

First of its kind simulator sets GDC apart

Nakuru taps from the boiling rift thanks to GDC

GDC's water system quenching the thirst of Baringo

Steam



Issue No. 15 . Sept-Dec 2021

ENERGY TRANSITION:

Why Kenya banks on geothermal

The Future is **GREEN**
and that's **GDC**

www.gdc.co.ke



GDC's Kifaru II drilling rig at the Korosi Geothermal Prospect..



Editorial Team

Patron
Eng. Jared O. Othieno

Editor
Erick Wamanji

Contributors
Evans Mutai
Ngolo Christopher
Wendy Amondi
Gloria Nyang'iyie
Jedida Ojwang
Duncan Wachira
Irene Moinkett
Pauline Sheghu, HSC.
Deborah Kalei

Circulation
Maureen Rop
Fouby Akinyi

Design & Layout
Deborah Kalei

Steam reports on geothermal development in Kenya. It gives readers perspective on the dynamics of geothermal energy and how GDC is developing the resource for national good.

Steam is published quarterly by the Geothermal Development Company Limited (GDC). Views expressed in this publication do not necessarily reflect the position of GDC.

©All Rights Reserved 2021
Geothermal Development Company Limited
Kawi House, South C
P.O. Box 100746-00101
Nairobi
Tel: +254 719 037 000
email: steam@gdc.co.ke
www.gdc.co.ke

GDC is on the march

Climate change is a big global issue. How do we decarbonise and achieve net-zero? As a renewable, geothermal energy is at the heart of energy transition. Indeed, as our honchos point out, the future is green and that's GDC.

While the pandemic raged, our machinery roared. The indomitable spirit of our drillers has produced spectacular results. This explains why at Paka we're now on appraisal drilling. See, GDC is on the march - unstoppable.

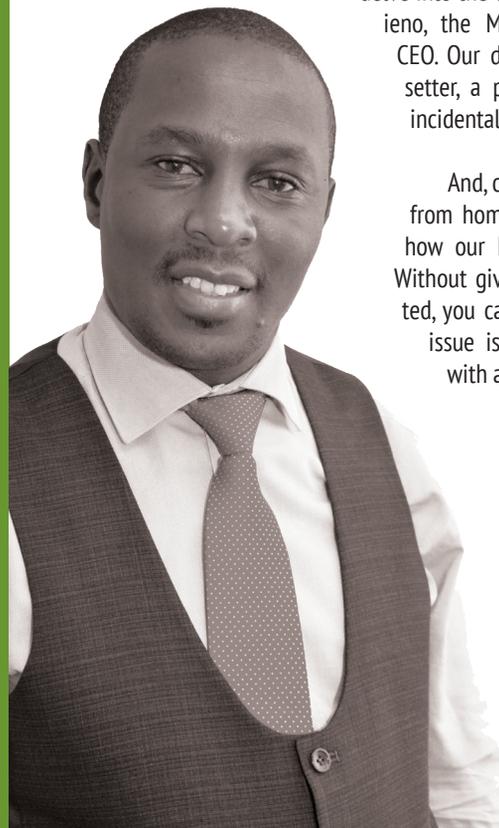
Aah! And there's moo. There's milk. We've started to pasteurise milk at Menengai using heat from geothermal steam. Yours truly was on the ground to witness this marvel. The urge for a sip was irresistible; it ended up into a pint. Oops!

GDC is bullish. Optimism is in the air as the company regains its groove. In **Step**, we delve into the world of Eng Jared Othieno, the Managing Director and CEO. Our discovery? He's a pacesetter, a passionate leader who, incidentally, thrives in crisis.

And, oh yeah, there's working from home, a new fad. Find out how our Debby Kalei is fairing. Without giving more than permitted, you can be assured that this issue is fresh and fascinating with a tinge of perspective.

You'll love it!

*Cheers,
Eric*



September - December 2021

INSIDE



Milestone as GDC attains ISO certification

pg **8**

KFW gives project thumbs up

pg **10**

GDC posts great success in Paka, Korosi

pg **15**

Cover: Focus on Direct Use

pg **17-20**

pg **22-26**
Profiles



pg **28**

The road ahead looks exciting with certification



GDC experts train Djiboutians pg **11**



First of its kind simulator sets GDC apart pg **16**



Intrigues and ecstasies of remote working pg **31**

Follow us on social media



YouTube

You said...



Learning with the best experts you become excellent. Djibouti group be assured of this, we wish you the very best and thank you for choosing Kenya as a resource centre.

Purity Gituma, LinkedIn

Said that right... Reducing carbon emissions is key and using #RenewableEnergy #CleanEnergy is the way to go to achieve this.

Diana Imbugua, LinkedIn

Glad that the rift system has proven to be a valuable natural phenomena for its geothermal resource.

Isac Obeds

@obed_semba, Twitter

This shows the good work GDC is doing towards making sure green energy is a reality.

Lawrence Kibet

@LawrenceKibet, Twitter

Well said. Investments towards achieving green and sustainable energy guarantees a future clean space for the human race. It is further a brilliant move to eliminate costs of rejuvenating a non-pleasant environment while serving as the backbone for economic growth and development.

Mbithi Erickson, LinkedIn

We applaud GDC. Electric Vehicles will make much sense with 100% green grid.

