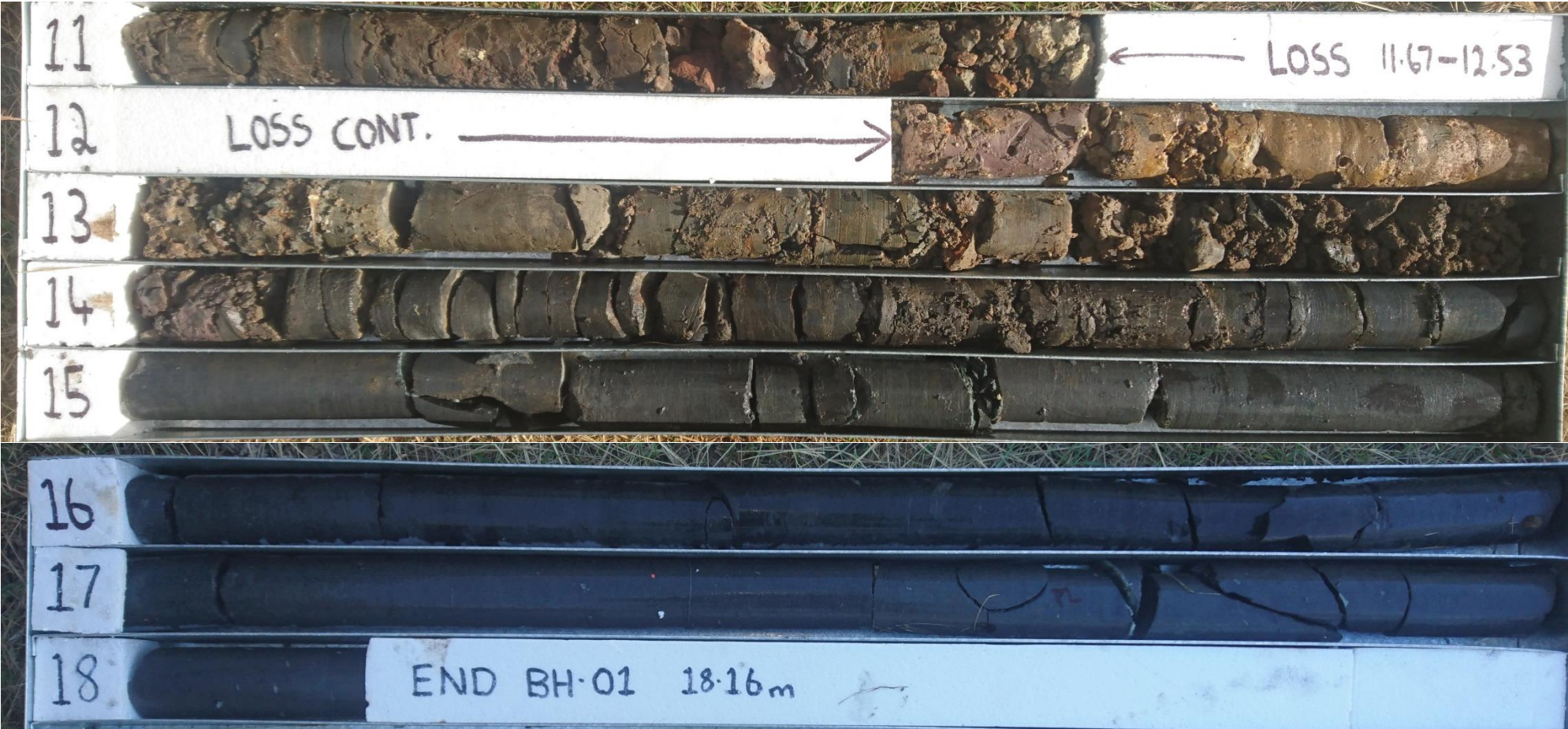




TITLE: Wattle Valley Quarry			
PROJECT NO: 30012451	TEST DATE: 30/3/2016	INCLINATION: -90°	CORED LENGTH: 1.5m – 18.16m
DRILL RIG: P160	CONTRACTOR: NCD	LOGGED BY: BD	CHECKED BY: NP

BH01





NON-CORE DRILL HOLE - GEOLOGICAL LOG

HOLE NO : BH02

PROJECT : WATTLE VALE QUARRY
 LOCATION : MATHESON NSW

CLIENT : GLEN INNES SEVERN COUNCIL
 FEATURE : PROPOSED QUARRY SITE 3

FILE / JOB NO : 30012451
 SHEET : 1 OF 4

POSITION : E: 365278.000, N: 6711980.000 (56 MGA94)

SURFACE ELEVATION : 1125.784 (AHD)

ANGLE FROM HORIZONTAL : -60°

RIG TYPE : P160

MOUNTING : Track

CONTRACTOR : NCD

DRILLER : DALE

DATE STARTED : 31/3/16

DATE COMPLETED : 31/3/16

DATE LOGGED : 31/3/16

LOGGED BY : BD

CHECKED BY : SB

DRILLING					MATERIAL							
DRILLING & CASING	SAMPLES	DRILLING PENETRATION	GROUND WATER LEVELS	FIELD TESTS	ELEVATION (RL) DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Plasticity or Particle Characteristic, Colour, Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY	RELATIVE DENSITY	STRUCTURE & Other Observations
ADIT HQ Casing					0.0		CI-CH	Silty CLAY red brown, with basalt cobbles, with basalt boulders	M			RESIDUAL SOIL
					1126.0			0.60m				
			GNE		1126.5			Continued as Cored Drill Hole				
					1127.0							
					1127.5							
					1128.0							
					1128.5							
					1129.0							
					1129.5							
					1130.0							
					5.0							

GINT - WATTLE VALE QUARRY LIBRARY.GLB Log SMEC NON-CORE DRILL HOLE GINT - WATTLE VALE QUARRY.GPJ <-DrawingFiles> 27/04/2016 13:32 8.30.002

See Explanatory Notes for details of abbreviations & basis of descriptions.



