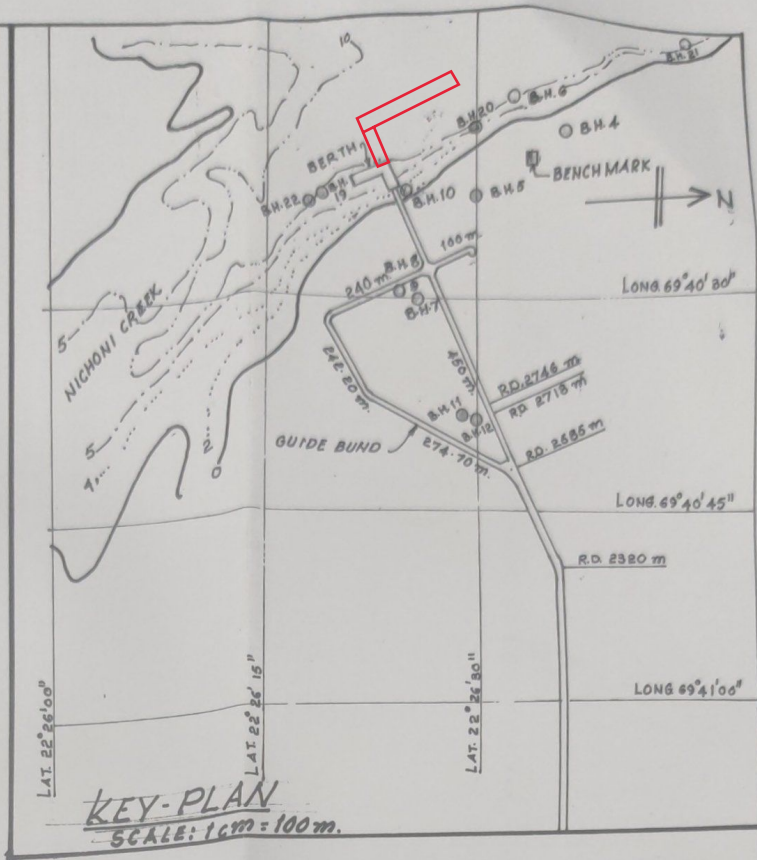


BERTHING JETTY
STD
PENETRATION TEST.
'N' VALUE
5
10



REFERENCES	SYMBOL	PARTICLE SIZE
CORALS/GRAVELS		2mm - 60mm
CORALS/COARSE SAND		0.60mm - 2mm
CORALS/MED. SAND		0.20mm - 0.60mm
FINE SAND		0.06mm - 0.20mm
SILT & CLAY		0.002mm - 0.06mm

8 FOR 15 CMS.

SCALE: VERT 1 cm = 0.50 m

KANDLA PORT TRUST OFF SHORE OIL TERMINAL

DRG NO. KPT/001/90-1

DATED: 9-2-90

SOIL PROFILE IN
NEAR VICINITY OF
BERTHING JETTY.
SURVEY INVESTIGATION
FOR OIL BERTH AT
VADINAR JETTY
(NOVEMBER 1989)

Ratel
TRACED

Rohette
T.A.
DRAWN

Had
CHECKED BY



Joseph
SC. OFFICER

T. Lakshmi
EXECUTIVE ENGINEER (CIVIL)

S. S. Sotale
SUPERINTENDING ENGINEER (DOT)

R.L. -10.20 MTS.

200 MTS NORTH OF BERTHING

 N.M.C.
 WET DENSITY

MARINE BORE HOLE NO. 19

R.L. -10.00 MTS.

70 MTR. SOUTH OF BERTHING JETTY

R.L. MTS.	SOIL CLASSIFICATION	PERCENTAGE COMPOSITION				TYPE OF SAMPLE	NATURAL MOISTURE AND WET DENSITY				STD PENETRATION TEST	
		20	40	60	80		20	40	60	80 %	"N" VALUE	10
8.00 m.							500	1000	1500	2000 kg/m ³	9	10
-9.00												
-10.00	R.L. -10.00 MTS											
-11.00	CORALS & SHELLS BONDED WITH LIGHT GREY SILTY FINE TO COARSE SAND AND CLAY	oooo	oooo	xxxx	xxxx							
-12.00		oooo	oooo	xxxx	xxxx							
-13.00		oooo	oooo	xxxx	xxxx							
-14.00		oooo	oooo	xxxx	xxxx							
-15.00		oooo	oooo	xxxx	xxxx							
-16.00		oooo	oooo	xxxx	xxxx							
-17.00		oooo	oooo	xxxx	xxxx							
-18.00		oooo	oooo	xxxx	xxxx							
-19.00		oooo	oooo	xxxx	xxxx							
-20.00		oooo	oooo	xxxx	xxxx							
-21.00		oooo	oooo	xxxx	xxxx							
-21.45 MTS.		oooo	oooo	xxxx	xxxx							
-22.00	LIGHT BROWN ROCK WITH POCKETS OF GYPSUM	MED. ROCK										
-22.50 MTS.												
-23.00												
-24.00												
-25.00												

CLIENT: - DEENDAYAL PORT TRUST

PMC: - INDIAN INSTITUTE OF TECHNOLOGY, MADRAS

CONTRACTOR: -

PARESH CONSTRUCTIONS AND FOUNDATIONS PVT. LTD.

PROJECT
GEO-TECHNICAL INVESTIGATION FOR CONSTRUCTION OF
JETTY FOR INDIAN COAST GARD AT DEENDAYAL PORT,
VADINAR, GUJARAT

SUBMISSION OF FACTUAL DATA

SUBMITTED BY



PARESH CONSTRUCTION & FOUNDATION PVT LTD CHEMBUR, MUMBAI

OCTOBER– 2021



PROJECT
GEO-TECHNICAL INVESTIGATION FOR CONSTRUCTION OF
JETTY FOR INDIAN COAST GARD AT DEENDAYAL PORT,
VADINAR, GUJARAT

SUBMISSION OF FACTUAL DATA

CONTENTS-	PAGE NO
1. LOCATION PLAN	2
2. BOREHOLE LOGS	4
3. COREBOX PHOTOGRAPHS	29
4. COREBOX PHOTOGRAPHS	36

LOCATION PLAN SAMPLING






BORE HOLE CO-ORDINATES IN UTM

Sl.N	DESCRIPTION	NORTHING	EASTING
	REFERENCE POINT	2481577.00	569621.00
2.	LBH-1	2481670.35	569538.35
3.	MBH-1	2481602.69	569535
4.	MBH-2	2481540.9	569536.94
5.	MBH-3	2481496.76	569513.44
6.	MBH-4	2481452.63	569489.93
7.	MBH-5	2481416.7	569436.81
8.	MBH-6	2481439.97	569392.56
9.	MBH-7	2481463.24	569348.3


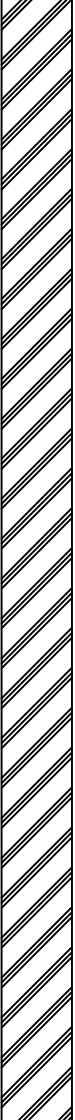
BORE HOLE CO-ORDINATES

S.I.N	DESCRIPTION	LATITUDE	LONGITUDE
1.	REFERENCE POINT	22°26'20.42"N	69°40'35.68"E
2.	LBH-1	22°26'23.46"N	69°40'32.79"E
3.	MBH-1	22°26'21.25"N	69°40'32.67"E
4.	MBH-2	22°26'19.23"N	69°40'32.70"E
5.	MBH-3	22°26'17.86"N	69°40'32.01"E
6.	MBH-4	22°26'16.38"N	69°40'31.04"E
7.	MBH-5	22°26'15.21"N	69°40'29.18"E
8.	MBH-6	22°26'15.97"N	69°40'27.64"E
9.	MBH-7	22°26'16.75"N	69°40'26.11"E

REFERENCE DRAWINGS				ENGINEERING FIRM:				SIGNATURE :			
SR.NO	DRG/DOC. NO.	REV NO.	TITLE		Prof. R. SUNDARAVADIVELU, FNAE INSTITUTE CHAIR PROFESSOR, MEMBER BOG IIT MADRAS, DEPARTMENT OF OCEAN ENGINEERING, IIT MADRAS, CHENNAI - 36						
1.	ITM/DOE/DP1/KCG/1000	02	OVERALL LAYOUT WITH GOOGLE MAP								
2.	ITM/DOE/DP1/KCG/2000	06	GENERAL ARRANGEMENT OF LANDING JETTY		CLIENT : DEENDAYAL PORT TRUST, OFFSHORE OIL TERMINAL,VADINAR, DEV BHOOMI DWARKA GUJARAT-361010						
				PROJECT TITLE : CONSTRUCTION OF INDIAN COAST GUARD JETTY AT OOT VADINAR			DRN.	CHK.	APP.	DATE	REV
							SS	GVK	RSUN	27/04/2021	01
				DRAWING TITLE : LOCATION OF BORE HOLES			SH.SCALE	DRAWING NUMBER			
							AS SHOWN	ITM/DOE/DP1/KCG/1001			

BOREHOLE LOGS

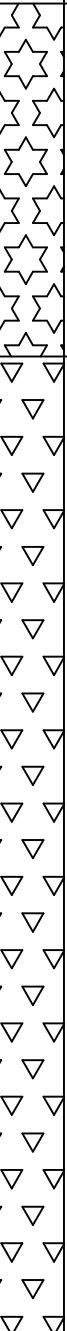
CLIENT : DEENDAYAL PORT TRUST												
PROJECT : GEO-TECHNICAL INVESTIGATION FOR CONSTRUCTION OF JETTY FOR INDIAN COAST GARD AT DEENDAYAL PORT, VADINAR, GUJARAT												
SHEET NO. : 1 OF 3						DATE : 08 /05 /2021 TO 22 / 05 /2021						
BORE HOLE NO: LBH 1						METHOD : ROTARY DRILLING						
GROUND R.L. : 7.009 w.r.t MSL						CASING : Up to 10.50 M BGL						
WATER TABLE : 15.00 M						DIAMETER : 100 MM & NX						
LOCATION : DEENDAYAL PORT, VADINAR						CO-ORDINATE : E- 569569.17, N- 2481684.96						

DEPTH (m.)	DIA. OF BORE HOLE	LOG.	STRATA DESCRIPTION	SAMPLE		BLOWS/15cm				SPT N	CORE RECOVERY (%)	RQD %	UCS (MPa)
				DEPTH (m)	TYPE	15	15	15	15				
1.00	100 MM		Filled Up Materials										
			1.00	D/S									
2.00			Yellowish brown/ gray hard sand mixed with gravels	1.50/ 1.95	SPT1	10	16	30	-	46			
3.00													
				3.00/ 3.45	SPT2	22	21	14	-	35			
4.00													
				4.50/ 4.95	SPT3	7	9	4	-	13			
5.00													
6.00				6.00/ 6.45	SPT4	9	5	5	-	10			
7.00		7.50/ 7.95	SPT5	11	17	9	-	26					
		7.95/ 8.42	UDS 1										
8.00													
9.00			9.00										
			Gray stiff Clay	9.00/ 9.45	SPT6	5	5	15	-	20			
10.00													


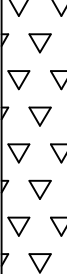
SPT N =STANDARD PENETRATION TEST VALUE	VST = VANE SHEAR TEST	CR = CORE RECOVERY
UDS = UNDISTURBED SOIL SAMPLE	DS = DISTURBED SOIL SAMPLE	RQD = ROCK QUALITY DESIGNATION

