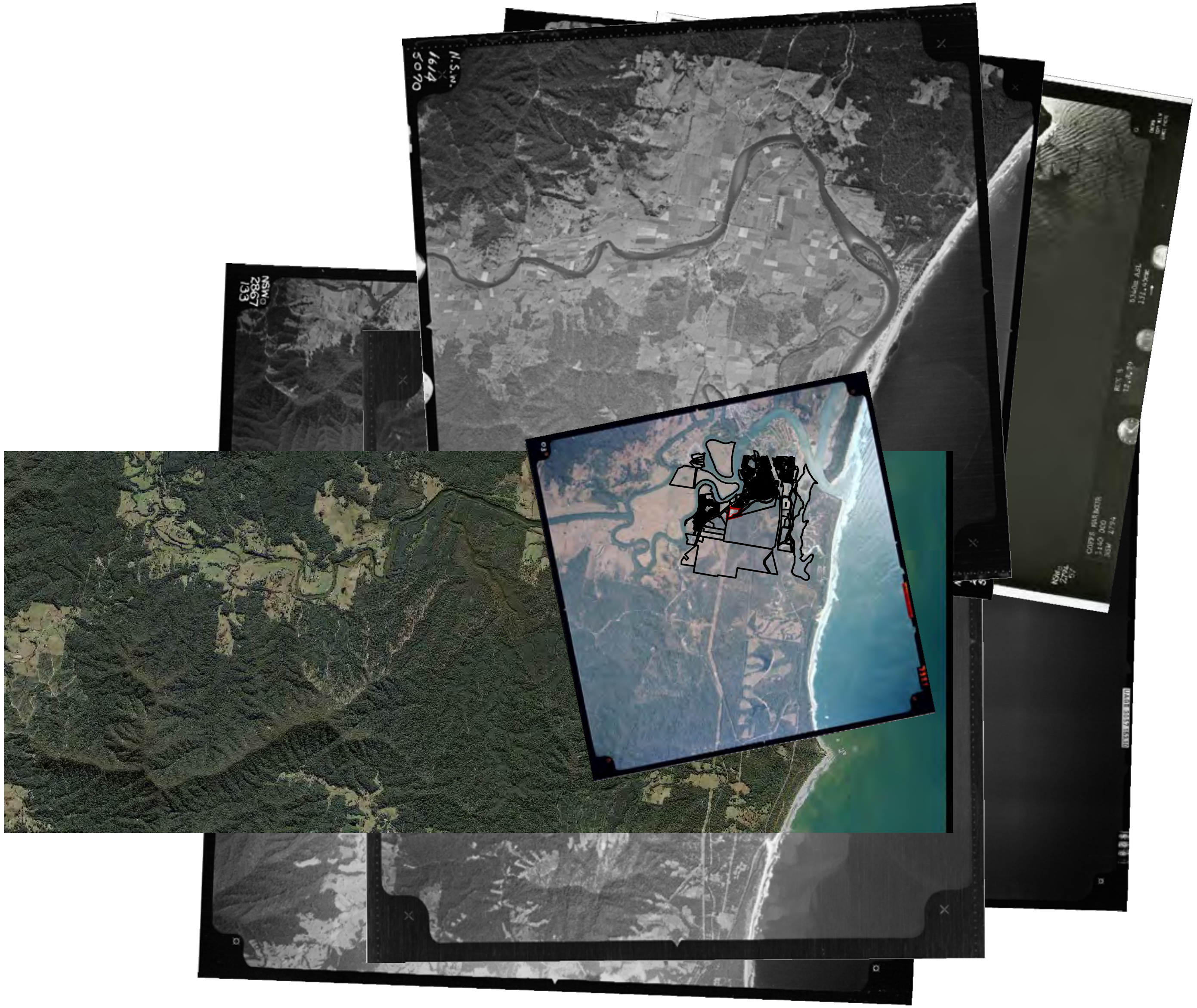

1989

1991


2009


N.S.W.
1614
5070
NSW
2867
133

Appendix E - Borelogs

BOREHOLE LOG

ENVIRONMENTAL - SOIL BORE

Bore No.: BH001

Client: NSW Catchment and Lands - Crown Land
Project: Urunga Antimony RAP
Project No.: 2216251
Location:
Date Drilled: 16/08/2012 to: 16/08/2012

Drill Co: GHD
Driller: MK
Rig Type: AS
Total Depth (m): 1.5
Diameter (mm): 150

Easting: 500866
Northing: 6625256
Grid Ref: GDA94_MGA_zone_56
Elevation: 0
Logged by: JS Checked by: BC

DRILLING										
Depth (m)	Drilling Method	PID (ppm)	Sample ID	Water	Graphic Log	LITHOLOGICAL DESCRIPTION Soil Type (Classification Group Symbol); Particle Size; Colour; Secondary / Minor Components.	Moisture	Consistency	COMMENTS/ CONTAMINANT INDICATORS Odours, staining, waste materials, separate phase liquids, imported fill, ash.	Elevation / Depth (m)
						Ground Surface:				0.00
0.0	AS		BH001_0.0-0.2			silty GRAVEL Trace Cobbles,brown	D			0.00
										-0.30
			BH001_0.3-0.5			SILT Some Gravel, trace Cobbles,brown	D			0.30
										-0.70
			BH001_0.7-0.9			clayey SILT Trace Sand and Gravel,orange	M			0.70
										-1.00
1.0			BH001_1.0-1.2			silty CLAY Trace Sand,orange	M			1.00
										-1.50
										1.50
2.0										
3.0										
4.0										

NOTES:

GHD Soil Classifications: The GHD Soil Classification is based on Australian Standards AS 1726-1993. This log is not intended for geotechnical purposes.

Drilling Abbreviations:

RW(x)	Rotary Wash	PSC(x)	Percussion Simultanous Casing
RT(x)	Rotary Triple Tube	AS	Augering - Solid Flight
PC(x)	Percussion Cable Tool	AH	Augering - Hollow Flight
PD(x)	Percussion Down Hole	H	Hand Augering

Where "x" is flushing medium: (W) Water, (M) Mud, (A) Air, (F) Foam.

Moisture Abbreviations:
D Dry
M Moist
W Wet

Consistency:

Granular Soils		Cohesive Soils	
(VL) Very Loose	(D) Dense	(VS) Very Soft	(ST) Stiff
(L) Loose	(VD) Very Dense	(S) Soft	(VST) Very Stiff
(MD) Medium Dense		(F) Firm	(H) Hard

BOREHOLE LOG

ENVIRONMENTAL - SOIL BORE

Bore No.: BH002

Client: NSW Catchment and Lands - Crown Land
Project: Urunga Antimony RAP
Project No.: 2216251
Location:
Date Drilled: 16/08/2012 to: 16/08/2012

Drill Co: GHD
Driller: MK
Rig Type: AS
Total Depth (m): 1.4
Diameter (mm): 150

Easting: 500865
Northing: 6625235
Grid Ref: GDA94_MGA_zone_56
Elevation: 0
Logged by: JS Checked by: BC

DRILLING										
Depth (m)	Drilling Method	PID (ppm)	Sample ID	Water	Graphic Log	LITHOLOGICAL DESCRIPTION Soil Type (Classification Group Symbol); Particle Size; Colour; Secondary / Minor Components.	Moisture	Consistency	COMMENTS/ CONTAMINANT INDICATORS Odours, staining, waste materials, separate phase liquids, imported fill, ash.	Elevation / Depth (m)
						Ground Surface:				0.00
0.0	AS		BH002_0.0-0.2			sandy SILT Trace Clay, trace Gravel (fine grained),brown	D			0.00
										-0.50
			BH002_0.5-0.7			silty CLAY Trace Sand,orange/ brown	D		BHDUP06	0.50
1.0			BH002_1.0-1.2							-1.20
	HA					CLAY Some Silt, trace Sand,orange/ brown	M			1.20
										-1.40
										1.40
2.0										
3.0										
4.0										

NOTES:

GHD Soil Classifications: The GHD Soil Classification is based on Australian Standards AS 1726-1993. This log is not intended for geotechnical purposes.

Drilling Abbreviations:

RW(x)	Rotary Wash	PSC(x)	Percussion Simultanous Casing
RT(x)	Rotary Triple Tube	AS	Augering - Solid Flight
PC(x)	Percussion Cable Tool	AH	Augering - Hollow Flight
PD(x)	Percussion Down Hole	H	Hand Augering

Where "x" is flushing medium: (W) Water, (M) Mud, (A) Air, (F) Foam.

Moisture Abbreviations:
D Dry
M Moist
W Wet

Consistency:

Granular Soils		**Cohesive Soils**	
(VL) Very Loose	(D) Dense	(VS) Very Soft	(ST) Stiff
(L) Loose	(VD) Very Dense	(S) Soft	(VST) Very Stiff
(MD) Medium Dense		(F) Firm	(H) Hard

BOREHOLE LOG

ENVIRONMENTAL - SOIL BORE

Bore No.: BH003

Client: NSW Catchment and Lands - Crown Land
Project: Urunga Antimony RAP
Project No.: 2216251
Location:
Date Drilled: 16/08/2012 to: 16/08/2012

Drill Co: GHD
Driller: MK
Rig Type: AS
Total Depth (m): 1.2
Diameter (mm): 150

Easting: 500854
Northing: 6625193
Grid Ref: GDA94_MGA_zone_56
Elevation: 0
Logged by: JS Checked by: BC

DRILLING										
Depth (m)	Drilling Method	PID (ppm)	Sample ID	Water	Graphic Log	LITHOLOGICAL DESCRIPTION Soil Type (Classification Group Symbol); Particle Size; Colour; Secondary / Minor Components.	Moisture	Consistency	COMMENTS/ CONTAMINANT INDICATORS Odours, staining, waste materials, separate phase liquids, imported fill, ash.	Elevation / Depth (m)
						Ground Surface:				0.00
0.0	AS		BH003_0.0-0.2			sandy SILT Some Gravel (fine grained),brown	D/M			0.00
										-0.30
						silty CLAY Some Sand,brown	M			0.30
			BH003_0.5-0.7							-0.70
						clayey SILT Trace Sand,dark brown	W			0.70
1.0			BH003_1.0-1.2							-1.20
										1.20
2.0										
3.0										
4.0										

NOTES:

GHD Soil Classifications: The GHD Soil Classification is based on Australian Standards AS 1726-1993. This log is not intended for geotechnical purposes.

Drilling Abbreviations:

RW(x)	Rotary Wash	PSC(x)	Percussion Simultanous Casing
RT(x)	Rotary Triple Tube	AS	Augering - Solid Flight
PC(x)	Percussion Cable Tool	AH	Augering - Hollow Flight
PD(x)	Percussion Down Hole	H	Hand Augering

Where "x" is flushing medium: (W) Water, (M) Mud, (A) Air, (F) Foam.

Moisture Abbreviations:
D Dry
M Moist
W Wet

Consistency:

Granular Soils		Cohesive Soils	
(VL) Very Loose	(D) Dense	(VS) Very Soft	(ST) Stiff
(L) Loose	(VD) Very Dense	(S) Soft	(VST) Very Stiff
(MD) Medium Dense		(F) Firm	(H) Hard

BOREHOLE LOG

ENVIRONMENTAL - SOIL BORE

Bore No.: BH004
Page: 1 of 1

Client: NSW Catchment and Lands - Crown Land
Project: Urunga Antimony RAP
Project No.: 2216251
Location:
Date Drilled: 16/08/2012 to: 16/08/2012

Drill Co: GHD
Driller: MK
Rig Type: AS
Total Depth (m): 2.2
Diameter (mm): 150

Easting: 500847
Northing: 6625160
Grid Ref: GDA94_MGA_zone_56
Elevation: 0
Logged by: JS Checked by: BC

DRILLING										
Depth (m)	Drilling Method	PID (ppm)	Sample ID	Water	Graphic Log	LITHOLOGICAL DESCRIPTION Soil Type (Classification Group Symbol); Particle Size; Colour; Secondary / Minor Components.	Moisture	Consistency	COMMENTS/ CONTAMINANT INDICATORS Odours, staining, waste materials, separate phase liquids, imported fill, ash.	Elevation / Depth (m)
						Ground Surface:				0.00
0.0	AS		BH004_0.0-0.2			sandy SILT Trace Gravel (fine grained),brown	D		BHLABDUP02	0.00
			BH004_0.5-0.7							-0.70
						silty CLAY Some Sand,brown/ mottled grey	M			0.70 -1.00
1.0			BH004_1.0-1.2			silty SAND dark grey	W			1.00
	HA									-1.50
			BH004_1.5-1.7			clayey SILT Trace Sand,dark brown	W			1.50
										-2.00
2.0			BH004_2.0-2.2			silty CLAY Trace Gravel (decreasing with depth),orange/ brown	W			2.00 -2.20
										2.20
3.0										
4.0										

NOTES:

GHD Soil Classifications: The GHD Soil Classification is based on Australian Standards AS 1726-1993. This log is not intended for geotechnical purposes.

Drilling Abbreviations:

RW(x)	Rotary Wash	PSC(x)	Percussion Simultanous Casing
RT(x)	Rotary Triple Tube	AS	Augering - Solid Flight
PC(x)	Percussion Cable Tool	AH	Augering - Hollow Flight
PD(x)	Percussion Down Hole	H	Hand Augering

Where "x" is flushing medium: (W) Water, (M) Mud, (A) Air, (F) Foam.

Moisture Abbreviations:
D Dry
M Moist
W Wet

Consistency:

Granular Soils		**Cohesive Soils**	
(VL) Very Loose	(D) Dense	(VS) Very Soft	(ST) Stiff
(L) Loose	(VD) Very Dense	(S) Soft	(VST) Very Stiff
(MD) Medium Dense		(F) Firm	(H) Hard

BOREHOLE LOG

ENVIRONMENTAL - SOIL BORE

Bore No.: BH005

Client: NSW Catchment and Lands - Crown Land
Project: Urunga Antimony RAP
Project No.: 2216251
Location:
Date Drilled: 14/08/2012 to: 14/08/2012

Drill Co: GHD
Driller: MK
Rig Type: HA
Total Depth (m): 2.2
Diameter (mm): 50

Easting: 500848
Northing: 6625138
Grid Ref: GDA94_MGA_zone_56
Elevation: 0
Logged by: JS Checked by: BC

DRILLING						LITHOLOGICAL DESCRIPTION				
Depth (m)	Drilling Method	PID (ppm)	Sample ID	Water	Graphic Log	Soil Type (Classification Group Symbol); Particle Size; Colour; Secondary / Minor Components.	Moisture	Consistency	COMMENTS/ CONTAMINANT INDICATORS Odours, staining, waste materials, separate phase liquids, imported fill, ash.	Elevation / Depth (m)
						Ground Surface:				0.00
0.0	HA		BH005_0.0-0.2			silty SAND Trace Organic matter,dark brown	W			0.00 -0.10
						silty SAND brown	W			0.10
			BH005_0.3-0.5							
										-0.80
						sandy SILT grey/ mottled	W			0.80
1.0			BH005_1.0-1.2							
										-1.40
						SILT Trace Sand, Organic matter,dark brown	W			1.40
			BH005_1.5-1.8							
										-1.90
						sandy SILT brown	W			1.90
2.0			BH005_2.0-2.2							
										-2.20
										2.20
3.0										
4.0										

NOTES:

GHD Soil Classifications: The GHD Soil Classification is based on Australian Standards AS 1726-1993. This log is not intended for geotechnical purposes.

Drilling Abbreviations:

RW(x)	Rotary Wash	PSC(x)	Percussion Simultanous Casing
RT(x)	Rotary Triple Tube	AS	Augering - Solid Flight
PC(x)	Percussion Cable Tool	AH	Augering - Hollow Flight
PD(x)	Percussion Down Hole	H	Hand Augering

Where "x" is flushing medium: (W) Water, (M) Mud, (A) Air, (F) Foam.

Moisture Abbreviations:
D Dry
M Moist
W Wet

Consistency:

Granular Soils
(VL) Very Loose
(L) Loose
(MD) Medium Dense
(D) Dense
(VD) Very Dense

Cohesive Soils
(VS) Very Soft
(S) Soft
(F) Firm
(ST) Stiff
(VST) Very Stiff
(H) Hard

BOREHOLE LOG

ENVIRONMENTAL - SOIL BORE

Bore No.: BH006

Client: NSW Catchment and Lands - Crown Land
Project: Urunga Antimony RAP
Project No.: 2216251
Location:
Date Drilled: 3/08/2012 to: 3/08/2012

Drill Co: GHD
Driller: JS
Rig Type: HA
Total Depth (m): 1
Diameter (mm): 50

Easting: 500824
Northing: 6625115
Grid Ref: GDA94_MGA_zone_56
Elevation: 0
Logged by: BC Checked by: BC

DRILLING										
Depth (m)	Drilling Method	PID (ppm)	Sample ID	Water	Graphic Log	LITHOLOGICAL DESCRIPTION Soil Type (Classification Group Symbol); Particle Size; Colour; Secondary / Minor Components.	Moisture	Consistency	COMMENTS/ CONTAMINANT INDICATORS Odours, staining, waste materials, separate phase liquids, imported fill, ash.	Elevation / Depth (m)
						Ground Surface:				0.00
0.0	HA		BH006_0.0-0.3			sandy SILT brown/ grey	W			0.00
										-0.50
			BH006_0.5-0.8			SILT Trace Sand,grey	W		BHDUP06	0.50
1.0										-1.00
										1.00
2.0										
3.0										
4.0										

NOTES:

GHD Soil Classifications: The GHD Soil Classification is based on Australian Standards AS 1726-1993. This log is not intended for geotechnical purposes.

Drilling Abbreviations:

RW(x)	Rotary Wash	PSC(x)	Percussion Simultanous Casing
RT(x)	Rotary Triple Tube	AS	Augering - Solid Flight
PC(x)	Percussion Cable Tool	AH	Augering - Hollow Flight
PD(x)	Percussion Down Hole	H	Hand Augering

Where "x" is flushing medium: (W) Water, (M) Mud, (A) Air, (F) Foam.

Moisture Abbreviations:
D Dry
M Moist
W Wet

Consistency:

Granular Soils

(VL) Very Loose	(D) Dense
(L) Loose	(VD) Very Dense
(MD) Medium Dense	

Cohesive Soils

(VS) Very Soft	(ST) Stiff
(S) Soft	(VST) Very Stiff
(F) Firm	(H) Hard

BOREHOLE LOG

ENVIRONMENTAL - SOIL BORE

Bore No.: BH010
Page: 1 of 1

Client: NSW Catchment and Lands - Crown Land
Project: Urunga Antimony RAP
Project No.: 2216251
Location:
Date Drilled: 14/08/2012 to: 14/08/2012

Drill Co: GHD
Driller: MK
Rig Type: HA
Total Depth (m): 2
Diameter (mm): 50

Easting: 500864
Northing: 6625139
Grid Ref: GDA94_MGA_zone_56
Elevation: 0
Logged by: JS Checked by: BC

DRILLING										
Depth (m)	Drilling Method	PID (ppm)	Sample ID	Water	Graphic Log	LITHOLOGICAL DESCRIPTION Soil Type (Classification Group Symbol); Particle Size; Colour; Secondary / Minor Components.	Moisture	Consistency	COMMENTS/ CONTAMINANT INDICATORS Odours, staining, waste materials, separate phase liquids, imported fill, ash.	Elevation / Depth (m)
						Ground Surface:				0.00
0.0	HA		BH010_0.0-0.2			sandy SILT Organic matter,dark brown	W			0.00 -0.20
						silty SAND brown	W			0.20
			BH010_0.3-0.5							
1.0			BH010_1.0-1.2							-1.30
						sandy SILT Organic matter,dark brown	W			1.30
			BH010_1.5-1.8							
2.0										-2.00 2.00
3.0										
4.0										

NOTES:

GHD Soil Classifications: The GHD Soil Classification is based on Australian Standards AS 1726-1993. This log is not intended for geotechnical purposes.

Drilling Abbreviations:

RW(x)	Rotary Wash	PSC(x)	Percussion Simultanous Casing
RT(x)	Rotary Triple Tube	AS	Augering - Solid Flight
PC(x)	Percussion Cable Tool	AH	Augering - Hollow Flight
PD(x)	Percussion Down Hole	H	Hand Augering

Where "x" is flushing medium: (W) Water, (M) Mud, (A) Air, (F) Foam.

Moisture Abbreviations:
D Dry
M Moist
W Wet

Consistency:

Granular Soils		**Cohesive Soils**	
(VL) Very Loose	(D) Dense	(VS) Very Soft	(ST) Stiff
(L) Loose	(VD) Very Dense	(S) Soft	(VST) Very Stiff
(MD) Medium Dense		(F) Firm	(H) Hard

BOREHOLE LOG

ENVIRONMENTAL - SOIL BORE

Bore No.: BH011

Page: 1 of 1

Client: NSW Catchment and Lands - Crown Land
Project: Urunga Antimony RAP
Project No.: 2216251
Location:
Date Drilled: 16/08/2012 to: 16/08/2012

Drill Co: GHD
Driller: BL/BJ
Rig Type: HA
Total Depth (m): 0.6
Diameter (mm): 50

Easting: 500852
Northing: 6625112
Grid Ref: GDA94_MGA_zone_56
Elevation: 0
Logged by: BL/BJ Checked by: BC

DRILLING										
Depth (m)	Drilling Method	PID (ppm)	Sample ID	Water	Graphic Log	LITHOLOGICAL DESCRIPTION Soil Type (Classification Group Symbol); Particle Size; Colour; Secondary / Minor Components.	Moisture	Consistency	COMMENTS/ CONTAMINANT INDICATORS Odours, staining, waste materials, separate phase liquids, imported fill, ash.	Elevation / Depth (m)
						Ground Surface:				0.00
0.0	HA		BH011_0.0-0.2			silty CLAY Organic matter,grey	W			0.00 -0.20
			BH011_0.2-0.4			SILT Organic matter,dark brown	W			0.20 -0.40
			BH011_0.4-0.6			clayey SAND Gravel,dark grey	W			0.40 -0.60
										0.60
1.0										
2.0										
3.0										
4.0										

NOTES:

GHD Soil Classifications: The GHD Soil Classification is based on Australian Standards AS 1726-1993. This log is not intended for geotechnical purposes.

Drilling Abbreviations:

RW(x)	Rotary Wash	PSC(x)	Percussion Simultanous Casing
RT(x)	Rotary Triple Tube	AS	Augering - Solid Flight
PC(x)	Percussion Cable Tool	AH	Augering - Hollow Flight
PD(x)	Percussion Down Hole	H	Hand Augering

Where "x" is flushing medium: (W) Water, (M) Mud, (A) Air, (F) Foam.

Moisture Abbreviations:
D Dry
M Moist
W Wet

Consistency:

Granular Soils		Cohesive Soils	
(VL) Very Loose	(D) Dense	(VS) Very Soft	(ST) Stiff
(L) Loose	(VD) Very Dense	(S) Soft	(VST) Very Stiff
(MD) Medium Dense		(F) Firm	(H) Hard

BOREHOLE LOG

ENVIRONMENTAL - SOIL BORE

Bore No.: BH012
Page: 1 of 1

Client: NSW Catchment and Lands - Crown Land
Project: Urunga Antimony RAP
Project No.: 2216251
Location:
Date Drilled: 16/08/2012 to: 16/08/2012

Drill Co: GHD
Driller: BL/BJ
Rig Type: HA
Total Depth (m): 0.6
Diameter (mm): 50

Easting: 500845
Northing: 6625013
Grid Ref: GDA94_MGA_zone_56
Elevation: 0
Logged by: BL/BJ Checked by: BC

DRILLING										
Depth (m)	Drilling Method	PID (ppm)	Sample ID	Water	Graphic Log	LITHOLOGICAL DESCRIPTION Soil Type (Classification Group Symbol); Particle Size; Colour; Secondary / Minor Components.	Moisture	Consistency	COMMENTS/ CONTAMINANT INDICATORS Odours, staining, waste materials, separate phase liquids, imported fill, ash.	Elevation / Depth (m)
						Ground Surface:				0.00
0.0	HA		BH012_0.0-0.1			sandy SILT dark brown	M		BHDUP08	0.00
										-0.40
			BH012_0.4-0.6			sandy CLAY grey	W			0.40
										-0.60
										0.60
1.0										
2.0										
3.0										
4.0										

NOTES:

GHD Soil Classifications: The GHD Soil Classification is based on Australian Standards AS 1726-1993. This log is not intended for geotechnical purposes.

Drilling Abbreviations:

RW(x)	Rotary Wash	PSC(x)	Percussion Simultanous Casing
RT(x)	Rotary Triple Tube	AS	Augering - Solid Flight
PC(x)	Percussion Cable Tool	AH	Augering - Hollow Flight
PD(x)	Percussion Down Hole	H	Hand Augering

Where "x" is flushing medium: (W) Water, (M) Mud, (A) Air, (F) Foam.

Moisture Abbreviations:
D Dry
M Moist
W Wet

Consistency:

Granular Soils		**Cohesive Soils**	
(VL) Very Loose	(D) Dense	(VS) Very Soft	(ST) Stiff
(L) Loose	(VD) Very Dense	(S) Soft	(VST) Very Stiff
(MD) Medium Dense		(F) Firm	(H) Hard

BOREHOLE LOG

ENVIRONMENTAL - SOIL BORE

Bore No.: BH014

Page: 1 of 1

Client: NSW Catchment and Lands - Crown Land
Project: Urunga Antimony RAP
Project No.: 2216251
Location:
Date Drilled: 16/08/2012 to: 16/08/2012

Drill Co: GHD
Driller: BL/BJ
Rig Type: HA
Total Depth (m): 0.6
Diameter (mm): 50

Easting: 500878
Northing: 6625064
Grid Ref: GDA94_MGA_zone_56
Elevation: 0
Logged by: BL/BJ Checked by: BC

DRILLING					Graphic Log	LITHOLOGICAL DESCRIPTION Soil Type (Classification Group Symbol); Particle Size; Colour; Secondary / Minor Components.	Moisture	Consistency	COMMENTS/ CONTAMINANT INDICATORS Odours, staining, waste materials, separate phase liquids, imported fill, ash.	Elevation / Depth (m)
Depth (m)	Drilling Method	PID (ppm)	Sample ID	Water						
						Ground Surface:				0.00
0.0	HA		BH014_0.0-0.1			silty SAND dark brown	M			0.00
										-0.40
			BH014_0.4-0.6			clayey SAND orange	M			0.40
										-0.60
										0.60
1.0										
2.0										
3.0										
4.0										

NOTES:

GHD Soil Classifications: The GHD Soil Classification is based on Australian Standards AS 1726-1993. This log is not intended for geotechnical purposes.

Drilling Abbreviations:

RW(x)	Rotary Wash	PSC(x)	Percussion Simultanous Casing
RT(x)	Rotary Triple Tube	AS	Augering - Solid Flight
PC(x)	Percussion Cable Tool	AH	Augering - Hollow Flight
PD(x)	Percussion Down Hole	H	Hand Augering

Where "x" is flushing medium: (W) Water, (M) Mud, (A) Air, (F) Foam.

Moisture Abbreviations:
D Dry
M Moist
W Wet

Consistency:

Granular Soils		Cohesive Soils	
(VL) Very Loose	(D) Dense	(VS) Very Soft	(ST) Stiff
(L) Loose	(VD) Very Dense	(S) Soft	(VST) Very Stiff
(MD) Medium Dense		(F) Firm	(H) Hard

BOREHOLE LOG

ENVIRONMENTAL - SOIL BORE

Bore No.: BH020
Page: 1 of 1

Client: NSW Catchment and Lands - Crown Land
Project: Urunga Antimony RAP
Project No.: 2216251
Location:
Date Drilled: 16/08/2012 to: 16/08/2012

Drill Co: GHD
Driller: MK
Rig Type: AS
Total Depth (m): 1.2
Diameter (mm): 150

Easting: 500895
Northing: 6625259
Grid Ref: GDA94_MGA_zone_56
Elevation: 0
Logged by: JS Checked by: BC

DRILLING										
Depth (m)	Drilling Method	PID (ppm)	Sample ID	Water	Graphic Log	LITHOLOGICAL DESCRIPTION Soil Type (Classification Group Symbol); Particle Size; Colour; Secondary / Minor Components.	Moisture	Consistency	COMMENTS/ CONTAMINANT INDICATORS Odours, staining, waste materials, separate phase liquids, imported fill, ash.	Elevation / Depth (m)
						Ground Surface:				0.00
0.0	AS		BH020_0.0-0.2			sandy SILT Some Clay,brown	M			0.00
			BH020_0.3-0.5							-0.80
1.0			BH020_1.0-1.2			sandy CLAY Trace Silt,orange	M			0.80 -1.20
										1.20
2.0										
3.0										
4.0										

NOTES:

GHD Soil Classifications: The GHD Soil Classification is based on Australian Standards AS 1726-1993. This log is not intended for geotechnical purposes.

Drilling Abbreviations:

RW(x)	Rotary Wash	PSC(x)	Percussion Simultanous Casing
RT(x)	Rotary Triple Tube	AS	Augering - Solid Flight
PC(x)	Percussion Cable Tool	AH	Augering - Hollow Flight
PD(x)	Percussion Down Hole	H	Hand Augering

Where "x" is flushing medium: (W) Water, (M) Mud, (A) Air, (F) Foam.

Moisture Abbreviations:
D Dry
M Moist
W Wet

Consistency:

Granular Soils		**Cohesive Soils**	
(VL) Very Loose	(D) Dense	(VS) Very Soft	(ST) Stiff
(L) Loose	(VD) Very Dense	(S) Soft	(VST) Very Stiff
(MD) Medium Dense		(F) Firm	(H) Hard

BOREHOLE LOG

ENVIRONMENTAL - SOIL BORE

Bore No.: BH021
Page: 1 of 1

Client: NSW Catchment and Lands - Crown Land
Project: Urunga Antimony RAP
Project No.: 2216251
Location:
Date Drilled: 16/08/2012 to: 16/08/2012

Drill Co: GHD
Driller: MK
Rig Type: HA
Total Depth (m): 0.3
Diameter (mm): 50

Easting: 500886
Northing: 6625236
Grid Ref: GDA94_MGA_zone_56
Elevation: 0
Logged by: JS Checked by: BC

DRILLING										
Depth (m)	Drilling Method	PID (ppm)	Sample ID	Water	Graphic Log	LITHOLOGICAL DESCRIPTION Soil Type (Classification Group Symbol); Particle Size; Colour; Secondary / Minor Components.	Moisture	Consistency	COMMENTS/ CONTAMINANT INDICATORS Odours, staining, waste materials, separate phase liquids, imported fill, ash.	Elevation / Depth (m)
						Ground Surface:				0.00
0.0	HA		BH021_0.0-0.2			sandy SILT brown	D			0.00
										-0.30
						Auger Refusal, gravel and roots				0.30
1.0										
2.0										
3.0										
4.0										

NOTES:

GHD Soil Classifications: The GHD Soil Classification is based on Australian Standards AS 1726-1993. This log is not intended for geotechnical purposes.

Drilling Abbreviations:

RW(x)	Rotary Wash	PSC(x)	Percussion Simultanous Casing
RT(x)	Rotary Triple Tube	AS	Augering - Solid Flight
PC(x)	Percussion Cable Tool	AH	Augering - Hollow Flight
PD(x)	Percussion Down Hole	H	Hand Augering

Where "x" is flushing medium: (W) Water, (M) Mud, (A) Air, (F) Foam.

Moisture Abbreviations:
D Dry
M Moist
W Wet

Consistency:

Granular Soils		**Cohesive Soils**	
(VL) Very Loose	(D) Dense	(VS) Very Soft	(ST) Stiff
(L) Loose	(VD) Very Dense	(S) Soft	(VST) Very Stiff
(MD) Medium Dense		(F) Firm	(H) Hard

BOREHOLE LOG

ENVIRONMENTAL - SOIL BORE

Bore No.: BH022
Page: 1 of 1

Client: NSW Catchment and Lands - Crown Land
Project: Urunga Antimony RAP
Project No.: 2216251
Location:
Date Drilled: 16/08/2012 to: 16/08/2012

Drill Co: GHD
Driller: MK
Rig Type: AS
Total Depth (m): 0.8
Diameter (mm): 150

Easting: 500873
Northing: 6625212
Grid Ref: GDA94_MGA_zone_56
Elevation: 0
Logged by: JS Checked by: BC

DRILLING					Graphic Log	LITHOLOGICAL DESCRIPTION Soil Type (Classification Group Symbol); Particle Size; Colour; Secondary / Minor Components.	Moisture	Consistency	COMMENTS/ CONTAMINANT INDICATORS Odours, staining, waste materials, separate phase liquids, imported fill, ash.	Elevation / Depth (m)
Depth (m)	Drilling Method	PID (ppm)	Sample ID	Water						
						Ground Surface:				0.00
0.0	AS		BH022_0.0-0.2			SILT Some Gravel, some Sand, trace Cobbles,brown	M			0.00
										-0.30
						clayey SILT Some Sand, trace Gravel,brown	M			0.30
			BH022_0.5-0.7							
										-0.80
						Auger Refusal- Cobbles				0.80
1.0										
2.0										
3.0										
4.0										

NOTES:

GHD Soil Classifications: The GHD Soil Classification is based on Australian Standards AS 1726-1993. This log is not intended for geotechnical purposes.

Drilling Abbreviations:

RW(x)	Rotary Wash	PSC(x)	Percussion Simultanous Casing
RT(x)	Rotary Triple Tube	AS	Augering - Solid Flight
PC(x)	Percussion Cable Tool	AH	Augering - Hollow Flight
PD(x)	Percussion Down Hole	H	Hand Augering

Where "x" is flushing medium: (W) Water, (M) Mud, (A) Air, (F) Foam.

Moisture Abbreviations:
D Dry
M Moist
W Wet

Consistency:

Granular Soils		**Cohesive Soils**	
(VL) Very Loose	(D) Dense	(VS) Very Soft	(ST) Stiff
(L) Loose	(VD) Very Dense	(S) Soft	(VST) Very Stiff
(MD) Medium Dense		(F) Firm	(H) Hard

BOREHOLE LOG

ENVIRONMENTAL - SOIL BORE

Bore No.: BH023
Page: 1 of 1

Client: NSW Catchment and Lands - Crown Land
Project: Urunga Antimony RAP
Project No.: 2216251
Location:
Date Drilled: 3/08/2012 to: 3/08/2012

Drill Co: GHD
Driller: JS
Rig Type: HA
Total Depth (m): 2
Diameter (mm): 50

Easting: 500899
Northing: 6625186
Grid Ref: GDA94_MGA_zone_56
Elevation: 0
Logged by: BL Checked by: BC

DRILLING										
Depth (m)	Drilling Method	PID (ppm)	Sample ID	Water	Graphic Log	LITHOLOGICAL DESCRIPTION Soil Type (Classification Group Symbol); Particle Size; Colour; Secondary / Minor Components.	Moisture	Consistency	COMMENTS/ CONTAMINANT INDICATORS Odours, staining, waste materials, separate phase liquids, imported fill, ash.	Elevation / Depth (m)
						Ground Surface:				0.00
0.0	HA		BH023_0.0-0.2			SAND Trace Silt,grey/ brown	M			0.00
										-0.50
			BH023_0.5-0.7			grey	W			0.50
1.0			BH023_1.0-1.3							-1.50
						SILT Trace Sand, Organic matter,black	W			1.50
			BH023_1.8-2.0							-2.00
2.0										2.00
3.0										
4.0										

NOTES:

GHD Soil Classifications: The GHD Soil Classification is based on Australian Standards AS 1726-1993. This log is not intended for geotechnical purposes.

Drilling Abbreviations:

RW(x)	Rotary Wash	PSC(x)	Percussion Simultanous Casing
RT(x)	Rotary Triple Tube	AS	Augering - Solid Flight
PC(x)	Percussion Cable Tool	AH	Augering - Hollow Flight
PD(x)	Percussion Down Hole	H	Hand Augering

Where "x" is flushing medium: (W) Water, (M) Mud, (A) Air, (F) Foam.

Moisture Abbreviations:
D Dry
M Moist
W Wet

Consistency:

Granular Soils		**Cohesive Soils**	
(VL) Very Loose	(D) Dense	(VS) Very Soft	(ST) Stiff
(L) Loose	(VD) Very Dense	(S) Soft	(VST) Very Stiff
(MD) Medium Dense		(F) Firm	(H) Hard

BOREHOLE LOG

ENVIRONMENTAL - SOIL BORE

Bore No.: BH024
Page: 1 of 1

Client: NSW Catchment and Lands - Crown Land
Project: Urunga Antimony RAP
Project No.: 2216251
Location:
Date Drilled: 14/08/2012 to: 14/08/2012

Drill Co: GHD
Driller: MK
Rig Type: HA
Total Depth (m): 4
Diameter (mm): 50

Easting: 500894
Northing: 6625143
Grid Ref: GDA94_MGA_zone_56
Elevation: 0
Logged by: JS Checked by: BC

DRILLING										
Depth (m)	Drilling Method	PID (ppm)	Sample ID	Water	Graphic Log	LITHOLOGICAL DESCRIPTION Soil Type (Classification Group Symbol); Particle Size; Colour; Secondary / Minor Components.	Moisture	Consistency	COMMENTS/ CONTAMINANT INDICATORS Odours, staining, waste materials, separate phase liquids, imported fill, ash.	Elevation / Depth (m)
						Ground Surface:				0.00
0.0	HA		BH024_0.0-0.2			silty SAND pale brown	W			0.00
										-0.30
			BH024_0.3-0.5			sandy SILT grey	W			0.30
										-0.90
1.0			BH024_1.0-1.2			sandy SILT Organic matter,brown	W			0.90
			BH024_1.5-1.8							
										-2.00
2.0			BH024_2.0-2.2			clayey SILT Trace Sand,grey	W			2.00
3.0										-3.60
						clayey SILT Some Gravel,grey	W			3.60
4.0										-4.00 4.00

NOTES:

GHD Soil Classifications: The GHD Soil Classification is based on Australian Standards AS 1726-1993. This log is not intended for geotechnical purposes.

