REPUBLIC OF MAURITIUS

OPPORTUNITY ASSESSMENT FOR THE DEVELOPMENT OF GEOTHERMAL ENERGY IN MAURITIUS

Mount Deux Mamelles, from La Laura village. January 2012

Final Report

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Table of Contents

1 INTRODUCTION

1.1 Contractual Framework of the Consulting Services

According to the Terms of Reference the scope of the Consulting Services for the development of geothermal resources in Mauritius, confirmed in the Contract, included the following Tasks:

Task 1: Situation analysis

Review and analysis of:

- existing documentation regarding Mauritius volcanic and geothermal manifestations, including the Mauritius Research Council (MRC) report and geological logs from past drillings;
- policy and regulatory framework, including all regulations impacting the development of geothermal energy (energy, environmental, land, etc.);
- Government of Mauritius development targets;
- electricity sector situation and development plans.

Output 1: An Inception Report including the methodology to be used for the assignment, an implementation schedule for the study and a Situation Analysis Report.

Task 2: Surface exploration through geological and hydrogeochemical studies

Geological and hydrogeochemical reconnaissance exercise to determine whether to proceed with additional surface exploration on the most promising sites by:

- review of the MRC study methodology and results interpretation;
- analysis of available geological data to provide a better understanding of Mauritius stratigraphic and geological structure;
- hydrogeochemical assessment over the island through mapping of thermal manifestations (e.g. hot springs) and analysis of the physical and chemical characteristics of these manifestations and of water samples as appropriate;
- preliminary assessment of technical, chemical, environmental, social set up and of any constraints that may hinder the development of the most promising sites and any such assessment that the Consultant may deem necessary for the purposes of this assignment.

Output 2: Mauritius Geothermal Resources Initial Assessment Report including an executive summary.

Task 3: Recommendations for the development of geothermal energy in Mauritius

Based on the results of Tasks 1 and 2, assessment of the opportunity for development of geothermal energy according to the following criteria:

- geothermal resources potential as evaluated by the Consultant;
- cost of applicable technologies and technology risks;

- environmental and social constraints in the Mauritius context;
- electricity sector regulations (feed-in-tariffs, etc.);
- existing local technical and scientific capacities;
- Clean Development Mechanism or Climate finance opportunities;
- interest of developers, including CEB.

and relevant recommendations about:

- surface exploration strategy, including prioritization of further sites to be investigated and relevant listing and scheduling of scientific reconnaissance to be carried out;
- institutional and organizational set-up;
- role and mandates of the various stakeholders;
- financing models for geothermal exploration and exploitation, and potential involvement, and at which stage, of the private sectors;
- regulation and licencing issues;
- anticipation on environmental and social issues;

Output 3: Opportunity Assessment for the Development of Geothermal Energy in Mauritius Report. The report will combine the results of Tasks 1 to 3.

Task 4: One day Workshop

Organize a one day workshop to present the results of Tasks 1 to 3 and to provide training on geothermal resources development, geothermal technologies, value chain and business model.

The comments gathered during the workshop shall be incorporated by the Consultant in the final version of output 3.

Output 4: Power point presentations for both training sessions and presentation of the results.

1.2 Implementation of the Consulting Services

Task 1 and part of Task 2 (collection of 29 water samples from springs and water wells, geological reconnaissance of the most interesting area identified, examination of the cores and cuttings of 7 water wells drilled in that area) were completed during the Inception Mission. Output 1 (Inception Report) was submitted in January 2012. The report included an analysis of the present situation in Mauritius, in terms of energy market, legal, institutional and organizational framework and environmental and social issues.

The findings of this first activity made it possible a preliminary assessment of the geological situation that oriented the further actions to be undertaken to maximize the results of the Consulting Services. These findings are summarized here after:

- No indication whatsoever of geothermal activity was observed or reported in the whole island.
- In the context of the geologic history of Mauritius, characterized by a sequence of volcanic events building the island from the ocean floor up to its present landscape,

the Nouvelle Découverte area was identified as the one where the most recent volcanic events (0.025 to 0.05 My) took place.

- The volcanic cones witnessing the latest magmatic activity point to the sector of maximum likelihood for the existence of geothermal resources.

Based on the above findings and in order to obtain direct evidence on the possible existence of a commercially exploitable geothermal reservoir, it was strongly recommended to ascertain the temperature of the basaltic sequence by drilling a hole (500 m deep), with the drilling resources available in the Island, and by measuring temperatures along the hole down to its bottom, thus determining the thermal gradient of the area.

Following these recommendations a few locations, suitable for the gradient hole, were identified in Nouvelle Découverte and one drilling site was ultimately selected. (Figure 1-1) on the basis of geological setting, morphology, accessibility and land ownership considerations.

Contracting procedures took a long time, wherefore the hole was initiated in May 2013 and terminated in June 2014. Due to technical problems, and in particular to the occurrence of numerous water strikes, it was not possible to achieve the originally planned final depth of 500 m: the hole, denominated BH1226, was terminated at a depth of 432 m and casing was inserted to a depth of only 270 m. Thermal measurements took place in the period August 26-30, 2014, pointing to a thermal gradient only slightly above the normal one.

The present Final Report represents, from the contractual viewpoint, the Output of Task 3, denominated "Recommendations for the development of geothermal energy in Mauritius". It should be underlined that, in consideration of the disappointing results of the investigation activities, the scope of Task 3 has been drastically modified.

In particular, all aspects concerning assessment of development costs, environmental and social constraints, electricity sector regulation, financing opportunities, etc. become irrelevant in the light of the proven lack of commercial geothermal resources. Similarly, recommendations on additional investigations, institutional and organizational set-up, role of potential stakeholders, financial models, regulation and licensing issues, etc. are deemed to be not applicable.

