

841707

43-RL-B-3-53 (1-57) crushed¹⁷

AA 0344

NAME OF SECTION: Redfern Lake.

NUMBER OF SECTION: 43-RL-A-53; RL-B.

43-RL-A-53 (1-105) AA 0432

(106-244) AA 0433

LOCALITY: Approximately 57°22'N. and 123°53'W.

On the north side of Redfern Lake near western end of lake. The section is exposed continuously along the face of a mountain directly north of the lake and measuring was done in gulleys that drain to the lake. The sections are easily accessible from any part of the north shore. Measuring was done with five foot Jacob's staff and samples taken each five feet, or lithologic unit, which ever occurred first. The Section was measured and described from the base upwards.

DATE: August 10, 1953

(245-365) AA 0434

GEOLOGIST: G.V. Lloyd.

ASSISTANTS: P.G. Satterlin
D.J. Wigham

CUMULATIVE THICKNESSES:

(366-491) AA 0435

Cambrian: 1600+'
Ordovician: 502'
Silurian: 1073'
Devonian: 1531'

THICKNESS
Cum. Unit

ORD. beds(?) DESCRIPTION

Sample
No.

0 - 5' Dolostone, slightly silty, probably argillaceous(?), very dark grey, grey to light grey weathering, very fine grained, massive, hard, thick and well-bedded (2' to 5'), finely irregularly laminated on weathered surface, tight, no fossils. Rare, small (less than 1 inch in diameter) silicified, cream-coloured blobs (after fossils?).

1

Abrupt contact to:

5 - 16' Dolostone: slightly silty, light grey, light to very light grey weathering, very fine grained, hard, tough, massive, thick (2' to 4') poorly bedded, with fine irregular laminae on weathered surface, tight, no fossils. Abrupt contact to:

2 - 3

16 - 16.5 Dolostone, silty, very argillaceous, very dark grey, very dark grey weathering, very fine grained, soft, massive, regular thin bedded (6 inches), tight, no fossils. Gradational contact to:

16.5 - 26 Dolostone, very slightly silty (argillaceous?) dark grey, grey to dark grey weathering, very fine grained, hard, massive, medium (2 inches to 1 foot) bedded, poorly bedded, tight, no fossils. Gradational contact to:

4 - 5

26 - 32' Dolomite, as last below, slightly silty, light grey. BASE SILURIAN (?) Lower Member ?

Concealed, abrupt.

Qtz. ss. unit

6 - 7

32 - 33' Sandstone, quartzitic light brown to white, light brown weathering, medium grained, clear sub-angular quartz grains, rare light mica, very clear, well cemented, hard, tough, conchoidal fracture, massive, medium bedded, tight, no fossils.

8

Abrupt contact to:

33 - 53' Sandstone, dolomitic, medium grey, medium grey weathering, fine to medium grained, frosted and clear sub-angular quartz grains poorly cemented, scattered medium grained dolomite grains, fairly clean, very difficult friable, massive, medium to thick bedded, shows fine, thin irregular laminae, tight, no fossils. 9,10
11,12

53 - 57' Covered: by rubble, probably as next above.

57 - 61' Dolostone, very slightly silty, argillaceous?, medium grey, reddish brown-grey weathering, very fine grained, fairly soft, medium bedded (1 inch to 8 inches), tight, no fossils. 13

Abrupt contact to:

61 - 81' Sandstone, dolomitic, grey to light grey, light grey weathering, fine to medium, frosted and clear rounded to sub-rounded quartz grains, scattered dolomitic grains, poorly sorted fairly clean, well cemented, hard, tough, no fossils.

At 14 feet from the base of the unit, becomes very fine grained and medium grained. 14 - 17

81 - 93' Covered: by rubble.

93 - 103' Dolostone: silty, argillaceous?, dark grey, grey to dark grey weathering, fine grained, hard, massive, medium to thick bedded (3 inches to 2 feet), tight, no fossils. 18 - 19

Abrupt contact through 4 inches of dolostone; very silty, argillaceous, very dark grey to black, dark grey weathering, fine grained, fairly soft, thin, irregularly bedded, tight, no fossils; to:

103 - 122' Dolostone; very silty to sandy, grades from light grey at basal foot to very dark grey, grey weathering, fine grained, hard, fine irregular stringers of fine grained quartz, thick (18 inches to 3 feet) bedded, with rare, fine laminae on the weathered surface, tight, no fossils. 20,21
22,23

Gradational contact through 3 feet to:

122 - 137' Dolostone, very sandy, light grey, light grey weathering, (to light brown), very fine grained, very fine, clear and frosted sub-angular (?) to well cemented, quartz grains, hard, thick to medium (5 inches to 1½ feet) bedded, tough, brittle, tight, no fossils.

