

Chapter 4 Project Evaluation and Recommendation

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4-1 Project Effect

Through implementation of this Project, it will be possible to contribute to the paediatric medical services in Fiji for the specific item (1) - (4) mentioned below.

CWMH, in addition to acting as the district hospital for the Central and Eastern Divisions, also functions as the top referral hospital in Fiji and the surrounding countries. The population covered directly by CWMH is about 40% (300,000 people: the population of the Central and Eastern Divisions) of the total population (750,000) of Fiji. CWMH treats about 300,000 outpatients and has about 20,000 inpatients annually. However, about 8% of both categories are referral patients from surrounding countries. This means that every day 100 patients come to CWMH from outside the country of Fiji, receiving a considerable number of users. From this viewpoint, the population covered, including the surrounding countries, totals 1.75 million people. The group targeted by this Project are children, but in Fiji the number of children aged under 14 years and under occupies 35% (260,000) of the total population.

(1) Consolidation of paediatric medical functions

Currently, the paediatric medical functions of CWMH are dispersed throughout the entire hospital. Its management is in an extremely inefficient situation. Since upon completion of this Project, dispersed functions will be consolidated into a single location, paediatric medical activities will dramatically improve.

(2) Enhancement of clinical education

Furthermore, not only is CWMH positioned as the top referral hospital for the nation of Fiji and surrounding countries, it also functions as a clinical teaching hospital for Fiji School of Medicine and Fiji School of Nurse.

This Project will construct not only facilities for medical care activities, but also those for educational activities (seminar room, lecture room, etc.). This will make it possible to develop efficient educational activities.

(3) Improvement of capacity for accepting referral patients

Intensive care units are indispensable for treating seriously ill patients with infectious diseases of the respiratory system (pneumonia, etc.) and others, which are one of the primary causes of death among infants in Fiji.

Under this Project, the Paediatric and Neonatal Intensive Care Units (PICU, NICU) now dispersed in the existing premises are to be concentrated under a single roof. Along with this, provision of necessary equipment (supplementation, renewal, etc.) such as artificial

respirators, etc. are being planned for its operation. Thus, the capacity for accepting seriously ill referral patients will remarkably improve.

(4) Contribution to improving medical standards in the Southern Pacific Region

Through the implementation of this Project, the improvement of educational functions of those engaged in paediatric medical care and the enhancement of paediatric medical care service functions of the top referral hospital in the Southern Pacific Region can be materialized. It is therefore anticipated that this Project will make a contribution to the improvement of medical standards in the region.

With the aim of enriching FSM to be a core of medical educational institutions in the Southern Pacific region, the government of Fiji, under the cooperation of WHO, formulated in 1989 a redevelopment plan for CWMH, an educational hospital of FSM. "The Project for the Redevelopment of the Fiji School of Medicine and the Colonial War Memorial Hospital", implemented in 1991 and 1992 under grant aid provided by the Japanese Government, is in line with the said redevelopment plan.

The necessity of improvement of paediatric ward under this Project is indicated in the basic concept of Master Plan of CWMH now being formulated.

Furthermore, National Health Plan (1998-2002) is being implemented in Fiji in which "Provision of high-level medical care/nursing service" and "developments of highly qualified personnel" are stated. In this connection, the role played by CWMH is positioned extremely important.

Thus, this Project is considered consistent with projects with high priority in this country.

4-2 Recommendation

With regard to the grant aid by the Japanese government, the Basic Design Study Team has already explained to concerned person within the government of Fiji, but the construction that Fiji is responsible for, should be coordinated with the budgetary system of the nation of Fiji and carried out within a suitable period. In particular, it is essential that the demolishing, removal, and site clearing of existing facilities on the planned construction site be completed prior to commencement of construction work by the Japan side.

- (1) A maintenance inspection manual, operating manual and circuit diagrams will be delivered with medical equipment, and the maintenance training will be carried out by a trading firm. In order to implement maintenance effectively, it is recommended that those documents will be kept and used properly.
- (2) A record (logbook) will be kept for all equipment at CWMH including delivery date, frequency of use, and repair history. Plans for procuring spare parts and for renewing equipment will be formulated. Based on these plans, a mid to long range budget plan will be determined.
- (3) After completion of this Project, it is recommended that CWMH prepare annual reports regarding the status of operations (Diseases distribution of out-patients and in-patient, Average bed occupancy rate, Average admission, Mortality rate, Number of referral patients, etc.) for the previous year. By preparing these reports, the status of operations of the paediatric ward can be grasped separately, and also it will be able to be used as reference material for improving operations.

