

## **SCHEDULE OF RATES**

### **RECONNAISSANCE SURVEY**

<b>Sl. No.</b>	<b>Subject</b>	<b>Amount</b>	<b>Unit</b>
1.	Reconnaissance Geodetic Survey of an area to be surveyed and mapped on a scale of 1:5000 and smaller in semi barren/barren land.	200.00	Hectare
2.	Reconnaissance Geodetic Survey of an area to be surveyed and mapped on scale of 1:5000 and smaller in thick forest cover	400.00	Hectare
3.	Reconnaissance Geodetic Survey of an area to be surveyed and mapped on a scale larger than 1:5000 (i.e. 1:2500, 1:2000, 1:1000) in semi barren /barren land	400.00	Hectare
4.	Reconnaissance Geodetic Survey of an area to be surveyed and mapped on a scale larger than 1:5000 (i.e. 1:2500, 1:2000, 1:1000) on thick forest cover	600.00	Hectare
5.	Reconnaissance Geodetic Survey of an area to be surveyed and mapped on a scale of 1:500 in either within forest cover of barren/semi barren land	600.00	Hectare
6.	Reconnaissance Geodetic Survey of alignment for new road construction in semi barren/barren land.	1200.00	Km
7.	Reconnaissance Geodetic Survey of alignment for new road construction in thick forest cover.	1400.00	Km
8.	Reconnaissance Geodetic Survey of an area for major projects/establishment.	600.00	Day
9.	Reconnaissance Cadastral Survey (boundary survey)	200.00	Hectare

### **CONTOUR SURVEY**

<b>Sl. No.</b>	<b>Subject</b>	<b>Amount</b>	<b>Unit</b>
10.	Contour surveying of an area larger than 10 hectares on a scale of 1:500 in semi barren/barren land (N.B. Add 50% of the job cost per hectare if the survey area falls below 10 hectares)	2880.00	Hectare
11.	Contour surveying of an area larger than 10 hectares on a scale of 1:500 in thick forest land (N.B. Add 50% of the job cost per hectare if the survey area falls below 10 hectares)	3120.00	Hectare
12.	Contour surveying of an area larger than 10 hectares on a scale of 1:1000 and 1:2000 in semi barren /barren land (N.B. Add 30% of the job cost per hectare if the survey area falls below 10 hectares)	3230.00	Hectare
13.	Contour surveying of an area larger than 10 hectares on a scale of 1:1000 and 1:2000 either within thick forest cover or urban township or cities (N.B. Add 30% of the job cost per hectare if the survey area falls below 10 hectares)	3430.00	Hectare
14.	Contour surveying of an area on a scale of 1:5000 and smaller in semi barren /barren land.	3030.00	Hectare
15.	Contour surveying of an area on a scale of 1:5000 and smaller in thick forest cover	3130.00	Hectare

### **CADASTRAL SURVEY**

<b>Sl. No.</b>	<b>Subject</b>	<b>Amount</b>	<b>Unit</b>
16.	Detail cadastral survey of an area for demarcating private holdings /real estates on a scale of 1:2000, 1:1000 on rural area with minor jungle clearance etc.	4200.00	Hectare

17.	Detail cadastral survey of an area for demarcating private holding /real estate properties etc. within thick forest/urban township and cities on a scale of 1:2000, 1:1000, 1:500	4950.00	Hectare
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**ROAD ALIGNMENT**

<b>Sl. No.</b>	<b>Subject</b>	<b>Amount</b>	<b>Unit</b>
18.	Detail Contour Surveying of 30 metre on either side of road alignment on a scale of 1:500/1:1000 with a contour interval of 1 metre including cutting / clearance of minor jungle /bushes, detail alignment of road on the proposed site, providing Pegs /Katcha bullies at 20 m interval on both side of the road to be built all complete	30,000.00	Km

**OTHER PROJECTS**

<b>Sl. No.</b>	<b>Subject</b>	<b>Amount</b>	<b>Unit</b>
19.	Transfer of the plans of the major projects on the ground from the pre-planned drawing, providing necessary identification marks on required areas etc. all complete.	10,000.00	Day
20.	Short site visits by a survey team involving 10,000/day instrumentation to verify/study the spot (all expenses included )	10,000.00	Day