Electric Vehicles in Kenya

@EVsKenya, Twitter

Great! An ideal geothermal field with great potential.

Stephen Nyoru PM, LinkedIn

Renewable energy is the way to go

Joania Bulinda, LinkedIn

The Editor welcomes short letters. Write to steam@gdc.co.ke

Numbers

4.2

Quantity in million metric tons of carbon dioxide that would be reduced annually by 1065MW of geothermal energy.

1,200

Litres of milk that GDC is pasteurising per month using geothermal steam at Menengai, Nakuru County.

160

The kilometres of water pipeline that GDC has laid out to distribute fresh water to communities in the Baringo-Silali Geothermal Block.

20

Number of staff from Djibouti Geothermal Energy Development Authority (ODDEG) trained by GDC in July 2021.

The Shot



A section of GDC drivers (from left) Yusuf Issa, John Mwangi, Anthony Mugwe and Henry Sekeyian during the commemoration of year's UN Global Road Safety Week



The future is green and that's GDC

This has been an exciting period in the green energy and climate realm. The White House Leaders Summit on Climate held in April reinvigorated the green energy sector giving it the impetus to soldier on. Kenya's geothermal energy got its moment of glory too. H.E. President Uhuru Kenyatta reaffirmed to the world leaders, at the Summit, of the special place geothermal holds in helping to fight climate change.

Indeed, geothermal is not just about energy. It's a climate agenda. Its green properties make it a prized resource. It's at the heart of the net zero plan.

And there is some more good news. Recently, the Geothermal Development Company (GDC) received a grant of \$5,162,910. The Geothermal Risk Mitigation Facility (GRMF) grant is resident at the Africa Union

**“
An accelerated geothermal environment places Kenya at a pole position as it transitions to a 100 per cent green grid**”

Commission (AUC) and is designed to unlock Africa's vast geothermal potential.

GDC will use the strategic funds to drill and test two geothermal wells and upgrade infrastructure at the Paka Geothermal Project. Paka is one of the geothermal projects in the Baringo-Silali complex. The two others are Korosi and Silali.

This grant is critical and timely. It is a major psychological and financial boost to the geothermal fraternity. It is a vote of confidence in GDC's efforts, and the government's commitments towards renewable energy. It gives us more impetus in our pursuit of the strategic energy that the country so requires. A robust geothermal regime is basically what the doctor prescribed as our country marches towards a manufacturing economy. Further, an accelerated geothermal environment places Kenya at a pole position as it transitions to a 100 per cent green grid. This will also help Kenya in the commitment of meeting its international climate obligations of reduced Green House Gas emissions by 32 per cent set for 2030.

As an integral player in the climate reconstruction strategies, our strategic projections at GDC are to develop 1,065MW by 2030. That is not all. GDC is developing a robust concept of mining direct heat for industrial processes. Currently, our semi-commercial grain dryer and a milk pasteuriser

both use geothermal heat. This approach displaces the need to use fossil fuel to heat industrial boilers. It will dramatically transform our manufacturing scene.

De-risking

This way, GDC is no doubt at the nexus of the manufacturing pillar as envisioned in the Big 4 agenda. Indeed, our philosophical underpinning is to de-risk and demystify the geothermal scene. Our efforts are bearing fruits. The private sector is now angling for the myriad of investment opportunities in the geothermal sector.

That is why such facilities like GRMF are celebrated. GRMF is aimed at mitigating the high risks associated with geothermal development. We need more of such strategic funds to unlock the vast treasure and fortune in geothermal energy.

Geothermal is the real deal. In the energy architecture, after hydroelectricity, geothermal offers one of the most affordable tariffs. Further, beyond its prolific green credentials, geothermal is very stable with an enviable longevity therefore incredibly reliable. This means, its bankability makes it easy for the government and investors to plan for long term. As it is now, geothermal is unrivaled in Kenya. Consequently, it is a strategic national heritage, a jewel that we are happily refining at GDC for national prosperity and prestige.

**MR. JOHN NJIRAINI
CHAIRMAN, BOARD OF DIRECTORS
GEOTHERMAL DEVELOPMENT COMPANY (GDC)**

Geothermal is at the heart of energy transition

As the world moves towards a new regime of Electric Vehicles (EVs), chances are, your future car will be powered not by oil but by geothermal electricity from Menengai in Nakuru or Paka in Baringo. Even your favourite food will be cooked by geothermal power.

Here's why: The world, Kenya included, is on an epic journey of decarbonisation. Now we're at the energy transition juncture. Vacating an old order to a new one requires audacity, commitment and luck. In geothermal energy, Kenya has a combination of the three ideals.

Kenya's quest for geothermal energy dating back decades ago is now paying premium dividends during this age of energy transition. Today, geothermal energy accounts to about 29% of our electricity. Geothermal is a green magnet par excellence ticking all the key boxes hence the bedrock of our energy tower. That is why our national Power and Transmission Masterplan, 2016; Medium Term Plan 2018-2022 identifies geothermal energy as the least-cost and environmentally friendly choice for new electricity generation.

Scheme of things

Geothermal is indigenous and abundant. Its centrality in the larger scheme of things - going green and building a resilient economic environment cannot be gainsaid.

And it fits well in the mix of Sustainable Development Goals (SDG7) on energy. Indeed, a robust geothermal environment will accelerate energy access, cut costs, and improve lifestyles.

