

**KULEKHANI-III HYDROPOWER PROJECT  
BORE HOLE LOG**

DRILL HOLE NO. BPV-1  
COORDINATES 3040702.412,602587.308,577.596  
INCLINATION : VERTICAL  
DRILLING MACHINE : TONE UD-5  
DRILLING METHOD : ROTARY

START DATE : 2 JUNE 2002  
COMPLETION DATE : 13 JULY 2002  
COLLAR ELEVATION :577.596  
ELEVATION OF HOLE END : 465.596  
LOCATION : POWERHOUSE

Depth.m	Casing size	Core Log	DESCRIPTION OF ROCK /SOIL	S P T			DESCRIPTION OF DISCONTINUITIES					CORE RECOVERY RQD %					LU		
				Blows per 15 cm			WATER LEVEL	ALTERATION	ORIENTATION	ROUGHNESS	JOINT/m	REC %	ROD%				PERMEABILITY	LAB TEST	SCREEN PIPE
				0-15	15-30	30-45													
30.00			W2,STRONG,GRAY COLOR,FINE GRAINED,THINLY FOLIATED,LAMINATED SILICIOUS DOLOMITE.											20	40	60	80	100	
			W2,STRONG,GRAY COLOR,FINE GRAINED,THINLY FOLIATED,LAMINATED SILICIOUS DOLOMITE.				FLOW	-	-	-	-	100	-						
31.00			W3,MEDIUM STRONG,GRAY COLOR,FINE GRAINED, FATURED SILICIOUS DOLOMITE, <10cm CORES.				FLOW	-	-	-	-	100	80						
32.00			W2,STRONG,GRAY COLOR,THINLY FOLIATED, LAMINATED,SILICIOUS DOLOMITE.				FLOW	-	-	-	-	100	80						
33.00			W3,MEDIUM STRONG,GREENISH GRAY,MICA AND CHLONITECONTENT,THINLY FOLIATED,LAMINATED SILICIOUS DOLOMITE, SOME MICRO DRAGGED FOLDS WITHIN THEM.				FLOW	CLAY/CLAY ST.	60° 70°	r	2	100	85						
34.00			W2,STRONG,GRAY COLOR,THINLY FOLIATED, LAMINATED SILICIOUS DOLOMITE.				FLOW	CLAY/CLAY ST.	60° 70°	r	2	100	85						
35.00			W2,STRONG,GRAY COLOR,THINLY FOLIATED, LAMINATED SILICIOUS DOLOMITE.				FLOW	CLAY/CLAY ST.	60° 70°	r	2	100	85						
36.00			W2,STRONG,GRAY COLOR,THINLY FOLIATED, LAMINATED SILICIOUS DOLOMITE.				FLOW	CLAY/CLAY ST.	60° 70°	r	2	100	85						
37.00			W2,STRONG,GRAY COLOR,THINLY FOLIATED, LAMINATED SILICIOUS DOLOMITE.				FLOW	CLAY/CLAY ST.	60° 70°	r	2	100	85						
38.00			W2,STRONG,GRAY COLOR,THINLY FOLIATED, LAMINATED SILICIOUS DOLOMITE.				FLOW	CLAY/CLAY ST.	60° 70°	r	2	100	80						
39.00			W1-2,VERY STRONG-STRONG,GRAY COLOR, FOLIATED LAMINATED,SILICIOUS DOLOMITE.				FLOW	CLAY/CLAY ST.	60° 70°	r	2	100	76						
40.00			ABOUT 40cm. THICK WHITE GRAY COLOR SAND(SHEAR PLANE)BELOW IT W3 SILICIOUS DOLOMITE.				FLOW	CLAY/CLAY ST.	60° 70°	r	3	46	40						

ABBREVIATION Rough =r, Irregular=ir, Stepped= st, Smooth= s, Slickensided= sl, Undulating= un, Planner= pl, Clay= cl, Sand= sa, Mica= mi, Crushed= cr, Iron stain=Feo, Fractured zone = f2, Mechanical Breakage= MB, Fresh = W1, Slightly Weathered = W2,Mod. Weathered =W3, Highly Weathered= w4, Decomposed = w5.

