

No. Ft.48-1747/2008 (FCA)
Forest Department, Himachal Pradesh.

From: Nodal Officer-cum-Addl.Pr.CCF (FCA),
O/o Pr.CCF, HP Shimla-1.

To: The Addl.Pr. Chief Conservator of Forests (Central)
Regional Office, Govt. of India, Ministry of Environment & Forests,
Pearson Road, FRI Campus, P.O. New Forests,
Dehradun-248006.

Dated Shimla-171001, the

3 JUL 2015

Subject:- Diversion of 1.634 hectares of forest land in favour of M/s Shakti Hydro Electric Company Ltd., 204 Madan Lal Chowk Asiad Village Khel Gaon, New Delhi for the construction of approach road to 3.5 MW Project, Laying of Transmission Line & Drift within the jurisdiction of Nachan Forest Division, Distt. Mandi, H.P.

Sir,

This is with reference to your observations raised through online on the subject cited above.

2 The pointwise reply of the observations is submitted as given below:-

1. Short narrative of the project are enclosed herewith.
2. Copy of the authorization of UA for authorizing the person making application is attached.
3. Villag-wise break up of the total land required for the project is enclosed.
4. Copy of Geo reference map of the forest land proposed for diversion & CA using GPS or total station is enclosed.
5. Copy of Sol toposheet map indication boundary of forest land proposed for diversion and CA area is enclosed.
6. Justification for locating the project in forest area is enclosed.
7. FRA certificate is under process with District Collector Mandi and Sub-Divisional Magistrate Chachiot at Goahr which will be provided before the final approval for the project.
8. Certificate regarding non-availability of non-forest land for raising compensatory afforestation is signed by Chief Secretary which is placed at proposal folder 8(A).
9. Muck disposal plan has already been submitted and placed at page 78 of the proposal folder.
10. Distance of area from the boundary of forest is 200 Mtrs. and slope of the proposed area is moderate hence not vulnerable to soil erosion. The detail has already given in Para-II of the proposal folder.

Nodal Officer-cum- Addl.Pr.CCF(FCA)
O/o Pr. CCF ,H.P

77°01'00" E

77°01'30" E

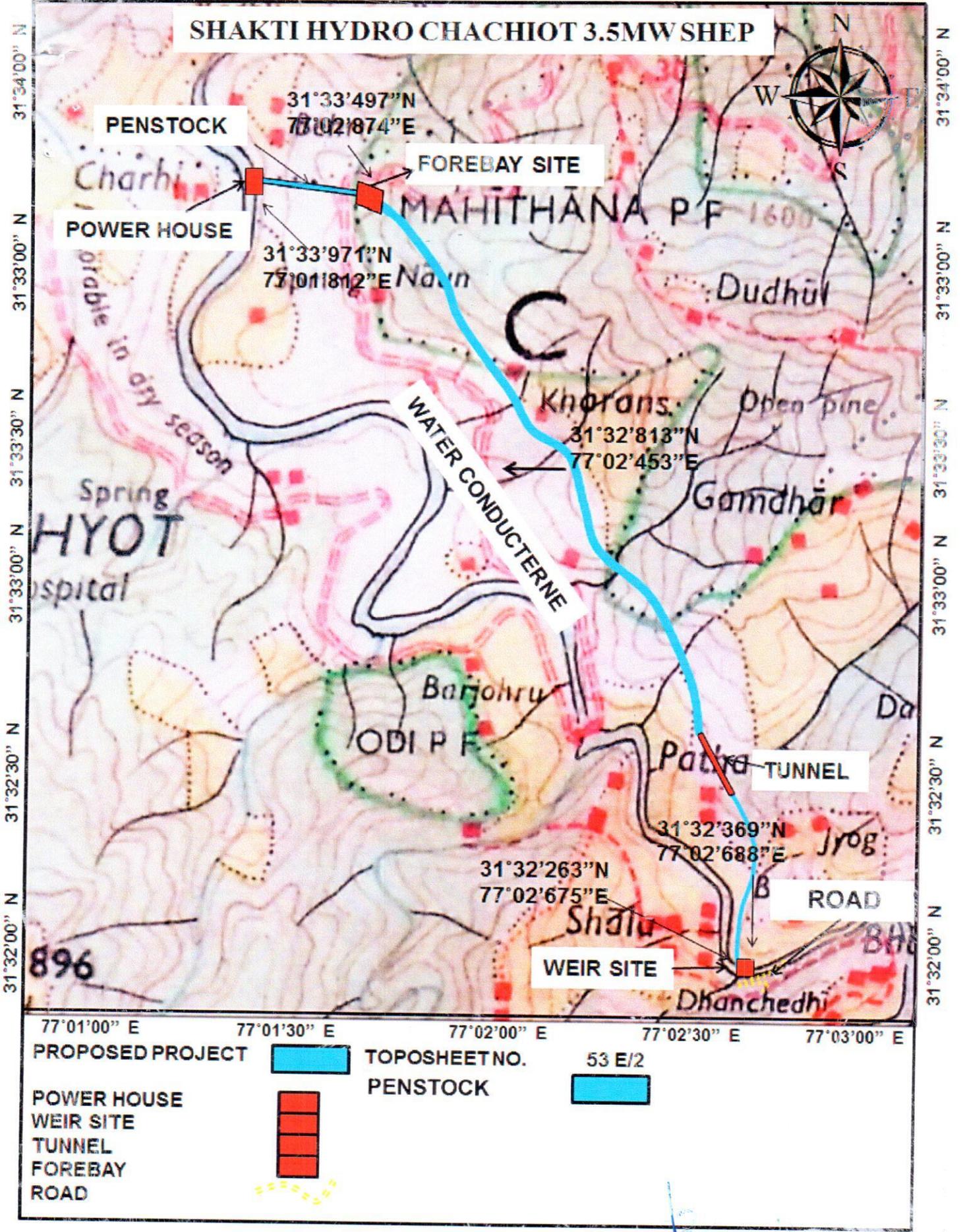
77°02'00" E

77°02'30" E

77°03'00" E

34

SHAKTI HYDRO CHACHIOT 3.5MW SHEP



77°01'00" E	77°01'30" E	77°02'00" E	77°02'30" E	77°03'00" E
PROPOSED PROJECT		TOPOSHEET NO.	53 E/2	
POWER HOUSE		PENSTOCK		
WEIR SITE				
TUNNEL				
FOREBAY				
ROAD				

