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**STRATIGRAPHIC SECTIONS OF THE  
GLACIAL DRIFT  
TAYLOR AND VICTORIA VALLEYS,  
SOUTH VICTORIA LAND**

**Paul Robinson**

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STRATIGRAPHIC SECTIONS OF THE GLACIAL DRIFT,  
TAYLOR AND VICTORIA VALLEYS, SOUTH VICTORIA LAND.

PART 1 - VUWAE 19 (1974-75)

LOWER TAYLOR VALLEY

	Page
COMMONWEALTH STREAM (SECTIONS A1, A2, B and L)	1
WEST COMMONWEALTH STREAM (SECTIONS C, D1 and D2)	4
WALES STREAM (SECTIONS E, F1 and F2)	7
NEW HARBOUR STREAM (SECTIONS O, I and J)	9
SOUTH OF LAKE FRYXELL (SECTIONS M, G, N, H and K)	13

PART 2 - VUWAE 19 (1974-75) and 20 (1975-76)

UPPER TAYLOR VALLEY

EAST OF LAKE BONNEY (SECTIONS P, W1 and W2)	16
SOUTH OF LAKE BONNEY (SECTIONS Q1, Q2, R1, R2, R3, S1, S2, S3, T, U1 and U2)	20
NORTH OF LAKE BONNEY (SECTION V)	26

TAYLOR GLACIER

NORTH SIDE OF TAYLOR GLACIER	
AREA A (SECTIONS 1 and 2)	27
AREA B (SECTIONS 3, 4 and 5)	28
AREA C (SECTION 6)	30
AREA E (SECTIONS 7, 8, 9, 10 and 11)	30
SOUTH SIDE OF TAYLOR GLACIER	
AREA H (SECTIONS 12 and 13)	33
AREA I (SECTION 14)	35

PART 3 - VUWAE 19 (1974-75)

VICTORIA VALLEY

NORTH OF LAKE VIDA (SECTIONS N2 and N3)	38
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INTRODUCTION

The following stratigraphic descriptions of the surficial bedded glaciogenic sediments of Taylor Valley were made during the 1974-75 and 1975-76 Antarctic expeditions from Victoria University of Wellington. All sections were measured, by abney level and graduated staff, to the permafrost level in stream channels and spaded trenches.

Each section is divided into units (and occasionally subunits). Unit thickness is given in Column A and cumulative thickness from the base of the section is in Column B. The section location, the initials of the measurers and the date of each description is given for each site. Latitude and longitude, and elevation have been taken from sheets of the U.S. Geological Survey 1:50,000 Topographic Series.

Sediment properties are described in following order: gross lithology, colour (using Munsell colour chart), grain sorting, bedding and splitting properties, grain size and then other comments. Bedding and splitting properties are modified from McKea and Weir (1953) to fit the terms of Ingram (1954), except for the term "unbedded" which is used in preference to "unstratified". Grain size is given in terms of the Wentworth scale. "Diamicton" is used in the sense of Flint et. al. (1960).

Sample numbers on the left side of the page are those of the Victoria University of Wellington rock collection. The bracketed numbers on the right side are the sample site locations above the section base, in meters.

P.H. Robinson  
Department of Geology,  
Victoria University of Wellington,  
Private Bag,  
Wellington,  
NEW ZEALAND.

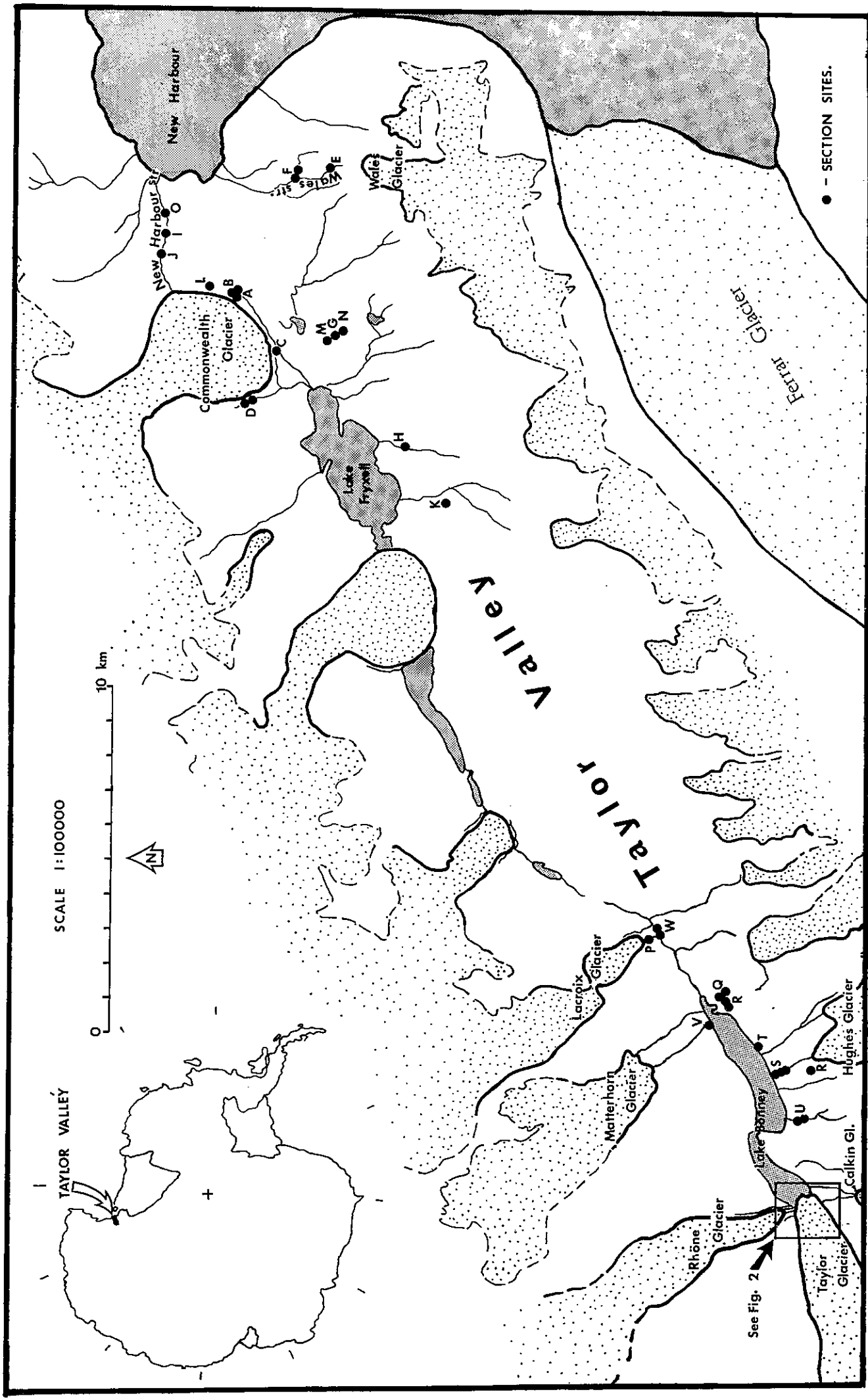
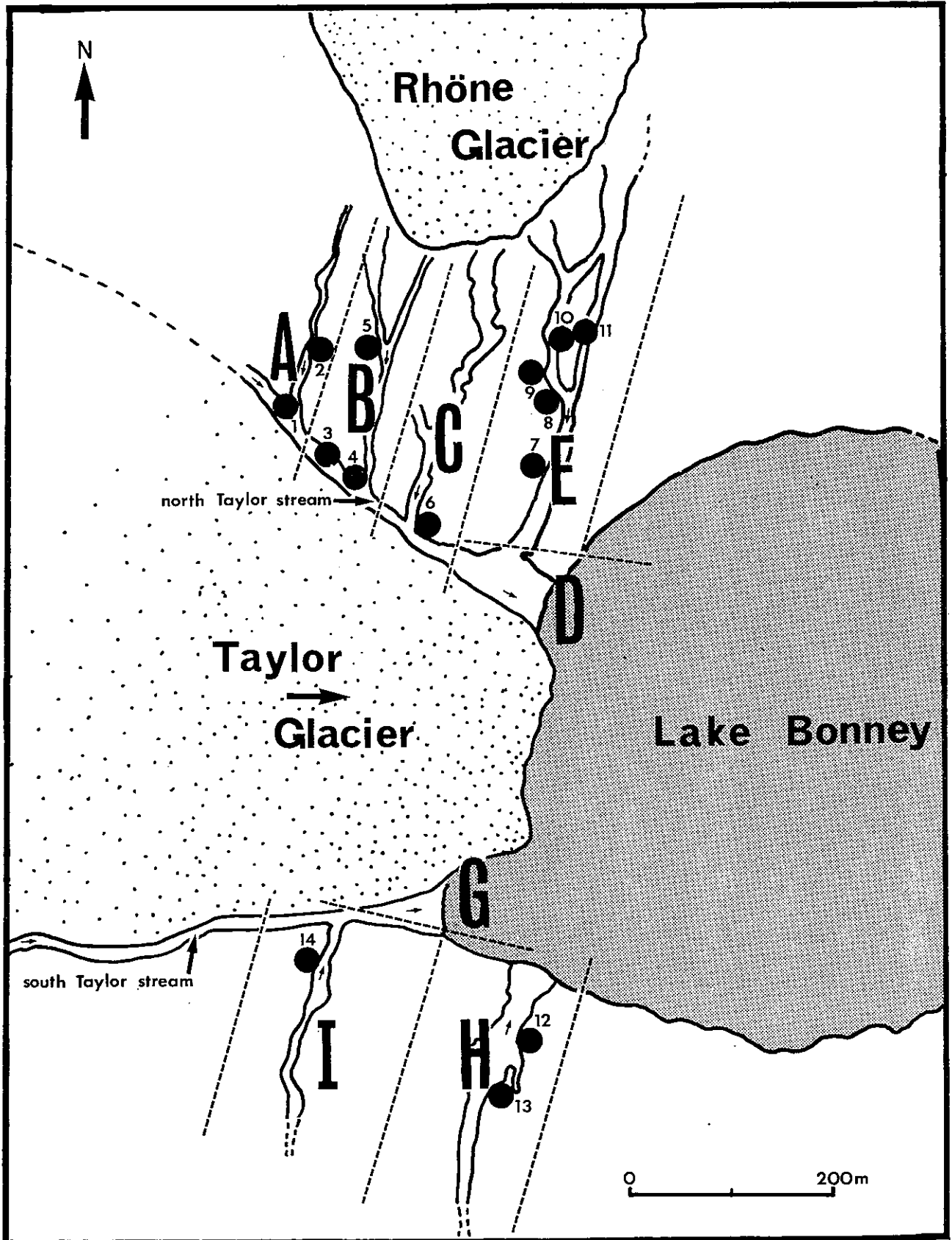


FIGURE 1. Location map of section sites upper and lower Taylor Valley, Antarctica.

FIGURE 2. Map of Taylor Glacier snout and western Lake Bonney with section sites 1 to 14.