Drilling Abbreviations:

RW(x)	Rotary Wash	PSC(x)	Percussion Simultanous Casing
RT(x)	Rotary Triple Tube	AS	Augering - Solid Flight
PC(x)	Percussion Cable Tool	AH	Augering - Hollow Flight
PD(x)	Percussion Down Hole	H	Hand Augering

Where "x" is flushing medium: (W) Water, (M) Mud, (A) Air, (F) Foam.

Moisture Abbreviations:
D Dry
M Moist
W Wet

Consistency:

Granular Soils		Cohesive Soils	
(VL) Very Loose	(D) Dense	(VS) Very Soft	(ST) Stiff
(L) Loose	(VD) Very Dense	(S) Soft	(VST) Very Stiff
(MD) Medium Dense		(F) Firm	(H) Hard

BOREHOLE LOG

ENVIRONMENTAL - SOIL BORE

Bore No.: BH027

Page: 1 of 1

Client: NSW Catchment and Lands - Crown Land
Project: Urunga Antimony RAP
Project No.: 2216251
Location:
Date Drilled: 16/08/2012 to: 16/08/2012

Drill Co: GHD
Driller: BL/BJ
Rig Type: HA
Total Depth (m): 0.6
Diameter (mm): 50

Easting: 500929
Northing: 6625080
Grid Ref: GDA94_MGA_zone_56
Elevation: 0
Logged by: BL/BJ Checked by: BC

DRILLING										
Depth (m)	Drilling Method	PID (ppm)	Sample ID	Water	Graphic Log	LITHOLOGICAL DESCRIPTION Soil Type (Classification Group Symbol); Particle Size; Colour; Secondary / Minor Components.	Moisture	Consistency	COMMENTS/ CONTAMINANT INDICATORS Odours, staining, waste materials, separate phase liquids, imported fill, ash.	Elevation / Depth (m)
						Ground Surface:				0.00
0.0	HA		BH027_0.0-0.1			silty SAND Organic matter,grey/ dark brown	W			0.00
			BH027_0.1-0.3							
										-0.40
			BH027_0.4-0.6			sandy CLAY mottled grey/ orange	M			0.40
										-0.60
										0.60
1.0										
2.0										
3.0										
4.0										

NOTES:

GHD Soil Classifications: The GHD Soil Classification is based on Australian Standards AS 1726-1993. This log is not intended for geotechnical purposes.

Drilling Abbreviations:

RW(x)	Rotary Wash	PSC(x)	Percussion Simultanous Casing
RT(x)	Rotary Triple Tube	AS	Augering - Solid Flight
PC(x)	Percussion Cable Tool	AH	Augering - Hollow Flight
PD(x)	Percussion Down Hole	H	Hand Augering

Where "x" is flushing medium: (W) Water, (M) Mud, (A) Air, (F) Foam.

Moisture Abbreviations:
D Dry
M Moist
W Wet

Consistency:

Granular Soils		Cohesive Soils	
(VL) Very Loose	(D) Dense	(VS) Very Soft	(ST) Stiff
(L) Loose	(VD) Very Dense	(S) Soft	(VST) Very Stiff
(MD) Medium Dense		(F) Firm	(H) Hard

BOREHOLE LOG

ENVIRONMENTAL - SOIL BORE

Bore No.: BH028

Client: NSW Catchment and Lands - Crown Land
Project: Urunga Antimony RAP
Project No.: 2216251
Location:
Date Drilled: 16/08/2012 to: 16/08/2012

Drill Co: GHD
Driller: MK
Rig Type: AS
Total Depth (m): 1
Diameter (mm): 150

Easting: 500874
Northing: 6625286
Grid Ref: GDA94_MGA_zone_56
Elevation: 0
Logged by: JS Checked by: BC

DRILLING										
Depth (m)	Drilling Method	PID (ppm)	Sample ID	Water	Graphic Log	LITHOLOGICAL DESCRIPTION Soil Type (Classification Group Symbol); Particle Size; Colour; Secondary / Minor Components.	Moisture	Consistency	COMMENTS/ CONTAMINANT INDICATORS Odours, staining, waste materials, separate phase liquids, imported fill, ash.	Elevation / Depth (m)
						Ground Surface:				0.00
0.0	AS		BH028_0.0-0.2			silty GRAVEL Trace Sand, Trace Cobbles,brown	D			0.00
										-0.30
			BH028_0.3-0.5			sandy SILT Some Gravel,brown	D/M			0.30
										-0.60
						silty CLAY Trace Sand,orange/ brown	M			0.60
			BH028_0.8-1.0							-1.00
1.0										1.00
2.0										
3.0										
4.0										

NOTES:

GHD Soil Classifications: The GHD Soil Classification is based on Australian Standards AS 1726-1993. This log is not intended for geotechnical purposes.

Drilling Abbreviations:

RW(x)	Rotary Wash	PSC(x)	Percussion Simultanous Casing
RT(x)	Rotary Triple Tube	AS	Augering - Solid Flight
PC(x)	Percussion Cable Tool	AH	Augering - Hollow Flight
PD(x)	Percussion Down Hole	H	Hand Augering

Where "x" is flushing medium: (W) Water, (M) Mud, (A) Air, (F) Foam.

Moisture Abbreviations:
D Dry
M Moist
W Wet

Consistency:

Granular Soils
(VL) Very Loose
(L) Loose
(MD) Medium Dense
(D) Dense
(VD) Very Dense

Cohesive Soils
(VS) Very Soft
(S) Soft
(F) Firm
(ST) Stiff
(VST) Very Stiff
(H) Hard

BOREHOLE LOG

ENVIRONMENTAL - SOIL BORE

Bore No.: BH029
Page: 1 of 1

Client: NSW Catchment and Lands - Crown Land
Project: Urunga Antimony RAP
Project No.: 2216251
Location:
Date Drilled: 16/08/2012 to: 16/08/2012

Drill Co: GHD
Driller: MK
Rig Type: AS
Total Depth (m): 0.7
Diameter (mm): 150

Easting: 500870
Northing: 6625300
Grid Ref: GDA94_MGA_zone_56
Elevation: 0
Logged by: JS Checked by: BC

DRILLING										
Depth (m)	Drilling Method	PID (ppm)	Sample ID	Water	Graphic Log	LITHOLOGICAL DESCRIPTION Soil Type (Classification Group Symbol); Particle Size; Colour; Secondary / Minor Components.	Moisture	Consistency	COMMENTS/ CONTAMINANT INDICATORS Odours, staining, waste materials, separate phase liquids, imported fill, ash.	Elevation / Depth (m)
						Ground Surface:				0.00
0.0	AS		BH029_0.0-0.2			silty CLAY Some Sand and Gravel,yellow/ brown	M			0.00
			BH029_0.5-0.7							-0.70
										0.70
1.0										
2.0										
3.0										
4.0										

NOTES:

GHD Soil Classifications: The GHD Soil Classification is based on Australian Standards AS 1726-1993. This log is not intended for geotechnical purposes.

Drilling Abbreviations:

RW(x)	Rotary Wash	PSC(x)	Percussion Simultanous Casing
RT(x)	Rotary Triple Tube	AS	Augering - Solid Flight
PC(x)	Percussion Cable Tool	AH	Augering - Hollow Flight
PD(x)	Percussion Down Hole	H	Hand Augering

Where "x" is flushing medium: (W) Water, (M) Mud, (A) Air, (F) Foam.

Moisture Abbreviations:
D Dry
M Moist
W Wet

Consistency:

Granular Soils		**Cohesive Soils**	
(VL) Very Loose	(D) Dense	(VS) Very Soft	(ST) Stiff
(L) Loose	(VD) Very Dense	(S) Soft	(VST) Very Stiff
(MD) Medium Dense		(F) Firm	(H) Hard

BOREHOLE LOG

ENVIRONMENTAL - SOIL BORE

Bore No.: BH030
Page: 1 of 1

Client: NSW Catchment and Lands - Crown Land
Project: Urunga Antimony RAP
Project No.: 2216251
Location:
Date Drilled: 16/08/2012 to: 16/08/2012

Drill Co: GHD
Driller: MK
Rig Type: HA
Total Depth (m): 2
Diameter (mm): 50

Easting: 500903
Northing: 6625217
Grid Ref: GDA94_MGA_zone_56
Elevation: 0
Logged by: JS Checked by: BC

DRILLING						LITHOLOGICAL DESCRIPTION			COMMENTS/	
Depth (m)	Drilling Method	PID (ppm)	Sample ID	Water	Graphic Log	Soil Type (Classification Group Symbol); Particle Size; Colour; Secondary / Minor Components.	Moisture	Consistency	CONTAMINANT INDICATORS Odours, staining, waste materials, separate phase liquids, imported fill, ash.	Elevation / Depth (m)
						Ground Surface:				0.00
0.0	HA		BH030_0.0-0.2			silty SAND grey	D/M			0.00
			BH030_0.5-0.7							
1.0			BH030_1.5-1.7							-1.70
						clayey SILT dark brown	W			1.70
			BH030_1.8-2.0							-2.00
2.0										2.00
3.0										
4.0										

NOTES:

GHD Soil Classifications: The GHD Soil Classification is based on Australian Standards AS 1726-1993. This log is not intended for geotechnical purposes.

Drilling Abbreviations:

RW(x)	Rotary Wash	PSC(x)	Percussion Simultanous Casing
RT(x)	Rotary Triple Tube	AS	Augering - Solid Flight
PC(x)	Percussion Cable Tool	AH	Augering - Hollow Flight
PD(x)	Percussion Down Hole	H	Hand Augering

Where "x" is flushing medium: (W) Water, (M) Mud, (A) Air, (F) Foam.

Moisture Abbreviations:
D Dry
M Moist
W Wet

Consistency:

Granular Soils		**Cohesive Soils**	
(VL) Very Loose	(D) Dense	(VS) Very Soft	(ST) Stiff
(L) Loose	(VD) Very Dense	(S) Soft	(VST) Very Stiff
(MD) Medium Dense		(F) Firm	(H) Hard

BOREHOLE LOG

ENVIRONMENTAL - SOIL BORE

Bore No.: BH031
Page: 1 of 1

Client: NSW Catchment and Lands - Crown Land
Project: Urunga Antimony RAP
Project No.: 2216251
Location:
Date Drilled: 15/08/2012 to: 15/08/2012

Drill Co: GHD
Driller: MK
Rig Type: HA
Total Depth (m): 3
Diameter (mm): 50

Easting: 500917
Northing: 6625197
Grid Ref: GDA94_MGA_zone_56
Elevation: 0
Logged by: JS Checked by: BC

DRILLING										
Depth (m)	Drilling Method	PID (ppm)	Sample ID	Water	Graphic Log	LITHOLOGICAL DESCRIPTION Soil Type (Classification Group Symbol); Particle Size; Colour; Secondary / Minor Components.	Moisture	Consistency	COMMENTS/ CONTAMINANT INDICATORS Odours, staining, waste materials, separate phase liquids, imported fill, ash.	Elevation / Depth (m)
						Ground Surface:				0.00
0.0	HA		BH031_0.0-0.2			silty SAND grey	M			0.00
										-0.50
			BH031_0.5-0.7			brown/ grey	M			0.50
										-1.00
1.0			BH031_1.0-1.2			brown/ purple	M			1.00
										-1.50
						clayey SILT Trace Sand,dark brown	W			1.50
			BH031_1.8-2.0							
2.0										
										-3.00
3.0										3.00
4.0										

NOTES:

GHD Soil Classifications: The GHD Soil Classification is based on Australian Standards AS 1726-1993. This log is not intended for geotechnical purposes.

Drilling Abbreviations:

RW(x)	Rotary Wash	PSC(x)	Percussion Simultanous Casing
RT(x)	Rotary Triple Tube	AS	Augering - Solid Flight
PC(x)	Percussion Cable Tool	AH	Augering - Hollow Flight
PD(x)	Percussion Down Hole	H	Hand Augering

Where "x" is flushing medium: (W) Water, (M) Mud, (A) Air, (F) Foam.

Moisture Abbreviations:
D Dry
M Moist
W Wet

Consistency:

Granular Soils		**Cohesive Soils**	
(VL) Very Loose	(D) Dense	(VS) Very Soft	(ST) Stiff
(L) Loose	(VD) Very Dense	(S) Soft	(VST) Very Stiff
(MD) Medium Dense		(F) Firm	(H) Hard

BOREHOLE LOG

ENVIRONMENTAL - SOIL BORE

Bore No.: BH032
Page: 1 of 1

Client: NSW Catchment and Lands - Crown Land
Project: Urunga Antimony RAP
Project No.: 2216251
Location:
Date Drilled: 14/08/2012 to: 14/08/2012

Drill Co: GHD
Driller: MK
Rig Type: HA
Total Depth (m): 1.8
Diameter (mm): 50

Easting: 500919
Northing: 6625151
Grid Ref: GDA94_MGA_zone_56
Elevation: 0
Logged by: JS Checked by: BC

DRILLING										
Depth (m)	Drilling Method	PID (ppm)	Sample ID	Water	Graphic Log	LITHOLOGICAL DESCRIPTION Soil Type (Classification Group Symbol); Particle Size; Colour; Secondary / Minor Components.	Moisture	Consistency	COMMENTS/ CONTAMINANT INDICATORS Odours, staining, waste materials, separate phase liquids, imported fill, ash.	Elevation / Depth (m)
						Ground Surface:				0.00
0.0	HA		BH032_0.0-0.2			silty SAND pale brown	W			0.00
										-0.30
			BH032_0.3-0.5			sandy SILT grey/ brown	W			0.30
1.0			BH032_1.0-1.2			SILT Trace Sand,brown	M			-1.00 1.00
			BH032_1.5-1.8							-1.80
										1.80
2.0										
3.0										
4.0										

NOTES:

GHD Soil Classifications: The GHD Soil Classification is based on Australian Standards AS 1726-1993. This log is not intended for geotechnical purposes.

Drilling Abbreviations:

RW(x)	Rotary Wash	PSC(x)	Percussion Simultanous Casing
RT(x)	Rotary Triple Tube	AS	Augering - Solid Flight
PC(x)	Percussion Cable Tool	AH	Augering - Hollow Flight
PD(x)	Percussion Down Hole	H	Hand Augering

Where "x" is flushing medium: (W) Water, (M) Mud, (A) Air, (F) Foam.

Moisture Abbreviations:
D Dry
M Moist
W Wet

Consistency:

Granular Soils		**Cohesive Soils**	
(VL) Very Loose	(D) Dense	(VS) Very Soft	(ST) Stiff
(L) Loose	(VD) Very Dense	(S) Soft	(VST) Very Stiff
(MD) Medium Dense		(F) Firm	(H) Hard

BOREHOLE LOG

ENVIRONMENTAL - SOIL BORE

Bore No.: BH034

Client: NSW Catchment and Lands - Crown Land
Project: Urunga Antimony RAP
Project No.: 2216251
Location:
Date Drilled: 15/08/2012 to: 15/08/2012

Drill Co: GHD
Driller: BL/BJ
Rig Type: HA
Total Depth (m): 0.9
Diameter (mm): 50

Easting: 500968
Northing: 6625075
Grid Ref: GDA94_MGA_zone_56
Elevation: 0
Logged by: BL/BJ Checked by: BC

DRILLING										
Depth (m)	Drilling Method	PID (ppm)	Sample ID	Water	Graphic Log	LITHOLOGICAL DESCRIPTION Soil Type (Classification Group Symbol); Particle Size; Colour; Secondary / Minor Components.	Moisture	Consistency	COMMENTS/ CONTAMINANT INDICATORS Odours, staining, waste materials, separate phase liquids, imported fill, ash.	Elevation / Depth (m)
						Ground Surface:				0.00
0.0	HA		BH034_0.0-0.1			sandy SILT dark brown	M		BHDUP04	0.00
										-0.30
			BH034_0.3-0.5			sandy CLAY mottled grey/ orange	M			0.30
			BH034_07-0.9							-0.90
										0.90
1.0										
2.0										
3.0										
4.0										

NOTES:

GHD Soil Classifications: The GHD Soil Classification is based on Australian Standards AS 1726-1993. This log is not intended for geotechnical purposes.

Drilling Abbreviations:

RW(x)	Rotary Wash	PSC(x)	Percussion Simultanous Casing
RT(x)	Rotary Triple Tube	AS	Augering - Solid Flight
PC(x)	Percussion Cable Tool	AH	Augering - Hollow Flight
PD(x)	Percussion Down Hole	H	Hand Augering

Where "x" is flushing medium: (W) Water, (M) Mud, (A) Air, (F) Foam.

Moisture Abbreviations:
D Dry
M Moist
W Wet

Consistency:

Granular Soils

(VL) Very Loose	(D) Dense
(L) Loose	(VD) Very Dense
(MD) Medium Dense	

Cohesive Soils

(VS) Very Soft	(ST) Stiff
(S) Soft	(VST) Very Stiff
(F) Firm	(H) Hard

BOREHOLE LOG

ENVIRONMENTAL - SOIL BORE

Bore No.: BH039

Client: NSW Catchment and Lands - Crown Land
Project: Urunga Antimony RAP
Project No.: 2216251
Location:
Date Drilled: 16/08/2012 to: 16/08/2012

Drill Co: GHD
Driller: MK
Rig Type: AS
Total Depth (m): 2.8
Diameter (mm): 150

Easting: 500876
Northing: 6625186
Grid Ref: GDA94_MGA_zone_56
Elevation: 0
Logged by: JS Checked by: BC

DRILLING										
Depth (m)	Drilling Method	PID (ppm)	Sample ID	Water	Graphic Log	LITHOLOGICAL DESCRIPTION Soil Type (Classification Group Symbol); Particle Size; Colour; Secondary / Minor Components.	Moisture	Consistency	COMMENTS/ CONTAMINANT INDICATORS Odours, staining, waste materials, separate phase liquids, imported fill, ash.	Elevation / Depth (m)
						Ground Surface:				0.00
0.0	AS		BH039_0.0-0.2			sandy SILT Trace Clay and Gravel,brown	D			0.00
										-0.30
						silty CLAY Some Sand, trace Gravel,brown/ orange	M			0.30
			BH039_0.5-0.7							
										-0.90
1.0						brown	M			0.90
			BH039_1.0-1.2							
										-1.30
	HA					clayey SAND Some Silt,grey	W			1.30
			BH039_1.5-1.7							
2.0										
			BH039_2.0-2.2							
			BH039_2.2-2.4			clayey SILT Trace Sand,dark brown	W			-2.20 2.20
										-2.40
						clayey SAND Some Silt,grey	W			2.40
										-2.80
										2.80
3.0										
4.0										

NOTES:

GHD Soil Classifications: The GHD Soil Classification is based on Australian Standards AS 1726-1993. This log is not intended for geotechnical purposes.

Drilling Abbreviations:

RW(x)	Rotary Wash	PSC(x)	Percussion Simultanous Casing
RT(x)	Rotary Triple Tube	AS	Augering - Solid Flight
PC(x)	Percussion Cable Tool	AH	Augering - Hollow Flight
PD(x)	Percussion Down Hole	H	Hand Augering

Where "x" is flushing medium: (W) Water, (M) Mud, (A) Air, (F) Foam.

Moisture Abbreviations:
D Dry
M Moist
W Wet

Consistency:

Granular Soils
(VL) Very Loose (L) Loose (MD) Medium Dense (D) Dense (VD) Very Dense

Cohesive Soils
(VS) Very Soft (S) Soft (F) Firm (ST) Stiff (VST) Very Stiff (H) Hard

BOREHOLE LOG

ENVIRONMENTAL - SOIL BORE

Bore No.: BH040

Page: 1 of 1

Client: NSW Catchment and Lands - Crown Land
Project: Urunga Antimony RAP
Project No.: 2216251
Location:
Date Drilled: 15/08/2012 to: 15/08/2012

Drill Co: GHD
Driller: MK
Rig Type: HA
Total Depth (m): 0.5
Diameter (mm): 50

Easting: 500918
Northing: 6625272
Grid Ref: GDA94_MGA_zone_56
Elevation: 0
Logged by: JS Checked by: BC

DRILLING										
Depth (m)	Drilling Method	PID (ppm)	Sample ID	Water	Graphic Log	LITHOLOGICAL DESCRIPTION Soil Type (Classification Group Symbol); Particle Size; Colour; Secondary / Minor Components.	Moisture	Consistency	COMMENTS/ CONTAMINANT INDICATORS Odours, staining, waste materials, separate phase liquids, imported fill, ash.	Elevation / Depth (m)
						Ground Surface:				0.00
0.0	HA		BH040_0.0-0.2			sandy SILT Trace Gravel (fine grained),brown	D/M			0.00
			BH040_0.3-0.5							-0.50
										0.50
1.0										
2.0										
3.0										
4.0										

NOTES:

GHD Soil Classifications: The GHD Soil Classification is based on Australian Standards AS 1726-1993. This log is not intended for geotechnical purposes.

Drilling Abbreviations:

RW(x)	Rotary Wash	PSC(x)	Percussion Simultanous Casing
RT(x)	Rotary Triple Tube	AS	Augering - Solid Flight
PC(x)	Percussion Cable Tool	AH	Augering - Hollow Flight
PD(x)	Percussion Down Hole	H	Hand Augering

Where "x" is flushing medium: (W) Water, (M) Mud, (A) Air, (F) Foam.

Moisture Abbreviations:
D Dry
M Moist
W Wet

Consistency:

Granular Soils		**Cohesive Soils**	
(VL) Very Loose	(D) Dense	(VS) Very Soft	(ST) Stiff
(L) Loose	(VD) Very Dense	(S) Soft	(VST) Very Stiff
(MD) Medium Dense		(F) Firm	(H) Hard

BOREHOLE LOG

ENVIRONMENTAL - SOIL BORE

Bore No.: BH041

Client: NSW Catchment and Lands - Crown Land
Project: Urunga Antimony RAP
Project No.: 2216251
Location:
Date Drilled: 16/08/2012 to: 16/08/2012

Drill Co: GHD
Driller: MK
Rig Type: HA
Total Depth (m): 1.2
Diameter (mm): 50

Easting: 500920
Northing: 6625231
Grid Ref: GDA94_MGA_zone_56
Elevation: 0
Logged by: JS Checked by: BC

DRILLING					Graphic Log	LITHOLOGICAL DESCRIPTION Soil Type (Classification Group Symbol); Particle Size; Colour; Secondary / Minor Components.	Moisture	Consistency	COMMENTS/ CONTAMINANT INDICATORS Odours, staining, waste materials, separate phase liquids, imported fill, ash.	Elevation / Depth (m)
Depth (m)	Drilling Method	PID (ppm)	Sample ID	Water						
						Ground Surface:				0.00
0.0	HA		BH041_0.0-0.2			silty SAND Trace Clay and Gravel,brown	M			0.00
			BH041_0.5-0.7							
1.0			BH041_1.0-1.2				W			-1.00 1.00 -1.20
										1.20
2.0										
3.0										
4.0										

NOTES:

GHD Soil Classifications: The GHD Soil Classification is based on Australian Standards AS 1726-1993. This log is not intended for geotechnical purposes.

Drilling Abbreviations:

RW(x)	Rotary Wash	PSC(x)	Percussion Simultanous Casing
RT(x)	Rotary Triple Tube	AS	Augering - Solid Flight
PC(x)	Percussion Cable Tool	AH	Augering - Hollow Flight
PD(x)	Percussion Down Hole	H	Hand Augering

Where "x" is flushing medium: (W) Water, (M) Mud, (A) Air, (F) Foam.

Moisture Abbreviations:
D Dry
M Moist
W Wet

Consistency:

Granular Soils		**Cohesive Soils**	
(VL) Very Loose	(D) Dense	(VS) Very Soft	(ST) Stiff
(L) Loose	(VD) Very Dense	(S) Soft	(VST) Very Stiff
(MD) Medium Dense		(F) Firm	(H) Hard

BOREHOLE LOG

ENVIRONMENTAL - SOIL BORE

Bore No.: BH042
Page: 1 of 1

Client: NSW Catchment and Lands - Crown Land
Project: Urunga Antimony RAP
Project No.: 2216251
Location:
Date Drilled: 14/08/2012 to: 14/08/2012

Drill Co: GHD
Driller: MK
Rig Type: HA
Total Depth (m): 1.7
Diameter (mm): 50

Easting: 500939
Northing: 6625168
Grid Ref: GDA94_MGA_zone_56
Elevation: 0
Logged by: JS Checked by: BC

DRILLING						LITHOLOGICAL DESCRIPTION Soil Type (Classification Group Symbol); Particle Size; Colour; Secondary / Minor Components.			COMMENTS/ CONTAMINANT INDICATORS Odours, staining, waste materials, separate phase liquids, imported fill, ash.	Elevation / Depth (m)
Depth (m)	Drilling Method	PID (ppm)	Sample ID	Water	Graphic Log		Moisture	Consistency		
						Ground Surface:				0.00
0.0	HA		BH042_0.0-0.2			silty SAND grey	M			0.00
										-0.30
			BH042_0.3-0.5			sandy SILT Trace Wood,grey	W			0.30
1.0										-1.00
			BH042_1.0-1.2			SILT Trace Sand,dark brown	M			1.00
			BH042_1.5-1.7							-1.70
										1.70
2.0										
3.0										
4.0										

NOTES:

GHD Soil Classifications: The GHD Soil Classification is based on Australian Standards AS 1726-1993. This log is not intended for geotechnical purposes.

Drilling Abbreviations:

RW(x)	Rotary Wash	PSC(x)	Percussion Simultanous Casing
RT(x)	Rotary Triple Tube	AS	Augering - Solid Flight
PC(x)	Percussion Cable Tool	AH	Augering - Hollow Flight
PD(x)	Percussion Down Hole	H	Hand Augering

Where "x" is flushing medium: (W) Water, (M) Mud, (A) Air, (F) Foam.

Moisture Abbreviations:
D Dry
M Moist
W Wet

Consistency:

Granular Soils		**Cohesive Soils**	
(VL) Very Loose	(D) Dense	(VS) Very Soft	(ST) Stiff
(L) Loose	(VD) Very Dense	(S) Soft	(VST) Very Stiff
(MD) Medium Dense		(F) Firm	(H) Hard

BOREHOLE LOG

ENVIRONMENTAL - SOIL BORE

Bore No.: BH043
Page: 1 of 1

Client: NSW Catchment and Lands - Crown Land
Project: Urunga Antimony RAP
Project No.: 2216251
Location:
Date Drilled: 14/08/2012 to: 14/08/2012

Drill Co: GHD
Driller: MK
Rig Type: HA
Total Depth (m): 1.7
Diameter (mm): 50

Easting: 500950
Northing: 6625159
Grid Ref: GDA94_MGA_zone_56
Elevation: 0
Logged by: JS Checked by: BC

DRILLING										
Depth (m)	Drilling Method	PID (ppm)	Sample ID	Water	Graphic Log	LITHOLOGICAL DESCRIPTION Soil Type (Classification Group Symbol); Particle Size; Colour; Secondary / Minor Components.	Moisture	Consistency	COMMENTS/ CONTAMINANT INDICATORS Odours, staining, waste materials, separate phase liquids, imported fill, ash.	Elevation / Depth (m)
						Ground Surface:				0.00
0.0	HA		BH043_0.0-0.2			silty SAND brown	W			0.00
			BH043_0.3-0.5							
										-0.80
						sandy SILT grey	W			0.80 -1.00
1.0			BH043_1.0-1.2			SILT Trace Sand,dark brown	W			1.00
			BH043_1.5-1.7							-1.70
										1.70
2.0										
3.0										
4.0										

NOTES:

GHD Soil Classifications: The GHD Soil Classification is based on Australian Standards AS 1726-1993. This log is not intended for geotechnical purposes.

Drilling Abbreviations:

RW(x)	Rotary Wash	PSC(x)	Percussion Simultanous Casing
RT(x)	Rotary Triple Tube	AS	Augering - Solid Flight
PC(x)	Percussion Cable Tool	AH	Augering - Hollow Flight
PD(x)	Percussion Down Hole	H	Hand Augering

Where "x" is flushing medium: (W) Water, (M) Mud, (A) Air, (F) Foam.

Moisture Abbreviations:
D Dry
M Moist
W Wet

Consistency:

Granular Soils		**Cohesive Soils**	
(VL) Very Loose	(D) Dense	(VS) Very Soft	(ST) Stiff
(L) Loose	(VD) Very Dense	(S) Soft	(VST) Very Stiff
(MD) Medium Dense		(F) Firm	(H) Hard

BOREHOLE LOG

ENVIRONMENTAL - SOIL BORE

Bore No.: BH046

Page: 1 of 1

Client: NSW Catchment and Lands - Crown Land
Project: Urunga Antimony RAP
Project No.: 2216251
Location:
Date Drilled: 16/08/2012 to: 16/08/2012

Drill Co: GHD
Driller: MK
Rig Type: AS
Total Depth (m): 0.7
Diameter (mm): 150

Easting: 500892
Northing: 6625291
Grid Ref: GDA94_MGA_zone_56
Elevation: 0
Logged by: JS Checked by: BC

DRILLING					Graphic Log	LITHOLOGICAL DESCRIPTION Soil Type (Classification Group Symbol); Particle Size; Colour; Secondary / Minor Components.	Moisture	Consistency	COMMENTS/ CONTAMINANT INDICATORS Odours, staining, waste materials, separate phase liquids, imported fill, ash.	Elevation / Depth (m)
Depth (m)	Drilling Method	PID (ppm)	Sample ID	Water						
						Ground Surface:				0.00
0.0	AS		BH046_0.0-0.2			sandy SILT Trace Clay,brown	D			0.00
										-0.40
						silty CLAY Trace Sand,orange/ brown	D/M			0.40
			BH046_0.5-0.7							-0.70
										0.70
1.0										
2.0										
3.0										
4.0										

NOTES:

GHD Soil Classifications: The GHD Soil Classification is based on Australian Standards AS 1726-1993. This log is not intended for geotechnical purposes.

Drilling Abbreviations:

RW(x)	Rotary Wash	PSC(x)	Percussion Simultanous Casing
RT(x)	Rotary Triple Tube	AS	Augering - Solid Flight
PC(x)	Percussion Cable Tool	AH	Augering - Hollow Flight
PD(x)	Percussion Down Hole	H	Hand Augering

Where "x" is flushing medium: (W) Water, (M) Mud, (A) Air, (F) Foam.

Moisture Abbreviations:
D Dry
M Moist
W Wet

Consistency:

Granular Soils		Cohesive Soils	
(VL) Very Loose	(D) Dense	(VS) Very Soft	(ST) Stiff
(L) Loose	(VD) Very Dense	(S) Soft	(VST) Very Stiff
(MD) Medium Dense		(F) Firm	(H) Hard

BOREHOLE LOG

ENVIRONMENTAL - SOIL BORE

Bore No.: BH047

Client: NSW Catchment and Lands - Crown Land
Project: Urunga Antimony RAP
Project No.: 2216251
Location:
Date Drilled: 16/08/2012 to: 16/08/2012

Drill Co: GHD
Driller: MK
Rig Type: AS
Total Depth (m): 0.7
Diameter (mm): 150

Easting: 500862
Northing: 6625276
Grid Ref: GDA94_MGA_zone_56
Elevation: 0
Logged by: JS Checked by: BC

DRILLING						LITHOLOGICAL DESCRIPTION				
Depth (m)	Drilling Method	PID (ppm)	Sample ID	Water	Graphic Log	Soil Type (Classification Group Symbol); Particle Size; Colour; Secondary / Minor Components.	Moisture	Consistency	COMMENTS/ CONTAMINANT INDICATORS Odours, staining, waste materials, separate phase liquids, imported fill, ash.	Elevation / Depth (m)
						Ground Surface:				0.00
0.0	AS		BH047_0.0-0.2			sandy SILT Trace Clay,brown	D			0.00
										-0.50
			BH047_0.5-0.7				D/M			0.50
										-0.70
										0.70
1.0										
2.0										
3.0										
4.0										

NOTES:

GHD Soil Classifications: The GHD Soil Classification is based on Australian Standards AS 1726-1993. This log is not intended for geotechnical purposes.

Drilling Abbreviations:

RW(x)	Rotary Wash	PSC(x)	Percussion Simultanous Casing
RT(x)	Rotary Triple Tube	AS	Augering - Solid Flight
PC(x)	Percussion Cable Tool	AH	Augering - Hollow Flight
PD(x)	Percussion Down Hole	H	Hand Augering

Where "x" is flushing medium: (W) Water, (M) Mud, (A) Air, (F) Foam.

Moisture Abbreviations:
D Dry
M Moist
W Wet

Consistency:

Granular Soils		**Cohesive Soils**	
(VL) Very Loose	(D) Dense	(VS) Very Soft	(ST) Stiff
(L) Loose	(VD) Very Dense	(S) Soft	(VST) Very Stiff
(MD) Medium Dense		(F) Firm	(H) Hard

BOREHOLE LOG

ENVIRONMENTAL - SOIL BORE

Bore No.: BH050

Client: NSW Catchment and Lands - Crown Land
Project: Urunga Antimony RAP
Project No.: 2216251
Location:
Date Drilled: 16/08/2012 to: 16/08/2012

Drill Co: GHD
Driller: MK
Rig Type: HA
Total Depth (m): 1.2
Diameter (mm): 50

Easting: 500936
Northing: 6625239
Grid Ref: GDA94_MGA_zone_56
Elevation: 0
Logged by: JS Checked by: BC

DRILLING										
Depth (m)	Drilling Method	PID (ppm)	Sample ID	Water	Graphic Log	LITHOLOGICAL DESCRIPTION Soil Type (Classification Group Symbol); Particle Size; Colour; Secondary / Minor Components.	Moisture	Consistency	COMMENTS/ CONTAMINANT INDICATORS Odours, staining, waste materials, separate phase liquids, imported fill, ash.	Elevation / Depth (m)
						Ground Surface:				0.00
0.0	HA		BH050_0.0-0.2			sandy SILT grey	W			0.00
			BH050_0.2-0.4							-0.40
						sandy SILT Some Clay,dark brown	W			0.40
			BH050_0.5-0.7							-0.90
1.0			BH050_1.0-1.2			silty CLAY dark brown	W			0.90
										-1.20
										1.20
2.0										
3.0										
4.0										

NOTES:

GHD Soil Classifications: The GHD Soil Classification is based on Australian Standards AS 1726-1993. This log is not intended for geotechnical purposes.

Drilling Abbreviations:

RW(x)	Rotary Wash	PSC(x)	Percussion Simultanous Casing
RT(x)	Rotary Triple Tube	AS	Augering - Solid Flight
PC(x)	Percussion Cable Tool	AH	Augering - Hollow Flight
PD(x)	Percussion Down Hole	H	Hand Augering

Where "x" is flushing medium: (W) Water, (M) Mud, (A) Air, (F) Foam.

Moisture Abbreviations:
D Dry
M Moist
W Wet

Consistency:

Granular Soils

(VL) Very Loose	(D) Dense
(L) Loose	(VD) Very Dense
(MD) Medium Dense	

Cohesive Soils

(VS) Very Soft	(ST) Stiff
(S) Soft	(VST) Very Stiff
(F) Firm	(H) Hard

BOREHOLE LOG

ENVIRONMENTAL - SOIL BORE

Bore No.: BH052

Client: NSW Catchment and Lands - Crown Land
Project: Urunga Antimony RAP
Project No.: 2216251
Location:
Date Drilled: 15/08/2012 to: 15/08/2012

Drill Co: GHD
Driller: MK
Rig Type: HA
Total Depth (m): 3
Diameter (mm): 50

Easting: 500954
Northing: 6625213
Grid Ref: GDA94_MGA_zone_56
Elevation: 0
Logged by: JS Checked by: BC

DRILLING										
Depth (m)	Drilling Method	PID (ppm)	Sample ID	Water	Graphic Log	LITHOLOGICAL DESCRIPTION Soil Type (Classification Group Symbol); Particle Size; Colour; Secondary / Minor Components.	Moisture	Consistency	COMMENTS/ CONTAMINANT INDICATORS Odours, staining, waste materials, separate phase liquids, imported fill, ash.	Elevation / Depth (m)
						Ground Surface:				0.00
0.0	HA		BH052_0.0-0.2			silty SAND grey/ brown	M			0.00
										-0.50
			BH052_0.5-0.7				W			0.50
										-0.80
						clayey SILT Trace Sand,grey	W			0.80
1.0			BH052_1.0-1.2						BHDUP03	
										-1.20
						dark brown				1.20
										-1.80
			BH052_1.8-2.0			clayey SILT Trace Sand,grey	W			1.80
2.0										
			BH052_2.3-2.5							
			BH052_2.8-3.0							
										-3.00
3.0										3.00
4.0										

NOTES:

GHD Soil Classifications: The GHD Soil Classification is based on Australian Standards AS 1726-1993. This log is not intended for geotechnical purposes.

Drilling Abbreviations:

RW(x)	Rotary Wash	PSC(x)	Percussion Simultanous Casing
RT(x)	Rotary Triple Tube	AS	Augering - Solid Flight
PC(x)	Percussion Cable Tool	AH	Augering - Hollow Flight
PD(x)	Percussion Down Hole	H	Hand Augering

Where "x" is flushing medium: (W) Water, (M) Mud, (A) Air, (F) Foam.