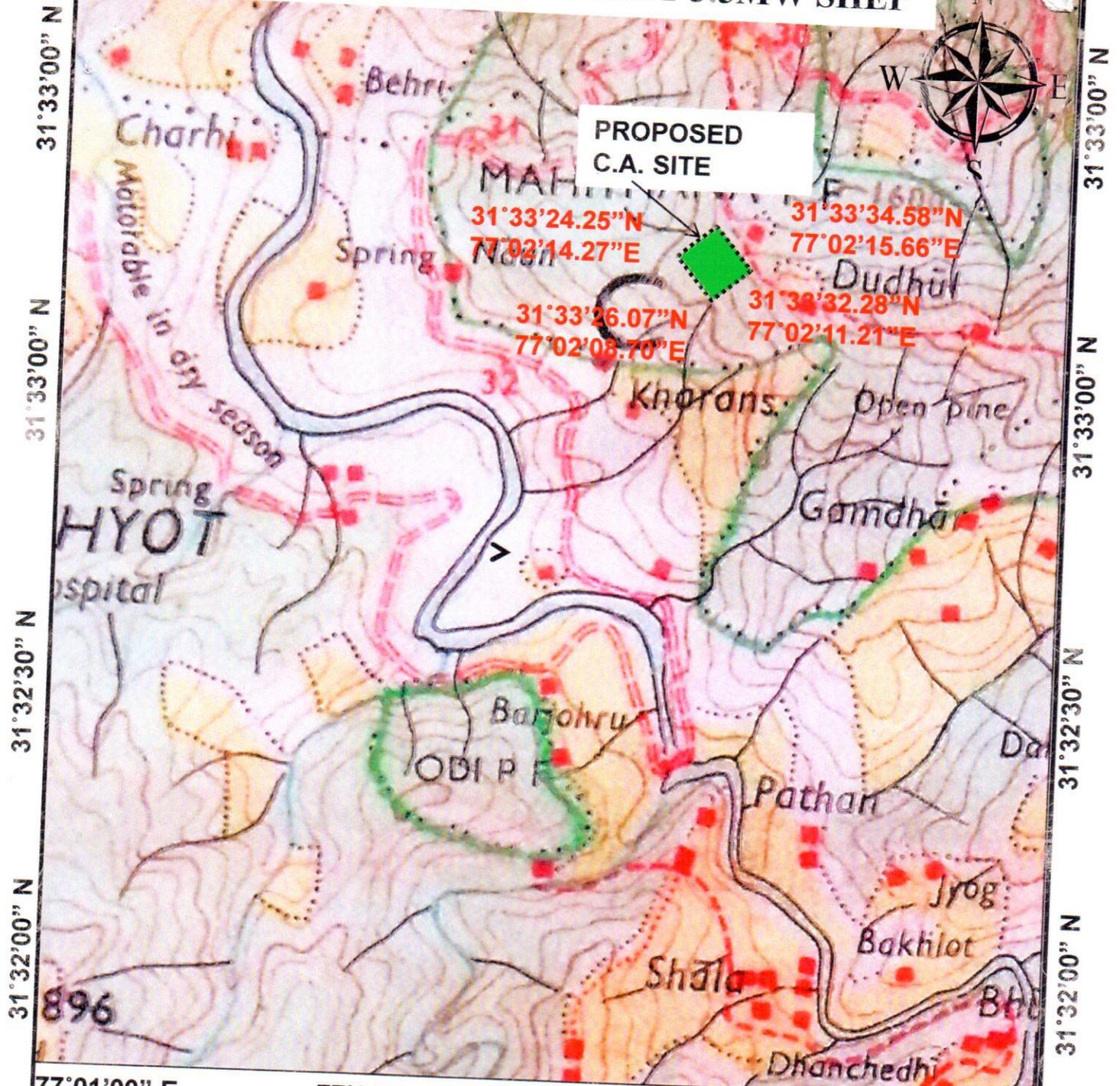
77°01'00" E

77°01'30" E

77°02'00" E

77°02'30" E

SHAKTI HYDRO CHACHIOT 3.5MW SHEP



77°01'00" E

77°01'30" E

77°02'00" E

77°02'30" E

PROPOSED C.A. SITE



TOPOSHEET NO.

53 E/2

79
SHAKTI HYDROELECTRIC COMPANY

PRIVATE LIMITED

Regd. Office : C-567, 1st Floor, Defence Colony, New Delhi-110024

Phone : 011-40581604

Regn.: U40101DL2000PTC106969

Dated:- 20.06.2015

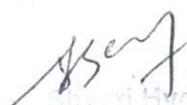
TO WHOM SOEVER IT MAY CONCERN

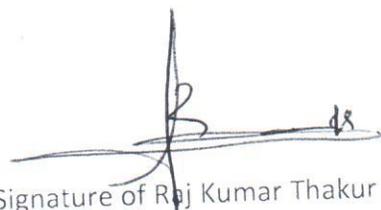
We, Shakti Hydroelectric Company Private Limited, hereby authorize Mr. Raj Kumar Thakur, Project Officer:

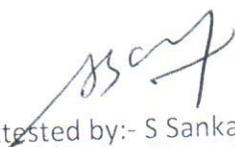
- To represent Shakti Hydroelectric Co. Pvt. Ltd. for all matters related to FCA in respect of Chachiot Small Hydro Electric Project; and
- To sign the submissions and responses to State /Government department of Himachal Pradesh on behalf of Chachiot Small Hydro Electric Project.

Signature of Shri. Raj Kumar Thakur is attested here below.

For Shakti Hydroelectric Co. Pvt. Ltd.


S Sankaran
Director


Signature of Raj Kumar Thakur


Attested by:- S Sankaran

PARTHASARATHI MITRA
Chief Secretary



Government of Himachal Pradesh,
Shimla-171 002

Tel. (O) +91-177-2621022

(R) +91-177-2621658

Fax +91-177-2621813

E-mail cs-hp@nic.in

No. Ft. 48-1747/2008

Dated...29.5.2015

Certificate of Non-availability of Land for Compensatory Afforestation

I, Parthasarathi Mitra, IAS Chief Secretary *Himachal Pradesh* (Name of State/Union Territory) do hereby certify that:

- I. Relevant records pertaining to non-forest land, revenue lands, zudpi jungle, chhote jhar ka jungle, bade jhar ka jungle, jungle-jhari land, civil-sayam lands and all other such categories of forest lands (except the forest land under management and administrative control of the Forest Department) on which the provisions of Forest (Conservation) Act, 1980 are applicable, available in each district of *Himachal Pradesh* (name of State/UT have been examined; and
- II. I have also conducted such further enquiry as is required to satisfy myself for issue of this certificate.

On the basis of examination all relevant records and such further enquiry, as was required for issue of this certificate, I do hereby certify that non-forest land, revenue lands, *zudpi jungle, chhote jhad ka jungle, bade jhad ka jungle, jungle jhadi land, civil-soyam* lands and all other such categories of forest land (except the forest land under management and administrative control of the Forest Department) on which the provisions of Forest (Conservation) Act, 1980 are applicable, which as per the extent guidelines of the Central Government may be utilised for creation of compensatory afforestation in due of forest land diverted for non-forest purpose, is not available in the entire Himachal Pradesh (Name of State/UT)

Issued in my hand and seal on this...29th May...day of 2015

Parthasarathi Mitra
Signature

Village & Muhal wise break up

Detail of Forest land coming in the Project alignment for the construction of
Chachiot Hydroelectric Power Project in Distt Mandi (H.P)

Sr. No.	Village Name	Muhal	Khasra No.	Bighas	Biswa	Biswansi	Component name
1	Shalla	Shalla	418/1	00	16	12	Road
2	Shalla	Shalla	720/60 6/1	00	08	11	Road
3	Shalla	Shalla	720/60 6/2	00	01	07	Road
4	Shalla	Shalla	580/42 9	00	05	03	Road
5	Shalla	Shalla	488/1	00	08	10	Road
6	Shalla	Shalla	693/55 9/1	00	12	09	Road
7	Shalla	Shalla	563/1	02	13	00	Road
8	Shalla	Shalla	563/2	00	04	08	Road
9	Sandoha	Sandoha	83/1	00	00	10	Drift
10	Sandoha	Sandoha	204/1	00	02	04	Drift
11	Sandoha	Sandoha	222/1	00	06	12	Drift
12	Sandoha	Sandoha	561/1	00	00	17	Drift
13	Gulad	Dugal	2/1	00	14	06	Transmission line
14	Gulad	Dugal	2/2	00	04	16	Transmission line
15	Gulad	Dugal	2/3	00	03	11	Transmission line
16	Gulad	Dugal	11/1	00	12	06	Transmission line
17	Gulad	Dugal	11/2	00	13	18	Transmission line
18	Gulad	Dugal	14/1	00	07	14	Transmission line
19	Gulad	Dugal	14/2	00	03	00	Transmission line
20	Gulad	Dugal	128/1	02	09	01	Transmission line
21	Gulad	Dugal	128/2	01	13	14	Transmission line
22	Badu	Badu	228/1/1	01	04	07	Transmission line
23	Badu	Badu	228/1	00	10	05	Transmission line
24	Sunather	Basa	90/1	01	18	12	Transmission line
25	Sunather	Basa	90/2	00	15	12	Transmission line
26	Sunather	Basa	98/1	00	05	10	Transmission line
27	Sunather	Basa	98/2	01	04	03	Transmission line
28	Sunather	Basa	390/91/ 1	00	00	18	Transmission line
29	Dal	Gohar	675/1	00	02	11	Transmission line
30	Dal	Gohar	679/1	00	02	00	Transmission line
31	Dal	Gohar	682/2	00	05	04	Transmission line
32	Dal	Gohar	775/1	00	10	12	Transmission line

Total. 1.634 hms

Chachiot Hydro Power Project (3.5 MW)

JUSTIFICATION FOR LOCATING THE PROJECT IN FOREST AREA

There is huge hydropower potential in Himachal Pradesh which can play a major role in power generation programme to meet the ever increasing demand not only within the State but also to bridge the gap in demand and supply in the northern region as a whole. The Government of Himachal Pradesh has encouraged several entrepreneurs for the development of hydropower projects in private sector. Development of such projects also results in local area development directly and indirectly.

The Shakti Hydroelectric Co. Pvt. Ltd. proposed 3.5 MW Chachiot Small Hydro Electric Power Project to harness the potential of JuniKhad, a tributary of River Beas, between village Shala and Behri Tehsil Chachiot, Distt. Mandi (HP).

While finalizing the layout of the project components such as Weir, Desilting Basin, Water Conducting System, Forebay, Pressure shaft and Penstocks, Power House, Tailrace Channel, Switch Yard and Transmission Line, ecological factors have been kept in view and only the essentially required forest land has been considered for the Project. The location and alignment of the proposed project components has been laid down carefully giving due consideration to various environmental aspects such as minimum use of forest, barely essential tree cuttings etc.

In addition to surface water conducting system, we have also planned for an alternative considering ~~two~~ stretches of water conducting system of about 290 m ~~and 185 m~~ lengths in underground thus obviating the need of surface disturbance in these stretches. Both the alternatives aim at minimizing the forest area as well as number of trees; however we find the proposed one with two underground drifts, involves less number of trees as well as forest land.