DRILLED BY :B.B. KARKI/M.B. SHRESTHA/RISHI ADHIKARI(DRILLING SUPARVISOR/FOREMAN),SRCL

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				Blows per 15 cm				WATER LEVEL m	ALTERATION	ORIENTATION	ROUGHNESS	JOINT/m	REC %	RQD%				PERMEABILITY	LAB TEST	SCREEN PIPE
				0-15	15-30	30-45	45-60													
40.00			W1-2,VERY STRONG- STRONG,GRAY COLOR, FOLIATED LAMINATED,SILICIOUS DOLOMITE.					FLOW	CLAY ST.	60° 71°	r	2	100	76						
			W3,MEDIUM STRONG,GRAY COLOR,THINLY FOLIATED,SILICIOUS DOLOMITE,BELOW IT 10cm. THICK SAND (SHEAT PLANE)					FLOW	CLAY ST.	65° 71°	r	4	88	65						
41.00			W3,MEDIUM STRONG,GRAY COLOR,THINLY FOLIATED, LAMINATED,SILICIOUS DOLOMITE CORE <10cm.					FLOW		-	-	-	100	-						
			W2,STRONG,GRAY COLOR,THINLY FOLIATED, LAMINATED SILICIOUS DOLOMITE.					FLOW	CLAY/CALCITE STAINING	65° 71°	r	3	100	48						
42.00																				
			ABOUT 40cm,THICK W4-5 WEAK-VERYWEAK, GREENISH GRAY PHYLLITE,BELOW THIS, W3 MEDIUM STRONG,GRAY COLOR,FINE GRAINED, THINLY FOLIATED SILICIOUS DOLOMITE.					FLOW	CLAY/CALCITE STAINING	65° 71°	r	2	95	70						
43.00																				
44.00																				
			W1-2 VERY STRONG- STRONG,GRAY COLOR, THINLY FOLIATED,FINE GRAINED ,SILICIOUS DOLOMITE.					FLOW		65° 71°	r	4	100	65						
45.00																				
			W1-2 VERY STRONG- STRONG,GRAY COLOR, THINLY FOLIATED,LAMINATED,FINE GRAINED ,SILICIOUS DOLOMITE.					FLOW	CLAY STAINING	65° 71°	r	4	100	65						
46.00																				
			W1-2 VERY STRONG- STRONG,GRAY COLOR, THINLY FOLIATED,LAMINATED,FINE GRAINED , SILICIOUS DOLOMITE.					FLOW	CLAY STAINING	65° 71°	r	4	100	65						
47.00																				
			W1-2 VERY STRONG-STRONG,GRAY COLOR, THINLY FOLIATED,LAMINATED FINE GRAINED SILICIOUS DOLOMITE.					FLOW	CLAY STAINING	60° 71°	r	3	100	70						
48.00																				
			W1-2 VERY STRONG-STRONG,GRAY COLOR, THINLY FOLIATED,LAMINATED FINE GRAINED SILICIOUS DOLOMITE.						CLAY STAINING	65° 71°	r	2	100	80						
49.00																				
			W1-2 VERY STRONG-STRONG,GRAY COLOR, THINLY FOLIATED,LAMINATED FINE GRAINED SILICIOUS DOLOMITE.					FLOW	CLAY STAINING	65° 71°	r	3	100	82						
50.00			W1,VERY STRONG,GRAY COLOR,FOLIATED,SILICIOUS DOLOMITE.							71°	R	3	100	82						

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				Blows per 15 cm			WATER LEVEL	ALTERATION	ORIENTATION	ROUGHNESS	JOINT/m	REC %	ROD%							
50.00				0-15	15-30	30-45								20	40	60	80	100		
			W1,VERY STRONG,GRAY COLOR,THINGLY FOLIATED, LAMINATED,SILICIOUS DOLOMITE,SOME MICRO DRAGGED FOLDSWITHIN THEM.				FLOW	-	-	-	-	100	89							
51.00			W1,VERYSTRONG,GRAY COLOR,THINGLY FOLIATED, LAMINATED SILICIOUS DOLOMITE, SOME MICRO DRAGGED FOLDSWITHIN THEM.				FLOW	-	-	-	-	100	60							
52.00			W1,VERYSTRONG,,GRAY COLOR,THINGLY FOLIATED, LAMINATED SILICIOUS DOLOMITE, SOME MICRO DRAGGED FOLDS WITHIN THEM.				FLOW	-	-	-	-	100	100							
53.00			W1,VERYSTRONG,,GRAY COLOR,THINGLY FOLIATED, LAMINATED,SILICIOUS DOLOMITE,SOME MICRO DRAGGED FOLDS WITHIN THEM.				FLOW	-	-	-	-	100	74							
54.00			W1,VERYSTRONG,,GRAY COLOR,THINGLY FOLIATED, LAMINATED SILICIOUS DOLOMITE,SOME MICRO DRAGGED FOLDS WITHIN THEM.				FLOW	-	-	-	-	100	100							
55.00			W1,VERYSTRONG,GRAY COLOR,THINGLY FOLIATED, LAMINATED SILICIOUS DOLOMITE, SOME MICRO DRAGGED FOLDS WITHIN THEM.				FLOW	-	-	-	-	100	91							
56.00			W1,VERYSTRONG,GRAY COLOR,THINGLY FOLIATED, LAMINATED SILICIOUS DOLOMITE, SOME MICRO DRAGGED FOLDS WITHIN THEM.				FLOW	-	-	-	-	100	75							
57.00			W1,VERYSTRONG,GRAY COLOR,THINGLY FOLIATED, LAMINATED,SILICIOUS DOLOMITE, SOME MICRO DRAGGED FOLDS WITHIN THEM.				FLOW	STAINING	60° 70° 45°	Ir, r	6	100	68							
58.00			W1,VERYSTRONG,GRAY COLOR,THINGLY FOLIATED, LAMINATED,SILICIOUS DOLOMITE,SOME MICRO DRAGGED FOLDSWITHIN THEM.				FLOW	-	-	-	-	100	100							
59.00			W1,VERYSTRONG,GRAY COLOR,THINGLY FOLIATED,LAMINATED SILICIOUS DOLOMITE, SOME MICRO DRAGGED FOLDS WITHIN THEM.				FLOW	STAINING	60° 40°	r	2	100	100							
60.00																				

