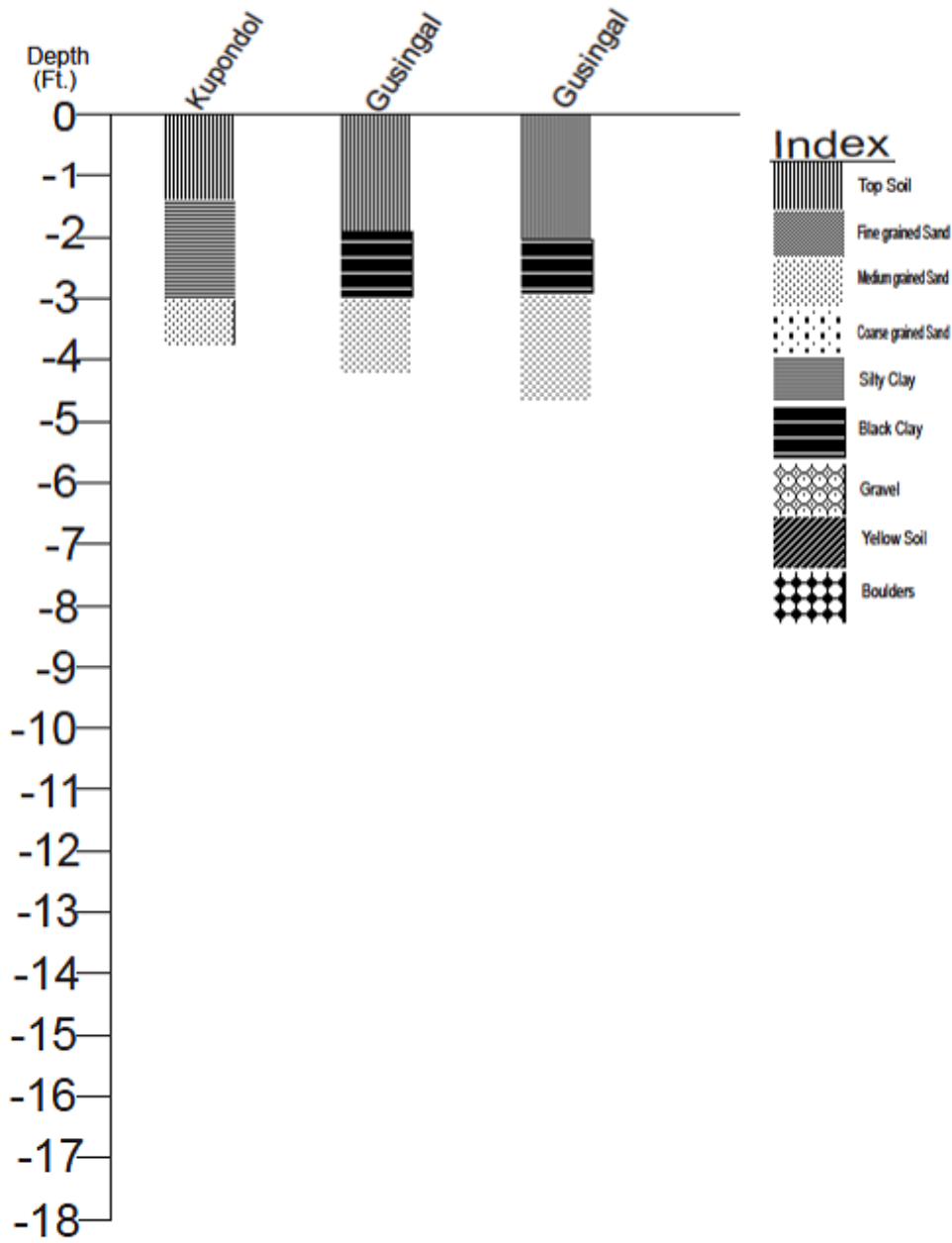


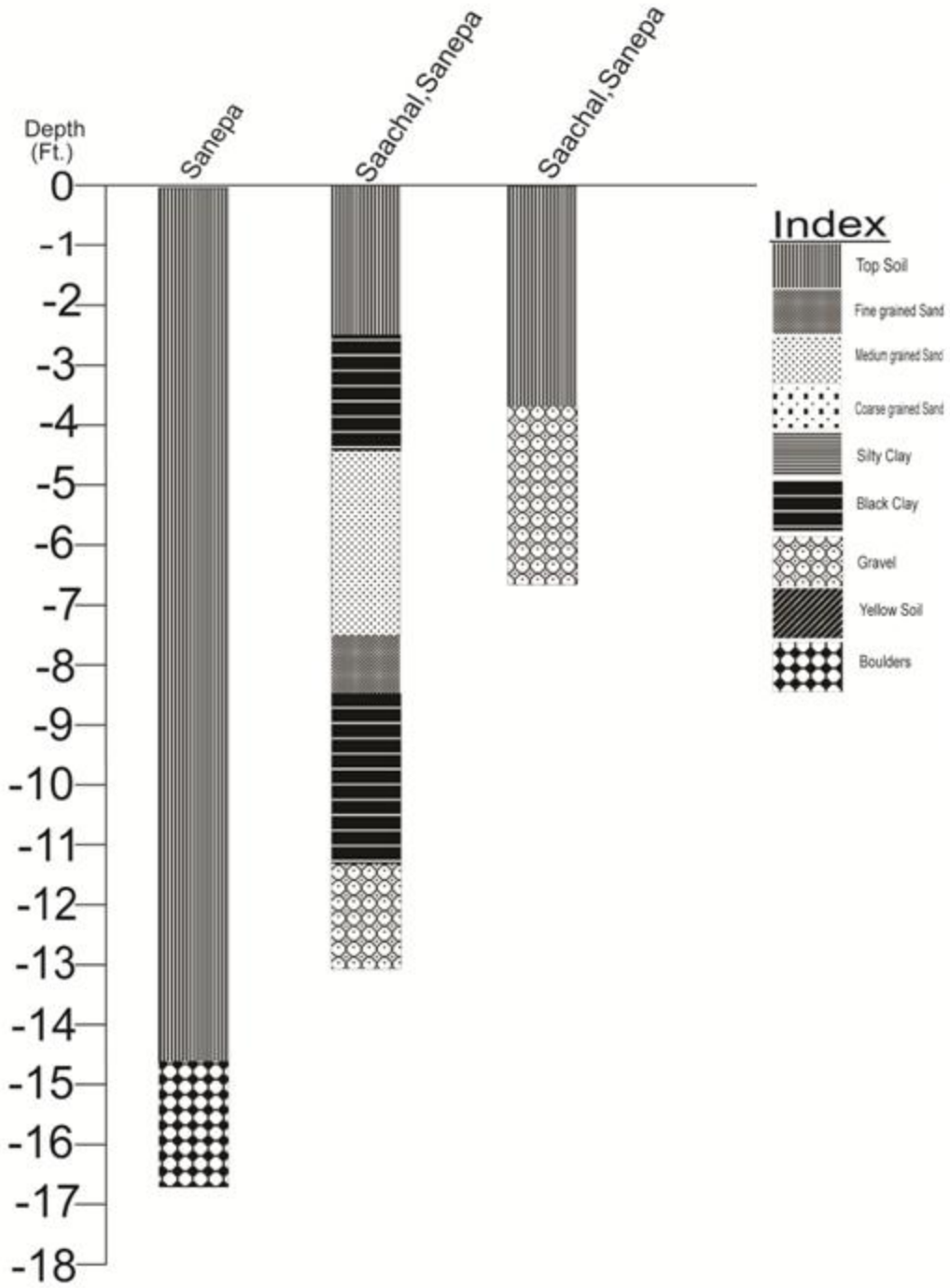
**ANNEX I**

**Lithologs of Ward No. 1 to Ward No. 22**

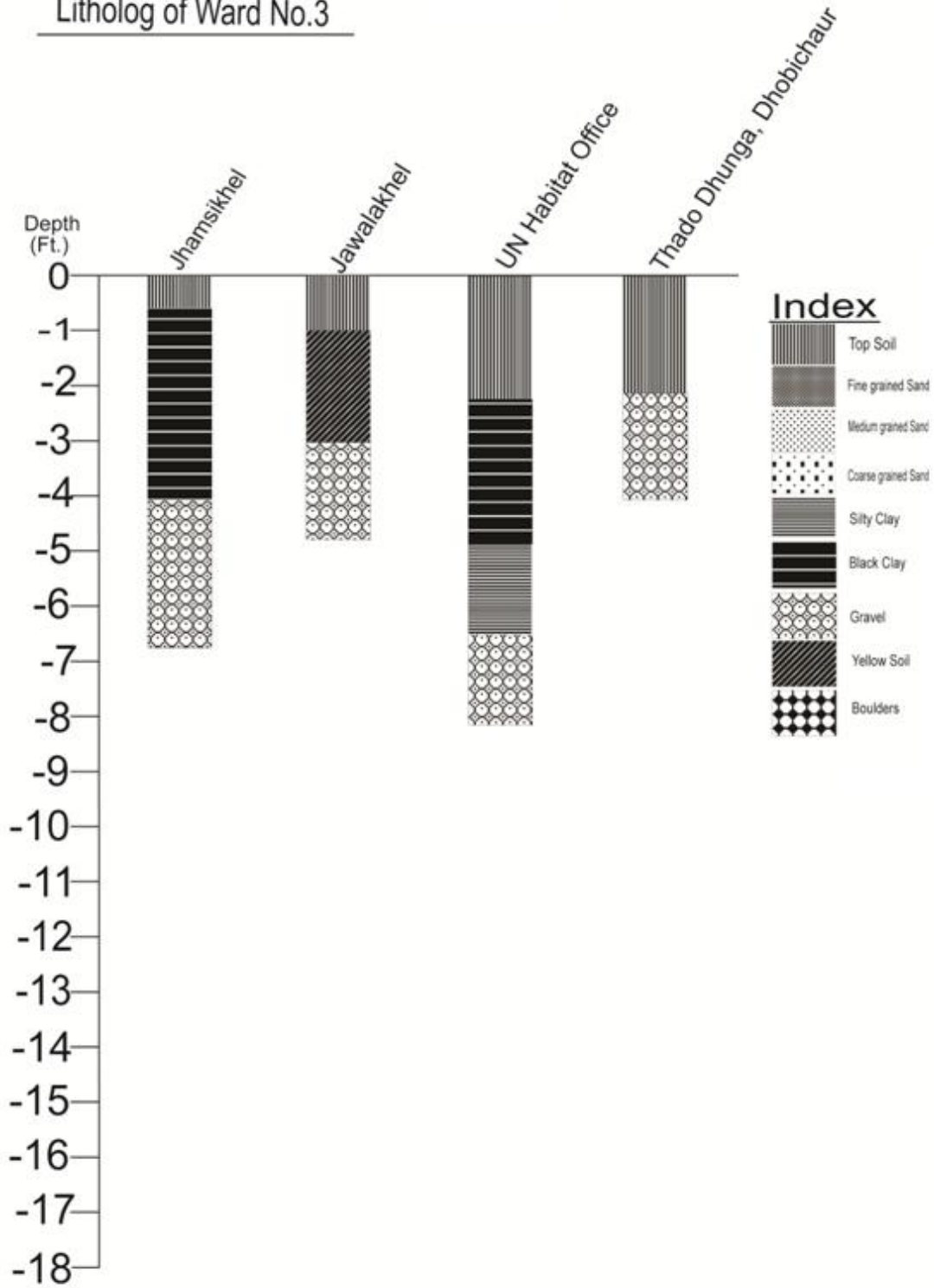
# Litholog of Ward No.1



# Litholog of Ward No.2

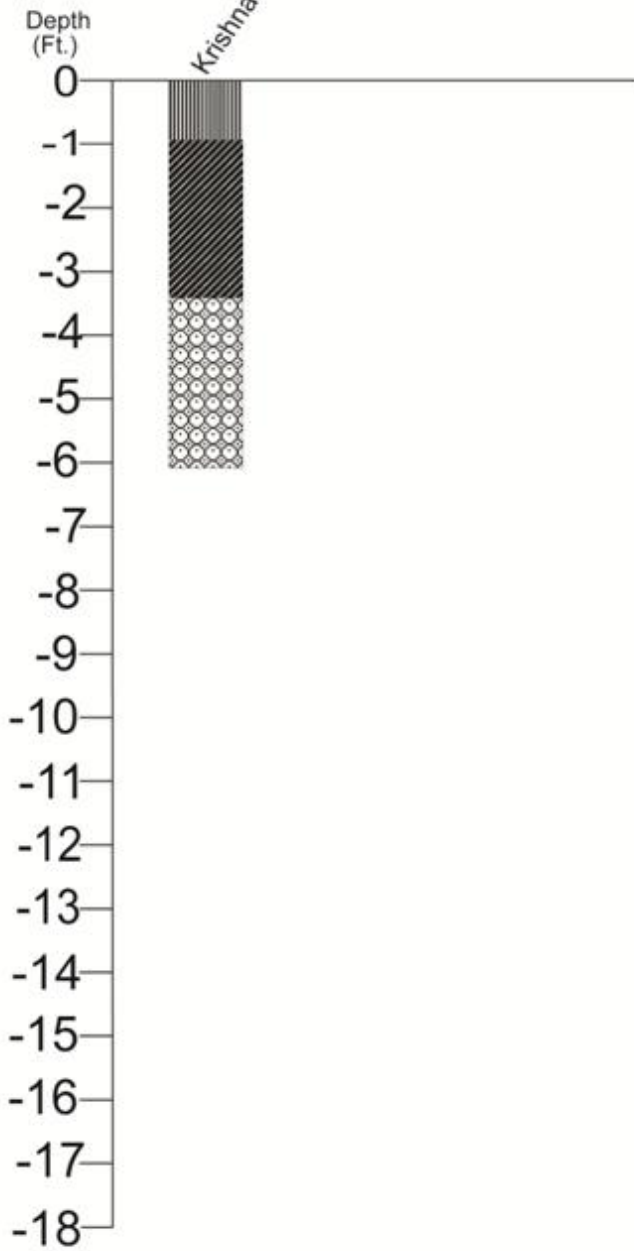


# Litholog of Ward No.3



# Litholog of Ward No.3

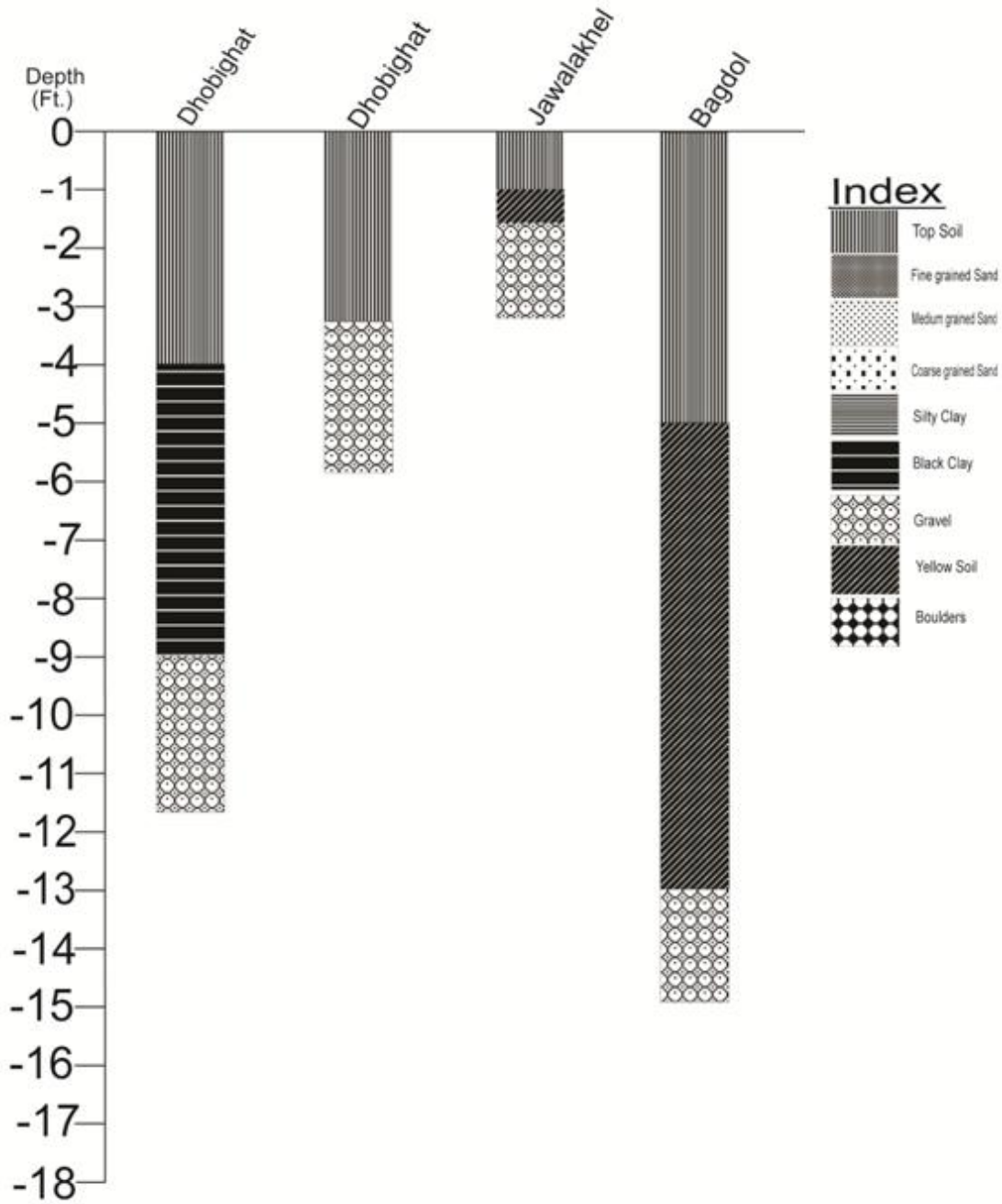
Krishna Galli, Patandhoka



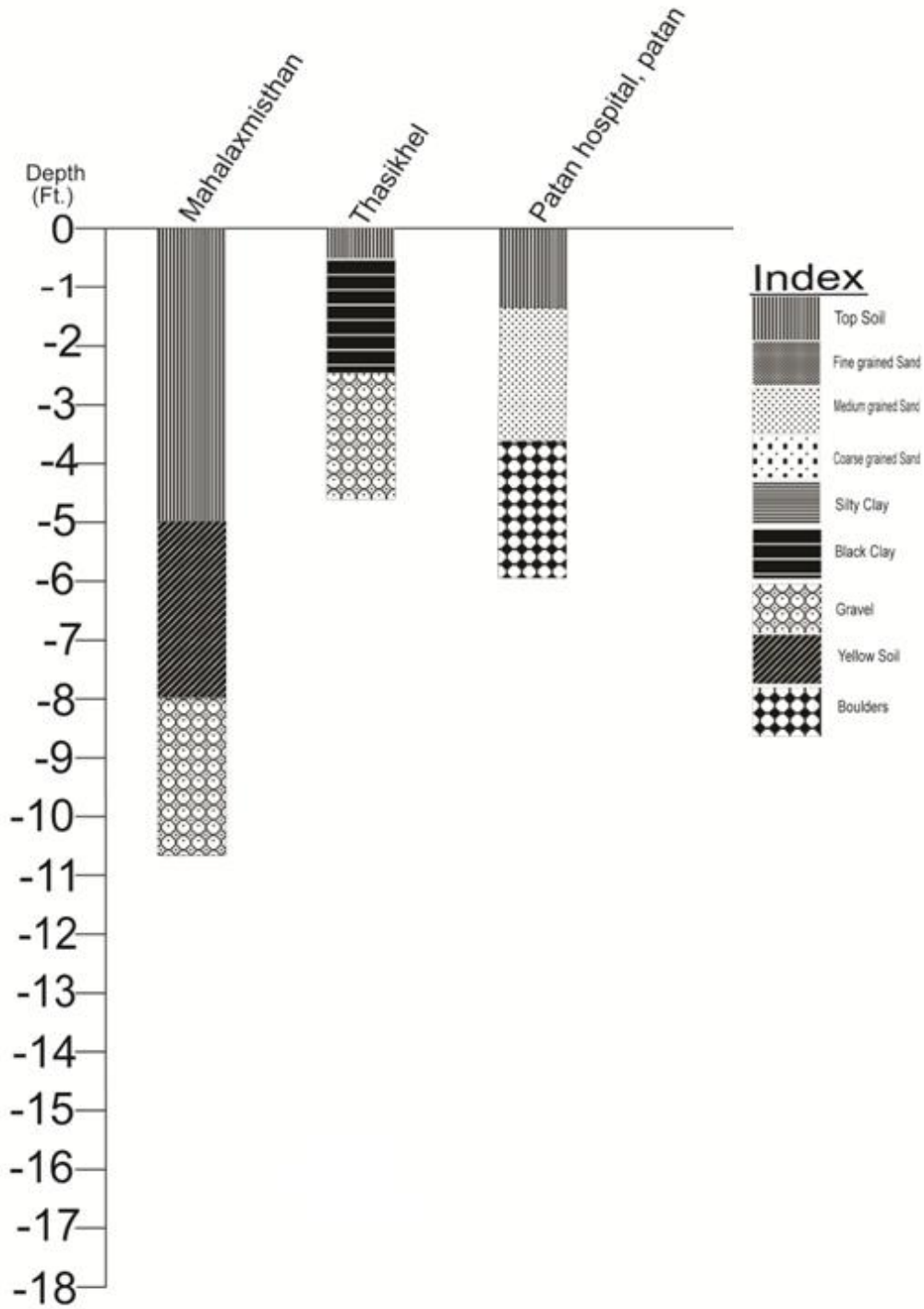
## Index

- Top Soil
- Fine grained Sand
- Medum grained Sand
- Coarse grained Sand
- Silty Clay
- Black Clay
- Gravel
- Yellow Soil
- Boulders