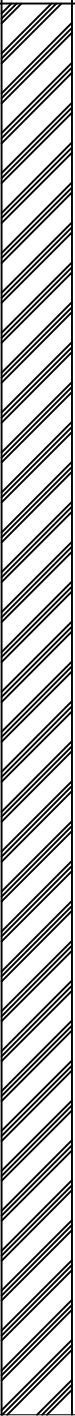
REMARKS : Borehole continue.....	SCALE : 1: 50
PARESH CONSTRUCTIONS AND FOUNDATIONS PVT. LTD.	JOB NO. :1008

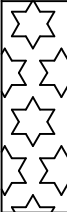

CLIENT : DEENDAYAL PORT TRUST													
PROJECT : GEO-TECHNICAL INVESTIGATION FOR CONSTRUCTION OF JETTY FOR INDIAN COAST GARD AT DEENDAYAL PORT, VADINAR, GUJARAT													
SHEET NO. : 2 OF 3						DATE : 08 /05 /2021 TO 22 / 05 /2021							
BORE HOLE NO: LBH 1						METHOD : ROTARY DRILLING							
GROUND R.L. : 7.009 w.r.t MSL						CASING : Up to 10.50 M BGL							
WATER LEVEL : 15.00 M						DIAMETER : 100 MM & NX							
LOCATION : DEENDAYAL PORT, VADINAR						CO-ORDINATE : E- 569569.17, N- 2481684.96							
DEPTH (m.)	DIA. OF BORE HOLE	LOG.	STRATA DESCRIPTION	SAMPLE		BLOWS/15cm				SPT N	CORE RECOVERY (%)	RQD %	UCS (MPa)
				DEPTH (m)	TYPE	15	15	15	15				
11.00	100 MM		Gray medium stiff Clay	10.50/10.95	SPT7	3	3	4	-	7			
				11.00/11.45	UDS 2								
12.00													
				12.00/12.45	SPT8	1	3	5	-	8			
				12.45/12.90	UDS 3								
13.00													
				13.50/13.95	SPT9	6	3	2	-	5			
14.00					14.00/14.45	UDS 4							
15.00					15.00/15.45	SPT10	6	4	4	-	8		
					15.45/15.90	UDS 5							
16.00													
					16.50/16.95	SPT11	3	4	3	-	7		
17.00					16.95/17.40	UDS 6							
18.00			Gray hard Silty Sand with gravel	18.00/18.45	SPT12	16	62	34	-	96			
19.00													
				19.50/19.82	SPT13	23	92	-	-	R			
20.00													
SPT N =STANDARD PENETRATION TEST VALUE VST = VANE SHEAR TEST CR = CORE RECOVERY UDS = UNDISTURBED SOIL SAMPLE DS = DISTURBED SOIL SAMPLE RQD = ROCK QUALITY DESIGNATION													
REMARKS : Borehole continue.....											SCALE : 1: 50		
PARESH CONSTRUCTIONS AND FOUNDATIONS PVT. LTD.											JOB NO. :1008		

CLIENT : DEENDAYAL PORT TRUST													
PROJECT : GEO-TECHNICAL INVESTIGATION FOR CONSTRUCTION OF JETTY FOR INDIAN COAST GARD AT DEENDAYAL PORT, VADINAR, GUJARAT													
SHEET NO. : 3 OF 3						DATE : 08 /05 /2021 TO 22 / 05 /2021							
BORE HOLE NO: LBH 1						METHOD : ROTARY DRILLING							
GROUND R.L. : 7.009 w.r.t MSL						CASING : Up to 10.50 M BGL							
WATER LEVEL : 15.00 M						DIAMETER : 100 MM & NX							
LOCATION : DEENDAYAL PORT, VADINAR						CO-ORDINATE : E- 569569.17, N- 2481684.96							
DEPTH (m.)	DIA. OF BORE HOLE	LOG.	STRATA DESCRIPTION	SAMPLE		BLOWS/15cm				SPT N	CORE RECOVERY (%)	RQD %	UCS (MPa)
				DEPTH (m)	TYPE	15	15	15	15				
21.00	NX		Gray fractured highly weathered Basalt rock			CORE					16	NIL	8
21.00/21.09				SPT14	55	-	-	-	R				
22.00					CORE					25	NIL		
22.50													
23.00			22.50/22.67	SPT15	55	-	-	-	R				
24.00			24.00			CORE					77	28	81.30
						CORE					100	96	85.50
25.00			24.50/24.25	SPT16	55	-	-	-	R				
26.00						CORE					80	55	5.90
			26.00/26.04	SPT17	55	-	-	-	R				
27.00						CORE					100	72	7.60
28.00			27.50/27.53	SPT18	55	-	-	-	R				
				CORE					100	77	4.60		
29.00	29.00/29.03	SPT19	55	-	-	-	R		88	68	32		
BOREHOLE IS TERMINATED AT A DEPTH OF 29.50 M BELOW GROUND LEVEL.													
30.00													
SPT N =STANDARD PENETRATION TEST VALUE VST = VANE SHEAR TEST CR = CORE RECOVERY UDS = UNDISTURBED SOIL SAMPLE DS = DISTURBED SOIL SAMPLE RQD = ROCK QUALITY DESIGNATION													
REMARKS : BOREHOLE IS TERMINATED AT A DEPTH OF 29.50 M BELOW GROUND LEVEL.											SCALE : 1: 50		
PARESH CONSTRUCTIONS AND FOUNDATIONS PVT. LTD.											JOB NO. :1008		

CLIENT : DEENDAYAL PORT TRUST															
PROJECT : GEO-TECHNICAL INVESTIGATION FOR CONSTRUCTION OF JETTY FOR INDIAN COAST GARD : AT DEENDAYAL PORT, VADINAR, GUJARAT															
SHEET NO. : 1 OF 3							DATE : 29 /05 /2021 TO 08 / 06 /2021								
BORE HOLE NO: MBH 01							METHOD : ROTARY DRILLING								
GROUND R.L. : 1.699 w.r.t MSL							CASING : Up to 11.00 M BGL								
WATER LEVEL : L.T: 0.00 M, H.T: 5.00 M							DIAMETER : 150 MM & NX								
LOCATION : DEENDAYAL PORT, VADINAR							CO-ORDINATE : E- 569535.00, N- 2481602.69								
DEPTH (m.)	DIA. OF BORE HOLE	LOG.	STRATA DESCRIPTION	SAMPLE		BLOWS/15cm				SPT N	CORE RECOVERY (%)	RQD %	UCS (MPa)		
				DEPTH (m)	TYPE	15	15	15	15						
1.00	150 MM		Gray medium stiff sandy silty Clay	1.00	D/S										
2.00				1.50/ 1.95	SPT1	5	2	5	-	7					
				1.95/ 2.45	UDS 1										
3.00															
				3.00/ 3.45	SPT2	3	2	1	-	3					
4.00				3.45/ 3.95	UDS 2										
				4.00/ 4.47	UDS 3										
5.00				4.50/ 4.95	SPT3	1	0	1	-	1					
				4.95/ 5.42	UDS 4										
6.00				5.42/ 5.89	UDS 5										
				6.17/ 6.62	SPT4	0	0	1	-	1					
7.00				6.62/ 7.09	UDS 6										
8.00				7.50/ 7.95	SPT5	0	0	2	-	2					
				7.95/ 8.42	UDS 7										
9.00				8.42/ 8.50	UDS 8										
				9.00/ 9.45	SPT6	0	1	1	0	2					
10.00				9.45/ 9.90	UDS 9										
SPT N =STANDARD PENETRATION TEST VALUE UDS = UNDISTURBED SOIL SAMPLE															
VST = VANE SHEAR TEST DS = DISTURBED SOIL SAMPLE															
CR = CORE RECOVERY RQD = ROCK QUALITY DESIGNATION															
REMARKS : Borehole continue.....												SCALE : 1: 50			
PARESH CONSTRUCTIONS AND FOUNDATIONS PVT. LTD.												JOB NO. :1008			

CLIENT : DEENDAYAL PORT TRUST															
PROJECT : GEO-TECHNICAL INVESTIGATION FOR CONSTRUCTION OF JETTY FOR INDIAN COAST GARD AT DEENDAYAL PORT, VADINAR, GUJARAT															
SHEET NO. : 2 OF 3							DATE : 29 /05 /2021 TO 08 / 06 /2021								
BORE HOLE NO: MBH 01							METHOD : ROTARY DRILLING								
GROUND R.L. : 1.699 w.r.t MSL							CASING : Up to 11.00 M BGL								
WATER LEVEL : L.T: 0.00 M, H.T: 5.00 M							DIAMETER : 150 MM & NX								
LOCATION : DEENDAYAL PORT, VADINAR							CO-ORDINATE : E- 569535.00, N- 2481602.69								
DEPTH (m.)	DIA. OF BORE HOLE	LOG.	STRATA DESCRIPTION	SAMPLE		BLOWS/15cm				SPT N	CORE RECOVERY (%)	RQD %	UCS (MPa)		
				DEPTH (m)	TYPE	15	15	15	15						
11.00	150 MM		Gray medium stiff sandy silty Clay mixed with gravels	10.50/10.95	SPT 7	1	0	2	-	2					
12.00				10.95/11.45	UDS10										
				11.45/11.95	UDS11										
				12.00/12.45	SPT 8	1	0	3	-	3					
13.00				12.45/12.88	UDS12										
				13.50/13.95	SPT9	0	1	4	-	5					
14.00															
15.00															
16.00	NX		Gray fractured highly weathered Basalt rock	15.00/15.30	SPT10	73	27	-	-	R	30	Nil			
				CORE											
17.00				16.50/16.65	SPT11	40	-	-	-	R	39	Nil			
					CORE										
18.00			Gray slightly weathered to fresh Basalt	18.00/18.08	SPT12	53	-	-	-	R	77	29	9.26		
					CORE										
19.00															
20.00					19.50/19.57	SPT13	43	-	-	-	R				
SPT N =STANDARD PENETRATION TEST VALUE VST = VANE SHEAR TEST CR = CORE RECOVERY UDS = UNDISTURBED SOIL SAMPLE DS = DISTURBED SOIL SAMPLE RQD = ROCK QUALITY DESIGNATION															
REMARKS : Borehole continue.....												SCALE : 1: 50			
PARESH CONSTRUCTIONS AND FOUNDATIONS PVT. LTD.												JOB NO. :1008			

CLIENT : DEENDAYAL PORT TRUST														
PROJECT : GEO-TECHNICAL INVESTIGATION FOR CONSTRUCTION OF JETTY FOR INDIAN COAST GARD AT DEENDAYAL PORT, VADINAR, GUJARAT														
SHEET NO. : 1 OF 3						DATE : 11 /06 /2021 TO 17 / 06 /2021								
BORE HOLE NO: MBH 02						METHOD : ROTARY DRILLING								
GROUND R.L. : 0.273 w.r.t MSL						CASING : Up to 15.00 M BGL								
WATER LEVEL : L.T: 2.00 M, H.T: 7.00 M						DIAMETER : 150 MM & NX								
LOCATION : DEENDAYAL PORT, VADINAR						CO-ORDINATE : E- 569536.940, N- 2481540.900								
DEPTH (m.)	DIA. OF BORE HOLE	LOG.	STRATA DESCRIPTION	SAMPLE		BLOWS/15cm				SPT N	CORE RECOVERY (%)	RQD %	UCS (MPa)	
				DEPTH (m)	TYPE	15	15	15	15					
1.00	150 MM		Gray very loose to loose silty Sand mixed with gravels	1.00	D/S									
2.00				1.50/1.95	SPT1	3	2	1	-	4				
				1.95/2.45	UDS 1									
3.00														
				3.00/3.45	SPT2	3	3	2	-	5				
4.00														
				4.50/4.95	SPT3	3	4	1	0	5				
5.00				4.95/5.45	UDS 2									
6.00				6.00/6.60	SPT4	3	2	1	-	3				
7.00														
				7.50/7.95	SPT5	3	1	1	-	2				
8.00				7.95/8.45	UDS 3									
9.00	9.00/9.45	SPT6	2	1	1	-	2							
10.00														
SPT N =STANDARD PENETRATION TEST VALUE VST = VANE SHEAR TEST CR = CORE RECOVERY UDS = UNDISTURBED SOIL SAMPLE DS = DISTURBED SOIL SAMPLE RQD = ROCK QUALITY DESIGNATION														
REMARKS : Borehole continue.....											SCALE : 1: 50			
PARESH CONSTRUCTIONS AND FOUNDATIONS PVT. LTD.											JOB NO. :1008			

