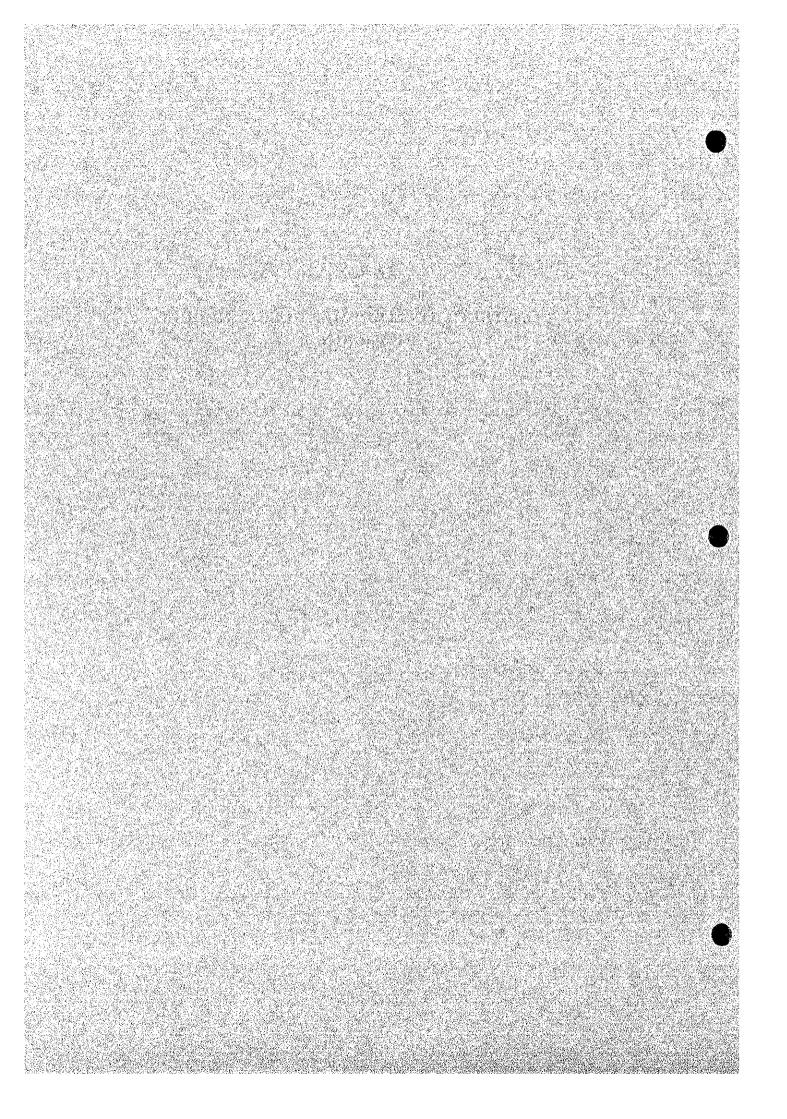
### ANNEX VI

## CONSTRUCTION EQUIPMENT USE SCHEDULE, PACKAGE 1



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Construction Equipment Schedulc,Package I