Basically, this report presents a synthesis of the results of the investigations (Chapter 2) and conclusions and recommendations based on these results (Chapter 3). The report is integrated by three annexes, namely:

- Annex 1: Geological Report
- Annex 2: Geochemical Report
- Annex 3: Thermal Measurements Report

2 APPRAISAL OF THE FIELD SITUATION OF MAURITIUS

2.1 Geological Setting

The Geological Report (see Annex 1) analyses and discusses in detail the following aspects of the situation of Mauritius and of the south-western portion of the Indian Ocean, in order to understand the tectonic and volcanic framework of this part of the oceanic crust and the relevant implications about the existence of a possible source of heat capable to generate an exploitable geothermal reservoir at attainable depth:

- regional geological background
- features of the lithosphere beneath Mauritius
- Mauritius volcanism and morphology
- stratigraphy of Mauritius volcanic and sedimentary units

This analysis, based on the review of the rich documentation available on that subject and on the field observations, can be summarized as follows.

Located at about 20°17'S / 57°33'E in the south-western Indian Ocean, some 1800 km south of the Seychelles archipelago and 900 km east of the Madagascar eastern coast, the Island of Mauritius is a dryland culmination of a huge submarine relief, the Mascarene Plateau. This regional-scale morphological feature, overprinting the submarine topography of the Indian Ocean, lies entirely within the Africa plate, is aseismic and is largely made of volcanic rocks, at least in its uppermost crust layers. The pattern of this structure, well depicted in Figures 2.1 and 2.2, exhibits a huge, elongated, arched rise with a nearly flat top. The plateau and the adjacent basins also show a micro-relief made up by several scattered guyots and sharply cut by large linear fractures.

The geology of Mauritius Island and the surrounding sea areas of the Indian Ocean and the role played in geodynamic evolution have been tackled in several scientific works. The available papers, albeit of general character, also provide indirect information about the geothermal characters of this area.

The morphological/physiographic features of Mauritius were identified thanks to a number of scientific missions started with the Deep Sea Drilling Project and the Integrated Ocean Drilling Program. Both surveys focused on data collection and interpretation for improving the knowledge on the plate dynamics, the occurrence of natural resources, geohazards and climate changes. These data and subsequent studies on volcanology, petrology, geophysics and geochemistry led to frame the geology of Mauritius within the regional scenario and to better define the volcanic evolution.

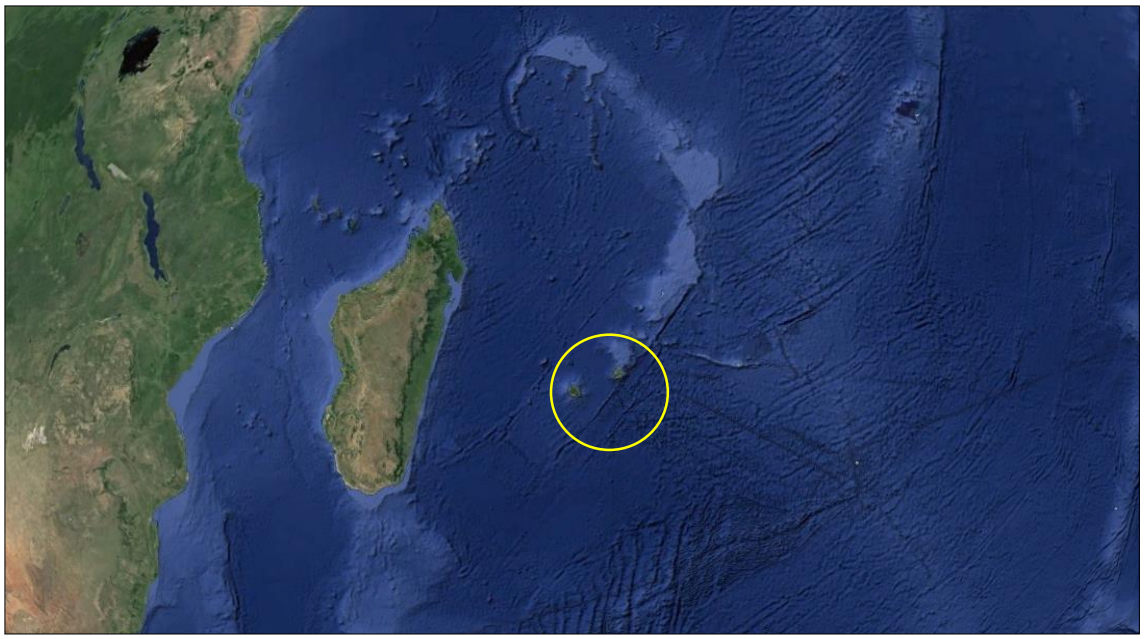

Figure 2.1 Excerpt from LANDSAT photomosaic in Google Earth visualization, showing the very complex submarine topography of the western Indian Ocean. The arc-shaped Mascarene Plateau is highlighted in paler tones of blue, east of Madagascar. The yellow circle encloses the islands of Réunion, on the left, and Mauritius, on the right (both volcanic islands are shown in Figure 2.2)

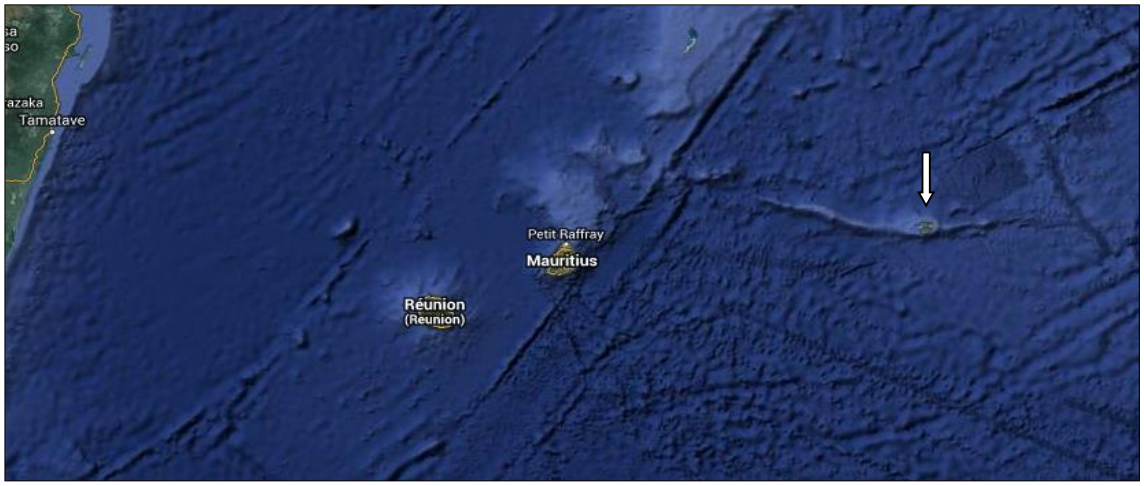

Figure 2.2 Detail of the former image, showing the islands of Réunion and Mauritius (after Google Earth). The smaller island without toponyms, indicated by the white arrow, is Rodrigues, on a roughly E-W trending fracture zone