CLIENT : DEENDAYAL PORT TRUST															
PROJECT : GEO-TECHNICAL INVESTIGATION FOR CONSTRUCTION OF JETTY FOR INDIAN COAST GARD AT DEENDAYAL PORT, VADINAR, GUJARAT															
SHEET NO. : 2 OF 3						DATE : 11 /06 /2021 TO 17 / 06 /2021									
BORE HOLE NO: MBH 02						METHOD : ROTARY DRILLING									
GROUND R.L. : 0.273 w.r.t MSL						CASING : Up to 15.00 M BGL									
WATER LEVEL : L.T: 2.00 M, H.T: 7.00 M						DIAMETER : 150 MM & NX									
LOCATION : DEENDAYAL PORT, VADINAR						CO-ORDINATE : E- 569536.940, N- 2481540.900									
DEPTH (m.)	DIA. OF BORE HOLE	LOG.	STRATA DESCRIPTION	SAMPLE		BLOWS/15cm				SPT N	CORE RECOVERY (%)	RQD %	UCS (MPa)		
				DEPTH (m)	TYPE	15	15	15	15						
11.00	150 MM		Gray very loose to loose silty Sand mixed with gravels	10.50/10.95	SPT 7	0	0	0	-	0					
				10.95/11.45	UDS 4										
12.00															
				12.00/12.45	SPT 8	4	3	4	-	7					
13.00															
				13.50/13.95	SPT 9	1	0	6	-	6					
14.00				13.95/14.45	UDS 5										
15.00															
16.00	NX		Gray moderately weathered Basalt	15.00/15.12	SPT10	52	-	-	-	R	57	7	58.11		
					CORE										
17.00				Gray Fresh compact Basalt	16.50/16.51	SPT11	15	-	-	-	R	93	73	60.22	
						CORE									
18.00						18.00/18.01	SPT12	20	-	-	-	R	99	77	25.5
						CORE									
19.00			19.50/19.52	SPT13	25	-	-	-	R						
20.00															
SPT N =STANDARD PENETRATION TEST VALUE VST = VANE SHEAR TEST CR = CORE RECOVERY UDS = UNDISTURBED SOIL SAMPLE DS = DISTURBED SOIL SAMPLE RQD = ROCK QUALITY DESIGNATION															
REMARKS : Borehole continue.....											SCALE : 1: 50				
PARESH CONSTRUCTIONS AND FOUNDATIONS PVT. LTD.											JOB NO. :1008				

CLIENT : DEENDAYAL PORT TRUST													
PROJECT : GEO-TECHNICAL INVESTIGATION FOR CONSTRUCTION OF JETTY FOR INDIAN COAST GARD AT DEENDAYAL PORT, VADINAR, GUJARAT													
SHEET NO. : 3 OF 3						DATE : 11 /06 /2021 TO 17 / 06 /2021							
BORE HOLE NO: MBH 02						METHOD : ROTARY DRILLING							
GROUND R.L. : 0.273 w.r.t MSL						CASING : Up to 15.00 M BGL							
WATER LEVEL : L.T: 2.00 M, H.T: 7.00 M						DIAMETER : 150 MM & NX							
LOCATION : DEENDAYAL PORT, VADINAR						CO-ORDINATE : E- 569536.940, N- 2481540.900							
DEPTH (m.)	DIA. OF BORE HOLE	LOG.	STRATA DESCRIPTION	SAMPLE		BLOWS/15cm				SPT N	CORE RECOVERY (%)	RQD %	UCS (MPa)
				DEPTH (m)	TYPE	15	15	15	15				
21.00	NX	▽ ▽ ▽ ▽ ▽ ▽	Gray Fresh compact Basalt	20.50	CORE						90	90	17
					CORE						98	98	29.06
22.00				21.50/21.55	SPT14	16	-	-	-	R			
23.00			BOREHOLE IS TERMINATED AT A DEPTH OF 21.50 M BELOW GROUND LEVEL.										
24.00													
25.00													
26.00													
27.00													
28.00													
29.00													
30.00													
SPT N =STANDARD PENETRATION TEST VALUE VST = VANE SHEAR TEST CR = CORE RECOVERY UDS = UNDISTURBED SOIL SAMPLE DS = DISTURBED SOIL SAMPLE RQD = ROCK QUALITY DESIGNATION													
REMARKS : BOREHOLE IS TERMINATED AT A DEPTH OF 21.50 M BELOW GROUND LEVEL.											SCALE : 1: 50		
PARESH CONSTRUCTIONS AND FOUNDATIONS PVT. LTD.											JOB NO. :1008		

CLIENT : DEENDAYAL PORT TRUST														
PROJECT : GEO-TECHNICAL INVESTIGATION FOR CONSTRUCTION OF JETTY FOR INDIAN COAST GARD AT DEENDAYAL PORT, VADINAR, GUJARAT														
SHEET NO. : 1 OF 3						DATE : 22 /06 /2021 TO 29 / 06 /2021								
BORE HOLE NO: MBH 03						METHOD : ROTARY DRILLING								
GROUND R.L. : -1.30 M w.r.t MSL						CASING : Up to 16.50 M BGL								
WATER LEVEL : L.T: 3.00 M, H.T: 9.00 M						DIAMETER : 150 MM & NX								
LOCATION : DEENDAYAL PORT, VADINAR						CO-ORDINATE : E- 569513.440, N- 2481496.760								
DEPTH (m.)	DIA. OF BORE HOLE	LOG.	STRATA DESCRIPTION	SAMPLE		BLOWS/15cm				SPT N	CORE RECOVERY (%)	RQD %	UCS (MPa)	
				DEPTH (m)	TYPE	15	15	15	15					
1.00	150 MM		Gray very soft silty Clay	1.00	D/S									
2.00				1.50/ 1.95	SPT1	0	0	0	-	0				
				1.95/ 2.45	UDS 1									
3.00														
				3.00/ 3.45	SPT2	0	0	0	-	0				
4.00														
				4.50/ 4.95	SPT3	0	0	0	-	0				
5.00				4.95/ 5.45	UDS 2									
6.00				6.00/ 6.45	SPT4	0	0	0	-	0				
7.00				7.50/ 7.95	SPT5	0	0	0	-	0				
				7.95/ 8.40	UDS 3									
8.00														
				9.00/ 9.45	SPT6	0	0	0	-	0				
9.00														
10.00														
SPT N =STANDARD PENETRATION TEST VALUE VST = VANE SHEAR TEST CR = CORE RECOVERY UDS = UNDISTURBED SOIL SAMPLE DS = DISTURBED SOIL SAMPLE RQD = ROCK QUALITY DESIGNATION														
REMARKS : Borehole continue.....											SCALE : 1: 50			
PARESH CONSTRUCTIONS AND FOUNDATIONS PVT. LTD.											JOB NO. :1008			

CLIENT : DEENDAYAL PORT TRUST														
PROJECT : GEO-TECHNICAL INVESTIGATION FOR CONSTRUCTION OF JETTY FOR INDIAN COAST GARD AT DEENDAYAL PORT, VADINAR, GUJARAT														
SHEET NO. : 2 OF 3						DATE : 22 /06 /2021 TO 29 / 06 /2021								
BORE HOLE NO: MBH 03						METHOD : ROTARY DRILLING								
GROUND R.L. : -1.30 M w.r.t MSL						CASING : Up to 16.50 M BGL								
WATER LEVEL : L.T: 3.00 M, H.T: 9.00 M						DIAMETER : 150 MM & NX								
LOCATION : DEENDAYAL PORT, VADINAR						CO-ORDINATE : E- 569513.440, N- 2481496.760								
DEPTH (m.)	DIA. OF BORE HOLE	LOG.	STRATA DESCRIPTION	SAMPLE		BLOWS/15cm				SPT N	CORE RECOVERY (%)	RQD %	UCS (MPa)	
				DEPTH (m)	TYPE	15	15	15	15					
11.00			Gray very soft to stiff silty Clay	10.50/10.95	SPT 7	0	0	0	-	0				
				10.95/11.45	UDS 4									
12.00														
				12.00/12.45	SPT 8	4	6	4	-	10				
13.00														
				13.50/13.95	SPT 9	0	0	0	-	0				
14.00					13.95/14.45	UDS 5								
15.00					15.00/15.45	SPT 10	0	0	0	-	0			
16.00				16.50/16.95	SPT 11	0	0	0	-	0				
17.00			17.00											
18.00	NX	▽	Gray fractured highly weathered Basalt rock		CORE						36	NIL		
		▽		18.00/18.45	SPT 12	13	9	9	9	36				
19.00		▽			CORE						93	22	5.05	
		▽		19.50/19.55	SPT 13	55	-	-	-	R				
20.00		▽												
SPT N =STANDARD PENETRATION TEST VALUE VST = VANE SHEAR TEST CR = CORE RECOVERY UDS = UNDISTURBED SOIL SAMPLE DS = DISTURBED SOIL SAMPLE RQD = ROCK QUALITY DESIGNATION														
REMARKS : Borehole continue.....											SCALE : 1: 50			
PARESH CONSTRUCTIONS AND FOUNDATIONS PVT. LTD.											JOB NO. :1008			

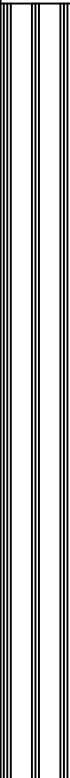
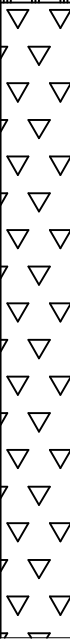
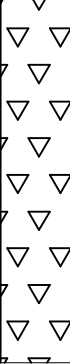
CLIENT : DEENDAYAL PORT TRUST													
PROJECT		GEO-TECHNICAL INVESTIGATION FOR CONSTRUCTION OF JETTY FOR INDIAN COAST GARD AT DEENDAYAL PORT, VADINAR, GUJARAT											
SHEET NO. : 3 OF 3						DATE : 22 /06 /2021 TO 29 / 06 /2021							
BORE HOLE NO: MBH 03						METHOD : ROTARY DRILLING							
GROUND R.L. : -1.30 M w.r.t MSL						CASING : Up to 16.50 M BGL							
WATER LEVEL : L.T: 3.00 M, H.T: 9.00 M						DIAMETER : 150 MM & NX							
LOCATION : DEENDAYAL PORT, VADINAR						CO-ORDINATE : E- 569513.440, N- 2481496.760							
DEPTH (m.)	DIA. OF BORE HOLE	LOG.	STRATA DESCRIPTION	SAMPLE		BLOWS/15cm				SPT N	CORE RECOVERY (%)	RQD %	UCS (MPa)
				DEPTH (m)	TYPE	15	15	15	15				
21.00	NX	▽	Gray fractured highly weathered Basalt rock		CORE						31	NIL	6.53
22.00		▽	Grayish brown Fresh compact Basalt	21.00/ 21.05	SPT14	55	-	-	-	R			
		▽			CORE						93	93	9.26
23.00		▽		22.50/ 22.53		SPT15	55	-	-	-	R		
		▽			CORE						72	55	32.85
24.00		▽		24.00/ 24.04		SPT16	55	-	-	-	R		
		▽			CORE						95	82	23.58
25.00	▽	25.50/ 25.51	SPT17	55		-	-	-	R	74	54	9.26	
26.00	▽	26.00											
27.00	BOREHOLE IS TERMINATED AT A DEPTH OF 26.00 M BELOW GROUND LEVEL.												
28.00													
29.00													
30.00													
SPT N =STANDARD PENETRATION TEST VALUE VST = VANE SHEAR TEST CR = CORE RECOVERY UDS = UNDISTURBED SOIL SAMPLE DS = DISTURBED SOIL SAMPLE RQD = ROCK QUALITY DESIGNATION													
REMARKS : BOREHOLE IS TERMINATED AT A DEPTH OF 26.00 M BELOW GROUND LEVEL. PARESH CONSTRUCTIONS AND FOUNDATIONS PVT. LTD.												SCALE : 1: 50 JOB NO. :1008	