**REVENUE RECEIPT CHARGES**

**For the work listed from II to V**

21.	Upto 5 un interrupted working days	10,000.00
22.	Upto 10 un interrupted working days	18,000.00
23.	Upto 20 un interrupted working days	35,000.00
24.	Upto 100 un interrupted working days	1,50,000.00
25.	For un interrupted working days beyond 100 days upto 250 days	2,50,000.00
26.	For un interrupted working days beyond 250 days	5,00,000.00

**SAMPLING**

Sl. No.	Subject/Nature of work	Unit	Approved rate in Rs. (1996)	Proposed/ Present rate on the basis of detail analysis at present labour cost and market value (in Rs.)
27	Channel sampling in exposed soft rock	(10cmx100cmx10cm)	250.00	450.00
28	Channel sampling in exposed soft rock	(10cmx100cmx15cm)	300.00	550.00
29	Channel sampling in buried soft rock	(10cmx100cmx10cm)	300.00	550.00
30	Channel sampling in buried soft rock	(10cmx100cmx15cm)	350.00	650.00
31	Channel sampling in hard rock out crop	(10cmx100cmx10cm)	300.00	550.00
32	Channel sampling in hard rock out crop.	(10cmx100cmx15cm)	350.00	650.00
33	Channel sampling in buried hard rock	(10cmx100cmx10cm)	350.00	650.00
34	Channel sampling in buried hard rock	(10cmx100cmx15cm)	400.00	750.00
35	Grab sampling	1 nos.	20.00	40.00
36	Augur sampling	1 nos.	25.00	50.00

**PITTING AND TRENCHING AND BACK FILLING**

Sl. No.	Subject/Nature of work	Unit	Approved rate in Rs. (1996)	Proposed/ Work out present rate
37	Excavation of pits/trenches in mixed soil to a depth of 150 cms max. and lifting of material all complete (Length & breath depending upon working condition)	Cum	30.00	100.00
38	Excavation of pits/trenches in mixed soil upto a depth of 300 cms max. and lifting of material all complete (Length & breath depending upon working condition).	Cum	35.00	135.00
39	Excavation of pits/trenches in mixed soil upto a depth of 400 cms max. and vertical uplift of material all complete (Length & breath depending upon working condition).	Cum	50.00	200.00
40	Excavation of pits/trenches in mixed soil upto a depth of 500 cms cum max. and vertical uplift of matcumerial all complete (Length & breath cum depending upon working condition).	Cum	65.00	265.00

41	Excavation of pits/trenches in mixed soil upto a depth of 600 cms max. and vertical uplift of material all complete (Length & breath depending upon working condition).	Cum	85.00	400.00
42	Excavation of 150 cm pits/ trenches in soft rock/mixed soil formation and vertical uplift of material all complete (Length & breath depending upon working condition).	Cum	35.00	135.00
43	Excavation of 300 cms pits/ trenches in soft rock/mixed soil formation and vertical uplift of material all complete (Length & breath depending upon working condition).	Cum	50.00	200.00
44	Excavation of 400 cms pits/ trenches in soft rock/mixed soil formation and vertical uplift of material all complete (Length & breath depending upon working condition).	Cum	70.00	265.00
45	Excavation of 500 cms pits/ trenches in soft rock/mixed soil formation and vertical uplift of material all complete (Length & breath depending upon working condition).	Cum	100.00	400.00
46	Excavation of 600 cms pits/ trenches in soft rock/mixed soil formation and vertical uplift of material all complete (Length & breath depending upon working condition).	Cum	130.00	500.00
47	Back filling of pits/trenches by excavated material	Cum	15.00	50.00

**GEOTECHNICAL TESTS: (As per G.S.I)**

**SOIL TESTING:**

		<b>Old Rate</b>	<b>Revised Rate</b>
48.	Particle Size Analysis for determining sand, silt and clay percentages (including pipetting	Rs. 367.00	Rs. 809.00
49.	Determination of Atterberg's Limits (LL,PL & PI) (LL – or set of 3 tests)	Rs. 405.00	Rs. 417.00