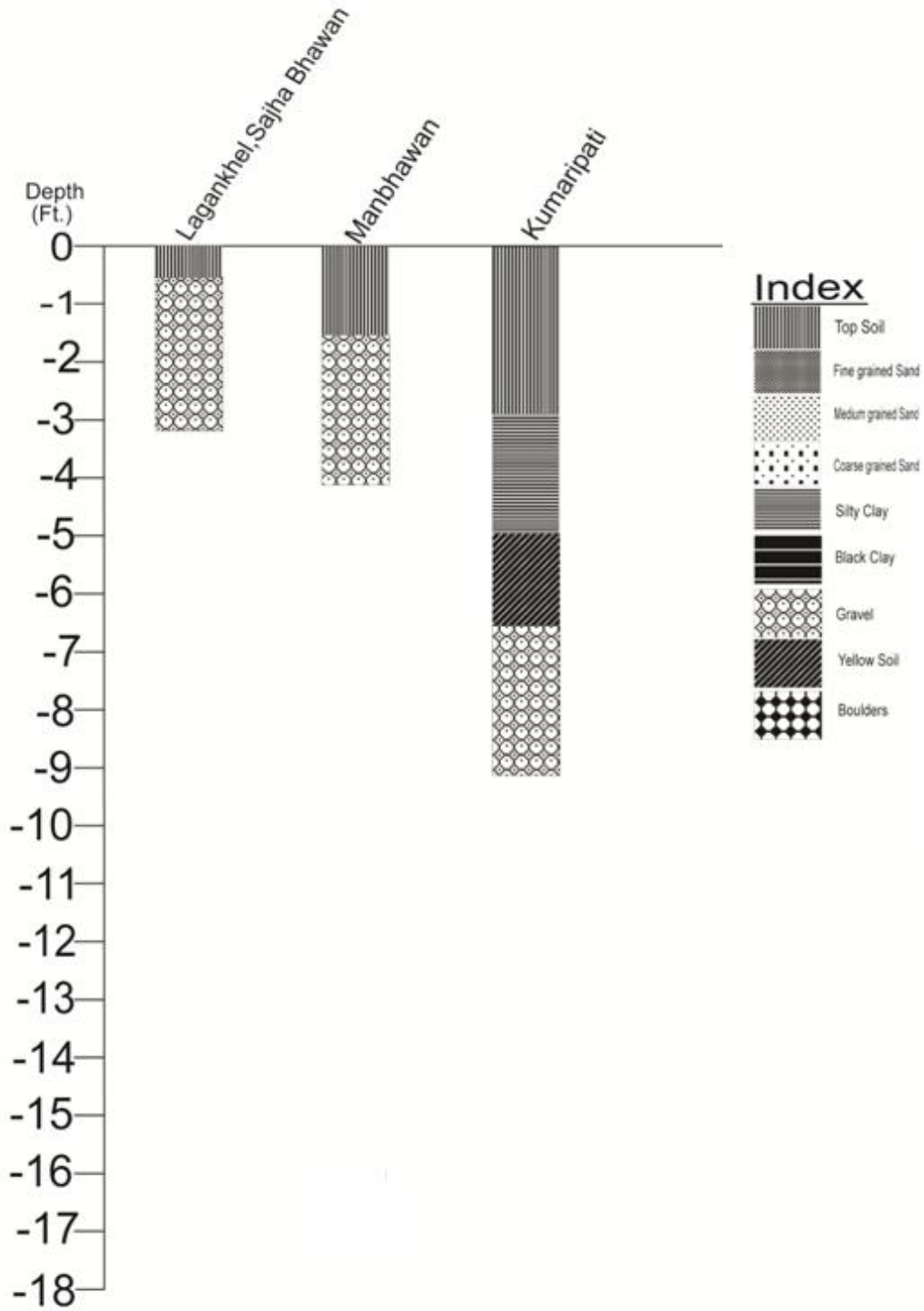
# Litholog of Ward No.4



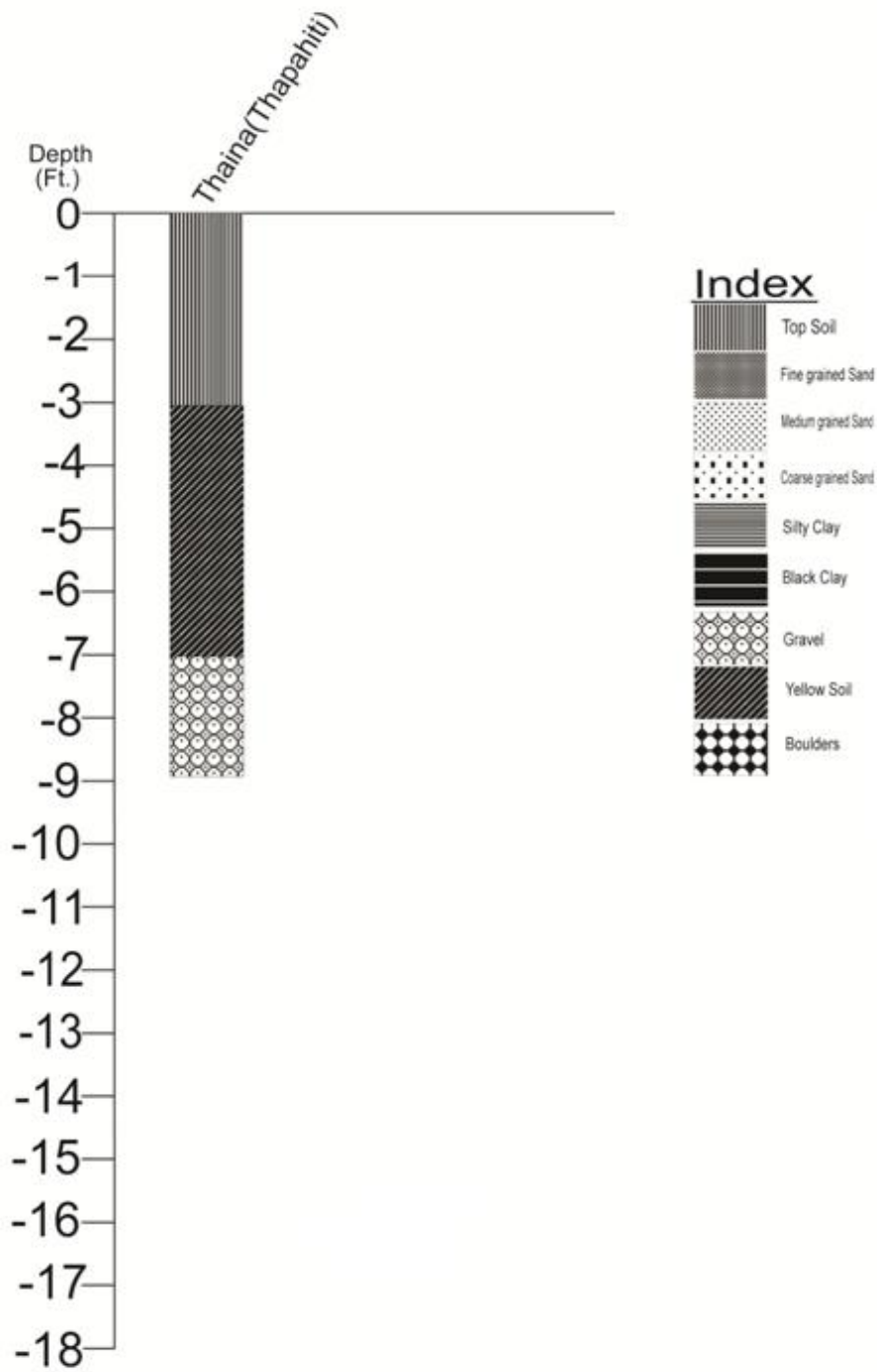
# Litholog of Ward No.5



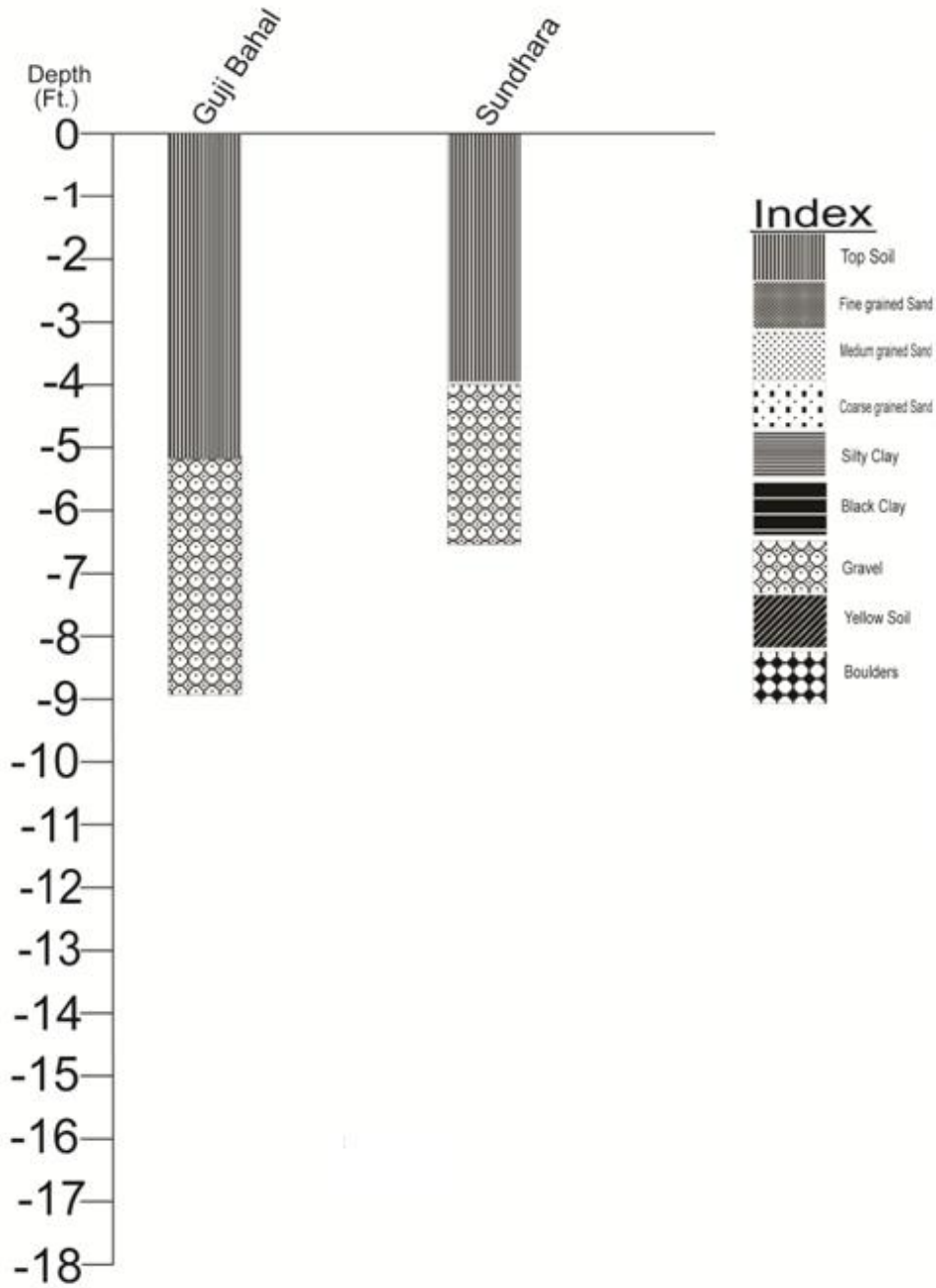
# Litholog of Ward No.5



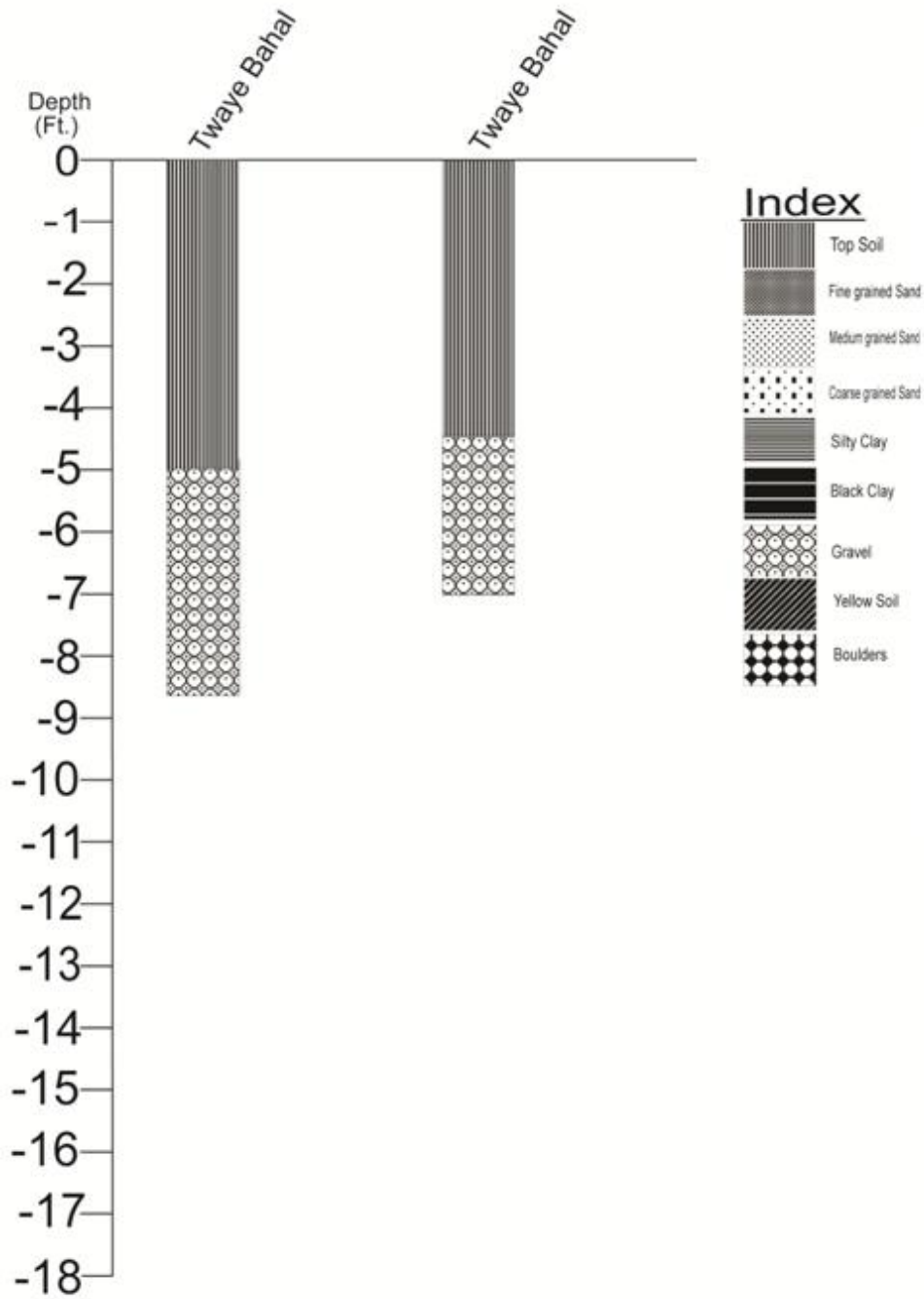
# Litholog of Ward No.6



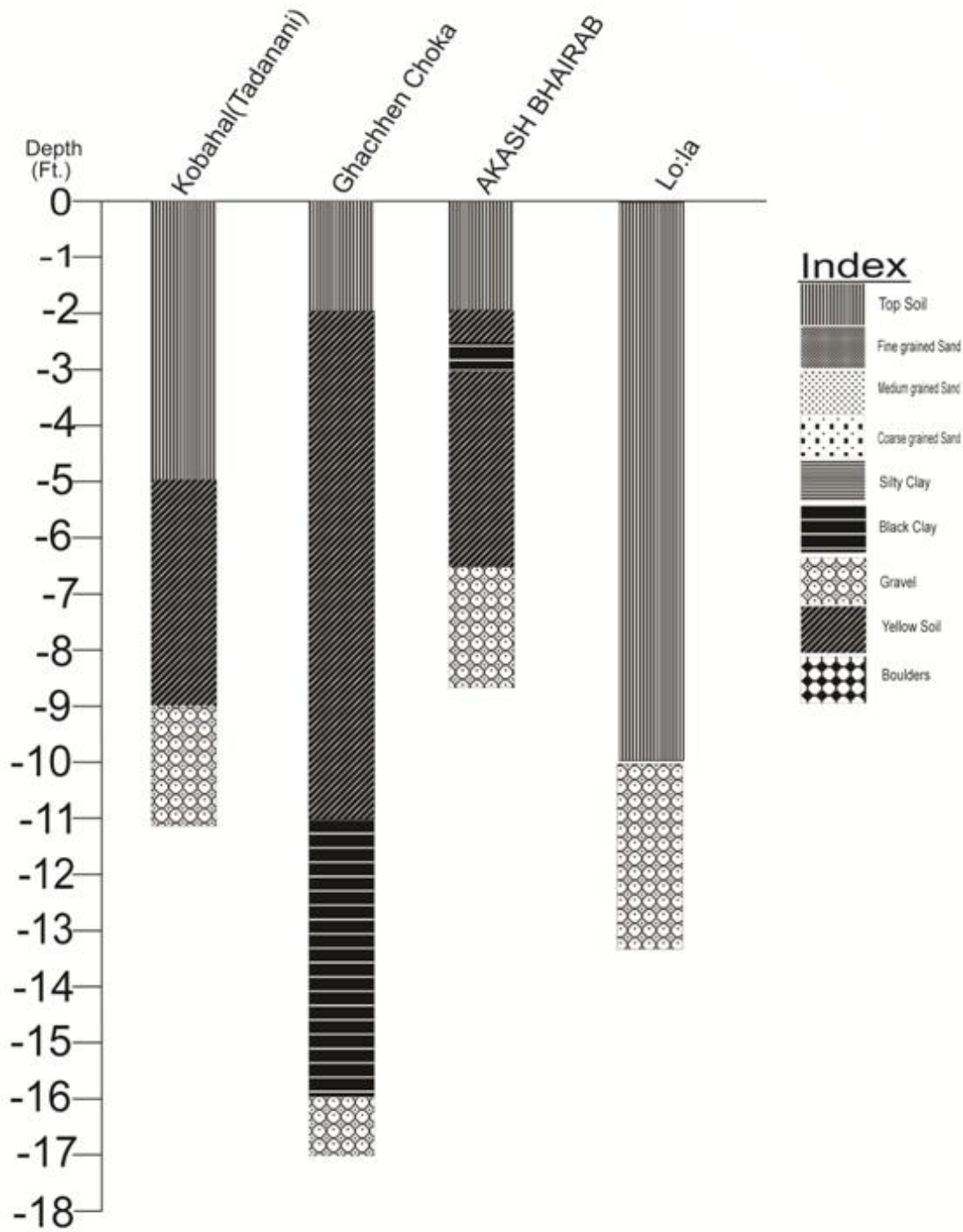
# Litholog of Ward No.7



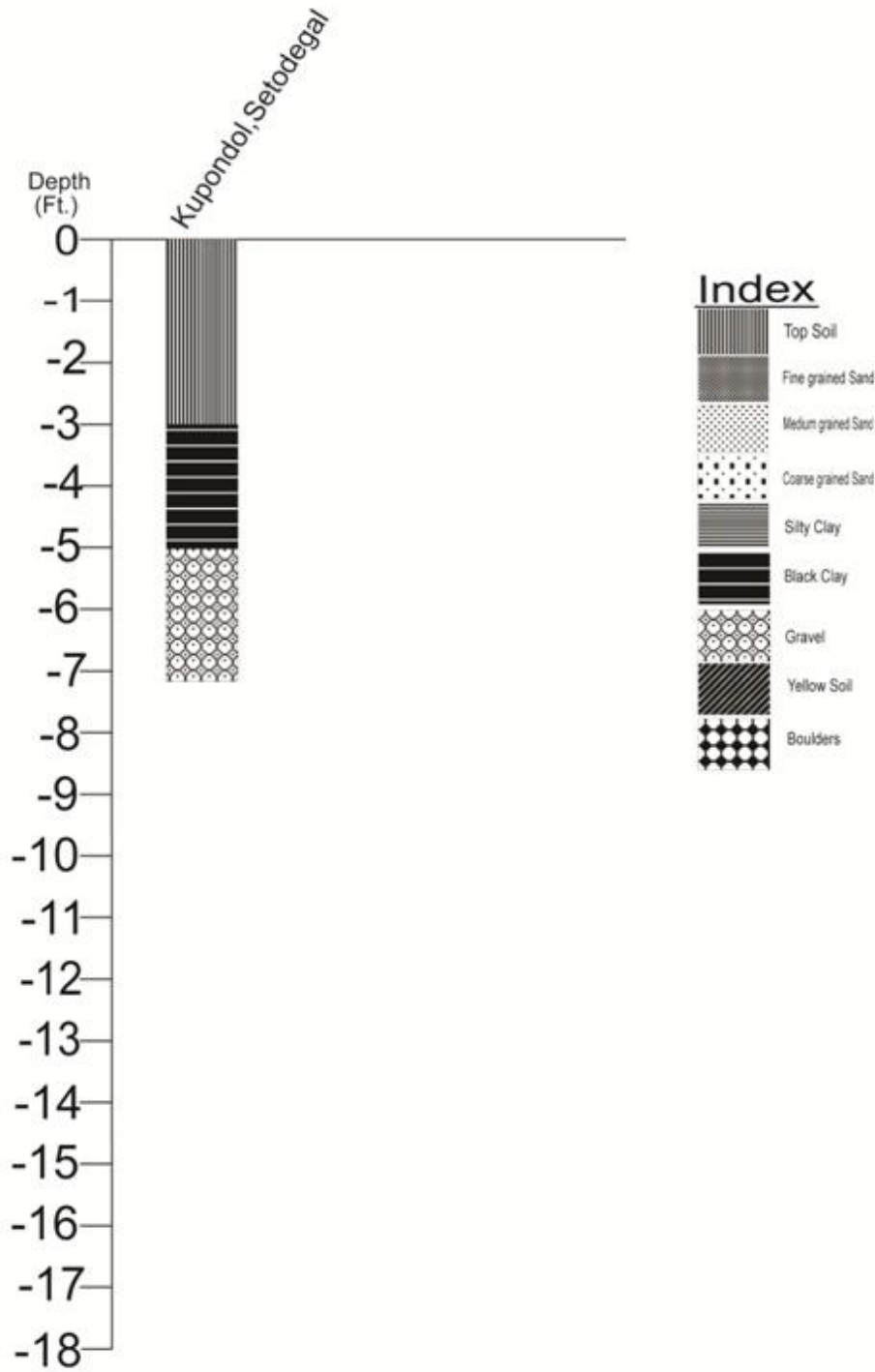
# Litholog of Ward No.8



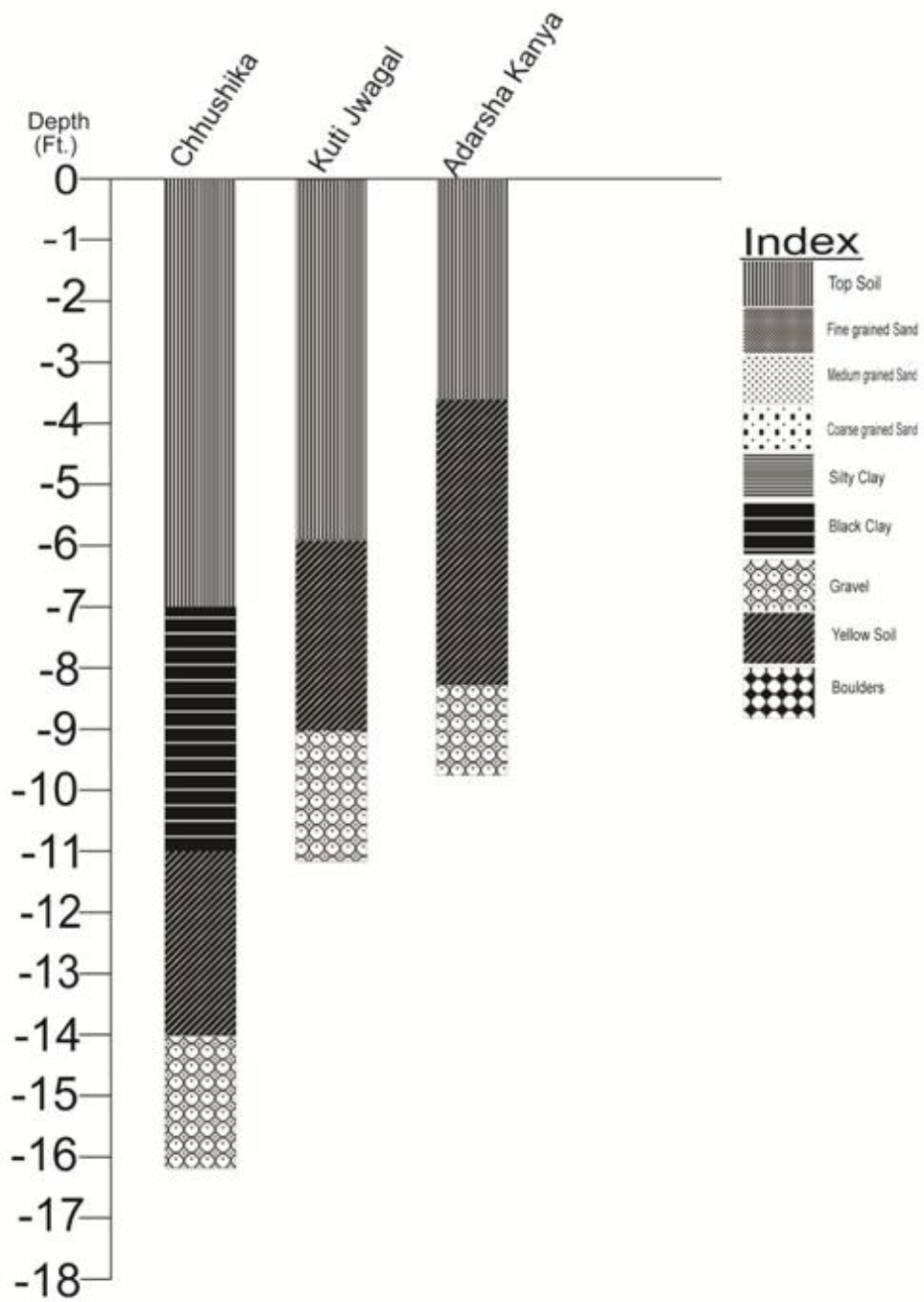
# Litholog of Ward No. 9



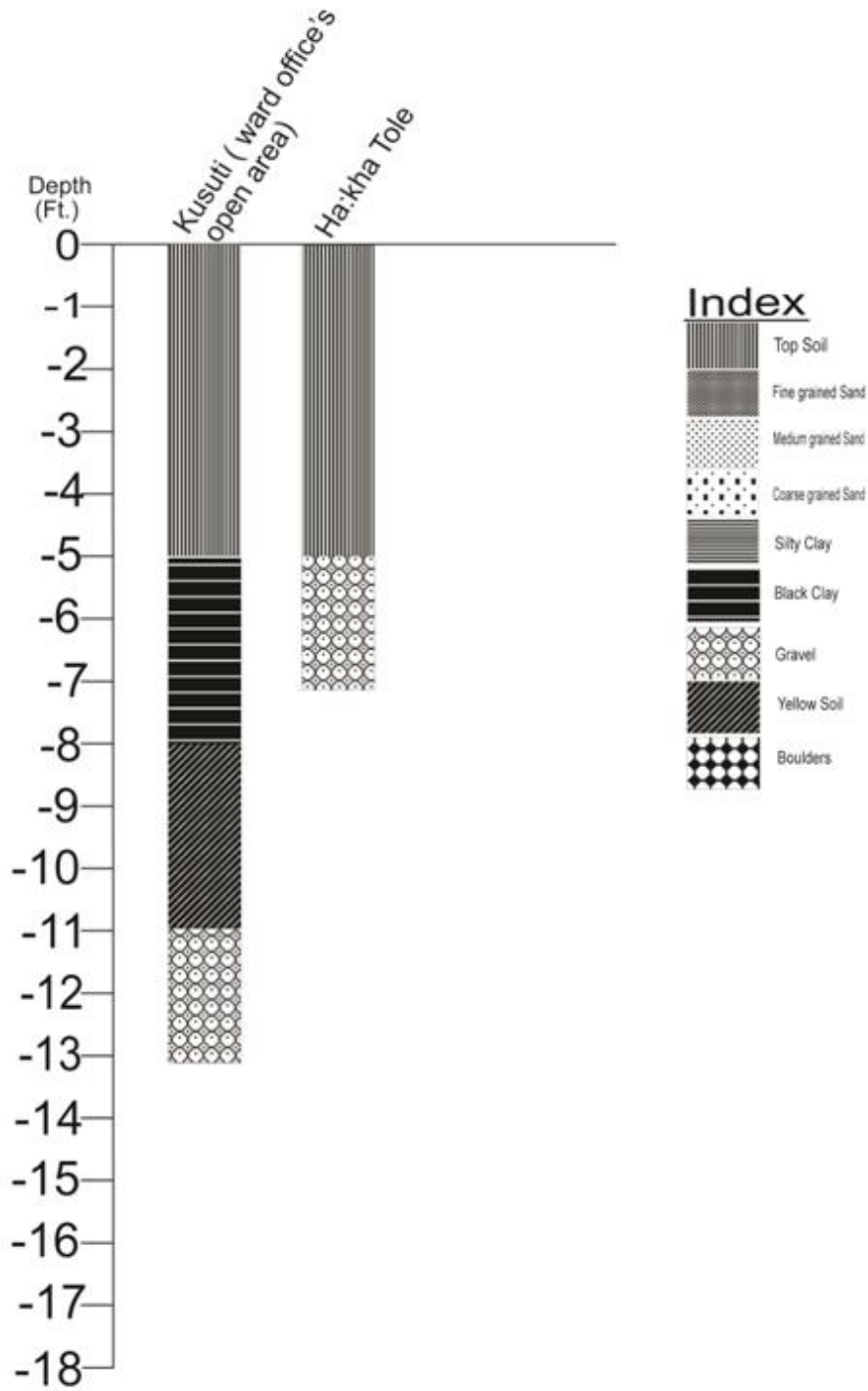
# Litholog of Ward No. 10



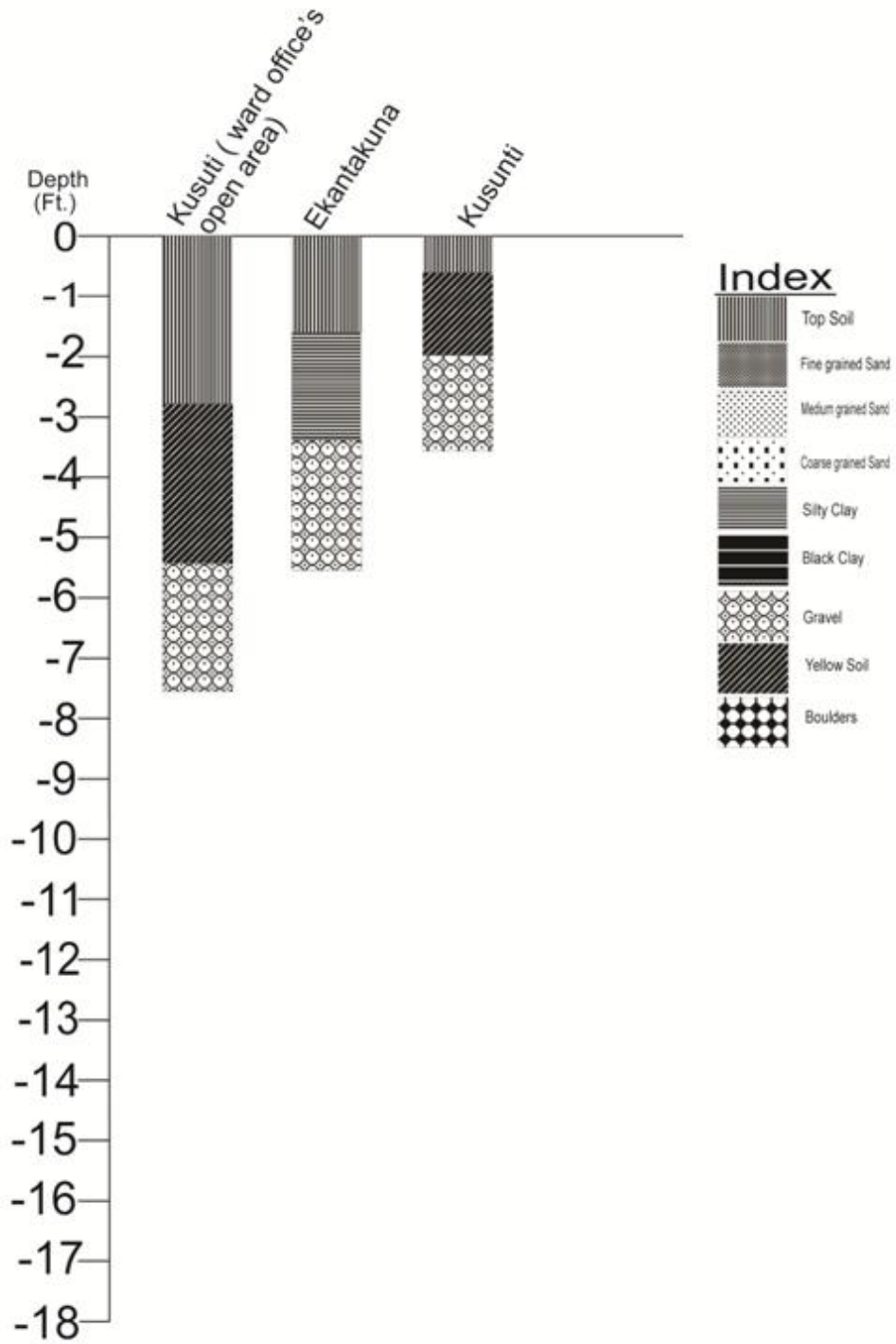
# Litholog of Ward No. 11



# Litholog of Ward No. 12

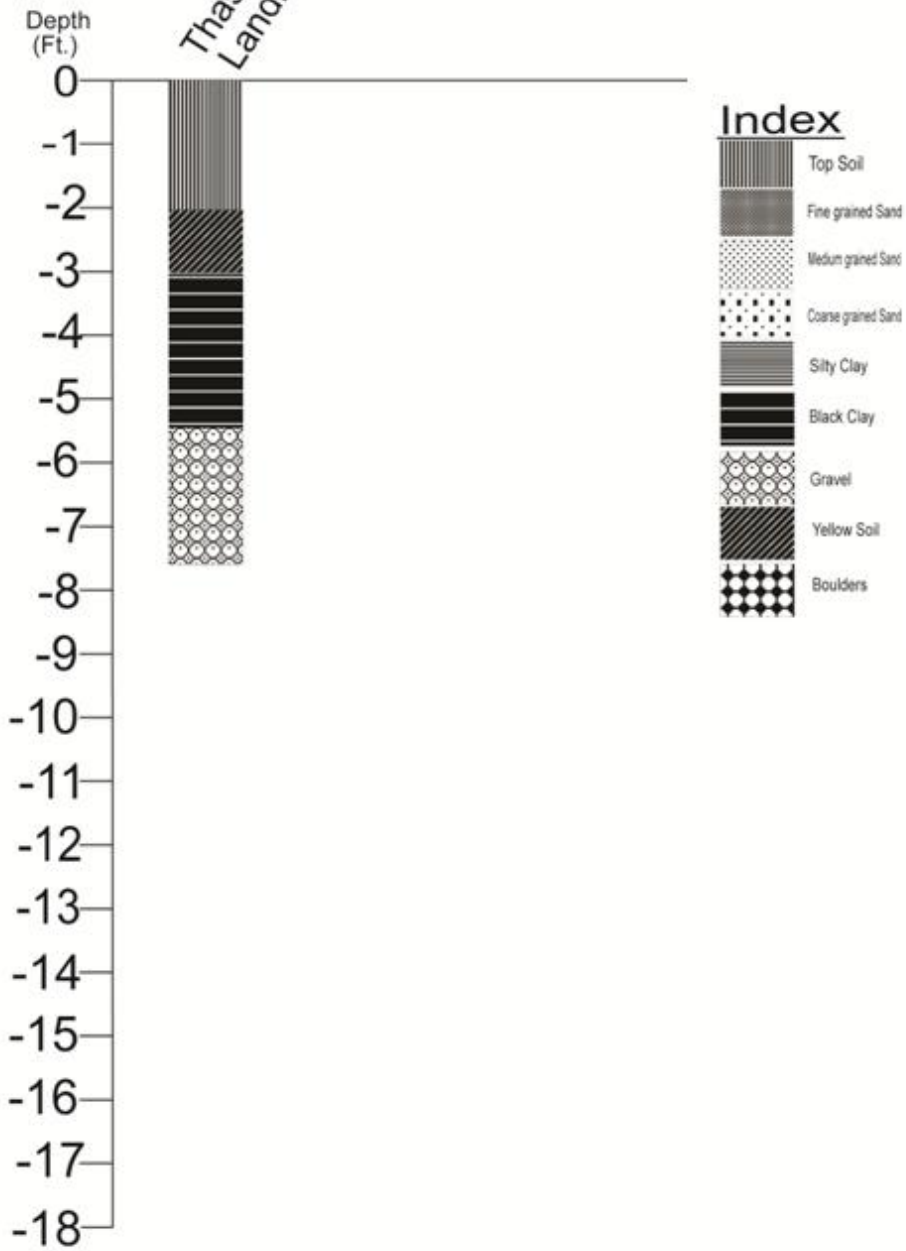


# Litholog of Ward No. 13

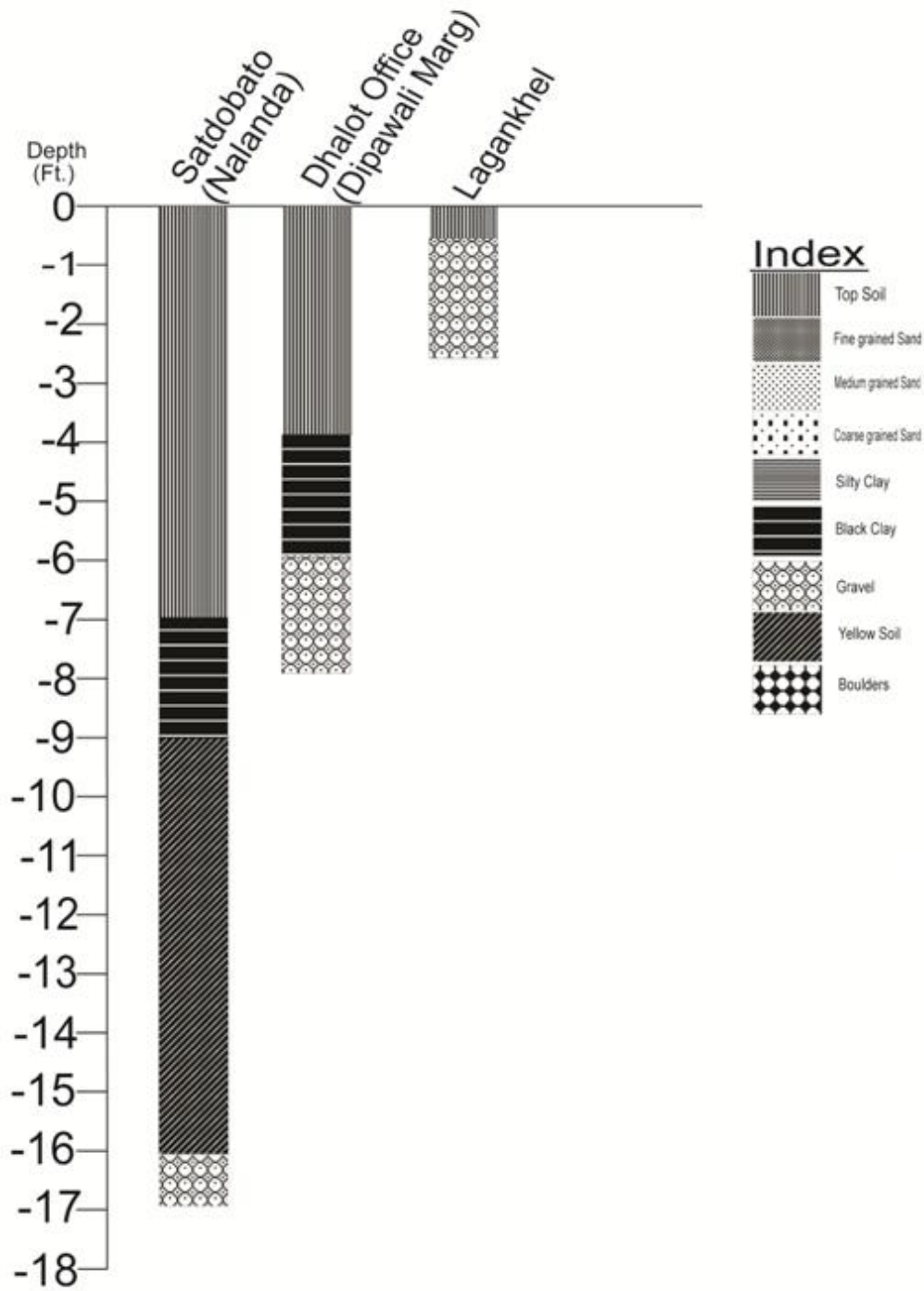


# Litholog of Ward No. 14

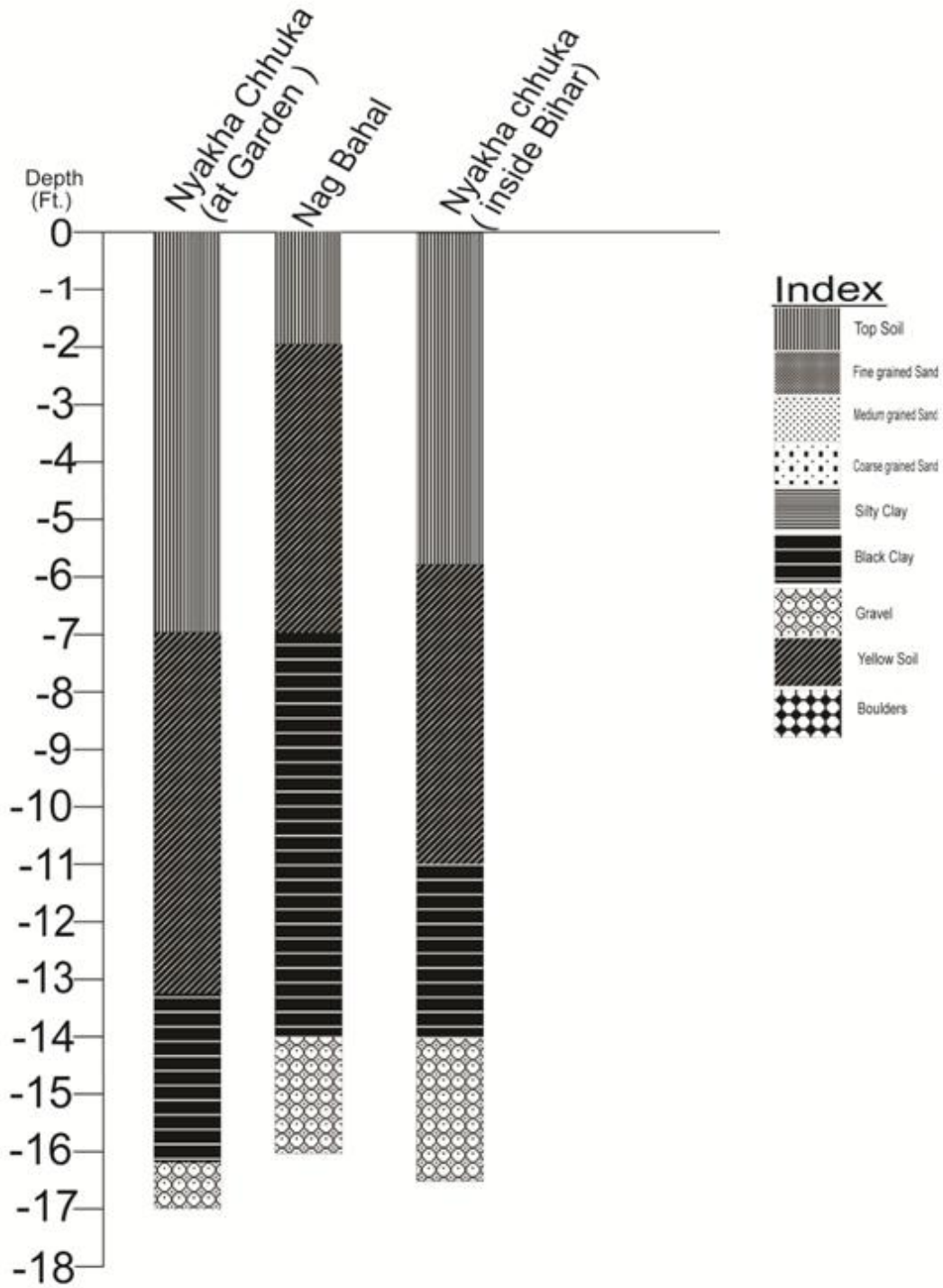
Thasikhel,  
Landmark school



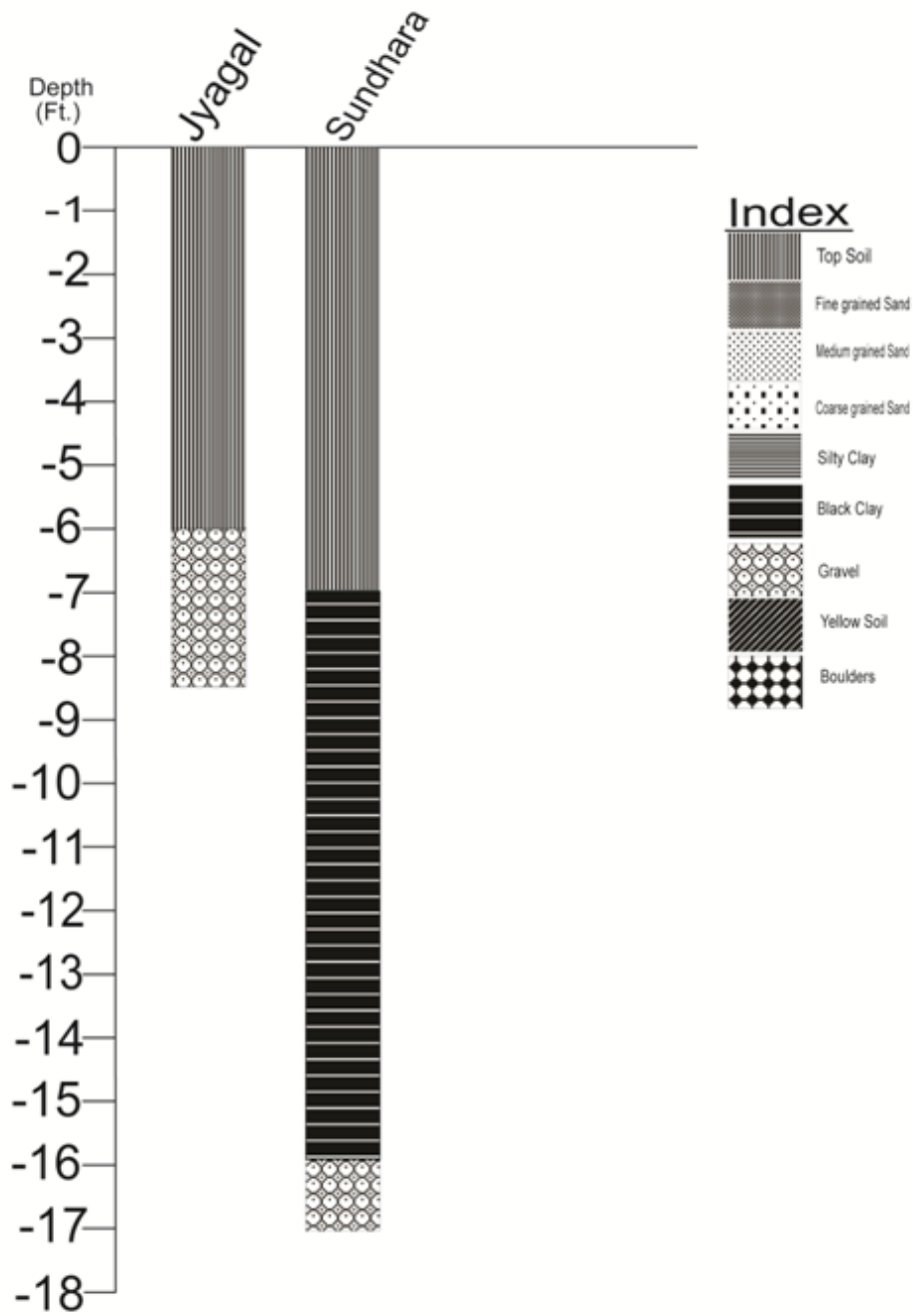
# Litholog of Ward No. 15



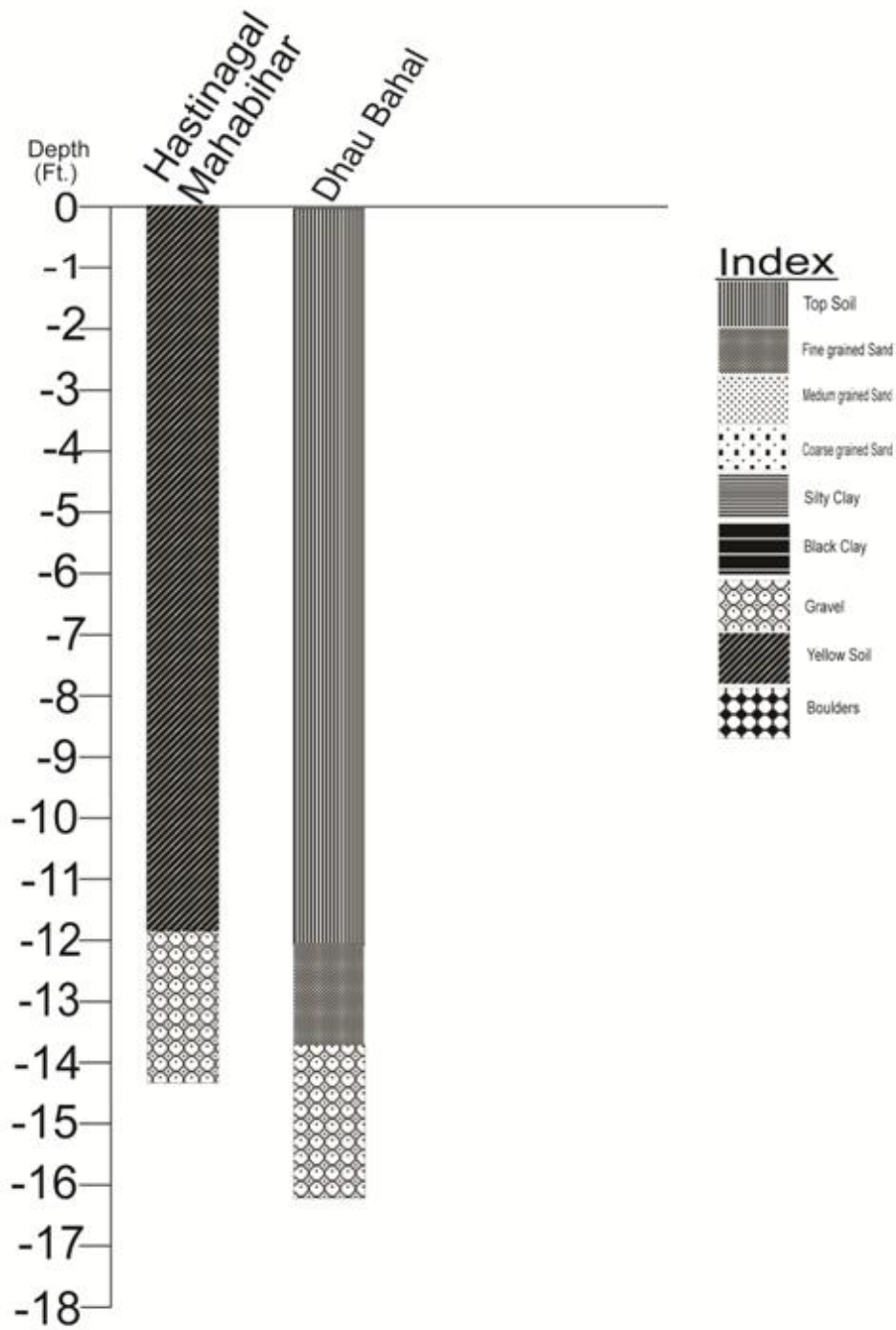
# Litholog of Ward No. 16



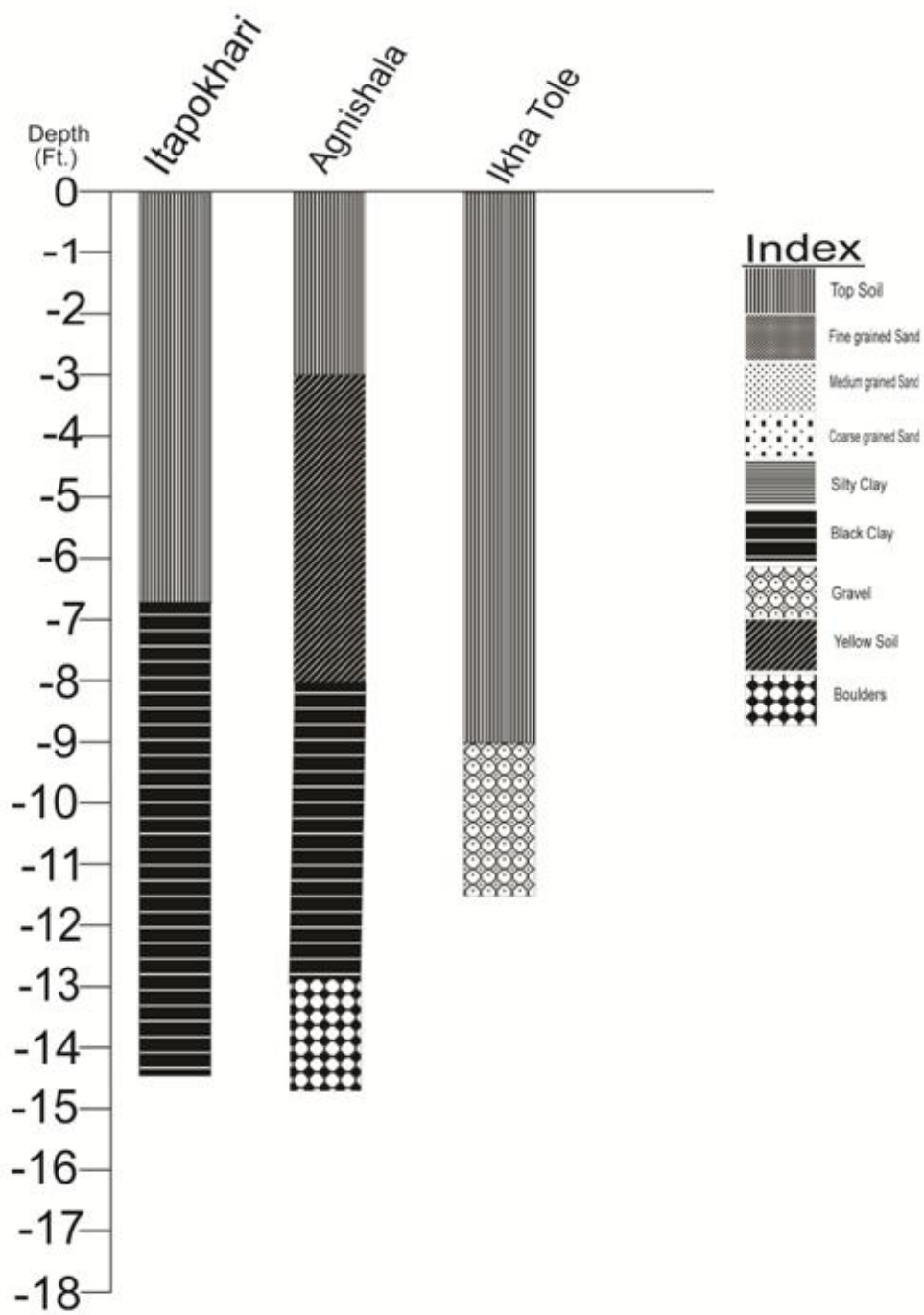
# Litholog of Ward No. 17



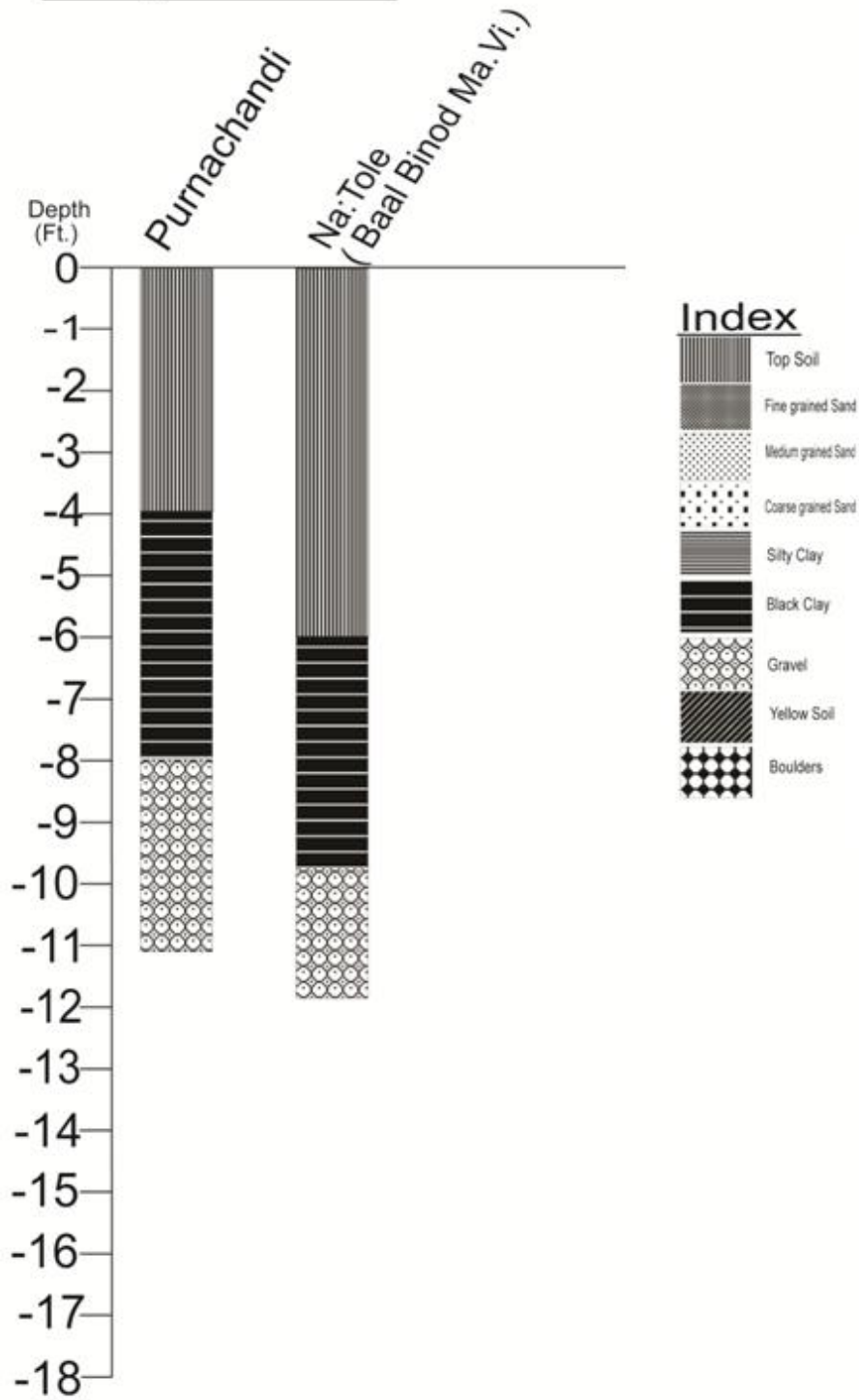
# Litholog of Ward No. 18



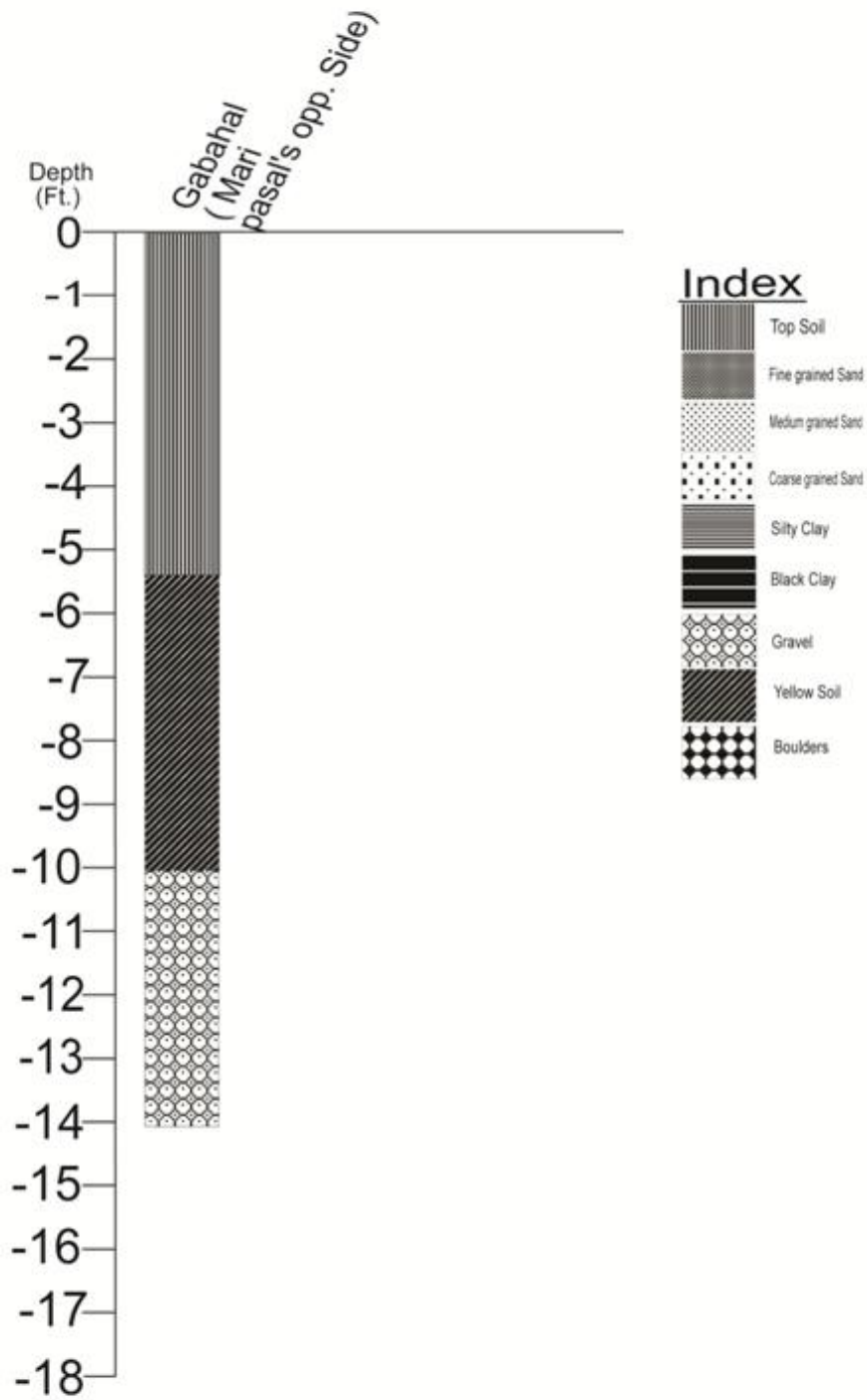
# Litholog of Ward No. 19



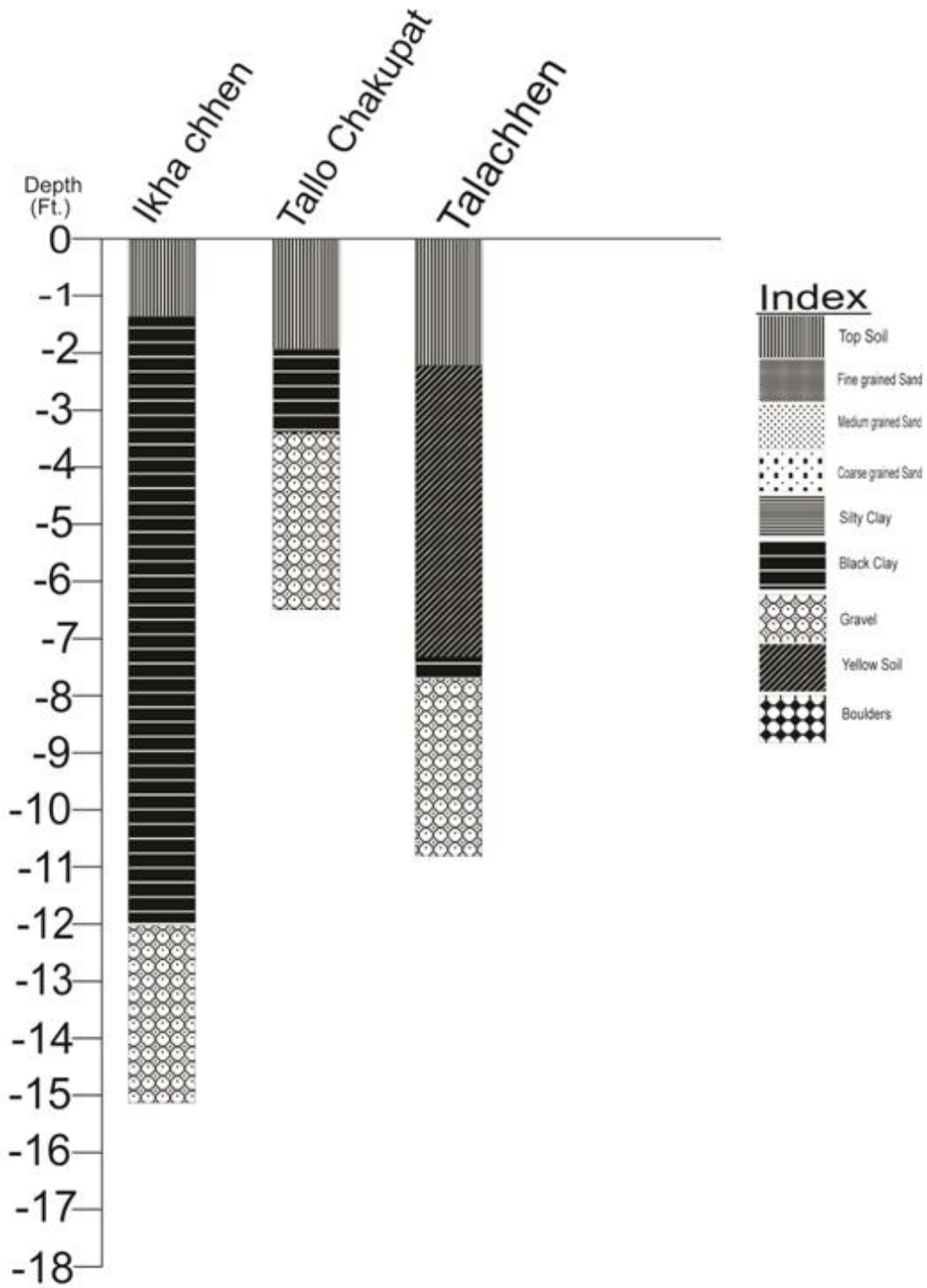
# Litholog of Ward No. 20



# Litholog of Ward No. 21



Litholog of Ward No. 22



## **ANNEX II**

### **Datas of Augering of Study Area of Lalitpur Sub Metropolitan City**

**Table No. 4.1: Datas of Augering in various places of Lalitpur Sub Metropolitan City**

S. No.	Ward No.	Location No.	Location	Depth from the Surface (ft.)	Soil Type	Thickness (ft.)	Gravel Depth(ft.)
1	1	1A	Gusingal	0-3	Top Soil	3	
				3-3.5	Kalimati (Black Clay )	0.5	
				3.5 onwards	Sand ( Medium Grained)		
2	1	1B	Gusingal	0-2	Top Soil	2	
				2--3	Kalimati (Black Clay )	1	
				3 onwards	Sand		
3	1	1C	Kupondol	0-1.5	Top Soil	1.5	
				1.5-3.4	Kalimati (Black Clay )	1.9	
				3.4 onwards	Sand		
4	1	1D	Gusingal	0-4	Top Soil	4	
				4 onwards	Sand		
5	1	1E	Kupondol	0-1.5	Top Soil	1.5	
				1.5-3	Pango mato (Yellow Soil ) with silt	1.5	
				3 onwards	Sand		
6	2	2A	Saachal,Sanepa	0-4	Top Soil	4	
				4 onwards	Kalimati + Pango mato+ Gravel		4
7	2	2B	Saachal,Sanepa	0-2.5	Top Soil	2.5	
				2.5-4.5	Kalimati (Black Clay )	2	
				4.5-7.5	Chimti Mato+ sand	3	
				7.5-8.5	Gravel + Pango mato+Kalimati	1	8.5
				8.5-11.5	Sand +	3	
					Kalimati (Black Soil)		
				11.5 onwards	Gravel +		11.5

					Sand+Kalimati ( Black Soil)		
8	2	2C	Sanepa	0-0.5	Top Soil	0.5	
				0.5-4	Pango mato (Yellow Soil )+Kalimati	3.5	
				4--10	pango mato+Sand	6	
				10 onwards	Pango mato + fine sand		
