

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

METROPOLITAN DISTRICT OF CARACAS  
BOLIVARIAN REPUBLIC OF VENEZUELA

**STUDY ON**

**DISASTER PREVENTION BASIC PLAN  
IN THE METROPOLITAN DISTRICT OF CARACAS  
IN THE BOLIVARIAN REPUBLIC OF VENEZUELA**

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**FINAL REPORT  
DATABOOK**

---

March 2005

**PACIFIC CONSULTANTS INTERNATIONAL**  
*In association with*  
**OYO INTERNATIONAL CORPORATION**

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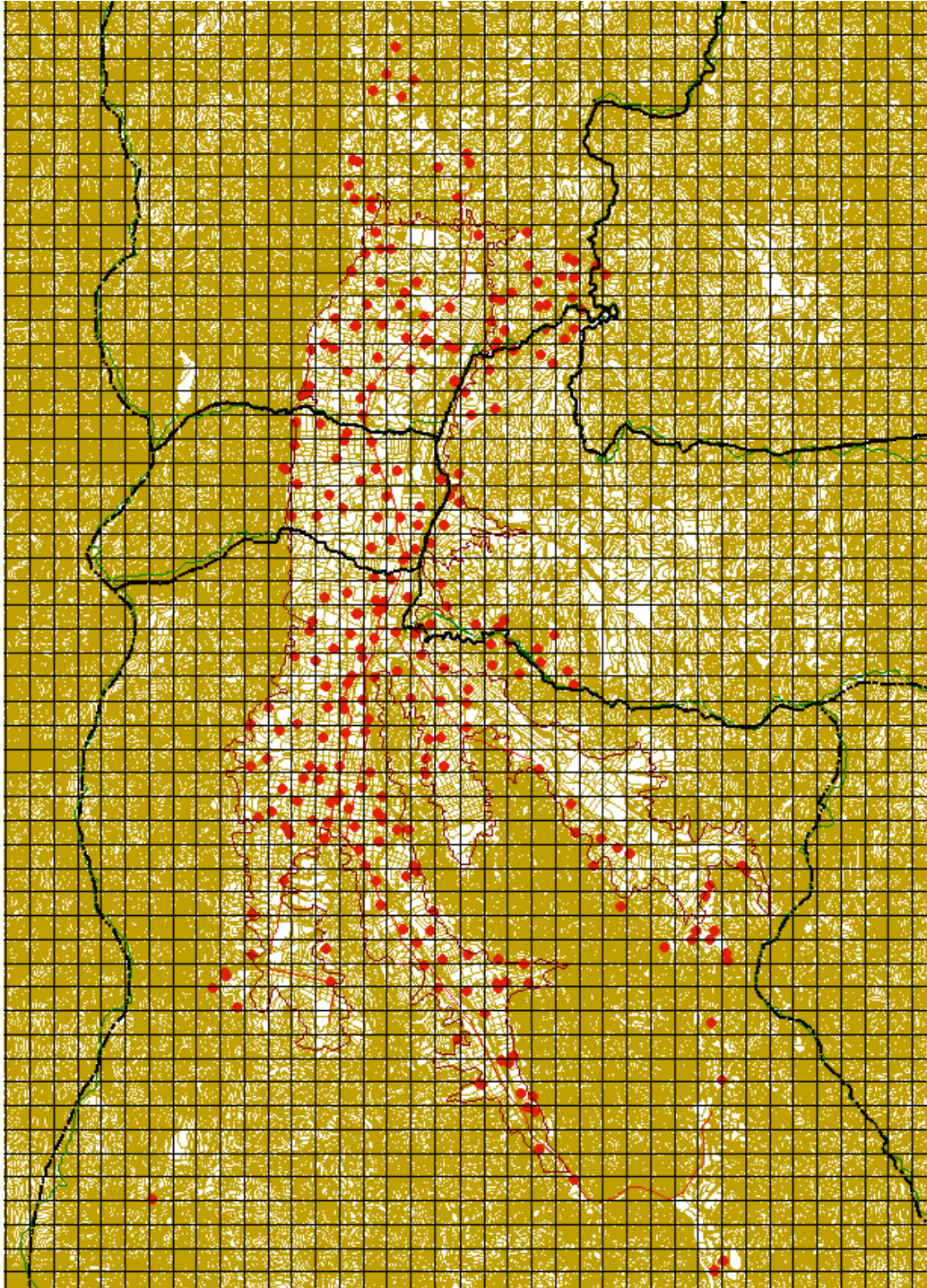
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# ***Data Book A***

## **Location Map of Collected Borehole Data**

**Location Map of Collected Borehole Data**



## ***Data Book B***

**Collected Borehole Data** (Plain and Hill/Mountain area)

Mesh Address	Name of Mesh	Coordinate of Bh		Elevation (+m)	Groundwater level (G.L.-m)	Number of layer	Upper boundary depth of each layer (G.L.-m)	Soil types	Origin of Soils	Average N-value of each layer in site	Wet density kg/m <sup>3</sup>
		X (m)	Y (m)								
0043	C43R23	1,157,969.78	721,210.67	923	-4.8	7	0.00	Fill	Fill	15	2.0
							1.20	Sedimentary	Sedimentary	8	2.0
							2.80	clay	Sedimentary	8	1.8
							6.40	sand	Sedimentary	13	2.0
							7.80	Base1	Weathered rock	54	
0044	C44R22	1,158,238.49	722,102.61	913.48	-16.5	12	0.00	Fill	Fill	22	2.0
							12.50	clay	Sedimentary	16	1.8
							13.70	sand	Sedimentary	23	2.0
							14.60	Base1	Base1	Sedimentary	66
0044	C44R23	1,158,081.88	722,000.39	914.56	-16.5	11	0.00	Fill	Fill	19	2.0
							6.50	clay	Fill	21	1.8
							12.50	clay	Sedimentary	15	1.8
							14.50	sand	Sedimentary	28	2.0
							17.60	sand	Sedimentary	22	2.0
							20.50	Base1	Sedimentary	79	
0045	C45R20	1,159,246.14	722,600.58	906.25	-12.8	10	0.00	Fill	Fill	9	2.0
							4.00	clay	Sedimentary	10	1.8
							5.50	sand	Sedimentary	13	2.0
							7.50	clay	Sedimentary	20	1.8
							9.20	clay	Sedimentary	18	1.8
							11.20	sand	Sedimentary	23	2.0
							14.00	sand	Sedimentary	40	2.0
							17.50	Base1	Sedimentary	51	
0045	C45R20	1,159,188.87	722,561.94	899.5	-6	6	0.00	Fill	Fill	15	2.0
							2.00	clay	Sedimentary	11	1.8
							3.20	sand	Sedimentary	21	2.0
							7.00	sand	Sedimentary	29	2.0
							10.50	clay	Sedimentary	14	1.8
							12.60	Base1	Sedimentary	80	
0045	C45R22	1,158,345.84	722,369.01	912.31	-11.4	7	0.00	Fill	Fill	26	2.0
							6.50	clay	Sedimentary	14	1.8
							11.70	clay	Sedimentary	19	1.8
							14.50	sand	Sedimentary	38	2.0
							16.40	Base1	Sedimentary	66	
0045	C45R23	1,158,083.86	722,308.78	917.3	-12.7	7	0.00	Fill	Fill	19	2.0
							3.40	clay	Sedimentary	40	1.8
							5.40	sand	Sedimentary	35	2.0
							8.40	clay	Sedimentary	9	1.8
							11.40	sand	Sedimentary	30	2.0
							13.90	Base1	Weathered rock	58	

Mesh Address	Row	Mesh	Coordinate of Bh		Elevation (+m)	Groundwater level (G.L.-m)		Number of layer	Upper boundary depth of each layer (G.L.-m)	Soil types	Origin of Soils	Average N-value of each layer in site	Wet density kg/m <sup>3</sup>
			X (m)	Y (m)									
0046	0021	C46R21	1,158,772.33	723,071.80	906.22	-9	10	0.00	clay	Fill	22	1.8	
								6.70	sand	Sedimentary	28	2.0	
								9.50	sand	Sedimentary	17	2.0	
								13.40	clay	Sedimentary	19	1.8	
								15.50	Base1	Sedimentary	68		
0046	0022	C46R22	1,158,597.58	723,012.31	914.41	-17	8	0.00	sand	Fill	25	2.0	
								9.50	sand	Sedimentary	17	2.0	
								10.20	clay	Sedimentary	16	1.8	
								14.60	Base1	Sedimentary	34		
0046	0031	C46R31	1,154,135.86	722,656.43	1020.4	no	3	0.00	sand	Fill	18	2.0	
								9.30	clay	Sedimentary	30	1.8	
								17.30	sand	Sedimentary	20	2.0	
								25.00	Base1				
0047	0022	C47R22	1,158,504.13	723,178.57	909	-12.7	9	0.00	clay	Fill	36	1.8	
								6.40	sand	Sedimentary	70	2.0	
								7.50	clay	Sedimentary	22	1.8	
								8.50	clay	Sedimentary	8	1.8	
								10.00	Base1	Sedimentary	63		
0048	0021	C48R21	1,159,100.93	724,067.92	900	-15	19	0.00	clay	Fill	31	1.8	
								1.30	clay	Sedimentary	10	1.8	
								4.30	clay	Sedimentary	14	1.8	
								5.30	clay	Aluvial	25	1.8	
								9.30	sand	Sedimentary	28	2.0	
								10.40	clay	Aluvial	5	1.8	
								11.30	clay	Sedimentary	17	1.8	
								13.30	clay	Sedimentary	7	1.8	
								14.30	clay	Sedimentary	13	1.8	
								15.30	clay	Sedimentary	15	1.8	
								16.30	sand	Sedimentary	80	2.0	
								17.80	clay	Sedimentary	29	1.8	
								18.30	clay	Sedimentary	26	1.8	
								20.20	clay	Sedimentary	16	1.8	
								22.70	sand	Sedimentary	22	2.0	
								23.30	Base1	Sedimentary	80		
0049	0019	C49R19	1,160,110.49	724,588.34	905	no	5	0.00	sand	Fill	7	2.0	
								2.40	clay	Sedimentary	15	1.8	
								5.40	sand	Sedimentary	28	2.0	
								9.50	Base1	Sedimentary	32		
0049	0020	C49R20	1,159,479.62	724,536.56	847	no	6	0.00	clay	Sedimentary	29	1.8	
								2.60	clay	Sedimentary	23	1.8	



Mesh Address	Name of Mesh	Coordinate of Bh		Elevation (+m)	Groundwater level (G.L-m)	Number of layer	Upper boundary depth of each layer (G.L-m)	Soil types	Origin of Soils	Average N-value of each layer in site	Wet density kg/m <sup>3</sup>	
		X (m)	Y (m)									
0049	0021	C49R21	1,158,823.02	724,592.99	899.5	no	11	4.60 7.60 8.50 12.40 20.00	gravel clay clay sand Base1	Sedimentary Sedimentary Sedimentary Sedimentary	23 14 14 35	2.1 1.8 1.8 2.0
0050	0014	C50R14	1,162,315.87	724,735.24	972.62	-3.25	7	0.00 1.80 4.20 7.20 9.40 10.50 12.40 15.90	clay sand sand clay clay clay sand Base1	Sedimentary Sedimentary Sedimentary Sedimentary Sedimentary Sedimentary Sedimentary Sedimentary	15 16 15 15 11 8 27 28	1.8 2.0 2.0 1.8 1.8 2.0
0050	0018	C50R18	1,160,348.00	725,059.56	893	-7.5	11	1.00 2.00 0.00 2.40 3.40 4.50 5.50 6.50 7.50 8.50 11.40 16.50	clay Base1 sand clay sand clay clay sand clay gravel clay Base1	Sedimentary Sedimentary Sedimentary Sedimentary Aluvial soil Sedimentary Sedimentary Sedimentary Sedimentary Aluvial soil Sedimentary Sedimentary	9 45 21 9 14 21 16 16 14 35 15 77	1.8 1.8 2.0 1.8 2.0 1.8 1.8 2.0 1.8 2.1 1.8
0050	0021	C50R21	1,158,847.32	724,684.36	902.2	-5.9	10	0.00 2.30 3.50 7.50 0.00 1.40 6.50 8.60 11.60 15.60	clay clay sand Base1 sand sand clay sand sand Base1	Top soil Sedimentary Sedimentary Sedimentary Fill Sedimentary Sedimentary Sedimentary Sedimentary Sedimentary Coluvial Soil	16 13 21 28 14 19 22 27 32 35 49	1.8 1.8 2.0 2.0 2.0 2.0 1.8 2.0 2.0
0050	0021	C50R21	1,158,674.35	724,713.70	915.5	no	8	0.00 1.40 6.50 8.60 11.60 15.60	sand sand clay sand sand Base1	Fill Sedimentary Sedimentary Sedimentary Sedimentary Sedimentary	14 19 22 27 32 35	2.0 2.0 1.8 2.0 2.0
0050	0022	C50R22	1,158,200.99	724,698.88	932	no	1	0.00	Base1	Coluvial Soil	49	1.8
0050	0022	C50R22	1,158,295.37	725,105.06	926	no	4	0.00 5.10 5.40	clay clay clay	Fill Top soil Coluvial soil	8 5 15	1.8 1.8 1.8



Mesh Address Column	Row	Name of Mesh	Coordinate of Bh		Elevation (+m)	Groundwater level (G.L.-m)		Number of layer	Upper boundary depth of each layer (G.L.-m)	Soil types	Origin of Soils	Average N- value of each layer in site	Wet density kg/m <sup>3</sup>
			X (m)	Y (m)		no	no						
0052	0030	C52R30	1,154,279.92	725,817.85	945.66	no	5	0.00	sand	Pavement	37	2.0	
								0.30	sand	Fill	37	2.0	
0053	0016	C53R16	1,161,276.60	726,341.78	886	no	12	0.00	Base1	Sedimentary	43		
								3.00	clay	Fill	14	1.8	
								4.00	clay	Fill	14	1.8	
								5.40	sand	Sedimentary	27	2.0	
								6.30	clay	Sedimentary	18	1.8	
								8.50	sand	Sedimentary	30	2.0	
								12.50	sand	Sedimentary	9	2.0	
								13.50	clay	Sedimentary	16	1.8	
								15.00	Base1	Sedimentary	47		
0053	0018	C53R18	1,160,190.96	726,211.83	889	-7.8	25	0.00	sand	Sedimentary	16	2.0	
								0.80	sand	Sedimentary	15	2.0	
								1.80	clay	Sedimentary	8	1.8	
								2.30	sand	Sedimentary	31	2.0	
								3.20	clay	Sedimentary	13	1.8	
								4.20	clay	Sedimentary	18	1.8	
								5.30	clay	Sedimentary	18	1.8	
								6.20	sand	Sedimentary	12	2.0	
								8.40	clay	Sedimentary	6	1.8	
								9.20	sand	Sedimentary	17	2.0	
								12.30	clay	Sedimentary	16	1.8	
								16.30	Base1	Sedimentary	41		
0053	0030	C53R30	1,154,479.26	726,517.94	946.95	no	7	0.00	clay	Pavement	35	1.8	
								0.30	clay	Fill	35	1.8	
								1.30	Base1	Sedimentary	66		
0054	0016	C54R16	1,161,351.53	726,855.14	886.5	-7.7	6	0.00	sand	Fill	10	2.0	
								4.40	clay	Sedimentary	16	1.8	
								5.40	sand	Sedimentary	24	2.0	
								7.40	clay	Sedimentary	21	1.8	
								8.40	sand	Coluvial soil	31	2.0	
								10.40	clay	Sedimentary	19	1.8	
								15.00	Base1	Sedimentary			
0054	0017	C54R17	1,160,718.30	726,954.03	886	-12.2	11	0.00	clay	Sedimentary	7	1.8	
								5.50	sand	Sedimentary	11	2.0	
								7.00	clay	Sedimentary	11	1.8	
								8.30	sand	Sedimentary	45	2.0	
								10.90	clay	Sedimentary	10	1.8	
								14.60	Base1	Sedimentary	67		

Mesh Address	Name of Mesh	Coordinate of Bh		Elevation (+m)	Groundwater level (G.L-m)	Number of layer	Upper boundary depth of each layer (G.L-m)	Soil types	Origin of Soils	Average N-value of each layer in site	Wet density kg/m <sup>3</sup>
		X (m)	Y (m)								
0054	C54R30	1,154,399.23	726,758.77	931.54	no	4	0.00	sand	Pavement	13	2.0
							0.20	sand	Fill	13	2.0
							7.30	Base1	Coluvial soil	36	
0055	C55R15	1,161,727.00	727,516.33	890	no	8	0.00	sand	Sedimentary	4	2.0
							3.50	clay	Sedimentary	15	1.8
							4.40	sand	Sedimentary	35	2.0
							9.40	Base1	Sedimentary	20	
0055	C55R16	1,161,596.37	727,162.24	887	-5.6	12	0.00	sand	Fill	20	2.0
							0.50	sand	Sedimentary	15	2.0
							0.90	clay	Sedimentary	17	1.8
							2.30	sand	Sedimentary	42	2.0
							5.20	sand	Sedimentary	31	2.0
							8.30	clay	Sedimentary	17	1.8
							10.30	sand	Sedimentary	21	2.0
							11.30	Base1	Sedimentary	58	
0055	C55R25	1,156,817.76	727,172.59	927	no	6	0.00	clay	Fill	7	
							1.50	Base1	Sedimentary	35	
0055	C55R26	1,156,325.66	727,536.76	908	no	4	0.00	sand	Sedimentary	22	2.0
							6.50	clay	Sedimentary	29	1.8
							9.80	clay	Sedimentary	30	1.8
							14.30	Base1	Weathered rock	48	
0055	C55R27	1,156,062.90	727,421.61	911	-23	11	0.00	clay	Fill	25	1.8
							1.40	sand	Sedimentary	24	2.0
							8.70	sand	Sedimentary	15	2.0
							10.40	clay	Sedimentary	17	1.8
							11.30	Base1	Sedimentary	36	
0055	C55R31	1,153,714.51	729,274.17	923	no	5	0.00	clay	Fill	26	1.8
							3.30	clay	Sedimentary	12	1.8
							5.40	Base1	Sedimentary	48	
0056	C56R12	1,163,276.39	727,977.50	954	no	3	0.00	Base1	Weathered rock	71	
0056	C56R12	1,163,164.98	727,833.89	960	no	3	0.00	clay	Fill	8	1.8
							1.50	sand	Residual soil	31	2.0
							2.50	Base1	Weathered rock	75	
0056	C56R13	1,162,711.55	728,132.10	921.04	-14	10	0.00	sand	Fill	39	2.0
							1.20	Base1	Sedimentary	54	
0056	C56R14	1,162,370.06	728,101.73	908	no	6	0.00	sand	Fill	13	2.0
							1.00	sand	Sedimentary	27	2.0
							3.80	Base1	Sedimentary	Rotation	
0056	C56R15	1,161,811.24	728,001.01	893	no	5	0.00	clay	Top soil	13	1.8
							2.20	clay	Sedimentary	10	1.8

Mesh Address	Row	Name of Mesh	Coordinate of Bh		Elevation (+m)	Groundwater level (G.L.-m)	Number of layer	Upper boundary depth of each layer (G.L.-m)	Soil types	Origin of Soils	Average N-value of each layer in site	Wet density kg/m <sup>3</sup>
			X (m)	Y (m)								
0056	0016	C56R16	1,161,251.51	728,127.76	899.48	-7	13	0.00	sand	Sedimentary	5	2.0
								3.10	clay	Sedimentary	39	1.8
								5.20	clay	Sedimentary	14	1.8
								7.30	Base1	Coluvial soil	55	
0056	0017	C56R17	1,160,924.19	727,927.17	876	-3.7	7	0.00	gravel	Sedimentary	8	2.1
								5.50	sand	Sedimentary	6	2.0
								6.50	sand	Sedimentary	17	2.0
								8.50	clay	Sedimentary	5	1.8
								10.30	Base1	Sedimentary	44	
0056	0018	C56R18	1,160,654.26	727,941.13	895	-4.8	9	0.00	clay	Sedimentary	3	1.8
								2.60	gravel	Sedimentary	11	2.1
								5.40	clay	Sedimentary	4	1.8
								6.50	sand	Sedimentary	3	2.0
								8.50	sand	Sedimentary	37	2.0
								9.60	sand	Sedimentary	28	2.0
								10.60	Base1	Sedimentary	106	
0056	0025	C56R25	1,156,679.23	727,743.24	907	no	6	0.00	clay	Fill	14	1.8
								0.80	clay	Top soil	29	1.8
								1.20	clay	Sedimentary	25	1.8
								2.40	clay	Sedimentary	25	1.8
								5.30	sand	Sedimentary	29	2.0
								10.30	Base1	Sedimentary	23	
0057	0011	C57R11	1,163,847.07	728,192.83	988	no	2	0.00	sand	Coluvial Soil	24	2.0
								5.00	Base1	Coluvial Soil	69	
0057	0012	C57R12	1,163,557.31	728,323.06	971.27	-14.5	7	0.00	clay	Sedimentary	13	1.8
								1.40	sand	Sedimentary	32	2.0
								6.50	Base1	Sedimentary	47	
0057	0013	C57R13	1,163,018.14	728,541.54	932.5	-12.5	9	0.00	Base1	Top Soil		
0057	0014	C57R14	1,162,306.67	728,497.66	908.3	no	12	0.00	sand	Sedimentary	29	2.0
								9.00	Base1	Coluvial Soil	50	
0057	0014	C57R14	1,162,199.67	728,561.98	903	no	12	0.00	clay	Fill	11	1.8
								2.20	sand	Sedimentary	12	2.0
								3.20	sand	Sedimentary	34	2.0
								4.30	sand	Sedimentary	32	2.0
								6.20	Base1	Sedimentary	77	
0057	0015	C57R15	1,161,924.67	728,362.76	883	-18.1	8	0.00	sand	Fill	11	2.0
								1.40	sand	Sedimentary	11	2.0

Mesh Address	Name of Mesh	Coordinate of Bh		Elevation (+m)	Groundwater level (G.L-m)	Number of layer	Upper boundary depth of each layer (G.L-m)	Soil types	Origin of Soils	Average N-value of each layer in site	Wet density kg/m <sup>3</sup>
		X (m)	Y (m)								
0057	0016			890	-7.2	14	0.00	clay	Sedimentary	14	1.8
		1,161,326.99	728,285.70				3.20	sand	Sedimentary	34	2.0
							6.30	Base1	Sedimentary	80	2.0
0057	0016			899.03	-7	12	0.00	clay	Fill	11	1.8
		1,161,224.22	728,174.75				1.20	clay	Sedimentary	10	1.8
							3.20	sand	Sedimentary	35	2.0
							7.20	Base1	Sedimentary	80	2.0
0057	0024			890	no	10	0.00	clay	Fill	19	1.8
		1,157,298.03	728,464.83				1.50	clay	Sedimentary	15	1.8
							3.60	clay	Sedimentary	6	1.8
							4.40	clay	Sedimentary	15	1.8
							6.70	clay	Sedimentary	19	1.8
							9.00	clay	Sedimentary	13	1.8
							11.00	sand	Sedimentary	10	2.0
							12.60	Base1	Sedimentary	51	2.0
0058	0012			941.4	no	6	0.00	Base1	Sedimentary	63	2.0
0058	0013			917.36	no	6	0.00	sand	Fill	16	2.0
							1.50	sand	Sedimentary	26	2.0
							3.40	Base1	Coluvial soil	71	2.0
0058	0014			900.28	-6.7	13	0.00	sand	Sedimentary	17	2.0
		1,162,557.79	728,986.86				5.20	gravel	Coluvial soil	52	2.1
							8.20	sand	Sedimentary	20	2.0
							9.30	Base1	Sedimentary	22	2.0
0058	0015			899	-18	8	0.00	sand	Fill		2.0
		1,162,120.30	728,669.49				1.50	sand	Sedimentary	30	2.0
							5.30	Base1	Sedimentary	70	2.0
0058	0015			881	no	10	0.00	gravel	Fill	6	2.1
		1,161,652.06	728,821.87				4.30	clay	Sedimentary	6	1.8
							5.70	sand	Sedimentary	10	2.0
							6.50	sand	Sedimentary	13	2.0
							7.40	clay	Sedimentary	17	1.8
							8.90	clay	Sedimentary	20	1.8
							10.60	sand	Sedimentary	23	2.0
							13.50	clay	Sedimentary	16	1.8

Mesh Address	Name of Mesh	Coordinate of Bh		Elevation (+m)	Groundwater level (G.L-m)	Number of layer	Upper boundary depth of each layer (G.L-m)	Soil types	Origin of Soils	Average N-value of each layer in site	Wet density kg/m <sup>3</sup>
		X (m)	Y (m)								
Colom	Row										
0058	0016	C58R16	1,161,237.49	728,641.01	875.5	no	17	0.00 3.30 4.30 6.20 7.70 9.30 11.20 12.30 13.30 16.80 18.30	Fill Sedimentary Sedimentary Sedimentary Sedimentary Sedimentary Sedimentary Sedimentary Sedimentary Sedimentary Sedimentary Sedimentary	19 6 13 4 8 42 11 27 44 47 77	2.1 2.0 2.0 1.8 1.8 2.0 1.8 2.1 2.0 2.0
0059	0011	C59R11	1,163,993.00	729,274.17	925.4	no	6	0.00 1.40 2.40 4.50	Fill Sedimentary Sedimentary Sedimentary	15 13 37 64	1.8 2.0 1.8
0059	0012	C59R12	1,163,651.32	729,404.18	980.3	no	3	0.00 7.50 8.50	Sedimentary Sedimentary Sedimentary	13 20 54	2.0 1.8
0059	0013	C59R13	1,162,770.81	729,246.54	903.4	-8.5	7	0.00 2.50 5.00 7.80	Fill Coluvial soil Coluvial soil Coluvial soil	3 25 39 76	2.0 1.8 2.0
0059	0014	C59R14	1,162,498.95	729,208.16	896.3	no	22	0.00 1.30 2.80	Fill Sedimentary Coluvial soil	2 14 33	2.0 2.0
0059	0015	C59R15	1,162,133.69	729,251.53	888.5	-8.3	12	0.00 0.10 1.40 2.00 2.60 12.00 16.50 17.00 18.70 19.00 20.00 22.00	Concrete Fill Sedimentary Sedimentary Sedimentary Sedimentary Sedimentary Sedimentary Sedimentary Sedimentary Sedimentary Sedimentary	7 5 6 42 27 26 38 26 17 33 22	2.0 2.0 2.0 1.8 2.0 1.8 1.8 2.0 1.8 1.8 1.8

Mesh Address Column	Row	Name of Mesh	Coordinate of Bh		Elevation (+m)	Groundwater level (G.L.-m)	Number of layer	Upper boundary depth of each layer (G.L.-m)	Soil types	Origin of Soils	Average N- value of each layer in site	Wet density kg/m <sup>3</sup>
			X (m)	Y (m)								
0059	0016	C59R16	1,161,481.01	729,128.69	872	-11.6	5	30.00	Base1	Fill	4	2.0
								0.00	sand	Weathered rock	14	2.0
								2.50	sand	Weathered rock	43	2.0
								3.60	sand	Weathered rock	15	2.0
								5.50	sand	Weathered rock	33	2.0
								8.60	Base1	Weathered rock		
0059	0018	C59R18	1,160,323.83	729,404.71	882	-7	2	0.00	Base1	Coluvial soil	54	
0059	0019	C59R19	1,159,981.87	729,267.05	875.5	no	8	0.00	clay	Sedimentary	10	1.8
								1.50	clay	Sedimentary	12	1.8
								2.50	sand	Sedimentary	19	2.0
								4.80	sand	Sedimentary	13	2.0
								5.60	sand	Sedimentary	19	2.0
								6.40	sand	Sedimentary	81	2.0
								7.80	sand	Sedimentary	24	2.0
								8.50	Base1	Sedimentary	122	
0060	0011	C60R11	1,164,038.25	730,107.97	972.5	no	7	0.00	sand	Fill	8	2.0
								0.60	Base1	Coluvial soil	70	
0060	0012	C60R12	1,163,404.07	730,025.84	931.3	no	7	0.00	sand	Fill	10	2.0
								3.40	clay	Sedimentary	18	1.8
								6.20	Base1	Coluvial soil	72	
0060	0014	C60R14	1,162,476.05	729,869.63	893	-8	17	0.00	sand	Sedimentary	4	2.0
								0.20	sand	Aluvial soil	10	2.0
								1.30	sand	Aluvial soil	26	2.0
								4.20	clay	Sedimentary	14	1.8
								4.70	sand	Aluvial soil	46	2.0
								10.20	Base1	Sedimentary	50	
0060	0015	C60R15	1,161,994.64	729,947.89	878	-9.5	4	0.00	sand	Fill	13	2.0
								1.40	sand	Sedimentary	19	2.0
								5.30	clay	Sedimentary	23	1.8
								10.30	Base1	Sedimentary	69	
0060	0016	C60R16	1,161,597.89	729,986.00	870.6	-12.7	8	0.00	clay	Fill	28	1.8
								4.40	sand	Sedimentary	19	2.0
								5.50	sand	Sedimentary	24	2.0
								6.50	clay	Sedimentary	16	1.8
								7.60	sand	Sedimentary	38	2.0
								9.80	sand	Sedimentary	14	2.0
								10.50	clay	Sedimentary	13	1.8
								15.60	Base1	Sedimentary	66	
0060	0018	C60R18	1,160,260.80	729,838.07	874	no	8	0.00	sand	Sedimentary	10	2.0
								1.40	sand	Sedimentary	10	2.0



Mesh Address	Name of Mesh	Coordinate of Bh		Elevation (+m)	Groundwater level (G.L-m)	Number of layer	Upper boundary depth of each layer (G.L-m)	Soil types	Origin of Soils	Average N-value of each layer in site	Wet density kg/m <sup>3</sup>
		X (m)	Y (m)								
Column	Row										
0060	0019	C60R19	1,160,049.00	729,868.07	871.3	no	5	clay	Sedimentary	8	1.8
								sand	Sedimentary	18	2.0
								sand	Sedimentary	14	2.0
								clay	Sedimentary	10	1.8
								sand	Sedimentary	10	2.0
								clay	Sedimentary	9	1.8
								Base1			
								clay	Sedimentary	40	1.8
								sand	Residual soil	40	2.0
								Base1	Sedimentary	60	
0060	0020	C60R20	1,159,508.99	730,087.89	886	no	7	sand	Sedimentary	10	2.0
								clay	Sedimentary	13	1.8
								clay	Sedimentary	17	1.8
								Base1	Weathered rock	29	
0061	0012	C61R12	1,163,624.33	730,492.96	950.42	no	4	sand		29	2.0
								sand	Top soil	43	2.0
								Base1	Coluvial soil	77	
0061	0013	C61R13	1,163,017.89	730,160.90	911.2	-20	5	clay	Fill		1.8
								clay	Sedimentary	16	1.8
								sand	Sedimentary	27	2.0
								sand	Sedimentary	21	2.0
								Base1	Sedimentary	68	
0061	0014	C61R14	1,162,381.06	730,505.78	890	no	9	clay	Sedimentary	29	1.8
								sand	Sedimentary	22	2.0
								clay	Sedimentary	20	1.8
								sand	Sedimentary	34	2.0
								Base1	Sedimentary	76	
0061	0015	C61R15	1,162,033.19	730,460.22	873.56	-5	16	sand	Fill	8	2.0
								clay	Sedimentary	6	1.8
								clay	Sedimentary	6	1.8
								sand	Coluvial soil	33	2.0
								sand	Sedimentary	16	2.0
								sand	Sedimentary	70	2.0
								sand	Sedimentary	32	2.0
								sand	Sedimentary	46	2.0
								Base1	Sedimentary	98	
0061	0016	C61R16	1,161,514.64	730,239.26	876	no	10	sand	Fill	9	2.0
								sand	Sedimentary	8	2.0
								sand	Sedimentary	10	2.0
								sand	Sedimentary	10	2.0

