











LOG OF TEST PIT OR AUGER HOLE

FEATURE Kasseb project LOCATION Damsite(Axis of dam) HOLE NO P 12
 COORDINATE X= 87,269.30 Y= 78,642.62 METHOD OF EXCAVATION Hand
 GROUND ELEVATION _____ TOTAL DEPTH OF HOLE 4.0 m DIMENSIONS OF HOLE _____
 DATE OF EXCAVATION _____ HOLE LOGGED BY STEG

DEPTH (m)	ELEVATION (m)	GRAPHIC	SOIL NAME AND CLASSIFICATION	DESCRIPTION	SAMPLING DEPTH (m)	WATER CONTENT (%)		GRADATION ** (%)										
						100	80	60	40	20	0							
1				Clay: Silty, greyish yellow, with rare rock fragments.														
2				MARLSTONE: Greenish grey, weathered with CALCITE small flakes.	1.5													
3																		
3.86				Very compact	3.8													
4				Bottom of pit 4.0 m.														

NOTES.

* GRAPHIC SYMBOLS ARE AS BELOW

 ROCK FRAGMENT	 GRAVEL	 SAND	 SILT	 LOAM
 CLAY	 ORGANIC MATTER			 G.W.L.

** GRADATION: _____ PERCENT PASSING NO. 4. SIEVE
 _____ PERCENT PASSING NO. 200 SIEVE

E.P.C. CONSULTING GEOTECHNICAL ENGINEERS 100, 101 & 102, 103 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000	
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LOG OF TEST PIT OR AUGER HOLE

FEATURE: **Kaeseb project** LOCATION: **Dam site (Axis of dam)** HOLE NO: **P 13**
 COORDINATE: **X= 87,070.21 Y= 78,641.75** METHOD OF EXCAVATION: **Hand**
 GROUND ELEVATION: TOTAL DEPTH OF HOLE: **5.7 m** DIMENSIONS OF HOLE: DATE OF EXCAVATION: HOLE LOGGED BY: **M. Sultani / HELLALI**

DEPTH (m)	ELEVATION (m)	GRAPHIC	SOIL NAME AND CLASSIFICATION	DESCRIPTION	SAMPLING DEPTH (m)	WATER CONTENT (%)		GRADATION (%)											
						100	80	60	40	20	0								
				Topsoil; Clay, greyish yellow with rare debris.	0.7														
1				MARLSTONE; Dark brown tinged in part. Completely weathered and closely cracked.															
2				Compact, but rock pieces are friable. Bedding is obscure.	2.6														
3				MARLSTONE; Dark grey Fresh but friable and soft. Moderately cracked. Bedding is obscure.	3.6														
4					3.8														
5					5.7														
				Bottom of 5.7m.															

NOTES:

* GRAPHIC SYMBOLS ARE AS BELOW

ROCK FRAGMENT	GRAVEL	SAND	SILT	LOAM
CLAY	ORGANIC MATTER			GWL

* GRADATION

----- PERCENT PASSING NO. 100 SIEVE
 ----- PERCENT PASSING NO. 200 SIEVE

CFD (Check for Particulars)	
DATE	
CHECKED	
REVIEWED	
APPROVED	
DATE	

LOG OF TEST PIT OR AUGER HOLE

FEATURE KASSEB project LOCATION Dam site (Axis of dam) HOLE NO P 14
 COORDINATE X=87,314.25 Y=78,642.14 METHOD OF EXCAVATION Hand
 GROUND ELEVATION _____ TOTAL DEPTH OF HOLE 3.5 m DIMENSIONS OF HOLE _____
 DATE OF EXCAVATION _____ HOLE LOGGED BY T. FUJITA (JICA)

DEPTH (m)	ELEVATION (m)	GRAPHIC	SOIL NAME AND CLASSIFICATION	DESCRIPTION	SAMPLING DEPTH (m)	WATER CONTENT (%)		GRADATION ** (%)											
						100	80	60	40	20	0								
0.0 - 0.4				Topsoil; Black and humus. 0.4															
0.4 - 0.8				MARLSTONE; Altered into clay (Residual soil) 0.8															
0.8 - 2.0				MARLSTONE; Brown and clayey due to decomposition. 2.0															
2.0 - 3.5				MARLSTONE; Weathered and soft. Easily scratched by weak blow of hammer. Intercalated with clayey material. 3.5															
				Bottom of pit, 3.5m.															
				Remarks: Rock gets into massive toward bottom of pit.															

