

**RECONNAISSANCE GEOLOGICAL REPORT OF PROPOSED SITE OF
SHRI RAJU LAL S/O SHRI SERU FOR THE CONSTRUCTION OF OWNER
DRIVEN CONSTRUCTION FOR HOUSING (ODCH)
VILLAGE-KHAMUNDI TALLI, TEHSIL- BARKOT, DIST.- UTTARKASHI
KHASARA NO – 1608 & AREA – 0.011 ha**

Date of Inspection: 24-12-2013

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 10th December 2013 regarding geological studies in disaster affected five districts of Uttarakhand. District Uttarkashi is one of them where the undersigned took traverses and collected field geological observations 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 Khajan Singh Aswal, Revenue Sub-Inspector, Khamundi Talli. The site is 60km approximately from Tehsil Barkot, District Uttarkashi, Uttarakhand by NH-123 (Delhi-Yamunotri National Highway) via Damta-Kandari-Khamundimalli Road and then 40-50m downhill on bridle path from road. It falls on coordinates – N 30°39.450' E 78°05.328' and elevation 1600m. The site is highly populated.



A view from SE direction of the proposed site.



A side view from East direction of the proposed site.

The proposed site is situated on the hill slope in the Khamundi Talli Village. The overburden thickness in the proposed site is about 10-15m approximately and is colluvial in nature. There are fragments of phyllite of approximately 5-10cm in size. There are mostly houses on the uphill side of the site and in the downhill there are cultivated man-made terraces. The downhill slope of the site is approximately 35°-40° towards East direction for

almost 30-40m and then there is a steep fall of approximately 70°. The proposed site is less vegetation. There are few remains of the previously damaged house on the site which must be removed before starting of the new construction. The soil is yellow color with silty clay material and phyllite fragments.


RECOMMENDATIONS:

Based on above surface geological observations of the proposed area the following remedial measures for construction of a geologically suitable house are recommended:


1. The depth of foundation of the house must be deep and as per the compactness of the overburden material.
2. An inclined RCC retaining wall in two steps of 5m each must be constructed in both uphill in West direction and downhill East direction of the proposed site with proper weep holes at specific distance for enhanced stability of the plot.
3. The weep-holes passage should be clear to discharge subsurface water to maintain stability of foundation of the house.
4. There must be a minimum gap of 0.30m between the uphill retaining and the backside wall of the house to avoid seepage into the house.
5. The back, sides and premises of the houses must be made cemented to prevent subsurface seepage and a proper drainage system with drain channels towards North direction needs to be developed.
6. As the area falls in Lesser Himalayan earthquake zone IV, light weight and slanting roof, framed structure, deep column and single storied house construction is preferable.


CONCLUSION:

Prima-facie, the proposed site of Shri Raju Lal S/o Shri Seru, is geologically feasible for the proposed construction, with the strict implementation of the above mentioned recommendations, otherwise, in their contravention; geological suitability will be deemed voided.

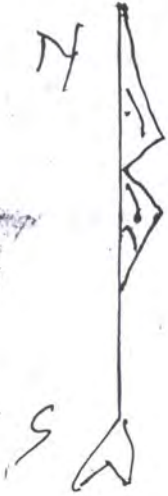

(Anupriya Shah)
Consultant Associate Geologist

Date: 5th Jan, 2014
Place: Camp Uttarkashi


(Deepak Singh)
Consultant Geologist


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

नक्शा मंजूर रजमुब्दा तली पदी - गाँव ८६० कडके
 मंघी आते राजूलाल धु म्हे १६ खमुब्दी तली ८६० कडके
 विला - उत्तरकाशी काल के नाम. प्रा-फेब्रिके गवन विभाग
 हेतु प्रस्तोवित है,



$$\frac{1}{\text{पैमाना}}$$


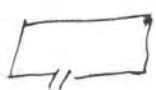
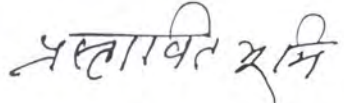
$$64'' = 1 \text{ मील}$$



शर्तें

- १) पूर्व दिशा - कचन लाल झाड़ि का मकान
- २) पश्चिम दिशा - कुपरा एड का जे
- ३) उत्तर दिशा - दिनेश का खेत
- ४) दक्षिण दिशा - गचा लाल का खेत

संकेत -

- १)  नाप श्रम
- २)  आवादी
- ३)  प्रस्तावित श्रमि

सत्यापित किया
 २०१३
 कर्मचारी

रस किया

34
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 ७/१२/२०१३

कर्मचारी
 २०१३
 २५/१२/१३

हरा भोजा गरीब इस भूमि को जो पति लाल, अकलाल
 मे १११ गीत गीत गीत गीत गीत गीत गीत गीत गीत
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~~सत्याजित सिपा
 रा० ३०
 पनीगाड~~

~~श्री
 रा० ३० श्री माला
 7/12/13~~

~~श्री
 रा० ३० श्री माला~~
 24/12/13