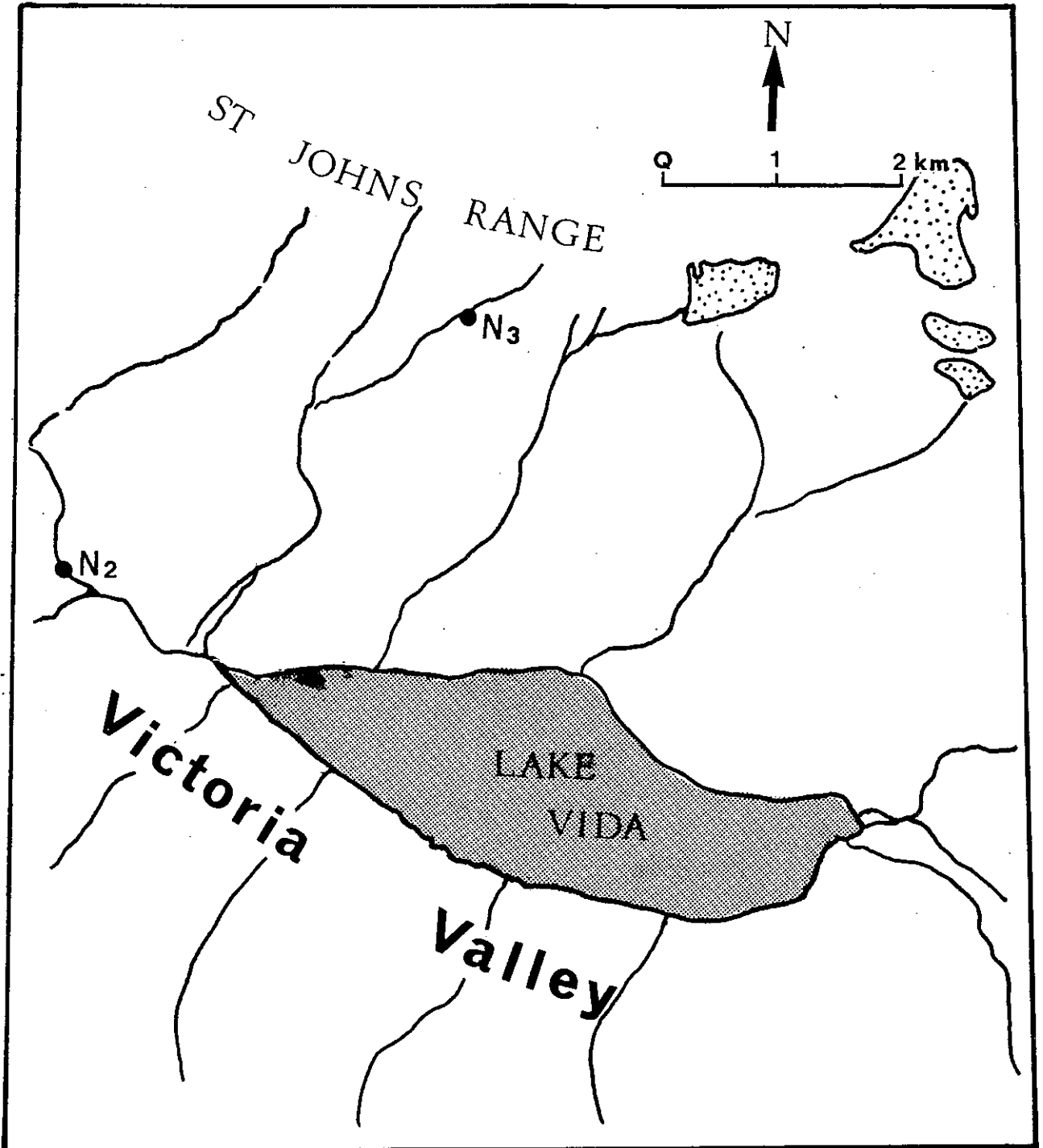


FIGURE 3 Map of sections N2 and N3, Lake Vida, Victoria Valley.

PART 1

STRATIGRAPHIC SECTIONS FROM LOWER TAYLOR VALLEY

Measured and described in the 1974-75 season (VUWAE 19) by:-

C.G. Vucetich and P.H. Robinson,

Department of Geology, Victoria University of Wellington.

LOWER TAYLOR VALLEY

COMMONWEALTH STREAM

SECTION A1 - measured 200m south of the Commonwealth Glacier in the south bank of the stream channel with a south west drainage into Lake Fryxell. Map elevation 25m. (77° 35.2'S : 163° 19.5'E). Measured by CGV and PHR. 12/74.

UNIT	A	B
SURFACE LAYER - surface veneer (0.05-0.10m) of angular to subrounded pebbles, uniform in size (0.02-0.05m); mixed lithologies (granite, dolerite and basalt) in a matrix of coarse sand.		
2	0.15	1.20
SILT - pale grey (10YR 7/1), very thin - bedded to laminated. Platy brecciated bedding giving silt clasts (3-10mm) Sample 13081 Silt (1.10m).		
- sharp contact -		
1	1.05+	1.05
SAND - greenish grey (5G 6/1), coarse to medium, massive sand; containing scattered pebbles of mixed lithologies. Sample 13082 Sand (0.95m) 13083 Sand (0.50m).		
Unbottomed in stream bed.		

SECTION A2 - measured 15m to the north west (upstream) from Section A1 in south west bank. Map elevation 25m. Measured by CGV and PHR. 12/74.

UNIT	A	B
SURFACE LAYER - see Section A1 (0.05-0.10m thick).		
3	0.10	1.10
SILT - like unit 2, section A1.		
- sharp contact -		
2	0.20	1.00
SAND - light olive grey (2.5Y 7/1), coarse to medium, thin - to very thin-bedded, cross-stratified. Lense shaped unit with maximum thickness 0.20m and 5-7m lateral extent. Sample 13084 Cross-bedded sand (0.85m) 13085 Pebble lens (0.95m) 13086 Sand (0.90m).		
- sharp contact -		
1	0.80+	0.80
SAND - like unit 1, section A1.		
Unbottomed in stream bed.		

SECTION B - measured from north bank exposure in stream channel directly opposite section A1. Map elevation 25m. Measured by CGV and PHR. 12/74.

UNIT	A	B
SURFACE LAYER - see section A1 (0.05-0.07m thick).		
5	0.45	2.38
SILT - pale yellow (5Y 8/3), laminated and slightly brecciated.		
- sharp contact -		
4	0.35	1.93
SAND - greenish grey (5G 6/1), massive, medium sand.		
- sharp contact -		



UNIT		A	B
3	SILT - dull yellow (2.5Y 6/4), very thin - bedded to laminated. Lower 0.10m consists of laminated very fine sand interbedded with thinly laminated silt; bedding persistent. Sample 13087 Silt (1.30m)  - gradational contact (over 0.02-0.05m) -	0.48	1.58
2	SAND - light grey (7.5Y 7/2), indistinctly thin-bedded, fine sand. Sample 13088 Sand (1.00m).  - sharp contact -	0.40	1.10
1	SAND - greenish grey (5G 6/1), thin-bedded, coarse to medium sand, with minor fine sand and silt laminae. Sample 13089 Sand (0.40m).  Unbottomed in stream bed.	0.70+	0.70

SECTION L - measured directly below ice front of the Commonwealth Glacier in west bank of stream channel. 200m north east of section A1. Map elevation 30m. (77° 34.9'S : 163° 21.0'E). Measured by CGV and PHR. 12/74.

UNIT		A	B
	SURFACE LAYER - 'closed' surface of angular to subrounded pebbles and boulders, mainly granite and dolerite; distinct lower boundary.		
5	SAND - light grey (7.5Y 7/2), thin - to very thin-bedded, medium sand, interbedded with very thin-bedded granules and coarse sand in the upper 0.30m; and thin-bedded fine sands in the lower 0.28m. Base contains scattered silt clasts (3-10mm). Sample 13112 Coarse sand and pebbles (2.35m) 13113 Coarse sand (2.05m)  - erosional contact (with 0.02-0.05m relief) -	0.58	2.43
4	SILTY CLAY - olive yellow (7.5Y 6/3), rippled and thinly laminated. Distinct upward fining, with lower 0.20m of ripple laminated very fine sand and silt (average ripple wavelength 0.12m; amplitude 0.02m). Grades up into 0.30m of distinctly laminated silty clay. Discrete layer of pebble size reworked black tuffaceous (?) clasts (0.25m from upper contact). Sample 13114 Coarse sand (1.50m) 13121 Black clasts (1.60m)  - erosional contact (with 0.02-0.04 relief).	0.50	1.85
3	SAND - brownish black (7.5YR 3/2), well sorted, thin-bedded, medium to fine sand. Unit wedges, in outcrop, to the north east.  - sharp contact (dipping 16° to south west) -	0.40	1.35
2	SILTY CLAY - greyish olive (7.5Y 5/2), horizontally laminated; brecciated in the lower 0.40m. Colour change upper 0.20m - olive yellow (5Y 6/3); lower 0.40m - olive grey (10Y 6/2). Sample 13115 Fine sand and silt 13116 Clay 13117 Silty clay 13118 Silt 13119 Fine sand and silt 13120 Fine sand and silt	0.60	0.95

UNIT

A

B

- sharp contact -

1	SAND - greyish brown (7.5YR 4/2), moderate to poorly sorted, thin-bedded, medium to coarse sand, with minor granules. Upper 0.20m of grey brown (7.5YR 4/1), fine sand and minor silt, with scattered olive yellow (7.5Y 6/3), silt clasts (3-10mm). Lower 0.15m, medium to coarse sand and granules (high basalt content) with traces of iron staining.	0.35+	0.35
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Samples 13123 Silty clay  
13124 Silty clay  
13125 Silty clay  
13126 Iron stained coarse sand  
13127 Silty clay  
13128 Silty clay  
13129 Fine sand and silt

Unbottomed in stream bed.

WEST COMMONWEALTH STREAM

SECTION C - measured in south facing stream exposure 100m south west of the Commonwealth Glacier. Drainage into Lake Fryxell, 1km to the south west. Map elevation 25m (77° 35.5'S : 163° 16.5'E). Measured by CGV and PHR. 12/74.

UNIT	A	B
SURFACE LAYER - predominantly cobbles, pebbles and coarse sand with a yellowish brown (2.5Y 5/3), soil development. Minor carbonate present in weathered silt (0.08-0.10m thick).		
6 SILT - olive yellow (5Y 6/3), laminated, with minor very thin-bedded fine sand; increasing sand partings with depth. - gradational contact (with 0.03-0.06m relief) -		
5 Subunit 2. SAND - greyish olive (5Y 5/2), weak very thinly-bedded fine sand, with upward increase in silt laminae. Minor scattered subrounded to rounded pebbles. - sharp contact -	0.30	3.20
Subunit 1. SAND - greenish grey (10GY 4/1), indistinct medium bedding of medium sand. - sharp contact -	1.00	2.90
4 SILTY CLAY and SAND - greyish olive (7.5Y 5/3), very thin-bedded, fine to very fine sand interbedded with laminated silt. 0.30-0.37m from upper contact, pale yellowish grey (2.5Y 6/1), dessicated algae plates interbedded with thinly laminated silts. Sample 13090 ) Pebbly sand layers 13091 ) within silt and 13092 ) sand interbeds. - sharp contact -	0.45	1.90
3 SAND - olive grey (2.5Y 6/1), moderate to poorly sorted, massive, coarse to medium sand, with scattered pebbles and cobbles. - sharp contact -	0.40	1.45
2 Subunit 2. CLAYEY SILT - pale yellow (5Y 8/3), laminated with minor fine sand. - sharp contact -	0.20	1.05
Subunit 1. SAND - light grey (10YR 7/1) to brownish grey (10YR 6/1), moderately well sorted, laminated, fine sand, inter-bedded with thinly-laminated silt (see unit 4). Laminae show slight disruption around pebbles and cobbles. Sample 13093 Medium to fine sand. - sharp contact -	0.40	0.85
1 SAND - medium to dark grey (10Y 4/1), moderate sorting, thin - to very thin-bedded, coarse to medium sand. Fining upwards with laminated to thinly laminated fine sand in upper unit. Silt clasts scattered through upper 0.20m. Sample 13094 Coarse sand. Unbottomed in stream bed.	0.45+	0.45

SECTION D1 - measured on northern slope of hummocky ridge 100m west of Commonwealth Glacier, 1.2km north east of Lake Fryxell. Map elevation 40m. (77° 35.4'S : 163° 14.5'E). Measured by CGV and PHR. 12/74.