CLIENT : DEENDAYAL PORT TRUST														
PROJECT : GEO-TECHNICAL INVESTIGATION FOR CONSTRUCTION OF JETTY FOR INDIAN COAST GARD AT DEENDAYAL PORT, VADINAR, GUJARAT														
SHEET NO. : 1 OF 3						DATE : 05 /07 /2021 TO 12 / 07 /2021								
BORE HOLE NO: MBH 04						METHOD : ROTARY DRILLING								
GROUND R.L. : -3.75 M w.r.t MSL						CASING : Up to 16.50 M BGL								
WATER LEVEL : L.T: 6.00 M, H.T: 10.00 M						DIAMETER : 150 MM & NX								
LOCATION : DEENDAYAL PORT, VADINAR						CO-ORDINATE : E- 569489.93, N- 2481452.63								
DEPTH (m.)	DIA. OF BORE HOLE	LOG.	STRATA DESCRIPTION	SAMPLE		BLOWS/15cm				SPT N	CORE RECOVERY (%)	RQD %	UCS (MPa)	
				DEPTH (m)	TYPE	15	15	15	15					
1.00	150 MM		Gray very soft silty Clay	1.00	D/S									
2.00				1.50/1.95	SPT1	0	0	0	-	0				
				1.95/2.45	UDS 1									
3.00														
				3.00/3.45	SPT2	0	0	0	-	0				
4.00														
				4.50/4.95	SPT3	1	2	2	-	4				
5.00				4.95/5.45	UDS 2									
6.00				6.00/6.45	SPT4	0	0	0	-	0				
7.00				7.50/7.95	SPT5	0	0	0	-	0				
				7.95/8.40	UDS 3									
8.00														
				9.00/9.45	SPT6	0	0	0	-	0				
9.00														
10.00														
SPT N =STANDARD PENETRATION TEST VALUE VST = VANE SHEAR TEST CR = CORE RECOVERY UDS = UNDISTURBED SOIL SAMPLE DS = DISTURBED SOIL SAMPLE RQD = ROCK QUALITY DESIGNATION														
REMARKS : Borehole continue.....											SCALE : 1: 50			
PARESH CONSTRUCTIONS AND FOUNDATIONS PVT. LTD.											JOB NO. :1008			

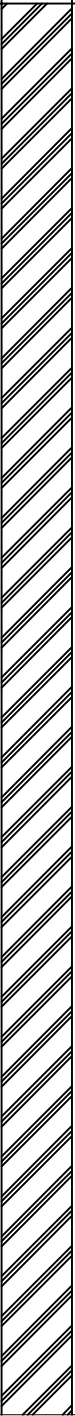
CLIENT : DEENDAYAL PORT TRUST														
PROJECT : GEO-TECHNICAL INVESTIGATION FOR CONSTRUCTION OF JETTY FOR INDIAN COAST GARD AT DEENDAYAL PORT, VADINAR, GUJARAT														
SHEET NO. : 2 OF 3						DATE : 05 /07 /2021 TO 12 / 07 /2021								
BORE HOLE NO: MBH 04						METHOD : ROTARY DRILLING								
GROUND R.L. : -3.75 M w.r.t MSL						CASING : Up to 16.50 M BGL								
WATER LEVEL : L.T: 6.00 M, H.T: 10.00 M						DIAMETER : 150 MM & NX								
LOCATION : DEENDAYAL PORT, VADINAR						CO-ORDINATE : E- 569489.93, N- 2481452.63								
DEPTH (m.)	DIA. OF BORE HOLE	LOG.	STRATA DESCRIPTION	SAMPLE		BLOWS/15cm				SPT N	CORE RECOVERY (%)	RQD %	UCS (MPa)	
				DEPTH (m)	TYPE	15	15	15	15					
11.00	150 MM		Gray very soft silty Clay	10.50/10.95	SPT 7	1	2	2	-	4				
				10.95/11.45	UDS 4									
12.00														
				12.00/12.45	SPT 8	1	0	0	-	0				
13.00														
				13.50/13.95	SPT 9	0	0	0	-	0				
14.00					13.95/14.45	UDS 5								
15.00					15.00/15.45	SPT 10	0	0	0	-				0
16.00														
17.00				16.50/16.95	SPT 11	0	0	0	0	0				
				16.95/17.40	UDS 6									
17.50														
18.00	NX	▽▽▽▽▽▽▽▽▽▽	Gray moderately weathered Basalt		CORE						67	NIL		
				18.00										
19.00					CORE						67	57		
				19.50										
20.00														
SPT N =STANDARD PENETRATION TEST VALUE VST = VANE SHEAR TEST CR = CORE RECOVERY UDS = UNDISTURBED SOIL SAMPLE DS = DISTURBED SOIL SAMPLE RQD = ROCK QUALITY DESIGNATION														
REMARKS : Borehole continue.....											SCALE : 1: 50			
PARESH CONSTRUCTIONS AND FOUNDATIONS PVT. LTD.											JOB NO. :1008			

CLIENT : DEENDAYAL PORT TRUST													
PROJECT		GEO-TECHNICAL INVESTIGATION FOR CONSTRUCTION OF JETTY FOR INDIAN COAST GARD AT DEENDAYAL PORT, VADINAR, GUJARAT											
SHEET NO. : 3 OF 3						DATE : 05 /07 /2021 TO 12 / 07 /2021							
BORE HOLE NO: MBH 04						METHOD : ROTARY DRILLING							
GROUND R.L. : -3.75 M w.r.t MSL						CASING : Up to 16.50 M BGL							
WATER LEVEL : L.T: 6.00 M, H.T: 10.00 M						DIAMETER : 150 MM & NX							
LOCATION : DEENDAYAL PORT, VADINAR						CO-ORDINATE : E- 569489.93, N- 2481452.63							
DEPTH (m.)	DIA. OF BORE HOLE	LOG.	STRATA DESCRIPTION	SAMPLE		BLOWS/15cm				SPT N	CORE RECOVERY (%)	RQD %	UCS (MPa)
				DEPTH (m)	TYPE	15	15	15	15				
21.00	NX	▽	Gray moderately weathered Basalt	21.00	CORE						73	54	
22.00				CORE						73	55		
23.00		22.50		CORE						68	52		
BOREHOLE IS TERMINATED AT A DEPTH OF 23.00 M BELOW GROUND LEVEL.													
24.00													
25.00													
26.00													
27.00													
28.00													
29.00													
30.00													
SPT N =STANDARD PENETRATION TEST VALUE VST = VANE SHEAR TEST CR = CORE RECOVERY UDS = UNDISTURBED SOIL SAMPLE DS = DISTURBED SOIL SAMPLE RQD = ROCK QUALITY DESIGNATION													
REMARKS : BOREHOLE IS TERMINATED AT A DEPTH OF 23.00 M BELOW GROUND LEVEL. PARESH CONSTRUCTIONS AND FOUNDATIONS PVT. LTD.											SCALE : 1: 50 JOB NO. :1008		

CLIENT : DEENDAYAL PORT TRUST														
PROJECT : GEO-TECHNICAL INVESTIGATION FOR CONSTRUCTION OF JETTY FOR INDIAN COAST GARD AT DEENDAYAL PORT, VADINAR, GUJARAT														
SHEET NO. : 1 OF 3						DATE : 16 /07 /2021 TO 27 / 07 /2021								
BORE HOLE NO: MBH 05						METHOD : ROTARY DRILLING								
GROUND R.L. : -7.362 M w.r.t MSL						CASING : Up to 15.00 M BGL								
WATER LEVEL : L.T: 10.00 M, H.T: 15.00 M						DIAMETER : 150 MM & NX								
LOCATION : DEENDAYAL PORT, VADINAR						CO-ORDINATE : E- 569436.81, N- 2481416.70								
DEPTH (m.)	DIA. OF BORE HOLE	LOG.	STRATA DESCRIPTION	SAMPLE		BLOWS/15cm				SPT N	CORE RECOVERY (%)	RQD %	UCS (MPa)	
				DEPTH (m)	TYPE	15	15	15	15					
1.00	150 MM		Gray very soft silty Clay	1.00	D/S									
2.00				1.50/1.95	SPT1	0	0	0	-	0				
				1.95/2.50	UDS 1									
3.00														
				3.00/3.45	SPT2	0	0	0	-	0				
4.00														
				4.50/4.95	SPT3	0	0	0	-	0				
5.00				4.95/5.45	UDS 2									
6.00				6.00/6.60	SPT4	0	0	0	-	0				
7.00														
				7.50/7.95	SPT5	0	0	0	-	0				
8.00				7.95/8.45	UDS 3									
9.00	9.00/9.45	SPT6	0	0	0	-	0							
10.00														
SPT N =STANDARD PENETRATION TEST VALUE VST = VANE SHEAR TEST CR = CORE RECOVERY UDS = UNDISTURBED SOIL SAMPLE DS = DISTURBED SOIL SAMPLE RQD = ROCK QUALITY DESIGNATION														
REMARKS : Borehole continue.....											SCALE : 1: 50			
PARESH CONSTRUCTIONS AND FOUNDATIONS PVT. LTD.											JOB NO. :1008			

CLIENT : DEENDAYAL PORT TRUST													
PROJECT : GEO-TECHNICAL INVESTIGATION FOR CONSTRUCTION OF JETTY FOR INDIAN COAST GARD : AT DEENDAYAL PORT, VADINAR, GUJARAT													
SHEET NO. : 2 OF 3							DATE : 16 /07 /2021 TO 27 / 07 /2021						
BORE HOLE NO: MBH 05							METHOD : ROTARY DRILLING						
GROUND R.L. : -7.362 M w.r.t MSL							CASING : Up to 15.00 M BGL						
WATER LEVEL : L.T: 10.00 M, H.T: 15.00 M							DIAMETER : 150 MM & NX						
LOCATION : DEENDAYAL PORT, VADINAR							CO-ORDINATE : E- 569436.81, N- 2481416.70						
DEPTH (m.)	DIA. OF BORE HOLE	LOG.	STRATA DESCRIPTION	SAMPLE		BLOWS/15cm				SPT N	CORE RECOVERY (%)	RQD %	UCS (MPa)
				DEPTH (m)	TYPE	15	15	15	15				
11.00	150 MM		Gray very soft silty Clay	10.50/ 10.95	SPT 7	0	0	0	-	0			
				10.95/ 11.45	UDS 4								
12.00													
				12.00/ 12.45	SPT 8	0	0	0	-	0			
13.00													
				13.50/ 13.95	SPT 9	0	0	0	-	0			
14.00				13.95/ 14.45	UDS 5								
15.00	NX		Gray highly to moderately weathered Basalt	15.00/ 15.45	SPT10	0	0	0	-	0	20	NIL	
16.00													
17.00				17.00									
18.00	NX		Gray highly to moderately weathered Basalt	18.50							50	7	
19.00													
20.00				20.00							71	52	
SPT N =STANDARD PENETRATION TEST VALUE VST = VANE SHEAR TEST CR = CORE RECOVERY UDS = UNDISTURBED SOIL SAMPLE DS = DISTURBED SOIL SAMPLE RQD = ROCK QUALITY DESIGNATION													
REMARKS : Borehole continue.....												SCALE : 1: 50	
PARESH CONSTRUCTIONS AND FOUNDATIONS PVT. LTD.												JOB NO. :1008	