NOTES

* GRAPHIC SYMBOLS ARE AS BELOW:

ROCK FRAGMENT	GRAVEL	SAND	SILT	LOAM
CLAY	ORGANIC MATTER			G.W.L.

** GRADATION: _____ PERCENT PASSING NO 4 SIEVE
 _____ PERCENT PASSING NO 200 SIEVE

E.P.O. (Name, Address, City, State, Zip) JICA (Name, Address, City, State, Zip)	SPAN CHECKED VERIFIED RE-CHECKED APPROVED DATE
--	---

LOG OF TEST PIT OR AUGER HOLE

FEATURE: **KASSEB Project** LOCATION: **Proposed Borrow Area (A)** HOLE NO: **BA-1**
 COORDINATE: **X=86,179.16, Y=77,956.77** METHOD OF EXCAVATION: **Hand**
 GROUND ELEVATION: _____ TOTAL DEPTH OF HOLE: **6.40 m** DIMENSIONS OF HOLE: _____
 DATE OF EXCAVATION: _____ HOLE LOGGED BY: **S. OGATA/STEG**

DEPTH (m)	ELEVATION (m)	GRAPHIC	SOIL NAME AND CLASSIFICATION	DESCRIPTION	WATER CONTENT (%)						
					DEPTH (cm)	0-10	10-20	20-30	30-40	40-50	50-60
TOP SOIL											
0.0											
1.0			Clayey GRAVEL GC(CH)	large amount of gravel, gravel is limestone, maximum grain size is 60mm, yellow, dry 1.60-2.20m. Amount of gravel is smaller than 0.9-1.6m							
2.0											
3.0											
3.2			Clayey GRAVEL GC(CH)	comparative large amount of gravel, gravel is limestone, maximum size is 60mm, brown, moist,							
4.0											
5.0											
5.8			COBBLES								
6.0			MARL	grey,							
6.2											
7.0											

NOTES

* GRAPHIC SYMBOLS ARE AS BELOW:

ROCK FRAGMENT	GRAVEL	SAND	SILT	LOAM
CLAY	ORGANIC MATTER	MARL		G.W.L.

** GRADATION: _____ PERCENT PASSING NO 40 SIEVE
 _____ PERCENT PASSING NO 200 SIEVE

E.P.D. Checked LISTED TESTED SAMPLED ON 11/06/1988	DRAWN CHECKED RECORDED APPROVED DATE
---	--

LOG OF TEST PIT OR AUGER HOLE

FEATURE **KASSEB Project** LOCATION **Proposed Borrow Area(A)** HOLE NO **BA-2**
 COORDINATE **X=86,605.41, Y=77,981.48** METHOD OF EXCAVATION **Hand**
 GROUND ELEVATION _____ TOTAL DEPTH OF HOLE **3.70 m** DIMENSIONS OF HOLE _____
 DATE OF EXCAVATION _____ HOLE LOGGED BY **S. OGATA/STEG**

DEPTH (m)	ELEVATION (m)	GRAPHIC	SOIL NAME AND CLASSIFICATION	DESCRIPTION	SAMPLING DEPTH (m)	WATER CONTENT (%)					GRADATION ** (%)												
						0	20	40	60	80	100	0	20	40	60	80	100						
			TOP SOIL																				
1.0																							
1.2			CLAY	Small amount of carbonized limestone. maximum size is 20 mm, yellow, dry.																			
2.0			CH																				
2.2			MARL	grey.																			
3.0																							
3.7																							
4.0																							

NOTES

* GRAPHIC SYMBOLS ARE AS BELOW:

ROCK FRAGMENT	GRAVEL	SAND	SILT	LOAM
CLAY	ORGANIC MATTER	MARL		GWL

** GRADATION: _____ PERCENT PASSING NO 40 SIEVE
 _____ PERCENT PASSING NO 200 SIEVE

L.P.D.C. (SPECIALIST) (SPECIALIST) (SPECIALIST)	DRAWN CHECKED ESTIMATED RECOMMENDED APPROVED DATE
---	--

LOG OF TEST PIT OR AUGER HOLE

FEATURE **KASSEB Project** LOCATION **Proposed Borrow Area (A)** HOLE NO. **BA-3**
 COORDINATE **X=86,376.22, Y=77,946.18** METHOD OF EXCAVATION **Hand**
 GROUND ELEVATION _____ TOTAL DEPTH OF HOLE **2.50 m** DIMENSIONS OF HOLE _____
 DATE OF EXCAVATION _____ HOLE LOGGED BY **S. OGATA/STEG**

DEPTH (m)	ELEVATION (m)	GRAPHIC	SOIL NAME AND CLASSIFICATION	DESCRIPTION	SAMPLING DEPTH (cm)	WATER CONTENT (%)		GRADATION ** (%)												
						2	100	60	40	20	10									
0			CLAY	yellowish grey, dry.																
1.0			CH																	
1.5			MARL	greenish grey, moist, weathered, CH.																
2.0																				
2.5																				
3.0																				

NOTES:

* GRAPHIC SYMBOLS ARE AS BELOW:

ROCK FRAGMENT	GRAVEL	SAND	SILT	LOAM
CLAY	ORGANIC MATTER	MARL		GWL

** GRADATION

_____ PERCENT PASSING NO 40 SIEVE
 _____ PERCENT PASSING NO 200 SIEVE

L.P.R. INSTRUMENTS ELECTRICAL SUPPLY 1000-10TH ST. N.E. WASHINGTON, D.C. 20002	DRAWN _____ CHECKED _____ FIELD NOTES _____ APPROVED _____ DATE _____
---	---

LOG OF TEST PIT OR AUGER HOLE

FEATURE KASSEB Project LOCATION Proposed Borrow Area (B) HOLE NO. BB-1
 COORDINATE X=86,732.57, Y=77,671.70 METHOD OF EXCAVATION Hand
 GROUND ELEVATION _____ TOTAL DEPTH OF HOLE 2.20 m DIMENSIONS OF HOLE _____
 DATE OF EXCAVATION _____ HOLE LOGGED BY S. OGATA/STEG

DEPTH (m)	ELEVATION (m)	GRAPHIC	SOIL NAME AND CLASSIFICATION	DESCRIPTION	SAMPLING		WATER CONTENT (%)		GRADATION ** (%)											
					DEPTH (m)				0	20	40	60	80	100						
0			CLAY	dence, grey, dry.																
1.8			CH																	
2.0			MARL	yellowish grey, dry-weathered, CH.																
2.2																				
3.0																				

NOTES

* GRAPHIC SYMBOLS ARE AS BELOW:

ROCK FRAGMENT	GRAVEL	SAND	SILT	LOAM
CLAY	ORGANIC MATTER	MARL	GWL	

** GRADATION

----- PERCENT PASSING NO. 4. SIEVE
 ----- PERCENT PASSING NO. 200. SIEVE

S.P.B.L. NO. _____ DATE OF LOGGING _____ NAME OF LOGGERS _____ NAME OF PROJECT _____ NAME OF SITE _____ DATE _____	
---	--

LOG OF TEST PIT OR AUGER HOLE

FEATURE: **KASSEB Project** LOCATION: **Proposed Borrow Area (B)** HOLE NO.: **BB-2**
 COORDINATE: **X=86,578.59, Y=77,632.92** METHOD OF EXCAVATION: **Hand**
 GROUND ELEVATION: _____ TOTAL DEPTH OF HOLE: **1.70 m** DIMENSIONS OF HOLE: _____
 DATE OF EXAMINATION: _____ HOLE LOGGED BY: **S. OGATA/STEG**

DEPTH (m)	ELEVATION (m)	GRAPHIC	SOIL NAME AND CLASSIFICATION	DESCRIPTION	SAMPLING		WATER CONTENT (%)						GRADATION ** (%)							
					DEPTH (cm)		0	2	20	100	80	60	40	20	0					
1.0		CLAY	CLAY	yellow, dry																
1.7		MARL	MARL	grey, dry, weathered CH.																
2.0																				
2.2																				
2.4																				
2.6																				
2.8																				
3.0																				
3.2																				
3.4																				
3.6																				
3.8																				
4.0																				
4.2																				
4.4																				
4.6																				
4.8																				
5.0																				