The total Forest land required for the components of the Project is 2.8568 Ha. This Forest Land cannot be avoided considering the Project designs. Out of the total Forest Land we have already the stage -1 approval of 1.2228 Hect. & we are apply for the 1.634 Hect.

Further the location of various project components as outlined in DPR are not connected to the existing state roads. Approach roads are required for the major components such as Weir and Power House of the Project to reach these sites, It is therefore essentially required to construct an approach road from existing Kot –Devidarh road near village Shala to Weir site and the other from existing village road in Beiry to Power House site. These roads would not only serve the project but also provide a good road connectivity for near by villages.

The Transmission Line has been proposed partially on private and partially on forest land. It has been attempted to minimize the use of Forest Land and the Forest land has been considered where essentially required for laying transmission line of about 2.2 Kms length.

The forest land required for transmission line would be about 1.414 hectares. The alignment of transmission Line has been so selected as to involve minimum number of trees.

The proposed forest land for the Project as well as the roads have not been Demarcated as Protected Forest. These are mostly the unutilized or unclassified forest land the most of which have been classified as Gair Mumkin Nali & Charaah-bill-Drakhtan etc., comes under the definition of un-classed forest. Local public and authorities of the surrounding villages are also willing to construct such link roads and also applied for FCA for road to village shalla. The local authority/public have approached the Government through HP PWD Division Gohar Dist. Mandi. As confirmed by the XEN HP PWD Division Gohar Dist. Mandi, HP so far have not been granted the FCA for the link road connectivity to village Shalla. The company, therefore in the interest of project and the villagers as well, has proposed the said roads now on the forest land for which approval of the Government of India for the diversion of 1.634 hectare of land in our favour is necessary.

The project also serves the critical need of power generation. The Project is willing to construct the proposed roads serving dual purpose, one for connectivity to the villages and the other approach to the major Project components.

The total land required for the Project is 2.8568 Ha. Out of this forest land 0.44 Ha is required only for the construction of approach roads which is essential for the local public as well as the Project.

Thus the proposed forest land is bare minimum and essentially required for the development of the Project.

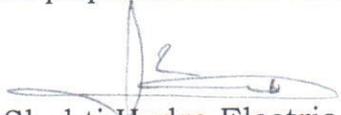
For Shakti Hydro Electric Co. Pvt. Ltd.
Authorized Signatory

C/S
D.F.O. Nachan
Al Gohar

(78)

SHORT NARRATIVE OF THE PROPOSAL AND PROJECT/SCHEME FOR WHICH THE FOREST LAND IS REQUIRED

We M/s Shakti Hydro Electric Company , Village & P.O. Shalla Tehsil Chachiot Distt. Mandi has proposed 1.634 hectares forest land for the construction of approach road to 3.5 MW project site , laying of Transmission Line & Drifh. We have already obtained Ist stage approval for the diversion of 1.228 hectares of forest land for the construction of 3.5 MW SHEP at Shalla. In order to carry the different components to the project site, we need approach road from main road Kot Devidarh at Shalla Sherpur to the project site . The proposed road is passing through the forest land which is a unclassed forest. Transmission line as well as drifh has been proposed on forest land .


M/S Shakti Hydro Electric company
R/o Vill. & P.O. Shalla Tehsil Chachiot
Distt. Mandi (HP)

c/s



D.F.O. Nachan
At Gohar

DISTANCE OF AREA FROM THE BOUNDARY OF FOREST

Information about the distance of area from the boundary of forest has already been given in Part-II of the main application form attached with the proposal folder . However, it is again intimated that distance of area from the boundary of forest is 200 Mtrs. from the proposed project/scheme site.



M/S Shakti Hydro Electric company
R/o Vill. & P.O.Shalla Tehsil Chachiot
Distt. Mandi (HP)



O.F.C. Mandi
A. S. S. R.

BRIEF VULNERABILITY TO SOIL EROSION

Information about the brief vulnerability to soil erosion has already been given in Part-II of the main application form attached with the proposal folder . However, it is again intimated that the slope of the area is moderate hence not vulnerable to soil erosion.



M/S Shakti Hydro Electric company
R/o Vill. & P.O.Shalla Tehsil Chachiot
Distt. Mandi (HP)

G/S.



D.F.O. Nahanj
Al Gohar

**RECLAMATION PLAN FOR REHABILITATION OF DUMPING SITE
0.0374 HA IN FOREST LAND. IN RESPECT OF 3.5 MW CHACHIOT
SHEP UNDER THE JURIDICION OF NACHAN FOREST DIVISION.**

- 1. Cost of plantation I/C moisture conservation works
over 0.0374 Ha @ 60,000/- per hac. Rs. 2,244=00
- 2. Maintt. of 0.0374 ha for a period of 5 years
@ 50,000/-per ha. Rs. 1,870=00
- 3. Soil conservation works over 0.0374 ha. L/S Rs. 6,000=00
- 4. Maintt. of soil conservation & Bio works
for a period of 5 years. Rs. 4,000=00
- 5. Engineering works over 0.0374ha. L/S. Rs. 2,50,000=00

Total:- Rs. 2,64,114=00

Contingency charges @ 5.25% Rs. 13,866=00

Departmental charges @ 17.5% Rs. 46,220=00

Grand Total:- Rs. 3,24,200=00

Or say Rs. 3,24,200=00

(Rs. Three Lac Twenty Four Thousand and Two Hundred) only.

It is certified that the above Reclamation Plan will be carried out
by the user agency it self.

cls

 Divisional Forest Officer
 Nachan Forest Division,
 (M.P.)


 (Raj Kumar)
 M/s Shakti Hydro Electrical Co-Pvt
 Authorized Signatory
 204 Madan Lal Block A Shriad
 VIII. New Dehli 110049
 RAJ KUMAR

DETAIL OF TRANSMISSION LINE

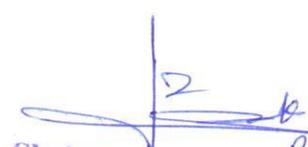
Length of transmission line:

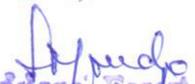
- i) Forest Area = Nil
- ii) Non Forest Area = 1.500 Kms Passing through the line from Power House to Sub Station Gohar (33K.V.)

Number of Tower be to erected in:

- i) Forest Area = Nil
- ii) Non Forest Area = 10 Nos

Width of the right of way for Transmission line = 4 mtrs.


RAJKUMAR
Shakti Electric Co. Pvt. Ltd
204 Madan Mohan Block, Ashiad
VIII, New Delhi - 110049

CS

Divisional Forest Officer
Nahan Forest Divn
Gohar, Distt Mandi (H.P.)

STATEMENT SHOWING DUMPING PLACES QUANTITY OF MUCK/DEVRIES TO BE DUMPED WITH OTHER DETAILS FOR PROJECT IN CHACHHOT MINI HYDEL POWER PROJECT, NACHAN FOREST
DIVISION DISTRICT MANDI H.P.