The versatile nature of geothermal is incredible. This informs our pursuit of innovative enterprises to holistically utilise the resource. Since only 20% of heat from steam is used to generate electricity, 80% has been going to waste. GDC is designing projects that will uti-

lise part of the 80%. We're adopting technology that will capture and deploy the heat for horticulture farming, leisure and recreation and industrial processes.

Today, for instance, we are pasteurising milk at Menengai using geothermal heat. It's profitable. Scaled up, investors in dairy have a goldmine. That's why we're in an MoU with the County Government of Nakuru and Baringo to establish geothermal resource heat parks. Such parks will attract investors in the manufacturing sector angling for affordable and reliable heat. That way, we shall further help to decarbonise the economy and open vast new job opportunities.

This reality puts a lot of expectation on our shoulders as core industry actors. We're rolling out an elaborate development mechanism that will support the implementation of this strategic quest. Our projects in Menengai, Paka, Silali and Koro-si are all promising.

Of course, geothermal is one of the jewels in the green energy assemblage. That is why we're also alive to the realities of SDG 13 that calls for "urgent action to combat climate change and its impacts". Indeed, our medium target of availing 1065 MW by 2030 means that Kenya will escape using 1.8 million tons of heavy oil per year to generate power.

The country will also save \$1 trillion for not using diesel to generate an equivalent amount of power. Furthermore, even at 90 percent availability, the 1065MW geothermal power will displace an equivalent of 4.2 million metric tons of carbon dioxide per year. That's massive. It's a direct inhibitor of Greenhouse Gases (GHE). By every measure, geothermal energy is the holy grail. It is at the core of green infrastructure architecture.



ENG. JARED O. OTHIENO
MANAGING DIRECTOR AND CEO
GEOTHERMAL DEVELOPMENT COMPANY (GDC)

▶ **4.2M**

**Quantity in metric tons of carbon dioxide
 that would be reduced annually by 1065MW
 of geothermal energy**

Milestone as GDC attains ISO certification

The Geothermal Development Company (GDC) has attained the Quality Management System ISO 9001:2015 certification. This is a major milestone that places GDC in the league of global organisations that are quality and excellence oriented.

“We’re delighted by this major milestone,” enthuses Eng. Jared Othieno, the GDC Managing Director and CEO. “It’s an affirmation of our commitment and fidelity to best industry practices.”

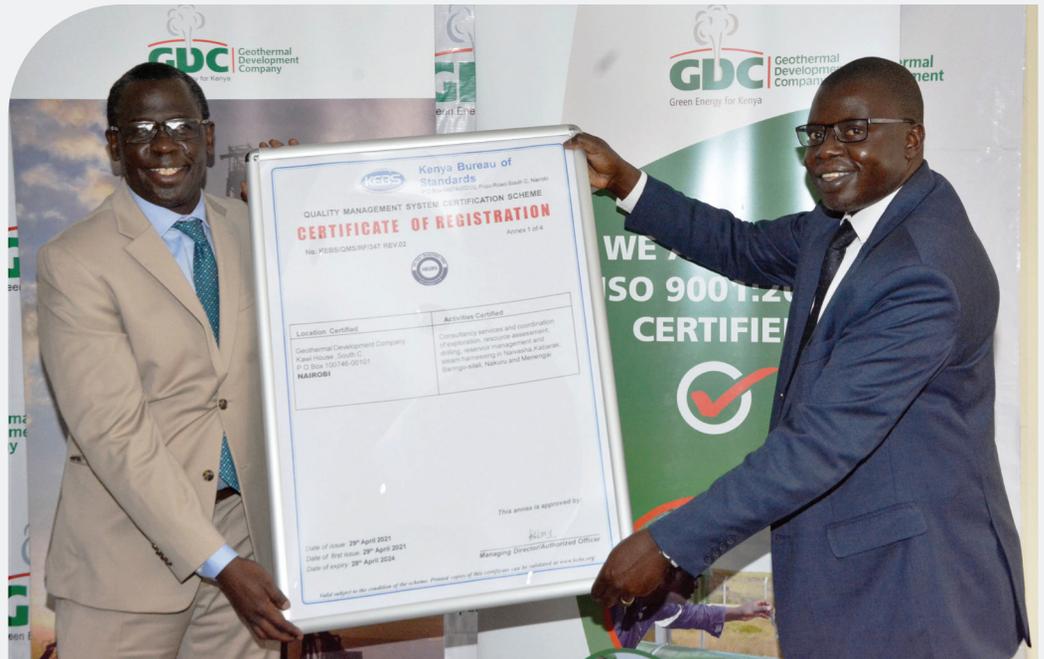
The CEO reiterates that GDC is not leaving anything to chance when it comes to quality of its processes. He views the Quality Management System as the bedrock on which great corporate success is anchored.

“Our business has no room for second-guessing. That’s why a standardised way of operations is critical. It increases efficiency and cuts losses. That way, the business thrives,” Eng. Othieno explains.

Indeed, this certification manifests high level of competence, professionalism, and refined business processes that are a lived reality in the organisation.

The certification was a product of rigorous audits and streamlining of operations. Mrs. Irene Onyambu, the Management Representative, who is also The General Manager HR and Administration, ably led the process to fruition.