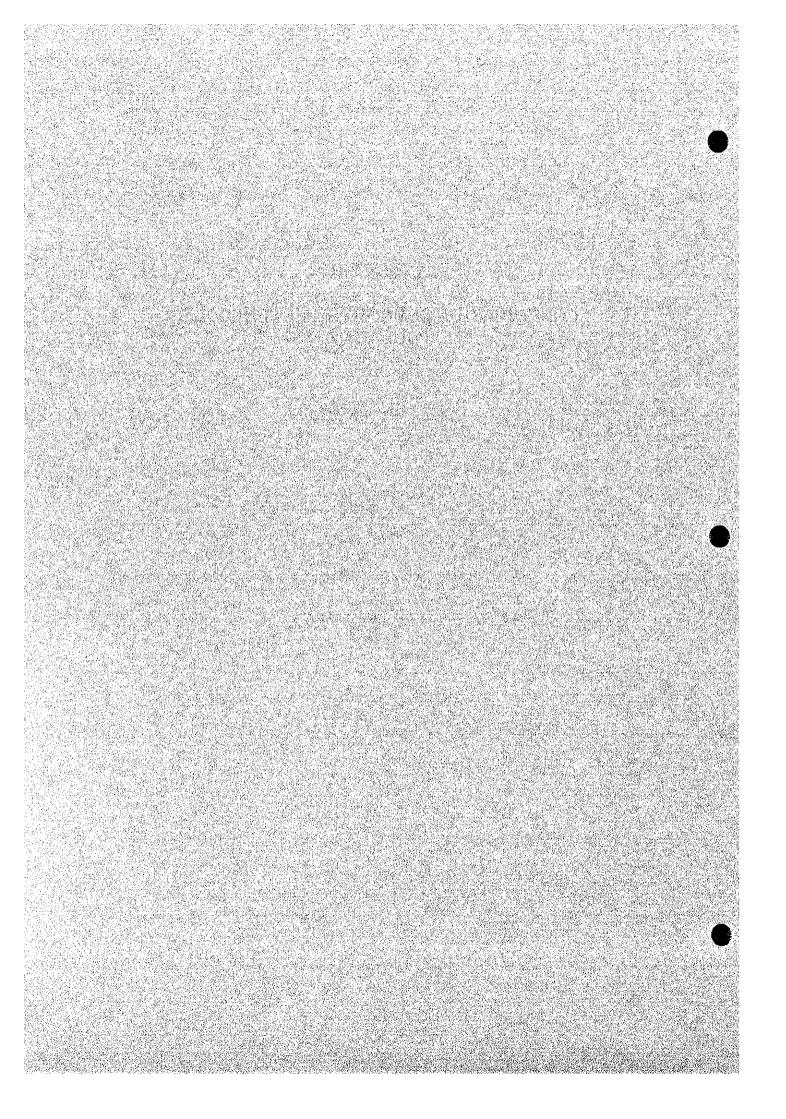
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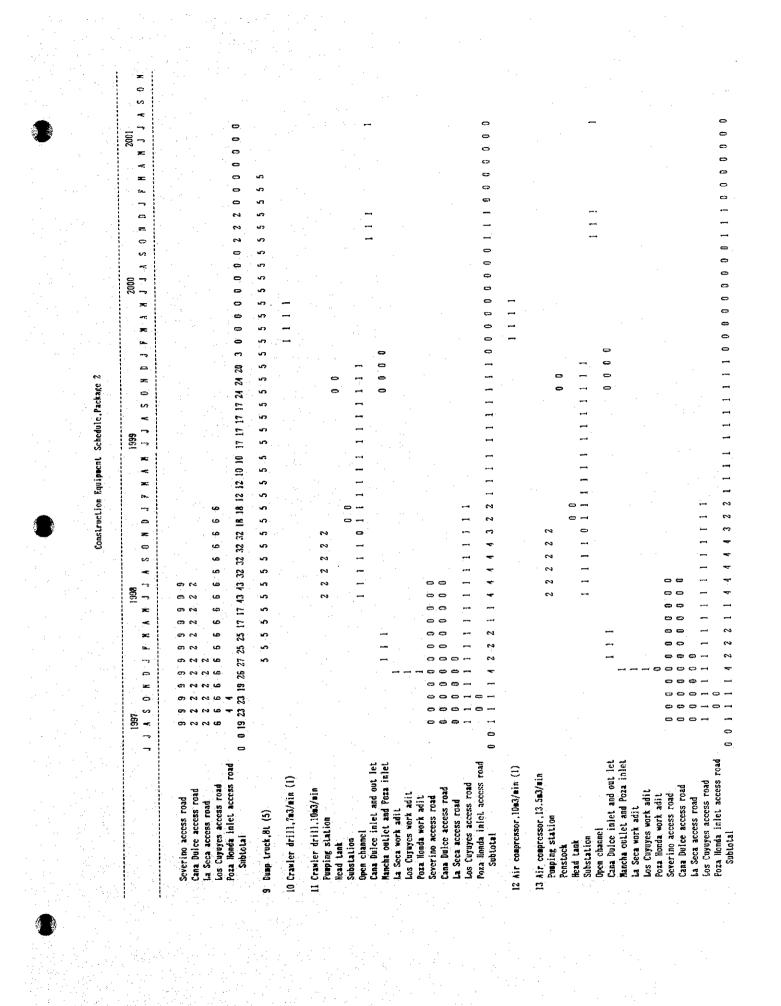
#### ANNEX VII

#### CONSTRUCTION EQUIPMENT USE SCHEDULE, PACKAGE 2



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18 Concrete plant, 0.75m3x2 (2)		2 2 2	2 2 2 2 2	2 2 2 2	2 2 2 2	2 2 2 2 2	2 2 2 2	2 2 2 2 2	2 2 2 2	2 2 2 2 2	2 2 2	
19 Concrete plant,0.75m3 (1)				1111	1 1 1 1		1 1 1 1	1 1 1 1 1	1			
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21 Concrete pump car,45m3/hr (1)		· · · ·		111	1 1 1		1 1 1	1111	1 1 1			
22 Truck crane, 301 (2)				2 2 2	2 2 2 2	2 2 2 2 2	2 2 2 2	2 2 2 2 2	2 2 2 2	2 2 2 2 2	2 2	
23 truck crane,20t (2)				2 2 2	2 2 2 2	2 2 2 2 2	2 2 2 2	2 2 2 2 2	2 2 2 2	2 2 2 2	2 2	
24 Tower crame.it (2)			• • •	1 I I	1 1 1 1	1 1 1 1 1	1 1 1 1	1		3		

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Construction Equipment Schedule, Package 2

25 Trailor 201 (1)	
26 Arm Lunnech machine, 110kW (5)	5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5
27 Muck loader,0.4m3 (3)	3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3
28 Nuck car,4.5m3 (24)	24 24 24 24 24 24 24 24 24 24 24 24 24 2
29 Mock car,3m3 (16)	
30 Battery locomotive, 8t (6)	6 5 6 6 5 6 6 5 5 6 5 6 5 6 6 6 6 6 6 6
31 Battery locomolive.61 (4)	4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4
32 Air compressor,16m3/min (5)	5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5
33 Yent fan, 300a3/ain (34)	34 34 34 34 34 34 34 34 34 34 34 34 34 3
34 Vent fan,100m3/min (10)	01 01 01 01 01 01 01 01 01 01 01 01 01 0
35 Winch, 150kW (2)	3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3
36 Winch, 100kW (3)	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
37 Shotcrete gun,10m3/hr (5)	5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5
38 Concrete placer, 6m3 (6)	6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6
39 Concrete placer, 4.5m3 (4)	<b>1</b> 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4
41 Battery locomotive,6t (10)	10 10 10 10 10 10 10 10 10 10 10 10 10 1
42 Agitator car,4.5m3 (6)	
43 Sliding form, 3.5m dia.12m (3)	3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3
44 Sliding form.2.5m dia.12m (2)	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
45 Boring machine, 5.5kW (6)	
46 Grout pump,11kH (6)	
47 Grout Lixer,200 x 2 (6)	
48 Diesel generator,300kVA (8)	8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8
	~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~

