit | From Base |
| 29 | Limestone, dark grey, aphanitic, evenly bedded between 1 foot and 3.5 feet thick, coated with a pale orange stain; unit discontinuously exposed; <u>Moelleritia canadensis</u> Copeland collected loose 14 feet up (GSC loc. 54794); numerous well preserved <u>Moelleritia canadensis</u> Copeland and <u>M. c. insignis</u> Copeland in upper 1 foot of unit (GSC loc. 54795). | 21.5 | 473.4 |
| 28 | Limestone, medium brown, aphanitic, even beds up to 4 feet thick, resistant, weathers medium brownish grey. | 14 | 451.9 |
| 27 | Calcite, white, coarsely crystalline, as secondary replacement. | 5 | 437.9 |
| 26 | Covered by talus. | 25 | 432.9 |
| 25 | Limestone, dark brown, aphanitic, thick bedded, weathers dark grey. | 8.5 | 407.9 |
| 24 | Covered by talus; <u>Moelleritia cf. M. canadensis</u> Copeland collected loose (GSC loc. 54792). | 1.5 | 399.4 |
| 23 | Limestone, slightly silty, medium brown, aphanitic, even bed, resistant, weathers medium brownish grey, in places rust stained. Lithological specimen (GSC loc. 54793). | 6.3 | 397.9 |
| 22 | Covered by talus. | 8 | 391.6 |
| 21 | Limestone, dark grey, aphanitic, thick bedded to massive, highly resistant, unit in part replaced by large masses of coarsely crystalline white calcite. | 34.2 | 383.6 |

| Unit | Description | Thickness (feet) | |
|------|--|------------------|-----------|
| | | Unit | From Base |
| | Station 273NB at top of unit 21 about one-half way up cirque-like gully. Bedding 050T/29SE. | | |
| 20 | Covered by talus and vegetation. | 6.8 | 349.4 |
| 19 | Limestone, medium brown, aphanitic, evenly bedded between 0.7 foot and 1.5 feet thick, weathers light brownish grey. Bedding 046T/25SE. | 18.5 | 342.6 |
| 18 | Limestone, aphanitic, medium brownish grey, evenly bedded, beds up to 4 feet thick, weathers medium brownish grey; unit discontinuously exposed. | 4.5 | 324.1 |
| 17 | Covered by vegetation. | 6.5 | 319.6 |
| 16 | Limestone, medium brown, aphanitic, thick bedded to massive, resistant, weathers medium brownish grey. | 12 | 313.1 |
| 15 | Covered by vegetation. | 7.5 | 301.1 |
| 14 | Limestone, dark brown, aphanitic, even bed, resistant, weathers dark grey. | 3.7 | 293.6 |
| 13 | Covered by talus and vegetation. | 4.5 | 289.9 |
| 12 | Limestone, dark grey, fine grained, beds between 1 foot and 2 feet thick, weathers dark grey; stromatoporoid from (GSC loc. 54791) 26.9 feet up; unit discontinuously exposed. | 28.9 | 285.4 |
| 11 | Limestone, medium brown, fine grained, evenly bedded between 1 foot and 2 feet thick, weathers medium brown. | 16.8 | 256.5 |
| 10 | Limestone, pale brown, fine grained, evenly thick bedded, resistant, | | |

| Unit | Description | Thickness (feet) | |
|------|---|------------------|-----------|
| | | Unit | From Base |
| | weathers medium grey; cup coral fragment, <u>Paracyclas</u> sp., orthoconic cephalopod fragment, impressions of small ostracods, and echinoderm ossicles with single canals (GSC loc. 54672) collected loose. | 10 | 239.7 |
| 9 | Limestone, very dark brownish grey, aphanitic, massive, highly fractured, weathers light grey; <u>Favosites</u> sp. (GSC loc. 54789) collected loose 14 feet up; <u>Ambocoelia?</u> sp., <u>Paracyclas?</u> sp., *cf. <u>Philoxene</u> sp., * <u>Michelinoceras</u> sp., and echinoderm ossicles with single canals, and indeterminate ostracod (GSC loc. 54790) from 23 to 35 feet up. | 52 | 229.7 |
| 8 | Covered by talus; <u>Favosites</u> sp., <u>Atrypa</u> cf. <u>A. arctica</u> Warren, <u>Spinatrypa</u> sp., leiorhynchid, <u>Paracyclas</u> sp., echinoderm ossicles with single, and double axial canals collected loose (GSC loc. 54788). | 10 | 177.7 |
| 7 | Limestone, dark grey, aphanitic, massive, to very evenly medium bedded in upper 3 feet, highly fractured, weathers medium grey; stromatoporoids, <u>Alveolites</u> sp., and <u>Favosites</u> sp. (GSC loc. 54787) from 7.5 feet up. Bedding 175T/60E. | 20.5 | 167.7 |
| 6 | Limestone, fetid, very dark grey, fine grained, thickly bedded to massive, resistant, weathers light brownish grey; stromatoporoids, <u>Favosites</u> sp., and brachiopod fragments (GSC loc. 54785) from 8 feet up; <u>Alveolites?</u> sp., <u>Atrypa</u> sp., echinoderm ossicles with single, and double axial canals from 29 feet up (GSC loc. 54786). | 34.5 | 147.2 |

| Unit | Description | Thickness (feet) | |
|------|--|------------------|-----------|
| | | Unit | From Base |
| 5 | Covered by talus. | 30 | 112.7 |
| 4 | Limestone, dark brown, aphanitic, thick bedded, irregularly fractured, weathers light grey; less resistant than underlying unit. | 5 | 82.7 |
| 3 | Limestone, dark grey, aphanitic, massive, in places highly fractured, resistant, weathers light grey; transitional upper contact. | 40.2 | 77.7 |
| 2 | Covered by talus. | 4 | 37.5 |
| 1 | Limestone, dolomitic, medium brown, aphanitic, pelletoid, massive, beds up to 4 feet thick, resistant, weathers light brownish grey. | 33.5 | |

Lithological specimen (GSC loc. 54784).

Station 272NB at base of unit 1 in stream gully on north, upthrow side of fault, at approximately 66°36.5'N, 139°25.1'W. Section measured eastward upsection from this point.

Section 28: NORTHERN END OF OGILVIE MOUNTAINS, SIX MILES WEST OF CODY CREEK (116J-9)

Section located in the northeast flank of Ogilvie Mountains about 6 miles west of Cody Creek was measured from the bottom of a tributary stream gully of Cody Creek at about 66°42.8'N, 139°14'W north-northwestward up to the top of the mountain at about 66°43'N, 139°16'N. The upper part of the Gossage Formation and most if not all of the Ogilvie Formation are exposed in this vicinity.

Section measured by A. W. Norris, assisted by D. L. Jordan, August 3-5, 1962.

| | |
|---------------------------|---------------------|
| MIDDLE DEVONIAN | |
| Ogilvie Formation | 567.7' |
| MIDDLE DEVONIAN AND OLDER | |
| Gossage Formation | 1250.3'; incomplete |

| Unit | Description | Thickness (feet) | |
|------|-------------|------------------|-----------|
| | | Unit | From Base |

MIDDLE DEVONIAN

Ogilvie Formation
(567.7 feet thick)

| | | | |
|----|--|------|-------|
| 36 | Limestone, crinoidal, fetid, reefal, medium brown, medium grained, bioclastic, massive, parting planes up to 12 feet apart, becoming medium to thick bedded in upper 12 feet; *echinoderm ossicles with double axial canals from 8.5 feet up (GSC loc. 54782). | 57.5 | 567.7 |
| | Unit 36 caps the plateau at top of mountain. Station 271NB at top of unit 36 at peak of mountain at about 66°43'N, 139°16'W. Bedding 153T/24SW. | | |
| 35 | Covered by vegetation. | 4 | 510.2 |

| Unit | Description | Thickness (feet) | |
|------|--|------------------|-----------|
| | | Unit | From Base |
| 34 | Limestone, crinoidal, fetid, medium brown, medium grained, bioclastic, massive, weathers medium brown, very large <u>Gypidula</u> sp. from 3 feet up (GSC loc. 54670). | 5 | 506.2 |
| 33 | Covered by vegetation. | 8 | 501.2 |
| 32 | Limestone, crinoidal, fine grained, massive, parting planes 6 to 7 feet apart, cliff-forming, weathers light brown; contains numerous echinoderm ossicles with double and cross-like axial canals (GSC loc. 54781). Station 270NB at top of unit 32 in gully on east flank of mountain. | 43 | 493.2 |
| 31 | Limestone, medium brown, fine grained, rubbly thin to medium bedded, weathers medium grey; <u>Favosites</u> sp. collected loose at top of unit (GSC loc. 54780). | 18.4 | 450.2 |
| 30 | Limestone, pale brown, fine grained, massive, containing irregular lenses of dark brown crinoidal limestone, weathers light grey. Bedding 140T/19SW. | 7 | 431.8 |
| 29 | Limestone, crinoidal, dark grey to black, fine grained, thin bedded, recessive, weathers very dark grey; poorly exposed; contains echinoderm ossicles with single, double, and cross-like axial canals (GSC loc. 54671). | 9 | 424.8 |
| 28 | Limestone, crinoidal, reefal, medium brown, fine grained, granular, massive, vertical scarp-forming, weathers light grey; echinoderm ossicles with single, double, | | |

| Unit | Description | Thickness (feet) | |
|------|---|------------------|-----------|
| | | Unit | From Base |
| | and cross-like axial canals present as lenses more or less throughout unit; sample (GSC loc. 54775) from basal 3 feet of unit; veins 1/2 to 3 inches thick of coarse white calcite. | 49 | 415.8 |
| | <u>Favosites</u> sp., gastropod and echinoderm ossicles with single axial canals (GSC loc. 54776) from 7 feet up. | | |
| | Stromatoporoids (GSC loc. 54777) collected loose 9 feet up. | | |
| | Large <u>Favosites</u> sp. in place 12 feet up, but could not be extracted from tough matrix. | | |
| | <u>Syringopora?</u> sp., <u>Emanuella</u> sp., ostracods, and echinoderm ossicles with single canals (GSC loc. 54778) collected loose 12 feet up. | | |
| | <u>Favosites</u> sp., cyrtoconic cephalopod fragments, trilobite tail fragment, echinoderm ossicles with single, and double axial canals (GSC loc. 54779) collected loose 16 feet up. | | |
| 27 | Covered by vegetation. | 15 | 366.8 |
| 26 | Limestone, dark brown, aphanitic, thin to thick bedded, weathers medium brownish grey (wet). | 18 | 351.8 |
| | Station 269NB at top of unit 26 on east side of gully on east flank of mountain. Bedding 152T/40SW. | | |
| 25 | Limestone, dark grey, fine grained, massive, weathers dark grey. | 8.4 | 333.8 |

| Unit | Description | Thickness (feet) | |
|------|--|------------------|-----------|
| | | Unit | From Base |
| 24 | Limestone, medium brown, aphanitic, thick bedded to massive, scarp-forming, weathers dark grey. | 13.5 | 325.4 |
| 23 | Limestone, medium brown, aphanitic, thin to medium bedded, recessive, terrace-forming, weathers medium grey. | 5 | 311.9 |
| 22 | Limestone, dark brown, aphanitic, massive, very resistant, scarp-forming, weathers medium grey; echinoderm ossicles with single axial canals (GSC loc. 54774) 6 feet up in unit. | 13 | 306.9 |
| 21 | Limestone, dark brown, aphanitic, thin to medium bedded, with irregular argillaceous limestone partings, recessive, weathers medium grey. Bedding 170T/15W. | 8 | 293.9 |
| 20 | Limestone, dark brown, aphanitic, massive, weathers medium grey, some joint faces stained a pale orange; crinoid ossicles in loose blocks. | 28 | 285.9 |
| 19 | Limestone, dark brown, aphanitic, massive, resistant, scarp-forming, weathers medium grey. Poorly preserved <u>Favosites</u> sp. and <u>Tentaculites</u> sp. collected loose 10 feet up (GSC loc. 54772). Cup coral, <u>Favosites</u> sp., and spiriferid collected loose 12 feet up (GSC loc. 54773). | 37 | 257.9 |
| 18 | Limestone, very dark grey, aphanitic, massive, scarp-forming, weathers | | |

| Unit | Description | Thickness (feet) | |
|------|---|------------------|-----------|
| | | Unit | From Base |
| | medium grey, in places stained a pale orange; gastropod fragments, echinoderm ossicles with single, and double axial canals from 20 feet up (GSC loc. 54771). | 34 | 220.9 |
| | Station 268NB at base of unit 127 in gully. | | |
| 17 | Limestone, pelletoid, aphanitic to medium grained, massive, highly resistant, weathers medium grey, in places stained a medium orange; colonial corals from 4 feet up (GSC loc. 54770); <u>Aulopora</u> -like coral collected loose (GSC loc. 54971) at base of unit. | 8.5 | 186.9 |
| 16 | Limestone, dark brown, aphanitic, thick bedded to massive, highly resistant, scarp-forming, weathers medium grey. | 11.6 | 178.4 |
| 15 | Limestone, dark brown, aphanitic, thin to thick bedded, weathers dark grey; discontinuously exposed; vague organic impressions 30 feet up. | 53 | 166.8 |
| 14 | Limestone, dark brownish grey, aphanitic, even bed, resistant, weathers medium grey. | 3 | 113.8 |
| 13 | Covered by vegetation. | 4.2 | 110.8 |
| 12 | Limestone, light to medium brown, aphanitic, medium to thick bedded, fairly resistant, weathers medium grey. | 10 | 106.6 |
| 11 | Covered by vegetation. | 6.7 | 96.6 |
| 10 | Limestone, medium brown, aphanitic, evenly medium to thick bedded, weathers dark grey. | 9 | 89.9 |

