

RECONNAISSANCE GEOLOGICAL REPORT OF SMT. SOVI DEVI W/O
SHRIBHAGAT RAM FOR THE PROPOSED CONSTRUCTION OF OWNER
DRIVEN CONSTRUCTION HOUSING (ODCH)
VILLAGE-ANGODA, TEHSIL- PUROLA, DIST.- UTTARKASHI
KHASRA NO.- 240&AREA -0.143 ha.

Date of Inspection: 28-12-2013

In a 'World Bank' funded programme, Government of Uttarakhand has teams for geological studies in sites proposed for Owner Driven Construction House (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, 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 Kamleshwar Prasad Nautiyal, Revenue Inspector, Purola. The proposed construction site is located 3km away from Tehsil headquarter Purola and 100m valley side in east direction from Purola-Mori motor road. It falls on coordinate – N 30°53'21.1"E 78°05'34.6" and El.1418m from msl.

The proposed site situated on the overburden which is manmade flat hill terrace. At 50m horizontal distance in the east direction on the right bank of Kamal river, at site head in west direction Angora Khadd perennial nala is present, 1-2m approximate thickness of overburden, in overburden phyllite fragments 1-5cm in size with fine grain brownish clayey soil matrix with less vegetation. Bedrock schistose and gneisses has been exposed surrounding of the site.



Close view of the propose site

At the site uphill slope is 30°-35° and downhill slope is 25°-30° towards E direction. In-situ schistose gneiss with inclination of bed 5°-10° in N direction and joints are J1 is dipping 90° in S 50° E direction, J2 is dipping 75° in N direction, J3 is dipping 90° in S 80° E

direction. Below the site 30-40m towards river terrace T1 located on flat cultivated man-made terrace. The toe of the land vertical retaining wall is present.


RECOMMENDATIONS:

Based on above surface geological observations, the proposed area seems geologically suitable for the proposed building construction. The following remedial measures are recommended for safety:

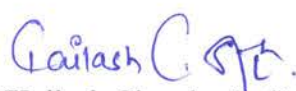
1. Inclined retaining wall at the uphill side with depth of foundation more than the foundation depth of the house, with provisions of weep holes and sufficient gap of about 0.5-1.0m in between the backside retaining wall and the proposed construction should be constructed. And also, proper drainage 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, rainwater from uphill side as well as waste water from the existing houses to be release safe place at down-hill along a channel.
3. Inclined retaining wall with step at the toe of the proposed site with provision of weep holes at specific distance should be re-constructed.
4. Massive plantation of trees, bushes and grasses which can hold the soil mass and retained the debris with dense and long rooted, wide/broad leafed flora must be done to protect the soil erosion and minimize the surface erosion of the subsurface rocks.
5. The soakpits and toilet foundations must be quiet away 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' to prevent excessive subsurface seepage and downward percolation of water and differential settlement.
7. Framed structure must be used and light roof should 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, scientific and technically sound craftsmanship with logical and favorable principles of soil mechanics.


CONCLUSION:

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

(Vivek Sahu) 
Associate Consultant
Geologist

Date:
Place: Uttarkashi


(Kailash Chandra Sati)
Consultant Geologist

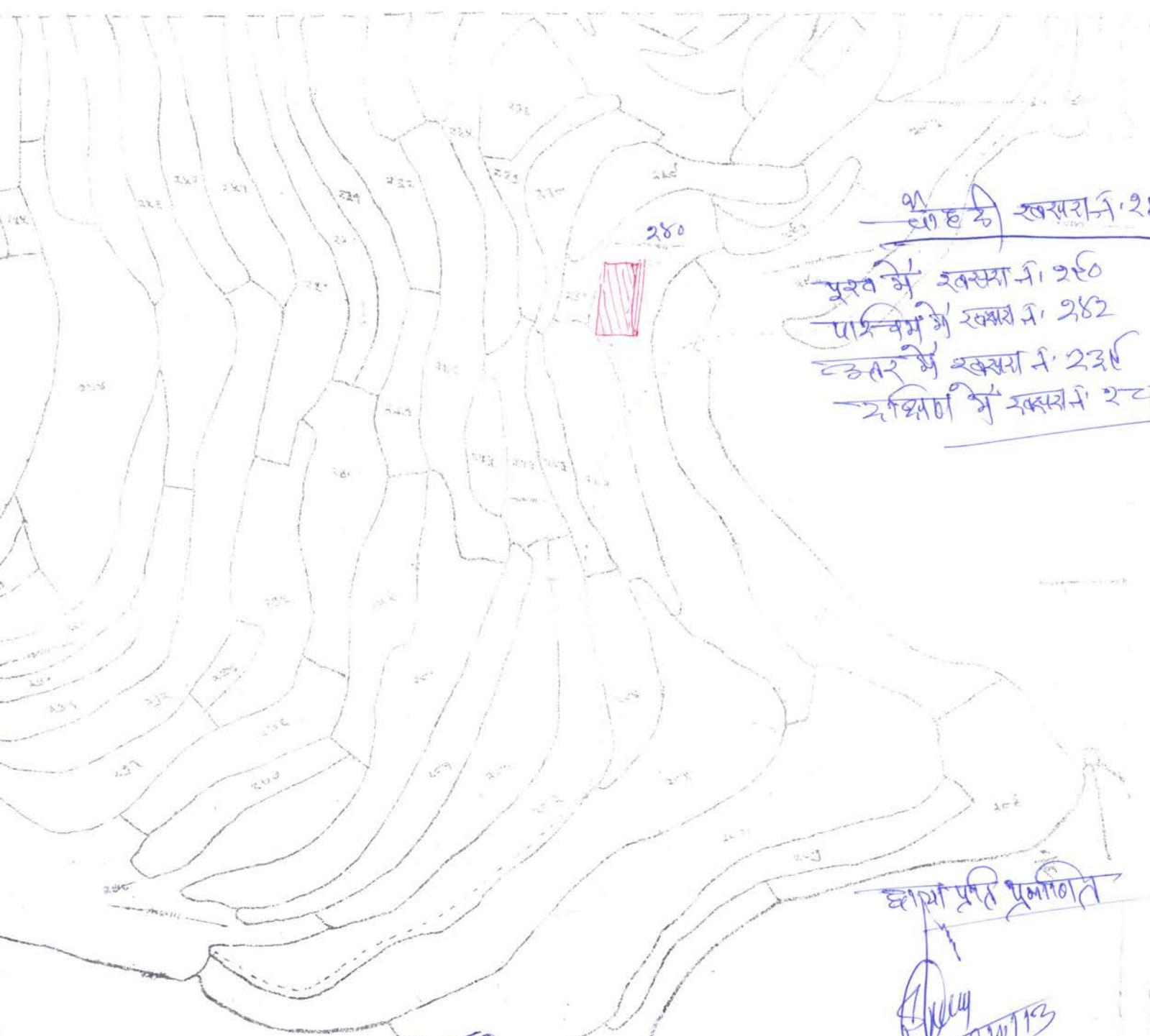

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नक्शा ग्राम बंगोडा पट्टे रामासिराई तहसील (सुनौली जिला-इतरवासी मंडल
 देवी बाबादा अतिवृष्टि से पूर्ण क्षतिग्रस्त (आवासीय) मकान प्रभावित महिला श्रीमते
 सोबी देवी पुत्री भगताराम निवासी बंगोडा बाली को आवासीय मकान निर्माण
 हेतु प्रस्तावित निजी भूमि

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मिति

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- पूरुब में खसरा नं. 280
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- उत्तर में खसरा नं. 238
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रवारा का सं प क - रवारा ग्राम आंगणवाड़ी पंच समितिचे सर्व सदस्येसोला जिला कार्यालय

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