

**RECONNAISSANCE GEOLOGICAL REPORT OF PROPOSED SITE OF SMT  
RAJDEY W/o SHRI JAGMOHAN FOR THE CONSTRUCTION OF OWNER  
DRIVEN CONSTRUCTION FOR HOUSING (ODCH)  
TOK NEERO, VILLAGE HALTADI, TEHSIL- MORI- DISTRICT UTTARKASHI,  
UTTARAKHAND  
KHASARA No. – 1283 & AREA – 0.020 ha.**

**Date of Inspection: 19/01/14**

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 10<sup>th</sup>December 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 Jaipal Singh, Homeguard. It is 21Km approx from Tehsil Headquarter Mori, Uttarkashi, Uttarakhand and the site is 700m approx from Mori-Naitwad-Haltadi motarmarg through Haltadi village bridle path. It falls on coordinate – N 31<sup>o</sup> 03 16.3 E 78<sup>o</sup> 06 59.3 El. 1957m. The site is in Tok Neero of village Haltadi, which is less populated.

The proposed site is on mix colluvial overburden material varying in thickness range from 1.5-2.5m approx at places, man-made cultivated terraces are present. The uphill slope is 40<sup>o</sup>-42<sup>o</sup> and the downhill slope is 20<sup>o</sup>-24<sup>o</sup> sloping in SW direction. Around the proposed site location mix Pine, Banjh, etc., vegetation is present at about 80-100m approx in uphill side.



**Close view of the proposed site**

As the site is on overburden material thus no in-situ rocks are found but few boulders of gneiss varying in size range from 0.30m to 0.7m approx are found embedded in the greyish brown clayey soil with quartz fragments of size 0.5-5cm. 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.

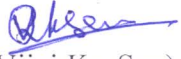
### RECOMMENDATIONS:


1. Inclined retaining wall of 3-4m approx at the NE uphill side boundary and in the SW downhill side boundary of the site with depth of foundation of the backside retaining more than that of the foundation depth of the house, 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 south 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 south 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:

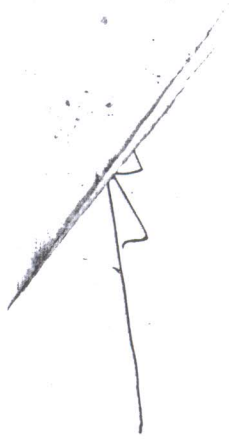
Prima-facie, presently, the proposed site of Smt. Rajdey W/o Shri Jagmohan is geologically feasible for the proposed construction, only if, the above mentioned recommendations will be followed strictly, otherwise, in their contravention; geologically suitability will be deemed annulled.

  
(Shashank Sharma)  
Consultant Associate Geologist  
Place: Camp Uttarkashi

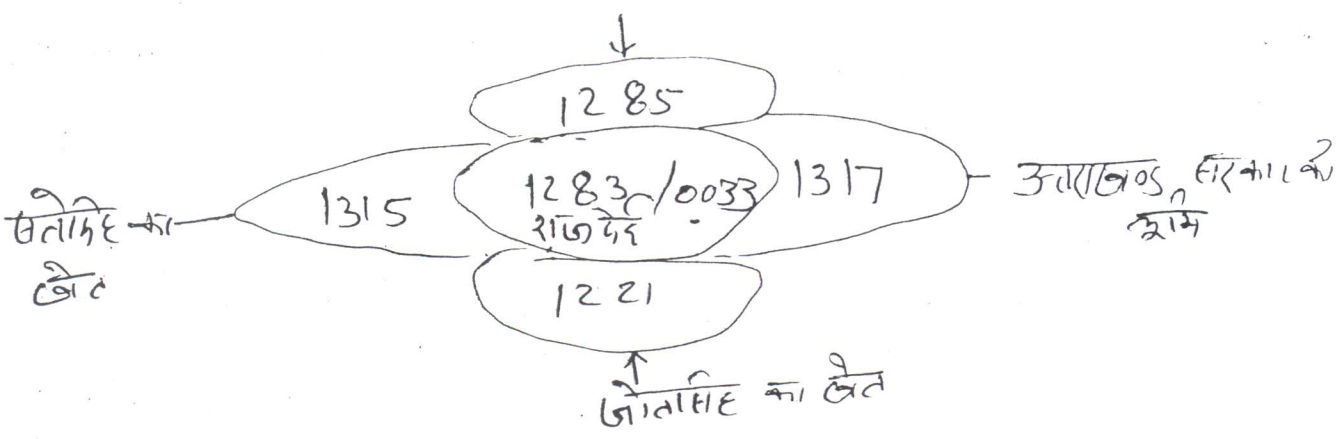
  
(Vijai Kr. Sen)  
Consultant Geologist

  
(Dipender Singh Chand)  
Assistant Geologist  
Mob: 8192802331  
Email id: [agddn-dgm-uk@nic.in](mailto:agddn-dgm-uk@nic.in)

नजारी नकशा ग्राम ग्राम हल्लाडी



सोमल का क्षेत्र



टिप्पणी :- नजारा नं० 1283 राजपेट का क्षेत्र प्रस्तावित रकम, 0.020 हे०

- ① पूर्वदिशा में सोमल का क्षेत्र
- ② पश्चिमदिशा में जोतासिंह का क्षेत्र
- ③ उत्तरीदिशा में जोतासिंह का क्षेत्र
- ④ दक्षिणदिशा में उत्तरीयों, हिरकोल के ग्राम (क्षेत्र च)

व्यख्या

प्रस्तावित क्षेत्र का 1283 नं० 0.033  
 प्रस्तावित क्षेत्र 0.020

संयोजक गुप्त  
 4-12-013