| Unit | Description | Thickness (feet) | |
|------|--|------------------|-----------|
| | | Unit | From Base |
| 9 | Limestone, dark brownish grey, aphanitic, irregularly thin to medium bedded, slightly recessive, weathers dark grey. | 6.4 | 80.9 |
| 8 | Limestone, medium brown, aphanitic, thick bedded to massive, scarp-forming, weathers dark grey; with fine irregular veinlets of coarse white calcite. | 17 | 74.5 |
| 7 | Covered by vegetation. | 1.3 | 57.5 |
| 6 | Limestone, dark brownish grey, aphanitic, thick bedded to massive, scarp-forming, weathers dark grey. | 16.6 | 56.2 |
| 5 | Limestone, dark brown, aphanitic, thick bedded to massive, resistant, weathers dark grey; arbitrary cut-off. | 14.6 | 39.6 |
| 4 | Limestone, slightly fetid, black, aphanitic, irregularly thin bedded, slightly recessive, weathers medium orange-brown; contains coral fragments (GSC loc. 54769); brachiopod fragments and ostracods collected loose at base of unit (GSC loc. 54770). | 2.8 | 25 |
| 3 | Limestone, black, beds between 0.2 and 0.6 foot thick, weathers medium to dark grey; upper 0.2 foot recessive, argillaceous limestone. | 2.7 | 22.2 |
| 2 | Limestone, slightly silty, and with argillaceous limestone partings, medium brown, aphanitic, fairly evenly thick bedded, scarp-forming, weathers medium grey; sparse <u>Ambocoelia</u> sp. and ostracod (GSC loc. 54767) present in lower 3 feet; cf. <u>Coenites rectilineatus</u> (Simpson), <u>Ambocoelia</u> sp., <u>Moelleritia canadensis</u> Copeland from upper bed of unit (GSC loc. 54768). | 9.5 | 19.5 |

| Unit | Description | Thickness (feet) | |
|---|--|------------------|-----------|
| | | Unit | From Base |
| | Station 267NB at top of unit 110 in gully on side of mountain. Bedding 029T/39E. | | |
| 1 | Limestone, dark brown, aphanitic, irregularly thin to medium bedded, weathers medium grey; <u>Emanuella</u> sp., <u>Moelleritia?</u> sp., and ostracods from lower 2 feet (GSC loc. 54766). | 10 | |
| MIDDLE DEVONIAN AND OLDER | | | |
| <u>Gossage Formation</u> (1250.3 feet; incomplete) | | | |
| 109 | Limestone, medium brown, aphanitic, fairly evenly medium bedded, weathers medium grey; discontinuously exposed. | 7.9 | 1250.3 |
| 108 | Limestone, dark brown, irregularly thin bedded, weathers dark brownish grey; very poorly exposed; contains <u>Moelleritia canadensis</u> Copeland, ' <u>Bythocypris</u> ' sp., and <u>Kloedenella?</u> sp. (GSC loc. 54765). | 11 | 1242.4 |
| 107 | Limestone, dark brown, aphanitic, evenly bedded between 0.3 foot and 1.3 feet, weathers medium grey; <u>Moelleritia</u> sp. <u>canadensis</u> Copeland present in upper bed (GSC loc. 54764). | 4 | 1231.4 |
| 106 | Limestone, very dark grey, aphanitic, irregularly thin to medium bedded, beds between 0.5 foot and 2.5 feet thick, weathers medium grey; coral? fragments from top of unit (GSC loc. 54762); <u>Moelleritia canadensis</u> Copeland collected loose at top of unit (GSC loc. 54763). | 10 | 1227.4 |

| Unit | Description | Thickness (feet) | |
|------|---|------------------|-----------|
| | | Unit | From Base |
| 105 | Covered by vegetation. | 3 | 1217.4 |
| 104 | Limestone, with irregular argillaceous limestone partings, dark grey, aphanitic, irregularly thin to medium bedded, weathers medium brownish grey; discontinuously exposed. Bedding 006 T/28W. | 12.9 | 1214.4 |
| 103 | Limestone, dark brownish grey, very fine grained, almost aphanitic, evenly bedded between 0.3 foot and 1.5 feet thick, resistant, weathers medium brownish grey. | 2.1 | 1201.5 |
| 102 | Limestone, dark grey, aphanitic, evenly thick bedded, weathers medium brownish grey; discontinuously exposed. Station 266NB at top of unit 102 about one-half way up southern slope of mountain. Bedding 011T/36W. | 10 | 1199.4 |
| 101 | Limestone, argillaceous, dark grey, rubbly very thin bedded, weathers medium orange-brown. | 4 | 1189.4 |
| 100 | Limestone, dark grey, rubbly thin to thick bedded, weathers medium grey; poorly exposed. | 6.7 | 1185.4 |
| 99 | Covered by talus. | 1.5 | 1178.7 |
| 98 | Similar to unit 96; lithological specimen (GSC loc. 54761). | 2.5 | 1177.2 |
| 97 | Covered by talus. | 4.5 | 1174.7 |
| 96 | Limestone, dark brown, fine grained, even bed, highly resistant, weathers pale brown. | 2.5 | 1170.2 |

| Unit | Description | Thickness (feet) | |
|------|--|------------------|-----------|
| | | Unit | From Base |
| 95 | Limestone, very dark grey, evenly and rubbly thin bedded, weathers light brownish grey; discontinuously exposed. | 11.8 | 1167.7 |
| 94 | Covered. | 2 | 1155.9 |
| 93 | Limestone, dark brownish grey, aphanitic, evenly bedded, resistant, weathers light grey. | 6.4 | 1153.9 |
| 92 | Covered by talus. | 7.5 | 1147.5 |
| 91 | Limestone, very dark brownish grey, aphanitic, even bed, weathers light brownish grey. | 1 | 1140 |
| 90 | Covered by vegetation. | 1 | 1139 |
| 89 | Limestone, brown, aphanitic, evenly thick bedded, to massive, weathers light grey. | 7.5 | 1138 |
| | Station 265NB at top of unit 89 on south slope of mountain. Bedding 011T/22W. | | |
| 88 | Covered by talus. | 5 | 1130.5 |
| 87 | Limestone, dark grey, aphanitic, even bed, weathers medium brownish grey. | 1 | 1125.5 |
| 86 | Covered by vegetation. | 15 | 1124.5 |
| 85 | Limestone, very dark brownish grey, fine grained, evenly thick bedded, weathers medium brownish grey. | 5.5 | 1109.5 |
| 84 | Limestone, silty, fine grained, granular, irregularly thin bedded, weathers light brownish grey. | 3 | 1104 |
| 83 | Covered by vegetation. | 2.8 | 1101 |

| Unit | Description | Thickness (feet) | |
|------|--|------------------|-----------|
| | | Unit | From Base |
| 82 | Limestone, dark grey, aphanitic, pelletoid, thin to medium bedded, weathers medium brownish grey. Lithological specimen (GSC loc. 54760). | 4 | 1098.2 |
| 81 | Covered by vegetation. | 9.5 | 1094.2 |
| 80 | Covered; fragments of limestone, dark grey, aphanitic, weathers medium grey. | 6.5 | 1084.7 |
| 79 | Limestone, dark grey, fine grained, granular, medium to thick bedded, beds between 1 foot and 3 feet thick, weathers light brownish grey. | 10.5 | 1078.2 |
| 78 | Limestone, fine grained, granular, irregularly thin bedded, weathers light brownish grey; poorly exposed. | 10 | 1067.7 |
| 77 | Limestone, dark brownish grey, aphanitic, evenly medium bedded, weathers light brownish grey. | 5 | 1057.7 |
| 76 | Covered by talus and vegetation. | 2 | 1052.7 |
| 75 | Limestone, fine grained, granular, rubbly thin bedded, weathers mottled light grey and pale brown; poorly exposed. | 5 | 1050.7 |
| 74 | Covered. | 3 | 1045.7 |
| 73 | Limestone, medium brown, aphanitic, thin bedded, weathers light brownish grey. | 8.5 | 1042.7 |
| 72 | Covered. | 1.7 | 1034.2 |
| 71 | Limestone, argillaceous, dark brownish grey, aphanitic, pelletoid, rubbly thin bedded; alternating with limestone, | | |

| Unit | Description | Thickness (feet) | |
|------|--|------------------|-----------|
| | | Unit | From Base |
| | medium bedded; both weathering medium brownish grey; poorly exposed. | 15.8 | 1032.5 |
| | Lithological specimen from top of unit (GSC loc. 54759). Bedding 040T/25NW. | | |
| 70 | Limestone, dark grey, fine grained, evenly medium bedded, weathers light brownish grey; poorly exposed. | 9.5 | 1016.7 |
| 69 | Covered; fragments of limestone, medium brown, aphanitic, thin bedded, weathers light grey. | 7.5 | 1007.2 |
| 68 | Limestone, dark grey, fine grained, massive, weathers light grey and medium brown in alternating wavy bands up to 2.5 inches thick. | 9 | 999.7 |
| 67 | Covered. | 3.4 | 990.7 |
| 66 | Limestone, medium brown, aphanitic, irregularly thin to medium bedded, weathers medium brownish grey. | 5.5 | 987.3 |
| 65 | Covered. | 4.6 | 981.8 |
| 64 | Limestone, black, medium grey, aphanitic, evenly thick bedded, weathers medium grey; upper 8 feet poorly exposed. | 10 | 977.2 |
| 63 | Covered. | 6 | 967.2 |
| 62 | Limestone, partly dolomitic, mottled medium grey and light brown, massive in lower part, bedded towards top, highly resistant, weathers mottled light and medium grey. | 5 | 961.2 |
| 61 | Covered. | 1.8 | 956.2 |

| Unit | Description | Thickness (feet) | |
|------|--|------------------|-----------|
| | | Unit | From Base |
| 60 | Limestone, almost black, fine grained, massive, resistant, weathers medium grey. | 2.8 | 954.4 |
| 59 | Covered. | 3 | 951.6 |
| 58 | Limestone, with pale brown silty limestone laminae and beds up to 1/2 inch thick, dark grey, fine grained, pelletoid, weathers light grey; poorly exposed; oriented lithological specimen (GSC loc. 54758) from top of unit. | 8.5 | 948.6 |
| 57 | Covered; frost heaved blocks of limestone, medium-bedded; alternating with argillaceous limestone, rubbly thin bedded; both weathering medium grey. | 12 | 940.1 |
| 56 | Limestone, medium brown, aphanitic, thick bedded, weathers light grey. | 5.8 | 928.1 |
| 55 | Recessive talus covered interval. | 3.5 | 922.3 |
| 54 | Limestone, medium brown, fine grained, granular, medium-bedded, weathers medium grey. | 7.8 | 918.8 |
| 53 | Limestone, dolomitic, light brown, fine grained, granular, irregularly thin bedded, upper 3 feet slightly thicker bedded, weathers light grey, transitional upper contact. | 2 | 911 |
| 52 | Limestone, very dark grey, fine grained, granular, very evenly thick bedded, resistant, weathers light brownish grey. | 4.6 | 909 |
| 51 | Covered. | 11.5 | 904.4 |
| 50 | Limestone, dark brownish grey, aphanitic, massive, weathers light grey. | 5.3 | 892.9 |

| Unit | Description | Thickness (feet) | |
|------|--|------------------|-----------|
| | | Unit | From Base |
| 49 | Covered by talus. | 15 | 887.6 |
| 48 | Dolomite, slightly calcareous, aphanitic, massive, resistant, weathers medium brownish grey. | 3.5 | 872.6 |
| 47 | Covered; talus fragments of limestone, very dark grey, fine grained, granular, thin bedded, weathers light brownish grey. | 17.5 | 869.1 |
| 46 | Limestone, very dark grey to medium brown, aphanitic, pelletoid, massive, resistant, weathers medium grey; small poorly preserved echinoderm ossicles with single axial canals (GSC loc. 54756) collected loose at base of unit. | 2.7 | 851.6 |
| | Lithological specimen (GSC loc. 54757). | | |
| | Station 264NB at base of unit 46 in gully in lower third of south-facing slope of mountain. Bedding 065T/14NW. | | |
| 45 | Covered; talus fragments of limestone, very dark grey, thin bedded, weathers light grey. | 15 | 848.9 |
| 44 | Covered; talus fragments of limestone, light grey, fine grained, thin bedded, weathers light brownish grey; mixed with fragments of limestone, dark brown, laminated, weathers light brownish grey. | 12 | 833.9 |
| 43 | Covered; fragments of limestone, dark grey, aphanitic, evenly medium bedded, weathers light grey; auloporid fragments (GSC loc. 54755) collected loose 5 feet up. | 30 | 821.9 |

| Unit | Description | Thickness (feet) | |
|------|---|------------------|-----------|
| | | Unit | From Base |
| 42 | Covered; large talus blocks of limestone, aphanitic, thick bedded, weathers medium grey. | 10 | 791.9 |
| 41 | Covered; fragments of limestone, dark grey, aphanitic, weathers light grey. | 3.5 | 781.9 |
| 40 | Limestone, slightly silty, dark brown, fine grained, evenly medium to thick bedded, weathers light to medium brownish grey. | 5 | 778.4 |
| 39 | Covered; talus fragments of limestone, silty, medium brown, aphanitic, weathers medium grey; chonetid, and cf. <u>Moelleritia canadensis</u> Copeland fragment (GSC loc. 54754) collected loose 10 feet up. | 22 | 773.4 |
| 38 | Covered; large blocks of limestone, silty, dark brown, fine grained, thick bedded to massive, weathers medium brown. | 10 | 751.4 |
| 37 | Covered; fine fragments of limestone, slightly silty, medium brown, aphanitic, weathers light to dark brownish grey. | 15 | 741.4 |
| 36 | Dolomite, slightly calcareous, medium brownish grey, beds up to 3 feet thick, weathers medium brownish grey. | 20 | 726.4 |
| 35 | Dolomite, some beds slightly silty and laminated, alternating light and medium grey, beds between 1 foot and 2 feet thick. | 25 | 706.4 |
| 34 | Covered by talus and vegetation; fragments of dolomite, weathering light and medium grey. | 18 | 681.4 |
| 33 | Covered; fragments of limestone, dark brown, thin to medium bedded, weathers | | |

| Unit | Description | Thickness (feet) | |
|------|---|------------------|-----------|
| | | Unit | From Base |
| | light to medium grey; mixed with fragments of dolomite, dark brown, fine grained, granular, containing organic fragments (GSC loc. 54753). | 4.5 | 663.4 |
| 32 | Covered by vegetation. | 3.5 | 658.9 |
| 31 | Covered; fragments of limestone, light grey, aphanitic, coated with a light yellowish orange stain. | 8.5 | 655.4 |
| 30 | Covered; fragments of limestone, medium brown, aphanitic, thin bedded, weathers very light grey; mixed with fragments of dolomite, very fine grained, thin to medium bedded, weathers medium brownish grey. | 10 | 646.9 |
| 29 | Covered; fragments of dolomite, light grey, some blocks laminated, weathers medium to dark grey. | 13 | 636.9 |
| 28 | Covered; fragments of dolomite weathering light brown and medium grey. | 14 | 623.9 |
| 27 | Covered; fragments of dolomite, fine grained, granular, minutely vuggy, weathers light and medium grey. | 20 | 609.9 |
| 26 | Covered; fragments of dolomite, weathering light brown. | 3.2 | 589.9 |
| 25 | Covered; mixture of fragments of dolomite, light, medium and dark grey, fine grained, granular. | 19.5 | 586.7 |
| 24 | Dolomite, medium brown, very fine grained, evenly thin bedded, weathers medium brownish grey; poorly exposed. | 3.5 | 567.2 |