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				Blows per 15 cm			WATER LEVEL	ALTERATION	ORIENTATION	ROUGHNESS	JOINT/m	REC %	ROD%				PERMEABILITY	LAB TEST	SCREEN PIPE
				0-15	15-30	30-45													
60.00															20	40	60	80	100
61.00			W1,VERY STRONG,GRAY COLOR,THINLY FOLIATED, LAMINATED SILICIOUS DOLOMITE.				FLOW	FRESH	60° 70°	r	2	100	95						
62.00																			
63.00			W1,VERYSTRONG,GRAY COLOR,THINLY FOLIATED, LAMINATED FINE GRAINED SILICIOUS DOLOMITE.				FLOW	FRESH	60° 40°	r	2	100	95						
64.00																			
65.00			W1,VERYSTRONG,GRAY COLOR,THINLY FOLIATED, LAMINATED FINE GRAINED SILICIOUS DOLOMITE.				FLOW	FRESH	60° 40°	r	4	100	56						
66.00			W1,VERYSTRONG,GRAY COLOR,THINLY FOLIATED, LAMINATED FINE GRAINED SILICIOUS DOLOMITE.				FLOW	-	-	-	-	100	100						
67.00			SAND ONLY (SHEAR PLANE)				-	-	-	-	-								
68.00			W3-4,WEAK,COMPLETELY FRACTURED SILICIOUS DOLOMITE.				-	-	-	-	-								
69.00			W2,STRONG,GRAY COLOR,THINLY FOLIATED, LAMINATED SILICIOUS DOLOMITE.				FLOW	-	-	-	-	100	96						
70.00			W2,STRONG,GRAY COLOR,THINLY FOLIATED, LAMINATED SILICIOUS DOLOMITE.				FLOW	FRESH	60° 70°	r	2	100	92						
71.00			W2,STRONG,GRAY COLOR,THINLY FOLIATED, LAMINATED SILICIOUS DOLOMITE.				FLOW	FRESH	60° 70°	r	2	100	78						
72.00			W2,STRONG,GRAY COLOR,THINLY FOLIATED, LAMINATED SILICIOUS DOLOMITE.				FLOW	-	-	-	-	100	100						

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				Blows per 15 cm			WATER LEVEL	ALTERATION	ORIENTATION	ROUGHNESS	JOINT/m	REC %	RQD%				PERMEABILITY	LAB TEST	SCREEN PIPE
				0-15	15-30	30-45													
70.00														20	40	60	80	100	
			W1,VERY STRONG,GRAY COLOR,THINGLY FOLIATED, LAMINATED FINE GRAINED SILICIOUS DOLOMITE.				FLOW	-	-	-	-	100	95						
71.00																			
			W1,VERY STRONG,GRAY COLOR,THINGLY FOLIATED, LAMINATED FINE GRAINED SILICIOUS DOLOMITE.				FLOW	-	-	-	-	100	100						
72.00																			
			W1,VERY STRONG,GRAY COLOR,THINGLY FOLIATED, LAMINATED FINE GRAINED SILICIOUS DOLOMITE.				FLOW	STAINING	45° 70°	r	2	100	90						
73.00																			
			W1,VERY STRONG,GRAY COLOR,THINGLY FOLIATED, LAMINATED FINE GRAINED SILICIOUS DOLOMITE.				FLOW	STAINING	70°	r	2	100	85						
74.00																			
			W1,VERY STRONG,GRAY COLOR,THINGLY FOLIATED, LAMINATED,FINE GRAINED SILICIOUS DOLOMITE.				FLOW	CAL STAINING	68°	STEPPED	r	2	100	95					
75.00																			
			W1,VERY STRONG,GRAY COLOR,THINGLY FOLIATED, LAMINATED FINE GRAINED SILICIOUS DOLOMITE.				FLOW	STAINING	60° 70°	r	3	100	71						
76.00																			
			W1,VERY STRONG,GRAY COLOR,THINGLY FOLIATED, LAMINATED FINE GRAINED SILICIOUS DOLOMITE.				FLOW	CAL STAINING	60° 70°	r	2	100	85						
77.00																			
			W1,VERY STRONG,GRAY COLOR,THINGLY FOLIATED, LAMINATED,FINE GRAINED SILICIOUS DOLOMITE.				FLOW	-	-	-	-	100	95						
78.00																			
			W1,VERY STRONG,GRAY COLOR,THINGLY FOLIATED, LAMINATED,FINE GRAINED SILICIOUS DOLOMITE.				FLOW	FRESH	60° 70°	r	2	100	100						
79.00																			
			W1,VERY STRONG,GRAY COLOR,THINGLY FOLIATED, LAMINATED,FINE GRAINED SILICIOUS DOLOMITE.				FLOW	-	-	-	-	100	100						
80.00																			