NOTES:

* GRAPHIC SYMBOLS ARE AS BELOW:

ROCK FRAGMENT	GRAVEL	SAND	SILT	LOAM
CLAY	ORGANIC MATTER	MARL		GWL

** GRADATION: _____ PERCENT PASSING NO 40 SIEVE
 _____ PERCENT PASSING NO 200 SIEVE

DATE	_____
APPROVED	_____
PIC PRINTED	_____
SAMPLE	_____
CHECKED	_____
DATE	_____

LOG OF TEST PIT OR AUGER HOLE

FEATURE **KASSEB Project** LOCATION **Proposed Borrow Area** HOLE NO **BB-3**
 COORDINATE **X=86,245.89, Y=77,725.52** METHOD OF EXCAVATION **Hand**
 GROUND ELEVATION _____ TOTAL DEPTH OF HOLE **2.50 m** DIMENSIONS OF HOLE _____
 DATE OF EXCAVATION _____ HOLE LOGGED BY **S. OGATA/STEG**

DEPTH (m)	ELEVATION (m)	GRAPHIC	SOIL NAME AND CLASSIFICATION	DESCRIPTION	SAMPLING DEPTH (m)	WATER CONTENT (%)		GRADATION** (%)												
						0	100	100	80	60	40	20	0							
1.0			CLAY	small amount of fragment of limestone, yellowish grey, dry.																
1.2			CH																	
2.0			MARL	grey, dry, weathered CH.																
2.5																				
3.0																				

NOTES:

* GRAPHIC SYMBOLS ARE AS BELOW:

ROCK FRAGMENT	GRAVEL	SAND	SILT	LOAM
CLAY	ORGANIC MATTER	MARL		GWL

** GRADATION: _____ PERCENT PASSING NO. 4. SIEVE
 _____ PERCENT PASSING NO. 200 SIEVE

E.P.B. CONTINUATION OF LOG SHEET NO. _____ DATE: _____ SCALE: _____ DRAWN BY: _____ CHECKED BY: _____ APPROVED BY: _____ TITLE: _____ PAGE: _____	
--	--

LOG OF TEST PIT OR AUGER HOLE

FEATURE KASSEB Project LOCATION Proposed Borrow Area ^(B) HOLE NO. BB-4
 COORDINATE X=86,114.61, Y=77,727.00 METHOD OF EXCAVATION Hand
 GROUND ELEVATION TOTAL DEPTH OF HOLE 1.40 m DIMENSIONS OF HOLE
 DATE OF EXCAVATION HOLE LOGGED BY S. OGATA/STEG

DEPTH (m)	ELEVATION (m)	GRAPHIC	SOIL NAME AND CLASSIFICATION	DESCRIPTION	SAMPLING DEPTH (m)	WATER CONTENT (%)						
						0	5	20	40	60	80	
0.0			CLAY	comparatively large amount of coarse gravel of limestone, yellow, dry.								
0.6			CH									
1.0			MARL	grey, dry, weathered, CH, GWL - 1.10 = (July, '79)								
1.4												
2.0												

NOTES

* GRAPHIC SYMBOLS ARE AS BELOW

ROCK FRAGMENT	GRAVEL	SAND	SILT	LOAM
CLAY	ORGANIC MATTER	MARL	GWL	

** GRADATION: PERCENT PASSING NO. 40 SIEVE
 PERCENT PASSING NO. 200 SIEVE

SP. GR. NO. / DATE	
NO. OF TESTS	
TEST NO.	
TESTER	
APPROVER	
DATE	

LOG OF TEST PIT OR AUGER HOLE

FEATURE KASSEB Project LOCATION Proposed Borrow Area (C) HOLE NO. BC-1
 COORDINATE X=86,599.77, Y=78,554.17 METHOD OF EXCAVATION Hand
 GROUND ELEVATION _____ TOTAL DEPTH OF HOLE 1.70 m DIMENSIONS OF HOLE _____
 DATE OF EXCAVATION _____ HOLE LOGGED BY S. OGATA/STEG

DEPTH (m)	ELEVATION (m)	GRAPHIC	SOIL NAME AND CLASSIFICATION	DESCRIPTION	SAMPLING DEPTH (m)	WATER CONTENT (%)		GRADATION (%)										
						2	200	20	60	40	20	0						
0.6			CLAY	yellow, dry.														
1.0			MARL	greenish grey, moist weathered, CH.														
1.7																		
2.0																		