Mesh Address Column	Row	Name of Mesh	Coordinate of Bh		Elevation (+m)	Groundwater level (G.L.-m)	Number of layer	Upper boundary depth of each layer (G.L.-m)	Soil types	Origin of Soils	Average N- value of each layer in site	Wet density kg/m <sup>3</sup>
			X (m)	Y (m)								
0061	0019	C61R19	1,160,049.24	730,627.97	871	-7	8	4.50	gravel	Sedimentary	16	2.1
								5.60	clay	Sedimentary	12	1.8
								6.50	gravel	Sedimentary	15	2.1
								7.50	sand	Sedimentary	25	2.0
								11.50	sand	Sedimentary	19	2.0
								14.20	clay	Sedimentary	24	1.8
								20.00	Base1			
								0.00	sand	Fill	19	2.0
0061	0020	C61R20	1,159,504.75	730,581.57	869	no	5	1.20	clay	Sedimentary	14	1.8
								6.80	clay	Sedimentary	15	1.8
								17.60	sand	Sedimentary	20	2.0
								18.40	sand	Sedimentary	18	2.0
								19.20	clay	Sedimentary	16	1.8
								24.50	clay	Sedimentary	17	1.8
								29.50	sand	Sedimentary	26	2.0
								40.00	Base1			
								0.00	clay	Fill	6	1.8
								1.40	clay	Sedimentary	14	1.8
0062	0014	C62R14	1,162,407.08	730,949.25	905	no	11	0.00	sand	Pavement	14	2.0
								0.30	sand	Fill	11	2.0
								1.40	sand	Top soil	11	2.0
								2.30	clay	Sedimentary	32	1.8
								4.30	sand	Coluvial soil	20	2.0
								5.30	Base1	Sedimentary	55	
								0.00	clay	Top soil / fill	12	1.8
								2.20	sand	Sedimentary	30	2.0
								8.00	Base1	Sedimentary	83	
								0.00	sand	Fill	14	2.0
0062	0015	C62R15	1,161,972.25	730,994.19	879	no	7	4.00	sand	Sedimentary	12	2.0
								5.00	clay	Sedimentary	13	1.8
								6.00	sand	Sedimentary	36	2.0
								11.00	sand	Sedimentary	20	2.0
								12.00	sand	Sedimentary	29	2.0
								14.00	sand	Sedimentary	34	2.0
								20.00	Base1			
								0.00	sand	Sedimentary	9	2.0
								1.00	sand	Sedimentary	22	2.0
								0062	0016	C62R16	1,161,639.99	730,671.32
1.00	sand	Sedimentary	22	2.0								

Mesh Address Column	Row	Name of Mesh	Coordinate of Bh		Elevation (+m)	Groundwater level (G.L.-m)		Number of layer	Upper boundary depth of each layer (G.L.-m)	Soil types	Origin of Soils	Average N- value of each layer in site	Wet density kg/m <sup>3</sup>
			X (m)	Y (m)									
0062	0016	C62R16	1,161,393.37	731,099.16	865.7	no	5	5.00	sand	Sedimentary	15	2.0	
								6.00	clay	Sedimentary	13	1.8	
								7.00	sand	Sedimentary	62	2.0	
								9.00	clay	Sedimentary	12	1.8	
								12.00	sand	Sedimentary	34	2.0	
								14.50	Base1	Sedimentary	80		
								0.00	clay	Fill	18	1.8	
								1.10	clay	Sedimentary	25	1.8	
								1.80	sand	Sedimentary	48	2.0	
								2.40	clay	Sedimentary	25	1.8	
0062	0018	C62R18	1,160,647.63	730,686.58	872.5	no	7	15.00	Base1				
								0.00	clay	Fill	16	1.8	
								3.60	clay	Sedimentary	18	1.8	
								4.60	clay	Sedimentary	16	1.8	
								5.70	clay	Sedimentary	13	1.8	
								8.40	clay	Sedimentary	12	1.8	
								9.50	clay	Sedimentary	9	1.8	
								11.60	clay	Sedimentary	18.85	1.8	
								20.00	Base1				
								0062	0019	C62R19	1,160,078.72	730,641.13	871
2.60	clay	Sedimentary	16	1.8									
5.40	clay	Sedimentary	14	1.8									
10.40	clay	Sedimentary	16	1.8									
16.20	clay	Sedimentary	13	1.8									
17.50	sand	Sedimentary	17	2.0									
19.50	sand	Sedimentary	24	2.0									
21.50	sand	Sedimentary	13	2.0									
23.60	clay	Sedimentary	13	1.8									
24.50	clay	Sedimentary	14	1.8									
0062	0020	C62R20	1,159,473.47	730,880.08	869.5	-8.43	10	35.00	Base1				
								0.00	sand	Fill	7	2.0	
								3.00	sand	Fill	5	2.0	
								5.00	sand	Fill	9	2.0	
								7.00	sand	Sedimentary	14	2.0	
								9.00	clay	Sedimentary	3	1.8	
								10.00	sand	Sedimentary	37	2.0	
								11.00	gravel	Sedimentary	23	2.1	
								12.00	clay	Sedimentary	49	1.8	
								13.00	gravel	Sedimentary	42	2.1	

Mesh Address Column	Row	Name of Mesh	Coordinate of Bh		Elevation (+m)	Groundwater level (G.L-m)	Number of layer	Upper boundary depth of each layer (G.L-m)	Soil types	Origin of Soils	Average N- value of each layer in site	Wet density kg/m <sup>3</sup>
			X (m)	Y (m)								
0063	0013	C63R13	1,163,090.86	731,558.91	978	no	10	14.00	Base1	Sedimentary	64	
								0.00	sand	Fill	8	2.0
								0.40	sand	Sedimentary	8	2.0
								1.70	sand	Weathered rock	21	2.0
								5.20	sand	Weathered rock	42	2.0
								10.60	sand	Weathered rock	21	2.0
								11.60	sand	Weathered rock	19	2.0
								12.70	Base1	Weathered rock	80	
0063	0014	C63R14	1,162,634.53	731,438.24	936	no	4	0.00	sand	Fill	8	2.0
								0.30	sand	Residual soil	8	2.0
								1.30	sand	Residual soil	31	2.0
								2.30	Base1	Weathered rock	65	
0063	0015	C63R15	1,161,861.31	731,142.07	867.4	-9.04	8	0.00	sand	Top soil/Fill	22	2.0
								1.00	sand	Fill	10	2.0
								3.00	sand	Sedimentary	28	2.0
								8.00	clay	Sedimentary	14	1.8
								9.00	sand	Sedimentary	46	2.0
								10.90	Base1	Sedimentary	41	
0063	0016	C63R16	1,161,645.96	731,502.47	868	-7.8	14	0.00	sand	Fill	5	2.0
								2.40	sand	Sedimentary	19	2.0
								3.30	sand	Sedimentary	13	2.0
								4.30	sand	Sedimentary	33	2.0
								7.30	sand	Sedimentary	28	2.0
								10.30	sand	Sedimentary	8	2.0
								11.20	Base1	Sedimentary	59	
0063	0017	C63R17	1,160,929.64	731,226.81	862	-13.5	12	0.00	clay	Sedimentary	8	1.8
								5.60	sand	Sedimentary	6	2.0
								6.70	gravel	Sedimentary	33	2.1
								8.50	clay	Sedimentary	12	1.8
								9.50	clay	Sedimentary	16	1.8
								10.60	sand	Sedimentary	23	2.0
								11.60	Base1	Sedimentary	28	
0063	0018	C63R18	1,160,421.62	731,567.29	860.52	-6.4	13	0.00	clay	Sedimentary	31	1.8
								2.30	clay	Sedimentary	20	1.8
								4.30	clay	Sedimentary	25	1.8
								5.20	sand	Sedimentary	8	2.0
								8.80	clay	Sedimentary	9	1.8
								11.30	sand	Sedimentary	14	2.0
								12.30	sand	Sedimentary	44	2.0
								17.20	clay	Sedimentary	15	1.8

Mesh Address Column	Row	Name of Mesh	Coordinate of Bh		Elevation (+m)	Groundwater level (G.L.-m)	Number of layer	Upper boundary depth of each layer (G.L.-m)	Soil types	Origin of Soils	Average N- value of each layer in site	Wet density kg/m <sup>3</sup>
			X (m)	Y (m)								
0063	0019	C63R19	1,159,984.58	731,286.32	863	-4	5	18.30	Base1 clay	Sedimentary Fill	80	1.8
								0.00	clay	Sedimentary	19	1.8
								3.50	sand	Aluvial soil	16	2.0
								8.50	clay	Sedimentary	17	1.8
0064	0013	C64R13	1,162,767.32	732,095.89	939	no	6	10.60	Base1	Sedimentary	65	1.8
								0.00	clay	Sedimentary	6	1.8
								1.50	sand	Sedimentary	11	2.0
								4.50	sand	Sedimentary	23	2.0
								7.50	sand	Residual soil	30	2.0
								8.60	sand	Residual soil	37	2.0
								13.60	sand	Residual soil	42	2.0
								15.00	Base1			
0064	0014	C64R14	1,162,270.13	731,718.93	912.3	no	7	0.00	sand	Sedimentary	24	2.0
								4.70	clay	Sedimentary	18	1.8
								7.50	sand	Sedimentary	21	2.0
								9.50	sand	Sedimentary	23	2.0
								21.70	clay	Sedimentary	36	1.8
								22.80	sand	Residual soil	29	2.0
								36.70	Base1	Weathered rock	73	
0064	0015	C64R15	1,161,895.09	732,030.32	881.5	no	8	0.00	gravel	Fill	3	2.1
								2.40	sand	Sedimentary	15	2.0
								3.50	sand	Sedimentary	17	2.0
								8.60	sand	Residual soil	28	2.0
								10.60	sand	Residual soil	18	2.0
								11.60	sand	Residual soil	14	2.0
								12.60	sand	Residual soil	38	2.0
								13.60	Base1	Weathered rock	80	
0064	0015	C64R16	1,161,675.89	731,701.72	869.3	-12.8	21	0.00	clay	Sedimentary	23	1.8
								2.30	clay	Sedimentary	16	1.8
								3.30	sand	Sedimentary	31	2.0
								6.20	sand	Sedimentary	31	2.0
								7.20	clay	Sedimentary	12	1.8
								8.30	sand	Sedimentary	29	2.0
								9.30	sand	Sedimentary	24	2.0
								11.30	sand	Sedimentary	25	2.0
								15.20	Base1	Sedimentary	53	
0064	0016	C64R16	1,161,405.43	731,937.28	866	-14.7	10	0.00	clay	Concrete	20	1.8
								0.20	clay	Fill	20	1.8
								1.00	sand	Sedimentary	32	2.0

Mesh Address Column	Row	Name of Mesh	Coordinate of Bh		Elevation (+m)	Groundwater level (G.L.-m)	Number of layer	Upper boundary depth of each layer (G.L.-m)	Soil types	Origin of Soils	Average N-value of each layer in site	Wet density kg/m <sup>3</sup>
			X (m)	Y (m)								
								4.00	sand	Sedimentary	36	2.0
								12.50	clay	Sedimentary	11	1.8
								15.00	sand	Sedimentary	14	2.0
								16.00	clay	Sedimentary	7	1.8
0064	0017	C64R17	1,160,942.54	732,055.61	872	-4	13	17.50	Base1	Sedimentary	61	
								0.00	clay	Sedimentary	8	1.8
								1.40	gravel	Sedimentary	15	2.1
								4.50	clay	Sedimentary	6	1.8
								5.50	clay	Sedimentary	4	1.8
								6.40	clay	Sedimentary	3	1.8
								8.70	gravel	Sedimentary	33	2.1
								12.70	clay	Sedimentary	19	1.8
								13.30	Base1	Sedimentary	76	
0064	0018	C64R18	1,160,542.13	732,009.60	856.82	-3.3	10	0.00	clay	Sedimentary	20	1.8
								3.30	gravel	Sedimentary	7	2.1
								4.20	sand	Sedimentary	13	2.0
								5.30	sand	Sedimentary	21	2.0
								6.80	clay	Sedimentary	13	1.8
								9.30	sand	Sedimentary	39	2.0
								10.40	clay	Sedimentary	13	1.8
								11.30	sand	Sedimentary	46	2.0
								13.30	Base1	Weathered rock	70	
0065	0013	C65R13	1,162,696.26	732,273.23	935.5	-15.3	8	0.00	sand	Fill	12	2.0
								1.50	sand	Sedimentary	8	2.0
								4.50	clay	Sedimentary	12	1.8
								6.60	sand	Sedimentary	17	2.0
								7.50	Base1	Residual soil	64	
0065	0015	C65R15	1,161,746.26	732,434.90	896.46	-16.3	14	0.00	sand	Fill	14	2.0
								1.20	sand	Sedimentary	19	2.0
								5.20	sand	Sedimentary	27	2.0
								8.30	clay	Coluvial soil	35	1.8
								16.30	Base1	Coluvial soil	48	
0065	0016	C65R16	1,161,333.07	732,495.49	873.5	-10.8	12	0.00	sand	Fill	5	2.0
								0.80	sand	Top soil	6	2.0
								1.30	clay	Sedimentary	33	1.8
								4.20	clay	Sedimentary	19	1.8
								6.20	clay	Sedimentary	26	1.8
								9.20	clay	Sedimentary	18	1.8
								11.30	sand	Sedimentary	37	2.0
								15.20	sand	Sedimentary	43	2.0



Mesh Address Column	Row	Name of Mesh	Coordinate of Bh		Elevation (+m)	Groundwater level (G.L.-m)	Number of layer	Upper boundary depth of each layer (G.L.-m)	Soil types	Origin of Soils	Average N- value of each layer in site	Wet density kg/m <sup>3</sup>
			X (m)	Y (m)								
0066	0016	C66R16	1,161,215.62	732,693.19	872	-10.4	13	0.00	clay	Top soil	2	1.8
								0.50	sand	Sedimentary	3	2.0
								1.20	sand	Sedimentary	10	2.0
								4.30	sand	Sedimentary	24	2.0
								6.30	sand	Sedimentary	37	2.0
								10.30	sand	Sedimentary	40	2.0
								11.20	sand	Sedimentary	31	2.0
								13.30	clay	Sedimentary	13	1.8
								14.20	Base1	Sedimentary	51	
0066	0017	C66R17	1,160,711.44	732,786.46	858.67	-7.5	8	0.00	Base1	Weathered rock	80	
0067	0016	C67R16	1,161,403.32	733,179.69	870.39	-4	5	0.00	sand	Fill	16	2.0
								2.40	sand	Sedimentary	38	2.0
								4.30	sand	Sedimentary	19	2.0
								5.40	clay	Sedimentary	18	1.8
								8.30	sand	Sedimentary	18	2.0
								10.00	Base1			
0067	0017	C67R17	1,161,045.43	733,150.40	870	-9.3	13	0.00	clay	Fill	22	2.0
								0.50	clay	Sedimentary	8	1.8
								1.30	clay	Sedimentary	13	1.8
								2.30	clay	Sedimentary	28	1.8
								4.20	sand	Sedimentary	12	2.0
								5.20	sand	Sedimentary	50	2.0
								8.30	clay	Sedimentary	17	1.8
								10.30	clay	Sedimentary	20	1.8
								12.40	sand	Sedimentary	27	2.0
								14.30	sand	Sedimentary	42	2.0
								19.20	clay	Sedimentary	22	1.8
								20.30	sand	Sedimentary	34	2.0
								25.30	Base1	Weathered rock	70	
0067	0017	C67R17	1,160,808.82	733,566.04	861.2	-10.8	18	0.00	sand	Pavement	23	2.0
								0.40	sand	Fill	23	2.0
								0.60	sand	Fill	23	2.0
								1.30	sand	Top soil	30	2.0



Mesh Address	Row	Name of Mesh	Coordinate of Bh		Elevation (+m)	Groundwater level (G.L.-m)	Number of layer	Upper boundary depth of each layer (G.L.-m)	Soil types	Origin of Soils	Average N-value of each layer in site	Wet density kg/m <sup>3</sup>
			X (m)	Y (m)								
0068	0016	C68R16	1,161,467.20	733,813.78	883.5	-9	2	0.00	clay	Fill	18	1.8
								2.30	Base1	Coluvial soil	66	
0068	0017	C68R17	1,161,063.76	733,997.66	872.35	-15.5	9	0.00	sand	Fill	70	2.0
								1.00	Base1	Sedimentary	79	
0068	0018	C68R18	1,160,536.42	733,800.38	852.5	-8.4	6	0.00	sand	Sedimentary	15	2.0
								1.30	clay	Sedimentary	32	1.8
								4.30	sand	Sedimentary	33	2.0
0068	0018	C68R18	1,160,224.40	733,913.94	849	-6	7	0.00	Base1	Sedimentary	66	
								4.60	clay	Sedimentary	12	2.0
								5.60	sand	Sedimentary	6	1.8
								7.60	sand	Sedimentary	16	2.0
								11.60	sand	Sedimentary	38	2.0
								12.60	sand	Sedimentary	44	2.0
0069	0013	C69R13	1,163,131.53	734,507.09	970	no	2	0.00	sand	Fill	15	2.0
								3.40	Base1	Coluvial soil	78	
0069	0014	C69R14	1,162,590.82	734,507.63	941.5	no	1	0.00	Base1	Coluvial soil	58	
0069	0016	C69R16	1,161,344.39	734,473.71	880	no	6	0.00	sand	Fill	10	2.0
								1.00	sand	Sedimentary	8	2.0
								2.00	sand	Sedimentary	48	2.0
								8.40	sand	Sedimentary	28	2.0
								10.00	sand	Sedimentary	33	2.0
0069	0017	C69R17	1,160,858.33	734,458.82	866	-18	11	0.00	Base1	Sedimentary	72	
								0.00	sand	Fill	11	2.0
								2.80	Base1	Sedimentary	58	
0069	0018	C69R18	1,160,465.00	734,301.13	847.12	-6.2	12	0.00	gravel	Coluvial soil	18	2.1
								2.00	clay	Aluvial Soil	2	1.8
								3.00	clay	Aluvial Soil	20	1.8
								6.00	sand	pluvial - Aluvial S	34	2.0

Mesh Address		Coordinate of Bh		Elevation		Groundwater level (G.L-m)	Number of layer	Upper boundary depth of each layer (G.L-m)	Soil types	Origin of Soils	Average N- value of each layer in site	Wet density kg/m <sup>3</sup>
Colum	Row	Nome of Mesh	X (m)	Y (m)	(+m)							
0069	0019	C69R19	1,159,963.70	734,298.45	830.04	-59	5	8.00	Base1 sand clay	pluvial - Alluvial S Sedimentary Sedimentary	72 24 7	2.0 2.0 1.8
0070	0014	C70R14	1,162,366.51	734,926.28	911.3	-10.3	11	0.00	clay	Sedimentary	38	2.0
								1.30	Base1	Sedimentary	9	1.8
0070	0015	C70R15	1,162,078.90	734,667.66	901.7	no	12	0.00	sand	Top soil	7	2.0
								0.50	Base1	Coluvial soil	Rotation	
0070	0016	C70R16	1,161,148.03	734,913.00	872.5	-7.7	12	0.00	sand	Fill	14	2.0
								0.80	sand	Sedimentary	9	2.0
								2.30	gravel	Sedimentary	31	2.1
								5.70	clay	Sedimentary	34	1.8
								6.40	sand	Sedimentary	28	2.0
								8.20	clay	Sedimentary	30	1.8
								10.20	sand	Sedimentary	26	2.0
								15.90	clay	Sedimentary	38	1.8
0070	0018	C70R18	1,160,437.34	734,672.83	847	no	6	0.00	Base1 sand	Sedimentary Fill	80 10	2.0 2.0
								1.30	sand	Sedimentary	20	2.0
								2.20	sand	Sedimentary	9	2.0
								3.30	sand	Sedimentary	20	2.0
								6.20	clay	Sedimentary	9	1.8
								8.20	clay	Sedimentary	18	1.8
								15.00	Base1			
0070	0019	C70R19	1,159,855.46	734,928.56	841.5	-5.52	8	0.00	sand	Fill	11	2.0
								1.40	clay	Sedimentary	8	1.8
								3.40	sand	Sedimentary	9	2.0
								5.40	clay	Sedimentary	5	1.8
								6.40	clay	Sedimentary	31	1.8
								8.30	Base1	Residual soil	77	
0070	0019	C70R19	1,159,666.66	734,796.43	914.8	-9.8	12	0.00	clay	Sedimentary	11	1.8
								2.20	sand	Sedimentary	15	2.0
								3.30	clay	Sedimentary	24	1.8
								4.20	sand	Sedimentary	79	2.0
								5.20	sand	Sedimentary	30	2.0
								7.20	sand	Sedimentary	28	2.0
								8.20	clay	Sedimentary	14	1.8
								9.20	Base1	Sedimentary	20	

Mesh Address	Mesh	Coordinate of Bh		Elevation (+m)	Groundwater level (G.L-m)		Number of layer	Upper boundary depth of each layer (G.L-m)	Soil types	Origin of Soils	Average N-value of each layer in site	Wet density kg/m <sup>3</sup>
		X (m)	Y (m)		(G.L-m)	(G.L-m)						
0071	0012	C71R12	1,163,287.18	735,495.55	984.5	-21.6	7	6.00	sand	Fill	29	2.0
								6.00	sand	Fill	14	2.0
								10.00	Base1	Coluvial soil	55	
0071	0012	C71R12	1,163,269.09	735,483.67	1,005	-21.8	12	0.00	Base1	Fill	50	
0071	0013	C71R13	1,163,026.15	735,152.24	959.81	no	6	0.00	sand	Fill	8	2.0
								0.50	sand	Sedimentary	32	2.0
								3.25	Base1	Sedimentary	80	
0071	0015	C71R15	1,161,696.36	735,227.96	885.42	-13.6	7	0.00	Base1	Pavement	49	
0071	0016	C71R16	1,161,374.07	735,479.78	872.5	-8.6	7	0.00	Base1	Coluvial soil	45	
0071	0017	C71R17	1,160,932.36	735,443.56	862.3	-12.4	13	0.00	clay	Fill / Top soil	34	1.8
								1.20	clay	Sedimentary	18	1.8
								3.80	Base1	Sedimentary	60	
0071	0019	C71R19	1,160,031.86	735,253.74	844.2	-8.6	7	0.00	gravel	Fill	16	2.1
								4.20	sand	Aluvial Soil	22	2.0
								6.70	clay	Aluvial Soil	12	1.8
								7.80	sand	Aluvial Soil	34	2.0
								10.30	Base1	Coluvial soil	58	
0072	0013	C72R13	1,163,074.53	735,989.82	995.5	-19.8	3	0.00	sand	Fill	18	2.0
								1.20	gravel	Coluvial soil	39	2.1
								5.00	Base1	Coluvial soil	80	
0072	0014	C72R14	1,162,197.85	735,714.58	894	-0.85	3	0.00	gravel	Fill	43	2.1
								3.00	Base1	Coluvial soil	65	
0072	0015	C72R15	1,162,023.53	736,089.25	888.9	-5	5	0.00	sand	Top soil	26	2.0
								0.40	sand	Sedimentary	26	2.0
								2.50	Base1	Sedimentary	50	
0072	0016	C72R16	1,161,457.50	736,063.27	869.6	-9.7	8	0.00	sand	Fill	8	2.0
								0.50	sand	Fill	14	2.0
								4.80	sand	Fill	10	2.0
								7.30	Base1	Coluvial soil	80	
0073	0013	C73R13	1,163,056.10	736,454.66	963.3	-16.18	3	0.00	sand	Aluvial-coluvial so	8	2.0
								2.50	sand	Aluvial-coluvial so	29	2.0
								6.00	Base1	Aluvial-coluvial so	58	
0073	0014	C73R14	1,162,637.45	736,441.97	914	no	4	0.00	sand	Fill	32	2.0
								2.60	Base1	Sedimentary	56	
0073	0015	C73R15	1,161,973.72	736,231.47	887.5	-2.1	18	0.00	sand	Top soil	6	2.0
								1.20	sand	Sedimentary	9	2.0
								4.30	clay	Sedimentary	24	1.8
								5.30	Base1	Sedimentary	80	
0073	0016	C73R16	1,161,644.43	736,626.17	874.8	-11.4	6	0.00	gravel	Fill	9	2.1
								0.90	sand	Coluvial Soil	20	2.0

Mesh Address	Row	Name of Mesh	Coordinate of Bh		Elevation (+m)	Groundwater level (G.L-m)	Number of layer	Upper boundary depth of each layer (G.L-m)	Soil types	Origin of Soils	Average N-value of each layer in site	Wet density kg/m <sup>3</sup>
			X (m)	Y (m)								
0074	0013	C74R13	1,162,937.75	737,033.29	868.49	-6.9	6					
0074	0013	C74R13	1,162,790.55	737,097.03	943	no	4					
0074	0015	C74R15	1,161,695.69	736,976.44	870	no	19					
0075	0013	C75R13	1,162,778.73	737,231.60	947.5	no	5					
0075	0015	C75R15	1,161,960.52	737,552.80	892	no	10					
0075	0016	C75R16	1,161,476.75	737,193.25	859.05	-5	10					
0075	0018	C75R18	1,160,639.49	737,557.43	857.5	-31	7					
0075	0019	C75R19	1,159,747.89	737,344.28	835.5	-6.6	4					
0075	0019	C75R19	1,159,739.81	737,331.46	835	-7.8	5					
0076	0013	C76R13	1,162,748.27	737,992.20	944.75	no	2					

Mesh Address	Name of Mesh	Coordinate of Bh		Elevation (+m)	Groundwater level (G.L-m)	Number of layer	Upper boundary depth of each layer (G.L-m)	Soil types	Origin of Soils	Average N-value of each layer in site	Wet density kg/m <sup>3</sup>
		X (m)	Y (m)								
0076	C76R14	1,162,440.62	738,099.52	910.85	no	2	3.00	Base1 sand	pluvial - Aluvial Soil	51	2.0
0076	C76R14	1,162,244.65	738,020.49	900.3	no	6	0.00	clay	Coluvial Soil	60	1.8
							0.50	clay	Residual soil	10	1.8
							3.40	sand	Residual soil	16	2.0
							4.60	sand	Weathered rock	44	2.0
0076	C76R16	1,161,345.71	737,841.35	890	-12.5	11	6.90	Base1 sand	Weathered rock	23	2.0
							0.00	sand	Fill	5	2.0
							0.50	clay	Sedimentary	18	1.8
0076	C76R18	1,160,352.76	738,104.11	848.28	no	7	1.80	Base1 sand	Sedimentary	65	2.0
							0.00	sand	Fill	14	2.0
							0.50	sand	Top Soil	14	2.0
							4.30	sand	Top Soil	47	2.0
0076	C76R19	1,159,876.75	738,079.19	835.57	no	6	10.30	Base1 sand	Coluvial soil	43	2.0
							0.00	sand	Fill	22	2.0
							3.00	sand	Aluvial soil	16	2.0
							9.00	sand	Aluvial soil	14	2.0
							11.00	sand	Aluvial soil	23	2.0
							13.55	sand	Aluvial soil	40	2.0
							14.00	Base1 sand	Aluvial soil	75	2.0
0076	C76R19	1,159,763.11	738,028.66	834.24	-6	8	0.00	sand	Sedimentary	17	2.0
							0.50	clay	Sedimentary	14	1.8
							3.30	clay	Sedimentary	6	1.8
							4.80	sand	Sedimentary	15	2.0
							6.50	sand	Sedimentary	37	2.0
0077	C77R15	1,161,819.68	738,431.90	894.5	no	3	8.80	Base1 clay	Sedimentary	74	1.8
							0.00	sand	Sedimentary	44	2.0
							3.30	sand	Sedimentary	42	2.0
							4.30	clay	Sedimentary	44	1.8
							10.00	Base1 sand			
0077	C77R15	1,161,771.69	738,496.43	893.5	no	4	0.00	sand	Asphalt	23	2.0
							0.40	sand	Sedimentary	44	2.0
							2.30	sand	Sedimentary	41	2.0
							6.40	sand	Sedimentary	44	2.0
0077	C77R16	1,161,228.49	738,538.71	871.6	-9.5	5	10.00	Base1 sand			
							0.00	sand	Fill	4	2.0
							0.90	clay	Coluvial soil	18	1.8
0077	C77R18	1,160,332.41	738,213.79	847.2	-6	10	7.30	Base1 sand	Coluvial soil	50	2.0
							0.00	sand	Asphalt	8	2.0

Mesh Address	Row	Name of Mesh	Coordinate of Bh		Elevation (+m)	Groundwater level (G.L.-m)	Number of layer	Upper boundary depth of each layer (G.L.-m)	Soil types	Origin of Soils	Average N-value of each layer in site	Wet density kg/m <sup>3</sup>
			X (m)	Y (m)								
0078	0014	C78R14	1,162,223.70	738,660.50	940.7	-11.2	3	0.00	Base1 gravel	Fill	35	2.1
0078	0016	C78R16	1,161,557.61	738,934.91	886.13	-2.2	7	0.00	Base1 sand	Fill	24	2.0
								2.20	clay	Top Soil	8	1.8
								4.30	sand	Coluvial soil	33	2.0
								13.20	clay	Coluvial soil	24	1.8
								14.20	sand	Coluvial soil	22	2.0
								17.30	Base1	Weathered rock	79	
0078	0017	C78R17	1,160,847.11	738,936.50	870.5	no	4	0.00	clay	Top Soil	6	1.8
								0.30	clay	Residual soil	14	1.8
								3.00	clay	Weathered rock	19	1.8
								7.30	Base1	Weathered rock	80	
0078	0018	C78R18	1,160,364.27	738,668.44	820.96	no	6	0.00	gravel	Fill	10	2.1
								1.00	gravel	Aluvial soil	31	2.1
								6.00	sand	Aluvial soil	40	2.0
								12.00	sand	Aluvial soil	11	2.0
								16.00	Base1	Aluvial soil	80	
0078	0019	C78R19	1,159,856.65	738,870.36	838	-3.5	9	0.00	sand	Residual soil	7	2.0
								0.40	sand	Residual soil	28	2.0
								6.20	sand	Residual soil	10	2.0
								7.20	sand	Residual soil	31	2.0
								9.30	sand	Residual soil	27	2.0
								11.20	clay	Weathered rock	27	1.8
								17.30	sand	Weathered rock	26	2.0
								20.30	sand	Weathered rock	11	2.0
								22.70	Base1	Weathered rock	80	
0079	0016	C79R16	1,161,289.13	739,424.55	885	no	9	0.00	sand	Fill	5	2.0
								2.20	gravel	Fill	5	2.1
								3.00	sand	Fill	4	2.0
								5.00	clay	Top Soil	5	1.8
								8.70	gravel	Coluvial soil	14	2.1
								10.80	Base1	Weathered rock	37	
0080	0015	C80R15	1,161,875.50	739,646.58	919.17	-14.5	5	0.00	sand	Fill	11	2.0
								2.60	sand	Coluvial Soil	27	2.0
								11.50	clay	Coluvial Soil	21	1.8

