

Stage	Strat Unit	Scale (metres)	Strat Unit (old)	Lithology	Structures	Fossils	Facies	Photo No.	WO No.	Description		
eLwh	Glen Massey	80 70 60 50 40 30 20 10 0	Te Akatea Carter	Burrowed glauconitic horizon approx. 10-12 cm		~	Z1		WU3 3012 WU3 3011 WU3 3010	CALCAREOUS SILTSTONE		
				Scattered phosphatic nodules		~	L5-C2	WU3 3009 WU3 3008 WU3 3007	GLAUC SILTY LIMESTONE			
	Irregularly/weakly horizontal bedding, bioturbated, mod. glauconitic increasing upsection			Rare echinoderm spicules & spines								
	No exposure											
	Lapiez weathering, abundant burrows, honeycombed surface weathering			Scattered pectinid		S2					CALCAREOUS SILTY FINE SANDSTONE	
	Common burrows and other bioturbation structures throughout					S6						
	Break in weathering profile, gradational					C3					WU3 3006 WU3 3005 WU3 3004	MASSIVE CALCAREOUS SILTSTONE GLAUC. SANDSTONE / SANDY LIMESTONE
	Extensively burrowed, glauconitic					L5					WU3 3003 WU3 3002 WU3 3001	MASSIVE SANDY LIMESTONE
	Contact with basement concealed											
	Basement											



Stratigraphic Column No: PW-1B Grid Reference:

Region: Port Waikato

E: 2669660 -

Location: Port Waikato, Waikaretu Road,
Sunset Farm

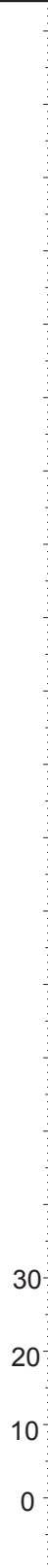
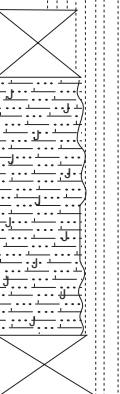
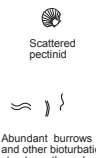

N: 6417600 -

PW-1B

NZMS 260 Sheet: R13/646176

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Stage	Strat Unit	Scale (metres)	Strat Unit (old)	Lithology	Structures	Fossils	Facies	Photo No.	WO No.	Description
eLwh	Glen Massey Ahirau				<p>No exposure</p> <p>Lapiez weathering, steep bluffy profile, honeycombed surface weathering</p>	 <p>Scattered pectenid</p> <p>Abundant burrows and other bioturbation structures throughout</p>	S2		<p>WU3 3031</p> <p>WU3 3030</p> <p>WU3 3029</p> <p>WU3 3028</p> <p>WU3 3027</p>	CALCAREOUS SILTY FINE SANDSTONE
										

Stratigraphic Column No: PW-1

Grid Reference:

NZMS 260 R13

Region: Port Waikato

E: 2664387

2664798

Location: Port Waikato Waikaretu Road,
Sunset Farm

N: 6418307

6417568

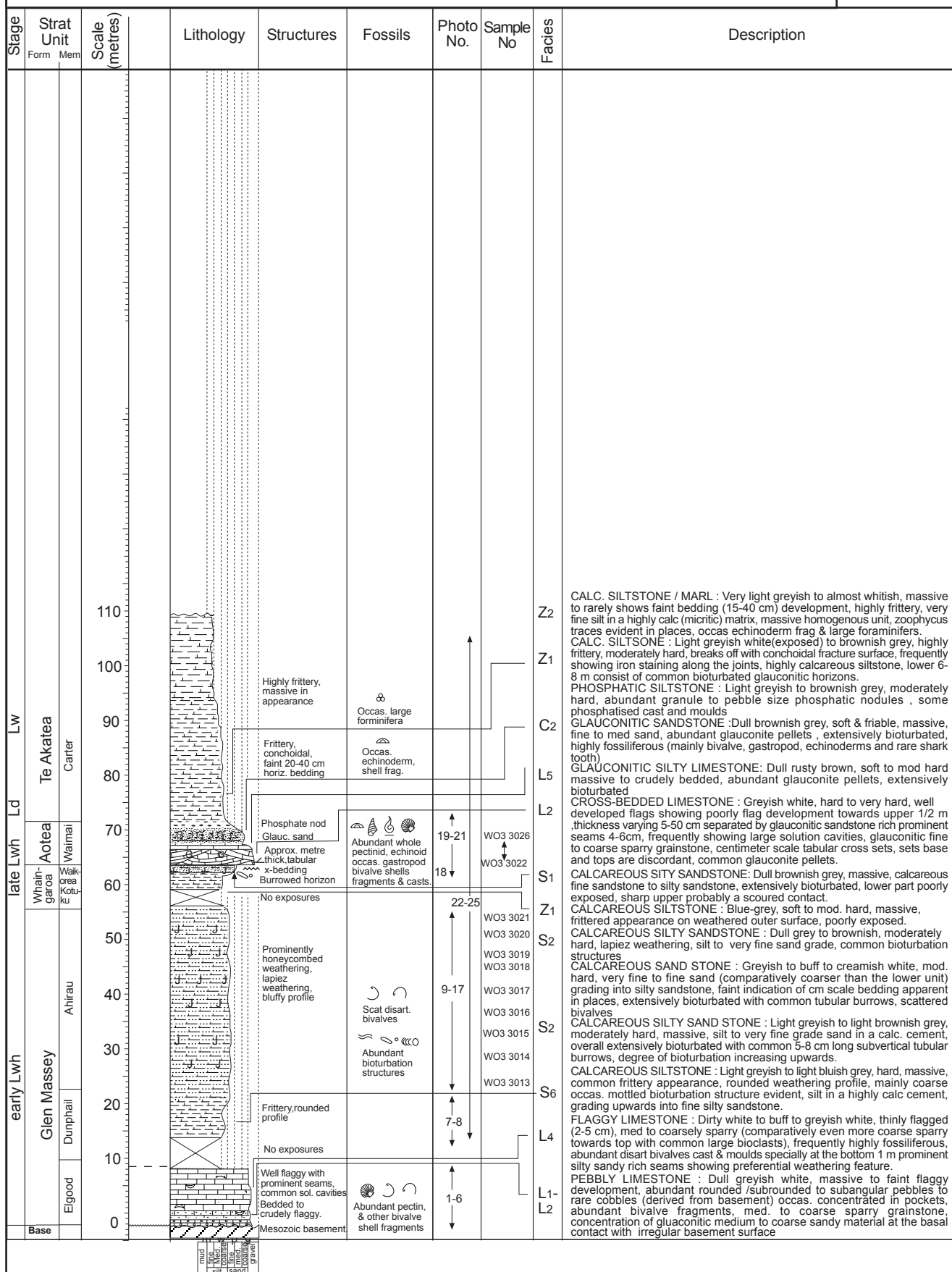
PW-1

NZMS 260 Sheet: R13/1643183

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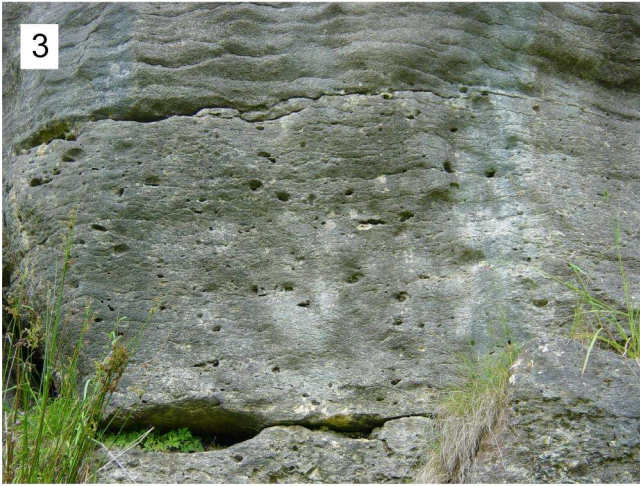
Author: A. Tripathi