Appendices

1. Member List of the Survey Team

Basic Design Study Team (23 February 1998 ~ 18 March 1998)

Role	Name	Organization
Leader	Dr. Atsuo KAKEHI	National Institute of Health Service Management, Ministry of Health and Welfare
Technical Advisor	Dr. Osamu KUNII	International Medical Center of Japan, Ministry of Health and Welfare
Project Coordinator	Mr. Norimasa FUJITA	Grant Aid Project Study Department, Japan International Cooperation Agency
Project Manager	Mr. Masahiro IKAWA	Nihon Sekkei, Inc.
Building Planner	Mr. Takeshi ENDO	Nihon Sekkei, Inc.
Facilities Planner	Mr. Motohiro OKADA	Nihon Sekkei, Inc.
Equipment Planner	Mr. Koichi MURAO	Nihon Sekkei, Inc.
Cost Planner	Mr. Hideo Nakashima	Nihon Sekkei, Inc.
Facilities Planner	Mr. Eiji Kawaguchi	Nihon Sekkei, Inc. (Supporting Staff)

Explanation Team for Draft Basic Design (28 May 1998 ~ 6 June 1998)

Role	Name	Organization
Leader	Dr. Osamu KUNII	International Medical Center of Japan, Ministry of Health and Welfare
Project Coordinator	Mr. Seiji FUJITA	Accounting Section, Ministry of Foreign Affairs
Project Manager	Mr. Masahiro IKAWA	Nihon Sekkei, Inc.
Building Planner	Mr. Takeshi ENDO	Nihon Sekkei, Inc.
Equipment Planner	Mr. Koichi MURAO	Nihon Sekkei, Inc.

2. Survey Schedule

Basic Design Study Team (23 February 1998 ~ 18 March 1998)

No.	Date	Place	Activities
1	2/23 (Mon)	-	Lev. Narita -
2	24 (Tue)	-	- Arr. Nadi Lev. Nadi - Arr. Suva
		Suva	Courtesy Call to JICA Fiji Office Courtesy Call to Embassy of Japan Courtesy Call to Permanent Secretary, MOFA Courtesy Call to Resident Representative of WHO Tour to FSN
3	25 (Wed)	Suva	Courtesy call and Meeting with MOH, CWMH and PWD Site Survey at CWMH Courtesy Call to FSM and other related facilities
4	26 (Thu)	Suva	Discussion with MOH and CWMH
5	27 (Fri)	Suva	Discussion with MOH and CWMH
6	28 (Sat)	Suva	Internal Meeting within the Team
7	3/01 (Sun)	Suva	Internal Meeting within the Team
8	02 (Mon)	Suva	Discussion with MOH and CWMH Courtesy Call to MOF Courtesy Call to MNP Discussion with MOH, CWMH and PWD
9	03 (Tue)	Suva	Discussion with MOH and CWMH
10	04 (Wed)	Suva	Wrap up Meeting with Signing of Minutes of Discussions with MOH Report to JICA Fiji Office Report to Embassy of Japan
		-	JICA Officials : Lev. Suva - Arr. Nadi
11	05 (Thu)	-	JICA Officials : Lev. Nadi - Arr. Narita
		Suva	Discussion with CWMH and PWD Site Survey at CWMH Discussion with JICA
12	06 (Fri)	Suva	Discussion with CWMH and PWD Site Survey at CWMH
13	07 (Sat)	-	Cost Planner (Consultant) : Lev. Narita -
		Suva	Survey on Construction Industry Survey on Medical Equipment Industry
14	08 (Sun)	-	Cost Planner : - Arr. Suva
		Suva	Team Meeting
15	09 (Mon)	Suva	Tour to Construction Site Discussion with JICA Discussion with CWMH and PWD
16	10 (Tue)	Suva	Discussion with CWMH and PWD Discussion with MOH