UNIT		A	B
	SURFACE LAYER - large cobbles (up to 0.20m) with a pebble and granule pavement, covering a moderately poorly sorted pebbly coarse sand 0.10-0.15m thick. High granite and basalt content.		
6	CLAYEY SILT - pale olive yellow (5Y 6/3), weakly laminated silt. Unit divided by one granule and coarse sand layer (0.02m thick) 0.10m from upper contact.  - sharp contact -	0.18	3.24
5	Subunit 3. SAND - pale grey to medium grey (N 7/0) thin - to very thin-bedded, medium to fine sand.  - sharp contact -  Subunit 2. SAND - grey (10Y 5/1), well sorted, unbedded, medium sand. Minor silt clasts (2-6mm).  - sharp contact -  Subunit 1. SAND - greyish olive (7.5Y 6/2), laminated, medium to fine sand. Granule and coarse sand parting (0.01-0.02m thick) marks unit base.  - sharp contact -	0.40  0.12  0.52	3.06  2.66  2.45
4	SILT - olive yellow (7.5Y 6/3), weakly laminated silt, with 0.02m thick coarse sand to pebble parting marking the lower contact.  - sharp contact -	0.17	2.02
3	SAND - greyish olive (7.5Y 5/2), well sorted, massive, medium sand. Contains scattered pebbles and few pockets of coarse sand and granules.  - sharp contact -	0.75	1.85
2	CLAYEY SILT - olive grey (10Y 6/2), weakly laminated. Like unit 4. Pebbles and granules (0.02-0.04m thick bed) marks lower contact.  - sharp contact -	0.15	1.10
1	Subunit 2. SAND - dark olive grey (7.5Y 4/3), moderately well sorted, weakly stratified, thick-bedded, fine to medium sand.  - gradational contact (over 0.10-0.20m) -  Subunit 1. SAND - greyish olive (5Y 4/2), indistinct thin - to thin-bedded, medium to coarse sand.  Unbottomed in stream bed.	0.50  0.45+	0.95  0.45

SECTION D2 - measured on southern slope of hummocky ridge, 100m west of Commonwealth Glacier. 1km north east of Lake Fryxell. 5m south of section D1. Map elevation 40m. Measured by CGV and PHR. 12/74.

UNIT		A	B
	SURFACE LAYER - see section D1.		
4	Subunit 2. SILT - dull yellow (2.5Y 6/3), unstratified silt with high fine sand content.	0.32	3.07
	- sharp contact -		
	Subunit 1. SAND - greyish yellow (2.5Y 6/2), thin-bedded, medium sand; also contains laminations of fine sand and silt.	0.30	2.75
	- sharp contact -		
3	SAND - dark greenish grey (10GY 4/1), very thin-bedded, fine to medium sand. Upper 0.04m consists of coarse sand and granules forming distinct upper contact.	0.30	2.45
	- sharp contact -		
2	Subunit 2. SILT - olive yellow (5Y 6/4), laminations interbedded with thinly-laminated, very fine sand, with weak fissility and brecciation. Minor scattered pebbles.	0.25	2.15
	- gradational contact (over 0.05m) -		
	Subunit 1. SILTY CLAY - olive grey (10Y 6/2), strong, thin-laminae with high clay content; upward silt increase.	0.65	1.90
	- sharp contact -		
1	Subunit 3. SAND - dark grey (7.5Y 4/3), very weakly thin-bedded, medium and coarse sand.	0.30	1.25
	- sharp contact -		
	Subunit 2. SAND - olive brown (2.5Y 4/3), moderate sorting, unbedded, very fine to medium sand with minor silt. One granule and coarse sand parting (0.04m thick) 0.15m from upper contact.	0.30	0.95
	- sharp contact -		
	Subunit 1. SAND - dark grey (7.5Y 4/3), see subunit 3, unit 1. Unbedded medium to coarse sand.	0.65+	0.65
	Unbottomed in stream bed.		

WALES STREAM

SECTION E - measured in eastern bank (true right) of Wales Stream, 800m north east of the Wales Glacier. Map elevation 200m. (77° 36.5'S : 163° 31.6'E). Measured by CGV and PHR. 12/74.

UNIT	A	B
SURFACE LAYER - a lag undergoing downslope movement prevented complete description of the upper 2m of exposure. The lag consists of a poorly sorted veneer (0.05-0.07m thick) of sands, pebbles and cobbles with an indistinct lower boundary.		
3 SILTY CLAY - olive yellow (10YR 6/2), thinly laminated, silty clay with minor fine sand. Silt clasts (2-8mm) with shaly to platy appearance; bedding intact. Bedding thickness increases with depth; basal silt clasts up to 0.03m thick.	0.90+	3.35
- sharp contact -		
2 COARSE SAND and GRANULES - very weak, medium - to thin-bedded, loose sands and granules with slight fining upwards.	0.45	2.45
- sharp contact -		
1 SILTY CLAY - greyish olive (5Y 6/2), thinly laminated, silty clay, shaly fissility and strongly brecciated; bed splitting decreases with ice couleure and outcrop depth. Minor pebbles and small cobbles.	2.00+	2.00
Scree observes lower slope.		

SECTION F1 - measured in a channel 5m deep on western (true left) side of Wales Stream, 1km downstream of Section E. Map elevation 110m. (77° 35.8'S ; 163° 31.2'E) Measured by CGV and PHR. 12/74.

UNIT	A	B
SURFACE LAYER - lag slope of pebble to boulder surface with coarse sand and granules. Scree creep obscures upper 1-2m.		
2 SAND - greyish yellow (2.5Y 6/3), well sorted, weak, thin - to very thin-bedded, medium sand. Minor fine sand partings (0.01m thick); silty clay lense (0.02-0.04m thick) at unit base.	0.35+	2.80
- sharp contact -		

UNIT	A	B
1	0.85	2.45
<p>Subunit 2. SAND INTERBEDS - sequence of very thin-bedded to laminated, medium sands; coarsening upwards. Upper thin-bedded medium to coarse sand interbedded with fine sand laminae. Lower thin-bedded medium to fine sands interbedded with silt laminations.</p> <p>Sample 13095 Coarse sand and pebbles 13096 Coarse sand and pebbles.</p> <p>- sharp contact -</p>		
	1.60+	1.60
<p>Subunit 1. SILT - olive grey (10Y 6/2), thinly-laminated. Silt clasts (5-30mm) with platy to flaggy appearance. Predominantly thin-laminated silt interbedded with thin - to very thin-bedded, medium to very fine sand. Upper 0.20-0.30m contains convolute and over-fold laminae. (0.03-0.05m amplitude). Minor granules and pebbles.</p> <p>Sample 13097 Silt 13098 Fine sand 13099 Medium sand.</p> <p>Unbottomed in stream bed.</p>		

SECTION F2 - measured 60m up a tributary of the Wales Stream, on west bank. As with section A1 (90-100m to the west) the incised channel wall lacks good exposure in the upper 2-3m. Map elevation 115m. (77° 35.8'S : 163° 32.0'E). Measured by CGV and PHR. 12/74.

UNIT	A	B
<p>SURFACE LAYER - see section F1.</p>		
2	4.90+	6.50
<p>SAND INTERBEDS - medium to very thin-bedded, medium to fine sand. Unit shows universe grading. Upper 2-3m, medium - to thin-beds of coarse to medium sand, increasing upwards. Lower 0.8-1.0m very thin-bedded, fine sand, with minor medium sand and silt laminae.</p> <p>- sharp contact -</p>		
1	0.50	1.60
<p>Subunit 4. SAND - dark greyish green (10GY 4/1), moderately well sorted, graded loose sand. Lower weak thinly-bedded medium to fine sand grades into 0.35m of moderately well sorted, massive, coarse to medium sand.</p> <p>- sharp contact -</p>		
	0.10	1.10
<p>Subunit 3. SILT - dull yellow (2.5Y 6/3), thinly-laminated.</p> <p>- sharp contact -</p>		
<p>Subunit 2. SAND and SILT INTERBEDS - 0.30m of laminated fine sand and slightly brecciated silt.</p> <p>- sharp contact -</p>		
	0.70+	0.70
<p>Subunit 1. SAND - grey (7.5Y 4/1), loose, unstratified coarse to medium sand.</p> <p>Unbottomed in stream bed.</p>		

NEW HARBOUR STREAM

SECTION O - measured in a channel cutting 20m deep on the true left (east) bank of New Harbour Stream. 1.6km north west of New Harbour. The south facing outcrop has 20°-30° lower slope, topped by a 4-5m vertical bluff. Map elevation 40m. (77° 33.8'S : 163° 28.4'E). Measured by CGV and PHR. 12/74. Previously described by Webb and Neall (1972).

UNIT	A	B
SURFACE LAYER - loose surface of subangular to subrounded boulders (1.5m maximum) and pebbles; predominantly sandstone, dolerite and granite, capping a thick (0.35m) well sorted, coarse sand and granule bed. Minor carbonate and soil development; loose and friable, dark greenish grey (10GY 3/1). Weakly stratified basalt-rich granular sand lenses; minor silt laminae; pockets of large cobbles and pebbles.		
- erosional contact (with 0.03-0.05m relief) -		
3	0.55	15.25
Subunit 5. SAND - olive grey (10Y 4/2), well sorted, very weak thin-bedded coarse to medium sand; normal grading to upper medium to fine sands.		
- sharp contact -		
	0.84	14.70
Subunit 4. SILT and SAND INTERBEDS - grey (10Y 4/2), very thinly laminated (less than 3mm). Predominantly fine sand with a few laminae of coarse to medium sand, inter-bedded with silt laminae. Bedding laterally discontinuous with minor disruption of convolute laminae.		
- gradational contact (over 0.07-0.10m) -		
	1.10	13.86
Subunit 3. SILT - light grey (5Y 7/2), very thin-laminations, weakly cemented, strongly fissile with silt clasts (5-10mm). Minor bedding disruption (weak convolutions), flaggy to shaly appearance. Low in pebbles and cobbles.		
- sharp contact -		
	0.31	12.76
Subunit 2. SILT and SAND INTERBEDS - like subunit 4, unit 5.		
- sharp contact -		
	1.05	12.45
Subunit 1. SILTY SAND - well stratified, weakly cemented and fissile. Basal 0.60m (greyish pale yellow - 2.5Y 6/2). Very thin-bedded medium sand with minor silt partings (2-20mm). Sand decrease upwards; upper 0.40m (light yellow - 5Y 7/3), thin-bedded silt and fine sand. Weakly cemented, angular to subrounded, silt clasts (0.01-0.05m) concentrated at unit base. Lenses (up to 0.50m thick) with pebble to boulder gravels, with coarse sand and granule matrix.		
- gradational contact (over 0.20-0.30m) -		
2	1.40	11.40
SAND and SILT INTERBEDS - alternating dark grey olive (2.5GY 4/1), medium-bedded, coarse to medium sands, and light yellow (7.5Y 7/3), thin-bedded, laminated silts and fine sands; increasing sand with depth. Lenses (like subunit 1, unit 3) throughout unit.		
- gradational contact (over 0.10-0.20m) -		



UNIT		A	B
1	SAND - grey (7.5Y 4/1), well sorted very thick bedded, medium sand, separated at 1-2m intervals by very thin-bedded (less than 0.02m) laminated silt and sand partings.  Scree obscures lower slopes.	10.00+	10.00

SECTION I - measured from eastern slope outcrop in a channel cutting on the true left bank of New Harbour Stream, approximately 1km upstream from section O. Map elevation 60m. (77° 33.9'S : 163° 26.0'E). Measured by CGV and PHR. 12/74. Section previously studied by Murrell (1973).