9	2	2D	Sanepa	0-2	Top Soil	2	
				2-2.5	Pango mato (Yellow Soil )	0.5	
				2.5 onwards	Sand		
10	2	2E	Rajtirtha, Sanepa	0-5	Top Soil	5	
				5--7	Kalimati (Black Clay )	2	
				7 onwards	Sand		
11	2	2F	Gusingal	0-0.5	Top Soil	0.5	
				0.5-5	Kalimati (Black Clay )	4.5	
				5 onwards	Sand		
12	2	2G	Sanepa	0-14.7	Kalimati( Black Clay )	14.7	
				14.7 onwards	Boulders		
13	2	2H	Kupondol,Sanepa	0-3	Top Soil	3	
				3-3.5	Sand	0.5	
				3.5-6.5	Kalimati (Black Clay )	3	
				6.5 onwards	Pango mato + fine sand		
14	2	2I	Kupondol,Sanepa	0-3.5	Top Soil	3.5	
				3.5-9.5	Kalimati (Black Clay )	6	
				9.5 onwards	Pango mato (Yellow Soil )		
15	3	3A	Patandhoka	0-1	Top Soil	1	

				1-3.5	Pango mato (Yellow Soil )	2.5	
				3.5 onwards	Gravels		3.5
16	3	3B	Jawalakhel	0-2.8	Top Soil	2.8	
				2.8 onwards	Gravels		2.8
17	3	3C	Jhamsikhel	0-2.5	Top Soil	2.5	
				2.5-17.2	Kalimati (Black Clay )		
18	3	3D	Hariharbhawan	0-0.5	top soil	0.5	
				0.5-17.2	Kalimati (Black Clay )		
19	3	3E	Pulchowk,UNDP	0-1.96	gray sandy clay		
				1.96-5.24	grayclay		
				5.24-8.52	blackish clay with plastic clay		
				8.52-9.84	gray clayey silt		
				9.84 onwards	moist gray silty clay		
20	3	3F	Pulchowk	0-1.6	Top Soil		
				1.6-14.7	fine to medium sand		
21	3	3G	Hariharbhawan	0-1.6	TOP SOIL		
				1.6-4.9	Kalimati (Black Clay )		
				4.9-16.4	Kalimati (Black Clay )		
				16.4	coarse sand with few kankar and fine sand		
22	3	3H	Thado Dhunga,	0-2.09	Top Soil	2.09	
			Dhobichaur	2.09 onwards	Gravel		2.09
23	3	3I	UN Habitat Office	0-2.3	Top Soil	2.3	
				2.3-4.9	Gray +Black clay	2.6	
				4.9-6.6	Silty Clay	1.7	
				6.6-7.5	Find Sand with Gravel	0.9	2.3



32	4	4D	Jawalakhel	0-3	Top Soil	3	
				3--4	Brown Soil	1	
				4 onwards	Gravel		4
33	4	4E	Jawalakhel	0-0.5	Top Soil	0.5	
				0.5-3	Pango mato (Yellow Soil )	2.5	
				3--4	White Pango mato	1	
				4 onwards	Gravel		4
34	4	4F	Jawalakhel	0-3	Top Soil	3	
				3--4	Kalimati (Black Clay )	1	
				4 onwards	Gravel		4
35	4	4G	Dhobighat	0-4	Top Soil	4	
				4--9	Kalimati (Black Clay )	5	
				9 onwards	Gravel		9
36	5	5A	Kumaripati	0-3	Top Soil	3	
				3--5	Chimti Mato	2	
				5--6.5	pangomato + gravel	1.5	
				6.5 onwards	Gravel		6.5
37	5	5B	Manbhawan	0-1.5	Top Soil	1.5	
				1.5 onwards	Gravel		1.5
38	5	5C	Lagankhel	0-2.5	Top Soil	2.5	
				2.5-5	Pango Mato+Gravel	2.5	
				5 onwards	Gravel		5
39	5	5D	Lagankhel	0-0.5	Top Soil	0.5	
				0.5 onwards	Gravels		6
40	5	5E	Jawalakhel	0-3	Top Soil	3	
				3--7	Chimti Mato	4	
				7--9	Pango mato (Yellow Soil )	2	
				9 onwrds	Gravel		9

41	5	5F	Lagankhel	0-1.6	Top Soil		
				1.6-3.9	sandy clay		
				3.9-10.98	boulder with sand		