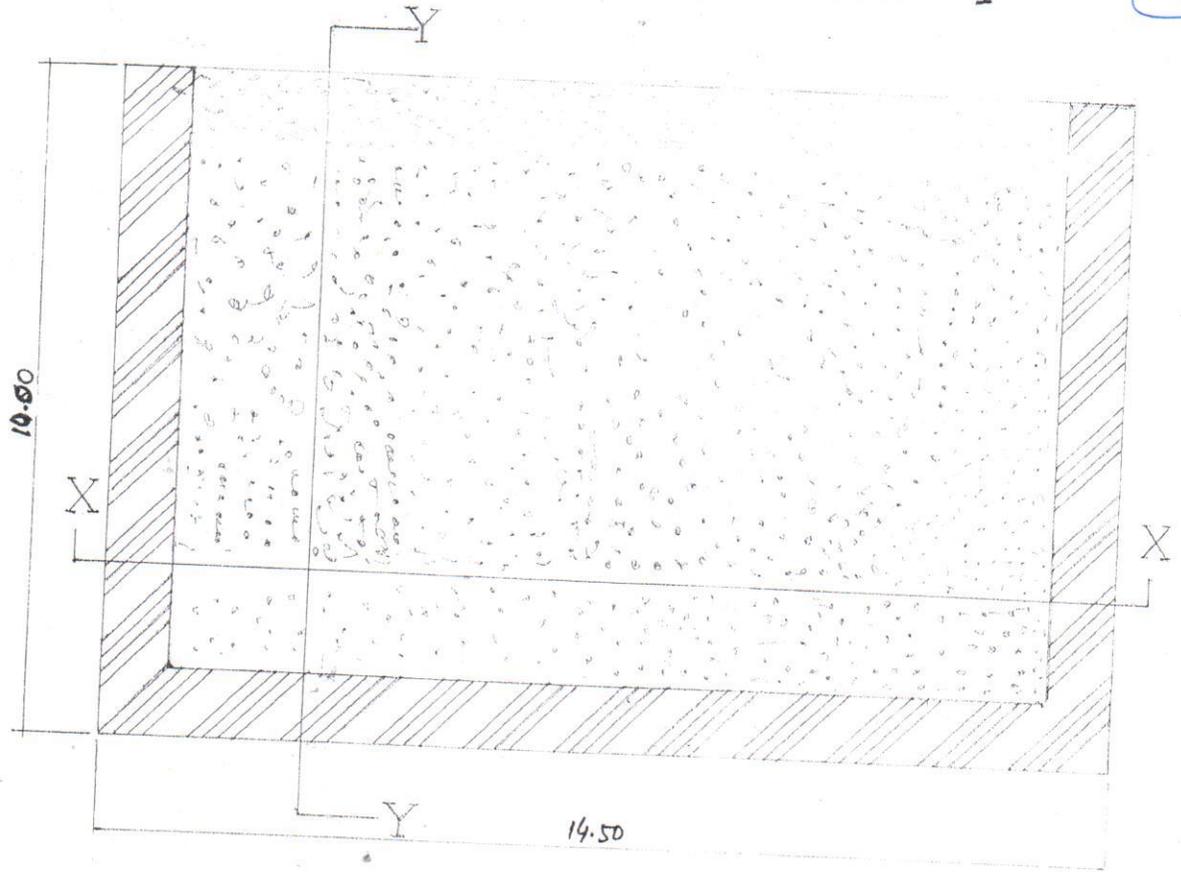
Sr. No	Name of Component from where muck devries is to be produced	Total Qty of muck/devries to be produced (Cum in)	Factor of increase in Volume after excavation (Hard strata)	Qty. of muck /devries to be dumped on basis of increase	Total Qty. Of muck/devries to be dumped on basis of increase (in m3)	Qty. Of muck /devries to be utilized in (m3)	Total Qty. of muck/devries to be dumped on compact basis (in m3)	Name of dumping site	area of dumping site with length/width	Area of forest land required for dumping site in (Sq.m)	Average height of muck dumping site to accommodate muck generated in (mtr)	Capacity of dumping site to dispose muck (cum)	Remarks
1		2	4	56 (3-5)	78 (6-7)	9	10	11	12	13	14		
1	Weir site in take tank & D.tank	1450.1	40%	580.04	2030.14	1600.1	430	Weir site Intake tank & D.Tank	14.5.10	145	3	435	
2	Power Channel	16660	40%	6664	23324	224.2	904	Power channel	13.1x10 10x8.4 9x5	131 84 45	3.5 3.5 3.5	458.5 294 157.5	
3	Forebay Tank & Penstock	1522.5	0.4	609	2131.5	1491.5	640	Forebay Tank & Penstock	18.4x10	184	3.5	644	
4	Pen stock Power House, Tail	3556.5	0.4	1422.6	4979.1	3498.6	1480.5	Pen stock Power House, Tail Rece	19x10 19.9x10 10x3.6	191 199 36	3.5 3.5 3.5	665 696.5 126	
	Total	23189.1		9275.64	13913.46	6814.4	7099.06					3476.5	

The built size of the forebay tank size of the forebay tank is 43.50mx 4.0 m i.e. Built up coverer area is 174.0 sqm. However the land acquired is 700 .00 sqm in addition to the muck dumping site near forebay tarik . The additional area has been acquired for the working space for storage of construction material like cement, sand and aggregate etc. and for the construction retaining wall and breast wall. Hence the excavated material shall be utilized protection and retaining works and also in the back filling. The material also be dumped along the length of tank for the c/o site berm.

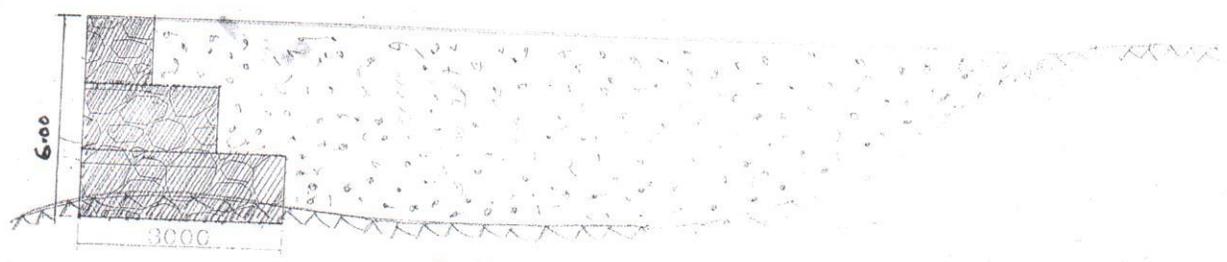

M/s Shakti Hydro Electrical Co-Pvt.
204 Madhav Block A Shiad
Vili Raj Kumar
Mobile: 110049

CHACHYOT MINI HYDEL POWER PROJECT
 MUCK DUMPING SITE - 1

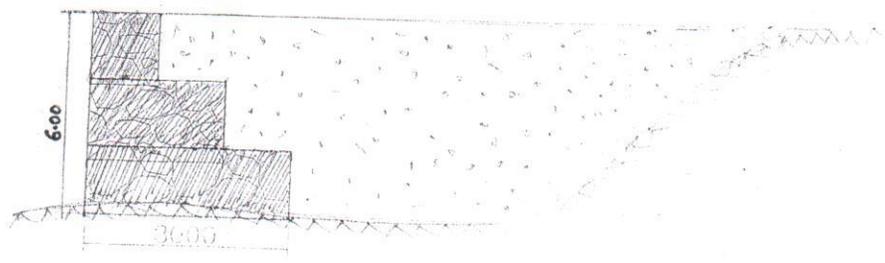
106



PLAN



Section at X-X



Section at Y-Y

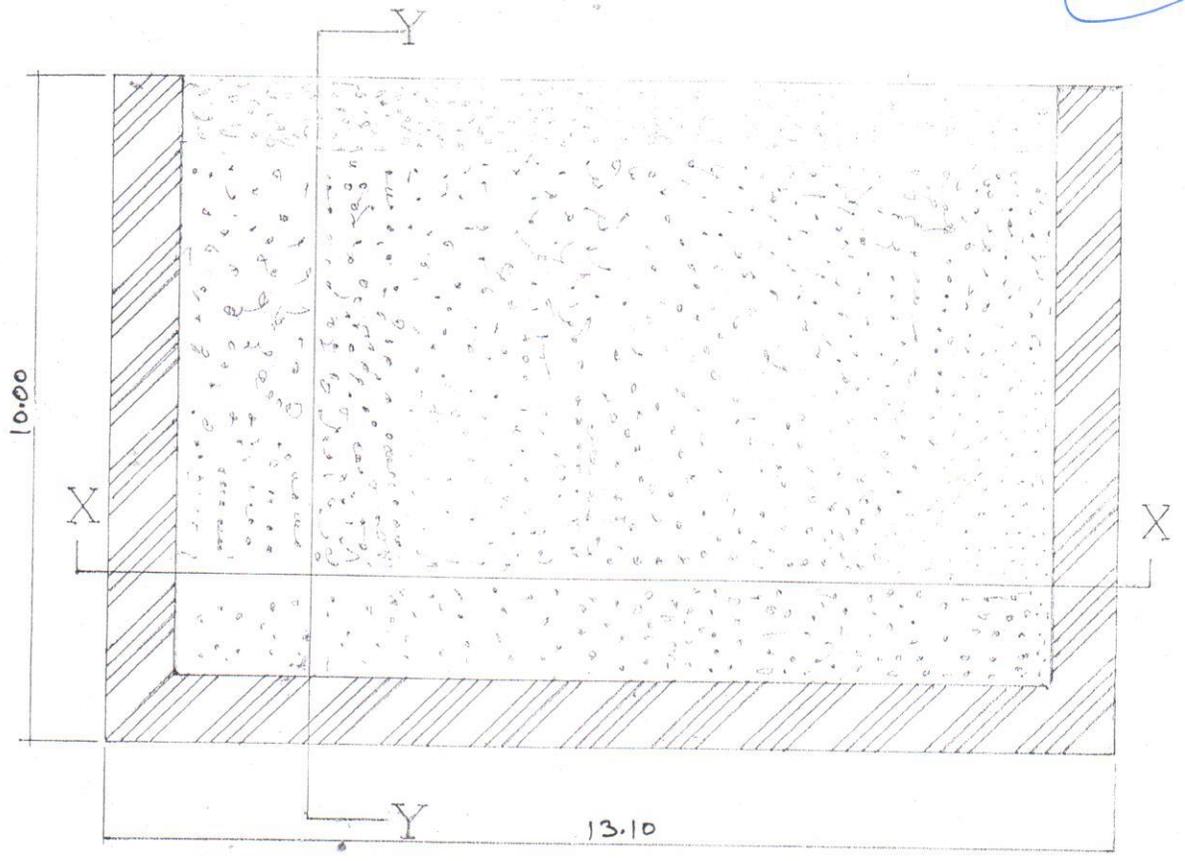
Area = 14.50×10.00
 $= 145 \text{ m}^2$
 Depth = $\frac{6}{2} = 3 \text{ m}$
 Capacity of muck dumping = $145 \times 3 = 00$
 $= 435 \text{ cum}$