CORED DRILL HOLE LOG

HOLE NO : BH02

PROJECT : WATTLE VALE QUARRY
LOCATION : MATHESON NSW

CLIENT : GLEN INNES SEVERN COUNCIL
FEATURE : PROPOSED QUARRY SITE 3

FILE / JOB NO : 30012451
SHEET : 2 OF 4

POSITION : E: 365278.000, N: 6711980.000 (56 MGA94)

SURFACE ELEVATION : 1125.784 (AHD)

ANGLE FROM HORIZONTAL : -60°

RIG TYPE : P160

MOUNTING : Track

CONTRACTOR : NCD

HOLE DIA : 96mm

DATE STARTED : 31/3/16

DATE COMPLETED : 31/3/16

DATE LOGGED : 31/3/16

LOGGED BY : BD

CHECKED BY : SB

CASING DIAMETER : HQ

BARREL (Length) : 3.00 m BIT : Diamond Impreg S10-12

BIT CONDITION : Good

DRILLING				MATERIAL				ROCK MASS				
DRILLING & CASING	WATER RETURN (%)	CORE LOSS (DRILL RUN %)	SAMPLES & FIELD TESTS	ELEVATION (RL) DEPTH (m)	GRAPHIC LOG	DESCRIPTION ROCK TYPE : Colour, Grain size, Structure (texture, fabric, mineral composition, hardness alteration, cementation, etc as applicable)	Weathering	ESTIMATED STRENGTH Is(50)		RQD (%)	DEFECT SPACING (mm)	DEFECTS (joints, partings, seams, zones, etc) Description, orientation, infilling or coating, shape, roughness, thickness, other
								● Axial	○ Diametral			
				0.0								
				0.5		0.60m START CORING AT 0.60m						
				1.0		BASALT fine grained, dark grey occasional laths and amygdalae brown silty clay in fractures	SW			25		0.65: JT, 30°, PR, RF, Clay FILLED, 10 mm 0.70-0.83: SM, 15-30°, Clay FILLED
				1.5						0		1.09: JT, 15°, PR, RF, Clay CT, 5 mm 1.18: JT, 15°, PR, RF, Clay VR 1.25-1.29: SM, 20°, Clay FILLED 1.36-1.46: SM, 15-70°, Clay FILLED
				2.0		2.00m red-brown, weathered to low plasticity silty clay in parts brown silty clay in fractures	HW to XW			0		1.67: JT, 10°, PR, S, FE 1.75: JT, 15°, S, Fe Clay, 20 mm 1.79: JT, 70°, PR, RF, Fe Clay VR 1.86: JT, 20°, CU, RF, Fe Clay VR 1.96-2.00: FZ
				2.5								2.15-2.65: JT, 20-30°, PR, RF, Fe SN, 40-100mm spacing
				2.70m		CORE LOSS 0.16m (2.70-2.86)						
				2.86m		BASALT BRECCIA grey brown angular clasts, stained with iron	HW			0		2.86-3.30: HB
				3.0								
				3.30m		BASALT fine grained, dark grey iron stained on fractures	SW to FR			17		3.30-3.95: FZ, Fe SN, 20-40mm spacing
				4.0								4.08: JT, 50°, CU, RF, Fe SN 4.20: JT, 60°, PR, RF, Fe SN
				4.5								4.62: JT, 60°, UN, RF, Fe SN 4.70: JT, 25°, IR, RF, Fe SN 4.72: JT, 25°, IR, Ro, Fe Sn 4.82: JT, 25°, PR, RF, Fe SN
				5.0								

DRILLING AD/T Auger Drilling with TC Bit AD/V Auger Drilling with V Bit AS Auger Screwing DB Washbore with Drag Bit DT Diatube HMLC HMLC Core Barrel HQ3 HQ3 Core Barrel NMLC NMLC Core Barrel NQ3 NQ3 Core Barrel PQ3 PQ3 Core Barrel R Rock Roller	WATER 10 Oct., 73 Water Level on Date shown water inflow water outflow WEATHERING FR Fresh SW Slightly Weathered MW Moderately Weathered HW Highly Weathered EW Extremely Weathered	STRENGTH EH Extremely High VH Very High H High M Medium L Low VL Very Low EL Extremely Low ROUGHNESS POL Polished RF Rough S Smooth SL Slickensided VR Very Rough	DEFECT TYPE BP Bedding Plane CL Cleavage CS Crushed Seam CZ Crushed Zone DB Drilling Break FC Fracture HB Handling Break IS Infilled Seam JT Joint SM Seam SS Shear Seam SZ Shear Zone VN Vein VO Void FA Fault	COATING CN Clean CT Coating (>= 1.0m) FILLED Filled SN Stained VR Veneer (< 1.0mm) PLANARITY CU Curved DIS Discontinuous IR Irregular PR Planar ST Stepped UN Undulose	INFILL CA Calcite CLAY Clay FE Iron Oxide FE Iron Oxide Clay CLAY Clay KT Chlorite MS Secondary Mineral MU Unidentified Mineral OZ Quartz X Carbonaceous
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See Explanatory Notes for details of abbreviations & basis of descriptions.