CLIENT		: DEENDAYAL PORT TRUST												
PROJECT		: GEO-TECHNICAL INVESTIGATION FOR CONSTRUCTION OF JETTY FOR INDIAN COAST GARD : AT DEENDAYAL PORT, VADINAR, GUJARAT												
SHEET NO. : 3 OF 3						DATE : 16 /07 /2021 TO 27 / 07 /2021								
BORE HOLE NO: MBH 05						METHOD : ROTARY DRILLING								
GROUND R.L. : -7.362 M w.r.t MSL						CASING : Up to 15.00 M BGL								
WATER LEVEL : L.T: 10.00 M, H.T: 15.00 M						DIAMETER : 150 MM & NX								
LOCATION : DEENDAYAL PORT, VADINAR						CO-ORDINATE : E- 569436.81, N- 2481416.70								
DEPTH (m.)	DIA. OF BORE HOLE		LOG.	STRATA DESCRIPTION	SAMPLE		BLOWS/15cm				SPT N	CORE RECOVERY (%)	RQD %	UCS (MPa)
					DEPTH (m)	TYPE	15	15	15	15				
21.00	NX		▽ ▽ ▽ ▽ ▽ ▽	Gray moderately weathered Basalt	21.50	CORE				61	61			
22.00														
BOREHOLE IS TERMINATED AT A DEPTH OF 21.50 M BELOW GROUND LEVEL.														
23.00														
24.00														
25.00														
26.00														
27.00														
28.00														
29.00														
30.00														
SPT N =STANDARD PENETRATION TEST VALUE						VST = VANE SHEAR TEST						CR = CORE RECOVERY		
UDS = UNDISTURBED SOIL SAMPLE						DS = DISTURBED SOIL SAMPLE						RQD = ROCK QUALITY DESIGNATION		
REMARKS : BOREHOLE IS TERMINATED AT A DEPTH OF 21.50 M BELOW GROUND LEVEL. PARESH CONSTRUCTIONS AND FOUNDATIONS PVT. LTD.												SCALE : 1: 50 JOB NO. :1008		

CLIENT : DEENDAYAL PORT TRUST														
PROJECT : GEO-TECHNICAL INVESTIGATION FOR CONSTRUCTION OF JETTY FOR INDIAN COAST GARD AT DEENDAYAL PORT, VADINAR, GUJARAT														
SHEET NO. : 1 OF 3						DATE : 11 /09 /2021 TO 16 / 09 /2021								
BORE HOLE NO: MBH 06						METHOD : ROTARY DRILLING								
GROUND R.L. : -9.88 M w.r.t MSL						CASING : Up to 15.00 M BGL								
WATER LEVEL : L.T: 11.00 M, H.T: 17.00 M						DIAMETER : 150 MM & NX								
LOCATION : DEENDAYAL PORT, VADINAR						CO-ORDINATE : E- 5693.92.56 , N- 2481439.97								
DEPTH (m.)	DIA. OF BORE HOLE	LOG.	STRATA DESCRIPTION	SAMPLE		BLOWS/15cm				SPT N	CORE RECOVERY (%)	RQD %	UCS (MPa)	
				DEPTH (m)	TYPE	15	15	15	15					
1.00	150 MM		Gray loose Sand	1.00	D/S									
2.00				1.50/1.95	SPT1	0	0	0	-	0				
3.00				3.00/3.45	SPT2	0	0	0	-	0				
4.00														
5.00				4.50/4.95	SPT3	0	0	0	-	0				
6.00	6.00/6.60	SPT4	0	0	0	-	0							
7.00														
8.00	7.50/7.95	SPT5	0	0	0	-	0							
9.00	9.00/9.45	SPT6	0	0	0	-	0							
10.00														
<div> SPT N =STANDARD PENETRATION TEST VALUE VST = VANE SHEAR TEST CR = CORE RECOVERY UDS = UNDISTURBED SOIL SAMPLE DS = DISTURBED SOIL SAMPLE RQD = ROCK QUALITY DESIGNATION </div>														
REMARKS : Borehole continue.....											SCALE : 1: 50			
PARESH CONSTRUCTIONS AND FOUNDATIONS PVT. LTD.											JOB NO. :1008			

CLIENT : DEENDAYAL PORT TRUST													
PROJECT : GEO-TECHNICAL INVESTIGATION FOR CONSTRUCTION OF JETTY FOR INDIAN COAST GARD AT DEENDAYAL PORT, VADINAR, GUJARAT													
SHEET NO. : 2 OF 3						DATE : 11 /09 /2021 TO 16 / 09 /2021							
BORE HOLE NO: MBH 06						METHOD : ROTARY DRILLING							
GROUND R.L. : -9.88 M w.r.t MSL						CASING : Up to 15.00 M BGL							
WATER LEVEL : L.T: 11.00 M, H.T: 17.00 M						DIAMETER : 150 MM & NX							
LOCATION : DEENDAYAL PORT, VADINAR						CO-ORDINATE : E- 5693.92.56 , N- 2481439.97							
DEPTH (m.)	DIA. OF BORE HOLE	LOG.	STRATA DESCRIPTION	SAMPLE		BLOWS/15cm				SPT N	CORE RECOVERY (%)	RQD %	UCS (MPa)
				DEPTH (m)	TYPE	15	15	15	15				
11.00	150 MM		Gray loose Sand	10.50/10.95	SPT 7	0	0	0	-	0			
12.00													
13.00													
14.00				12.00/12.45	SPT 8	0	0	0	-	0			
15.00													
16.00				13.50/13.95	SPT 9	0	0	0	-	0			
17.00	NX		Gray highly to moderately weathered Basalt	15.00/15.45	SPT10	0	0	0	-	0	NIL	NIL	
18.00					CORE								
19.00													
20.00													
				16.50/16.75	SPT11	47	51	-	-	R			
				18.00		CORE					31	7	26.8
				19.50		CORE					50	7	35.3

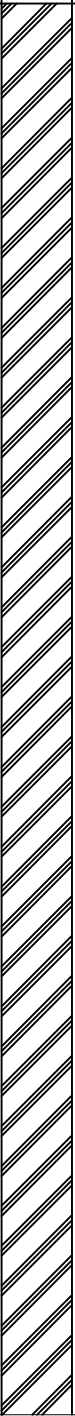
SPT N =STANDARD PENETRATION TEST VALUE
UDS = UNDISTURBED SOIL SAMPLE

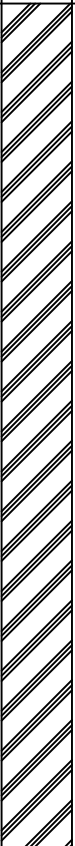
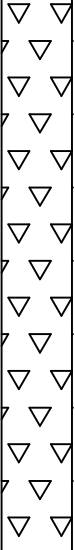
VST = VANE SHEAR TEST
DS = DISTURBED SOIL SAMPLE

CR = CORE RECOVERY
RQD = ROCK QUALITY DESIGNATION

REMARKS : Borehole continue.....	SCALE : 1: 50
PARESH CONSTRUCTIONS AND FOUNDATIONS PVT. LTD.	JOB NO. :1008

CLIENT : DEENDAYAL PORT TRUST														
PROJECT : GEO-TECHNICAL INVESTIGATION FOR CONSTRUCTION OF JETTY FOR INDIAN COAST GARD AT DEENDAYAL PORT, VADINAR, GUJARAT														
SHEET NO. : 3 OF 3						DATE : 11 /09 /2021 TO 16 / 09 /2021								
BORE HOLE NO: MBH 06						METHOD : ROTARY DRILLING								
GROUND R.L. : -9.88 M w.r.t MSL						CASING : Up to 15.00 M BGL								
WATER LEVEL : L.T: 11.00 M, H.T: 17.00 M						DIAMETER : 150 MM & NX								
LOCATION : DEENDAYAL PORT, VADINAR						CO-ORDINATE : E- 5693.92.56 , N- 2481439.97								
DEPTH (m.)	DIA. OF BORE HOLE	LOG.	STRATA DESCRIPTION	SAMPLE		BLOWS/15cm				SPT N	CORE RECOVERY (%)	RQD %	UCS (MPa)	
				DEPTH (m)	TYPE	15	15	15	15					
21.00	NX	▽	Gray highly to moderately weathered Basalt	21.00	CORE						75	53	42.9	
22.00		▽		22.50	CORE						62	62	50.1	
23.00		▽			CORE						65	65	86.4	
24.00		▽		24.00										
		▽		24.50	CORE						56	56	92.1	
25.00			BOREHOLE IS TERMINATED AT A DEPTH OF 24.50 M BELOW GROUND LEVEL.											
26.00														
27.00														
28.00														
29.00														
30.00														
SPT N =STANDARD PENETRATION TEST VALUE VST = VANE SHEAR TEST CR = CORE RECOVERY UDS = UNDISTURBED SOIL SAMPLE DS = DISTURBED SOIL SAMPLE RQD = ROCK QUALITY DESIGNATION														
REMARKS : BOREHOLE IS TERMINATED AT A DEPTH OF 24.50 M BELOW GROUND LEVEL. PARESH CONSTRUCTIONS AND FOUNDATIONS PVT. LTD.											SCALE : 1: 50 JOB NO. :1008			

CLIENT : DEENDAYAL PORT TRUST														
PROJECT : GEO-TECHNICAL INVESTIGATION FOR CONSTRUCTION OF JETTY FOR INDIAN COAST GARD AT DEENDAYAL PORT, VADINAR, GUJARAT														
SHEET NO. : 1 OF 3						DATE : 20 /09 /2021 TO 22 / 09 /2021								
BORE HOLE NO: MBH 07						METHOD : ROTARY DRILLING								
GROUND R.L. : -12.30 M w.r.t MSL						CASING : Up to 14.00 M BGL								
WATER LEVEL : L.T: 12.50 M, H.T: 18.00 M						DIAMETER : 150 MM & NX								
LOCATION : DEENDAYAL PORT, VADINAR						CO-ORDINATE : E- 569348.3 , N- 2481463.24								
DEPTH (m.)	DIA. OF BORE HOLE	LOG.	STRATA DESCRIPTION	SAMPLE		BLOWS/15cm				SPT N	CORE RECOVERY (%)	RQD %	UCS (MPa)	
				DEPTH (m)	TYPE	15	15	15	15					
1.00	150 MM		Gray loose Sand	1.00	D/S									
2.00				1.50/1.95	SPT1	0	0	0	-	0				
3.00				3.00/3.45	SPT2	0	0	0	-	0				
4.00														
5.00				4.50/4.95	SPT3	0	0	0	-	0				
6.00	6.00/6.60	SPT4	0	0	0	-	0							
7.00														
8.00	7.50/7.95	SPT5	0	0	0	-	0							
9.00	9.00/9.45	SPT6	0	0	0	-	0							
10.00														
<div> SPT N =STANDARD PENETRATION TEST VALUE VST = VANE SHEAR TEST CR = CORE RECOVERY </div> <div> UDS = UNDISTURBED SOIL SAMPLE DS = DISTURBED SOIL SAMPLE RQD = ROCK QUALITY DESIGNATION </div>														
REMARKS : Borehole continue.....											SCALE : 1: 50			
PARESH CONSTRUCTIONS AND FOUNDATIONS PVT. LTD.											JOB NO. :1008			

