EAST DRILLING COMPANY (P) LTD.

BORE HOLE LOG

KULEKHANI-3 HYDROELECTRIC POWER PROJECT

DRILL HOLE NO.: BD-4
COORDINATES; 3040889.416 N, 602335.992 E
DRILLING MACHINE: KOKEN
DRILLING METHOD: ROTARY

START DATE: 10/04/2002
COLLAR ELEVATION:562.083m
ELEVATION HOLE END:512.083 m
LOCATION: YANGRANG KHOLA
INCLINATION: VERTICAL

Core Recovery
RQD%

Depth, m	Barrel Size	Core Log	Description	Water Level m	Alteration	Orientation	Roughness	Joint/R cm	REC%	RQD%	Permeability	Results: LU	Results: kg/cm2 (Laboratory)
30.00	66 mm		W1, strong hard, greenish to dard grey fine grain, laminated, highly jointed and fragmented phyllitic dolomite and phyllite with quartz vein.		FeS	30° 50°	ir	10	100	0			
31.00			W1, medium to strong hard, dark to light grey, fine grain, laminated fragmented phyllite with quartz vein.			30° 50°	ir	8	100	0			
32.00			W1, strong hard, light grey, fine grain laminated, moderately jointed and fragmented phyllite and dolomite with Quartz vein.	10		30° 50°	ir	11	100	33			
33.00			WI-W2, strong hard, light grey, fine grain, moderately jointed and fragmented dolomite.			20° 50°	ir	10	100	16			
34.00			WI-W2, strong hard, light grey, fine grain, moderately jointed and fragmented dolomite with Quartz vein. Core loss : 34.78 to 35.00 m			30° 60°	ir	7	78	0			
35.00			Total core loss soft and laminated phyllite crushed during drilling . Sludge as fine grain, dark grey. Core loss : 35.00 to 36.00 m			0	0	0					
36.00			W1, medium to strong hard, dark grey, fine grain, laminated phyllite Core loss : 36.00 to 36.65 m			60°	ir	6	47	0			
37.00			W1-W3, medium to strong hard, dark grey, fine grain, laminated phyllite with Quartz vein. Core loss : 37.46 to 37.80 m			30° 50°	ir	6	66	0			
38.00			W1-W3, medium to strong hard, light to dark grey, fine grain, laminated and moderately jointed phyllitic dolomite with pyrite MB : 38.17 m	9.6		20° 50°	ir	8	100	30			
39.00			W1, strong hard, light grey, fine grain, highlly jointed and fragmented dolomite. Soft rock crush during drill. Core loss : 39.00 to 39.47 m			50°	ir	5	53	0			
40.00													

ABBREVIATION rough=r, smooth=s, slickensided=sl, un=undulating, pl=planar, clay=cl, sand=sa, mica=mi, crushed=cr, iron stain=FeO
Zone, MB=Mechanical Breakage, W1=Fresh, W2=slightly Weathered, W3=Moderately Weathered, W4=Highly Weathered, W5=Decomposed.
FZ= Fractured, CL= Core loss

Drilled by: MAN Bdr. MAGAR

EAST DRILLING COMPANY (P) LTD.

BORE HOLE LOG

KULEKHANI-3 HYDROELECTRIC POWER PROJECT

DRILL HOLE NO.: BD-4
COORDINATES; 3040889.416 N, 602335.992 E
DRILLING MACHINE: KOKEN
DRILLING METHOD: ROTARY

START DATE: 10/04/2002
COLLAR ELEVATION:562.083m
ELEVATION HOLE END:512.083 m
LOCATION: YANGRANG KHOLA
INCLINATION: VERTICAL

Depth, m	Barrel Size	Core Log	Description	Water Level m	Alteration	Orientation	Roughness	Joint/ft cm	REC%	RQD%	Core Recovery / RQD%	Results: Permeability	Results: Laboratory (LU / kg/cm2)
40.00	66mm		W1, strong khard, light kto dark grey, fine grain, laminated, jighly jointed and fragmented phyllitic dolomite			30° 50°	ir	10	100	0			
41.00			W1, strong hard, light to dark grey, fine grain, moderately jointed dolomite. Core loss : 41.00 to 41.41 m	10.24		30° 60°	ir	8	59	10			
42.00			W1, strong hard, light to dark grey, fine grain, lighly jointed and fragmented dolomite. Sludge of light grey, fine grain sand and found. Core loss : 42.38 to 43.00 m			10° 40°	ir	4	38	0			
43.00			W1, strong hard, light to dark grey, fine grain, dolomite. Sludge of light grey, fine grain sand. Core loss : 43.00 to 43.93 m			20° 50°	ir	3	7	0			
44.00			W1, strong hard, light grey, fine grain, highly jointed and fragmented dolomite.	9.7		20° 50°	ir	12	100	0			
44.50			W1, strong hard, sight grey, fine grain, thin bedded, highly jointed and fragmented dolomite.			20° 40°	ir		100	0			
45.00			W1, strong hard, light grey to greenish fine grain, highly jointed and fragmented dolomite. Sludge of light grey, fine grain sand. Core loss : 45.00 to 45.88 m			10° 50°	ir	5	12	0			
46.00			Total core loss. Soft rock are crushed and sludge as greenish grey, fine grain sand are found Core loss : 46.00 to 47.00 m			-	-	-	0	0			
47.00			W1-W2, medium to strong hard, light and dark grey to greenish, fine grain, laminated phyllite with Quartz vein. Sludge of dard to greenish grey sand. Core loss : 47.00 to 47.60 m	10.1		20° 40°	ir	5	40	0			
48.00			W1-W2, medium hard, dark grey to jointed phyllite. Sludge of greenish grey, fine grain sand are found. Core loss : 48.00 to 48.46 m	10.1		20° 50°	ir	6	54	0			
49.00			W1-W2, medium hard, dark to greenish grey, fine grain, laminated, jointed and fragmented phyllite with Quartz vein.			20° 30° 50°	ir	6	100	0			
50.00													

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Drilled by: MAN Bdr. MAGAR

EAST DRILLING COMPANY (P) LTD.

BORE HOLE LOG

KULEKHANI-3 HYDROELECTRIC POWER PROJECT

DRILL HOLE NO.: BD-5
COORDINATES: 3040890.036 N, 602325.161 E
DRILLING MACHINE: KOKEN
DRILLING METHOD: ROTARY

START DATE: 12/03/2002
COLLAR ELEVATION: 551.98 m
ELEVATION HOLE END:501.98 m
LOCATION: YANG RANG KHOLA
INCLINATION: VERTICAL

Depth, m	Barrel Size	Core Log	Description	Water Level m	Alteration	Orientation	Roughness	Joint/R cm	Core Recovery REC%	RQD%	RQD% 20	40	60	80	100	Results Permeability LU	Laboratory kg/cm2
0.00																	
	NX		Initially alluvium of coarse grain sand and cobble, pebble and boulder size, W1-W2, dark grey, fine grain phyllitie dolomite	0.28					100	0							
1.00																	
	76mm		Alluvium deposition of coarse grain sand and boulder of W1, white to light grey, fine grain phyllitie dolomite	0.25					48	0							
2.00																	
			Alluvium deposition of boulder size, W1-W2, white to dark grey, fine grain phyllitiedolomite. Sludte of medium grain sand found.	0.25					55	0							
3.00																	
	76mm		Aluvium depositio of cobble boulder size, W1-W2, white to dark grey, fine grain, phyllitie dolomite. Soft phyllite comes as sludge.	0.3					27	0							
4.00																	
			Alluvium deposition of boulder size, W1, dark grey, fine grain phyllite. Crush rocks comes as sludge.						50	0							
5.00																	
			Alluvium deposition of boulder size, W1, dark grey, fine grain laminated phyllite. Soft rock crush and comes as sludge.						24	0							
6.00																	
			Alluvium deposition sludge of fine grain sand are found. Soft phyllite crush during drill.						0	0							
7.00																	
			Alluvium deposition of boulder, W1, light to dark grey, fine grain, laminated, fractured phyllite.						51	0							
8.00																	
	66mm		Alluvium deposition of boulder, W1-W2, dark grey, fine grain, laminated phyllitie dolomite						29	0							
9.00																	
			Alluvium deposition of boulder, W1-w2, dark grey, fine grain, laminated phyllitie dolomite sludge is collected.						5	0							
10.00																	

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Zone, MB=Mechanical Breakage, W1=Fresh, W2=slightly Weathered, W3=Moderately Weathered, W4=Highly Weathered, W5=Decomposed.
FZ= Fractured, CL= Core loss

Drilled by: KAMAL BHANDARI

EAST DRILLING COMPANY (P) LTD.

BORE HOLE LOG

KULEKHANI-3 HYDROELECTRIC POWER PROJECT

DRILL HOLE NO.: BD-5
COORDINATES: 3040890.036 N, 602325.161 E
DRILLING MACHINE: KOKEN
DRILLING METHOD: ROTARY

START DATE: 12/03/2002
COLLAR ELEVATION: 551.98 m
ELEVATION HOLE END:501.98 m
LOCATION: YANG RANG KHOLA
INCLINATION: VERTICAL

Depth, m	Barrel Size	Core Log	Description	Water Level m	Alteration	Orientation	Roughness	Joint/R cm	Core Recovery REC%	RQD%	Results Permeability LU	Results Laboratory kg/cm2
10.00	66mm		Run of 87cm is soft rock & fractured phyllite that is collected as sludge. Bed Rock started from 10.87 m that is W1, strong hard, white, fine grain, fractured dolomite with quartz.	0.24		5° 65°	ir	4	23	0		
11.00			W1, strong hard, light grey, fine grain, highly fractured dolomite white sludge are found of soft rock. Core loss : 11.00 to 11.32m			5° 60°	ir	4	40	11		
12.00			W1, strong hard, light grey, crystolline lamina, jointed and fractured phyllitie dolomite Core loss : 12.58 to 12.72m			5° 20° 65°	ir	12	82	18		
13.00			W1, strong hard, light grey, fine grain, crystolline, jointed and fragmented dolomite Core loss : 13.60 to 13.78m			30° 40° 50°	ir	13	82	0		
14.00			W1, strong hard, light grey, fine grain crystolline, fractured and fragmented dolomite	0.00		20° 40°	ir	11	100	10		
15.00			W1, strong hard, light grey, fine grain, crystolline, highly jointed and fragmented dolomite.	0.00		5° 20° 40°	ir	17	100	10		
16.00			W1, strong hard, light grey, fine grain, crystolline, highly jointed and fragmented ddomite with mica, quartz CL: 16.23 to 16.95m			10° 20° 30°	ir	10	28	0		
17.00			W1, strong hard, light grey, crystolline highly jointed and fragmented dolomite with mica, quartz.Core loss : 17.26 to 17.49m			20° 30° 50°	ir	14	77	0		
18.00			W1, strong hard, light grey, fine grain, crystolline, highly jointed and fragmented phyllitie dolomite with mica, Quartz vein Core loss : 18.46 to 18.89m	0.00		5° 15°	ir	11	57	0		
19.00			W1, strong hard, light to dark grey, fine grain, crystolline, jointed and fragmented dolomite with mica, quartz and pyrite mineral. CLore loss : 19.17 to 19.74m	0.00		20° 40° 60°	ir	10	43	10		
20.00												

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Zone, MB=Mechanical Breakage, W1=Fresh, W2=slightly Weathered, W3=Moderately Weathered, W4=Highly Weathered, W5=Decomposed.
FZ= Fractured, CL= Core loss

Drilled by: KAMAL BHANDARI

EAST DRILLING COMPANY (P) LTD.