50.	Laboratory vane shear test	Rs. 306.00	Rs. 668.00
51.	Laboratory Permeability test (By Jodhpur Permeameter)	Rs. 432.00	Rs. 936.00
52.	Swelling Index test	Rs. 218.00	Rs. 731.00
53.	Particle Specific Gravity	Rs. 292.00	Rs. 450.00
54.	Optimum moisture content by Proctor Compaction	Rs. 636.00	Rs. 1257.00
55.	Density and moisture content (in-situ)- a set of 3 tests	Rs. 333.00	Rs. 371.00
56.	Density and moisture content of disturbed Sample.	Rs. 289.00	Rs. 720.00
57.	pH of a particular sample by pH meter.	Rs. 174.00	Rs. 359.00
58.	Director Shear Test (a test by 3 tests) by any of these methods.		
	i) Unconsolidated undrained (uu) condition	Rs. 416.00	Rs. 671.00
	ii) Consolidated undrained (cu) condition	Rs. 520.00	Rs. 804.00
	iii) Consolidated undrained (cd) condition	Rs. 597.00	Rs. 1,457.00
59.	Soil triaxial test (a set of least 3 test) by any of these methods.		
	i) Unconsolidated undrained (uu) Condition – without pore pressure	Rs. 559.00	Rs. 672.00
	ii) Consolidated undrained (cu) condition	Rs. 757.00	Rs. 1,713.00
	iii) Consolidated drained (cd) condition	Rs. 900.00	Rs. 1,713.00
	iv) Unconsolidated undrained condition – With pore pressure	Rs. 845.00	Rs. 1,713.00
	v) Unconfined compression test (ucc)	Rs. 295.00	Rs. 731.00
<b>ROCK TESTING:</b>			
60.	Cutting of rock core faces (one core)	Rs. 190.00	Rs. 204.00
61.	Cutting of one rock cube	Rs. 383.00	Rs. 812.00
62.	Uni-axial compressive strength of a Set of at least 3 cores including Cutting and polishing of faces.	Rs. 993.00	Rs. 2,147.00
63.	Tensile Strength of a set of at least 3 Cores including cutting and polishing of faces as per specification.	Rs. 790.00	Rs. 2,147.00
64.	Point Load Strength Index test	Rs. 256.00	Rs. 528.00
65.	Modulus of elasticity and Poisson's Ratio –a set of 3 samples.	Rs. 1230.00	Rs. 2,816.00
66.	Determination of Bulk density and void ratio (including cutting & polishing) & water Absorption.	Rs. 350.00	Rs. 854.00
67.	Determination of specific Gravity.	Rs. 185.00	Rs. 204.00

**AGGREGATE TESTING**

	<b>Coarse Aggregate Teesta:-</b>	<b>Old Rate</b>	<b>Revised Rate</b>
68	Aggregate impact value (average of a set of 3 test)	Rs. 696.00	Rs. 1,410.00
69	Soundness loss test (average of a set of 3 tests)	Rs. 762.00	Rs. 1,667.00
70	Los Angeles Abrasion test (one set of 3 tests)	Rs. 702.00	Rs. 1,680.00
71	Crushing Strength (one set of 3 tests)	Rs. 482.00	Rs. 1,110.00
72	Compressive strength by uniaxial compression testing machine (a set of 3 sets)	Rs. 993.00	Rs. 2,147.00
73	Compressive strength by Point Load Strength machine after computation (a set of 3 tests)	Rs. 256.00	Rs. 500.00
74	Modulus of elasticity & Poison's ratio	Rs. 1230.00	Rs. 1845.00
75	Bulk density & Void ratio	Rs. 350.00	Rs. 700.00
76	Specific Gravity	Rs. 185.00	Rs. 450.00
77	Water absorption	Rs. 696.00	Rs. 950.00
	<b>Fine Aggregate Tests:</b>		
78	Sieve Analysis and determination of fineness Modulus	Rs. 383.00	Rs. 809.00
79	Specific Gravity (particle)	Rs. 262.00	Rs. 677.00
80	Mica Content determinations	Rs. 647.00	Rs. 669.00
81	Organic impurities Test	Rs. 295.00	Rs. 698.00
82	Combined Silt and Clay Content	Rs. 377.00	Rs. 809.00
	<b>FIELD TESTING:</b>	<b>Old Rate</b>	<b>Revised Rate</b>
83	Collection of undisturbed soil samples with wax sealing etc. by usual method	Rs. 388.00	Rs. 794.00
84	Sampling by hand augur upto 2 mt. depth – (charge per mts. Calculated)	Rs. 487.00	Rs. 900.00
85	Determination of bearing capacity of soil by Vicksberg Cone-penetrometer	Rs. 201.00	Rs. 993.00
86	Field Vane Shear test	Rs. 2687.00	Rs. 3800.00
	In situ stress determination in underground openings under construction by flat jack 2 pin method ( a set of two tests)	Rs. 11,295.00	Rs. 24,224.00