M/s Shakti Electricals
 204 Madan Mohan Road
 VIII, New Delhi

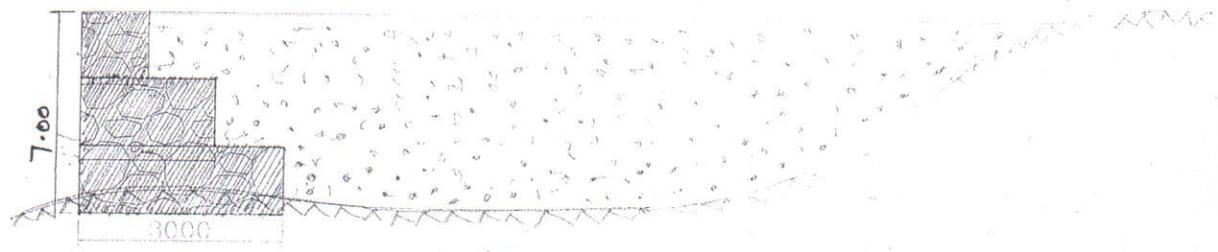
CHACHYOT MINI HYDEL POWER PROJECT

MUCK DUMPING SITE 2.

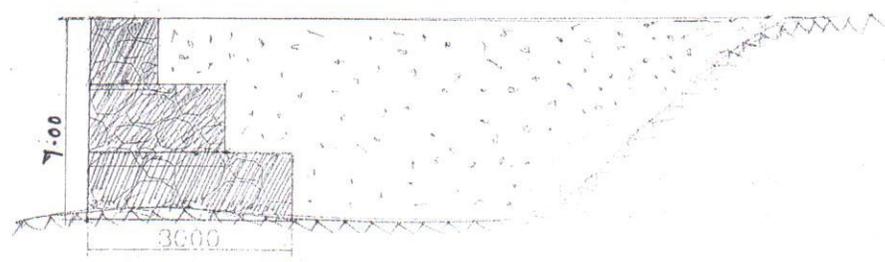
107



PLAN



Section at X-X



Section at Y-Y

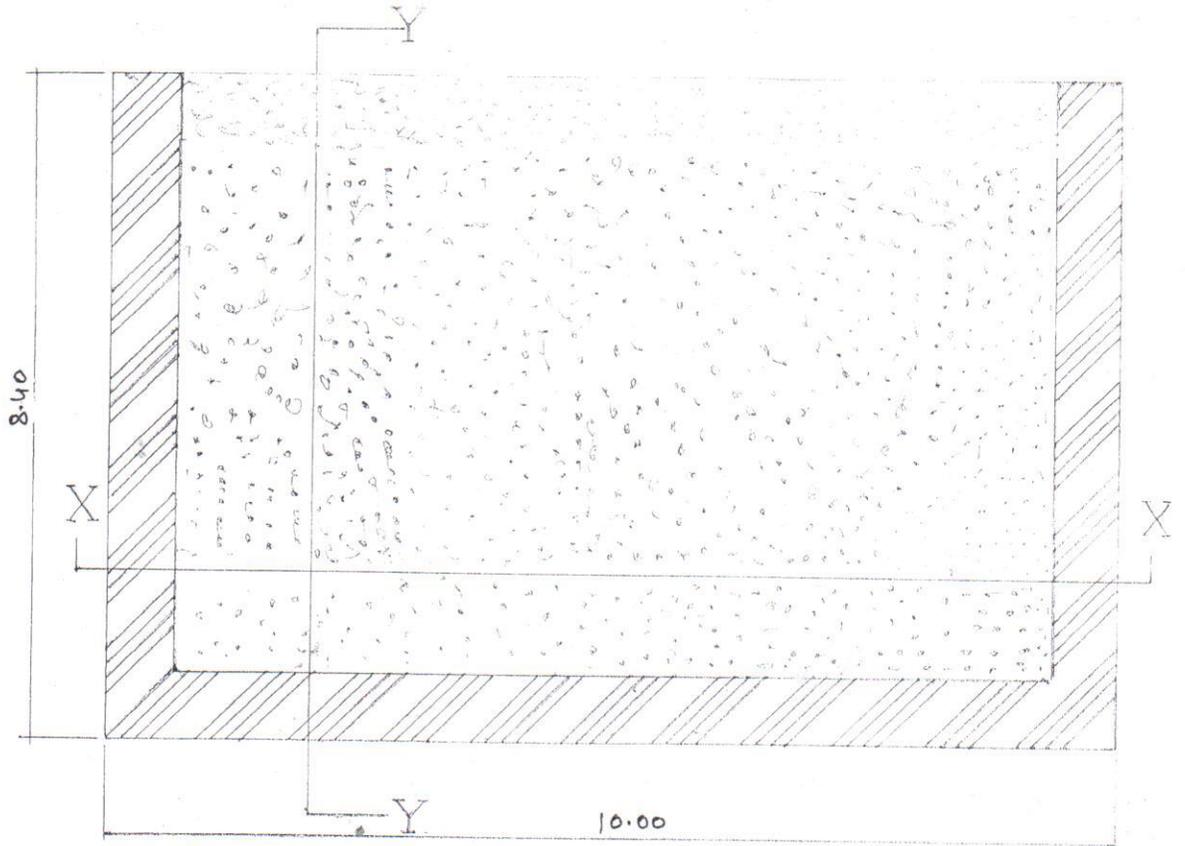
Area = 13.10×10
= 131 m²
Depth = $\frac{7}{2} = 3.5$ m
Capacity of muck dumping = 131×3.5
= 458.5 cum.

M/s Shakti Hydro Electrical Co-Pvt
204 Madan Lal Block A Sniad

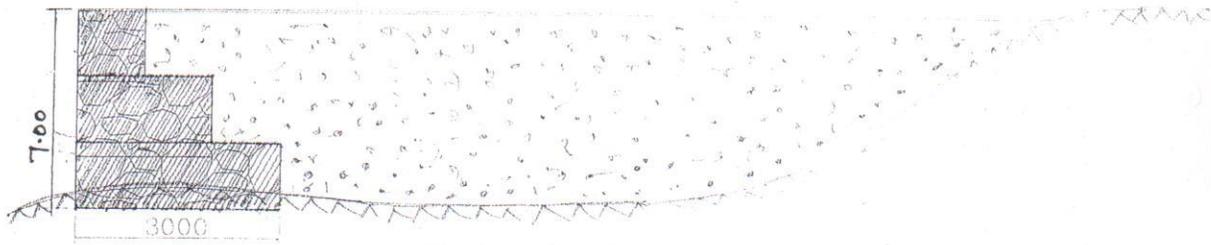
CHACHYOT MINI HYDEL POWER PROJ.

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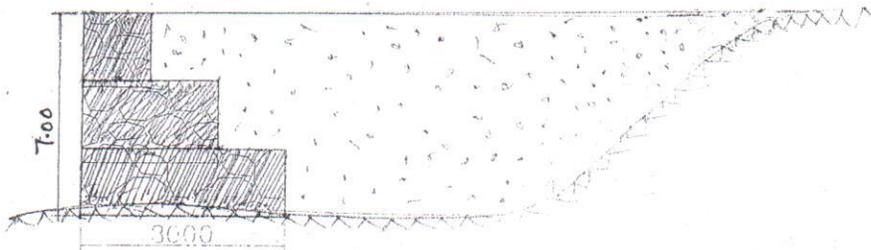
MUCK DUMPING SITE - 3.