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				Blows per 15 cm			WATER LEVEL,m	ALTERATION	ORIENTATION	ROUGHNESS	JOINT /m	REC %	ROCK%				PERMEABILITY	LAB TEST	SCREEN PIPE						
				0-15	15-30	30-45																			
80.00				0-15	15-30	30-45										20	40	60	80	100					
			W1,VERYSTRONG,GRAY COLOR,THINGLY FOLIATED, LAMINATED FINE GRAINED ,SILICIOUS DOLOMITE.				FLOW	-	-	-	-	100	85												
81.00																									
			W1,VERY STRONG,GRAY COLOR,THINGLY FOLIATED, LAMINATED,FINE GRAINED SILICIOUS DOLOMITE.				FLOW	-	-	-	-	100	70												
82.00																									
			W1,VERY STRONG,GRAY COLOR,THINGLY FOLIATED, FINE GRAINED W1,SILICIOUS DOLOMITE.				FLOW	STAINING	65° 70°	r	2	100	90												
83.00																									
			W1,VERY STRONG,GRAY COLOR,THINGLY FOLIATED, FINE GRAINED W1,SILICIOUS DOLOMITE.				FLOW	STAINING	65° 70°	r	2	100	90												
84.00																									
			W1,VERYSTRONG,GRAY COLOR,THINGLY FOLIATED, FINE GRAINED,SILICIOUS DOLOMITE.				FLOW	-	-	-	-	100	100												
85.00																									
			W2,STRONG,SILICIOUS DOLOMITE INTER CALTED WITH W3,DARK GRAY COLOR VERY THINLY FOLIATED ,PHILLITE.				FLOW	-	-	-	-	100	80												
86.00																									
			W2,HARD,SILICIOUS DOLOMITE INTER CALTED WITH W3,DARK GRAY COLOR VERY THINLY FOLIATED ,PHILLITE.				FLOW	-	-	-	-	100	80												
87.00																									
			W2, STRONG,SILICIOUS DOLOMITE INTER CALTED WITH W4,WEAKDARK GRAY COLOR VERY THINLY FOLIATED ,PHILLITE.				FLOW	-	-	-	-	100	84												
88.00																									
			W1 ,VERY STRONG,SILICIOUS DOLOMITE,WITH INTER CALACTION OF W4, WEAK,GREENISH GRAY COLOR CHLORITE PHYLITE.				FLOW	-	-	-	-	100	85												
89.00																									
90.00																									

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				0-15	15-30	30-45													
90.00														20	40	60	80	100	
			W1,VERY STRONG,GRAY COLOR,FINE GRAINED THINLY FOLIATED ,SILICIOUS DOLOMITE INTERCALATION WITH W2,PHYLLITE.				FLOW OUT	STAINING	70° 20'	r	3	100	92						
91.00																			
			90.90/92.00 W1 ,VERYS TRONG,SILICIOUS DOLOMITE INTERCALATION WITH PHYLLITE. 92-92.40 W1,VERY STRONG,GRAY COLOR SILICIOUS DOLOMITE.				FLOW OUT	STAINING	70° 25'	r	3	100	80						
92.00																			
93.00			W1,VERYSTRONG,DARK GREENISH GRAY,THINLY FOLIATED SILICIOUS DOLOMITE INTERCALATION WITH W2,PHYLLITE.				FLOW OUT	STAINING	70° 15'	r	2	100	89						
94.00																			
			W1,VERY STRONG,GRAY COLOR,THINLY FOLIATED FINE GRAINED SILICIOUS DOLOMITE.				FLOW OUT	-	-	-	-	100	47						
95.00																			
			W1,VERY STRONG,DARK GREENISH GRAY THINLY FOLIATED,FINE GRAINED ,SILICIOUS DOLOMITE ,INTERCALATION WITH W2,PHYLLITE				FLOW OUT	-	-	-	-	100	99						
96.00																			
			W1,VERY STRONG,DARK GREENISH GRAY THINLY FOLIATED,FINE GRAINED ,SILICIOUS DOLOMITE, INTERCALATION WITH PHYLLITE, SOME MICRO DRAGGED FOLDS WITHIN THEM.				FLOW OUT	-	-	-	-	100	83						
97.00																			
98.00			W1,VERY STRONG,DARK GREENISH GRAY THINLY FOLIATED,FINE GRAINED SILICIOUS DOLOMITE, INTERCALATION WITH PHYLLITE SOME MICRO DRAGGED FOLDS WITHIN THEM.				FLOW OUT	CL COATING	70°	S,UN	3	100	76						
99.00																			
			W1,VERY STRONG,WHITE GRAY,FINE GRAINED MASSIVE SILICIOUS DOLOMITE.				FLOW OUT	-	-	-	-	100	56						
			99.35-100.75m W1,VERY STRONG,DARK GREENISH GRAY,SILICIOUS DOLOMITE, INTERCALATION WITH PHYLLITE ,MICRO-DAGGED FOLDS WITHIN THEM.				FLOW OUT	CL COATING	70° 75'	S,UN	3	100	51						
100.00																			