42	5	5 G	Patandhoka	0-6.5	Top Soil		
				6.5-13.1	sandy clay		
				13.1 onwards	Kalimati (Black Clay )		
43	5	5H	Thasikhel	0-0.5	Top Soil	0.5	
				0.5-2.5	Kalimati (Black Clay )	2	
				2.5-3.5	Gravel + Kalimati	1	
				3.5 onwards	Gravel +Pangomato		3.5
44	5	5I	Jawalakhel	0-1	Top Soil	1	
				1 onwards	Gravel	4	1
45	5	5J	Manbhawan	0-1.5	Top Soil	1.5	
				1.5-4.5	Pango mato (Yellow Soil )	3	
				4.5 onwards	Gravels		4.5
46	5	5K	Mahalaxmasthan	0-5	Top Soil	3	
				5--8	Kalimati (Black Clay )		
				8 onwards	Gravels		8
47	5	5L	Lagankhel,Mahalaxmasthan	0-3	Top Soil	3	
				3--5	Kalimati	2	
					(Black Clay )		
				5--9	Pango mato (Yellow Soil )	4	
				9 onwards	Gravels		9
						5	
48	6	6A	Thaina(Thapahiti)	0-3	Top Soil	3	
				3--7	Pango mato (Yellow Soil )	4	
				7 onwards	Gravels		7
49	6	6 B	Thaina(Thapahiti)	0-3	Top Soil	3	
				3--7	Pango mato	4	

					(Yellow Soil )		
				7 onwards	Gravels		7
50	6	6C	Jyakha bahal	0-6	Top Soil	6	
				6--9	Kalimati (Black Clay )	3	
				9 onwards	Pango mato (Yellow Soil )		
51	6	6 D	Kani bahal	0-6	Top Soil	6	
				6 onwards	Pango mato (Yellow Soil )		
52	7	7A	Sundhara	0-4	Top Soil	4	
				4 onwards	Gravels		4
53	7	7B	Guji Bahal	0-5.10	Top Soil	5.1	
				5.10 onwards	Gravels		
54	7	7C	Guji Bahal	0-6.8	Top Soil	6.8	
				6.8 onwards	Gravels		
55	7	7 D	Chalachen	0-5	Top Soil	5	
				5 onwards	Gravel		
56	8	8A	Guoitol	0-7.2	Top Soil	7.2	
				7.2-8.8	Pango mato (Yellow Soil )	1.6	
				8.8-13.4	Kalimati (Black Clay )	4.6	
				13.4 onwards	Pango mato (Yellow Soil )		
57	8	8B	Twaye Bahal	0-4.2	Kalimati (Black Clay )	4.2	
				4.2 onwards	Gravel		
58	8	8C	Twaye Bahal	0-5	Kalimati (Black Soil )	5	
				5 onwards	Gravel		
59	9	9A	Lo:la	0-10	Top Soil		
				10 onwards	gravel		10

60	9	9B	Akash Bhairab	0-2	Top Soil		
				2-2.5	Pango mato (Yellow Soil )		
				2.5-3	Kalimati (Black Clay )		
				3-6.5	Pango mato (Yellow Soil )		
				6,5 onwards	Gravel		6.5
61	9	9 C	Lo:La	0-10	Top Soil		
				10 onwards	Gravels		10
62	9	9 D	Gachhen	0-6	Top Soil	6	
				6--15	Kalimati (Black Clay )	9	
63	9	9 E	Saptakhel	0-4.5	Top Soil	4.5	
				4.5 onwards	Kalimati (Black Clay )		
64	9	9 F	Gachhen Choka	0-2	Top Soil	2	
				2--11	Pango mato (Yellow Soil )	9	
				11--16	Kalimati (Black Clay )	5	
				16 onwards	Gravels		16
65	9	9 G	Kobahal(Tadanani)	0-5	Top Soil	5	
				5-9.6	Pango mato (Yellow Soil )	4.6	
				9.6 onwards	Gravels		9.6
66	9	9 H	Kobahal(Tadanani)	0-4.6	Top Soil	4.6	
				4.6-9.6	Pango mato (Yellow Soil )	5	
				9.6 onwards	Gravels		9.6
67	9	9 I	Kobahal(Tadanani)	0-3.6	Top Soil	3.6	
				3.6-6.6	Kalimati (Black Clay )	3	
				6.6-9.6	Pango mato (Yellow Soil )	3	