BORE HOLE LOG

KULEKHANI-3 HYDROELECTRIC POWER PROJECT

DRILL HOLE NO.: BD-5
COORDINATES: 3040890.036 N, 602325.161 E
DRILLING MACHINE: KOKEN
DRILLING METHOD: ROTARY

START DATE: 12/03/2002
COLLAR ELEVATION: 551.98 m
ELEVATION HOLE END:501.98 m
LOCATION: YANG RANG KHOLA
INCLINATION: VERTICAL

Depth, m	Barrel Size	Core Log	Description	Water Level m	Alteration	Orientation	Roughness	Joint/R cm	Core Recovery REC%	RQD%	Results LU	Results kg/cm2 Permeability	Laboratory
20.00	66mm		W1, strong hard, light grey, crystolline moderately jointed dolomite with mica parting.	0		30° 40° 60°	ir	12	100	64			
21.00			W1, strong hard, light grey, fine grain, crystolline, dolomite with quartz, pyrite mineral. M.B : 21.13 m.			20° 40° 60°	ir	7	100	66			
22.00			Total core loss highly jointed rock is crushed and found as sludge during drill. Core loss : 22.00 to 23.00 m.			-	-	0	0	0			
23.00			W1, strong hard, light to dark grey, fine grain, crystolline, highly jointed and fragmented phyllitic dolomite with mica, Quartz and pyrite mineral.	0		10° 15° 30°	ir	11	100	0			
24.00			W1, strong hard, light to dark grey, fine grain, laminated, jointed and fragmented phyllitic dolomite with mica, Quartz Core loss : 24.50 to 24.78 m.			20° 30°	ir	8	72	0			
25.00			W1, strong hard, light to dark grey, fine grain, laminated, highly jointed and fragmented phyllitic dolomite Core loss : 25.35 to 25.77 m.			30° 40°	ir	7	58	0			
26.00			W1, strong hard, light grey, fine grain, highly jointed and fragmented dolomite with mica. Core loss : 26.25 to 26.84 m.	0		20° 30° 50°	ir	7	41	0			
27.00			W1, strong hard, light grey, fine grain, highly jointed dolomite. Core loss : 27.23 to 27.84 m.			20° 55°	ir	6	49	0			
28.00			W1, strong hard, light to dark grey, fine grain, highly jointed and fragmented dolomite.			20° 50°	ir	13	100	0			
29.00			W1, strong hard, light to dark grey, fine grain, highly jointed and fragmented dolomite. Core loss : 29.67 to 29.92 m.	0		10° 50°	ir	9	76	0			
30.00													

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FZ= Fractured, CL= Core loss

Drilled by: KAMAL BHANDARI

EAST DRILLING COMPANY (P) LTD.

BORE HOLE LOG

KULEKHANI-3 HYDROELECTRIC POWER PROJECT

DRILL HOLE NO.: BD-5
COORDINATES: 3040890.036 N, 602325.161 E
DRILLING MACHINE: KOKEN
DRILLING METHOD: ROTARY

START DATE: 12/03/2002
COLLAR ELEVATION: 551.98 m
ELEVATION HOLE END:501.98 m
LOCATION: YANG RANG KHOLA
INCLINATION: VERTICAL

Depth, m	Barrel Size	Core Log	Description	Water Level m	Alteration	Orientation	Roughness	Joint/R cm	Core Recovery REC%	RQD%	Results LU	Results kg/cm2
30.00	66mm		W1, strong hard, dard to light grey, fine grain, jointed and fragmented dolomite with Quartz vein. Core loss : 30.43 to 30.84 m.	0.0		20° 40° 60°	ir	10	59	0	Permeability	Laboratory
31.00			W1, strong hard, light grey, fine grain dolomite with Quartz vein. Core loss due to highly jointed. Core loss : 31.00 to 31.93 m.					0	7	0		
32.00			W1, strong hard, light to dark grey, fine grain, crystolline, highly jointed and fragmented dolomite with Quartz. Core loss : 32.20 to 32.60 m.			10° 40°	ir	7	60	0		
33.00			W1, strong hard, light to dard grey, fine grain dolomite with Quartz vein.	0.0		10° 50°	ir	9	100	40		
34.00			W1, strong hard, light to dark grey, fine grain dolomite with Quartz vein.			20° 50°	ir	12	100	41		
35.00			W1, strong hard, light to dark grey, fine grain, dolomite with Quartz vein.			20° 60°	ir	14	100	18		
36.00			W1, strong hard, light to dark grey, fine grain dolomite with Quartz vein.			20° 50°	ir	16	100	19		
37.00			W1, medium to strong hard, dark grey fine grain, highly jointed, fragmented phyllitic dolomit. Core loss : 37.64 to 38.00 m.	0.0		10° 20° 50°	ir	14	64	0		
38.00			W1, strong hard, light grey, fine grain highly jointed, laminated phyllitic dolomite with mica, Quarz vein. Core loss : 38.00 to 38.62 m.			5° 20° 50°	ir	8	38	13		
39.00			W1, soft to medium hard, light grey to greenish grey, fine grain, highly jointed phyllitic dolomite and phyllite. Core loss : 39.25 to 39.83 m.			20° 30° 40°	ir	9	42	0		
40.00												

RQD% 20 40 60 80 100

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Drilled by: KAMAL BHANDARI

EAST DRILLING COMPANY (P) LTD.

BORE HOLE LOG

KULEKHANI-3 HYDROELECTRIC POWER PROJECT

DRILL HOLE NO.: BD-5
COORDINATES: 3040890.036 N, 602325.161 E
DRILLING MACHINE: KOKEN
DRILLING METHOD: ROTARY

START DATE: 12/03/2002
COLLAR ELEVATION: 551.98 m
ELEVATION HOLE END:501.98 m
LOCATION: YANG RANG KHOLA
INCLINATION: VERTICAL

Depth, m	Barrel Size	Core Log	Description	Water Level m	Alteration	Orientation	Roughness	Joint/R cm	REC%	RQD%	Core Recovery RQD% 20 40 60 80 100	Results: Permeability	Results: Laboratory
40.00	66mm		W1, soft to medium hard, light grey to greenish grey, fine grain, highly jointed phyllitec dolomite and phyllite Core loss : 40.39 to 41.00 m.	0.0		20° 50°	ir	8	39	0			
41.00			W1, soft to medium hard, greenish grey to dark grey, fine grain, laminated phyllite. Core loss : 41.19 to 41.66 m.			20° 40°	ir	10	53	0			
42.00			Total core loss due to soft rock crushed during drill. Core loss : 42.00 to 43.00 m.	0.0		-	-	0	0	0			
43.00			W1-W2, soft to medium hard, dark grey, fine grain, laminated phyllite with Quartz vein. Core loss : 43.00 to 43.86 m.			50°	ir	5	14	0			
44.00			W1, medium to strong hard, dark to greenish grey, fine grain, laminated phyllite. Core loss : 44.00 to 44.60 m.			10° 30° 50°	ir	8	40	0			
45.00			W1, medium to strong hard, light to dark grey, fine grain, laminated phyllite Core loss : 45.44 to 46.00 m.			20° 50°	ir	7	41	0			
46.00			W1, strong hard, dard grey, fine grain, laminated, highly jointed phyllitic dolomite. Core loss : 46.46 to 46.95 m.	0.0		10° 20° 50°	ir	10	51	0			
47.00			W1, medium to strong hard, greenish to dark grey, fine gain, laminated phyllite Core loss : 47.14 to 47.62 m.			20° 30°	ir	6	52	0			
48.00			W1, medium to strong hard, dark to greenish grey, laminated, jointed and fragmented phyllitic dolomite and phyllite with Quartz vein Core loss : 48.39 to 48.84 m.	0.0		20° 60°	ir	8	55	10			
49.00			W1, strong hard, light to dark grey, fine grain, laminated, jointed phyllitic dolomite Core loss : 49.68 to 49.88 m.	0.0		20° 50°	ir	14	80	13			
50.00													

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FZ= Fractured, CL= Core loss

Drilled by: KAMAL BHANDARI

EAST DRILLING COMPANY (P) LTD.