Moisture Abbreviations:
D Dry
M Moist
W Wet

Consistency:

Granular Soils		Cohesive Soils	
(VL) Very Loose	(D) Dense	(VS) Very Soft	(ST) Stiff
(L) Loose	(VD) Very Dense	(S) Soft	(VST) Very Stiff
(MD) Medium Dense		(F) Firm	(H) Hard

BOREHOLE LOG

ENVIRONMENTAL - SOIL BORE

Bore No.: BH053
Page: 1 of 1

Client: NSW Catchment and Lands - Crown Land
Project: Urunga Antimony RAP
Project No.: 2216251
Location:
Date Drilled: 14/08/2012 to: 14/08/2012

Drill Co: GHD
Driller: MK
Rig Type: HA
Total Depth (m): 3.5
Diameter (mm): 50

Easting: 500967
Northing: 6625173
Grid Ref: GDA94_MGA_zone_56
Elevation: 0
Logged by: JS Checked by: BC

DRILLING					Graphic Log	LITHOLOGICAL DESCRIPTION Soil Type (Classification Group Symbol); Particle Size; Colour; Secondary / Minor Components.	Moisture	Consistency	COMMENTS/ CONTAMINANT INDICATORS Odours, staining, waste materials, separate phase liquids, imported fill, ash.	Elevation / Depth (m)
Depth (m)	Drilling Method	PID (ppm)	Sample ID	Water						
						Ground Surface:				0.00
0.0	HA		BH053_0.0-0.2			sandy SILT grey	M			0.00
			BH053_0.3-0.5							
1.0			BH053_1.0-1.2			SILT Trace Sand,dark brown	W			-1.00 1.00
			BH053_1.5-1.7							
2.0			BH053_2.0-2.2			clayey SILT Trace Sand,grey	W			-2.00 2.00
3.0			BH053_3.2-3.5							-3.50
4.0										3.50

NOTES:

GHD Soil Classifications: The GHD Soil Classification is based on Australian Standards AS 1726-1993. This log is not intended for geotechnical purposes.

Drilling Abbreviations:

RW(x)	Rotary Wash	PSC(x)	Percussion Simultanous Casing
RT(x)	Rotary Triple Tube	AS	Augering - Solid Flight
PC(x)	Percussion Cable Tool	AH	Augering - Hollow Flight
PD(x)	Percussion Down Hole	H	Hand Augering

Where "x" is flushing medium: (W) Water, (M) Mud, (A) Air, (F) Foam.

Moisture Abbreviations:
D Dry
M Moist
W Wet

Consistency:

Granular Soils		Cohesive Soils	
(VL) Very Loose	(D) Dense	(VS) Very Soft	(ST) Stiff
(L) Loose	(VD) Very Dense	(S) Soft	(VST) Very Stiff
(MD) Medium Dense		(F) Firm	(H) Hard

BOREHOLE LOG

ENVIRONMENTAL - SOIL BORE

Bore No.: BH054

Client: NSW Catchment and Lands - Crown Land
Project: Urunga Antimony RAP
Project No.: 2216251
Location:
Date Drilled: 14/08/2012 to: 14/08/2012

Drill Co: GHD
Driller: MK
Rig Type: HA
Total Depth (m): 1.7
Diameter (mm): 50

Easting: 500957
Northing: 6625166
Grid Ref: GDA94_MGA_zone_56
Elevation: 0
Logged by: JS Checked by: BC

DRILLING										
Depth (m)	Drilling Method	PID (ppm)	Sample ID	Water	Graphic Log	LITHOLOGICAL DESCRIPTION Soil Type (Classification Group Symbol); Particle Size; Colour; Secondary / Minor Components.	Moisture	Consistency	COMMENTS/ CONTAMINANT INDICATORS Odours, staining, waste materials, separate phase liquids, imported fill, ash.	Elevation / Depth (m)
						Ground Surface:				0.00
0.0	HA		BH054_0.0-0.2			silty SAND Crust at water level,brown	W			0.00
			BH054_0.3-0.5							
			BH054_0.7-0.9							-0.80
						sandy SILT grey	W			0.80 -1.00
1.0			BH054_1.0-1.2			SILT Trace Sand,dark brown	W			1.00
			BH054_1.5-1.7							-1.70
										1.70
2.0										
3.0										
4.0										

NOTES:

GHD Soil Classifications: The GHD Soil Classification is based on Australian Standards AS 1726-1993. This log is not intended for geotechnical purposes.

Drilling Abbreviations:

RW(x)	Rotary Wash	PSC(x)	Percussion Simultanous Casing
RT(x)	Rotary Triple Tube	AS	Augering - Solid Flight
PC(x)	Percussion Cable Tool	AH	Augering - Hollow Flight
PD(x)	Percussion Down Hole	H	Hand Augering

Where "x" is flushing medium: (W) Water, (M) Mud, (A) Air, (F) Foam.

Moisture Abbreviations:
D Dry
M Moist
W Wet

Consistency:

Granular Soils		**Cohesive Soils**	
(VL) Very Loose	(D) Dense	(VS) Very Soft	(ST) Stiff
(L) Loose	(VD) Very Dense	(S) Soft	(VST) Very Stiff
(MD) Medium Dense		(F) Firm	(H) Hard

BOREHOLE LOG

ENVIRONMENTAL - SOIL BORE

Bore No.: BH056

Page: 1 of 1

Client: NSW Catchment and Lands - Crown Land
Project: Urunga Antimony RAP
Project No.: 2216251
Location:
Date Drilled: 15/08/2012 to: 15/08/2012

Drill Co: GHD
Driller: MK
Rig Type: HA
Total Depth (m): 0.5
Diameter (mm): 50

Easting: 500968
Northing: 6625286
Grid Ref: GDA94_MGA_zone_56
Elevation: 0
Logged by: JS Checked by: BC

DRILLING					Graphic Log	LITHOLOGICAL DESCRIPTION Soil Type (Classification Group Symbol); Particle Size; Colour; Secondary / Minor Components.	Moisture	Consistency	COMMENTS/ CONTAMINANT INDICATORS Odours, staining, waste materials, separate phase liquids, imported fill, ash.	Elevation / Depth (m)
Depth (m)	Drilling Method	PID (ppm)	Sample ID	Water						
						Ground Surface:				0.00
0.0	HA		BH056_0.0-0.2			silty SAND brown	D			0.00
										-0.30
			BH056_0.3-0.5			sandy SILT Some Clay,orange/ brown	M			0.30
										-0.50
										0.50
1.0										
2.0										
3.0										
4.0										

NOTES:

GHD Soil Classifications: The GHD Soil Classification is based on Australian Standards AS 1726-1993. This log is not intended for geotechnical purposes.

Drilling Abbreviations:

RW(x)	Rotary Wash	PSC(x)	Percussion Simultanous Casing
RT(x)	Rotary Triple Tube	AS	Augering - Solid Flight
PC(x)	Percussion Cable Tool	AH	Augering - Hollow Flight
PD(x)	Percussion Down Hole	H	Hand Augering

Where "x" is flushing medium: (W) Water, (M) Mud, (A) Air, (F) Foam.

Moisture Abbreviations:
D Dry
M Moist
W Wet

Consistency:

Granular Soils		**Cohesive Soils**	
(VL) Very Loose	(D) Dense	(VS) Very Soft	(ST) Stiff
(L) Loose	(VD) Very Dense	(S) Soft	(VST) Very Stiff
(MD) Medium Dense		(F) Firm	(H) Hard

BOREHOLE LOG

ENVIRONMENTAL - SOIL BORE

Bore No.: BH057

Page: 1 of 1

Client: NSW Catchment and Lands - Crown Land
Project: Urunga Antimony RAP
Project No.: 2216251
Location:
Date Drilled: 15/08/2012 to: 15/08/2012

Drill Co: GHD
Driller: MK
Rig Type: HA
Total Depth (m): 0.5
Diameter (mm): 50

Easting: 500967
Northing: 6625255
Grid Ref: GDA94_MGA_zone_56
Elevation: 0
Logged by: JS Checked by: BC

DRILLING						LITHOLOGICAL DESCRIPTION				
Depth (m)	Drilling Method	PID (ppm)	Sample ID	Water	Graphic Log	Soil Type (Classification Group Symbol); Particle Size; Colour; Secondary / Minor Components.	Moisture	Consistency	COMMENTS/ CONTAMINANT INDICATORS Odours, staining, waste materials, separate phase liquids, imported fill, ash.	Elevation / Depth (m)
						Ground Surface:				0.00
0.0	HA		BH057_0.0-0.2			sandy SILT Trace Clay,dark brown	M			0.00
			BH057_0.3-0.5							-0.50
										0.50
1.0										
2.0										
3.0										
4.0										

NOTES:

GHD Soil Classifications: The GHD Soil Classification is based on Australian Standards AS 1726-1993. This log is not intended for geotechnical purposes.

Drilling Abbreviations:

RW(x)	Rotary Wash	PSC(x)	Percussion Simultanous Casing
RT(x)	Rotary Triple Tube	AS	Augering - Solid Flight
PC(x)	Percussion Cable Tool	AH	Augering - Hollow Flight
PD(x)	Percussion Down Hole	H	Hand Augering

Where "x" is flushing medium: (W) Water, (M) Mud, (A) Air, (F) Foam.

Moisture Abbreviations:
D Dry
M Moist
W Wet

Consistency:

Granular Soils		Cohesive Soils	
(VL) Very Loose	(D) Dense	(VS) Very Soft	(ST) Stiff
(L) Loose	(VD) Very Dense	(S) Soft	(VST) Very Stiff
(MD) Medium Dense		(F) Firm	(H) Hard

BOREHOLE LOG

ENVIRONMENTAL - SOIL BORE

Bore No.: BH060
Page: 1 of 1

Client: NSW Catchment and Lands - Crown Land
Project: Urunga Antimony RAP
Project No.: 2216251
Location:
Date Drilled: 15/08/2012 to: 15/08/2012

Drill Co: n/a
Driller: JS
Rig Type: HA
Total Depth (m): 0.7
Diameter (mm): 50

Easting: 500949
Northing: 6625255
Grid Ref: GDA94_MGA_zone_56
Elevation: 0
Logged by: JS Checked by: BC

DRILLING										
Depth (m)	Drilling Method	PID (ppm)	Sample ID	Water	Graphic Log	LITHOLOGICAL DESCRIPTION Soil Type (Classification Group Symbol); Particle Size; Colour; Secondary / Minor Components.	Moisture	Consistency	COMMENTS/ CONTAMINANT INDICATORS Odours, staining, waste materials, separate phase liquids, imported fill, ash.	Elevation / Depth (m)
						Ground Surface:				0.00
0.0	HA		BH060_0.0-0.2			sandy SILT Some Gravel (approx. 3mm),brown	M		Possible fill material	0.00
			BH060_0.3-0.5							
										-0.70
										0.70
1.0										
2.0										
3.0										
4.0										

NOTES:

GHD Soil Classifications: The GHD Soil Classification is based on Australian Standards AS 1726-1993. This log is not intended for geotechnical purposes.

Drilling Abbreviations:

RW(x)	Rotary Wash	PSC(x)	Percussion Simultanous Casing
RT(x)	Rotary Triple Tube	AS	Augering - Solid Flight
PC(x)	Percussion Cable Tool	AH	Augering - Hollow Flight
PD(x)	Percussion Down Hole	H	Hand Augering

Where "x" is flushing medium: (W) Water, (M) Mud, (A) Air, (F) Foam.

Moisture Abbreviations:
D Dry
M Moist
W Wet

Consistency:

Granular Soils		**Cohesive Soils**	
(VL) Very Loose	(D) Dense	(VS) Very Soft	(ST) Stiff
(L) Loose	(VD) Very Dense	(S) Soft	(VST) Very Stiff
(MD) Medium Dense		(F) Firm	(H) Hard

BOREHOLE LOG

ENVIRONMENTAL - SOIL BORE

Bore No.: BH061

Page: 1 of 1

Client: NSW Catchment and Lands - Crown Land
Project: Urunga Antimony RAP
Project No.: 2216251
Location:
Date Drilled: 15/08/2012 to: 15/08/2012

Drill Co: GHD
Driller: MK
Rig Type: HA
Total Depth (m): 0.5
Diameter (mm): 50

Easting: 500947
Northing: 6625280
Grid Ref: GDA94_MGA_zone_56
Elevation: 0
Logged by: JS Checked by: BC

DRILLING					Graphic Log	LITHOLOGICAL DESCRIPTION Soil Type (Classification Group Symbol); Particle Size; Colour; Secondary / Minor Components.	Moisture	Consistency	COMMENTS/ CONTAMINANT INDICATORS Odours, staining, waste materials, separate phase liquids, imported fill, ash.	Elevation / Depth (m)
Depth (m)	Drilling Method	PID (ppm)	Sample ID	Water						
						Ground Surface:				0.00
0.0	HA		BH061_0.0-0.2			sandy SILT Trace Clay,orange/ brown	M			0.00
			BH061_0.3-0.5							-0.50
										0.50
1.0										
2.0										
3.0										
4.0										

NOTES:

GHD Soil Classifications: The GHD Soil Classification is based on Australian Standards AS 1726-1993. This log is not intended for geotechnical purposes.

Drilling Abbreviations:

RW(x)	Rotary Wash	PSC(x)	Percussion Simultanous Casing
RT(x)	Rotary Triple Tube	AS	Augering - Solid Flight
PC(x)	Percussion Cable Tool	AH	Augering - Hollow Flight
PD(x)	Percussion Down Hole	H	Hand Augering

Where "x" is flushing medium: (W) Water, (M) Mud, (A) Air, (F) Foam.

Moisture Abbreviations:
D Dry
M Moist
W Wet

Consistency:

Granular Soils		Cohesive Soils	
(VL) Very Loose	(D) Dense	(VS) Very Soft	(ST) Stiff
(L) Loose	(VD) Very Dense	(S) Soft	(VST) Very Stiff
(MD) Medium Dense		(F) Firm	(H) Hard

BOREHOLE LOG

ENVIRONMENTAL - SOIL BORE

Bore No.: BH062
Page: 1 of 1

Client: NSW Catchment and Lands - Crown Land
Project: Urunga Antimony RAP
Project No.: 2216251
Location:
Date Drilled: 15/08/2012 to: 15/08/2012

Drill Co: GHD
Driller: MK
Rig Type: HA
Total Depth (m): 0.5
Diameter (mm): 50

Easting: 500942
Northing: 6625313
Grid Ref: GDA94_MGA_zone_56
Elevation: 0
Logged by: JS Checked by: BC

DRILLING										
Depth (m)	Drilling Method	PID (ppm)	Sample ID	Water	Graphic Log	LITHOLOGICAL DESCRIPTION Soil Type (Classification Group Symbol); Particle Size; Colour; Secondary / Minor Components.	Moisture	Consistency	COMMENTS/ CONTAMINANT INDICATORS Odours, staining, waste materials, separate phase liquids, imported fill, ash.	Elevation / Depth (m)
						Ground Surface:				0.00
0.0	HA		BH062_0.0-0.2			clayey SILT Some Sand,brown/ grey	M			0.00
			BH062_0.3-0.5							-0.50
										0.50
1.0										
2.0										
3.0										
4.0										

NOTES:

GHD Soil Classifications: The GHD Soil Classification is based on Australian Standards AS 1726-1993. This log is not intended for geotechnical purposes.

Drilling Abbreviations:

RW(x)	Rotary Wash	PSC(x)	Percussion Simultanous Casing
RT(x)	Rotary Triple Tube	AS	Augering - Solid Flight
PC(x)	Percussion Cable Tool	AH	Augering - Hollow Flight
PD(x)	Percussion Down Hole	H	Hand Augering

Where "x" is flushing medium: (W) Water, (M) Mud, (A) Air, (F) Foam.

Moisture Abbreviations:
D Dry
M Moist
W Wet

Consistency:

Granular Soils		**Cohesive Soils**	
(VL) Very Loose	(D) Dense	(VS) Very Soft	(ST) Stiff
(L) Loose	(VD) Very Dense	(S) Soft	(VST) Very Stiff
(MD) Medium Dense		(F) Firm	(H) Hard

BOREHOLE LOG

ENVIRONMENTAL - SOIL BORE

Bore No.: BH063
Page: 1 of 1

Client: NSW Catchment and Lands - Crown Land
Project: Urunga Antimony RAP
Project No.: 2216251
Location:
Date Drilled: 15/08/2012 to: 15/08/2012

Drill Co: GHD
Driller: MK
Rig Type: HA
Total Depth (m): 0.5
Diameter (mm): 50

Easting: 500975
Northing: 6625321
Grid Ref: GDA94_MGA_zone_56
Elevation: 0
Logged by: JS Checked by: BC

DRILLING										
Depth (m)	Drilling Method	PID (ppm)	Sample ID	Water	Graphic Log	LITHOLOGICAL DESCRIPTION Soil Type (Classification Group Symbol); Particle Size; Colour; Secondary / Minor Components.	Moisture	Consistency	COMMENTS/ CONTAMINANT INDICATORS Odours, staining, waste materials, separate phase liquids, imported fill, ash.	Elevation / Depth (m)
						Ground Surface:				0.00
0.0	HA		BH063_0.0-0.2			silty CLAY Some Sand,orange/ brown	M			0.00
			BH063_0.3-0.5							-0.50
										0.50
1.0										
2.0										
3.0										
4.0										

NOTES:

GHD Soil Classifications: The GHD Soil Classification is based on Australian Standards AS 1726-1993. This log is not intended for geotechnical purposes.

Drilling Abbreviations:

RW(x)	Rotary Wash	PSC(x)	Percussion Simultanous Casing
RT(x)	Rotary Triple Tube	AS	Augering - Solid Flight
PC(x)	Percussion Cable Tool	AH	Augering - Hollow Flight
PD(x)	Percussion Down Hole	H	Hand Augering

Where "x" is flushing medium: (W) Water, (M) Mud, (A) Air, (F) Foam.

Moisture Abbreviations:
D Dry
M Moist
W Wet

Consistency:

Granular Soils		**Cohesive Soils**	
(VL) Very Loose	(D) Dense	(VS) Very Soft	(ST) Stiff
(L) Loose	(VD) Very Dense	(S) Soft	(VST) Very Stiff
(MD) Medium Dense		(F) Firm	(H) Hard

BOREHOLE LOG

ENVIRONMENTAL - SOIL BORE

Bore No.: BH064

Page: 1 of 1

Client: NSW Catchment and Lands - Crown Land
Project: Urunga Antimony RAP
Project No.: 2216251
Location:
Date Drilled: 15/08/2012 to: 15/08/2012

Drill Co: GHD
Driller: MK
Rig Type: HA
Total Depth (m): 0.5
Diameter (mm): 50

Easting: 500980
Northing: 6625343
Grid Ref: GDA94_MGA_zone_56
Elevation: 0
Logged by: JS Checked by: BC

DRILLING						LITHOLOGICAL DESCRIPTION				
Depth (m)	Drilling Method	PID (ppm)	Sample ID	Water	Graphic Log	Soil Type (Classification Group Symbol); Particle Size; Colour; Secondary / Minor Components.	Moisture	Consistency	COMMENTS/ CONTAMINANT INDICATORS Odours, staining, waste materials, separate phase liquids, imported fill, ash.	Elevation / Depth (m)
						Ground Surface:				0.00
0.0	HA		BH064_0.0-0.2			silty CLAY Trace Sand,brown	M			0.00
										-0.30
			BH064_0.3-0.5			silty CLAY Trace Sand,orange/ brown	M			0.30
										-0.50
										0.50
1.0										
2.0										
3.0										
4.0										

NOTES:

GHD Soil Classifications: The GHD Soil Classification is based on Australian Standards AS 1726-1993. This log is not intended for geotechnical purposes.

Drilling Abbreviations:

RW(x)	Rotary Wash	PSC(x)	Percussion Simultanous Casing
RT(x)	Rotary Triple Tube	AS	Augering - Solid Flight
PC(x)	Percussion Cable Tool	AH	Augering - Hollow Flight
PD(x)	Percussion Down Hole	H	Hand Augering

Where "x" is flushing medium: (W) Water, (M) Mud, (A) Air, (F) Foam.

Moisture Abbreviations:
D Dry
M Moist
W Wet

Consistency:

Granular Soils		Cohesive Soils	
(VL) Very Loose	(D) Dense	(VS) Very Soft	(ST) Stiff
(L) Loose	(VD) Very Dense	(S) Soft	(VST) Very Stiff
(MD) Medium Dense		(F) Firm	(H) Hard

BOREHOLE LOG

ENVIRONMENTAL - SOIL BORE

Bore No.: BH065

Page: 1 of 1

Client: NSW Catchment and Lands - Crown Land
Project: Urunga Antimony RAP
Project No.: 2216251
Location:
Date Drilled: 15/08/2012 to: 15/08/2012

Drill Co: GHD
Driller: MK
Rig Type: HA
Total Depth (m): 0.5
Diameter (mm): 50

Easting: 501003
Northing: 6625341
Grid Ref: GDA94_MGA_zone_56
Elevation: 0
Logged by: JS Checked by: BC

DRILLING						LITHOLOGICAL DESCRIPTION				
Depth (m)	Drilling Method	PID (ppm)	Sample ID	Water	Graphic Log	Soil Type (Classification Group Symbol); Particle Size; Colour; Secondary / Minor Components.	Moisture	Consistency	COMMENTS/ CONTAMINANT INDICATORS Odours, staining, waste materials, separate phase liquids, imported fill, ash.	Elevation / Depth (m)
						Ground Surface:				0.00
0.0	HA		BH065_0.0-0.2			silty CLAY Trace Sand,brown	M			0.00
			BH065_0.3-0.5							-0.50
										0.50
1.0										
2.0										
3.0										
4.0										

NOTES:

GHD Soil Classifications: The GHD Soil Classification is based on Australian Standards AS 1726-1993. This log is not intended for geotechnical purposes.

Drilling Abbreviations:

RW(x)	Rotary Wash	PSC(x)	Percussion Simultanous Casing
RT(x)	Rotary Triple Tube	AS	Augering - Solid Flight
PC(x)	Percussion Cable Tool	AH	Augering - Hollow Flight
PD(x)	Percussion Down Hole	H	Hand Augering

Where "x" is flushing medium: (W) Water, (M) Mud, (A) Air, (F) Foam.

Moisture Abbreviations:
D Dry
M Moist
W Wet

Consistency:

Granular Soils		**Cohesive Soils**	
(VL) Very Loose	(D) Dense	(VS) Very Soft	(ST) Stiff
(L) Loose	(VD) Very Dense	(S) Soft	(VST) Very Stiff
(MD) Medium Dense		(F) Firm	(H) Hard

BOREHOLE LOG

ENVIRONMENTAL - SOIL BORE

Bore No.: BH066

Page: 1 of 1

Client: NSW Catchment and Lands - Crown Land
Project: Urunga Antimony RAP
Project No.: 2216251
Location:
Date Drilled: 15/08/2012 to: 15/08/2012

Drill Co: GHD
Driller: MK
Rig Type: HA
Total Depth (m): 0.7
Diameter (mm): 50

Easting: 500992
Northing: 6625305
Grid Ref: GDA94_MGA_zone_56
Elevation: 0
Logged by: JS Checked by: BC

DRILLING					Graphic Log	LITHOLOGICAL DESCRIPTION Soil Type (Classification Group Symbol); Particle Size; Colour; Secondary / Minor Components.	Moisture	Consistency	COMMENTS/ CONTAMINANT INDICATORS Odours, staining, waste materials, separate phase liquids, imported fill, ash.	Elevation / Depth (m)
Depth (m)	Drilling Method	PID (ppm)	Sample ID	Water						
						Ground Surface:				0.00
0.0	HA		BH066_0.0-0.2			sandy SILT Trace Clay,orange/ brown	M			0.00
			BH066_0.5-0.7							-0.70
										0.70
1.0										
2.0										
3.0										
4.0										

NOTES:

GHD Soil Classifications: The GHD Soil Classification is based on Australian Standards AS 1726-1993. This log is not intended for geotechnical purposes.

Drilling Abbreviations:

RW(x)	Rotary Wash	PSC(x)	Percussion Simultanous Casing
RT(x)	Rotary Triple Tube	AS	Augering - Solid Flight
PC(x)	Percussion Cable Tool	AH	Augering - Hollow Flight
PD(x)	Percussion Down Hole	H	Hand Augering

Where "x" is flushing medium: (W) Water, (M) Mud, (A) Air, (F) Foam.

Moisture Abbreviations:
D Dry
M Moist
W Wet

Consistency:

Granular Soils		Cohesive Soils	
(VL) Very Loose	(D) Dense	(VS) Very Soft	(ST) Stiff
(L) Loose	(VD) Very Dense	(S) Soft	(VST) Very Stiff
(MD) Medium Dense		(F) Firm	(H) Hard

BOREHOLE LOG

ENVIRONMENTAL - SOIL BORE

Bore No.: BH067

Client: NSW Catchment and Lands - Crown Land
Project: Urunga Antimony RAP
Project No.: 2216251
Location:
Date Drilled: 15/08/2012 to: 15/08/2012

Drill Co: GHD
Driller: MK
Rig Type: HA
Total Depth (m): 0.7
Diameter (mm): 50

Easting: 501028
Northing: 6625327
Grid Ref: GDA94_MGA_zone_56
Elevation: 0
Logged by: JS Checked by: BC

DRILLING					Graphic Log	LITHOLOGICAL DESCRIPTION Soil Type (Classification Group Symbol); Particle Size; Colour; Secondary / Minor Components.	Moisture	Consistency	COMMENTS/ CONTAMINANT INDICATORS Odours, staining, waste materials, separate phase liquids, imported fill, ash.	Elevation / Depth (m)
Depth (m)	Drilling Method	PID (ppm)	Sample ID	Water						
						Ground Surface:				0.00
0.0	HA		BH067_0.0-0.2			clayey SILT brown	M			0.00
										-0.50
			BH067_0.5-0.7			CLAY Some Silt,grey	M			0.50
										-0.70
										0.70
1.0										
2.0										
3.0										
4.0										

NOTES:

GHD Soil Classifications: The GHD Soil Classification is based on Australian Standards AS 1726-1993. This log is not intended for geotechnical purposes.

Drilling Abbreviations:

RW(x)	Rotary Wash	PSC(x)	Percussion Simultanous Casing
RT(x)	Rotary Triple Tube	AS	Augering - Solid Flight
PC(x)	Percussion Cable Tool	AH	Augering - Hollow Flight
PD(x)	Percussion Down Hole	H	Hand Augering

Where "x" is flushing medium: (W) Water, (M) Mud, (A) Air, (F) Foam.

Moisture Abbreviations:
D Dry
M Moist
W Wet

Consistency:

Granular Soils		Cohesive Soils	
(VL) Very Loose	(D) Dense	(VS) Very Soft	(ST) Stiff
(L) Loose	(VD) Very Dense	(S) Soft	(VST) Very Stiff
(MD) Medium Dense		(F) Firm	(H) Hard

BOREHOLE LOG

ENVIRONMENTAL - SOIL BORE

Bore No.: BH069
Page: 1 of 1

Client: NSW Catchment and Lands - Crown Land
Project: Urunga Antimony RAP
Project No.: 2216251
Location:
Date Drilled: 15/08/2012 to: 15/08/2012

Drill Co: GHD
Driller: MK
Rig Type: HA
Total Depth (m): 0.5
Diameter (mm): 50

Easting: 500988
Northing: 6625271
Grid Ref: GDA94_MGA_zone_56
Elevation: 0
Logged by: JS Checked by: BC

DRILLING										
Depth (m)	Drilling Method	PID (ppm)	Sample ID	Water	Graphic Log	LITHOLOGICAL DESCRIPTION Soil Type (Classification Group Symbol); Particle Size; Colour; Secondary / Minor Components.	Moisture	Consistency	COMMENTS/ CONTAMINANT INDICATORS Odours, staining, waste materials, separate phase liquids, imported fill, ash.	Elevation / Depth (m)
						Ground Surface:				0.00
0.0	HA		BH069_0.0-0.2			sandy SILT Trace Clay,brown	M			0.00
			BH069_0.3-0.5							-0.50
										0.50
1.0										
2.0										
3.0										
4.0										

NOTES:

GHD Soil Classifications: The GHD Soil Classification is based on Australian Standards AS 1726-1993. This log is not intended for geotechnical purposes.

Drilling Abbreviations:

RW(x)	Rotary Wash	PSC(x)	Percussion Simultanous Casing
RT(x)	Rotary Triple Tube	AS	Augering - Solid Flight
PC(x)	Percussion Cable Tool	AH	Augering - Hollow Flight
PD(x)	Percussion Down Hole	H	Hand Augering

Where "x" is flushing medium: (W) Water, (M) Mud, (A) Air, (F) Foam.

Moisture Abbreviations:
D Dry
M Moist
W Wet

Consistency:

Granular Soils		**Cohesive Soils**	
(VL) Very Loose	(D) Dense	(VS) Very Soft	(ST) Stiff
(L) Loose	(VD) Very Dense	(S) Soft	(VST) Very Stiff
(MD) Medium Dense		(F) Firm	(H) Hard

BOREHOLE LOG

ENVIRONMENTAL - SOIL BORE

Bore No.: BH070
Page: 1 of 1

Client: NSW Catchment and Lands - Crown Land
Project: Urunga Antimony RAP
Project No.: 2216251
Location:
Date Drilled: 15/08/2012 to: 15/08/2012

Drill Co: GHD
Driller: MK
Rig Type: HA
Total Depth (m): 0.7
Diameter (mm): 50

Easting: 501021
Northing: 6625316
Grid Ref: GDA94_MGA_zone_56
Elevation: 0
Logged by: JS Checked by: BC

DRILLING					Graphic Log	LITHOLOGICAL DESCRIPTION Soil Type (Classification Group Symbol); Particle Size; Colour; Secondary / Minor Components.	Moisture	Consistency	COMMENTS/ CONTAMINANT INDICATORS Odours, staining, waste materials, separate phase liquids, imported fill, ash.	Elevation / Depth (m)
Depth (m)	Drilling Method	PID (ppm)	Sample ID	Water						
						Ground Surface:				0.00
0.0	HA		BH070_0.0-0.2			clayey SAND Mottled orange and grey/ brown	M			0.00
			BH070_0.5-0.7							-0.70
										0.70
1.0										
2.0										
3.0										
4.0										

NOTES:

GHD Soil Classifications: The GHD Soil Classification is based on Australian Standards AS 1726-1993. This log is not intended for geotechnical purposes.

Drilling Abbreviations:

RW(x)	Rotary Wash	PSC(x)	Percussion Simultanous Casing
RT(x)	Rotary Triple Tube	AS	Augering - Solid Flight
PC(x)	Percussion Cable Tool	AH	Augering - Hollow Flight
PD(x)	Percussion Down Hole	H	Hand Augering

Where "x" is flushing medium: (W) Water, (M) Mud, (A) Air, (F) Foam.

Moisture Abbreviations:

D Dry
M Moist
W Wet

Consistency:

Granular Soils		**Cohesive Soils**	
(VL) Very Loose	(D) Dense	(VS) Very Soft	(ST) Stiff
(L) Loose	(VD) Very Dense	(S) Soft	(VST) Very Stiff
(MD) Medium Dense		(F) Firm	(H) Hard

BOREHOLE LOG

ENVIRONMENTAL - SOIL BORE

Bore No.: BH071
Page: 1 of 1

Client: NSW Catchment and Lands - Crown Land
Project: Urunga Antimony RAP
Project No.: 2216251
Location:
Date Drilled: 15/08/2012 to: 15/08/2012

Drill Co: GHD
Driller: MK
Rig Type: HA
Total Depth (m): 0.7
Diameter (mm): 50

Easting: 501071
Northing: 6625320
Grid Ref: GDA94_MGA_zone_56
Elevation: 0
Logged by: JS Checked by: BC

DRILLING						LITHOLOGICAL DESCRIPTION				
Depth (m)	Drilling Method	PID (ppm)	Sample ID	Water	Graphic Log	Soil Type (Classification Group Symbol); Particle Size; Colour; Secondary / Minor Components.	Moisture	Consistency	COMMENTS/ CONTAMINANT INDICATORS Odours, staining, waste materials, separate phase liquids, imported fill, ash.	Elevation / Depth (m)
						Ground Surface:				0.00
0.0	HA		BH071_0.0-0.2			silty CLAY Some Sand,dark brown	M			0.00
			BH071_0.5-0.7							-0.70
										0.70
1.0										
2.0										
3.0										
4.0										

NOTES:

GHD Soil Classifications: The GHD Soil Classification is based on Australian Standards AS 1726-1993. This log is not intended for geotechnical purposes.

Drilling Abbreviations:

RW(x)	Rotary Wash	PSC(x)	Percussion Simultanous Casing
RT(x)	Rotary Triple Tube	AS	Augering - Solid Flight
PC(x)	Percussion Cable Tool	AH	Augering - Hollow Flight
PD(x)	Percussion Down Hole	H	Hand Augering

Where "x" is flushing medium: (W) Water, (M) Mud, (A) Air, (F) Foam.

Moisture Abbreviations:
D Dry
M Moist
W Wet

Consistency:

Granular Soils		**Cohesive Soils**	
(VL) Very Loose	(D) Dense	(VS) Very Soft	(ST) Stiff
(L) Loose	(VD) Very Dense	(S) Soft	(VST) Very Stiff
(MD) Medium Dense		(F) Firm	(H) Hard

BOREHOLE LOG

ENVIRONMENTAL - SOIL BORE

Bore No.: BH072

Client: NSW Catchment and Lands - Crown Land
Project: Urunga Antimony RAP
Project No.: 2216251
Location:
Date Drilled: 15/08/2012 to: 15/08/2012

Drill Co: GHD
Driller: MK
Rig Type: HA
Total Depth (m): 0.7
Diameter (mm): 50

Easting: 501094
Northing: 6625331
Grid Ref: GDA94_MGA_zone_56
Elevation: 0
Logged by: JS Checked by: BC

DRILLING										
Depth (m)	Drilling Method	PID (ppm)	Sample ID	Water	Graphic Log	LITHOLOGICAL DESCRIPTION Soil Type (Classification Group Symbol); Particle Size; Colour; Secondary / Minor Components.	Moisture	Consistency	COMMENTS/ CONTAMINANT INDICATORS Odours, staining, waste materials, separate phase liquids, imported fill, ash.	Elevation / Depth (m)
						Ground Surface:				0.00
0.0	HA		BH072_0.0-0.2			silty CLAY Some Sand,dark brown	W			0.00
										-0.40
						grey				0.40
			BH072_0.5-0.7							-0.70
										0.70
1.0										
2.0										
3.0										
4.0										

NOTES:

GHD Soil Classifications: The GHD Soil Classification is based on Australian Standards AS 1726-1993. This log is not intended for geotechnical purposes.

Drilling Abbreviations:

RW(x)	Rotary Wash	PSC(x)	Percussion Simultanous Casing
RT(x)	Rotary Triple Tube	AS	Augering - Solid Flight
PC(x)	Percussion Cable Tool	AH	Augering - Hollow Flight
PD(x)	Percussion Down Hole	H	Hand Augering

Where "x" is flushing medium: (W) Water, (M) Mud, (A) Air, (F) Foam.

Moisture Abbreviations:
D Dry
M Moist
W Wet

Consistency:

Granular Soils		Cohesive Soils	
(VL) Very Loose	(D) Dense	(VS) Very Soft	(ST) Stiff
(L) Loose	(VD) Very Dense	(S) Soft	(VST) Very Stiff
(MD) Medium Dense		(F) Firm	(H) Hard

BOREHOLE LOG

ENVIRONMENTAL - SOIL BORE

Bore No.: BH073

Client: NSW Catchment and Lands - Crown Land
Project: Urunga Antimony RAP
Project No.: 2216251
Location:
Date Drilled: 15/08/2012 to: 15/08/2012

Drill Co: GHD
Driller: MK
Rig Type: HA
Total Depth (m): 1.2
Diameter (mm): 50

Easting: 501032
Northing: 6625306
Grid Ref: GDA94_MGA_zone_56
Elevation: 0
Logged by: JS Checked by: BC

DRILLING										
Depth (m)	Drilling Method	PID (ppm)	Sample ID	Water	Graphic Log	LITHOLOGICAL DESCRIPTION Soil Type (Classification Group Symbol); Particle Size; Colour; Secondary / Minor Components.	Moisture	Consistency	COMMENTS/ CONTAMINANT INDICATORS Odours, staining, waste materials, separate phase liquids, imported fill, ash.	Elevation / Depth (m)
						Ground Surface:				0.00
0.0	HA		BH073_0.0-0.2			clayey SAND brown/ grey	M			0.00
										-0.50
			BH073_0.5-0.7				W			0.50
1.0			BH073_1.0-1.2			sandy CLAY brown/ grey	W			1.00
										-1.20
										1.20
2.0										
3.0										
4.0										

NOTES:

GHD Soil Classifications: The GHD Soil Classification is based on Australian Standards AS 1726-1993. This log is not intended for geotechnical purposes.

Drilling Abbreviations:

RW(x)	Rotary Wash	PSC(x)	Percussion Simultanous Casing
RT(x)	Rotary Triple Tube	AS	Augering - Solid Flight
PC(x)	Percussion Cable Tool	AH	Augering - Hollow Flight
PD(x)	Percussion Down Hole	H	Hand Augering

Where "x" is flushing medium: (W) Water, (M) Mud, (A) Air, (F) Foam.