“It’s a moment of pride,” Mrs. Onyambu beams. “The process was stringent. Still, I had a team of able people who successfully



ISO Certified... GDC MD & CEO Eng. Jared Othieno (l) receives the ISO 9001:2015 Certificate from KEBS Chief Manager Standards Development and Trade Mr. Zacharia Lukorito.

championed the processes,” she says.

“With a great system in place, GDC will go places,” she says optimistically.

GDC is rooting for a culture of innovation and excellence that is geared towards high performance. The ISO certification therefore is a major boost to this spirit of continuous learning and improvement.

This means that GDC has established systems and processes that meet industry

expectations and customer requirements.

“We’re still committed to continuous improvement,” says the GDC CEO. “As an organisation that is anchored on learning mindsets, our stakeholders should be happy to learn that will always get better, serve better and deliver better.”

Indeed, at GDC ISO means doing work Together. Efficient. Right.

ISO affirms our commitment to deliver Kenya’s vision on power

This certification is a product of rigorous audit, recalibrated systems thinking and standardised procedures that guarantee quality across the board. Therefore, at GDC, it’s a moment of pride to be verified for our operations and quality systems.

MRS. IRENE ONYAMBU
GENERAL MANAGER, HR &
ADMINISTRATION, AND QUALITY
MANAGEMENT REPRESENTATIVE



ISO puts GDC on the cutting edge

Standards and qualities make strong business sense. This ISO 9001:2015 is even more versatile. It encompasses other ideals, including integrating leadership in quality and risk management. This enriched perspective has greatly improved our processes, increasing efficiency and turnaround time.

ENG. JOSEPH KITILIT
MANAGER, QUALITY ASSURANCE
AND SAFETY



Together, Efficient, Right :

The new spirit driving quality at GDC

The ISO 9001:2015 certification is finally in the house. But what does ISO mean to you? Well, at GDC, ISO means doing work together as a team, doing work in the most efficient manner possible and doing work the correct way.

This informs the new campaign designed to re-focus our perspective towards work. The GDC ISO doctrine is simply **Together. Efficient. Right.** The campaign was launched at Kawi House Nairobi. The CEO said that soon he will tour the regions again to engage with staff on diverse issues.

“If we remain loyal to the three core doctrines, then GDC will go places,” the MD and CEO, said. He made the remarks at the Kawi House Boardroom when he received the ISO certificate from the Kenya Bureau of Standards (KEBS).

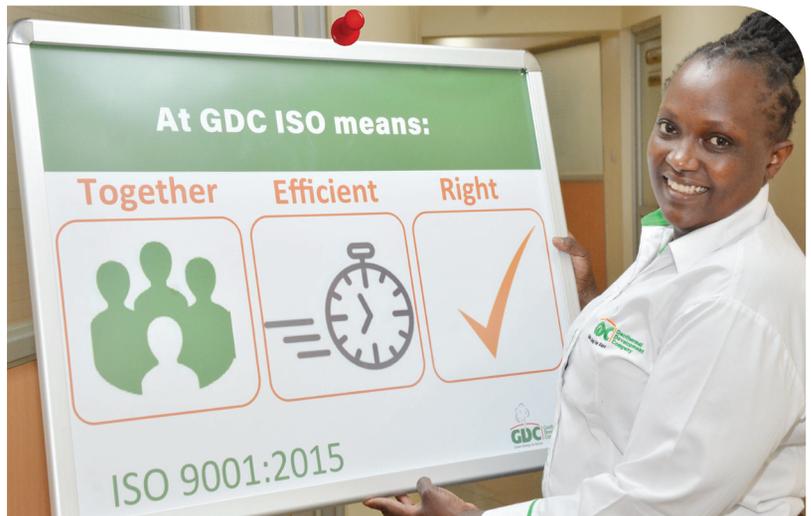
The CEO noted that with determination we shall all turn around GDC and make it a happy place to work in.

“Work is to be enjoyed. The workplace we spend most of our time should also be exciting and fulfilling. If we develop the right attitudes toward work and our company, we shall go places. All of us shall be happy,” the CEO said.

He explained that great companies are founded on teamwork and pursuit of excellence. “Like have promised before, these are new times. Together we shall perform beyond imagination. So remember, **Together, Efficient, Right.**”



▶ The new spirit... The MD & CEO Eng. Jared O. Othieno (C) unveils the new campaign that will drive the quality management system at GDC. With him are Quality Management Representative and GDC General Manager HR and Administration Mrs. Irene Onyambu (second right), General Manager Strategy Research and Innovation Dr. George Muia (second left), Manager Quality Assurance and Safety (QA &S) Mr. Joseph Kitilit (far right) and Ms. Sarah Musumba, a QA&S Officer (far left)



▶ Finance Assistant Ms. Mary Ndung'u during the unveiling of the new creed to drive GDC's performance

My 8 points for KETAWU

Mr Christopher Ngolo is the new GDC-KETAWU Branch Secretary. The unionist told Steam about his area of focus going forward.

1. Fast-track the Collective Bargaining Agreement negotiation,
2. Improve membership engagement and consultation on labour relations issues,
3. Enhanced communication and complete pending matters.
4. Champion for sound health and safety for all.
5. Improve representation in disciplinary cases and vouch for humane approach within the tripartite cycle arrangement.
6. The Branch Secretary's office to engage management to embrace social dialogue and partnership
7. Forge sound partnership with management to embrace dialogue to boost industrial harmony.
8. Provide checks and balances between staff and management and ensure workers interests are safeguarded, while equally vouching for high staff performance.