The main conclusions of geothermal relevance, derived from the analysis of the geological and volcanological situation, can be summarized as follows:

- Volcanism of Mauritius and of the nearby Réunion is fed by the same magmatic source, as demonstrated by the chemical features of the erupted lavas, the only difference being the activity status of Mauritius, which at present is quiescent.

- These similarities lead to a possible comparison of the geothermal potential of the two islands: in Réunion, some research projects carried out in the late 1980s found temperatures of approximately 200 °C at about 2100 m depth.
- Both islands correspond to the minor dry land area of typical, huge polygenic shield volcanoes built on "basaltic" oceanic seafloor and have similar features to other hot-spot related shield volcanoes in oceanic environment, like e.g. the Hawaiian volcanoes.
- In Mauritius, the total volcano height above its submarine base surface can be estimated to be 7,500 m. This estimated height does not simply correspond to the elevation difference between the maximum height of 828 m asl and the depth of the surrounding ocean floor of 4,500 m bsl, but it results from geophysical investigations and is considered as due to gravity-driven sinking of the seafloor beneath the mass of the volcano edifice. The dry land part of the volcano edifice is minimal, compared with the submarine one.
- The volcano volume was estimated to be 75,000 km^3. As a shield volcano, the ratio between height and radius of the edifice itself (without considering its basement) suggests a very gentle steeping slope of the landform as a whole. As any shield-type volcano, Mauritius is mostly made of lava flows.
- Volcanic type and overall morphology of Mauritius determine a general outward dipping of the main volcanostratigraphic discontinuities. This feature should be considered in any hydrogeological model.
- The available technical literature (papers, reports and geological maps of Mauritius) mostly claims the presence of a caldera structure in the central part of the island. However, this structure is hardly recognizable, as neither sharp counter-slopes, nor sub-circular depressions within a visible rim can be clearly identified in the topographic surface. In any case, the caldera should be pre-Quaternary in age and thus probably partly erased by recent morphogenetic processes.
- By contrast, a huge flank collapse cutting the western side of the island is deemed as very probable. Such catastrophic episode is considered as capable to trigger the volcanic rejuvenation after the last long-lasting activity hiatus. On the other side, large-scale slope instability processes of this huge volcanic edifice (above all if in an oceanic location) are very important from the geological hazard point of view.
- Important fracture systems are observed anyway, as an unavoidable result of the combination of rigid rock types (i.e. "basaltic" lavas) and their geodynamic context, characterized by extensional to strike-slip tectonics and subsequent faulting and fracturing.
- Any geodynamic model of the Mascarene Plateau, based on multi-disciplinary research involving substantial oceanographic data, is highlighting a dense set of (probably deep-seated) fractures scattered around and between gigantic fracture zones. This should be considered as a favorable, regional-scale geological factor.

- Mauritius shield volcano is considered as still capable to produce eruptions (last episodes are dated at about 40 ka), hence a volcanic source of heat may exist. Nevertheless, the heat source is probably not a shallow magmatic chamber, but volcanism seems likely to be fed by deep fracture zones.
- The limited interaction / exchange (thermal, chemical, etc.) between the (probably) deep heat source and the infiltrating waters seems to be indicated by the total absence of geothermal manifestations (such as steaming grounds, hot springs etc.).
- The most reliable water recharge should correspond to seawater infiltration in the prevailingly submerged mass of the shield volcano, whereas rainfall and related infiltration in the dry land are clearly subordinate.
- Any available information on geology, petrology, volcanology etc. confirms the Nouvelle Découverte area in the central plateau as the primary target site for further investigations aimed at defining the geothermal potential. This area was actually the object of a program of underground investigation, as dissected in paragraph 2,3.

In conclusion, based on the results of the geological study, the stratigraphic and structural conditions of the Mauritius Island appear to be favourable, pointing to the presence of intense and recent tectonic activity, which may guarantee widespread fracturing and hence adequate permeability of the lavic formations.

This positive indication however is counterbalanced by the geovolcanological framework, hinting at a likely large depth of any potential heat source: such a negative aspect is also reinforced by the complete absence in the island of manifestations (hydrothermal alteration and/or warm springs) which would witness the existence of a shallow thermal anomaly.

2.2 Geochemical Setting

The aim of the geochemical survey has been the reconstruction of the conceptual geochemical model of the shallow water circuits present in the island and the possible exchanges of matter and heat with the underlying hydrothermal-magmatic system. For this purpose a geochemical survey was carried out in Mauritius Island in January 2012 by ELC-Electroconsult.

The Geochemical Report (see Annex 2) presents and discusses both the data measured in the field during this geochemical survey and the results of chemical and isotopic analyses performed on collected water samples in the laboratories of the Institute of Geosciences and Georesources of the Italian National Research Council (IGG-CNR), Pisa, Italy.

A total of 29 water samples were collected from boreholes drilled at shallow depths for different purposes, including domestic water supply and agricultural and industrial uses (Figure 2.3).