**VII-5** 

Construction Equipment Schedule.Package 2

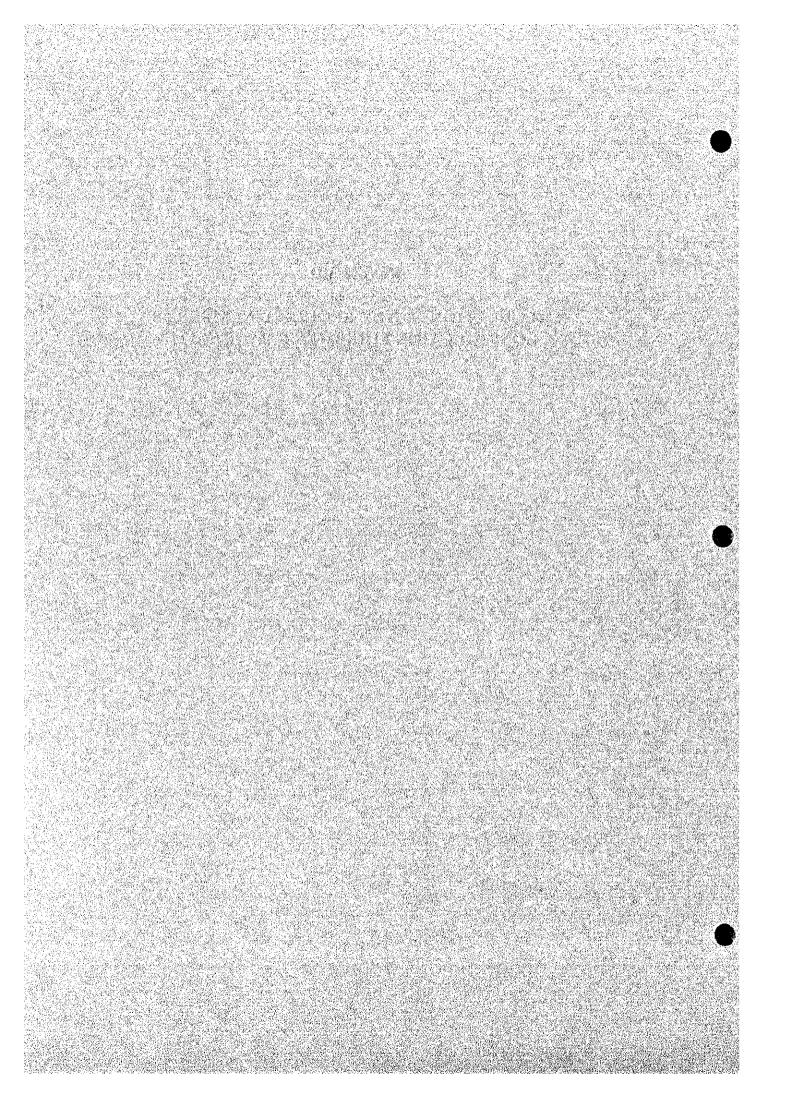
1997 1999 1999 2000 2001 1997 1988 1999	1997						1998						:		•	1999	•		3		•	-		12 -	2000	د -	e e	z	-	14	= 14	-	- 2001	2001	2	c
	J A S O # D J	#	6	6	× ;		Y [ [ W Y		s			-		-	nc ¦		4 r r	2	~		~	~	Ŧ	• •		~	>	=			-					
50 Diesel generator,100kVA (2)	5 7	2222	2 2	2	2 2	5 3	~	2 2	\$	5	5 7	~	2 2	2	~	2 2	~	~	2 2	~	2	2 2	~	2 2	2	2 2	2 2	~	2	2 2	~	5	2	~	2 2	
5] Molor grader,3.7m (2)	5 2	2 2 2	2 2	~	2 2	2 2	2	2 2	2	2 2	22	2	2 2	~	ć,	2 2	2	2	2 2	2	2 2	2 2	2	22	2	~	2 2	<b>(</b> )	2 2	2 2	2	2	2	~	2 2	
52 Macadiom roller,101 (2)	5	2 2 2	2 2	~2	2 2	3 2	2	2 2	2	2	2 2	. 67	2 2	2	~	2 2	5	~	2 2	2	2	2 2	2	2 3	~7	2	2	~	2	2 2	~	~	23	~	2 2	
53 Tire roller,201 (2)	2 2	2 2 2 2 2	5 2	53	2 2	2 2	63	2 2	2	22	2 2	7	2 7	2	2	2 2	5	~	2 2	2	~	2 2	~	2 2	2	2	2 2	?	2 2	2 2	2	~	5	~1	~2	
54 Water sprinkler,5.5kl (3)	е С	3 3 3 3	с. С		3	33	~	3 3	3	3	33	er:	33	3	ŝ	e0	e e	3	33	~	ŝ	33	ç	33	e	ŝ	С	ę	с С	33	~	ŝ	33	ŝ	 m	ŝ