ABBREVIATION Rough =r, Irregular=ir, Stepped= st, Smooth= s, Slickensided= sl, Undulating= un, Planner= pl, Clay= cl, Sand= sa, Mica= mi, Crumbed= cr, Iron stain=Feo, Fractured zone = f2, Mechanical Breakage= MB, Fresh = W1, Slightly Weathered = W2,Mod. Weathered =W3, Highly Weathered= w4, Decomposed = w5.

DRILLED BY :B.B. KARKI/M.B. SHRESTHA/RISHI ADHIKARI(DRILLING SUPARVISOR/FOREMAN),SRCL

**KULEKHANI-III HYDROPOWER PROJECT**  
**BORE HOLE LOG**

DRILL HOLE NO. BPV-1  
COORDINATES 3040702.412,602587.308,577.596  
INCLINATION : VERTICAL  
DRILLING MACHINE : TONE UD-5  
DRILLING METHOD : ROTARY

START DATE : 2 JUNE 2002  
COMPLETION DATE : 13 JULY 2002  
COLLAR ELEVATION :577.596  
ELEVATION OF HOLE END : 465.596  
LOCATION : POWERHOUSE

Depth,m	Casing size	Core Log	DESCRIPTION OF ROCK /SOIL	S P T			DESCRIPTION OF DISCONTINUITIES					CORE RECOVERY					LU		
				Blows per 15 cm			WATER LEVELm	ALTERATION	ORIENTATION	ROUGHNESS	JOINT/m	REC %	RQD%				PERMEABILITY	LAB TEST	SCREEN PIPE
				0-15	15-30	30-45													
100.00														20	40	60	80	100	
			99.35-100.75m W1,VERY STRONG, DARK GREENISH GRAY,SILICIOUS DOLOMITE INTERCALATION WITH PHYLLITE ,MICRO-DAGGED FOLDS WITHIN THEM.				FLOW OUT	STAINING	70° 75°	S,UN	3	100	51						
101.00			W1,VERY STRONG,GRAY COLOR,THINLY FOLIATED FINE GRAINED,LAMINATED , SILICIOUS DOLOMITE,INTERCALATION WITH PHYLLITE				FLOW OUT	STAINING	70°	S,UN	4	100	93						
102.00			W1,VERY STRONG, ,DARK GREENISH GRAY COLOR,THINLY FOLIATED,LAMINATED ,SILICIOUS DOLOMITE,INTERCALATION WITH PHYLLITE,				FLOW OUT					100	58						
103.00			W1,VERY STRONG, ,DARK GREENISH GRAY COLOR,THINLY FOLIATED,LAMINATED SILICIOUS DOLOMITE,INTERCALATION WITH PHYLLITE,				FLOW OUT	STAINING	70°	S,UN	2	100	64						
104.00			W1,VERY STRONG, ,DARK GREENISH GRAY COLOR,THINLY FOLIATED,LAMINATED ,SILICIOUS DOLOMITE,INTERCALATION WITH PHYLLITE				FLOW OUT	-	-	-	-	100	99						
105.00			W1,VERY STRONG, ,DARK GREENISH GRAY THINLY FOLIATED,LAMINATED SILICIOUS DOLOMITE, INTERCALATION WITH PHYLLITE,MICRO DRAGGED FOLDS WITHIN THEM.				FLOW OUT	-	-	-	-	100	100						
106.00			W1,VERY STRONG, ,DARK GREENISH GRAY THINLY FOLIATED,LAMINATED,FINE GRAINED , SILICIOUS DOLOMITE.SOMEWHAT INTERCALATION WITH PHYLLITE				FLOW OUT	-	-	-	-	100	75						
107.00			107.10-107.60m CLAY MIXED SAND ( SHEAR PLANE) 107.60-107.85 W1,VERY STRONG, SILICIOUS DOLOMITE.				FLOW OUT	-	-	-	-	18	17						
108.00			W1 VERY STRONG,SILICIOUS DOLOMITE , INTERCALATION WITH PHYLLITE .				FLOW OUT	-	-	-	-	100	44						
109.00			W1, VERY STRONG,SILICIOUS DOLOMITE, INTERCALATION WITH PHYLLITE, MICRO DRAGGED FOLDS WITHIN THEM.				FLOW OUT	-	-	-	-	100	67						
			109.15-109.80 mCLAY MIXED SAND (SHEAR ZONE/ WEAK ZONE) BELOW IT				FLOW OUT	-	-	-	-	58	33						
110.00			109.80-110.70m W1,VERY STRONG,SILICIOUS DOLOMITE.																