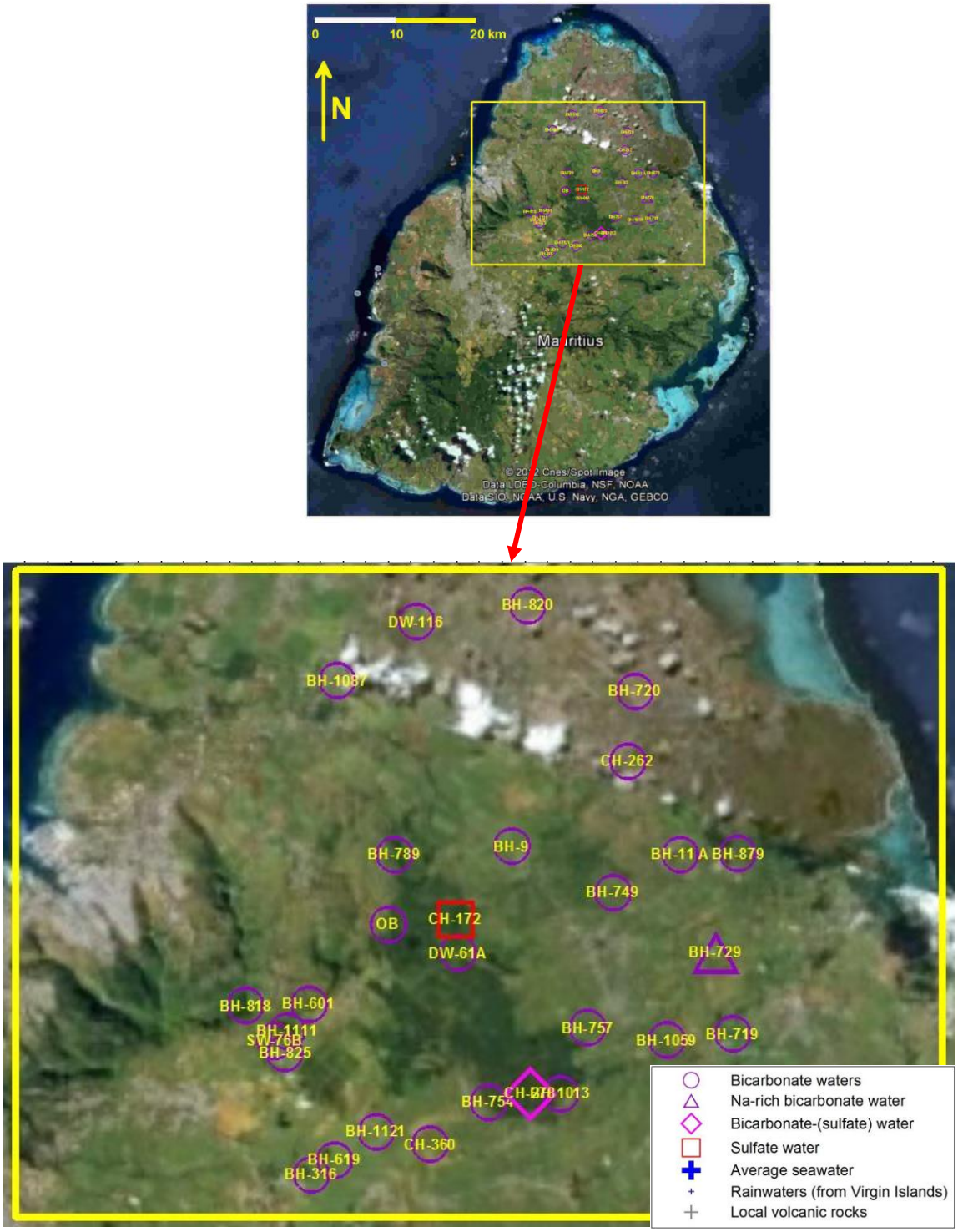

Figure 2.3 Location of the 29 water samples collected from shallow boreholes in Mauritius Island

At each sampling site, temperature, pH, electrical conductivity, and total alkalinity were measured in the field by means of portable instruments. On the samples collected the following chemical determinations were carried out in the laboratory: Li^+, Na^+, K^+, Rb^+, Mg^{2+}, Ca^{2+}, Sr^{2+}, Fe, B, As, SO_4^{2-}, Cl^-, Br^-, NO_3, NH_4^+, F^- and dissolved SiO_2. Moreover, the $^{18}O/^{16}O$ and $D/^1H$ isotope ratios were determined.

The data obtained from these analyses were elaborated to:

- define the water chemistry by hydrochemical classification and correlation plots;
- calculate the speciation- saturation identifying the distribution of CO_2 partial pressure and the distribution of their saturation index with calcite in groundwaters;
- understand the isotope geochemistry;
- elaborate the water geothermometers to estimate the geothermal gradient.

The following conclusions can be drawn from the field observations and the results of the laboratory analyses:

- No sample representative of mature waters, that is of neutral Na-Cl liquids typically circulating in high-temperature geothermal reservoirs, was found in Mauritius Island. 90% of collected samples are HCO_3 waters with comparable concentrations of Ca, Mg, and Na, low-salinity (2.1 to 9.6 meq/L), and low outlet temperature (23 to 29°C). They are originated through dissolution of local volcanic rocks, mainly those of the younger series, driven by conversion of aqueous CO_2 to HCO_3^-ion.
- In addition to the characteristics mentioned above, undersaturation with calcite and geothermometric graphical tools confirm the immature nature of these waters, whose chemical features are ascribable to short-term water-rock interaction in shallow hydrological circuits.
- The δD and $\delta^{18}O$ values of all the groundwater samples from the study area are within the ranges of local rainwaters, indicating that these groundwaters are of meteoric origin. In addition, there is no oxygen isotope shift in all these samples, as partly expected due to the absence of mature waters of Na-Cl composition.
- The cumulative distribution of CO_2 partial pressure in Mauritius groundwaters can be subdivided in two populations: (i) a low-P_{CO2} population (0.0513-0.0108 bar), ascribable to decay of organic matter and root respiration in soils and (ii) a high-P_{CO2} population (0.1160-0.0564 bar), which is probably a mixture of shallow and deep contributions, rather than the expression of deep sources only. In any case, the involvement, even partial, of one or more deep CO_2 sources does not necessarily implies the presence of a geothermal system at depth. In fact, the flux of deep CO_2 may be sustained by magmatic degassing, possibly occurring at considerable depth, owing to the very low solubility of CO_2 in magmas.
- **Everything considered, there is no geochemical indication on the possible presence of a geothermal system at depth in the explored area of Mauritius Island**.