This unit gradually becomes more sandy and lighter grey in colour until at 15 feet it becomes: 24,25
26,27

137 - 142' Sandstone, quartzitic: very light grey, grey to dark grey weathering, very fine grained, clear and frosted quartz grains, hard, tough, brittle, commonly finely laminated, medium to thick well bedded, (14 inches to 3 feet), tight, no fossils. Gradual contact to: 28

142 - 183' Dolostone: sandy, medium grey, light grey weathering, fine grained, hard, tough, quartz content is variable from quartzitic to sandy, medium to thick bedded (4 inches to 2 feet), tight, no fossils. Gradational contact through 3 feet to: 29, 36

183 - 195' Dolostone: clastic? (fragmental), silty, medium grey,

light grey weathering, medium to coarse grained, hard, tough, abundant indistinct fragments; rare fine crystalline pyrite, thick (1 foot to 2 feet) well bedded, with fine cross-bedding on weathered surfaces, tight, no fossils. The upper two feet becomes fine grained.

37 - 38

Abrupt contact to:

195 - 202' Sandstone, slightly dolomitic, light brown and light grey weathering, fine to medium grained, sub-rounded to sub-angular quartz grains, clear and frosted, kaolinitic, poorly cemented, poorly sorted, fairly hard, chitinous (?), flecks, medium (4 to 6 inches) bedded, tight; no fossils.

39 - 40

Abrupt contact to:

202 - 209' Dolostone, argillaceous, silts and sany (?) very dark grey, dark brown weathering, fine to medium grained, fairly soft, thin shaly bedded at bottom of unit to well medium bedded at top, tight, common well-developed worm tubes. Abrupt to:

41

209 - 210.5' Shale, very slightly silty, very dark grey, dark brown weathering, soft, recessive weathering, no fossils. Abrupt contact to:

210.5 - 212.5' Sandstone, quartzitic, very light grey, light brown weathering, fine to medium grained, frosted, sub-angular and rounded quartz grains, poorly sorted, hard, well cemented, thick well bedded, well developed cross-bedding (west-dipping), tight, no fossils.

42

Abrupt contact to:

212.5 - 214' Shale, as last below. Abrupt contact to:

43

214 - 218.5" Sandstone, quartzitic: as last below but with common worm tubes. Abrupt contact to:

44

218.5 - 220' Shale; as last below. Abrupt contact to:

45

220 - 230' Sandstone, quartzitic: dolomitic; grey to very light grey, grey weathering, fine to medium grained, frosted sub-angular to sub-rounded quartz grains, poorly sorted, poorly cemented, fairly dirty, rare small pyrite crystals, occasional (very rare) angular chert fragments (1/2 inch), medium poorly bedded (less than 1 foot), finely laminated, tight, common worm burrows on the weathered surface.

46 - 47

Abrupt contact to:

230 - 238' Shale, very dark grey, grey weathering, fine, soft, recessive weathering, thin platy bedded, no fossils. Abrupt contact to:

238 - 246' Sandstone, quartzitic: as last below. Abrupt contact to:

48

246 - 251' Dolostone, grey, grey weathering, fine grained, fairly soft, probably clastic, thick (5 feet) regular-bedded, tight, no fossils.

49

Abrupt contact to:

251 - 261' Sandstone quartzitic very light grey, grey weathering,

6

clear and frosted sub-angular to sub-rounded quartz grains, poorly cemented, fairly clean, poorly sorted, massive, hard, thick-bedded (2 to 4 feet), tight, no fossils.

At 5 feet the unit grades to fine grained quartz sand with very poor fossil traces. It is dolomitic.

50 - 51

Abrupt contact to:

261 - 261.5' Shale, black, fairly hard and as last below. Abrupt contact to:

261.5 - 269.5' Sandstone, shaly and dolomitic, light brown ochre, light brown-grey weathering, fine grained to silty, fairly soft, dirty, poorly sorted, thin poorly bedded at base to thick bedded with fine laminae on the weathered surface at the top, tight, no fossils, scattered with crusty weathering concretions.