CHRISTOPHER NGOLO
GDC-KETAWU BRANCH
SECRETARY

Milestone as GDC starts appraisal drilling at Paka

GDC has moved into appraisal drilling at the Paka geothermal field in the Baringo-Silali Project, with Rig 3 crew spudding Paka Well 4 (PW-04) on June 28, 2021. This ushers in the next phase of developing the Paka field in preparation for production drilling.

Mr. Reuben Ngosi, Manager Drilling Operations, says the commencement of appraisal drilling in Paka is a milestone to the Company, adding that the wells will be used to map out the extent of the resource in the Paka field.

“This is the second phase in the development of a geothermal field and is the most critical one as it tells us the vastness of the resource and whether or not the drilling can proceed to the final stage of production drilling,” said Mr. Ngosi.

He added GDC was planning to drill six

appraisal wells to ascertain the viability of the resource in the Paka field, estimated to have a potential of 200MW.

“The Paka field works well with our program as we have planned to develop a hybrid of six appraisal wells and four production wells as part of the German Development Bank (KfW) financing. We are keen on delivering PW-04 within 80 days,” says Mr. Ngosi.

GDC has so far deployed two drilling rigs for the Baringo-Silali project, by press-time, a third rig was on its way to the block to fast-track operations.

“We are currently in the process of mobilizing the third rig to Paka that will aid in speeding up the development of geothermal in the area. We are targeting to complete the four planned appraisal wells



GDC Manager
Drilling Operations
Mr. Reuben Ngosi

by December 2021,” explained Mr. Ngosi, “Our plan is to have three rigs drilling in Paka so that we can achieve this target and proceed to production drilling.”

The Paka field is part of the Baringo-Silali project financed by KfW for the drilling of between 15-20 wells. So far, GDC has drilled six exploration wells, three in Paka field and three in Korosi.

▶ **6**
Number of appraisal wells to be drilled to ascertain viability of geothermal resource in the Paka field

KfW gives project thumbs up



From left: KfW's Senior Program Coordinator Mr. Jeff Murage, KfW Kenya Country Director Mr. Oskar Von Maltzan, GDC MD & CEO Eng. Jared Othieno and GDC Chief Engineer Infrastructure Development Mr. Joseph Mberia at the Baringo-Silali Geothermal Project during a Project inspection visit

KfW-German Development Bank, the financier of the Baringo-Silali Project, is upbeat about the Project's progress and future projections.

Speaking during a Monitoring & Evalu-

ation mission at the project, the KfW Country Director, Kenya and Somalia, Mr. Oskar von Maltzan, noted that on completion the geothermal project will have great benefits for the country.

The Country Director was visibly impressed by Paka Well-3 discharging steam. The well had been recently completed. It rumbled with might and majesty shaking the earth. It discharged silverish steam to the clear blue skies of Paka. So powerful was the well that it required 10 silencers to tame its noise. Such was a scene to behold.

Mr. Maltzan was also very keen on the dynamics of the drilling process.

“Today, there so many highlights. It is difficult to pin-point just one. Seeing the rig here has been a highlight, especially getting explained to how it works... but also to see that exploratory well, to see all that steam coming out, you really realise how much power the earth has... and how much power it can and will give Kenya. When all this is finished it will definitely have a lot of benefit to this Country.”

The KfW boss explained that the current financing is ending in August 2022 and that he hopes after review, “KfW, on behalf of the Germany government can contribute to supporting GDC in exploring more wells in this area.”

During the mission, the GDC Managing Director and CEO, Eng. Jared Othieno noted that the success of the Baringo Silali project will contribute a great deal to lowering the cost of energy in Kenya and spur economic development. The CEO emphasised that the concept of Geothermal Heat Parks “will definitely be a game-changer.”

▶ **10**
Number of silencers connected to the powerful Paka Well 3 (PW-03)

GDC experts train Djiboutians

In July, the GDC experts had exciting time training staff of Djibouti Geothermal Energy Development Authority (ODDEG).

The 20 fellows from ODDEG undertook intense 29-day training in cross-cutting geothermal disciplines. The fellows trained at the iconic Menengai Geothermal Project.

"We're happy to host you at GDC. Thank you for choosing us as your training hub. You couldn't have made any better choice," remarked Eng. Jared Othieno, the GDC Managing Director and CEO.

Eng. Othieno assured the keen fellows that GDC is the home of geothermal expertise and a reservoir of geothermal knowledge. He explained that the training is part of GDC's bigger vision of south-to-south knowledge transfer.

The training was funded by the Bundesanstalt für Geowissenschaften und Rohstoffe (BGR) of Germany.

"Technical know-how is critical to the success of geothermal development in Africa. At GDC, we're always ready to share our unique expertise with our friends in the region. Our facilities, sites and instructors will be availed to serve our continent," the GDC CEO said.

And at the Menengai Geothermal Project, the Djiboutians saw the path to their country's success in geothermal exploits.