NOTES

* GRAPHIC SYMBOLS ARE AS BELOW:

ROCK FRAGMENT	GRAVEL	SAND	SILT	LOAM
CLAY	ORGANIC MATTER	MARL		GWL

** GRADATION: _____ PERCENT PASSING NO 4 SIEVE
 _____ PERCENT PASSING NO 200 SIEVE

E & B CONSULTANTS INCORPORATED 1000-10TH AVENUE DENVER, CO 80202	DRAWN BY _____ CHECKED BY _____ SURVEYED BY _____ RECORDED BY _____ APPROVED BY _____ DATE _____
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







LOG OF TEST PIT OR AUGER HOLE

FEATURE KASSEB Project LOCATION Proposed Borrow Area(C) HOLE NO. BC-2
 COORDINATE X=86,320.00, Y=78,548.31 METHOD OF EXCAVATION Hand
 GROUND ELEVATION TOTAL DEPTH OF HOLE 2.30 m DIMENSIONS OF HOLE
 DATE OF EXCAVATION HOLE LOGGED BY S. OGATA/STEG

DEPTH (m)	ELEVATION (m)	GRAPHIC	SOIL NAME AND CLASSIFICATION	DESCRIPTION	SAMPLING DEPTH (m)	WATER CONTENT (%)					GRADATION (%)									
						0	5	10	15	20	0	5	10	15	20					
0.0			CLAY CH	dark grey, dry.																
1.0																				
1.5			MARL	dark grey, moist, weathered, CH.																
2.0																				
2.3																				
3.0																				

NOTES

- * GRAPHIC SYMBOLS ARE AS BELOW

** GRADATION
 --- PERCENT PASSING NO. 4. SIEVE
 - - - PERCENT PASSING NO. 200. SIEVE

EPBC 2003/2004 FORM 100 1/2004	DATE
LOG NO.	
LOCATION	
PROJECT	
DESIGNED BY	
CHECKED BY	
DATE	

LOG OF TEST PIT OR AUGER HOLE

FEATURE KASSEB Project (LOCATION Proposed Borrow Area(C)) HOLE NO BC-3
COORDINATE X=86,107.43, Y=78,479.13 METHOD OF EXCAVATION Hand
GROUND ELEVATION _____ TOTAL DEPTH OF HOLE 2.20 m DIMENSIONS OF HOLE _____
DATE OF EXCAVATION _____ HOLE LOGGED BY S. OGATA/STEG

DEPTH (m)	ELEVATION (m)	GRAPHIC	SOIL NAME AND CLASSIFICATION	DESCRIPTION	WATER CONTENT (%)				GRADATION** (%)										
					DEPTH 100	80	60	40	75	60	40	20	0						
		▲	CLAY	<i>small amount of gravel</i>															
		▲	CH	<i>dense, black, dry.</i>															
1.0		▲																	
1.8		▲																	
2.0		▲	MARL	<i>greenish grey, dry,</i>															
2.3		▲		<i>weathered, CH.</i>															
3.0																			

NOTES:
* GRAPHIC SYMBOLS ARE AS BELOW:
ROCK FRAGMENT: GRAVEL: SAND: SILT: LOAM:
CLAY: ORGANIC MATTER: MARL: GWL:
** GRADATION: PERCENT PASSING NO. 4. SIEVE
 PERCENT PASSING NO. 200. SIEVE
CPD: SAMPLED:
CHECKED:
SERIALIZED:
PICKUP DATE:
APPROVED:
DATE:

LOG OF TEST PIT OR AUGER HOLE

FEATURE: **KASSEB Project** LOCATION: **Proposed Borrow Area(C)** REF NO: **BC-4**
 COORDINATE: **X=85,863.91, Y=78,439.61** METHOD OF EXCAVATION: **Hand**
 GROUND ELEVATION: _____ TOTAL DEPTH OF HOLE: **2.40 m** DIMENSIONS OF HOLE: _____
 DATE OF EXCAVATION: _____ HOLE LOGGED BY: **S. OGATA/STEG**