52 - 53

Gradational contact through 3 feet

269.5 - 303.5' Sandstone, quartzitic light grey, light grey, light brown weathering, fine to medium grained frosted sub-angular quartz grains, poorly sorted, fairly well cemented, fairly clean with occasional light brown crystalline mineral (secondary ?) hard, essentially massive, thick bedded, tight, no fossils.

54 - 59

At $4\frac{1}{2}$ feet the unit becomes medium well-bedded and the beds vary to occasional sandstone, poorly sorted, fine to coarse grained, with angular chert fragments and rounded pebbles; some with quartz grain filled worm burrows. In part covered at the top of the unit.

Abrupt contact to:

303.5 - 313.5' Sandstone, quartzitic: tight to dark grey, dark grey with rusty stained surface weathering, fine grained, clear, sub-angular to rounded quartz grains, poorly sorted, well cemented, very dirty, rare scattered pyrite, common distorted black thin matter, very irregularly bedded and "washed", tight, common worm tubes.

60 - 61

313.5 - 317' Covered; rubble in gully bottom.

317 - 320' Sandstone, quartzitic, dolomitic, very dark grey, rusty weathering, fine grained clear quartz grains, fairly well cemented, dirty, fairly soft, massive, thick poorly bedded, tight, very abundant worm tubes.

62

Abrupt contact to:
320 - 350' Sandstone, quartzitic: grey to white, rusty weathering, fine grained, clear rounded and sub-angular quartz grains, well cemented, poorly sorted, clean, hard, massive thick regular bedded, tight, no fossils.

63 - 68

Abrupt contact to:

350 - 420' Sandstone, quartzitic: pale yellowish-white, rusty light yellow weathering, fine to medium grained, clear and frosted sub-angular quartz grains, very clean, well sorted, well cemented, hard, tough, massive, medium to thick poorly bedded, (regularly), occasional finely to strongly cross-bedded, interbeds, tight, rare indistinct worm tubes.

69 - 82

Gradational contact through 2 feet to:

420 - 433' Sandstone, quartzitic: dolomitic, grey to light brown,

light brown weathering, fine grained, frosted sub-angular quartz, poorly cemented, poorly sorted, dirty, fairly soft, recessive weathering, poorly thin to medium (less than 4 inches) bedded, tight, fairly abundant scattered "detrital" zones with broken and whole brachiopod shells fairly well preserved. 83,84,84F

433 - 443' Sandstone, quartzitic: as last 70 feet below. 85-86

Abrupt contact to:

443 - 457' Sandstone, quartzitic: dolomitic, grey and light brown weathering, fine grained (silt) fairly hard, massive, thick (2 feet) poorly irregularly bedded, fine irregular laminae on weathered surface, tight, no fossils. 87-89

Abrupt contact to:

457 - 502' Sandstone, quartzitic, pale yellowish to white and as last 10 feet, quartzite below.
At 13 feet a 3 foot band with abundant vague molds of cup-corals (fairly well developed) about 3 inches in diameter and branching, poorly preserved and difficult, extricable.
Top 5 feet is coralliferous. 90,- 98, 98F

Abrupt contact to:

502 - 507' Sandstone, quartzitic: dolomitic, very dark grey, dark grey weathering, fine grained to silty, frosted sub-angular quartz, poorly sorted, clean, well cemented, hard, tough, medium (2 to 12 inches) well regularly bedded, tight, no fossils. Abrupt contact to: 99

507 - 522' Dolostone, slightly silty, very dark grey, dark grey weathering, finely crystalline, hard, tough, medium (1 to 9 inches) well regular bedded, tight, no fossils. 100 - 102

522 - 526' Covered:

526 - 631' Sandstone, quartzitic: very light brown, light orange-brown weathering, fine grained, sub-angular clear and frosted quartz grains, well sorted, well cemented, clean, hard, tough, massive, thick very poorly bedded, tight, no fossils. 103 - 123

631 - 640' Covered; recessive, by talus. Probably as next sandstone above.