▶ GDC Senior Geochemist Jeremiah Kipngok (c) takes ODDEG's Darar Liban Ismael (l) and Rokiya Houssein (r) through a session at the Ion Chromatograph at the Geochem lab at the Menengai Geothermal Project

One of the star attractions at Menengai was the drilling rig simulator. We caught up with Mr. Adsieh Aden Kanil keenly following instructions on how to drill. The 3D screen and the baritone voice of the pre-recorded instructor, carefully and calmly guiding what to do. Mr. Kanil was excited. His other colleagues sat at the back of the console following the instructions and taking notes.

"It's exciting. It's realistic," he beamed. "There is a lot to be discovered but this is a right beginning." He hoped to master more drilling tactics to allow him to drill successful wells back in Djibouti.

"We appreciate that GDC has been committed to training us," he says. "Your instructors are friendly, patient and very



knowledgeable. We hope one day we can be like them," he says.

GDC has emerged as an unparalleled Geothermal Centre of Excellence in Africa. The Company has heavily invested in training infrastructure such as rig simulators, laboratories, and drilling rigs. The company is said to be having some of the best geothermal scientists in Africa as well. Now GDC is leveraging on this expertise and unique infrastructure to support other African countries that seek to develop their own geothermal resources.

The Company has established a robust training regime that will uplift the geothermal technical-how of most African countries. So far, GDC has trained 600 geothermists from across the continent.

▶ **20**
Number of
ODDEG staff
trained by
GDC in July
2021

DRILLING PHASES

Drilling is the riskiest and most expensive part of geothermal development. Drilling is done in three phases: exploration, appraisal and production drilling. The process of de-risking a geothermal field starts when test results from exploration wells indicate a commercially viable resource. If the quantity, quality and cost of exploration drilling warrants further development, appraisal drilling is undertaken. A successful appraisal phase paves way for production drilling, including drilling for re-injection of both hot and cold fluids.



Gender mainstreaming critical to performance

BY PAULINE SHEGHU

The performance and success of any organisation is pegged on many factors ranging from the expertise, commitment and morale of staff as well as the gender balance of the workforce.

GDC has taken a keen interest in attaining this balance. And the drive is being led from the top. The greatest champion of gender balance is Eng. Jared Othieno, the Managing Director & CEO.

“GDC has put in place gender mainstreaming policies geared towards maintaining the Company as a gender bias and barrier free organisation with full commitment towards the realisation of a gender-balanced organisation,” says Eng. Othieno.

To achieve this, the Company has developed policies such as Gender Mainstreaming, Gender Based Violence and Disability Mainstreaming that seek to address the needs of all staff with a view of building a cohesive organisation devoid of gender bias. Here, the task has been handed out to a team of gender and disability mainstreaming committee, constituted with the sole purpose of championing for equality in the Company.

Recently, Ms. Eileen Woods of the USAID-Power Africa, and a champion of gender parity in organisations, met with the GDC gender mainstreaming committee through a virtual forum. She shared in-depth knowledge and insights on the importance of gender and disability mainstreaming at the work place and how great Companies have tapped into gender mainstreaming to remain above the rest.

“Workplaces ought to be structurally gendered and barrier-free. The successes of organisations are pegged on everybody’s contribution, male and female alike,” Ms. Woods explained, “Identifying these gender barriers, inequalities, and developing policies to address these imbalances help build a better organisation.”

GDC recognizes that gender mainstreaming is a central and cross-cutting issue and has incorporated gender equity, in its operations.

Ethiopia hits steam

Ethiopia is making major progress in geothermal drilling at the Tulu Moyo volcano in Oromia

Tulu Moyo Geothermal (TMGO) began working on the first phase of a 50MW geothermal power plant in collaboration with Meridiam, a French company specialised in the development, financing and management of infrastructure projects, and Reykjavik Geothermal (RG), an Iceland-based geothermal energy company.

Chief Executive Officer of TMGO, Max-



▶ Ethiopia’s Tulu Moyo Geothermal field (Photo courtesy: Ethiopian Electric Power)

ence Mirabeau, says the target is to generate 50 MW of power by 2023 and reach full capacity of a 150 MW geothermal power plant in 2025.

Djibouti goes geothermal

The Djibouti Office of Geothermal Energy Development (ODDEG) has developed the Galla Le Koma geothermal project with drilling of three geothermal exploration wells in the region of Lake Assal, Djibouti. The

three wells are expected to produce 15 Mwe of power. The project is part of a pilot to test the geothermal potential of the Lake Assal region. Recently, the Geothermal Development Company trained 20 staff from ODDEG on geothermal technology.



▶ GDC Geophysicist Joseph Gichira takes ODDEG’s Ibado Moustapha through a geophysics session during a Geothermal Specialised Training at the Menengai Geothermal Project

Innovative technology, like that being used by Eden Geothermal to unlock sustainable, naturally occurring energy, is a fantastic example of being able to grow our economy through skilled jobs while cutting our emissions. I look forward to seeing this pioneering project moving full steam ahead.

President-Designate of the COP26 Climate Meetings, Alok Sharma, during a ceremony to mark the start of drilling at the Eden Geothermal project in Cornwall



Japanese distillery to produce beer using geothermal energy

A Japanese company that manufactures and sells craft beer and whisky is planning to use geothermal heat for distillation. The company, Niigata Beer, will build a whiskey distillery in Aga Town, Niigata Prefecture, Japan. Two distillers are to be installed to make whiskey using heat from hot springs.