BORE HOLE LOG

KULEKHANI-3 HYDROELECTRIC POWER PROJECT

DRILL HOLE NO.: BD-6
COORDINATES: 3040889.407 N, 602302.205 E
DRILLING MACHINE: KOKEN
DRILLING METHOD: ROTARY

START DATE: 12/03/2002
COLLAR ELEVATION:561.085 m
ELEVATION HOLE END:521.085 m
LOCATION: YANG RANG KHOLA
INCLINATION: VERTICAL

Depth, m	Barrel Size	Core Log	Description	Water Level m	Alteration	Orientation	Roughness	Joint/R cm	Core Recovery REC%	RQD%	Results Permeability	Results Laboratory
0.00	NX		Colluvium deposition of coarse grain sand, gravel, W1-W2, light grey, fine grain phyllitie dolomite	0.0					51			
1.00												
1.50			Colluvium deposition of coarse graine sand and boulder size, W2-W3, dark grey, fine grain phyllitie dolomite						40			
2.00												
2.50			Colluvium deposition of cobble, pebble and boulder size, W1, greenish, fine grained, laminated, fractured phyllitie dolomite						86			
3.00												
3.50			Colluvium deposition of fine grained sand and cobble, boulder size, W1-W2, light to dark grey, fine grain, fractured phyllitie dolomite						61			
4.00												
4.50			Clluvium deposition of medium to fine grain sand and cobble, boulder size, W1-W2, light grey to white, fine grain, laminated pyllitie dolomite						33			
5.00												
6.00			Colluvium deposition of fine grained sand and boulder size, W1-W2, light grey, fine grain jointed phyllitie dolomite	0.0					40			
7.00												
7.50			Run of 1.20 m is colluvium deposition of fine to medium grained sand. From 8.70 m bed rock is obserued. W1, strong hard, light to dark grey, fine grained, fractured phyllitie dolomite			10° ir 60°		4	20			
8.00												
9.00			W1, strong hard, light to dark grey, fine grain, jointed and fragmented phyllitie dolomite with mica, Quartz.	7.5		30° ir 65°		10	52			
10.00												

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FZ= Fractured, CL= Core loss

Drilled by: SANJEEV POKHAREL

EAST DRILLING COMPANY (P) LTD.

BORE HOLE LOG

KULEKHANI-3 HYDROELECTRIC POWER PROJECT

DRILL HOLE NO.: BD-6
COORDINATES: 3040889.407 N, 602302.205 E
DRILLING MACHINE: KOKEN
DRILLING METHOD: ROTARY

START DATE: 12/03/2002
COLLAR ELEVATION:561.085 m
ELEVATION HOLE END:521.085 m
LOCATION: YANG RANG KHOLA
INCLINATION: VERTICAL

Depth, m	Barrel Size	Core Log	Description	Water Level m	Alteration	Orientation	Roughness	Joint/R cm	Core Recovery REC%	RQD%	Permeability	Results LU	Results kg/cm2 Laboratory
10.00	NX		W1, strong hard, light to dark grey, fine grained, crystolline, jointed phyllitic dolomite with mica, quartz. Core loss : 10.00 to 10.19m			10° 50° 60°	ir	10	81	57			
11.00			W1, strong hard, light to dark grey, fine grained, fractured and fragmented phyllitic dolomite. CL: 11.14 to 11.36m & 11.68 to 11.92m			10° 30° 40°	ir	8	54	13			
12.00			W1, strong hard, light to dark grey, fine grained, jointed and fragmented phyllitic dolomite with mica, quartz vein.CL : 12.00 to 12.14m &12.37 to 12.60m	6.5		5° 50°	ir	5	63	13			
13.00			W1, strong hard, light to dark grey, fine grain, crystolline, jointed dolomite with Quartz vein. Core loss : 13.07 to 13.28m and 13.51 to 13.92m			20° 50°	ir	7	38	0			
14.00			W1, strong hard, light to dark grey, fine grain, crystolline, highly jointed and fragmented dolomite. Core loss : 14.00 to 14.69m			20° 50°	ir	6	31	0			
15.00			W1, strong hard, light to dark grey, fine grain, crystolline, ighly jointed and fragmented dolomite. Core loss : 15.26 to 15.73m.			20°	ir	4	53	0			
16.00	66		W1, strong hard, light grey, fine grain, highly jointed and fractured dolomite with mica, Quartz and pyrite mineral. Core loss due to highly jointed rock CL :16. to 6.95m						5	0			
17.00			W1, strong hard, light to dark grey, fine grain, highly jointed and fractured phyllitie dolomite with mica, Quartz Core loss : 17.08 to 18.00m.						8	0			
18.00			W1, strong hard, light grey, fine grain jointed and fractured phyllitie dolomite with mica, Quartz and pyrite mineral. Core loss : 18.06 to 19.00m	8.5					6	0			
19.00			W1-W2, medium to strong hard, greenish grey, fine grain, laminated, highly jointed phyllite with mica, Quartz.Core loss : 19.00 to 19.21m & 19.00 to 20.00.	7.5		5° 30° 50°	ir	14	62	0			
20.00													

ABBREVIATION rough=r, smooth=s, slickensided=sl, un=undulating, pl=planar, clay=cl, sand=sa, mica=mi, crushed=cr, iron stain=FeO
Zone, MB=Mechanical Breakage, W1=Fresh, W2=slightly Weathered, W3=Moderately Weathered, W4=Highly Weathered, W5=Decomposed.
FZ= Fractured, CL= Core loss

Drilled by: SANJEEV POKHAREL

EAST DRILLING COMPANY (P) LTD.

BORE HOLE LOG

KULEKHANI-3 HYDROELECTRIC POWER PROJECT

DRILL HOLE NO.: BD-6
COORDINATES: 3040889.407 N, 602302.205 E
DRILLING MACHINE: KOKEN
DRILLING METHOD: ROTARY

START DATE: 12/03/2002
COLLAR ELEVATION:561.085 m
ELEVATION HOLE END:521.085 m
LOCATION: YANG RANG KHOLA
INCLINATION: VERTICAL

Depth, m	Barrel Size	Core Log	Description	Water Level m	Alteration	Alteration	Orientation	Roughness	Joint/R cm	Core Recovery REC%	Core Recovery RQD%	Results LU	Results kg/cm2 Permeability	Results kg/cm2 Laboratory
20.00	NX		W1, medium to strong hard, greenish grey, fine grain, laminated, jointed phyllite with micas. Core loss : 20.00-20.73m.	5.8		-	20° 30°	ir	6	27	0			
21.00			W1, medium to strong hard, greenish grey, fine grain, laminated, jointed phyllite with mica, Quartz vein. Core loss : 21.00 to 21.33m				20° 30°	ir	9	67	14			
22.00			W1, medium to strong hard, greenish grey, fine grain, laminated, jointed phyllite with mica and Quartz vein				10° 30°	ir	9	100	67			
23.00			W1, medium to strong hard, greenish grey, fine grain, laminated, highly jointed phyllite with mica, Quartz. Core loss : 23.23 to 23.78m				10° 30°	ir	8	45	0			
24.00			W1, medium to strong hard, grreenish grey, fine grain, laminated, phyllite with mica Core loss : 24.00 to 24.80m				10° 20°	ir	5	20	0			
25.00			W1, strong hard, greenish grey, fine grain, laminated phyllite with mica quartz.				10° 20°	ir	6	100	63			
26.00			W1, medium to strong hard, greenish grey, fine grain, laminated and hihgly phyllite with mica, quartz.	6.4			10° 30° 40°	ir	12	100	15			
27.00			W1, strong hard, greenish grey, fine grain, laminated and jointed phyllite with mica, quartz vein				5° 50°	ir	8	100	35			
28.00			W1, medium to strong hard, greenish grey, fine grain, laminated and jointed phyllite. Core loss : 28.00 to 28.48m				5° 15° 50°	ir	10	48	10			
29.00			W1, medium hard, greenish grey, fine grain, laminated phyllite with mica, Quartz vein. Core loss due to lamination almost parallel to drill.CL: 29.00 to 29.94m				30°	ir	3	6	0			
30.00														

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Zone, MB=Mechanical Breakage, W1=Fresh, W2=slightly Weathered, W3=Moderately Weathered, W4=Highly Weathered, W5=Decomposed.
FZ= Fractured, CL= Core loss

Drilled by: SANJEEV POKHAREL

EAST DRILLING COMPANY (P) LTD.

BORE HOLE LOG

KULEKHANI-3 HYDROELECTRIC POWER PROJECT

DRILL HOLE NO.: BD-6
COORDINATES: 3040889.407 N, 602302.205 E
DRILLING MACHINE: KOKEN
DRILLING METHOD: ROTARY

START DATE: 12/03/2002
COLLAR ELEVATION:561.085 m
ELEVATION HOLE END:521.085 m
LOCATION: YANG RANG KHOLA
INCLINATION: VERTICAL

Depth, m	Barrel Size	Core Log	Description	Water Level m	Alteration	Orientation	Roughness	Joint/R cm	Core Recovery REC%	RQD%	RQD% 20	40	60	80	100	Results Permeability	LU kg/cm2 Laboratory
30.00	66mm		Total core loss due to medium hard, highly jointed phyllite. Sludge of fine grain sand are found. Core loss : 30.00 to 31.00 m.	6.6					0	0							
31.00			W1, medium to strong hard, greenish grey, fine grain, laminated and jointed dolomite with mica, Quartz vein Core loss : 31.32 to 31.92 m.			15° 30°	ir	5	40	10							
32.00			W1, medium to strong hard, greenish grey, fine grain, laminated and jointed dolomite with mica Quartz vein. Core loss : 32.00 to 32.35 m. & 32.50 to 32.82 m.		6.6	30°	ir	4	33	0							
33.00			W1, medium to strong hard, greenish grey, fine grain, laminated and jointed dolomite with mica Quartz vein. Core loss : 33.32 to 33.67 m.			20° 30° 60°	ir	7	65	11							
34.00			W1, medium to strong hard, greenish grey, fine grain, laminated, jointed and fragmented dolomite with mica Quartzvein.	6.6		20° 50°	ir	8	100	0							
35.00			W1, soft to medium hard, geenish grey, fine grain, laminated, jointed and fragmented phyllitic dolomite with mica, Quartz vein.			10° 30° 50°	ir	10	76	0							
36.00			W1, medium to strong hard, greeniah grey, fine grain, laminated, jointed phyllite.			20° 50°	ir	9	100	0							
37.00			W1, medium to strong hard, dark grey to greenish, fine grain, laminated, highly jointed dolomite with Quartz vein. Core loss : 37.19 to 38.00 m.	6.4	6.4	40°	ir	5	19	0							
38.00			Total core loss due to soft and laminated phyllite. Core loss : 38.00 to 39.00 m.			-	-	0	0	0							
39.00			W1, strong hard, lihgt to dark grey fine grain, laminated, highly jointed and fractured dolomite with mica, Quartz vein.			20° 30° 50°	ir	11	100	18							
40.00																	

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Zone, MB=Mechanical Breakage, W1=Fresh, W2=slightly Weathered, W3=Moderately Weathered, W4=Highly Weathered, W5=Decomposed.
FZ= Fractured, CL= Core loss

Drilled by: SANJEEV POKHAREL

EAST DRILLING COMPANY (P) LTD.