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## ANNEX VIII

# CALCULATION OF THE REQUIRED NUMBER OF CONSTRUCTION EQUIPMENT, PACKAGE 1



Description	iption	Detailed Work	Unit	Quantity	Equipment	Spec.	Output per Hour	Operating Hours	Operating Construction Hours Period	Scheduled Hours	Nos.of Equio
Diversion Tunnel	nel					)   					
Conguillo Inlet	Excavation, common	Dozing Loading Hauling 2km Spoil bank		6,020 6,020 6,020	Bulidozer Tractor shovel Dump truck Bulldozer	21 t 2.2 m3 11 t 11 t	127.0 71.0 18.2 175.0	47 85 331 34	2 month (40*6.5)	260 260 260 260	0.18 0.33 0.13 0.12
	Excavation, weathered rock	Ripping Loading Hauling, 2km Spoil bank		18,870 18,870 18,870 18,870 18,870	Bulldozer Tractor shovel Dump truck Bulldozer	32 t 2.2 a3 11 t 11 t	114.0 51.0 16.6 323.0	166 370 1,137 58	2 month (40*6.5)	260 260 260 260	0.64 4.37 0.22
Membrillc Outlet	Excavation, common	Dozing Loading Hauling,2km Spoil bank		4,690 4,690 4,690	Bulldozer Tractor shovel Du <b>m</b> p truck Bulldozer	21 t 2.2 m3 11 t 11 t	127.0 71.0 18.2 175.0	37 66 258 27	1 month (20*6.5)	130 130 130 130	0.28 0.51 1.98 0.21
	Excavation, weathered rock	Ripping Loading Hauling,2km Spoil bank		2,580 2,580 2,580 2,580 2,580	Bulldozer Tractor shovel Dump truck Bulldozer	32 t 2.2 m3 11 t 11 t	114.0 51.0 16.6 323.0	23 155 8	1 month (20*6.5)	130 130 130	0.17 0.39 0.65 0.65
	Excavation, rock	Drilling Gathering Loading Hauling,2km Spoil bank		400 400 400 400 400	Crawler drill Air compressor Buildozer Tractor shovel Dump truck Bulldozer	10 m3/min 13.5 m3/min 32 t 2.2 m3 11 t 11 t	n 23.0 23.0 167.0 47.0 14.3 375.0	- 11 - 28 - 87 - 11 - 11 - 11 - 11 - 11 - 11 - 11 - 1	I month (20≉6.5)	130 130 130 130 130 130	0.13 0.02 0.02 0.01 0.01
Conguillo Inlet,shaft	Hauling to spoil(2nd)	Loading Hauling,2km Spoil bank		8,570 8,570 8,570	Tractor shovel Dump truck Bulldozer	2.2 m3 11 t 11 t	47.0 14.3 375.0	182 599 23	4 month (80*6.5)	520 520 520	0.35 1.15 0.04

Description	ption	Detailed Hork	Unit	Quantity	Equipment	Spec.	Output per Hour	Operating ( Hours	Operating Construction Hours Period	Scheduled Hours	Nos.cf Equip.
Conguillo Inlet,tunnel	Hauling to spoil(2nd)	Loading Hauling,2km Spoil bank	ମୁକୁ କୁ ଜୁକୁ କୁ	440 440	Tractor shovel Dump truck Bulidozer	2.2 m3 11 t 12 t	47.0 14.3 375.0	ᅙᇊᆏ	1. month (20*6.5)	130 130	0.07 0.24 0.61
Conguille Hauling to Inlet,dreadge spoil(2nd)	Hauling to spoil(2nd)	Loading Bauling,2km Spoil bank	က္ကက္က	3,000 3,000 3,000	Tractor shovel Dump truck Bulldozer	2.2 m3 11 t 11 t	71.0 18.2 175.0	42 165 17	7 month (140*6.5)	016 016	0.05 0.18 0.02
Tunnel Excav.	Tunnei Excav. Second haul, tunnel rock Sta.0-166	Loading Hauling,2km Stockpile		3,100 3,100 3,100	Tractor shovel Dump truck Buildozer	1.1 8 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	25.0 9.7 375.0	124 320 8	1.5 month (34.5*18)	621 621 621	6.20 0.51 0.01
	Second haul, tunnel rock Sta.166-3000	Loading Hauling,2km Stockpile	ကကက ဧ ဧ ။	52,730 52,730 52,730	Tractor shovel Dump truck Bulldozer	1181 18 18 18 19 19 19 19 19 19 19 19 19 19 19 19 19	25.0 9.7 375.0	2,109 5,436 141	25.5 month (587*18)	10,566 10,566 10,566	0.20 0.51 0.01
	Second haul. tunnel rock Sta.3000-5500	Loading Hauling,lkm Stockpile	က္ကက္က	46,700 46,700 46,700	Tractor shovel Dump truck Bulldozer	1.2 1.3 1.1 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5	25.0 12.5 375.0	1,863 3,736 125	26 mcnth (598*18)	10,764 10,764 10,764	0.17 0.35 0.01
	Second haul, tunnel rock Sta.5500-8170	Loading Hauling,2km Stockpile		49,640 49,640 49,640	Tractor shovel Dump truck Bulldozer	1.00 .7 .7 .7 .7 .7 .7 .7 .7 .7 .7 .7 .7 .7	25.0 9.7 375.0	1,986 5,118 132	26 month (598*18)	10,764 10,764 10,764	0.18 0.48 0.01
	Second haul, tunnel rock Sta.8170-8305	Loading Hauling,2km Stockpile		2,470 2,470 2,470	Tractor shovel Dump truck Bulldczer	11.2 m3 11 t	25.0 3.7 375.0	99 255 7	1 month (23*18)	414 414 414	0.24 0.62 0.02
2 Conguillo Work Adit	Excavation, common	Dozing Loading Hauling,2km Spoil bank		3,070 3,070 3,070 3,070	Bulidozer Tractor shovel Dump truck Bulidozer	21 t 2.2 m 11 t 11 t	127.0 71.0 18.2 175.0	24 43 169 18	1 acnth (20*6.5)	130 D21	0.19 0.13 0.13