CLIENT : DEENDAYAL PORT TRUST														
PROJECT : GEO-TECHNICAL INVESTIGATION FOR CONSTRUCTION OF JETTY FOR INDIAN COAST GARD AT DEENDAYAL PORT, VADINAR, GUJARAT														
SHEET NO. : 2 OF 3						DATE : 20 /09 /2021 TO 22 / 09 /2021								
BORE HOLE NO: MBH 07						METHOD : ROTARY DRILLING								
GROUND R.L. : -12.30 M w.r.t MSL						CASING : Up to 14.00 M BGL								
WATER LEVEL : L.T: 12.50 M, H.T: 18.00 M						DIAMETER : 150 MM & NX								
LOCATION : DEENDAYAL PORT, VADINAR						CO-ORDINATE : E- 569348.3 , N- 2481463.24								
DEPTH (m.)	DIA. OF BORE HOLE	LOG.	STRATA DESCRIPTION	SAMPLE		BLOWS/15cm				SPT N	CORE RECOVERY (%)	RQD %	UCS (MPa)	
				DEPTH (m)	TYPE	15	15	15	15					
11.00	150 MM		Gray loose Sand	10.50/10.95	SPT 7	0	0	0	-	0				
12.00														
13.00														
14.00				12.00/12.45	SPT 8	0	0	0	-	0				
15.00														
16.00				13.50/13.95	SPT 9	0	0	0	-	0				
				15.00/15.45	SPT10	0	0	0	-	0				
16.00			16.00											
17.00	NX		Gray highly to moderately weathered Basalt		CORE					51	51	71.6		
18.00				17.50										
19.00					CORE					75	75	61.7		
20.00				19.00										
SPT N =STANDARD PENETRATION TEST VALUE VST = VANE SHEAR TEST CR = CORE RECOVERY UDS = UNDISTURBED SOIL SAMPLE DS = DISTURBED SOIL SAMPLE RQD = ROCK QUALITY DESIGNATION														
REMARKS : Borehole continue.....											SCALE : 1: 50			
PARESH CONSTRUCTIONS AND FOUNDATIONS PVT. LTD.											JOB NO. :1008			

CLIENT : DEENDAYAL PORT TRUST													
PROJECT : GEO-TECHNICAL INVESTIGATION FOR CONSTRUCTION OF JETTY FOR INDIAN COAST GARD AT DEENDAYAL PORT, VADINAR, GUJARAT													
SHEET NO. : 3 OF 3						DATE : 20 /09 /2021 TO 22 / 09 /2021							
BORE HOLE NO: MBH 07						METHOD : ROTARY DRILLING							
GROUND R.L. : -12.30 M w.r.t MSL						CASING : Up to 14.00 M BGL							
WATER LEVEL : L.T: 12.50 M, H.T: 18.00 M						DIAMETER : 150 MM & NX							
LOCATION : DEENDAYAL PORT, VADINAR						CO-ORDINATE : E- 569348.3 , N- 2481463.24							
DEPTH (m.)	DIA. OF BORE HOLE	LOG.	STRATA DESCRIPTION	SAMPLE		BLOWS/15cm				SPT N	CORE RECOVERY (%)	RQD %	UCS (MPa)
				DEPTH (m)	TYPE	15	15	15	15				
21.00	NX	▽ ▽ ▽ ▽	Gray highly to moderately weathered Basalt	20.50	CORE						87	87	77.8
				21.00	CORE						68	68	108.8
BOREHOLE IS TERMINATED AT A DEPTH OF 21.00 M BELOW GROUND LEVEL.													
22.00													
23.00													
24.00													
25.00													
26.00													
27.00													
28.00													
29.00													
30.00													
<div style="display: flex; justify-content: space-between; font-size: small;"> SPT N =STANDARD PENETRATION TEST VALUE VST = VANE SHEAR TEST CR = CORE RECOVERY </div> <div style="display: flex; justify-content: space-between; font-size: small;"> UDS = UNDISTURBED SOIL SAMPLE DS = DISTURBED SOIL SAMPLE RQD = ROCK QUALITY DESIGNATION </div>													
REMARKS : BOREHOLE IS TERMINATED AT A DEPTH OF 21.00 M BELOW GROUND LEVEL. PARESH CONSTRUCTIONS AND FOUNDATIONS PVT. LTD.											SCALE : 1: 50 JOB NO. :1008		

CORE BOX PHOTOGRAPHS

CORE BOXES PHOTOGRAPHS

LBH-1



MBH-1



MBH-2





MBH-3





MBH-4



MBH-5



MBH-6



MBH-7



LOCATION PLAN SAMPLING

10 LAB INVESTIGATION:

10.1 SOIL CHARACTERISTICS FOR BOREHOLE: LBH-1

Table 5 Soil Characteristics for Borehole: LBH-1

10.1.1 Soil Testing Data

Bore Hole No.	Depth (m)	SPT-N Value	In-situ density (gm/cc)	In-situ water content (%)	Free Swell Index (%)	Specific Gravity	Grain Size Analysis (%)				Atterberg's Limits			Consolidation Properties				Shear Strength Parameter	
							Gravel	Sand	Silt	Clay	LL (WL)	PL (WP)	P.I. %	C _v	C _c	a _v	e _o	C (kN/m ²)	Φ (°)
LBH-1	0.0-1.00	--	--	--	NS	2.78	44	53	3		NP			--	--	--	--	--	--
	1.50-1.95	46	--	--	NS	2.96	26	66	8		NP			--	--	--	--	--	--
	3.0-3.45	35	--	--	NS	2.87	30	64	6		NP			--	--	--	--	--	--
	6.0-6.45	10	--	--	NS	2.68	39	43	18		NP			--	--	--	--	--	--
	7.50-7.95	26	--	--	NS	2.63	36	52	12		NP			--	--	--	--	--	--
	9.0-9.45	20	--	--	NS	2.65	48	38	14		NP			--	--	--	--	--	--
	10.5-10.95	7	--	--	NS	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	12.0-12.45	15	--	--	2	2.75	31	20	46.5	2.45	41	23	18.5	--	--	--	--	--	--
	12.45-12.92	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	13.5-13.95	5	--	--	10	2.70	40	19	38.5	2.5	40.0	22.0	18.0	--	--	--	--	--	--
	15.0-15.45	8	--	--	10	--	41	24	32.0	3.0	38.0	21.0	19.0	--	--	--	--	--	--
	15.45-15.9	--	2.1	24.5	12	2.70	24	20	53.0	3.0	42.0	21.0	21.0	0.672	0.1019	0.1534	0.593	40.0	0
	16.5-16.95	7	--	--	10	2.76	21	23	52.0	4.0	43.0	20.0	23.0	--	--	--	--	--	--
	17.5-17.95	96	--	--	NS	2.64	53	46	1		NP			--	--	--	--	--	--
	19.5-19.82	R	--	--	NS	2.76	36	54	10		NP			--	--	--	--	--	--
	21.0-21.09	R	--	--	NS	2.69	35	48	17		NP			--	--	--	--	--	--
	22.5-22.67	R	--	--	NS	2.82	31	58	11		NP			--	--	--	--	--	--
Test Method			IS:2131 – 1981 RA-2002		IS:27 20 (P.29)	IS:27 20-3	IS:2720 (P-4) 1985, RA-2010				IS:2720 (P-5) 1980, RA-2011			IS 2720 Part-15				IS:2720-P-13, P-30 -1993, RA 2002	

10.2 ROCK CHARACTERISTICS FOR BOREHOLE: LBH-1

10.2.1 Rock Testing Data

Table 6 Rock properties for Borehole: LBH-1

Bore Hole No.	Depth (m)	Weather Condition	Grade of Rock	SPT N-Value	TCR (%)	RQD (%)	Sp. Gravity	Porosity	Water Absorption	Density	Compressive Strength (MPa)	Point load Strength (MN/m ²)
LBH-1	20.0-21.0	Residual Soil	VI	--	16	--	2.35	19.7	9.16	2.35	8.00	2.71
	22.5-24.0	Highly Weathered	IV	--	77	28	2.90	0.75	0.26	2.90	81.30	21.42
	24.0-24.5	Fresh	I	--	100	96	2.86	1.14	0.40	2.86	85.50	27.78
	24.5-26.0	Moderately Weathered	III	--	80	55	2.19	16.5	7.68	2.19	5.90	1.14
	26.0-27.5	Slightly Weathered	II	--	100	72	2.24	13.52	6.41	2.24	7.60	1.00
	27.5-29.0	Slightly Weathered	II	--	100	77	2.20	8.5	17.21	2.20	4.60	1.43
	29.0-29.5	Moderately Weathered	III	--	88	68	2.68	3.38	1.28	2.68	32.00	8.57
Test Method		IS 4464-1985		Data suggested by Paresh Con. & Foun.			IS 13030:1991			IS 9143:1979		IS 8764:1998



10 LAB INVESTIGATION:

10.1 SOIL CHARACTERISTICS FOR BOREHOLE: MBH-1

Table 5 Soil Characteristics for Borehole: MBH-1

Soil Testing Data

Bore Hole No.	Depth (m)	SPT-N Value	In-situ density (gm/cc)	In-situ water content (%)	Free Swell Index	Void Ratio	Grain Size Analysis (%)				Atterberg's Limits			Consolidation Properties			Specific Gravity	Shear Strength Parameter	
							Gravel	Sand	Silt	Clay	LL (WL)	PL (WP)	P.I. %	C _v (m ² /year)	C _c	a _v		C (kN/m ²)	Φ (°)
MBH-1	1.50-1.95	7	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	1.95-2.45	--	1.73	24.4	NS	--	27	46	23	4	NP			--	--	--	2.56	0	27.5
	4.00-4.47	--	1.66	44.0	2	1.515	23	20	45	12	68	24	44	0.18	0.1795	0.073	2.56	3.05	--
	5.54-5.89	--	1.73	66.3	18	1.565	22	21	48	9	64	27	37	0.17	0.1790	0.097	2.58	2.56	--
	6.17-6.64	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	6.64-7.09	--	1.69	57.0	5	1.540	25	18	47	10	65	26	39	0.18	0.1708	0.053	2.60	3.15	--
	7.50-7.95	2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	9.45-9.92	2	1.83	36.0	9	1.539	28	15	42	15	67	25	42	0.18	0.1895	0.035	2.57	3.33	--
	10.5-10.95	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	11.45-11.95	--	1.58	50.0	10	1.603	16	29	43	12	67	26	41	0.22	0.1725	0.056	2.59	3.08	--
	12.00-12.45	3	--	--	--	--	31	13	45	11	64	26	38	--	--	--	2.57	--	--
	12.45-12.88	--	1.55	54.5	10	1.612	20	26	46	8	65	25	40	0.19	0.1751	0.013	2.61	3.05	--
	13.50-13.95	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	15.17-15.30	--	--	--	--	--	31	53	13	3	--	--	--	--	--	--	--	--	--
Test Method			IS:2131 – 1981 RA-2002		IS:2720 (P.2 9)	IS 2720 Part-15	IS:2720 (P-4) 1985, RA-2010				IS:2720 (P-5) 1980, RA-2011			IS 2720 Part-15			IS:2720-3	IS:2720-P-13, P-30 -1993, RA 2002	