UNIT		A	B
	SURFACE LAYER - moderately closed surface veneer of subangular sandstone, granite and dolerite pebbles and boulders, covering 0.50m of very poorly sorted sands, grits and gravel.		
2	Subunit 7. GRADED SANDS and SILTS - sequence of olive grey (10Y 5/2), loose, coarse to medium basal sand, overlain by olive brown (2.5Y 4/3) medium to fine sand and laminated silt. Double sequence (upper 0.18m thick; lower 0.30m thick) with very thin-bedded to laminated layers.  - sharp contact -	0.48	13.23
	Subunit 6. SAND - grey (10Y 4/2), weakly thin-bedded, medium to coarse sand.  - sharp contact -	0.50	12.75
	Subunit 5. SAND and SILT INTERBEDS - thin-bedded to laminated, coarse to fine sand, alternating with laminated silt.  - sharp contact -	0.90	12.25
	Subunit 4. SILT and SAND INTERBEDS - pale olive yellow (5Y 7/4), brecciated (clasts 0.01-0.08m), weakly stratified silt laminae. Lower 0.25m predominantly thin-bedded sands with scattered silt clasts (5-10mm); ripple laminated, microfaulted and strongly convolute bedding. Upper 0.30m thin-bedded to laminated silts surrounding a laterally persistent, tight, pebble and boulder layer, of subangular to subrounded, unweakened crystalline plutonics and dolerites. Minor deformed laminae around large boulders. Upturned bedding (upper 0.30-0.40m) results from well preserved fossil sand wedges, which are not continuous into overlying sediments.  Sample 13102 Pebbles, cobbles and coarse sand.  - sharp contact -	0.55	11.35
	Subunit 3. SAND - grey (7.5Y 5/1), weak, thin-bedded, medium sand.  Sample 13103 Sand  - sharp contact -	0.25	10.80
	Subunit 2. SAND - see subunit 7 unit 2. Thin-bedded, medium sand grades into upper thin-beds of fine sand. Upward increase in abundance of thinly laminated silt.  Sample 13104 Clayey silt 13105 Sandy silt  - sharp contact -	0.40	10.55

UNIT	A	B
Subunit 1. CLAYEY SILT - olive yellow (5Y 6/3), thinly laminated clay-rich silt.	0.15	10.15
Sample 13106 Silt.		
- sharp contact -		
1 SAND - brownish grey (10YR 4/1), moderately well sorted, thick to medium bedded, coarse to medium sand. Scattered granule and coarse sand layers (0.01-0.05m thick).	10.00+	10.00
Sample 13107 Coarse sand.		
Scree observes lower slope.		

SECTION J - measured from east (true left) bank outcrop in channel cutting 500m upstream from section I and 1.2km east of Commonwealth Glacier. Map elevation 80m (77° 33.7'S : 163° 24.6'E.) Measured by CGV and PHR. 12/74.

UNIT	A	B
SURFACE LAYER - well developed closed stone surface between boulders; covers 0.22m of pale olive grey (5Y 6/2), poorly sorted, loose, friable, coarse to medium sand, few angular to subrounded pebbles.		
3 Subunit 6. SAND and SILT INTERBEDS - greyish olive (5Y 4/2), very thin-bedded, medium sand with interbedded silt laminations in upper 0.80m; few scattered pebbles. Lower 0.30 platy to flaggy, laminated medium to fine sand with laminated silt.	1.15	31.40
- sharp contact -		
Subunit 5. SAND - dark greyish yellow (2.5Y 4/2), moderately well sorted, thick bedded, medium sand; laminations of fine sand and silt (2-8mm thick) with weak and irregular bedding.	0.85	30.25
- sharp contact -		
Subunit 4. SILT and SAND INTERBEDS - see subunit 6, unit 3. Dark greyish yellow (2.5Y 4/2), minor very thin-bedded to laminated fine sand interbedded with thinly laminated, platy silt.	1.40	29.40
- sharp contact -		
Subunit 3. SAND - grey (5Y 5/1), well sorted, loose, massive, medium sand. Scattered silt clasts (2-10mm thick) at subunit base.	0.25	28.00
- irregular contact (with 0.05-0.10m relief) -		
Subunit 2. SILTY SAND - brownish black (2.5Y 3/2), weakly rippled and convolute laminated medium to fine sand. Scattered silt clasts (5-10mm thick).	1.25	27.75
- sharp contact -		
Subunit 1. SILT - greyish olive (5Y 5/2), thinly laminated silt with very thin-bedded to laminated, coarse to medium sands. 0.70-0.90m (from upper contact) distinctly laminated, fissile silts and silt clasts (3-8mm thick).	1.75	26.50
- sharp contact -		

UNIT		A	B
2	Subunit 6. SAND - dark, well sorted, weakly thin-bedded, medium sand. See subunit 3, unit 3.  - sharp contact -	0.45	24.75
	Subunit 5. SAND - greyish olive (7.5Y 5/2), thin-bedded, medium to fine sand. Lenses of very thin-bedded to laminated fine sand and silt throughout subunit.  - sharp contact -	11.10	23.80
	Subunit 4. SAND - moderately well sorted, coarse to medium sands and granules; occasional pebbles and small cobbles, mainly plutonics. Upper 0.30m weakly thin-bedded sand lenses with silt clasts (papery : 2-6mm).  - gradational contact (over 0.20m) -	0.90	22.70
	Subunit 3. SAND - weak thick beds of coarse to medium sand, with few subrounded pebbles and cobbles; very thin-bedded coarse sand and granule layers. High mafic content gives subunit dark olive grey (10Y 4/2) to olive black (10Y 3/2) colour.  - sharp contact -	15.00	21.80
	Subunit 2. SAND and SILT - brownish black (2.5Y 3/2), weak thinly-bedded, fine sand and very minor silt laminae.  - gradational contact (over 0.30m) -	0.40	6.80
	Subunit 1. SAND - see subunit 3, unit 2, coarse to medium sand.  - sharp contact -	4.40	6.40
1	DIAMICTON - olive yellow (5Y 6/4). Composed of multiple laminations of silt and clay with scattered very thin-bedded fine sand; occasional coarse to medium sand partings; scattered subangular to subrounded pebbles.  Unbottomed in stream bed.	2.00+	2.00

SOUTH OF LAKE FRYXELL

SECTION M - measured in trench 0.5m deep on east facing slope of low mound, in old stream channel. 1.3km east of Lake Fryxell, central lower valley. Map elevation 30m (77° 36.4'S : 163° 19.2'E). Measured by CGV and PHR. 12/74.

UNIT	A	B
SURFACE LAYER - well developed, dark pebble surface between scattered cobbles and boulders of dolerite, basalt and granite. This veneer covers 0.02-0.03m of weakly cemented grey (N 6/1), coarse sand with weak soil development and platy structure.		
1		
SAND - greyish olive (7.5Y 4/2), thin - to very thin-bedded, coarse to medium sand, interbedded with thin-laminated silts.		
Unbottomed at permafrost surface.		

SECTION G - measured in trench 1.0m deep on north facing slope of high mound, 1.3km east of Lake Fryxell. 400m to the south of section M. Map elevation 50m (77° 36.6'S : 163° 19.7'E). Measured by CGV and PHR. 12/74.

UNIT	A	B
SURFACE LAYER - tight cobble to boulder covered surface, with minor pebbles and coarse sand; mainly basalt and dolerite with minor plutonics. Covers 0.10-0.20m of silty sand and scattered small pebbles; weak soil development and minor carbonate.		
2	0.35	0.85
SILT - light yellow (2.5Y 7/3), unbedded, silt with minor fine sand towards unit base.		
- sharp contact -		
1	0.50+	0.50
COARSE SAND, GRANULES and PEBBLES - poorly sorted, loose, unbedded basaltic granules, with coarse sand and pebbles.		
Sample 13100 Granules.		
Unbottomed at permafrost surface.		

SECTION N - measured in trench 0.5m deep on east facing kenyte covered high ridge, 1.5km south east of Lake Fryxell. 30m above and 150m to the south of section G. Map elevation 80m (77° 36.9'S : 163° 18.8'E). Measured by CGV and PHR. 12/74.

UNIT	A	B
SURFACE LAYER - veneer of predominantly volcanic (kenyte and basaltic scoria) cobbles and coarse sands, covering 0.05m of loose coarse sand with weak soil development.		
2		
COARSE SAND and GRANULE - very thin-bedded, basalt-rich, coarse sand and granules inter-bedded with pale yellowish grey (2.5Y 6/1), laminated (2-6mm) dessicated algal plate partings.		
- sharp contact -		
1	0.20+	0.20
FINE SAND and SILT - greyish yellow, very thin-bedded to laminated fine sand and silt interbeds.		
Unbottomed at permafrost surface.		

SECTION H - measured in outcrop on west (true left) bank of Blong Gully, in fore-slope of deltaic mound. 1.0km south of Lake Fryxell. Map elevation 60m. (77° 37.6'S : 163° 11.5'E). Measured by CGV and PHR. 12/74.

UNIT	A	B
SURFACE LAYER - well developed, tight, uniform, medium pebble surface.		
2 FINE SAND and SILT - bright yellow brown (2.5Y 6/6), laminated to thinly laminated medium to fine sand and silt; few scattered pebbles. Basal 0.20, very thin-bedded, coarse to medium sand interbedded with silt laminae.	0.50	0.85
- sharp contact -		
1 COARSE SAND, GRANULES and PEBBLES - loose, massive basaltic granules, with coarse sand and pebbles.	0.35+	0.35
Sample 13101 Granules.		
Unbottomed at permafrost surface.		

SECTION K - measured in trench 0.80m deep on high ridge between Blong Gully and Delta Stream; 1.2km south of Lake Fryxell. Map elevation 120m (77° 37.8'D : 163° 8.5'E). Measured by CGV and PHR. 12/74.

UNIT	A	B
SURFACE LAYER - tight pebble to boulder veneer of basalt, dolerite and minor plutonics. Weak soil development to 0.01-0.02m depth.		
2 GRANULES - moderately well sorted, loose, massive basalt-rich granules, with coarse sand and pebbles. Weak, very thin-beds of coarse to medium sands (lower 0.20m) separated from the granules by thin (0.03m) algal plate parting.	0.30	0.80
Sample 13108 Algal plates 13109 Granules and algae.		
- sharp contact -		
SILTY CLAY - pale yellow (5Y 8/2), unbedded clay with minor fine sand.	0.50	0.50
Unbottomed at permafrost surface.		

PART 2

STRATIGRAPHIC SECTIONS FROM UPPER TAYLOR VALLEY

Measured and described in the 1974-75 (VUWAE 19) and 1975-76 (VUWAE 20) seasons by:-

C.G. Vucetich, P.H. Robinson and A.S. Palmer  
Geology Department, Victoria University of Wellington.

UPPER TAYLOR VALLEY

EAST OF LAKE BONNEY

SECTION P - measured 300m south of snout of Lacroix Glacier in meltwater stream channel.  
Map elevation 130m. (77° 41.2'S : 162° 34.8'E). Measured by PHR and CGV. 12/74.

UNIT	A	B
SURFACE LAYER - capped by a pavement of coarse sands to boulders, with granite granodiorite, dolerite and minor basalt scoria lithologies.		
15	4.30	27.92
SILTY SAND - see units 2, 8 and 13. Dull yellow (2.5Y 6/4), unbedded silt rich matrix, with scattered unoriented clasts. Few weakly bedded sand and pebble layers (0.40, 2.00, 2.50 and 3.10m from unit top) with maximum thickness of 0.30m. Grading of sands in lower 0.50m occurs with a decrease in clast size and colour change (greyish yellow - 5Y 6/2). Sample 13172 Sand, from parting (26.12m) 13171 Silty sand (26.82m). - gradational contact (over 0.30m) -		
14	0.69	23.62
SILT and SAND INTERBEDS - greyish olive (5Y 5/3), moderately well sorted, thin-bedded, coarse sand and granules with silt laminae. Clast (up to large pebbles) lithologies as above (unit 15). Sample 13185 Sand and silt (23.33m) - gradational contact (over 0.25m) -		
13	1.49	23.93
SILTY SAND - see unit 2. Grey (5Y 6/1), weak bedding of lateral wedging silty sand. Large clasts (pebble to small boulders) are dispersed throughout the sand matrix. Lateral variation from silty sand to light grey sands. Sample 13173 Light grey sand (22.64m)* 13186 Silty sand (22.64m)* * These samples are from the same unit (13) at the same stratigraphic position but 40m laterally separated. - gradational contact (over 0.20m) -		
12	0.44	22.44
SILT and SAND INTERBEDS - laminated to thinly-laminated silt interbedded with thin-bedded, coarse to medium sand; with normal grain texture grading. Granules, pebbles and small cobbles confined to upper 0.20m. - sharp contact -		
11	1.56	22.00
GRANULES, PEBBLES and COBBLES - poorly sorted, loose, unbedded gravel of subangular to subrounded granodiorite, granite, dolerite and basalt scoria in coarse sand matrix, lacking fines. Sample 13187 Coarse sand and pebbles (21.24m) - sharp contact -		