Descr	Description	Detailed Work	Uait	Quantity	Equipment	Spec.	Output per Hour	Operating Hours	Operating Construction Hours Period	Scheduled Hours	Nos.of Equip.
	Excavation, seathered rock	Ripping Loading	က္ဆင္ဆာ	10,800	Bulldozer Tractor shovel	21. t 2.2 m3	114.0 51.0	95 212	1 month (20*6.5)	130 130	0.73
		Hauling,2km Spoil bank	2 C	10,800	Dump truck Buildozer	+ + 	16.6 323.0	651 33		130 130	5.00 0.26
	Excavation, rock	Drilling	្តដ្ឋា	570 570	Crawler drill Air compressor	10 u3/min 13.5 m3/min	n 23.0 n 23.0	25 25	1 month (20*6.5)	130 130	0.19 0.19
		Gathering Loading		570 570	Bulldozer Tractor shovel	32 t 2.2 =3	167.0 47.0 14.1	90 TI 3		130 130	0.03
		Spoil bank		570	Bulldozer	د+ د +	375.0	5 C J		130	0.01
	Second haul. inclined tunnel	Loading Hauling,2km Stockpile	မ္မာရွာရွာ	3,560 3,560 3,560	Tractor shovel Dump truck Buildozer	11 8 12 8 12 8 12 12 12 12 12 12 12 12 12 12 12 12 12	25.0 9.7 375.0	142 367 9	2 sonth (46*18)	828 828 828	0.17 0.44 0.01
3 El Guasmo Work Adit	Excavation, common	Dozing Loading Hauling,1km Spoil bank		3, 730 3, 730 3, 730 3, 730	Builaozer Tractor shevel Dump truck Bulldozer	21 21 21 22 33 11 11 11 11 11 11	127.0 71.0 24.8 175.0	29 53 150 21	1 month (20*6.5)	130 130 130	0.23 0.40 1.16 0.15
	Excavation, weathered rock	Ripping Loading Hauling.1km Spoil bank		7,300 7,300 7,300 7,300	Buildozer Tractor shovel Dump truck Bulldozer	21 t 2.2 m3 11 t 11 t	114.0 51.0 22.0 323.0	64 143 332 23	1 month (20*6.5)	130 130 130	0.49 1.10 2.55 0.17
	Excavation, rock	Drilling Gathering Loading Hauling,1km Spoil bank		390 390 390 390 390 390 390 390 390 390	Crawier drill Air compressor Bulldozer Tractor shovel Dump truck Bulldozer	10 m3/min 13.5 m3/min 32 t 2.2 m3 11 t 11 t	n 23.0 n 23.0 167.0 167.0 18.9 375.0	220011	1 month (20*6.5)	130 130 130 130 130 130	0.13 0.13 0.02 0.16 0.16 0.01

Descri	Description	Detailed 1 Fork	Unit	Quantity	Equipment	Spec.	Output per Nour	Operating C Hours P	Construction Period	Scheduled Hours	Nos.of Equip.
	Second haul, L Inclined tunnel I S	Loading Bauling, Ika Stockpile		6,560 6,560 6,560	Tractor shovel Dump truck Bulldozer	1.2 m3 8 12.5 11 L	25.0 18.9 375.0	262 347 17	5 wonth (115*18)	2,070 2,070 2,070	0.13 0.17 0.01
4 Hembrillo Kork Adit	Excavation, common	Dozing Loading Hauling,2km Spoil bank		2,560 2,560 2,560 2,560	Bulldozer Tractor shovel Dump truck Bulldozer	21 t 2.2 m3 11 t 11 t	127.0 71.0 13.2 175.0	20 36 141 15	1 #onth (20*6.5)	130 130 130	0.16 0.28 1.08 0.11
	Excavation, weathered rock	Ripping Loading Hauling,2km Spoil bank		4,040 4,040 4,040 4,040	Buildozer Tractor shovel Dump truck Bulldozer	21 t 2.2 m3 11 t 11 t	114.0 51.0 16.6 323.0	35 243 13	1 month (20*6.5)	130 130 130	0.27 0.61 1.87 0.10
	Excavation, rock	Drilling Gathering Loading Hauling,2km Spoil bank		210 210 210 210 210 210	Crawler drill Air compresson- Buildozer Tractor shovel Dump truck Buildozer	10 m3/min 13.5 m3/min 32 t 2.2 m3 11 t 11 t	23.0 23.0 47.0 375.0 375.0	တ္ တ မ က	1 month (20%6.5)	021 021 021 130 130 130	0.07 0.01 0.03 0.03 0.03
	Second haul, inclined tunnel	Loading Hauling, 2km Stockpile	က္ရက္ရွိရွိ	2,550 2,550 2,550	Tractor shovel Dump truck Buildozer	1.2 <b>m</b> 3 8 t 11 t	25.0 9.7 375.0	102 263 7	2 month (45*18)	828 828 828	0.12 0.32 0.01
5 Congillo Access Road	Filling.	Dozing Loading Spreading Compacting		246,100 246,100 246,100 246,100 246,100 246,100	Bulldozer Tractor shovel Dump truck Bulldozer Tamp roller	32 t 2.2 m3 11 t 21 t 20 t	188.0 64.0 27.3 231.0 373.0	1,309 3,845 9,015 1,065 660	13 #onth (260*6.5)	1,690 1,690 1,690 1,690 1,690	0.77 5.33 0.63 0.39 0.39
	Filling, seathered rock	Ripping Loading Haul,0.5km		246,100 246,100 246,100	Bulldozer Tractor shovel Dump truck	32 t 2.2 m3 11 t	125.0 59.0 33.4	1,969 4,171 7,368	13 month (260*6.5)	1,690 1,690 1,690	1.16 2.47 4.36