BORE HOLE LOG

KULEKHANI-3 HYDROELECTRIC POWER PROJECT

DRILL HOLE NO.: BD-7
COORDINATES: 3040866.882N, 60232.387E
DRILLING MACHINE: KOKEN
DRILLING METHOD: ROTARY

START DATE: 10/04/2002
COLLAR ELEVATION:562.083m
ELEVATION HOLE END:532.083 m
LOCATION: YANGRANG KHOLA
INCLINATION: VERTICAL

Depth, m	Barrel Size	Core Log	Description	Water Level m	Alteration	Alteration	Orientation	Roughness	Joint/R cm	Core Recovery REC%	RQD%	Results LU	Results kg/cm2	Laboratory
0.00	76mm		Alluvium deposition of coarse grain sand and pebble to boulder size, W1-W2, greenish to dark grey, fine grain phyllite	0.0						54	0			
1.00			Alluvium deposition of medium grain sand and W3, greenish grey, fine grain phyllite.							0	0			
2.00			Run from 2.00m bed rock is observed W1, strong hard, greenish grey, fine grain, laminated and jointed phyllite Core loss : 2.76 to 3.00 m.				30° 40°	ir	8	76	0			
3.00			W1, strong hard, dark grey, fine grain, laminated, jointed and fractured phyllite with Quartz vein Core loss : 3.00 to 3.30 m.	0.8			20° 50°	ir	7	70	0			
4.00			W1, strong hard, dard grey, fine grain, laminated phyllite				50°	ir	3	100	44			
5.00			W1, strong hard, dark grey, fine grain, laminated phyllite MB : 5.70m				20° 30° 50°	ir	4	100	81			
6.00			W1, medium to strong hard, dark to greenish grey, fine grain, laminated phyllite				30°	ir	6	100	71			
7.00			W1, medium to strong hard, greenish grey, fine grain, laminated phyllite Core loss : 7.63 to 7.89m				20° 50°	ir	6	74	44			
8.00			Total core loss due to medium hard and lamination is parallel to drilling Core loss : 8.00 to 9.00m				-	-	0	0	0			
9.00			W1, medium to strong hard, greenish to dark grey, fine grain, laminated and fragmented phllite. Core loss : 9.20 to 9.64m	0.95			20° 50°	ir	6	54	10			
10.00														

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Zone, MB=Mechanical Breakage, W1=Fresh, W2=slightly Weathered, W3=Moderately Weathered, W4=Highly Weathered, W5=Decomposed.
FZ= Fractured, CL= Core loss

Drilled by: KAMAL BHANDARI

EAST DRILLING COMPANY (P) LTD.

BORE HOLE LOG

KULEKHANI-3 HYDROELECTRIC POWER PROJECT

DRILL HOLE NO.: BD-7
COORDINATES: 3040866.882N, 60232.387E
DRILLING MACHINE: KOKEN
DRILLING METHOD: ROTARY

START DATE: 10/04/2002
COLLAR ELEVATION:562.083m
ELEVATION HOLE END:532.083 m
LOCATION: YANGRANG KHOLA
INCLINATION: VERTICAL

Depth, m	Barrel Size	Core Log	Description	Water Level m	Alteration	Alteration	Orientation	Roughness	Joint/R cm	REC%	RQD%	Core Recovery / RQD%	Permeability	Results LU	Results kg/cm2
10.00	76mm		W1, medium hard, dark to greenish grey, fine grain, laminated, jointed phyllite Core loss : 10.00 to 10.34 m & 10.47 to 11.00 m				30° 40°	ir	4	13	0				
11.00			Total core loss, greenish grey, fine grain sludge are found. Core loss : 11.00 to 12.00 m.				-	-	0	0	0				
12.00			W1, medium hard, greenish to dark grey, fine grain, laminated phyllite Core loss : 12.00 to 12.60 m.				30° 50°	ir	6	40	0				
13.00			W1, medium hard, greenish grey, fine grain, laminated, jointed and fragmented phyllite. Core loss : 13.00 to 13.77 m.				30° 50°	ir	5	23	0				
14.00			Total core loss, greenish grey, fine grain sludge are found. Core loss : 14.00 to 15.00 m.	1.1			-	-	0	0	0				
15.00	66mm		W1-W2, medium hard, greenish grey, fine grain, laminated, jointed and fragmented phyllite with Quartz vein. Cl : 15.00 to 15.56 m.				30° 50°	ir	5	44	10				
16.00			W1, strong hard, dark to greenish grey, fine grain, laminated, moderately jointed phyllite with Quartz vein.				15° 30° 50°	ir	8	100	30				
17.00			W1, strong hard, greenish grey, fine grain, laminated phyllite. Core loss : 17.36 to 18.00 m.				20° 30°	ir	4	36	0				
18.00			Total core loss, soft and jointed fock crushed during drilling. Core loss : 18.00 to 19.00 m.	1			-	-	0	0	0				
19.00			W1, strong hard, dark to greenish grey, fine frein, laminated phyllite. Core loss : 19.00 to 19.71 m.	1.1			10° 50°	ir	5	29	0				
20.00															

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Zone, MB=Mechanical Breakage, W1=Fresh, W2=slightly Weathered, W3=Moderately Weathered, W4=Highly Weathered, W5=Decomposed.
FZ= Fractured, CL= Core loss

Drilled by: KAMAL BHANDARI

EAST DRILLING COMPANY (P) LTD.

BORE HOLE LOG

KULEKHANI-3 HYDROELECTRIC POWER PROJECT

DRILL HOLE NO.: BD-7
COORDINATES: 3040866.882N, 60232.387E
DRILLING MACHINE: KOKEN
DRILLING METHOD: ROTARY

START DATE: 10/04/2002
COLLAR ELEVATION:562.083m
ELEVATION HOLE END:532.083 m
LOCATION: YANGRANG KHOLA
INCLINATION: VERTICAL

Depth, m	Barrel Size	Core Log	Description	Water Level m	Alteration	Alteration	Orientation	Roughness	Joint/R cm	REC%	RQD%	Core Recovery / RQD%	Permeability	Laboratory (LU / kg/cm2)
20.00	66mm		Total cote loss, greenish grey, fine grain sand as sludge are found. Core loss : 20.00 to 21.00 m.				-	-	0	0	0			
21.00			W1, medium to strong hard, dark to greenish grey, fine grain, laminated phyliite. Core loss : 21.00 to 21.64 m.	2			20° 30°	ir	4	36	0			
22.00			W1, medium to strong hard, dark grey to greenish, fine grain, laminated phyllite Core loss : 22.68 to 23.00 m.				20° 30°	ir	8	68	0			
23.00			W1-W2, medium to strong hard, dark to greenish grey, fine grain, laminated phyllite Core loss : 23.00 to 23.50 m.				20° 30°	ir	5	50	0			
24.00			W1-W2, medium to strong hard, greenish to dark grey, fine grain laminated and jointed phyllite Core loss : 24.00 to 24.30 m.				20° 30° 50°	ir	9	70	11			
25.00			W1, strong hard, dark to greenish grey, fine grain, laminated and jointed phyllite. Core loss : 25.00 to 2531 m.	5.6			20° 50°	ir	7	69	17			
26.00			W1, medium to strong ard, greenish to dark grey, fine grain, laminated phyllite. Core loss : 26.63 to 27.00 m.				15° 50°	ir	9	63	0			
27.00			W1, strong hard, light grey to greenish grey, fine grain, jointed and fragmented phyllitic dolomite. Core loss : 27.31 to 28.00 m.				20° 50°	ir	4	31	0			
28.00			W1, medium hard, dark grey to greenish grey, fine grain, laminated phyllite. Core loss : 28.00 to 28.22 m. & 28.48 to 29.00 m.				20°	ir	3	26	0			
29.00			W1, medium hard, dark to greenish grey, fine grain, jointed and fragmented phyllite with Quartz vein. Core loss : 29.00 to 29.92 m.				20°	ir	4	8	0			
30.00														

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Zone, MB=Mechanical Breakage, W1=Fresh, W2=slightly Weathered, W3=Moderately Weathered, W4=Highly Weathered, W5=Decomposed.
FZ= Fractured, CL= Core loss

Drilled by: KAMAL BHANDARI

EAST DRILLING COMPANY (P) LTD.