Mesh Address	Name of Mesh	Coordinate of Bh		Elevation (+m)	Groundwater level (G.L.-m)	Number of layer	Upper boundary depth of each layer (G.L.-m)	Soil types	Origin of Soils	Average N-value of each layer in site	Wet density kg/m <sup>3</sup>
		X (m)	Y (m)								
Column	Row										
							14.40	clay	Coluvial Soil	36	1.8
0080	0016			902.6	no	4	16.80	Base1	Weathered rock	80	
							0.00	gravel	Fill	8	2.1
							3.40	gravel	Fill	14	2.1
							5.10	Base1	Weathered rock	29	
0080	0016			875	no	5	0.00	sand	Residual soil	23	2.0
							1.30	sand	Residual soil	31	2.0
							2.50	Base1	Weathered rock	41	
0080	0017			992.5	no	5	0.00	clay	Residual soil	20	1.8
							1.20	Base1	Residual soil	34	
0081	0016			872.45	no	3	0.00	sand	Weathered rock	34	2.0
							1.10	sand	Weathered rock	38	2.0
							5.30	Base1	Weathered rock	80	
0081	0020			848.64	no	3	0.00	sand	Fill	22	2.0
							4.00	sand	Residual soil	21	2.0
							5.50	Base1	Residual soil	55	
0082	0016			885.5	-4.8	6	0.00	sand	Fill	20	2.0
							2.40	Base1	Sedimentary	64	
0083	0015			930	-9.5	3	0.00	sand	Fill	22	2.0
							2.90	clay	Top Soil	18	1.8
0083	0015			909	-6.25	3	0.00	Base1	Coluvial soil	52	2.0
							4.70	sand	Fill	24	2.0
							5.30	clay	Top soil	21	1.8
0083	0016			892	-5.76	6	0.00	Base1	Coluvial Soil	63	
							0.00	sand	Fill	9	2.0
							2.50	sand	Fill	18	2.0
							5.50	gravel	Sedimentary	20	2.1
0084	0015			950.33	no	5	0.00	Base1	Sedimentary	80	
							0.40	sand	Fill	12	2.0
							3.20	clay	Coluvial soil	27	1.8
0084	0015			950.13	no	4	0.00	Base1	Residual soil	80	
							14.20	clay	Fill	28	1.8
							17.30	clay	Coluvial soil	17	1.8
							19.20	clay	Residual soil	31	1.8
								Base1	Weathered rock	73	

Mesh Address Column	Row	Name of Mesh	Coordinate of Borehole		Elevation (+m)	Groundwater level (G.L-m)	Lower boundary		Origin of Soils	Average N- value of each layer in site	Wet density kg/m <sup>3</sup>	
			X (m)	Y (m)			Number of layer	Soil types				
0037	0030	C37R30	1,154,283.85	718,629.15	960	-3.7	4	2.5 3.6 4.6 9.2 1.40 9.30 0.30 2.60 15.20	clay sand clay clay sand clay clay clay clay	Residual soil Residual soil Residual soil Weathered rock Fill Weathered rock Top soil Residual soil Weathered rock	29 36 44 80 16 55 20 20 36	
0038	0030	C38R30	1,154,302.62	718,668.74	960		2	1.40 9.30	sand clay	Fill Weathered rock	16 55	2040 2192
0038	0031	C38R31	1,154,099.70	718,862.26	989	-6.6	3	0.30 2.60 15.20	clay clay clay	Top soil Residual soil Weathered rock	20 20 36	
0041	0007	C41R7	1,166,046.91	720,167.05	549.3	no	2	12 17	sand gravel	Fill Coluvial Soil	20 100	
0041	0024	C41R24	1,157,252.43	720,572.69	934.9	no	4	7.30 10.30 11.40 17.00	sand sand sand sand	Fill Fill Sedimentary Sedimentary	29 24 20 34	2032
0047	0019	C47R19	1,159,677.75	723,512.81	981	no	4	24.60 25.40 26.50 28.30	sand clay schist schist	Fill Residual soil Weathered rock Weathered rock	13 28 86 80	2115
0048	0030	C48R30	1,154,362.46	723,876.64	1153	no	2	2.20 30.70	sand schist	Residual soil Weathered rock	30 53	
0049	0009	C49R9	1,164,780.56	724,611.09	939	no	9	0.9 1.2 1.8 6.3 7.5 10 11.5 15 25	clay clay clay clay schist schist schist schist	Fill Top soil Residual soil Weathered rock Weathered rock Weathered rock Weathered rock Weathered rock Weathered rock	6 7 13 16 59 Rotation 16 100 Rotation	
0049	0010	C49R10	1,164,272.61	724,172.33	927	no	8	1.4 1.8 3 6.3 8.3 12 23.5	sand sand schist schist schist schist schist	Fill Residual soil Weathered rock Weathered rock Weathered rock Weathered rock Weathered rock	16 16 11 26 32 88 Rotation	



Mesh Address Column	Row	Name of Mesh	Coordinate of Borehole		Elevation (+m)	Groundwater level (G.L-m)	Lower boundary		Origin of Soils	Average N- value of each layer in site	Wet density kg/m <sup>3</sup>
			X (m)	Y (m)			Number of layer	Soil types			
0050	0010	C50R10	1,164,517.05	724,844.35	926	no	4	40.2 1 8 15 20 3 10 13 20	Weathered rock / fresh rock Top soil Residual soil Weathered rock Weathered rock Fill Residual soil Residual soil Weathered rock	Rotation 25 25 Rotation Rotation 39 52 80 Rotation	
0050	0010	C50R10	1,164,532.47	724,907.77	973	no	4				
0051	0011	C51R11	1,163,974.13	725,282.30	955	-18.4	8	0.50 8.30 9.40 10.30 13.30 19.20 21.30 24.80	Fill Fill Fill Sedimentary Sedimentary Weathered rock Weathered rock Weathered rock	50 12 13 21 6 72 69 80	
0051	0014	C51R14	1,162,406.87	725,419.21	1033	no	5	16.60 18.40 20.40 25.80 30.00	Fill Fill Fill Weathered rock Weathered rock	20 42 29 69 80	
0051	0021	C51R21	1,158,831.45	725,201.68	925	no	4	1.30 3.50 15.50 17.30	Fill Residual soil Weathered rock Weathered rock	10 38 27 80	
0051	0029	C51R29	1,154,759.33	725,624.88	980	no	4	14 15 18 25	Fill Fill Fill Residual soil	35 31 21 50	
0051	0031	C51R31	1,154,040.11	725,337.78	995.8	no	6	0.50 6.20 20.40 26.30 28.30 31.80	Top soil Fill Coluvial soil Coluvial soil Sedimentary Residual soil	10 10 36 44 49 80	2182
0051	0031	C51R31	1,154,002.23	725,160.22	997.8	no	3	11.30	Fill	28	

Mesh Address	Row	Name of Mesh	Coordinate of Borehole		Elevation (+m)	Groundwater level (G.L-m)	Lower boundary		Origin of Soils	Average N-value of each layer in site	Wet density kg/m <sup>3</sup>
			X (m)	Y (m)			Depth of each layer (G.L-m)	Soil types			
0053	0011	C53R11	1,163,968.56	726,155.41	993	no	3	14.20 24.70 2.50 9.80 13.20 4.50 8.60 13.30	Residual soil Weathered rock Fill Weathered rock Weathered rock Fill Weathered rock Weathered rock	38 87 5 67 61 29 23 47	
0053	0026	C53R26	1,156,249.99	726,318.95	969	no	3				2065 2262 2169 2036
0054	0012	C54R12	1,163,305.87	726,860.73	930	no	3	7.60 12.00 20.00	Weathered rock Weathered rock Weathered rock	35 80 Rotation	2152
0054	0018	C54R18	1,160,498.31	727,042.81	889	-19.2	8	3.00 9.60 16.00 17.00 20.00 30.00 32.40 35.00	Residual soil Weathered rock Weathered rock Weathered rock Weathered rock Weathered rock Weathered rock Weathered rock	44 56 100 Rotation 14 69 Rotation 83	2113 2370 2135 2274 2141
0054	0032	C54R32	1,153,616.32	727,060.45	930	no	6	2.60 4.70 6.60 18.60 28.50 30.00	Residual soil Weathered rock Weathered rock Weathered rock Weathered rock Weathered rock	41 71 36 80 80 80	2000
0055	0018	C55R18	1,160,583.79	727,171.28	900	no	2	6.40 20.00	Weathered rock Weathered rock	74 100	2154
0056	0014	C56R14	1,162,433.66	727,738.21	924	-12.4	5	3.4 3.7 20 22 27.5	Fill Weathered rock Weathered rock Weathered rock Weathered rock	32 100 Rotation Rotation Rotation	
0056	0024	C56R24	1,157,218.87	727,865.87	914	no	6	2.60 13.30 15.90 25.90 29.60	Sedimentary Residual soil Residual soil Residual soil Weathered rock	15 54 21 60 18	2229 2237 2206

Mesh Address		Name of Mesh	Coordinate of Borehole		Elevation (+m)	Groundwater level (G.L-m)	Lower boundary		Origin of Soils	Average N-value of each layer in site	Wet density kg/m <sup>3</sup>
Column	Row		X (m)	Y (m)			Number of layer	Soil types			
0056	0024	C56R24	1,157,205.00	727,871.51	914	no	5	30.30 8.60 14.50 24.90 29.40 35.30	clay clay clay clay sand clay	27	2168 2202 2263 2229
0058	0018	C58R18	1,160,317.77	729,098.16	884	no	3	3.50 6.50 10.00	sand clay clay	8 36 48	2240 2167
0059	0023	C59R23	1,157,984.15	729,190.47	882	no	3	1.30 11.60 20.40	clay clay clay	8 31 76	2276
0062	00024	C62R24	1,157,242.45	730977.88	1047	no	4	16.2 17.3 20 23.3	clay clay clay clay	30 55 59 80	2164 2139
0063	0021	C63R21	1,158,963.67	731,340.86	960	no	4	17.00 17.50 18.20 20.20	clay clay clay schist	26 70 80 80	2026
0063	0022	C63R22	1,158,386.99	731,170.64	1005.1	no	4	35.00 37.00 38.60 43.50 45.50	gravel clay sand sand schist	44 53 58 57 Rotation	
0063	0023	C63R23	1,157,943.54	731,428.59	1049	no	3	16 20.6 24.2	gravel sand clay	26 45 77	
0063	0024	C63R24	1,157,379.80	731,232.07	1030	no	3	14 15.6 16.3 26.10 26.6 29.00	sand sand schist sand schist schist	27 33 80 28 60 80	2101
0064	0021	C64R21	1,158,984.16	731,800.23	1025.3	no	3	8.5 10 18	gravel schist schist	21 60 Rotation	
0064	0022	C64R22	1,158,599.03	731,844.65	1075.4	no	3				

Mesh Address Column	Row	Name of Mesh	Coordinate of Borehole		Elevation (+m)	Groundwater level (G.L.-m)	Number of layer	Lower boundary		Origin of Soils	Average N- value of each layer in site	Wet density kg/m <sup>3</sup>
			X (m)	Y (m)				Depth of each layer (G.L.-m)	Soil types			
0064	0023	C64R23	1,158,010.57	731,707.59	1,050	no	3	5	sand	Fill	46	
								6	sand	Residual soil	40	
								10	sand	Residual soil	80	
0064	0024	C64R24	1,157,651.11	731,991.37	1005	no	3	6	clay	Fill	32	2117
								7.5	clay	Residual soil	32	
								12.4	schist	Weathered rock	80	
0065	0020	C65R20	1,159,306.80	732204.11	995	no	4	25.8	clay	Fill	20	
								26.4	clay	Top soil	20	
								28.5	clay	Residual soil	32	
								31.5	schist	Weathered rock	80	
0065	0021	C65R21	1,158,817.69	732,143.84	1101.2	no	3	0.9	sand	Fill	14	
								22.4	sand	Fill	27	
								29.7	clay	Weathered rock	64	
0065	0021	C65R21	1,158,706.94	732,310.15	1096.85	no	7	3	sand	Fill	8	
								5.6	schist	Residual soil	80	
								7.4	schist	Weathered rock	Rotation	
								9	schist		80	
								10.8	schist	Weathered rock	80	
								11.6	schist		80	
								17.5	schist	Weathered rock	Rotation	
0066	0019	C66R19	1,160,020.43	733,065.80	926	no	3	6	clay	Fill	20	
								6.8	clay	Residual soil	25	
								12.2	clay	Weathered rock	46	1981
0071	0019	C71R19	1,159,651.82	735381.95	924.55	no	2	1	sand	Top soil	28	
								12	sand	Weathered rock	77	
0073	0020	C73R20	1,159,411.80	736608.38	922.3	no	5	13.2	sand	Fill	22	
								14.8	clay	Top soil	30	
								15.5	clay	Residual soil	46	
								20.68	Schist	Weathered rock	28	2113
								24	Schist	Weathered rock	Rotation	
0074	0020	C74R20	1,159,538.28	737109.44	902	no	3	9.3	sand	Fill	21	
								10.3	clay	Top soil	13	
								15.6	sand	Weathered rock	103	
0074	0021	C74R21	1,158,905.28	736,753.04	962	-2.8	4	8.5	clay	Fill	8	2406
								11.5	clay	Sedimentary	17	2490
								14.5	clay	Weathered rock	21	
								17.4	clay	Weathered rock	49	

Mesh Address Column	Row	Name of Mesh	Coordinate of Borehole		Elevation (+m)	Groundwater level (G.L-m)	Lower boundary		Origin of Soils	Average N- value of each layer in site	Wet density kg/m <sup>3</sup>
			X (m)	Y (m)			Number of layer	Soil types			
0075	0021	C75R21	1,159,008.10	737,564.20	932.5	no	3	8.2 9.8 12.3 11.50 7.30 16.5 18.3 20.2	Fill Residual soil Weathered rock Fill Weathered rock Fill Sedimentary Weathered rock	18 25 80 11 60 16 22 80	
0076	0021	C76R21	1,158,875.54	738,013.78	874	no	2	12.7 13.2 14 15.4 20.3	clay clay clay gravel Schist		2082 2079
0076	0022	C76R22	1,158,501.35	737,975.55	981.5	no	3	1.9 2.4 7.5 9.6 15.3	Fill Fill Top soil Top soil Weathered rock		
0076	0023	C76R23	1,157,936.00	737878.46	914.5	no	5	1.9 2.4 7.5 9.6 15.3	Fill Fill Top soil Top soil Weathered rock		
0076	0023	C76R23	1,157,693.84	737696.58	889.4	no	5	1.9 2.4 7.5 9.6 15.3	Fill Fill Top soil Top soil Weathered rock		
0077	0021	C76R21	1,158,852.06	738,156.14	870	no	4	18.80 19.30 20.70 23.30	clay clay clay Schist		2131 2218
0077	0021	C76R21	1,158,692.83	73,896.56	888	no	4	15.00 15.70 16.40 21.20	Fill Top Soil Residual soil Weathered rock		
0077	0023	C77R23	1,157,837.27	738,434.56	972.3	no	1	3.14	Schist	Rotation	
0077	0024	C77R24	1,157,434.05	738,194.80	960.2	no	2	0.8 2.1	gravel sand	3	
0078	0021	C78R21	1,158,932.87	739,087.14	845.2	no	6	5.20 6.30 9.20 18.30 19.70 27.00	sand sand sand sand sand schist	50 6 25 40 43 88	
0078	0021	C78R21	1,158,758.91	739,029.02	868.5	no	3	8.70 9.30 15.20	gravel clay clay	20 26 42	

Mesh Address Column	Row	Name of Mesh	Coordinate of Borehole		Elevation (+m)	Groundwater level (G.L.-m)	Lower boundary		Origin of Soils	Average N- value of each layer in site	Wet density kg/m <sup>3</sup>
			X (m)	Y (m)			Number of layer	Soil types			
0078	0023	C78R23	1,157,976.66	738,921.68	880.9	no	4	7.40 8.00 11.00 12.65	Fill Top Soil Residual soil Weathered rock	21 21 68 67	
0078	0023	C78R223	1,157,814.82	738,936.44	888.35	no	2	0.90 12.30	Fill Weathered rock	14 24	1990
0078	0024	C78R24	1,157,286.95	739,083.63	984.5	no	6	2 3 6.7 8 9.9 10.5	Fill Residual soil Weathered rock Weathered rock Weathered rock Weathered rock	14 17 77 Rotation 54 Rotation	
0078	0025	C78R25	1,157,073.60	738,842.05	981	no	2	4 7.4	Fill Weathered rock	39 64	
0079	0017	C79R17	1,160,764.82	739,186.17	880.5	-2.7	5	1.20 3.20 7.10 10.20 17.80	Fill Top Soil Coluvial soil Coluvial soil Weathered rock	13 5 18 21 66	2221
0079	0018	C78R18	1,160,503.70	739,399.56	867.5	no	6	8.9 9.9 11.6 12.7 13.6 14.3	Fill Fill Fill Fill Weathered rock Weathered rock	15 13 22 17 50 80	
0079	0022	C79R22	1,158,560.47	739,198.44	876.3	no	2	17.60 20.30	Fill Weathered rock	26 34	2206
0079	0023	C79R23	1,158,019.29	739,412.70	879.7	no	3	11.20 15.40 20.30	Fill Weathered rock Weathered rock	18 37 32	2208 2145 2149
0079	0024	C79R24	1,157,484.11	739,534.32	930.5	no	5	1.20 4.70 5.40 9.70 11.20	Fill Weathered rock Weathered rock Weathered rock Weathered rock	9 27 22 43 80	
0079	0024	C78R24	1,157,246.46	739,496.19	930.93	no	2	33 36	Residual soil Residual soil	31 80	2210

Mesh Address Column	Row	Name of Mesh	Coordinate of Borehole		Elevation (+m)	Groundwater level (G.L-m)	Lower boundary		Origin of Soils	Average N- value of each layer in site	Wet density kg/m <sup>3</sup>
			X (m)	Y (m)			Number of layer	Soil types			
0079	0026	C79R26	1,156,584.32	739,568.03	953.2	no	3	14.5 20 23.3	Fill Fill Weathered rock	27 25 43	2200
0080	0022	C80R22	1,158,212.36	739,770.15	833.7	no	5	2.50 5.40 6.50 7.50 11.30	clay gravel sand schist schist	13 8 7 10 62	
0080	0024	C80R24	1,157,376.98	739,926.84	923.8	no	3	3.60 13.00 20.30	gravel clay clay	14 35 59	2037 2020
0080	0024	C80R24	1,157,240.22	739,863.59	945.77	no	4	2.50 5.50 10.40 15.40	sand clay Schist Schist	36 20 33 62.6	
0080	0025	C80R25	1,156,773.73	739,767.81	835.22	-1.1	7	3.00 5.00 6.00 8.00 9.00 11.00 16.60	gravel gravel gravel clay clay sand clay	13 43 43 33 21 14 54	
0081	0022	C81R22	1,158,235.02	740,458.89	842.5	no	6	5.60 6.50 8.40 14.40 18.20 20.10	clay clay sand sand clay Schist	11 17 13 25 27 80	2042
0083	0019	C83R19	1,159,694.45	741,198.25	848.82	-4.7	3	5.3 10.3 18 18.7	sand clay clay sand	18 22 30 80	
0084	0019	C84R19	1,160,116.66	741,817.63	918.33	no	2	23.20 29.80	sand schist	54 80	
0084	0020	C84R20	1,159,497.70	742,106.19	922.5	no	3	16.3 18.3 22.8	sand gravel sand	11 41 76	2113 2205

Mesh Address Column	Row	Name of Mesh	Coordinate of Borehole		Elevation (+m)	Groundwater level (G.L-m)	Lower boundary		Origin of Soils	Average N- value of each layer in site	Wet density kg/m <sup>3</sup>
			X (m)	Y (m)			Number of layer	Soil types			
0084	0020	C84R20	1,159,448.28	741,906.96	903.5	no	3	20.40 25.50 29.30	Fill Fill Weathered rock	24 24 80	2050
0087	0016	C87R16	1,161,431.47	743,436.71	1,030	-9.77	6	1 3 5 7 8 10	Top soil Fill Weathered rock Weathered rock Weathered rock Weathered rock	60 21 28 28 30 19	
0087	0017	C87R17	1,160,819.22	743,307.89	1020.59	no	4	2.5 4.5 11 22.1	Residual soil Weathered rock Weathered rock Weathered rock	13 19 78 43	2088 2057
0088	0016	C88R16	1,161,158.08	743,778.18	974	no	5	4.5 5.6 8.5 12.4 15.3	Fill Top soil Top soil Residual soil Weathered rock	19 15 17 33 80	2113
0089	0017	C89R17	1,160,948.76	744,367.14	999.73	no	4	13.50 14.50 18.00 21.00	Fill Top soil Residual soil Weathered rock	17 26 51 80	
0088	0018	C88R18	1,160,569.06	743,653.30	929	no	3	9 12 15	Fill Residual soil Rock	11 14 46	



***Data Book C***

**Geomorphology Survey**

**Table DB-1.1 List of Sketch**

Steep Slope			Cross Section		
No.	Stream	Serial No.	No.	Stream	Serial No.
1	To come	T-1	14	Camburi-La Julia	12-LJ-27
2	To come	TO-33	15	Camburi-La Julia	12-LJ-28
3	To come	TO-31	16	Camburi-La Julia	12-LJ-36
4	Pasaquire	LJ-13	17	To come	14-TO-02
5	Cota Mil	CM-3	18	To come	14-TO-03
6	Pasaquire	PAS-2	19	To come	14-TO-21
7	Galindo	CAU-4	20	To come	14-TO-36
8	To come	TO-14	21	Tenerias-Tributary	15-TE-06
9	Gamboa	GAM-10	22	Tenerias	15-TE-09
10	Gamboa	GAM-03	23	Tenerias	15-TE-11
11	Cotiza	COT-02	24	Sebucan	17-SE-01
12	Cartafuegos	RD-14	25	Sebucan	17-SE-02
13	Road	RD-12	26	Sebucan	17-SE-05
			27	Pajaritos	19-PAJ-02
			28	Pajaritos	19-PAJ-03
			29	Pajaritos	19-PAJ-07
			30	Quintero	22-Q-4A
			31	Quintero	22-Q-4B
			32	Quintero	22-Q-5
			33	Quintero	22-Q-7
			34	Quintero	22-Q-8
			35	Quintero	22-Q-17
			36	Quintero	22-Q-32
			37	Chacaito	25-CH-1
			38	Chacaito	25-CH-2
			39	Chacaito	25-CH-3
			40	Chacaito	25-CH-5
			41	Chacaito	25-CH-6
			42	Chacaito	25-CH-8
			43	Chacaito	25-CH-10
			44	Chacaito	25-CH-12
			45	Chapellin	28-AV-2
			46	Chapellin	28-AV-3
			47	Chapellin	28-AV-6
			48	Chapellin	28-AV-7
			49	Mariperez	33-MARI-1
			50	Canoa	35-CAN-1
			51	Canoa	33-CAN-2
			52	Canoa	35-CAN-3
			53	Canoa	35-CAN-4
			54	Canoa	35-CAN-5
			55	Canoa	35-RD-11
			56	Gamboa	37-GAM-2
			57	Gamboa	37-GAM-3
			58	Gamboa	37-GAM-5
			59	Anauco	41-ANA-2
			60	Anauco	41-ANA-6
			61	Cotiza	42-COT-11
			62	Cotiza	42-COT-06
			63	Catuche	44-CAT-04
			64	Catuche	44-CAT-10
			65	Catuche	44-CAT-18
Weathering Column			Cross Section		
No.					
1	Road1	Car-2			
2	Road1	Car-8			
3	Road1	Car-14			
4	Road1	Car-15			
5	Road2	Rd-4			
6	Road2	Rd-5			
7	Road2	Rd-7			
8	Road2	Rd-9			
9	Road2	Rd-10			
10	Road2	Rd-12			
11	Road2	Rd-17			
12	To come	TO-6			
13	To come	TO-9			
14	Caurimare	CAU-12			
15	Quintero	Q1			
16	Tenerias	TE-1			
17	Tenerias	TE-5			
18	La Julia	LJ-1			
19	La Julia	LJ-3			
20	La Julia	LJ-25			

Note: Serial No = Principal Stream No. + Location Number

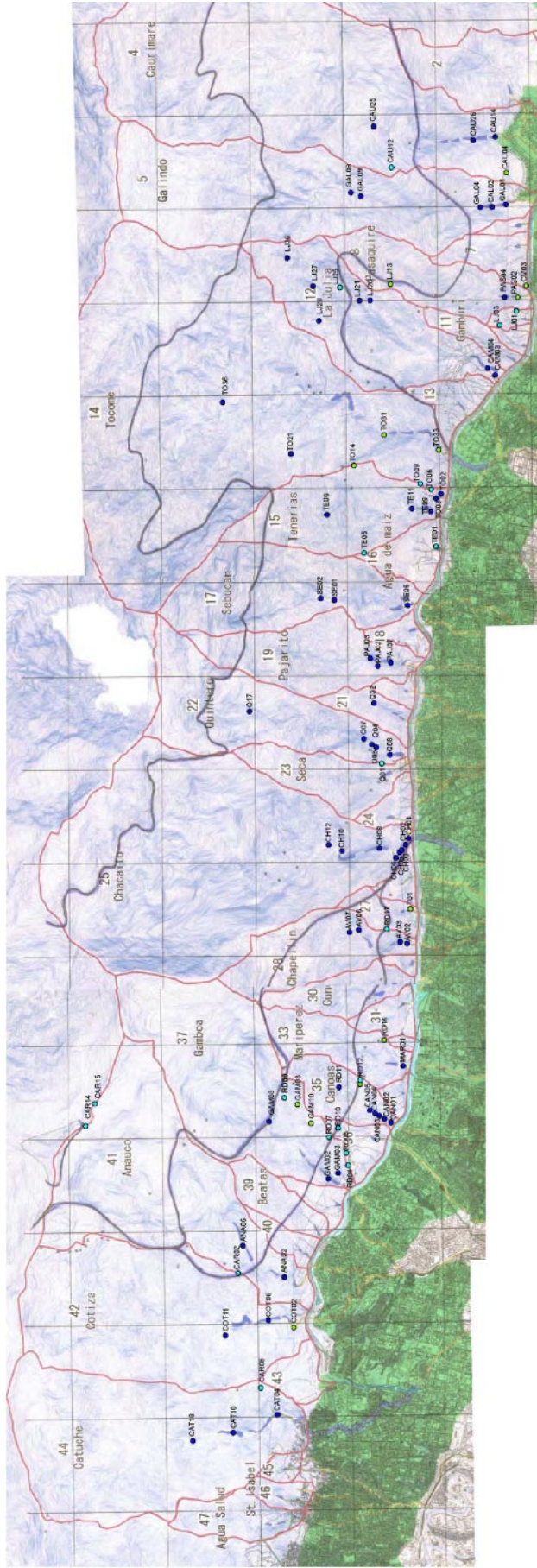
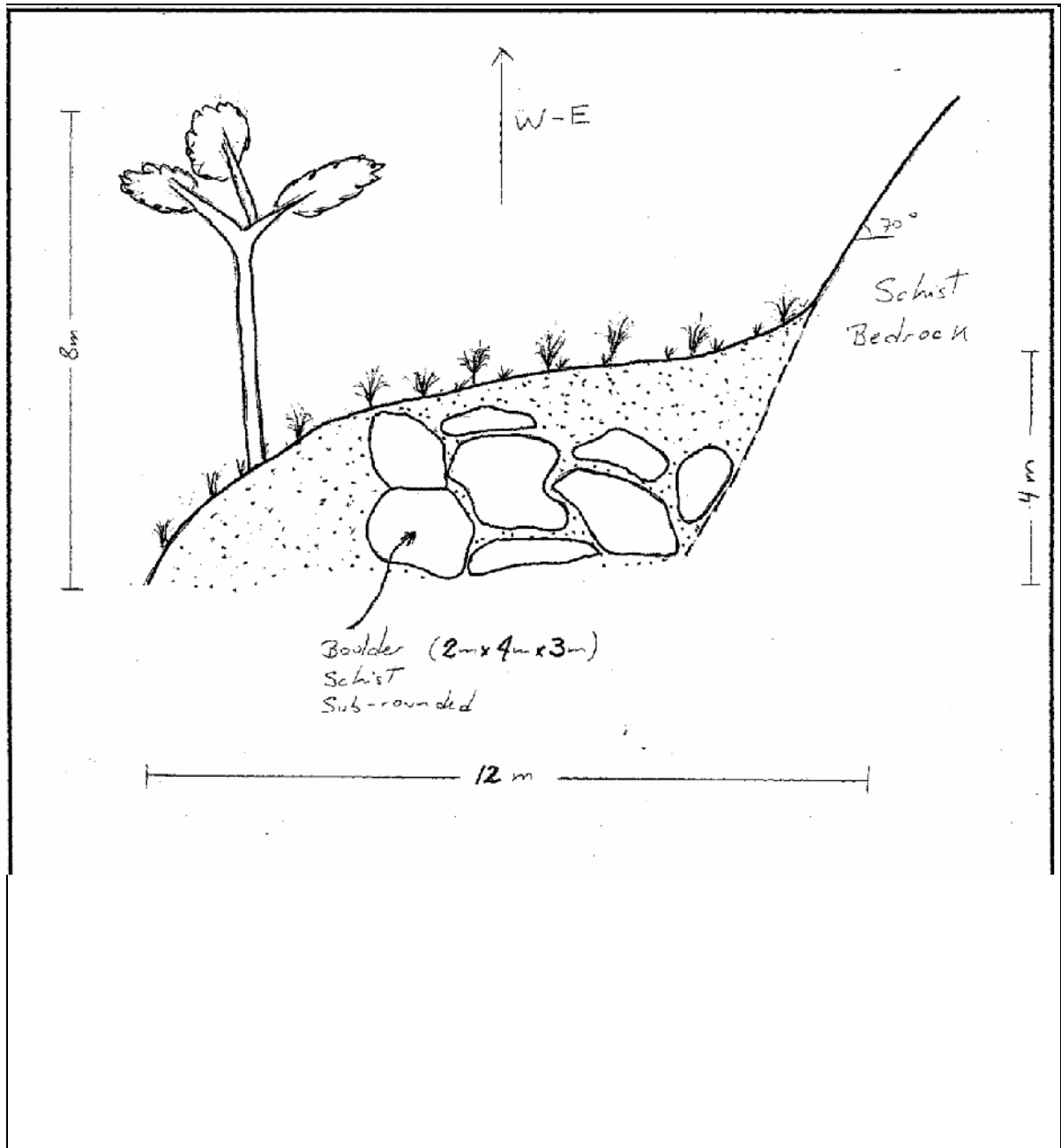