				9.6 onwards	Gravels		9.6
68	9	9 J	Kobahal( Tadanani )	0-3.6	Top Soil	3.6	
				3.6-6.6	Kalimati ( Black Soil )	3	
				6.6-9.6	Pangomato( Yellow Soil )	3	
				9.6 onwards	Gravel		
69	9	9 K	Gachhen	0-3	Top Soil	3	
				3 onwards	(Black ) Pango mato		
70	9	9 L	Banglamukhi	0-5	Top Soil	5	
				5--11	Pangomato( Yellow Soil )	6	
				11 onwards	Gravel		
71	10	10A	Jwagal	0-2	Top Soil		
				2-17.2	Kalimati (Black Clay )		
72	10	10B	Pulchowk	0-2	Top soil		
				2-17.2	Kalimati (Black Clay )		
73	10	10C	Kupondol,Setodegal	0-3	Top Soil	3	
				3--5	Kalimati (Black Clay )	2	
				5 onwards	Pango mato +Gravel		5
74	10	10D	Kupondol	0-2.5	Top Soil	2.5	
				2.5-3.5	Kalimati (Black Clay )	1	
				3.5 onwards	Sand		
75	10	10E	Jwagal, Kupondol	0-6	Top Soil	6	
				6--8	Kalimati (Black Clay )	2	
				8 onwards	Sand		
76	10	10F	Jwagal, Kupondol	0-2	Top Soil	2	

				2-3.5	Kalimati (Black Clay )	1.5	
				3.5 onwards	Sand		
77	10	10G	Chakupat	0-1.64	Top Soil	1.64	
				1.64 onwards	Pango mato (Yellow Soil )		
78	10	10 H	Kupondol	0-1.5	Top Soil	1.5	
				1.5-3.5	Kalimati (Black Clay )	2	
				3.5 onwards	Sand		
79	11	11A	Bilachhen	0-2.5	Top Soil		
				2.5-3.5	Kalimati (Black Clay )		
				3.5 on	Pango mato (Yellow Soil )		
80	11	11B	Adarsha kanya	0-3.5	Top Soil		
				3.5-8.5	Pango mato (Yellow Soil )		
				8.5 on	gravels		5.8
81	11	11 C	Kuti Jaugal	0-6	Top Soil	6	
				6--9	Pango mato (Yellow Soil )	3	
				9 onwards	Gravels		9
82	11	11 D	Chhushika	0-7	Top Soil	7	
				7--11	Kalimati (Black Clay )	4	
				11--14	Pango mato (Yellow Soil )	3	
				14 onwards	Gravels		14
83	12	12A	Ha:kha Tole	0-5	Top Soil	5	
				5 onwards	Gravels		5
84	12	12B	Chakra Bayal	0-6	Top Soil	6	
				6--14	Kalimati (Black Clay )	8	
				14 onwards	Pango mato		

					(Yellow Soil)		
85	12	12C	Prayag Pokhari	0-6	Top Soil	6	
				6--8	Pango mato (Yellow Soil)	2	
				8 onwards	Gravels		8
86	12	12 D	Prayag Pokhari	0-5	Top Soil	5	
				5--8	Kalimati (Black Clay )	3	
				8--11	Pango mato (Yellow Soil)	3	
				11 onwards	Gravels		11
87	12	12 E	Kobahal, Tadanani	0-5	Top Soil	5	
				5-9.6	Pangomato ( Yellow Soil )	4.6	
				9.6 onwards	Gravel		
88	13	13A	Kusunti	0-0.5	Top Soil	0.5	
				0.5-2	Pango mato (Yellow Soil)	1.5	
				2 onwards	Gravel		12
89	13	13B	Ekantakuna	0-1.5	Top Soil	1.5	
				1.5 onwards	Gravel		1.5
90	13	13C	Ekantakuna	0-1.5	Top Soil	1.5	
				1.5-3.5	Chimti mato	2	
				3.5 onwards	Pango mato + gravel		3.5
91	13	13D	Ekantakuna	0-2	Top Soil	2	
				2 onwards	Gravels		2
92	13	13E	Kusuti	0-2.8	Top Soil	2.8	
				2.8-5.4	Pango mato (Yellow Soil)	2.6	5.4
				5.4 onwards	Gravels		
93	13	13F	Kusuti	0-3.5	back filling	3.5	

