

**RECONNAISSANCE GEOLOGICAL REPORT OF PROPOSED SITE OF
SMT. RATULI DEVI W/o SHRI NEPALU FOR THE CONSTRUCTION OF
OWNER DRIVEN CONSTRUCTION FOR HOUSING (ODCH)
VILLAGE BHITRI, TEHSIL- MORI- DISTRICT UTTARKASHI, UTTARAKHAND
KHASARA No. – 485 & AREA – 0.020 ha.**

Date of Inspection: 12/01/2014

In a 'World Bank' funded programme, Government of Uttarakhand has provided teams of Consultant Geologists and Consultant Associate Geologists to Director, Geology and Mining Unit, Uttarakhand for geological studies in proposed sites for Owner Driven Construction For Housing (ODCH) in disaster affected districts of Uttarakhand.

Director, Geology and Mining Unit, Directorate of Industries, Uttarakhand has issued an Office Order No.1612 Aa. Pra./Bhu.Ni./Bhu.Khani.E./2013-14 dated 10thDecember 2013 regarding geological studies in disaster affected five districts of Uttarakhand, Uttarkashi is one of them. Thus, undersigned have taken geological observation during traverses and collected field geological data under the management of cosignatory departmental 'Assistant Geologist'.

In the above mentioned questioned area, the reconnaissance geological investigation was carried out in the presence and co-operation of Shri Prem Lal, Home guard, Mori, Uttarkashi. It is 32Km approx from Tehsil Headquarter Mori, Uttarkashi, Uttarakhand and the site is 1km approx on Netwar- Bhitri motar marg through bridle path. It falls on coordinate – N 31° 07'28.8" E 78° 05'41.9" El. 2225m. The site is in village Masri, which is densely populated.

The proposed site is on colluvial overburden material varying in thickness range from >3m approx at places, man-made cultivated terraces are present. The uphill slope is 15°-20° and the downhill slope is 25°-30° sloping in south-west direction. Around the proposed site location least mix vegetation of Banjh, Chulu, etc., is present at about 150m-200m approx in uphill side. A seasonal flow is passing from E side at about 80m-100m approx flowing in S direction.



Proposed site

Close view of the proposed site

The proposed site is on colluvial overburden material thus no insitu rock is found but a few boulders varying in size range from 0.5m to 1m approx are found embedded in the brownish soil with fragments of gneiss of 2cm-10cm approx size. The soil is consolidated;

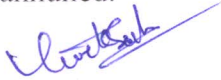
the rate of infiltration is low making the soil water saturation low. At the proposed site location the water seepage is low. The trees at the uphill slopes are standing straight.

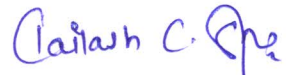
RECOMMENDATIONS:

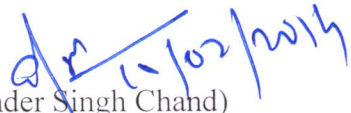
1. Inclined retaining wall of 1-2m approx height and 3-4m approx length at the NE backside boundary and also in the SW toe boundary of the site of 3m approx length, with provisions of weep holes and sufficient gap of about 2-3feet in between the backside retaining wall and the proposed construction should be constructed. And also, proper drainage system between the retaining wall and the wall of house should be developed.
2. The surface drainage should be properly planned through lined drain/pipe, so both rain water as well as waste water from the existing houses to be release safe place in SW direction along a channel.
3. The foundation depth of the houses must be as per the compactness of the overburden material at the proposed site.
4. Framed structure with deep column and light roof must be constructed as the area falls in the earthquake zone IV, so it is essential that the house must be constructed with latest earthquake resistive techniques.
5. The soak pits and toilet foundations must be quiet away in S side from the house so that the foundations are not directly affected from subsidence due to excessive seepage.
6. The premises of house must be made 'pukka' in order to avoid excessive seepage of the surface water.

CONCLUSION:

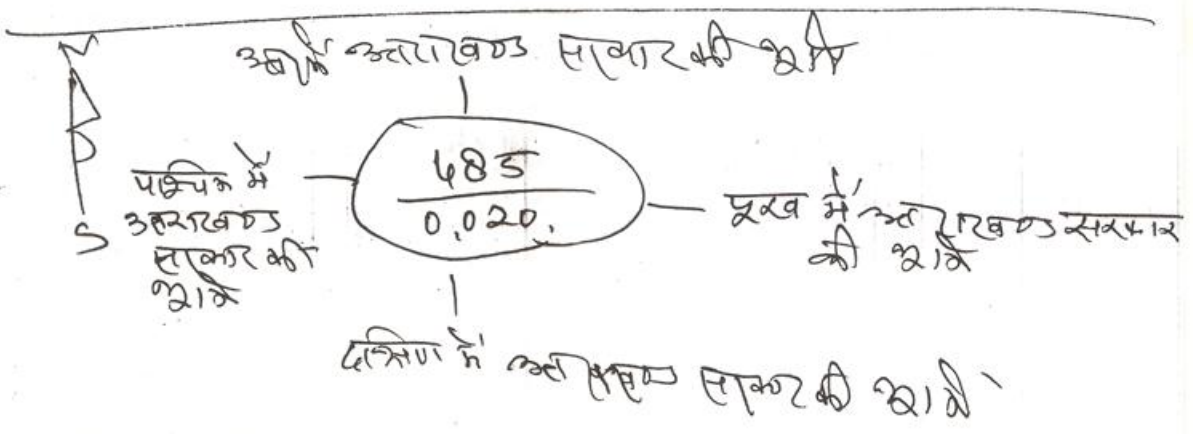
Prima-facie, presently, the proposed site of Smt. Ratuli Devi w/o Shri Nepal is geologically feasible for the proposed construction, only if, the above mentioned recommendations will be followed strictly, otherwise, in their contravention; geologically suitability will be deemed annulled.


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वहसील भारी क शुभ मिहरी में देवी कापदा के कारण
 पूर्ण क्षतिग्रस्तकेनै मकान के कारण कंपनी ने जी शक्ति
 पर 1 नौम जाल गले पुनर्निर्माण शक्ति श्रीमती रबूली देवी वा
 मं पाहू के शक्ति की मजदरी लक्षणा



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बोद्धकी

- 1) पूर्व में अराखण्ड साकार की शक्ति
- 2) पश्चिम में अराखण्ड साकार की शक्ति
- 3) उत्तर में अराखण्ड साकार की शक्ति
- 4) दक्षिण में अराखण्ड साकार की शक्ति

R. P. N.