ABBREVIATION Rough = r, Irregular=ir, Stepped= st, Smooth= s, Slickensided= sl, Undulating= un, Planner= pl, Clay= cl, Sand= sa, Mica= mi, Crumbed= cr, Iron stain=fao, Fractured zone = f2, Mechanical Breakage= MB, Fresh = W1, Slightly Weathered = W2,Mod. Weathered =W3, Highly Weathered= w4, Decomposed = w5.

DRILLED BY :B.B. KARKI/M.B. SHRESTHA/RISHI ADHIKARI(DRILLING SUPARVISOR/FOREMAN),SRCL



**KULEKHANI-III HYDROPOWER PROJECT**  
**BORE HOLE LOG**

DRILL HOLE NO. BPV-1  
COORDINATES 3040702.412,602587.308,577.596  
INCLINATION : VERTICAL  
DRILLING MACHINE : TONE UD-5  
DRILLING METHOD : ROTARY

START DATE : 2 JUNE 2002  
COMPLETION DATE : 13 JULY 2002  
COLLAR ELEVATION : 577.596  
ELEVATION OF HOLE END : 465.596  
LOCATION : POWERHOUSE

Depth.m	Casing size	Core Log	DESCRIPTION OF ROCK /SOIL	S P T			DESCRIPTION OF DISCONTINUITIES					CORE RECOVERY RQD %					LU					
				Blows per 15 cm			WATER LEVEL	ALTERATION	ORIENTATION	ROUGHNESS	JOINT/m	REC %	RQD%				PERMEABILITY	LAB TEST	SCREEN PIPE			
				0-15	15-30	30-45																
110.00			W1,VERY STRONG, SILICIOUS DOLOMITE, INTERCALATION WITH PHYLLITE, MICRO DRAGGED FOLDS WITHIN THEM.				FLOW OUT	-	-	-	-	58	33		20	40	60	80	100			
111.00			110.0 TO 111.17m W1,VERY STRONG, SILICIOUS DOLOMITE,111.17 TO 111.53m CLAY MIXED SAND,SHEAR PLANE BELOW IT 111.53-112.00 W1,VERY STRONG, WHITE GRAY MASSIVE SILICIOUS DOLOMITE.				FLOW OUT	-	-	-	-	100	62									
112.00																						
113.00			W1,VERY STRONG, WHITE GRAY COLOR,MASSIVE LAMINATED SILICIOUS DOLOMITE.				FLOW OUT	-	-	-	-	100	65									
114.00			113.50-113.70m W1,VERY STRONG, WHITE GRAY, COLOR LAMINATED SILICIOUS DOLOMITE 113.70-114.20m CLAY MIXED SAND (SHEAR ZONE/WEAK PLANE) BELOW IT W1,VERY STRONG, GRAY COLOR,FINE GRAINED LAMINATED SILICIOUS DOLOMITE.				FLOW OUT	-	-	-	-	67	38									
115.00			END OF HOLE																			

ABBREVIATION Rough =r, Irregular=ir, Stepped= st, Smooth= s, Slickensided= sl, Undulating= un, Planner= pl, Clay= cl, Sand= sa, Mica= mi, Crumbed= cr, Iron stain=Feo, Fractured zone = f2, Mechanical Breakage= MB, Fresh = W1, Slightly Weathered = W2,Mod. Weathered =W3, Highly Weathered= w4, Decomposed = w5.