No.	Date	Place	Activities
17	11 (Wed)	Suva	Discussion with CWMH and PWD Discussion with NFA
18	12 (Thu)	Suva	Courtesy Call to PWD/HQ Signing on Technical Memorandum with MOH, CWMH Report to JICA Fiji Office Report to Embassy of Japan
19	13 (Fri)	-	Lev. Suva - Arr. Nadi
		Nadi	Tour to Lautoka Hospital
20	14 (Sat)	Nadi	Team Meeting
21	15 (Sun)	-	Lev. Nadi - Arr. Sydney
22	16 (Mon)	Sydney	Courtesy Call to JICA Australia Office Survey on Construction Industry Survey on Medical Equipment Industry
23	17 (Tue)	Sydney	Survey on Construction Industry Survey on Medical Equipment Industry
24	18 (Wed)	-	Lev. Sydney - Arr. Narita

Explanation Team for Draft Basic Design (28 May 1998 ~ 6 June 1998)

No.	Date	Place	Activities
1	5/28 (Thu)	-	Lev. Narita -
2	29 (Fri)	-	- Arr. Nadi
			Lev. Nadi - Arr. Suva
		Suva	Courtesy Call to JICA Fiji Office Courtesy Call to Embassy of Japan Courtesy Call to MOH Courtesy Call to Resident Representative of WHO
3	30 (Sat)	Suva	Team Meeting
4	31 (Sun)	Suva	Team Meeting
5	6/1 (Mon)	Suva	Discussion with MOH and CWMH
6	2 (Tue)	Suva	Courtesy Call to MNP
7	3 (Wed)	Suva	Tour to Health Center Discussion with MOH, CWMH and PWD
8	4 (Thu)	Suva	Courtesy Call to MOF Discussion with PWD (FEA) Discussion with MOH and CWMH Signing on Minutes of Discussions
9	5 (Fri)	Suva	Report to JICA Fiji Office Report to Embassy of Japan
			Lev. Suva - Arr. Auckland
10	6 (Wed)	-	Lev. Auckland - Arr. Narita

3. List of Party Concerned in the Recipient Country

1) Ministry of Health

Hon. Leo Smith	Minister
Mr. Luke Rokovada	Permanent Secretary
Dr. Salimoni Tuqa	Director of Health Planning & Information
Dr. Nacanieli Goneyali	Director of Hospital Services
Ms. Rigieta Nadakuitawki	Director of Nursing Services
Dr. Asinate Boladuadua	Director of Primary & preventive Health Services
Mr. A. Tamanitoakula	Director of Finance & Administration
Dr. Miliana Savua	Principal Administration Officer
Ms. Michelle Levene	Health Planning Unit

2) CWMH

Dr. Mary Schramm	Medical Superintendent
Dr. Lisi Tikoduadua	Consultant Paediatrician
Dr. Jai C. Autar	Paediatrician
Dr. Shakuntla Pal	Superintendent Radiographer
Dr. Shanta Kant	Senior Physiotherapist
Dr. Asinate J. Lesianawai	Supervisor
Ms. Losalini Tavaga	Chief Hospital Administrator
Mr. Virendra D. Singh	Bio-Medical Engineer

3) Ministry of Finance

Mr. Solomon Kofobalavu	Deputy Secretary
Mr. Bob Kumar	Chief Assistant Secretary (Budget)
Mr. Faga Solomon	A/Principal Assistant Secretary (Budget)
Ms. Paula Uluinaleva	Senior Assistant Secretary (Budget)
Mr. Naidote Katonitabua	Assistant Secretary (Aid)
Mr. Aisake Taito	Acting Chief Assistant Secretary

4) Ministry of Foreign Affairs

Mr. Kesaia Tuisawau	Deputy Permanent Secretary
Ms. Leilun Khan	Chief Assistant Secretary
Ms. Cheryl Braun	Graduate Trainee (Aid/Trade)
Ms. Taina Tagicakabau	A/DPS Political/Treatise

- 5) Ministry of National Planning
Mr. Robin H. Yarrow Permanent Secretary
Mr. Peceli Vocea Acting Principal Planning Officer
Mr. Jiten Mengal Acting Principal Planning Officer
- 6) Public Works Department
Mr. Cama T. Tuiloma Director of Buildings & Architect
Mr. Neil Billings Principal Architect
Mr. Narendra Dutt Supervisor High Grade Hospital Services
Mr. J. Magoon Electrical Engineer
- 7) Fiji School of Medicine
Dr. Jimi Samisoni Dean
Dr. Apenisa Ratu Registrar
Mr. Charles Katoanga Manager, Development Planning
- 8) Lautoka Hospital
Dr. Serupepeli Goneyali Medical Superintendent
Dr. Shiva Nando Paediatrician Senior Registrar
- 9) National Fire Authority
Mr. Suliasi Ratumaikoro District Fire Officer, Training
Mr. Tsireli Qase Deputy Chief Fire Officer
- 10) Fiji Electrical Authority
Mr. R. K. Mua Regional Manager
- 11) WHO
Dr. Raymond S. K. Ahn Representative
Dr. T.M. Biumaiwai Advisor
Mr. O' Leary Officer in Charge
Ms. L. Y. Chan Program & Administration Office

4. Cost Estimation Borne by the Recipient Country

- (1) Project site ----- FJ\$ 250,000

Preparation of construction site including following conditions.