				3.5-8.8	Pango mato (Yellow Soil )	5.3	
				8.8 onwards	Gravels		8.8
94	13	13G	Kusunti	0-0.5	Back Filling	0.5	
				0.5-2	Pango mato (Yellow Soil )	1.5	
				2 onwards	Gravel		2
95	14	14A	Thasikhel	0-2	Top Soil	2	
				2--3	Pango mato (Yellow Soil )	1	
				3-5.5	Kalimati (Black Clay )	2.5	
				5.5 onwards	Gravels		5.5
96	14	14 B	Thasikhel	0-2.5	Pango mato (Yellow Soil )	2.5	
				2.5 onwards	Gravels		2.5
97	14	14C	Kusunti	0-2.5	Pango mato (Yellow Soil )	2.5	
				2.5 onwards	Gravels		2.5
98	15	15A	Satdobato	0-9.8	top sandy soil		
				9.8 on	sand and gravel		9.8
99	15	15B	Lagankhel	0-0.5	Top Soil	0.5	
				0.5 onwards	Gravels		6
100	15	15C	Lagankhel	0-3	Top Soil	3	
				3--10	Yellowish Gravel	7	10
				10--15	Kalimati (Black Clay )	5	
				15 onwards	Pango mato (Yellow Soil )		
101	15	15 D	Lagankhel	0-2	Top Soil	2	
				2--4	Pango mato (Yellow Soil )	2	
				4--8	White Pangomato	4	
				8--9	Kalimati (Black Clay )	1	

				9 onwards	Pango mato (Yellow Soil )		
102	15	15 E	Dhalot Office	0-4	Top Soil	4	
				4--6	Kalimati (Black Clay )	2	
				6 onwards	Gravels		6
103	15	15 F	Satdobato	0-7	Top Soil	7	
				7--9	Kalimati (Black Clay )	2	
				9--18	Pango mato (Yellow Soil )	9	
				18 onwards	Gravels		18
104	16	16 A	Nyakha chhuka	0-6	Top Soil	6	
				6--11	Pango mato (Yellow Soil )	5	
				11--14	Kalimati (Black Clay )	3	
				14 onwards	Gravels		14
105	16	16 B	Ward Office	0-2	Top Soil	2	
				2--12	Pango mato (Yellow Soil )	10	
				12 onwards	Kalimati (Black Clay )		
106	16	16 C	Elanani	0-5.6	Top Soil	5.6	
				5.6 onwards	Kalimati (Black Clay )		
107	16	16 D		0-2	Top Soil	2	
				2--7	Pango mato (Yellow Soil )	5	
				7--14	Kalimati (Black Clay )	7	
				14 onwards	Gravels		14
108	16	16 E	Nyakha Chhuka	0-7	Top Soil	7	
				7--13.3	Pango mato (Yellow Soil )	6.3	
				13.3-16.2	Kalimati (Black Clay )	2.9	

				16.2 onwards	Gravels		16.2
109	17	17A	Gwarko	0-17.2	Kalimati (Black Clay )		
110	17	17 B	Sundhara	0-7	Top Soil	7	
				7--16	Kalimati (Black Clay )	9	
				16 onwards	Gravels		16
111	17	17 C	NITI office	0-10	Top Soil	10	
				10--16	Kalimati (Black Clay )	6	
112	17	17D	Jwagal	0-6	Top Soil	6	
				6 onwards	Gravels		6
113	18	18A	Dhau Bahal	0-12	Top Soil	12	
				12-13.8	Fine Sand	1.8	
				13.8 onwards	Fine Sand with Gravels		13.8
114	18	18B	Mahapal, Naunani	0-10.2	Top Soil	10.2	
				10.2 onwards	Kalimati (Black Clay )		
115	18	18 C	Hastinagal Mahabihar	0-11.8	Pangomato( Yellow Soil )	11.8	
				11.8 onwards	Gravel		
116	19	19 A	Ikha Tole	0-9	Top Soil	9	
				9 onwards	Gravels		9
117	19	19 B	Agni shal	0-3	Top Soil	3	
				3--11	Kalimati (Black Clay )	8	
				11 onwards	Gravels		11
118	19	19 C	Agni shal	0-3	Top Soil	3	
				3--8	Pango mato (Yellow Soil )	5	
				8--13	Clay Soil	5	

				13 onwards	Boulder		
119	19	19 D	Mahendra Bahal	0-6	Pango mato (Yellow Soil )	6	
				6--12	Gravel		
120	19	19 E	Itachhen	0-8.2	Brown Clay	8.2	
				8.2-16.4	Gravel		
121	19	19 F	Iku Bahal	0-2.4	Top Soil	2.4	
				2.4-8.8	Brown Clay	6.4	
				8.8 onwards	Gravel		
122	19	19 G	Itapokhari	0-6.8	Top Soil	6.8	
				6.8-14.6	Grey Clay	7.1	
				14.6 onwards	Gravel		
123	20	20A	Na:Tole	0-5	Top Soil	5	
				5--9	Kalimati (Black Clay )	4	9
				9 onwards	Gravel		
124	20	20B	Na:Tole	0-6	Top Soil	6	
				6--10	Kalimati + Pango Mato	4	
				10 onwards	Gravel		10
125	20	20C	Purnachandi	0-2.6	Top Soil	2.6	
				2.6-5.6	Kalimati (Black Clay )	3	
				5.6 onwards	Gravels		5.6
126	20	20 D	Purnachandi	0-4	Top Soil	4	
				4--8	Kalimati (Black Clay )	4	
				8 onwrds	Gravels		8
127	21	21A	Pulchowk,Na:tole	0-9	Pango mato (Yellow Soil )	9	
				9 onwards	Kalimati (Black Clay )		
128	21	21B	Gabahal	0-5.5	Top Soil	5.5	

				5.5-7.5	Pango mato (Yellow Soil )	2	
				7.5-8	Yellowish Soil	0.5	
				8--10	Pango mato (Yellow Soil )	2	
				10 onwards	Gravels		10
129	22	22A	Banglamukhi, Gahiti	0-17.2	Top Soil	17.2	
130		22B	Talachhen	0-2.2	Top Soil	2.2	
				2.2-7.6	Pango mato (Yellow Soil )	5.4	
				7.6-7.9	Kalimati (Black Clay )	0.3	
				7.9 onwards	Gravels		7.9
131		22C	Talachhen	0-7.3	Top Soil	7.3	
				7.3-9	Pango mato (Yellow Soil )	1.7	
				9 onwards	Gravels		9
132		22D	Thapahiti	0-0.5m	Top Soil	0.5	
				0.5-1.5m	Top Soil	1	
133		22E	Malido	0-3.5	Top Soil	3.5	
				3.5-4.7	Pango mato (Yellow Soil )	1.5	
				4.7-13.8	Kalimati (Black Clay )	9.1	
				13.8 onwards	Pango mato (Yellow Soil )		
134		22F	Tallo chakupat	0-2	Top Soil	2	
				2-3.3	Kalimati (Black Clay ) with silt	1.3	
				3.3 onwards	Pango mato + Gravels		3.3
135		22G	Ikha chhen	0-1.64	Top Soil	1.64	
				1.64-12	Kalimati (Black Clay )	10.36	
				12 onwards	Gravels		12

136		22 H	Chakupat, Bagallo	0-7	Top Soil	7	
				7--12	Kalimati (Black Clay )	5	
				12 onwards	Pango mato (Yellow Soil )		
137		22 I	Shankhamul,Alko	0-6	Top Soil	6	
				9 onwards	Sand		

### **ANNEX III**

#### **Water Quality Tests of Sample Wells**

**Table No.5.2.1****IRON TEST**

<b>S.NO.</b>	<b>SAMPLE</b>	<b>ABSORBANCE</b>	<b>FACTOR (Mg/Ltr.)</b>
1	Blank	0	0
2	W1	-0.002	<0.001
3	W2	0.004	0.000078124
4	W3	0.009	0.000175779
5	5C W2	0.012	0.000234372
6	16-Na-ch	0.006	0.000117186
7	16-Nag	-0.005	<0.001
8	20 Gyan bd	0.009	0.000175779
9	9-Taro	0.009	0.000175779
10	9L tt	0.089	0.001738259
11	19C	-0.001	<0.001
12	9B W1	-0.008	<0.001
13	16 Ilanani	-0.004	<0.001
14	14A W2	0.049	0.000957019
15	6B	0.0469	0.000916004
16	W3 UA	0.015	0.000292965
17	W2 UA	2.515	0.049120465
18	W1 UA	0.009	0.000175779
19	5E W1	0.314	0.006132734
20	14 A W1	0.054	0.001054674
21	5C W1	0.476	0.009296756
22	5E W2	0.603	0.058885965
23	9B W2	0.581	0.056737555
24	14A W3	0.034	0.000664054

(Measured at 520 nm Wavelength)

(Factor=0.019531\*x, Where x= absorbance)

**Table No.5.2.2.****AMMONIA TEST**

<b>S.NO.</b>	<b>SAMPLE NO.</b>	<b>ABSORBANCE(A)</b>	<b>FACTOR (Mg/Ltr.)</b>
1	Blank	0	0
2	W1	0.023	0.0655569
3	W2	0.009	0.0256527
4	W3	0.027	0.0769581
5	5C W2	0.126	0.3591378
6	16-Na-ch	0.016	0.0456048
7	16-Nag	0.021	0.0598563
8	20 Gyan bd	0.001	0.0028503
9	9-Taro	0.026	0.0741078
10	9 L tt	0.031	0.0883593
11	19 C	0.027	0.0769581
12	9B W1	0.045	0.1282635
13	16 Ilanani	0.009	0.0256527
14	14A W2	0.018	0.0513054
15	6B	0.02	0.057006
16	W3 UA	0.017	0.0484551
17	W2 UA	0.017	0.0484551
18	W1 UA	0.011	0.0313533
19	5E W1	0.081	0.2308743
20	14 A W1	0.036	0.1026108
21	5C W1	0.017	0.0484551
22	5E W2	0.016	0.0456048
23	9B W2	0.018	0.0513054
24	14 A W3	0.015	0.0427545

(Measured at 425nm Wavelength)

Factor=2.8503\*x, Where x=absorbance)

**Table No.5.2.3.****TOTAL COLIFORM TEST**

S.NO.	SAMPLE	COLIFORM NO. ( COL./100 MI)
1	UA W1	TNTC
2	6B	NIL
3	W3 W11	20
4	14A W2	NIL
5	9B W1	10
6	19 C	NIL
7	UA W3	NIL
8	16 Ilanani	TNTC

Note:-TNTC= Too numerous to count

**Table No.5.2.4.****EC/PH/TEMP.**

S.NO.	SAMPLE	EC (micro S /cm.)	PH	TEMP.
1	W1	51	6.65	146.6
2	W2	29	6.71	81.9
3	W3	63	6.96	96.3
4	5C W2	36	6.74	163.2
5	16-Na-ch	54	9.18	91.2
6	16-Nag	64	6.75	146.6
7	20 Gyan bd	40	6.57	119.2
8	9-Taro	27	6.75	145.1
9	9 L tt	43	8.31	93.5
10	19 C	50	8.21	125.1
11	9B W1	78	7.91	99.8
12	16 Ilanani	52	7.18	36.6
13	14A W2	74	6.25	46.8
14	6B	59	6.62	163.3
15	W3 UA	62	6.95	83.5
16	W2 UA	56	6.46	126.5
17	W1 UA	25	6.85	154.2
18	5E W1	61	6.55	73.6
19	14 A W1	109	6.52	144.2
20	5C W1	47	6.17	76.5
21	5E W2	51	6.82	148.1
22	9B W3	86	9.22	103.6
23	14 A W3	72	6.34	117.2

**Table No.5.2.5.****TOTAL HARDNESS TEST**

<b>S.NO.</b>	<b>SAMPLE NO.</b>	<b>VOLUME DIFFERENCE(ml.)</b>	<b>FACTOR(mg/ltr.)</b>	<b>me/ltr.</b>
1	W1	4.3	166.9776	3.336212
2	W2	2.8	108.7296	2.172417
3	W3	2.8	108.7296	2.172417
4	5E	5.9	229.1088	4.577594
5	16-Na-ch	3.2	124.2624	2.482763
6	16-Nag	4.8	186.3936	3.724144
7	20 Gyan bd	5	194.16	3.879317
8	9-Taro	4.6	178.6272	3.568971
9	9L tt	1.7	66.0144	1.318968
10	19C	4.2	163.0944	3.258626
11	9B W1	13.8	535.8816	10.70691
12	16 Ilanani	4.8	186.3936	3.724144
13	14A W2	2.8	108.7296	2.172417
14	6B	17.4	675.6768	13.50002
15	W3 UA	4.7	182.5104	3.646558
16	W2 UA	4	155.328	3.103453
17	W1UA	6.1	236.8752	4.732766
18	5E W1	3.7	143.6784	2.870694
19	14 A W1	7.3	283.4736	5.663803
20	5C W1	5	194.16	3.879317
21	5EW2	5.9	229.1088	4.577594
22	9BW2	2.4	93.1968	1.862072
23	14 A W3	4.6	178.6272	3.568971

Note: - Factor=38.832\*x mg/ltr.  
me/ltr=mg/ltr\*0.01998

**Table No.5.2.6.****CALCIUM TEST**

<b>S.NO.</b>	<b>SAMPLE NO.</b>	<b>VOLUME DIFFERENCE(ml.)</b>	<b>FACTOR(mg/ltr.)</b>	<b>me/ltr.</b>
1	W1	3.7	57.47136	2.867820864
2	W2	1.7	26.40576	1.317647424
3	W3	2.2	34.17216	1.705190784
4	5EW2	4.5	69.8976	3.48789024
5	16-Na-ch	1.4	21.74592	1.085121408
6	16-Nag	3.2	49.70496	2.480277504
7	20 Gyan bd	2.7	41.93856	2.092734144
8	9-Taro	2.2	34.17216	1.705190784
9	9L tt	0.6	9.31968	0.465052032
10	19C	2.8	43.49184	2.170242816
11	9B W1	4.2	65.23776	3.255364224
12	16 Ilanani	3.3	51.25824	2.557786176
13	14A W2	3.8	59.02464	2.945329536
14	6B	2.5	38.832	1.9377168
15	W3 UA	2.5	38.832	1.9377168
16	W2 UA	1.8	27.95904	1.395156096
17	W1 UA	4.8	74.55744	3.720416256
18	5E W1	4.8	74.55744	3.720416256
19	14 A W1	5	77.664	3.8754336
20	5C W1	3	46.5984	2.32526016
21	5C W2	2.8	43.49184	2.170242816
22	9B W2	0.9	13.97952	0.697578048
23	14 A W3	14.6	226.77888	11.31626611

Note:- Factor= $15.5328 \times$  mg/ltr.  
me/ltr=mg/ltr\*0.04990

Table No.5.2.7.

MAGNESIUM TEST

S.NO.	SAMPLE NO.	TOTAL HARDNESS VOLUME DIFF.(ml.)	FACTOR (mg/ltr.)	TOTAL HARDNESS (me/ltr.)	CALCIUM VOLUME DIFF.(ml.)	FACTOR (mg/ltr.)	CALCIUM (me/ltr.)	MAGNESIUM (me/ltr.)	MAGNESIUM (mg/ltr.)
1	w1	4.3	166.98	3.34	3.7	57.47	2.87	0.47	5.74
2	w2	2.8	108.73	2.17	1.7	26.41	1.32	0.85	10.47
3	w3	2.8	108.73	2.17	2.2	34.17	1.71	0.47	5.72
4	5EW2	5.9	229.11	4.58	4.5	69.90	3.49	1.09	13.35
5	16-n-ch	3.2	124.26	2.48	1.4	21.75	1.09	1.40	17.12
6	16-nag	4.8	186.39	3.72	3.2	49.70	2.48	1.24	15.24
7	20 gyan bd	5	194.16	3.88	2.7	41.94	2.09	1.79	21.89
8	9-taro	4.6	178.63	3.57	2.2	34.17	1.71	1.86	22.83
9	9-ltt	1.7	66.01	1.32	0.6	9.32	0.47	0.85	10.46
10	19c	4.2	163.09	3.26	2.8	43.49	2.17	1.09	13.33
11	9B W1	13.8	535.88	10.71	4.2	65.24	3.26	7.45	91.28
12	16 ilanani	4.8	186.39	3.72	3.3	51.26	2.56	1.17	14.29
13	14a w2	2.8	108.73	2.17	3.8	59.02	2.95	-0.77	-9.47
14	6b	17.4	675.68	13.50	2.5	38.83	1.94	11.56	141.64
15	w3 ua	4.7	182.51	3.65	2.5	38.83	1.94	1.71	20.93
16	w2 ua	4	155.33	3.10	1.8	27.96	1.40	1.71	20.93
17	w1 ua	6.1	236.88	4.73	4.8	74.56	3.72	1.01	12.40
18	5e w1	3.7	143.68	2.87	4.8	74.56	3.72	-0.85	-10.41
19	14 a w1	7.3	283.47	5.66	5	77.66	3.88	1.79	21.91
20	5c w1	5	194.16	3.88	3	46.60	2.33	1.55	19.04
21	5CW2	5.9	229.11	4.58	2.8	43.49	2.17	2.41	29.49
22	9BW3	2.4	93.20	1.86	0.9	13.98	0.70	1.16	14.27
23	14 A W3	4.6	178.63	3.57	14.6	226.78	11.32	-7.75	-94.90

Note:- **Magnesium(me/ltr.)=Total Hardness(me/ltr.)-Calcium(me/ltr.)**      **Magnesium(mg/ltr.)=mg/ltr.\*12.25**

Table No.5.2.8.

**CARBONATE TEST**

S.NO.	SAMPLE	I	II	III	PHENOLPHTHALIAN ALKALINITY (P)	METHYLORANGE ALKALINITY (T)	T/2	OH- as CACO3	CO3- as CACO3	HCO3 as CACO3
1	14A W2	29.6		33.4	-29.6	33.4	16.7	0	-59.2	92.6
2	14A W3	33.4		39.9	-33.4	39.9	20	0	-66.8	106.7
3	16 ILANANI	39.9	41.8	44.6	1.9	2.8	1.4	1	1.8	0
4	5E W1	44.6		48.9	-44.6	48.9	24.5	0	-89.2	138.1
5	5C W2	9.3		12.2	-9.3	12.2	6.1	0	-18.6	30.8
6	UA W2	12.2		14.7	-12.2	14.7	7.35	0	-24.4	39.1
7	9B W1	14.7	16.2	18.7	1.5	2.5	1.25	0.5	2	0
8	9L TT	18.7	20.2	22.1	1.5	1.9	0.95	1.1	0.8	0
9	19 C	22.1	23.7	25.6	1.6	1.9	0.95	1.3	0.6	0
10	5C W1	25.6		29.7	-25.6	29.7	14.9	0	-51.2	80.9
11	9 TARO	29.7	30.4	35.4	0.7	5	2.5	0	0	5
12	6B	35.4		41.3	-35.4	41.3	20.7	0	-70.8	112.1
13	UA W3	41.3	42.4	43.8	1.1	1.4	0.7	0.8	0.6	0
14	9B W3	43.8	45.8	47.8	2	2	1	2	0	0
15	UA W1	19.2		23.2	-19.2	23.2	11.6	0	-38.4	61.6
16	14 A W1	23.2		28.8	-23.2	28.8	14.4	0	-46.4	75.2
17	16 Na CHOK	28.8	31.3	32.9	2.5	1.6	0.8	3.4	-1.8	0
18	16 NAG	32.9	34.3	38.5	1.4	4.2	2.1	0	2.8	1.4
19	W2	38.5		41.9	-38.5	41.9	21	0	-77	118.9
20	20 GYAN B.	41.9	42.9	45.9	1	3	1.5	0	2	1
21	W1	45.9		50.3	-45.9	50.3	25.2	0	-91.8	142.1
22	W3	27.5	28.8	35.7	1.3	6.9	3.45	0	2.6	4.3
23	5EW2	40		43.9	-40	43.9	22	0	-80	123.9

**Note:-****Condition:-**

- 1) If  $P > T/2$ ,  $OH = 2P - T$ ,  $Co3 = 2(T - P)$ ,  $HCO3 = 0$
- 2) If  $P = 0$ ,  $HCO3 = T$
- 3) If  $P < T/2$ ,  $OH = 0$ ,  $Co3 = 2P$ ,  $HCO3 = T - 2P$

**Table No.5.2.9.****CHLORIDE TEST**

<b>S.NO.</b>	<b>SAMPLE</b>	<b>INITIAL READING (ml.)</b>	<b>FINAL READING(ml.)</b>	<b>ml.</b>
1	W3	0	0.95	0.95
2	6B	0	1.05	1.05
3	5C W1	1.05	1.6	0.55
4	16- Nag	1.6	2.75	1.15
5	9B W2	4.4	5.4	1
6	5EW2	0	0.75	0.75
7	W1	0.75	1.6	0.85
8	14AW2	1.6	2.5	0.9
9	5EW1	2.5	3.2	0.7
10	UA W2	3.2	3.85	0.65
11	5C W1	3.85	4.3	0.45
12	9BW1	4.3	5	0.7
13	9L tt	0	0.5	0.5
14	19C	0.5	1.45	0.95
15	14AW1	1.45	2.85	1.4
16	UA W1	2.85	3.65	0.8
17	20 Gyan bd.	3.65	4.35	0.7
18	UA W3	4.35	4.95	0.6
19	9 Taro	0	0.95	0.95
20	14A W3	0.95	1.9	0.95
21	16 Ilanani	1.9	3.1	1.2
22	W2	2.75	3.4	0.65
23	16- Na-ch	3.4	4.4	1

Note:- Factor=5.7636\*x mg/ltr.