SMC AUSTRALIA



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CORED DRILL HOLE LOG

HOLE NO : BH02

PROJECT : WATTLE VALE QUARRY
LOCATION : MATHESON NSW

CLIENT : GLEN INNES SEVERN COUNCIL
FEATURE : PROPOSED QUARRY SITE 3

FILE / JOB NO : 30012451
SHEET : 3 OF 4

POSITION : E: 365278.000, N: 6711980.000 (56 MGA94)

SURFACE ELEVATION : 1125.784 (AHD)

ANGLE FROM HORIZONTAL : -60°

RIG TYPE : P160

MOUNTING : Track

CONTRACTOR : NCD

HOLE DIA : 96mm

DATE STARTED : 31/3/16

DATE COMPLETED : 31/3/16

DATE LOGGED : 31/3/16

LOGGED BY : BD

CHECKED BY : SB

CASING DIAMETER : HQ

BARREL (Length) : 3.00 m BIT : Diamond Impreg S10-12

BIT CONDITION : Good

DRILLING				MATERIAL				ROCK MASS				
DRILLING & CASING	WATER RETURN (%)	CORE LOSS (DRILL DEPTH)	SAMPLES & FIELD TESTS	ELEVATION (RL) DEPTH (m)	GRAPHIC LOG	DESCRIPTION ROCK TYPE : Colour, Grain size, Structure (texture, fabric, mineral composition, hardness alteration, cementation, etc as applicable)	Weathering	ESTIMATED STRENGTH Is(50)		RQD (%)	DEFECT SPACING (mm)	DEFECTS (joints, partings, seams, zones, etc) Description, orientation, infilling or coating, shape, roughness, thickness, other
								● Axial	○ Diametral			
				5.0		BASALT fine grained, dark grey (continued)	SW to FR			0		5.00-5.43: FZ, Fe SN, 20-40mm spacing
				5.5						27		5.43: JT, 40°, PR, S, Fe SN 5.52: JT, 35°, PR, RF, Fe Clay CT 5.58: JT, 20°, CU, RF, Fe Clay CT 5.75: JT, 30°, PR, RF, Fe SN 5.75-5.90: FZ, 20-40°, Fe SN
				6.0						0		5.90-6.00: EW 6.00-6.30: FZ, 20-40°, Fe SN
			6.30m Is(50) d=0.06 MPa	6.30m		LAPILLI TUFF brown and dark grey brown angular clasts up to 40mm, coarse grained matrix, matrix supported	HW			38		6.35: JT, 0°, IR, RF, Fe SN 6.41: JT, 30°, PR, RF, Fe VR 6.51: JT, 30°, PR, VR, Clay VR 6.62: JT, 25-30°, PR, RF, Fe SN 6.82: JT, 50°, PR, RF, Fe SN 6.89: JT, 70°, PR, RF, Fe SN 6.95: JT, 70°, PR, RF, Fe SN
			7.00m Is(50) d=0.3 MPa	7.0								
				7.5								7.36: JT, 15°, IR, RF, Fe SN
				8.0								7.85: JT, 30°, PR, RF, Fe SN
			8.10m Is(50) d=0.12 MPa	8.10m		dark grey clasts, clasts increases to 100mm in parts, appears more clasts supported, frequent closed micro fractures						8.15: JT, 10°, IR, RF, Fe SN
				8.5								
			8.60m Is(50) d=0.2 MPa	8.60m								8.81: DB 8.82: DB
				9.0								
				9.25m		bands of matrix supported, clast size generally less than 40mm						
				9.5								
				9.9								9.18-9.89: JT, 40-45°, PR, S, Fe SN, 40-120mm spacing

DRILLING AD/T Auger Drilling with TC Bit AD/V Auger Drilling with V Bit AS Auger Screwing DB Washbore with Drag Bit DT Diatube HMLC HMLC Core Barrel HQ3 HQ3 Core Barrel NMLC NMLC Core Barrel NQ3 NQ3 Core Barrel PQ3 PQ3 Core Barrel R Rock Roller	WATER 10 Oct., 73 Water Level on Date shown water inflow water outflow WEATHERING FR Fresh SW Slightly Weathered MW Moderately Weathered HW Highly Weathered EW Extremely Weathered	STRENGTH EH Extremely High VH Very High H High M Medium L Low VL Very Low EL Extremely Low ROUGHNESS POL Polished RF Rough S Smooth SL Slickensided VR Very Rough	DEFECT TYPE BP Bedding Plane CL Cleavage CS Crushed Seam CZ Crushed Zone DB Drilling Break FC Fracture HB Handling Break IS Infilled Seam JT Joint SM Seam SS Shear Seam SZ Shear Zone VN Vein VO Void FA Fault	COATING CN Clean CT Coating (>= 1.0m) FILLED Filled SN Stained VR Veneer (< 1.0mm) PLANARITY CU Curved DIS Discontinuous IR Irregular PR Planar ST Stepped UN Undulose	INFILL CA Calcite CLAY Clay FE Iron Oxide FE Iron Oxide Clay CLAY Clay KT Chlorite MS Secondary Mineral MU Unidentified Mineral OZ Quartz X Carbonaceous
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See Explanatory Notes for details of abbreviations & basis of descriptions.