10.2 ROCK CHARACTERISTICS FOR BOREHOLE: MBH-1

Rock Testing Data

Table 6 Rock properties for Borehole: MBH-1

Bore Hole No.	Depth (m)	Weather Condition	Grade of Rock	SPT N-Value	CR (%)	RQD (%)	Sp. Gravity	Porosity	Water Absorption	Density	Compressive Strength (MPa)	Point load Strength (MN/m ²)
MBH-1	15.30-16.50	Highly Weathered	IV	--	--	30	--	--	--	--	--	--
	16.50-16.65	--	--	Refusal	--	--	--	--	--	--	--	--
	16.65-18.00	Highly Weathered	IV	--	39	--	--	--	--	--	--	--
	18.00-18.08	--	--	Refusal	--	--	2.65	1.935	0.75	2.65	9.26	4.8
	18.08-19.50	Slightly Weathered	II	--	77	29						
	19.50-19.57	--	--	Refusal	--	--	2.69	14.435	7.00	2.69	8.42	2.0
	19.57-21.00	Fresh Rock	I	--	97	70						
	21.00-21.05	--	--	Refusal	--	--	2.60	13.500	6.48	2.60	5.47	1.29
	21.05-22.50	Moderately Weathered	III	--	67	39						
	22.50-22.57	--	--	Refusal	--	--	2.31	9.550	7.30	2.31	6.73	0.93
	22.57-24.00	Fresh Rock	I	--	77	77						
	24.00-25.00			--	100	100						
Test Method		IS 4464-1985		By Pavan Con. & Foun.			IS 13030:1991				IS 9143:1979	IS 8764:1998

DIET/CIVIL/CTMT/ 129 /2021

Report No.	: 43A_1/21-22	Date	: 11-08-2021
Name of Client	Deendayal Port Trust-Offshore oil Terminal Department		
Name of Work	Construction of Coast guard jetty at OOT Vadinar-Test on borehole sample (MBH-2 &3)		
Name of Agency	Paresh Construction and Foundation Pvt. Ltd		
Name of Consultant	Department of Ocean Engineering – Indian Institute of Technology- Madras		
Material Received	Mr. K. M. Vadsola		
Wide letter No.	OOT/C-WK/CG/7041(jetty) 06-07-2021		
Bore Hole No.	: MBH-2	Bore Hole Started	: 11/06/2021
		Bore Hole Completed	: 17/06/2021
Method of Investigation	: Wash Boring	Diameter of bore hole	: 150mm
Diameter of core	: 55 mm	Latitude	: 22°26'19.23"N
		Longitude	: 69°40'32.70"E
		Sea Bad Level-R.L	: +0.273 m

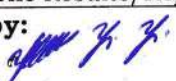
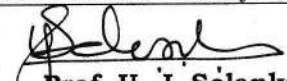
Soil Characteristics for Borehole: MBH-2

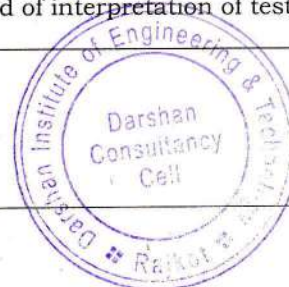
Sr. No.	Depth(m)	SPT-N Value (Paresh Construction and Foundation Pvt. Ltd)	Grain Size Analysis		
			Coarse		Fine
			Gravel (%)	Sand (%)	(Silt + Clay) (%)
1	1.5-1.95	4	83	11	6
2	1.95-2.45	--	80	14	6
3	3.00-3.45	5	89	9	2
4	4.5-4.95	5	91	7	2
5	4.95-5.45	--	--	--	--
6	6.00-6.45	3	75	15	10
7	7.95-8.45	--	51	39	9
8	9.00-9.45	2	33	29	39
9	10.5-10.95	0	2	35	63
10	10.95-11.45	--	47	42	11
11	12.00-12.45	7	84	14	2
12	13.50-13.95	6	8	86	6
13	15.00-15.12	Refusal	26	7	67
Test Method		--	IS:2720-Part 4-1985		

From the gradation of samples send by Paresh Construction & Foundation Pvt. Ltd, it is observed that Coral stone, sandy & marine silty clay soils in grey color encounter at varies depth are shown in a above table with SPT values.

****End of Report****

Note: 1. The Test Certificates is given for the Sample received in the laboratory by Customer.
2. DARSHAN CONSULTANCY CELL is not responsible for any kind of interpretation of test results.
3. The Results/Reports are not used for Publicity.

Tested by: 

Prof. U. J. Solanki
(Technical Manager)
Authorized Signatory



T.S. No.	: 43_2/21-22	Date:	12-08-2021
Name of Client	: Deendayal Port Trust-Offshore oil Terminal Department		
Name of Work	: Construction of Jetty for INDIAN COAST GUARD at Vadinar - Test on borehole sample (MBH-2 &3)		
Name of Agency	: Paresh Construction and Foundation Pvt. Ltd		
Name of Consultant	: Department of Ocean Engineering – Indian Institute of Technology- Madras		
Wide letter No.	: OOT/C-WK/CG/7041(jetty) 06-07-2021	Material Received	: Mr. K. M. Vadsola
Bore Hole No.	: MBH-2	Bore Hole Started on.	: 11-06-2021
Method of Investigation	: Wash Boring (Rotary Drilling)	Bore Hole Completed on.	: 17-06-2021
Diameter of core	: 55 mm	Diameter of bore hole	: 150mm
		Latitude	: 22°26'17.86"N
		Sea Bad Level-R.L	: +0.273 m
		Longitude	: 69°40'32.01"E

Rock Testing Data Sheet:


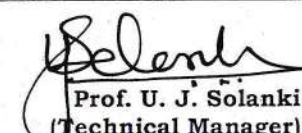
Bore Hole No.	Depth (m)	Weather Condition/Descriptions	Grade of Rock	SPT N-Value	TCR (%)	RQD (%)	Sp. Gravity	Porosity (%)	Water Absorption (%)	Density (g/cc)	Compressive Strength (MPa)	Point load Strength (MN/m ²)
MBH-2	16.50	Grey Jointed fractured basalt rock	III	Refusal	57	7	2.91	0.37	0.13	2.91	58.11	--
	18.00	Grey fresh basalt rock	I	Refusal	93	73	2.79	1.36	0.51	2.79	60.22	22.13
	19.50	Grey fractured basalt rock	I	Refusal	99	77	2.57	3.28	1.31	2.57	25.5	3.60
	20.50	Grey fresh basalt rock	I	Refusal	90	90	2.79	3.44	2.53	2.79	17.00	3.64
	21.50	Grey Fresh Basalt rock	I	Refusal	98	98	2.61	3.13	1.22	2.61	29.06	4.15
Test Method		IS 4464-1985		Data suggested by Paresh Con. & Foun.			IS 13030:1991			IS 9143:1979		IS 8764:1998

Soil Testing Data Sheet: MBH-2

Soil Testing Data Sheet: MBH-2					
Bore Hole No.	Depth (m)	Sample Types	Field Density (g/cc)	Field Moisture Content (%)	Reference
MBH-2	1.95-2.45	Undisturbed (UDS) Samples send by Paresh Con. & Foun.	Discard		IS-2720-Part-29 for Density & Moisture content Measurement
	4.95-5.45		Discard		
	7.95-8.45		1.87	26	
	10.95-11.45		1.57	34	

****End of Report****

Note: 1. The Test Certificates is given for the Sample received in the laboratory by Customer.
 2. DARSHAN CONSULTANCY CELL is not responsible for any kind of interpretation of test results.
 3. The Results/Reports are not used for Publicity.

Tested by: 

 Prof. U. J. Solanki
 (Technical Manager)
 Authorized Signatory



Dedicated Faculty, Committed Education

Darshan
Institute of Engineering & Technology**DARSHAN CONSULTANCY CELL**

Department of Civil Engineering

At - Hadala, Rajkot Morbi Highway,
Nr. Water Sump, Rajkot - 363650. (GUJARAT)

+91 9924100758 / 9825941204

Report No. : 43A_2/21-22 **Date** : 11-08-2021

Name of Client : Deendayal Port Trust-Offshore oil Terminal Department

Name of Work : Construction of Coast guard jetty at OOT Vadinar-Test on borehole sample (MBH-2 & 3)

Name of Agency : Paresh Construction and Foundation Pvt. Ltd

Name of Consultant : Department Of Ocean Engineering - Indian Institute of Technology -Madras

Material Received : Mr. K. M. Vadsola

Wide letter No. : OOT/C-WK/CF/7041(jetty) 06-07-2021

Bore Hole No. : MBH-3 **Bore Hole Started** : 22/06/2021 **Bore Hole Completed** : 29/06/2021

Method of Investigation : Wash Boring **Diameter of bore hole** : 150mm **Latitude** : 22°26'17.86"N

Diameter of core : 55 mm **Longitude** : 69°40'32.01"E

Sea Bad Level-R.L : -1.3m

Soil Characteristics for Borehole: MBH-3

Sr. No.	Depth(m)	SPT-N Value (Paresh Construction and Foundation Pvt. Ltd)	Grain Size Analysis		
			Coarse		Fine
			Gravel (%)	Sand (%)	(Silt + Clay) (%)
1	1.50-1.95	0	0	0	100
2	1.95-2.45	--	0	1	99
3	3.00-3.45	0	0	3	97
4	4.50-4.95	0	15	77	8
5	4.95-5.45	--	1	2	97
6	6.00-6.45	0	0	18	82
7	7.5-7.95	0	0	3	97
8	7.95-8.40	--	0	11	90
9	9.00-9.45	0	0	8	92
10	10.50-10.95	0	1	5	94
11	10.95-11.40	--	0	2	98
12	12.00-12.45	10	1	7	92
13	13.50-13.95	0	1	5	96
14	13.95-14.45	--	0	6	94
15	15.00-15.45	0	0	1	99
Test Method			IS:2720-Part 4-1985		

From the gradation of samples send by Paresh Construction & Foundation Pvt. Ltd, it is observed that marine silty clay soils in grey color at varies depth were encounter are shown in an above table with SPT values.

****End of Report****

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3. The Results/Reports are not used for Publicity.