The temperature of the 'Kanose Onsen Akayu' day spa geothermal source is 59.5 degrees and is heated to around 80 degrees for distillation. Niigata Beer plans to produce 16,000 bottles of beer a month, most

of which are to be exported overseas.

This new development will lead to cost reduction as the head office uses propane gas for distillation. The Mayor, Kanda Kazuaki, states that the temperature of Akayu is suitable for beer distillation.

Niigata Beer started manufacturing whiskey in 2017 and almost all their products are exported to Europe and the United States. With this new launch, the beer company also plans to graze cattle using the pomace produced during the manufacturing process as food in the future.

Story source: ThinkGeoEnergy



Steam emerges from a well dug to test geothermal power generation in Hokkaido in October 2015. | KYODO
(Photo courtesy: Japan Times)

GM eyes geothermal to manufacture electric vehicles



▶ One of CalEnergy's 10 geothermal plants by the southern shore of the Salton Sea.
(Photo courtesy: Desert Sun)

General Motors (GM) is investing millions of dollars to be at the forefront of the electric vehicle revolution. The American vehicle manufacturing company is working in collaboration with Controlled

Thermal Resources (CTR), an Australian firm to harvest lithium, a critical metal in electric-vehicle batteries, as a by-product of geothermal power generation.

CTR's project, dubbed 'Hell's Kitchen'

will use naturally heated geothermal water from under the Salton Sea, a lake in Southern California, to drive turbines and generate electricity. The geothermal fluid, brine, can reach high temperatures of up to 300°C, hot enough to dissolve lithium and other metals from rocks.

CTR will then use a technique termed 'direct lithium extraction', a procedure where they will extract lithium from the fluid before re-injecting it into the ground. This move could produce 600,000 tons of lithium carbonate annually, worth \$7.2 billion (KES779.1 billion).

General Motors is launching this project as a move to sustainably produce lithium, also known as "white gold", while reducing U.S. reliance on foreign supplies. GM's director of electrification strategy, Tim Grewe, said he believes the California lithium would be cheaper than imported metal.

Neither General Motors nor Controlled Thermal Resources have disclosed the exact amount of the investment.

Story source: Fortune

Milestones

2008



GDC incorporated as a special purpose vehicle to accelerate development of geothermal resources in Kenya

2009



GDC opened its offices, recruited staff and commenced drilling operations in the Olkaria geothermal field to avail steam for KenGen

2010



Acquired our first two (2) high capacity drilling rigs

2011



Discharged the first well in Menengai (MW-01) proving resource existence. The well has a capacity of 12.5MW.

2015



Launched Direct Use pilot projects at Menengai

2014



Struck a 30 MW well (MW-1A) at Menengai

2013



Feasibility study for the power plant at the Menengai Geothermal Project commissioned

2012



Received support from our partners to develop the Menengai Geothermal Project

2016



Within the FY 2015/2016, earned revenue from steam sales worth approximately Ksh. 3B from the Olkaria Geothermal Project in Naivasha

2017



Completed construction of 25 km of additional access road and carried out maintenance of the already existing road network in the Baringo-Silali Geothermal Project area

2018



Completed construction of the steam gathering system in the Menengai Geothermal Project

2019



Water supply system installed and commissioned in Baringo-Silali Geothermal Project area

2021



Paka Well 3 (PW-03) successfully discharged

2020



Steam Gathering System (SGS) commissioned

Our Mission

To develop 1,065MW of geothermal resources by 2030

Our Vision

Lowering the cost of power in Kenya

GDC posts great success in Paka, Korosi

BY EVANS MUTAI

Korosi Geothermal Prospect. This is GDC's latest exploration frontier, as the Company searches for geothermal resources in its quest for cleaner, greener, and affordable energy for Kenyans.

Here, GDC is well into its plans of drilling three exploration wells to verify the availability of the resource, before the appraisal and subsequent production drilling. The first and second of the three wells, Korosi Well 01(KW-01) and Korosi Well 02(KW-02) respectively, have been completed and are heating up in readiness for discharge test. Drilling is underway for the third and final exploration well, Korosi Well 03 (KW-03).

The drilling site of KW-03 is buzzing. Cranes move drilling pipes from one end to the other, floormen give instruction to roustabouts as they organise the drilling pipes to be lifted to the rig floor. On the side, a vehicle kicks off dust as it drives to the well pad to drop supplies. The noise of clinking metals from the racked drilling pipes are drowned by the sound from the roar of the gigantic Kifaru 1 Rig as it bores the earth.

Mr Stephen Kangogo is the man tasked with managing the drilling of exploration wells in the Korosi prospect. He is a Principal Engineer, Drilling Operations. Here, he is buoyant of the imminent success of the prospect expressing confidence that the drilling of KW-03 will yield positive results. Kangogo is full of experience.

"Judging from our experience drilling at Paka prospect, we are confident that here at Korosi, we are going to successfully discover the resource from our exploration drilling. The rock formation of this bloc is more or less the same as Paka and so is

“
“
The
exploration
drilling in
Korosi and
Paka marks
a great
milestone
for GDC and
the Country
”

the permeability. All these indicators point to a repeat of our successes as witnessed in the just concluded Paka field," beamed Kangogo.