- a. Demolition of existing buildings down to the basement level if any.
- b. Remove or diversion of existing Plumbing pipes, Electric conduit etc. if any.
- c. Site clearance and Rough gradation.

- (2) Landscape works ----- FJ\$50,000

The works in relation with this project.

- a. Gardening, Planting and Turfing.
- b. Road works out of the site.
- c. Fence, Gate and Open car parking for the site.

- (3) Lead-in and connection work ----- FJ\$100,000

Each infrastructure such as electricity, water, supply, telephone, drainage, gases.

- (4) Furniture and utensils ----- FJ\$100,000

Curtain for windows (rail work will be done by Japanese side), blind, ordinary furniture

5. Other Relevant Data

UNCONFINED COMPRESSIVE STRENGTH TESTS

BH No.	Depth (m)	Maximum Stress(MPa)
1	4.42-4.52	1.6
	6.06-6.16	2.3
	7.08-7.18	2.0
2	3.66-3.76	1.9
	5.30-5.40	1.1
	6.40-6.50	1.0
3	3.06-3.16	1.5
	4.20-4.30	1.0
	7.00-7.10	4.7
4	2.24-2.34	3.6
	4.00-4.10	0.9
	7.50-7.60	1.5
5	2.00-2.10	4.3
	4.60-4.70	1.8
	5.90-6.00	3.1

Average Unconfined
Compressive Strength
in Mpa : 2.2

STANDARD PENETRATION TESTS

BH No.	SP Test No.	Depth (m)	SPT Blow Counts	N Value	Remarks
1	1	1.00-1.45	3 , 1 , 2	3	Fill
	2	2.00-2.45	1 , 2 , 3	5	Fill
	3	2.90-3.35	5 , 4 , 7	11	Fill
	4	4.00-4.45	3 , 6 , 32	38	Rock
2	1	1.00-1.45	1 , 2 , 2	4	Fill
	2	2.00-2.45	10 , 10 , 21	31	Rock
	3	6.50 - 6.75	16		30 Blow for 100mm only
3	1	1.00-1.45	1 , 1 , 1	2	Fill
	2	2.00-2.30	21 , 40 ,	Too Hard	Rock Did not drive SPT.
4	1	1.00-1.20	15 , .	Too Hard	Rock 20 blows for 50mm
5	1	1.00-1.14		Too Hard	Rock 15 blows for 140mm penetration only hammer double bounce Then Refusal

Average SPT N - Value in Fill = 5

Average SPT N - Value in Rock => 40

LOCATION	As Shown on Plan	BORE HOLE NO. 4	FIGURE SHEET 1 OF 1
SURFACE ELEVATION	55.5m		
INCLINATION	VERTICAL		
DRILL TYPE	GEMCO ROTARY	PROJECT C.W.M. CHILDRENS HOSPITAL	