| Unit | Description | Thickness (feet) | |
|------|---|------------------|-----------|
| | | Unit | From Base |
| 23 | Covered; fragments of dolomite, slightly calcareous, light brown, fine grained, thin bedded, weathers light brownish grey. | 1.5 | 563.7 |
| 22 | Covered; fragments of dolomite, fetid, fine grained, vuggy, weathers light brownish grey; contains cf. <u>Coenites rectilineatus</u> (Simpson) (GSC loc. 54752). | 18 | 562.2 |
| 21 | Dolomite, fine grained, granular, medium bedded, weathers medium brownish grey; highly frost shattered and poorly exposed. | 5 | 544.2 |
| 20 | Covered; fragments of dolomite, slightly silty, dark brownish grey, fine grained, granular, upper part vuggy, weathers medium grey; poorly preserved <u>Moelleritia?</u> sp. impressions (GSC loc. 54750) from 40 feet up; cf. <u>Moelleritia canadensis</u> Copeland (GSC loc. 54751) from 48 feet up. | 56 | 539.2 |
| 19 | Dolomite, slightly silty, medium brown, fine grained, evenly medium bedded, weathers medium brownish grey; poorly exposed. | 7 | 483.2 |
| 18 | Covered; fragments of dolomite, medium brown, fine grained, granular, some beds vuggy, medium bedded, weathers medium grey, pitted weathered surface. | 41 | 476.2 |
| 17 | Covered; fragments of dolomite, very fine grained, granular; contains vague traces of colonial corals and cf. <u>Coenites rectilineatus</u> (Simpson) (GSC loc. 54749). | 5.5 | 435.2 |
| 16 | Covered. | 6 | 429.7 |
| 15 | Dolomite, medium brown, very fine grained, massive, resistant, weathers light grey. | 9 | 423.7 |

| Unit | Description | Thickness (feet) | |
|------|--|------------------|-----------|
| | | Unit | From Base |
| 14 | Dolomite, dark brownish grey, fine grained, granular, weathers very dark grey; very poorly exposed. | 8 | 414.7 |
| 13 | Dolomite, slightly calcareous, very light grey, irregularly thin bedded, weathers very light grey. | 4 | 406.7 |
| 12 | Dolomite, dark grey, very fine grained, massive, cliff-forming, weathers medium grey. Oriented lithological specimen (GSC loc. 54748). | 15 | 402.7 |
| 11 | Covered; large blocks of dolomite, silty, medium brown, aphanitic to fine grained, weathers medium brownish grey; pitted weathered surface. | 39 | 387.7 |
| 10 | Dolomite, dark brown, aphanitic to fine grained, evenly bedded, beds up to 2.5 feet thick, weathers dark brownish grey, pitted weathered surface; unit poorly exposed. Station 263NB at base of unit 10 near the bottom of south-facing mountain slope immediately north of east-flowing stream. Bedding 072T/15N. | 18.5 | 348.7 |
| 9 | Covered; fragments of dolomite, medium brown, fine grained, granular, minutely vuggy, medium to thick bedded, weathers medium brownish grey. | 21.2 | 330.2 |
| 8 | Covered. | 104 | 309 |
| 7 | Dolomite, slightly calcareous, dark brownish grey, thin bedded, beds | | |

| Unit | Description | Thickness (feet) | |
|------|---|------------------|-----------|
| | | Unit | From Base |
| | between 4 and 6 inches thick, weathers medium brownish grey; unit poorly exposed. | 1.4 | 205 |
| 6 | Covered. | 8 | 203.6 |
| 5 | Limestone, minute amount of chert tracery, medium brown, with light orange ochre, medium grained, evenly thick bedded, highly resistant, weathers light grey and light pinkish grey. Bedding 155T/55SW. | 6.8 | 195.6 |
| 4 | Covered. | 152 | 188.8 |
| 3 | Limestone, very light brownish grey, very fine grained, thick bedded, resistant, weathers medium grey; contains vague traces of colonial corals (GSC loc. 54747). | 7 | 36.8 |
| 2 | Covered. | 24 | 29.8 |
| 1 | Limestone, dark brownish grey, fine grained, massive, highly resistant, weathers light grey, contains very small echinoderm ossicles with double and cross-like axial canals (GSC loc. 54746); contains irregular masses and veins of white coarsely crystalline calcite. | 5.8 | |
| | Station 262NB at base of unit 1 and base of outcrop, north bank of creek, 5 feet above creek level at about 66°42.8'N, 139°14'W. | | |

Section 31: EAST OF SOUTH END OF CAMPBELL LAKE (107C-1)

Section is located on the east side of the Mackenzie River delta in the vicinity of 68°10'N, 133°28'W. Section was measured from a point 0.1 mile east of the east shore and about 4.5 miles north of the south end of Campbell Lake northeastward to a point 1.5 miles inland. Parts of the Gossage and Ogilvie Formations are exposed in this vicinity.

Section measured by A. W. Norris, assisted by D. L. Jordan, July 8-9, 1962.

| | |
|--------------------------|--------------------|
| MIDDLE DEVONIAN | |
| Ogilvie Formation | 330'; incomplete |
| MIDDLE DEVONIAN OR OLDER | |
| Gossage Formation | 350.6'; incomplete |

| Unit | Description | Thickness (feet) | |
|---|---|------------------|-----------|
| | | Unit | From Base |
| MIDDLE DEVONIAN | | | |
| Ogilvie Formation (330 feet; incomplete) | | | |
| 16 | Covered. Station 169NB at top of unit 16 on edge of highland area 1.5 miles inland from the east shore of Campbell Lake. | 60 | 330 |
| 15 | Limestone, very dark grey, fine grained, rubbly thin bedded, weathers dark grey; very poorly exposed; cup coral, * <i>Ambocoelia</i> sp., undet. gastropod, and <i>Paracyclas</i> sp. present in upper beds (GSC loc. 54386). | 10.5 | 270 |
| 14 | Covered. | 15 | 259.5 |
| 13 | Limestone, dark brown, aphanitic, rubbly bedded, highly resistant, weathers medium | | |

| Unit | Description | Thickness (feet) | |
|------|--|------------------|-----------|
| | | Unit | From Base |
| | grey; stromatoporoids, <u>Alveolites</u> sp., <u>Favosites</u> sp., and <u>Phillipsastrea</u> sp. from basal 3 feet of unit (GSC loc. 54384); <u>Syringopora?</u> sp. and other corals from top of unit (GSC loc. 54385). | 19 | 244.5 |
| | Station 168NB at top of unit 71. Bedding 068T/15S. | | |
| 12 | Limestone, argillaceous partings, dark grey, rubbly thin to medium bedded, weathers medium brownish grey; <u>Alveolites</u> sp. and <u>Phillipsastrea</u> sp. from 4 feet up (GSC loc. 54383). | 15.2 | 225.5 |
| 11 | Limestone, dark grey, fine grained, fairly evenly medium bedded, beds between 1 foot and 1.4 feet thick, moderately resistant, weathers medium brownish grey; contains <u>Alveolites</u> sp., * <u>Lazutkinia?</u> sp., <u>Fenestrellina?</u> sp., and ostracod (GSC loc. 54382). | 5.6 | 210.3 |
| 10 | Covered; <u>Alveolites</u> sp., * <u>Paracyclas</u> sp., *proetid tail with three border spines, and ostracod collected loose (GSC loc. 54382). | 5.5 | 204.7 |
| 9 | Limestone, very dark grey, rubbly and nodular bedded, beds up to 1 foot thick, weathers medium grey; poorly exposed; fossils collected in place: <u>Coenites</u> sp., ostracod, and echinoderm ossicles with single canals (GSC loc. 54381); fossils collected loose (GSC loc. 54380). | 8 | 199.2 |
| 8 | Limestone, argillaceous, black, rubbly bedded, nodular partings, bedding | | |

| Unit | Description | Thickness (feet) | |
|------|---|------------------|-----------|
| | | Unit | From Base |
| | between 0.8 and 1.4 feet thick, weathers medium grey; contains echinoderm ossicles (GSC loc. 54379). | 11.3 | 191.2 |
| 7 | Covered. | 1 | 179.9 |
| 6 | Limestone, black, fine grained, even bed, weathers brownish grey; contains crinoid ossicles with single canals. | 1.4 | 178.9 |
| 5 | Limestone, argillaceous partings, black, aphanitic, nodular bedded, beds up to 1.5 feet thick, weathers medium brown; <u>Favosites</u> sp., * <u>Paracyclas</u> sp., and <u>Atrypa</u> sp. collected loose (GSC loc. 54378). | 11 | 177.5 |
| 4 | Limestone, argillaceous, irregular nodular bedded, dark grey, resistant, weathers medium brownish grey; sparsely fossiliferous, echinoderm ossicles with double axial canals and <u>Emanuella</u> sp. noted. | 5 | 166.5 |
| 3 | Limestone, dark grey, aphanitic, nodular bedded, resistant, weathers medium grey; contains fairly numerous fossils: <u>Coenites</u> sp., <u>Schizophoria</u> sp., <u>Atrypa</u> cf. <u>A. perfimbriata</u> Crickmay, <u>Spinatrypa</u> sp., * <u>Emanuella?</u> sp., * <u>Plectospirifer compactus</u> (Meek), * <u>Dechenella (D.)</u> sp., <u>Ondontocephalus</u> sp., trilobite pygidium fragments, ostracods, *echinoderm ossicles with double axial canals (GSC loc. 54376); age: ?Eifelian; <u>Alveolites</u> sp., <u>Coenites?</u> sp., <u>Favosites</u> sp., <u>Phillipsastrea</u> sp., <u>Spinulicosta?</u> sp., <u>Atrypa</u> cf. <u>A. perfimbriata</u> Crickmay, echinoderm ossicles with single, and with five star-shaped | | |

| Unit | Description | Thickness (feet) | |
|--|---|------------------|-----------|
| | | Unit | From Base |
| | axial canals, collected loose (GSC loc. 54377). | 10 | 161.5 |
| | Station 167NB at base of unit 3. | | |
| 2 | Covered; talus fragments of limestone, argillaceous, dark grey, fine grained, rubbly bedded, weathers medium grey. | 21.5 | 151.5 |
| 1 | Covered interval across a muskeg. | 130 | |
| | Lower contact of Ogilvie Formation is drawn at the base of covered interval. | | |
| SILURIAN? | | | |
| <u>Gossage Formation</u> (350.6 feet; incomplete) | | | |
| 58 | Limestone, dark brownish grey, aphanitic, strongly fractured, weathers light grey; poorly exposed in thick bush and muskeg. | 1 | 350.6 |
| | Lithological specimen, oriented (GSC loc. 54375). | | |
| | Station 166NB at top of unit 58. | | |
| 57 | Covered. | 28 | 349.6 |
| | Station 165NB on top of unit 57. | | |
| 56 | Limestone, dark brownish grey, aphanitic, evenly thick bedded to massive, scarp-forming, weathers light grey. | 21.4 | 321.6 |
| | Lithological specimen from top of unit; oriented (GSC loc. 54374). | | |
| | Station 164NB at top of unit 56. Bedding 025T/9SE. | | |

| Unit | Description | Thickness (feet) | |
|------|--|------------------|-----------|
| | | Unit | From Base |
| 55 | Limestone, slightly argillaceous, black, rubbly bedded, recessive, coated with a light brown wash. | 0.4 | 300.2 |
| 54 | Limestone, dark grey, fine grained, even bed, resistant, weathers light grey; contains poorly preserved fossils: undetermined brachiopod (GSC loc. 54373). | 4 | 299.8 |
| | Station 163NB at top of unit 54. Bedding 010T/13E. | | |
| 53 | Covered. | 1 | 295.8 |
| 52 | Limestone, medium brown, aphanitic, evenly medium bedded, weathers medium grey. | 5.3 | 294.8 |
| 51 | Limestone, dark brownish grey, aphanitic, massive, weathers medium grey. | 10.5 | 289.5 |
| 50 | Limestone, dark brownish grey, aphanitic, contains very fine iron sulphides, thick bedded in middle, rubbly and argillaceous towards top and bottom of unit. | 2 | 279 |
| | Oriented lithological specimen (GSC loc. 54372). | | |
| 49 | Limestone, very dark grey, aphanitic, even bed, highly resistant, closely jointed, weathers dark grey. | 2.1 | 277 |
| 48 | Covered. | 2.3 | 274.9 |
| 47 | Limestone, medium brown, aphanitic, closely jointed, weathers medium grey. | 2.5 | 272.6 |
| 46 | Covered. | 0.7 | 270.1 |

| Unit | Description | Thickness (feet) | |
|------|--|------------------|-----------|
| | | Unit | From Base |
| 45 | Limestone, silty, argillaceous, black, fine grained to aphanitic, rubbly thin bedded, recessive, weathers very dark grey. Lithological specimen (GSC loc. 54371). Bedding 045T/13SE. | 2.8 | 269.4 |
| 44 | Limestone, very dark grey to black, aphanitic, resistant, weathers dark grey. | 4.4 | 266.6 |
| 43 | Limestone, slightly argillaceous, dark brown, rubbly bedded, weathers medium grey. | 0.5 | 262.2 |
| 42 | Limestone, dark brown, aphanitic, evenly medium bedded, weathers light grey. | 4.3 | 261.7 |
| 41 | Covered. | 1 | 257.4 |
| 40 | Limestone, black, aphanitic, massive, weathers light grey. Lithological specimen (GSC loc. 54537). | 10.5 | 256.4 |
| 39 | Limestone, black, aphanitic, evenly medium bedded with argillaceous partings and beds up to 1/2 inch thick, weathers medium grey. | 8 | 245.9 |
| 38 | Covered. | 1.5 | 237.9 |
| 37 | Limestone, black in lower half, medium brown in upper half, aphanitic, evenly medium bedded, weathers medium grey. | 6.9 | 236.4 |
| 36 | Covered. | 4 | 229.5 |
| 35 | Limestone, dark brownish grey, aphanitic, medium bedded, with interbeds of limestone, | | |