Moisture Abbreviations:
D Dry
M Moist
W Wet

Consistency:

Granular Soils		**Cohesive Soils**	
(VL) Very Loose	(D) Dense	(VS) Very Soft	(ST) Stiff
(L) Loose	(VD) Very Dense	(S) Soft	(VST) Very Stiff
(MD) Medium Dense		(F) Firm	(H) Hard

BOREHOLE LOG

ENVIRONMENTAL - SOIL BORE

Bore No.: BH074

Client: NSW Catchment and Lands - Crown Land
Project: Urunga Antimony RAP
Project No.: 2216251
Location:
Date Drilled: 15/08/2012 to: 15/08/2012

Drill Co: GHD
Driller: MK
Rig Type: HA
Total Depth (m): 1
Diameter (mm): 50

Easting: 501025
Northing: 6625286
Grid Ref: GDA94_MGA_zone_56
Elevation: 0
Logged by: JS Checked by: BC

DRILLING										
Depth (m)	Drilling Method	PID (ppm)	Sample ID	Water	Graphic Log	LITHOLOGICAL DESCRIPTION Soil Type (Classification Group Symbol); Particle Size; Colour; Secondary / Minor Components.	Moisture	Consistency	COMMENTS/ CONTAMINANT INDICATORS Odours, staining, waste materials, separate phase liquids, imported fill, ash.	Elevation / Depth (m)
						Ground Surface:				0.00
0.0	HA		BH074_0.0-0.2			clayey SILT Some Sand,dark brown	M			0.00
										-0.80
			BH074_0.8-1.0			sandy CLAY Trace Silt,brown/ grey	M			0.80
1.0										-1.00 1.00
2.0										
3.0										
4.0										

NOTES:

GHD Soil Classifications: The GHD Soil Classification is based on Australian Standards AS 1726-1993. This log is not intended for geotechnical purposes.

Drilling Abbreviations:

RW(x)	Rotary Wash	PSC(x)	Percussion Simultanous Casing
RT(x)	Rotary Triple Tube	AS	Augering - Solid Flight
PC(x)	Percussion Cable Tool	AH	Augering - Hollow Flight
PD(x)	Percussion Down Hole	H	Hand Augering

Where "x" is flushing medium: (W) Water, (M) Mud, (A) Air, (F) Foam.

Moisture Abbreviations:
D Dry
M Moist
W Wet

Consistency:

Granular Soils		**Cohesive Soils**	
(VL) Very Loose	(D) Dense	(VS) Very Soft	(ST) Stiff
(L) Loose	(VD) Very Dense	(S) Soft	(VST) Very Stiff
(MD) Medium Dense		(F) Firm	(H) Hard

BOREHOLE LOG

ENVIRONMENTAL - SOIL BORE

Bore No.: BH075
Page: 1 of 1

Client: NSW Catchment and Lands - Crown Land
Project: Urunga Antimony RAP
Project No.: 2216251
Location:
Date Drilled: 15/08/2012 to: 15/08/2012

Drill Co: GHD
Driller: MK
Rig Type: HA
Total Depth (m): 2
Diameter (mm): 50

Easting: 501012
Northing: 6625245
Grid Ref: GDA94_MGA_zone_56
Elevation: 0
Logged by: JS Checked by: BC

DRILLING										
Depth (m)	Drilling Method	PID (ppm)	Sample ID	Water	Graphic Log	LITHOLOGICAL DESCRIPTION Soil Type (Classification Group Symbol); Particle Size; Colour; Secondary / Minor Components.	Moisture	Consistency	COMMENTS/ CONTAMINANT INDICATORS Odours, staining, waste materials, separate phase liquids, imported fill, ash.	Elevation / Depth (m)
						Ground Surface:				0.00
0.0	HA		BH075_0.0-0.2			sandy SILT brown	D			0.00
										-0.70
						grey				0.70
										-1.00
1.0			BH075_1.0-1.2			Some Clay,brown				1.00
										-1.50
							W			1.50
										-1.80
			BH075_1.8-2.0			dark brown			BHLABDUP01	1.80
										-2.00
2.0										2.00
3.0										
4.0										

NOTES:

GHD Soil Classifications: The GHD Soil Classification is based on Australian Standards AS 1726-1993. This log is not intended for geotechnical purposes.

Drilling Abbreviations:

RW(x)	Rotary Wash	PSC(x)	Percussion Simultanous Casing
RT(x)	Rotary Triple Tube	AS	Augering - Solid Flight
PC(x)	Percussion Cable Tool	AH	Augering - Hollow Flight
PD(x)	Percussion Down Hole	H	Hand Augering

Where "x" is flushing medium: (W) Water, (M) Mud, (A) Air, (F) Foam.

Moisture Abbreviations:
D Dry
M Moist
W Wet

Consistency:

Granular Soils		**Cohesive Soils**	
(VL) Very Loose	(D) Dense	(VS) Very Soft	(ST) Stiff
(L) Loose	(VD) Very Dense	(S) Soft	(VST) Very Stiff
(MD) Medium Dense		(F) Firm	(H) Hard

BOREHOLE LOG

ENVIRONMENTAL - SOIL BORE

Bore No.: BH076
Page: 1 of 1

Client: NSW Catchment and Lands - Crown Land
Project: Urunga Antimony RAP
Project No.: 2216251
Location:
Date Drilled: 15/08/2012 to: 15/08/2012

Drill Co: GHD
Driller: MK
Rig Type: HA
Total Depth (m): 0.7
Diameter (mm): 50

Easting: 500991
Northing: 6625251
Grid Ref: GDA94_MGA_zone_56
Elevation: 0
Logged by: JS Checked by: BC

DRILLING					Graphic Log	LITHOLOGICAL DESCRIPTION Soil Type (Classification Group Symbol); Particle Size; Colour; Secondary / Minor Components.	Moisture	Consistency	COMMENTS/ CONTAMINANT INDICATORS Odours, staining, waste materials, separate phase liquids, imported fill, ash.	Elevation / Depth (m)
Depth (m)	Drilling Method	PID (ppm)	Sample ID	Water						
						Ground Surface:				0.00
0.0	HA		BH076_0.0-0.2			clayey SILT Some Sand, Organic matter,dark brown	W			0.00
			BH076_0.3-0.5							-0.40
						SAND Trace Silt,grey	W			0.40
										-0.70
										0.70
1.0										
2.0										
3.0										
4.0										

NOTES:

GHD Soil Classifications: The GHD Soil Classification is based on Australian Standards AS 1726-1993. This log is not intended for geotechnical purposes.

Drilling Abbreviations:

RW(x)	Rotary Wash	PSC(x)	Percussion Simultanous Casing
RT(x)	Rotary Triple Tube	AS	Augering - Solid Flight
PC(x)	Percussion Cable Tool	AH	Augering - Hollow Flight
PD(x)	Percussion Down Hole	H	Hand Augering

Where "x" is flushing medium: (W) Water, (M) Mud, (A) Air, (F) Foam.

Moisture Abbreviations:
D Dry
M Moist
W Wet

Consistency:

Granular Soils		**Cohesive Soils**	
(VL) Very Loose	(D) Dense	(VS) Very Soft	(ST) Stiff
(L) Loose	(VD) Very Dense	(S) Soft	(VST) Very Stiff
(MD) Medium Dense		(F) Firm	(H) Hard

BOREHOLE LOG

ENVIRONMENTAL - SOIL BORE

Bore No.: BH077

Client: NSW Catchment and Lands - Crown Land
Project: Urunga Antimony RAP
Project No.: 2216251
Location:
Date Drilled: 14/08/2012 to: 14/08/2012

Drill Co: GHD
Driller: MK
Rig Type: HA
Total Depth (m): 2.2
Diameter (mm): 50

Easting: 500997
Northing: 6625216
Grid Ref: GDA94_MGA_zone_56
Elevation: 0
Logged by: JS Checked by: BC

DRILLING										
Depth (m)	Drilling Method	PID (ppm)	Sample ID	Water	Graphic Log	LITHOLOGICAL DESCRIPTION Soil Type (Classification Group Symbol); Particle Size; Colour; Secondary / Minor Components.	Moisture	Consistency	COMMENTS/ CONTAMINANT INDICATORS Odours, staining, waste materials, separate phase liquids, imported fill, ash.	Elevation / Depth (m)
						Ground Surface:				0.00
0.0	HA		BH077_0.0-0.2			sandy SILT grey	D/M			0.00 -0.10
						mottled brown	D			0.10
			BH077_0.3-0.5							-0.50
						clayey SILT Some Sand, Roots @ 0.8m,dark brown	M			0.50
1.0			BH077_1.0-1.2			CLAY Stiff,grey	M			-1.00 1.00
										-1.40
			BH077_1.5-1.7			SILT Trace Sand,dark brown	W			1.40
2.0			BH077_2.0-2.2			black				-2.00 2.00
										-2.20
3.0										2.20
4.0										

NOTES:

GHD Soil Classifications: The GHD Soil Classification is based on Australian Standards AS 1726-1993. This log is not intended for geotechnical purposes.

Drilling Abbreviations:

RW(x)	Rotary Wash	PSC(x)	Percussion Simultanous Casing
RT(x)	Rotary Triple Tube	AS	Augering - Solid Flight
PC(x)	Percussion Cable Tool	AH	Augering - Hollow Flight
PD(x)	Percussion Down Hole	H	Hand Augering

Where "x" is flushing medium: (W) Water, (M) Mud, (A) Air, (F) Foam.

Moisture Abbreviations:
D Dry
M Moist
W Wet

Consistency:

Granular Soils		**Cohesive Soils**	
(VL) Very Loose	(D) Dense	(VS) Very Soft	(ST) Stiff
(L) Loose	(VD) Very Dense	(S) Soft	(VST) Very Stiff
(MD) Medium Dense		(F) Firm	(H) Hard

BOREHOLE LOG

ENVIRONMENTAL - SOIL BORE

Bore No.: BH078

Client: NSW Catchment and Lands - Crown Land
Project: Urunga Antimony RAP
Project No.: 2216251
Location:
Date Drilled: 14/08/2012 to: 14/08/2012

Drill Co: GHD
Driller: MK
Rig Type: HA
Total Depth (m): 1.7
Diameter (mm): 50

Easting: 501019
Northing: 6625227
Grid Ref: GDA94_MGA_zone_56
Elevation: 0
Logged by: JS Checked by: BC

DRILLING										
Depth (m)	Drilling Method	PID (ppm)	Sample ID	Water	Graphic Log	LITHOLOGICAL DESCRIPTION Soil Type (Classification Group Symbol); Particle Size; Colour; Secondary / Minor Components.	Moisture	Consistency	COMMENTS/ CONTAMINANT INDICATORS Odours, staining, waste materials, separate phase liquids, imported fill, ash.	Elevation / Depth (m)
						Ground Surface:				0.00
0.0	HA		BH078_0.0-0.2			SAND Trace Silt,pale grey	D/M			0.00
										-0.30
			BH078_0.3-0.5			silty SAND Organic matter,dark brown	M			0.30
1.0			BH078_1.0-1.2			sandy CLAY Trace Silt,dark brown	W			-1.00 1.00
										-1.40
			BH078_1.5-1.7			clayey SILT Trace Sand,dark brown	W			1.40
										-1.70
										1.70
2.0										
3.0										
4.0										

NOTES:

GHD Soil Classifications: The GHD Soil Classification is based on Australian Standards AS 1726-1993. This log is not intended for geotechnical purposes.

Drilling Abbreviations:

RW(x)	Rotary Wash	PSC(x)	Percussion Simultanous Casing
RT(x)	Rotary Triple Tube	AS	Augering - Solid Flight
PC(x)	Percussion Cable Tool	AH	Augering - Hollow Flight
PD(x)	Percussion Down Hole	H	Hand Augering

Where "x" is flushing medium: (W) Water, (M) Mud, (A) Air, (F) Foam.

Moisture Abbreviations:
D Dry
M Moist
W Wet

Consistency:

Granular Soils

(VL) Very Loose	(D) Dense
(L) Loose	(VD) Very Dense
(MD) Medium Dense	

Cohesive Soils

(VS) Very Soft	(ST) Stiff
(S) Soft	(VST) Very Stiff
(F) Firm	(H) Hard

BOREHOLE LOG

ENVIRONMENTAL - SOIL BORE

Bore No.: BH079
Page: 1 of 1

Client: NSW Catchment and Lands - Crown Land
Project: Urunga Antimony RAP
Project No.: 2216251
Location:
Date Drilled: 15/08/2012 to: 15/08/2012

Drill Co: GHD
Driller: MK
Rig Type: HA
Total Depth (m): 1
Diameter (mm): 50

Easting: 501042
Northing: 6625267
Grid Ref: GDA94_MGA_zone_56
Elevation: 0
Logged by: JS Checked by: BC

DRILLING										
Depth (m)	Drilling Method	PID (ppm)	Sample ID	Water	Graphic Log	LITHOLOGICAL DESCRIPTION Soil Type (Classification Group Symbol); Particle Size; Colour; Secondary / Minor Components.	Moisture	Consistency	COMMENTS/ CONTAMINANT INDICATORS Odours, staining, waste materials, separate phase liquids, imported fill, ash.	Elevation / Depth (m)
						Ground Surface:				0.00
0.0	HA		BH079_0.0-0.2			SAND Trace Silt,pale grey	M			0.00
										-0.80
			BH079_0.8-1.0			clayey SAND brown/ grey	M			0.80 -1.00
1.0										1.00
2.0										
3.0										
4.0										

NOTES:

GHD Soil Classifications: The GHD Soil Classification is based on Australian Standards AS 1726-1993. This log is not intended for geotechnical purposes.

Drilling Abbreviations:

RW(x)	Rotary Wash	PSC(x)	Percussion Simultanous Casing
RT(x)	Rotary Triple Tube	AS	Augering - Solid Flight
PC(x)	Percussion Cable Tool	AH	Augering - Hollow Flight
PD(x)	Percussion Down Hole	H	Hand Augering

Where "x" is flushing medium: (W) Water, (M) Mud, (A) Air, (F) Foam.

Moisture Abbreviations:
D Dry
M Moist
W Wet

Consistency:

Granular Soils		**Cohesive Soils**	
(VL) Very Loose	(D) Dense	(VS) Very Soft	(ST) Stiff
(L) Loose	(VD) Very Dense	(S) Soft	(VST) Very Stiff
(MD) Medium Dense		(F) Firm	(H) Hard

BOREHOLE LOG

ENVIRONMENTAL - SOIL BORE

Bore No.: BH080
Page: 1 of 1

Client: NSW Catchment and Lands - Crown Land
Project: Urunga Antimony RAP
Project No.: 2216251
Location:
Date Drilled: 15/08/2012 to: 15/08/2012

Drill Co: GHD
Driller: MK
Rig Type: HA
Total Depth (m): 1.2
Diameter (mm): 50

Easting: 501059
Northing: 6625289
Grid Ref: GDA94_MGA_zone_56
Elevation: 0
Logged by: JS Checked by: BC

DRILLING										
Depth (m)	Drilling Method	PID (ppm)	Sample ID	Water	Graphic Log	LITHOLOGICAL DESCRIPTION Soil Type (Classification Group Symbol); Particle Size; Colour; Secondary / Minor Components.	Moisture	Consistency	COMMENTS/ CONTAMINANT INDICATORS Odours, staining, waste materials, separate phase liquids, imported fill, ash.	Elevation / Depth (m)
						Ground Surface:				0.00
0.0	HA		BH080_0.0-0.2			sandy CLAY mottled orange/ grey	M			0.00
										-1.00
1.0			BH080_1.0-1.2			silty SAND Some Clay,dark brown	M		BHDUP02	1.00
										-1.20
										1.20
2.0										
3.0										
4.0										

NOTES:

GHD Soil Classifications: The GHD Soil Classification is based on Australian Standards AS 1726-1993. This log is not intended for geotechnical purposes.

Drilling Abbreviations:

RW(x)	Rotary Wash	PSC(x)	Percussion Simultanous Casing
RT(x)	Rotary Triple Tube	AS	Augering - Solid Flight
PC(x)	Percussion Cable Tool	AH	Augering - Hollow Flight
PD(x)	Percussion Down Hole	H	Hand Augering

Where "x" is flushing medium: (W) Water, (M) Mud, (A) Air, (F) Foam.

Moisture Abbreviations:
D Dry
M Moist
W Wet

Consistency:

Granular Soils		**Cohesive Soils**	
(VL) Very Loose	(D) Dense	(VS) Very Soft	(ST) Stiff
(L) Loose	(VD) Very Dense	(S) Soft	(VST) Very Stiff
(MD) Medium Dense		(F) Firm	(H) Hard

BOREHOLE LOG

ENVIRONMENTAL - SOIL BORE

Bore No.: BH081
Page: 1 of 1

Client: NSW Catchment and Lands - Crown Land
Project: Urunga Antimony RAP
Project No.: 2216251
Location:
Date Drilled: 15/08/2012 to: 15/08/2012

Drill Co: GHD
Driller: MK
Rig Type: HA
Total Depth (m): 1.8
Diameter (mm): 50

Easting: 501064
Northing: 6625271
Grid Ref: GDA94_MGA_zone_56
Elevation: 0
Logged by: JS Checked by: BC

DRILLING										
Depth (m)	Drilling Method	PID (ppm)	Sample ID	Water	Graphic Log	LITHOLOGICAL DESCRIPTION Soil Type (Classification Group Symbol); Particle Size; Colour; Secondary / Minor Components.	Moisture	Consistency	COMMENTS/ CONTAMINANT INDICATORS Odours, staining, waste materials, separate phase liquids, imported fill, ash.	Elevation / Depth (m)
						Ground Surface:				0.00
0.0	HA		BH081_0.0-0.2			clayey SAND Roots,brown	M			0.00
										-0.70
						CLAY mottled white/ orange	M			0.70
1.0										-1.00
			BH081_1.0-1.2			clayey SILT Trace Sand,dark brown	M			1.00
										-1.30
						CLAY mottled pale grey/ orange	M			1.30
										-1.50
						sandy CLAY grey	W			1.50
			BH081_1.6-1.8							-1.80
										1.80
2.0										
3.0										
4.0										

NOTES:

GHD Soil Classifications: The GHD Soil Classification is based on Australian Standards AS 1726-1993. This log is not intended for geotechnical purposes.

Drilling Abbreviations:

RW(x)	Rotary Wash	PSC(x)	Percussion Simultanous Casing
RT(x)	Rotary Triple Tube	AS	Augering - Solid Flight
PC(x)	Percussion Cable Tool	AH	Augering - Hollow Flight
PD(x)	Percussion Down Hole	H	Hand Augering

Where "x" is flushing medium: (W) Water, (M) Mud, (A) Air, (F) Foam.

Moisture Abbreviations:
D Dry
M Moist
W Wet

Consistency:

Granular Soils		**Cohesive Soils**	
(VL) Very Loose	(D) Dense	(VS) Very Soft	(ST) Stiff
(L) Loose	(VD) Very Dense	(S) Soft	(VST) Very Stiff
(MD) Medium Dense		(F) Firm	(H) Hard

BOREHOLE LOG

ENVIRONMENTAL - SOIL BORE

Bore No.: BH082
Page: 1 of 1

Client: NSW Catchment and Lands - Crown Land
Project: Urunga Antimony RAP
Project No.: 2216251
Location:
Date Drilled: 14/08/2012 to: 14/08/2012

Drill Co: GHD
Driller: MK
Rig Type: HA
Total Depth (m): 1.7
Diameter (mm): 50

Easting: 501046
Northing: 6625229
Grid Ref: GDA94_MGA_zone_56
Elevation: 0
Logged by: JS Checked by: BC

DRILLING						LITHOLOGICAL DESCRIPTION Soil Type (Classification Group Symbol); Particle Size; Colour; Secondary / Minor Components.			COMMENTS/ CONTAMINANT INDICATORS Odours, staining, waste materials, separate phase liquids, imported fill, ash.	Elevation / Depth (m)
Depth (m)	Drilling Method	PID (ppm)	Sample ID	Water	Graphic Log		Moisture	Consistency		
						Ground Surface:				0.00
0.0	HA		BH082_0.0-0.2			CLAY mottled pale grey/ orange	D/M			0.00
			BH082_0.3-0.5							
1.0			BH082_1.0-1.2			SAND Some Silt, trace Clay,grey	W			-1.00 1.00 -1.20
			BH082_1.5-1.7			SILT Trace Sand,dark brown	M/W			1.20 -1.70
										1.70
2.0										
3.0										
4.0										

NOTES:

GHD Soil Classifications: The GHD Soil Classification is based on Australian Standards AS 1726-1993. This log is not intended for geotechnical purposes.

Drilling Abbreviations:

RW(x)	Rotary Wash	PSC(x)	Percussion Simultanous Casing
RT(x)	Rotary Triple Tube	AS	Augering - Solid Flight
PC(x)	Percussion Cable Tool	AH	Augering - Hollow Flight
PD(x)	Percussion Down Hole	H	Hand Augering

Where "x" is flushing medium: (W) Water, (M) Mud, (A) Air, (F) Foam.

Moisture Abbreviations:
D Dry
M Moist
W Wet

Consistency:

Granular Soils		**Cohesive Soils**	
(VL) Very Loose	(D) Dense	(VS) Very Soft	(ST) Stiff
(L) Loose	(VD) Very Dense	(S) Soft	(VST) Very Stiff
(MD) Medium Dense		(F) Firm	(H) Hard

BOREHOLE LOG

ENVIRONMENTAL - SOIL BORE

Bore No.: BH083
Page: 1 of 1

Client: NSW Catchment and Lands - Crown Land
Project: Urunga Antimony RAP
Project No.: 2216251
Location:
Date Drilled: 14/08/2012 to: 14/08/2012

Drill Co: GHD
Driller: MK
Rig Type: HA
Total Depth (m): 1.7
Diameter (mm): 50

Easting: 501076
Northing: 6625232
Grid Ref: GDA94_MGA_zone_56
Elevation: 0
Logged by: JS Checked by: BC

DRILLING										
Depth (m)	Drilling Method	PID (ppm)	Sample ID	Water	Graphic Log	LITHOLOGICAL DESCRIPTION Soil Type (Classification Group Symbol); Particle Size; Colour; Secondary / Minor Components.	Moisture	Consistency	COMMENTS/ CONTAMINANT INDICATORS Odours, staining, waste materials, separate phase liquids, imported fill, ash.	Elevation / Depth (m)
						Ground Surface:				0.00
0.0	HA		BH083_0.0-0.2			silty SAND mottled brown	M			0.00
										-0.30
			BH083_0.3-0.5			clayey SILT Some Sand,dark brown	M			0.30
										-0.90
						SILT Trace Sand,dark brown	M			0.90 -1.00
1.0			BH083_1.0-1.2			silty CLAY Some Sand,brown	W			1.00
			BH083_1.5-1.7							-1.70
										1.70
2.0										
3.0										
4.0										

NOTES:

GHD Soil Classifications: The GHD Soil Classification is based on Australian Standards AS 1726-1993. This log is not intended for geotechnical purposes.

Drilling Abbreviations:

RW(x)	Rotary Wash	PSC(x)	Percussion Simultanous Casing
RT(x)	Rotary Triple Tube	AS	Augering - Solid Flight
PC(x)	Percussion Cable Tool	AH	Augering - Hollow Flight
PD(x)	Percussion Down Hole	H	Hand Augering

Where "x" is flushing medium: (W) Water, (M) Mud, (A) Air, (F) Foam.

Moisture Abbreviations:
D Dry
M Moist
W Wet

Consistency:

Granular Soils		**Cohesive Soils**	
(VL) Very Loose	(D) Dense	(VS) Very Soft	(ST) Stiff
(L) Loose	(VD) Very Dense	(S) Soft	(VST) Very Stiff
(MD) Medium Dense		(F) Firm	(H) Hard

BOREHOLE LOG

ENVIRONMENTAL - SOIL BORE

Bore No.: BH084
Page: 1 of 1

Client: NSW Catchment and Lands - Crown Land
Project: Urunga Antimony RAP
Project No.: 2216251
Location:
Date Drilled: 15/08/2012 to: 15/08/2012

Drill Co: GHD
Driller: MK
Rig Type: HA
Total Depth (m): 1.7
Diameter (mm): 50

Easting: 501077
Northing: 6625256
Grid Ref: GDA94_MGA_zone_56
Elevation: 0
Logged by: JS Checked by: BC

DRILLING										
Depth (m)	Drilling Method	PID (ppm)	Sample ID	Water	Graphic Log	LITHOLOGICAL DESCRIPTION Soil Type (Classification Group Symbol); Particle Size; Colour; Secondary / Minor Components.	Moisture	Consistency	COMMENTS/ CONTAMINANT INDICATORS Odours, staining, waste materials, separate phase liquids, imported fill, ash.	Elevation / Depth (m)
						Ground Surface:				0.00
0.0	HA		BH084_0.0-0.2			sandy SILT Trace Clay,brown	D			0.00
										-0.50
			BH084_0.5-0.7			silty CLAY pale brown	M			0.50
										-1.00
1.0			BH084_1.0-1.2			clayey SILT Trace Sand,dark brown	W			1.00
										-1.40
			BH084_1.5-1.7			silty CLAY Trace Sand,dark brown	W			1.40
										-1.70
										1.70
2.0										
3.0										
4.0										

NOTES:

GHD Soil Classifications: The GHD Soil Classification is based on Australian Standards AS 1726-1993. This log is not intended for geotechnical purposes.

Drilling Abbreviations:

RW(x)	Rotary Wash	PSC(x)	Percussion Simultanous Casing
RT(x)	Rotary Triple Tube	AS	Augering - Solid Flight
PC(x)	Percussion Cable Tool	AH	Augering - Hollow Flight
PD(x)	Percussion Down Hole	H	Hand Augering

Where "x" is flushing medium: (W) Water, (M) Mud, (A) Air, (F) Foam.

Moisture Abbreviations:
D Dry
M Moist
W Wet

Consistency:

Granular Soils		**Cohesive Soils**	
(VL) Very Loose	(D) Dense	(VS) Very Soft	(ST) Stiff
(L) Loose	(VD) Very Dense	(S) Soft	(VST) Very Stiff
(MD) Medium Dense		(F) Firm	(H) Hard

BOREHOLE LOG

ENVIRONMENTAL - SOIL BORE

Bore No.: BH091

Page: 1 of 1

Client: NSW Catchment and Lands - Crown Land
Project: Urunga Antimony RAP
Project No.: 2216251
Location:
Date Drilled: 15/08/2012 to: 15/08/2012

Drill Co: GHD
Driller: BL/BJ
Rig Type: HA
Total Depth (m): 0.5
Diameter (mm): 50

Easting: 501108
Northing: 6625107
Grid Ref: GDA94_MGA_zone_56
Elevation: 0
Logged by: BL/BJ Checked by: BC

DRILLING					Graphic Log	LITHOLOGICAL DESCRIPTION Soil Type (Classification Group Symbol); Particle Size; Colour; Secondary / Minor Components.	Moisture	Consistency	COMMENTS/ CONTAMINANT INDICATORS Odours, staining, waste materials, separate phase liquids, imported fill, ash.	Elevation / Depth (m)
Depth (m)	Drilling Method	PID (ppm)	Sample ID	Water						
						Ground Surface:				0.00
0.0	HA		BH091_0.0-0.1			SILT Some Clay,brown	M			0.00
			BH091_0.1-0.3							
			BH091_0.3-0.5							-0.50
										0.50
1.0										
2.0										
3.0										
4.0										

NOTES:

GHD Soil Classifications: The GHD Soil Classification is based on Australian Standards AS 1726-1993. This log is not intended for geotechnical purposes.

Drilling Abbreviations:

RW(x)	Rotary Wash	PSC(x)	Percussion Simultanous Casing
RT(x)	Rotary Triple Tube	AS	Augering - Solid Flight
PC(x)	Percussion Cable Tool	AH	Augering - Hollow Flight
PD(x)	Percussion Down Hole	H	Hand Augering

Where "x" is flushing medium: (W) Water, (M) Mud, (A) Air, (F) Foam.

Moisture Abbreviations:
D Dry
M Moist
W Wet

Consistency:

Granular Soils
(VL) Very Loose
(L) Loose
(MD) Medium Dense
(D) Dense
(VD) Very Dense

Cohesive Soils
(VS) Very Soft
(S) Soft
(F) Firm
(ST) Stiff
(VST) Very Stiff
(H) Hard

BOREHOLE LOG

ENVIRONMENTAL - SOIL BORE

Bore No.: BH093
Page: 1 of 1

Client: NSW Catchment and Lands - Crown Land
Project: Urunga Antimony RAP
Project No.: 2216251
Location:
Date Drilled: 15/08/2012 to: 15/08/2012

Drill Co: GHD
Driller: BL/BJ
Rig Type: HA
Total Depth (m): 1
Diameter (mm): 50

Easting: 501133
Northing: 6625139
Grid Ref: GDA94_MGA_zone_56
Elevation: 0
Logged by: BL/BJ Checked by: BC

DRILLING										
Depth (m)	Drilling Method	PID (ppm)	Sample ID	Water	Graphic Log	LITHOLOGICAL DESCRIPTION Soil Type (Classification Group Symbol); Particle Size; Colour; Secondary / Minor Components.	Moisture	Consistency	COMMENTS/ CONTAMINANT INDICATORS Odours, staining, waste materials, separate phase liquids, imported fill, ash.	Elevation / Depth (m)
						Ground Surface:				0.00
0.0	HA		BH093_0.0-0.1			SILT Organic matter,dark brown	M			0.00
										-0.20
			BH093_0.2-0.4			silty CLAY dark grey	M			0.20
			BH093_0.4-0.6							
										-0.80
			BH093_0.8-1.0			silty CLAY grey	W			0.80
1.0										-1.00
										1.00
2.0										
3.0										
4.0										

NOTES:

GHD Soil Classifications: The GHD Soil Classification is based on Australian Standards AS 1726-1993. This log is not intended for geotechnical purposes.

Drilling Abbreviations:

RW(x)	Rotary Wash	PSC(x)	Percussion Simultanous Casing
RT(x)	Rotary Triple Tube	AS	Augering - Solid Flight
PC(x)	Percussion Cable Tool	AH	Augering - Hollow Flight
PD(x)	Percussion Down Hole	H	Hand Augering

Where "x" is flushing medium: (W) Water, (M) Mud, (A) Air, (F) Foam.

Moisture Abbreviations:
D Dry
M Moist
W Wet

Consistency:

Granular Soils		**Cohesive Soils**	
(VL) Very Loose	(D) Dense	(VS) Very Soft	(ST) Stiff
(L) Loose	(VD) Very Dense	(S) Soft	(VST) Very Stiff
(MD) Medium Dense		(F) Firm	(H) Hard

BOREHOLE LOG

ENVIRONMENTAL - SOIL BORE

Bore No.: BH100
Page: 1 of 1

Client: NSW Catchment and Lands - Crown Land
Project: Urunga Antimony RAP
Project No.: 2216251
Location:
Date Drilled: 16/08/2012 to: 16/08/2012

Drill Co: GHD
Driller: MK
Rig Type: HA
Total Depth (m): 0.5
Diameter (mm): 50

Easting: 500848
Northing: 6625241
Grid Ref: GDA94_MGA_zone_56
Elevation: 0
Logged by: JS Checked by: BC

DRILLING										
Depth (m)	Drilling Method	PID (ppm)	Sample ID	Water	Graphic Log	LITHOLOGICAL DESCRIPTION Soil Type (Classification Group Symbol); Particle Size; Colour; Secondary / Minor Components.	Moisture	Consistency	COMMENTS/ CONTAMINANT INDICATORS Odours, staining, waste materials, separate phase liquids, imported fill, ash.	Elevation / Depth (m)
						Ground Surface:				0.00
0.0	HA		BH100_0.0-0.2			SILT Some Gravel,grey/ brown	D			0.00 -0.20
			BH100_0.3-0.5			silty CLAY Trace Gravel,orange/ brown	M			0.20 -0.50
										0.50
1.0										
2.0										
3.0										
4.0										

NOTES:

GHD Soil Classifications: The GHD Soil Classification is based on Australian Standards AS 1726-1993. This log is not intended for geotechnical purposes.

Drilling Abbreviations:

RW(x)	Rotary Wash	PSC(x)	Percussion Simultanous Casing
RT(x)	Rotary Triple Tube	AS	Augering - Solid Flight
PC(x)	Percussion Cable Tool	AH	Augering - Hollow Flight
PD(x)	Percussion Down Hole	H	Hand Augering

Where "x" is flushing medium: (W) Water, (M) Mud, (A) Air, (F) Foam.

Moisture Abbreviations:
D Dry
M Moist
W Wet

Consistency:

Granular Soils		**Cohesive Soils**	
(VL) Very Loose	(D) Dense	(VS) Very Soft	(ST) Stiff
(L) Loose	(VD) Very Dense	(S) Soft	(VST) Very Stiff
(MD) Medium Dense		(F) Firm	(H) Hard

BOREHOLE LOG

ENVIRONMENTAL - SOIL BORE

Bore No.: BH101
Page: 1 of 1

Client: NSW Catchment and Lands - Crown Land
Project: Urunga Antimony RAP
Project No.: 2216251
Location:
Date Drilled: 16/08/2012 to: 16/08/2012

Drill Co: GHD
Driller: MK
Rig Type: HA
Total Depth (m): 1.2
Diameter (mm): 50

Easting: 500830
Northing: 6625169
Grid Ref: GDA94_MGA_zone_56
Elevation: 0
Logged by: JS Checked by: BC

DRILLING										
Depth (m)	Drilling Method	PID (ppm)	Sample ID	Water	Graphic Log	LITHOLOGICAL DESCRIPTION Soil Type (Classification Group Symbol); Particle Size; Colour; Secondary / Minor Components.	Moisture	Consistency	COMMENTS/ CONTAMINANT INDICATORS Odours, staining, waste materials, separate phase liquids, imported fill, ash.	Elevation / Depth (m)
						Ground Surface:				0.00
0.0	HA		BH101_0.0-0.2			clayey SILT orange/ brown	W			0.00
										-0.50
			BH101_0.5-0.7			silty CLAY mottled orange/ grey/ brown	M			0.50
										-0.90
1.0			BH101_1.0-1.2			orange				0.90
										-1.20
										1.20
2.0										
3.0										
4.0										

NOTES:

GHD Soil Classifications: The GHD Soil Classification is based on Australian Standards AS 1726-1993. This log is not intended for geotechnical purposes.

Drilling Abbreviations:

RW(x)	Rotary Wash	PSC(x)	Percussion Simultanous Casing
RT(x)	Rotary Triple Tube	AS	Augering - Solid Flight
PC(x)	Percussion Cable Tool	AH	Augering - Hollow Flight
PD(x)	Percussion Down Hole	H	Hand Augering

Where "x" is flushing medium: (W) Water, (M) Mud, (A) Air, (F) Foam.

Moisture Abbreviations:
D Dry
M Moist
W Wet

Consistency:

Granular Soils		**Cohesive Soils**	
(VL) Very Loose	(D) Dense	(VS) Very Soft	(ST) Stiff
(L) Loose	(VD) Very Dense	(S) Soft	(VST) Very Stiff
(MD) Medium Dense		(F) Firm	(H) Hard

BOREHOLE LOG

ENVIRONMENTAL - SOIL BORE

Bore No.: SE001
Page: 1 of 1

Client: NSW Catchment and Lands - Crown Land
Project: Urunga Antimony RAP
Project No.: 2216251
Location:
Date Drilled: 14/08/2012 to: 14/08/2012

Drill Co: GHD
Driller: BL/BJ
Rig Type: HA
Total Depth (m): 0.7
Diameter (mm): 50

Easting: 500894
Northing: 6625123
Grid Ref: GDA94_MGA_zone_56
Elevation: 0
Logged by: BL/BJ Checked by: BC

DRILLING										
Depth (m)	Drilling Method	PID (ppm)	Sample ID	Water	Graphic Log	LITHOLOGICAL DESCRIPTION Soil Type (Classification Group Symbol); Particle Size; Colour; Secondary / Minor Components.	Moisture	Consistency	COMMENTS/ CONTAMINANT INDICATORS Odours, staining, waste materials, separate phase liquids, imported fill, ash.	Elevation / Depth (m)
						Ground Surface:				0.00
0.0	HA		SE001_0.0-0.1			silty SAND brown	W			0.00 -0.10
			SE001_0.1-0.2			CLAY Trace Sand,grey	W			0.10 -0.20
						silty CLAY Trace sand, Organic matter,black	W			0.20
			SE001_0.4-0.6							
										-0.70
										0.70
1.0										
2.0										
3.0										
4.0										

NOTES:

GHD Soil Classifications: The GHD Soil Classification is based on Australian Standards AS 1726-1993. This log is not intended for geotechnical purposes.

Drilling Abbreviations:

RW(x)	Rotary Wash	PSC(x)	Percussion Simultanous Casing
RT(x)	Rotary Triple Tube	AS	Augering - Solid Flight
PC(x)	Percussion Cable Tool	AH	Augering - Hollow Flight
PD(x)	Percussion Down Hole	H	Hand Augering

Where "x" is flushing medium: (W) Water, (M) Mud, (A) Air, (F) Foam.