## **CIVIL WORKS IN GEOENGINEERING**

### **REMEDIAL MEASURES:**

87	Retaining Structure	as per SPWD rates
88	Drainage	as per SPWD rates
89	Grouting	As per GSI, NHPC rates
90	Bio-technical stabilization	As per Forest deptt. rates
91	Fitting, fixing of 25mm – dia. Of different length, different rock bolts in all types of rocks including reinforcement of cement grouting for rock bolting all complete.	Rs. 120/m

Cost of rock bolts extra as per the prevailing market rates.

### **CHARGES FOR SERVICES RENDERED BY THE DEPARTMENT OF MINES AND GEOLOGY, GOVT. OF SIKKIM, BEYOND THEIR ACREDITED ACTIVITIES (To be deposit in State Bank of Sikkim, under the to departmental receipt head)**

92	Geo-technical studies for a period not exceeding 3 days	<b>EXISTING</b>	<b>PROPOSED</b>
	a) East District	Rs. 5,500.00	Rs. 10,000.00
	b) West District	Rs. 6,000.00	Rs. 12,000.00
	c) North District	Rs. 6,250.00	Rs. 12,500.00
	d) South District	Rs. 5,750.00	Rs. 11,500.00
93	Geo-technical studies for a period not exceeding 5 days		
	a) East District	Rs. 8,700.00	Rs. 17,000.00
	b) West District	Rs. 9,200.00	Rs. 18,500.00
	c) North District	Rs. 9,700.00	Rs. 19,500.00
	d) South District	Rs. 8,950.00	Rs. 17,500.00
94	Geo-technical studies for a period not exceeding 10 days		
	a) East District	Rs. 16,500.00	Rs. 33,000.00
	b) West District	Rs. 17,500.00	Rs. 35,000.00
	c) North District	Rs. 17,800.00	Rs. 36,000.00
	d) South District	Rs. 17,800.00	Rs. 35,000.00



95 Charges for geotechnical and geological investigation including drainage mapping, geo-morphology etc per km (30 mts on both side of proposed road).

- i) East district Rs. 6,000/- for 1<sup>st</sup> km and Rs 5,225/-km for additional kms.
- ii) South district Rs. 7,000/-for 1<sup>st</sup> km and Rs. 5,225/km for additional kms.
- iii) West district Rs. 8,000/-for 1<sup>st</sup> km and Rs. 5,225/km for additional kms.
- iv) North district Rs. 7,750/-for 1<sup>st</sup> km and Rs. 5,225/km for additional kms.

96 Geological and Geotechnical studies on suitability of area for road construction in all parts of Sikkim.  
Rs. 12000/km+ requisite fee for as per scheduled XII (Sl. No. 1 to 3) above

	<b>CHEMICAL ANALYSIS:</b>	Existing rate (per sample)	Revised rate /proposed (Per sample)
97	Quantitative chemical analysis of rock by conventional wet chemical method for SiO <sub>2</sub> , Al <sub>2</sub> O <sub>3</sub> , TiO <sub>2</sub> , FeO, Fe <sub>2</sub> O <sub>3</sub> , MnO, Cr <sub>2</sub> O <sub>3</sub> , CaO, MgO, Na <sub>2</sub> O <sub>3</sub> , K <sub>2</sub> O <sub>3</sub> , P <sub>2</sub> O <sub>5</sub> , CO <sub>2</sub> (+/-), H <sub>2</sub> O	Rs. 2424.00	Rs. 6060.00
98	Quantitative wet chemical analysis by conventional methods		
	a) First radical	Rs. 187.00	Rs. 467.00
	b) Each additional radical except rare earth elements	Rs. 125.00	Rs. 312.00
	c) Rare earth elements, viz, Ta, Nb, W, Zr, Mo, Cd, V, Li etc.	Rs. 263.00	Rs. 657.00
99	Gold or silver analysis (first assay)	Rs. 387.00	Rs. 967.00
100	Organic matter/carbon analysis	Rs. 161.00	Rs. 402.00