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CORED DRILL HOLE LOG

HOLE NO : BH02

PROJECT : WATTLE VALE QUARRY
LOCATION : MATHESON NSW

CLIENT : GLEN INNES SEVERN COUNCIL
FEATURE : PROPOSED QUARRY SITE 3

FILE / JOB NO : 30012451
SHEET : 4 OF 4

POSITION : E: 365278.000, N: 6711980.000 (56 MGA94)

SURFACE ELEVATION : 1125.784 (AHD)

ANGLE FROM HORIZONTAL : -60°

RIG TYPE : P160

MOUNTING : Track

CONTRACTOR : NCD

HOLE DIA : 96mm

DATE STARTED : 31/3/16

DATE COMPLETED : 31/3/16

DATE LOGGED : 31/3/16

LOGGED BY : BD

CHECKED BY : SB

CASING DIAMETER : HQ

BARREL (Length) : 3.00 m

BIT : Diamond Impreg S10-12

BIT CONDITION : Good

DRILLING				MATERIAL				ROCK MASS			
DRILLING & CASING	WATER RETURN (%)	CORE LOSS DRILL DEPTH	SAMPLES & FIELD TESTS	ELEVATION (RL) DEPTH (m)	GRAPHIC LOG	DESCRIPTION ROCK TYPE : Colour, Grain size, Structure (texture, fabric, mineral composition, hardness alteration, cementation, etc as applicable)	Weathering	ESTIMATED STRENGTH Is(50)	RQD (%)	DEFECT SPACING (mm)	DEFECTS (joints, partings, seams, zones, etc) Description, orientation, infilling or coating, shape, roughness, thickness, other
NMLC	100 % RETURN			10.0		LAPILLI TUFF brown and dark grey brown (continued)	HW	● Axial ○ Diametral	93	20	10.00-10.25: HB
				10.5						40	10.34: JT, 10°, CU, RF, Fe SN
				11.0						100	10.50-10.87: JT, 40-50°, PR, RF, Fe SN, 60-120mm spacing
				11.5						26	11.25-11.88: FZ, CN, 20-40mm spacing
				12.0						0	12.00-12.40: JT, 40-45°, PR, RF, Fe Sn, 40-80mm spacing
				12.5						0	12.60-12.85: FZ, Fe SN, 20-40mm spacing
				13.0						0	12.95: JT, 45°, IR, RF, CN
				13.5						0	13.56: JT, 25°, PR, S, CN 12.98-14.20: DB, x 3 13.60-13.80: FZ, 20-40mm spacing 13.28-14.33: CS, 30°
				14.0						0	13.90-14.02: FC, 50°, closed
				14.5						0	14.20-14.44: FC, 50°, Fe SN, 20-40mm partly closed
				14.80					0	14.40-14.80: FC, 50-60°, 20-40mm partly closed	
				15.0							BOREHOLE BH02 TERMINATED AT 14.80 m Target depth

DRILLING AD/T Auger Drilling with TC Bit AD/V Auger Drilling with V Bit AS Auger Screwing DB Washbore with Drag Bit DT Diatube HMLC HMLC Core Barrel HQ3 HQ3 Core Barrel NMLC NMLC Core Barrel NQ3 NQ3 Core Barrel PQ3 PQ3 Core Barrel R Rock Roller	WATER 10 Oct., 73 Water Level on Date shown water inflow water outflow WEATHERING FR Fresh SW Slightly Weathered MW Moderately Weathered HW Highly Weathered EW Extremely Weathered	STRENGTH EH Extremely High VH Very High H High M Medium L Low VL Very Low EL Extremely Low ROUGHNESS POL Polished RF Rough S Smooth SL Slickensided VR Very Rough	DEFECT TYPE BP Bedding Plane CL Cleavage CS Crushed Seam CZ Crushed Zone DB Drilling Break FC Fracture HB Handling Break IS Infilled Seam JT Joint SM Seam SS Shear Seam SZ Shear Zone VN Vein VO Void FA Fault	COATING CN Clean CT Coating (>= 1.0m) FILLED Filled SN Stained VR Veneer (< 1.0mm) PLANARITY CU Curved DIS Discontinuous IR Irregular PR Planar ST Stepped UN Undulose	INFILL CA Calcite CLAY Clay FE Iron Oxide FE Iron Oxide Clay CLAY Clay KT Chlorite MS Secondary Mineral MU Unidentified Mineral OZ Quartz X Carbonaceous
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See Explanatory Notes for details of abbreviations & basis of descriptions.

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TITLE: **Wattle Valley Quarry**

PROJECT NO:
30012451

TEST DATE:
30/3/2016

INCLINATION:
-90°

CORED LENGTH:
0.6m – 14.8m

DRILL RIG:
P160

CONTRACTOR:
NCD

LOGGED BY:
BD

CHECKED BY:
NP

BH02





NON-CORE DRILL HOLE - GEOLOGICAL LOG

HOLE NO : BH03

PROJECT : WATTLE VALE QUARRY
 LOCATION : MATHESON NSW

CLIENT : GLEN INNES SEVERN COUNCIL
 FEATURE : PROPOSED QUARRY SITE 3

FILE / JOB NO : 30012451
 SHEET : 1 OF 5

POSITION : E: 365289.390, N: 6712024.330 (56 MGA94)

SURFACE ELEVATION : 1125.434 (AHD)