Table No.5.2.10.

**PHOSPHATE TEST**

<b>S.NO.</b>	<b>SAMPLE NO.</b>	<b>ABSORBANCE (A)</b>	<b>FACTOR (Mg/ltr.)</b>
1	BLANK	0	0
2	W1	1.904	28.58856
3	W2	0.535	8.033025
4	W3	1.882	28.25823
5	5C W2	0.553	8.303295
6	16-Na-ch	0.497	7.462455
7	16-Nag	0.436	6.54654
8	20 Gyan bd	0.282	0.846846
9	9-Taro	0.477	7.162155
10	9 L tt	0.504	7.56756
11	19 C	0.576	8.64864
12	9B W1	0.06	0.9009
13	16 Ilanani	0.439	6.591585
14	14A W2	0.327	4.909905
15	6B	0.59	8.85885
16	W3 UA	0.264	3.96396
17	W2 UA	0.67	10.06005
18	W1 UA	0.296	4.44444
19	5E W1	0.902	2.708706
20	14 A W1	0.636	9.54954
21	5C W1	0.563	8.453445
22	5E W2	0.537	8.063055
23	9B W2	0.361	5.420415
24	14 A W3	0.532	7.98798

Measured at 800nm

Factor=3.003\*x mg/ltr for Undiluted solution

Factor=3.003\*x\*5 mg/ltr for Diluted solution

**Table No.5.2.11.****NO<sub>3</sub> TEST**

<b>S.NO.</b>	<b>SAMPLE NO.</b>	<b>ABSORBANCE (A)</b>	<b>FACTOR (Mg/ltr.)</b>
1	Blank	0	0
2	0.5ml(Std.)	0.027	0.675
3	1ml(Std.)	0.012	0.3
4	2ml(Std.)	0.08	2
5	4ml(Std.)	0.16	4
6	W1	1.249	31.225
7	W2	1.004	25.1
8	W3	1.199	29.975
9	5C W2	<0.01	<0.01
10	16-Na-ch	1.459	36.475
11	16-Nag	1.388	34.7
12	20 Gyan bd	0.295	2.95
13	9-Taro	0.187	1.87
14	9 L tt	0.443	4.43
15	19 C	0.227	2.27
16	9B W1	0.814	8.14
17	16 Ilanani	0.276	2.76
18	14A W2	1.168	29.2
19	6B	1.068	26.7
20	W3 UA	0.509	5.09
21	W2 UA	0.809	20.225
22	W1 UA	0.489	4.89
23	5E W1	1.021	25.525
24	14 A W1	0.875	8.75
25	5C W1	1.427	35.675
26	5E W2	1.573	39.325
27	9B W2	0.139	3.475
28	14 A W3	0.538	13.45

Measured at 410 nm Wavelength

Note:- Factor=25\*x mg/ltr for 10 ml solution

Factor=10\*x mg/ltr for 25ml solution

Table No.5.2.12.

<b>SO<sub>4</sub> TEST</b>		
<b>S.NO.</b>	<b>SAMPLE NO.</b>	<b>ABSORBANCE (A) OR FACTOR (Mg/ Ltr.)</b>
1	BLANK	0
2	W1	37
3	W2	29
4	W3	29
5	5C W2	22
6	16-Na-ch	51
7	16-Nag	31
8	20 Gyan bd	63
9	9-Taro	35
10	9 L tt	34
11	19 C	48
12	9B W1	43
13	16 Ilanani	32
14	14A W2	52
15	6B	16
16	W3 UA	50
17	W2 UA	13
18	W1 UA	41
19	5E W1	42
20	14 A W1	59
21	5C W1	37
22	5E W2	43
23	9B W2	75
24	14 A W3	55

Measured at 450 nm Wavelength

**Note:**

W1 = Jawalakhel

W3 =Jawalakhel

W2 UA = Kumaripati(United Academy)

5C W1 =Lagankhel

5E W1 =Jawalakhel

6 B =Thaina(Thapahiti)

9B1 = Akash Bhairab

9-Taro =Kobahal( Tadanani )

14A W2 = Thasikhel

16 Ilanani = Elanani

16 Nag = Nag Bahal

20 Gyan bd = Na:Tole

W2 =Jawalakhel

W1 UA =Kumaripati(United Academy)

W3 UA = Kumaripati(United Academy)

5C W2 =Lagankhel

5E W2 =Jawalakhel

9L tt = Banglamukhi

9B W2 = Akash Bhairab

14 AW1 = Thasikhel

14A W3 = Thasikhel

16-Na-ch = Nyakha chhuka

19 C = Agni shal

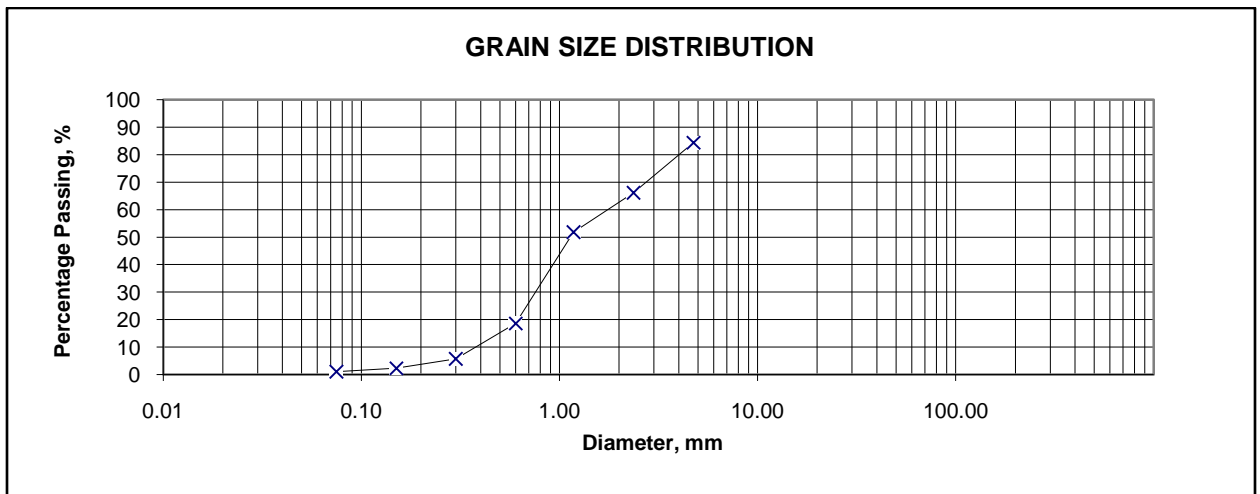
**ANNEX IV**

**Sieve Analysis of Study Area of Lalitpur Sub Metropolitan City**

**Table No.4.2.1: Sieve Analysis of Ward No.1D, Gusingal**

Test Sieve Sizes mm	Mass Retained gm.	Cumu. Mass. Retained gm.	Cumulative Retained %	Total Passing %
4.75	114.8	114.8	15.60	84.40
2.36	134.8	249.6	33.93	66.07
1.18	105	354.6	48.20	51.80
0.600	243.6	598.2	81.31	18.69
0.300	95.4	693.6	94.28	5.72
0.150	24.6	718.2	97.62	2.38
0.075	9.62	727.8	98.93	1.07
PAN	7.86	735.7	100.00	
Total	735.7			

**Fig.4.2.1: Curve of Sieve Analysis of Ward No.1D, Gusingal**

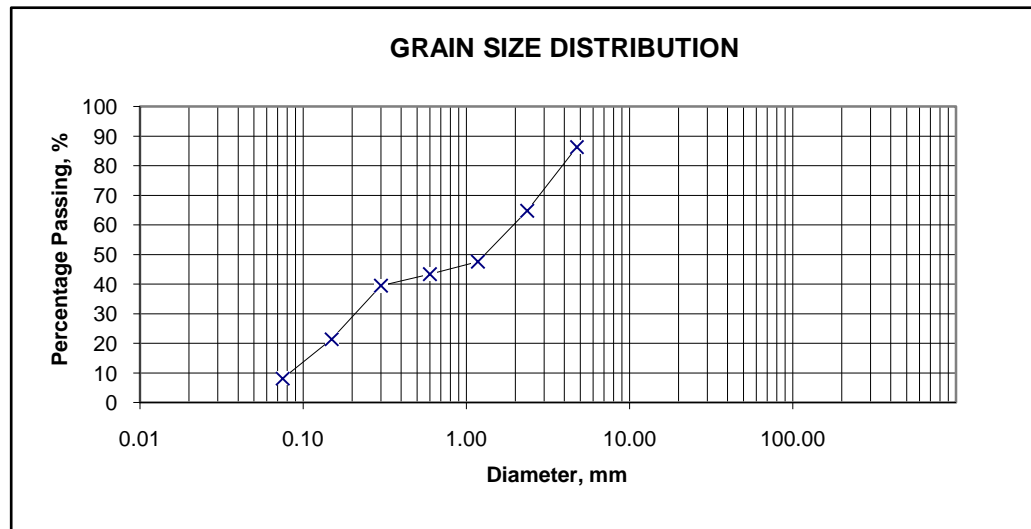


<b>D10(mm)</b>	0.39
<b>D30(mm)</b>	0.75
<b>D60(mm)</b>	2
<b>Uniformity Coefficient(CU)</b>	5.13
<b>Coefficient of Gradient (CG)</b>	0.72

**Table No.4.2.2: Sieve Analysis of Ward No.2F, Gusingal**

Test Sieve Sizes mm	Mass Retained gm.	Cumu. Mass. Retained gm.	Cumulative Retained %	Total Passing %
4.75	82.2	82.2	13.79	86.21
2.36	128.22	210.4	35.29	64.71
1.18	102.3	312.7	52.45	47.55
0.600	25.32	338.0	56.70	43.30
0.300	22.92	361.0	60.54	39.46
0.150	107.22	468.2	78.52	21.48
0.075	79.2	547.4	91.81	8.19
PAN	48.84	596.2	100.00	
Total	596.2			

**Fig.4.2.2: Curve of Sieve Analysis of Ward No.2F, Gusingal**

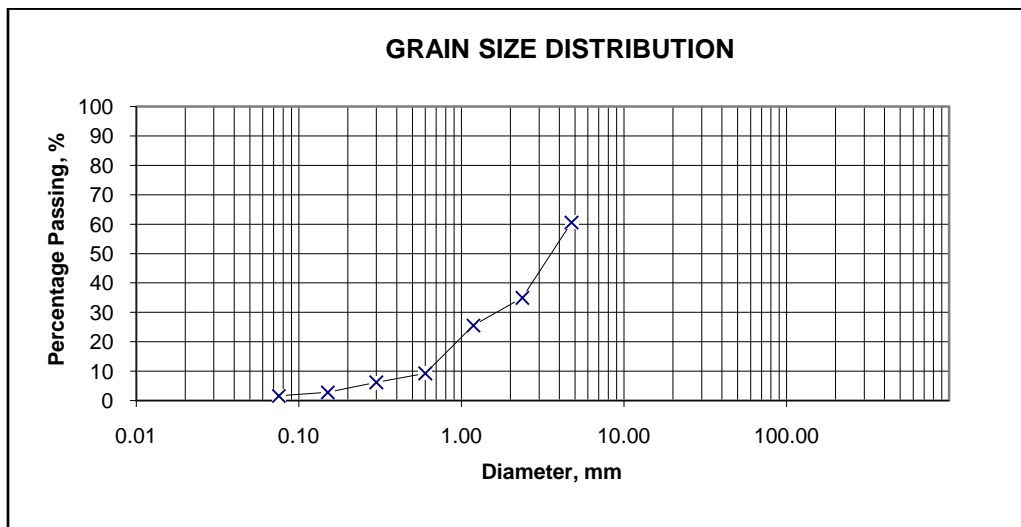


<b>D10(mm)</b>	0.75
<b>D30(mm)</b>	0.2
<b>D60(mm)</b>	2
<b>Uniformity Coefficient(CU)</b>	2.67
<b>Coefficient of Gradient (CG)</b>	0.03

**Table No.4.2.3: Sieve Analysis of Ward No.3J, Jawalakhel**

Test Sieve Sizes mm	Mass Retained gm.	Cumu. Mass. Retained gm.	Cumulative Retained %	Total Passing %
4.75	403	403.0	39.32	60.68
2.36	263.84	666.8	65.07	34.93
1.18	95.64	762.5	74.40	25.60
0.600	167.86	930.3	90.78	9.22
0.300	31.46	961.8	93.85	6.15
0.150	33.54	995.3	97.12	2.88
0.075	12.32	1007.7	98.32	1.68
PAN	17.22	1024.9	100.00	
Total	1024.9			

**Fig.4.2.3: Curve of Sieve Analysis of Ward No.3J, Jawalakhel**

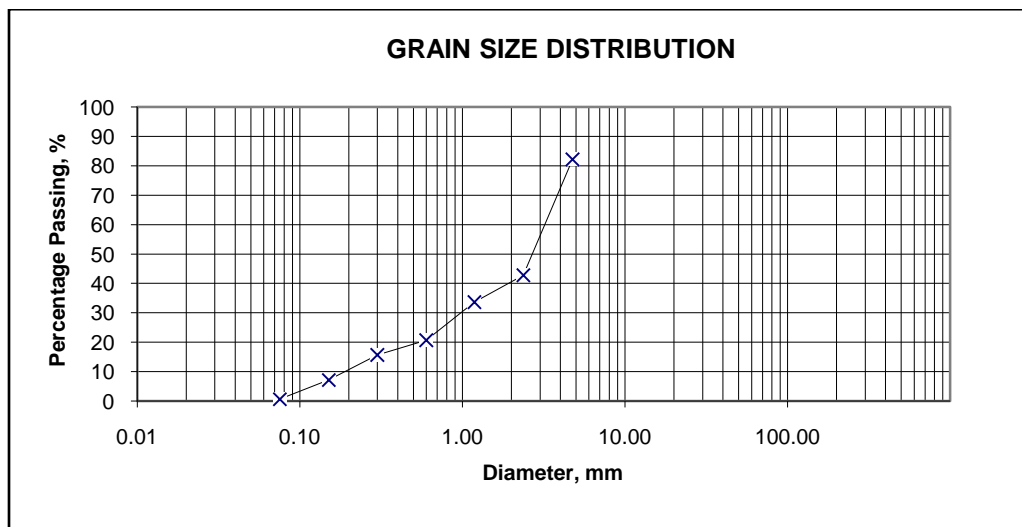


<b>D10(mm)</b>	0.6
<b>D30(mm)</b>	1.7
<b>D60(mm)</b>	4.5
<b>Uniformity Coefficient(CU)</b>	7.50
<b>Coefficient of Gradient (CG)</b>	1.07

**Table No.4.2.4: Sieve Analysis of Ward No.4D, Jawalakhel**

Test Sieve Sizes mm	Mass Retained gm.	Cumu. Mass. Retained gm.	Cumulative Retained %	Total Passing %
4.75	128.44	128.4	17.84	82.16
2.36	283.5	411.9	57.23	42.77
1.18	65.86	477.8	66.37	33.63
0.600	93.18	571.0	79.32	20.68
0.300	36.16	607.1	84.34	15.66
0.150	60.62	667.8	92.76	7.24
0.075	47.26	715.0	99.33	0.67
PAN	4.84	719.9	100.00	
Total	719.9			

**Fig.4.2.4: Curve of Sieve Analysis of Ward No.4D, Jawalakhel**

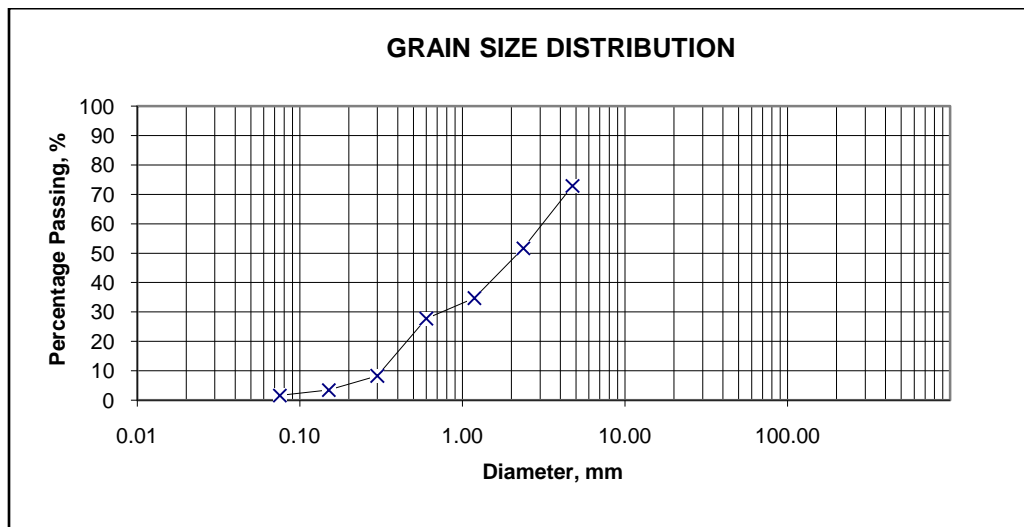


<b>D10(mm)</b>	0.19
<b>D30(mm)</b>	0.95
<b>D60(mm)</b>	2.2
<b>Uniformity Coefficient(CU)</b>	11.58
<b>Coefficient of Gradient (CG)</b>	2.16

**Table No.4.2.5: Sieve Analysis of Ward No.5C, Manbhawan**

Test Sieve Sizes mm	Mass Retained gm.	Cumu. Mass. Retained gm.	Cumulative Retained %	Total Passing %
4.75	242.4	242.4	27.05	72.95
2.36	190.2	432.6	48.27	51.73
1.18	152.4	585.0	65.28	34.72
0.600	62.8	647.8	72.28	27.72
0.300	174.6	822.4	91.77	8.23
0.150	42.4	864.8	96.50	3.50
0.075	16.6	881.4	98.35	1.65
PAN	14.8	896.2	100.00	
Total	896.2			

**Fig.4.2.5: Curve of Sieve Analysis of Ward No.5C, Manbhawan**

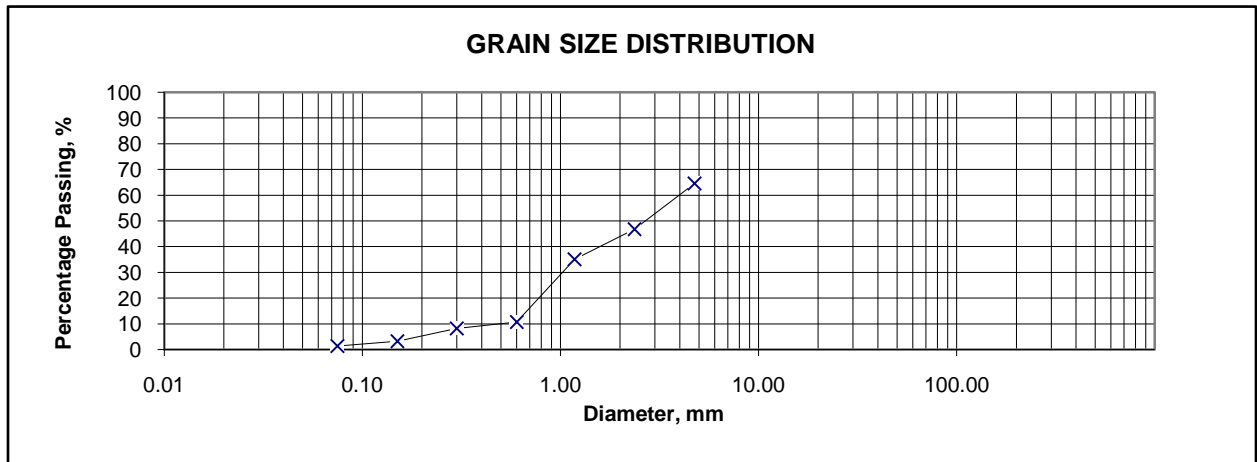


<b>D10(mm)</b>	0.3
<b>D30(mm)</b>	0.7
<b>D60(mm)</b>	3
<b>Uniformity Coefficient(CU)</b>	10.00
<b>Coefficient of Gradient (CG)</b>	0.54