**WATER ANALYSIS:**

101	Partial (pH, conductivity, total hardness, alkalinity, chloride)	Rs. 2810.00	Per Sample
102	Detailed (pH, conductivity, total hardness, Alkalinity, Carbonate, Biocarbonate, T.D.S., Nitrate, Sulphate, Chloride, Iron, Calcium, Magnesium, Sodium, Potassium, Boron, Fluoride.	Rs. 769.00	Per Sample
103 a)	Coliform count, Presence or absence test in the Laboratory	Rs. 302.00	Per Sample
b)	Sample collection within East District and test for Coliform presence, or absence and count.		
i)	First sample	Rs. 650.00	
ii)	Each subsequent sample	Rs. 362.00	

N.B. Service charge extra as per Schedule XVIII (To be deposited in SBS under appropriate departmental head).

c)	Sample collection within West District and test for Coliform presence or absence and count		
i)	First sample	Rs. 877.00	
ii)	Each subsequent sample	Rs. 362.00	

N.B. Service charge extra as per Schedule XVIII (To be deposited in SBS under appropriate departmental head).

d)	Sample collection within North District and test for Coliform presence or absence and count		
i)	First sample	Rs. 1110.00	
ii)	Each subsequent sample	Rs. 362.00	

N.B. Service charge extra as per Schedule XVIII (To be deposited in SBS under appropriate departmental head).

e)	Sample collection within South District and test for Coliform presence or absence and count		
i)	First Sample	Rs. 762.00	
ii)	Each subsequent sample	Rs. 362.00	

N.B. Service charge extra as per Schedule XVIII (To be deposited in SBS under appropriate departmental head).

**DIAMOND DRILLING (Preparation)**

104.	Dismantling of Drilling Machine all complete.	Rs. 1630.00
105.	Assembly of Drill Machine all complete.	Rs. 3100.00
106.	Carriage of Machine parts in Hilly Terrain other than vehicular transport.	Rs. 1.00 kg/100mts.
107.	Transportation cost for vehicular transport	As per SNT rates
108.	Construction of Platform all complete	Rs. 4000.00
109.	Laying of temporary water supply pipe line and construction of temporary (2m x 1m x 0.5m) Water tank with concrete.	Rs. 1200.00

**RATE OF DIAMOND CORE DRILLING PER METER.**

110.	Cost of diamond core drilling per metre in soft rock formation upto a depth of 40 metres all complete.	Rs. 1315.00 + 72 lts. of HSD under prevailing market rate.
111.	Cost of diamond core drilling per metre in soft rock formation between 40 mts to 60 mts. all complete.	Rs. 1630.00 + 58 lts. of HSD under prevailing market rate.
112.	Cost of diamond core drilling per metre in soft rock formation between 60 mts to 100 mts. all complete.	Rs. 1960.00 + 70 lts. of HSD under prevailing market rate.
113.	Cost of diamond core drilling per metre in soft rock formation between 100 mts to 150 mts. all complete.	Rs. 2350.00 + 84 lts. of HSD under prevailing market rate.
114.	Cost of diamond core drilling per metre in medium hard rock formation upto a depth of 40 mts all complete.	Rs. 1445.00 + 72 lts. of HSD under prevailing market rate.
115.	Cost of diamond core drilling per metre in medium hard rock formation between 40 mts to 60 mts. all complete.	Rs. 1745.00 + 64 lts. of HSD under prevailing market rate.
116.	Cost of diamond core drilling per metre in medium hard rock formation between 60 mts to 100 mts. all complete.	Rs. 2160.00 + 77 lts. of HSD under prevailing market rate.
117.	Cost of diamond core drilling per metre in medium hard rock formation between 100 mts to 150 mts. all complete.	Rs. 2595.00 + 93 lts. of HSD under prevailing market rate.
118.	Cost of diamond core drilling per metre in hard rock formation upto 40 mts all complete.	Rs. 1690.00 + 58 lts. of HSD prevailing market rate.
119.	Cost of diamond core drilling per metre in hard rock formation upto 40 to 60 mts. all complete	Rs. 1975.00 + 71 lts. of HSD under prevailing market rate.