640 - 646' Sandstone; light brown-grey, light brown-grey weathering, fine grained, sub-angular to sub-rounded frosted and clear quartz grains, well sorted, poorly cemented, only slightly dirty with kaolinitic material, fairly soft and easily friable, massive, medium (1 to 6 inches) poorly regularly bedded, good intergranular porosity and permeability, no fossils. 124

Abrupt contact - but say, gradational, over 6 inches to:

646 - 651' Sandstone, quartzitic, brown-grey, dark brown-grey weathering, as last quartzitic sandstone below.
Note: angular unconformable contact with overlying unit. This is possibly due to well-developed cross-bedding in the underlying sandstone. 125

Gradational contact (N.B. no sign or evidence of reworking, brecciation etc. to mark an unconformity) through 6 inches to: UPPER MEMBER?

651 - 663' Dolostone, slightly silty, argillaceous, very dark grey, very dark grey weathering, very finely crystalline, hard tough, medium poorly irregularly bedded, tight, fossiliferous with well preserved small Halysites, unidentifiable brachiopods and cup-corals.

126 - 128
126F

At 10 feet from the base, this unit becomes abundantly "stromatoporoidal and with very abundant small, calcite replaced Halysites sp.

663 - 668' Covered: by talus, probably as next above.

668 - 723' Dolostone, very shaly and sandy at top, dark grey fine, hard, medium poorly bedded, recessive weathering and forms a covered slope on the mountainside, no fossils.

129

At 20 feet from the base, the dolostone becomes "interbedded" with 6 to 9 inch shaly members, - the shale often separates, large pieces of dolostone (4'X4'X2') - that is, poorly nodular.

134

At 30 feet, the unit becomes finely silty and harder weathering, generally unfossiliferous except for very rare poorly preserved cup-corals.

139

At 43 feet from base of unit, it becomes very gradually sandy, sand content increasing at the expense of the shale content at the top of the unit.

Gradational contact through 2 feet to:

723 - 134' Sandstone, quartzitic, white to very pale yellowish, light grey weathering, medium grained, sub-angular clean and frosted quartz grains, well cemented, well sorted, clean, hard, tough, brittle, massive, thick regularly bedded, (finely cross-bedded at base), tight, no fossils.

140 - 141

Abrupt contact to:

734 - 754' Sandstone, light brown-grey, brown weathering, fine grained sub-angular clear quartz, well cemented, well sorted, fairly clean, hard, resistant weathering when compared to underlying beds, massive, medium (1 to 1.5 feet) poorly regularly bedded, tight, abundant very poorly preserved vague corals and brachiopods on the weathered surface.

142- 145

754 - 759' Covered:

759 - 819' Sandstone, occasionally dolomitic, pale brown, light brown-grey weathering, silt to very fine grained quartz, fairly dirty with Kaolinitic material, hard but "soft" weathering, massive, medium (4 to 12 inches) regular well bedded, tight, no fossils.

146 - 157

Gradational contact through the last 4 feet of the underlying unit to:

819 - 831' Dolostone, slightly silty, very dark grey, dark grey weathering, very fine grained, hard, tough, massive, medium (6 inches) to thick (3 feet) bedded, tight, occasional poorly preserved brachio-

Pods and corals seen on the weathered surface. 158 - 159

831 - 849' Covered, probably as last below.

844 - 855.5' Dolostone, very dark grey, dark grey weathering and as last below but with very abundant very poorly preserved brachiopods in the top 18 inches. 160

855.5 - 861' Covered.

861 - 909' Dolostone; as last dark grey weathering dolostone below. 161 - 170

Abrupt contact to:

909 - 915' Sandstone, white to light grey, fine to medium grained sub-rounded clean quartz, well sorted, poorly cemented, clean, difficult friable, thick (6 feet) bedded, finely cross-bedded, poor intergranular porosity and permeability, no fossils. 171

Gradational contact through 4 inches to:

915 - 920' Dolostone; slightly silty, very dark grey, very dark grey weathering, finely crystalline, hard, tough, brittle, medium (6 inches) regular bedded, tight, no fossils. 172

Abrupt contact to:

920 - 924' Sandstone; easily friable and, as last sandstone below. 173

Abrupt contact to:

924 - 930' Dolostone, very dark grey, dark grey. Weathering very fine grained, hard, tough, medium (4 to 6 inches) regular well bedded, tight, no fossils. 174

Abrupt contact to:

930 - 932' Sandstone; to siltstone, pale brown-grey and light brown-grey weathering, silty, quartzitic, clean, hard, massive but finely laminated. 175

Abrupt contact to:

932 - 947' Dolostone, very dark grey, dark grey weathering, very fine grained and as last dolostone below. Very finely silty and thinly laminated in the basal part. 176 - 178 179, 179F

FORMATIONAL CHANGE(?)