0.49 1.17 2.06 0.30 0.18  $\begin{array}{c} 1.86\\ 3.32\\ 23.35\\ 1.35\end{array}$ 2.07 4.62 24.57 0.73 0.55 0.63 0.37 1.08 2.53 0.30 0.18 Scheduled Nos.of Equip. 1,690 1,690 1,690 1,690 1,690 1,690 260 1,690 1,690 1,690 1,690 1,690 1,690 1,690 1,690 1,690 1,690 1,690 1,690 1,690 1,690 1,690 1,690 1,690 lours Operating Construction 2 month (40%6.5) (260\*6.5) $(260 \times 6.5)$  $(260 \pm 6.5)$  $(260 \approx 6.5)$ l3 month  $(260 \pm 6.5)$ 13 month 13 month 13 month 13 month Period 3,496 7,816 41,521 1,234 348 348 48 48 170 976 21 128. 620 1,821 4,269 505 312 932 1,975 3,490 505 312 3, 139 5,614 39,465 2,278 1,065 660 llours 23.0 23.0 167.0 47.0 8.2 35.0 375.0 231.0 188.0 64.0 27.3 231.0 373.0 125.0 59.0 33.4 231.0 373.0 127.0 71.0 10.1 175.0 114.0 51.0 9.6 323.0 per llour Output 10 m3/min 13.5 m3/min 32 t 2.2 m3 2.2 m3 0.6 m3 32 t 2.2 ∎3 2.2 m3 Spec. 32 t 2.2 m3 11 t 21 t 20 t ... 32 5 51 = = 2211 23 Air compressor Tractor shovel Fractor shovel **Fractor** shovel Tractor shovel fractor shovel Crawler drill famp roller Camp roller Tamp roller bump truck Dump truck Jump truck Dump\_truck Dump truck Bulldozer Bulldozer Bulldozer 3ulldozer Buildozer Buildozer 3ulldozer Bulldozer Bulldozer Equipment Bulldozer Bulldozer Bulldozer Backhoe 16,293 246,100 246,100 398,600 398,600 398,600 398,600 398,600 398,600 8,000 116,550 116,550 398,600 398,600 8,000 8,000 8,000 8,000 8,000 116,550 116,550 116, 550. 116,550 116,550 116,550 116,550 Quantity Unit 5 E <u>۲</u> 2 2 ģ ĩ 1 ĩ ~ ୁ ĩ <u>ت</u> ട്ട <u>\_</u> **2** 72 ~ 2 ŝ 2 33 Loading Hauling,5km Hauling,5km Hauling, 5km Hauling, Ikm Hauling, Ikm Spoil bank Spoil bank Compacting Spoil bank Compacting. Compacting Spreading Sathering Spreading Spreading )ozing Loading Drilling Loading Ripping Loading Detailed Ripping Dozing Loading Loading Dozing Nork weathered rock weathered rock for structure Spoil, comon Excavation, Spoil, rock Filling. Filling. COMMON Spoil, Description

Descri	Description	Betailed Kork	Unit	Quantity	Equipment	Spec.	Output per Nour	Operating Nours	Construction Period	Scheduled Bours	Nos.of Equip.
		Hauling,lkm Spoil bank	5	16, 293 16, 293	Duep truck Bulldozer		18.2	895 93		260 260	3.44 0.36
	Backfill from stockpile	Loading Hauling,lkm Spreading Compacting		9,581 9,581 9,581 9,581	Tractor shovel Dump truck Bulldozer Vibrating roller	2.2 #3 11 t 11 t 1 t	59.0 27.3 280.0 36.0	162 351 351 351 351 351	2 month (40*6.5)	260 260 260 260	0.62 1.35 0.13 1.02
	Subbase, hauling from guarry	≿t Purchased mat'	٦٢ , ۲			· · · · · · · · · · · · · · · · · · ·					
	Subbase	Spreading Compacting		20,470 20,470	Bulldozer Vibrating roller	r 10 t	140.0 98.0	146 209	6 month (120\$6.5)	780 780	0.19 0.27
6 El Guasmo Access Road	Filling. coason	Dozing Louding Haul, O. 5km Spreading Compacting		10,900 10,900 10,900 10,900 10,900	Buildozer Tractor shovel Dump truck Buildozer Tamp roller	32 t 2.2 m 1 t 20 t 20 t	188.0 64.0 27.3 231.0 373.0	58 170 399 47 29	4 month (80*6.5)	520 520 520 520 520	0.11 0.33 0.77 0.09 0.06
	Filling. weathered rock	Ripping Loading Aaul, O. 5km Spreading Compacting		10,900 10,900 10,900 10,900 10,900	Bulldozer Tractor shovel Dump truck Bulldozer Tamp roller	32 2.2 m3 21 t t 21 t t 20 t t	231.0 373.0 373.0	87 185 326 47 29	4 month (80*6.5)	520 520 520 520	0.17 0.36 0.09 0.06
	Filling, common	Dozing Loading Haul, 3km Spreading Compacting		10,350 10,350 10,350 10,350 10,350	Bulldozer Tractor shovel Dump truck Bulldozer Tamp roller	32 L 2.2 3 21 L 21 L 20 t	188.0 64.0 12.9 231.0 373.0	55 162 802 802 832 832 85	4 month (80*6.5)	520 520 520 520 520	0.11 0.31 1.54 0.09 0.05
	Filling, Ripping weathered rock Loading	Ripping Loading	1	10,350 10,350	Bulldozer Tractor shovel	32 t 2.2 m3	125.0 59.0	83 175	4 month (80*6.5)	520 520	0.16