| Unit | Description | Thickness (feet) | |
|------|--|------------------|-----------|
| | | Unit | From Base |
| | argillaceous, rubbly and nodular; unit recessive, weathers light grey. | 19.3 | 225.5 |
| | Lithological specimen (GSC loc. 54336) from top of unit. | | |
| | Station 162NB at top of unit 35 near top of first cliff about 0.3 mile inland from shore of Campbell Lake. | | |
| 34 | Limestone, black, aphanitic, evenly bedded, from 1.3 to 2.8 feet thick, weathers medium grey. | 13.4 | 206.2 |
| 33 | Limestone, aphanitic, dark brown, massive, highly resistant, cliff-forming, weathers medium dull grey. | 14.6 | 192.8 |
| | Stromatoporoid collected loose from near base of unit (GSC loc. 54370). | | |
| 32 | Limestone, slightly argillaceous, black, rubbly and nodular bedded, coated with a medium brown wash. | 1.5 | 178.2 |
| | Lithological specimen (GSC loc. 54535). | | |
| 31 | Covered. | 1 | 176.7 |
| 30 | Limestone, very dark grey, almost black, massive, resistant, weathers light grey. | 2.4 | 175.7 |
| 29 | Limestone, argillaceous in lower part, aphanitic, weathers medium brown. | 2.8 | 173.3 |
| 28 | Limestone, dark brown, aphanitic, even bed, weathers medium brown. | 2.9 | 170.5 |
| 27 | Limestone, argillaceous, medium brown, nodular and rubbly bedded, slightly recessive, weathers medium brownish grey. | 1.2 | 167.6 |

| Unit | Description | Thickness (feet) | |
|------|---|------------------|-----------|
| | | Unit | From Base |
| | Lithological specimen (GSC loc. 54534). | | |
| 26 | Limestone, dark brown, aphanitic, even bed, weathers medium brown. | 1.5 | 166.4 |
| 25 | Limestone, silty laminae, dark brownish grey, very thin bedded, slightly recessive. | 0.6 | 164.9 |
| 24 | Limestone, dark brownish grey, aphanitic, even bed, resistant, weathers medium brownish grey. | 2.5 | 164.3 |
| 23 | Limestone, moderately argillaceous, black, rubbly thin bedded, moderately recessive, weathers black. | 1.4 | 161.8 |
| | Lithological specimen (GSC loc. 54533). | | |
| 22 | Limestone, dark brownish grey, aphanitic, beds up to 4 feet thick; separated by recessive argillaceous beds up to 0.5 foot thick. | 18 | 160.4 |
| 21 | Limestone, argillaceous, aphanitic, thin bedded, highly fissile, recessive. | 0.4 | 142.4 |
| 20 | Limestone, black, aphanitic, massive, resistant; separated by argillaceous limestone, aphanitic, nodular, thin bedded. | 11.8 | 142 |
| 19 | Limestone, very dark brownish grey, aphanitic, pelletoid, weathers medium grey; unit closely and evenly jointed. | 7.8 | 130.2 |
| | Lithological specimen (GSC loc. 54532) from 4 feet up. | | |
| 18 | Covered. | 7 | 122.4 |

| Unit | Description | Thickness (feet) | |
|------|---|------------------|-----------|
| | | Unit | From Base |
| 17 | Limestone, black, aphanitic, massive, resistant, weathers light grey. | 6.1 | 115.4 |
| 16 | Limestone, black, aphanitic, thin bedded, recessive, weathers medium grey. Lithological specimen, oriented (GSC loc. 54531). Bedding 065T/11SE. | 1.6 | 109.3 |
| 15 | Limestone, dark grey, aphanitic, massive, weathers light grey; contains small blebs of pyrite. | 3 | 107.7 |
| 14 | Covered. | 2.5 | 104.7 |
| 13 | Limestone, black, fine grained, massive, weathers medium grey. | 6 | 102.2 |
| 12 | Limestone, slightly argillaceous, almost black, aphanitic, thin bedded; brachiopod 'ghost' collected (GSC loc. 54369). | 3.5 | 96.2 |
| 11 | Limestone, dark grey, aphanitic, massive, weathers light grey. | 3 | 92.7 |
| 10 | Covered. | 2 | 89.7 |
| 9 | Limestone, argillaceous limestone beds 6 inches thick at top and bottom, black, aphanitic, weathers light grey. | 3.7 | 87.7 |
| 8 | Limestone, dark brownish grey, aphanitic, massive, in beds up to 4 feet thick; separated by irregular thin beds up to 8 inches thick of limestone, slightly argillaceous, black, aphanitic. Lithological specimen (GSC loc. 54530) 18.7 feet up. | 21.7 | 84.0 |

| Unit | Description | Thickness (feet) | |
|------|--|------------------|-----------|
| | | Unit | From Base |
| 7 | Covered. | 12 | 62.3 |
| 6 | Limestone, dark brownish grey, aphanitic, beds up to 3 feet thick, resistant, weathers medium grey; separated by limestone, slightly argillaceous, black, irregularly thin bedded. | 20.7 | 50.3 |
| | Lithological specimen (GSC loc. 54529) from 4 feet up. | | |
| | Top of unit 6 forms a prominent step. | | |
| 5 | Limestone, dark brownish grey, aphanitic, beds up to 4.5 feet thick; separated by argillaceous limestone beds up to 8 inches thick. | 18 | 29.6 |
| 4 | Limestone, dark grey to black, aphanitic, irregularly thin bedded, coated with a medium brown wash. | 0.7 | 11.6 |
| | Lithological specimen (GSC loc. 54528). | | |
| 3 | Limestone, dark brownish grey, massive, highly resistant, weathers light grey. | 5 | 10.9 |
| 2 | Limestone, irregular thin beds up to 1 inch thick; otherwise similar to unit 1. | 0.5 | 5.9 |
| 1 | Limestone, very dark brownish grey, aphanitic, conchoidally fracturing, beds 3 and more feet thick, weathers light grey. | 5.4 | |
| | Station 161NB at base of unit 1 and base of cliff 0.1 mile inland from east shore and about 4.5 miles north of the south end of Campbell Lake. | | |

Section 32: NORTH SIDE OF CAMPBELL LAKE (107C-2)

Section was measured on the north side towards the northeast end of Campbell Lake from 68°15.2'N, 133°26.4'W, opposite the apex of a large bay, northeastward to 68°17.1'N, 133°21'W, over a distance of approximately three miles.

Section measured by A. W. Norris, assisted by D. L. Jordan, July 10-11, 1962.

MIDDLE DEVONIAN

Ogilvie Formation 287.9'; incomplete

SILURIAN

Gossage (?) Formation 697.3'; incomplete

| Unit | Description | Thickness (feet) | |
|--|--|------------------|-----------|
| | | Unit | From Base |
| MIDDLE DEVONIAN | | | |
| <u>Ogilvie Formation</u> (287.9 feet; incomplete) | | | |
| 49 | Limestone, presumably similar to unit 106, present north of station 185NB across a deep trench. | c. 25 | 287.9 |
| | Station 185NB (68°17.1'N, 133°21'W) near the east side of a large isolated outcrop surrounded by muskeg 1.1 miles northwest of the northeast end of Campbell Lake. Bedding 055T/7SE. | | |
| 48 | Limestone, pale brownish grey, fine grained, evenly very thick bedded to massive, weathers light grey. | 8.5 | 262.9 |
| | Station 184NB at base of unit 106. Bedding 034T/10SE. | | |
| 47 | Covered. | 2.5 | 254.4 |

| Unit | Description | Thickness (feet) | |
|------|---|------------------|-----------|
| | | Unit | From Base |
| 46 | Limestone, medium brownish grey, fine grained, granular, evenly thin to medium bedded, weathers light grey; unfossiliferous. | 7.5 | 251.9 |
| 45 | Limestone, dark brownish grey, aphanitic, pelletoid, evenly thick bedded, weathers medium grey; a strongly resistant unit. Lithological specimen (Field No. 183NB2) from top of unit. | 11 | 244.4 |
| 44 | Limestone, aphanitic, even beds up to 3 feet thick, resistant; interbeds of argillaceous limestone up to 0.5 foot thick. | 9.5 | 233.4 |
| 43 | Limestone, medium brown, aphanitic, with fine blebs of sparry calcite, even bed, weathers light to medium grey; with an occasional vug. Lithological specimen (Field No. 183NB1) from top of unit. | 1.5 | 223.9 |
| 42 | Limestone, aphanitic, evenly bedded, resistant; interbedded with limestone, argillaceous, rubbly bedded, recessive. | 3.8 | 222.4 |
| 41 | Limestone, medium brown, aphanitic, even bed, resistant, weathers very light grey. | 2 | 218.6 |
| 40 | Covered. | 5 | 216.6 |
| 39 | Limestone, medium brown, aphanitic, even bed, resistant, weathers light grey. | 2 | 211.6 |
| 38 | Limestone, medium brown, aphanitic, nodular and rubbly bedded, recessive, | | |

| Unit | Description | Thickness (feet) | |
|------|--|------------------|-----------|
| | | Unit | From Base |
| | weathers medium brown; sharp upper contact. | 1 | 209.6 |
| 37 | Limestone, pale brown, aphanitic, even bed, resistant, weathers light grey; transitional upper contact. | 1.5 | 208.6 |
| 36 | Limestone, slightly argillaceous, medium brown, aphanitic, nodular bedded, recessive, poorly exposed. | 4.5 | 207.1 |
| 35 | Limestone, pale brown, fine grained, evenly bedded; separated by an argillaceous limestone bed 6 inches thick. | 3.5 | 202.6 |
| 34 | Covered. | 6 | 199.1 |
| 33 | Limestone, pale brown, aphanitic, evenly thick bedded, weathers light grey. | 4.8 | 193.1 |
| 32 | Covered. | 1.5 | 188.3 |
| | Station 183NB near the south end of a large outcrop surrounded by muskeg 0.5 mile southwest of station 185NB. Bedding 136T/7NE. | | |
| 31 | Limestone, pale brown, aphanitic, evenly thin bedded to massive, weathers very light grey almost white, resistant. | 7.2 | 186.8 |
| 30 | Limestone, light grey, aphanitic, smoothly eroded. | 1.3 | 179.6 |
| 29 | Limestone, light grey, aphanitic, pelletoid, even bed, resistant, weathers whitish grey; noted a single stromatoporoid (Field No. 181NB1). | 3.2 | 178.3 |
| 28 | Covered. | 0.8 | 175.1 |

| Unit | Description | Thickness (feet) | |
|------|--|------------------|-----------|
| | | Unit | From Base |
| 27 | Limestone, medium brownish grey, aphanitic, even bed, weathers light grey. | 3.2 | 174.3 |
| 26 | Covered. | 4 | 171.1 |
| 25 | Dolomite, medium brown, fine grained, granular, evenly thin bedded, weathers light brownish grey. | 1.5 | 167.1 |
| 24 | Covered. | 1.5 | 165.6 |
| 23 | Limestone, dolomitic, slightly argillaceous, light brown, aphanitic, evenly medium bedded, weathers pale buff-brown. | 2.7 | 164.1 |
| 22 | Dolomite, slightly calcareous, medium brownish grey, very fine grained, fairly evenly medium bedded, weathers medium grey. | 3.5 | 161.4 |
| 21 | Covered. | 17.5 | 157.9 |
| 20 | Dolomite, medium brownish grey, aphanitic, very hard, breaks with a conchoidal fracture, even bed, weathers medium brown. | 1.7 | 140.4 |
| 19 | Covered. | 4.5 | 138.7 |
| 18 | Dolomite, slightly calcareous, medium brown, very fine grained, evenly medium bedded, weathers light to medium brownish grey; unit discontinuously exposed as a series of steps. | 9.5 | 134.2 |
| | Lithological specimen (Field No. 180NB1) from top of unit. | | |
| | Station 181NB at top of unit 76. Bedding 185T/6E. | | |
| 17 | Covered. | 3 | 124.7 |

| Unit | Description | Thickness (feet) | |
|------|--|------------------|-----------|
| | | Unit | From Base |
| 16 | Dolomite, slightly argillaceous, pale brown, aphanitic, even beds between 0.8 foot to 1.2 feet thick, weathers medium brownish grey, poorly exposed. | 7.2 | 121.7 |
| 15 | Limestone, medium brownish grey, aphanitic, resistant, weathers medium grey. | 2.6 | 114.5 |
| 14 | Dolomite, medium brownish grey, aphanitic, even bed, highly fractured, weathers dark grey. | 1.5 | 111.9 |
| 13 | Covered. | 6.5 | 110.4 |
| 12 | Dolomite, dark brownish grey, aphanitic to fine grained, evenly bedded, weathers dark grey. | 2.5 | 103.9 |
| 11 | Limestone, dark grey, fine grained, granular, evenly bedded up to 1 foot thick, weathers dark grey. | 5.5 | 101.4 |
| | Lithological specimen (Field No. 179NB2) from top of unit. | | |
| | Station 179NB at top of unit 69. Bedding 025T/15E. | | |
| 10 | Covered. | 15 | 95.9 |
| 9 | Limestone, slightly dolomitic, dark brownish grey, fine grained to aphanitic, evenly thick bedded up to 2 feet thick, weathers medium to dark grey. | 9.5 | 80.9 |
| 8 | Limestone, slightly dolomitic, mottled pale and medium brown, very fine grained, pelletoid, evenly bedded up to 1 foot thick, weathers light grey. | 11.5 | 71.4 |

| Unit | Description | Thickness (feet) | |
|------|---|------------------|-----------|
| | | Unit | From Base |
| | Lithological specimen (Field No. 179NB1) from top of unit. | | |
| 7 | Covered. | 6 | 59.9 |
| 6 | Limestone, argillaceous, dark grey, fine grained, massive and rubbly thin bedded, weathers light grey, cliff-forming; contains a few echinoderm ossicles with single, and double? axial canals (GSC loc. 59710). | 17.5 | 53.9 |
| 5 | Limestone, argillaceous, massive but in places rubbly thin bedded, resistant, weathers light grey. | 5.8 | 36.4 |
| 4 | Limestone, dark brownish grey, evenly medium bedded, weathers buff-brown; interbedded with medium grey weathering limestone; faint traces of stromatoroids in upper part of unit. | 3.3 | 30.6 |
| | Station 179NB at top of unit. Bedding 060T/6SE. | | |
| 3 | Limestone, light brownish grey, fine grained, granular, massive, weathers light grey; occasional <u>Favosites</u> sp., and echinoderm ossicles with single and *double axial canals present in lower 14 feet (GSC loc. 54980); <u>Favosites</u> sp. present in upper 2 feet of unit (GSC loc. 54981). | 16.8 | 27.3 |
| 2 | Limestone, medium grey, fine grained, evenly thick bedded, weathers light grey; contains cup corals, <u>Favosites</u> sp., and echinoderm ossicles with single axial canals (GSC loc. 54979). | 7 | 10.5 |
| 1 | Limestone, medium grey, fine grained, granular, rubbly thin bedded, weathers | | |