Very gradational contact through 6 feet to:

947 - 952' Dolomite, very dark grey, dark grey weathering, very fine grained, fairly hard, massive, cliff-forming, thick (2 feet) and very thick (up to 12 feet) regular well bedded, tight, abundant poorly preserved fossils like cup-corals and brachiopods.

Section discontinued in this gully and resumed in another gully $\frac{1}{2}$ mile east using last 2 foot pale brown grey sandstone as marker-horizon.

- 952 - 997' Dolomite: very slightly silty, medium to dark grey and dark grey weathering, medium grained, hard, tough, thin (1 inch) to medium (3 feet) regular well bedded, tight, scattered poorly preserved cup-corals. 180-183
 At 15 feet from base becomes darker grey, very fine to fine grained, and with scattered Halysites sp.
 At 29 feet from base medium grey and as last above. 183
- 997 - 1044' Dolostone, very slightly silty, light grey and brown grey weathering, fine to medium grained, hard, tough, medium (2 inches to 1 foot) regular well bedded, tight, no fossils. 189 - 193
 At 7 feet from base becomes dark grey.
- 1044' - 1058' Covered by talus, probably as last dolostone below.
- 1058' - 1062' Dolostone: slightly silty, dark grey and dark grey brown weathering, very fine grained, hard, massive, thick (2 to 5 feet) well regular bedded, tight, with very poorly preserved calcite replaced brachiopods. 199
- 1062 - 1065.5' Covered: probably as next dolostone above.
- 1065 - 1067' Dolostone, very shaly, very dark grey and dark grey weathering, medium grained, hard, thin regular bedded ($\frac{1}{2}$ to 1 inch), tight, no fossils. 200
- Abrupt to:
- 1067 - 1105' Dolostone: slightly silty, very dark grey and very dark grey weathering, very fine grained, hard, massive, medium (4 inches to 4 feet) to thick regular well bedded, imperfectly jointed normal to bedding. 201 - 208
- Abrupt contact to:
- FORMATIONAL BREAK(?)
- 1105 - 1109.5' Sandstone, quartzitic, slightly calcareous; brownish white to white and grey brown weathering, fine to medium clear quartz, sub-rounded, poorly sorted, well cemented, very difficult friable, some interstitial limonitic material, thick irregular bedded.
- Gradational contact through 4 inches to:
- 1109.5 - 1112.5' Dolostone, very slightly silty, dark grey and dark grey weathering, very fine grained, hard, massive, medium (8 to 12 inches) regular bedded. 210
- Abrupt to:
- 1112.5 - 1115' Sandstone, slightly dolomitic, very light grey and brownish grey weathering, fine to coarse, clear and frosted, sub-angular to sub-rounded quartz, very poorly sorted, poorly cemented, dirty with kaolinitic matter, easily friable, rare scattered limonite,

soft weathering, medium (3 to 10 inches) well bedded, poor to fair inter-granular porosity and permeability, no fossils.

Abrupt contact to:

1115 - 1140' Dolostone; very dark grey and medium to dark grey weathering, fine grained, hard, massive, medium (4 inches to 18 inches) well bedded. 212 - 216

Gradational change to:

1140 - 1163' Dolostone, silty, dark grey and dark grey weathering, very fine grained, very hard, massive, thick (4 to 6 feet) well bedded, tight, sparsely fossiliferous. 217 - 220

1163 - 1167' Dolostone, as below but with yellowish silicified stromatoporoid-like forms and cross bedded fine silt on weathered surface. 221

1167 - 1169' Dolostone, as last 23 feet dolostone below. 222

1169 - 1245' Dolostone, silty, dark grey and dark grey weathering, fine grained to fine crystalline, very hard, very massive, scattered poorly preserved silicified cup-corals. 223 - 238

1245 - 1285' Dolostone; non-silty, very dark grey and as last dolostone below. 239 - 245

Moved east along face of mountain to next large gulley where section is more easily accessible.

1285 - 1330' Dolostone; dark grey and grey to light grey weathering, very fine grained, hard, massive, thick irregular bedded, with poorly preserved silicified Halysites sp. Abrupt contact with: 246 - 254

LITHOLOGIC FORMATIONAL BREAK (?)