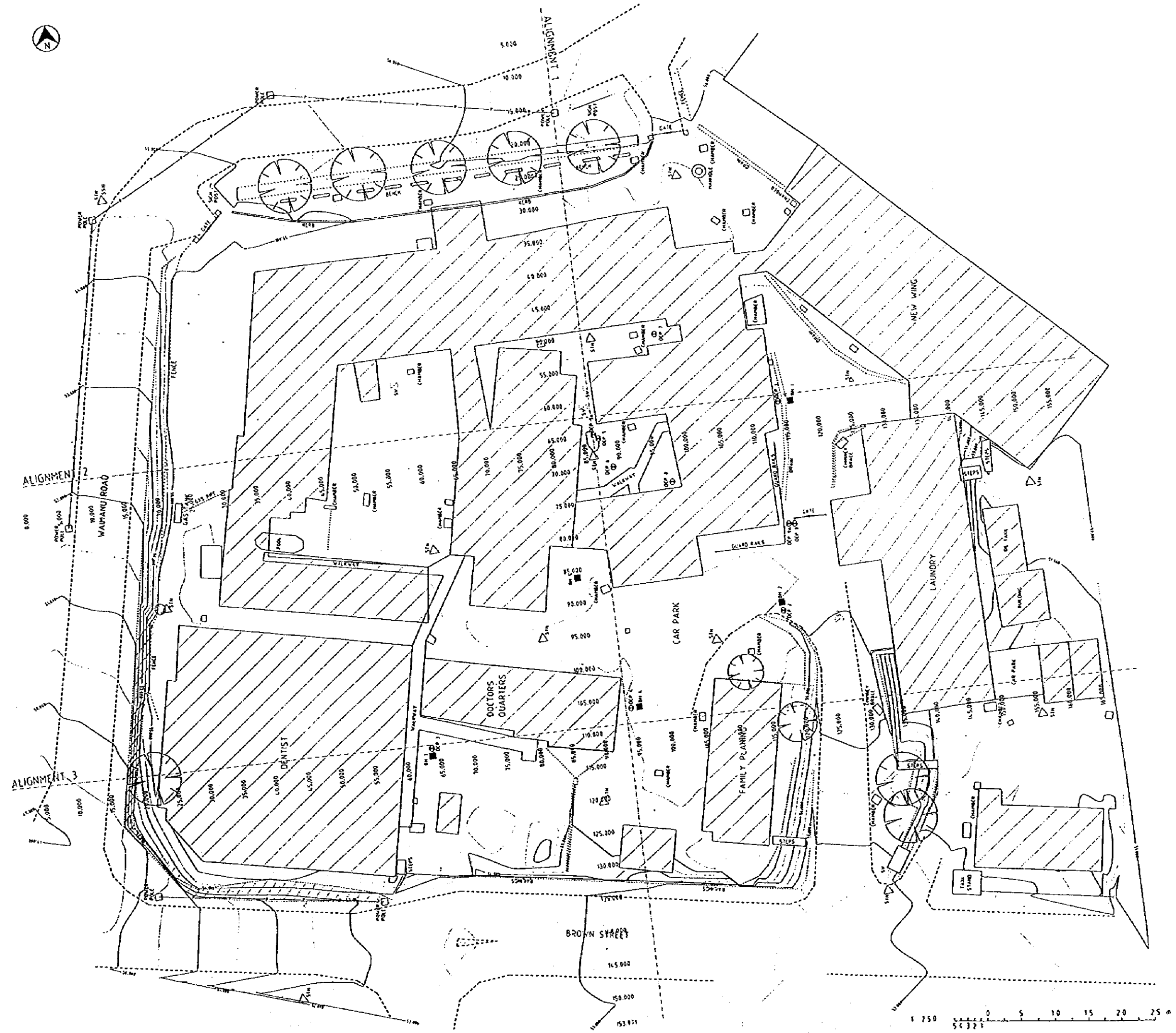
DESCRIPTION		GROUND LEVEL:		DATE: 23-3-98		
		REDUCED LEVEL	LEGEND	SAMPLE/TESTS		FIELD RECORDS
				DEPTH	SAMPLE TYPE No.	
0	ROAD PAVEMENT : 50mm seal and River gravel			0	0.2m	
	<u>SUVA MARL(SOAPSTONE) INSITU</u> Light brown friable to hard				DP	
	26/3/98 W/L					
1	Light brown Suva Marl.			1	1.0m	
	<u>SUVA MARL(SOAPSTONE) INSITU</u> light grey blue to light brown friable to hard.				1.2m	SPT 1
2	Occassional light brown layers.				DP	
	<u>SUVA MARL(SOAPSTONE) INSITU</u> light grey to light brown layers in between. friable to hard no joint visible					
3	core broken by drill action while extruding				CORE RUN	1
	Change to light grey blue.				3.5m	
4	<u>SUVA MARL(SOAPSTONE) INSITU</u> light grey blue. Friable to hard.				CORE RUN	2
5	A thin fault zone and joints visible				5.0m	
	<u>SUVA MARL (SOAPSTONE) INSITU</u> blue grey friable to hard.					
6	<u>SUVA MARL (SOAPSTONE) INSITU</u> Friable to hard.				CORE RUN	3
	Core fracture vertically; otherwise uniform core.				6.65m	
7					CORE RUN	4
8	End of Hole. 8.15m					
9						
10						
REMARKS		SPT stuck in the hole, so dry plug to 2m to take SPT out. Casing down to 1.4m.		BULK SAMPLE STANDARD PENETROMETER TEST SV - SHEAR VANE UD - UNDISTURBED D/P - DRY PLUG		LOGGED BY: A.OEO SCALE:

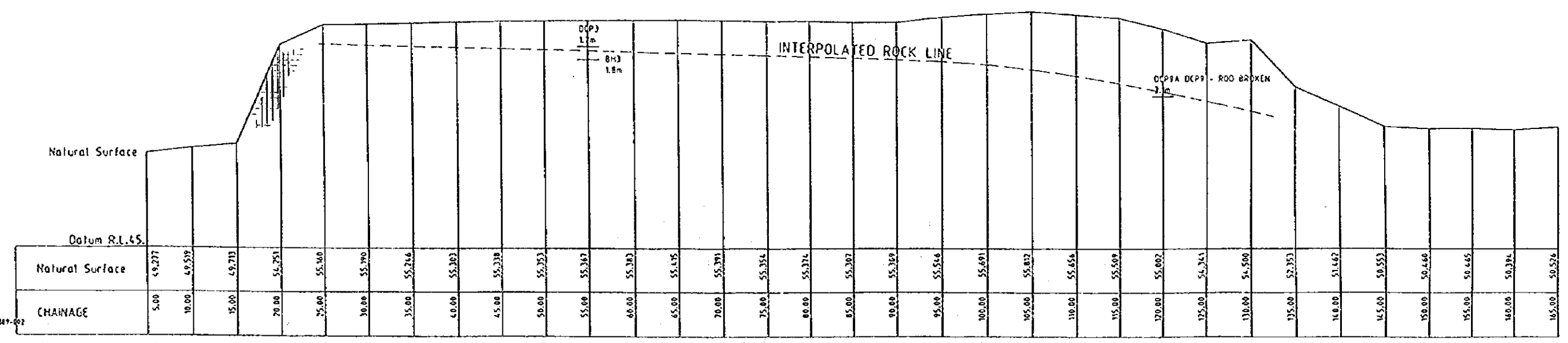
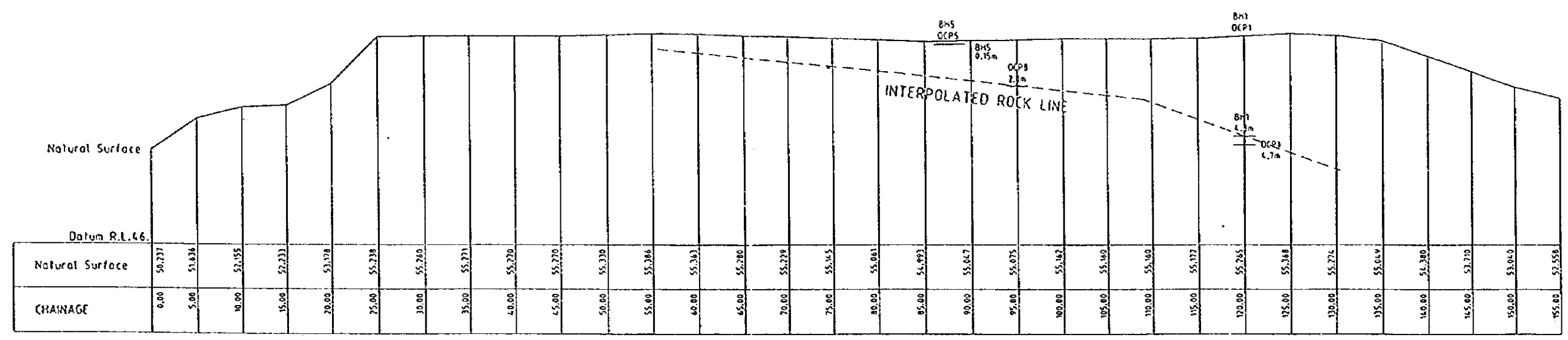
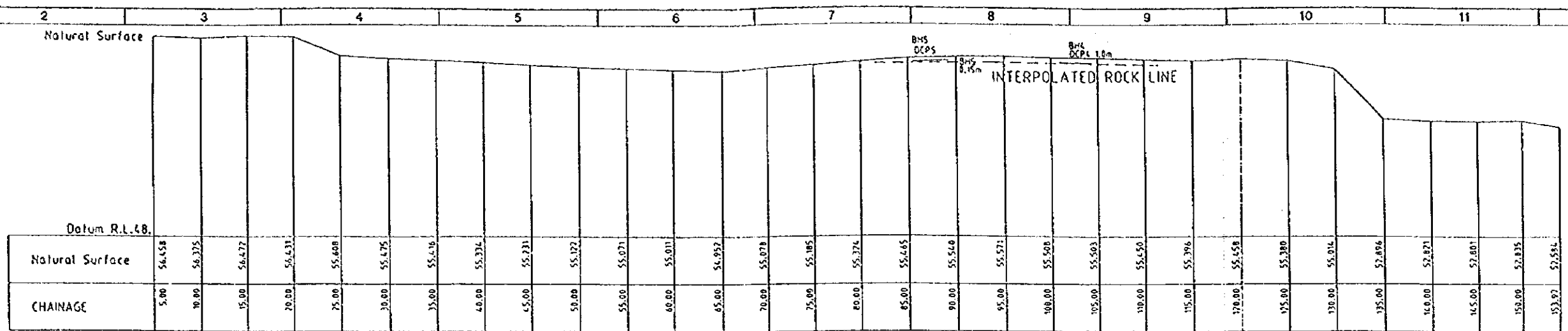
SINCLAIR KNIGHT MERZ
CONSULTING ENGINEERS