Moisture Abbreviations:
D Dry
M Moist
W Wet

Consistency:

Granular Soils		**Cohesive Soils**	
(VL) Very Loose	(D) Dense	(VS) Very Soft	(ST) Stiff
(L) Loose	(VD) Very Dense	(S) Soft	(VST) Very Stiff
(MD) Medium Dense		(F) Firm	(H) Hard

BOREHOLE LOG

ENVIRONMENTAL - SOIL BORE

Bore No.: SE002
Page: 1 of 1

Client: NSW Catchment and Lands - Crown Land
Project: Urunga Antimony RAP
Project No.: 2216251
Location:
Date Drilled: 14/08/2012 to: 14/08/2012

Drill Co: GHD
Driller: BL/BJ
Rig Type: HA
Total Depth (m): 0.7
Diameter (mm): 50

Easting: 500896
Northing: 6625113
Grid Ref: GDA94_MGA_zone_56
Elevation: 0
Logged by: BL/BJ Checked by: BC

DRILLING										
Depth (m)	Drilling Method	PID (ppm)	Sample ID	Water	Graphic Log	LITHOLOGICAL DESCRIPTION Soil Type (Classification Group Symbol); Particle Size; Colour; Secondary / Minor Components.	Moisture	Consistency	COMMENTS/ CONTAMINANT INDICATORS Odours, staining, waste materials, separate phase liquids, imported fill, ash.	Elevation / Depth (m)
						Ground Surface:				0.00
0.0	HA		SE002_0.0-0.1			sandy SILT Organic matter,grey	W			0.00 -0.10
						CLAY Tr. Sand, Organic matter,black	W			0.10
			SE002_0.3-0.5							-0.50
			SE002_0.5-0.7			sandy CLAY Organic matter,dark grey	W			0.50 -0.70
										0.70
1.0										
2.0										
3.0										
4.0										

NOTES:

GHD Soil Classifications: The GHD Soil Classification is based on Australian Standards AS 1726-1993. This log is not intended for geotechnical purposes.

Drilling Abbreviations:

RW(x)	Rotary Wash	PSC(x)	Percussion Simultanous Casing
RT(x)	Rotary Triple Tube	AS	Augering - Solid Flight
PC(x)	Percussion Cable Tool	AH	Augering - Hollow Flight
PD(x)	Percussion Down Hole	H	Hand Augering

Where "x" is flushing medium: (W) Water, (M) Mud, (A) Air, (F) Foam.

Moisture Abbreviations:
D Dry
M Moist
W Wet

Consistency:

Granular Soils		Cohesive Soils	
(VL) Very Loose	(D) Dense	(VS) Very Soft	(ST) Stiff
(L) Loose	(VD) Very Dense	(S) Soft	(VST) Very Stiff
(MD) Medium Dense		(F) Firm	(H) Hard

BOREHOLE LOG

ENVIRONMENTAL - SOIL BORE

Bore No.: SE003

Page: 1 of 1

Client: NSW Catchment and Lands - Crown Land
Project: Urunga Antimony RAP
Project No.: 2216251
Location:
Date Drilled: 16/08/2012 to: 16/08/2012

Drill Co: GHD
Driller: BL/BJ
Rig Type: HA
Total Depth (m): 0.6
Diameter (mm): 50

Easting: 500911
Northing: 6625118
Grid Ref: GDA94_MGA_zone_56
Elevation: 0
Logged by: BL/BJ Checked by: BC

DRILLING					Graphic Log	LITHOLOGICAL DESCRIPTION Soil Type (Classification Group Symbol); Particle Size; Colour; Secondary / Minor Components.	Moisture	Consistency	COMMENTS/ CONTAMINANT INDICATORS Odours, staining, waste materials, separate phase liquids, imported fill, ash.	Elevation / Depth (m)
Depth (m)	Drilling Method	PID (ppm)	Sample ID	Water						
						Ground Surface:				0.00
0.0	HA		SE003_0.0-0.1			SILT Organic matter,grey	W			0.00
										-0.20
			SE003_0.2-0.4			SILT Organic matter,dark brown	W			0.20
										-0.40
			SE003_0.4-0.6			silty CLAY dark brown	W			0.40
										-0.60
										0.60
1.0										
2.0										
3.0										
4.0										

NOTES:

GHD Soil Classifications: The GHD Soil Classification is based on Australian Standards AS 1726-1993. This log is not intended for geotechnical purposes.

Drilling Abbreviations:

RW(x)	Rotary Wash	PSC(x)	Percussion Simultanous Casing
RT(x)	Rotary Triple Tube	AS	Augering - Solid Flight
PC(x)	Percussion Cable Tool	AH	Augering - Hollow Flight
PD(x)	Percussion Down Hole	H	Hand Augering

Where "x" is flushing medium: (W) Water, (M) Mud, (A) Air, (F) Foam.

Moisture Abbreviations:
D Dry
M Moist
W Wet

Consistency:

Granular Soils

(VL) Very Loose	(D) Dense
(L) Loose	(VD) Very Dense
(MD) Medium Dense	

Cohesive Soils

(VS) Very Soft	(ST) Stiff
(S) Soft	(VST) Very Stiff
(F) Firm	(H) Hard

BOREHOLE LOG

ENVIRONMENTAL - SOIL BORE

Bore No.: SE004
Page: 1 of 1

Client: NSW Catchment and Lands - Crown Land
Project: Urunga Antimony RAP
Project No.: 2216251
Location:
Date Drilled: 16/08/2012 to: 16/08/2012

Drill Co: GHD
Driller: BL/BJ
Rig Type: HA
Total Depth (m): 0.6
Diameter (mm): 50

Easting: 500881
Northing: 6625094
Grid Ref: GDA94_MGA_zone_56
Elevation: 0
Logged by: BL/BJ Checked by: BC

DRILLING										
Depth (m)	Drilling Method	PID (ppm)	Sample ID	Water	Graphic Log	LITHOLOGICAL DESCRIPTION Soil Type (Classification Group Symbol); Particle Size; Colour; Secondary / Minor Components.	Moisture	Consistency	COMMENTS/ CONTAMINANT INDICATORS Odours, staining, waste materials, separate phase liquids, imported fill, ash.	Elevation / Depth (m)
						Ground Surface:				0.00
0.0	HA		SEDUP05			SILT Organic matter,dark brown	W			0.00
										-0.20
			SE004_0.2-0.3			silty CLAY Organic matter,dark brown	W		SEDUP05	0.20 -0.30
							W			0.30
			SE004_0.4-0.6			SILT Organic matter,dark brown				-0.60
										0.60
1.0										
2.0										
3.0										
4.0										

NOTES:

GHD Soil Classifications: The GHD Soil Classification is based on Australian Standards AS 1726-1993. This log is not intended for geotechnical purposes.

Drilling Abbreviations:

RW(x)	Rotary Wash	PSC(x)	Percussion Simultanous Casing
RT(x)	Rotary Triple Tube	AS	Augering - Solid Flight
PC(x)	Percussion Cable Tool	AH	Augering - Hollow Flight
PD(x)	Percussion Down Hole	H	Hand Augering

Where "x" is flushing medium: (W) Water, (M) Mud, (A) Air, (F) Foam.

Moisture Abbreviations:
D Dry
M Moist
W Wet

Consistency:

Granular Soils		Cohesive Soils	
(VL) Very Loose	(D) Dense	(VS) Very Soft	(ST) Stiff
(L) Loose	(VD) Very Dense	(S) Soft	(VST) Very Stiff
(MD) Medium Dense		(F) Firm	(H) Hard

BOREHOLE LOG

ENVIRONMENTAL - SOIL BORE

Bore No.: SE005
Page: 1 of 1

Client: NSW Catchment and Lands - Crown Land
Project: Urunga Antimony RAP
Project No.: 2216251
Location:
Date Drilled: 16/08/2012 to: 16/08/2012

Drill Co: GHD
Driller: BL/BJ
Rig Type: HA
Total Depth (m): 0.1
Diameter (mm): 50

Easting: 500918
Northing: 6625101
Grid Ref: GDA94_MGA_zone_56
Elevation: 0
Logged by: BL/BJ Checked by: BC

DRILLING										
Depth (m)	Drilling Method	PID (ppm)	Sample ID	Water	Graphic Log	LITHOLOGICAL DESCRIPTION Soil Type (Classification Group Symbol); Particle Size; Colour; Secondary / Minor Components.	Moisture	Consistency	COMMENTS/ CONTAMINANT INDICATORS Odours, staining, waste materials, separate phase liquids, imported fill, ash.	Elevation / Depth (m)
						Ground Surface:				0.00
0.0	HA		SE005_0.0-0.1			clayey SILT Organic matter,dark brown	W			0.00 -0.10
										0.10
1.0										
2.0										
3.0										
4.0										

NOTES:

GHD Soil Classifications: The GHD Soil Classification is based on Australian Standards AS 1726-1993. This log is not intended for geotechnical purposes.

Drilling Abbreviations:

RW(x)	Rotary Wash	PSC(x)	Percussion Simultanous Casing
RT(x)	Rotary Triple Tube	AS	Augering - Solid Flight
PC(x)	Percussion Cable Tool	AH	Augering - Hollow Flight
PD(x)	Percussion Down Hole	H	Hand Augering

Where "x" is flushing medium: (W) Water, (M) Mud, (A) Air, (F) Foam.

Moisture Abbreviations:
D Dry
M Moist
W Wet

Consistency:

Granular Soils		Cohesive Soils	
(VL) Very Loose	(D) Dense	(VS) Very Soft	(ST) Stiff
(L) Loose	(VD) Very Dense	(S) Soft	(VST) Very Stiff
(MD) Medium Dense		(F) Firm	(H) Hard

BOREHOLE LOG

ENVIRONMENTAL - SOIL BORE

Bore No.: SE010
Page: 1 of 1

Client: NSW Catchment and Lands - Crown Land
Project: Urunga Antimony RAP
Project No.: 2216251
Location:
Date Drilled: 14/08/2012 to: 14/08/2012

Drill Co: GHD
Driller: BL/BJ
Rig Type: HA
Total Depth (m): 1.4
Diameter (mm): 50

Easting: 500930
Northing: 6625143
Grid Ref: GDA94_MGA_zone_56
Elevation: 0
Logged by: BL/BJ Checked by: BC

DRILLING										
Depth (m)	Drilling Method	PID (ppm)	Sample ID	Water	Graphic Log	LITHOLOGICAL DESCRIPTION Soil Type (Classification Group Symbol); Particle Size; Colour; Secondary / Minor Components.	Moisture	Consistency	COMMENTS/ CONTAMINANT INDICATORS Odours, staining, waste materials, separate phase liquids, imported fill, ash.	Elevation / Depth (m)
						Ground Surface:				0.00
0.0	HA					CLAY Some Silt, trace Sand,grey	W			0.00
			SE010_0.1-0.3							
										-0.60
			SE010_0.6-0.8			SILT Some Clay and Sand, Organic matter,black	W			0.60
1.0										-1.40
										1.40
2.0										
3.0										
4.0										

NOTES:

GHD Soil Classifications: The GHD Soil Classification is based on Australian Standards AS 1726-1993. This log is not intended for geotechnical purposes.

Drilling Abbreviations:

RW(x)	Rotary Wash	PSC(x)	Percussion Simultanous Casing
RT(x)	Rotary Triple Tube	AS	Augering - Solid Flight
PC(x)	Percussion Cable Tool	AH	Augering - Hollow Flight
PD(x)	Percussion Down Hole	H	Hand Augering

Where "x" is flushing medium: (W) Water, (M) Mud, (A) Air, (F) Foam.

Moisture Abbreviations:
D Dry
M Moist
W Wet

Consistency:

Granular Soils

(VL) Very Loose	(D) Dense
(L) Loose	(VD) Very Dense
(MD) Medium Dense	

Cohesive Soils

(VS) Very Soft	(ST) Stiff
(S) Soft	(VST) Very Stiff
(F) Firm	(H) Hard

BOREHOLE LOG

ENVIRONMENTAL - SOIL BORE

Bore No.: SE011
Page: 1 of 1

Client: NSW Catchment and Lands - Crown Land
Project: Urunga Antimony RAP
Project No.: 2216251
Location:
Date Drilled: 14/08/2012 to: 14/08/2012

Drill Co: GHD
Driller: BL/BJ
Rig Type: HA
Total Depth (m): 1.1
Diameter (mm): 50

Easting: 500935
Northing: 6625135
Grid Ref: GDA94_MGA_zone_56
Elevation: 0
Logged by: BL/BJ Checked by: BC

DRILLING						LITHOLOGICAL DESCRIPTION				
Depth (m)	Drilling Method	PID (ppm)	Sample ID	Water	Graphic Log	Soil Type (Classification Group Symbol); Particle Size; Colour; Secondary / Minor Components.	Moisture	Consistency	COMMENTS/ CONTAMINANT INDICATORS Odours, staining, waste materials, separate phase liquids, imported fill, ash.	Elevation / Depth (m)
						Ground Surface:				0.00
0.0	HA		SE011_0.0-0.1			CLAY Some Silt, trace Sand,grey	W			0.00
										-0.20
						Organic matter,black				0.20
			SE011_0.3-0.5							
			SE011_0.7-0.9							
1.0										-1.10
										1.10
2.0										
3.0										
4.0										

NOTES:

GHD Soil Classifications: The GHD Soil Classification is based on Australian Standards AS 1726-1993. This log is not intended for geotechnical purposes.

Drilling Abbreviations:

RW(x)	Rotary Wash	PSC(x)	Percussion Simultanous Casing
RT(x)	Rotary Triple Tube	AS	Augering - Solid Flight
PC(x)	Percussion Cable Tool	AH	Augering - Hollow Flight
PD(x)	Percussion Down Hole	H	Hand Augering

Where "x" is flushing medium: (W) Water, (M) Mud, (A) Air, (F) Foam.

Moisture Abbreviations:
D Dry
M Moist
W Wet

Consistency:

Granular Soils		Cohesive Soils	
(VL) Very Loose	(D) Dense	(VS) Very Soft	(ST) Stiff
(L) Loose	(VD) Very Dense	(S) Soft	(VST) Very Stiff
(MD) Medium Dense		(F) Firm	(H) Hard

BOREHOLE LOG

ENVIRONMENTAL - SOIL BORE

Bore No.: SE012
Page: 1 of 1

Client: NSW Catchment and Lands - Crown Land
Project: Urunga Antimony RAP
Project No.: 2216251
Location:
Date Drilled: 14/08/2012 to: 14/08/2012

Drill Co: GHD
Driller: BL/BJ
Rig Type: HA
Total Depth (m): 1.2
Diameter (mm): 50

Easting: 500942
Northing: 6625127
Grid Ref: GDA94_MGA_zone_56
Elevation: 0
Logged by: BL/BJ Checked by: BC

DRILLING										
Depth (m)	Drilling Method	PID (ppm)	Sample ID	Water	Graphic Log	LITHOLOGICAL DESCRIPTION Soil Type (Classification Group Symbol); Particle Size; Colour; Secondary / Minor Components.	Moisture	Consistency	COMMENTS/ CONTAMINANT INDICATORS Odours, staining, waste materials, separate phase liquids, imported fill, ash.	Elevation / Depth (m)
						Ground Surface:				0.00
0.0	HA		SE012_0.0-0.1			silty CLAY Trace Sand,grey	W			0.00 -0.10
						silty CLAY Trace Sand, Organic matter increasing with depth,black	W			0.10
			SE012_0.3-0.5							
1.0			SE012_1.0-1.2							-1.20 1.20
2.0										
3.0										
4.0										

NOTES:

GHD Soil Classifications: The GHD Soil Classification is based on Australian Standards AS 1726-1993. This log is not intended for geotechnical purposes.

Drilling Abbreviations:

RW(x)	Rotary Wash	PSC(x)	Percussion Simultanous Casing
RT(x)	Rotary Triple Tube	AS	Augering - Solid Flight
PC(x)	Percussion Cable Tool	AH	Augering - Hollow Flight
PD(x)	Percussion Down Hole	H	Hand Augering

Where "x" is flushing medium: (W) Water, (M) Mud, (A) Air, (F) Foam.

Moisture Abbreviations:
D Dry
M Moist
W Wet

Consistency:

Granular Soils		**Cohesive Soils**	
(VL) Very Loose	(D) Dense	(VS) Very Soft	(ST) Stiff
(L) Loose	(VD) Very Dense	(S) Soft	(VST) Very Stiff
(MD) Medium Dense		(F) Firm	(H) Hard

BOREHOLE LOG

ENVIRONMENTAL - SOIL BORE

Bore No.: SE013
Page: 1 of 1

Client: NSW Catchment and Lands - Crown Land
Project: Urunga Antimony RAP
Project No.: 2216251
Location:
Date Drilled: 16/08/2012 to: 16/08/2012

Drill Co: GHD
Driller: BL/BJ
Rig Type: HA
Total Depth (m): 0.7
Diameter (mm): 50

Easting: 500949
Northing: 6625120
Grid Ref: GDA94_MGA_zone_56
Elevation: 0
Logged by: BL/BJ Checked by: BC

DRILLING										
Depth (m)	Drilling Method	PID (ppm)	Sample ID	Water	Graphic Log	LITHOLOGICAL DESCRIPTION Soil Type (Classification Group Symbol); Particle Size; Colour; Secondary / Minor Components.	Moisture	Consistency	COMMENTS/ CONTAMINANT INDICATORS Odours, staining, waste materials, separate phase liquids, imported fill, ash.	Elevation / Depth (m)
						Ground Surface:				0.00
0.0	HA		SEDUP04			SILT Some grey clay, Organic matter,black	W		SEDUP04	0.00
										-0.20
						silty CLAY Organic matter,dark brown	W			0.20
			SE013_0.3-0.5							-0.50
			SE013_0.5-0.7			SILT Organic matter,black	W			0.50
										-0.70
										0.70
1.0										
2.0										
3.0										
4.0										

NOTES:

GHD Soil Classifications: The GHD Soil Classification is based on Australian Standards AS 1726-1993. This log is not intended for geotechnical purposes.

Drilling Abbreviations:

RW(x)	Rotary Wash	PSC(x)	Percussion Simultanous Casing
RT(x)	Rotary Triple Tube	AS	Augering - Solid Flight
PC(x)	Percussion Cable Tool	AH	Augering - Hollow Flight
PD(x)	Percussion Down Hole	H	Hand Augering

Where "x" is flushing medium: (W) Water, (M) Mud, (A) Air, (F) Foam.

Moisture Abbreviations:
D Dry
M Moist
W Wet

Consistency:

Granular Soils		**Cohesive Soils**	
(VL) Very Loose	(D) Dense	(VS) Very Soft	(ST) Stiff
(L) Loose	(VD) Very Dense	(S) Soft	(VST) Very Stiff
(MD) Medium Dense		(F) Firm	(H) Hard

BOREHOLE LOG

ENVIRONMENTAL - SOIL BORE

Bore No.: SE014
Page: 1 of 1

Client: NSW Catchment and Lands - Crown Land
Project: Urunga Antimony RAP
Project No.: 2216251
Location:
Date Drilled: 15/08/2012 to: 15/08/2012

Drill Co: GHD
Driller: BL/BJ
Rig Type: HA
Total Depth (m): 0.6
Diameter (mm): 50

Easting: 500972
Northing: 6625090
Grid Ref: GDA94_MGA_zone_56
Elevation: 0
Logged by: BL/BJ Checked by: BC

DRILLING										
Depth (m)	Drilling Method	PID (ppm)	Sample ID	Water	Graphic Log	LITHOLOGICAL DESCRIPTION Soil Type (Classification Group Symbol); Particle Size; Colour; Secondary / Minor Components.	Moisture	Consistency	COMMENTS/ CONTAMINANT INDICATORS Odours, staining, waste materials, separate phase liquids, imported fill, ash.	Elevation / Depth (m)
						Ground Surface:				0.00
0.0	HA		SE014_0.0-0.05			silty CLAY	W			0.00
						grey	W			
						SILT				-0.20
						Organic matter,dark brown	W			0.20
			SE014_0.2-0.4			silty CLAY				
						brown/ grey				-0.40
							W			0.40
			SE014_0.4-0.6			SILT				
						Organic matter,dark brown				-0.60
										0.60
1.0										
2.0										
3.0										
4.0										

NOTES:

GHD Soil Classifications: The GHD Soil Classification is based on Australian Standards AS 1726-1993. This log is not intended for geotechnical purposes.

Drilling Abbreviations:

RW(x)	Rotary Wash	PSC(x)	Percussion Simultanous Casing
RT(x)	Rotary Triple Tube	AS	Augering - Solid Flight
PC(x)	Percussion Cable Tool	AH	Augering - Hollow Flight
PD(x)	Percussion Down Hole	H	Hand Augering

Where "x" is flushing medium: (W) Water, (M) Mud, (A) Air, (F) Foam.

Moisture Abbreviations:
D Dry
M Moist
W Wet

Consistency:

Granular Soils		Cohesive Soils	
(VL) Very Loose	(D) Dense	(VS) Very Soft	(ST) Stiff
(L) Loose	(VD) Very Dense	(S) Soft	(VST) Very Stiff
(MD) Medium Dense		(F) Firm	(H) Hard

BOREHOLE LOG

ENVIRONMENTAL - SOIL BORE

Bore No.: SE020
Page: 1 of 1

Client: NSW Catchment and Lands - Crown Land
Project: Urunga Antimony RAP
Project No.: 2216251
Location:
Date Drilled: 14/08/2012 to: 14/08/2012

Drill Co: GHD
Driller: BL/BJ
Rig Type: HA
Total Depth (m): 0.7
Diameter (mm): 50

Easting: 500974
Northing: 6625148
Grid Ref: GDA94_MGA_zone_56
Elevation: 0
Logged by: BL/BJ Checked by: BC

DRILLING										
Depth (m)	Drilling Method	PID (ppm)	Sample ID	Water	Graphic Log	LITHOLOGICAL DESCRIPTION Soil Type (Classification Group Symbol); Particle Size; Colour; Secondary / Minor Components.	Moisture	Consistency	COMMENTS/ CONTAMINANT INDICATORS Odours, staining, waste materials, separate phase liquids, imported fill, ash.	Elevation / Depth (m)
						Ground Surface:				0.00
0.0	HA		SE020_0.0-0.1			CLAY Trace Sand,grey	W			0.00 -0.10
						silty CLAY Trace Sand, Organic matter,black	W			0.10
			SE020_0.2-0.4							-0.70
										0.70
1.0										
2.0										
3.0										
4.0										

NOTES:

GHD Soil Classifications: The GHD Soil Classification is based on Australian Standards AS 1726-1993. This log is not intended for geotechnical purposes.

Drilling Abbreviations:

RW(x)	Rotary Wash	PSC(x)	Percussion Simultanous Casing
RT(x)	Rotary Triple Tube	AS	Augering - Solid Flight
PC(x)	Percussion Cable Tool	AH	Augering - Hollow Flight
PD(x)	Percussion Down Hole	H	Hand Augering

Where "x" is flushing medium: (W) Water, (M) Mud, (A) Air, (F) Foam.

Moisture Abbreviations:
D Dry
M Moist
W Wet

Consistency:

Granular Soils		Cohesive Soils	
(VL) Very Loose	(D) Dense	(VS) Very Soft	(ST) Stiff
(L) Loose	(VD) Very Dense	(S) Soft	(VST) Very Stiff
(MD) Medium Dense		(F) Firm	(H) Hard

BOREHOLE LOG

ENVIRONMENTAL - SOIL BORE

Bore No.: SE021
Page: 1 of 1

Client: NSW Catchment and Lands - Crown Land
Project: Urunga Antimony RAP
Project No.: 2216251
Location:
Date Drilled: 14/08/2012 to: 14/08/2012

Drill Co: GHD
Driller: BL/BJ
Rig Type: HA
Total Depth (m): 0.7
Diameter (mm): 50

Easting: 500981
Northing: 6625143
Grid Ref: GDA94_MGA_zone_56
Elevation: 0
Logged by: BL/BJ Checked by: BC

DRILLING										
Depth (m)	Drilling Method	PID (ppm)	Sample ID	Water	Graphic Log	LITHOLOGICAL DESCRIPTION Soil Type (Classification Group Symbol); Particle Size; Colour; Secondary / Minor Components.	Moisture	Consistency	COMMENTS/ CONTAMINANT INDICATORS Odours, staining, waste materials, separate phase liquids, imported fill, ash.	Elevation / Depth (m)
						Ground Surface:				0.00
0.0	HA		SE021_0.0-0.1			silty CLAY Some Sand,grey	W			0.00 -0.10
						silty CLAY Organic matter,black	W			0.10
			SE021_0.3-0.5							
										-0.70
										0.70
1.0										
2.0										
3.0										
4.0										

NOTES:

GHD Soil Classifications: The GHD Soil Classification is based on Australian Standards AS 1726-1993. This log is not intended for geotechnical purposes.

Drilling Abbreviations:

RW(x)	Rotary Wash	PSC(x)	Percussion Simultanous Casing
RT(x)	Rotary Triple Tube	AS	Augering - Solid Flight
PC(x)	Percussion Cable Tool	AH	Augering - Hollow Flight
PD(x)	Percussion Down Hole	H	Hand Augering

Where "x" is flushing medium: (W) Water, (M) Mud, (A) Air, (F) Foam.

Moisture Abbreviations:
D Dry
M Moist
W Wet

Consistency:

Granular Soils		**Cohesive Soils**	
(VL) Very Loose	(D) Dense	(VS) Very Soft	(ST) Stiff
(L) Loose	(VD) Very Dense	(S) Soft	(VST) Very Stiff
(MD) Medium Dense		(F) Firm	(H) Hard

BOREHOLE LOG

ENVIRONMENTAL - SOIL BORE

Bore No.: SE022
Page: 1 of 1

Client: NSW Catchment and Lands - Crown Land
Project: Urunga Antimony RAP
Project No.: 2216251
Location:
Date Drilled: 15/08/2012 to: 15/08/2012

Drill Co: GHD
Driller: BL/BJ
Rig Type: HA
Total Depth (m): 0.6
Diameter (mm): 50

Easting: 501015
Northing: 6625119
Grid Ref: GDA94_MGA_zone_56
Elevation: 0
Logged by: BL/BJ Checked by: BC

DRILLING										
Depth (m)	Drilling Method	PID (ppm)	Sample ID	Water	Graphic Log	LITHOLOGICAL DESCRIPTION Soil Type (Classification Group Symbol); Particle Size; Colour; Secondary / Minor Components.	Moisture	Consistency	COMMENTS/ CONTAMINANT INDICATORS Odours, staining, waste materials, separate phase liquids, imported fill, ash.	Elevation / Depth (m)
						Ground Surface:				0.00
0.0	HA		SE022_0.0-0.05			silty CLAY	W			0.00
						grey	W			
						SILT				-0.20
			SE022_0.2-0.4			Organic matter,dark brown	W			0.20
						silty CLAY brown/ grey				-0.40
			SE022_0.4-0.6			SILT Organic matter,dark brown	W			0.40
										-0.60
										0.60
1.0										
2.0										
3.0										
4.0										

NOTES:

GHD Soil Classifications: The GHD Soil Classification is based on Australian Standards AS 1726-1993. This log is not intended for geotechnical purposes.

Drilling Abbreviations:

RW(x)	Rotary Wash	PSC(x)	Percussion Simultanous Casing
RT(x)	Rotary Triple Tube	AS	Augering - Solid Flight
PC(x)	Percussion Cable Tool	AH	Augering - Hollow Flight
PD(x)	Percussion Down Hole	H	Hand Augering

Where "x" is flushing medium: (W) Water, (M) Mud, (A) Air, (F) Foam.

Moisture Abbreviations:
D Dry
M Moist
W Wet

Consistency:

Granular Soils		**Cohesive Soils**	
(VL) Very Loose	(D) Dense	(VS) Very Soft	(ST) Stiff
(L) Loose	(VD) Very Dense	(S) Soft	(VST) Very Stiff
(MD) Medium Dense		(F) Firm	(H) Hard

BOREHOLE LOG

ENVIRONMENTAL - SOIL BORE

Bore No.: SE030
Page: 1 of 1

Client: NSW Catchment and Lands - Crown Land
Project: Urunga Antimony RAP
Project No.: 2216251
Location:
Date Drilled: 14/08/2012 to: 14/08/2012

Drill Co: GHD
Driller: BL/BJ
Rig Type: HA
Total Depth (m): 0.5
Diameter (mm): 50

Easting: 500980
Northing: 6625193
Grid Ref: GDA94_MGA_zone_56
Elevation: 0
Logged by: BL/BJ Checked by: BC

DRILLING										
Depth (m)	Drilling Method	PID (ppm)	Sample ID	Water	Graphic Log	LITHOLOGICAL DESCRIPTION Soil Type (Classification Group Symbol); Particle Size; Colour; Secondary / Minor Components.	Moisture	Consistency	COMMENTS/ CONTAMINANT INDICATORS Odours, staining, waste materials, separate phase liquids, imported fill, ash.	Elevation / Depth (m)
						Ground Surface:				0.00
0.0	HA		SE030_0.0-0.1			clayey SILT brown	W			0.00
										-0.20
						silty CLAY grey	W			0.20
			SE030_0.3-0.5							-0.50
										0.50
1.0										
2.0										
3.0										
4.0										

NOTES:

GHD Soil Classifications: The GHD Soil Classification is based on Australian Standards AS 1726-1993. This log is not intended for geotechnical purposes.

Drilling Abbreviations:

RW(x)	Rotary Wash	PSC(x)	Percussion Simultanous Casing
RT(x)	Rotary Triple Tube	AS	Augering - Solid Flight
PC(x)	Percussion Cable Tool	AH	Augering - Hollow Flight
PD(x)	Percussion Down Hole	H	Hand Augering

Where "x" is flushing medium: (W) Water, (M) Mud, (A) Air, (F) Foam.

Moisture Abbreviations:
D Dry
M Moist
W Wet

Consistency:

Granular Soils		**Cohesive Soils**	
(VL) Very Loose	(D) Dense	(VS) Very Soft	(ST) Stiff
(L) Loose	(VD) Very Dense	(S) Soft	(VST) Very Stiff
(MD) Medium Dense		(F) Firm	(H) Hard

BOREHOLE LOG

ENVIRONMENTAL - SOIL BORE

Bore No.: SE031
Page: 1 of 1

Client: NSW Catchment and Lands - Crown Land
Project: Urunga Antimony RAP
Project No.: 2216251
Location:
Date Drilled: 14/08/2012 to: 14/08/2012

Drill Co: GHD
Driller: BL/BJ
Rig Type: HA
Total Depth (m): 0.7
Diameter (mm): 50

Easting: 500989
Northing: 6625182
Grid Ref: GDA94_MGA_zone_56
Elevation: 0
Logged by: BL/BJ Checked by: BC

DRILLING										
Depth (m)	Drilling Method	PID (ppm)	Sample ID	Water	Graphic Log	LITHOLOGICAL DESCRIPTION Soil Type (Classification Group Symbol); Particle Size; Colour; Secondary / Minor Components.	Moisture	Consistency	COMMENTS/ CONTAMINANT INDICATORS Odours, staining, waste materials, separate phase liquids, imported fill, ash.	Elevation / Depth (m)
						Ground Surface:				0.00
0.0	HA		SE031_0.0-0.1			CLAY Trace Sand,grey	W			0.00
										-0.20
			SE031_0.2-0.4			silty CLAY Some Sand, Organic matter,black	W			0.20
			SE031_0.5-0.7							-0.70
										0.70
1.0										
2.0										
3.0										
4.0										

NOTES:

GHD Soil Classifications: The GHD Soil Classification is based on Australian Standards AS 1726-1993. This log is not intended for geotechnical purposes.

Drilling Abbreviations:

RW(x)	Rotary Wash	PSC(x)	Percussion Simultanous Casing
RT(x)	Rotary Triple Tube	AS	Augering - Solid Flight
PC(x)	Percussion Cable Tool	AH	Augering - Hollow Flight
PD(x)	Percussion Down Hole	H	Hand Augering

Where "x" is flushing medium: (W) Water, (M) Mud, (A) Air, (F) Foam.

Moisture Abbreviations:
D Dry
M Moist
W Wet

Consistency:

Granular Soils		**Cohesive Soils**	
(VL) Very Loose	(D) Dense	(VS) Very Soft	(ST) Stiff
(L) Loose	(VD) Very Dense	(S) Soft	(VST) Very Stiff
(MD) Medium Dense		(F) Firm	(H) Hard

BOREHOLE LOG

ENVIRONMENTAL - SOIL BORE

Bore No.: SE032
Page: 1 of 1

Client: NSW Catchment and Lands - Crown Land
Project: Urunga Antimony RAP
Project No.: 2216251
Location:
Date Drilled: 14/08/2012 to: 14/08/2012

Drill Co: GHD
Driller: BL/BJ
Rig Type: HA
Total Depth (m): 0.7
Diameter (mm): 50

Easting: 500999
Northing: 6625175
Grid Ref: GDA94_MGA_zone_56
Elevation: 0
Logged by: BL/BJ Checked by: BC

DRILLING										
Depth (m)	Drilling Method	PID (ppm)	Sample ID	Water	Graphic Log	LITHOLOGICAL DESCRIPTION Soil Type (Classification Group Symbol); Particle Size; Colour; Secondary / Minor Components.	Moisture	Consistency	COMMENTS/ CONTAMINANT INDICATORS Odours, staining, waste materials, separate phase liquids, imported fill, ash.	Elevation / Depth (m)
						Ground Surface:				0.00
0.0	HA		SE032_0.0-0.1			silty CLAY Some Sand,grey	W			0.00 -0.10
			SE032_0.1-0.3			clayey SILT Some Sand, Organic matter,black	W		SEDUP01	0.10
										-0.70
										0.70
1.0										
2.0										
3.0										
4.0										

NOTES:

GHD Soil Classifications: The GHD Soil Classification is based on Australian Standards AS 1726-1993. This log is not intended for geotechnical purposes.

Drilling Abbreviations:

RW(x)	Rotary Wash	PSC(x)	Percussion Simultanous Casing
RT(x)	Rotary Triple Tube	AS	Augering - Solid Flight
PC(x)	Percussion Cable Tool	AH	Augering - Hollow Flight
PD(x)	Percussion Down Hole	H	Hand Augering

Where "x" is flushing medium: (W) Water, (M) Mud, (A) Air, (F) Foam.

Moisture Abbreviations:
D Dry
M Moist
W Wet

Consistency:

Granular Soils		Cohesive Soils	
(VL) Very Loose	(D) Dense	(VS) Very Soft	(ST) Stiff
(L) Loose	(VD) Very Dense	(S) Soft	(VST) Very Stiff
(MD) Medium Dense		(F) Firm	(H) Hard

BOREHOLE LOG

ENVIRONMENTAL - SOIL BORE

Bore No.: SE033
Page: 1 of 1

Client: NSW Catchment and Lands - Crown Land
Project: Urunga Antimony RAP
Project No.: 2216251
Location:
Date Drilled: 15/08/2012 to: 15/08/2012

Drill Co: GHD
Driller: BL/BJ
Rig Type: HA
Total Depth (m): 0.6
Diameter (mm): 50

Easting: 501021
Northing: 6625185
Grid Ref: GDA94_MGA_zone_56
Elevation: 0
Logged by: BL/BJ Checked by: BC

DRILLING										
Depth (m)	Drilling Method	PID (ppm)	Sample ID	Water	Graphic Log	LITHOLOGICAL DESCRIPTION Soil Type (Classification Group Symbol); Particle Size; Colour; Secondary / Minor Components.	Moisture	Consistency	COMMENTS/ CONTAMINANT INDICATORS Odours, staining, waste materials, separate phase liquids, imported fill, ash.	Elevation / Depth (m)
						Ground Surface:				0.00
0.0	HA		SE033_0.0-0.05			silty CLAY	W			0.00
						grey	W			
						SILT				-0.20
			SE033_0.2-0.4			Organic matter,dark brown	W			0.20
						silty CLAY brown/ grey				-0.40
			SE033_0.4-0.6			SILT Organic matter,dark brown	W			0.40
										-0.60
										0.60
1.0										
2.0										
3.0										
4.0										

NOTES:

GHD Soil Classifications: The GHD Soil Classification is based on Australian Standards AS 1726-1993. This log is not intended for geotechnical purposes.

Drilling Abbreviations:

RW(x)	Rotary Wash	PSC(x)	Percussion Simultanous Casing
RT(x)	Rotary Triple Tube	AS	Augering - Solid Flight
PC(x)	Percussion Cable Tool	AH	Augering - Hollow Flight
PD(x)	Percussion Down Hole	H	Hand Augering

Where "x" is flushing medium: (W) Water, (M) Mud, (A) Air, (F) Foam.

Moisture Abbreviations:
D Dry
M Moist
W Wet

Consistency:

Granular Soils		**Cohesive Soils**	
(VL) Very Loose	(D) Dense	(VS) Very Soft	(ST) Stiff
(L) Loose	(VD) Very Dense	(S) Soft	(VST) Very Stiff
(MD) Medium Dense		(F) Firm	(H) Hard

BOREHOLE LOG

ENVIRONMENTAL - SOIL BORE

Bore No.: SE040
Page: 1 of 1

Client: NSW Catchment and Lands - Crown Land
Project: Urunga Antimony RAP
Project No.: 2216251
Location:
Date Drilled: 14/08/2012 to: 14/08/2012

Drill Co: GHD
Driller: BL/BJ
Rig Type: HA
Total Depth (m): 0.5
Diameter (mm): 50

Easting: 501038
Northing: 6625212
Grid Ref: GDA94_MGA_zone_56
Elevation: 0
Logged by: BL/BJ Checked by: BC

DRILLING										
Depth (m)	Drilling Method	PID (ppm)	Sample ID	Water	Graphic Log	LITHOLOGICAL DESCRIPTION Soil Type (Classification Group Symbol); Particle Size; Colour; Secondary / Minor Components.	Moisture	Consistency	COMMENTS/ CONTAMINANT INDICATORS Odours, staining, waste materials, separate phase liquids, imported fill, ash.	Elevation / Depth (m)
						Ground Surface:				0.00
0.0	HA					SILT Organic matter,dark brown	W			0.00 -0.20
			SE040_0.3-0.5			CLAY Trace Sand,grey	W			0.20 -0.50
										0.50
1.0										
2.0										
3.0										
4.0										

NOTES:

GHD Soil Classifications: The GHD Soil Classification is based on Australian Standards AS 1726-1993. This log is not intended for geotechnical purposes.