ANGLE FROM HORIZONTAL : 90°

RIG TYPE : P160

MOUNTING : Track

CONTRACTOR : NCD

DRILLER : DALE

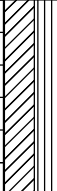
DATE STARTED : 1/4/16

DATE COMPLETED : 2/4/16

DATE LOGGED : 1/4/16

LOGGED BY : BD

CHECKED BY : SB

DRILLING					MATERIAL							
DRILLING & CASING	SAMPLES	DRILLING PENETRATION	GROUND WATER LEVELS	FIELD TESTS	ELEVATION (RL) DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Plasticity or Particle Characteristic, Colour, Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY	RELATIVE DENSITY	STRUCTURE & Other Observations
AD/T HQ Casing					0.0 1125.0		CI-CH	Silty CLAY red brown, with basalt cobbles, with basalt boulders, moist	M			RESIDUAL SOIL 0.00: moist
			GNE		1124.5 1124.0 1123.5 1123.0 1122.5 1122.0 1121.5 1121.0 1120.5			Continued as Cored Drill Hole				

GINT - WATTLE VALE QUARRY LIBRARY.GLB Log SMEC NON-CORE DRILL HOLE GINT - WATTLE VALE QUARRY.GPJ <-DrawingFiles> 27/04/2016 13:32 8.30.002

See Explanatory Notes for details of abbreviations & basis of descriptions.



CORED DRILL HOLE LOG

HOLE NO : BH03

PROJECT : WATTLE VALE QUARRY
LOCATION : MATHESON NSW

CLIENT : GLEN INNES SEVERN COUNCIL
FEATURE : PROPOSED QUARRY SITE 3

FILE / JOB NO : 30012451
SHEET : 2 OF 5

POSITION : E: 365289.390, N: 6712024.330 (56 MGA94)

SURFACE ELEVATION : 1125.434 (AHD)

ANGLE FROM HORIZONTAL : 90°

RIG TYPE : P160

MOUNTING : Track

CONTRACTOR : NCD

HOLE DIA : 96mm

DATE STARTED : 1/4/16

DATE COMPLETED : 2/4/16

DATE LOGGED : 1/4/16

LOGGED BY : BD

CHECKED BY : SB

CASING DIAMETER : HQ

BARREL (Length) : 3.00 m BIT : Diamond Impreg S10-12

BIT CONDITION : Good

DRILLING				MATERIAL				ROCK MASS				
DRILLING & CASING	WATER RETURN (%)	CORE LOSS (DRILL DEPTH)	SAMPLES & FIELD TESTS	ELEVATION (RL) DEPTH (m)	GRAPHIC LOG	DESCRIPTION ROCK TYPE : Colour, Grain size, Structure (texture, fabric, mineral composition, hardness alteration, cementation, etc as applicable)	Weathering	ESTIMATED STRENGTH Is(50)		RQD (%)	DEFECT SPACING (mm)	DEFECTS (joints, partings, seams, zones, etc) Description, orientation, infilling or coating, shape, roughness, thickness, other
								● Axial	○ Diametral			
				0.0								
				1125.0		0.60m START CORING AT 0.60m						
				1124.5		BASALT fine grained, dark grey occasional amygdalae, Fe clay seams at 100-200mm spacing	SW			61		0.64: JT, 20°, PR, RF, Fe Clay Ct 0.67: SM, 15°, Clay FILLED, 10 mm 0.80: JT, 10°, PR, VR, MU Vr 0.86-1.14: SM, 10-20°, Clay FILLED, <15mm thick, 20-60mm spacing 1.20-1.83: SM, 15-20°, Clay FILLED, <10mm thick, 100-150mm spacing 1.95: JT, 70°, IR, VR, Fe Ct, 5 mm 2.09: JT, IR, VR, Fe Sn
			2.20m Is(50) d=7.52 MPa	1123.5		2.00m appears brecciated, dark grey anular basalt fragments in cemented matrix 2.14m occasional amygdalae and laths, some clay seams, 80mm spacing	MW SW			47		2.28-2.52: SM, 0-30°, <20mm thick, 20-80mm spacing 2.53-2.70: JT, 90°, Un, RF, Fe Sn 2.70: JT, 60°, RF, Fe Sn 2.80: JT, 0°, IR, RF, Fe Sn
				1123.0		2.50m iron stained sub vertical joint, some partly opened healed fractures 20-60mm spacing				64		2.90-3.86: JT, 80-90°, PR, S, Fe Sn 3.38: JT, 15°, PR, S, Fe Sn 3.50: JT, 10°, PR, RF, Fe Sn 3.67: JT, 10°, PR, RF, Fe Sn
			3.95m Is(50) d=3.34 MPa	1121.5						91		3.84-4.05: JT, 0°, PR, RF, Fe Sn, x3 4.09-4.56: JT, 0-5°, PR, RF, Cn, 50-100mm spacing
				1121.0								4.95: JT, 10°, PR, S, Fe Sn
				1120.5								

DRILLING AD/T Auger Drilling with TC Bit AD/V Auger Drilling with V Bit AS Auger Screwing DB Washbore with Drag Bit DT Diatube HMLC HMLC Core Barrel HQ3 HQ3 Core Barrel NMLC NMLC Core Barrel NQ3 NQ3 Core Barrel PQ3 PQ3 Core Barrel R Rock Roller	WATER 10 Oct., 73 Water Level on Date shown water inflow water outflow WEATHERING FR Fresh SW Slightly Weathered MW Moderately Weathered HW Highly Weathered EW Extremely Weathered	STRENGTH EH Extremely High VH Very High H High M Medium L Low VL Very Low EL Extremely Low ROUGHNESS POL Polished RF Rough S Smooth SL Slickensided VR Very Rough	DEFECT TYPE BP Bedding Plane CL Cleavage CS Crushed Seam CZ Crushed Zone DB Drilling Break FC Fracture HB Handling Break IS Infilled Seam JT Joint SM Seam SS Shear Seam SZ Shear Zone VN Vein VO Void FA Fault	COATING CN Clean CT Coating (>= 1.0m) FILLED Filled SN Stained VR Veneer (< 1.0mm) PLANARITY CU Curved DIS Discontinuous IR Irregular PR Planar ST Stepped UN Undulose	INFILL CA Calcite CLAY Clay FE Iron Oxide FE Iron Oxide Clay CLAY Clay KT Chlorite MS Secondary Mineral MU Unidentified Mineral QZ Quartz X Carbonaceous
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See Explanatory Notes for details of abbreviations & basis of descriptions.