Figure DB-1.1 Location Map of Sketch

## Sketch of Steep Slope

SHEET NO.	1			Date:	2003/7/17
Stream Name	T stream	T-1		Inspector:	Ricardo Olivares
Location	40 m from Cota Mil				

Sketch

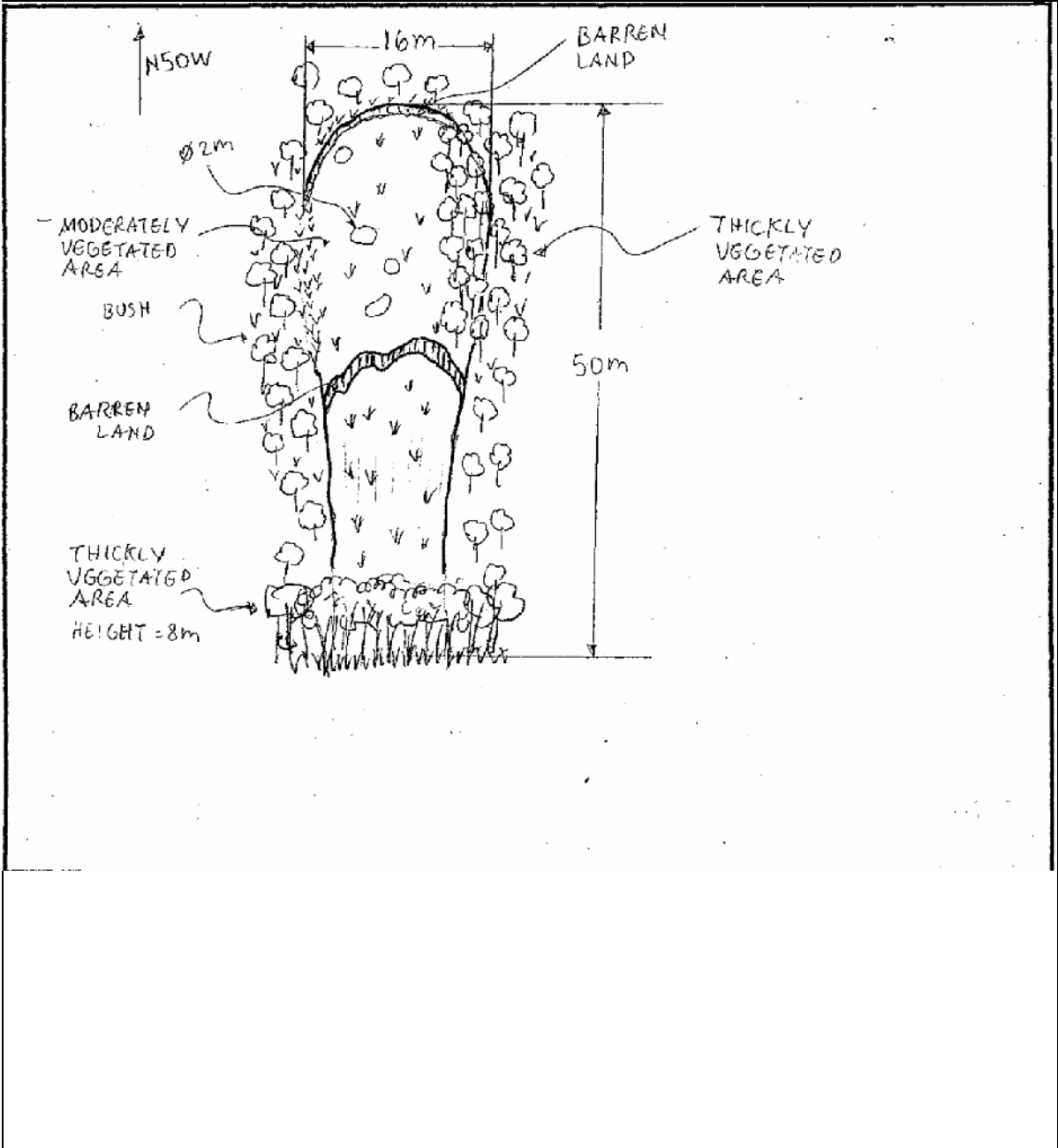


Remarks

Lithology: Plagioclase-Quartz-muscovitic Schist and Gneiss (San Julian Complex)  
 Bedrock: Moderately weathered  
 Hydrology: Damp

SHEET NO.	2		
Stream Name	TOCOME	TO-33	Date: 2003/7/03
Location	178	m from Cota Mil	Inspector: Juan C. Suarez

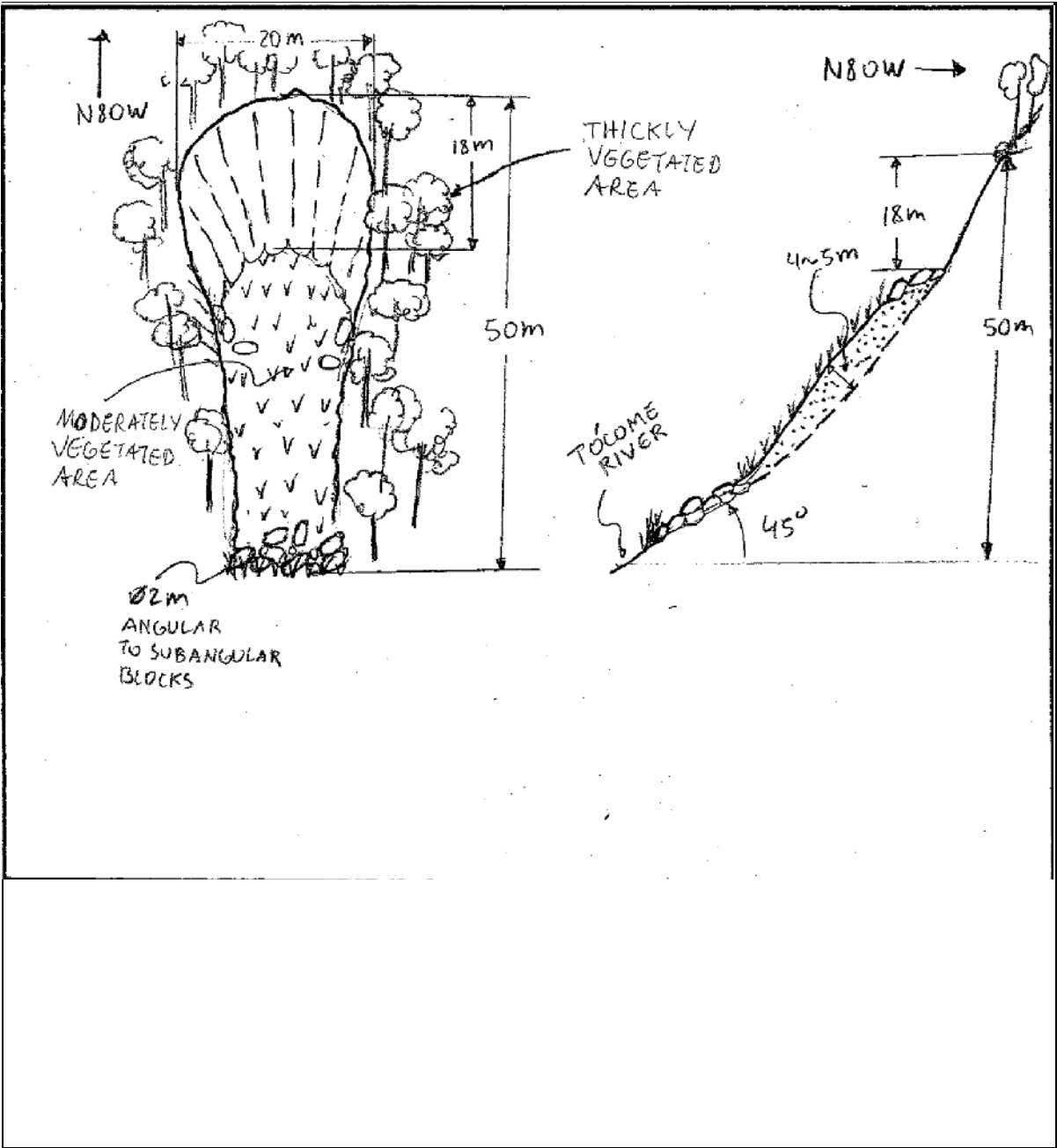
Sketch



Remarks

SHEET NO.	4		
Stream Name	TOCOME	TO-31	Date: 2003/7/03
Location	851	m from Cota Mil	Inspector: Juan C. Suarez

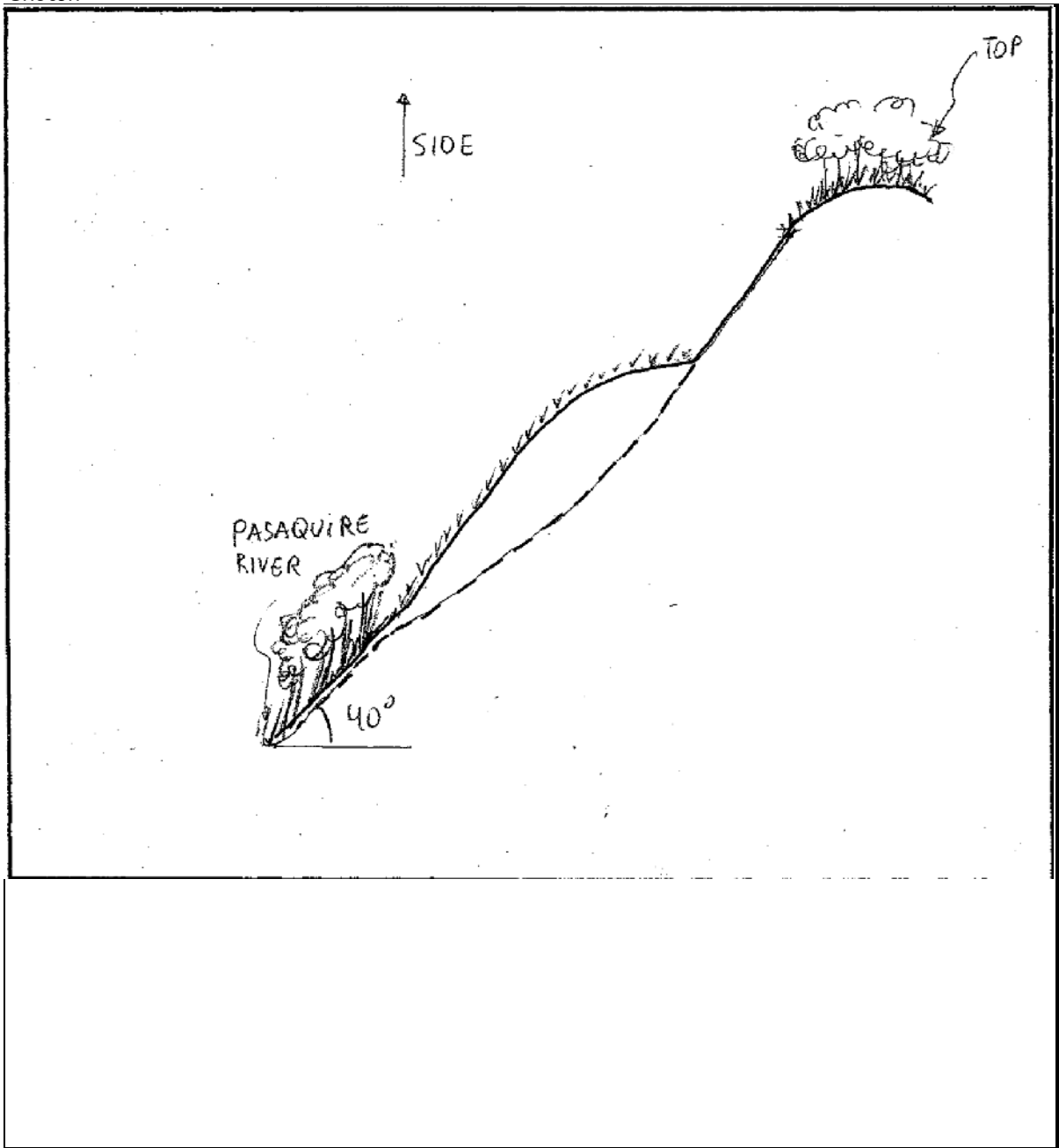
Sketch



Remarks

SHEET NO.	3		
Stream Name	PASAQUIRE	LJ-13	Date: 2003/7/06
Location	1570	m from Cota Mil	Inspector: Juan C. Suarez

Sketch

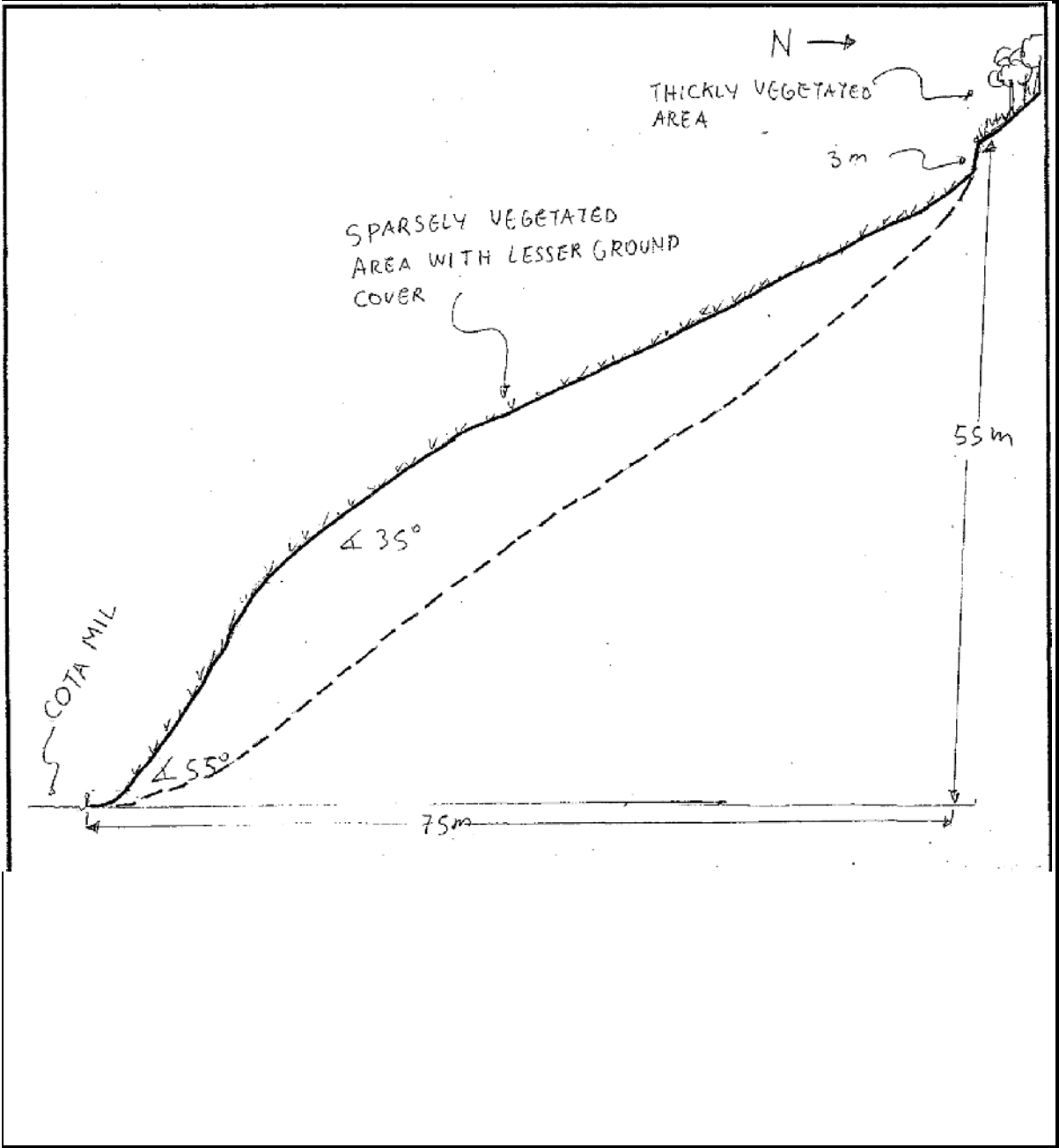


Remarks



SHEET NO.	5		
Stream Name	COTA MIL	CM-03	Date: 2003/8/03
Location	0	m from Cota Mil	Inspector: Juan C. Suarez

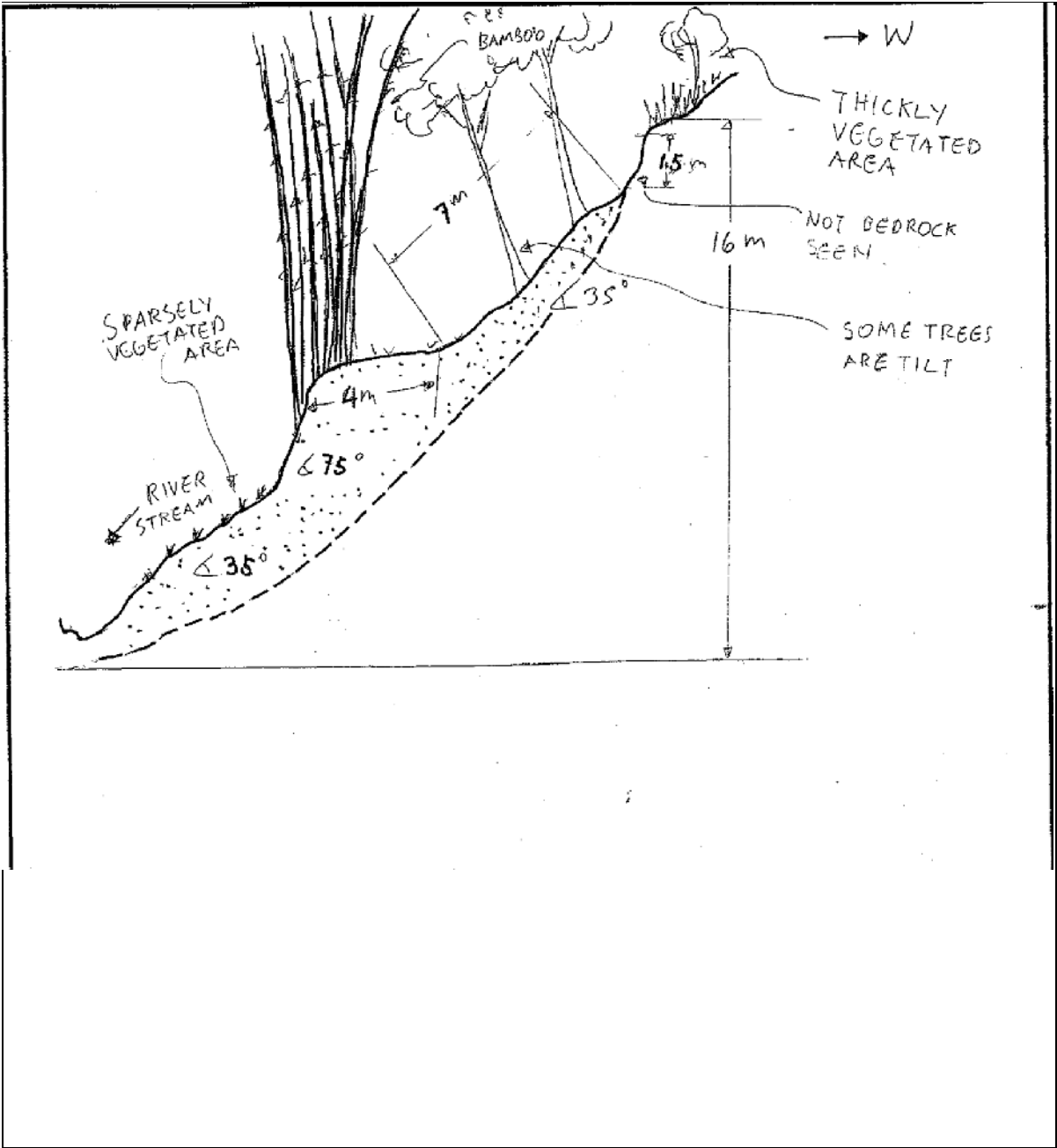
Sketch



Remarks

SHEET NO.	6		
Stream Name	PASAQUIRE	PAS-02	Date: 2003/8/03
Location	100	m from Cota Mil	Inspector: Juan C. Suarez

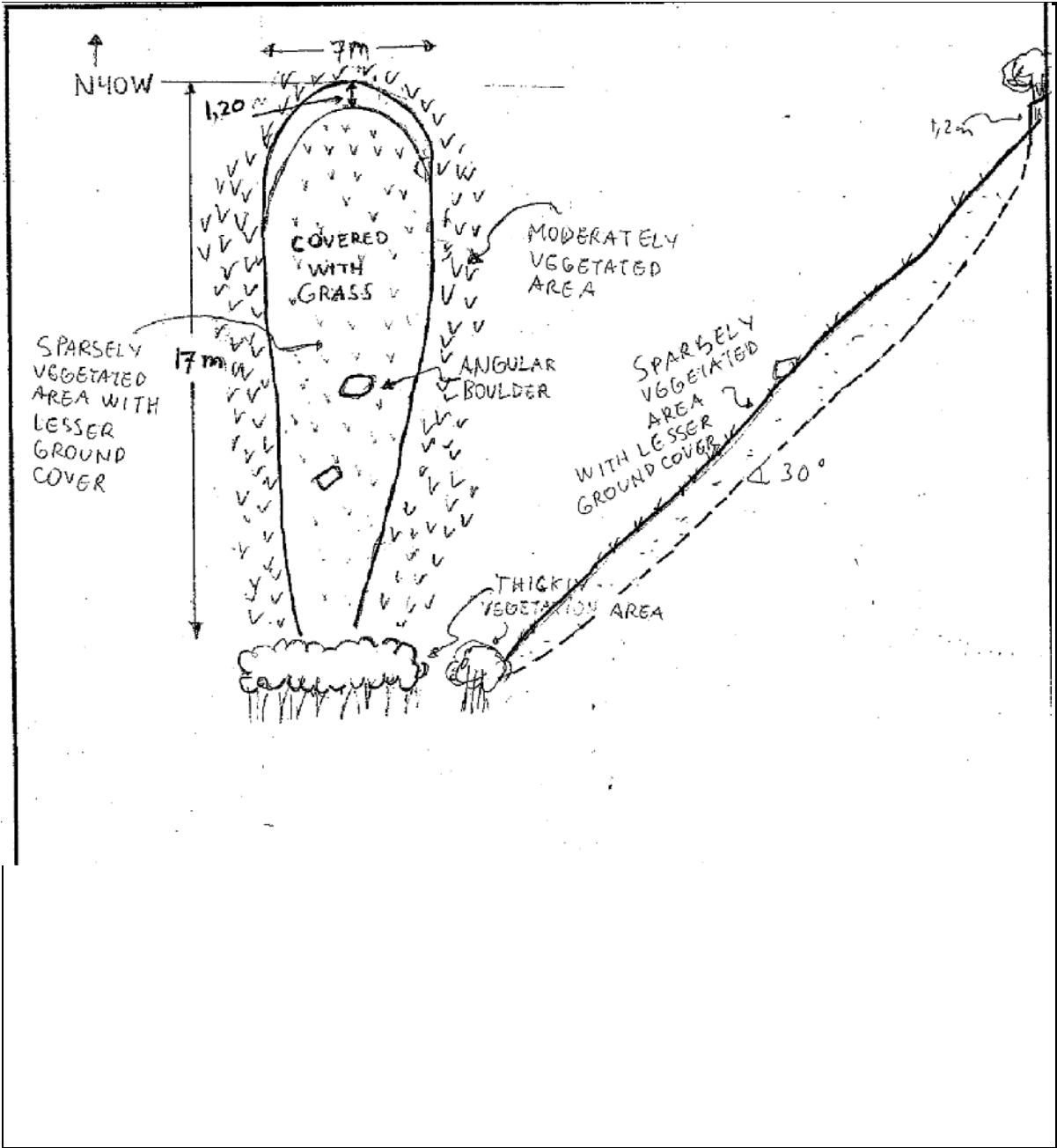
Sketch



Remarks

SHEET NO.	7		
Stream Name	GALINDO	CAU-4	Date: 2003/7/07
Location	502	m from Cota Mil	Inspector: Juan C. Suarez

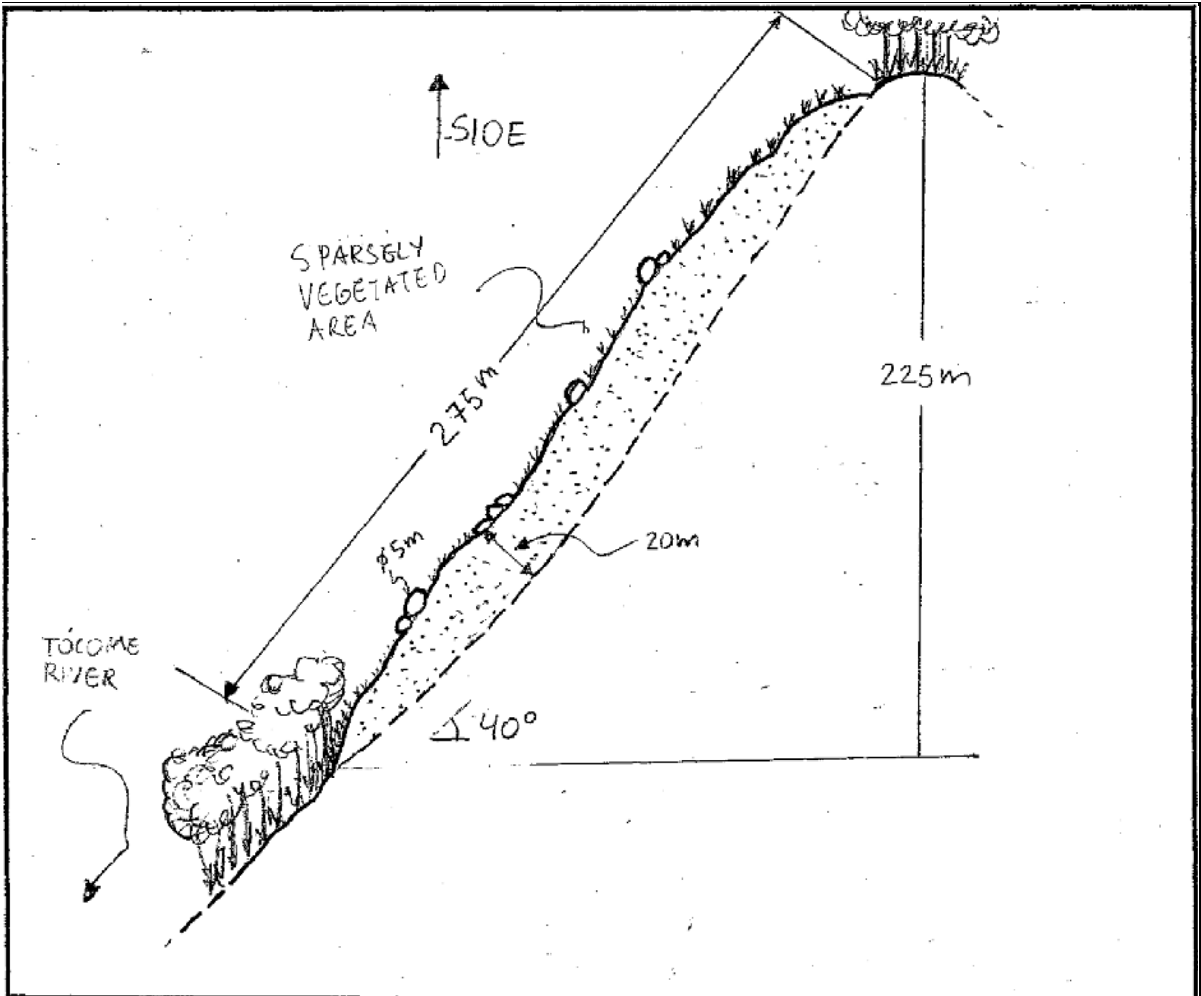
Sketch



Remarks

SHEET NO.	8		
Stream Name	TOCOME	TO-14	Date: 2003/7/01
Location	1384	m from Cota Mil	Inspector: Juan C. Suarez