LOCATION	As shown on Plan	BORE HOLE NO. 5	FIGURE SHEET 1 OF 1
SURFACE ELEVATION			
INCLINATION	VERTICAL		
DRILL TYPE	GEMCO ROTARY	PROJECT C.W.M. CHILDRENS HOSPITAL	

		GROUND LEVEL:		DATE: 23-3-98		
DESCRIPTION	REDUCED LEVEL	LEGEND	DEPTH & THICKNESS	SAMPLE/TESTS		FIELD RECORDS
				DEPTH	SAMPLE	
					TYPE No.	
0 ROAD PAVEMENT River gravel and seal. SUVA MARL (SOAPSTONE) INSITU light brown Friable to hard some rusty brown spots.			0	0.5m	O/B	open barrel used to core
				0.66m	SPT	15 blows for 140mm penetration and Refusal
1 SUVA MARL (SOAPSTONE) INSITU occasional 0.3m of light brown and blue grey layers. Friable to hard. Core shattered and broken due to drill action.			1	1.0m	O/B	
					CORE RUN	1 100% rec
2			2			
SUVA MARL (SOAPSTONE) INSITU Light brown in color.						
3 SUVA MARL (SOAPSTONE) INSITU Blue grey in color; friable to hard.			3		CORE RUN	2 100% rec
				4.0m		
SUVA MARL (SOAPSTONE) INSITU Light brown in color.			4		CORE RUN	3 100% rec
				5.5m		
5 SUVA MARL (SOAPSTONE) INSITU blue grey friable to hard.			5		CORE RUN	4 100% rec
				6.25m		
6 End of Hole. 6.25m			6			
			7			
			8			
			9			
			10			
REMARKS	Solid point used for SPT test no sample and it is hard hammer double bounce at 140mm.		8	BULK SAMPLE		LOGGED BY A.OEO
			SPT	STANDARD PENETROMETER TEST		SCALE
			SV	SHEAR VANE		
			UD	UNDISTURBED		
			O/B	OPEN BARREL		

SINCLAIR KNIGHT MERZ
CONSULTING ENGINEERS





FILE NAME: F100396-003
 PROJECT: NEW CHILDRENS HOSPITAL
 DRAWN BY: L. NARAYAN
 CHECKED BY: P. BATAL
 DESIGNED BY: P. BATAL

SINCLAIR KNIGHT MERZ
 2 Selva Street, Lulea, P.O. Box 4669, Lulea, Pij
 Telephone 16791 663 431
 Facsimile 16791 664 107

CLIENT: NIHON SEKKEI - TOKYO
 PROJECT: NEW CHILDRENS HOSPITAL
 DRAWING CHECK: P. BATAL
 REVISION: PROJECT MANAGER
 APPROVED: PROJECT DIRECTOR

FILE: LONGITUDINAL SECTIONS
 AT ALIGNMENTS NO 1, 2 AND 3
 SCALE: AS SHOWN
 DRAWING NO: F100396-003
 SHEET NO: 11 OF 11

JICA