1330 - 1333' Sandstone; quartzitic, slightly calcareous, very light brown and brown weathering, fine to medium, frosted and some clear, mostly sub-rounded quartz, fairly well sorted, fairly clean but with rare interstitial limonitic staining, fairly well cemented, difficult friable, thick regular bedded, tight, no fossils. 255

Gradational contact to:

1333-1346' Sandstone, dolomitic, light brown and dark grey weathering, fine to medium, clear, sub-rounded quartz, well cemented, fairly well sorted, fairly clean, very difficult friable, medium (1 foot) bedded. 256 - 257

Gradational contact to:

1346 - 1347.5' Sandstone, quartzitic: and as last 3 foot quartzitic sandstone below. 258

1347.5 - 1356' Sandstone, dolomitic, light grey and grey to dark grey weathering, fine to medium quartz and as last dolomitic sandstone below. 259 - 260

1356 - 1375' Dolostone: dark grey and grey to dark grey weathering, very fine grained, very hard, massive thick bedded (4 to 6 feet), tight, no fossils.

Abrupt contact with:

261 - 264

1375 - 1445' Dolostone, siliceous, very dark grey and dark grey to reddish brown weathering, medium grained, hard, hematitic streaks and partings, "cliff-forming" and very thick poorly irregularly bedded, tight, abundant silicified fossils, very poorly preserved, like stromatoporoidal forms, corals, and brachiopods.

265 - 278

1445 - 1524' Dolostone; medium grey and light grey weathering, very fine grained, hard, massive medium (8 inches) bedded, tight, occasionally stromatoporoidal.

At 23 feet from base becomes dark grey and with scattered large silicified stromatoporoidal bulbs.

At 77 feet from base (upper 2 feet) scattered black chert nodules.

Abrupt contact to:

279 - 294

1524 - 1553' Dolostone, very slightly silty, medium grey and light grey to light grey brown weathering, fine grained, hard, massive, medium (6 to 12 inches) regular well bedded, tight, no fossils.

Undulating, abrupt contact to:

295 - 300

1553 - 1688' Dolostone, siliceous, silty, argillaceous (?), dark grey and very dark grey weathering, medium to coarse, somewhat crystalline, hard, very thick well bedded, tight, abundant silicified fossils such as stromatoporoidal forms, algal "plates", and rare brachiopods.

At 100 feet from base silicified stromatoporoidal zones become units (4 to 6 feet thick) that are lense-like individually, although the "zone" is persistent.

301 - 327

Gradational change through two feet to:

LITHOLOGIC BREAK (?) TO BASE RAMPARTS (?) *Aug.*

1688 - 1701' Sandstone, white and banded grey weathering, medium, mostly frosted, sub-rounded quartz, well sorted, well cemented, clean, very difficult friable, "cliff-forming", tight, no fossils.

Gradational change to:

328 - 329

1701 - 1720' Dolostone, siliceous, silty, argillaceous, dark grey and as last dolostone below.

Abrupt contact with:

330 - 333

1720 - 1722.5 Chert: pale yellow, very irregular and crenulated, after vague fossil forms, hard, resistant weathering.

334

LITHOLOGIC BREAK (?) TO BASE RAMPARTS (?)

1722.5 - 1729.5 Dolostone: medium grey and light grey weathering, very fine grained, hard, tough, with rare scattered calcite fragments, thick (2 feet) well bedded, tight, no fossils.

335

Abrupt to:

1729.5 - 1730' Sandstone, quartzitic; abrupt contact at base and gradational through two inches at top to:

1730 - 1873' Dolostone, silty to sandy, light grey and light to medium grey weathering, fine grained, hard, dense, tough, massive, medium (18 inches) regular very well bedded. 336- 361

This unit begins recessive weathering, light grey weathering, break on mountain side. The medium regular bedding contrasts sharply with the massive, cliff-forming, very dark grey dolostones below.

At 7 feet from base of unit: angular, medium grained, clear, quartz grains, "floating" occur in fine irregular laminae on weathered surface.