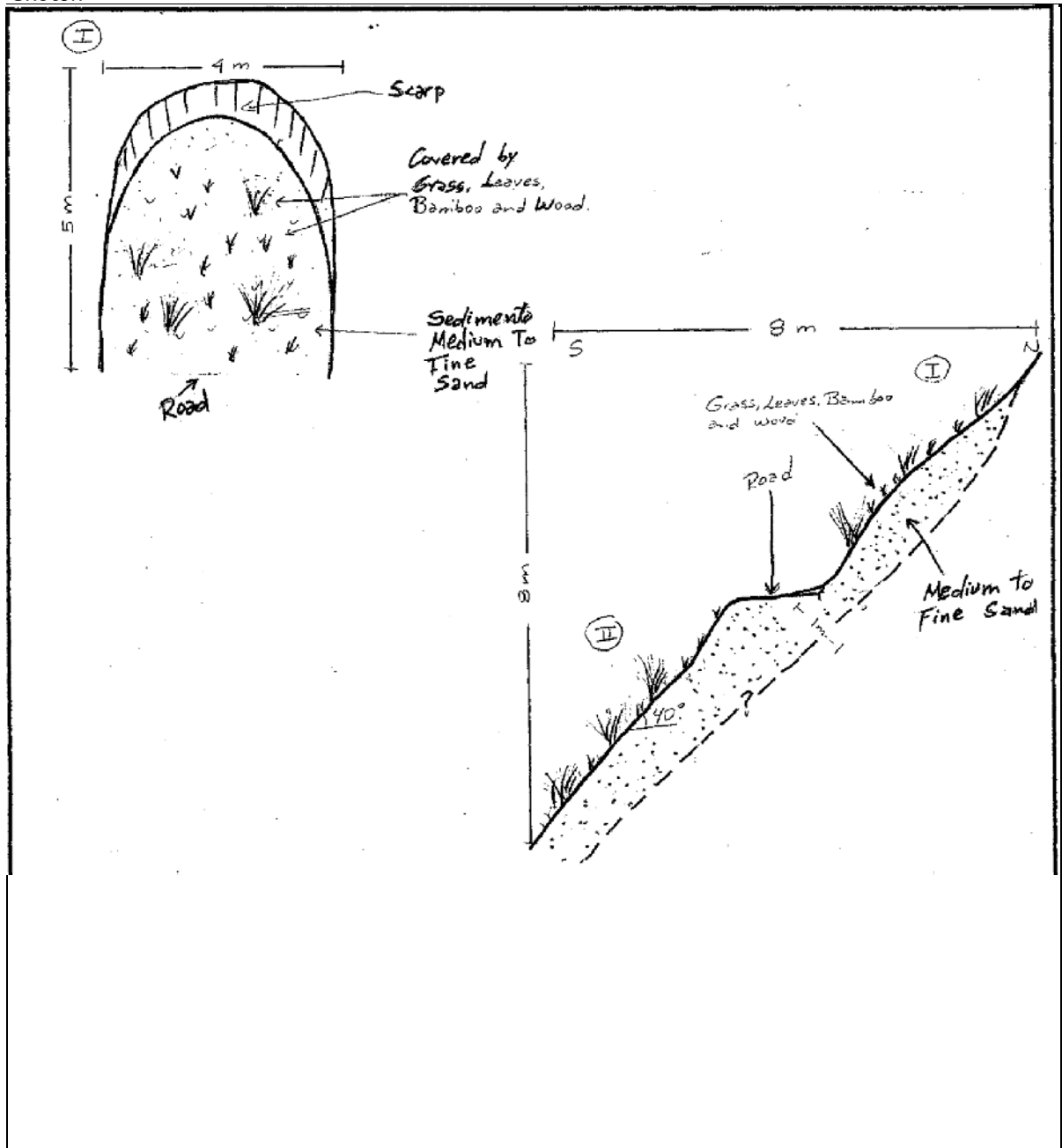
Sketch



Remarks

SHEET NO.	9		
Stream Name	GAMBOA	GAM-10	Date: 2003/7/08
Location	1000	m from Cota Mil	Inspector: Reinaldo Olivares

Sketch

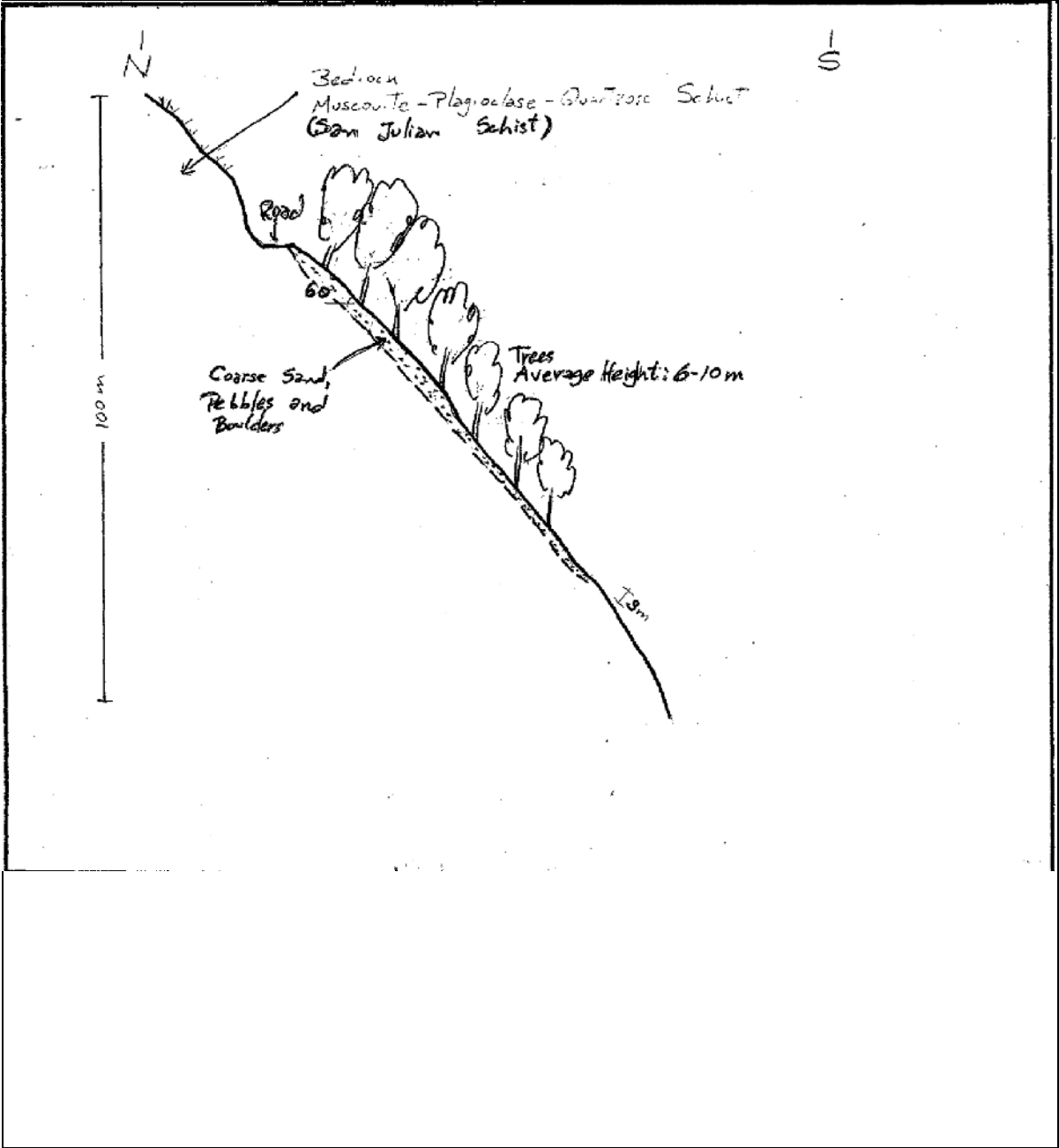


Remarks

Vegetation: Bambo, herbaceos vegetation

SHEET NO.	10			
Stream Name	GAMBOA	GAM-03	Date:	2003/7/7
Location	180	m from Cota Mil	Inspector:	Reinaldo Olivares

Sketch

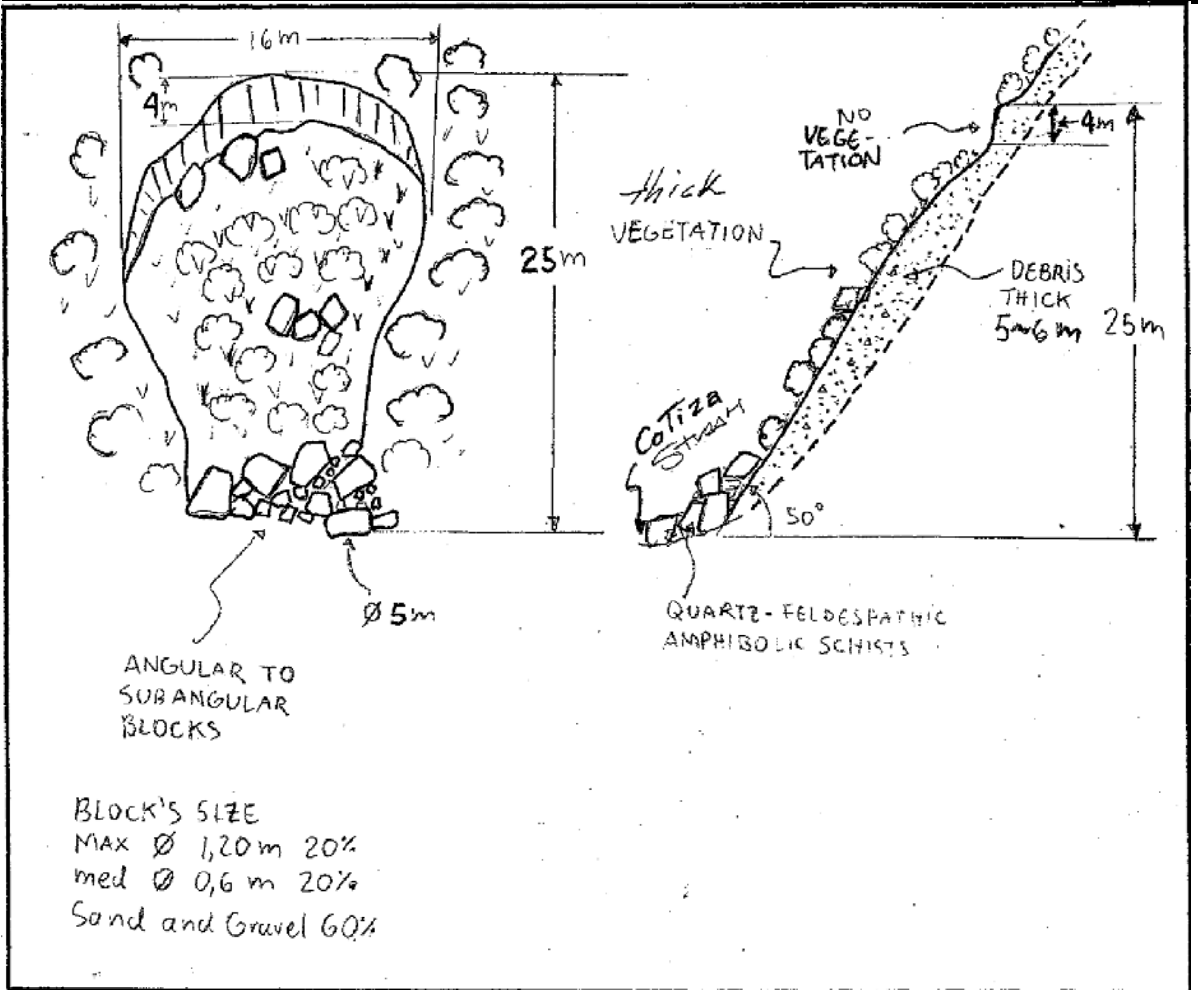


Remarks

Sediment Acumulation

SHEET NO.	11			
Stream Name	COTIZA	COT-2	Date:	2003/7/4
Location	240	m from Cota Mil	Inspector:	Juan C. Suarez N.

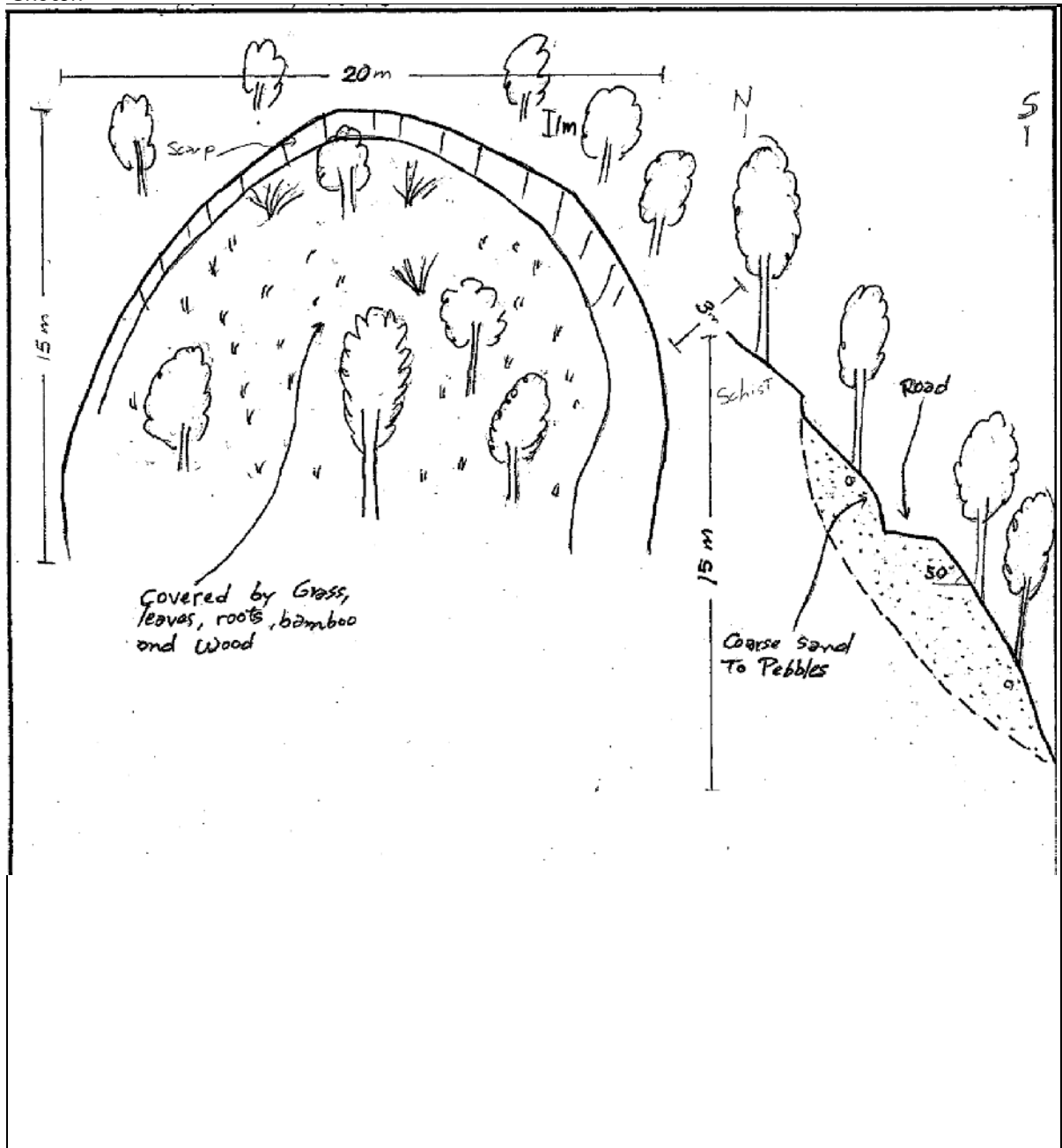
Sketch



Remarks

SHEET NO.	12		
Stream Name	CORTAFUEGOS	RD-14	Date: 2003/7/16
Location	2970*	m from Cota Mil	Inspector: Reinaldo Olivares

Sketch



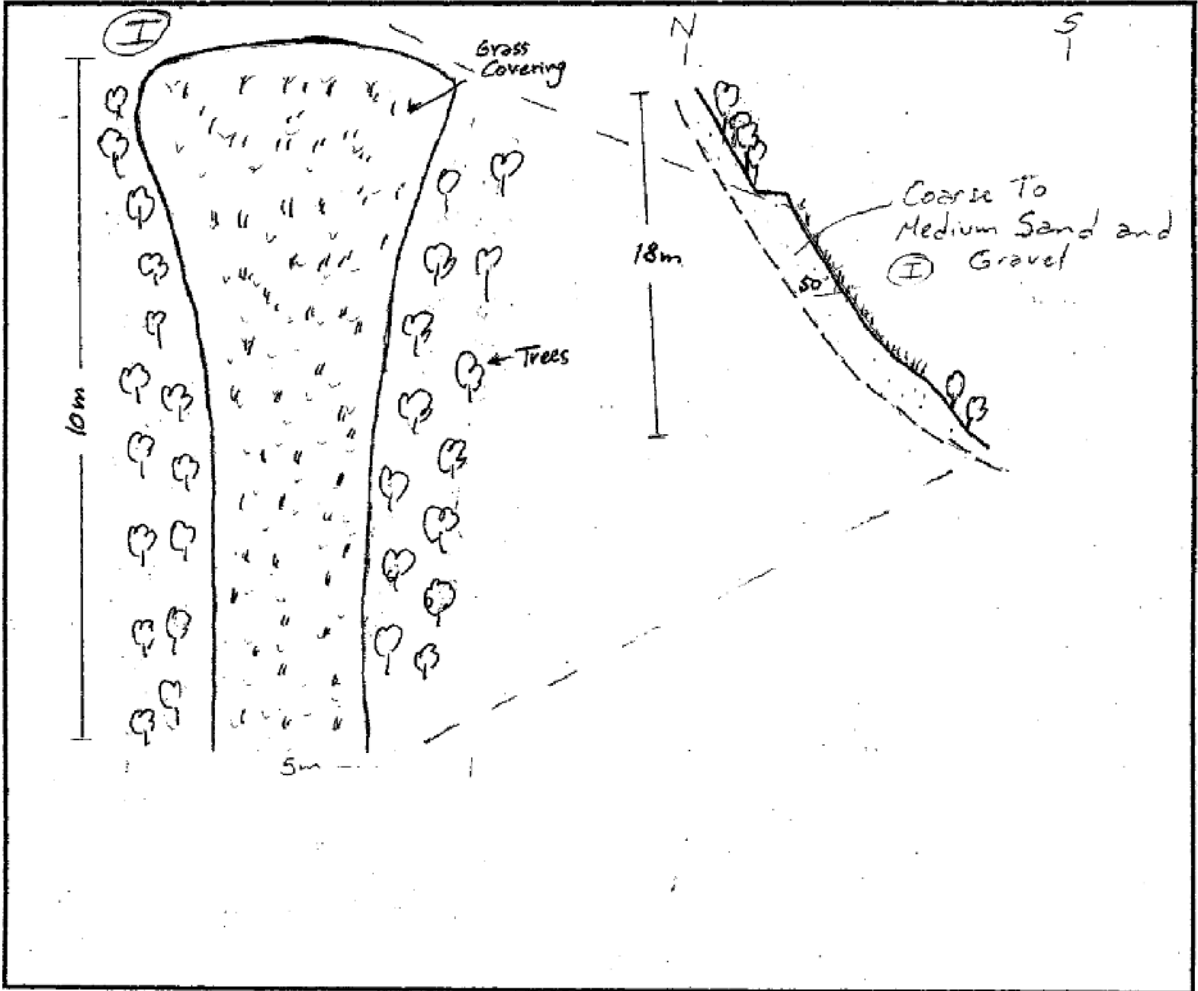
Remarks

Lithology: Plagioclase-muscovite-quartzose Schist  
 \*That distance was measured from alcabala 6 N



SHEET NO.	13			Date:	2003/7/16
Stream Name	ROAD	RD-12		Inspector:	Reinaldo Olivares
Location	2280*	m from Cota Mil			

Sketch



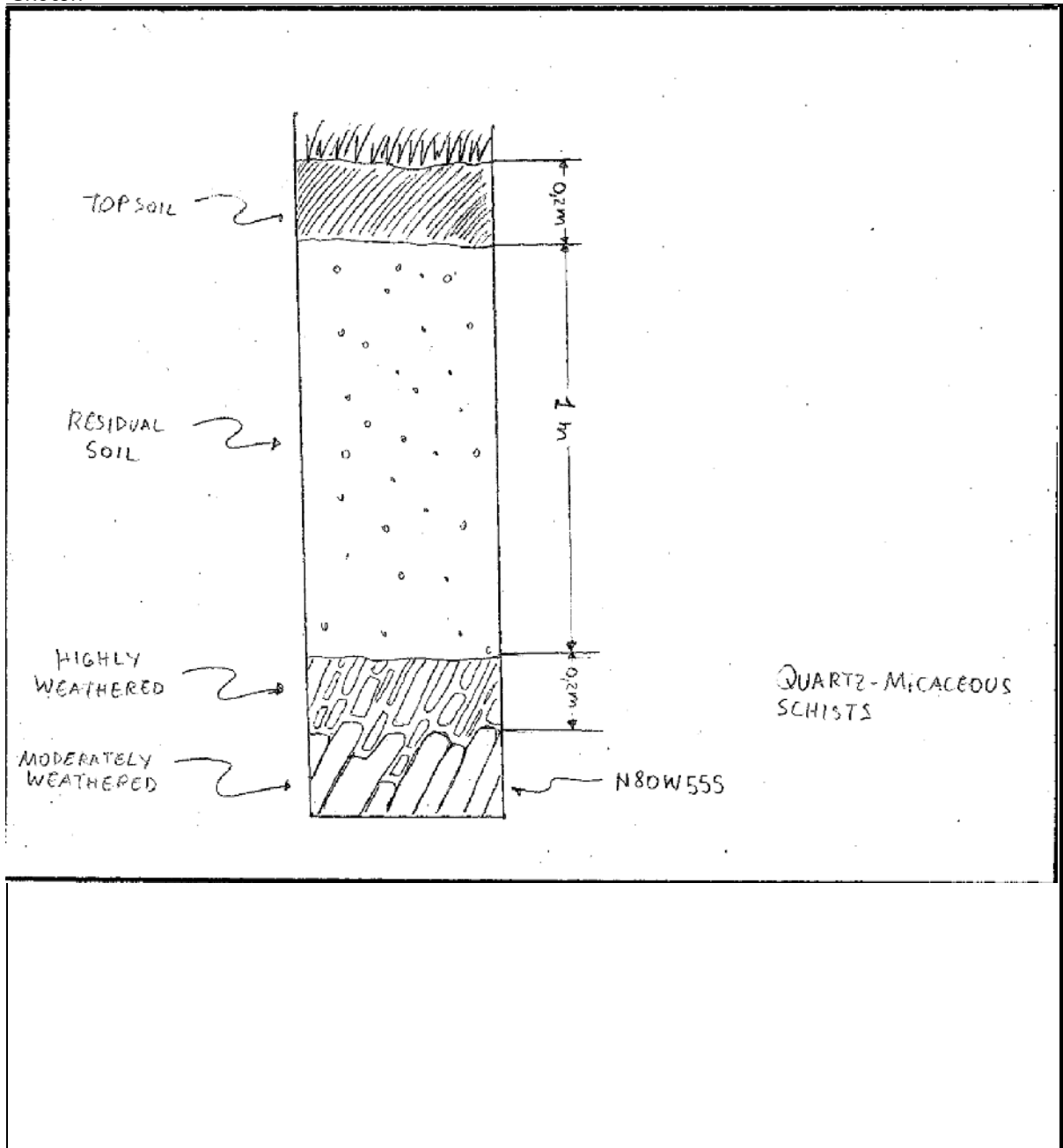
Remarks

\*That distance was measured from alcabala 6 N

## Sketch of Weathering Column

SHEET NO.	20			
Stream Name	LA JULIA	LJ25	Date:	2003/7/25
Location	2760	m from Cota Mil	Inspector:	Juan Carlos Suarez

Sketch

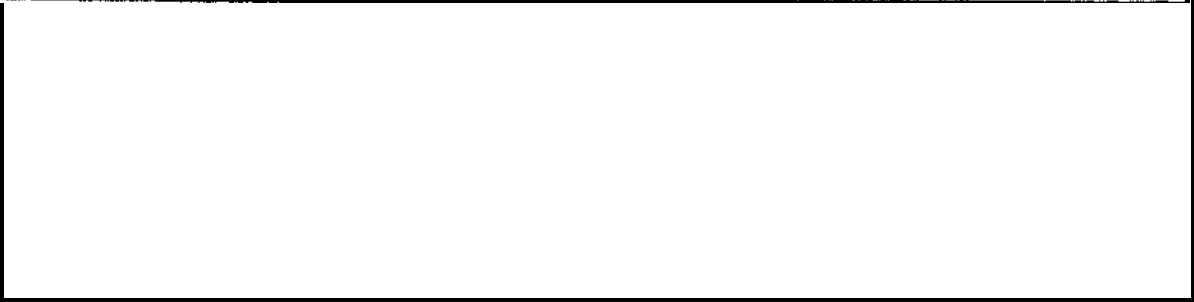
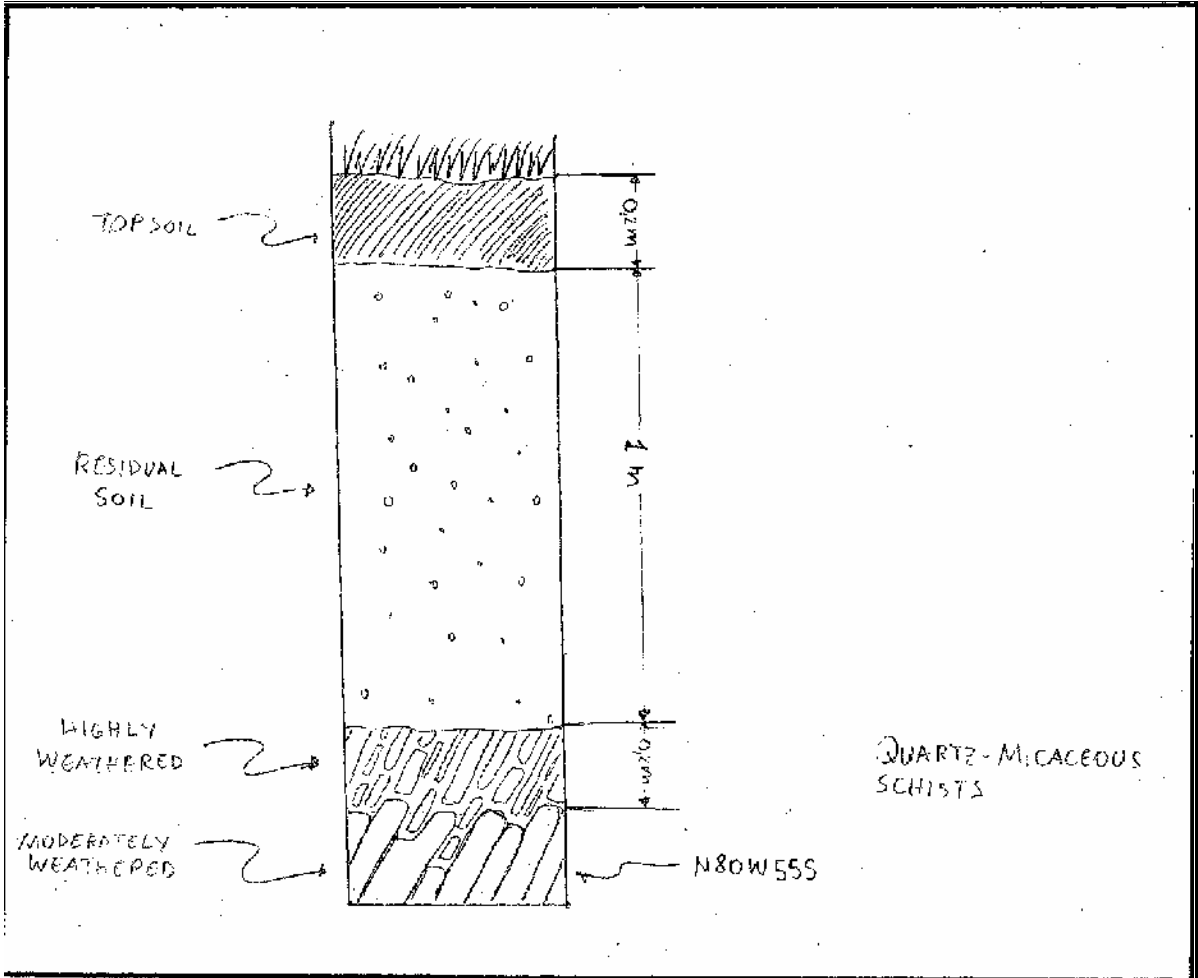


Remarks

Soil Profile

SHEET NO.	20		
Stream Name	LA JULIA	LJ25	Date: 2003/7/25
Location	2760	m from Cota Mil	Inspector: Juan Carlos Suarez

Sketch



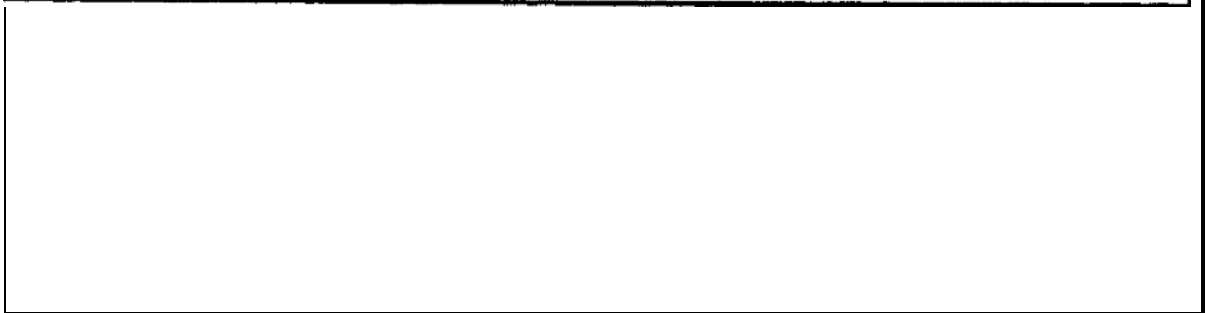
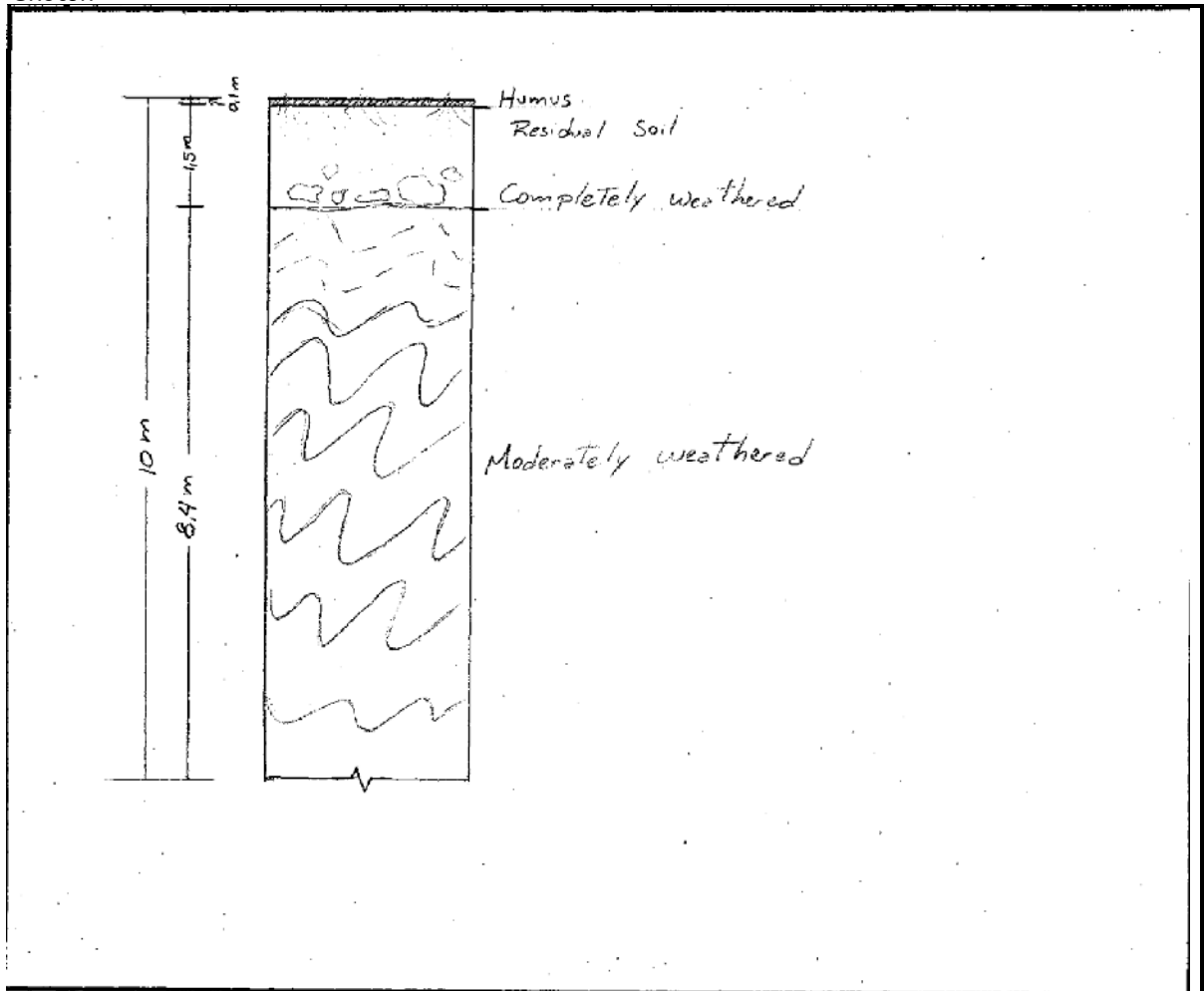
Remarks

Soil Profile

Empty rectangular box for additional remarks or notes.