0.10 0.01 0.07 0.00 0.02 0.05 0.38 0.0400.00 00..0 0.000.00 0.01 1.26 0.09 0.05 0.01 0.01 0.0 Equip. Operating Construction Scheduled Hos.of 520 520 520 520 520 520 520 520 130 520 520 520 130 520 520 Hours (80%6.5)  $(20 \times 6.5)$  $(20 \pm 6.5)$ (80\$6.5) (80 s 6.5)4 month l sonth i month 4 month 4 month Period 655 45 28 9.2 **~**~ 50.50 Hours 127.0 35.0 18.2 175.0 59.0 27.3 230.0 36.0 114.0 51.0 22.0 323.0 23.0 23.0 167.0 47.0 18.9 per Hour. 15.8 231.0 373.0 127.0 71.0 175.0 375.0Output a3/min 13.5 m3/min 2.2 m3 32 t 2.2 ∎3 2.2 m3 0.6 m3 Spec. 2.2 m3 2 32 21 Π П Ï Ξ Π П 21 23 21 Vibrating roller Tractor shovel Air compressor Tractor shove[ **Tractor** shovel **Tractor** shovel Crawler drill famp roller Dump truck Dump truck Dump truck Jump truck Dump truck Dump truck 8ulldozer Bulldozer Equipment Bulldozer **Sulldozer** 3ul Idozer Bulldozer Bulldozer Bulldozer 8ut I dozer **Buildozer** Backhoe 905 905 905 905 341 341 341 341 Unit Quantity 10,350 10,350 200 200 200 200 200 200 200 00110001001 ĩ ۲ ۲ щ., ŝ Ŷ £ Hauling, lkm Hauling,1km Hauling, Ikm Hauling, 1km Hauling, Ikm Spoil bank Compacting Spoil bank Spoil bank Spoil bank Compacting Spreading Gathering Loading Spreading Detailed Ripping Loading Drilling laul, 3km Dozing Loading Loading Loading Dozing Sork Subbase, hauling \*\* from stockpile weathered rock for structure Spoil, common Excavation, Spoil, rock Backfill Spoil, Description

Purchased mat'i

from quarry

Det	Detailed Un Kork	Unit (	Quantity	Eguipment	Spec.	Output per Hour	-	ting (	Operating Construction Nours Period	Scheduled Hours	Nos.of Equip.
	Spreading m Compacting m		943 943	Buildozer Vibrating roller	د د 10 د	140.0 98.0	00	10	6 aonth (120*6.5)	780 780	0.01
	Dozing Loading Haul, 0.5km Spreading Compacting		3,600 3,600 3,600 3,600	Bulldozer Tractor shovel Dump truck Bulldozer Tamp roller	32 t 22 m 11 t 21 t 20 t	188.0 64.0 27.3 231.0 373.0	ت ت ب ت ت ت	19 56 132 16 16	4 month (80*6.5)	520 520 520 520	0.01 0.11 0.25 0.03
	Ripping Loading Haul, 0.5km Spreading Compacting		3,600 3,600 3,600 3,600	Bulldozer Tractor shovel Dump truck Bulldozer Tamp roller	32 t 2.2 #3 11 t 21 t 20 t	125.0 59.0 33.4 231.0 373.0	00400	23 10 10 10	4 month (80*6.5)	520 520 520 520 520	0.06 0.12 0.21 0.03 0.03
Dozing Loading Hauling Spoil b	, lkm ank		1,120 1,120 1,120 1,120	Bulldozer Tractor shovel Dump truck Bulldozer	21 t 2.2 m3 2.2 m3 11 t 11 t	127.0 71.0 24.8 175.0	0.0 % 0	9 9 <del>2</del> 9	4 month (80*6.5)	520 520 520 520	0.02 0.03 0.09 0.01
poil, Ripping weathered rock Loading Hauling, Speil b	a k		1,120 1,120 1,120 1,120	Bulldozer Tractor shovel Dump truck Bulldozer	32 t 2.2 m3 11 t 11 t	114.0 51.0 22.0 323.0	0000	3 51 3	4 month (80*6.5)	520 520 520	0.04 0.10 0.10
iil adii	Drilling Gathering Loading Hauling, 1km		001 100 100 100 100 100 100 100 100 100	Crawler drill Air compressor Bulldozer Tractor shovel Dump truck Bulldozer	10 m3/#if 13.5 m3/#if 32 L 2.2 m3 11 L 11 L		23.0 23.0 47.0 18.9 375.0	~~~~N~O	4 month (80+6.5)	520 520 520 520 520 520 520 520 520 520	0.01 0.00 0.00 0.00 0.00