DRILLED BY :B.B. KARKI/M.B. SHRESTHA/RISHI ADHIKARI(DRILLING SUPERVISOR/FOREMAN),SRCL

# BORE HOLE LOG

DRILL HOLE NO.: BPV-2A  
COORDINATES  
INCLINATION: VERTICAL  
DRILLING MACHINE: JOY  
DRILLING METHOD: ROTARY  
CLIENT: NIPPON KCEI

START DATE: 17/06/2002  
COMPLETION DATE: 28/06/2002  
COLLAR ELEVATION:  
ELEVATION HOLE END: 20.00 m.  
LOCATION: Sikharbas Canda  
DIRECTION:

LOCATION: Sikharbas Danda									
DIRECTION:									
Core Recovery									
RQD%									
Results									
LW kg/cm2									
Laboratory									
Permeability									
RQD%									
REC%									
Joint/ m									
Roughness									
Orientation									
Alteration									
Water Level m.									
Blows per 15 cm									
Description									
Core Log									
Casing Size									
Depth, m									
0.00									
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ABBREVIATION rougher, smoother, suckersuck=sl, un=undulating, p=planar, clay=cl, sand=ss, 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: JCCN GHRESTHA & SANTA MAJHI

Logged by: R. SHAPIT

# BORE HOLE LOG KULEKHANI-3 HYDROELECTRIC POWER PROJECT

DRILL HOLE NO.: BPV-2A  
COORDINATES  
INCLINATION: VERTICAL  
DRILLING MACHINE: JOY  
DRILLING METHOD: ROTARY  
CLIENT: NIPPON KCEI

START DATE: 17/06/2002  
COMPLETION DATE: 26/06/2002  
COLLAR ELEVATION:  
ELEVATION HOLE END: 20.00 m.  
LOCATION: Sikharbas Danda  
DIRECTION:

DIRECTION:																				
Depth, m	Casing Size	Core Log	Description	S	P	T	Blows per 15 cm	Water Level m	Alteration	Orientation	Roughness	Joint/ m	Core Recovery						Results	
													REC%	RQD%	20	40	60	80	100	Permeability
10.00							0-15 115-3000-45													
	NOT		W1-W2, strong hard, white to light grey, fine grain, moderately jointed and fragmented dolomite. Core loss : 10.00 to 10.34m.					Dry 9.00	-	30°	ir	11	88	-						
11.00			W1-W2, strong hard, white to light grey, fine grain dolomite. FZ : 11.32 to 12.00m.					10.90 Dry	-	30°	ir	16	100	12						
12.00			W1-W2, strong hard, light grey, fine grain dolomite. Core loss : 12.00 to 12.28m.						-	30°	ir	8	72	37						
13.00			W1-W2, strong hard, light grey, fine grain, jointed dolomite. Core loss : 13.26 to 13.88m.						-	30°	ir	6	48	24						
14.00			W1-W2, strong hard, white to light grey, fine grain, moderately jointed dolomite. Core loss : 14.31 to 14.44m.					Dry Dry	-	30°	ir	9	87	14						
15.00			W1-W2, strong hard, light grey, fine grain dolomite. Light grey, fine grain sand found as sludge. Core loss : 15.00 to 15.94m.						-	10°	ir	3	6	-						
16.00			W1, strong hard, light grey, fine grain, fragmented dolomite. Light grey, fine grain sand found as sludge. Core loss : 16.00 to 16.81m.					Dry 16.50	-	30°	ir	3	19	-						
17.00			W1, strong hard, light grey, fine grain, moderately jointed dolomite. Light grey, fine grain sand found as sludge. Core loss : 17.25 to 17.32m.						-	30°	ir	5	43	10						
18.00			W1, strong hard, light grey, fine grain, moderately jointed dolomite. Core loss : 18.17 to 18.79m.					Dry Dry	-	30°	ir	7	38	-						
19.00			W1, strong hard, light grey, fine grain, moderately jointed and fragmented dolomite. Core loss : 19.10 to 19.79m.						-	30°	ir	5	31	-						
20.00																				
ABBREVIATION rough=r, smooth=s, slickensided=sl, un=undisturbed, crushed=cr, cemented=c																				

ABBREVIATION rougher, smooth=s, slickensided=sl, un=undulating, pl=planar, clay=cl, sand=sa, mica=ms, 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

Edited by JCCN SHRESTHA & SANTA MAJHI

Logged by: R. SHAPIT

# BORE HOLE LOG

DRILL HOLE NO.: BPV-28  
COORDINATES  
INCLINATION: VERTICAL  
DRILLING MACHINE: JOY  
DRILLING METHOD: ROTARY  
CLIENT: NIPPON KOEI

START DATE: 29/06/2002  
COMPLETION DATE: 21/08/2002  
COLLAR ELEVATION:  
ELEVATION HOLE END: 78.35 m.  
LOCATION: Sikharbas Danda  
DIRECTION:

DEPTH: 0.00 - 10.00				D C P T				DIRECTION: Core Recovery RQD%												
Depth, m	Casing Size	Core Log	Description	Blows per 15 cm			Water Level m	Alteration	Orientation	Roughness	Joint: cm	REC%	RQD%	20	40	60	80	100	Permeability	Laboratory
0.00				0-15 (15-30) 30-45																
0.00		NX	Colluvium deposition of dark brown to dark grey, fine to coarse grain clayey sand and boulder size of phyllite.	4	9	18	45/25	Dry	-	-	-	100	-							
1.00			Colluvium deposition of cobble to boulder size, W2, light grey to greenish phyllite.						-	-	-	90	-							
2.00			Initially 60cm is colluvium of cobble size of greenish grey phyllite. From 2.60m Red rock is observed. W1-W2 strong hard, greenish grey laminated phyllite.	80	-	-	15/80		-	50°	lr	7	54	-						
2.60			W1-W2, medium to strong hard, greenish grey, laminated, moderately jointed phyllite. Core loss : 3.00 to 3.40m.						-	30°	lr	8	60	-						
3.00		78	W1-W2, medium to strong hard, greenish grey, laminated, moderately jointed phyllite. Core loss : 4.00 to 4.33m.					Dry	-	30°	lr	7	62	-						
4.00			W1-W3, strong hard, greenish grey laminated, moderately jointed phyllite. Core loss : 5.00 to 5.12m.						-	30°	lr	7	62	-						
5.00			W1-W2, medium hard, greenish grey, laminated, moderately jointed phyllite. Core loss : 5.00 to 6.42m.						-	30°	lr	8	57	-						
6.00			W1-W2, medium to strong hard, greenish grey, laminated, highly jointed and fragmented phyllite. Core loss : 7.00 to 7.47m.						-	30°	lr	8	53	-						
7.00			W3-W5, soft to medium hard, dark grey to brownish, medium to coarse grain phyllite.						-	30°	lr	4	100	-						
8.00			W1-W2, strong hard, greenish grey, laminated, phyllite with quartz vein.					Dry	-	30°	lr	5	24	10						
9.00			Core loss : 9.00 to 9.75m.																	
10.00																				

ABBREVIATION rough=, smooth=s, slickensided=sl, un=undulating, pl=planner, 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  
Created by JCON SHRESTHA & SANTA MAJHI  
Logged by R. SHARMA

ABBREVIATION rough=r, smooth=s, slickensided=ss, un=undulating, p=planar, clay=cl, sand=sa, mica=ms, 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: JCCN SHRESTHA & SANTA MAJHI

Logged by: R. SHARMA

# BORE HOLE LOG KULEKHANI-3 HYDROELECTRIC POWER PROJECT

DRILL HOLE NO.: BPV-28  
COORDINATES  
INCLINATION: VERTICAL  
DRILLING MACHINE: JOY  
DRILLING METHOD: ROTARY  
CLIENT: NIPPON KOEI

START DATE: 29/08/2002  
COMPLETION DATE: 21/08/2002  
COLLAR ELEVATION:  
ELEVATION HOLE END: 78.35 m.  
LOCATION: Sikharbas Danda  
DIRECTION:

Depth, m	Casing Size	Core Log	Description	S P T			Core Recovery										Results	
				Blows per 15 cm	Water Level m	Alteration	Orientation	Roughness	Joint, m	REC%	RDD%	20	40	60	80	100	Permeability	Laboratory
10.00				0-15 (15-30) 35-45														
78			W1-W2, strong med. greenish gray, laminated, moderately jointed phyllite. Core loss : 10.00 to 10.23m.				10°	5	8	77	-							
11.00			W1-W3, medium to strong hard, greenish gray, laminated, moderately jointed phyllite. Core loss : 11.00 to 11.37m.				10°	5	7	63	11							
12.00			W2-W3, medium hard, greenish gray to brownish, laminated phyllite. Core loss : 12.34 to 13.00m.				10°	5	6	34	-							
13.00			Total core loss, soft and weathered rock are crushed, brown, fine grain sand found as sludge. Core loss : 13.00 to 14.00m.						0	0	-							
14.00			W3, soft, greenish gray, fine grain phyllite found as sand size particles. Core loss : 14.00 to 14.41m.						0	58	-							
15.00			W1-W2, strong hard, greenish gray, laminated, moderately jointed phyllite. Core loss : 15.00 to 15.52m.				10°	5	7	48	-							
16.00			W2, medium hard, greenish gray, laminated phyllite with quartz vein. Sludge found as greenish gray, medium grain sand. Core loss : 16.00 to 16.77m.				10°	5	6	11	-							
17.00			W2, medium hard, greenish gray, laminated phyllite. Sludge as greenish gray, fine grain sand are found. Core loss : 17.00 to 17.58m.				10°	5	5	32	-							
18.00			W2-W3, medium hard, greenish gray, laminated phyllite. Sludge found as greenish gray, medium grain sand. Core loss : 18.15 to 19.00m.				10°	1r	3	15	-							
19.00			W5, soft, greenish gray to brown phyllite with brown, fine grain sand found as sludge. Core loss : 19.00 to 19.66m.						0	34	-							
19.66																		

ABBREVIATION rough=, smooth=s, slickensided=sl, un=unquating, p=planar, clayed, sand=ss, 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 JCCN SHRESTHA & SANTA MAJHI

Logged by R. SHARPT