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Use of Dowsing and Geo-Resistivity meter For Detection of Geopathic Stress Zone

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Abstract

This paper deals with the experimental setup used for detection of geopathic stress. It highlights the under ground water as the one of most important factor to generate geopathic stress. Such under ground water locations and geopathic stress zone are interrelated. First time, detection of geopathic location has been done using dowsing and geo-resistivity meter method. It is found that, inside geopathic stress copper L rods gets deflected. Electrical resistivity decreases as water content increases.

Key word: Geopathic Stress, Dowsing, Geo-Resistivity Meter.

I.Introduction

Geopathic stress (GS) is a natural phenomenon which affects certain places and can be damaging to human health [1]. The most usual cause of geopathic stress is certain minerals concentration, usually an underground water stream, flowing beneath a house [2]. The water rapidly flowing through rock gives rise to an electromagnetic field which can affect the health of those living above it [3]. Geopathic stress can also arise from a geological fault line [4] that is, a deep crack in the bedrock which allows radiation from deep within the earth to come up to the surface. Literature survey reveals that geopathic stress may be a form of imbalanced electromagnetic energy spectrum or subtle energy [5].

Several authors [6-9] and many others have reported the presence of ground water vein as one of the aetiological factors for certain type of diseases (cancer, illness)[10-14] and others have tried to show the ability of human body (i.e. dowser) to detect subterranean features.

Researchers offer science based explanations about detection of geopathic stress zone by studying possible influences of geopathic stress on the human body, and suggest that it somehow interferes with brain function and affects the release of melatonin, a hormone with particular importance for the immune system [15-16]. According to these theories, dowsers are assumed to have a kind of specifically trained magnetic sense that gives them the ability to detect certain natural fields [17-18]. Some studies in this area are focused on the ability of dowsers to detect water and technical electromagnetic fields. However, in present work empirical studies on detection of geopathic stress using dowsing and surface geophysical technique are elaborated.

II. Study Area

Extensive survey was carried out around Pune city based on which about twenty geopathic stress zone locations were identified by using dowsing method and with geophysical vertical electrical resistivity survey in residential, commercial areas, and transport routes like state and national highways in and around Pune city, Pune district of Maharashtra state, India. Details of each location are given in figure 1. Geologically Pune district is underlain by Deccan basaltic flows belonging to Cretaceous to Eocene periods.

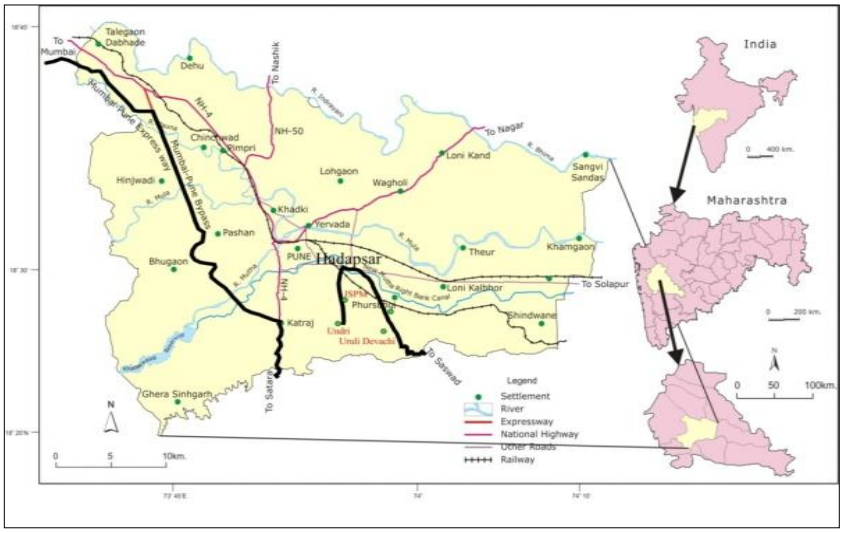

Figure 1: Location map of Pune district (study area)