UNIT		A	B
10	SILTY SAND - dull yellow (2.5Y 6/3), weak, thin - to very thin-bedded, medium to fine sand and silt with scattered pebble and boulder clasts of characteristic lithologies. Unbedded coarse sand and granule lenses in lower 1.0m of unit.  Sample 13175 Silty sand (19.16m)  - gradational contact (over 0.25m) -	2.48	20.44
9	SAND and SILT INTERBEDS - pale yellow (2.5Y 8/4) to greyish yellow (2.5Y 7/2), prominent very thin-bedded to laminated silt and thin-bedded sand. Lower 1.0m contains shaly to flaggy silt clasts in laminae interbedded with sparse thin - to very thin-bedded coarse sands and granules. Upper 1.50-2.50m of moderately well sorted, thin-bedded, medium sands with minor silt beds (increasing with depth) and scattered medium to large pebbles (similar lithologies to those in active layer).  Sample 13176 Sand, minor silt (15.34m) 13188 Sand, minor silt (17.74m)  - sharp contact -	3.72	17.96
8	SANDY SILT - greyish olive (5Y 5/3), weakly laminated silt with thin-bedded sand and few dispersed pebbles (up to 0.03m). Lower 0.6m more clayey; upper 0.2 more coarse and gritty.  Sample 13184 Silty sand (13.42m) 13162 Silty sand (13.62m) 13177 Silty sand (13.82m) 13190 Silty sand (14.12m)  - sharp contact - where large boulders (up to 0.3m) mark the unit contacts.	0.92	14.24
7	SILT and COARSE SAND INTERBEDS - light greyish yellow (2.5Y 7/2), strong, very thin-bedded to laminated, weakly cemented silt and medium to thin-bedded sand. See unit 9, except clasts are pebbles to small cobbles.  Sample 13178 Sand (13.07m)  - sharp contact -	0.75	13.32
6	SILTY SAND - dull yellow (2.5Y 6/5), moderately well sorted, weakly cemented, fissile, platy to shaly medium sand and scattered pebbles (lithology as active layer).  Sample 13179 Silty sand (12.42m)  - sharp contact -	0.35	12.57
5	SAND and SILT INTERBEDS - light yellow (7.5Y 7/3), moderately well sorted, loose, thin-bedded medium to coarse sands and few pebbles, interbedded with very thin-bedded to laminated, weakly cemented silts.  Sample 13161 Silty sand (11.56m) 13189 Silty sand (11.96m)  - sharp contact -	0.86	12.22
4	SAND - grey (10Y 6/1), moderately well sorted, weakly cemented, thin-bedded, fine sand with minor silt. Unit shows normal grading with coarse sand and minor medium pebbles in lower unit. A 'Diamicton'.	1.13	11.36



Sample 13160 Sand (10.83m)

- sharp contact -

- |   |  |      |       |
|---|--|------|-------|
| 3 | SAND - dull yellow (2.5Y 6/3), very thin-bedded, medium to fine sand, with minor silt. Laminae convolute (0.10-0.20m wavelength; 0.05-0.10m amplitude) becoming ripple laminations in upper 0.25m. Pebbles scattered throughout. | 0.75 | 10.23 |
|---|--|------|-------|

Sample 13159 Medium sand (9.78m)

- gradational contact (over 0.10m) -

- |   |  |      |      |
|---|--|------|------|
| 2 | SAND - greyish yellow (2.5Y 6/2), poorly sorted unit of weakly bedded (0.10-0.20m) medium to fine sand matrix with high subangular to subrounded, granule to medium boulder, clast content. Clasts are scattered throughout; lithologies - granite, granodiorite and dolerite. One dark grey, moderately well sorted, laminated, medium sand layer (0.20-0.30m thick) in lower 0.5-1.0m. | 2.93 | 9.48 |
|---|--|------|------|

Sample 13156 Silty sand (7.05m)  
 13157 Sand lense (7.25m)  
 13158 Silty sand (8.85m)

- gradational contact (over 0.30m) -

- |   |  |       |      |
|---|--|-------|------|
| 1 | SAND and PEBBLE INTERBEDS - well sorted, thin-bedded to laminated (0.01-0.10m) interbeds of medium sands, coarse sands and pebbles. The bedding is distinct, graded and cross-stratified (in medium sand laminae). Granule and pebble thin-beds of plutonics and basalt. Cemented, very thin-bedded to laminated, coarse sand and granule layers at 5.3 and 6.27m from section base. | 6.55+ | 6.55 |
|---|--|-------|------|

Sample 13168 Pebbles and coarse sand (1.54m)  
 13169 Medium sand (1.76m)  
 13182 Granule and coarse sand layer (5.38m)  
 13164 Granule and coarse sand layer (5.38m)  
 13183 Basalt granules (5.58m)  
 13167 Pebbles and granules (5.77m)  
 13163 Sand (6.07m)  
 13181 Coarse sand and granule layer (6.27m)

Unbottomed in stream bed.

SECTION W1 - 2km east of Lake Bonney, section measured in 'ice-cored' mound on valley floor 300m south of Lacroix Glacier. Map elevation 105m. (77° 41.4'S : 162° 34.5'E).  
 Measured by CGV and PHR. 12/74.

UNIT	A	B
SURFACE LAYER - predominantly coarse sand and pebbles, few scattered small boulders. No soil development.		
4 DIAMICTON - light yellow (5Y 7/3), coarse sand to small cobbles in a poorly sorted, weakly bedded sand, with minor silt, matrix.	0.30	0.60
- gradational contact (over 0.05m) -		
3 COARSE SAND and GRANULES - moderately well sorted and unbedded coarse sand and granules.	0.10	0.30
Sample 13154 Coarse sand (0.25m)		
- sharp contact -		

UNIT		A	B
2	SILT - pale yellow (5Y 8/3), well sorted, laminated silt.  Sample 13155 Silt (0.17m)  - gradational contact (over 0.05m) -	0.05	0.20
1	SAND - moderately well sorted, unbedded basal coarse sand grading to upper fine sand.  - unbottomed at permafrost surface -	0.15+	0.15

SECTION W2 - on same mound as section W1. (3m to the west). Measured by CGV and PHR. 12/74.

UNIT		A	B
2	SURFACE LAYER - see section W1.		
2	DIAMICTON - see unit 4, section W1. Contains 'tuffaceous' clasts (0.01-0.03m).  Sample 13243 Tuffaceous material.  - sharp contact -	0.40	0.70
1	SAND - moderately well sorted, unbedded, medium to coarse sand. One layer (0.01-0.03m thick) of thinly laminated silt (0.05m from upper contact).  Unbottomed at permafrost surface.	0.30+	0.30

SOUTH OF LAKE BONNEY

SECTION Q1 - measured south side of Lake Bonney, at the base of a bench riser. Map elevation 100m. (77° 42.7'S : 163° 30.8'E). Measured by CGV and PHR. 12/74.

UNIT	A	B
SURFACE LAYER - moderately well sorted pebble pavement of subrounded granodiorite, dolerite and basalt clasts.		
4 SILT - pale yellow (2.5Y 8/3), thinly laminated. Sample 13191 Silt (1.05m). - gradational contact (over 0.10m) -	0.07	1.10
3 SAND and SILT INTERBEDS - grading from basal thin-bedded, coarse sands and laminated silts to upper very thin-bedded fine sands and laminated silts. Moderate to well sorted individual beds. - sharp contact -	0.38	1.03
2 SILT - light yellow (2.5Y 7/3), thinly laminated, platy silt with inverse grading to upper fine sand laminae. Sample 13192 Silt (0.50m) - sharp contact -	0.45	0.65
1 SAND - well sorted, massive, medium to fine sand. Sample 13193 Sand (0.10m) Unbottomed at permafrost surface.	0.20+	0.20

SECTION Q2 - measured 8m to the west of Q1. Measured by CGV and PHR. 12/74.

UNIT	A	B
SURFACE LAYER - 'tight' pebble pavement, moderate clast sorting with granule and coarse sand matrix. Mixed lithologies; granodiorite predominant.		
2 SILT - greyish yellow (2.5Y 7/2), thinly laminated; weak soil development. - sharp contact (12° dip to the north) -	0.10	0.70
1 SAND - well sorted, medium to thin-bedded, medium to fine sand. See unit 1, section Q1. Unbottomed at permafrost surface.	0.60+	0.60

SECTION R1 - measured south side of Lake Bonney, 300m east of sections Q1 and Q2. Map elevation 120m. (77° 42.9'S : 163° 31.1'E). Measured by CGV and PHR. 12/74.

UNIT	A	B
SURFACE LAYER - 'tight' pebble to cobble pavement with granodiorite, granite, dolerite and minor basalt scoria.		
4 SAND - weak, very thin beds of coarse to medium sand with scattered granules and pebbles (lithology, see active layer).	0.25'	1.10

UNIT	A	B
Sample 13195 Sand (0.95m)		
- sharp contact -		
3 SILT - dull yellow (2.5Y 6/3), laminated and containing few pebbles.	0.10	0.85
Sample 13196 Silt (0.80m)		
- sharp contact -		
2 GRANULES and PEBBLES - poorly sorted, loose, massive pebbles with coarse sand and granule matrix. Mixed lithologies; high scoria content. Weak grading throughout upper unit. Silt partings (0.03m), thinly laminated in 0.30m from lower contact. Lower 0.30m, poorly sorted, massive coarse sand and granules with few pebbles.	0.65	0.75
Sample 13197 Coarse sand to pebbles (0.55m)		
13198 Coarse sand and granules (0.25m)		
- sharp contact -		
1 SILT - light grey (5Y 7/2), thinly laminated.	0.10+	0.10
Unbottomed at permafrost surface.		

SECTION R2 - measured south side of Lake Bonney, 600m above section R1. Map elevation 180m. Measured by CGV and PHR. 12/74.

UNIT	A	B
SURFACE LAYER - surface pebble pavement with weak soil development in upper 0.05m.		
3 SILT and SAND INTERBEDS - very thin-bedded fine sand and silt graded beds, with wavy bedding.	0.20	0.62
- erosional contact (0.50m relief) -		
2 SAND - moderately well sorted, unbedded coarse sand, with minor granules and pebbles. Grades from granules and pebbles at unit base to weakly cemented, medium sand in middle of unit. Overlain by a weak, thinly laminated silt parting (0.03-0.05m thick), with minor granules and small pebbles which separate the lower graded sands from unbedded coarse sand and pebbles in upper unit.	0.27	0.42
- sharp contact -		
1 SILT - greyish olive (5Y 6/2), thinly laminated fine sand and silt interbeds with scattered granules and small pebbles. Weakly bedded, well sorted granule lenses (less than 10mm thick) at unit base.	0.15+	0.15
Unbottomed at permafrost surface -		

SECTION R3 - measured 500m west of lowest lobe of Hughes Glacier, in elevated mound above a meltwater stream. Map elevation 210m. (77° 43.7'S : 162° 25.2'E). Measured by CGV and PHR. 12/74.

UNIT	A	B
SURFACE LAYER - tight pebble pavement.		

UNIT		A	B
2	SILT - light yellow (5Y 7/3), well laminated, platy silt.  Sample 13202 Silt (0.55m)  - sharp contact -	0.15	0.65
1	SAND - moderately well sorted, massive, medium sand. Few lenses (up to 0.05m thick) of laminated silt and minor small pebbles.  Sample 13203 Sand (0.30m)  Unbottomed at permafrost surface.	0.50+	0.50

SECTION S1 - measured south side of Lake Bonney, main meltwater channel draining lowest lobe of Hughes Glacier. Outcrop exposed laterally 15-20m in east (true right) bank. Map elevation 140m. (77° 43.3'S : 162° 26.1'E). Measured by CGV and PHR. 1/75.