2.3 Gradient Well Survey

In the light of the results of the geological study, pointing to the region of Nouvelle Découverte as the most promising area for the evaluation of the geothermal potential of Mauritius Island, drilling of an exploratory hole was finally planned. The final step of the investigations on the geothermal potential of Mauritius included downhole temperature measurements. Information on subsurface temperature and temperature gradient was

considered as a fundamental clue for deciding on the opportunity to conduct further geothermal surveys in the island and, in case of positive outcome, for planning these surveys.

The hole, coded BH1226, was drilled since May 2013 within the framework of the present project and was terminated on June 06, 2014 (see Annex 3). The well site is located at 416 m a.s.l. along the ENE flank of Bar Le Duc - L'Escalier polygenic volcano in the central part of the island and lies inside the rim of the inferred caldera structure. Figure 2.4a illustrates the hole position and a simplified geological map of Mauritius.

A drilling depth of 500 m was initially planned for BH1226. This depth was suggested to avoid possible influences of shallow, cold aquifers on the measured temperatures and to provide reliable information of the true deep thermal gradient. Actually, several water strikes at different depths were noticed during drilling. Water inflows occurred at about 60 m, 120 m and 180 m depth. Unfortunately, due to technical problems encountered while drilling the target depth of the gradient well was not achieved. Drilling stopped at 432 m bsl and casing was inserted only to about 270 m depth**.**

From the lithological viewpoint, the hole encountered a sequence of basaltic lava flows and pyroclastic deposits, with thin intercalations of laterite. These products belong to three chronologically distinct magmatic cycles, termed Older, Intermediate and Younger Series, which developed between 7.8 and 0.03 Ma. Laterite can be considered as a marker of the main volcanic cycles (Figure 2.5).

Down-hole temperature logs were carried out in the 270 m cased section of the hole (Figure 2.4.b) and comparative measurements were made in two water wells to assess the thermal situation and particularly the thermal gradient in the neighbourhood.

Hole BH1226 shows significant perturbation due to groundwater flow, especially between 150 and 210 m, which causes distortion of the temperature depth profile and therefore biases the inference of the geothermal gradient in the upper section of the hole. Actually, it is observed that thermal gradient is negative at shallow depth (30-40 m), then it is relatively constant between 40 and 110 m; in the interval 110-210 m the largest variations of gradient, often turning to negative, do occur, whereas below this depth the gradient appears to be quite constant in the interval 110-210 m.

In fact this lower level appears to be in a purely conductive thermal regime with an estimated thermal gradient of 40 °C/km, as shown in Figure 2.6, which represent the results of the final temperature log registered on August 30, 2014 and focused on the lowermost conductive section of the hole. The measured gradient value exceeds by only 1.3 times the “normal” geothermal gradient; therefore, by extrapolating such gradient downwards, a temperature of 180 °C (a possible target temperature for geothermal exploitation) can be expected at a depth of about 4,000 m.

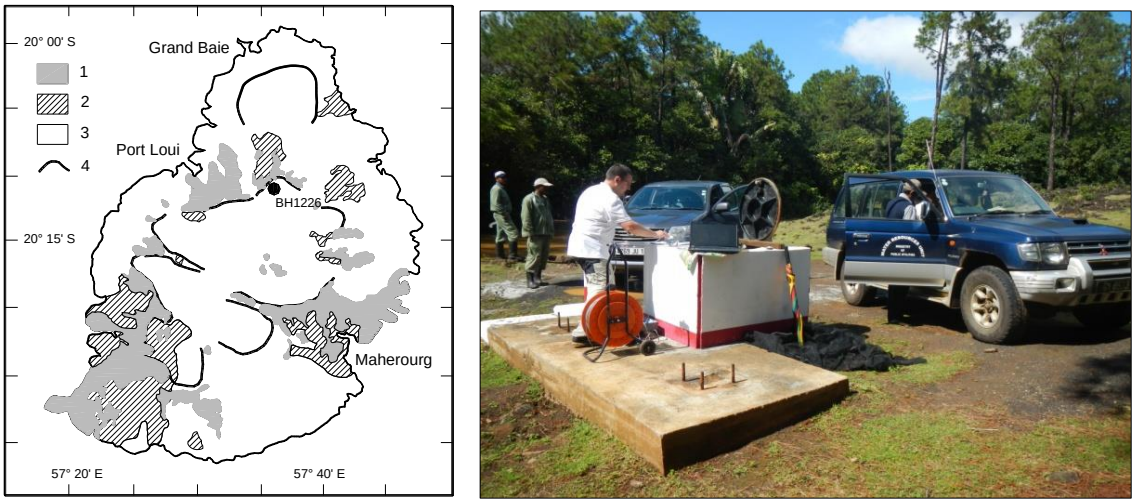

Figure 2.4 **a. (left): Location of gradient hole BH1226 and geologic sketch of Mauritius. Volcanic Series: (1) Older, (2) Intermediate, (3) Younger; (4) Probable caldera limit. b. (right): Thermal logging at gradient hole BH1226**