III. Material and Method

3.1 Dowsing using copper L-rod

It is popularly known as divining. It is both an art and an empirical science. Empirical in the sense that the dowsers or diviners have not been able to put forth an acceptable explanation of their ability to detect ground water, minerals , oil, deposit etc with so simple as instrument as a mere forked twig, copper L rod , simple pendulum. The L rods can be made of any material like copper, brass, steel etc. A pair of coat hangers bent to in an L can serve the purpose. The hand held section of the rod is six to ten inches in length. It is bent at right angle. The length of bent section can be from ten to eighteen inches long.

Using L-rods the correct way of holding the rods is to hold them one in each hand, slightly away from the body in a parallel position. The L-rods will be more sensitive if one holds them horizontally and give better response in this position. If they are held with tips pointing below the horizontal, they become less responsive and slower to react.

3.2 Electrical Resistivity – surface method

Numerous investigations have established the usefulness of surface electrical resistivity as a tool for detection of ground water [19-21]. It involves study of those parts of the earth hidden from direct view by measuring their physical properties with appropriate instruments, usually on or above the surface [22-24]. It also includes the interpretation of the measurement to obtain useful information on the structure and composition of the concealed zones [25]. The tools and techniques developed for such studies have been used in exploration for hydrocarbons, minerals and groundwater [26-28].

IV.Method

An area of investigation was taken large enough, of grid size 20m X 20m with each grid strip width of about 2 meter, to assure that geopathic stress zones are identified with the help of an experienced dowser using copper L-rods. The dowser walked on the investigated area in all possible directions and located the geopathic stress zone (Fig.2).

In the present study, the vertical electrical resistivity or geo-resistivity meter technique was used to confirm the existence of the underground water veins detected by the dowser. The Schlumberger method (Fig.3) of determining the electrical resistivity was used at two spots 1. In a residential area 2. Mumbai-Pune expresses way. In this method, four electrodes are arranged in co-linear and symmetric manner. The two outer electrodes are termed as the current electrodes and are kept at a larger interval than the other two inner electrodes, termed as the potential electrodes. After proper earthing, the current is passed through the outer electrodes and the potential difference across the inner electrodes is measured. Based on this, the electrical resistivity of the subsurface strata is determined up to the depth of 50 m. (Fig.4.1,Fig.4.2).Geotechnical engineering investigation (tests) of soil at normal zone and geopathic locations were carried out using various techniques as given in table 1

Sr. No.	Name of the Test	Method	Formula used	Normal zone	Geopathic Zone
1	Moisture Content (%)	Oven Drying Method	**W=(W2-W3)/(W3-W1) x 100** where, W1-Weight of Empty Container, W2-Wt. of Container + Wet soil, W3- Wt. of Container + Dry soil.	33	35
2	Specific Gravity	Pynometer Method	**G=(W2-W1)/((W2-W1)-(W3-W4))** where, W1-Empty Weight of Pynometer Bottle W2-Wt. of Pycno + soil W3- Wt. of Pycno + soil + water W4- Wt. of Pycno + water	2.74	3.067
3	Plastic Limit (%)	3mm Rolls	The wet soil is rolled till it forms cracks at 3mm and then its water-content is determined by oven drying method. The avg. water content of the 3 readings of the same sample is its Plastic limit.	50	62.5
4	Liquid limit (%)	Casegrande's Apparatus	It is the water-content corresponding to 25 no. of blows, calculated by interpolation of values, from the graph of water-content(ordinate) and log of No. of blows(abscissa).	38.89	60
5	Density (g/cu.cm)	Core-Cutter Method	**ρ=Mass of soil in core-cutter / Vol. of soil in core-cutter**	0.138	0.167

Table 1 Geotechnical engineering investigation (tests) of soil at normal zone and geopathic locations were carried out using various techniques.