SMC AUSTRALIA



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CORED DRILL HOLE LOG

HOLE NO : BH03

PROJECT : WATTLE VALE QUARRY
LOCATION : MATHESON NSW

CLIENT : GLEN INNES SEVERN COUNCIL
FEATURE : PROPOSED QUARRY SITE 3

FILE / JOB NO : 30012451
SHEET : 3 OF 5

POSITION : E: 365289.390, N: 6712024.330 (56 MGA94)

SURFACE ELEVATION : 1125.434 (AHD)

ANGLE FROM HORIZONTAL : 90°

RIG TYPE : P160

MOUNTING : Track

CONTRACTOR : NCD

HOLE DIA : 96mm

DATE STARTED : 1/4/16

DATE COMPLETED : 2/4/16

DATE LOGGED : 1/4/16

LOGGED BY : BD

CHECKED BY : SB

CASING DIAMETER : HQ

BARREL (Length) : 3.00 m

BIT : Diamond Impreg S10-12

BIT CONDITION : Good

DRILLING				MATERIAL				ROCK MASS						
DRILLING & CASING	WATER RETURN (%)	CORE LOSS (DRILL DEPTH)	SAMPLES & FIELD TESTS	ELEVATION (RL) DEPTH (m)	GRAPHIC LOG	DESCRIPTION ROCK TYPE : Colour, Grain size, Structure (texture, fabric, mineral composition, hardness alteration, cementation, etc as applicable)	Weathering	ESTIMATED STRENGTH Is(50)		RQD (%)	DEFECT SPACING (mm)	DEFECTS (joints, partings, seams, zones, etc) Description, orientation, infilling or coating, shape, roughness, thickness, other		
								● Axial	○ Diametral					
NMLC 100% RETURN				5.0		BASALT fine grained, dark grey (continued)	SW	VL	EH	91	5.11-5.50: DB5, x 5 5.45: JT, 60°, PR, RF, Clay Ct, 6 mm 5.50-6.00: JT, 20-30°, Fe Sn, 10-40mm			
				5.5		6.0	LAPILLI TUFF dark grey brown angular clasts in yellow-brown matrix, matrix supported becoming dark red-brown from 6.2m to 6.3m sub angular clasts up to 40mm in brown-grey matrix	HW	L	M	93			
				6.5		7.0								
				7.5		8.0								
NMLC 100% RETURN				8.5		AGGLOMERATE fine grained, dark grey brown basalt clasts in grey brown matrix, clast supported	MW	L	EL	61	7.74: JT, 20°, IR, RF, Clay Vr 8.16: JT, 25°, PR, RF, Clay Vr			
				9.0		9.9								

DRILLING AD/T Auger Drilling with TC Bit AD/V Auger Drilling with V Bit AS Auger Screwing DB Washbore with Drag Bit DT Diatube HMLC HMLC Core Barrel HQ3 HQ3 Core Barrel NMLC NMLC Core Barrel NQ3 NQ3 Core Barrel PQ3 PQ3 Core Barrel R Rock Roller	WATER 10 Oct., 73 Water Level on Date shown water inflow water outflow WEATHERING FR Fresh SW Slightly Weathered MW Moderately Weathered HW Highly Weathered EW Extremely Weathered	STRENGTH EH Extremely High VH Very High H High M Medium L Low VL Very Low EL Extremely Low ROUGHNESS POL Polished RF Rough S Smooth SL Slickensided VR Very Rough	DEFECT TYPE BP Bedding Plane CL Cleavage CS Crushed Seam CZ Crushed Zone DB Drilling Break FC Fracture HB Handling Break IS Infilled Seam JT Joint SM Seam SS Shear Seam SZ Shear Zone VN Vein VO Void FA Fault	COATING CN Clean CT Coating (>= 1.0m) FILLED Filled SN Stained VR Veneer (< 1.0mm) PLANARITY CU Curved DIS Discontinuous IR Irregular PR Planar ST Stepped UN Undulose	INFILL CA Calcite CLAY Clay FE Iron Oxide FE Iron Oxide Clay CLAY Clay KT Chlorite MS Secondary Mineral MU Unidentified Mineral QZ Quartz X Carbonaceous
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See Explanatory Notes for details of abbreviations & basis of descriptions.