SHEET NO.	2			Date:	2003/7/3
Stream Name	Road1	Car-8			
Location	4227	m from Cota Mil	Inspector:	Reinaldo Olivares	

Sketch

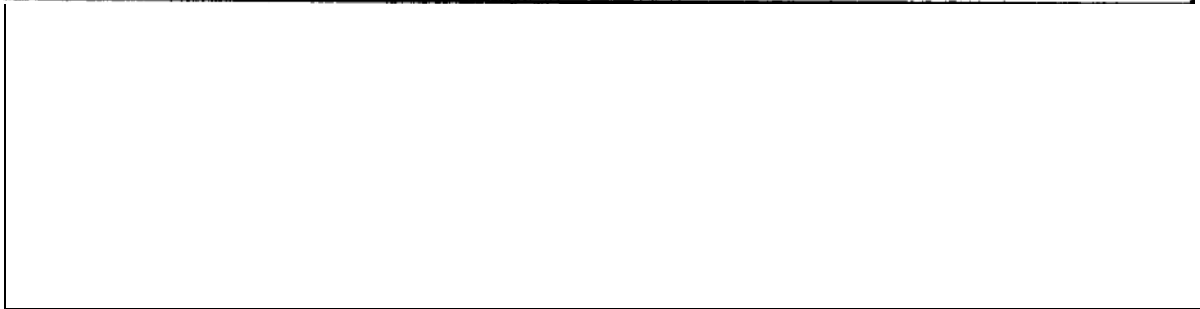
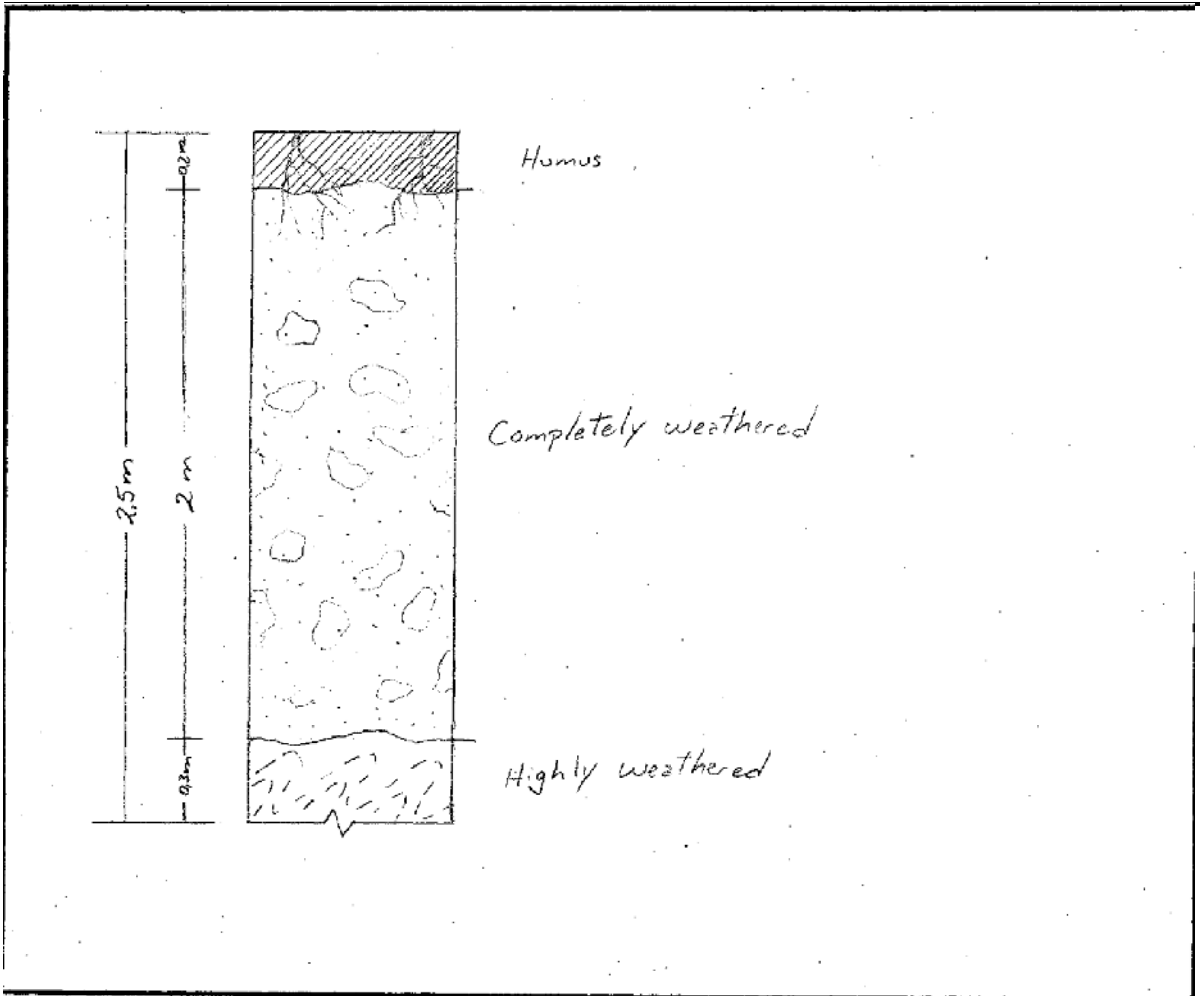


Remarks

Lithology: clorite-muscovite Schist  
Elevation 1,275m

SHEET NO.	3			Date:	2003/7/22
Stream Name	Road1	Car-14			
Location	6161	m from Cota Mil	Inspector:	Reinaldo Olivares	

Sketch

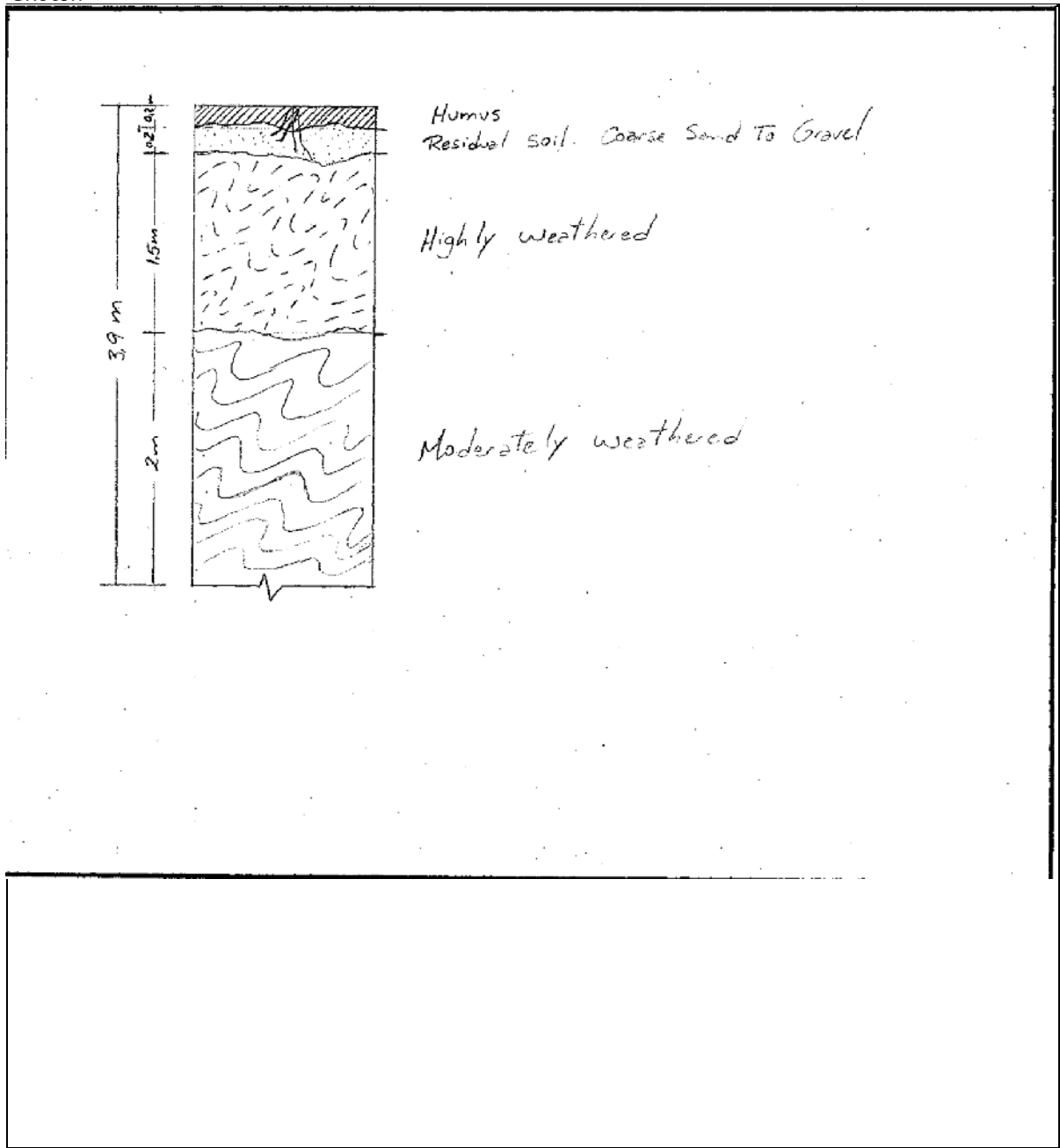


Remarks

Lithology: plagioclase-quartz-muscovite Schist  
 Elevation 1,935m

SHEET NO.	4				
Stream Name	Road1	Car-15	Date:	2003/7/22	
Location	6380	m from Cota Mil	Inspector:	Reinaldo Olivares	

Sketch

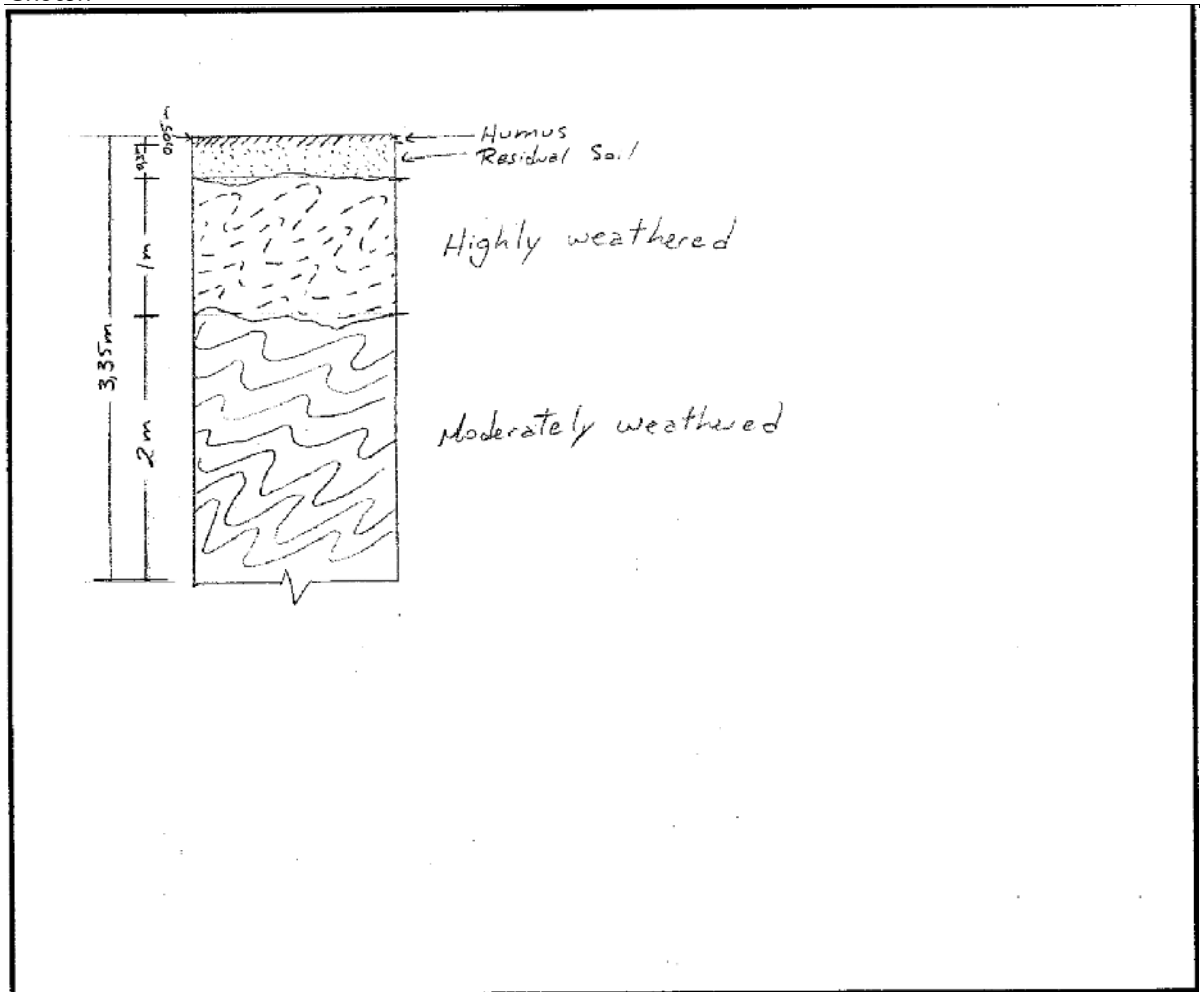


Remarks

Lithology: amphibolite schist  
Elevation: 2,005m

SHEET NO.	5				
Stream Name	Road2	Rd-4	Date:	2003/7/25	
Location	809	m from Cota Mil	Inspector:	Reinaldo Olivares	

Sketch



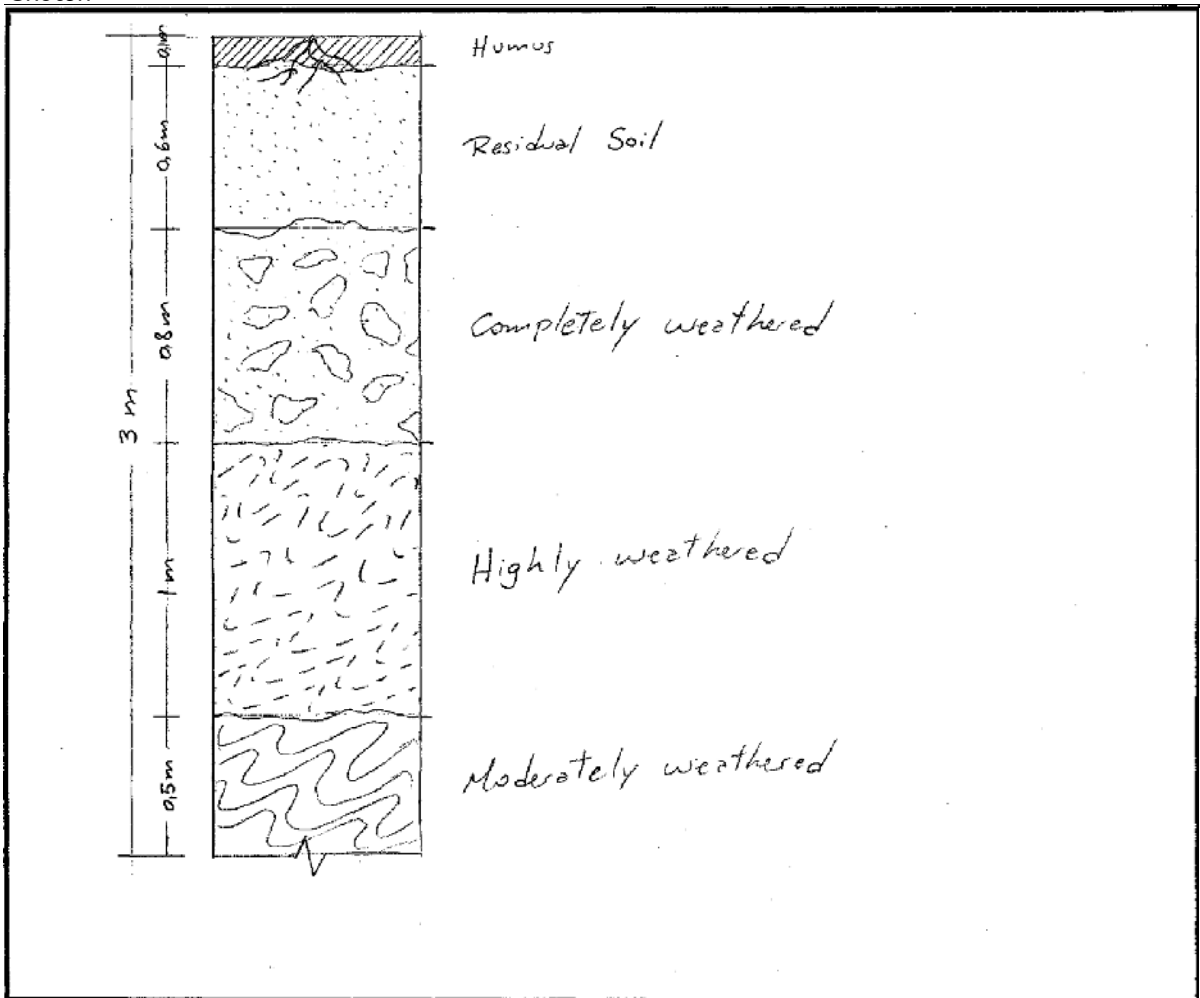
Remarks

Lithology: Plagioclase-quartz-muscovite Schist  
Elevation 1,105m



SHEET NO.	6				
Stream Name	Road2	Rd-5	Date:	2003/7/25	
Location	1018	m from Cota Mil	Inspector:	Reinaldo Olivares	

Sketch

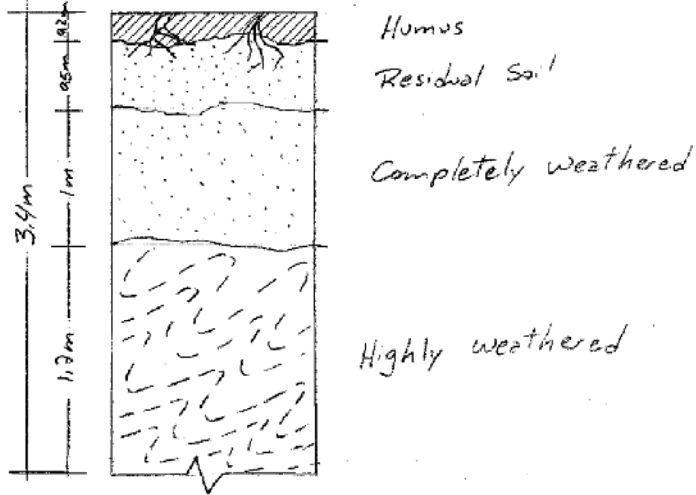


Remarks

Lithology: Plagioclase-quartz-muscovite Schist  
Elevation 1,150m

SHEET NO.	7		
Stream Name	Road2	Rd-7	Date: 2003/7/25
Location	1373	m from Cota Mil	Inspector: Reinaldo Olivares

Sketch

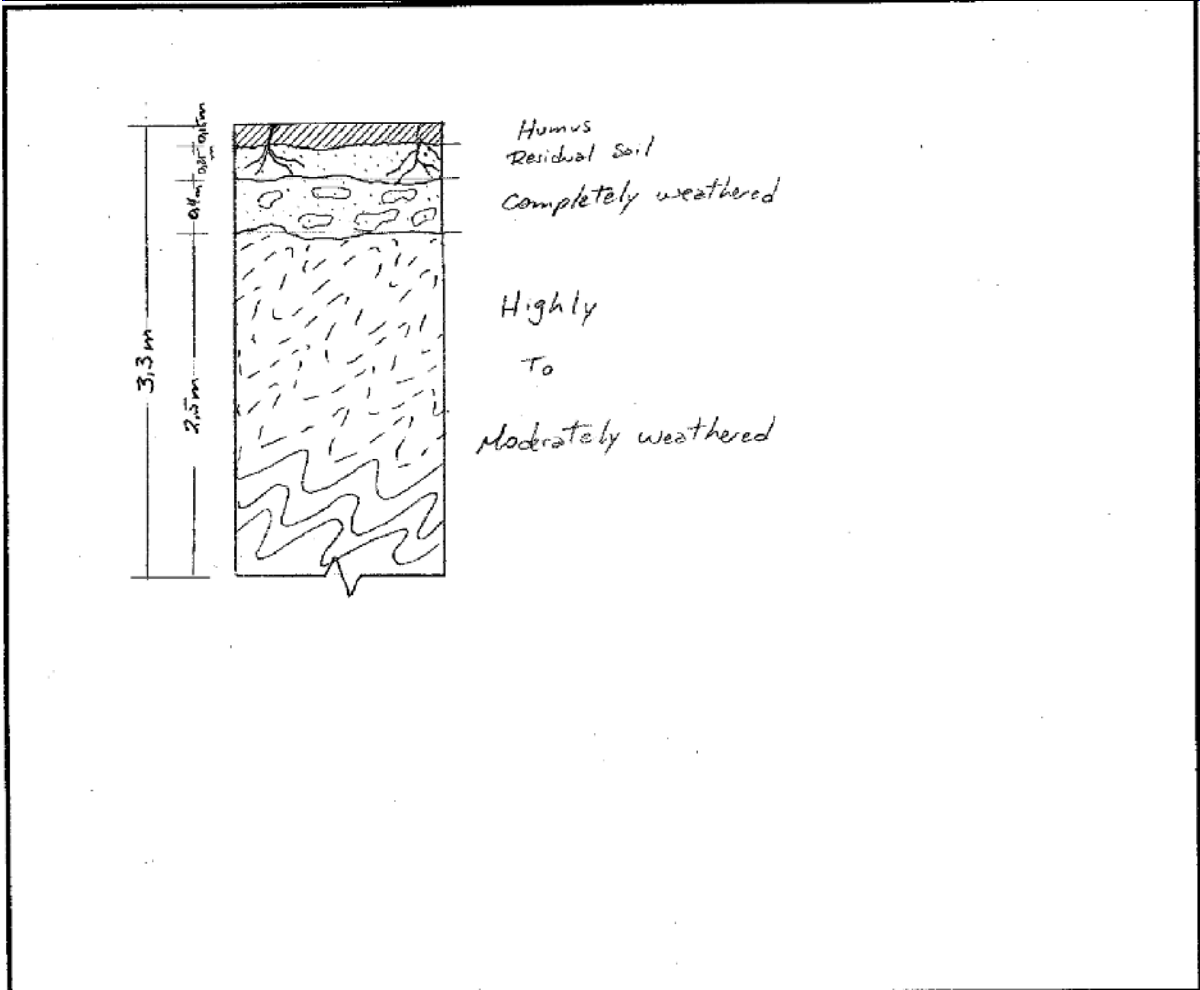


Remarks

Lithology: Plagioclase-quartz-muscovite Schist  
 Elevation 1,200m

SHEET NO.	8		
Stream Name	Road2	Rd-9	Date: 2003/7/25
Location	2823	m from Cota Mil	Inspector: Reinaldo Olivares

Sketch

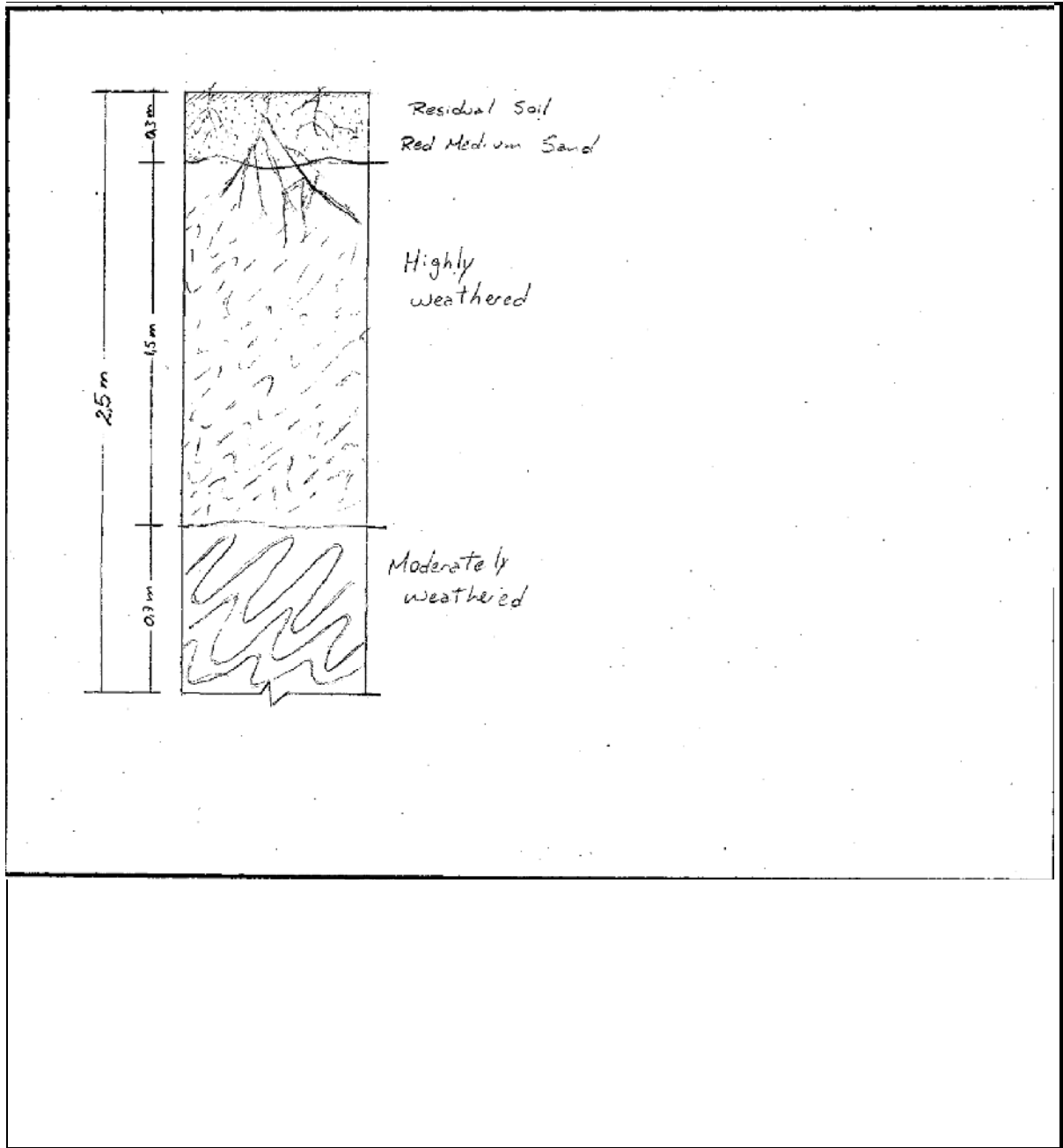


Remarks

Lithology: Plagioclase-quartz-muscovite Schist  
Elevation 1,510m

SHEET NO.	9			Date:	2003/7/16
Stream Name	Road2	Rd-10		Inspector:	Reinaldo Olivares
Location	1438	m from Cota Mil			

Sketch

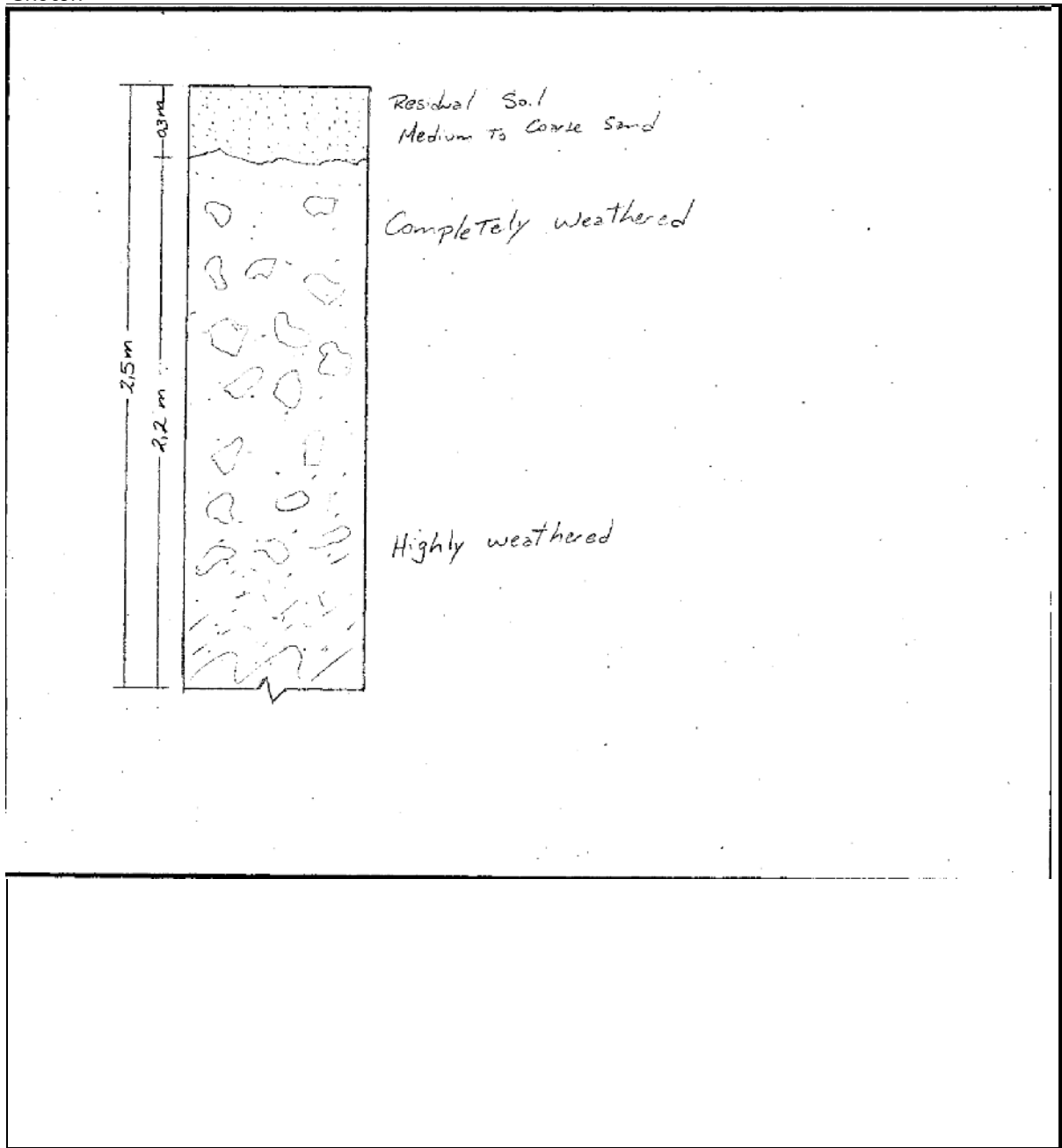


Remarks

Lithology: Plagioclase-muscovite Schist  
Elevation 1,180m

SHEET NO.	10		
Stream Name	Road2	Rd-12	Date: 2003/7/16
Location	2548	m from Cota Mil	Inspector: Reinaldo Olivares