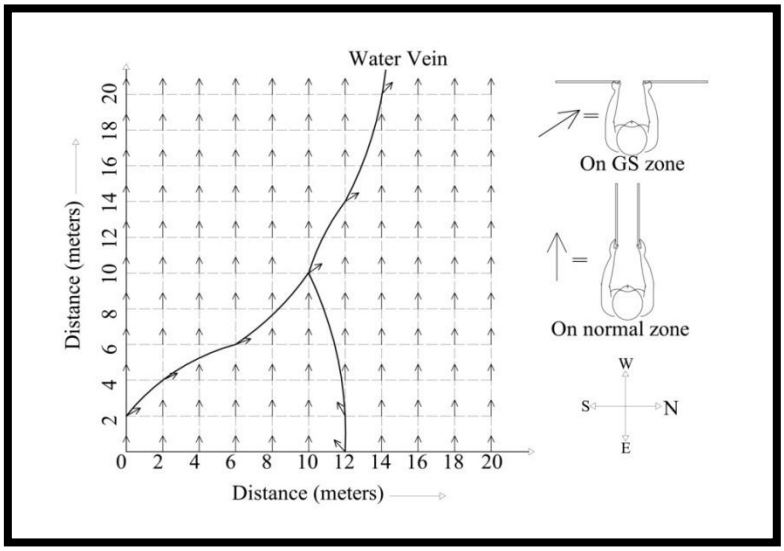

Figure 2 Investigated area and geopathic stress zone by dowser

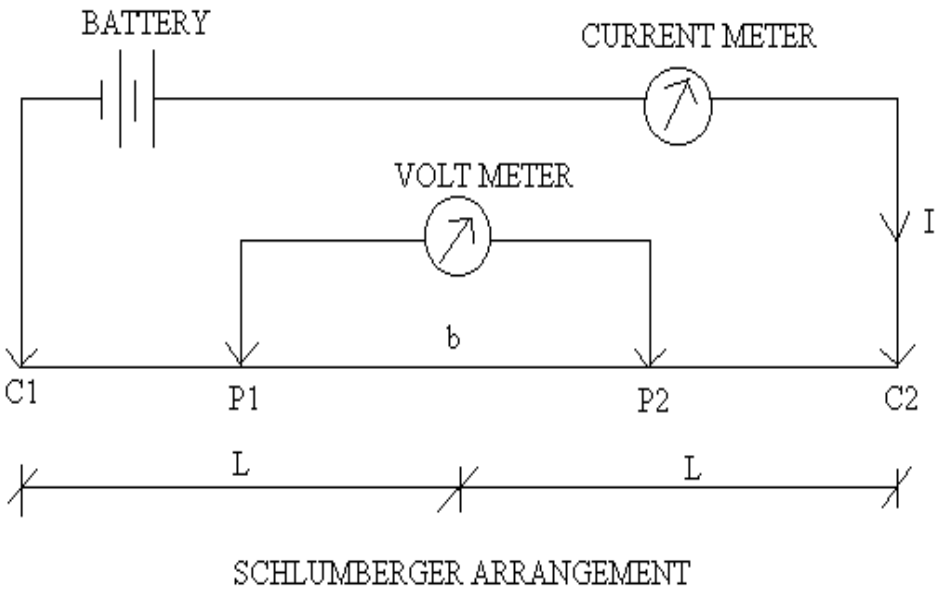

Figure 3 Schlumberger arrangements for measurement of electrical resistivity

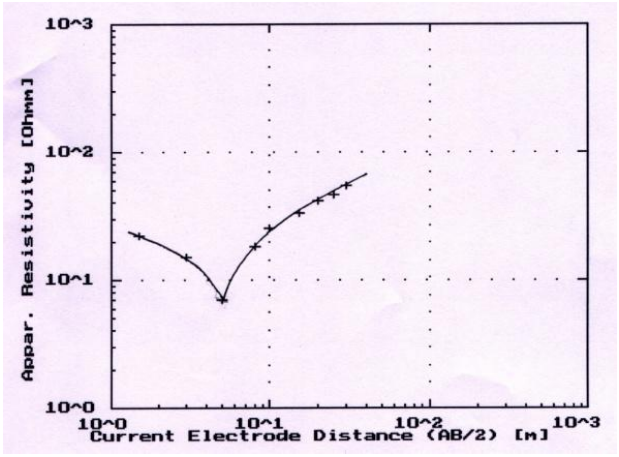

Figure 4.1 Experimental work confirmation of underground water vein using geo-resistivity meter at express highway.