**Table No.4.2.6: Sieve Analysis of Ward No.5I, Jawalakhel**

Test Sieve Sizes mm	Mass Retained gm.	Cumu. Mass. Retained gm.	Cumulative Retained %	Total Passing %
4.75	440.6	440.6	35.46	64.54
2.36	221.56	662.2	53.28	46.72
1.18	144.84	807.0	64.94	35.06
0.600	302.58	1109.6	89.29	10.71
0.300	31.04	1140.6	91.79	8.21
0.150	62.28	1202.9	96.80	3.20
0.075	22.86	1225.8	98.64	1.36
PAN	16.94	1242.7	100.00	
Total	1242.7			

**Fig.4.2.6: Curve of Sieve Analysis of Ward No.5I, Jawalakhel**

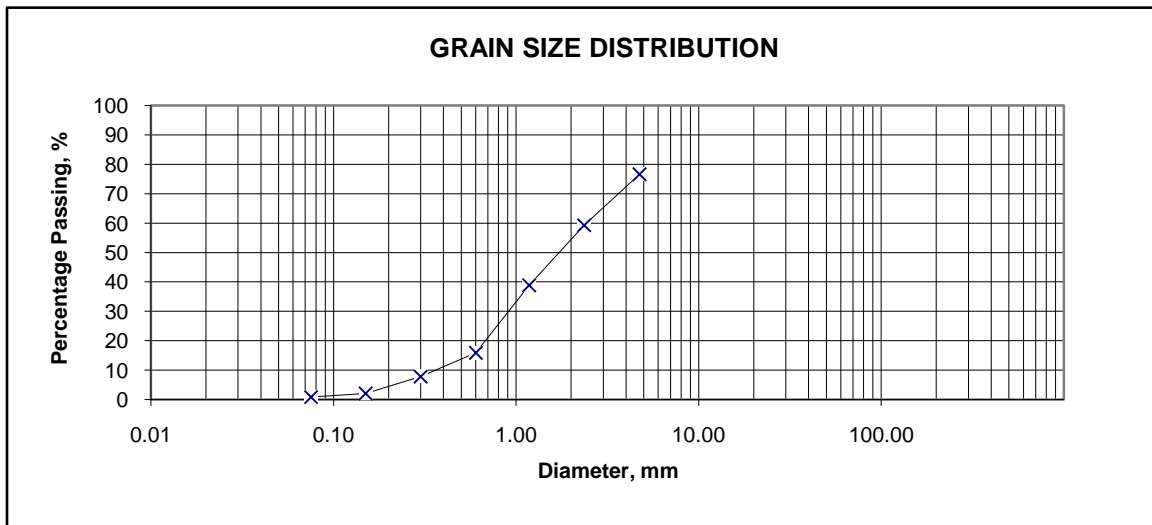


<b>D10(mm)</b>	0.6
<b>D30(mm)</b>	1.1
<b>D60(mm)</b>	4
<b>Uniformity Coefficient(CU)</b>	6.67
<b>Coefficient of Gradient (CC)</b>	0.50

**Table No.4.2.7: Sieve Analysis of Ward No.10E, Jwagal**

Test Sieve Sizes mm	Mass Retained gm.	Cumu. Mass. Retained gm.	Cumulative Retained %	Total Passing %
4.75	198.8	198.8	23.39	76.61
2.36	146.66	345.5	40.64	59.36
1.18	174.24	519.7	61.13	38.87
0.600	195.24	714.9	84.10	15.90
0.300	68.22	783.2	92.13	7.87
0.150	49.48	832.6	97.95	2.05
0.075	9.62	842.3	99.08	0.92
PAN	7.86	850.1	100.00	
Total	850.1			

**Fig.4.2.7: Curve of Sieve Analysis of Ward No.10E, Jwagal**

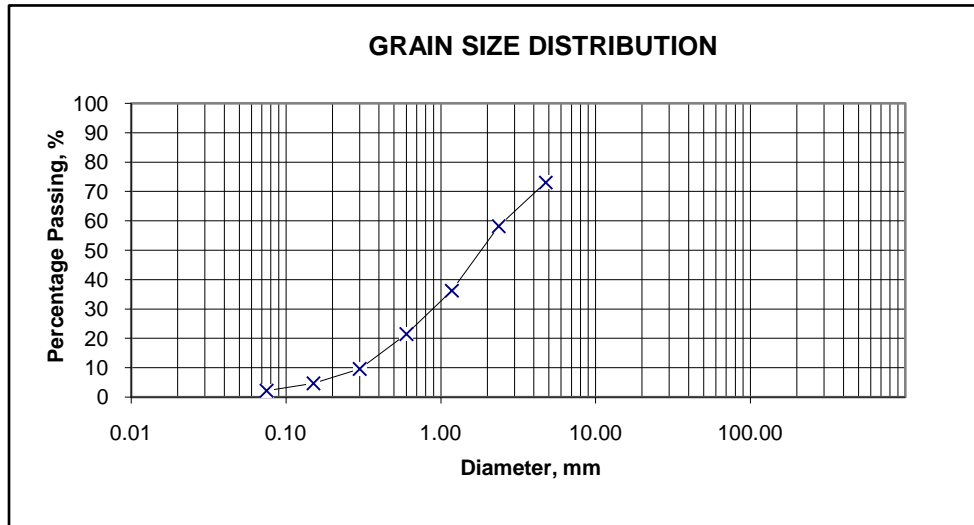


<b>D10(mm)</b>	0.35
<b>D30(mm)</b>	0.9
<b>D60(mm)</b>	2.3
<b>Uniformity Coefficient(CU)</b>	6.57
<b>Coefficient of Gradient (CC)</b>	1.01

**Table No.4.2.8: Sieve Analysis of Ward No.10F, Jwagal**

Test Sieve Sizes mm	Mass Retained gm.	Cumu. Mass. Retained gm.	Cumulative Retained %	Total Passing %
4.75	214.7	214.7	26.89	73.11
2.36	119.78	334.5	41.89	58.11
1.18	174.34	508.8	63.72	36.28
0.600	118.94	627.8	78.61	21.39
0.300	94.92	722.7	90.50	9.50
0.150	38.92	761.6	95.37	4.63
0.075	20.06	781.7	97.89	2.11
PAN	16.88	798.5	100.00	
Total	798.5			

**Fig.4.2.8: Curve of Sieve Analysis of Ward No.10F, Jwagal**

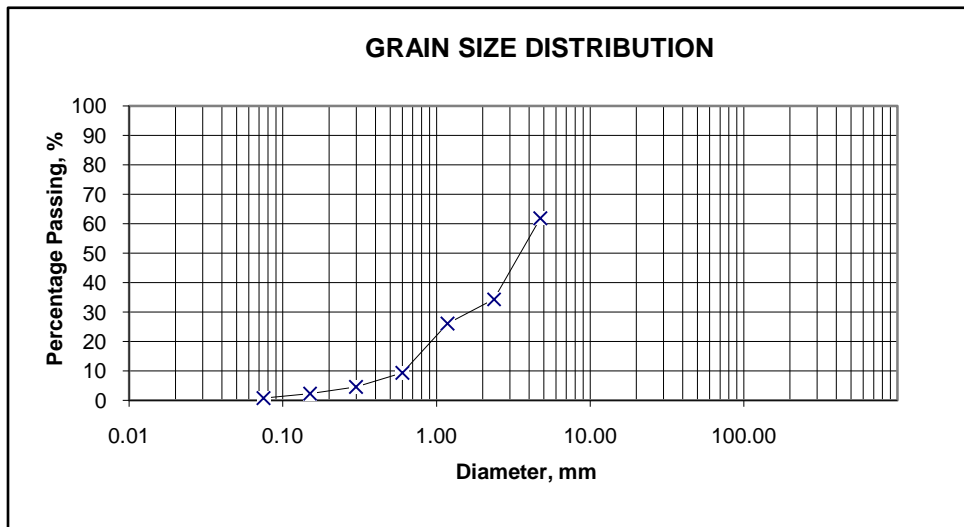


<b>D10(mm)</b>	0.3
<b>D30(mm)</b>	0.9
<b>D60(mm)</b>	2.4
<b>Uniformity Coefficient(CU)</b>	8.00
<b>Coefficient of Gradient (CG)</b>	1.1250

**Table No.4.2.9: Sieve Analysis of Ward No.13E, Kusunti**

Test Sieve Sizes mm	Mass Retained gm.	Cumu. Mass. Retained gm.	Cumulative Retained %	Total Passing %
4.75	343.24	343.2	38.16	61.84
2.36	246.8	590.0	65.60	34.40
1.18	74.74	664.8	73.91	26.09
0.600	150.6	815.4	90.65	9.35
0.300	43.36	858.7	95.47	4.53
0.150	20.32	879.1	97.73	2.27
0.075	13.3	892.4	99.21	0.79
PAN	7.12	899.5	100.00	
Total	899.5			

**Fig.4.2.9: Curve of Sieve Analysis of Ward No.13E, Kusunti**

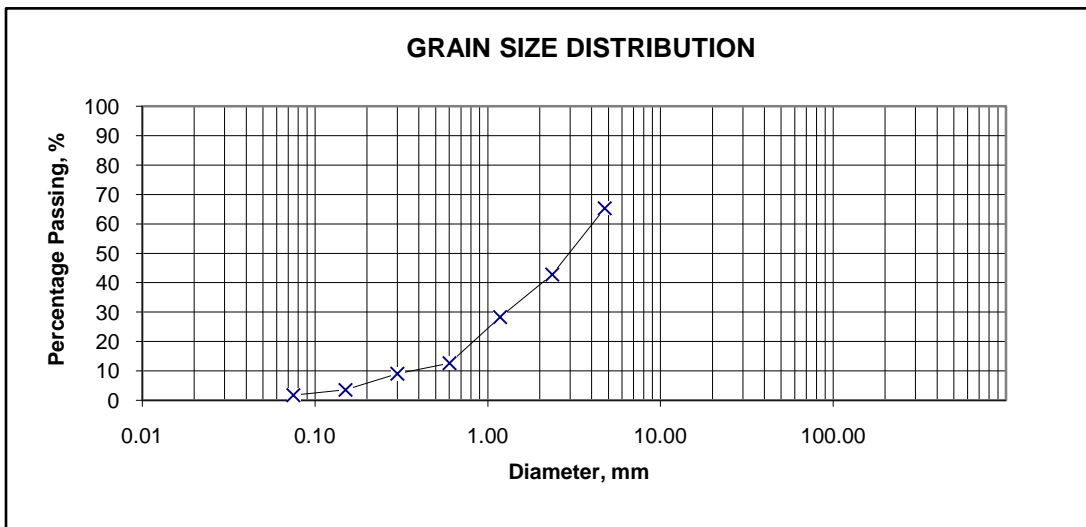


<b>D10(mm)</b>	0.6
<b>D30(mm)</b>	1.7
<b>D60(mm)</b>	4.7
<b>Uniformity Coefficient(CU)</b>	7.83
<b>Coefficient of Gradient (CG)</b>	1.02

**Table No.4.2.10: Sieve Analysis of Ward No.15B, Lagankhel**

Test Sieve Sizes mm	Mass Retained gm.	Cumu. Mass. Retained gm.	Cumulative Retained %	Total Passing %
4.75	313.2	313.2	34.74	65.26
2.36	202.74	515.9	57.23	42.77
1.18	130.52	646.5	71.71	28.29
0.600	141.08	787.5	87.36	12.64
0.300	32.56	820.1	90.97	9.03
0.150	48.78	868.9	96.38	3.62
0.075	16.96	885.8	98.26	1.74
PAN	15.66	901.5	100.00	
Total	901.5			

**Fig.4.2.10: Curve of Sieve Analysis of Ward No.15B, Lagankhel**

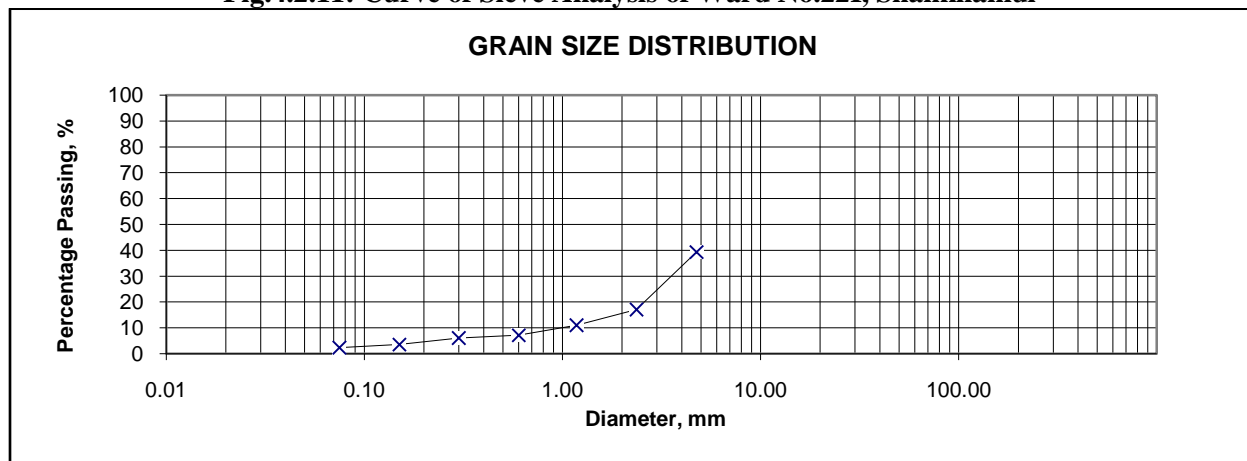


<b>D10(mm)</b>	0.3
<b>D30(mm)</b>	1.1
<b>D60(mm)</b>	4
<b>Uniformity Coefficient(CU)</b>	13.33
<b>Coefficient of Gradient (CG)</b>	1.01

**Table No.4.2.11: Sieve Analysis of Ward No.22I, Shankhamul**

Test Sieve Sizes mm	Mass Retained gm.	Cumu. Mass. Retained gm.	Cumulative Retained %	Total Passing %
4.75	848.32	848.3	60.59	39.41
2.36	312.48	1160.8	82.91	17.09
1.18	85.36	1246.2	89.01	10.99
0.600	52.36	1298.5	92.75	7.25
0.300	16.74	1315.3	93.95	6.05
0.150	33.64	1348.9	96.35	3.65
0.075	18.5	1367.4	97.67	2.33
PAN	9.62	1377.0	98.36	
Total	1377.0			

**Fig.4.2.11: Curve of Sieve Analysis of Ward No.22I, Shankhamul**



<b>D10(mm)</b>	1.2
<b>D30(mm)</b>	3.5
<b>D60(mm)</b>	9.5
<b>Uniformity Coefficient(CU)</b>	7.92
<b>Coefficient of Gradient (CG)</b>	1.07

**ANNEX V**

**List of Ward Numbers with their Location Areas**

**Table No. 5.1.****List of Ward Numbers with their Location Areas**

<b>S.No.</b>	<b>Ward No.</b>	<b>Location No.</b>	<b>Location Area</b>	<b>Remarks</b>
1.	1	1A	Gusingal	
		1B	Gusingal	
		1C	Kupondol, Right side of Nightingale School	
		1D	Gusingal	
		1E	Kupondol, Near Nightingale School	
2.	2	2A	Saachal,Sanepa,Near Radient School	
		2B	Saachal,Sanepa	
		2C	Sanepa,100m from Kaalopul due NE	
		2D	Sanepa, Opp. Of Ram Mandir	
		2E	Rajtirtha, Sanepa	
		2F	Gusingal,100m due East from Ram Mandir	
		2G	Nursing Campus, Sanepa	
		2H	Kupondol,Sanepa,near Champion School	
		2I	Sanepa, Kupondol	
3.	3	3A	Krishna Galli, Patandhoka	
		3B	Jawalakhel(st.merits school's op. house)	
		3C	Royal Nepal Army, Jhemsikhel	
		3D	Karmacharya Sanchaya Kosh	
		3E	Pulchowk,UNDP	
		3F	Water induced disaster prevention Technical center, Pulchowk	
		3G	Improvement of the Transportation capacity, Hariharbhawan , Sajha bus park	
		3H	Thado Dhunga, Dhobichaur	
		3I	UN Habitat Office, Jhamsikhel	
		3J	Jawalakhel, Buspark of St.merits	
		3K	Jhamsikhel, pulchowk	
		3L	Jawalakhel(Samata Foundation's ;left line pink house)	
		3M	Jhamsikhel	
3N	Jhamsikhel			
4.	4	4A	Bagdol	
		4B	Jawalakhel ( near DAV school)	
		4C	Dhobighat,near Himalayan Intl. School	
		4D	Jawalakhel,Behind of Zoo (red house)	
		4E	Jawalakhel,Surya Children Welfare Service centre	
		4F	Jawalakhel( in betn St.xavier and zoo )	
		4G	Dhobighat	

5.	5	5A	Kumaripati(United Academy )	
		5B	Manbhawan(just opp. Of Welhams College )	
		5C	Lagankhel(Patan hospital's gate)	
		5D	Lagankhel,Sajha Bhawan	
		5E	Jawalakhel(staff college)	
		5F	Patan hospital, patan	
		5 G	Nepal Bayarn electric ,Patandhoka	
		5H	Thasikhel (near Mount Valley School)	
		5I	Jawalakhel(opp.of irrigation office)	
		5J	Manbhawan (Sahara Girls Hostel)	
		5K	Mahalaxmasthan(himal finance)	
		5L	Lagankhel,Mahalaxmasthan	
6.	6	6A	Thaina(Thapahiti) near stone dhara	
		6 B	Thaina(Thapahiti), brick paved area	
		6C	Jyakha bahal	
		6 D	Kani bahal	
7.	7	7A	Sundhara	
		7B	Guji Bahal	
		7C	Guji Bahal	
		7 D	Chalachhen	
8.	8	8A	Guitol	
		8B	Twaye Bahal	
		8C	Twaye Bahal	
9.	9	9A	Lo:la	
		9B	AKASH BHAIRAB	
		9 C	LO:LA	
		9 D	Gachhen (Near Pokhari )	
		9 E	Saptakhel	
		9 F	Ghachhen Choka	
		9 G	Kobahal(Tadanani)	
		9 H	Kobahal(Tadanani)	
		9 I	Kobahal(Tadanani)	
		9 J	Kobahal( Tadanani )	
		9 K	Gachhen (Near a well)	
		9 L	Banglamukhi,Near Table Tennis board	
10.	10	10A	Jwagal,UN PARK	
		10B	Engineering campus, Pulchowk	
		10C	Kupondol, Setodegal	
		10D	Kupondol,	
		10E	Jwagal, Kupondol	
		10F	Jwagal, Kupondol	
		10G	Jakkupat	
		10 H	Kupondol	
11.	11	11A	Bilachhen	
		11B	Adarsha kanya	

		11 C	Kuti Jaugal	
		11 D	Chhushika	
12.	12	12A	Ha:kha Tole	
		12B	Chakra Bayal	
		12C	Prayag Pokhari	
		12 D	Prayag Pokhari	
		12 E	Kobahal, Tadanani	
13.	13	13A	Kusunti(just opp. Of west gate of Yatayat Building)	
		13B	Ekantakuna( Mahendra Bhrikuti Ma.Vi.)	
		13C	Ekata Tole or Khadka tole ( Ekantakuna)	
		13D	Ekta Tole (Just opp. Of a School)	
		13E	Kusuti( ward office open area)	
		13F	Kusunti( opp. Of yatayat office)	
		13G	Kusunti	
14.	14	14A	Thasikhel, Landmark school	
		14 B	Thasikhel(near ring road)	
		14C	Kusunti(near Koshi gas )	
15.	15	15A	Nepal sports council, vii safe games ,Satdobato	
		15B	Namna Machhindra School, Lagankhel	
		15C	Lagankhel (BatukBhairab Mandir)	
		15 D	Dipawali Marg	
		15 E	Dhalot Office(Dipawali Marg)	
		15 F	Satdobato (Nalanda)	
16.	16	16 A	Nyakha chhuka( inside Bihar)	
		16 B	Ward no.16, near a school	
		16 C	Elanani	
		16 D	Nag Bahal	
		16 E	Nyakha Chhuka (at Garden )	
17.	17	17A	B and B nursing Campus,gwarko	
		17 B	Sundhara	
		17 C	NITI office,	
		17D	Gyagal	
18.	18	18A	Dhau Bahal	
		18B	Mahapal, Naunani	
		18 C	Hastinagal Mahabihar	
19.	19	19 A	Ikha Tole	
		19 B	Agni sala	
		19 C	Agni shal	
		19 D	Mahendra Bahal	
		19 E	Itachhen	
		19 F	Iku Bahal	
		19 G	Itapokhari	
20.	20	20A	Na:Tole ( Gyan Sikha School)	

		20B	Na:Tole ( Baal Binod Ma.Vi.)	
		20 C	Purnachandi	
		20 D	Purnachandi	
21.	21	21A	Buddhi Sarada School, Pulchowk,Na:tole	
		21B	Gabahal ( Mari pasal's opp. Side)	
22.	22	22A	Banglamukhi, Gahiti	
		22B	Talachhen	
		22C	Talachhen	
		22D	Thapahiti	
		22E	Malido	
		22F	Tallo chakupat	
		22G	Ikha chhen	
		22 H	Chakupat, Bagallo	
		22 I	Shankhamul,Alko	