Sketch

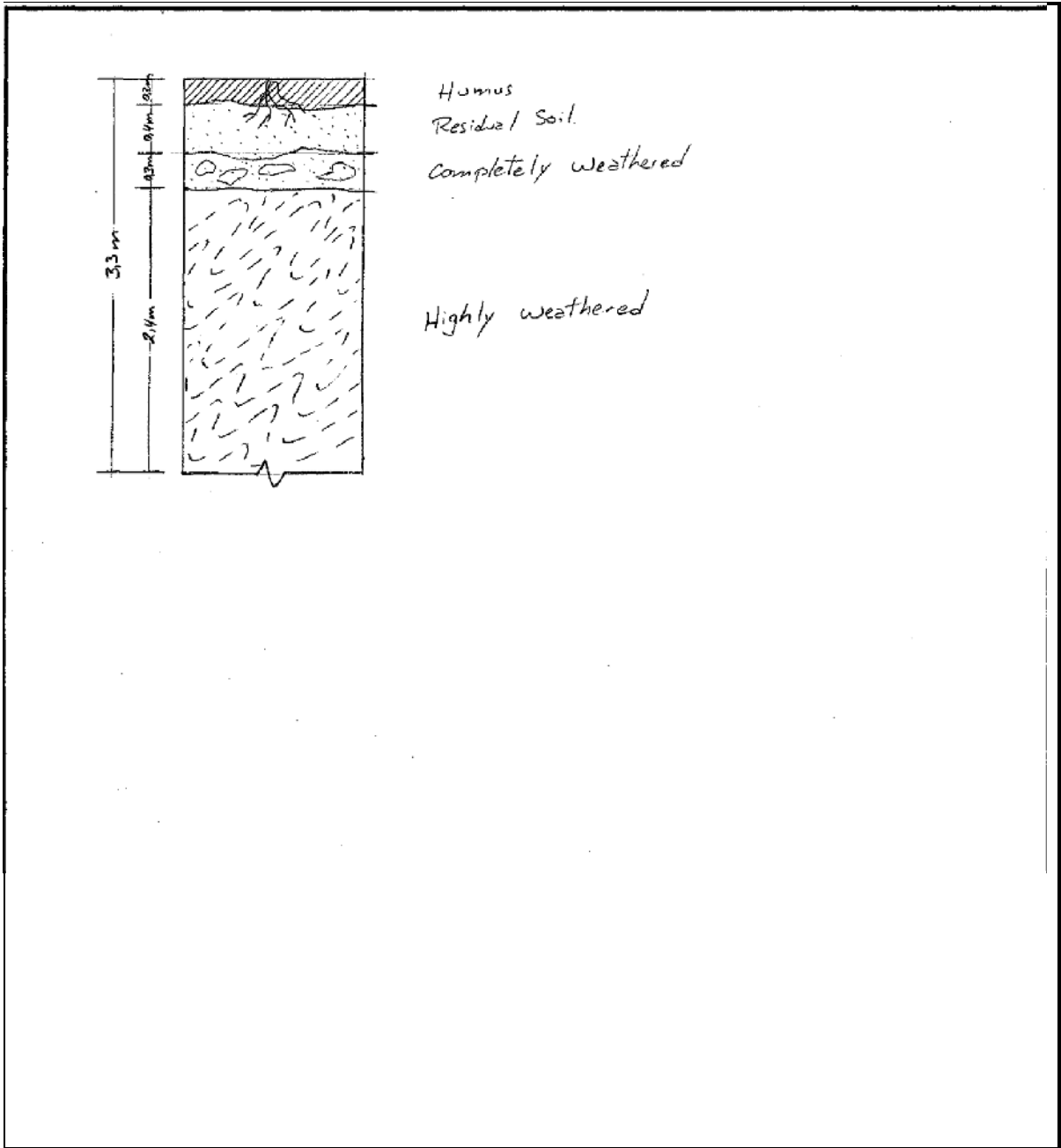


Remarks

Lithology: Plagioclase-muscovite Schist  
Elevation 1,200m

SHEET NO.	11			Date:	2003/7/25
Stream Name	Road2	Rd-17			
Location	1226	m from Cota Mil	Inspector:	Reinaldo Olivares	

Sketch

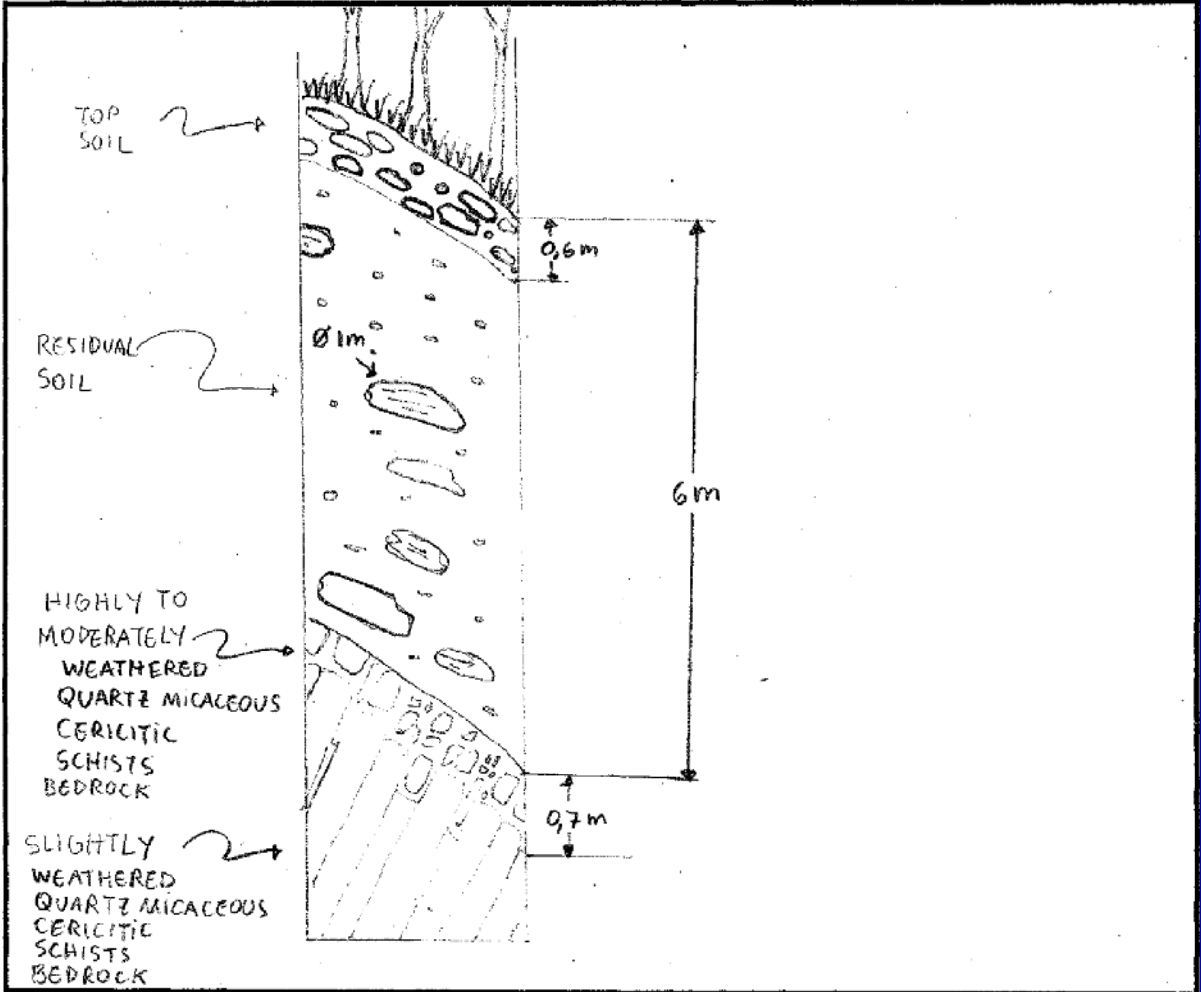


Remarks

Lithology: Plagioclase Schist  
Elevation 1,200m

SHEET NO.	12			
Stream Name	TOCOME	TO-6	Date:	2003/7/01
Location	412	m from Cota Mil	Inspector:	Juan Carlos Suarez

Sketch

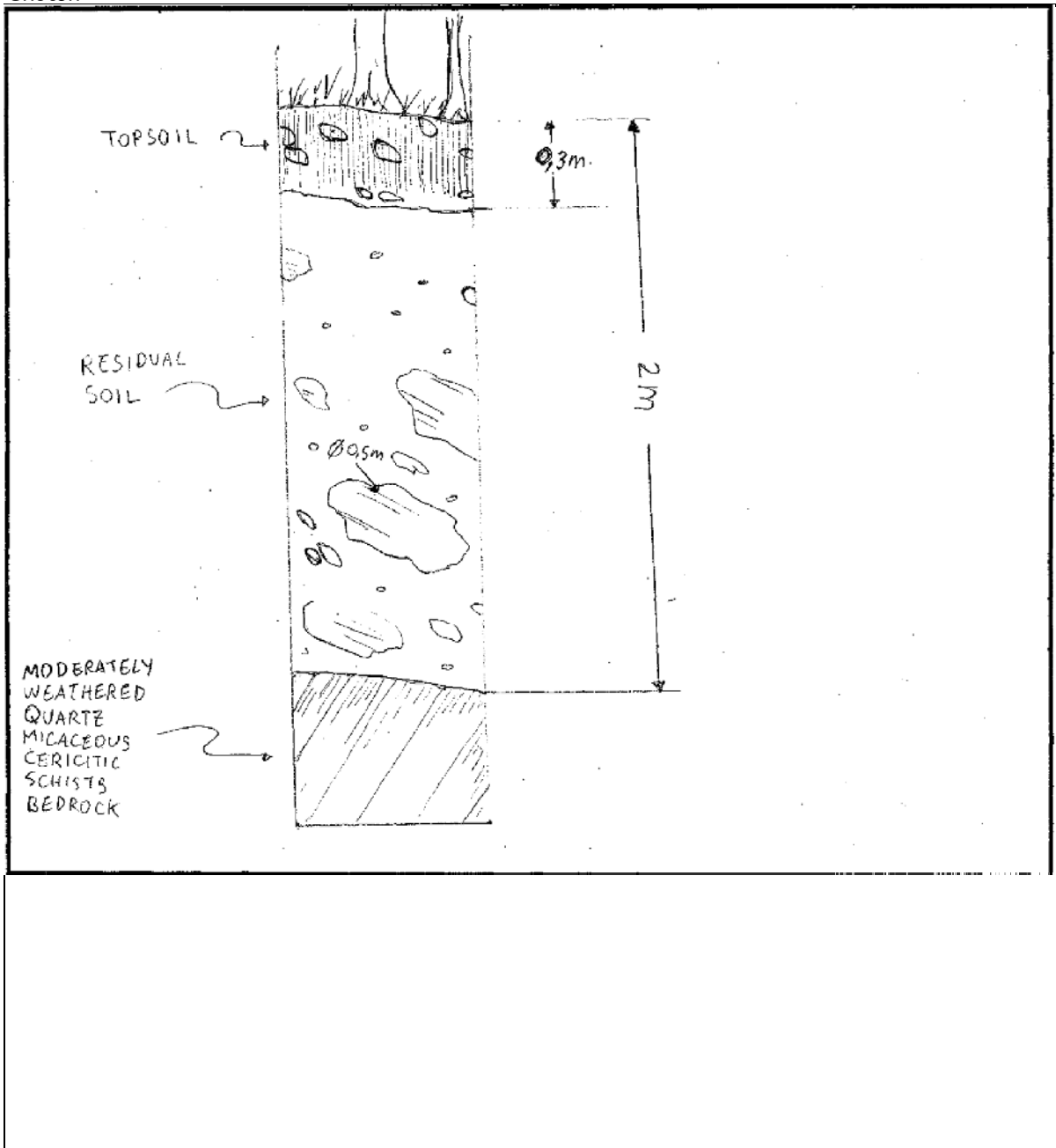


Remarks

Soil Profile

SHEET NO.	13			
Stream Name	TOCOME	TO-9	Date:	2003/7/01
Location	150	m from Cota Mil	Inspector:	Juan Carlos Suarez

Sketch



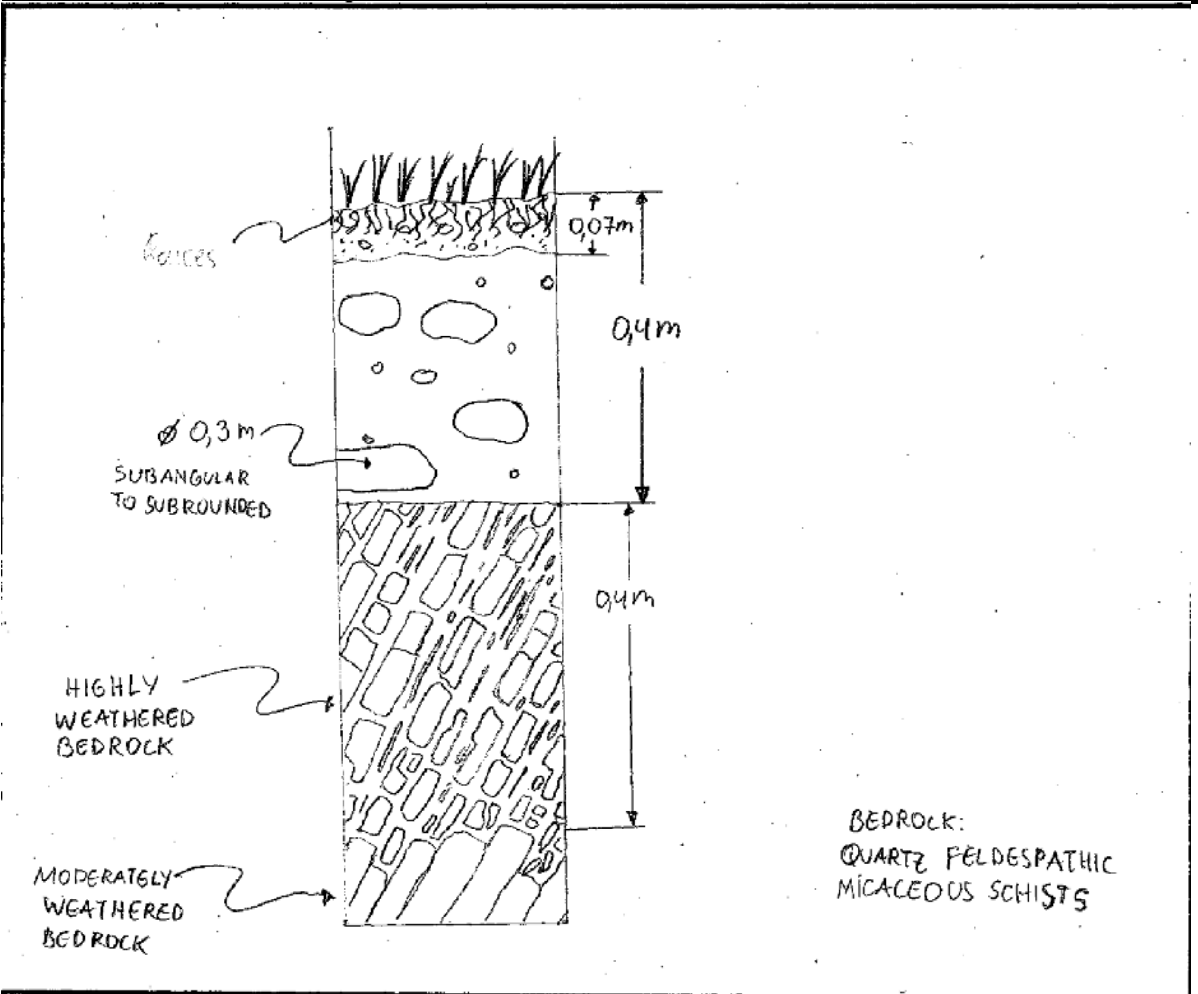
Remarks

Soil Profile



SHEET NO.	14			
Stream Name	CAURIMARE	CAU-12	Date:	2003/7/08
Location	530	m from Cota Mil	Inspector:	Juan Carlos Suarez

Sketch

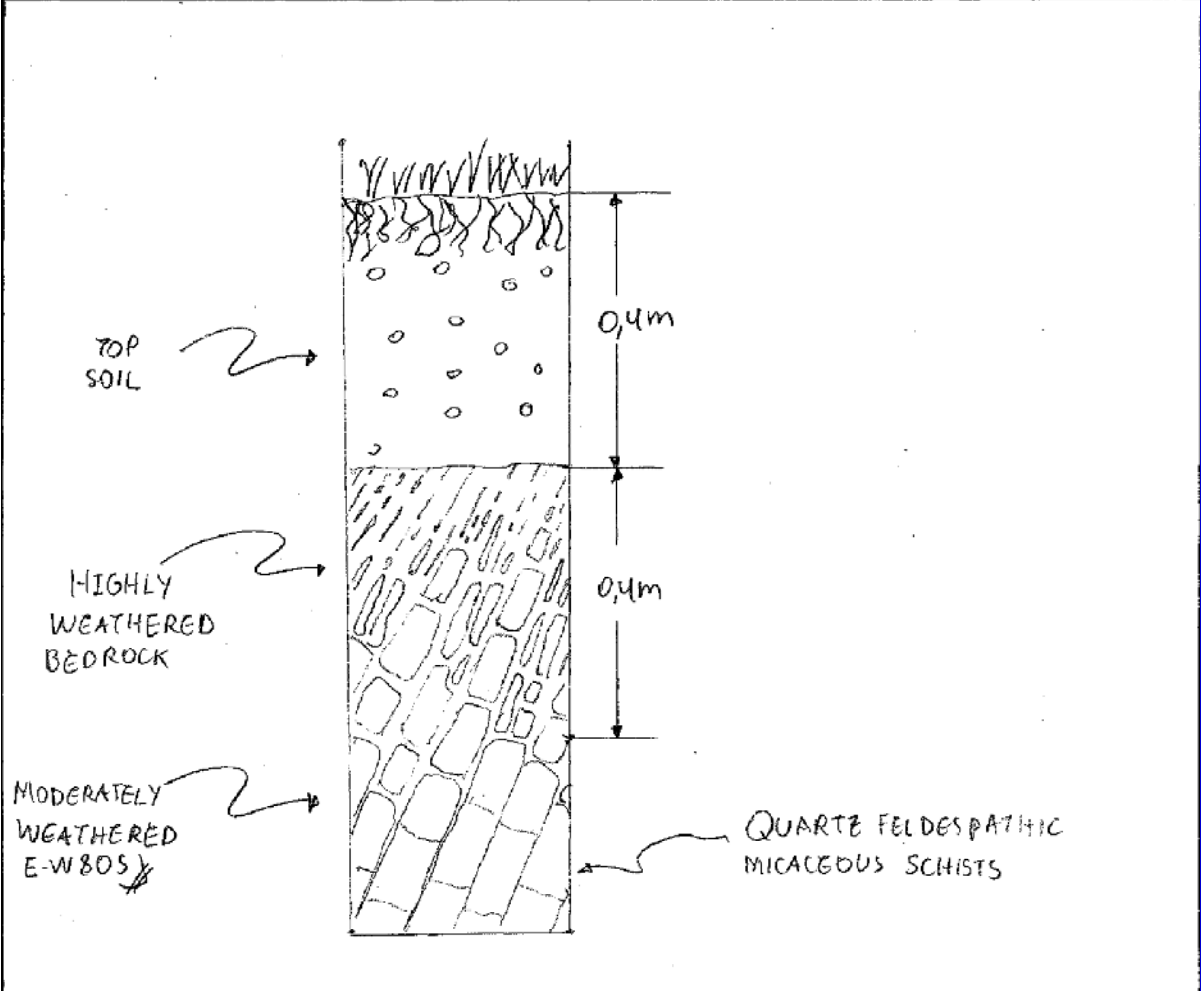


Remarks

Soil Profile

SHEET NO.	15			
Stream Name	QUINTERO	Q1	Date:	2003/7/15
Location	403	m from Cota Mil	Inspector:	Juan Carlos Suarez

Sketch

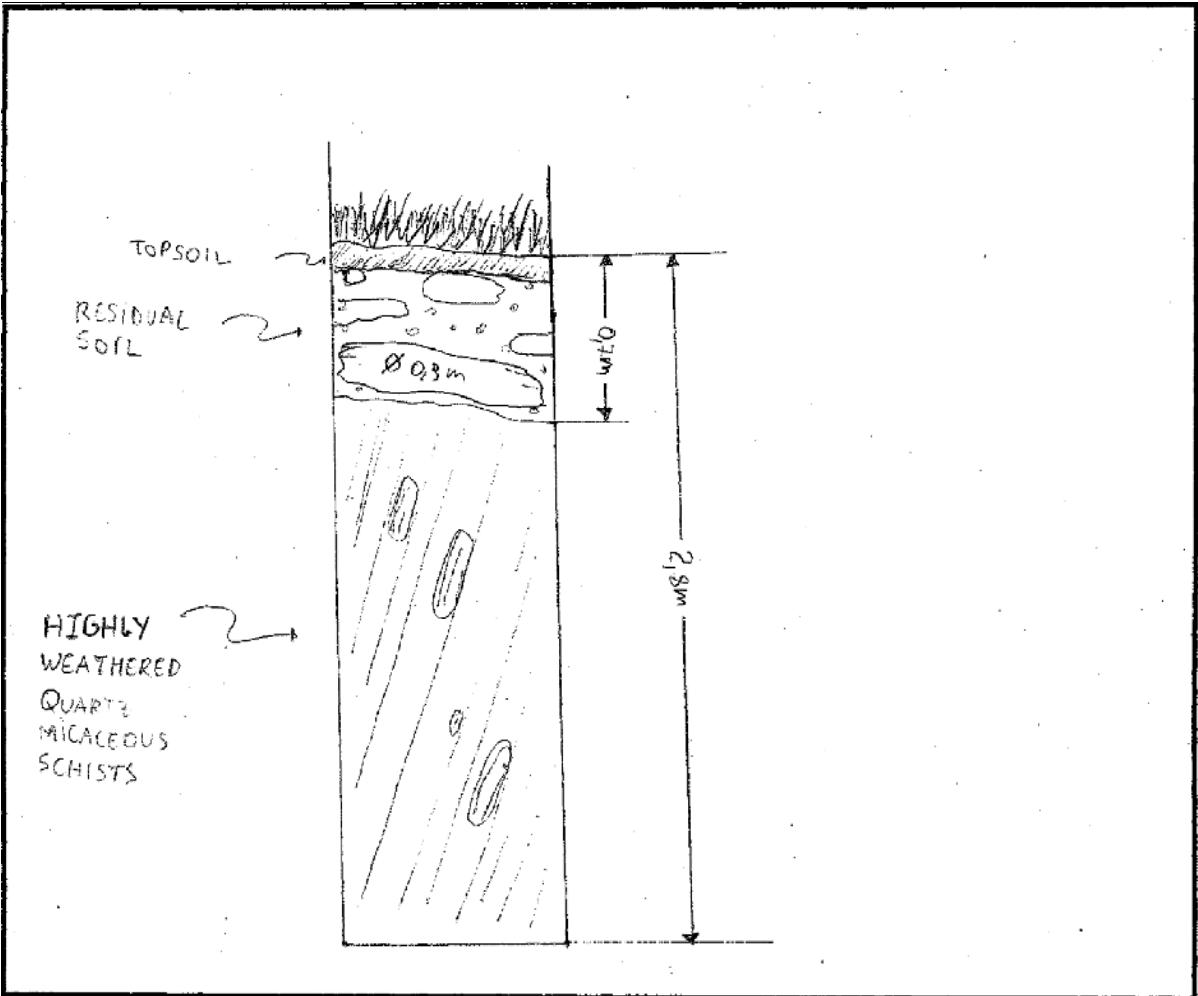


Remarks

Soil Profile

SHEET NO.	16			
Stream Name	TENERIAS	TE-1	Date:	2003/7/22
Location	50	m from Cota Mil	Inspector:	Juan Carlos Suarez

Sketch

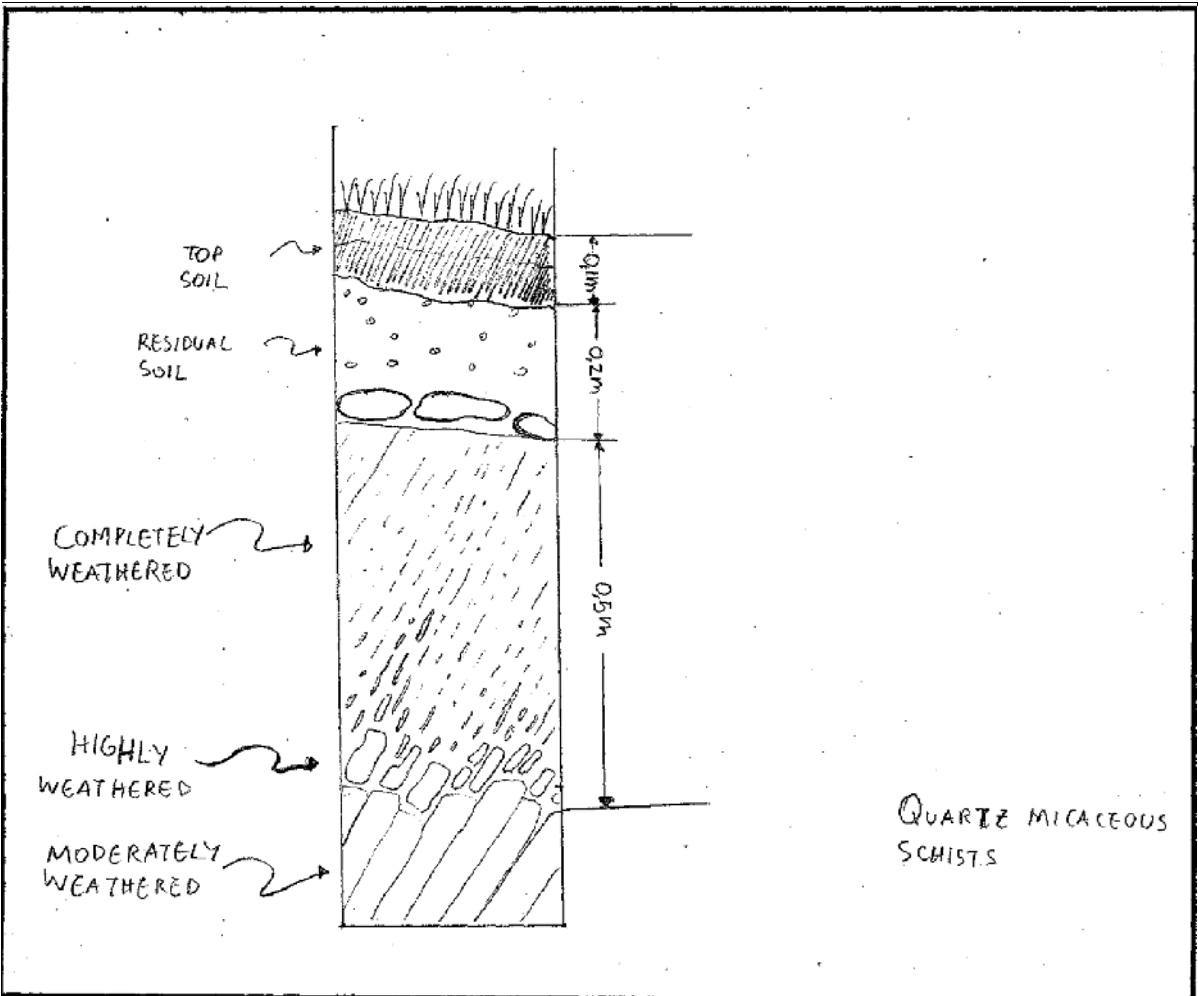


Remarks

Soil Profile

SHEET NO.	17			
Stream Name	TENERIAS	TE-5	Date:	2003/7/22
Location	1600	m from Cota Mil	Inspector:	Juan Carlos Suarez