| Unit | Description | Thickness (feet) | |
|--|--|------------------|-----------|
| | | Unit | From Base |
| | light grey; contains <u>Favosites</u> sp. (GSC loc. 54404). | 3.5 | |
| SILURIAN | | | |
| <u>Gossage (?) Formation</u> (697.3 feet; incomplete) | | | |
| 58 | Limestone, dark grey, very fine grained, massive, weathers medium grey. Station 178NB at top of unit 58. | 2.5 | 697.3 |
| 57 | Covered. | 10 | 694.8 |
| 56 | Limestone, medium brown, fine grained, even bed, weathers medium grey. | <u>c.</u> 1 | 684.8 |
| 55 | Dolomite, dark grey, fine grained, massive, resistant, weathers dark grey; contains chert 'tracery', and numerous closely spaced small veins of white calcite. | 3.2 | 683.8 |
| 54 | Covered. | 4 | 680.6 |
| 53 | Dolomite, dark grey, fine grained, granular, thick bedded, weathers dark grey. | 7.2 | 676.6 |
| 52 | Covered. | 3.2 | 669.4 |
| 51 | Dolomite, light brownish grey, fine grained, evenly thin to medium bedded. | 19.5 | 666.2 |
| 50 | Covered. | 3.1 | 646.7 |
| 49 | Limestone, medium brownish grey, aphanitic, evenly medium bedded, | | |

| Unit | Description | Thickness (feet) From Base |
|------|--|----------------------------------|
| | <p>weathers light grey; numerous silicified fossils in top few feet of unit including (GSC loc. 54403); stromatoporoids, <u>Favosites</u> sp., <u>Cystiphyllum</u>? sp., <u>Syringopora</u> sp., other corals, and *<u>Atrypa</u> cf. <u>A. gabrielsi</u> Norford.</p> | <p>29.4 643.6</p> |
| | <p>Station 176NB at top of unit 49.</p> | |
| 48 | <p>Dolomite, silty, slightly calcareous, dark brownish grey, fine grained, granular, evenly medium to thick bedded, weathers medium grey; poorly preserved silicified corals present in top 2 feet (GSC loc. 54978).</p> | <p>21.7 614.2</p> |
| 47 | <p>Dolomite, pale brown, aphanitic, even bed, weathers light brown.</p> | <p>2 592.5</p> |
| 46 | <p>Limestone, dark brownish grey, fine grained, granular, evenly thick bedded, weathers dark grey.</p> | <p>9.5 590.5</p> |
| 45 | <p>Limestone, pale brown, aphanitic, evenly thin to medium bedded, with partings and thin beds of rubbly argillaceous limestone, weathering light grey.</p> | <p>10.3 581</p> |
| 44 | <p>Covered; talus fragments of dolomite, dark brownish grey, fine grained, granular, weathers dark grey; contains poorly preserved silicified stromatoporoids and rugose corals (GSC loc. 54402).</p> | <p>4.5 570.7</p> |
| 43 | <p>Dolomite, slightly cherty, medium brownish grey, fine to medium grained, massive, resistant, scarp-forming, weathers medium brownish grey.</p> | <p>11 566.2</p> |
| | <p>Lithological specimen (GSC loc. 54401).</p> | |

| Unit | Description | Thickness (feet) | |
|------|---|------------------|-----------|
| | | Unit | From Base |
| 42 | Dolomite, light brown with faint red mottling, aphanitic, conchoidally fracturing, weathers light grey; highly fractured. | 2.5 | 555.2 |
| 41 | Limestone, very dark grey, aphanitic, rubbly thin to medium bedded, weathers light grey. | 14.5 | 552.7 |
| 40 | Limestone, dark brownish grey, very fine grained, granular, evenly medium bedded; poorly exposed. | 9 | 538.2 |
| 39 | Limestone, very dark grey, granular, rubbly thin bedded, weathers dark grey in lower 2 feet, and a slightly lighter grey above. Bedding 173T/8E. | 5.5 | 529.2 |
| 38 | Covered. | 3 | 523.7 |
| 37 | Limestone, very dark brownish grey, very fine grained, rubbly thin bedded, weathers dark grey. | 3.5 | 520.7 |
| 36 | Limestone, slightly dolomitic, silty, dark grey, fine grained, granular, massive to evenly thick bedded, weathers dark grey; contains fine authigenic quartz needles. Lithological specimen (GSC loc. 54977) from top of unit. | 3.5 | 517.2 |
| 35 | Dolomite, slightly calcareous, pale brownish grey, aphanitic, massive, weathers light grey; upper 1 foot finely crystalline, granular dolomite, weathers medium grey. | 4.5 | 513.7 |
| 34 | Covered. | 2 | 509.2 |

| Unit | Description | Thickness (feet) | |
|------|--|------------------|-----------|
| | | Unit | From Base |
| 33 | Dolomite, pale brown, aphanitic, evenly medium bedded, beds between 1 foot and 2.5 feet thick, weathers light grey; beds strongly and irregularly fractured. | 10.5 | 507.2 |
| 32 | Dolomite, calcareous, pale brown, aphanitic, thin bedded, very hard, weathers light grey; coated with a bright orange staining. Lithological specimen (GSC loc. 54400). Station 174NB at top of unit 32. Bedding 131T/1NE. | 11.5 | 496.7 |
| 31 | Limestone, dolomitic, dark brownish grey, very fine grained almost aphanitic, thin to medium bedded, weathers dark grey. | 4.5 | 485.2 |
| 30 | Limestone, dolomitic, very dark brown, evenly medium to thick bedded, weathers dark grey. Station 173NB at top of unit 30. Bedding approximately flat. | 25.3 | 480.7 |
| 29 | Dolomite, calcareous, medium brown, aphanitic, thin bedded, weathers buff brown. Lithological specimen (GSC loc. 54399). | 5 | 455.4 |
| 28 | Limestone, with silty laminae, dark grey, very fine grained, massive, weathers dark grey. | 9.5 | 450.4 |
| 27 | Covered. | 13.8 | 440.9 |
| 26 | Limestone, slightly cherty, very dark brownish grey, medium to thick bedded, | | |

| Unit | Description | Thickness (feet) | |
|------|--|------------------|-----------|
| | | Unit | From Base |
| | beds between 0.5 foot and 2.5 feet thick, weathers medium grey. | 8.3 | 427.1 |
| 25 | Dolomite, dark brownish grey, granular, friable and porous, medium bedded, weathers light brownish grey. | 2.5 | 418.8 |
| 24 | Covered. | 8 | 416.3 |
| 23 | Dolomite, silty, very dark grey, fine grained, thin bedded, parting planes 3 to 12 inches apart, weathers very dark grey. | 14.5 | 408.3 |
| 22 | Limestone, dolomitic, especially towards top, dark brownish grey, fine grained, evenly thin to medium bedded, weathers light grey, in places coated with a light orange staining; ostracods present in uppermost bed (GSC loc. 54398). | 25 | 393.8 |
| 21 | Dolomite, dark grey, fine grained, granular, irregular thick bedded, weathers dark grey. | 11.9 | 368.8 |
| | Station 172NB at top of unit 21. Bedding 170T/7E. | | |
| 20 | Dolomite, calcareous, slightly silty, very dark grey, very fine grained, granular, evenly thin to medium bedded, weathers medium to dark grey; contains very fine chert tracery. | 9.5 | 356.9 |
| | Lithological specimen (GSC loc. 54397) from top of unit. Bedding 170T/6E. | | |
| 19 | Limestone, silty, dark brown, fine grained, evenly thick bedded to massive, weathers brown. | 16 | 347.4 |
| 18 | Covered. | 3.5 | 331.4 |

| Unit | Description | Thickness (feet) | |
|------|--|------------------|-----------|
| | | Unit | From Base |
| 17 | Limestone, strongly dolomitic, variably silty, pale brown, fine grained, granular, evenly medium bedded, weathers light grey. | 5 | 327.9 |
| 16 | Limestone, silty, slightly cherty, colour laminated, medium brownish grey, fine grained, granular, evenly bedded between 0.5 foot and 2 feet thick, weathers medium and dark grey; stromatoporoids from 9 feet up (GSC loc. 54395); lithological specimen from 3 feet up (GSC loc. 54396). | 19 | 322.9 |
| 15 | Covered. | 23 | 303.9 |
| 14 | Limestone, medium brown, aphanitic, thickly bedded to massive, weathers light grey; exposed as a series of steps along top of plateau. | 30 | 280.9 |
| 13 | Limestone, light brownish grey, fine grained, granular, friable, massive and nodular weathering, weathers light grey; highly fractured; lithological specimen (GSC loc. 54394). | 24.5 | 250.9 |
| | Station 171NB at top of unit 13. Bedding 135T/10NE. | | |
| 12 | Limestone, dark brownish grey, aphanitic, evenly thick bedded, weathers light grey; stromatoporoids collected loose (GSC loc. 54393). | 18.5 | 226.4 |
| 11 | Covered; talus fragments of limestone, strongly fetid, dark brownish grey, fine grained, granular. | 10 | 207.9 |
| 10 | Limestone, very dark brownish grey, aphanitic, massive, cliff-forming, weathers light grey. | 45 | 197.9 |

| Unit | Description | Thickness (feet) | |
|------|---|------------------|-----------|
| | | Unit | From Base |
| 9 | Limestone, very dark brownish grey, aphanitic, massive, vertical cliff-forming, weathers light grey, in places coated with a pale orange staining; stromatoporoids from top of unit 9 (GSC loc. 54392). | 25 | 152.9 |
| 8 | Limestone, medium brown, aphanitic, massive, even parting planes, weathers very light grey. | 13 | 127.9 |
| 7 | Limestone, dark brownish grey, slightly fetid, aphanitic to fine grained, evenly very thick bedded to massive, weathers light grey; poorly exposed; lithological specimen from 7.5 feet up (GSC loc. 54391). | 12.5 | 114.9 |
| 6 | Dolomite, dark grey, fine grained, granular, irregular thick bedded to massive, weathers light grey. This unit forms a gently sloping terrace along escarpment facing Campbell Lake. | 24 | 102.4 |
| 5 | Limestone, medium brown, aphanitic, massive, vertical cliff-forming; along strike part of this unit changes to a dark brownish grey, fine grained, granular, massive dolomite; unit partly coated with a pale orange staining. Lithological specimen (GSC loc. 54390). | 39 | 78.4 |
| 4 | Limestone, in part dolomitized, dark brownish grey, fine grained, massive, resistant, coated with a pale orange staining, contains numerous small veins of white calcite. | 9.5 | 39.4 |

| Unit | Description | Thickness (feet) | |
|------|--|------------------|-----------|
| | | Unit | From Base |
| | Lithological specimen (170NB3) from top of unit. | | |
| 3 | Dolomite, slightly calcareous, silty laminated, dark brownish grey, fine grained, granular, massive in lower part and changing to evenly thick bedded in upper third of unit. | 15 | 29.9 |
| | Lithological specimen (GSC loc. 54389) from top of unit. Bedding 160T/5E. | | |
| 2 | Dolomite, silty laminated, dark brownish grey, fine grained, granular, massive, coated with a pale orange stain; beds 1/2 foot thick of recessive argillaceous dolomite at base; questionable stromatopores (GSC loc. 54387) from upper part of unit; unit with numerous small veins of white calcite. | 10 | 14.9 |
| 1 | Dolomite, very dark grey, fine grained, granular, massive, resistant, weathers medium grey; contains irregular masses of white secondary calcite as well as small veins of calcite. | 4.9 | |
| | Lithological specimen (GSC loc. 54388). | | |
| | Station 170NB at base of unit 1 and base of exposure at 68°15.2'N, 133°26.4'W on the north side of Campbell Lake. Section was measured northeastward from this point. | | |

Section 33: "SNAFU" MOUNTAIN (116P-4)

Section is located in the northern part of the Richardson Mountains on "Snafu" Mountain about 4.3 miles southeast of Summit Lake. The Devonian part of the section was measured up a stream gully from a point about 67°39.7'N, 136°18'W, to about 67°39.5'N, 136°20'W, and the overlying Permian? beds were measured about 0.7 mile to the north.

Section measured by E. W. Bamber, July 2, 1962.

PERMIAN?