UNIT		A	B
	SURFACE LAYER - range of clast size (pebble to medium boulder) and lithology (granodiorite granite, dolerite and porphyry) in a coarse sand and granule 'open' matrix.		
3	DIAMICTON - greyish olive (7.5Y 6/2), weak, thinly-bedded sandy silt with scattered clasts (pebble to boulder). Interbeds of loose, coarse sand and granules (0.40m and 1.25m from unit top) which are well sorted, very thin-bedded lenses (0.10-0.30m thick), thinning laterally to the north. Subangular to sub-rounded clasts in matrix with minor laminae deformation around boulders. Possible shell fragments and tuffaceous clasts in basal silt-rich matrix.  Sample 13214 Diamicton (1.45m) 13215 Sand lense (1.15m) 13216 Diamicton, shell fragments (0.70m)  - sharp contact -	1.90	2.40
2	SAND, GRANULES and PEBBLES - poorly sorted, loose, unbedded, basalt-rich sand, granules and small pebbles.  Sample 13127 Sand, granules, pebbles (0.40m)  - sharp contact -	0.20	0.50
1	SILTY SAND - grey (7.5Y 6/1), moderately well sorted, very thin-bedded, silt-rich, medium to fine sand with few scattered, very small pebbles (less than 8mm).  Unbottomed in stream bed.	0.30+	0.30

SECTION S2 - 2m downstream (north) of section A1. Measured by CGV and PHR. 1/75.

UNIT		A	B
	SURFACE LAYER - see section S1.		
4	DIAMICTON - see unit 3, section S1. Greyish olive (7.5Y 6/2), poorly sorted, silt-rich sand with three prominent, moderately well sorted, unbedded, massive coarse sand to pebble layers (0.10-0.30m thick); 0.30 and 0.85m from unit top. Upward increase of subrounded pebbles and cobbles; mixed lithologies, high in basalt clasts.	1.40	2.20

UNIT		A	B
	- sharp contact -		
3	SAND, GRANULES and PEBBLES - see unit 2, section S1. Poorly sorted, loose, unbedded, basalt-rich, coarse sand, granules and small pebbles.	0.10	0.80
	- sharp contact -		
2	SILTY SAND - see unit 1, section S1. Grey (7.5Y 6/1), silt-rich sand with lenses and layers of coarse sands and granules (0.05-0.035 and 0.45-0.50 from unit top). Basal silt is unbedded with minor fine sand. An upward increase in sand with very thin-bedding is apparent. The upper lense thins to the south and consists of well sorted, very thin-bedded coarse sand and granules.  Sample 13218 Upper sand lense (0.65m) 13219 Silty sand (0.40m) 13220 Silt (0.30m)	0.50	0.70
	- sharp contact -		
1	COARSE SAND - well sorted, unbedded sand.  Sample 13221 Coarse sand (0.10m)  Unbottomed in stream channel.	0.20+	0.20

SECTION S3 - 10m north (downstream) of section S2.

UNIT		A	B
	SURFACE LAYER - 'tight' pebble and cobble pavement.		
4	DIAMICTON - greyish olive (7.5Y 6/2). See units 3 and 4, sections S1 and S2 respectively. Poorly sorted, weakly thin-bedded, sandy silt with scattered clasts (pebbles, cobbles and few small boulders). One moderately well sorted, coarse sand and pebble layer between 0.10-0.20m from unit top.  - sharp contact, marked by a thin layer (0.05m) of basalt-rich sand and granules - see units 2 and 3, sections S1 and S2 respectively.	0.90	1.45
3	SAND and GRANULES - see lense, unit 2, section S2. Well sorted, very thin-bedded, coarse sand and granules inter-bedded with pebble layers. Ten scattered clasts. Unit is lateral equivalent of lense, unit 2, section S2.  - sharp contact -	0.30	0.55
2	SILT - see base of unit 2, section 2. Light grey (5Y 7/1), unbedded silt with upward increase in fine sand.  - sharp contact -	0.15	0.25
1	COARSE SAND - see unit 1, section S2, well sorted, unbedded, coarse and medium sand.  Unbottomed at permafrost surface in stream channel.	0.10+	0.10

SECTION T - south side of Lake Bonney, centre of east lobe of lake, at lake level. Map elevation 60m (77° 42.9'S : 162° 28.2'E). Measured by CGV and PHR. 1/75.

UNIT	A	B
SURFACE LAYER - thin capping of pebbles and coarse sand on slope.		
6 SILTY SAND - moderately well sorted, very thin-bedded, medium sand interbedded with laminated, silty, fine sand. Scattered clasts (granodiorite, granite, dolerite) up to small cobble size.  Sample 13238 Silty sand (1.20m)  - sharp contact -	0.52+	1.50
5 SILTY SAND - unit base is unbedded, silt-rich, medium to fine sand with upward increase in sand and clasts.  Sample 13239 Silty sand (0.80m)  - gradational contact (over 0.10m) -	0.38	0.98
4 SILT - olive yellow (7.5Y 6/3), weakly laminated; minor, very fine sand laminations; high clay content.  Sample 13240 Silt (0.55m)  - sharp contact -	0.11	0.60
3 SILT - greyish olive (7.5Y 6/2), well sorted, laminated, fine sand interbedded with dominant very thin-bedded silt.  Sample 13241 Silt (0.25m)  - gradational contact (over 0.05m) -	0.29	0.49
2 CLAY - olive grey (2.5GY 5/1), with silt and minor fine sand.  - gradational contact (over 0.03m) -	0.08	0.20
1 SAND - moderately well sorted, medium to coarse sand, with deformed silty clay partings, (0.05m).  Sample 13242 Medium sand (0.10m)  Unbottomed at lake edge.		

SECTION U1 - south side of Lake Bonney, western end of east lobe. Outcrop in dry stream channel, with drainage into Lake Bonney. Map elevation 140m. (77° 43.3'S : 162° 24.5'E). Measured by PHR and ASP. 12/75.

UNIT	A	B
SURFACE LAYER - 'tight', moderately well sorted, pebble pavement; underlain by 0.10m of weathered, dull yellow (2.5Y 6/4) fine silt.		
3 SILT - light yellow (2.5Y 7/3), very thin-bedded to laminated silt and very fine sand layer. Upward fining into soil of active layer.  - gradational contact (over 0.10m) -	0.60	2.10
2 SILTY SAND - greyish yellow (2.5Y 6/2), poorly sorted, weakly bedded, fine sand, silt and minor clay with coarse sand and granule layers ('diamicton'). Scattered pebbles and small cobbles.	0.80	1.50

UNIT	A	B
- sharp contact -		
1 COARSE SAND and GRANULES - moderately well sorted, unbedded, coarse sand and granules with few pebbles and cobbles of mixed lithologies (granite, granodiorite, dolerite, basalt scoria).  Unbottomed in stream channel.	0.70+	0.70

SECTION U2 - same stream channel as section U1; 100m to the south (upstream). Map elevation 145m. Measured by PHR and ASP. 12/75.

UNIT	A	B
SURFACE LAYER - 'open' pebble to boulder pavement with coarse sand and granule matrix.		
3 SILTY SAND - light grey (5Y 7/2), very thin-bedded fine sand and silt interbedded with thin-bedded medium to coarse sand. Numerous subangular pebbles and boulders of plutonics and minor volcanics.  - sharp contact (basal layers (0.07m) of unit 3 are disrupted along the contact with unit 2) -	1.00	2.20
2 DIAMICTON - light yellow (5Y 7/4), poorly sorted, unbedded, silty, fine sand with numerous subangular to subrounded, granule to boulder clasts; lithologies granite, granodiorite and minor dolerite. Unit thins 3.0m to the east.  Sample 13243 Diamicton (0.08m)  - sharp contact -	0.90	1.20
1 SAND - moderately well sorted, thin-bedded, medium sand with coarse sand to small cobble inclusions.  Unbottomed at permafrost surface in stream channel.	0.30+	0.30



NORTH OF LAKE BONNEY

SECTION V - north side of Lake Bonney, eastern end of east lobe. Exposure in main stream channel draining the Matterhorn Glacier. Map elevation 90m (77° 42.6'S : 162° 29.2'E). Measured by PHR and ASP. 12/75.

UNIT		A	B
	SURFACE LAYER - pebble to boulder slope over underlying unit.		
6	DIAMICTON - greyish olive (5Y 5/3), poorly sorted, unbedded, fine sand and silt, with granule to boulder clasts; mixed lithologies. Cemented, white, tuffaceous (?) clasts (medium pebble size) scattered through a 10-20m zone subparallel to bedding 0.45-0.50m above the unit base. One sharp coarse sand to pebble layer (0.40-0.45m above unit base) with angular granite, granodiorite and dolerite clasts, thins to the south (downstream) for 10-15m at 6° dip.	1.75+	5.42
	Sample 13232 Diamicton (3.90m)		
	13233 Cemented, white clasts (4.12m)		
	13234 Coarse sand/pebble layer (4.07m)		
	- sharp contact -		
5	SANDY SILT - pale yellow (2.5Y 8/3); contains scattered pebbles and boulders (mixed lithologies) in a weak thinly-bedded to laminated fine sand and silt matrix.	0.40	3.67
	Sample 13234 Sandy silt (3.40m)		
	13263 Sandy silt (3.50m)		
	- sharp contact -		
4	DIAMICTON - light yellow (5Y 7/3), moderate to poorly sorted, unbedded fine sand and silt matrix with pebble to boulder clasts.	1.55	3.67
	Sample 13236 Diamicton (2.70m)		
	13264 Diamicton (3.00m)		
	- sharp contact -		
3	SAND - bright yellowish brown (2.5Y 7/6), moderately well sorted, medium sand.	0.15	1.72
	- sharp contact -		
2	SILT - pale yellow (2.5Y 8/3), unbedded, very fine silt to clay, slightly cemented with tuffaceous appearance. Dipping 6° to the south.	0.12	1.57
	Sample 13237 Silt (1.50m)		
	- sharp contact -		
1	DIAMICTON - pale yellow (7.5Y 8/3), poorly sorted, unbedded, sandy silt matrix with numerous scattered pebble to boulder clasts (up to 0.5m diameter); granite, granodiorite and dolerite.	1.45+	1.45
	Unbottomed at lake level.		

TAYLOR GLACIER

Section descriptions are from exposures in stream channels draining the Rhone and Calkin Glaciers to the north and south of Taylor Glacier snout.

NORTH SIDE OF TAYLOR GLACIER

AREA A (see figure 2) - most westerly dry stream channel (stream A) draining from the west side of the Rhone Glacier; 0.8km west of Lake Bonney.

SECTION 1 - measured at confluence of North Taylor stream and stream A. Outcrop in western bank. Map elevation 130m. (77° 43.3'S : 77° 14.7'E). Measured by PHR and ASP. 12/75.

UNIT	A	B
SURFACE LAYER - 'open' pebble to boulder pavement with predominantly subrounded granite granodiorite and dolerite erratics in a coarse sand and granule matrix.		
2	0.90	2.40
DIAMICTON - light yellow (5Y 7/3), poorly sorted, unbedded sandy silt matrix, surrounding scattered pebbles to small boulders (plutonics and volcanics); subangular to subrounded (see unit 5, section 2).		
- sharp contact -		
1	1.70+	1.70
SAND - grey (5Y 5/1), moderately well sorted, strong thin-bedded, medium sand.		
Unbottomed in stream channel.		

SECTION 2 - measured in area A, stream A, north side of Taylor Glacier. 80m north (upstream) of north Taylor stream and stream A confluence, on east bank. Map elevation 140m. Measured by PHR and ASP. 12/75.

UNIT	A	B
SURFACE LAYER - pavement of coarse sand to scattered subrounded boulders; weathered soil development to 0.10m.		
3	0.60	3.45
DIAMICTON - light yellow (5Y 7/3), poorly sorted, unbedded, fine sand and silt, with weak subhorizontal fissility. Subangular to subrounded granite, granodiorite and dolerite pebbles to small boulders. Generally 'open' matrix with less than 10% clast content.		
Sample 13276 Diamicton (3.00m)		
13325 Diamicton (3.35m)		
- interfingering contact -		
2	0.85	2.85
SAND - poorly sorted, unbedded, coarse sand, granules and subrounded pebbles.		
Sample 13275 Sand (2.40m)		
- sharp contact -		
1	2.00+	2.00
DIAMICTON - light yellow (5Y 7/3), poorly sorted, unbedded, silt-rich sand. See unit 3. One lense of moderately well sorted, medium to coarse sand and granules; 0.10-0.45m thick with very thin-bedded layering and thins 10m to the south (downstream).		
Sample 13274 Diamicton (1.00m)		
Unbottomed in base of stream channel.		