BORE HOLE LOG

KULEKHANI-3 HYDROELECTRIC POWER PROJECT

DRILL HOLE NO.: BD-8
COORDINATES: 3040804.810N, 602262..400E
DRILLING MACHINE: KOKEN
DRILLING METHOD: ROTARY

START DATE: 10/04/2002
COLLAR ELEVATION:562.083m
ELEVATION HOLE END:532.083 m
LOCATION: YANGRANG KHOLA
INCLINATION: VERTICAL

Depth, m	Barrel Size	Core Log	Description	Water level m	Alteration	Orientation	Roughness	Joint/R cm	Core Recovery REC%	RQD%	RQD% 20 40 60 80 100	Results Permeability	Results Laboratory
0.00	NX		Colluvium deposition of mud and pebble, cobble size phyllite and dolomite						100	0			
1.00			Colluvium deposition of fine to medium grain sand and cobble to boulder size W1-W3, white to dark grey, fine grain dolomite and phyllite.						24	0			
2.00			Colluvium deposition of fine grain sand and pebble to boulder size, white to brown, W1-W2, fine grain dolomite						27	0			
3.00	76mm		Colluvium deposition of fine grain sand and pebble to boulder size, W1-W3, shite to dark grey, fine grain dolomite and phyllite.	0.0					50	0			
4.00			Colluvium deposition of coarse grain sand and pebble, cobble size W2-W3, white to light grey, fine grain dolomite.						52	0			
5.00			Colluvium deposition of fine grain, sand and pebble to cbble size, W1-W3, light grey to greenish, fine grain dolomite and phyllite.						20	0			
6.00			Colluvium depositionb of fine grain, sand and pebble to boulder size, W1-W2, greenish, light to dark grey, fine grain phyllite and dolomite						36	0			
7.00			The run of 53cm is colluvium of pebble to cobble size light gley dolomite. From 7.53m bed rock is observed W1, strong hard, white, fine grain, thin bedded, jogj;u kpomed dp;p,ote. Core loss : 7.58 to 8.00 m.	6.7		40° 50°	ir	3	18	0			
8.00			W1-W2, strong hard, shite to greenish brown, fine grain, highly jointed phyllitec dolomite. Core loss : 8.00 to 8.32 m & 8.49 to 8.76 m			30° 40°	ir	6	40	0			
9.00			W1, strong hard, white to greenish brown, fine grain, highly jointed and fragmented dolomite. Core loss : 9.00 to 9.24 m & 9.45 to 9.70 m			20° 40° 50°	ir	7	51	0			
10.00													

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Drilled by: BINOD MAGAR

EAST DRILLING COMPANY (P) LTD.
BORE HOLE LOG
KULEKHANI-3 HYDROELECTRIC POWER PROJECT

DRILL HOLE NO.: BD-8
COORDINATES: 3040804.810N, 602262..400E
DRILLING MACHINE: KOKEN
DRILLING METHOD: ROTARY

START DATE: 10/04/2002
COLLAR ELEVATION:562.083m
ELEVATION HOLE END:532.083 m
LOCATION: YANGRANG KHOLA
INCLINATION: VERTICAL

Depth, m	Barrel Size	Core Log	Description	Water level m	Alteration	Orientation	Roughness	Joint/R cm	Core Recovery REC%	RQD%	Permeability LU	Laboratory kg/cm2
10.00	76mm		W1, strong hard, white to light grey, fine grain, bedded, highly joined dolomite.			30° 40° 50°	ir	18	100	0		
11.00			W1-W2, strong hard, white to light grey, fine grain, jointed and fragmented dolomite Core loss : 11.00 to 11.64 m.			30° 50°	ir	7	36	0		
12.00			W1, strong hard, shite to light grey, fine grain, thin bedded, jointed and fragmented dolomite. Core loss : 12.36 to 12.90 m.	8.1		30° 40°	ir	7	46	0		
13.00			W1, strong hard, white to light grey, fine grain, thin bedded, jointed and fragmented dolomite. Core loss : 13.00 to 13.22 m & 13.54 to 13.81 m			30° 50°	ir	6	50	0		
14.00	66mm		W1, strong hard, white to light grey, fine grain, highly jointed and fragmented dolomite Core loss : 14.00 to 14.24 m & 14.50 to 14.80 m			50°	ir	7	46	0		
15.00			W1, medium to strong hard, light grey, to greenish grey, highly jointed dolomite and klaminated phyllite Core loss : 15.00 to 15.20 m & 15.56 to 15.70 m			20° 50°	ir	6	66	0		
16.00			W1, strong hard, light to dark grey, fine grain, jointed and fragmented dolomite. Core loss : 16.17 to 16.39 m	9.1		30° 40° 50°	ir	12	78	0		
17.00			W1, strong hard, light grey to greenish fine grain, highly jointed and fragmented dolomite Core loss : 17.57 to 17.72 m.			20° 50°	ir	11	85	0		
18.00			W1, strong hard, light to dark grey, fine grain, highly jointed and fragmented dolomite. Core loss : 18.45 to 1866 m			20° 50°	ir	14	79	0		
19.00			W1, midium to strong hard, light to dark grey and greenish, fine grain, thin bedded, highly jointed and fragmented dolomite and phyllitic dolomite.	9.1		20° 40°	ir	10	100	0		
20.00												

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Zone, MB=Mechanical Breakage, W1=Fresh, W2=slightly Weathered, W3=Moderately Weathered, W4=Highly Weathered, W5=Decomposed.
FZ= Fractured, CL= Core loss

Drilled by: BINOD MAGAR

EAST DRILLING COMPANY (P) LTD.

BORE HOLE LOG

KULEKHANI-3 HYDROELECTRIC POWER PROJECT

DRILL HOLE NO.: BD-8
COORDINATES: 3040804.810N, 602262..400E
DRILLING MACHINE: KOKEN
DRILLING METHOD: ROTARY

START DATE: 10/04/2002
COLLAR ELEVATION:562.083m
ELEVATION HOLE END:532.083 m
LOCATION: YANGRANG KHOLA
INCLINATION: VERTICAL

Depth, m	Barrel Size	Core Log	Description	Water Level m	Alteration	Orientation	Roughness	Joint/R cm	Core Recovery REC%	RQD%	RQD%	Permeability	Results LU	Results kg/cm2 Laboratory
20.00	66mm		W1, strong hard, white to light grey, fine grain, thin bedded, jointed and fragmented dolomite	9.3		30° 50°	ir	14	100	0				
21.00			W1, strong hard, white to light grey, fine grain, thin bedded, highly jointed and fragmented dolomite Core loss : 21.15 top 21.73 m			20° 50°	ir	7	52	0				
22.00			W1, strong hard, light to dark grey, fine grain, thin bedded, highly jointed and fragmented dolomite Core loss : 22.00 to 22.73 m			50°	ir	3	27	0				
23.00			W1, strong hard, light grey, fine grain, thin bedded, jointed and fragmented dolomite with mica parting Core loss : 23.00 to 23.32 m	9.5		20° 50°	ir	5	68	0				
24.00			W1, strong hard, light grey, fine grain, thin bedded, highly jointed and fragmented dolomite with mica parting Core loss : 24.30 to 24.75 m			20° 50°	ir	10	55	0				
25.00			W1, strong hard, light grey, fine grain, thin bedded, higly jointed dolomite with mica parting Core loss : 25.00 to 25.42 m			30° 50°	ir	8	58	0				
26.00			W1, strong hard, light grey, fine grain, thin bedded, jointed dolomite Core loss : 26.00 to 26.89 m			30° 50°	ir	4	11	0				
27.00			W1, strong hard, light to dard grey, fine grain, highly jointed and fragmented dolomite Core loss : 27.00 to 27.47 m	9.7		50°	ir	4	53	0				
28.00			W1, strong hard, light to dark grey, fine grain, highly jointed and fragmented dolomite. Core loss : 28.46 to 28.80 m			50°	ir	6	66	0				
29.00			W1, strong hard, light grey, fine grain thin bedded, jointed and fragmented dolomite with mica parting.			30° 50°	ir	10	100	0				
30.00														

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Zone, MB=Mechanical Breakage, W1=Fresh, W2=slightly Weathered, W3=Moderately Weathered, W4=Highly Weathered, W5=Decomposed.
FZ= Fractured, CL= Core loss

Drilled by: BINOD MAGAR

EAST DRILLING COMPANY (P) LTD.

BORE HOLE LOG

KULEKHANI-3 HYDROELECTRIC POWER PROJECT

DRILL HOLE NO.: BD-9
COORDINATES: 3040823.934 N, 602243.594E
DRILLING MACHINE: KOKEN
DRILLING METHOD: ROTARY

START DATE: 10/04/2002
COLLAR ELEVATION:562.083m
ELEVATION HOLE END:512.083 m
LOCATION: YANGRANG KHOLA
INCLINATION: VERTICAL

Depth, m	Barrel Size	Core Log	Description	Water level m	Alteration	Orientation	Roughness	Joint/R cm	Core Recovery REC%	RQD%	RQD% 20	40	60	80	100	Results Permeability	LU	kg/cm2 Laboratory
0.00	76mm		Alluvium deposition of sand and pebble to boulder size, W1, light to greenish grey, dolomite & phyllite.	1.15					47	0								
1.00			Alluvium deposition of sand and boulder size, W1-W3, strong hard, greenish grey to dard brosn phyllitic dolomite and hematite.						60	0								
2.00			Alluvium deposition of medium grain sand and pebble to boulder size, W1-W3, greenish grey to dard brown, medium to fine grain phyllite dolomite and smphibolite.						57									
3.00			Run of 25cm id alluvium deposition of pebble, cobble size smphibolite, hematite, dolomite. From 3.25m Bed rock if observed. W1-W3, white, medium to coarse grain, crystolline, jointed dolomite. Cl : 3.30 to 3.90 m.			20°	Ir	3	40	0								
4.00			W1, strong hard, white, fine grain highly jointed and fragmented dolomite Core loss : 4.00 to 4.48 m.			20° 50°	Ir	7	52	0								
5.00			W1, strong hard, white to light grey fine grain, highly jointed and fragmented dolomite with mica parting. Core loss : 5.00 to 5.22 m.			20° 30° 50°	U	8	78	0								
6.00			W1, strong hard, white to light grey, fine grain, highly jointed and fragmented dolomite. Core loss : 6.00 to 6.16 m.			10° 20° 50°	Ir	U	84	0								
7.00			Total core loss due to rock as dolomite is highly jointed and thinly bedded.] Core loss :7.00 to 8.00 m.	1.25		-	-	U	0	0								
8.00			W1, strong hard, white to light grey, fine grain, highly jointed and thinly bedded dolomite. Core loss : 8.21 to 9.00 m.			30°	Ir	4	27	9								
9.00			W1, strong hard, white to light grey, fine grain, highly jointed and thinly bedded dolomite. Core loss : 9.00 to 9.46 m.			30°	Ir	4	54	0								
10.00																		

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Zone, MB=Mechanical Breakage, W1=Fresh, W2=slightly Weathered, W3=Moderately Weathered, W4=Highly Weathered, W5=Decomposed.
FZ= Fractured, CL= Core loss

Drilled by: BINOD MAGAR

EAST DRILLING COMPANY (P) LTD.