At 45 feet from base: quartz grains become common - "floating" and somewhat bedded in zones $\frac{1}{2}$ to 4 inches thick and of variable quartz content in relation to total volume -- not graded or sorted, medium to coarse grained, mostly frosted, sub-rounded, often poorly cemented. 341

At 76 feet from base: a 7 foot more sandy unit in dolostone as below. Fine to medium quartz, mostly clear and sub-rounded (occasional sub-angular), poorly sorted, about 50 percent of total rock volume. Abrupt contact at base with gradational upper contact through 1.5 feet. 346

At about 85 feet from base: note scattered thin (2 inches) irregular poor beds with poorly preserved broken brachiopod shell fragments, essentially flat-lying and detrital - also poorly developed "mud-cracks" structure on weathered surface of broken fragments.

At 110 feet from base: becomes sandy, very fine quartz, clear, rounded to sub-rounded, well sorted, concentrated in bands $\frac{1}{4}$ to $\frac{1}{2}$ inch thick. 354 - 356

At 127 feet from base: a six inch zone with common calcite crystal fragments. 358

Abrupt contact to:

1873 - 1885' Dolostone, slightly silty, argillaceous (?) medium grey and medium (brownish) grey weathering, fine grained with occasional medium-sized grains, hard, massive, medium (8 inches to 2 feet) to thick well regular bedded, tight, common white small (less than one inch) calcite fragments.

Gradational contact through five feet to: 362 - 363

1885 - 2008' Dolostone, silty and sandy and as last light grey dolostone below - common sand layers $\frac{1}{8}$ inch thick and two inches apart in basal seven feet. 364 - 387

2008 - 2031' Covered, most probably as last, light grey dolostone below.

2031 - 2063' Dolostone, very light grey and light grey brown weathering, very fine grained to fine grained, hard, tough, massive, medium (4 to 12 inches) regular well bedded, tight, no fossils. 388 - 393

2063 - 2077' Covered, rubble.

2077 - 2080' Dolostone: calcareous, slightly silty, very light brown and brown weathering, fine to medium grained, fairly soft, massive, thin ($\frac{1}{2}$ inch) to medium (6 inches) poorly bedded, probable fair intergranular porosity and permeability.

394

2080 - 2092' Covered: rubble.

2092 - 2145' Dolostone, slightly silty, very light grey and light grey to whitish weathering, microcrystalline, hard, massive, medium (1 to 2 feet) well regular bedded.

395 - 404

At 20 feet from base becomes cliff-forming and medium grained.

Abrupt contact to:

398

2145 - 2200' Dolostone, very silty, siliceous, and sandy, light brown, dark grey to medium brown weathering, medium grained with fine to medium quartz (clear, sub-rounded to sub-angular, evenly distributed throughout rock), hard, thick (2 to 6 feet) irregular well bedded and finely laminated on weathered surface, tight, no fossils.

405 - 410

2200 - 2208' Covered; probably as last dolostone below.

2208 - 2283' Dolostone: very silty to sandy and as last light brown dolostone below.

At 7 feet from base: becomes calcareous

At 10 feet from base: beds disturbed, a low angle thrust?; relative movement and net slip unknown.

411 - 423

Abrupt contact to:

2273 - 2453' Dolostone; slightly silty, very light brown grey and grey brown weathering, very fine grained to fine grained, hard, very tough, brittle, massive, medium (12 to 18 inches) irregular well bedded, tight, no fossils.

424 - 459

At 25 feet from base: becomes light grey and light grey weathering and as last below.

At 80 feet from base: becomes more coarser grained -- grain size varies from very fine to medium.

2453 - 2467' Covered: probably as last below.

2467 - 2532' Dolostone, slightly silty, light grey and light grey weathering and as last below

460 - 472

2532 - 2539' Covered: by talus, probably as last dolostone below.

2539 - 2636' Dolostone; as last light grey and light grey weathering dolostone below.

473

Section ended at mountain top -- maximum thickness of exposed section measured.

SECTION NAME RL-"B" NO. _____

LOCATION The section was exposed in a dry gully on the north side of Redfern Lake, near the eastern end of the lake. The section was sampled every five feet and measuring was by means of Jacob's staff. Sampling was started at the base of the exposure, and the section was at the top of an easily accessible grass-covered slope.

MEASURED BY _____ ASSISTED BY _____

DATE MEASURED August 13, 1953.