Angular unconformity

UPPER DEVONIAN

Imperial Formation

3210'; incomplete

| Unit | Description | Thickness (feet) | |
|------|---|------------------|-----------|
| | | Unit | From Base |
| 8 | Sandstone with lenses of conglomerate, sandstone is quartzose, cherty, medium grey, coarse grained, beds from 0.5 to 3 feet thick, crossbedding common, weathers medium to dark grey; angular pebbles of chert and quartz up to 1/4 inch in diameter. | 26 | 211 |
| 7 | Covered. | 5 | 185 |
| 6 | Sandstone, quartzose, coarse grained, grains both angular and rounded, poorly sorted. | 13 | 180 |
| 5 | Covered but not recessive. | 49 | 167 |
| 4 | Sandstone, quartzose, slightly cherty, fine to medium grained, grains angular to subrounded, poorly sorted. | 8 | 118 |
| 3 | Covered, non-recessive, appear to be resistant sandstone across the valley. | 36 | 110 |

| Unit | Description | Thickness (feet) | |
|--|---|------------------|-----------|
| | | Unit | From Base |
| 2 | Sandstone, quartzose, slightly cherty, medium grey, fine grained, beds up to 2 feet thick, resistant, weathers medium grey; breaks into blocks from 0.3 foot to 2 feet in diameter. Lithological specimen from base of unit. | 40 | 74 |
| 1 | Sandstone, conglomeratic, quartzose, cherty, medium greenish grey to light grey, contains fine, medium, coarse and granule size grains, well indurated, resistant, irregular wavy beds between 1 foot and 3 feet thick, weathers medium to dark reddish brown; grains are mainly quartz with some black and grey chert; pebbles are up to 1/4 inch in diameter. An angular unconformity separates the top of the Imperial Formation from the overlying Permian (?) beds. Within the area Permian (?) beds transgress about 200 to 300 feet of Devonian strata. Bedding above the unconformity is 040T/38W. Bedding below the unconformity is 027T/45W. | 34 | |
| UPPER DEVONIAN | | | |
| <u>Imperial Formation</u> (3210 feet; incomplete) | | | |
| 144 | Sandstone, quartzose, beds from 0.5 foot to 3 feet thick, with minor interbeds of shale, silty, dark grey, from 0.1 to 0.5 foot thick, making up 15 per cent of the outcrop; minor beds between 0.5 and 1 foot thick of dark grey argillaceous sandstone containing poorly preserved plant fragments. | 73 | 3210 |

| Unit | Description | Thickness (feet) | |
|------|--|------------------|-----------|
| | | Unit | From Base |
| | Shale for microfossils (H1) 59 feet up. | | |
| | Shale for microfossils (I1) 65 feet up. | | |
| | Lithological specimen 68 feet up. | | |
| 143 | Mainly covered; some outcrop of shale, silty, dark grey; with interbeds 1/2 inch to 4 inches thick of siltstone. | 64 | 3137 |
| 142 | Sandstone in beds 0.5 foot to 5 feet thick forming 60 per cent of outcrop in intervals from 2 to 20 feet thick; interbedded with shale forming 40 per cent of outcrop with thin interbeds from 1/2 inch to 4 inches thick of siltstone. | 93 | 3073 |
| 141 | Sandstone in beds 0.5 foot to 2 feet thick forming 50 per cent of unit; interbedded with shale containing thin interbeds of siltstone between 1/2 inch and 2 inches thick. | 35 | 2980 |
| 140 | Shale, forming 60 per cent of unit in beds from 1 inch to 4 inches thick; interbedded with shale in beds between 1/2 inch and 3 inches thick forming 15 per cent of unit; and sandstone, slightly argillaceous, in beds 4 to 8 inches thick forming 25 per cent of unit; some sandstone beds contain poorly preserved plant fragments. | 40 | 2945 |
| | Lithological specimen from 12 feet up. | | |
| | Shale for microfossils (F1) from 11 feet up. | | |
| 139 | Sandstone, slightly conglomeratic, beds 0.5 foot to 2 feet thick; with interbeds of siltstone 2 to 6 inches thick. | 41 | 2905 |

| Unit | Description | Thickness (feet) | |
|------|---|------------------|-----------|
| | | Unit | From Base |
| 138 | Shale interbedded with siltstone. | 37 | 2864 |
| 137 | Sandstone, beds from 0.5 foot to 2 feet thick, with interbeds of shale up to 0.5 foot thick in upper 5 feet. | 15 | 2827 |
| 136 | Siltstone, beds from 1/2 inch to 6 inches thick, forming 70 per cent of unit, with interbeds of shale from 1/4 to 1 inch thick. | 43 | 2812 |
| 135 | Shale, beds from 1 inch to 6 inches thick, comprising 60 per cent of unit, interbeds of siltstone between 1/4 inch and 2 inches thick. | 79 | 2769 |
| 134 | Sandstone, two beds each 5 feet thick, separated by a 2-foot bed of shale. | 12 | 2690 |
| 133 | Covered. | 15 | 2678 |
| 132 | Sandstone, conglomeratic, massive, contains pebbles of black chert. | 39 | 2663 |
| 131 | Covered. | 17 | 2624 |
| 130 | Shale, beds 1/2 inch to 6 inches thick, weathers orange-brown, comprising 60 per cent of unit; interbedded with siltstone. | 55 | 2607 |
| 129 | Shale with minor thin beds of siltstone. Shale for microfossils (D1) from 23 feet up. | 25 | 2552 |
| 128 | Shale, comprising 70 per cent of unit; with interbeds of siltstone, cross-laminated, beds between 1/2 inch and 6 inches thick, weathers orange-brown; flow cast markings in bottoms | | |

| Unit | Description | Thickness (feet) | |
|------|--|------------------|-----------|
| | | Unit | From Base |
| | of beds; 2-foot bed of sandstone 11 feet up. | 40 | 2527 |
| | Shale for microfossils (C1) from 38 feet up. | | |
| 127 | Sandstone, beds 3 to 5 feet thick. | 15 | 2487 |
| 126 | Covered. | 9 | 2472 |
| 125 | Conglomerate of chert pebbles, grading up into medium grained quartzose sandstone. | 29 | 2463 |
| 124 | Shale, black, with scattered interbeds of 0.5 to 1 foot thick of sandstone. | 16 | 2434 |
| | Shale for microfossils (B1) from 2 feet up. | | |
| 123 | Mainly covered; appears to consist of sandstone, beds 0.5 foot to 2 feet thick. | 55 | 2418 |
| 122 | Sandstone, fine to coarse grained, massive. | 35 | 2363 |
| 121 | Sandstone, beds 0.3 to 1 foot thick; interbeds of shale from 1 inch to 3 inches thick. | 10 | 2328 |
| | Shale for microfossils (A1) from 7 feet up. | | |
| | Lithological specimen showing flow cast structures. Bedding 027T/47W. | | |
| 120 | Covered. | 55 | 2318 |
| 119 | Sandstone, fine grained, beds 0.3 to 1 foot thick; interbedded shale and siltstone; chert pebble conglomerate bed 5 feet thick 35 feet up. | 87 | 2263 |

| Unit | Description | Thickness (feet) | |
|------|--|------------------|-----------|
| | | Unit | From Base |
| | Shale for microfossils (Z) from 29 feet up. | | |
| 118 | Sandstone, with a 4-foot interval of black shale 8 feet up. | 26 | 2176 |
| 117 | Shale, with sparse thin beds of siltstone between 1/2 inch and 2 inches thick; and some beds of sandstone 2 to 4 inches thick. | 59 | 2150 |
| | Shale for microfossils (Y) from 29 feet up. | | |
| 116 | Sandstone. | 9 | 2091 |
| 115 | Sandstone, beds 0.5 foot to 2 feet thick, comprising 20 per cent of unit; alternating with 0.5 to 3-foot intervals of shale, which contain rare thin beds of siltstone. | 58 | 2082 |
| | Shale for microfossils (X) from 41 feet up. | | |
| 114 | Sandstone, graded thick bedded. | 5 | 2024 |
| 113 | Shale, with sparse beds of siltstone from 1 inch to 2 inches thick; and two 1-foot beds of sandstone at about 30 feet up. | 46 | 2019 |
| | Shale for microfossils (W) from 17 feet up. | | |
| 112 | Sandstone, beds 0.5 foot to 3 feet thick, forming 40 per cent of unit; alternating with intervals of siltstone beds 1/4 inch to 4 inches thick; and shale beds up to 4 inches thick. | 98 | 1973 |

| Unit | Description | Thickness (feet) | |
|------|--|------------------|-----------|
| | | Unit | From Base |
| 111 | Sandstone, in part conglomeratic, slightly graded beds, 1 foot to 3 feet thick; sparse interbeds of shale 4 to 6 inches thick. Lithological specimen from 30 feet up. | 60 | 1875 |
| 110 | Covered. | 65 | 1815 |
| 109 | Sandstone. | 50 | 1750 |
| 108 | Siltstone, beds 1/2 inch to 4 inches thick, forming about 65 per cent of unit; with very thin interbeds of shale in upper two-thirds of unit. Shale for microfossils (U) from 1 foot up. | 36 | 1700 |
| 107 | Sandstone, beds from 0.3 to 1 foot thick, forming 30 per cent of unit; alternating shale and very thin beds of siltstone. | 23 | 1664 |
| 106 | Sandstone, beds from 1 foot to 2 feet thick, comprising 80 per cent of unit; interbedded with shale in beds from 2 inches to 1 foot thick. | 21 | 1641 |
| 105 | Sandstone, beds from 0.5 foot to 2 feet thick, comprising 30 per cent of unit; shale beds between 1/2 inch to 6 inches thick, comprising 40 per cent of unit; and siltstone beds between 1/4 inch and 4 inches thick, comprising 30 per cent of unit. Shale for microfossils (S) from 15 feet up. | 55 | 1620 |
| 104 | Sandstone, beds 0.5 foot to 5 feet thick, with sparse interbeds of siltstone, 2 to 6 inches thick; and several beds of shale 1 inch to 3 inches thick. | 97 | 1565 |

| Unit | Description | Thickness (feet) | |
|------|--|------------------|-----------|
| | | Unit | From Base |
| 103 | Sandstone, beds up to 3 feet thick; alternating with thinly interbedded shale and siltstone. | 10 | 1468 |
| | Shale for microfossils (R) from 42 feet up. | | |
| 102 | Shale with minor thin interbeds of siltstone and sandstone. | 7 | 1458 |
| 101 | Sandstone with minor partings of shale. | 7 | 1451 |
| 100 | Shale, comprising 70 per cent of unit; with thin interbeds of siltstone, beds between 1/2 inch and 2 inches thick; and sandstone beds 4 to 6 inches thick. | 12 | 1444 |
| 99 | Sandstone, beds 4 inches to 1 foot thick; with interbeds of shale 1 inch to 4 inches thick. | 5 | 1432 |
| 98 | Shale, beds between 5 inches and 1 foot thick, comprising 60 per cent of unit; with interbeds of siltstone between 1/4 inch and 3 inches thick; also occasional beds of sandstone. | 26 | 1427 |
| | Shale for microfossils (Q) from 24 feet up. | | |
| 97 | Sandstone, cross-laminated, beds between 0.5 foot and 2 feet thick, comprising 50 per cent of unit; alternating with interbedded shale and siltstone. | 35 | 1401 |
| 96 | Sandstone, graded beds up to 2 feet thick, some with chert pebble conglomerate at base, pebbles up to 1/4 inch in diameter. | 20 | 1366 |
| 95 | Covered. | 12 | 1346 |

| Unit | Description | Thickness (feet) | |
|------|---|------------------|-----------|
| | | Unit | From Base |
| 94 | Sandstone, with interbeds from 1 inch to 6 inches thick of shale; some sandstone beds with flow cast structures. Oriented lithological specimen showing flow cast structures from 8 feet up. Bedding 027T/51W. | 14 | 1334 |
| 93 | Sandstone, beds 0.5 foot to 2 feet thick, comprising 70 per cent of unit; alternating with shale beds 2 inches to 1 foot thick. | 22 | 1320 |
| 92 | Sandstone. | 8 | 1298 |
| 91 | Sandstone, beds from 0.5 to 1 foot thick, comprising 30 per cent of unit, alternating with shale beds between 2 inches and 2 feet thick. | 24 | 1290 |
| 90 | Sandstone. | 10 | 1266 |
| 89 | Siltstone and shale; and minor discontinuous lensing beds of sandstone. | 31 | 1256 |
| 88 | Covered. | 48 | 1225 |
| 87 | Sandstone. | 5 | 1177 |
| 86 | Shale with two 2-inch beds of siltstone. | 2 | 1172 |
| 85 | Covered. | 4 | 1170 |
| 84 | Sandstone. | 2 | 1166 |
| 83 | Shale, with interbeds of siltstone between $\frac{1}{4}$ and 1 inch thick. | 8 | 1164 |
| 82 | Sandstone. | 2 | 1156 |
| 81 | Covered. | 12 | 1154 |

| Unit | Description | Thickness (feet) | |
|------|--|------------------|-----------|
| | | Unit | From Base |
| 80 | Sandstone with partings and beds of shale up to 3 inches thick. | 31 | 1142 |
| 79 | Sandstone with minor interbeds of shale and siltstone. | 5 | 1111 |
| 78 | Shale with minor thin beds of cross-laminated siltstone. Shale for microfossils (L) from 1 foot up. | 5 | 1106 |
| 77 | Sandstone. | 4 | 1101 |
| 76 | Siltstone. | 5 | 1097 |
| 75 | Sandstone with a 6-inch bed of shale 5 feet up. | 11 | 1092 |
| 74 | Siltstone. | 8 | 1081 |
| 73 | Sandstone with shale partings. | 9 | 1073 |
| 72 | Siltstone. | 2 | 1064 |
| 71 | Sandstone. | 1 | 1062 |
| 70 | Siltstone with several thin lenses of sandstone. | 28 | 1061 |
| 69 | Siltstone. | 3 | 1033 |
| 68 | Sandstone, cross-laminated and lensing, with minor partings of shale. | 5 | 1030 |
| 67 | Siltstone. | 3 | 1025 |
| 66 | Sandstone. | 1 | 1022 |
| 65 | Siltstone. | 8 | 1021 |

| Unit | Description | Thickness (feet) | |
|------|---|------------------|-----------|
| | | Unit | From Base |
| | Sample for microfossils (J) from 1 foot up. | | |
| 64 | Sandstone. | 4 | 1013 |
| | Lithological specimen from 3 feet up. | | |
| 63 | Siltstone with minor beds of sandstone 4 to 6 inches thick. | 49 | 1009 |
| | Sample for microfossils (H) from 8 feet up. | | |
| | Sample for microfossils (I) from 20 feet up. | | |
| 62 | Sandstone, with flow cast structures. | 10 | 960 |
| 61 | Siltstone, beds up to 3 inches thick, comprising 60 per cent of unit; interbedded with shale, beds from 1 inch to 6 inches thick. | 11 | 950 |
| 60 | Sandstone. | 9 | 939 |
| 59 | Siltstone interbedded with shale. | 36 | 930 |
| | Shale for microfossils (E) from 11 feet up. | | |
| | Shale for microfossils (F) from 31 feet up. | | |
| 58 | Sandstone, beds from 4 to 6 inches thick, alternating with thin beds of shale and siltstone. | 6 | 894 |
| 57 | Shale. | 3 | 888 |
| 56 | Sandstone. | 2 | 885 |

| Unit | Description | Thickness (feet) | |
|-------|--|------------------|-----------|
| | | Unit | From Base |
| 55 | Siltstone, thinly interbedded with shale. Shale for microfossils (D) from 7 feet up. | 8 | 883 |
| 54 | Sandstone. | 2 | 875 |
| 53 | Siltstone, beds from 1 inch to 3 inches thick, comprising 60 per cent of unit; interbedded with shale, beds 1 inch to 6 inches thick. | 34 | 873 |
| 52 | Sandstone. | 4 | 839 |
| 51 | Shale, beds 1 inch to 2 inches thick, and minor thin beds of siltstone. | 5 | 835 |
| 50 | Sandstone. | 19 | 830 |
| 49 | Shale with 4-inch beds of siltstone. Shale for microfossils (A) from base of unit. | 6 | 811 |
| 48 | Sandstone. | 2 | 805 |
| 47 | Shale. | 5 | 803 |
| 15-46 | Sandstone, conglomeratic, slightly calcareous, quartzose, cherty, feldspathic (?), dark grey, coarse-grained, interbedded with shale, in part carbonaceous, dark grey, beds 5 to 8 inches thick; interbedded with siltstone, slightly calcareous, dark grey with black to very dark grey laminae, beds from 0.5 to 1 foot thick, weathers dark grey with rusty orange patches; breaks into 1/4 to 1/2 inch plates; many beds weather rusty | | |