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| 120. | Cost of diamond core drilling per metre in hard rock formation upto 60 mts to 100 mts. all complete.  | Rs. 2380.00 + 85 lts. of HSD under prevailing market rate.  |
| 121  | Cost of diamond core drilling per metre in hard rock formation upto 100 mts to 150 mts. all complete. | Rs. 2855.00 + 104 lts. of HSD under prevailing market rate. |
| 122. | Borehole Logging/per hole   | Rs. 4000.00 + required p.oil for visiting official.         |

**Charges for service rendered to public for issue of stability/ report for construction of residential building & water test report.**

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| 123. | Gangtok and suburb  | Rs. 2400.00 |
| 124. | Singtam, Rango, Pakyong, Remst, Kabi, Phodong.            | Rs. 2700.00 |
| 125. | Rhenock, Dikchu   | Rs. 2900.00 |
| 126. | Rongli, Jorethang, Nayabazar, Namchi, Ravangla, Mangan.   | Rs. 3150.00 |
| 127. | Soreng, Sombarai, Gyalzing, Tashiding, Chungthang, Dzongu | Rs. 3400.00 |
| 128. | Hilley, Kaluk, Dentam, Utteray, Lachen-Lachung.           | Rs. 3600.00 |

Geological /Geotechnical studies of road alignment in different parts of state.	Rs. 12000.00/Km + requisite fee as per schedule XII.
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**RATE OF GEOLOGICAL AND GEOTECHNICAL INVESTIGATION.**

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| 129. | Geological/Geotechnical mapping over one hectare of area with rock exposures and semi barren land.                         | Rs. 600/ha. |
| 130. | Geological/Geotechnical mapping over one hectare of area with few rocks exposures with moderate to thick soil over burden: | Rs. 700/ha. |
| 131. | Geological/Geotechnical mapping over one hectare of area in thick jungle with few rock exposer:                            | Rs. 800/ha. |

**GIS (Geographical Information Laboratory)**  
**Charges for data compilation at GIS laboratory.**

**Scanning of Maps, Diagrams etc. (one hard copy included)**

<b>Sl. No.</b>	<b>SIZE &amp; TYPE</b>	<b>AMOUNT (Rs.)</b>
132	A4: Colour	300.00
	BW	200.00
133	A3: Colour	300.00
	BW	200.00
134	A2: Colour	400.00
	BW	300.00
135	A1: Colour	600.00
	BW	500.00
136	A0: Colour	1000.00
	BW	700.00

**Digitization and editing (including one draft and one hard copy)**

<b>Sl. No.</b>	<b>SIZE &amp; TYPE</b>	<b>AMOUNT (Rs.)</b>
137	A4: Point	1,000.00
	Line	1,400.00
	Polygon	2,100.00
138	A3: Point	1,950.00
	Line	2,050.00
	Polygon	2,650.00
139	A2: Point	3,600.00
	Line	4,000.00
	Polygon	5,200.00
140	A1: Point	6,650.00
	Line	6,900.00
	Polygon	9,150.00
141	A0: Point	9,600.00
	Line	10,000.00
	Polygon	13,150.00

**Scanning, Editing & Processing a column of black & white map to produce colour hard copy complete with all annotation and legend (Using GIS software Arc View)**

<b>Sl. No.</b>	<b>SIZE &amp; TYPE</b>	<b>AMOUNT (Rs.)</b>
142	A4: Simple	4,300.00
	Moderately complicated	7,550.00
	Complicated	14,950.00
143	A3: Simple	5,900.00
	Moderately complicated	9,850.00
	Complicated	17,300.00
144	A2: Simple	9,250.00
	Moderately complicated	12,500.00
	Complicated	24,800.00
145	A1: Simple	18,450.00
	Moderately complicated	26,600.00
	Complicated	35,550.00
146	A0: Simple	29,450.00
	Moderately complicated	36,700.00
	Complicated	49,350.00

**By Order**

**D.R. KHAREL  
SECRETARY  
MINES & GEOLOGY DEPARTMENT  
GOVT. OF SIKKIM, GANGTOK.**