Drilling Abbreviations:

RW(x)	Rotary Wash	PSC(x)	Percussion Simultanous Casing
RT(x)	Rotary Triple Tube	AS	Augering - Solid Flight
PC(x)	Percussion Cable Tool	AH	Augering - Hollow Flight
PD(x)	Percussion Down Hole	H	Hand Augering

Where "x" is flushing medium: (W) Water, (M) Mud, (A) Air, (F) Foam.

Moisture Abbreviations:
D Dry
M Moist
W Wet

Consistency:

Granular Soils		**Cohesive Soils**	
(VL) Very Loose	(D) Dense	(VS) Very Soft	(ST) Stiff
(L) Loose	(VD) Very Dense	(S) Soft	(VST) Very Stiff
(MD) Medium Dense		(F) Firm	(H) Hard

BOREHOLE LOG

ENVIRONMENTAL - SOIL BORE

Bore No.: SE041
Page: 1 of 1

Client: NSW Catchment and Lands - Crown Land
Project: Urunga Antimony RAP
Project No.: 2216251
Location:
Date Drilled: 14/08/2012 to: 14/08/2012

Drill Co: GHD
Driller: BL/BJ
Rig Type: HA
Total Depth (m): 0.7
Diameter (mm): 50

Easting: 501041
Northing: 6625205
Grid Ref: GDA94_MGA_zone_56
Elevation: 0
Logged by: BL/BJ Checked by: BC

DRILLING										
Depth (m)	Drilling Method	PID (ppm)	Sample ID	Water	Graphic Log	LITHOLOGICAL DESCRIPTION Soil Type (Classification Group Symbol); Particle Size; Colour; Secondary / Minor Components.	Moisture	Consistency	COMMENTS/ CONTAMINANT INDICATORS Odours, staining, waste materials, separate phase liquids, imported fill, ash.	Elevation / Depth (m)
						Ground Surface:				0.00
0.0	HA		SE041_0.0-0.05			CLAY	W			0.00
						Some Sand,grey	W			
			SE041_0.1-0.3			silty CLAY Organic matter,black				
										-0.40
						clayey SILT Organic matter,black	W			0.40
			SE041_0.5-0.7							-0.70
										0.70
1.0										
2.0										
3.0										
4.0										

NOTES:

GHD Soil Classifications: The GHD Soil Classification is based on Australian Standards AS 1726-1993. This log is not intended for geotechnical purposes.

Drilling Abbreviations:

RW(x)	Rotary Wash	PSC(x)	Percussion Simultanous Casing
RT(x)	Rotary Triple Tube	AS	Augering - Solid Flight
PC(x)	Percussion Cable Tool	AH	Augering - Hollow Flight
PD(x)	Percussion Down Hole	H	Hand Augering

Where "x" is flushing medium: (W) Water, (M) Mud, (A) Air, (F) Foam.

Moisture Abbreviations:
D Dry
M Moist
W Wet

Consistency:

Granular Soils		**Cohesive Soils**	
(VL) Very Loose	(D) Dense	(VS) Very Soft	(ST) Stiff
(L) Loose	(VD) Very Dense	(S) Soft	(VST) Very Stiff
(MD) Medium Dense		(F) Firm	(H) Hard

BOREHOLE LOG

ENVIRONMENTAL - SOIL BORE

Bore No.: SE042
Page: 1 of 1

Client: NSW Catchment and Lands - Crown Land
Project: Urunga Antimony RAP
Project No.: 2216251
Location:
Date Drilled: 14/08/2012 to: 14/08/2012

Drill Co: GHD
Driller: BL/BJ
Rig Type: HA
Total Depth (m): 0.7
Diameter (mm): 50

Easting: 501046
Northing: 6625195
Grid Ref: GDA94_MGA_zone_56
Elevation: 0
Logged by: BL/BJ Checked by: BC

DRILLING										
Depth (m)	Drilling Method	PID (ppm)	Sample ID	Water	Graphic Log	LITHOLOGICAL DESCRIPTION Soil Type (Classification Group Symbol); Particle Size; Colour; Secondary / Minor Components.	Moisture	Consistency	COMMENTS/ CONTAMINANT INDICATORS Odours, staining, waste materials, separate phase liquids, imported fill, ash.	Elevation / Depth (m)
						Ground Surface:				0.00
0.0	HA		SE042_0.0-0.1			silty CLAY grey	W			0.00 -0.10
						clayey SILT Organic matter,dark brown	W			0.10
			SE042_0.2-0.4							
										-0.70
										0.70
1.0										
2.0										
3.0										
4.0										

NOTES:

GHD Soil Classifications: The GHD Soil Classification is based on Australian Standards AS 1726-1993. This log is not intended for geotechnical purposes.

Drilling Abbreviations:

RW(x)	Rotary Wash	PSC(x)	Percussion Simultanous Casing
RT(x)	Rotary Triple Tube	AS	Augering - Solid Flight
PC(x)	Percussion Cable Tool	AH	Augering - Hollow Flight
PD(x)	Percussion Down Hole	H	Hand Augering

Where "x" is flushing medium: (W) Water, (M) Mud, (A) Air, (F) Foam.

Moisture Abbreviations:
D Dry
M Moist
W Wet

Consistency:

Granular Soils		Cohesive Soils	
(VL) Very Loose	(D) Dense	(VS) Very Soft	(ST) Stiff
(L) Loose	(VD) Very Dense	(S) Soft	(VST) Very Stiff
(MD) Medium Dense		(F) Firm	(H) Hard

BOREHOLE LOG

ENVIRONMENTAL - SOIL BORE

Bore No.: SE043
Page: 1 of 1

Client: NSW Catchment and Lands - Crown Land
Project: Urunga Antimony RAP
Project No.: 2216251
Location:
Date Drilled: 14/08/2012 to: 14/08/2012

Drill Co: GHD
Driller: BL/BJ
Rig Type: HA
Total Depth (m): 0.5
Diameter (mm): 50

Easting: 501077
Northing: 6625201
Grid Ref: GDA94_MGA_zone_56
Elevation: 0
Logged by: BL/BJ Checked by: BC

DRILLING										
Depth (m)	Drilling Method	PID (ppm)	Sample ID	Water	Graphic Log	LITHOLOGICAL DESCRIPTION Soil Type (Classification Group Symbol); Particle Size; Colour; Secondary / Minor Components.	Moisture	Consistency	COMMENTS/ CONTAMINANT INDICATORS Odours, staining, waste materials, separate phase liquids, imported fill, ash.	Elevation / Depth (m)
						Ground Surface:				0.00
0.0	HA		SE043_0.0-0.1			SILT Organic,dark brown	W			0.00 -0.10
			SE043_0.1-0.3			sandy CLAY trace Silt,brown/ grey	W			0.10 -0.30
			SE043_0.3-0.5			SILT Organic,dark brown	W			0.30 -0.50
1.0										0.50
2.0										
3.0										
4.0										

NOTES:

GHD Soil Classifications: The GHD Soil Classification is based on Australian Standards AS 1726-1993. This log is not intended for geotechnical purposes.

Drilling Abbreviations:

RW(x)	Rotary Wash	PSC(x)	Percussion Simultanous Casing
RT(x)	Rotary Triple Tube	AS	Augering - Solid Flight
PC(x)	Percussion Cable Tool	AH	Augering - Hollow Flight
PD(x)	Percussion Down Hole	H	Hand Augering

Where "x" is flushing medium: (W) Water, (M) Mud, (A) Air, (F) Foam.

Moisture Abbreviations:
D Dry
M Moist
W Wet

Consistency:

Granular Soils		**Cohesive Soils**	
(VL) Very Loose	(D) Dense	(VS) Very Soft	(ST) Stiff
(L) Loose	(VD) Very Dense	(S) Soft	(VST) Very Stiff
(MD) Medium Dense		(F) Firm	(H) Hard

BOREHOLE LOG

ENVIRONMENTAL - SOIL BORE

Bore No.: SE050

Client: NSW Catchment and Lands - Crown Land
Project: Urunga Antimony RAP
Project No.: 2216251
Location:
Date Drilled: 15/08/2012 to: 15/08/2012

Drill Co: GHD
Driller: BL/BJ
Rig Type: HA
Total Depth (m): 0.6
Diameter (mm): 50

Easting: 500971
Northing: 6625229
Grid Ref: GDA94_MGA_zone_56
Elevation: 0
Logged by: BL/BJ Checked by: BC

DRILLING										
Depth (m)	Drilling Method	PID (ppm)	Sample ID	Water	Graphic Log	LITHOLOGICAL DESCRIPTION Soil Type (Classification Group Symbol); Particle Size; Colour; Secondary / Minor Components.	Moisture	Consistency	COMMENTS/ CONTAMINANT INDICATORS Odours, staining, waste materials, separate phase liquids, imported fill, ash.	Elevation / Depth (m)
						Ground Surface:				0.00
0.0	HA		SE050_0.0-0.1			GRAVEL Some Sand,light brown	W		SEDUP03/ SELABDUP01	0.00
										-0.20
			SE050_0.2-0.4			silty CLAY grey	W			0.20
										-0.40
			SE050_0.4-0.6			SILT Organic matter,dark brown	W			0.40
										-0.60
										0.60
1.0										
2.0										
3.0										
4.0										

NOTES:

GHD Soil Classifications: The GHD Soil Classification is based on Australian Standards AS 1726-1993. This log is not intended for geotechnical purposes.

Drilling Abbreviations:

RW(x)	Rotary Wash	PSC(x)	Percussion Simultanous Casing
RT(x)	Rotary Triple Tube	AS	Augering - Solid Flight
PC(x)	Percussion Cable Tool	AH	Augering - Hollow Flight
PD(x)	Percussion Down Hole	H	Hand Augering

Where "x" is flushing medium: (W) Water, (M) Mud, (A) Air, (F) Foam.

Moisture Abbreviations:
D Dry
M Moist
W Wet

Consistency:

Granular Soils		Cohesive Soils	
(VL) Very Loose	(D) Dense	(VS) Very Soft	(ST) Stiff
(L) Loose	(VD) Very Dense	(S) Soft	(VST) Very Stiff
(MD) Medium Dense		(F) Firm	(H) Hard

BOREHOLE LOG

ENVIRONMENTAL - SOIL BORE

Bore No.: SE051
Page: 1 of 1

Client: NSW Catchment and Lands - Crown Land
Project: Urunga Antimony RAP
Project No.: 2216251
Location:
Date Drilled: 14/08/2012 to: 14/08/2012

Drill Co: GHD
Driller: BL/BJ
Rig Type: HA
Total Depth (m): 0.5
Diameter (mm): 50

Easting: 500991
Northing: 6625234
Grid Ref: GDA94_MGA_zone_56
Elevation: 0
Logged by: BL/BJ Checked by: BC

DRILLING										
Depth (m)	Drilling Method	PID (ppm)	Sample ID	Water	Graphic Log	LITHOLOGICAL DESCRIPTION Soil Type (Classification Group Symbol); Particle Size; Colour; Secondary / Minor Components.	Moisture	Consistency	COMMENTS/ CONTAMINANT INDICATORS Odours, staining, waste materials, separate phase liquids, imported fill, ash.	Elevation / Depth (m)
						Ground Surface:				0.00
0.0	HA		SE051_0.0-0.1			silty CLAY Trace Sand,grey	W			0.00
										-0.20
						silty CLAY Some Sand, Organic matter,dark brown	W			0.20
			SE051_0.3-0.5							-0.50
										0.50
1.0										
2.0										
3.0										
4.0										

NOTES:

GHD Soil Classifications: The GHD Soil Classification is based on Australian Standards AS 1726-1993. This log is not intended for geotechnical purposes.

Drilling Abbreviations:

RW(x)	Rotary Wash	PSC(x)	Percussion Simultanous Casing
RT(x)	Rotary Triple Tube	AS	Augering - Solid Flight
PC(x)	Percussion Cable Tool	AH	Augering - Hollow Flight
PD(x)	Percussion Down Hole	H	Hand Augering

Where "x" is flushing medium: (W) Water, (M) Mud, (A) Air, (F) Foam.

Moisture Abbreviations:
D Dry
M Moist
W Wet

Consistency:

Granular Soils		**Cohesive Soils**	
(VL) Very Loose	(D) Dense	(VS) Very Soft	(ST) Stiff
(L) Loose	(VD) Very Dense	(S) Soft	(VST) Very Stiff
(MD) Medium Dense		(F) Firm	(H) Hard

BOREHOLE LOG

ENVIRONMENTAL - SOIL BORE

Bore No.: SE052
Page: 1 of 1

Client: NSW Catchment and Lands - Crown Land
Project: Urunga Antimony RAP
Project No.: 2216251
Location:
Date Drilled: 14/08/2012 to: 14/08/2012

Drill Co: GHD
Driller: BL/BJ
Rig Type: HA
Total Depth (m): 0.3
Diameter (mm): 50

Easting: 501003
Northing: 6625245
Grid Ref: GDA94_MGA_zone_56
Elevation: 0
Logged by: BL/BJ Checked by: BC

DRILLING										
Depth (m)	Drilling Method	PID (ppm)	Sample ID	Water	Graphic Log	LITHOLOGICAL DESCRIPTION Soil Type (Classification Group Symbol); Particle Size; Colour; Secondary / Minor Components.	Moisture	Consistency	COMMENTS/ CONTAMINANT INDICATORS Odours, staining, waste materials, separate phase liquids, imported fill, ash.	Elevation / Depth (m)
						Ground Surface:				0.00
0.0	HA		SE052_0.0-0.1			silty SAND grey	W			0.00
										-0.30
										0.30
1.0										
2.0										
3.0										
4.0										

NOTES:

GHD Soil Classifications: The GHD Soil Classification is based on Australian Standards AS 1726-1993. This log is not intended for geotechnical purposes.

Drilling Abbreviations:

RW(x)	Rotary Wash	PSC(x)	Percussion Simultanous Casing
RT(x)	Rotary Triple Tube	AS	Augering - Solid Flight
PC(x)	Percussion Cable Tool	AH	Augering - Hollow Flight
PD(x)	Percussion Down Hole	H	Hand Augering

Where "x" is flushing medium: (W) Water, (M) Mud, (A) Air, (F) Foam.

Moisture Abbreviations:
D Dry
M Moist
W Wet

Consistency:

Granular Soils		**Cohesive Soils**	
(VL) Very Loose	(D) Dense	(VS) Very Soft	(ST) Stiff
(L) Loose	(VD) Very Dense	(S) Soft	(VST) Very Stiff
(MD) Medium Dense		(F) Firm	(H) Hard

BOREHOLE LOG

ENVIRONMENTAL - SOIL BORE

Bore No.: SE053
Page: 1 of 1

Client: NSW Catchment and Lands - Crown Land
Project: Urunga Antimony RAP
Project No.: 2216251
Location:
Date Drilled: 15/08/2012 to: 15/08/2012

Drill Co: GHD
Driller: BL/BJ
Rig Type: HA
Total Depth (m): 0.1
Diameter (mm): 50

Easting: 501017
Northing: 6625253
Grid Ref: GDA94_MGA_zone_56
Elevation: 0
Logged by: BL/BJ Checked by: BC

DRILLING										
Depth (m)	Drilling Method	PID (ppm)	Sample ID	Water	Graphic Log	LITHOLOGICAL DESCRIPTION Soil Type (Classification Group Symbol); Particle Size; Colour; Secondary / Minor Components.	Moisture	Consistency	COMMENTS/ CONTAMINANT INDICATORS Odours, staining, waste materials, separate phase liquids, imported fill, ash.	Elevation / Depth (m)
						Ground Surface:				0.00
0.0	HA		SE053_0.0-0.1			sandy CLAY grey	W			0.00 -0.10
										0.10
1.0										
2.0										
3.0										
4.0										

NOTES:

GHD Soil Classifications: The GHD Soil Classification is based on Australian Standards AS 1726-1993. This log is not intended for geotechnical purposes.

Drilling Abbreviations:

RW(x)	Rotary Wash	PSC(x)	Percussion Simultanous Casing
RT(x)	Rotary Triple Tube	AS	Augering - Solid Flight
PC(x)	Percussion Cable Tool	AH	Augering - Hollow Flight
PD(x)	Percussion Down Hole	H	Hand Augering

Where "x" is flushing medium: (W) Water, (M) Mud, (A) Air, (F) Foam.

Moisture Abbreviations:
D Dry
M Moist
W Wet

Consistency:

Granular Soils		**Cohesive Soils**	
(VL) Very Loose	(D) Dense	(VS) Very Soft	(ST) Stiff
(L) Loose	(VD) Very Dense	(S) Soft	(VST) Very Stiff
(MD) Medium Dense		(F) Firm	(H) Hard

BOREHOLE LOG

ENVIRONMENTAL - SOIL BORE

Bore No.: SE054
Page: 1 of 1

Client: NSW Catchment and Lands - Crown Land
Project: Urunga Antimony RAP
Project No.: 2216251
Location:
Date Drilled: 15/08/2012 to: 15/08/2012

Drill Co: GHD
Driller: BL/BJ
Rig Type: HA
Total Depth (m): 0.6
Diameter (mm): 50

Easting: 501057
Northing: 6625252
Grid Ref: GDA94_MGA_zone_56
Elevation: 0
Logged by: BL/BJ Checked by: BC

DRILLING										
Depth (m)	Drilling Method	PID (ppm)	Sample ID	Water	Graphic Log	LITHOLOGICAL DESCRIPTION Soil Type (Classification Group Symbol); Particle Size; Colour; Secondary / Minor Components.	Moisture	Consistency	COMMENTS/ CONTAMINANT INDICATORS Odours, staining, waste materials, separate phase liquids, imported fill, ash.	Elevation / Depth (m)
						Ground Surface:				0.00
0.0	HA		SE054_0.0-0.1			silty CLAY grey	W		SEDUP02	0.00 -0.10
			SE054_0.1-0.3			sandy SILT brown	W			0.10 -0.30
						Organic matter	W			0.30
			SE054_0.4-0.6							-0.60
										0.60
1.0										
2.0										
3.0										
4.0										

NOTES:

GHD Soil Classifications: The GHD Soil Classification is based on Australian Standards AS 1726-1993. This log is not intended for geotechnical purposes.

Drilling Abbreviations:

RW(x)	Rotary Wash	PSC(x)	Percussion Simultanous Casing
RT(x)	Rotary Triple Tube	AS	Augering - Solid Flight
PC(x)	Percussion Cable Tool	AH	Augering - Hollow Flight
PD(x)	Percussion Down Hole	H	Hand Augering

Where "x" is flushing medium: (W) Water, (M) Mud, (A) Air, (F) Foam.

Moisture Abbreviations:
D Dry
M Moist
W Wet

Consistency:

Granular Soils		**Cohesive Soils**	
(VL) Very Loose	(D) Dense	(VS) Very Soft	(ST) Stiff
(L) Loose	(VD) Very Dense	(S) Soft	(VST) Very Stiff
(MD) Medium Dense		(F) Firm	(H) Hard

BOREHOLE LOG

ENVIRONMENTAL - SOIL BORE

Bore No.: SE055
Page: 1 of 1

Client: NSW Catchment and Lands - Crown Land
Project: Urunga Antimony RAP
Project No.: 2216251
Location:
Date Drilled: 15/08/2012 to: 15/08/2012

Drill Co: GHD
Driller: BL/BJ
Rig Type: HA
Total Depth (m): 0.1
Diameter (mm): 50

Easting: 501049
Northing: 6625272
Grid Ref: GDA94_MGA_zone_56
Elevation: 0
Logged by: BL/BJ Checked by: BC

DRILLING										
Depth (m)	Drilling Method	PID (ppm)	Sample ID	Water	Graphic Log	LITHOLOGICAL DESCRIPTION Soil Type (Classification Group Symbol); Particle Size; Colour; Secondary / Minor Components.	Moisture	Consistency	COMMENTS/ CONTAMINANT INDICATORS Odours, staining, waste materials, separate phase liquids, imported fill, ash.	Elevation / Depth (m)
						Ground Surface:				0.00
0.0	HA		SE055_0.0-0.1			silty SAND grey	W			0.00 -0.10
										0.10
1.0										
2.0										
3.0										
4.0										

NOTES:

GHD Soil Classifications: The GHD Soil Classification is based on Australian Standards AS 1726-1993. This log is not intended for geotechnical purposes.

Drilling Abbreviations:

RW(x)	Rotary Wash	PSC(x)	Percussion Simultanous Casing
RT(x)	Rotary Triple Tube	AS	Augering - Solid Flight
PC(x)	Percussion Cable Tool	AH	Augering - Hollow Flight
PD(x)	Percussion Down Hole	H	Hand Augering

Where "x" is flushing medium: (W) Water, (M) Mud, (A) Air, (F) Foam.

Moisture Abbreviations:
D Dry
M Moist
W Wet

Consistency:

Granular Soils		**Cohesive Soils**	
(VL) Very Loose	(D) Dense	(VS) Very Soft	(ST) Stiff
(L) Loose	(VD) Very Dense	(S) Soft	(VST) Very Stiff
(MD) Medium Dense		(F) Firm	(H) Hard

BOREHOLE LOG

ENVIRONMENTAL - SOIL BORE

Bore No.: SE056
Page: 1 of 1

Client: NSW Catchment and Lands - Crown Land
Project: Urunga Antimony RAP
Project No.: 2216251
Location:
Date Drilled: 15/08/2012 to: 15/08/2012

Drill Co: GHD
Driller: BL/BJ
Rig Type: HA
Total Depth (m): 0.4
Diameter (mm): 50

Easting: 501039
Northing: 6625294
Grid Ref: GDA94_MGA_zone_56
Elevation: 0
Logged by: BL/BJ Checked by: BC

DRILLING										
Depth (m)	Drilling Method	PID (ppm)	Sample ID	Water	Graphic Log	LITHOLOGICAL DESCRIPTION Soil Type (Classification Group Symbol); Particle Size; Colour; Secondary / Minor Components.	Moisture	Consistency	COMMENTS/ CONTAMINANT INDICATORS Odours, staining, waste materials, separate phase liquids, imported fill, ash.	Elevation / Depth (m)
						Ground Surface:				0.00
0.0	HA		SE056_0.0-0.05			SILT	W			0.00
			SE056_0.05-0.15			Organic matter	W			-0.15
						silty SAND	W			0.15
			SE056_0.2-0.4			grey silty CLAY Some Sand,grey				-0.40
										0.40
1.0										
2.0										
3.0										
4.0										

NOTES:

GHD Soil Classifications: The GHD Soil Classification is based on Australian Standards AS 1726-1993. This log is not intended for geotechnical purposes.

Drilling Abbreviations:

RW(x)	Rotary Wash	PSC(x)	Percussion Simultanous Casing
RT(x)	Rotary Triple Tube	AS	Augering - Solid Flight
PC(x)	Percussion Cable Tool	AH	Augering - Hollow Flight
PD(x)	Percussion Down Hole	H	Hand Augering

Where "x" is flushing medium: (W) Water, (M) Mud, (A) Air, (F) Foam.

Moisture Abbreviations:
D Dry
M Moist
W Wet

Consistency:

Granular Soils		**Cohesive Soils**	
(VL) Very Loose	(D) Dense	(VS) Very Soft	(ST) Stiff
(L) Loose	(VD) Very Dense	(S) Soft	(VST) Very Stiff
(MD) Medium Dense		(F) Firm	(H) Hard

BOREHOLE LOG

ENVIRONMENTAL - SOIL BORE

Bore No.: SE057
Page: 1 of 1

Client: NSW Catchment and Lands - Crown Land
Project: Urunga Antimony RAP
Project No.: 2216251
Location:
Date Drilled: 15/08/2012 to: 15/08/2012

Drill Co: GHD
Driller: BL/BJ
Rig Type: HA
Total Depth (m): 0.5
Diameter (mm): 50

Easting: 501065
Northing: 6625302
Grid Ref: GDA94_MGA_zone_56
Elevation: 0
Logged by: BL/BJ Checked by: BC

DRILLING										
Depth (m)	Drilling Method	PID (ppm)	Sample ID	Water	Graphic Log	LITHOLOGICAL DESCRIPTION Soil Type (Classification Group Symbol); Particle Size; Colour; Secondary / Minor Components.	Moisture	Consistency	COMMENTS/ CONTAMINANT INDICATORS Odours, staining, waste materials, separate phase liquids, imported fill, ash.	Elevation / Depth (m)
						Ground Surface:				0.00
0.0	HA		SE057_0.0-0.1			CLAY Organic matter,black	W			0.00
										-0.20
			SE057_0.2-0.4			CLAY Trace Sand,brown/ grey	W			0.20
										-0.50
										0.50
1.0										
2.0										
3.0										
4.0										

NOTES:

GHD Soil Classifications: The GHD Soil Classification is based on Australian Standards AS 1726-1993. This log is not intended for geotechnical purposes.

Drilling Abbreviations:

RW(x)	Rotary Wash	PSC(x)	Percussion Simultanous Casing
RT(x)	Rotary Triple Tube	AS	Augering - Solid Flight
PC(x)	Percussion Cable Tool	AH	Augering - Hollow Flight
PD(x)	Percussion Down Hole	H	Hand Augering

Where "x" is flushing medium: (W) Water, (M) Mud, (A) Air, (F) Foam.

Moisture Abbreviations:
D Dry
M Moist
W Wet

Consistency:

Granular Soils		**Cohesive Soils**	
(VL) Very Loose	(D) Dense	(VS) Very Soft	(ST) Stiff
(L) Loose	(VD) Very Dense	(S) Soft	(VST) Very Stiff
(MD) Medium Dense		(F) Firm	(H) Hard

BOREHOLE LOG

ENVIRONMENTAL - SOIL BORE

Bore No.: SE060
Page: 1 of 1

Client: NSW Catchment and Lands - Crown Land
Project: Urunga Antimony RAP
Project No.: 2216251
Location:
Date Drilled: 15/08/2012 to: 15/08/2012

Drill Co: GHD
Driller: BL/BJ
Rig Type: HA
Total Depth (m): 0.7
Diameter (mm): 50

Easting: 501103
Northing: 6625215
Grid Ref: GDA94_MGA_zone_56
Elevation: 0
Logged by: BL/BJ Checked by: BC

DRILLING										
Depth (m)	Drilling Method	PID (ppm)	Sample ID	Water	Graphic Log	LITHOLOGICAL DESCRIPTION Soil Type (Classification Group Symbol); Particle Size; Colour; Secondary / Minor Components.	Moisture	Consistency	COMMENTS/ CONTAMINANT INDICATORS Odours, staining, waste materials, separate phase liquids, imported fill, ash.	Elevation / Depth (m)
						Ground Surface:				0.00
0.0	HA		SE060_0.0-0.1			silty CLAY Some Sand,brown/ grey	W			0.00
			SE060_0.2-0.4							-0.40
			SE060_0.5-0.7			GRAVEL Some Sand	W			0.40 -0.70
										0.70
1.0										
2.0										
3.0										
4.0										

NOTES:

GHD Soil Classifications: The GHD Soil Classification is based on Australian Standards AS 1726-1993. This log is not intended for geotechnical purposes.

Drilling Abbreviations:

RW(x)	Rotary Wash	PSC(x)	Percussion Simultanous Casing
RT(x)	Rotary Triple Tube	AS	Augering - Solid Flight
PC(x)	Percussion Cable Tool	AH	Augering - Hollow Flight
PD(x)	Percussion Down Hole	H	Hand Augering

Where "x" is flushing medium: (W) Water, (M) Mud, (A) Air, (F) Foam.

Moisture Abbreviations:
D Dry
M Moist
W Wet

Consistency:

Granular Soils		**Cohesive Soils**	
(VL) Very Loose	(D) Dense	(VS) Very Soft	(ST) Stiff
(L) Loose	(VD) Very Dense	(S) Soft	(VST) Very Stiff
(MD) Medium Dense		(F) Firm	(H) Hard

BOREHOLE LOG

ENVIRONMENTAL - SOIL BORE

Bore No.: SE061
Page: 1 of 1

Client: NSW Catchment and Lands - Crown Land
Project: Urunga Antimony RAP
Project No.: 2216251
Location:
Date Drilled: 15/08/2012 to: 15/08/2012

Drill Co: GHD
Driller: BL/BJ
Rig Type: HA
Total Depth (m): 0.7
Diameter (mm): 50

Easting: 501096
Northing: 6625230
Grid Ref: GDA94_MGA_zone_56
Elevation: 0
Logged by: BL/BJ Checked by: BC

DRILLING										
Depth (m)	Drilling Method	PID (ppm)	Sample ID	Water	Graphic Log	LITHOLOGICAL DESCRIPTION Soil Type (Classification Group Symbol); Particle Size; Colour; Secondary / Minor Components.	Moisture	Consistency	COMMENTS/ CONTAMINANT INDICATORS Odours, staining, waste materials, separate phase liquids, imported fill, ash.	Elevation / Depth (m)
						Ground Surface:				0.00
0.0	HA		SE061_0.0-0.1			silty CLAY Some Sand,brown/ grey	W			0.00
			SE061_0.2-0.4							-0.40
			SE061_0.5-0.7			GRAVEL Some Sand	W			0.40 -0.70
										0.70
1.0										
2.0										
3.0										
4.0										

NOTES:

GHD Soil Classifications: The GHD Soil Classification is based on Australian Standards AS 1726-1993. This log is not intended for geotechnical purposes.

Drilling Abbreviations:

RW(x)	Rotary Wash	PSC(x)	Percussion Simultanous Casing
RT(x)	Rotary Triple Tube	AS	Augering - Solid Flight
PC(x)	Percussion Cable Tool	AH	Augering - Hollow Flight
PD(x)	Percussion Down Hole	H	Hand Augering

Where "x" is flushing medium: (W) Water, (M) Mud, (A) Air, (F) Foam.

Moisture Abbreviations:
D Dry
M Moist
W Wet

Consistency:

Granular Soils		**Cohesive Soils**	
(VL) Very Loose	(D) Dense	(VS) Very Soft	(ST) Stiff
(L) Loose	(VD) Very Dense	(S) Soft	(VST) Very Stiff
(MD) Medium Dense		(F) Firm	(H) Hard

BOREHOLE LOG

ENVIRONMENTAL - SOIL BORE

Bore No.: SE062
Page: 1 of 1

Client: NSW Catchment and Lands - Crown Land
Project: Urunga Antimony RAP
Project No.: 2216251
Location:
Date Drilled: 15/08/2012 to: 15/08/2012

Drill Co: GHD
Driller: BL/BJ
Rig Type: HA
Total Depth (m): 0.6
Diameter (mm): 50

Easting: 501098
Northing: 6625257
Grid Ref: GDA94_MGA_zone_56
Elevation: 0
Logged by: BL/BJ Checked by: BC

DRILLING										
Depth (m)	Drilling Method	PID (ppm)	Sample ID	Water	Graphic Log	LITHOLOGICAL DESCRIPTION Soil Type (Classification Group Symbol); Particle Size; Colour; Secondary / Minor Components.	Moisture	Consistency	COMMENTS/ CONTAMINANT INDICATORS Odours, staining, waste materials, separate phase liquids, imported fill, ash.	Elevation / Depth (m)
						Ground Surface:				0.00
0.0	HA		SE062_0.0-0.1			SILT Trace Sand, Organic matter,black	W			0.00
										-0.20
			SE062_0.2-0.3			sandy CLAY dark grey	W			0.20 -0.30
							W			0.30
			SE062_0.4-0.6			SILT Organic matter,black				-0.60
										0.60
1.0										
2.0										
3.0										
4.0										

NOTES:

GHD Soil Classifications: The GHD Soil Classification is based on Australian Standards AS 1726-1993. This log is not intended for geotechnical purposes.

Drilling Abbreviations:

RW(x)	Rotary Wash	PSC(x)	Percussion Simultanous Casing
RT(x)	Rotary Triple Tube	AS	Augering - Solid Flight
PC(x)	Percussion Cable Tool	AH	Augering - Hollow Flight
PD(x)	Percussion Down Hole	H	Hand Augering

Where "x" is flushing medium: (W) Water, (M) Mud, (A) Air, (F) Foam.

Moisture Abbreviations:
D Dry
M Moist
W Wet

Consistency:

Granular Soils		**Cohesive Soils**	
(VL) Very Loose	(D) Dense	(VS) Very Soft	(ST) Stiff
(L) Loose	(VD) Very Dense	(S) Soft	(VST) Very Stiff
(MD) Medium Dense		(F) Firm	(H) Hard

BOREHOLE LOG

ENVIRONMENTAL - SOIL BORE

Bore No.: SE063
Page: 1 of 1

Client: NSW Catchment and Lands - Crown Land
Project: Urunga Antimony RAP
Project No.: 2216251
Location:
Date Drilled: 15/08/2012 to: 15/08/2012

Drill Co: GHD
Driller: BL/BJ
Rig Type: HA
Total Depth (m): 0.6
Diameter (mm): 50

Easting: 501117
Northing: 6625269
Grid Ref: GDA94_MGA_zone_56
Elevation: 0
Logged by: BL/BJ Checked by: BC

DRILLING										
Depth (m)	Drilling Method	PID (ppm)	Sample ID	Water	Graphic Log	LITHOLOGICAL DESCRIPTION Soil Type (Classification Group Symbol); Particle Size; Colour; Secondary / Minor Components.	Moisture	Consistency	COMMENTS/ CONTAMINANT INDICATORS Odours, staining, waste materials, separate phase liquids, imported fill, ash.	Elevation / Depth (m)
						Ground Surface:				0.00
0.0	HA		SE063_0.0-0.1			SILT Trace Sand, Organic matter,black	W			0.00
										-0.20
			SE063_0.2-0.3			sandy CLAY dark grey	W			0.20 -0.30
							W			0.30
			SE063_0.4-0.6			SILT Organic matter,black				-0.60
										0.60
1.0										
2.0										
3.0										
4.0										

NOTES:

GHD Soil Classifications: The GHD Soil Classification is based on Australian Standards AS 1726-1993. This log is not intended for geotechnical purposes.

Drilling Abbreviations:

RW(x)	Rotary Wash	PSC(x)	Percussion Simultanous Casing
RT(x)	Rotary Triple Tube	AS	Augering - Solid Flight
PC(x)	Percussion Cable Tool	AH	Augering - Hollow Flight
PD(x)	Percussion Down Hole	H	Hand Augering

Where "x" is flushing medium: (W) Water, (M) Mud, (A) Air, (F) Foam.

Moisture Abbreviations:
D Dry
M Moist
W Wet

Consistency:

Granular Soils		Cohesive Soils	
(VL) Very Loose	(D) Dense	(VS) Very Soft	(ST) Stiff
(L) Loose	(VD) Very Dense	(S) Soft	(VST) Very Stiff
(MD) Medium Dense		(F) Firm	(H) Hard

BOREHOLE LOG

ENVIRONMENTAL - SOIL BORE

Bore No.: SE064
Page: 1 of 1

Client: NSW Catchment and Lands - Crown Land
Project: Urunga Antimony RAP
Project No.: 2216251
Location:
Date Drilled: 15/08/2012 to: 15/08/2012

Drill Co: GHD
Driller: BL/BJ
Rig Type: HA
Total Depth (m): 0.6
Diameter (mm): 50

Easting: 501125
Northing: 6625245
Grid Ref: GDA94_MGA_zone_56
Elevation: 0
Logged by: BL/BJ Checked by: BC

DRILLING										
Depth (m)	Drilling Method	PID (ppm)	Sample ID	Water	Graphic Log	LITHOLOGICAL DESCRIPTION Soil Type (Classification Group Symbol); Particle Size; Colour; Secondary / Minor Components.	Moisture	Consistency	COMMENTS/ CONTAMINANT INDICATORS Odours, staining, waste materials, separate phase liquids, imported fill, ash.	Elevation / Depth (m)
						Ground Surface:				0.00
0.0	HA		SE064_0.0-0.1			SILT Trace Sand, Organic matter,black	W			0.00
										-0.20
			SE064_0.2-0.3			sandy CLAY dark grey	W			0.20 -0.30
							W			0.30
			SE064_0.4-0.6			SILT Organic matter,black				-0.60
										0.60
1.0										
2.0										
3.0										
4.0										

NOTES:

GHD Soil Classifications: The GHD Soil Classification is based on Australian Standards AS 1726-1993. This log is not intended for geotechnical purposes.

Drilling Abbreviations:

RW(x)	Rotary Wash	PSC(x)	Percussion Simultanous Casing
RT(x)	Rotary Triple Tube	AS	Augering - Solid Flight
PC(x)	Percussion Cable Tool	AH	Augering - Hollow Flight
PD(x)	Percussion Down Hole	H	Hand Augering

Where "x" is flushing medium: (W) Water, (M) Mud, (A) Air, (F) Foam.

Moisture Abbreviations:
D Dry
M Moist
W Wet

Consistency:

Granular Soils		Cohesive Soils	
(VL) Very Loose	(D) Dense	(VS) Very Soft	(ST) Stiff
(L) Loose	(VD) Very Dense	(S) Soft	(VST) Very Stiff
(MD) Medium Dense		(F) Firm	(H) Hard

BOREHOLE LOG

ENVIRONMENTAL - SOIL BORE

Bore No.: SE065
Page: 1 of 1

Client: NSW Catchment and Lands - Crown Land
Project: Urunga Antimony RAP
Project No.: 2216251
Location:
Date Drilled: 15/08/2012 to: 15/08/2012

Drill Co: GHD
Driller: BL/BJ
Rig Type: HA
Total Depth (m): 0.6
Diameter (mm): 50

Easting: 501153
Northing: 6625264
Grid Ref: GDA94_MGA_zone_56
Elevation: 0
Logged by: BL/BJ Checked by: BC

DRILLING										
Depth (m)	Drilling Method	PID (ppm)	Sample ID	Water	Graphic Log	LITHOLOGICAL DESCRIPTION Soil Type (Classification Group Symbol); Particle Size; Colour; Secondary / Minor Components.	Moisture	Consistency	COMMENTS/ CONTAMINANT INDICATORS Odours, staining, waste materials, separate phase liquids, imported fill, ash.	Elevation / Depth (m)
						Ground Surface:				0.00
0.0	HA		SE065_0.0-0.1			SILT Trace Sand, Organic matter,black	W			0.00
										-0.20
			SE065_0.2-0.3			sandy CLAY dark grey	W			0.20 -0.30
							W			0.30
			SE065_0.4-0.6			SILT Organic matter,black				-0.60
										0.60
1.0										
2.0										
3.0										
4.0										

NOTES:

GHD Soil Classifications: The GHD Soil Classification is based on Australian Standards AS 1726-1993. This log is not intended for geotechnical purposes.