| Unit | Description | Thickness (feet) | |
|------|--|------------------|-----------|
| | | Unit | From Base |
| | orange-brown completely. The above description applies to beds between 531 to 798 feet above base. | 267 | 798 |
| 46 | Sandstone with minor partings of siltstone. | 13 | 798 |
| 45 | Covered. | 19 | 785 |
| 44 | Sandstone. | 8 | 766 |
| 43 | Siltstone. | 2 | 758 |
| 42 | Covered. | 16 | 756 |
| 41 | Sandstone. | 3 | 740 |
| 40 | Covered. | 3 | 737 |
| 39 | Sandstone. | 14 | 734 |
| 38 | Shale and siltstone, small outcrops, and 5 feet of sandstone 24 feet above base of unit. | 49 | 720 |
| | Shale for microfossils (D) from 21 feet above base. | | |
| 37 | Sandstone. | 9 | 671 |
| 36 | Covered. | 5 | 662 |
| 35 | Sandstone, with partings of shale 3 feet up and 6-inch beds of siltstone 6 feet up. | 13 | 657 |
| | Shale for microfossils (C) from 3 feet up. | | |
| 34 | Siltstone. | 1 | 644 |
| 33 | Sandstone. | 3 | 643 |
| 32 | Covered. | 38 | 640 |

| Unit | Description | Thickness (feet) | |
|------|--|------------------|-----------|
| | | Unit | From Base |
| 31 | Sandstone. | 9 | 602 |
| 30 | Siltstone. | 5 | 593 |
| 29 | Sandstone. | 4 | 588 |
| 28 | Shale. | 1 | 584 |
| 27 | Sandstone. | 5 | 583 |
| 26 | Siltstone. | 1 | 578 |
| 25 | Sandstone. | 9 | 577 |
| 24 | Sandstone, interbedded with siltstone, beds 1 foot to 2 feet thick. | 7 | 568 |
| 23 | Shale. | 1 | 561 |
| | Shale for microfossils (B) from top of unit. | | |
| 22 | Sandstone. | 3 | 560 |
| 21 | Sandstone, pinches out along strike. | 3 | 557 |
| 20 | Sandstone. | 3 | 554 |
| 19 | Siltstone, with interbeds of shale up to 6 inches thick, and lenses of sandstone up to 2 feet thick in upper 3 feet. | 7 | 551 |
| 18 | Sandstone. | 2 | 544 |
| 17 | Shale. | 1 | 542 |
| 16 | Shale. | 1 | 540 |
| 15 | Sandstone. | 8 | 539 |
| 5-14 | Sandstone, interbedded with shale and silt- stone; sandstone is very slightly calcareous, | | |

| Unit | Description | Thickness (feet) | |
|------|--|------------------|-----------|
| | | Unit | From Base |
| | quartzose, cherty, feldspathic (?), considerable variation of grain size, a few beds are conglomeratic, beds up to 3 feet thick but mainly between 1 foot and 2 feet thick; numerous nodules up to 4 inches in diameter of dark grey siltstone in some beds. Shale is dark grey, beds commonly between 5 and 8 inches thick and separated by beds of fine-grained, cross-laminated, medium brown weathering sandstone and siltstone beds 1 inch to 2 inches thick; shale weathers dark grey. | 107 | 531 |
| | The above description applies to beds between 428 and 531 feet (103 feet thick) above base of section. | | |
| 14 | Covered. | 45 | 531 |
| 13 | Sandstone. | 2 | 486 |
| 12 | Shale. | 2 | 484 |
| 11 | Sandstone. | 3 | 482 |
| 10 | Shale. | 5 | 479 |
| 9 | Sandstone. | 3 | 474 |
| 8 | Shale. | 6 | 471 |
| | Shale for microfossils (B) from 5 feet up. | | |
| 7 | Sandstone. | 35 | 465 |
| 6 | Shale. | 1 | 430 |
| 5 | Sandstone. | 1 | 429 |

| Unit | Description | Thickness (feet) | |
|------|--|------------------|-----------|
| | | Unit | From Base |
| 4 | Covered; loose fragments along hillside similar in lithology to unit below. | 161 | 428 |
| 3 | Sandstone, quartzose, cherty, feldspathic (?), dark grey, coarse-grained, conglomeratic, even bed, resistant, weathers medium to dark grey on hillside and rusty orange-brown in creek gully. Quartz grains approximately 50 per cent, black chert approximately 30 per cent; white feldspar approximately 20 per cent; grains very poorly sorted, numerous grains of quartz and chert up to 1/8 inch in diameter, grains mainly angular. Lithological specimen. | 2 | 267 |
| 2 | Covered; scattered blocks of sandstone rubble, generally similar to unit 1 below but has some coarse angular grains up to 1/8 inch in diameter, some blocks of sandstone are conglomeratic. | 246 | 265 |
| 1 | Sandstone alternating with shale; sandstone is quartzose, cherty, feldspathic (?), dark grey, fine grained, angular fragments, beds 0.3 to 1 foot thick, resistant, sorting poor, weathers medium brownish grey, with rusty orange-brown staining in places; shale is dark grey to black, beds 2 inches to 1 foot thick, recessive, breaks into irregular fragments and small plates, weathers dark grey. Shale for microfossils (A) from 5 feet up. Shale for microfossils (B) from 10 feet up. Fossils (C) from 6 feet up. Fossils (D) from 9 feet up. | 19 | |

Section 34: EIGHT MILES NORTH OF RAT RIVER (116P-3)

Section is located in the northern part of the Richardson Mountains about 8 miles north of Rat River and was measured from near the axis of an anticlinal fold at about 67°28'N, 136°25.8'W, southeastward across the limb of the fold to about 67°27'N, 136°24'W. Clastics of the Imperial Formation are exposed in the core of the uplift and clastics of Permian? and Jurassic ages are exposed in the flanks of the fold. Only the Devonian part of the succession is described here in detail.

Section measured by A. W. Norris, assisted by D. L. Jordan, July 14-15, 1962.

JURASSIC

Disconformity

PERMIAN?

Angular unconformity

UPPER DEVONIAN

Imperial Formation

2345'; incomplete

| Unit | Description | Thickness (feet) | |
|----------|--|------------------|-----------|
| | | Unit | From Base |
| PERMIAN? | | | |
| 4 | Conglomerate, matrix of chert, light olive-green, coarse-grained, with rounded and angular pebbles of medium grey and dark grey chert, olive-green sandstone, unit massive, weathers medium grey but coated with black and orange lichen giving it a dark grey colour as seen from a distance. | 16 | 204 |
| | Lithological specimen (GSC loc. 54424) from base of unit. | | |
| 3 | Conglomerate, matrix quartzose, pale orange-grey, fine to coarse grained, containing slightly rounded to angular pebbles of pale green sandstone, and | | |

| Unit | Description | Thickness (feet) | |
|--|---|------------------|-----------|
| | | Unit | From Base |
| | occasional pebbles of black, dark grey, and light grey chert, thickly bedded, unit weathers light grey with splashes of orange staining. | 85 | 188 |
| | Lithological specimen (GSC loc. 54423). | | |
| 2 | Covered; talus blocks of conglomerate, matrix quartzose, orange, fine to coarse grained; contains pebbles of green sandstone, black chert, greenish grey chert, pebbles up to 1 inch in diameter; rubbly thin to medium bedded. | 48 | 103 |
| 1 | Covered; fragments of conglomerate, matrix quartzose, orange-brown, fine grained; contains pebbles of grey chert, green sandstone, pebbles up to 1 inch in diameter, weathers light and rusty orange. | 55 | |
| | Lithological specimen (GSC loc. 54982). | | |
| | An angular unconformity separates the top of the Imperial Formation from the overlying beds of Permian? age. | | |
| UPPER DEVONIAN | | | |
| <u>Imperial Formation</u> (2245 feet; incomplete) | | | |
| 84 | Covered; talus fragments of shale, silty, slightly sericitic, dark grey, hard, fissile, recessive, weathers dark grey; unit forms a deep trench along ridge leading to peak of mountain. | 9.5 | 2245 |
| | Shale for microfossils (Field No. 193NBa) 3 feet from base. | | |

| Unit | Description | Thickness (feet) | |
|------|--|------------------|-----------|
| | | Unit | From Base |
| 83 | Sandstone, dark greenish grey, fine grained, contains granules up to 4 mm in diameter of black chert, milky white quartz, and some white feldspar?, rubbly thin bedded, weathers light grey; only upper 10 feet well exposed. | 31 | 2235.5 |
| | Station 193NB at base of unit 83 on crest of ridge. Bedding 025T/27SE. | | |
| 82 | Sandstone, conglomeratic, matrix dark greenish grey, contains granules and pebbles up to 1/3 inch in diameter of black chert, milky white quartz, dark grey silty shale, which are angular to very slightly rounded and of low sphericity, unit massive, cross-laminated on a large scale, highly resistant, weathers medium grey. | 15 | 2204.5 |
| 81 | Covered; talus fragments of sandstone, dark greenish grey, medium grained, presumably thin to medium bedded, weathers medium grey. | 10 | 2189.5 |
| 80 | Covered; fragments of shale, silty, dark grey, recessive, terrace-forming, weathers medium brownish grey. | 4 | 2179.5 |
| | Shale for microfossils (Field No. 192NBd). | | |
| 79 | Covered; fine fragments of sandstone, fine grained, contains sparse granules of black chert and light grey quartz, presumably rubbly thin bedded, weathers medium grey. | 22 | 2175.5 |
| 78 | Covered; fragments of sandstone, quartzose, dark greenish grey, weathers medium grey; also fragments of shale, silty, weathering dark brownish grey. | 35 | 2153.5 |

| Unit | Description | Thickness (feet) | |
|------|---|------------------|-----------|
| | | Unit | From Base |
| 77 | Shale, silty and sandy, with thin interbeds of sandstone, medium grey, fissile, thin bedded, recessive, weathers dark grey. | 15 | 2118.5 |
| 76 | Covered; fragments of sandstone, fine grained, weathers light grey. | 11.5 | 2103.5 |
| 75 | Sandstone, quartzose, conglomeratic, matrix dark greenish grey, fine grained, with small pebbles of dark grey chert, massive, resistant, weathers medium grey. | 4 | 2092 |
| 74 | Covered; fragments of sandstone, quartzose, salt and pepper grey, fine grained, occasional granule of black chert up to 3 mm in diameter, weathers light grey with patches of bright orange staining. | 25 | 2088 |
| 73 | Shale, silty, dark grey, fairly hard, weathers dark brownish grey. Shale for microfossils (Field No. 192NBc). | 9 | 2063 |
| 72 | Sandstone, quartzose, very dark grey, even bed, resistant, weathers bright orange. | 1.5 | 2054 |
| 71 | Covered; fragments of shale, silty, dark grey; mixed with fragments of sandstone, fine grained, thin bedded, weathers dark brownish grey. | 11 | 2052.5 |
| 70 | Sandstone, quartzose, dark grey, fine grained, very hard, well indurated, massive, weathers light grey and medium orange-brown. Lithological specimen (GSC loc. 54419). | 5.5 | 2041.5 |

| Unit | Description | Thickness (feet) | |
|------|--|------------------|-----------|
| | | Unit | From Base |
| 69 | Shale, silty, dark greenish grey, recessive and terrace-forming, weathers dark grey and medium brown. | 7.5 | 2036 |
| | Shale for microfossils from base of unit (Field No. 192NBb). | | |
| 68 | Sandstone, quartzose, dark salt and pepper grey, fine grained, weathers medium grey and orange. | 2.5 | 2028.5 |
| | Bedding 057T/30SE. | | |
| 67 | Shale, silty, dark grey, recessive, weathers dark grey and medium brown. | 5 | 2026 |
| 66 | Sandstone, quartzose, ferruginous, cement, thin to medium bedded, fairly resistant, weathers medium grey. | 13 | 2021 |
| 65 | Covered; fragments of shale, dark grey; weathering medium tan-brown; with thin beds of fine-grained rusty brown weathering sandstone. | 20 | 2008 |
| | Shale for microfossils (Field No. 192NBa) from 10 feet up. | | |
| 64 | Sandstone, conglomeratic, matrix brown, fine grained, with fragments of black chert up to 3 mm in diameter; unit highly fractured, frost heaved, weathers medium orange-brown. | 34 | 1988 |
| 63 | Covered; fragments of sandstone, ferruginous, salt and pepper grey, fine grained, thin to medium bedded, in places rubbly bedded and fissile, weathers light tan-brown. | 80 | 1954 |

| Unit | Description | Thickness (feet) | |
|------|---|------------------|-----------|
| | | Unit | From Base |
| 62 | Sandstone, dark greenish grey, fine grained, medium bedded, hard, weathers medium grey; poorly exposed. Station 192NB at top of unit 62. Bedding 070T/26S. | 14 | 1874 |
| 61 | Sandstone, quartzose, ferruginous cement, dark salt and pepper grey, in part ochrous orange, thick bedded, weathers medium rusty brown and rusty grey, highly resistant. Lithological specimen (GSC loc. 54418) from base of unit. Bedding 082T/14S. | 6.5 | 1860 |
| 60 | Sandstone, quartzose, ferruginous, dark brownish grey, medium to thick bedded, weathers rusty brown; with thin interbeds of shale, silty, fissile, weathers medium grey and medium tan-brown; scattered outcrop up steep slope of ridge. | 26 | 1853.5 |
| 59 | Covered by vegetation. | 3 | 1827.5 |
| 58 | Covered; fragments of sandstone, highly ferruginous, rusty orange and dark grey, rubbly thin to medium bedded, weathers medium grey and rusty orange. | 45 | 1824.5 |
| 57 | Shale, silty, sericitic, dark grey, hard, weathers dark grey and light tan-brown. | 15 | 1779.5 |
| 56 | Covered; fragments of shale, silty, weathers light tan-brown. | 4.5 | 1764.5 |
| 55 | Shale, with silty laminae, dark grey, recessive, weathers dark grey. Shale for microfossils (Field No. 191NBc) from 9 feet up. | 14 | 1760 |