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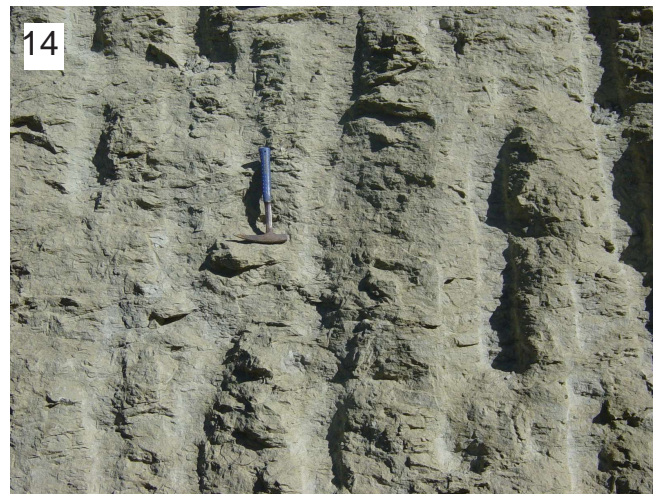
PW-1

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PW-1

3 of 5



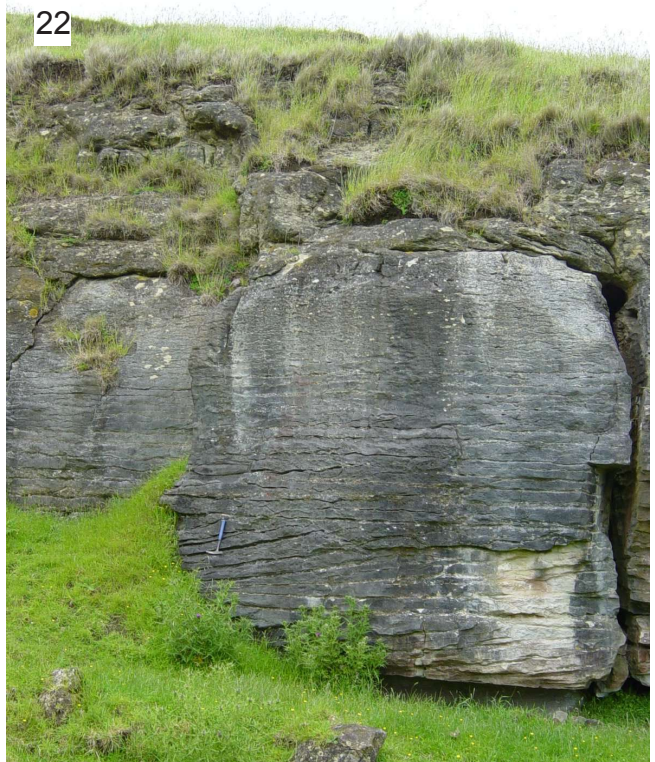
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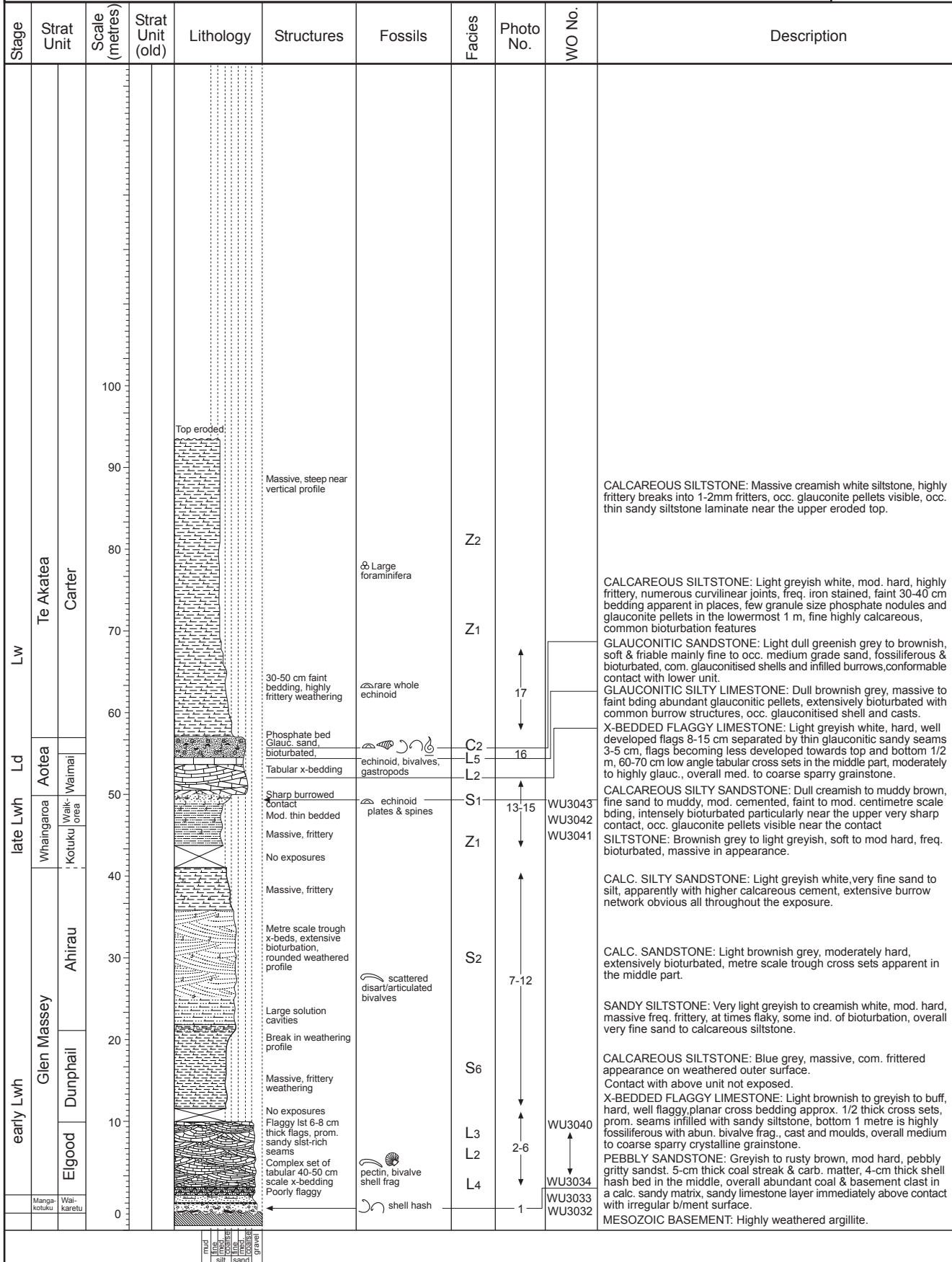
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PW-1