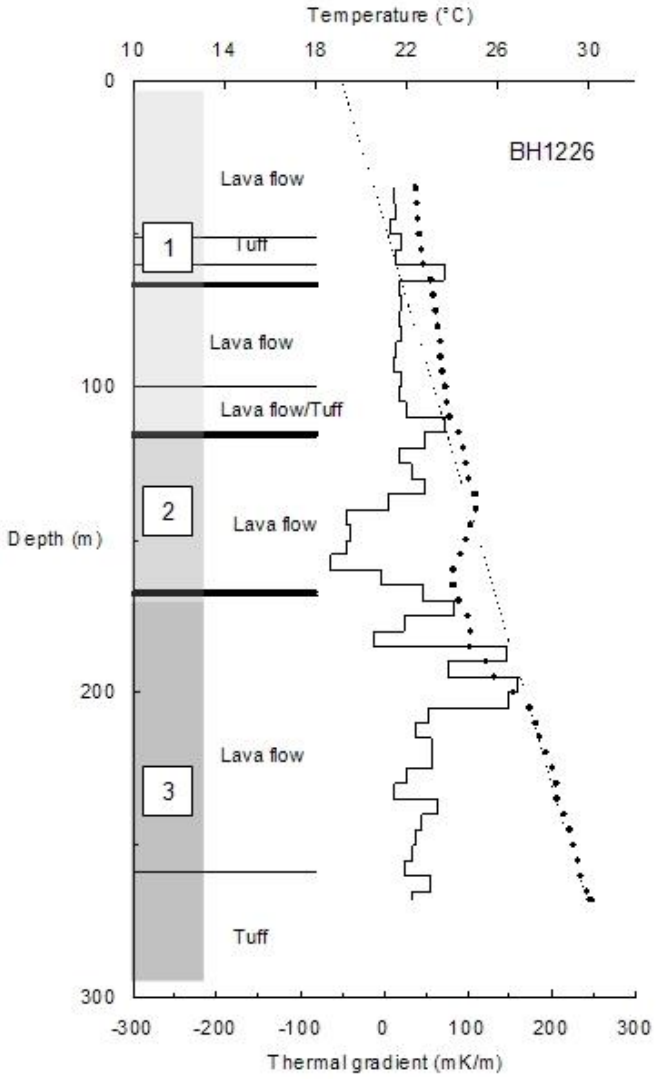

Figure 2.5 **Temperature (dots), thermal gradient versus depth (step line) and stratigraphy of the borehole BH1226. (1) Older, (2) Intermediate, (3) Younger volcanic Series. Bold line marks the lateritic levels. Dashed line indicates the least square linear regression**

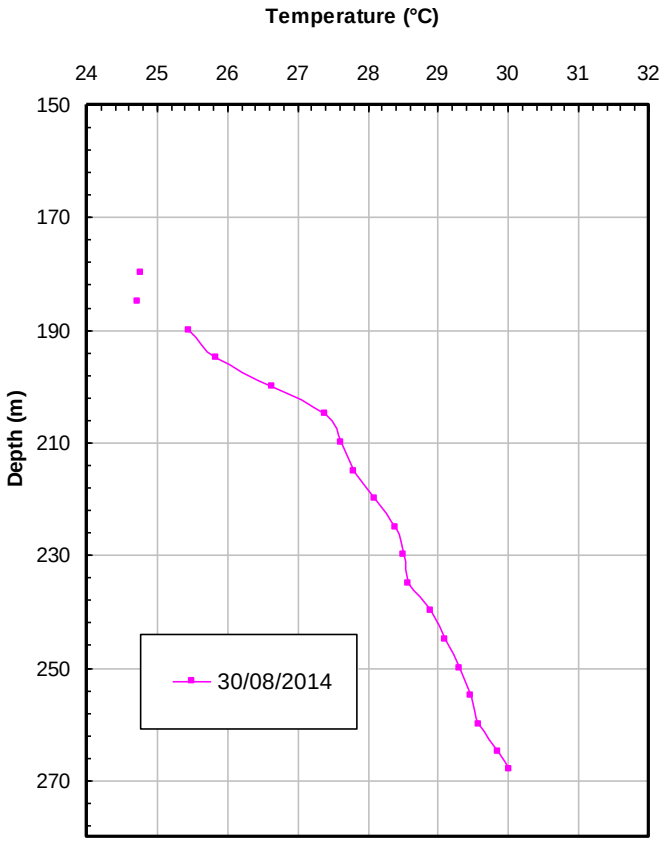

Figure 2.6 Temperature log focused on the lowermost section of gradient hole BH1226

As mentioned above, for a better assessment of the configuration of the thermal gradient in Mauritius, temperature logs were run in two water holes, BH740 and BH1133, located toward WSW, respectively 10 and 20 km far from BH1226 (Figure 2.7).

Hole BH740 is 170 m deep and has the water table at 13 m b.g.l. As shown in Figure 2.8, a null gradient was recorded up to 95 m, followed by a gradient of 20-40 °C/km^{-1} in the 95-115 m interval, in good agreement with the conductive gradient inferred in the deepest part of BH1226. Below this level gradient turns again to null or negative and increases again in the last 20. Such thermal gradient distribution can be interpreted as due to the presence of thin impermeable layers sandwiched between pervious horizons where intense groundwater circulation is taking place.

Hole BH1133 is 90 m deep and has the water table at 23 m b.g.l. Here, as shown in Figure 2.9, advective processes due to groundwater flow totally mask any possible thermal gradient, wherefore no significant temperature changes with depth were recorded.