Drilling Abbreviations:

RW(x)	Rotary Wash	PSC(x)	Percussion Simultanous Casing
RT(x)	Rotary Triple Tube	AS	Augering - Solid Flight
PC(x)	Percussion Cable Tool	AH	Augering - Hollow Flight
PD(x)	Percussion Down Hole	H	Hand Augering

Where "x" is flushing medium: (W) Water, (M) Mud, (A) Air, (F) Foam.

Moisture Abbreviations:
D Dry
M Moist
W Wet

Consistency:

Granular Soils		**Cohesive Soils**	
(VL) Very Loose	(D) Dense	(VS) Very Soft	(ST) Stiff
(L) Loose	(VD) Very Dense	(S) Soft	(VST) Very Stiff
(MD) Medium Dense		(F) Firm	(H) Hard

BOREHOLE LOG

ENVIRONMENTAL - SOIL BORE

Bore No.: SE066
Page: 1 of 1

Client: NSW Catchment and Lands - Crown Land
Project: Urunga Antimony RAP
Project No.: 2216251
Location:
Date Drilled: 15/08/2012 to: 15/08/2012

Drill Co: GHD
Driller: BL/BJ
Rig Type: HA
Total Depth (m): 0.6
Diameter (mm): 50

Easting: 501138
Northing: 6625278
Grid Ref: GDA94_MGA_zone_56
Elevation: 0
Logged by: BL/BJ Checked by: BC

DRILLING										
Depth (m)	Drilling Method	PID (ppm)	Sample ID	Water	Graphic Log	LITHOLOGICAL DESCRIPTION Soil Type (Classification Group Symbol); Particle Size; Colour; Secondary / Minor Components.	Moisture	Consistency	COMMENTS/ CONTAMINANT INDICATORS Odours, staining, waste materials, separate phase liquids, imported fill, ash.	Elevation / Depth (m)
						Ground Surface:				0.00
0.0	HA		SE066_0.0-0.1			SILT Trace Sand, Organic matter,black	W			0.00
										-0.20
			SE066_0.2-0.3			sandy CLAY dark grey	W			0.20 -0.30
							W			0.30
			SE066_0.4-0.6			SILT Organic matter,black				-0.60
										0.60
1.0										
2.0										
3.0										
4.0										

NOTES:

GHD Soil Classifications: The GHD Soil Classification is based on Australian Standards AS 1726-1993. This log is not intended for geotechnical purposes.

Drilling Abbreviations:

RW(x)	Rotary Wash	PSC(x)	Percussion Simultanous Casing
RT(x)	Rotary Triple Tube	AS	Augering - Solid Flight
PC(x)	Percussion Cable Tool	AH	Augering - Hollow Flight
PD(x)	Percussion Down Hole	H	Hand Augering

Where "x" is flushing medium: (W) Water, (M) Mud, (A) Air, (F) Foam.

Moisture Abbreviations:
D Dry
M Moist
W Wet

Consistency:

Granular Soils		**Cohesive Soils**	
(VL) Very Loose	(D) Dense	(VS) Very Soft	(ST) Stiff
(L) Loose	(VD) Very Dense	(S) Soft	(VST) Very Stiff
(MD) Medium Dense		(F) Firm	(H) Hard

BOREHOLE LOG

ENVIRONMENTAL - SOIL BORE

Bore No.: SE067
Page: 1 of 1

Client: NSW Catchment and Lands - Crown Land
Project: Urunga Antimony RAP
Project No.: 2216251
Location:
Date Drilled: 15/08/2012 to: 15/08/2012

Drill Co: GHD
Driller: BL/BJ
Rig Type: HA
Total Depth (m): 0.6
Diameter (mm): 50

Easting: 501173
Northing: 6625295
Grid Ref: GDA94_MGA_zone_56
Elevation: 0
Logged by: BL/BJ Checked by: BC

DRILLING										
Depth (m)	Drilling Method	PID (ppm)	Sample ID	Water	Graphic Log	LITHOLOGICAL DESCRIPTION Soil Type (Classification Group Symbol); Particle Size; Colour; Secondary / Minor Components.	Moisture	Consistency	COMMENTS/ CONTAMINANT INDICATORS Odours, staining, waste materials, separate phase liquids, imported fill, ash.	Elevation / Depth (m)
						Ground Surface:				0.00
0.0	HA		SE067_0.0-0.1			SILT Trace Sand, Organic matter,black	W			0.00
										-0.20
			SE067_0.2-0.3			sandy CLAY dark grey	W			0.20 -0.30
							W			0.30
			SE067_0.4-0.6			SILT Organic matter,black				-0.60
										0.60
1.0										
2.0										
3.0										
4.0										

NOTES:

GHD Soil Classifications: The GHD Soil Classification is based on Australian Standards AS 1726-1993. This log is not intended for geotechnical purposes.

Drilling Abbreviations:

RW(x)	Rotary Wash	PSC(x)	Percussion Simultanous Casing
RT(x)	Rotary Triple Tube	AS	Augering - Solid Flight
PC(x)	Percussion Cable Tool	AH	Augering - Hollow Flight
PD(x)	Percussion Down Hole	H	Hand Augering

Where "x" is flushing medium: (W) Water, (M) Mud, (A) Air, (F) Foam.

Moisture Abbreviations:
D Dry
M Moist
W Wet

Consistency:

Granular Soils		**Cohesive Soils**	
(VL) Very Loose	(D) Dense	(VS) Very Soft	(ST) Stiff
(L) Loose	(VD) Very Dense	(S) Soft	(VST) Very Stiff
(MD) Medium Dense		(F) Firm	(H) Hard

BOREHOLE LOG

ENVIRONMENTAL - SOIL BORE

Bore No.: SE068
Page: 1 of 1

Client: NSW Catchment and Lands - Crown Land
Project: Urunga Antimony RAP
Project No.: 2216251
Location:
Date Drilled: 15/08/2012 to: 15/08/2012

Drill Co: GHD
Driller: BL/BJ
Rig Type: HA
Total Depth (m): 0.6
Diameter (mm): 50

Easting: 501193
Northing: 6625321
Grid Ref: GDA94_MGA_zone_56
Elevation: 0
Logged by: BL/BJ Checked by: BC

DRILLING										
Depth (m)	Drilling Method	PID (ppm)	Sample ID	Water	Graphic Log	LITHOLOGICAL DESCRIPTION Soil Type (Classification Group Symbol); Particle Size; Colour; Secondary / Minor Components.	Moisture	Consistency	COMMENTS/ CONTAMINANT INDICATORS Odours, staining, waste materials, separate phase liquids, imported fill, ash.	Elevation / Depth (m)
						Ground Surface:				0.00
0.0	HA		SE068_0.0-0.1			SILT Trace Sand, Organic matter,black	W			0.00
										-0.20
			SE068_0.2-0.3			sandy CLAY dark grey	W			0.20 -0.30
							W			0.30
			SE068_0.4-0.6			SILT Organic matter,black				-0.60
										0.60
1.0										
2.0										
3.0										
4.0										

NOTES:

GHD Soil Classifications: The GHD Soil Classification is based on Australian Standards AS 1726-1993. This log is not intended for geotechnical purposes.

Drilling Abbreviations:

RW(x)	Rotary Wash	PSC(x)	Percussion Simultanous Casing
RT(x)	Rotary Triple Tube	AS	Augering - Solid Flight
PC(x)	Percussion Cable Tool	AH	Augering - Hollow Flight
PD(x)	Percussion Down Hole	H	Hand Augering

Where "x" is flushing medium: (W) Water, (M) Mud, (A) Air, (F) Foam.

Moisture Abbreviations:
D Dry
M Moist
W Wet

Consistency:

Granular Soils		**Cohesive Soils**	
(VL) Very Loose	(D) Dense	(VS) Very Soft	(ST) Stiff
(L) Loose	(VD) Very Dense	(S) Soft	(VST) Very Stiff
(MD) Medium Dense		(F) Firm	(H) Hard

BOREHOLE LOG

ENVIRONMENTAL - SOIL BORE

Bore No.: SE102
Page: 1 of 1

Client: NSW Catchment and Lands - Crown Land
Project: Urunga Antimony RAP
Project No.: 2216251
Location:
Date Drilled: 16/08/2012 to: 16/08/2012

Drill Co: GHD
Driller: JS
Rig Type: HA
Total Depth (m): 0.2
Diameter (mm): 50

Easting: 500829
Northing: 6625097
Grid Ref: GDA94_MGA_zone_56
Elevation: 0
Logged by: JS Checked by: BC

DRILLING										
Depth (m)	Drilling Method	PID (ppm)	Sample ID	Water	Graphic Log	LITHOLOGICAL DESCRIPTION Soil Type (Classification Group Symbol); Particle Size; Colour; Secondary / Minor Components.	Moisture	Consistency	COMMENTS/ CONTAMINANT INDICATORS Odours, staining, waste materials, separate phase liquids, imported fill, ash.	Elevation / Depth (m)
						Ground Surface:				0.00
0.0			SE102_0.0-0.2			SILT Trace Clay and Sand,dark brown	W			0.00 -0.20
										0.20
1.0										
2.0										
3.0										
4.0										

NOTES:

GHD Soil Classifications: The GHD Soil Classification is based on Australian Standards AS 1726-1993. This log is not intended for geotechnical purposes.

Drilling Abbreviations:

RW(x)	Rotary Wash	PSC(x)	Percussion Simultanous Casing
RT(x)	Rotary Triple Tube	AS	Augering - Solid Flight
PC(x)	Percussion Cable Tool	AH	Augering - Hollow Flight
PD(x)	Percussion Down Hole	H	Hand Augering

Where "x" is flushing medium: (W) Water, (M) Mud, (A) Air, (F) Foam.

Moisture Abbreviations:
D Dry
M Moist
W Wet

Consistency:

Granular Soils		**Cohesive Soils**	
(VL) Very Loose	(D) Dense	(VS) Very Soft	(ST) Stiff
(L) Loose	(VD) Very Dense	(S) Soft	(VST) Very Stiff
(MD) Medium Dense		(F) Firm	(H) Hard

Appendix F - Laboratory Reports

Environmental Division

CERTIFICATE OF ANALYSIS

Work Order	: **ES1219239**	Page	: 1 of 3
Client	: **GHD PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	: MR BEN LUFFMAN	Contact	: Angelene Kumar
Address	: 230 HARBOUR DRIVE PO Box 1340 COFFS HARBOUR NSW, AUSTRALIA 2450	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
E-mail	: ben_luffman@ghd.com	E-mail	: angelene.kumar@alsglobal.com
Telephone	: +61 02 6650 5600	Telephone	: +61 2 8784 8555
Facsimile	: +61 02 6652 6021	Facsimile	: +61 2 8784 8555
Project	: 2216251-URUNGA	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Order number	: ----		
C-O-C number	: 158501	Date Samples Received	: 08-AUG-2012
Sampler	: JS	Issue Date	: 10-AUG-2012
Site	: ----		
		No. of samples received	: 4
Quote number	: SY/270/12	No. of samples analysed	: 3

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results

NATA Accredited Laboratory 825

Accredited for compliance with ISO/IEC 17025.

Signatories

This document has been electronically signed by the authorized signatories indicated below. Electronic signing has been carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
Celine Conceicao	Senior Spectroscopist	Sydney Inorganics

General Comments

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
^ = This result is computed from individual analyte detections at or above the level of reporting

Analytical Results

Sub-Matrix: SOIL			Client sample ID	BH006_0.0-0.3	BH23_0.0-0.2	BH23_0.5-0.7	----	----
			Client sampling date / time	03-AUG-2012 15:00	03-AUG-2012 15:00	03-AUG-2012 15:00	----	----
Compound	CAS Number	LOR	Unit	ES1219239-001	ES1219239-003	ES1219239-004	----	----
EA055: Moisture Content								
Moisture Content (dried @ 103°C)	----	1.0	%	36.2	16.5	18.4	----	----
EG005T: Total Metals by ICP-AES								
Antimony	7440-36-0	5	mg/kg	1950	13200	8650	----	----
Arsenic	7440-38-2	5	mg/kg	702	6860	4110	----	----
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	2.3	146	42.8	----	----

Environmental Division

CERTIFICATE OF ANALYSIS

Work Order	: **ES1220305**	Page	: 1 of 33
Amendment	: **1**		
Client	: **GHD PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	: MR BEN LUFFMAN	Contact	: Angelene Kumar
Address	: 230 HARBOUR DRIVE PO Box 1340 COFFS HARBOUR NSW, AUSTRALIA 2450	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
E-mail	: ben_luffman@ghd.com	E-mail	: angelene.kumar@alsglobal.com
Telephone	: +61 02 6650 5600	Telephone	: +61 2 8784 8555
Facsimile	: +61 02 6652 6021	Facsimile	: +61 2 8784 8555
Project	: 2216251	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Order number	: ----		
C-O-C number	: ----	Date Samples Received	: 22-AUG-2012
Sampler	: JS	Issue Date	: 13-NOV-2012
Site	: HILLSIDE DR,URUNGA		
		No. of samples received	: 131
Quote number	: SY/270/12	No. of samples analysed	: 92

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results

NATA Accredited Laboratory 825

Accredited for compliance with ISO/IEC 17025.

Signatories

This document has been electronically signed by the authorized signatories indicated below. Electronic signing has been carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
		Newcastle
Celine Conceicao	Senior Spectroscopist	Sydney Inorganics
Evie.Sidarta	Inorganic Chemist	Sydney Inorganics
Kim McCabe	Senior Inorganic Chemist	Brisbane Inorganics
Kim McCabe	Senior Inorganic Chemist	Stafford Minerals - AY
Nanthini Coilparampil	Laboratory Manager - Inorganics	Sydney Inorganics
Sarah Millington	Senior Inorganic Chemist	Sydney Inorganics

General Comments

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
^ = This result is computed from individual analyte detections at or above the level of reporting

- **EG005: Poor precision was obtained for some elements on sample ES1220305#18 due to sample heterogeneity. Results have been confirmed by re-extraction and reanalysis.**
- **EG005T: Poor precision was obtained for Aluminium on sample Es1220305#44 and for Copper on sample ES1220305#86 due to sample heterogeneity.**
- **It is recognised that total analyte concentration is less than (1M) HCl Extractable concentration for some samples. However, the difference is within experimental variation of the methods.**
- **Some of samples' IDs were changed after Brian's email request on 07/09/2012.**
- **This report has been amended following changes to the analytical data reported. The quality system is being utilised to resolve this issue. The specific data affected includes Arsenic result for sample 10 reported by EG005T analysis.**

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	BH074_0.8-1.0	BH064_0.0-0.2	BH064_0.3-0.5	BH073_0.0-0.2	BH073_0.5-0.7
				Client sampling date / time	15-AUG-2012 15:00	15-AUG-2012 15:00	15-AUG-2012 15:00	15-AUG-2012 15:00	15-AUG-2012 15:00
					ES1220305-001	ES1220305-002	ES1220305-003	ES1220305-004	ES1220305-005
EA002 : pH (Soils)									
pH Value	----	0.1	pH Unit		**5.0**	**5.6**	**5.3**	**3.2**	**3.4**
EA055: Moisture Content									
Moisture Content (dried @ 103°C)	----	1.0	%		**12.5**	**24.5**	**22.0**	**10.5**	**14.9**
EG005T: Total Metals by ICP-AES									
Antimony	7440-36-0	5	mg/kg		<5	<5	<5	**295**	**405**
Arsenic	7440-38-2	5	mg/kg		<5	<5	**7**	**496**	**416**
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg		<0.1	<0.1	<0.1	**47.5**	**57.8**
EK026G: Total Cyanide By Discrete Analyser									
Total Cyanide	57-12-5	1	mg/kg		**1**	**1**	**1**	<1	<1

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: BH056_0.3-0.5	BH075_1.8-2.0	BH060_0.0-0.2	BH82_1.5-1.7	BH034_0.0-0.1
Client sampling date / time				15-AUG-2012 15:00	15-AUG-2012 15:00	15-AUG-2012 15:00	15-AUG-2012 15:00	15-AUG-2012 15:00
				ES1220305-006	ES1220305-007	ES1220305-008	ES1220305-009	ES1220305-010
EA150: Particle Sizing								
+75µm	----	1	%	----	----	----	----	77
+150µm	----	1	%	----	----	----	----	73
+300µm	----	1	%	----	----	----	----	26
+425µm	----	1	%	----	----	----	----	6
+600µm	----	1	%	----	----	----	----	1
+1180µm	----	1	%	----	----	----	----	<1
+2.36mm	----	1	%	----	----	----	----	<1
+4.75mm	----	1	%	----	----	----	----	<1
+9.5mm	----	1	%	----	----	----	----	<1
+19.0mm	----	1	%	----	----	----	----	<1
+37.5mm	----	1	%	----	----	----	----	<1
+75.0mm	----	1	%	----	----	----	----	<1
EA002 : pH (Soils)								
pH Value	----	0.1	pH Unit	5.0	----	4.6	5.6	3.0
EA055: Moisture Content								
Moisture Content (dried @ 103°C)	----	1.0	%	11.6	39.4	12.0	66.2	16.6
EA150: Soil Classification based on Particle Size								
Clay (<2 µm)	----	1	%	----	----	----	----	14
Silt (2-60 µm)	----	1	%	----	----	----	----	7
Sand (0.06-2.00 mm)	----	1	%	----	----	----	----	79
Gravel (>2mm)	----	1	%	----	----	----	----	<1
Cobbles (>6cm)	----	1	%	----	----	----	----	<1
ED007: Exchangeable Cations								
Exchangeable Calcium	----	0.1	meq/100g	----	----	----	----	0.2
Exchangeable Magnesium	----	0.1	meq/100g	----	----	----	----	0.5
Exchangeable Potassium	----	0.1	meq/100g	----	----	----	----	<0.1
Exchangeable Sodium	----	0.1	meq/100g	----	----	----	----	0.1
Cation Exchange Capacity	----	0.1	meq/100g	----	----	----	----	0.9
EG005T: Total Metals by ICP-AES								
Aluminium	7429-90-5	50	mg/kg	----	----	----	----	410
Antimony	7440-36-0	5	mg/kg	<5	36	160	92	12400
Arsenic	7440-38-2	5	mg/kg	<5	129	66	1510	6900
Cadmium	7440-43-9	1	mg/kg	----	3	----	----	<1
Chromium	7440-47-3	2	mg/kg	----	10	----	----	3
Copper	7440-50-8	5	mg/kg	----	30	----	----	8
Lead	7439-92-1	5	mg/kg	----	17	----	----	138

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: BH056_0.3-0.5	BH075_1.8-2.0	BH060_0.0-0.2	BH82_1.5-1.7	BH034_0.0-0.1
				Client sampling date / time: 15-AUG-2012 15:00	15-AUG-2012 15:00	15-AUG-2012 15:00	15-AUG-2012 15:00	15-AUG-2012 15:00
				ES1220305-006	ES1220305-007	ES1220305-008	ES1220305-009	ES1220305-010
EG005T: Total Metals by ICP-AES - Continued								
Nickel	7440-02-0	2	mg/kg	----	**3**	----	----	<2
Zinc	7440-66-6	5	mg/kg	----	**76**	----	----	**10**
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	**0.2**	**1.1**	**1.3**	**68.6**
EK026G: Total Cyanide By Discrete Analyser								
Total Cyanide	57-12-5	1	mg/kg	<1	----	**2**	**9**	**16**
EN33: TCLP Leach								
Initial pH	----	0.1	pH Unit	----	----	----	----	**3.6**
Extraction Fluid Number	----	1	-	----	----	----	----	**1**
Final pH	----	0.1	pH Unit	----	----	----	----	**4.9**
EP003: Total Organic Carbon (TOC) in Soil								
Total Organic Carbon	----	0.02	%	----	----	----	----	**2.03**

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: BH014_0.0-0.1	BH071_0.5-0.7	BH091_0.0-0.1	BH002_0.5-0.7	BH004_1.0-1.2
				Client sampling date / time: 15-AUG-2012 15:00	15-AUG-2012 15:00	15-AUG-2012 15:00	16-AUG-2012 15:00	16-AUG-2012 15:00
				ES1220305-011	ES1220305-012	ES1220305-013	ES1220305-014	ES1220305-015
EA150: Particle Sizing								
+75µm	----	1	%	72	----	----	----	----
+150µm	----	1	%	69	----	----	----	----
+300µm	----	1	%	32	----	----	----	----
+425µm	----	1	%	12	----	----	----	----
+600µm	----	1	%	7	----	----	----	----
+1180µm	----	1	%	5	----	----	----	----
+2.36mm	----	1	%	4	----	----	----	----
+4.75mm	----	1	%	2	----	----	----	----
+9.5mm	----	1	%	<1	----	----	----	----
+19.0mm	----	1	%	<1	----	----	----	----
+37.5mm	----	1	%	<1	----	----	----	----
+75.0mm	----	1	%	<1	----	----	----	----
EA002 : pH (Soils)								
pH Value	----	0.1	pH Unit	4.7	5.4	5.1	----	----
EA055: Moisture Content								
Moisture Content (dried @ 103°C)	----	1.0	%	34.8	21.3	28.2	16.8	28.6
EA150: Soil Classification based on Particle Size								
Clay (<2 µm)	----	1	%	14	----	----	----	----
Silt (2-60 µm)	----	1	%	13	----	----	----	----
Sand (0.06-2.00 mm)	----	1	%	69	----	----	----	----
Gravel (>2mm)	----	1	%	4	----	----	----	----
Cobbles (>6cm)	----	1	%	<1	----	----	----	----
ED007: Exchangeable Cations								
Exchangeable Calcium	----	0.1	meq/100g	0.2	1.0	----	----	----
Exchangeable Magnesium	----	0.1	meq/100g	0.5	0.9	----	----	----
Exchangeable Potassium	----	0.1	meq/100g	<0.1	0.2	----	----	----
Exchangeable Sodium	----	0.1	meq/100g	0.2	0.2	----	----	----
Cation Exchange Capacity	----	0.1	meq/100g	1.0	2.2	----	----	----
EG005T: Total Metals by ICP-AES								
Aluminium	7429-90-5	50	mg/kg	4660	5440	----	----	----
Antimony	7440-36-0	5	mg/kg	7	<5	<5	<5	2050
Arsenic	7440-38-2	5	mg/kg	7	<5	5	<5	1160
Cadmium	7440-43-9	1	mg/kg	<1	<1	----	<1	<1
Chromium	7440-47-3	2	mg/kg	5	4	----	11	16
Copper	7440-50-8	5	mg/kg	<5	<5	----	7	166
Lead	7439-92-1	5	mg/kg	8	8	----	6	116

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: BH014_0.0-0.1	BH071_0.5-0.7	BH091_0.0-0.1	BH002_0.5-0.7	BH004_1.0-1.2
				Client sampling date / time: 15-AUG-2012 15:00	15-AUG-2012 15:00	15-AUG-2012 15:00	16-AUG-2012 15:00	16-AUG-2012 15:00
				ES1220305-011	ES1220305-012	ES1220305-013	ES1220305-014	ES1220305-015
EG005T: Total Metals by ICP-AES - Continued								
Nickel	7440-02-0	2	mg/kg	<2	<2	----	<2	**5**
Zinc	7440-66-6	5	mg/kg	<5	**8**	----	**13**	**95**
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	**0.1**	<0.1	**28.9**
EK026G: Total Cyanide By Discrete Analyser								
Total Cyanide	57-12-5	1	mg/kg	**2**	<1	**3**	----	----
EN33: TCLP Leach								
Initial pH	----	0.1	pH Unit	**4.8**	**5.7**	**5.1**	----	----
After HCl pH	----	0.1	pH Unit	----	**1.6**	**1.6**	----	----
Extraction Fluid Number	----	1	-	**1**	**1**	**1**	----	----
Final pH	----	0.1	pH Unit	**4.9**	**4.9**	**4.9**	----	----
EP003: Total Organic Carbon (TOC) in Soil								
Total Organic Carbon	----	0.02	%	**2.88**	**1.74**	----	----	----

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: SE001_0.0-0.1	SE001_0.1-0.2	SE002_0.0-0.1	SE002_0.3-0.5	SE003_0.0-0.1
Client sampling date / time				14-AUG-2012 15:00	14-AUG-2012 15:00	14-AUG-2012 15:00	14-AUG-2012 15:00	14-AUG-2012 15:00
				ES1220305-016	ES1220305-017	ES1220305-018	ES1220305-019	ES1220305-020
EA002 : pH (Soils)								
pH Value	----	0.1	pH Unit	5.1	4.8	5.0	5.9	5.2
EA055: Moisture Content								
Moisture Content (dried @ 103°C)	----	1.0	%	25.7	39.3	73.3	72.4	49.3
ED007: Exchangeable Cations								
Exchangeable Calcium	----	0.1	meq/100g	----	----	1.7	----	----
Exchangeable Magnesium	----	0.1	meq/100g	----	----	1.4	----	----
Exchangeable Potassium	----	0.1	meq/100g	----	----	1.1	----	----
Exchangeable Sodium	----	0.1	meq/100g	----	----	0.6	----	----
Cation Exchange Capacity	----	0.1	meq/100g	----	----	4.8	----	----
EG005-SDH: 1M HCl-Extractable Metals by ICPAES								
Aluminium	7429-90-5	50	mg/kg	----	----	2300	----	----
Antimony	7440-36-0	1.0	mg/kg	----	----	1680	----	----
Arsenic	7440-38-2	1.0	mg/kg	----	----	57.9	----	----
Cadmium	7440-43-9	0.1	mg/kg	----	----	0.3	----	----
Cobalt	7440-48-4	0.5	mg/kg	----	----	0.8	----	----
Chromium	7440-47-3	1.0	mg/kg	----	----	61.8	----	----
Copper	7440-50-8	1.0	mg/kg	----	----	1450	----	----
Iron	7439-89-6	50	mg/kg	----	----	5780	----	----
Lead	7439-92-1	1.0	mg/kg	----	----	1010	----	----
Manganese	7439-96-5	10	mg/kg	----	----	36	----	----
Nickel	7440-02-0	1.0	mg/kg	----	----	1.2	----	----
Silver	7440-22-4	1.0	mg/kg	----	----	<1.0	----	----
Vanadium	7440-62-2	2.0	mg/kg	----	----	15.9	----	----
Zinc	7440-66-6	1.0	mg/kg	----	----	53.2	----	----
EG005T: Total Metals by ICP-AES								
Aluminium	7429-90-5	50	mg/kg	2180	----	10300	----	8510
Antimony	7440-36-0	5	mg/kg	3980	9260	4440	1200	2120
Arsenic	7440-38-2	5	mg/kg	1980	5410	225	295	176
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	3	<1
Chromium	7440-47-3	2	mg/kg	22	112	1450	253	323
Copper	7440-50-8	5	mg/kg	574	491	1900	1100	1040
Lead	7439-92-1	5	mg/kg	405	1760	1170	216	538
Nickel	7440-02-0	2	mg/kg	<2	<2	4	13	5
Zinc	7440-66-6	5	mg/kg	142	149	145	140	63
EG020-SDH: 1M HCl Extractable metals by ICPMS								
Selenium	7782-49-2	0.5	mg/kg	----	----	1.2	----	----

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: SE001_0.0-0.1	SE001_0.1-0.2	SE002_0.0-0.1	SE002_0.3-0.5	SE003_0.0-0.1
				Client sampling date / time: 14-AUG-2012 15:00	14-AUG-2012 15:00	14-AUG-2012 15:00	14-AUG-2012 15:00	14-AUG-2012 15:00
				ES1220305-016	ES1220305-017	ES1220305-018	ES1220305-019	ES1220305-020
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	**58.9**	**32.2**	**87.6**	**9.8**	**23.4**
EK026G: Total Cyanide By Discrete Analyser								
Total Cyanide	57-12-5	1	mg/kg	<1	**8**	**2**	**2**	<1
EP003: Total Organic Carbon (TOC) in Soil								
Total Organic Carbon	----	0.02	%	----	----	**5.25**	----	----

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	SE003_0.2-0.4	SE010_0.1-0.3	SE010_0.6-0.8	SE011_0.0-0.1	SE012_0.0-0.1
				Client sampling date / time	14-AUG-2012 15:00	14-AUG-2012 15:00	14-AUG-2012 15:00	14-AUG-2012 15:00	14-AUG-2012 15:00
					ES1220305-021	ES1220305-022	ES1220305-023	ES1220305-024	ES1220305-026
EA002 : pH (Soils)									
pH Value	----	0.1	pH Unit		**5.0**	**4.9**	**5.8**	**5.8**	**5.4**
EA055: Moisture Content									
Moisture Content (dried @ 103°C)	----	1.0	%		**75.2**	**47.0**	**42.4**	**45.7**	**77.9**
ED007: Exchangeable Cations									
Exchangeable Calcium	----	0.1	meq/100g		----	----	----	**2.4**	----
Exchangeable Magnesium	----	0.1	meq/100g		----	----	----	**1.9**	----
Exchangeable Potassium	----	0.1	meq/100g		----	----	----	**1.0**	----
Exchangeable Sodium	----	0.1	meq/100g		----	----	----	**0.6**	----
Cation Exchange Capacity	----	0.1	meq/100g		----	----	----	**6.0**	----
EG005-SDH: 1M HCl-Extractable Metals by ICPAES									
Aluminium	7429-90-5	50	mg/kg		----	----	----	**820**	----
Antimony	7440-36-0	1.0	mg/kg		----	----	----	**877**	----
Arsenic	7440-38-2	1.0	mg/kg		----	----	----	**139**	----
Cadmium	7440-43-9	0.1	mg/kg		----	----	----	<0.1	----
Cobalt	7440-48-4	0.5	mg/kg		----	----	----	**0.5**	----
Chromium	7440-47-3	1.0	mg/kg		----	----	----	**5.9**	----
Copper	7440-50-8	1.0	mg/kg		----	----	----	**160**	----
Iron	7439-89-6	50	mg/kg		----	----	----	**2870**	----
Lead	7439-92-1	1.0	mg/kg		----	----	----	**703**	----
Manganese	7439-96-5	10	mg/kg		----	----	----	**15**	----
Nickel	7440-02-0	1.0	mg/kg		----	----	----	<1.0	----
Silver	7440-22-4	1.0	mg/kg		----	----	----	<1.0	----
Vanadium	7440-62-2	2.0	mg/kg		----	----	----	**3.4**	----
Zinc	7440-66-6	1.0	mg/kg		----	----	----	**14.2**	----
EG005T: Total Metals by ICP-AES									
Aluminium	7429-90-5	50	mg/kg		----	**10800**	----	**5250**	**11000**
Antimony	7440-36-0	5	mg/kg		**959**	**4210**	**49**	**4640**	**9020**
Arsenic	7440-38-2	5	mg/kg		**813**	**1140**	**29**	**1020**	**1390**
Cadmium	7440-43-9	1	mg/kg		**6**	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg		**42**	**115**	**10**	**74**	**125**
Copper	7440-50-8	5	mg/kg		**1270**	**1340**	**8**	**247**	**750**
Lead	7439-92-1	5	mg/kg		**44**	**546**	**9**	**1230**	**1790**
Nickel	7440-02-0	2	mg/kg		**26**	**16**	**3**	**2**	**6**
Zinc	7440-66-6	5	mg/kg		**288**	**58**	<5	**33**	**106**
EG020-SDH: 1M HCl Extractable metals by ICPMS									
Selenium	7782-49-2	0.5	mg/kg		----	----	----	**0.7**	----

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: SE003_0.2-0.4	SE010_0.1-0.3	SE010_0.6-0.8	SE011_0.0-0.1	SE012_0.0-0.1
				Client sampling date / time: 14-AUG-2012 15:00	14-AUG-2012 15:00	14-AUG-2012 15:00	14-AUG-2012 15:00	14-AUG-2012 15:00
				ES1220305-021	ES1220305-022	ES1220305-023	ES1220305-024	ES1220305-026
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	**1.1**	**26.4**	**0.3**	**56.7**	**55.6**
EK026G: Total Cyanide By Discrete Analyser								
Total Cyanide	57-12-5	1	mg/kg	**2**	**77**	**1**	**8**	**19**
EP003: Total Organic Carbon (TOC) in Soil								
Total Organic Carbon	----	0.02	%	----	----	----	**5.94**	----

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: SE012_0.3-0.5	SE013_0.3-0.5	SE060_0.0-0.1	SE033_0.0-0.05	SE102_0.0-0.2
				Client sampling date / time: 14-AUG-2012 15:00	16-AUG-2012 15:00	15-AUG-2012 15:00	16-AUG-2012 15:00	16-AUG-2012 15:00
				ES1220305-027	ES1220305-028	ES1220305-029	ES1220305-030	ES1220305-031
EA002 : pH (Soils)								
pH Value	----	0.1	pH Unit	**5.2**	----	----	----	----
EA055: Moisture Content								
Moisture Content (dried @ 103°C)	----	1.0	%	**70.0**	**43.9**	----	----	**75.2**
ED007: Exchangeable Cations								
Exchangeable Calcium	----	0.1	meq/100g	----	----	**8.8**	**2.9**	----
Exchangeable Magnesium	----	0.1	meq/100g	----	----	**7.3**	**2.4**	----
Exchangeable Potassium	----	0.1	meq/100g	----	----	**0.6**	**1.5**	----
Exchangeable Sodium	----	0.1	meq/100g	----	----	**2.7**	**1.2**	----
Cation Exchange Capacity	----	0.1	meq/100g	----	----	**19.4**	**8.0**	----
EG005T: Total Metals by ICP-AES								
Antimony	7440-36-0	5	mg/kg	**239**	**28**	----	----	**744**
Arsenic	7440-38-2	5	mg/kg	**459**	**74**	----	----	**18**
Cadmium	7440-43-9	1	mg/kg	<1	<1	----	----	<1
Chromium	7440-47-3	2	mg/kg	**25**	**13**	----	----	**17**
Copper	7440-50-8	5	mg/kg	**229**	**13**	----	----	**708**
Lead	7439-92-1	5	mg/kg	**127**	**12**	----	----	**74**
Nickel	7440-02-0	2	mg/kg	**15**	**4**	----	----	**11**
Zinc	7440-66-6	5	mg/kg	**82**	**10**	----	----	**39**
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	**1.4**	**0.2**	----	----	**0.3**
EK026G: Total Cyanide By Discrete Analyser								
Total Cyanide	57-12-5	1	mg/kg	**8**	----	----	----	----
EP003: Total Organic Carbon (TOC) in Soil								
Total Organic Carbon	----	0.02	%	----	----	**19.4**	**10.3**	----

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: SEDUP04	SE020_0.0-0.1	SE020_0.2-0.4	SE021_0.0-0.1	SE030_0.0-0.1
				Client sampling date / time: 16-AUG-2012 15:00	14-AUG-2012 15:00	14-AUG-2012 15:00	14-AUG-2012 15:00	14-AUG-2012 15:00
				ES1220305-034	ES1220305-035	ES1220305-036	ES1220305-037	ES1220305-039
EA002 : pH (Soils)								
pH Value	----	0.1	pH Unit	5.0	4.8	5.4	4.4	5.6
EA055: Moisture Content								
Moisture Content (dried @ 103°C)	----	1.0	%	69.2	47.8	54.6	43.4	39.1
ED007: Exchangeable Cations								
Exchangeable Calcium	----	0.1	meq/100g	----	----	----	7.9	2.9
Exchangeable Magnesium	----	0.1	meq/100g	----	----	----	8.1	1.7
Exchangeable Potassium	----	0.1	meq/100g	----	----	----	0.6	0.7
Exchangeable Sodium	----	0.1	meq/100g	----	----	----	3.5	1.2
Cation Exchange Capacity	----	0.1	meq/100g	----	----	----	20.2	6.5
EG005-SDH: 1M HCl-Extractable Metals by ICPAES								
Aluminium	7429-90-5	50	mg/kg	----	----	----	770	1160
Antimony	7440-36-0	1.0	mg/kg	----	----	----	1480	1360
Arsenic	7440-38-2	1.0	mg/kg	----	----	----	111	1180
Cadmium	7440-43-9	0.1	mg/kg	----	----	----	0.2	0.2
Cobalt	7440-48-4	0.5	mg/kg	----	----	----	0.8	0.5
Chromium	7440-47-3	1.0	mg/kg	----	----	----	3.1	3.3
Copper	7440-50-8	1.0	mg/kg	----	----	----	148	122
Iron	7439-89-6	50	mg/kg	----	----	----	3440	9340
Lead	7439-92-1	1.0	mg/kg	----	----	----	1010	106
Manganese	7439-96-5	10	mg/kg	----	----	----	10	21
Nickel	7440-02-0	1.0	mg/kg	----	----	----	<1.0	<1.0
Silver	7440-22-4	1.0	mg/kg	----	----	----	<1.0	<1.0
Vanadium	7440-62-2	2.0	mg/kg	----	----	----	2.5	6.4
Zinc	7440-66-6	1.0	mg/kg	----	----	----	27.7	32.3
EG005T: Total Metals by ICP-AES								
Aluminium	7429-90-5	50	mg/kg	----	3680	----	----	3300
Antimony	7440-36-0	5	mg/kg	3770	7450	48	9570	4720
Arsenic	7440-38-2	5	mg/kg	1200	985	542	1260	2530
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg	23	88	15	24	9
Copper	7440-50-8	5	mg/kg	377	122	12	222	120
Lead	7439-92-1	5	mg/kg	587	1270	24	1730	160
Nickel	7440-02-0	2	mg/kg	6	4	5	3	<2
Zinc	7440-66-6	5	mg/kg	79	52	12	57	45
EG020-SDH: 1M HCl Extractable metals by ICPMS								
Selenium	7782-49-2	0.5	mg/kg	----	----	----	0.7	0.5