5 of 5





PW-2

2 of 5



PW-2

3 of 5

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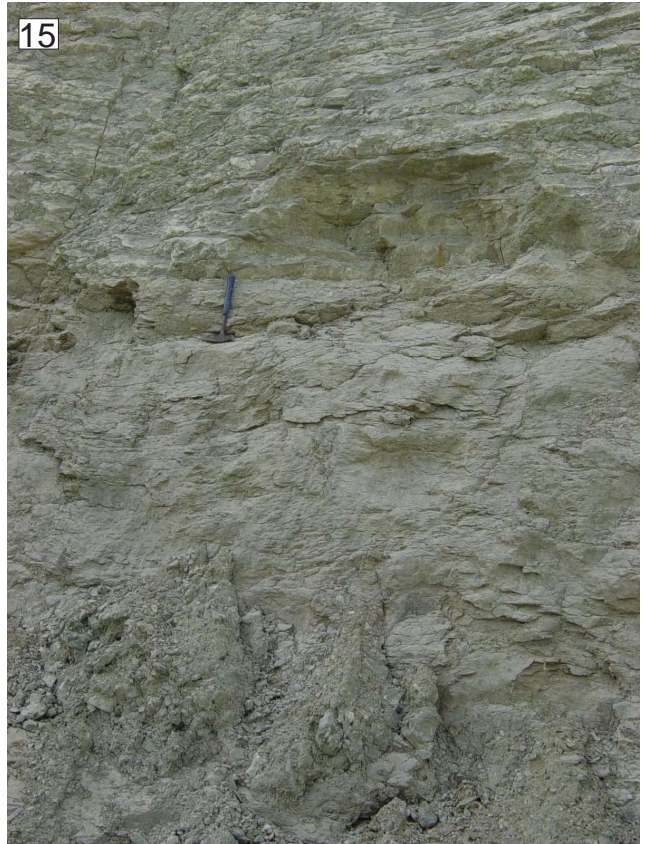


12



PW-2

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PW-2

5 of 5



Stratigraphic Column No: PW-3

Grid Reference:

NZMS 260 R13

Region: Port Waikato

E: 2665150

Location: 2 1/2 km SW from the Kaawa stream bridge on Port Waikato Waikaretu Road

N: 6410851

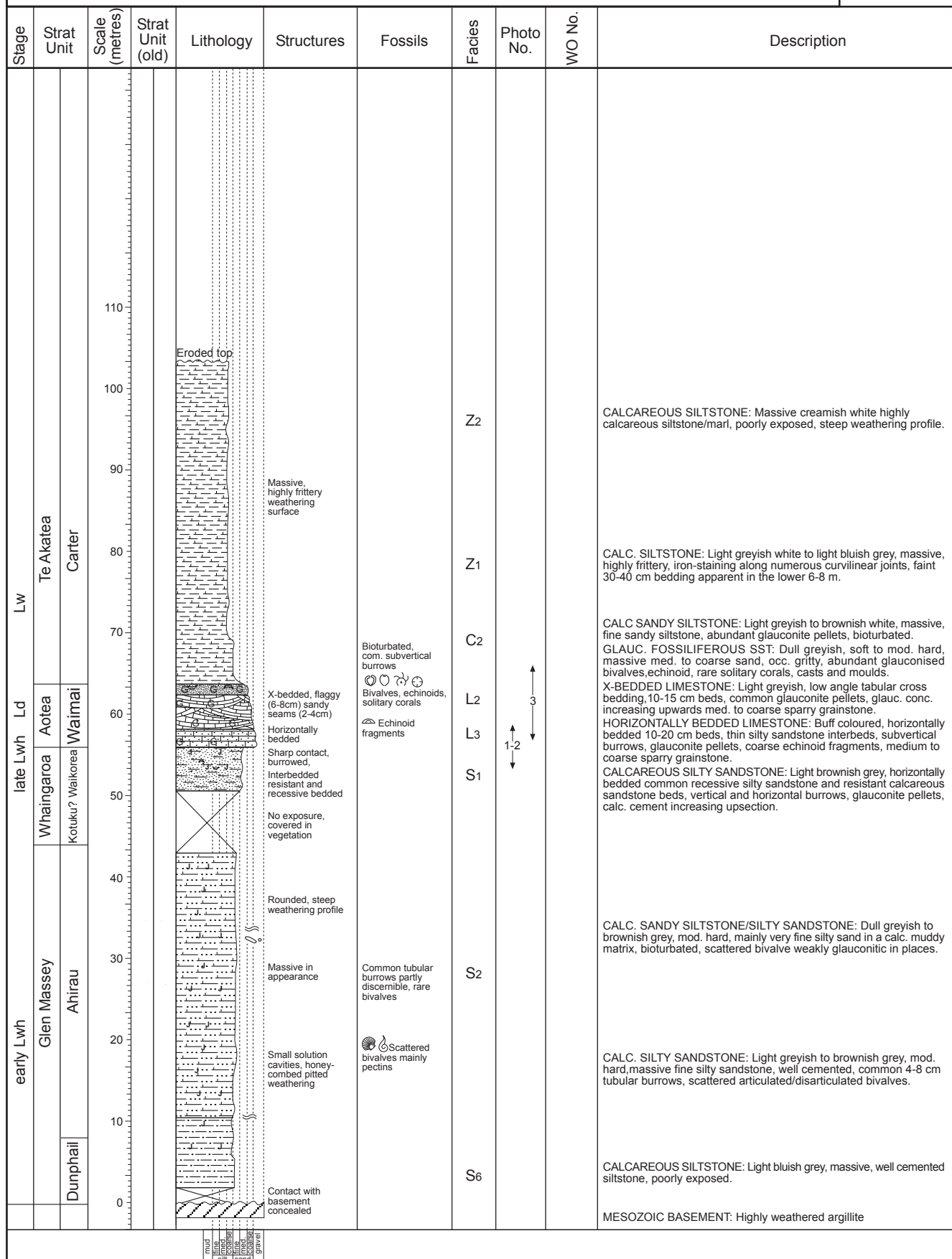
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NZMS 260 Sheet: R13/651108

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Author: A. Tripathi

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PW-3

2 of 2



PW-4

2 of 2



Stratigraphic Column No: PW-5

Grid Reference:

NZMS 260 R13

Region: Port Waikato

E: 2672040 - 2672503

Location: Brien Road, Wairamarama

N: 6419829 - 6419729

PW-5

NZMS 260 Sheet: R13/722197-724195

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Stage	Strat Unit	Scale (metres)	Strat Unit (old)	Lithology	Structures	Fossils	Facies	Photo No.	WO No.	Description														
early Lwh	Mangakotuku Rotowaro	0 to 130			No exposures	No exposures		1	3-3045 3-3044	CARBONACEOUS MUDSTONE: Dark greyish, massive, sticky, poorly exposed														
											Glen Massey Elgood	No exposures	No exposures	Pecten, bivalve shell fragments	L5 L2-L3	2-4	3-3047 3-3048 3-3049 3-3050	LIMESTONE: Well to mod. flaggy, freq. irregular sandy seams, in places massive LIMESTONE: Massive to horizontally bedded, poor flag development, blocky in the lower 2 m. LIMESTONE: Low angle cross-bedding						
	Glen Massey Dunphail																		No exposures	No exposures	Oyster cluster	L4 L2 L4	3-3052 3-3051 3-3050	LIMESTONE: Thinly to med. thick flaggy (5-10 cm), slabby with prominent recessive seams
											Glen Massey Ahirau	Honeycombed, weathering surface, bioturbated	Honeycombed, weathering surface, bioturbated	Scattered pectin, occ. articulated bivalves	S6	5	3-3054 3-3053 3-3055 3-3056 3-3057	LIMESTONE: Well to mod. flaggy, freq. irregular sandy seams, in places massive						
	Whaingaroa Kotuku																		Sharp erosive contact	Sharp erosive contact		Z1	3-3062 3-3061	CALCREOUS SILTSTONE: Massive, lower part poorly exposed
	Te Aketea Carter																		25 m sec. condensed	25 m sec. condensed		Z2	3-3072	CALCREOUS SILTSTONE: Massive, common friitery surface weathering, poorly exposed
	Aotea Waimai																		Weathering break.	Weathering break.	Rare glauc. bivalve, shark teeth burrowed	L3-C2 L2	3-3071 3-3070	CALCREOUS SILTSTONE: Massive, glauconitic LIMESTONE: Horizontally bedded, glauconitic
											Te Aketea Carter	25 m sec. condensed	25 m sec. condensed		Z2	3-3072	CALCREOUS SILTSTONE: Massive, common friitery surface weathering, poorly exposed							

PW-5

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Stratigraphic Column No: PW-6

Grid Reference:

NZMS 260 R13

Region: Port Waikato

E: 2676236 - 2676384

Location: Wairamarama Onewhero Road

N: 6421335 - 6420714

PW-6

NZMS 260 Sheet: R13/762133

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Stage	Strat Unit	Scale (metres)	Strat Unit (old)	Lithology	Structures	Fossils	Facies	Photo No.	WO No.	Description
Po	Waitemata	170			Approx. 30 m gap in exposures.					SANDY SILTSTONE: Greyish to brownish grey, mass. poorly-mod. cemented, exposed in the road cut.
	Te Akatea	140			Section condensed					
Lw	Carter	110			Poor exposure, mainly covered by grassy surface		Z2	5		CALC. SILTSTONE: Light greyish to creamish, massive, frittered weathered surface exposed in between mainly grassy mod. to steeply sloping surface.
	Mangiti	90			Bioturbated at contact, poorly exposed		S3			INTERBEDDED CALC SST AND SANDY SILTSTONE: Dull greyish to light greyish, mod. hard, fine calc. silty sst. beds 12-30 cm thick separated by recessive sandy siltstone interbeds, silty interbeds becoming thicker upsection, bioturbation common especially in the interbeds, occasional glauconite pellets moderate concentration seen at the upper contact, scattered bivalve and echinoderm fragments.
late Lwh	Aotea	80			Distinctly horizontally bedded.	Disart bivalves and echinoid fragments				
	Kotuku	70			Erosive sharp contact		Z1			CALC SILTSTONE: Light brownish grey to light greyish, soft to mod. hard, massive, bioturbated, variably muddy but calc. content increasing upsection, forming sharp upper contact.
Whaingaroa		60			Bioturbated, partic. near upper sharp contact, poorly exposed					
		50			No exposures, gently sloping grassy landscape					
Glen Massey	Ahirau	40			Faint horiz. bedding discernible, rounded bluffy weathering profile	Abundant bioturb.	S3			CALCAREOUS SILTY SANDSTONE: Light brownish grey, hard well cemented very fine sandstone to silty sandstone showing faint interbedding, bioturbated 4-6 cm tubular burrows seen occasionally.
		30			Vertical fluting apparent, steep surface					
early Lwh	Dunphail	20			Honeycombed weathering, surface riddled with lge solution cavities separated by 10-15 cm sub-horizontal bedding planes	Scattered pectins and other bivalves				CALCAREOUS SILTY SANDSTONE: Light greyish to brownish grey, hard, mainly very fine to fine sand and silty sand in a calcareous cement, extensively bioturbated commonly indicated by very honeycombed weathered surface and large solution cavities, centimeter scale bedding apparent in places.
		10			Steepening of weathering profile marking the grad. contact between lower and upper members		S6			CALC. SILTSTONE: Light bluish grey, mod. hard to hard, massive with com. frittered weathered surface, occ. indication of bioturbation, exposed mainly as slumped/tilted blocks.
		0			Common slumped blocks					No exposure below the stream level, unit probably extends in the subsurface.
					Contact with b/ment not known					

PW-6

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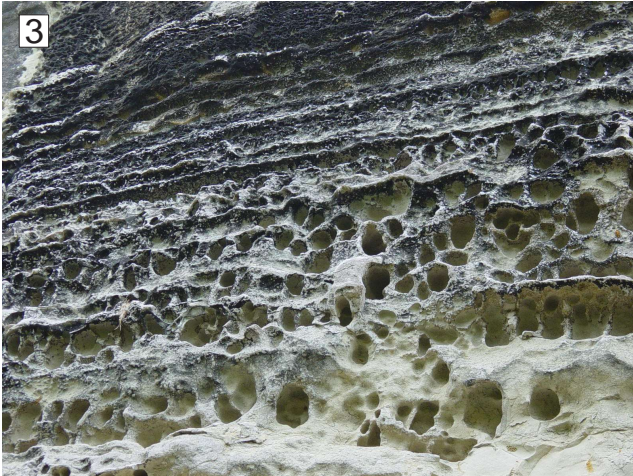
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5



Stratigraphic Column No: PW-7

Grid Reference:

NZMS 260 R13

Region: Port Waikato

E: 2680994 - 2679710

Location: Matakītaki Road, Matakītaki Trig

N: 6416438 - 6415270

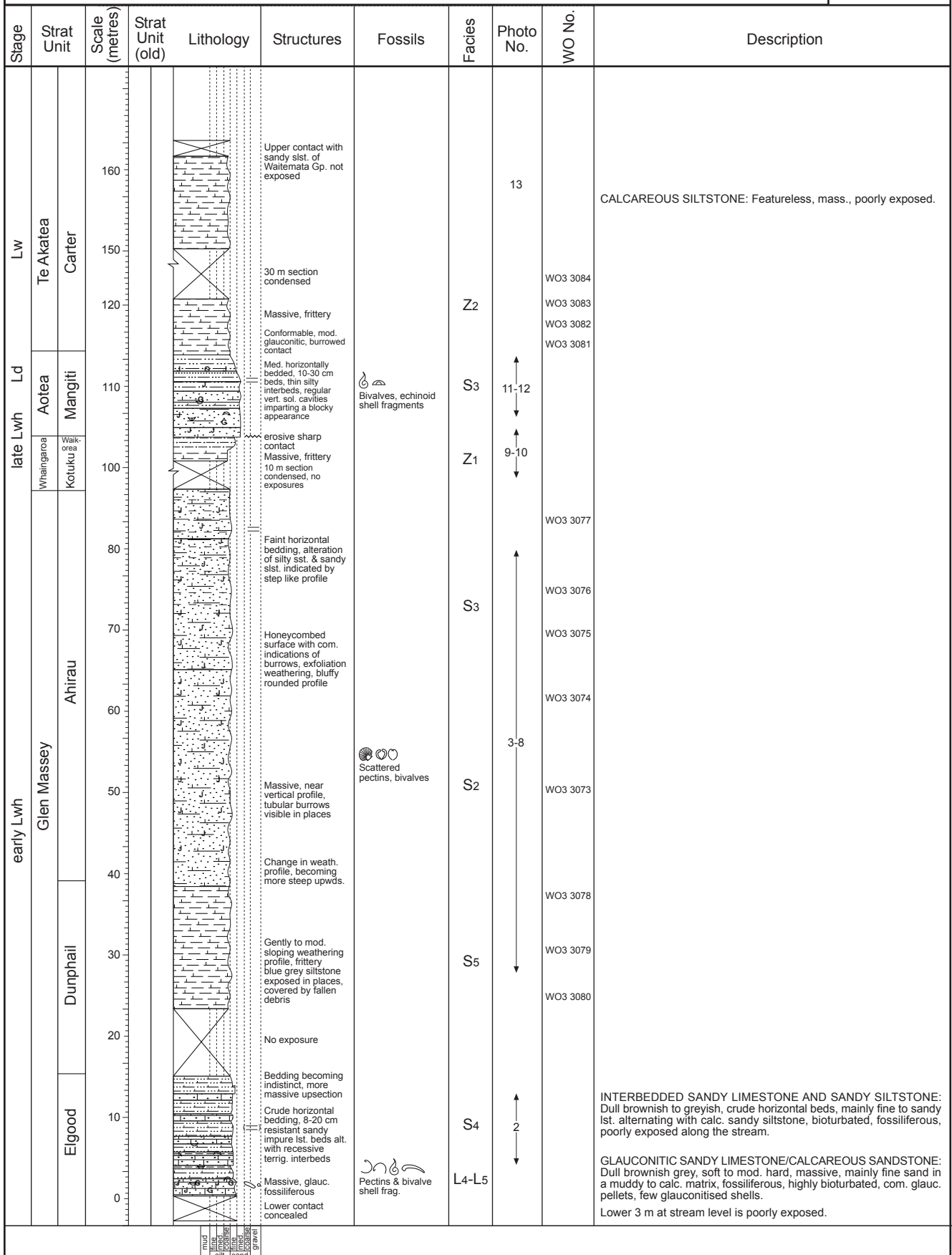
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NZMS 260 Sheet: R13/797152-809164

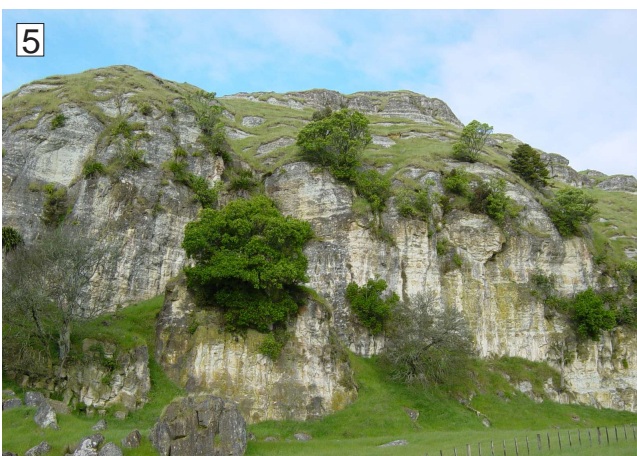
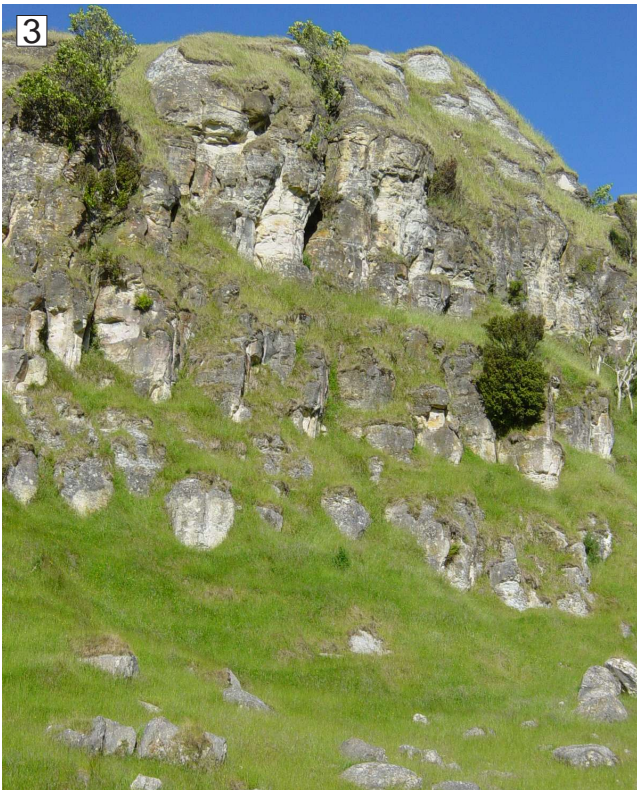
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PW-7



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PW-7

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11



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13



12



Stratigraphic Column No: PW-8

Grid Reference:

NZMS 260 R13

Region: Port Waikato

E: 2677081 - 2674948

Location: Bothwell Road

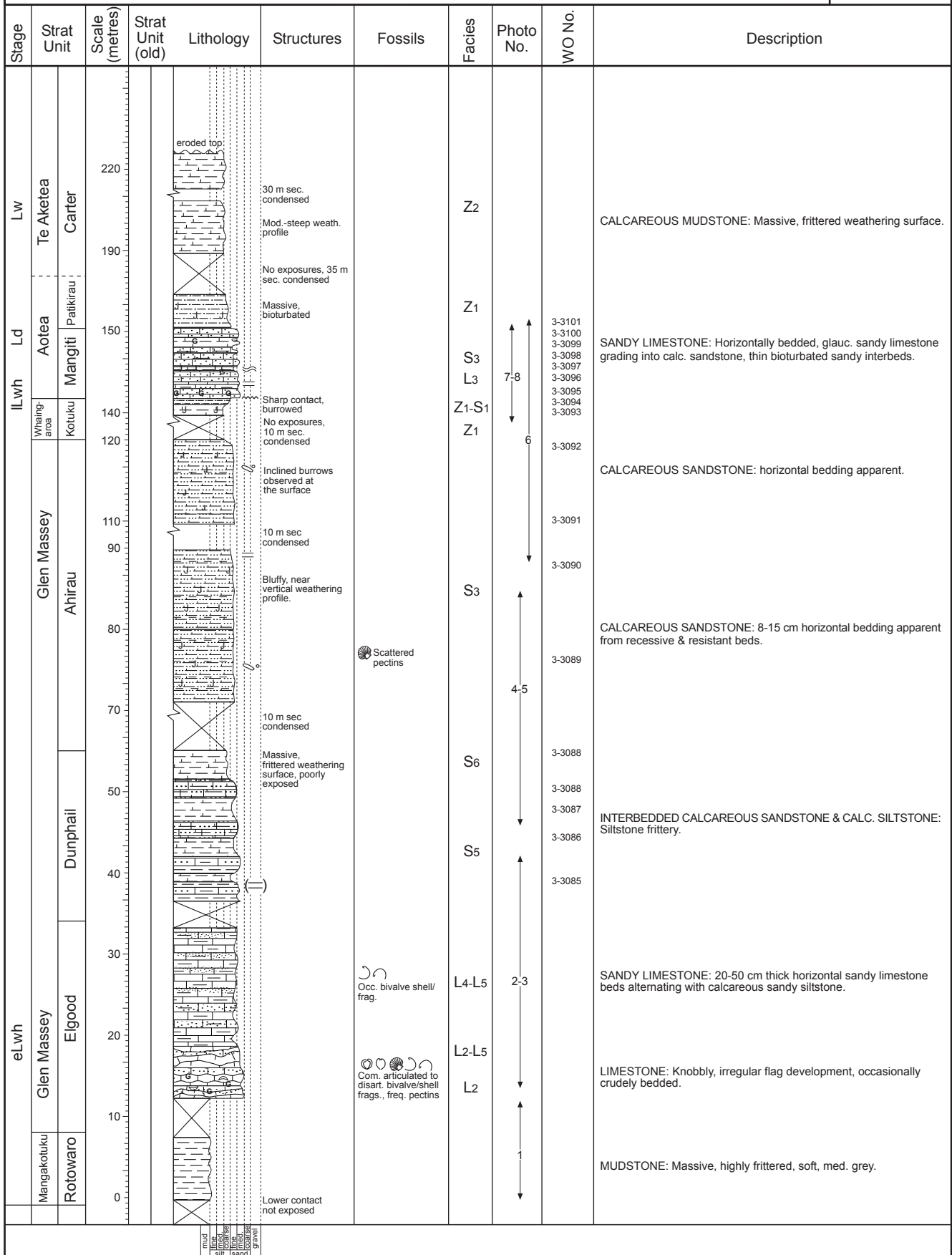
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PW-8

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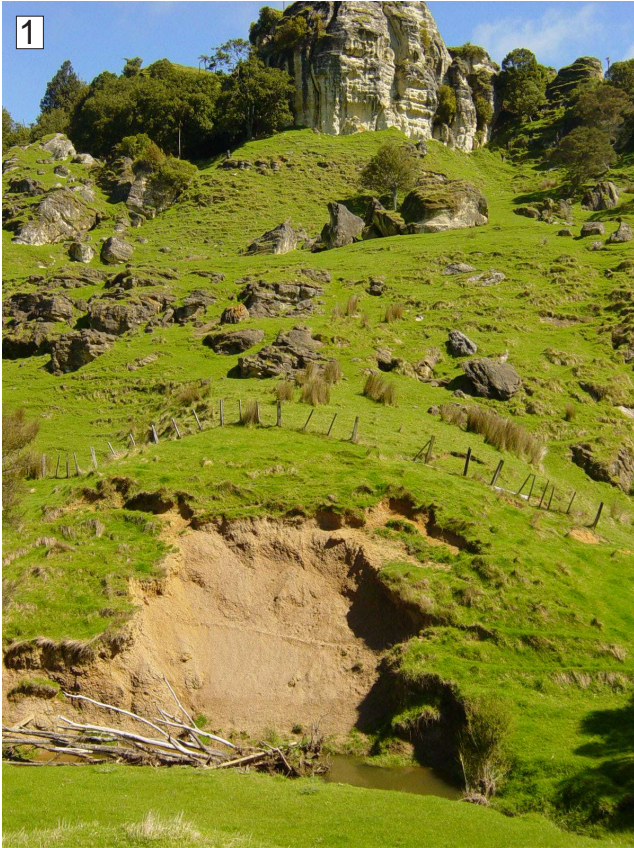
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8



Stratigraphic Column No: PW-9

Grid Reference:

NZMS 260 R13

Region: Port Waikato

E: 2670254 - 2669300

Location: Waikaretu Valley Road

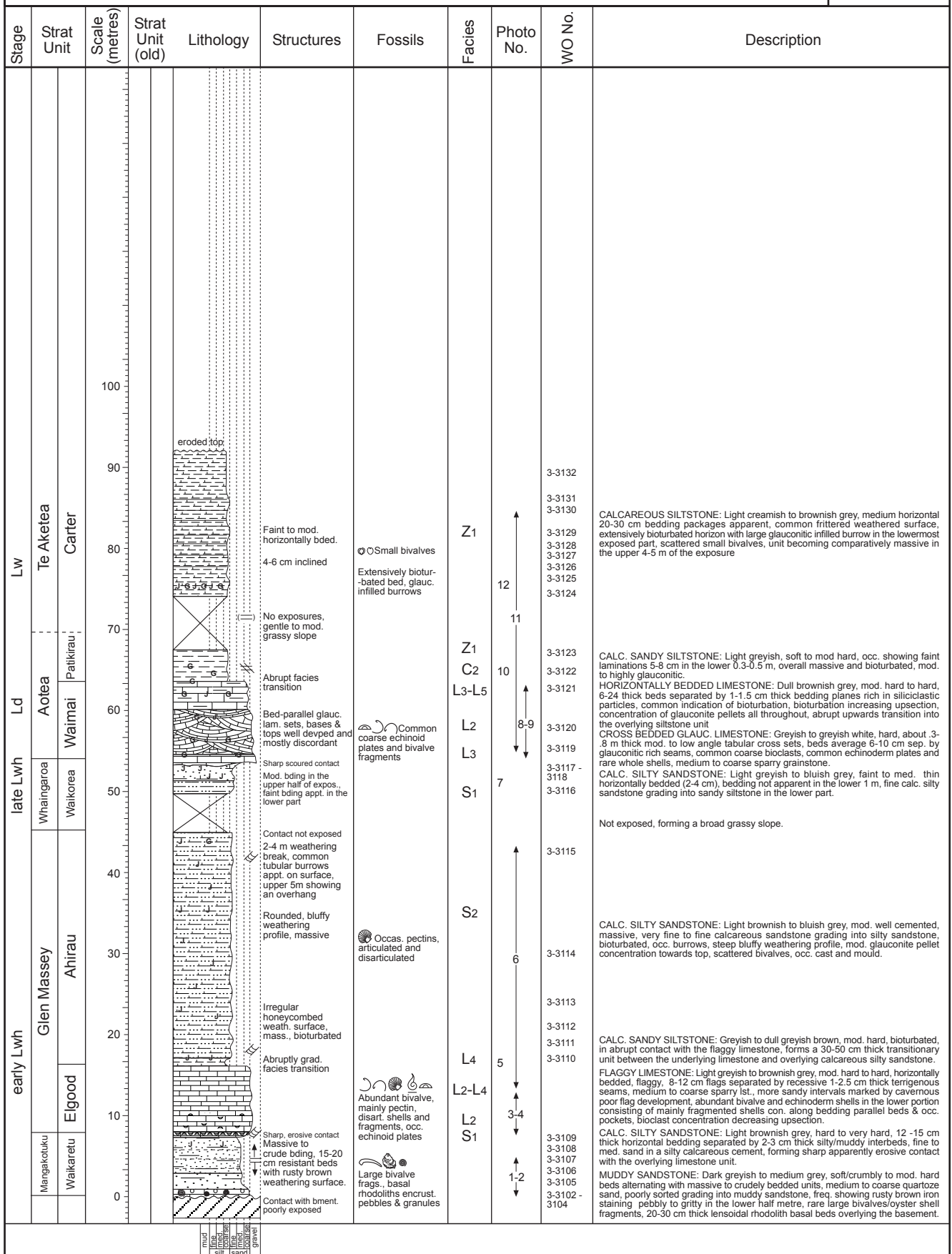
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PW-9

NZMS 260 Sheet: R13/702049 - 693043

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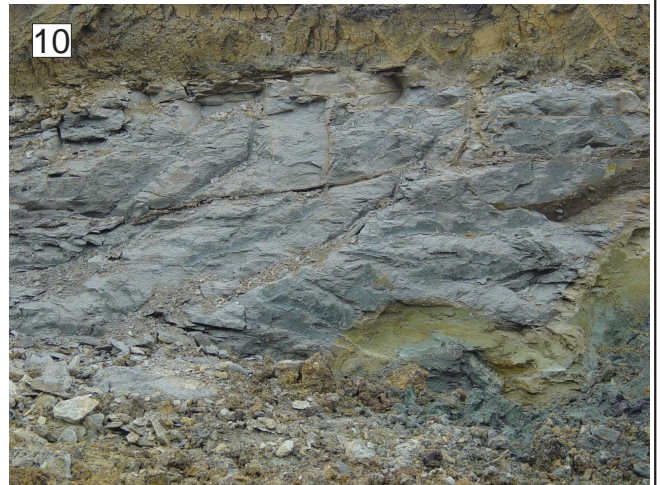
PW-9

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PW-9

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Stratigraphic Column No: PW-10

Grid Reference:

NZMS 260 R13

Region: Port Waikato

E: 2676359

Location: Waikorea Road

N: 6403131

PW-10

NZMS 260 Sheet: R13/762032

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Stage	Strat Unit	Scale (metres)	Strat Unit (old)	Lithology	Structures	Fossils	Facies	Photo No.	WO No.	Description
early Lwh	Mangakotuku	0 to 50			<p>Bluffy profile, tubular burrows and other bioturbation features seen in places</p> <p>No exposures, grassy slope strewn with fallen blocks</p> <p>Irreg. flaggy to knobby app., wavy siliciclastic rich seams</p> <p>Pebble/grit layer at sharp contact</p> <p>Poorly exposed</p>		<p>S2</p> <p>L2-L4</p> <p>L2-L5</p> <p>L1</p>	<p>3-4</p> <p>1-2</p>		<p>CALC. SILTY SANDSTONE: Light grey to brownish grey, hard, mainly silt to very fine sand in a calcareous cement, massive, freq. with mod. hard silty lenses, common bioturbation features, bluffy steep weathering profile.</p> <p>FOSSILIFEROUS SANDY LIMESTONE: Dull brownish grey, mod. hard to hard, irregular flag development, flags 8-15 cm thick separated by 1-1.5 cm sandy seams, occ. subrounded granules in the lower 0.5 m, abundant bioclasts scattered randomly but also concentrated as shell bed near the lower contact, overall very coarse bioclastic sandy grainstone.</p> <p>GRITTY CALC. SANDSTONE: Dull brownish grey, 0.20 - 0.30 m bed containing abundant pebble and granule size, subrounded basement clasts, well cemented and concentration of glauconite pellet.</p> <p>ARGILLACEOUS CALC. SANDSTONE: Dull greyish to buff, common rusty brown iron staining, massive, soft crumbly to mod. hard, mainly fine to medium muddy sandstone, calcareous cement increasing upsection becoming hard and well cemented particularly 0.30-0.50 m interval below the upper contact.</p> <p>Contact with basement not exposed, contact probably lies at the stream level.</p>
	Glen Massey									
	Ahirau									
	Dunphail?									
	Elgood									
Waikaretu										

PW-10

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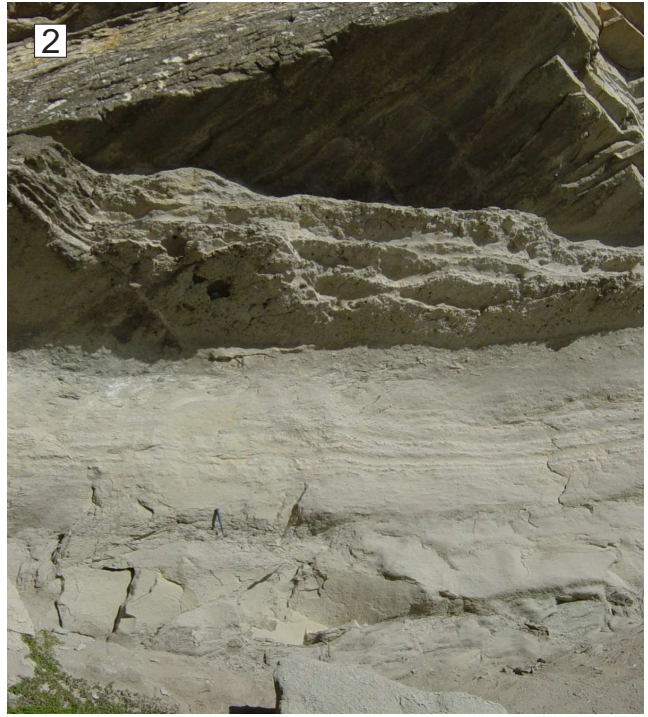


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Stratigraphic Column No: PW-12

Grid Reference:

NZMS 260 R13

Region: Port Waikato

E: 2664350 - 2664600

Location: Kaawa beach

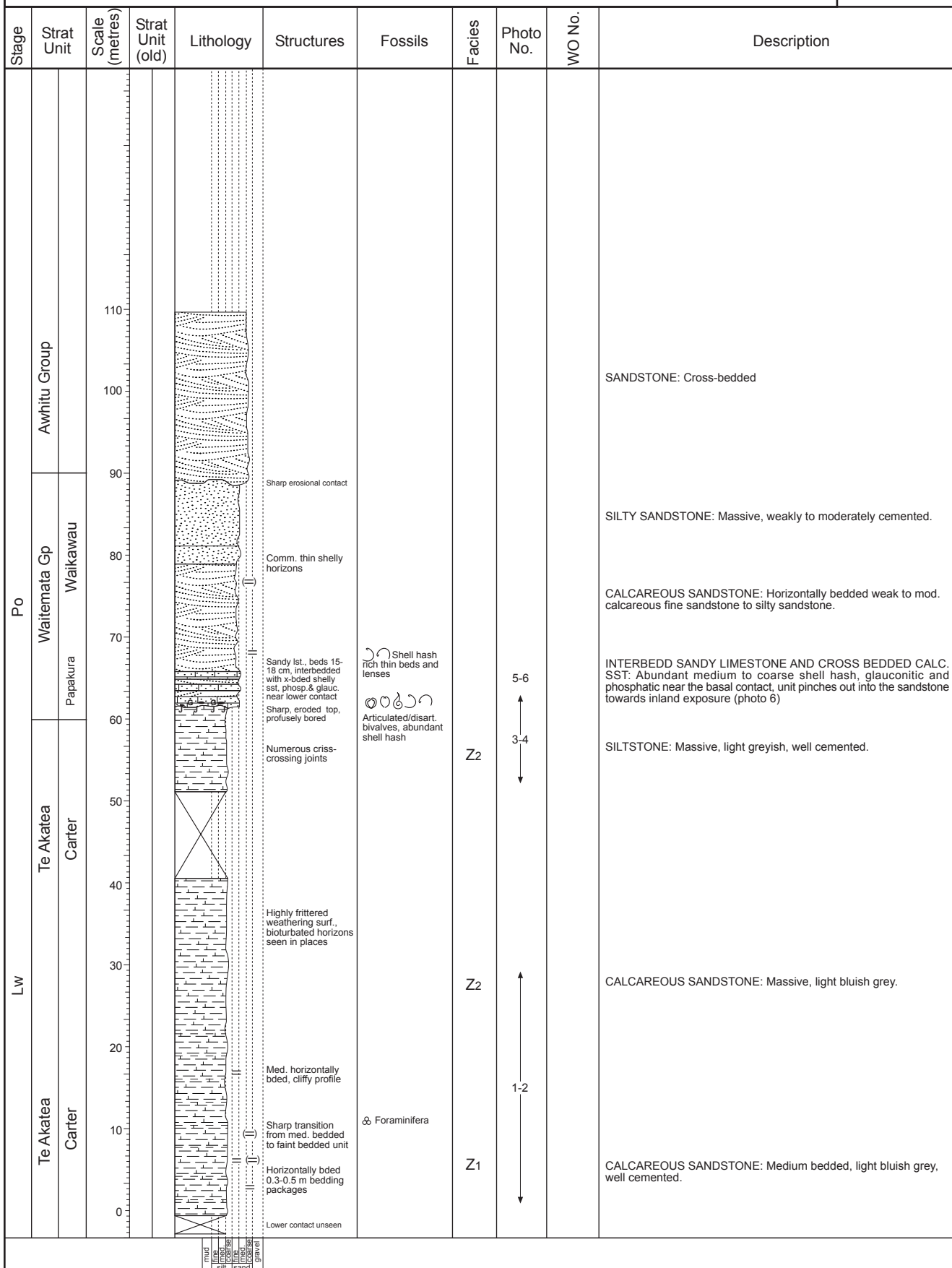
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PW-12

NZMS 260 Sheet: R13/643083-646095

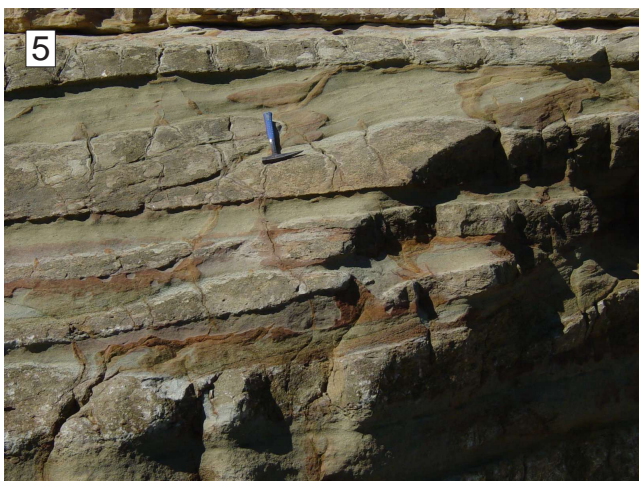
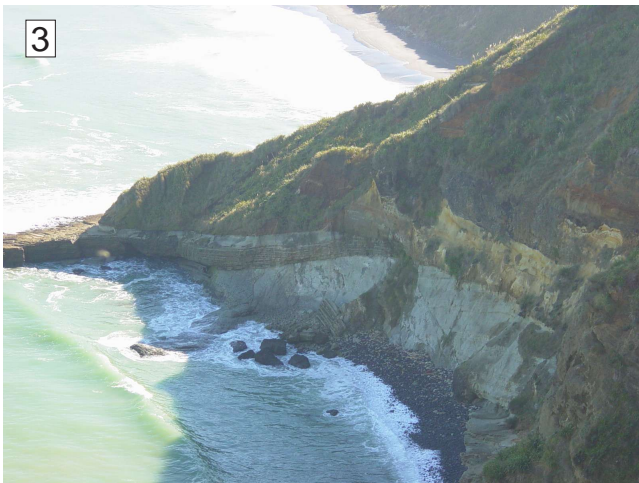
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Stratigraphic Column No: PW-13

Grid Reference:

NZMS 260 R13

Region: Port Waikato

E: 2686944

Location: Hetherington Road

N: 6404266

PW-13

NZMS 260 Sheet: R13/ 904942

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Stage	Strat Unit	Scale (metres)	Strat Unit (old)	Lithology	Structures	Fossils	Facies	Photo No.	WO No.	Description
eLwh	Whaingaroa	0 to 50			<p>No outcrop</p> <p>Steep vertical profile</p> <p>Honeycombed surface weathering occurring at .50m interval giving a faint horizontally bedded appearance</p>		<p>Z1</p> <p>S3</p>			<p>CALCAREOUS SILTSTONE: Light bluish grey, massive only 0.3 to 0.5 m crude bedding apparent in places, frittered weathering surface, fritters breaks off with typical conchoidal fracture, overall poorly exposed.</p>
	Glen Massey									Anirau
										Lower contact not exposed.

PW-13