DEPTH (m)	ELEVATION	SOIL NAME AND CLASSIFICATION	DESCRIPTION	SAMPLING DEPTH (cm)	WATER CONTENT (%)				GRADATION ** (%)									
					100	60	40	20	100	60	40	20						
0.0		gravelly CLAY	Comparatively large amount of gravel, black															
0.5		CH	dry															
1.0		gravelly CLAY	Comparatively large amount of gravel, maximum size is 10mm black															
1.5		CH																
2.0			GWL = 1.3m (9 July '79)															
2.1		CLAY, CH	small amount of gravel of limestone yellow, submerged															
2.4																		

NOTES

* GRAPHIC SYMBOLS ARE AS BELOW:

ROCK FRAGMENT	GRAVEL	SAND	SILT	LOAM
CLAY	ORGANIC MATTER			GWL

** GRADATION _____ PERCENT PASSING #100 SIEVE
 _____ PERCENT PASSING #200 SIEVE

CHECKED _____ DATE _____	DRAWN _____ DATE _____
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LOG OF TEST PIT OR AUGER HOLE

FEATURE: KASSEB Project LOCATION: Proposed Borrow Area(D) HOLE NO: BD-1
 COORDINATE: X=85,554.15, Y=78,722.91 METHOD OF EXCAVATION: Hand
 GROUND ELEVATION: _____ TOTAL DEPTH OF HOLE: 6.75 m DIMENSIONS OF HOLE: _____
 DATE OF EXCAVATION: _____ HOLE LOGGED BY: S. OGATA/STEG

DEPTH (m)	ELEVATION (m)	GRAPHIC CLASSIFICATION	SOIL NAME AND DESCRIPTION	WATER CONTENT (%)					GRADATION (%)														
				DEPTH (m)	0	2	200	80	60	40	20	0											
TOP SOIL																							
0.0		▲	gravelly CLAY	comparatively large amount of gravel, a few pieces of cobbles, maximum size is 100mm, yellow, moist																			
1.0		▲	gravelly CLAY	large amount of gravel, a few pieces of cobbles, maximum size is 100mm, brown, moist																			
1.7		▲	gravelly CLAY	hardened, maximum size is 20mm, yellow, dry																			
2.0		▲	gravelly CLAY	hardened, maximum size is 50mm, yellow, dry																			
2.7		▲	gravelly CLAY	hardened, maximum size is 50mm, yellow, dry																			
3.0		▲	CLAY																				
4.0		▲	CLAY																				
5.0		▲	CLAY																				
6.0		▲	CLAY																				
6.75		▲	CLAY																				
7.0																							

NOTES:

* GRAPHIC SYMBOLS ARE AS BELOW

▲	○ ○ ○	▨	▧	▩
ROCK FRAGMENT	GRAVEL	SAND	SILT	LOAM
▨	▽	□	□	▽
CLAY	ORGANIC MATTER			GWL

* * GRADATION: PERCENT PASSING NO. 40 SIEVE
 _____ PERCENT PASSING NO. 200 SIEVE

LOG OF TEST PIT OR AUGER HOLE

FEATURE KASSEB Project **LOCATION** Proposed Borrow Area(D) **HOLE NO** BD-2
COORDINATE X=85,678.06, Y=78,902.10 **METHOD OF EXCAVATION** Hand
GROUND ELEVATION **TOTAL DEPTH OF HOLE** 7.00 m **DIMENSIONS OF HOLE**
DATE OF EXCAVATION **HOLE LOGGED BY** S. OGATA/STEG

DEPTH (m)	ELEVATION (m)	GRAPHIC	SOIL NAME AND CLASSIFICATION	DESCRIPTION	SAMPLING WATER CONTENT (%)													
					DEPTH (cm)	2	10	20	50	60	70	80						
			TOP SOIL															
1.0		▲	clayey GRAVEL GC(CH)	large amount of gravel, maximum size is 80mm, a few cobbles, black, dry.														
2.0		▲	clayey GRAVEL GC(CL)	large amount of gravel, maximum size is 80mm, a few cobbles, brown, dry.														
2.9		▲	gravelly CLAY CH	large amount of gravel, maximum size is 80mm, a few cobbles, dark brown, moist.														
3.0		▲	clayey GRAVEL GC(CL)	large amount of gravel, maximum size is 100mm, yellow, moist.														
3.2		▲	clayey GRAVEL GC(CL)	large amount of gravel, maximum size is 100mm, yellow, moist.														
4.0		▲	gravelly CLAY CH	large amount of gravel, maximum size is 100mm, brown, moist.														
4.1		▲	clayey GRAVEL GC(CL)	large amount of gravel, maximum size is 100mm, yellow, moist.														
5.0		▲	clayey GRAVEL GC(CL)	large amount of gravel, maximum size is 100mm, yellow, moist.														
6.0		▲	gravelly CLAY CH	large amount of gravel, brown, moist.														
7.0		▲	CLAY															