SMC AUSTRALIA



GINT - WATTLE VALE QUARRY LIBRARY.GLB Log - WATTLE VALE QUARRY.GPJ -> DrawingFiles> 27/04/2016 13:41 8:30.002

CORED DRILL HOLE LOG

HOLE NO : BH03

PROJECT : WATTLE VALE QUARRY
 LOCATION : MATHESON NSW

CLIENT : GLEN INNES SEVERN COUNCIL
 FEATURE : PROPOSED QUARRY SITE 3

FILE / JOB NO : 30012451
 SHEET : 4 OF 5

POSITION : E: 365289.390, N: 6712024.330 (56 MGA94)

SURFACE ELEVATION : 1125.434 (AHD)

ANGLE FROM HORIZONTAL : 90°

RIG TYPE : P160

MOUNTING : Track

CONTRACTOR : NCD

HOLE DIA : 96mm

DATE STARTED : 1/4/16

DATE COMPLETED : 2/4/16

DATE LOGGED : 1/4/16

LOGGED BY : BD

CHECKED BY : SB

CASING DIAMETER : HQ

BARREL (Length) : 3.00 m BIT : Diamond Impreg S10-12

BIT CONDITION : Good

DRILLING				MATERIAL				ROCK MASS				
DRILLING & CASING	WATER RETURN (%)	CORE LOSS (DRILL DEPTH)	SAMPLES & FIELD TESTS	ELEVATION (RL) DEPTH (m)	GRAPHIC LOG	DESCRIPTION ROCK TYPE : Colour, Grain size, Structure (texture, fabric, mineral composition, hardness alteration, cementation, etc as applicable)	Weathering	ESTIMATED STRENGTH Is(50)		RQD (%)	DEFECT SPACING (mm)	DEFECTS (joints, partings, seams, zones, etc) Description, orientation, infilling or coating, shape, roughness, thickness, other
								● Axial	○ Diametral			
				10.00		AGGLOMERATE fine grained, dark grey brown (continued)	MW			93		9.95-10.08: JT, 20-25°, IR, RF, Cn, 50-200mm spacing
			10.60m Is(50) d=0.76 MPa	10.50								10.54: JT, 15°, IR, RF, Cn
				11.00								11.19: JT, 5°, IR, VR, Cn
				11.45								11.28: JT, 10°, IR, S, Cn
				11.50								
				11.50		11.50m LAPILLI TUFF white grey and yellow brown clasts generally <50mm, matrix supported	HW to MW					
			11.95m Is(50) d=0.9 MPa	12.00								
				12.50								
				12.60m		12.60m BASALT dark grey some pink speckles above 12.8m, frequent infilled fractures with green mineral above 13.5m	FR			98		12.95: JT, 5°, PR, RF, Cn
				13.00								13.30: JT, 40°, PR, RF, Cn
			13.30m Is(50) d=2.41 MPa	13.50								13.40-13.75: 60-70°, Fe, healed fractures at 100mm spacing
				14.00								
			13.80m Is(50) d=2.39 MPa	14.50						100		
				14.50		14.50m AGGLOMERATE fine grained, dark grey basalt clasts up to 100mm with yellow, green and white matrix, clast supported						
			14.30m Is(50) d=3.7 MPa	14.50								
				14.75m								
			14.75m Is(50) d=0.55 MPa	14.75								

DRILLING AD/T Auger Drilling with TC Bit AD/V Auger Drilling with V Bit AS Auger Screwing DB Washbore with Drag Bit DT Diatube HMLC HMLC Core Barrel HQ3 HQ3 Core Barrel NMLC NMLC Core Barrel NQ3 NQ3 Core Barrel PQ3 PQ3 Core Barrel R Rock Roller	WATER 10 Oct., 73 Water Level on Date shown water inflow water outflow WEATHERING FR Fresh SW Slightly Weathered MW Moderately Weathered HW Highly Weathered EW Extremely Weathered	STRENGTH EH Extremely High VH Very High H High M Medium L Low VL Very Low EL Extremely Low ROUGHNESS POL Polished RF Rough S Smooth SL Slicksided VR Very Rough	DEFECT TYPE BP Bedding Plane CL Cleavage CS Crushed Seam CZ Crushed Zone DB Drilling Break FC Fracture HB Handling Break IS Infilled Seam JT Joint SM Seam SS Shear Seam SZ Shear Zone VN Vein VO Void FA Fault	COATING CN Clean CT Coating (>= 1.0m) FILLED Filled SN Stained VR Veneer (< 1.0mm) PLANARITY CU Curved DIS Discontinuous IR Irregular PR Planar ST Stepped UN Undulose	INFILL CA Calcite CLAY Clay FE Iron Oxide FE Iron Oxide Clay CLAY Clay KT Chlorite MS Secondary Mineral MU Unidentified Mineral QZ Quartz X Carbonaceous
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See Explanatory Notes for details of abbreviations & basis of descriptions.

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CORED DRILL HOLE LOG

HOLE NO : BH03

PROJECT : WATTLE VALE QUARRY
LOCATION : MATHESON NSW

CLIENT : GLEN INNES SEVERN COUNCIL
FEATURE : PROPOSED QUARRY SITE 3

FILE / JOB NO : 30012451
SHEET : 5 OF 5

POSITION : E: 365289.390, N: 6712024.330 (56 MGA94)

SURFACE ELEVATION : 1125.434 (AHD)