| Unit | Description | Thickness (feet) | |
|------|--|------------------|-----------|
| | | Unit | From Base |
| 54 | Covered; fragments of sandstone, ferruginous, very dark grey, medium grained, thin to medium bedded, weathers rusty brown. | 11 | 1746 |
| 53 | Covered; fragments of sandstone, some layers conglomeratic, dark orange-brown, weathers light grey and rusty brown; fragments of dark grey weathering shale in upper 2 feet of unit. | 71 | 1735 |
| | Shale for microfossils (Field No. 191NBb). | | |
| | Fragments present as a series of ridges on south side of sharp ridge. | | |
| 52 | Shale, dark grey, breaks into small irregular fragments, recessive, weathers light to medium grey; poorly exposed. | 9 | 1664 |
| | Shale for microfossils (Field No. 191NBa). | | |
| 51 | Sandstone, highly ferruginous, dark greenish grey, fine grained, rubbly thin bedded, weathers rusty brown. | 25 | 1655 |
| 50 | Covered; fragments of sandstone, strongly ferruginous, fine grained, medium yellowish green and speckles of light orange, rubbly thin bedded, weathers rusty brown; most fragments are frost-heaved and close to being in place. | 15.5 | 1630 |
| 49 | Sandstone, highly ferruginous, contains granules of black chert, white quartz, and white feldspar? up to 4 mm in diameter, very coarse grained, rubbly thin bedded, weathers light grey and rusty brown. | 3.5 | 1614.5 |

| Unit | Description | Thickness (feet) | |
|------|---|------------------|-----------|
| | | Unit | From Base |
| | Lithological specimen (GSC loc. 54417). Bedding 055T/31SE. | | |
| 48 | Covered; fragments of sandstone, highly ferruginous, rusty brown, fine grained, thin bedded, weathers light grey and rusty brown. | 15 | 1611 |
| 47 | Sandstone, ferruginous, salt and pepper brown, rubbly thin bedded. Bedding 055T/18SE. | 1.5 | 1596 |
| 46 | Covered; fragments of sandstone, ferruginous, dark grey, fine grained, very hard, weathers rusty brown. Station 191NB at base of unit 46. Bedding 045T/12SE, estimated along ridge. | 19.5 | 1594.5 |
| 45 | Covered; fragments of sandstone, salt and pepper medium brownish grey, medium bedded, weathers rusty brown. Station 190NB at top of unit 45 at peak of ridge. | 26 | 1575 |
| 44 | Covered; fragments of sandstone, dark grey, fine grained, weathers rusty brown. | 12 | 1549 |
| 43 | Sandstone, quartzose, dark bluish grey, fine grained, contains larger fragments up to granule size of black chert, and translucent quartz, evenly thick bedded, very resistant, weathers rusty brown. | 4 | 1537 |
| 42 | Shale, dark grey, recessive. | 11 | 1533 |
| 41 | Sandstone, dark grey, well indurated, hard, with sparse scattered nodules | | |

| Unit | Description | Thickness (feet) | |
|------|---|------------------|-----------|
| | | Unit | From Base |
| | of marcasite, thick bedded to massive, weathers rusty brown, highly resistant in bottom and upper thirds, recessive in middle third. | 13 | 1522 |
| 40 | Covered; angular fragments of sandstone, conglomeratic, dark grey, fine to coarse grained, weathers light grey to medium rusty brown; also fragments of dark grey shale, and silty and sandy laminated shale. | 140 | 1509 |
| | Flow cast markings loose (GSC loc. 54431) 85 feet up; poorly preserved plant fragments (GSC loc. 54415) collected loose 140 feet up. | | |
| 39 | Sandstone, conglomeratic, matrix dark grey, fine to coarse grained, with larger fragments up to 1/4 inch in diameter, of low sphericity and roundness, unit massive, highly resistant, weathers very light grey; only bottom 5 feet well exposed. | 10 | 1369 |
| 38 | Covered; fragments of shale, in part silty and sandy, dark grey, weathers dark grey. | 19 | 1359 |
| 37 | Sandstone, quartzose, salt and pepper grey, fine to medium grained, massive, resistant, weathers rusty orange-brown. | 4.5 | 1340 |
| 36 | Covered; fragments of dark grey shale. | 9 | 1335.5 |
| 35 | Sandstone, conglomeratic, matrix dark greenish grey; conglomeratic layers with poorly rounded fragments of black chert and creamy white quartz up to 1/4 inch in diameter; sandstone beds up to | | |

| Unit | Description | Thickness (feet) | |
|------|--|------------------|-----------|
| | | Unit | From Base |
| | 3 feet, unit fairly resistant, weathers medium rusty brown. | 22 | 1326.5 |
| 34 | Shale, in part silty and sandy, sericitic, dark grey, recessive, weathers dark grey. | 11 | 1304.5 |
| 33 | Sandstone, with thin conglomeratic layers of poorly rounded fragments up to 4 mm in diameter, medium salt and pepper grey, thick bedded to massive, very strongly resistant, weathers rusty brown. | 31 | 1293.5 |
| 32 | Shale, dark grey, fissile, interbedded with mudstone, silty and sandy, dark greenish grey; unit recessive. | 6 | 1262.5 |
| | Shale for microfossils (Field No. 189NBb). | | |
| 31 | Sandstone, conglomeratic, dark salt and pepper grey, matrix fine grained, contains poorly rounded fragments of black chert, milky white quartz, and feldspar (?), fragments up to about 6 mm in diameter, unit resistant, weathers medium greenish grey. | 21 | 1256.5 |
| | Poorly preserved plant fragments (GSC loc. 54416) collected loose in sandy shale fragments 15 feet up. | | |
| | Station 189NB at base of unit 31 about two-thirds up north-facing slope of mountain near axis of anticlinal fold. | | |
| 30 | Sandstone and shale interbedded, sandstone about 60 per cent, shale about 40 per cent; sandstone is dark yellowish green, fine grained, evenly thin | | |

| Unit | Description | Thickness (feet) | |
|------|---|------------------|-----------|
| | | Unit | From Base |
| | to medium bedded, beds up to 2 feet thick, some beds conglomeratic, weathers medium rusty brownish grey; shale beds in part silty, dark grey, fissile, weather dark grey. | 109 | 1235.5 |
| | Plant stem impressions (GSC loc. 54414) in silty shale fragments from 55 feet up. | | |
| 29 | Sandstone, medium yellowish green, fine grained, hard, even bed, resistant, weathers rusty brown. | 3.5 | 1126.5 |
| 28 | Shale, dark grey, fissile, recessive, weathers dark grey. | 10.5 | 1123 |
| 27 | Sandstone, sericitic, dark greenish grey, very fine grained, beds up to 2 feet thick; separated by thin beds of shale, dark grey to black, fissile; unit resistant. | 8 | 1112.5 |
| | Bedding 040T/31SE. | | |
| 26 | Covered; fragments of shale, dark grey, fissile, weathers dark grey; with widely spaced thin beds of sandstone and conglomeratic sandstone. | 74 | 1104.5 |
| | Plant fragments collected loose at 54 and 74 feet up (GSC loc. 54413). | | |
| 25 | Sandstone, dark bluish grey, very hard, beds up to 2 feet thick; separated by thin beds of shale and silty shale, dark grey to black and greenish grey; poorly exposed. | 23 | 1030.5 |
| 24 | Shale, silty, black; with thin interbeds of sandstone; very poorly exposed. | 11.5 | 1007.5 |

| Unit | Description | Thickness (feet) | |
|------|---|------------------|-----------|
| | | Unit | From Base |
| 23 | Sandstone, quartzose, fine to coarse grained, with scattered fragments up to granule size, weathers rusty brown; thin interbeds of shale, silty, black; poorly preserved woody tissue seen in one bed. | 15 | 996 |
| 22 | Shale, silty laminae, sericitic, dark greenish grey, hard; with interbeds of sandstone, up to 1 foot thick, very dark grey, very fine grained, weathering rusty brown. Carbonized plant fragments (GSC loc. 54412) collected loose. Shale for microfossils (Field No. 188NBf). | 6.5 | 981 |
| 21 | Sandstone, conglomeratic, ferruginous, fine to coarse grained, contains lenses with small pebbles of black chert, some beds cross-laminated; with thin interbeds of shale, silty, black, beds up to 0.5 foot thick; unit resistant. Woody tissue in coarse sandstone fragment (GSC loc. 54410) at 35 feet up. Woody tissue collected from between 84 and 94 feet up (GSC loc. 54411). | 94 | 974.5 |
| 20 | Shale, black; very poorly exposed. | 7.5 | 880.5 |
| 19 | Sandstone, quartzose, cherty ferruginous, conglomeratic, medium yellowish green, massive, resistant, weathers medium brownish grey. Bedding 055T/39SE. | 5 | 873 |

| Unit | Description | Thickness (feet) | |
|------|--|------------------|-----------|
| | | Unit | From Base |
| 18 | Shale, silty, black, recessive; poorly exposed. | 4.5 | 868 |
| 17 | Sandstone, dark grey and dark greenish grey, thin to thick bedded, weathers rusty brown; with thin interbeds of shale, silty and sandy, black. | 8 | 863.5 |
| 16 | Sandstone, conglomeratic, matrix dark greenish grey, fine grained, medium to thick bedded, contains slightly rounded fragments up to 4 mm in diameter of dark greenish grey shale and black chert; interbedded with shale, silty, black, hard, beds up to 1.5 feet thick, weathers dark grey; unit slightly recessive. | 10.5 | 855.5 |
| | Shale for microfossils (Field No. 188NBb) from top of unit. | | |
| 15 | Sandstone, ferruginous, fine speckles of ochrous orange material, dark salt and pepper grey, thick bedded to massive, weathers rusty brown. | 7.5 | 845 |
| 14 | Sandstone, quartzose, dark salt and pepper grey and yellowish and greenish grey, fine grained, thick bedded, weathers dark brownish grey; conglomeratic sandstone beds present 20 feet up; thin interbeds of shale, silty, hard, beds varying in thickness from 0.3 foot to 2 feet. | 128 | 837.5 |
| | Shale for microfossils (Field No. 188NBa) from 11 feet up. | | |
| | Specimen of sandstone (GSC loc. 54409). | | |

| Unit | Description | Thickness (feet) | |
|------|---|------------------|-----------|
| | | Unit | From Base |
| 13 | Covered; fragments of shale, dark grey, breaks into small irregular fragments. | 9.5 | 709.5 |
| 12 | Covered; fragments of sandstone, dark salt and pepper grey, fine grained, weathers rusty brown. | 4.2 | 700 |
| 11 | Shale, dark grey; thinly interbedded with siltstone, dark greenish grey, beds up to 1 inch thick, cross-laminated, weathers dark greenish grey. Shale for microfossils (Field No. 187NBd). | 6.8 | 695.8 |
| 10 | Shale, non-calcareous, dark grey, hackly fracturing, weathers dark grey. Bedding 040T/18SE. | 3 | 689 |
| 9 | Covered; fragments of shale, silty, dark grey; mixed with fragments of sandstone. Shale for microfossils from 50 feet up (Field No. 187NBc). | 77.5 | 686 |
| 8 | Shale, sandy, silty, black, fissile, hard, weathers very dark grey; poorly exposed. Shale for microfossils (Field No. 187NBb). | 1.5 | 608.5 |
| 7 | Sandstone, dark salt and pepper grey, even bed, weathers dark brownish grey. | 1.5 | 607 |
| 6 | Covered; fragments of sandstone, dark grey, hard, irregularly medium bedded, weathers medium grey; also some fragments of shale, sandy and silty, fissile, weathers dark grey. | 22.5 | 605.5 |

| Unit | Description | Thickness (feet) | |
|------|--|------------------|-----------|
| | | Unit | From Base |
| 5 | Sandstone, quartzose, slightly ferruginous, conglomeratic, sparse poorly rounded fragments of black chert and milky white quartz, very dark grey, medium to coarse grained, massive, weathers rusty brown; unit highly shattered by frost action. | 23 | 583 |
| | Oriented lithological specimen (GSC loc. 54408) from top of unit. | | |
| 4 | Shale, sandy and silty, black, irregularly thin bedded, recessive, weathers very dark grey to black. | 1.5 | 560 |
| | Shale for microfossils (Field No. 187NBa). | | |
| 3 | Sandstone, quartzose, dark salt and pepper grey, fine grained, with occasional angular granules of quartz between 2 and 3 mm in diameter, massive, weathers rusty brown; lenses up to 8 inches thick of conglomeratic sandstone in basal 3 feet. | 5 | 558.5 |
| | Lithological specimen (GSC loc. 54407). | | |
| | Station 187NB at base of unit 3 in lower part of north-facing mountain slope near axis of anticlinal fold. | | |
| 2 | Covered; fragments of sandstone, dark greenish grey, fine grained, well indurated, contains angular granules of light grey chert up to 2 mm in diameter, irregular medium to thick bedded, weathers rusty brown; at 70 feet up a few blocks of conglomeratic sandstone with poorly rounded and | | |

| Unit | Description | Thickness (feet) | |
|------|---|------------------|-----------|
| | | Unit | From Base |
| | low sphericity pebbles of black chert, and creamy grey quartz up to 1/4 inch in diameter. | 178.5 | 553.5 |
| 1 | <p>Covered; from 0 to 19 feet up fragments of sandstone, dark grey, fine to medium grained, thin to medium bedded, weathers medium rusty brown; some fragments show shale partings; also fragments of shale, silty, dark grey, fairly hard, weathers dark grey.</p> <p>Sandstone specimen (GSC loc. 54405).</p> <p>At 20 feet up fragments of sandstone, conglomeratic, medium greenish grey, matrix fine to medium grained, slightly rounded pebbles up to 1/4 inch in diameter of quartz and black chert, thick bedded.</p> <p>Lithological specimen (GSC loc. 54406).</p> <p>At 115 feet up fragments of sandstone, silty, dark greenish grey, irregularly thin bedded, weathers dark greenish grey; mixed with fragments of sandstone, dark grey, coarse grained.</p> <p>At 230 feet up fragments containing rounded ferruginous black shale pebbles in sandstone, dark yellowish green, fine grained, hard, weathers rusty brown.</p> <p>Station 186NB at base of unit 1 at creek level near axis of anticlinal fold at about 67°28'N, 136°25.8'W.</p> | 375 | |