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: SEDUP04	SE020_0.0-0.1	SE020_0.2-0.4	SE021_0.0-0.1	SE030_0.0-0.1
				Client sampling date / time: 16-AUG-2012 15:00	14-AUG-2012 15:00	14-AUG-2012 15:00	14-AUG-2012 15:00	14-AUG-2012 15:00
				ES1220305-034	ES1220305-035	ES1220305-036	ES1220305-037	ES1220305-039
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	**19.4**	**60.0**	**0.5**	**73.3**	**18.4**
EK026G: Total Cyanide By Discrete Analyser								
Total Cyanide	57-12-5	1	mg/kg	**28**	**235**	**5**	**61**	**20**
EP003: Total Organic Carbon (TOC) in Soil								
Total Organic Carbon	----	0.02	%	----	----	----	**14.8**	**2.50**

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: SE030_0.3-0.5	SE031_0.0-0.1	SE040_0.3-0.5	SE042_0.0-0.1	SE050_0.0-0.1
				Client sampling date / time: 14-AUG-2012 15:00	14-AUG-2012 15:00	14-AUG-2012 15:00	14-AUG-2012 15:00	15-AUG-2012 15:00
				ES1220305-040	ES1220305-041	ES1220305-042	ES1220305-043	ES1220305-044
EA002 : pH (Soils)								
pH Value	----	0.1	pH Unit	**7.2**	**4.6**	**5.3**	----	**4.3**
EA055: Moisture Content								
Moisture Content (dried @ 103°C)	----	1.0	%	**24.2**	**33.9**	**26.8**	**78.3**	**14.5**
ED007: Exchangeable Cations								
Exchangeable Calcium	----	0.1	meq/100g	----	----	**2.0**	----	----
Exchangeable Magnesium	----	0.1	meq/100g	----	----	**3.1**	----	----
Exchangeable Potassium	----	0.1	meq/100g	----	----	**0.6**	----	----
Exchangeable Sodium	----	0.1	meq/100g	----	----	**0.9**	----	----
Cation Exchange Capacity	----	0.1	meq/100g	----	----	**6.6**	----	----
EG005-SDH: 1M HCl-Extractable Metals by ICPAES								
Aluminium	7429-90-5	50	mg/kg	----	**290**	**340**	----	----
Antimony	7440-36-0	1.0	mg/kg	----	**796**	**33.3**	----	----
Arsenic	7440-38-2	1.0	mg/kg	----	**286**	**23.9**	----	----
Cadmium	7440-43-9	0.1	mg/kg	----	<0.1	<0.1	----	----
Cobalt	7440-48-4	0.5	mg/kg	----	<0.5	<0.5	----	----
Chromium	7440-47-3	1.0	mg/kg	----	**2.7**	<1.0	----	----
Copper	7440-50-8	1.0	mg/kg	----	**33.8**	**6.1**	----	----
Iron	7439-89-6	50	mg/kg	----	**2210**	**10400**	----	----
Lead	7439-92-1	1.0	mg/kg	----	**399**	**4.5**	----	----
Manganese	7439-96-5	10	mg/kg	----	<10	**24**	----	----
Nickel	7440-02-0	1.0	mg/kg	----	<1.0	<1.0	----	----
Silver	7440-22-4	1.0	mg/kg	----	<1.0	<1.0	----	----
Vanadium	7440-62-2	2.0	mg/kg	----	<2.0	**6.8**	----	----
Zinc	7440-66-6	1.0	mg/kg	----	**10.8**	**6.7**	----	----
EG005T: Total Metals by ICP-AES								
Aluminium	7429-90-5	50	mg/kg	----	----	----	----	**990**
Antimony	7440-36-0	5	mg/kg	**342**	**5920**	**34**	**11900**	**626**
Arsenic	7440-38-2	5	mg/kg	**292**	**1210**	**57**	**1430**	**1370**
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	**2**	<1
Chromium	7440-47-3	2	mg/kg	**7**	**14**	**10**	**54**	**4**
Copper	7440-50-8	5	mg/kg	**7**	**44**	**6**	**980**	**47**
Lead	7439-92-1	5	mg/kg	**19**	**761**	**8**	**3280**	**69**
Nickel	7440-02-0	2	mg/kg	**2**	<2	<2	**9**	<2
Zinc	7440-66-6	5	mg/kg	**10**	**30**	<5	**347**	**20**
EG020-SDH: 1M HCl Extractable metals by ICPMS								
Selenium	7782-49-2	0.5	mg/kg	----	<0.5	<0.5	----	----

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: SE030_0.3-0.5	SE031_0.0-0.1	SE040_0.3-0.5	SE042_0.0-0.1	SE050_0.0-0.1
				Client sampling date / time: 14-AUG-2012 15:00	14-AUG-2012 15:00	14-AUG-2012 15:00	14-AUG-2012 15:00	15-AUG-2012 15:00
				ES1220305-040	ES1220305-041	ES1220305-042	ES1220305-043	ES1220305-044
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	**1.5**	**38.3**	**0.2**	**122**	**1.9**
EK026G: Total Cyanide By Discrete Analyser								
Total Cyanide	57-12-5	1	mg/kg	<1	**46**	**1**	----	<1
EP003: Total Organic Carbon (TOC) in Soil								
Total Organic Carbon	----	0.02	%	----	----	**0.21**	----	----

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: SE050_0.2-0.4	SEDUP03	SE051_0.0-0.1	SE051_0.3-0.5	SE052_0.0-0.1
				Client sampling date / time: 15-AUG-2012 15:00	15-AUG-2012 15:00	14-AUG-2012 15:00	14-AUG-2012 15:00	14-AUG-2012 15:00
				ES1220305-045	ES1220305-046	ES1220305-047	ES1220305-048	ES1220305-049
EA002 : pH (Soils)								
pH Value	----	0.1	pH Unit	**4.5**	**4.1**	**4.4**	**5.4**	**4.9**
EA055: Moisture Content								
Moisture Content (dried @ 103°C)	----	1.0	%	**29.8**	**11.0**	**34.7**	**30.9**	**17.7**
EG005-SDH: 1M HCl-Extractable Metals by ICPAES								
Aluminium	7429-90-5	50	mg/kg	----	----	**450**	----	**190**
Antimony	7440-36-0	1.0	mg/kg	----	----	**471**	----	**12.2**
Arsenic	7440-38-2	1.0	mg/kg	----	----	**458**	----	**16.3**
Cadmium	7440-43-9	0.1	mg/kg	----	----	**0.2**	----	<0.1
Cobalt	7440-48-4	0.5	mg/kg	----	----	<0.5	----	<0.5
Chromium	7440-47-3	1.0	mg/kg	----	----	**1.9**	----	<1.0
Copper	7440-50-8	1.0	mg/kg	----	----	**41.7**	----	**4.8**
Iron	7439-89-6	50	mg/kg	----	----	**1840**	----	**350**
Lead	7439-92-1	1.0	mg/kg	----	----	**365**	----	**2.0**
Manganese	7439-96-5	10	mg/kg	----	----	<10	----	<10
Nickel	7440-02-0	1.0	mg/kg	----	----	<1.0	----	<1.0
Silver	7440-22-4	1.0	mg/kg	----	----	<1.0	----	<1.0
Vanadium	7440-62-2	2.0	mg/kg	----	----	<2.0	----	**3.9**
Zinc	7440-66-6	1.0	mg/kg	----	----	**7.1**	----	**14.6**
EG005T: Total Metals by ICP-AES								
Antimony	7440-36-0	5	mg/kg	**4900**	**412**	**4820**	**76**	**21**
Arsenic	7440-38-2	5	mg/kg	**2030**	**800**	**2490**	**556**	**64**
Cadmium	7440-43-9	1	mg/kg	**1**	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg	**7**	**3**	**11**	**13**	**4**
Copper	7440-50-8	5	mg/kg	**274**	**28**	**67**	**47**	**16**
Lead	7439-92-1	5	mg/kg	**446**	**61**	**696**	**64**	<5
Nickel	7440-02-0	2	mg/kg	<2	<2	<2	**6**	<2
Zinc	7440-66-6	5	mg/kg	**32**	**12**	**24**	**61**	**27**
EG020-SDH: 1M HCl Extractable metals by ICPMS								
Selenium	7782-49-2	0.5	mg/kg	----	----	<0.5	----	<0.5
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	**39.8**	**2.3**	**11.8**	**5.1**	**0.1**
EK026G: Total Cyanide By Discrete Analyser								
Total Cyanide	57-12-5	1	mg/kg	**16**	<1	**4**	**2**	<1

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	SE053_0.0-0.1	SE054_0.0-0.1	SE055_0.0-0.1	SE056_0.05-0.15	SE057_0.2-0.4
				Client sampling date / time	15-AUG-2012 15:00	15-AUG-2012 15:00	15-AUG-2012 15:00	15-AUG-2012 15:00	16-AUG-2012 15:00
					ES1220305-050	ES1220305-051	ES1220305-052	ES1220305-053	ES1220305-054
EA002 : pH (Soils)									
pH Value	----	0.1	pH Unit		----	----	----	**5.5**	**5.6**
EA055: Moisture Content									
Moisture Content (dried @ 103°C)	----	1.0	%		**23.0**	**58.1**	**28.4**	**27.8**	**45.3**
EG005-SDH: 1M HCl-Extractable Metals by ICPAES									
Aluminium	7429-90-5	50	mg/kg		**4620**	**2760**	----	**870**	**1570**
Antimony	7440-36-0	1.0	mg/kg		**3.8**	**135**	----	**6.1**	**66.1**
Arsenic	7440-38-2	1.0	mg/kg		**11.0**	**27.2**	----	**14.8**	**80.8**
Cadmium	7440-43-9	0.1	mg/kg		**0.1**	**2.1**	----	**6.0**	**1.4**
Cobalt	7440-48-4	0.5	mg/kg		<0.5	**0.8**	----	<0.5	**0.9**
Chromium	7440-47-3	1.0	mg/kg		**2.2**	<1.0	----	<1.0	**1.5**
Copper	7440-50-8	1.0	mg/kg		**2.2**	**95.8**	----	**334**	**197**
Iron	7439-89-6	50	mg/kg		**940**	**2930**	----	**2040**	**4550**
Lead	7439-92-1	1.0	mg/kg		**1.6**	**78.0**	----	**10.2**	**86.1**
Manganese	7439-96-5	10	mg/kg		<10	**11**	----	<10	**13**
Nickel	7440-02-0	1.0	mg/kg		<1.0	**1.4**	----	<1.0	**1.1**
Silver	7440-22-4	1.0	mg/kg		<1.0	<1.0	----	<1.0	<1.0
Vanadium	7440-62-2	2.0	mg/kg		**6.7**	**23.0**	----	**2.6**	**14.9**
Zinc	7440-66-6	1.0	mg/kg		**90.6**	**669**	----	**1730**	**267**
EG005T: Total Metals by ICP-AES									
Antimony	7440-36-0	5	mg/kg		**15**	**311**	**6**	**8**	**108**
Arsenic	7440-38-2	5	mg/kg		**91**	**179**	**11**	**31**	**208**
Cadmium	7440-43-9	1	mg/kg		<1	**3**	<1	**8**	**3**
Chromium	7440-47-3	2	mg/kg		**6**	**27**	**3**	**4**	**30**
Copper	7440-50-8	5	mg/kg		**12**	**268**	**35**	**415**	**232**
Lead	7439-92-1	5	mg/kg		**5**	**136**	**14**	**22**	**88**
Nickel	7440-02-0	2	mg/kg		**2**	**7**	<2	<2	**7**
Zinc	7440-66-6	5	mg/kg		**97**	**925**	**238**	**2150**	**459**
EG020-SDH: 1M HCl Extractable metals by ICPMS									
Selenium	7782-49-2	0.5	mg/kg		**0.8**	**1.4**	----	**0.7**	**1.0**
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg		<0.1	**1.5**	<0.1	<0.1	**0.7**
EK026G: Total Cyanide By Discrete Analyser									
Total Cyanide	57-12-5	1	mg/kg		----	----	----	<1	**4**

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: SE061_0.0-0.1	SE005_0.0-0.1	SEDUP05	SE014_0.0-0.05	SE022_0.0-0.05
Client sampling date / time				15-AUG-2012 15:00	16-AUG-2012 15:00	16-AUG-2012 15:00	15-AUG-2012 15:00	15-AUG-2012 15:00
				ES1220305-055	ES1220305-056	ES1220305-057	ES1220305-058	ES1220305-059
EA002 : pH (Soils)								
pH Value	----	0.1	pH Unit	6.4	5.2	4.8	4.4	4.9
EA055: Moisture Content								
Moisture Content (dried @ 103°C)	----	1.0	%	43.8	74.2	32.8	81.3	75.9
ED007: Exchangeable Cations								
Exchangeable Calcium	----	0.1	meq/100g	5.8	----	----	4.7	----
Exchangeable Magnesium	----	0.1	meq/100g	5.7	----	----	4.1	----
Exchangeable Potassium	----	0.1	meq/100g	0.4	----	----	1.2	----
Exchangeable Sodium	----	0.1	meq/100g	1.4	----	----	1.0	----
Cation Exchange Capacity	----	0.1	meq/100g	13.3	----	----	11.0	----
EG005-SDH: 1M HCl-Extractable Metals by ICPAES								
Aluminium	7429-90-5	50	mg/kg	820	10900	1400	4950	7520
Antimony	7440-36-0	1.0	mg/kg	3.9	96.0	2.7	2640	532
Arsenic	7440-38-2	1.0	mg/kg	7.3	28.3	3.5	65.5	43.4
Cadmium	7440-43-9	0.1	mg/kg	<0.1	0.4	<0.1	0.4	0.2
Cobalt	7440-48-4	0.5	mg/kg	<0.5	1.4	<0.5	3.0	3.4
Chromium	7440-47-3	1.0	mg/kg	<1.0	3.5	<1.0	<1.0	1.0
Copper	7440-50-8	1.0	mg/kg	<1.0	37.8	2.2	311	42.5
Iron	7439-89-6	50	mg/kg	1470	3840	1120	8600	8010
Lead	7439-92-1	1.0	mg/kg	<1.0	25.5	2.9	693	191
Manganese	7439-96-5	10	mg/kg	<10	22	<10	42	52
Nickel	7440-02-0	1.0	mg/kg	<1.0	2.6	<1.0	6.5	6.2
Silver	7440-22-4	1.0	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
Vanadium	7440-62-2	2.0	mg/kg	14.0	32.7	10.7	25.8	47.4
Zinc	7440-66-6	1.0	mg/kg	5.1	93.6	3.1	83.1	43.5
EG005T: Total Metals by ICP-AES								
Aluminium	7429-90-5	50	mg/kg	----	----	----	----	18400
Antimony	7440-36-0	5	mg/kg	<5	188	<5	6640	2690
Arsenic	7440-38-2	5	mg/kg	12	83	7	861	747
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg	15	15	10	17	20
Copper	7440-50-8	5	mg/kg	9	310	8	402	88
Lead	7439-92-1	5	mg/kg	7	54	6	931	261
Nickel	7440-02-0	2	mg/kg	6	6	4	8	12
Zinc	7440-66-6	5	mg/kg	21	135	6	230	91
EG020-SDH: 1M HCl Extractable metals by ICPMS								
Selenium	7782-49-2	0.5	mg/kg	0.8	1.3	0.6	1.6	1.9

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: SE061_0.0-0.1	SE005_0.0-0.1	SEDUP05	SE014_0.0-0.05	SE022_0.0-0.05
				Client sampling date / time: 15-AUG-2012 15:00	16-AUG-2012 15:00	16-AUG-2012 15:00	15-AUG-2012 15:00	15-AUG-2012 15:00
				ES1220305-055	ES1220305-056	ES1220305-057	ES1220305-058	ES1220305-059
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	**0.1**	**0.6**	<0.1	**20.3**	**6.9**
EK026G: Total Cyanide By Discrete Analyser								
Total Cyanide	57-12-5	1	mg/kg	<1	<1	<1	**66**	**46**
EP003: Total Organic Carbon (TOC) in Soil								
Total Organic Carbon	----	0.02	%	**1.69**	----	----	**20.1**	----

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: SE022_0.2-0.4	SE043_0.1-0.3	SE064_0.0-0.1	SE062_0.0-0.1	SE062_0.2-0.3
				Client sampling date / time: 15-AUG-2012 15:00	15-AUG-2012 15:00	16-AUG-2012 15:00	15-AUG-2012 15:00	15-AUG-2012 15:00
				ES1220305-060	ES1220305-061	ES1220305-062	ES1220305-063	ES1220305-064
EA002 : pH (Soils)								
pH Value	----	0.1	pH Unit	----	5.5	5.3	4.7	5.7
EA055: Moisture Content								
Moisture Content (dried @ 103°C)	----	1.0	%	50.7	34.5	84.8	72.8	30.3
ED007: Exchangeable Cations								
Exchangeable Calcium	----	0.1	meq/100g	----	----	6.3	----	----
Exchangeable Magnesium	----	0.1	meq/100g	----	----	6.8	----	----
Exchangeable Potassium	----	0.1	meq/100g	----	----	0.4	----	----
Exchangeable Sodium	----	0.1	meq/100g	----	----	3.6	----	----
Cation Exchange Capacity	----	0.1	meq/100g	----	----	17.2	----	----
EG005-SDH: 1M HCl-Extractable Metals by ICPAES								
Aluminium	7429-90-5	50	mg/kg	----	580	6560	3950	1190
Antimony	7440-36-0	1.0	mg/kg	----	7.4	266	1020	2.9
Arsenic	7440-38-2	1.0	mg/kg	----	2.5	74.6	27.3	2.3
Cadmium	7440-43-9	0.1	mg/kg	----	<0.1	1.6	6.3	<0.1
Cobalt	7440-48-4	0.5	mg/kg	----	<0.5	4.4	2.8	0.5
Chromium	7440-47-3	1.0	mg/kg	----	<1.0	<1.0	<1.0	<1.0
Copper	7440-50-8	1.0	mg/kg	----	1.4	169	131	3.2
Iron	7439-89-6	50	mg/kg	----	600	12800	7750	1250
Lead	7439-92-1	1.0	mg/kg	----	2.6	87.4	155	4.4
Manganese	7439-96-5	10	mg/kg	----	<10	56	36	<10
Nickel	7440-02-0	1.0	mg/kg	----	<1.0	8.2	5.3	<1.0
Silver	7440-22-4	1.0	mg/kg	----	<1.0	<1.0	<1.0	<1.0
Vanadium	7440-62-2	2.0	mg/kg	----	6.6	42.5	23.3	10.7
Zinc	7440-66-6	1.0	mg/kg	----	1.8	526	512	5.0
EG005T: Total Metals by ICP-AES								
Aluminium	7429-90-5	50	mg/kg	----	----	----	11200	4790
Antimony	7440-36-0	5	mg/kg	58	10	4210	3120	<5
Arsenic	7440-38-2	5	mg/kg	115	9	2230	352	6
Cadmium	7440-43-9	1	mg/kg	<1	<1	2	2	<1
Chromium	7440-47-3	2	mg/kg	17	8	42	28	8
Copper	7440-50-8	5	mg/kg	9	6	653	767	6
Lead	7439-92-1	5	mg/kg	14	7	449	620	5
Nickel	7440-02-0	2	mg/kg	8	2	10	10	3
Zinc	7440-66-6	5	mg/kg	12	6	449	577	<5
EG020-SDH: 1M HCl Extractable metals by ICPMS								
Selenium	7782-49-2	0.5	mg/kg	----	<0.5	1.9	1.1	0.6

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: SE022_0.2-0.4	SE043_0.1-0.3	SE064_0.0-0.1	SE062_0.0-0.1	SE062_0.2-0.3
				Client sampling date / time: 15-AUG-2012 15:00	15-AUG-2012 15:00	16-AUG-2012 15:00	15-AUG-2012 15:00	15-AUG-2012 15:00
				ES1220305-060	ES1220305-061	ES1220305-062	ES1220305-063	ES1220305-064
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	**0.1**	<0.1	**4.4**	**8.1**	<0.1
EK026G: Total Cyanide By Discrete Analyser								
Total Cyanide	57-12-5	1	mg/kg	----	<1	<2	**34**	<1
EP003: Total Organic Carbon (TOC) in Soil								
Total Organic Carbon	----	0.02	%	----	----	**17.3**	----	----

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: SE066_0.0-0.1	SE013_0.0-0.1	BH031_0.0-0.2	BH031_0.5-0.7	BH031_1.8-2.0
				Client sampling date / time: 15-AUG-2012 15:00	16-AUG-2012 15:00	15-AUG-2012 15:00	15-AUG-2012 15:00	15-AUG-2012 15:00
				ES1220305-065	ES1220305-066	ES1220305-067	ES1220305-068	ES1220305-069
EA150: Particle Sizing								
+75µm	----	1	%	----	----	76	72	20
+150µm	----	1	%	----	----	53	47	12
+300µm	----	1	%	----	----	25	20	6
+425µm	----	1	%	----	----	14	10	4
+600µm	----	1	%	----	----	8	5	2
+1180µm	----	1	%	----	----	2	<1	1
+2.36mm	----	1	%	----	----	<1	<1	<1
+4.75mm	----	1	%	----	----	<1	<1	<1
+9.5mm	----	1	%	----	----	<1	<1	<1
+19.0mm	----	1	%	----	----	<1	<1	<1
+37.5mm	----	1	%	----	----	<1	<1	<1
+75.0mm	----	1	%	----	----	<1	<1	<1
EA002 : pH (Soils)								
pH Value	----	0.1	pH Unit	5.0	4.5	----	----	----
EA055: Moisture Content								
Moisture Content (dried @ 103°C)	----	1.0	%	79.0	66.5	----	----	----
EA150: Soil Classification based on Particle Size								
Clay (<2 µm)	----	1	%	----	----	9	9	36
Silt (2-60 µm)	----	1	%	----	----	14	17	44
Sand (0.06-2.00 mm)	----	1	%	----	----	77	74	19
Gravel (>2mm)	----	1	%	----	----	<1	<1	1
Cobbles (>6cm)	----	1	%	----	----	<1	<1	<1
EG005-SDH: 1M HCl-Extractable Metals by ICPAES								
Aluminium	7429-90-5	50	mg/kg	3340	2660	----	----	----
Antimony	7440-36-0	1.0	mg/kg	90.9	972	----	----	----
Arsenic	7440-38-2	1.0	mg/kg	91.4	105	----	----	----
Cadmium	7440-43-9	0.1	mg/kg	4.8	0.2	----	----	----
Cobalt	7440-48-4	0.5	mg/kg	3.2	1.9	----	----	----
Chromium	7440-47-3	1.0	mg/kg	<1.0	1.2	----	----	----
Copper	7440-50-8	1.0	mg/kg	70.5	144	----	----	----
Iron	7439-89-6	50	mg/kg	6900	4520	----	----	----
Lead	7439-92-1	1.0	mg/kg	26.9	415	----	----	----
Manganese	7439-96-5	10	mg/kg	40	33	----	----	----
Nickel	7440-02-0	1.0	mg/kg	6.4	4.1	----	----	----
Silver	7440-22-4	1.0	mg/kg	<1.0	<1.0	----	----	----
Vanadium	7440-62-2	2.0	mg/kg	17.2	16.8	----	----	----

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: SE066_0.0-0.1	SE013_0.0-0.1	BH031_0.0-0.2	BH031_0.5-0.7	BH031_1.8-2.0
				Client sampling date / time: 15-AUG-2012 15:00	16-AUG-2012 15:00	15-AUG-2012 15:00	15-AUG-2012 15:00	15-AUG-2012 15:00
				ES1220305-065	ES1220305-066	ES1220305-067	ES1220305-068	ES1220305-069
EG005-SDH: 1M HCl-Extractable Metals by ICPAES - Continued								
Zinc	7440-66-6	1.0	mg/kg	**953**	**43.6**	----	----	----
EG005T: Total Metals by ICP-AES								
Aluminium	7429-90-5	50	mg/kg	----	**6220**	----	----	----
Antimony	7440-36-0	5	mg/kg	**130**	**8900**	----	----	----
Arsenic	7440-38-2	5	mg/kg	**286**	**1660**	----	----	----
Cadmium	7440-43-9	1	mg/kg	**4**	<1	----	----	----
Chromium	7440-47-3	2	mg/kg	**12**	**29**	----	----	----
Copper	7440-50-8	5	mg/kg	**87**	**230**	----	----	----
Lead	7439-92-1	5	mg/kg	**21**	**1500**	----	----	----
Nickel	7440-02-0	2	mg/kg	**10**	**5**	----	----	----
Zinc	7440-66-6	5	mg/kg	**1130**	**73**	----	----	----
EG020-SDH: 1M HCl Extractable metals by ICPMS								
Selenium	7782-49-2	0.5	mg/kg	**1.0**	**0.8**	----	----	----
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	**0.2**	**48.6**	----	----	----
EK026G: Total Cyanide By Discrete Analyser								
Total Cyanide	57-12-5	1	mg/kg	**4**	**82**	----	----	----

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: BH031_1.0-1.2	BHDUP07	BHDUP06	BH053_0.3-0.5	BH053_1.5-1.7
				Client sampling date / time: 15-AUG-2012 15:00	16-AUG-2012 15:00	16-AUG-2012 15:00	14-AUG-2012 15:00	14-AUG-2012 15:00
				ES1220305-070	ES1220305-074	ES1220305-078	ES1220305-079	ES1220305-080
EA002 : pH (Soils)								
pH Value	----	0.1	pH Unit	----	----	----	5.2	5.9
EA055: Moisture Content								
Moisture Content (dried @ 103°C)	----	1.0	%	24.2	26.3	16.3	22.5	65.4
ED007: Exchangeable Cations								
Exchangeable Calcium	----	0.1	meq/100g	----	----	----	0.2	7.0
Exchangeable Magnesium	----	0.1	meq/100g	----	----	----	0.3	7.7
Exchangeable Potassium	----	0.1	meq/100g	----	----	----	0.5	0.6
Exchangeable Sodium	----	0.1	meq/100g	----	----	----	0.4	3.8
Cation Exchange Capacity	----	0.1	meq/100g	----	----	----	1.5	19.2
EG005T: Total Metals by ICP-AES								
Aluminium	7429-90-5	50	mg/kg	----	----	----	1370	17300
Antimony	7440-36-0	5	mg/kg	9670	3290	<5	5320	150
Arsenic	7440-38-2	5	mg/kg	5280	126	5	3560	1330
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg	9	10	13	11	18
Copper	7440-50-8	5	mg/kg	21	34	7	26	22
Lead	7439-92-1	5	mg/kg	133	64	5	329	25
Nickel	7440-02-0	2	mg/kg	9	20	<2	3	9
Zinc	7440-66-6	5	mg/kg	24	82	15	19	14
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	58.3	1.3	<0.1	35.8	1.2
EK026G: Total Cyanide By Discrete Analyser								
Total Cyanide	57-12-5	1	mg/kg	----	----	----	39	15
EN33: TCLP Leach								
Initial pH	----	0.1	pH Unit	----	----	----	5.8	6.0
After HCl pH	----	0.1	pH Unit	----	----	----	1.6	1.7
Extraction Fluid Number	----	1	-	----	----	----	1	1
Final pH	----	0.1	pH Unit	----	----	----	4.9	4.9
EP003: Total Organic Carbon (TOC) in Soil								
Total Organic Carbon	----	0.02	%	----	----	----	0.20	9.46

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: BH053_3.2-3.5	BH001_0.3-0.5	BH024_0.3-0.5	BH024_1.0-1.2	BH024_2.0-2.2
				Client sampling date / time: 14-AUG-2012 15:00	16-AUG-2012 15:00	14-AUG-2012 15:00	14-AUG-2012 15:00	14-AUG-2012 15:00
				ES1220305-081	ES1220305-082	ES1220305-083	ES1220305-084	ES1220305-085
EA002 : pH (Soils)								
pH Value	----	0.1	pH Unit	7.5	3.6	4.0	6.1	6.1
EA055: Moisture Content								
Moisture Content (dried @ 103°C)	----	1.0	%	21.9	5.4	34.2	41.0	35.3
ED007: Exchangeable Cations								
Exchangeable Calcium	----	0.1	meq/100g	2.0	----	----	----	----
Exchangeable Magnesium	----	0.1	meq/100g	3.5	----	----	----	----
Exchangeable Potassium	----	0.1	meq/100g	0.4	----	----	----	----
Exchangeable Sodium	----	0.1	meq/100g	2.4	----	----	----	----
Cation Exchange Capacity	----	0.1	meq/100g	8.3	----	----	----	----
EG005T: Total Metals by ICP-AES								
Aluminium	7429-90-5	50	mg/kg	6780	2970	----	----	----
Antimony	7440-36-0	5	mg/kg	23	3660	6640	192	31
Arsenic	7440-38-2	5	mg/kg	80	1520	4050	130	33
Cadmium	7440-43-9	1	mg/kg	<1	<1	----	----	----
Chromium	7440-47-3	2	mg/kg	11	7	----	----	----
Copper	7440-50-8	5	mg/kg	<5	630	----	----	----
Lead	7439-92-1	5	mg/kg	14	18	----	----	----
Nickel	7440-02-0	2	mg/kg	<2	2	----	----	----
Zinc	7440-66-6	5	mg/kg	<5	30	----	----	----
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	0.4	38.3	----	----	----
EK026G: Total Cyanide By Discrete Analyser								
Total Cyanide	57-12-5	1	mg/kg	<1	<1	32	3	1
EN33: TCLP Leach								
Initial pH	----	0.1	pH Unit	8.2	----	4.7	6.1	6.1
After HCl pH	----	0.1	pH Unit	1.6	----	----	1.8	1.7
Extraction Fluid Number	----	1	-	1	----	1	1	1
Final pH	----	0.1	pH Unit	4.9	----	4.9	4.9	4.9
EP003: Total Organic Carbon (TOC) in Soil								
Total Organic Carbon	----	0.02	%	0.29	----	----	----	----

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: BH004_0.0-0.2	BH077_0.3-0.5	BH077_1.0-1.2	BH077_1.5-1.7	BH084_1.0-1.2
				Client sampling date / time: 16-AUG-2012 15:00	14-AUG-2012 15:00	14-AUG-2012 15:00	14-AUG-2012 15:00	15-AUG-2012 15:00
				ES1220305-086	ES1220305-087	ES1220305-089	ES1220305-090	ES1220305-091
EA002 : pH (Soils)								
pH Value	----	0.1	pH Unit	----	3.4	4.8	5.2	5.3
EA055: Moisture Content								
Moisture Content (dried @ 103°C)	----	1.0	%	9.2	41.0	20.8	63.4	42.9
ED007: Exchangeable Cations								
Exchangeable Calcium	----	0.1	meq/100g	----	1.0	0.6	7.8	----
Exchangeable Magnesium	----	0.1	meq/100g	----	0.4	0.7	8.7	----
Exchangeable Potassium	----	0.1	meq/100g	----	0.4	0.4	0.7	----
Exchangeable Sodium	----	0.1	meq/100g	----	0.5	0.4	4.2	----
Cation Exchange Capacity	----	0.1	meq/100g	----	2.2	2.0	21.3	----
EG005T: Total Metals by ICP-AES								
Aluminium	7429-90-5	50	mg/kg	----	9100	10300	14500	----
Antimony	7440-36-0	5	mg/kg	4700	93	36	882	2730
Arsenic	7440-38-2	5	mg/kg	1950	157	156	2130	518
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	----
Chromium	7440-47-3	2	mg/kg	18	15	14	17	----
Copper	7440-50-8	5	mg/kg	136	28	10	51	----
Lead	7439-92-1	5	mg/kg	150	24	17	170	----
Nickel	7440-02-0	2	mg/kg	<2	5	3	8	----
Zinc	7440-66-6	5	mg/kg	47	9	11	33	----
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	61.2	0.8	0.6	5.4	5.1
EK026G: Total Cyanide By Discrete Analyser								
Total Cyanide	57-12-5	1	mg/kg	----	1	<1	19	22
EN33: TCLP Leach								
Initial pH	----	0.1	pH Unit	----	3.8	4.5	6.0	5.9
After HCl pH	----	0.1	pH Unit	----	----	----	1.8	1.7
Extraction Fluid Number	----	1	-	----	1	1	1	1
Final pH	----	0.1	pH Unit	----	4.8	4.9	4.9	4.9
EP003: Total Organic Carbon (TOC) in Soil								
Total Organic Carbon	----	0.02	%	----	15.5	0.30	17.6	----

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	BH084_1.5-1.7	TB01 (AKA TRIP BLANK 8)	TB02 (AKA TRIP BLANK 9)	BRICK01	BRICK02
				Client sampling date / time	15-AUG-2012 15:00	06-AUG-2012 15:00	06-AUG-2012 15:00	17-AUG-2012 15:00	17-AUG-2012 15:00
					ES1220305-092	ES1220305-096	ES1220305-097	ES1220305-111	ES1220305-112
EA002 : pH (Soils)									
pH Value	----	0.1	pH Unit		**5.6**	----	----	----	----
EA055: Moisture Content									
Moisture Content (dried @ 103°C)	----	1.0	%		**64.5**	----	----	**2.6**	**1.2**
EG005T: Total Metals by ICP-AES									
Antimony	7440-36-0	5	mg/kg		**3220**	<5	<5	<5	<5
Arsenic	7440-38-2	5	mg/kg		**387**	<5	<5	<5	**7**
Cadmium	7440-43-9	1	mg/kg		----	----	----	<1	<1
Chromium	7440-47-3	2	mg/kg		----	----	----	**6**	**11**
Copper	7440-50-8	5	mg/kg		----	----	----	<5	**6**
Lead	7439-92-1	5	mg/kg		----	----	----	<5	**6**
Nickel	7440-02-0	2	mg/kg		----	----	----	**3**	**6**
Zinc	7440-66-6	5	mg/kg		----	----	----	**10**	**14**
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg		<0.1	----	----	<0.1	<0.1
EK026G: Total Cyanide By Discrete Analyser									
Total Cyanide	57-12-5	1	mg/kg		**83**	----	----	----	----
EN33: TCLP Leach									
Initial pH	----	0.1	pH Unit		**5.9**	----	----	----	----
After HCl pH	----	0.1	pH Unit		**1.7**	----	----	----	----
Extraction Fluid Number	----	1	-		**1**	----	----	----	----
Final pH	----	0.1	pH Unit		**4.9**	----	----	----	----

Analytical Results

Sub-Matrix: SOIL				Client sample ID	SE004_0.0-0.1	SE011_0.3-0.5	----	----	----
				Client sampling date / time	16-AUG-2012 15:00	14-AUG-2012 15:00	----	----	----
Compound	CAS Number	LOR	Unit		ES1220305-144	ES1220305-145	----	----	----
EA002 : pH (Soils)									
pH Value	----	0.1	pH Unit		5.0	5.2	----	----	----
EA055: Moisture Content									
Moisture Content (dried @ 103°C)	----	1.0	%		80.5	30.6	----	----	----
EG005-SDH: 1M HCl-Extractable Metals by ICPAES									
Aluminium	7429-90-5	50	mg/kg		7550	----	----	----	----
Antimony	7440-36-0	1.0	mg/kg		92.4	----	----	----	----
Arsenic	7440-38-2	1.0	mg/kg		11.7	----	----	----	----
Cadmium	7440-43-9	0.1	mg/kg		0.3	----	----	----	----
Cobalt	7440-48-4	0.5	mg/kg		1.4	----	----	----	----
Chromium	7440-47-3	1.0	mg/kg		<1.0	----	----	----	----
Copper	7440-50-8	1.0	mg/kg		50.4	----	----	----	----
Iron	7439-89-6	50	mg/kg		7050	----	----	----	----
Lead	7439-92-1	1.0	mg/kg		28.6	----	----	----	----
Manganese	7439-96-5	10	mg/kg		35	----	----	----	----
Nickel	7440-02-0	1.0	mg/kg		3.9	----	----	----	----
Silver	7440-22-4	1.0	mg/kg		<1.0	----	----	----	----
Vanadium	7440-62-2	2.0	mg/kg		40.3	----	----	----	----
Zinc	7440-66-6	1.0	mg/kg		70.0	----	----	----	----
EG005T: Total Metals by ICP-AES									
Antimony	7440-36-0	5	mg/kg		242	<5	----	----	----
Arsenic	7440-38-2	5	mg/kg		22	17	----	----	----
Cadmium	7440-43-9	1	mg/kg		<1	<1	----	----	----
Chromium	7440-47-3	2	mg/kg		15	10	----	----	----
Copper	7440-50-8	5	mg/kg		73	8	----	----	----
Lead	7439-92-1	5	mg/kg		37	<5	----	----	----
Nickel	7440-02-0	2	mg/kg		6	3	----	----	----
Zinc	7440-66-6	5	mg/kg		74	<5	----	----	----
EG020-SDH: 1M HCl Extractable metals by ICPMS									
Selenium	7782-49-2	0.5	mg/kg		1.4	----	----	----	----
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg		0.2	<0.1	----	----	----
EK026G: Total Cyanide By Discrete Analyser									
Total Cyanide	57-12-5	1	mg/kg		2	<1	----	----	----