NOTES:

- * GRAPHIC SYMBOLS ARE AS BELOW:

ROCK FRAGMENT	GRAVEL	SAND	SILT	LOAM
CLAY	ORGANIC MATTER			GWL

** GRADATION

——— PERCENT PASSING NO. 40 SIEVE
 - - - PERCENT PASSING NO. 200 SIEVE

B.P.D. (BORROW PIT DATA) SHEET NO. _____ DATE OF FIELD LOGGING _____ LOCATION _____ HOLE NO. _____	OTHER _____ CHECKED _____ SUBMITTED _____ APPROVED _____ APPROVAL _____
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LOG OF TEST PIT OR AUGER HOLE

FEATURE KASSEB Project LOCATION Proposed Borrow Area (D) HOLE NO. BD-3
 COORDINATE X=85,473.50, Y=78,847.22 METHOD OF EXCAVATION Hand
 GROUND ELEVATION _____ TOTAL DEPTH OF HOLE 6.20 m DIMENSIONS OF HOLE _____
 DATE OF EXCAVATION _____ HOLE LOGGED BY S. OGATA/STEG

DEPTH (m)	ELEVATION (m)	GRAPHIC	SOIL NAME AND CLASSIFICATION	DESCRIPTION	SAMPLING DEPTH (m)	WATER CONTENT (%)		GRADATION ** (%)										
						S	200	75	60	40	20	0						
			TOP SOIL															
0.6			CLAY	dense, grey, dry														
1.0			CH															
2.2			CLAY	yellowish grey, moist														
3.0			CL															
4.0																		
5.0																		
6.0																		
6.2																		
7.0																		

NOTES

* GRAPHIC SYMBOLS ARE AS BELOW:

ROCK FRAGMENT	GRAVEL	SAND	SILT	LOAM
CLAY	ORGANIC MATTER			G.W.L.

** GRADATION

———— PERCENT PASSING NO. 4 SIEVE
 _____ PERCENT PASSING NO. 200 SIEVE

DATE	
CHECKED	
EXAMINED	
REVISION NO.	
BY	
DATE	

LOG OF TEST PIT OR AUGER HOLE

FEATURE: **KASSEB Project** LOCATION: **Proposed Borrow Area (D)** DISTRICT: **BD-4**
 COORDINATE: **X=85,596.36, Y=79,016.67** METHOD OF EXCAVATION: **Hand**
 SOIL ELEVATION: TOTAL DEPTH OF HOLE: **5.10 m** DEPTH OF HOLE: DATE OF EXCAVATION: HOLE LOGGED BY: **S. OGATA/STEG**

DEPTH (m)	RELATIVE ELEVATION (m)	SOIL NAME AND CLASSIFICATION	DESCRIPTION	SAMPLING DEPTH (cm)					GRAIN SIZE (%)				
				0-5	5-10	10-20	20-30	30-40	40-60	60-75	75-100	20	40
TOP SOIL													
1.6		GRAVEL	clayey large amount of gravel, maximum size is 70mm, yellowish brown, dry.										
2.0		GC(CH)											
2.4		CLAY	gravelly large amount of gravel, maximum size is 70mm, yellowish brown, moist.										
3.0		CH											
4.1		MARL	weathered, CH, moist, greenish grey.										
5.1													
6.0													

NOTES

* GRAPHIC SYMBOLS ARE AS BELOW

FRAGMENT	GRAVEL	SAND	SILT	LOAM
CLAY	ORGANIC MATTER	MARL	C & L	

* * * GRABATION

----- PERCENT PASSING NO. 10 SIEVE
 ----- PERCENT PASSING NO. 200 SIEVE