Descr	Description	Detailed Work	Unil	Quantity	Unit Quantity Equipment	Spec.	Output per llour	Operating Nours	Operating Construction Scheduled Nours Period Nours	Scheduled Nours	Nos.of Equip.
	Excavation, for structure	Dozing Loading Hauling,1km Spoil bank		3,295 3,295 3,295 3,295	Bulldozer Backhoe Dump truck Bulldozer	21 t 0.6 m3 11 t 11 t	127.0 35.0 18.2 175.0	26 94 181 19	l month (20¢6.5)	130 130	0.20 0.72 1.39 0.14
	Backfill from stockpile	Loading Hauling.lkm Spreading Compacting		2,767 2,767 2,767 2,767	Tractor shovel 2 Dump truck 11 Bulldozer 11 Vibrating roller 2	2233 11 t	59.0 27.3 280.0 36.0	47 101 10	1 month (20≉6.5)	130 130 130	0.36 0.78 0.08 0.59
	Subbase,hauling ** from quarry Pu	** Purchased mat'	1	· ·			• • •				
	Subbase	Spreading Compacting		212 212	Bulldozer 11 Vibrating roller 10	r 10 t	140.0 98.0	c3 C3	6 month (120*6.5)	780 780	0.00

	Nos.of Equip.	
	Scheduled Hours	5, 598 5, 598
	Operating Construction Hours Period	5.5 month (126*13)
	Operatin Hours	<pre></pre>
Package 1	Output per Hour	<b>3.</b>
rain Hole,	Spec.	
Construction Equipment for Drain Hole, Package 1	Equipment	Boring maximum second
onstruction	Quantity	<ul> <li>9 3310</li> <li>9 10 10 10 10 10 10 10 10 10 10 10 10 10</li></ul>
	Unit	
	Detailed Work	Diversion tunnel Drilling
	Description	
	Desc	1 Drain Production Control of Con

Construction Equipment for Concrete Work, Package 1

Desc	Description	Detailed Unit Work	Quantity	Equipment	Spec. (	Output per Hour	Operating Hours	Operating Construction Hours Period	Scheduled Hours	Nos.of Equip.
1 Diversion Tunnel	Inlet structure	Transporting m3 Placing m3	50	Agitator truck Bucket/crane	 	12.0 14.0	-47 - 44	1day(6.5hr)	6.5 6.5	0.55 0.55
	Tunnel lining Sta.O-166	Transporting m3	72	Agitator truck	ម ក្រុ ខ្ល	12.0	9	lday(4hr)	4.0	1.50
	Tunnel lining Sta.166-3000	Transporting m3	72	Agitator truck	с В С	12.0	<b>9</b>	lday(4hr)	4.0	1.50
	Tunnel lining Sta.3000-8170	Transporting #3	72	Agitator truck	3 <b>5</b> 3	3.1	33	lday(4hr)	4.0	5.81
	Tunnel lining Sta.8170-8305	Transporting m3	72	Agitator truck	3 #3	12.0	<b>9</b> .	lday(4hr)	4.0	1.50
2 Conguillo Kork Adit	Tunne! lining	Transporting 3	20	Agitator truck	2 2 2 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	12.0	<b>r3</b>	lday(4hr)	4.0	0.42
	Portal concrete	Transporting m3 Placing m3	20 20	Agitator truck Bucket/crane	3 <b>83</b> 1 83	12.0 14.0	€14	lday(6.5hr)	6.5 6.5	0.26
3 El Guasmo Work Adit	Tunnel lining	Transporting m3	20	Agitator truck	S E E	3.1	9	lday(4hr)	4.0	1.61
	Portal concrete	Transporting m3 Placing m3	20 20	Agitator truck Bucket/crane	6) 년 6월 12일 12일	3.1 14.0	<b>(O</b>	lday(6.5hr)	6.5	0.33
4 Hembrillo Fork Adit	Tunnel lining	Transporting m3	50	Agitator truck	3 n3	12.0	~	lday(4ar)	4.0	0.42
	Portal concrete	Transporting m3 Placing m3	20 20	Agitator truck Bucket/crane	1 33 33	12.0 14.0	1 5	1day(6.5hr)	0 5 5	0.26 0.22

Construction Equipment for Concrete Work, Package 1

Jescription	Description	Detailed Work	Unit	Quantity	Eguipment	Spec.	Output per Hour	Operating Hours	Output Operating Construction Scheduled Nos.of per Hour Hours Period Hours Equip.	Scheduled Hours	Nos.of Equip.
5.Conguillo Access Road	5.Conguillo Bridge Access Road	Transporting #3 Placing #3	06 E3	10 10	10 Agitator truck 10 Bucket/crane	3 <b>3</b> 3	5.2 14.0	1 73	2 1day(6.5hr) 1	6.5 6.5	0.30 0.11
	Box culvert	Transporting m3 Placing m3	រុទ ព្រះ	<b>20</b>	20 Agitator truck 20 Bucket/crane	с н С	5.2	4 H	lday(6.5hr)	9 5 5	0.59 0.22
6 El Guasmo Access Road	Bridge	Transporting <b>m</b> 3 Placing <b>m</b> 3	12 #3 13	10	10 Agitator truck 10 Bucket/crane	3 E3	5.2 14.0	Ч <b>С</b> Г	lday(6.5hr)	6.5 6.5	0.30 9.11
	Box culvert	Transporting æ3 Placing æ3	ng #3	20 20	Agitator truck Bucket/crane	3 #3 1 #3	5.2 14.0	4	1day(6.5hr)	6.5 6.5	0.59

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