BORE HOLE LOG

KULEKHANI-3 HYDROELECTRIC POWER PROJECT

DRILL HOLE NO.: BD-9
COORDINATES: 3040823.934 N, 602243.594E
DRILLING MACHINE: KOKEN
DRILLING METHOD: ROTARY

START DATE: 10/04/2002
COLLAR ELEVATION:562.083m
ELEVATION HOLE END:512.083 m
LOCATION: YANGRANG KHOLA
INCLINATION: VERTICAL

Depth, m	Barrel Size	Core Log	Description	Water Level m	Alteration	Orientation	Roughness	Joint/R cm	Core Recovery REC%	RQD%	RQD%	Results LU	Results kg/cm2
10.00	76 mm		W1, strong hard, white to light grey, fine grain, highly jointed, thinly bedded dolomite with mica parting Core loss : 10.00 to 10.16 m.	1.15		30° 60°	ir	4	84	0	Permeability	Laboratory	
11.00			W1, strong hard, white to light grey, fine grain, highly jointed, thinly bedded dolomite with mica parting. Core loss : 11.58 to 12.00 m.			30° 65°	ir	7	58	11			
12.00			W1, strong hard, white to light grey, fine grain, highly jointed, thinly bedded, fragmented dolomite with mica parting. Core loss : 1200 to 12.24 m. & 12.80 to 13.00 m.			20° 30° 50°	ir	6	64	0			
13.00			W1, strong hard, white to light grey, fine grain, highly jointed, thinly bedded, fragmented dolomite with mica parting. Core loss : 13.00 to 13.36 m.			20° 60°	ir	6	64	0			
14.00			W1, strong hard, white to light grey, fine grain, highly jointed, fragmentd dolomite. Core loss : 14.00 to 14.52 m.			30° 40° 60°	ir	8	48	0			
15.00			W1, strong hard, white to light grey fine grain, highly jointed, thinly bedded, gragmented dolomite with mica parting. Core loss : 15.67 to 15.86 m.			20° 50°	ir	11	81	11			
16.00			W1, strong hard, white to light grey, fine grain, highly kjointed and thinly bedded dolomite with mica parting Core loss : 16.00 to 16.19 m. & 16.38 to 17.00 m.			30° 40°	ir	4	19	0			
17.00			W1, strong hard, white to light grey, fine grain, highly jointed and fragmented dolomite. Core loss : 17.00 to 17.57 m.	1.2		50°	ir	4	43	0			
18.00			W1, strong hard, light grey, fine grain, highly jointed, thinly bedded dolomite with mica parting. Core loss : 18.12 to 18.49 m.			20° 50° 60°	ir	11	63	0			
19.00			W1, kstrong hard, light grey, fine grain, highly jointed, thinly bedded and fragmented dolomite with mica parting.	1.2		20° 40° 60°	ir	9	100	0			
20.00													

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Zone, MB=Mechanical Breakage, W1=Fresh, W2=slightly Weathered, W3=Moderately Weathered, W4=Highly Weathered, W5=Decomposed.
FZ= Fractured, CL= Core loss

Drilled by: BINOD MAGAR

EAST DRILLING COMPANY (P) LTD.

BORE HOLE LOG

KULEKHANI-3 HYDROELECTRIC POWER PROJECT

DRILL HOLE NO.: BD-9
COORDINATES: 3040823.934 N, 602243.594E
DRILLING MACHINE: KOKEN
DRILLING METHOD: ROTARY

START DATE: 10/04/2002
COLLAR ELEVATION:562.083m
ELEVATION HOLE END:512.083 m
LOCATION: YANGRANG KHOLA
INCLINATION: VERTICAL

Depth, m	Barrel Size	Core Log	Description	Water Level m	Alteration	Orientation	Roughness	Joint/R cm	Core Recovery REC%	RQD%	Permeability LU	Results Laboratory kg/cm2
20.00	76mm		W1, strong hard, white to light grey., fine grain, thin bedded and jointed dolomite with mica parting.			40° 50°	ir	11	100	0		
21.00	66		W1, strong hard, white to light grey, fine grain, thinly bedded, jointed dolomite with mica parting. Core loss : 21.24 to 21.45 m & 21.83 to 22.00 m.			20° 50°	ir	11	54	0		
22.00			W1, strong hard, white to light grey, fine grain, jointed dolomite with mica parting. Core loss : 22.12 to 22.55 m.			10° 20° 30°	ir	10	57	0		
23.00			W1, strong hard, light to dard grey, fine grain, highly jointed dolomite			20° 30° 50°	ir	16	100	0		
24.00			W1, strong hard, light grey, fine grain, thinly bedded, jointed dolomite with mica parting.			20° 30° 50°	ir	11	100	11		
25.00			W1, strong hard, white to light grey, fine grain, thin bedded, highly jointed fragmented dolomite with mica parting.			30° 50°	ir	9	100	0		
26.00			W1, strong hard, white to light grey, fine grain, thin bedded, highly jointed and fragmented dolomite with mica parting.			20° 50°	ir	12	100	23		
27.00			W!, strong hard, light grey, fine grain, highly jointed, fragmented dolomite with mica parting. Core loss : 27.31 to 27.66 m.			30° 50°	ir	5	65	0		
28.00			W1, strong hard, light grey, fine grain, highly jointed, thinly bedded and fragmented dolomite with mica parting			30° 50°	ir	9	100	0		
29.00			W1, strong hard, light grey, fine grain, highly jointed, thinly bedded fragmented dolomite with mica parting.	1.5		20° 50°	ir	11	100	0		
30.00												

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Drilled by: BINOD MAGAR

EAST DRILLING COMPANY (P) LTD.

BORE HOLE LOG

KULEKHANI-3 HYDROELECTRIC POWER PROJECT

DRILL HOLE NO.: BD-10
COORDINATES:3040859.069N, 602233.493E
DRILLING MACHINE: KOKEN
DRILLING METHOD: ROTARY

START DATE: 31/03/2002
COLLAR ELEVATION:564.334m
ELEVATION HOLE END:534.364m
LOCATION: YANG RANG KHOLA
INCLINATION: VERTICAL

Depth, m	Barrel size	Core Log	Description	Description of Discontinuities: Water Table m	Alteration	Orientation	Roughness	Joint/R cm	Core Recovery: REC%	RQD%	Core Recovery RQD% (20 / 40 / 60 / 80 / 100)	Results: Permeability LU	Results: Laboratory kg/cm2
0.00	NX		Colluvium deposition of pebbles to cobble size grabel, W1-W2, light to greenish grey, fine grain phyllite and dolomite.	- 3.50	-	-	-	-	100	-			
1.00	76mm		Colluvium deposition of boulder size, W1, light grey, fine grain dolomite.		-	-	-	-	24	-			
2.00			Colluvium deposition of boulder size, W1, light grey, fine grain dolomite.		-	-	-	-	22	-			
3.00			Colluvium deposition of fine grain brown, sand and pebble, cobble to boulder size, W1-W3, white to light grey, fine to medium grain dolomite.		-	-	-	-	100	-			
4.00			First 49cm is colluvium deposition of pebble cobble size. W1-W3, fine to medium grain phyllite and dolomite. **Bed Rock** is started from 4.49m W1, white to light grey, fine grain, jointed dolomite.	Dry	-	20° 30° 50°	Ir	7	72	-			
5.00			W1, strong hard, light grey, fine grain, jointed dolomite.		-	20° 50°	Ir	13	100	14			
6.00			W1-W3, strong hard, white to light grey, fine grain, moderately jointed dolomite Fz : 6.21 to 6.45 m.		-	10° 50° 60°	Ir	11	100	33			
7.00			W1-W2, medium to strong hard, light to dard grey, fine grain, laminated phyllitic dolomite with mica parting.	6.05	-	20° 40° 50°	Ir	8	100	55			
8.00			W2-W3, strong hard, light to dark grey, fine grain, highly jointed dolomite with mica parting Fz : 8.00 to 8.50 m.		-	15°-20° 40°	Ir	11	100	18			
9.00			W2-W3, strong hard, light grey to brown, fine grain, moderately jointed dolomite.		-	20° 30° 40°	Ir	7	100	59			
10.00													

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Zone, MB=Mechanical Breakage, W1=Fresh, W2=slightly Weathered, W3=Moderately Weathered, W4=Highly Weathered, W5=Decomposed.
FZ= Fractured, CL= Core loss

Drilled by: SANJEEV POKHAREL

EAST DRILLING COMPANY (P) LTD.

BORE HOLE LOG

KULEKHANI-3 HYDROELECTRIC POWER PROJECT

DRILL HOLE NO.: BD-10
COORDINATES:3040859.069N, 602233.493E
DRILLING MACHINE: KOKEN
DRILLING METHOD: ROTARY

START DATE: 31/03/2002
COLLAR ELEVATION:564.334m
ELEVATION HOLE END:534.364m
LOCATION: YANG RANG KHOLA
INCLINATION: VERTICAL

Depth, m	Barel size	Core Log	Description	Water Table m	Alteration	Orientation	Roughness	Joint/R cm	REC%	RQD%	Core Recov RQD% 20 40 60 80 100	Results LU	Results kg/cm2 Permeability	Laboratory
10.00	76mm		W2-W3, strong hard, light grey, fine grain, highly jointed and fragmented dolomite.		-	20° 50°	Ir	7	100	59				
11.00			W2-W3, strong hard, light grey, fine grain, jointed and fragmented dolomite with mica parting.		-	20° 60°	Ir	7	100	63				
12.00			W1-W3, strong hard, light to dark grey, fine grain, laminated, jointed and fragmented phyllitic dolomite and dolomite.		-	20° 60°	Ir	8	100	38				
13.00			W1-W4, medium to strong hard, light grey to brownish, fine grain, highly jointed and fragmented dolomite.	8.40 3.80	-	20° 50°	Ir	10	100	34				
14.00			W1-W2, strong hard, light to dark grey, fine grain, laminated, highly jointed and fragmented phyllitic dolomite with mica paritng.	8.80 3.30	-	20° 40° 50°	Ir	11	100	-				
15.00			W1-W2, strong hard, light grey, fine grain, highly jointed and fragmented dolomite with mica parting.		-	20° 30° 50°	Ir	7	100	12				
16.00			W1, strong hard, light to dark grey, fine grain, highly jointed and fragmented dolomite with mica paritng.		-	30° 60°	Ir	10	100	10				
17.00			W1, strong hard, light grey, fine grain, thin bedded, highly jointed and fragmented dolomite with mica parting.		-	30° 60°	Ir	8	100	-				
18.00	66		W1, strong hard, white to light grey, fine grain, jointed and fragmented dolomite. Core loss : 18.40 to 19.00 m.	9.00 3.60	-	20° 60°	Ir	6	40	-				
19.00			W1, medium to strong hard, light to dark grey, fine grain, thin bedded jointed and fragmented dolomite with phyllite interbedded.		-	30° 40° 50°	Ir	11	100	-				
20.00														

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Zone, MB=Mechanical Breakage, W1=Fresh, W2=slightly Weathered, W3=Moderately Weathered, W4=Highly Weathered, W5=Decomposed.
FZ= Fractured, CL= Core loss

Drilled by: SANJEEV POKHAREL

EAST DRILLING COMPANY (P) LTD.