PLAN



Section at X-X



Section at Y-Y

Area 10.00×8.40
 $= 84.00 \text{ m}^2$

Depth $\frac{7}{2} = 3.5 \text{ m}$

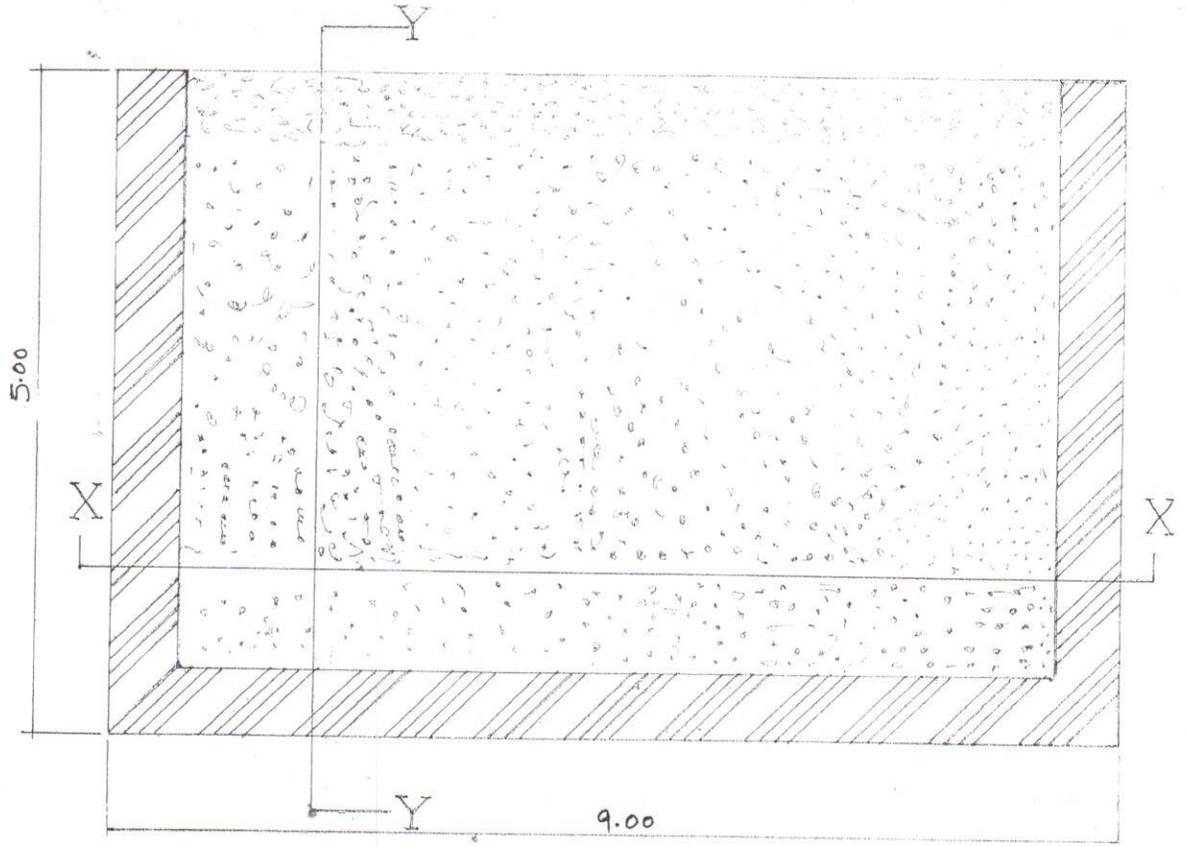
Capacity of muck dumping $= 84.00 \times 3.5$
 $= 294 \text{ m}^3$

M/s Shakti Hydro Electrical Co-Pvt

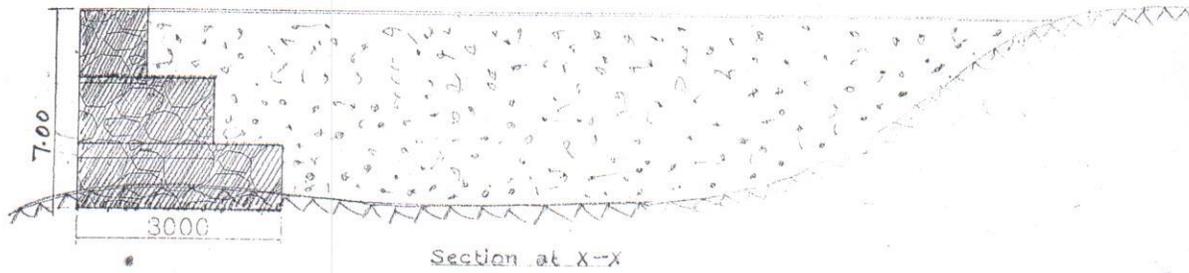
20/ Madan Lal Block A Shakti

CHACHYOT MINI HYDEL POWER PROJECT

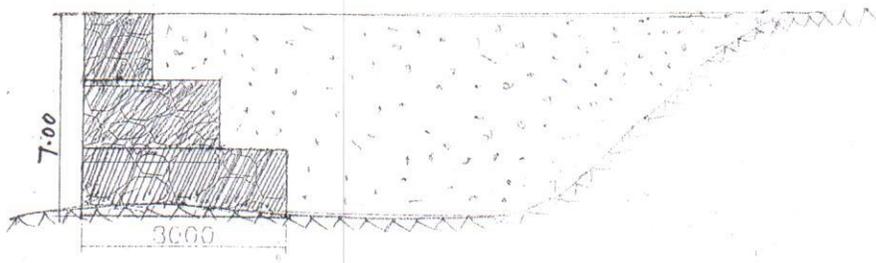
MUCK DUMPING SITE - 4.



PLAN



Section at X-X



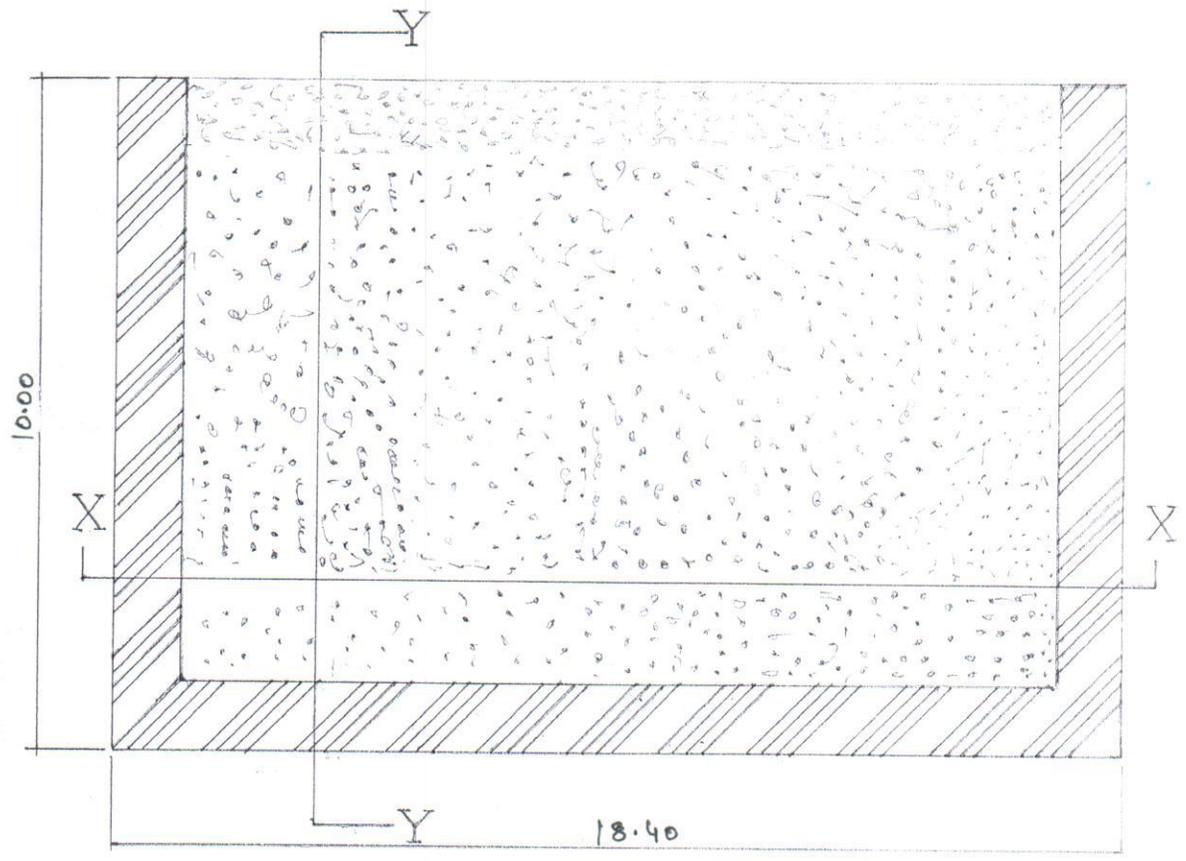
Section at Y-Y

$$\text{Area} = 9.00 \times 5.00 = 45.00 \text{m}^2$$

$$\text{Depth} = \frac{7}{2} = 3.5 \text{m}$$

$$\text{Capacity of muck dumping} = 45.00 \times 3.5 = 157.50 \text{cum}$$

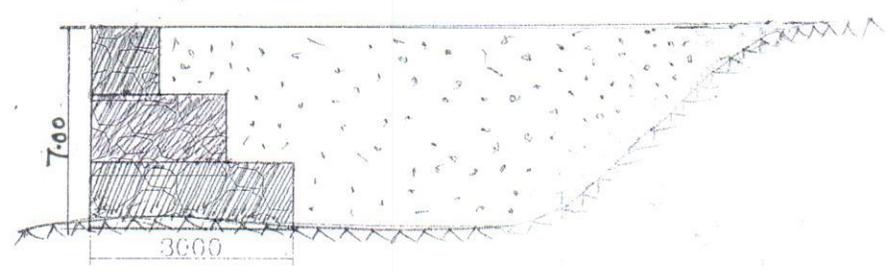
CHACHYOT MINI HYDEL POWER PROJECT MUCK DUMPING SITE - 5.