Tested by:*[Signature]*

[Signature]
Prof. U. J. Solanki
(Technical Manager)
Authorized Signatory



DIET/CI/CTMT/ 119 /2021

T.S. No.	: 43_1/21-22	Date:	12-08-2021
Name of Client	: Deendayal Port Trust-Offshore oil Terminal Department		
Name of Work	: Construction of Jetty for INDIAN COAST GUARD at Vadinar - Test on borehole sample (MBH-2 &3)		
Name of Agency	: Paresh Construction and Foundation Pvt. Ltd		
Name of Consultant	: Department of Ocean Engineering – Indian Institute of Technology- Madras		
Wide letter No.	: OOT/C-WK/CG/7041(jetty) 06-07-2021	Material Received	: Mr. K. M. Vadsola
Bore Hole No.	: MBH-3	Bore Hole Started on.	: 22-06-2021
		Bore Hole Completed on.	: 29/06/2021
Method of Investigation	: Wash Boring (Rotary Drilling)	Diameter of bore hole	: 150mm
		Latitude	: 22°26'17.86"N
Diameter of core	: 55 mm	Sea Bad Level-R.L	: -1.3 m
		Longitude	: 69°40'32.01"E

Rock Testing Data Sheet:

Bore Hole No.	Depth (m)	Weather Condition/Descriptions	Grade of Rock	SPT N-Value	TCR (%)	RQD (%)	Sp. Gravity	Porosity (%)	Water Absorption (%)	Density (g/cc)	Compressive Strength (MPa)	Point load Strength (MN/m ²)
MBH-3	18-19.50	Grey weathered basalt rock	VI	Refusal	--	--	2.36	12.93	5.8	2.36	5.05	--
	19.5-21.0	Grey to brown weathered Basalt rock	VI	Refusal	--	--	2.23	12.56	5.96	2.23	6.53	1.11
	21.5-22.5	Grey to brown fresh Basalt rock	IV	Refusal	35	--	2.29	10.86	4.99	2.29	9.26	2.28
	22.5-24.0		I	Refusal	93	93	2.57	3.99	1.75	2.57	32.85	21.39
	24.0-25.5		II	Refusal	72	55	2.79	3.46	1.22	2.79	23.58	17.99
	25.5-26.0	Grey fresh basalt rock	II	Refusal	74	54	2.47	3.90	1.62	2.47	9.26	4.14
Test Method		IS 4464-1985		Data suggested by Paresh Con. & Foun.			IS 13030:1991			IS 9143:1979		IS 8764:1998

Soil Testing Data Sheet: MBH-3

Bore Hole No.	Depth(m)	Sample Types	Field Density (g/cc)	Field Moisture Content (%)	Reference
MBH-3	1.95-2.45	Undisturbed (UDS) Samples send by Paresh Con. & Foun.	1.54	59	IS-2720-Part-29 for Density & Moisture content Measurement
	4.95-5.45		1.57	59	
	7.95-8.40		1.59	52	
	10.95-11.40		1.35	57	
	13.95-14.45		1.49	58	

****End of Report****

- Note: 1. The Test Certificates is given for the Sample received in the laboratory by Customer.
 2. DARSHAN CONSULTANCY CELL is not responsible for any kind of interpretation of test results.
 3. The Results/Reports are not used for Publicity.

Tested by:

[Signature]

[Signature]
Prof. U. J. Solanki
 (Technical Manager)
 Authorized Signatory



TEST REPORT OF SOIL & ROCK CORE FOR BORE HOLE NO :- 6

Client	: Deendayal Port Trust-Offshore oil Terminal Department.	Report No	: BRS-0028.1
Agency	: Paresh Construction & Foundation Pvt.Ltd.	Report Date	: 30-09-2021
PMC	: Department Of Ocean Engineering,IIT-Madras.	Receipt Date	: 25-09-2021
Name of Work	: Construction Of Jetty For INDIA COAST GUARD at Vadinar, Dwarka.		
TPI	: Unique Engineering Services.		
Customer's Reference	: OOT/C-WK/CG/704(Jetty)/09		
ID Of Bore	: Depth:- 1.50 - 24.50 mt. // R.L.:- 11.38 to 34.38		
Test Method	: IS 9143:1979 , IS 2720 (P-4) :1980		

Test Results

1) Soil Characteristics

Sr. No.	Depth (m)	Depth * (R.L.)	Strata Description *	SPT * N-Value	Grain Size Analysis (%)		
					Gravel	Sand	Silt + Clay
1	1.50-1.95	11.38 to 11.83	Greyish Very Soft Marine Clay	Nil	0	96	4
2	3.00-3.45	12.88 to 13.33	Greyish Very Soft Marine Clay	Nil	0	99	1
3	4.50-4.95	14.38 to 14.83	Greyish Very Soft Marine Clay	Nil	0	99	1
4	6.00-6.45	15.88 to 16.33	Greyish Very Soft Marine Clay	Nil	0	99	1
5	7.50-7.95	17.38 to 17.83	Greyish Very Soft Marine Clay	Nil	0	100	0
6	9.00-9.45	18.88 to 19.33	Greyish Very Soft Marine Clay	Nil	0	100	0
7	10.50-10.95	20.38 to 20.83	Greyish Very Soft Marine Clay	Nil	0	99	1
8	12.00-12.45	21.88 to 22.33	Greyish Very Soft Marine Clay	Nil	0	100	0
9	13.50-13.95	23.38 to 23.83	Greyish Soft Clay	Nil	0	100	0
10	15.00-15.45	24.88 to 25.33	Greyish Soft Clay	Nil	0	100	0
11	16.50-16.75	26.38 to 26.63	Greyish Soft Clay	Nil	0	100	0

Page 1 of 2



TEST REPORT OF SOIL & ROCK CORE FOR BORE HOLE NO :- 6

Client	: Deendayal Port Trust-Offshore oil Terminal Department.	Report No	:- BRSG-0028.1
Agency	: Paresh Construction & Foundation Pvt.Ltd.	Report Date	:- 30-09-2021
PMC	: Department Of Ocean Engineering, IIT-Madras.	Receipt Date	:- 25-09-2021


2) Rock Properties

Sr. No.	Depth (m)	Depth * (R.L.)	Strata Description *	SPT* N-Value	TCR* (%)	RQD * (%)	Density (g/cc)	Compressive Strength (MPa)
1	16.50-18.00	27.38 to 28.88	Grey Weathered Basalt Rock	Refusal	31	7	2.46	26.8
2	18.00-19.50	29.38 to 30.88	Grey Basalt Rock	Refusal	50	7	2.5	35.3
3	19.50-21.00	30.88 to 32.38	Grey Basalt Rock	Refusal	75	53	2.78	42.9
4	21.00-22.5	32.38 to 33.88	Grey Fresh Basalt Rock	Refusal	61	62	2.8	50.1
5	22.50-24.00	33.88 to 35.38	Grey Fresh Basalt Rock	Refusal	65	65	2.83	86.4
6	24.00-24.50	34.38 to 34.88	Grey Fresh Basalt Rock	Refusal	56	56	2.84	92.1

Notes :- i) *Data taken from Paresh construction & Foundation Pvt.Ltd.'s Bore Log data Sheet.
ii) We performed Dry Sieve Analysis method for Grain size Analysis of Soil Samples.

Nishit
Tested By




Authorized Signature
Kuldip (TM)

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E/7.8/22

*** END OF REPORT ***

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TEST REPORT OF SOIL & ROCK CORE FOR BORE HOLE NO :- 7

Client	:	Deendayal Port Trust-Offshore oil Terminal Department.	Report No	:-	BRSg-0028.2		
Agency	:	Paresh Construction & Foundation Pvt.Ltd.	Report Date	:-	30-09-2021		
PMC	:	Department Of Ocean Engineering,IIT-Madras.	Receipt Date	:-	25-09-2021		
Name of Work	:	Construction Of Jetty For INDIA COAST GUARD at Vadinar, Dwarka.					
TPI	:	Unique Engineering Services.					
Customer's Reference	:	OOT/C-WK/CG/704(Jetty)/09					
ID Of Bore	:	Depth:- 1.50 - 21.00 mt. // R.L.:- 13.80 to 33.80					
Test Method	:	IS 9143:1979 , IS 2720 (P-4) :1980					
Test Results							
1) Soil Characteristics							
Sr. No.	Depth (m)	Depth * (R.L.)	Strata Description *	SPT * N-Value	Grain Size Analysis (%)		
					Gravel	Sand	Silt + Clay
1	1.50-1.95	13.80 to 14.25	Greyish Very Soft Clay	Nil	0	100	0
2	3.00-3.45	15.30 to 15.75	Greyish Very Soft Clay	Nil	0	100	0
3	4.50-4.95	16.80 to 17.25	Greyish Very Soft Clay	Nil	0	100	0
4	6.00-6.45	18.30 to 18.75	Greyish Very Soft Clay	Nil	0	100	0
5	7.50-7.95	19.80 to 20.25	Greyish Very Soft Clay	Nil	0	100	0
6	9.00-9.45	21.30 to 21.75	Greyish Very Soft Clay	Nil	0	100	0
7	10.50-10.95	22.80 to 23.25	Greyish Very Soft Clay	Nil	0	99	1
8	12.00-12.45	24.30 to 24.75	Greyish Very Soft Clay	Nil	0	98	2
9	13.50-13.95	25.80 to 26.25	Greyish Very Soft Clay	Nil	0	100	0
10	15.00-15.45	27.30 to 27.75	Greyish Very Soft Clay	Nil	0	99	1



TEST REPORT OF SOIL & ROCK CORE FOR BORE HOLE NO :- 7

Client	: Deendayal Port Trust-Offshore oil Terminal Department.	Report No :- BRS-0028.2
Agency	: Paresh Construction & Foundation Pvt.Ltd.	Report Date :- 30-09-2021
PMC	: Department Of Ocean Engineering,IIT-Madras.	Receipt Date :- 25-09-2021

2) Rock Properties

Sr. No.	Depth (m)	Depth * (R.L.)	Strata Description *	SPT* N-Value	TCR* (%)	RQD * (%)	Density (g/cc)	Compressive Strength (MPa)
1	16.00-17.50	29.80 to 31.30	Grey Highly Weathered Basalt Rock	Refusal	51	51	2.87	71.6
2	17.50-19.00	31.30 to 32.80	Grey Basalt Rock	Refusal	75	75	2.82	61.7
3	19.00-20.50	32.80 to 34.30	Grey Fresh Basalt Rock	Refusal	87	87	2.84	77.8
4	20.50-21.00	34.30 to 34.80	Grey Fresh Basalt Rock	Refusal	68	68	2.86	108.8

Notes :- i) *Data taken from Paresh construction & Foundation Pvt.Ltd.'s Bore Log data Sheet.
ii) We performed Dry Sieve Analysis method for Grain size Analysis of Soil Samples.

Nishit
Tested By




Authorized Signature
Kuldip (TM)

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F/7.8/22

*** END OF REPORT ***

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TEST REPORT OF WEATHERED ROCK

Client	: Deendayal Port Trust-Offshore oil Terminal Department.	Report No :-	BRS-0027.1
Agency	: Paresh Construction & Foundation Pvt.Ltd.	Report Date :-	30-09-2021
PMC	: Department Of Ocean Engineering,IIT-Madras.	Receipt Date :-	25-09-2021
Name of Work	: Construction Of Jetty For INDIA COAST GUARD at Vadinar, Dwarka.		
TPI	: Unique Engineering Services.		
Customer's Reference	: OOT/C-WK/CG/704(Jetty)/10		
ID Of Sample	: Weathered Rock		
Test Method	: IS 2386		

Test Results

(I) Sieves Analysis IS 2386, Part-1:1963, RA: 2016			(II) Other Tests			
I.S.Sieve Size	% of Passing	Req. as per IS 383-16 (RA 19)	Test Name	Acceptance Critaria	Test Method	Test Results
-	-	-	Flakiness %	Combined Max. 40%	IS 2386 P1: 63, RA: 2016	-
-	-	-	Elogation%			-
-	-	-	Density gm/cc	--	IS 2386 P3 : 63 (RA 2016)	-
-	-	-	Specific Gravity	2.1 - 3.2		2.380
			Water Absorption%	Max. 5%		5.35
			Crushing Value %	Max. 30%	IS 2386 P4 : 63 (RA 2016)	-
			Impact Value %	Max. 30%		26.5
			Abrasion Value %	Max. 30%		-
			10% FinesValue,KN	Min. 50 KN		-
(III) Soundness Test			Acceptance	Test Method	Test Results	
A) Sodium Sulphate			Max. 12%	IS 2386 P5 : 63 (RA 2016)	-	
B) Magnesium sulfate			Max. 18%		-	
(IV) Alkali Reactivity Test (Gravimetric Method)						
A) SC = Dissoved Silica in Milimole/Ltr.			--	IS 2386 P7 : 63 (RA 2016)	-	
B) Rc = The Reduction of alkalinity in Milimole/Ltr.						
C) Ration = Sc/Rc						

Hardik
Tested By



Authorized Signature
Kuldip (TM)

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F/7.8/26

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