BORE HOLE LOG

KULEKHANI-3 HYDROELECTRIC POWER PROJECT

DRILL HOLE NO.: BD-10
COORDINATES:3040859.069N, 602233.493E
DRILLING MACHINE: KOKEN
DRILLING METHOD: ROTARY

START DATE: 31/03/2002
COLLAR ELEVATION:564.334m
ELEVATION HOLE END:534.364m
LOCATION: YANG RANG KHOLA
INCLINATION: VERTICAL

Depth, m	Barel size	Core Log	Description	Water Table m	Alteration	Orientation	Roughness	Joint/R cm	REC%	RQD%	Core Rec RQD% 20 40 60 80 100	Results: Permeability LU	Results: Laboratory kg/cm2
20.00	66mm		W1, medium hard, dark grey, fine grain, laminated and jointed phyllite		-	20° 50°	Ir	9	100	-			
21.00			W1, medium to strong hard, dark to light grey, fine grain, jointed and laminated phyllite and thin bedded dolomite with mica parting		-	20° 40° 50°	Ir	11	100	-			
22.00			W1, strong hard, white to light grey, fine grain, thin bedded, jointed and fragmented dolomite with mica parting.		-	20° 50° 60°	Ir	12	100	-			
23.00			W1, strong hard, white, fine grain, highly jointed and fragmented dolomite.	11.00	-	50°	Ir	10	100	-			
24.00			W1, strong hard, white to greenish grey, fine grain, thin bedded, highly jointed and fragmented dolomite.		-	10° 50°	Ir	11	100	10			
25.00			W1, medium to strong hard, light to greenish grey, fine grain, highly jointed and fragmented, thin bedded phyllitic dolomite & dolomite.		-	20° 50°	Ir	10	100	-			
26.00			W1, strong hard, light grey, fine grain, thin bedded, jointed dolomite with mica parting.		-	20° 30° 60°	Ir	11	100	-			
27.00			W1, strong hard, light grey, fine grain thin bedded, highly jointed and fragmented dolomite. Core loss : 27.64 to 28.00 m.	12.00	-	20° 50°	Ir	13	64	-			
28.00			W1-W3, strong hard, light grey, fine grain, highly jointed and fragmented dolomite. Core loss due to soft and weathered rock. Core loss : 28.00 to 28.80 m.		-	-	-	0	20	-			
29.00			W1-W2, strong hard, light grey, fine grain, highly jointed and fragmented dolomite. Core loss : 29.40 to 30.00 m.		-	50°	Ir	3	40	-			
30.00													

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Zone, MB=Mechanical Breakage, W1=Fresh, W2=slightly Weathered, W3=Moderately Weathered, W4=Highly Weathered, W5=Decomposed.
FZ= Fractured, CL= Core loss

Drilled by: SANJEEV POKHAREL

EAST DRILLING COMPANY (P) LTD.

BORE HOLE LOG

KULEKHANI-3 HYDROELECTRIC POWER PROJECT

DRILL HOLE NO.: LS-1
COORDINATES: 3041065.756N, 602014.037E
DRILLING MACHINE: KOKEN
DRILLING METHOD: ROTARY

START DATE: 17/04/2002
COLLAR ELEVATION:625.835 m
ELEVATION HOLE END: 595.835m
LOCATION: YANGRANG KHOLA
INCLINATION: VERTICAL

Depth, m	Barrel size	Core Log	Description	S P T Blows per 15 cm 0-15	15-30	30-45	Water Table m	Alteration	Orientation	Roughness	Joint/R cm	Core Recovery RQD% REC%	RQD%	kg/cm2 20 40 60 80 100	Laboratory
0.00															
	76mm		Colluvium deposition of brown, medium to coarse grain sand and greenish grey, pebble size gravel of phyllite	6	8	10 45/24	- 0.10	-	-	-	-	100	-		
1.00			Colluvium deposition of medium to coarse grain, dark to light brown sand and pebble to cobble size gravel of greenish grey phyllite	6	8	11 45/25	Dry	-	-	-	-	100	-		
2.00			Colluvium deposition of medium grain sand and dark grey to greenish, fine grain, cobble size gravel of phyllite.	12	38	- 30/50		-	-	-	-	34	-		
3.00			Colluvium deposition of greenish to brown, fine grain sand as sludge.	50	-	- 15/50		-	-	-	-	0	-		
4.00				D C P T											
			Colluvium deposition of greenish grey to dark grey, fine to medium grain sand as sludge.	80	-	- 10/80		-	-	-	-	0	-		
5.00			Colluvium deposition of greenish grey, medium to coarse grain sand as sludge.	18	26	32 45/76	Dry 2.50	-	-	-	-	0	-		
6.00			Colluvium deposition of greenish grey, fine to medium grain sand as sludge.	80	-	- 10/80		-	-	-	-	0	-		
7.00				S P T											
			Colluvium deposition of greenish grey fine to medium grain sand as sludge	50	-	- 13/50		-	-	-	-	0	-		
8.00			Colluvium deposition of medium to coarse grain, light grey to greenish sand as sludge.	22	28	- 19/50		-	-	-	-	0	-		
9.00	66mm		Colluvium depositioon of light grey, fien grain sand and boulder size gravel of light grey to greenish, fine grain, laminated phyllite.				Dry 3.00	-	-	-	-	23	-		
10.00															

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Zone, MB=Mechanical Breakage, W1=Fresh, W2=slightly Weathered, W3=Moderately Weathered, W4=Highly Weathered, W5=Decomposed.
FZ= Fractured, CL= Core loss

Drilled by: KAMAL BHANDARI

EAST DRILLING COMPANY (P) LTD.

BORE HOLE LOG

KULEKHANI-3 HYDROELECTRIC POWER PROJECT

DRILL HOLE NO.: LS-1
COORDINATES: 3041065.756N, 602014.037E
DRILLING MACHINE: KOKEN
DRILLING METHOD: ROTARY

START DATE: 17/04/2002
COLLAR ELEVATION:625.835 m
ELEVATION HOLE END: 595.835m
LOCATION: YANGRANG KHOLA
INCLINATION: VERTICAL

Depth, m	Barrel size	Core Log	Description	D C P T Blows per 15 cm 0-15	15-30	30-45	Water Table m.	Alteration	Orientation	Roughness	Joint/R cm	Core Recovery RQD% kg/cm2 REC%	RQD%	20	40	60	80	100	Laboratory
10.00																			
	66mm		Colluvium deposition of boulder size gravel of light grey to greenish, fine grain, laminated phyllite.					-	-	-	-	100	-						
11.00			Colluvium deposition of boulder size gravel of light grey to greenish, fine grain laminated phyllite				Dry	-	-	-	-	100	-						
12.00			Colluvim deposition of boulder size gravel of light grey to greenish, fine grain, laminated phyllite					-	-	-	-	100	-						
13.00			Colluvium deposition of pebble to boulder size gravel of light grey to greenish, fine grain, laminated phyllite.				Dry	-	-	-	-	69	-						
14.00			Colluvium deposition of light grey, fine grain sand as sludge and pebble to cobble size gravel of light to greenish grey, fine grain, laminated phyllite.					-	-	-	-	26	-						
15.00			Colluvium deposition of light grey, fine grain sand as sludge and pebble to bouldr size gravel of dark to greenish grey, fine grain, laminated phyllite				Dry	-	-	-	-	42	-						
16.00			Colluvium deposition of light grey to greenish fine grain sand as sludge and boulder size gravel of light to greenish grey, fine grain, laminated phyllite.				Dry	-	-	-	-	38	-						
17.00			Colluvium deposition of light grey to greenish, fine grain sand as sludge and pebble to cobble size gravel of light to greenish grey, fine grain, laminated phyllite.	24	27	29		-	-	-	-	18	-						
18.00			Colluvium deposition of pebble to boulder size gravel of dark grey to greenish fine grain, laminatd phyllite.			37/80		-	-	-	-	27	-						
19.00			Colluvium deposition of pebble to boulder size gravel of dark to greenish grey, fine grain, laminated phyllite				18.50	-	-	-	-	50	-						
20.00				55	25	19/80													

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Zone, MB=Mechanical Breakage, W1=Fresh, W2=slightly Weathered, W3=Moderately Weathered, W4=Highly Weathered, W5=Decomposed.
FZ= Fractured, CL= Core loss

Drilled by: KAMAL BHANDARI

EAST DRILLING COMPANY (P) LTD.