Sketch

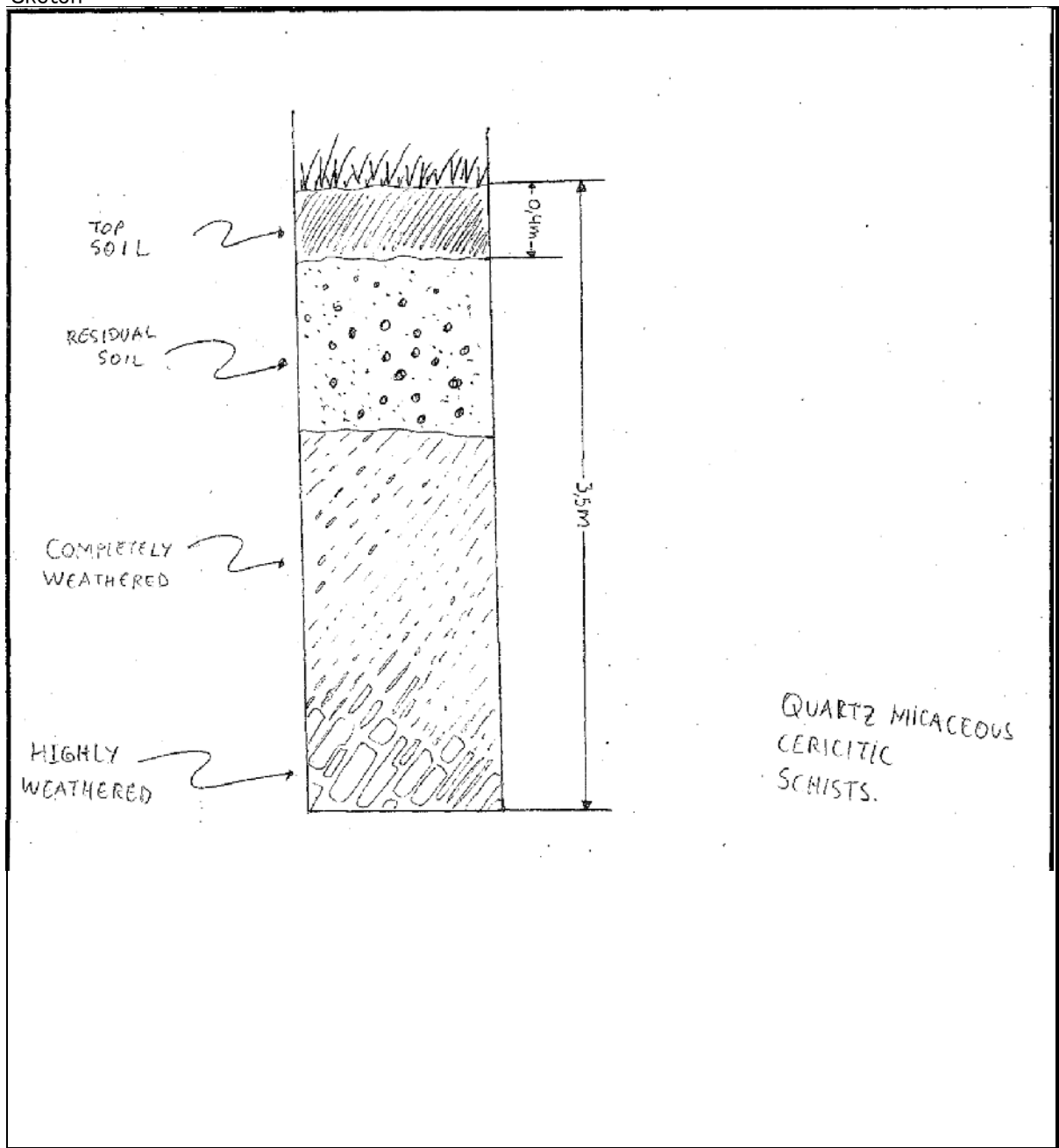


Remarks

Soil Profile

SHEET NO.	18			
Stream Name	LA JULIA	LJ1	Date:	2003/7/24
Location	300	m from Cota Mil	Inspector:	Juan Carlos Suarez

Sketch

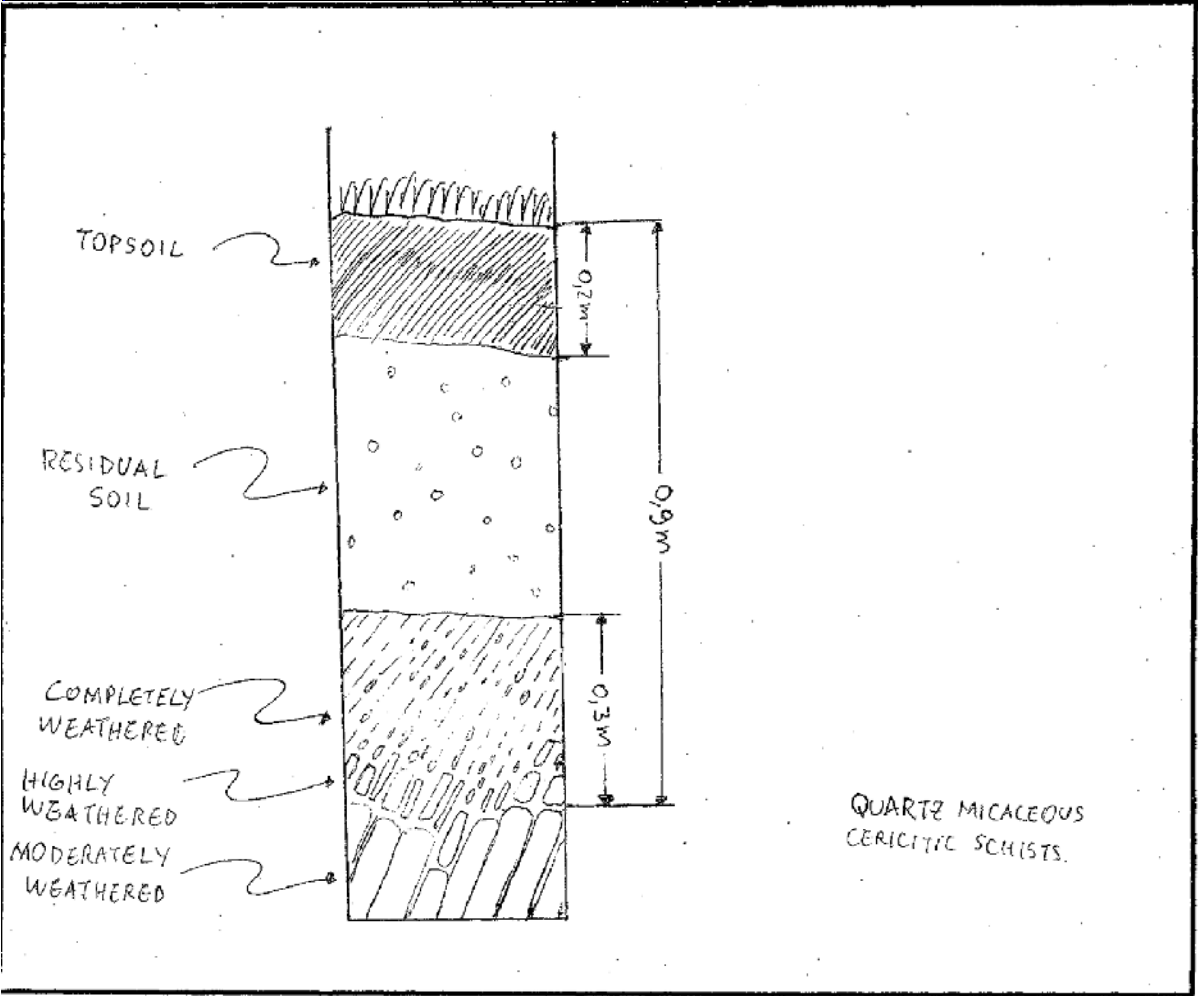


Remarks

Soil Profile

SHEET NO.	19		
Stream Name	LA JULIA	LJ3	Date: 2003/7/24
Location	810	m from Cota Mil	Inspector: Juan Carlos Suarez

Sketch

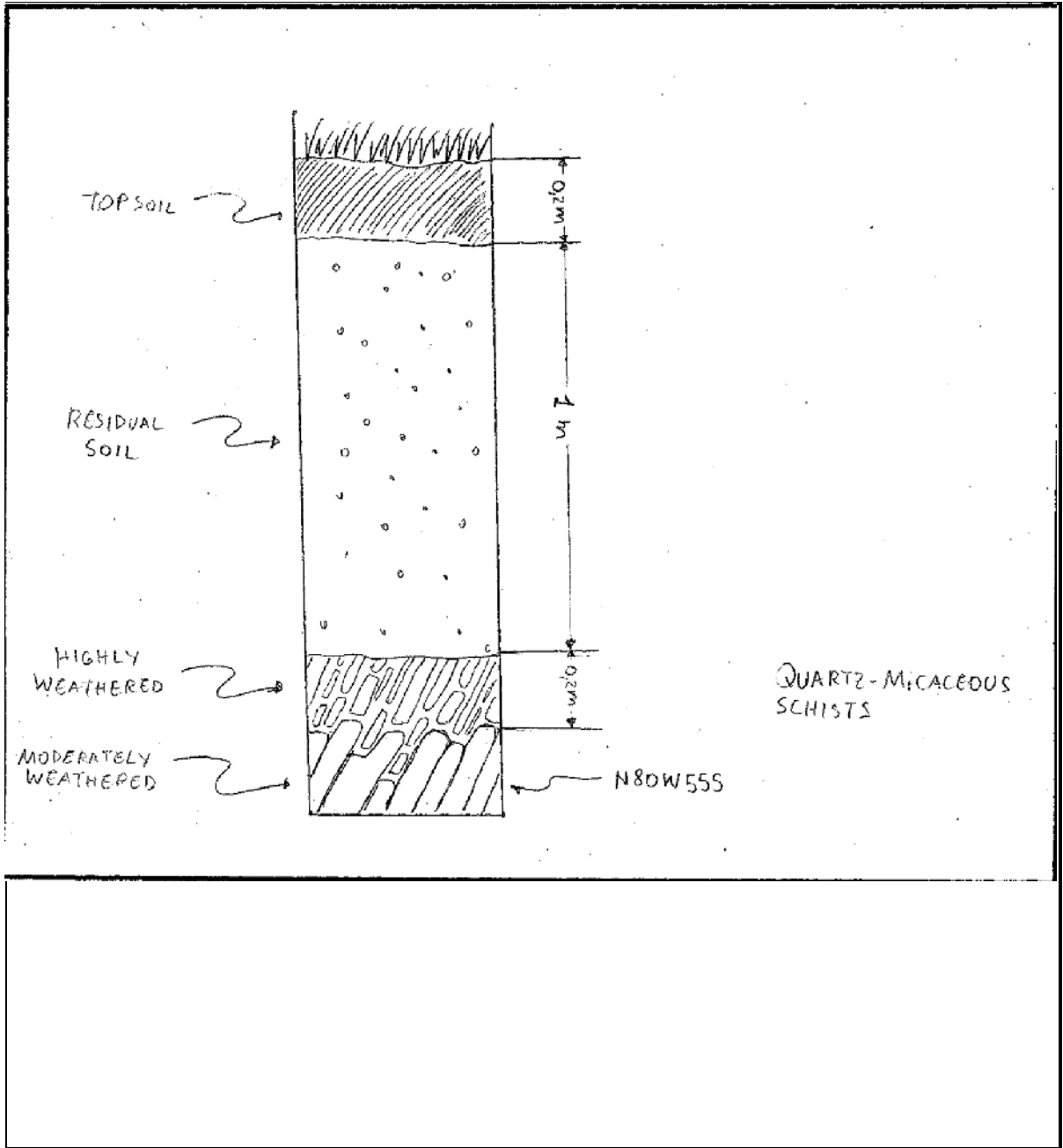


Remarks

Soil Profile

SHEET NO.	20			
Stream Name	LA JULIA	LJ25	Date:	2003/7/25
Location	2760	m from Cota Mil	Inspector:	Juan Carlos Suarez

Sketch



Remarks

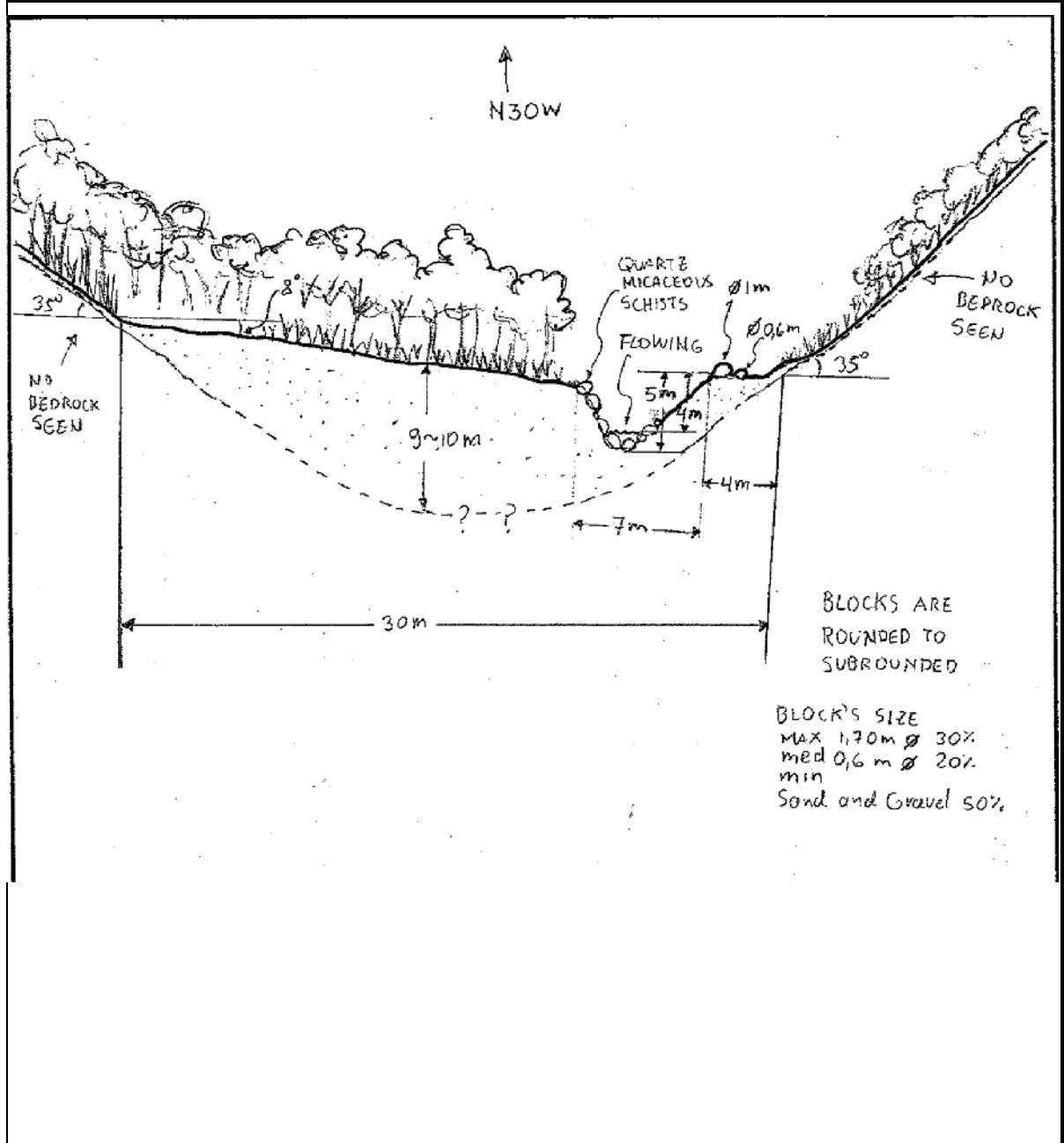
Soil Profile

## Sketch of Cross Section



SHEET NO.	1		
Stream Name	CAURIMARE RIVER	4-CAU-14	Date: 2003/7/10
Location	100	m from Cota Mil	Inspector: Juan C. Suarez N.

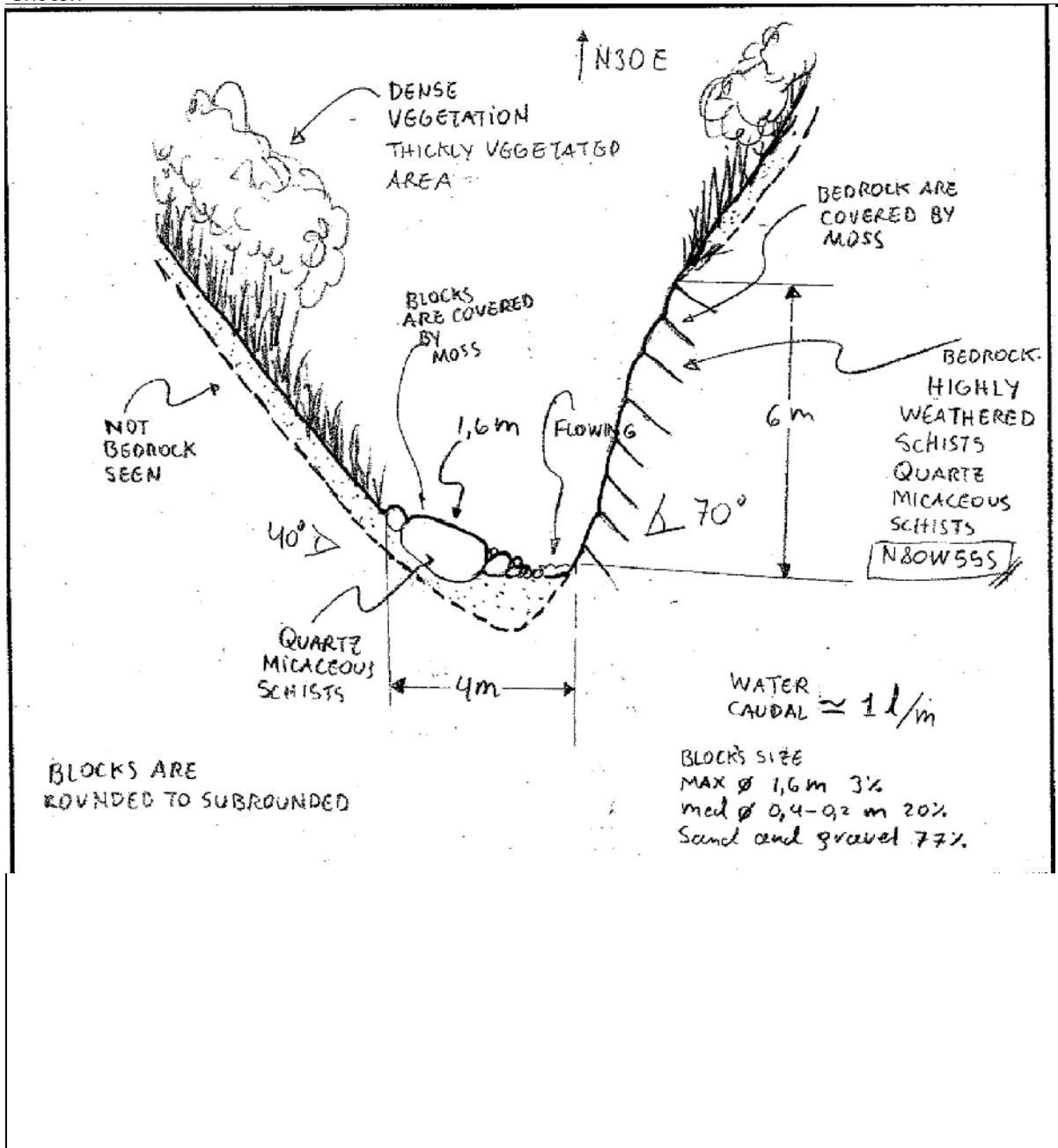
Sketch



Remarks

SHEET NO.	2		
Stream Name	CAURIMARE RIVER	4-CAU-25	Date: 2003/7/11
Location	3050	m from Cota Mil	Inspector: Juan C. Suarez N.

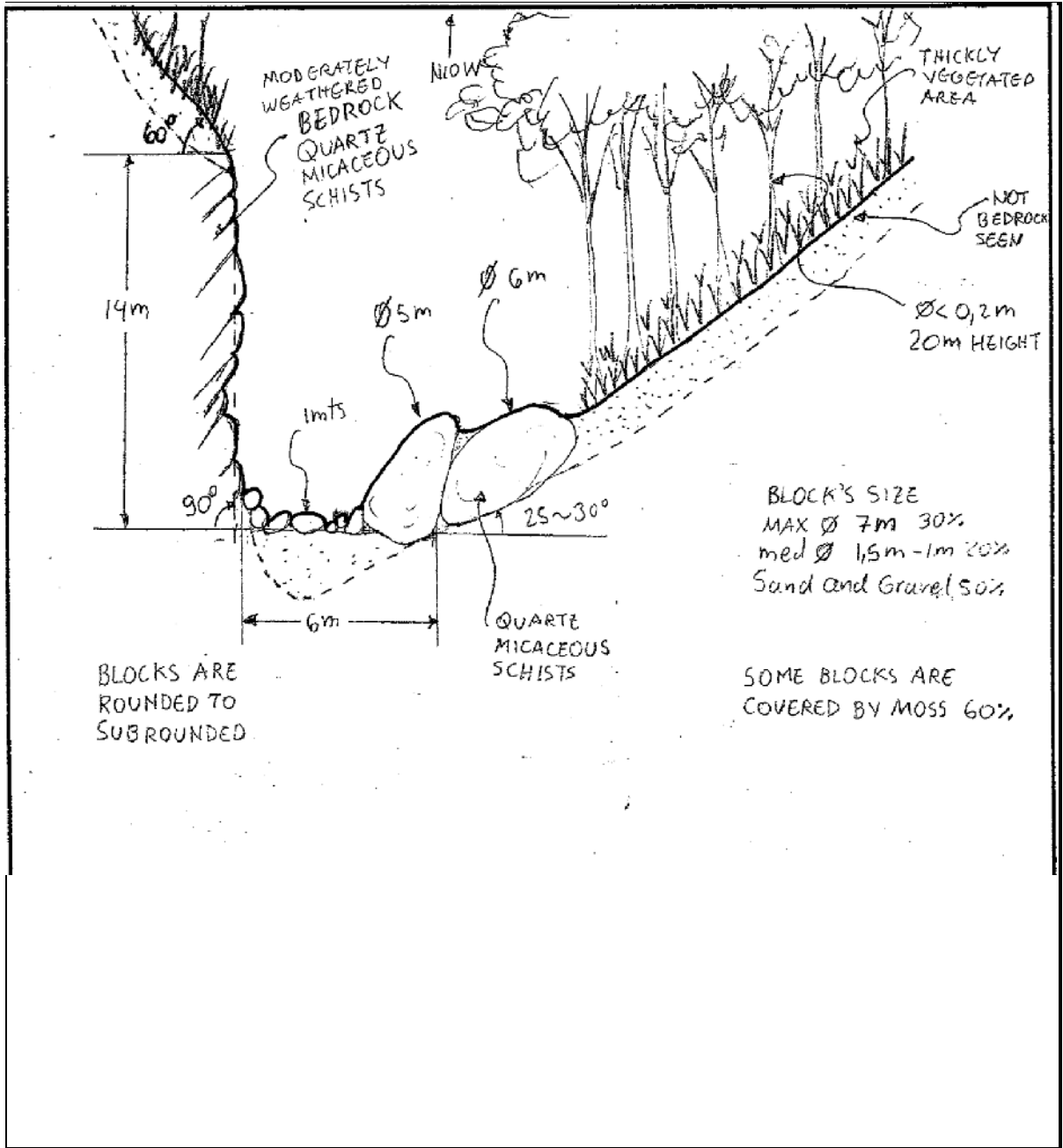
Sketch



Remarks

SHEET NO.	3		
Stream Name	CAURIMARE RIVER	4-CAU-26	Date: 2003/7/10
Location	405	m from Cota Mil	Inspector: Juan C. Suarez N.

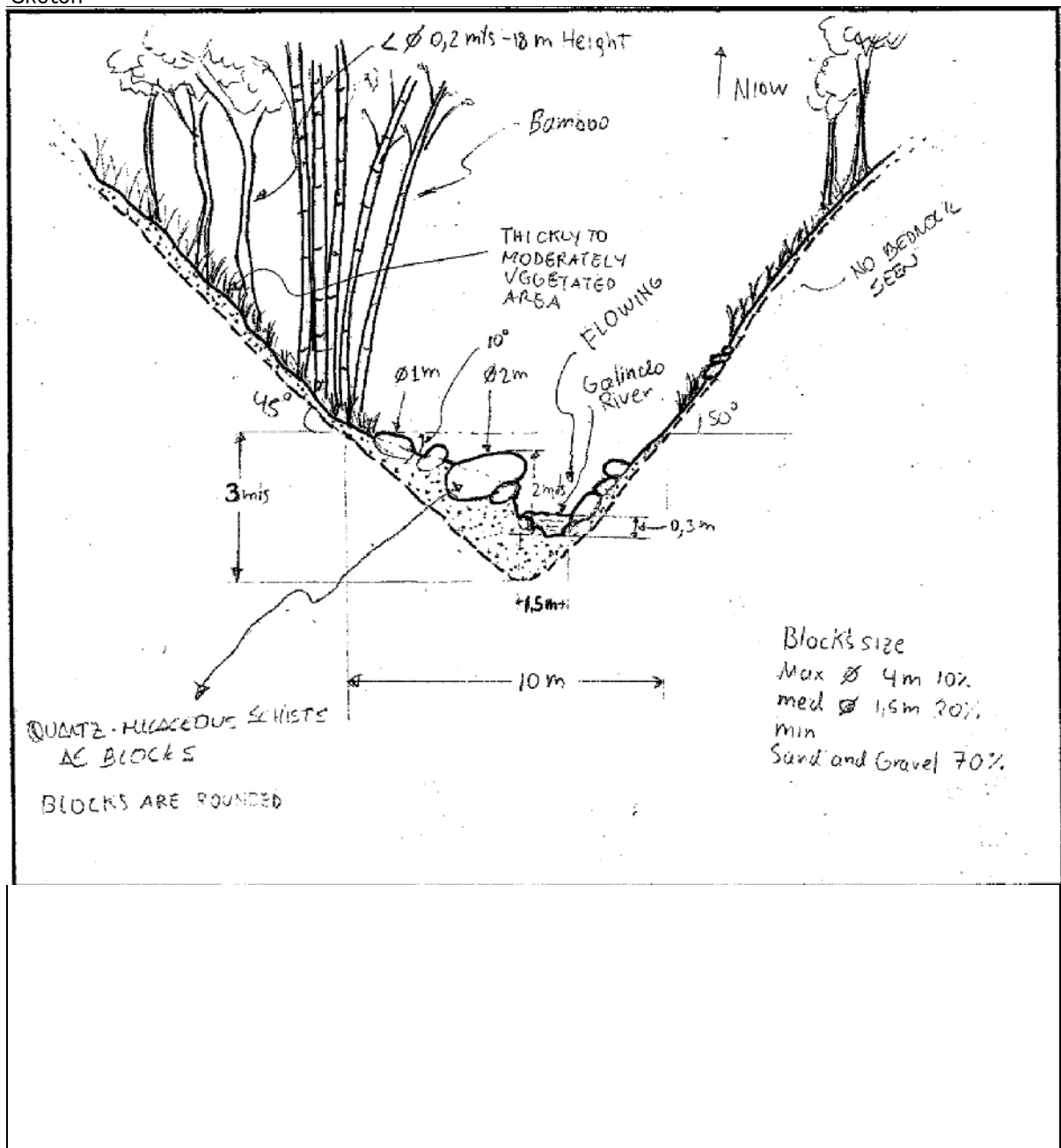
Sketch



Remarks

SHEET NO.	4		
Stream Name	GALINDO	5-GAL-1	Date: 2003/7/10
Location	405	m from Cota Mil	Inspector: Juan C. Suarez N.

Sketch

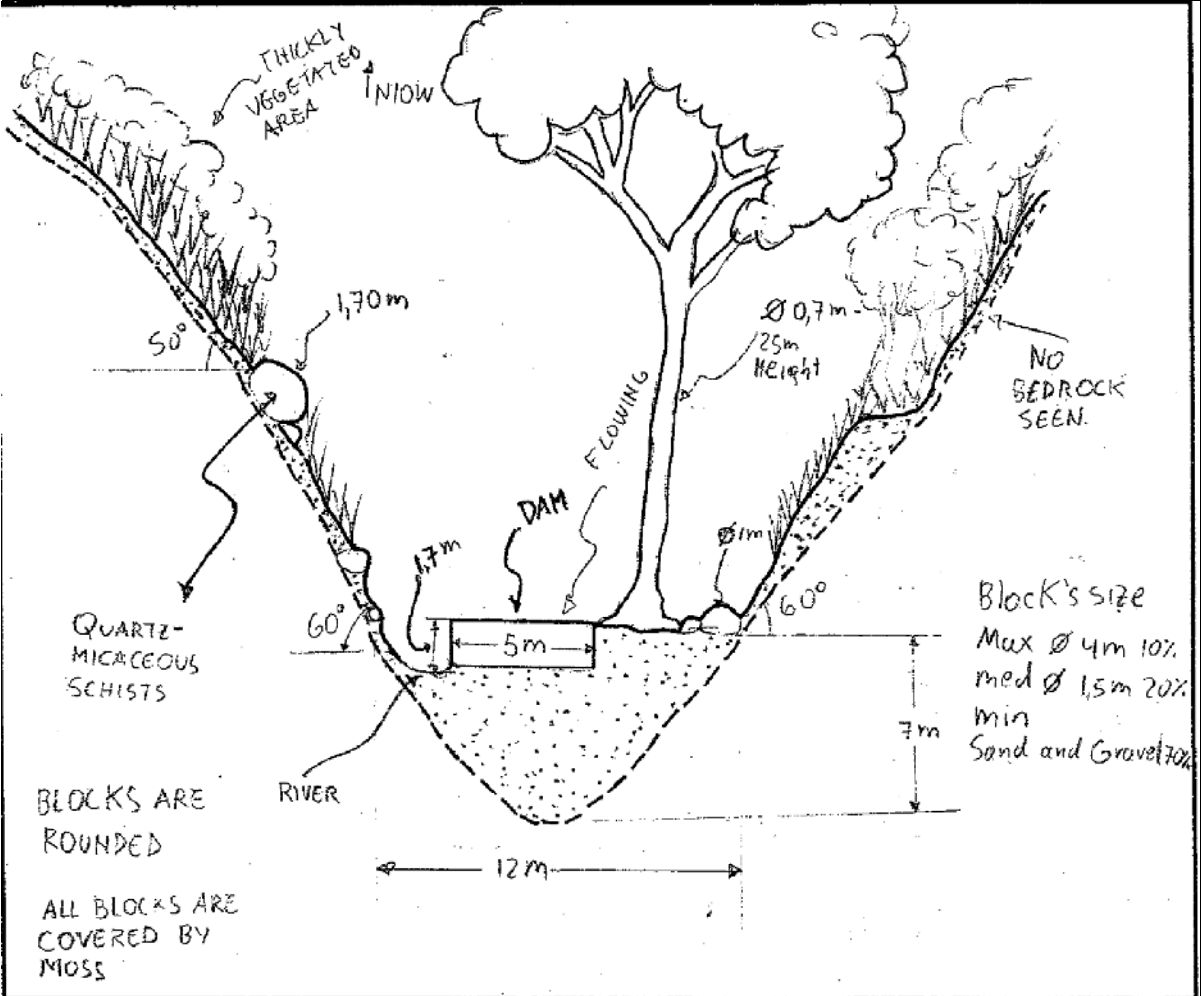


Remarks

Schist are from San Julian Complex

SHEET NO.	5		
Stream Name	GALINDO	5-GAL-2	Date: 2003/7/10
Location	304	m from Cota Mil	Inspector: Juan C. Suarez N.

Sketch



Remarks