AREA B (see figure 2) - middle west stream channel (stream B) draining from Rhone Glacier. 600m west of Lake Bonney.

SECTION 3 - measured 60m to the east (downstream) of section 1, in north Taylor stream. 4.0m vertical outcrop in north bank of stream channel. Map elevation 120m. Measured by PHR and ASP. 12/75.

UNIT	A	B
SURFACE LAYER - predominantly coarse sand to large pebbles, with scattered larger clasts; mixed lithologies.		
5	0.90	3.98
DIAMICTON - light yellow (5Y 7/3), poorly sorted, unbedded sandy silt with minor scattered pebbles. Basal 0.20m of unit contains weakly laminated wavy layers of silt interbedded with the massive sandy silt.		
Sample 13267 Diamicton (3.80m)		
13268 Diamicton (3.20m)		
- sharp, but undulating, contact -		
4	1.83	3.08
COARSE SAND, PEBBLES and COBBLES - upper 0.25m, well sorted, unbedded, coarse sand with minor pebble and fine sand lenses (up to 0.04m thick and laterally persistent for 0.50-1.00m). Lower 1.60m, angular to subrounded, medium to large pebbles and cobbles in a 'tight' matrix of coarse sand and granules. Dispersed at irregular intervals (between 0.10 and 0.35m apart), well sorted, medium to thin-bedded medium sands (0.20, 0.50, 0.60 and 0.80m from unit top). Sand layers are wavy, undulating and laterally continuous for 5-10m (outcrop width).		
A decrease in clast size occurs with unit depth, as bedding structures become more apparent. The basal 0.20m has small scale inclined bedded (cross-beds 0.05-0.10m) dipping 30-35° to the west; composed of medium to coarse sands and granules with strongly oriented (along bedding) angular to subangular pebbles. The upper surface of the cross-beds is truncated by the overlying thin-bedded coarse sand and gravel.		
Sample 13269 Coarse sand and pebbles (2.90m)		
13270 Coarse sand and pebbles (2.40m)		
13271 Medium sand lense (2.05m)		
13272 Cross-bedded sands (1.35m)		
- gradational (interfingering, over 0.20m) contact - Individual laminae of the cross-beds can be traced into the underlying subhorizontal bedding.		
3	0.35	1.25
SAND - brownish grey (10YR 5/1), moderately well sorted, graded sand. Upper 0.03-0.06m of thin-laminated fine sand grades into the overlying cross-beds of unit 4. Lower 0.20-0.30m is very thin-bedded, medium to coarse sand, becoming coarse sand to granule towards the base. Basal 0.05-0.10, clast dominated, coarse sand, granule and pebble layer; change in grain-size texture and colour as coarse sand and granule content decreases to less than 5%.		
Sample 13273 Sand (1.10m)		
- gradational contact (over 0.10-0.15m) -		
2	0.47	0.90
COARSE SAND, PEBBLES and COBBLES - see unit 4. Angular to subangular granite, granodiorite and dolerite pebbles and cobbles with minor coarse		

UNIT	A	B
<p>sand and granules; generally lacks bedding, except for one very thin-bedded to laminated fine sand and silt layer (0.03m thick - 0.07-0.10m from unit top), with wavy to convolute bedding. Basal 0.37m, tightly packed, subangular to subrounded pebbles and cobbles, with few small boulders and minor coarse sand to granules. Clast size decrease over the basal 0.10m.</p> <p>- sharp contact -</p>		
1	0.43+	0.43
<p>SAND and PEBBLES - loose, 'open', moderately well sorted, medium bedded, coarse sand with scattered subrounded pebbles and few cobbles. Interbedded with laminated medium to fine sand layers (0.01-0.02m thick) with 2-5° dip to the east.</p> <p>Unbottomed in stream channel.</p>		

SECTION 4 - measured at confluence of north Taylor stream and stream B. Exposure in western bank. Map elevation 120m (77° 43.5'S : 77° 15.1'E).

UNIT	A	B
<p>SURFACE LAYER - moderately well sorted, coarse sand and granules with 'tight' pebble pavement. Very weak soil development.</p>		
4	2.00	5.20
<p>SILT, SAND and GRANULE INTERBEDS - moderately well sorted, medium to thin-bedded silt, sand and granule interbeds.</p> <p>- sharp contact -</p>		
3	1.80	3.20
<p>PEBBLES, COBBLES and BOULDERS - angular to subrounded granite, granodiorite and dolerite pebbles to small boulders, within a 'tight' matrix of coarse sand and granules; lenses of thin-bedded medium to coarse sand.</p> <p>- sharp, but undulating, contact -</p>		
2	0.90	1.40
<p>DIAMICTON - light yellow (5Y 7/3), poorly sorted, unbedded, sandy silt matrix with minor (5-7%) clasts (pebbles and cobbles). Lower 0.40m, greyish olive (7.5Y 5/2); high clay content.</p> <p>Sample 13278 Diamicton (1.20m) 13279 Diamicton (0.70m)</p> <p>- sharp contact -</p>		
1	0.50+	0.50
<p>SAND, PEBBLES and COBBLES - bright reddish brown (5YR 5/8), moderately well sorted, unbedded, coarse sand and pebbles with pockets of angular to subrounded pebbles, cobbles and few small boulders; mixed lithologies.</p> <p>Unbottomed in stream channel.</p>		

SECTION 5 - measured 100m upstream B from confluence with north Taylor stream. Outcrop exposure 30-40m laterally on western bank. Map elevation 130m.

UNIT	A	B
<p>SURFACE LAYER - thick (0.15m) layer of moderately well sorted, coarse sand, granules and subangular to subrounded pebbles with few large boulders (up to 1.0m diameter);</p>		

UNIT		A	B
	lithologies of granodiorite, granite, dolerite and minor porphyry.		
3	SAND - moderately well sorted, thin-bedded, coarse sand and small pebbles. - sharp contact -	2.00	5.05
2	DIAMICTON - dull yellow (2.5Y 6/4) to olive yellow (5Y 6/4), poorly sorted, unbedded, silt-rich sand matrix surrounding angular to subrounded pebbles and cobbles (with few medium boulders). Upper 0.5m subhorizontal fissility. Sample 13280 Diamicton (2.30m) - sharp contact -	2.25	3.05
1	PEBBLES and BOULDERS - coarse gravels of unstratified, subangular to subrounded pebbles, cobbles and boulders in a 'tight' matrix of minor coarse sand and granules. Unbottomed in stream channel.	0.80+	0.80

AREA C (see figure 2) - middle east dry stream channel (stream C) draining east side of Rhone Glacier. 500m west of Lake Bonney.

SECTION 6 - measured at confluence of north Taylor stream and stream C, on the east bank 100m east of section 4. Map elevation 115m. (77° 43.8'S : 162° 15.8'E). Measured by PHR and ASP. 12/75.

UNIT		A	B
	SURFACE LAYER - 'open', subrounded, cobble to boulder pavement with coarse sand and pebble matrix. Slope scree cover.		
2	DIAMICTON - light yellow (2.5Y 7/3). Upper 0.10m, moderately well sorted, unbedded, sand-rich silt. Lower 0.4m, poorly sorted, unbedded silt. Scattered subrounded pebbles to boulders. Sample 13281 Diamicton (10.45m) 13282 Diamicton (10.20m) - sharp contact -	0.50+	10.50
1	COARSE SAND, GRANULES and PEBBLES - well sorted, weakly bedded, coarse sands with minor pebbles, in upper 2.00m. Lower 8.00+m, well sorted, medium to thin-bedded, medium to fine sand interbedded with very thin-bedded to laminated silt. Sample 13283 Sand and silt (6.00m) 13284 Sand and silt (4.00m) 13285 Sand and silt (3.00m) Unbottomed in stream channel.	10.00+	10.00

AREA E (see figure 2) - easternmost stream channel (stream E) draining the east side of Rhone Glacier. 100m west of Lake Bonney.

SECTION 7 - measured in stream E, 100m upstream of the confluence with north Taylor stream; in west bank. Map elevation 80m. (77° 43.3'S : 162° 16.3'E). Measured by PHR and ASP. 12/75.

UNIT		A	B
	'open' pebble to cobble veneer with few small boulders, with coarse sand and granule matrix.		
2	DIAMICTON - light yellow (7.5Y 7/3). Upper 0.50m, poorly sorted, unbedded, sand-rich silt with an 'open' matrix. Lower 0.4m, light yellow (5Y 7/4), is more silty and contains strong subhorizontal fissility and brecciation (platy to shaly), lacks bedding, decrease in clast content with depth.  Sample 13291 Diamicton (5.25m) 13292 Diamicton (4.80m)  - sharp contact -	0.90	5.50
1	SAND - well sorted, medium to thin-bedded, medium to coarse sand, interbedded with moderately well sorted, medium bedded, sands and granules, with minor pebbles. Shows weak normal grading. Upper 0.10m, a coarse sand and pebble subunit, emphasising the upper contact.  Unbottomed in stream channel.	4.60+	4.60
SECTION 8 - measured in west tributary of stream E, 75-100m upstream of section F. Map elevation 100m. Measured by PHR and ASP. 12/75. Map			
UNIT		A	B
	SURFACE LAYER - moderately well sorted, 'tight', subrounded pebble pavement, with minor coarse sand, granules and cobbles.		
3	SAND and PEBBLES - continued active layer. Loose pebbles with coarse sand and granule matrix; unbedded and moderately well sorted.  Sample 13295 Sand and pebbles (3.00m)  - contact obscured by scree from unit 3 -	0.50	3.10
2	SILT - light yellow (2.5Y 7/4), well sorted, very thin-bedded to laminated silt; strong fissility along bedding. Minor subangular to subrounded pebbles with associated bedding deformation and disruption around clasts. Beds dipping 8° to the east (downstream).  Sample 13294 Silt (0.90m)  - erosional contact (truncating underlying sub-horizontal bedding) -	2.00+	2.60
1	COARSE SAND and PEBBLES - poorly sorted, loosely packed, weak, thinly-bedded, coarse sand and pebbles, with high fines (medium to fine sand and minor silt) content in matrix - greyish yellow (2.5Y 7/2). Patches of strongly stained (bright yellowish brown - 10YR 6/6), coarse to medium sand, close to upper contact.  Sample 13293 Sand and pebbles (0.30m)  Unbottomed in stream channel.	0.60+	0.60

SECTION 9 - measured in stream E, 7-10m above section 8. Bluff-forming exposure at top of sand scree slope 5 above present dry stream channel; outcrop in west bank. Map elevation 110m. Measured by PHR and ASP. 12/75.

UNIT	A	B
SURFACE LAYER - pebble to boulder pavement. Subangular to subrounded granite, granodiorite, dolerite and porphyry erratics in a 'tight' surface veneer; minor coarse sand and granules in matrix.		
2	1.30	1.90
DIAMICTON - light yellow (2.5Y 7/4). Upper 0.80-1.00m, poorly sorted, weakly fissile, sand-rich silt with weak disrupted very thin-bedded and laminated, sorted, fine sands. Few pebbles and cobbles. Basal 0.30-0.50m, unbedded, silt-rich sand with more abundant, subangular to subrounded clasts (pebble and cobble) especially the lowermost 0.10m with predominant, coarse sand to pebbles.		
Sample 13296 Diamicton (1.40m)		
13298 Diamicton (1.40m)		
- erosional contact (0.05-0.10m in relief) -		
1	0.60+	0.60
SANDS and GRANULES - light grey (N 8/0), weak, very thin-bedded, coarse to medium sands and granules, coarsening with depth; colouring appears to be grain surface staining.		
Sample 13297 Sand (0.30m)		
Unbottomed in scree slope.		