<u>THICKNESS (FEET)</u>		<u>DESCRIPTION</u>	<u>SAMPLE NO.</u>
<u>Cum.</u>	<u>Unit</u>		
0-25	25.0	<u>Dolomite</u> : very slightly silty, very light grey, light grey to light brown weathering, fine grained, thick irregular bedded (1'-3'), fine, irregular laminations on the weathered surface, hard, tight, no fossils.	1 5
Gradational contact to:			
25-34	9.0	<u>Quartzite</u> : dolomitic, fine grained, clear, sub-angular, poorly sorted, poorly cemented, clean quartz; light grey, grey to light brown weathering, thick irregular bedded (1'-3'), hard, tight, no fossils.	6
Abrupt contact to:			
34-54	20.0	<u>Dolomite</u> : very slightly silty, light grey, grey to dark grey weathering, very fine grained, massive, hard, tough, thick irregular bedded (8"-3'), tight, no fossils.	7 10
54-64	10.0	<u>Dolomite</u> : argillaceous, light grey, grey to dark grey weathering, very fine grained, massive, hard, tough, thick irregular bedded (8"-3'), tight, no fossils.	11 12
Gradational contact through 2' to:			
64-84	20.0	<u>Dolomite</u> : not silty, light grey, grey to light brown weathering, very fine grained, massive, thick regular bedded (1'-4'), hard, tight, no fossils.	13 16

<u>THICKNESS (FEET)</u>		<u>DESCRIPTION</u>	<u>SAMPLE NO.</u>
<u>Cum.</u>	<u>Unit</u>		
84-104	20.0	<u>Dolomite</u> : argillaceous, light grey, grey to light brown weathering, very fine grained massive, thick regular bedded (1'-4'), hard, tight, no fossils.	17 20
Gradational contact to:			
104-144	40.0	<u>Dolomite</u> : argillaceous, slightly silty, very light grey, grey to light brown weathering, fine to medium grained, thick irregular bedded (1'-4'), hard, tight, no fossils.	21 28
Abrupt contact to:			
144-149	5.0	<u>Dolomite</u> : very slightly silty, medium grey, grey to very light brown weathering, very fine grained, thick irregular poorly bedded (1'-4'), fairly hard, tight, no fossils.	29
149-168	15.0	<u>Dolomite</u> : quartzitic, medium grey, grey to very light brown weathering, fine grained, thick irregular poorly bedded (1'-4'), fairly hard, tight, no fossils.	30 32
Gradational contact through 5' to:			
168-193	25.0	<u>Dolomite</u> : very slightly silty, light grey, grey to light brown weathering, very fine grained, thick poorly bedded (1'-3'), massive, hard, tight, no fossils.	33 37
193-198	5.0	<u>Dolomite</u> : argillaceous, very light grey, grey to light brown weathering, very fine grained, thick poorly bedded (1'-3'), massive, hard, tight, no fossils.	38
198-243	45.0	<u>Dolomite</u> : very slightly silty, light grey, grey to light brown weathering, very fine grained, thick poorly bedded (1'-3'), massive, hard, tight, no fossils.	39 47
Gradational contact to:			
243-260	17.0	<u>Quartzite</u> : dolomitic, clear and frosted, sub-angular, medium grained, poorly sorted, poorly cemented, dirty quartz grains; medium grey, grey weathering, medium bedded (6"-2'), hard, tight, no fossils. Some scattered limonite particles.	48 50
Abrupt contact to:			

<u>THICKNESS (FEET)</u>		<u>DESCRIPTION</u>	<u>SAMPLE NO.</u>
<u>Cum.</u>	<u>Unit</u>		
260-272	12.0	<u>Dolomite</u> : slightly silty, light grey, dark grey to light brown weathering, very fine grained, thick poorly bedded (1'-3'), hard, tight, no fossils.	51
272-275	3.0	<u>Dolomite</u> : argillaceous, light grey, dark grey to light brown weathering, very fine grained, thick poorly bedded (1'-3'), hard, tight, no fossils.	52
275-295	20.0	<u>Dolomite</u> : slightly silty, light grey, dark grey to light brown weathering, very fine grained, thick poorly bedded (1'-3'), hard, tight, no fossils.	53
			54
			57

At this point, the section is faulted back into black dolomite, with approximately 75' of macrobreccia. The white member below is repeated above the black dolomite, as in section RL-"A". Farther east, black dolomite appears below the same dolomite as in section RL-"B". The probability of a high angle thrust is quite apparent.