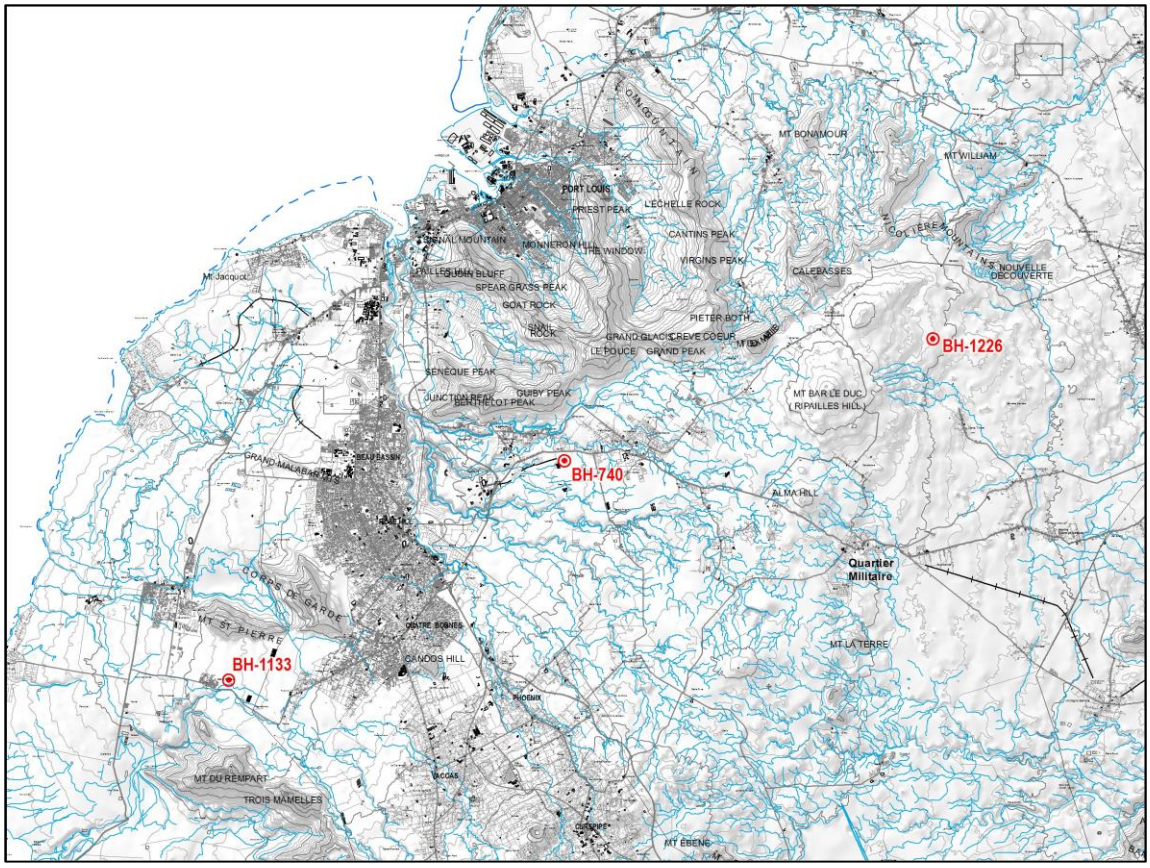

Figure 2.7 Location of holes BH740 and BH1133

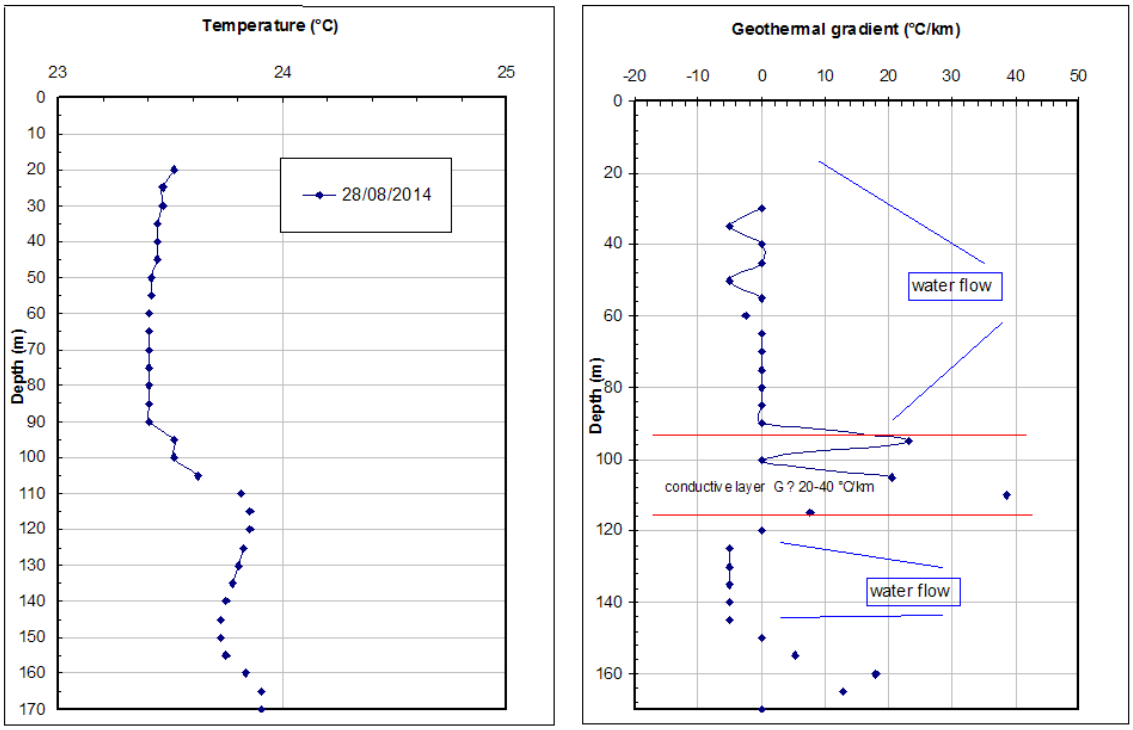

Figure 2.8 Hole BH740: Temperature and thermal gradient vs. depth

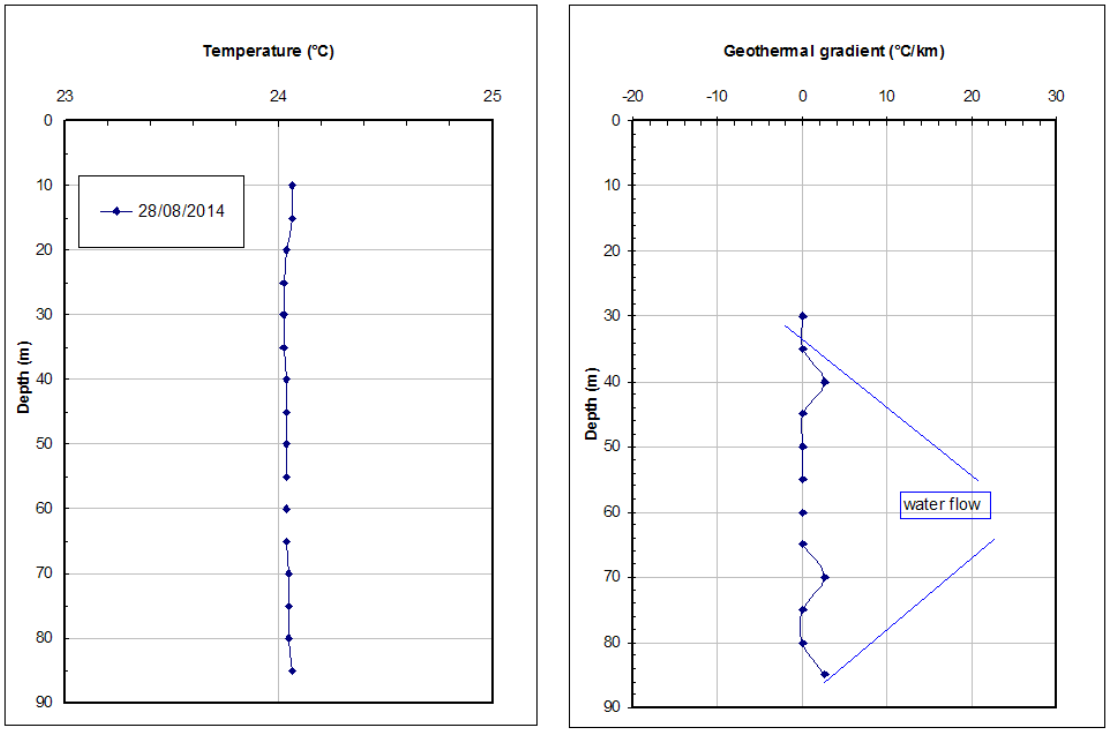

Figure 2.9 Hole BH1133: Temperature and thermal gradient vs. depth

In conclusion, it can be said that the outcome of thermal measurements in the water holes tends to confirm the absence of a significant thermal anomaly in the sector of Mauritius singled out as the most favourable from the volcanological point of view.

3 CONCLUSIONS

In the previous chapter the geological, geochemical and thermal conditions of Mauritius and specifically of the area investigated in detail (Nouvelle Découverte) have been examined and discussed. The main conclusions arising from this analysis can be summarized as follows:

Geology. The results of the geological study on the stratigraphic and structural conditions of the Mauritius Island point to the presence of intense and recent tectonic activity, which may guarantee widespread fracturing and hence adequate permeability of the lavic formations. All available information from the geology, petrology and volcanology point to the Nouvelle Découverte area in the central plateau as the most favorable target for further investigations aimed at proving the existence of a geothermal reservoir.

Geochemistry. The results of the geochemical study of the water samples collected from dug wells show that there are no geochemical indications on the possible presence of a geothermal system at depth in the explored area of Mauritius Island.

Thermal Gradient. The down-hole temperature logs run in the gradient hole drilled in the area of Nouvelle Découverte revealed, in the purely conductive thermal regime recorded in the lowest section of the hole, a thermal gradient of 40 °C/km. Such value exceeds by only 1.3 times the "normal" geothermal gradient; therefore a temperature of 180 °C (a possible target temperature for geothermal exploitation) can be expected at a depth of about 4,000 m. Other attempts, made by logging two water holes drilled in the same area, confirmed the presence of a weak or null deep-seated thermal anomaly beneath Mauritius Island.

The integrated interpretation of the above mentioned results allowed to assess the possibility for the existence of geothermal resources in Mauritius.

The basic conditions to find a commercially exploitable geothermal reservoir are the following:

a. temperature >180-200 °C, to be encountered at a depth not exceeding 2,500 m;

b. pervious horizons, which in the specific case of Mauritius would correspond to basaltic formations associated with intense fracturing, associated with a good permeability in rocks otherwise characterized by poor primary permeability.