SECTION 10 - measured in stream E, west tributary, 3m above end 40m upstream of section 9. Map elevation 115m (77° 43.1'S : 162° 15.9'E). Measured by PHR and ASP. 12/75.

UNIT	A	B
SURFACE LAYER - pebble to boulder pavement. Mixed clast size and lithologies. High fine-grained dolerite and porphyry content.		
2	1.50	3.50
DIAMICTON - light yellow (2.5Y 7/4), poorly sorted, weakly fissile, massive silt-rich sand; weakly stratified, discontinuous fine sand partings (less than 10mm thick). Pockets of subangular to subrounded pebbles and boulders of mixed lithologies. Few lenses (0.01-0.05m thick, 0.1-1.0m long) of rudimentary, very thin-bedded, medium to coarse sand.		
- gradational contact (over 0.20m) -		
1	2.00+	2.00
SILT - light yellow (5Y 7/3), fissile, flaggy, weakly stratified, sand-rich silt. Only minor pebbles and cobbles. Lenses of sandy diamicton, with high proportion of coarse, subangular to subrounded clasts, similar to unit 2.		
Sample 13299 Silt (1.00m)		
unbottomed in stream channel.		

SECTION 11 - measured in stream E, east tributary, west bank. Same elevation as, but 30m to the east of, section 10. Map elevation 115m. Measured by PHR and ASP. 12/75.

UNIT	A	B
SURFACE LAYER - pebble to medium boulder pavement with thick (0.10m) sand and granule layer, showing slight soil development.		

UNIT		A	B
3	DIAMICTON - dull yellow (2.5Y 6/4), poorly sorted, unbedded, silt-rich sand. Upper 0.60m, minor, very thin, discontinuous, deformed, coarse sand and granule layers. Basal 0.50, rudimentary bedding, weak fissility (shaly to flaggy). Scattered angular to subangular pebbles and boulders, generally in 'open' pockets of medium sands and minor silt, which are laterally discontinuous. 10° dip to the south (down slope).  Sample 13300 Diamicton (4.00m)  - sharp contact -	1.10	4.40
2	SAND and PEBBLES - poorly sorted, unbedded, loose, pebbly sand; mixed lithologies, with high fine grained dolerite and porphyry content.  - obscured contact (by scree from unit 2) -	0.60	3.30
1	DIAMICTON - light yellow (2.5Y 7/4), poorly sorted, unbedded, silt-rich sand. See unit 3. Scattered, subangular to subrounded, pebbles to boulders. Lower 1.50-2.00m, pale yellow (2.5Y 8/3), moderate to poorly sorted, silt-rich sand matrix with pronounced, coarse, pebbly diamicton layers and subhorizontal pebble imbrication within the massive silty sand.  Sample 13301 Diamicton (1.50m)  Unbottomed in stream channel.	2.70+	2.70

SOUTH SIDE OF TAYLOR GLACIER

AREA H (see figure 2) - dry stream channel (stream H) draining from Calkin Glacier into Lake Bonney.

SECTION 12 - measured in stream H, 50m above Lake Bonney, west lobe. Outcrop in east bank. Map elevation 110m (77° 43.8'S : 162° 16.6'E). Measured by PHR. 12/75.

UNIT		A	B
	SURFACE LAYER - pebble to small boulder pavement with interclast coarse sand and granule matrix.		
3	DIAMICTON - light yellow (2.5Y 7/4), poorly sorted, unbedded, fissile, sand-rich silt; scattered pebbles and cobbles (few boulders).  Sample 13309 Diamicton (0.90m)  - sharp and undulating (0.30m relief) contact -	1.30	1.90
2	DIAMICTON - light grey (7.5Y 7/2), moderately well sorted, weakly bedded, fissile, fine sand dominated matrix. Stratification of undulating, weakly laminated, sorted fine sand and silt. Subangular pebbles and small boulders; high dolerite and minor basalt content.  Sample 13310 Diamicton (0.45m)  - sharp contact -	0.30	0.60



UNIT	A	B
1 COARSE SAND, PEBBLES and BOULDERS - moderately well sorted, loose, unbedded, subangular to rounded, pebbles and few boulders in a coarse sand and granule matrix.  Sample 13311 Coarse sand and pebbles (0.15m)  Unbottomed in stream channel.	0.30+	0.30

SECTION 13 - measured in stream H, 40m above Lake Bonney, west lobe. Outcrop in east bank.  
Map elevation 100m. Measured by PHR and ASP. 12/75.

UNIT	A	B
SURFACE LAYER - 0.10-0.20m pavement veneer of subrounded pebbles and cobbles with few boulders; minor matrix of coarse sand.		
5 DIAMICTON - light yellow (5Y 7/4), poorly sorted, unbedded, matrix dominated silt-rich, fine sand; only minor clasts (pebble to cobble). Lower 0.30m, one 0.05-0.10m thick, coarse sand and pebble lense, thins to the south (upstream).  Sample 13312 Diamicton (4.60m)  - sharp contact -	0.70	5.11
4 COARSE SAND and GRANULES - interbeds of laminated, medium to fine sand, very thin-bedded, medium to coarse sand and thin-bedded, coarse sand, granules and small pebbles. Basal coarse sand and pebble interbeds, with scattered pebbles grades upwards to well sorted, medium to fine sand. A light grey (7.5YR 8/2), coarse sand and granule layer (0.03-0.07m thick) divides the unit at 0.90m from unit base.  - sharp contact -	2.00	4.41
3 FINE SAND and SILT - pale yellow (5Y 8/3), thinly laminated, silt interbedded with laminated fine sand; increasing sand content with depth. Basal laminae are wavy (0.03-0.08m amplitude); one thin layer (0.02m thick) of granules and small pebbles towards unit base. Slight unit thickening to the north (downstream).  Sample 13313 Silt (2.30m)  - sharp contact -	0.36	2.41
2 DIAMICTON - light yellow (5Y 7/3), poorly sorted, unbedded, fissile, fine sand and silt with minor (less than 5%) scattered, subangular to subrounded pebbles to small boulders. Unit thins downstream, average thickness 0.45m.  Sample 13314 Diamicton (1.80m)  - sharp contact -	0.45	2.05
1 SILT, SAND, GRANULE and PEBBLES - interbedded, thinly laminated silt, very thin-bedded, coarse sand and granules and thin-bedded, fine to medium sand. Strong stratification throughout, except for upper 0.15m of massive, well sorted, convolute bedding (0.10-0.30m amplitude) recognised at one site. Increase in grain	1.60+	1.60

UNIT	A	B
size and bedding thickness with unit depth. Lower 0.40-0.50m thin-bedded granules and pebbles with thin-bedded, fine sand.		
Sample 13315 Sand (1.10m)		
Unbottomed in stream channel.		

AREA I (see figure 2) stream I drains Calkin Glacier meltwaters into south Taylor stream. 150m west of Lake Bonney west lobe.

SECTION 14 - measured in stream I, from 40m of laterally continuous outcrop on the west bank. Map elevation 90m. (77° 43.8'S : 162° 15.0'E). Measured by PHR and ASP. 12/75.

UNIT	A	B
SURFACE LAYER - angular to subangular pebbles to cobbles; high fine grained dolerite content.		
7 COARSE SAND, PEBBLES and COBBLES - angular and minor subangular pebbles and cobbles in a coarse sand matrix (less than 30%). Clasts show a strong subhorizontal imbrication. No bedding.	1.20	8.56
- contact obscured by scree -		
6 SAND and PEBBLES - moderately well sorted, unbedded, medium to coarse sand (dark olive grey - 2.5GY 4/1): a sandy diamicton.	0.74	7.36
Sample 13316 Sandy diamicton (7.10m)		
- contact obscured by scree -		
5 SAND and PEBBLES - interbeds of thin to very thin-bedded, medium to fine sand and silt with thin-bedded granules and pebbles; few small to medium cobbles. Unit dips 8° to the north (downslope) and thins 10m upstream.	1.65	6.62
- sharp contact -		
4 SAND - dark greenish grey (7.5GY 4/1), well sorted, medium to thin-bedded, medium sand with laminated fine sand and silt interbeds; only minor scattered clasts. Lateral increase in fine sand and silt, greyish olive (7.5Y 5/2), with weak laminations of medium to fine sand. Weak fissility gives platy or shaly appearance.	2.10	4.97
Sample 13317 Sand (3.00m)		
- sharp contact -		
3 SAND and PEBBLES - well sorted, very thin-bedded, medium sand with lenses (0.03-0.05m thick) of pebbles and cobbles with minor well sorted granules and small pebbles.	0.32	2.87
- sharp contact -		
2 COARSE SAND and GRANULES - yellowish brown (2.5Y 5/6), very thin-bedded to laminated, medium to coarse sand and granules. High mafic content gives pronounced stratification along bedding. Beds truncated at upper contact.	0.65	2.55
- gradational contact (over 0.10m) -		

UNIT

A

B

1 DIAMICTON - olive (5Y 5/4), moderately poorly sorted, unbedded, silt-rich sand; minor subrounded pebbles. One olive grey (10Y 5/2), moderately well sorted, medium to coarse sand lense (0.50m thick, 4.0m long), 1.50m from exposed section base.

1.90+

1.90

Sample 13318 Diamicton (1.10m)

Unbottomed in stream channel.

PART 3

STRATIGRAPHIC SECTIONS FROM VICTORIA VALLEY

Measured and described in the 1974-75 season (VUWAE 19) by:-

C.G. Vucetich and P.H. Robinson

Department of Geology, Victoria University of Wellington.

VICTORIA VALLEY

NORTH OF LAKE VIDA

SECTION N2 - exposed on eastern bank of stream draining Victoria Upper Glacier. 2.0km north west of Lake Vida. Map elevation 350m. (77° 23.5'S : 161° 45.6'E). Measured by PHR and CGV. 12/74.

UNIT	A	B
SURFACE LAYER - pebble to cobble pavement with few scattered boulders and coarse sand matrix. 0.05-0.10m soil development.		
4 SANDY SILT - olive yellow (5Y 6/3), moderately well sorted, very thin-bedded, weakly fissile (platy) sand-rich silt; few granules to cobbles. Sample 13144 Sandy silt (0.90m) - gradational contact (over 0.03m) -	0.45	1.12
3 SAND - yellow brown (2.5Y 5/3), moderately well sorted, unbedded, quartzo feldspathic, medium sand with minor coarse sand, granules and small pebbles (up to 10mm). Sample 13145 Sand (0.60m) - sharp contact -	0.17	0.67
2 SANDY SILT - see unit 4. Olive brown (2.5Y 4/3), very thin-bedded, weakly fissile (platy), medium to fine sand with predominant silt; scattered granules and pebbles. Sample 13146 Sandy silt (0.40m) - sharp contact -	0.30	0.50
1 SAND - yellow brown (2.5Y 5/3), moderately well sorted, weakly thin-bedded, coarse to medium sand grading upwards from thin-beds of coarse sand, granules and subangular pebbles. Sample 13147 Sand (0.20m) 13148 Sand and pebble (0.10m)  Unbottomed in stream channel.	0.20+	0.20

SECTION N3 - measured from exposure at top of knoll, 360m above and 1.8km to the north of Lake Vida. Map elevation 700m. (77° 21.6'S : 16° 53.0'E). Measured by CGV and PHR. 12/74.

UNIT	A	B
SURFACE LAYER - plutonics and dolerite, angular to subangular, 'tight' pebble to cobble pavement. Minor coarse sand, granules and boulders (up to 0.25m diameter).		
1 SAND and SILT - moderately well sorted, very thin-bedded, fine sand and silt interbedded with laminated, fine to medium sand. One thin (0.05m) bed of coarse to medium sand at unit base.	0.35+	0.35

UNIT

A

B

Sample 13149	Sand (0.33m)
13150	Silty sand (0.30m)
13151	Sand and Silt (0.20m)
13152	Sand (0.15m)
13153	Sand (0.05m)

Unbottomed at permafrost surface.

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