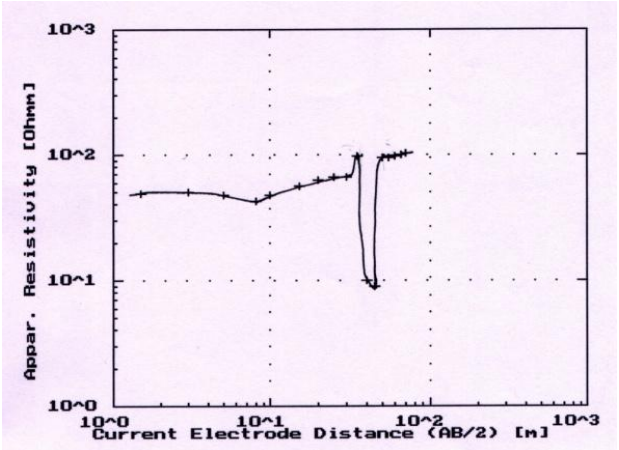

Figure 4.2 Experimental work confirmation of underground water vein using geo-resistivity meter at residential area

V. Results

When the dowser moves over the investigated area, it is seen that when there is no geopathic stress, the rods remain parallel to each other. The characteristic 'turning of the rod' occurs at the moment the dowser walks over the geopathic stress zone. Underground water vein flow direction gets marked after confirmation of geopathic stress zone (Figure 2).

The graph of electrical resistivity in ohms with the current electrode distance is plotted (Figure 4.1 and 4.2). From both the figures it can be seen that at the groundwater locations identified by dowser, a sudden drop in electrical resistivity is noticed, confirming the presence of the groundwater zone.

Percentage of water is more in geopathic zone as compared to normal zone. Liquid limit, specific gravity, density (g/cu.cm) and plastic limit (%) has a greater value in geopathic stress zone as compared to normal zone.

VII. Discussion

In a geopathic stress zone, electrical resistivity decreases as both water content and concentration of dissolved salts increases. The sudden change in a resistivity values indicates a change in subsurface strata. In the present study the area is underlain Deccan Trap Zeolitic basalt with 25 cm of black cotton soil with 2 to 5 % of sand size Zeolitic minerals, followed by 3.4 metres of weathered basalt underlain by compact Zeolitic basalts. (Photo 5.1, 5.2). Especially when a water zone is detected, the dip in the electrical resistivity value is significant. In the present study, the depth of groundwater at the two locations was approximately in the range of 150 m and 250 m respectively.

Photo 5.1 Black cotton soil with sand size zeolite minerals

Photo 5.2 Dug well with compact Zeolitic basalt with subsurface springs

VIII. Conclusion

From the comparative study of resistivity technique and L rod dowsing, we can authenticate dowsing. The authenticity of dowsing will help us in the study of investigation of Geopathic stress. It will also help us to find water veins in the ground and hence provide a quicker method for detection of water. Presently, due to congested building arrangement the technique of resistivity meter is very lengthy and requires large area (as spacing of electrodes is equal to depth of investigations). But the dowsing by L rods is more suitable for these areas. Also it is a faster method and can be used in built-up structures where the resistivity technique cannot be used.