ANGLE FROM HORIZONTAL : 90°

RIG TYPE : P160

MOUNTING : Track

CONTRACTOR : NCD

HOLE DIA : 96mm

DATE STARTED : 1/4/16

DATE COMPLETED : 2/4/16

DATE LOGGED : 1/4/16

LOGGED BY : BD

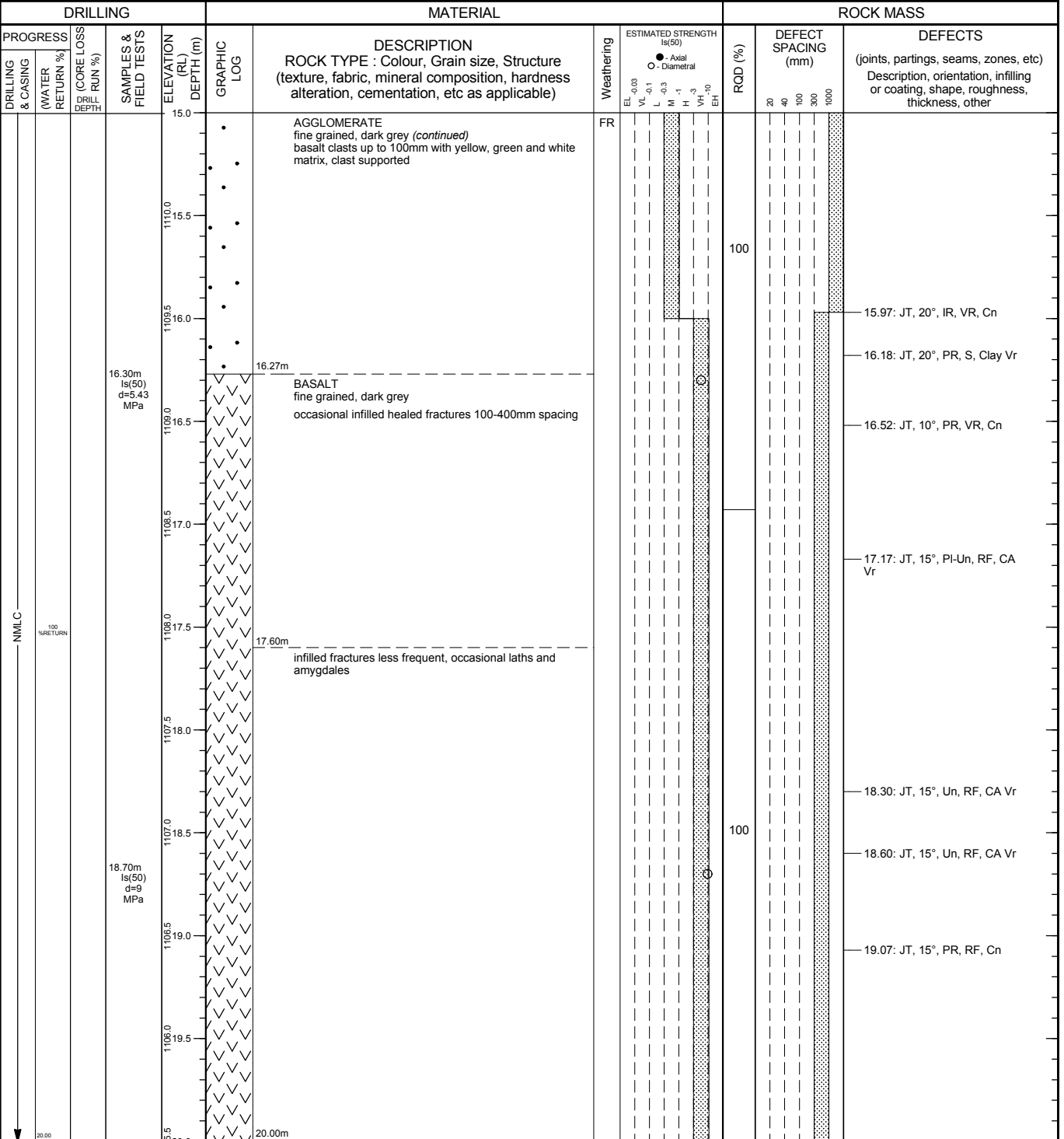
CHECKED BY : SB

CASING DIAMETER : HQ

BARREL (Length) : 3.00 m

BIT : Diamond Impreg S10-12

BIT CONDITION : Good



DRILLING	
AD/T	Auger Drilling with TC Bit
AD/V	Auger Drilling with V Bit
AS	Auger Screwing
DB	Washbore with Drag Bit
DT	Diatube
HMLC	HMLC Core Barrel
HQ3	HQ3 Core Barrel
NMLC	NMLC Core Barrel
NQ3	NQ3 Core Barrel
PQ3	PQ3 Core Barrel
R	Rock Roller

WATER	
10 Oct., 73 Water	Level on Date shown
water inflow	
water outflow	

WEATHERING	
FR	Fresh
SW	Slightly Weathered
MW	Moderately Weathered
HW	Highly Weathered
EW	Extremely Weathered

STRENGTH	
EH	Extremely High
VH	Very High
H	High
M	Medium
L	Low
VL	Very Low
EL	Extremely Low

ROUGHNESS	
POL	Polished
RF	Rough
S	Smooth
SL	Slickensided
VR	Very Rough

DEFECT TYPE	
BP	Bedding Plane
CL	Cleavage
CS	Crushed Seam
CZ	Crushed Zone
DB	Drilling Break
FC	Fracture
HB	Handling Break
IS	Infilled Seam
JT	Joint
SM	Seam
SS	Shear Seam
SZ	Shear Zone
VN	Vein
VO	Void
FA	Fault

COATING	
CN	Clean
CT	Coating (>= 1.0m)
FILLED	Filled
SN	Stained
VR	Veneer (< 1.0mm)

PLANARITY	
CU	Curved
DIS	Discontinuous
IR	Irregular
PR	Planar
ST	Stepped
UN	Undulose

INFILL	
CA	Calcite
CLAY	Clay
FE	Iron Oxide
FE	Iron Oxide Clay
CLAY	Clay
KT	Chlorite
MS	Secondary Mineral
MU	Unidentified Mineral
OZ	Quartz
X	Carbonaceous

See Explanatory Notes for details of abbreviations & basis of descriptions.

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