PLAN



Section at X-X

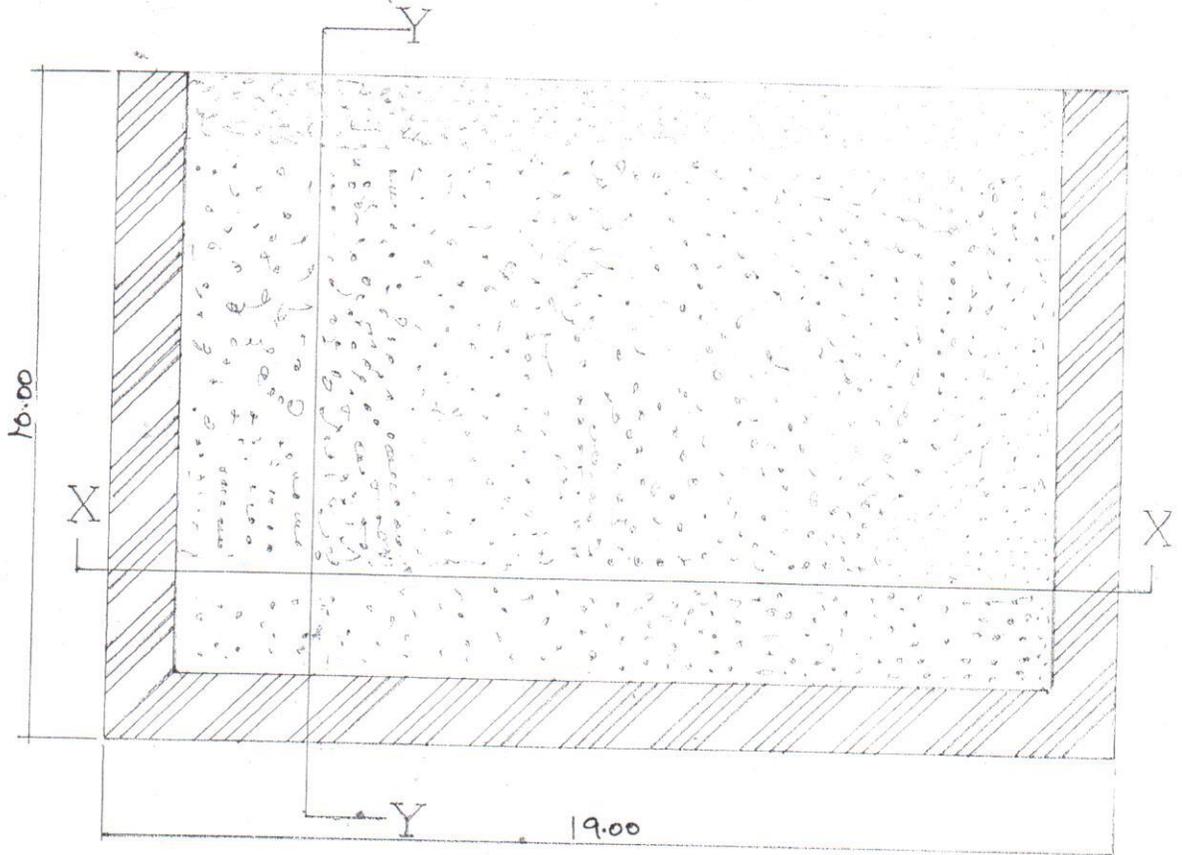


Section at Y-Y

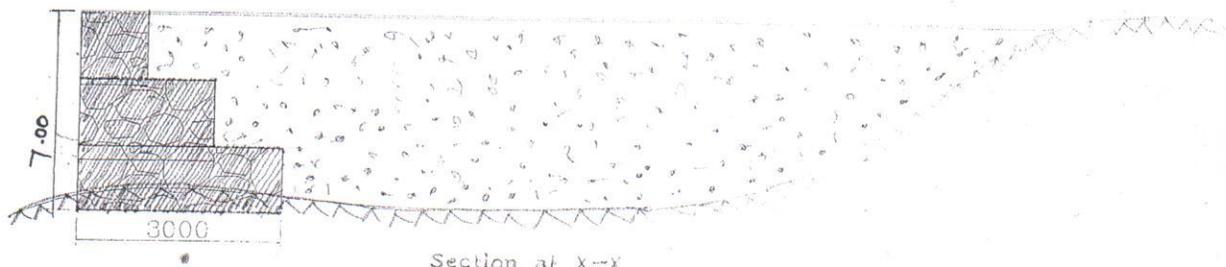
Area: 18.40×10.00
 $= 184.00 \text{ m}^2$
 Depth = $\frac{7}{2} = 3.5 \text{ m}$
 Capacity of muck dumping = 184.00×3.5
 $= 644 \text{ cum}$

CHACHYOT MINI HYDEL POWER PROJECT

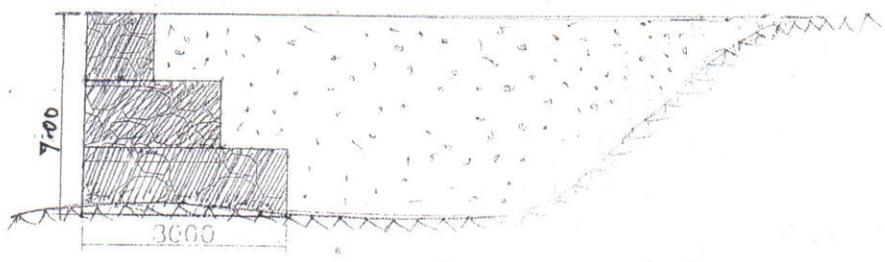
MUCK DUMPING SITE - 6



PLAN



Section at X-X



Section at Y-Y

Area = 19.00×10.00
 $= 190.00 \text{ m}^2$
 Depth = $\frac{7}{2} = 3.5 \text{ m}$
 Capacity of muck dumping = 190×3.5
 $= 665 \text{ cum}$

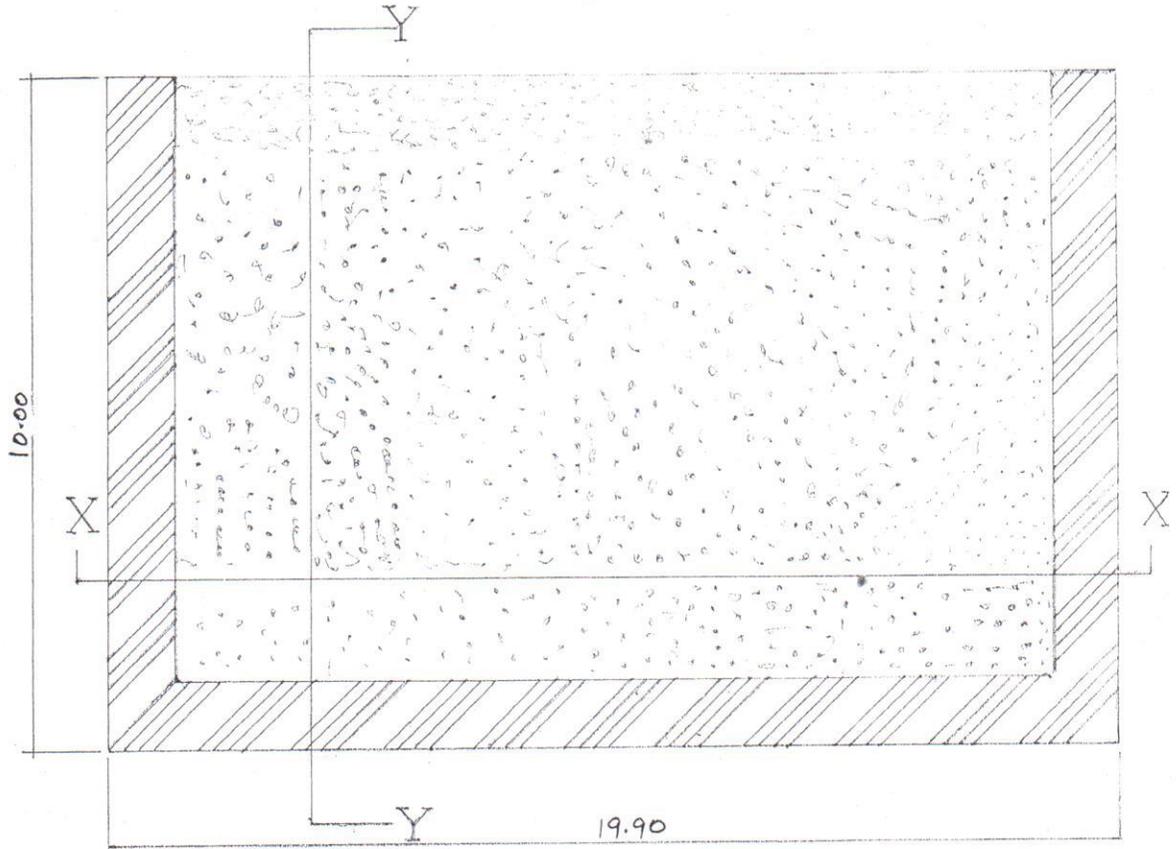
M/s Shakti Hydel Electrical Pvt
 204, Madar Block A, Ind