Reference

[1]	Freshwater, D., Geopathic Stress. Complement Therapies Nursing Midwifery, **3**,1997,160-162,
[2]	Croome, D.J., The Effect of Geopathic Stress on Building Occupants. Renewable Energy, vol.**5,** 1994**,** part II, 993-996.
[3]	Kharat, A.G., Empirical and Theoretical Investigation on Built Environment. Ph.D. Thesis, University Of Pune,2000
[4]	Telford, W.M., Geldart, L.P., Applied Geophysics. Cambridge University Press, NY, 1976;pp 859.
[5]	Thurnell-Read,J., Geopathic Stress & Subtle Energy. Life-Work Potential, (UK), 2006, pp 11-24.
[6]	Clover Anne, Homeopathy Reconsidered, Victor Gollanez Ltd,1989;pp-32.
[7]	G.A.Storozuk, Geopathic Zones and The Iron Stake Method N0-2, 1992; pp-11-24.
[8]	Christopher S, Proceeding of the First International Congress on Geopathic Stress, Cyprus, 1997.
[9]	Saunders,T., Health hazards and electromagnetic fields. Complementary Therapies in Nursing & Midwifery,**9**,2003,191–197.
[10]	Maby,J.C ,The Physics of the Diving Rod, G.Bell & sons London,1993.
[11]	Ros. F,The Lost Secret of Ayurvedic Acupuncture,Narendra Prakashan,1990;pp-203.
[12]	Lonegren Sig ,The dowsing Rod Kit: Virgin books ,London, 1995;pp-128.
[13]	Wilcock, J., internet http://www.inria.fr/agos/dowsing/dowsdean.html, 1994.
[14]	Silk, A., and Cown,D., Ancient Energies of the earth, Thorsons,1999; pp 319.
[15]	Kathe Bachler Earth Radiation, Word Asters Ltd, ISBN 978-4357-0246-2 ,1976; pp 55-60
[16]	Hacker,G.W, Geopathic stress zones and their influence on the human organism, Proceedings of the Druskininskai congress on 'Earth's Fields and Their Influence on Human Beings'.2008;pp 8-17.
[17]	Harvalik, Z, V., Anatomical localization of human detection of weak electromagnetic radiation: Experiments with dowsers. Physiol Chem Phys, 1978; 10,525–534.
[18]	Frilot C, Chesson AL, et al. Evidence of a nonlinear human magnetic sense. Neuroscience 2007; 144:356–367.
[19]	Swartz, J.H., Resistivity studies of some salt-water boundaries in the Hawaiian Islands. Amer. Geophysical Unio. V.18,1937, 387-393.
[20]	McComas, M.R., Geophysical surveys in the vicinity of sanitary landfills in northeastern Illinois, Ground water, V.6, No.5, 1968,23-30.
[21]	Cartwright, K.,Eletrical earth resistivity surveying in landfill investigations Engineering and soils Engineering Symposium Proceeding 10th Annual Meeting,Moscow,Idaho,1972,77-92.
[22]	Wenner,D.L., Preliminary field studies using earth resistivity measurements for delineating zones of contaminating ground water,v.7 , No.1,1969,9-16.
[23]	Fink, W.B. Aulenbach,D.B., Protracted recharge of treated sewage into sand ,part II –tracing the flow of contaminating ground water with a resistivity survey , Ground Water,vol.12,No-4,1974,219-223.
[24]	Urish, D.W., Salt source sleuthing in a coastal environmental: a case study. Abs., EOS, Amer.Geo.Union.vol.61, no-46,1980,955.
[25]	Fried, J.J. and Ungemach, P.O., Note: A dispersion model for a quantitative study of a ground –water pollution by salt, Water Research, vol-5,1971,491-495.
[26]	Hackbarth, D.A.,Field study of subsurface spent sulfite liquor movement using earth resistivity measurement, Ground Water,vol-9,no-3,1971,11-16.
[27]	Stollar, R.L. and Roux,P.,(1975), Earth resistivity surveys-a method for defining ground – water contamination, Ground Water,vol 13,no-2,1975,145-150.
[28]	Roux, P.H., Electrical resistivity evaluations at solid waste disposal facilities .EPA Report SW-1978, 729.94.