With reference to point b., geological literature combined with field observations concur in indicating that adequate hydrogeological conditions can be found in numerous parts of the island. This inference derives from the occurrence of intense neo-tectonism, as expressed by close-spaced fracturing observed in the recent volcanic units and by frequent water strikes registered in the holes drilled in the area, witnessing the occurrence of a strong groundwater circulation.

On the other side, many critical aspects are associated with conditions relevant to point a., as inferred from geological, geochemical and gradient drilling considerations.

Although Mauritius volcanism was active until 0.03 My ago, the comparison of the geothermal gradient and heat-flow data from offshore measurements in the Mascarene Plateau shows that the gradient measured in Mauritius is comparable or even lower than that observed in the 60-80 My old oceanic lithosphere. This might mean that the deep thermal processes

(mantle plume) invoked to occur in the Mascarene Plateau-Reunion hot spot area are likely not to yield any particular thermal signature.

Temperature logging in the Reunion Island, characterized by active volcanic activity, revealed a geothermal gradient relatively larger than Mauritius, which however exceeds by only 1.7-2.8 times the world average.

Moderate thermal anomalies seem a common feature in the geological environment of Ocean Islands. Geothermal heat sources in basaltic volcanoes of ocean islands (hot spot areas) rely on frequent but small eruptions. In contrast, along convergent plate boundaries and on the continents, eruptions are less frequent, but heat sources are shallow and large. Therefore, in spite of the still present volcanic activity, it is not surprising that moderate thermal anomalies were found in Reunion.

This strengthens the observation that the geothermal gradient of Mauritius, where active volcanism is even lacking, is only slightly larger than normal one and thus consistent with the volcanic evolution and migration of the Mascarene-Reunion hot spot area.

This regional framework, suggesting magmatologic conditions on the whole rather unfavorable in the Mascarene Plateau, has been largely confirmed by the recent investigations, namely:

- No thermal manifestations, expression of escapes to surface of fluids from a geothermal reservoir, were found.
- The surface water exhibits no chemical indication whatsoever of its origin from hot fluids.
- The thermal gradient measured in three holes is only very weakly in excess of the normal one.

The combination of these factors, although not hundred per cent conclusive (due to the possibility that a geothermal reservoir exists at depth without any surficial evidence), points to the fact that chances of discovering in the area investigated of Nouvelle Découverte, as well as in the whole Mauritius Island, geothermal resources of low, medium or high enthalpy are extremely low. In consideration of the above, it is recommended to discontinue the program of development of geothermal energy in Mauritius.

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