VIII, New Delhi 110049

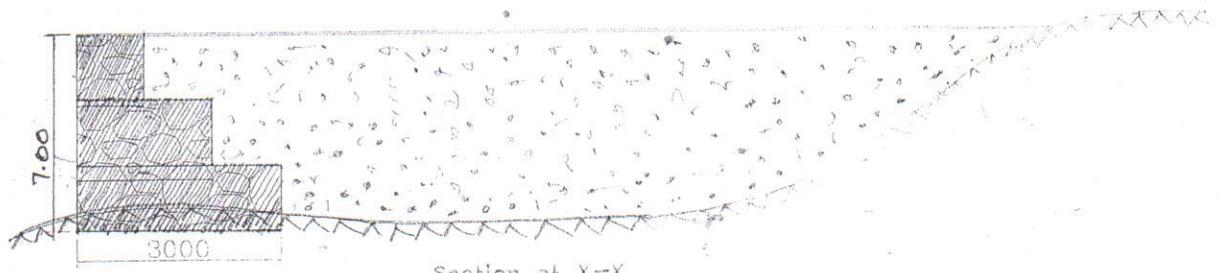
CHACHYOT MINI HYDEL POWER PROJECT

MUCK DUMPING SITE - 7.

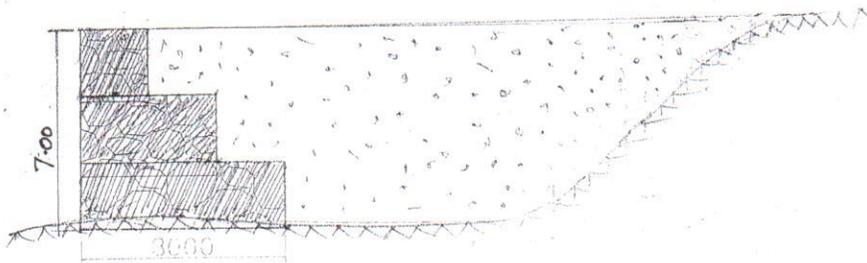
112



PLAN



Section at X-X



Section at Y-Y

Area = 19.90×10.00
 $= 199.00 \text{ m}^2$
 Depth = $\frac{7}{2} = 3.5 \text{ m}$
 Capacity of muck dumping = 199.00×3.5
 $= 696.5 \text{ cum.}$

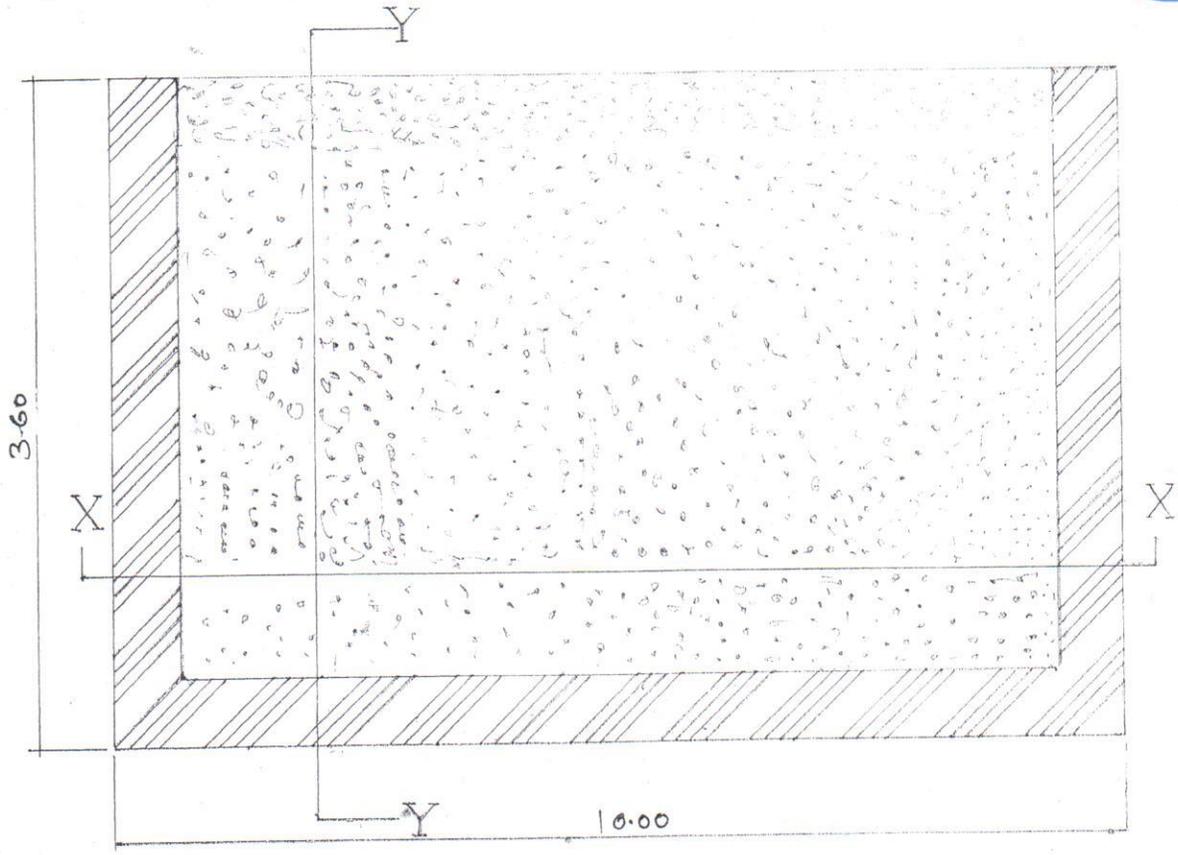
M/s Shakti Hydro Electrical Co-Pvt.
 204 Medan Lal Block A Sniad

VIII, New Delhi 110049

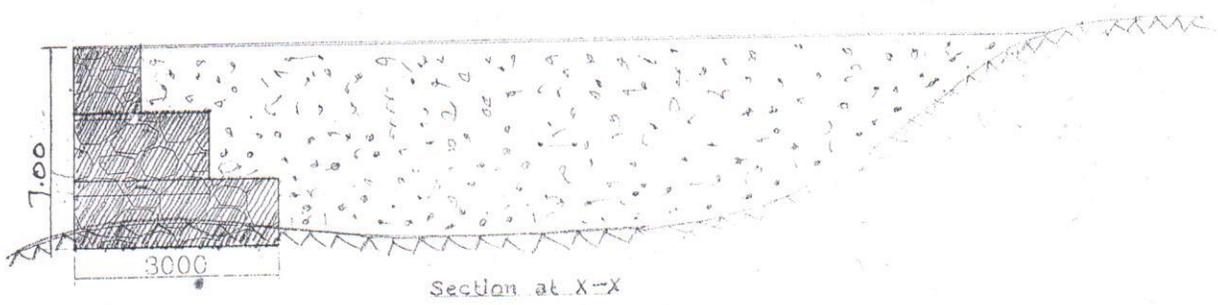
CHACHYOT MINI HYDEL POWER PROJECT

MUCK DUMPING SITE - 8

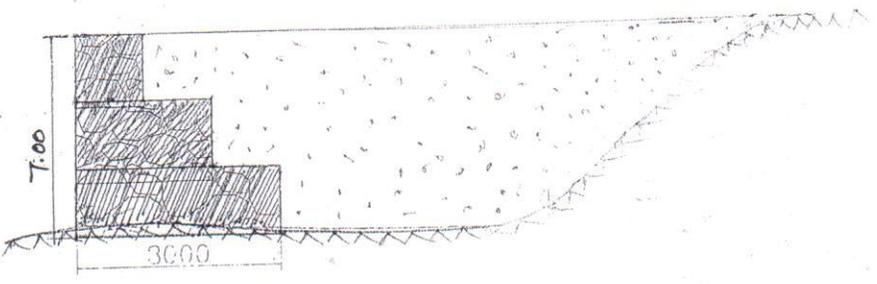
113



PLAN



Section at X-X



Section at Y-Y

Area = 10.00×3.60
 $= 36.00 \text{ m}^2$
 Depth = $\frac{7}{2} = 3.5 \text{ m}$
 Capacity of muck dumping = 36.00×3.5
 $= 126 \text{ cum}$