BORE HOLE LOG

KULEKHANI-3 HYDROELECTRIC POWER PROJECT

DRILL HOLE NO.: LS-1
COORDINATES: 3041065.756N, 602014.037E
DRILLING MACHINE: KOKEN
DRILLING METHOD: ROTARY

START DATE: 17/04/2002
COLLAR ELEVATION:625.835 m
ELEVATION HOLE END: 595.835m
LOCATION: YANGRANG KHOLA
INCLINATION: VERTICAL

Core Recovery
RQD%
kg/cm2

Depth, m	Barrel size	Core Log	Description	Water Table m	Alteration	Orientation	Roughness	Joint/R cm	REC%	RQD%	Laboratory
20.00	66mm		Colluvium deposition of boulder size gravel of dark grey to greenish, fine grain, laminated phyllite.		-	-	-	-	60	-	
21.00			Colluvium deposition of boulder size gravel of dark grey to greenish, fine grain, laminated phyllite	19.0	-	-	-	-	60	-	
22.00			Colluvium deposition of light to greenish grey, fine grain sand as sludge and cobble to boulder size gravel of light grey to greenish, fine grain, laminated phyllite.		-	-	-	-	61	-	
23.00			Initial 89 cm is colluvium deposition of coarse grain sand with cobble to boulder size phyllite. From 23.89 m bed rock is observed. W1, strong hard, greenish grey, fine grain, laminated phyllite.		-	20° 50°	Ir	2	100	-	
24.00			W1-W2, strong hard, light grey to greenish, fine grain, laminated highly jointd and fragmented phyllite. Cl :24.00 to 24.23 m and 24.52 to 24.72 m	1800 14.50	-	20° 30° 50°	Ir	8	57	-	
25.00			W!-W2, strong hard, light grey to greenish, fine grain, laminated, moderately jointed phyllite Core loss : 25.30 to 25.46 m		-	30° 50°	Ir	9	84	16	
26.00			W1, strong hard, light grey to greenish fine grain, laminated, phyllite with Quartz vein FZ : 26.11 to 26.24 m		-	50°	Ir	5	100	60	
27.00			W1, strong hard, dark grey to greenish, fine grain, laminated, moderately jointed and fragmented phyllite.	18.20 17.75	-	20° 50°	Ir	11	100	14	
28.00			W!-W2, strong hard, light- dark grey to greenish, fine grain, laminated, moderately jointed and fractured phyllite.		-	10° 50°	Ir	9	100	10	
29.00			W1, strong hard, light grey to greenish, fine grain, laminated, highly jointed and fractured phyllite. Core loss : 29.16 to 29.39 m	18.00 14.00	-	10° 50°	Ir	8	77	-	
30.00											

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Zone, MB=Mechanical Breakage, W1=Fresh, W2=slightly Weathered, W3=Moderately Weathered, W4=Highly Weathered, W5=Decomposed.
FZ= Fractured, CL= Core loss

Drilled by: KAMAL BHANDARI

EAST DRILLING COMPANY (P) LTD.

BORE HOLE LOG

KULEKHANI-3 HYDROELECTRIC POWER PROJECT

DRILL HOLE NO.: LS-2
COORDINATES:3041095.177N, 602085.993E
DRILLING MACHINE: KOKEN
DRILLING METHOD: ROTARY

START DATE: 29/04/2002
COLLAR ELEVATION:597.737 m
ELEVATION HOLE END: 567.737m
LOCATION: YANGRANG KHOLA
INCLINATION: VERTICAL

Depth, m	Barrel size	Core Log	Description	S P T Blows per 15 cm 0-15	15-30	30-45	Water Level m	Alteration	Orientation	Roughness	Joint/R cm	Core Recovery REC%	RQD%	RQD% 20 40 60 80 100 kg/cm2	Laboratory
0.00	76mm		Colluvium deposition of dark brown medium to coarse grain sand and pebble to cobble size gravel of laminated phyllite.	2	3	5 45/10	- 3.20	-	-	-	-	100	-		
1.00			Colluvium deposition of light to dark grey, medium to coarse grain sand and pebble to cobble size gravel of phyllite.	6	9	10 45/25		-	-	-	-	100	-		
2.00			Colluvium deposition of dark grey, medium to coarse grain sand and fragmented of boulder size gravel of dark to light grey, laminated phyllite.	32	18	19/50		-	-	-	-	58	-		
3.00			Colluvium deposition of fine grain, dark grey sand and pebble to cobble size gravel of light to dark grey, fine grain, laminated phyllite.	4	7	8 45/19		-	-	-	-	50	-		
4.00			Colluvium deposition of fine grain, dark grey sand and pebble to cobble size gravel of light to dark grey, fine grain, laminated phyllite.	6	7	7 45/20	Dry	-	-	-	-	71	-		
5.00			Colluvium deposition of fine grain, dark grey sand and pebble to cobble size gravel of light grey to greenish, fine grain, laminated phyllite.	9	10	9 45/28		-	-	-	-	55	-		
6.00			Colluvium deposition of dark grey to greenish, medium grain sand and pebble to cobble size gravel of light grey to greenish, fine grain, laminated phyllite.	D 14	C 7	P T 11 45/22		-	-	-	-	62	-		
7.00			Colluvium deposition of dark grey to greenish, medium grain sand and light grey to greenish, fine grain, laminated phyllite.	9	10	12 45/41	Dry	-	-	-	-	22	-		
8.00			Colluvium deposition of greenish grey, fine grain sand and pebble to cobble size gravel of greenish grey, fine grain, laminated phyllite.	6	8	13 45/27		-	-	-	-	59	-		
9.00			Colluvium deposition of med. to coarse grain, light grey to greenish sand, pebble & gravel. Also greenish, coarse grain, hard amphibolite & dolomitic phyllite boulder.	24	35	21 33/80		-	-	-	-	100	-		
10.00															

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Drilled by: BINOD MAGAR

EAST DRILLING COMPANY (P) LTD.

BORE HOLE LOG

KULEKHANI-3 HYDROELECTRIC POWER PROJECT

DRILL HOLE NO.: LS-2
COORDINATES:3041095.177N, 602085.993E
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START DATE: 29/04/2002
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ELEVATION HOLE END: 567.737m
LOCATION: YANGRANG KHOLA
INCLINATION: VERTICAL

Depth, m	Barrel Size	Core Log	Description	S P T Blows per 15 cm 0-15	15-30	30-45	Water Level m	Alteration	Orientation	Roughness	Joint/R cm	REC%	RQD%	Core Recovery RQD% 20 40 60 80 100 kg/cm2	Laboratory
10.00	76mm		Colluvium deposition of brown to dark grey, fine grain sand and cobble to boulder size. Gravel of light to dark grey to greenish phyllite quartzite, dolomite and smphibolite.	8	13	14 45/35	Dry	-	-	-	-	56	-		
11.00			Colluvium deposition of fine to medium grain, dark grey sand and boulder of light grey, fine grain, laminated phyllite.	13	27	35 45/80		-	-	-	-	40	-		
12.00			Colluvium deposition of light grey to greenish, fine grain sand and pebble to boulder size gravel of light grey to greenish, fine grain, laminated phyllite with Quartz.	36	44	- 22/80	Dry	-	-	-	-	63	-		
13.00			Initial 47 cm is colluvium deposition of cobble to boulder size of light grey to greenish, fine grain phyllite. **Bed rock** started from 13.47 m that is W1, strong hard, dark grey to greenish, fine grain, laminated phyllite.					-	10°/30°	Ir	7	100	12		
14.00			W!-W2, strong hard, dark grey to greenish, fine grain, laminated, highly jointed and fragmented phyllite.				12.60 12.20	-	20°/50°	Ir	9	100	-		
15.00			W!, strong hard, dark grey to greenish fine grain, laminated, highly jointed and fragmented phyllite.					-	20°/50°	Ir	11	100	12		
16.00			W!, strong hard, dard grey to greenish, fine grain, laminated phyllite.					-	20°/40°	Ir	4	100	59		
17.00			W!, strong hard, dark grey, fine grain, laminated phyllite with Quartz vein. FZ : 17.14 to 17.64 m				12.20 12.20	-	20°/40°/60°	Ir	11	100	-		
18.00			W1-W2, strong hard, dark grey to greenish, fine grain, laminated highly jointed and fragmented phyllite with Quartz.					Feo	20°/60°	Ir	7	100	-		
19.00			W!-W2, strong hard, dark grey to greenish, fine grain, laminated, highly jointed and fractured phyllite.					Feo	20°/60°	Ir	13	100	-		
20.00															

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Drilled by: BINOD MAGAR

EAST DRILLING COMPANY (P) LTD.

BORE HOLE LOG

KULEKHANI-3 HYDROELECTRIC POWER PROJECT

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ELEVATION HOLE END: 567.737m
LOCATION: YANGRANG KHOLA
INCLINATION: VERTICAL

Depth, m	Barrel size	Core Log	Description	Water Level m	Alteration	Orientation	Roughness	Joint/R cm	Core Recovery REC%	RQD%	RQD% 20	40	60	80	100	Results kg/cm2	Laboratory
20.00	66mm		W1-W2, strong hard, dark grey to greenish, fine grain, laminated, highly jointed and fractured phyllite.	12.40	-	20° 40°	Ir	10	100	-							
21.00			W1, strong hard, dark grey to greenish, fine grain, lamianted, moderately jointed and fragmented phyllite.		Feo	20° 30°	Ir	7	100	22							
22.00			W1, strong hard, dark grey to greenish, fine grain, laminated phyllite.	12.40	Feo	20° 30° 60°	Ir	7	100	46							
23.00			W1, strong hard, dark grey to greenish, fine grain, laminated phyllite.		-	20° 50° 60°	Ir	9	100	51							
24.00			W1, medium to strong hard, dark grey to greenish, fine grain, laminated, moderately jointed and fractured phyllite. FZ : 24.30 to 24.60 m		-	20° 30° 50°	Ir	9	100	-							
25.00			W1, strong hard, dark grey to greenish, fine grain, highly jointed and fractured phyllite. Cl :25.30 to 25.54 m; FZ :25.00 to 25.30 m	12.45	Feo	30° 40°	Ir	8	76	-							
26.00			W1, strong hard, dark grey to greenish, fine grain, laminated, moderately jointed and fractured phyllite with qquartz vein.		-	10° 30° 50°	Ir	11	100	-							
27.00			W1, strong hard, dark grey to greenish, fine grain, laminated, moderately jointed and fractured phyllite with quartz vein.		-	20° 30° 50°	Ir	10	100	-							
28.00			W1, strong hard, dark grey to greenish, fine grain, lamianted and jointed phyllite with quartz.		-	20° 30° 50°	Ir	11	100	20							
29.00			W1, strong hard, dark grey to greenish, fine grain, lamianted, moderately jointed and fractured phyllite with quartz vein. FZ : 29.43 to 29.55 m	12.50	-	30° 50°	Ir	10	100	10							
30.00																	

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