The exploration drilling in Korosi and Paka marks a great milestone for GDC and the Country. First, it opens a new frontier for further industry development. Secondly, it marks a major step towards establishing geothermal as the main source of energy for the grid and thirdly, it ushers in a new era of affordable and environmental-friendly baseload energy for Kenyans.

Mr John Lagat, the Regional Manager, North Rift, says the Baringo-Silali prospect is being developed wholly by GDC's internal expertise.

"Currently we are averaging \$ 3.5 Mil-

lion per well. This is below the global average of between \$ 5 Million and \$ 7 Million," said Mr. Lagat.

Additionally, the Korosi geothermal prospect provides GDC with a new impetus in resource mobilisation as it fits well into the African Union Commission's (AUC) Geothermal Risk Mitigation Fund (GRMF) incentive.

This is part of AUC's quest to establish geothermal energy as a strategic option for power generation capacity expansion, as it pushes to reduce greenhouse gas emissions towards environmental sustainability.

"Geothermal energy is a baseload electricity with the highest reliability as compared to other renewables such as hydro, solar and wind. It presents the cheapest source of electricity alternative at approximately 8.8 US cents per Kilowatt hour, when put against solar or wind that costs in the Country 11-12 US cents per kilowatt hour," said Mr Joseph Mutahi, a Chief Officer, Corporate Planning and Strategy.

With this, GDC is in line to benefit from GRMF funding through its development of the Korosi prospect and the larger Baringo-Silali bloc. It is a new geothermal field, which elevates the GDC status locally and regionally as a leading company in supporting production of cost-effective green energy to support industrial growth in Kenya and to help deal with the current global challenge of greenhouse gases.

GDC stakeholders walk past the Paka Geothermal Project's powerful Well Three (PW-03)



First of its kind simulator sets GDC apart



GDC Drilling Engineer Mr. Stephen Nato sets a drilling simulation exercise for GDC Driller Mr. Kipkurui Kibor

BY EVANS MUTAI

Pilots are known to use flight simulators for training. Doctors too simulate before undertaking real procedures. The same concept is applicable in drilling operations.

Drilling for geothermal or oil is complex; can be risky too. A drilling rig simulator is the answer to this unpredictability.

A simulator is a computer that replicates and mimics actual drilling process to a good degree of reliability. The beauty with a simulator is that mistakes are part of learning. They are not fatal. The simulator, therefore, is a must have for any serious drilling organisation.

Assembled at GDC's Menengai Geothermal project, the simulator is housed in a shipping container, slightly the size of a common living room. From the outside, it's unpretentious. Inside, it's an elaborate assemblage of top of the range computers, gears, a massive 3D screen and speakers.

There is an instructor's station at the far-right corner. He has a computer and a microphone. At the centre of the room is the real deal- a driller's console filled with joystick controls and several buttons. The room is akin to stepping inside a plane's cockpit.

The left and right-side walls of the

room are occupied by a Blowout Preventer (BOP) system. At the back of the console is a sitting area enough for 20 learners.

"This is the machine," announced Eng. Steve Nato, a GDC Drilling Engineer, "It's a replica of the 2000 horsepower drilling rigs we're using in our fields. It comes complete with a driller's console, the rig floor projected to the screen on the wall and 3D imaging which you see on the right side of the screen."

Though the simulator is a machine, it's also a complete technical school. A first of its kind that's setting GDC and Kenya apart.

"It's critical yet rare. It has been used in Oil and Gas but not so much in geothermal," interjects Eng. Michael Kamau, a GDC Drilling Engineer. "In Japan, there was only one such simulator that served the whole of East Asia; it wasn't as hi-tech as this though."

Today, Eng. Nato sets an exercise for Mr. Kipkurui Kibor, a Driller. Eng. Nato wants to test Kibor's response to a stuck string during drilling. He introduces "complexities" into the scenario, to make the exercise even more challenging. His goal; to gauge Mr. Kibor's reaction to tackling such a situation in real time.

"Our goal is to optimise the perfor-

mance of the drilling crew and to ensure that procedures are followed, particularly in cases of challenging environments such as High-Pressure/High-Temperature (HPHT)" Eng. Nato explains.

Mr. Kibor, with seven years drilling experience, credits much of his successes to the hours spent on the simulator.

Eng. Nato continues to monitor Mr. Kibor's progress from the instructors' station. Suddenly, a loud sound blares, "Chocked plug...chocked plug...pull out...pull out..." Mr. Kibor twists and turns, pushing forward and backwards on knobs, while pressing several buttons on the driller's console. Kibor had missed a step. He was about to experience a catastrophic moment.

"He has definitely missed a procedure. It can happen on the rig floor with costly consequences," explains Eng. Nato, as he makes his way to the console. "If he's unable to bleed off the trapped excess pressure then it will lead to a pump failure and the end of our drilling," he explains.

Mr. Reuben Ngosi, GDC Manager Drilling Operations, notes that the simulator is strategic. It keeps the GDC crew sharp. Besides, being the only one in the region, it makes GDC the to-go-to place for training in drilling operations.

“
It's a replica of the 2000 horsepower drilling rigs we're using in our fields

1200Litres GDC
pasteurizes per
month exclusively
for in-house use

▶ Esther Nyaguthii, Direct Use Engineering Attachee, pours a batch of milk into the pasteuriser at the Direct Use pilot project at Menengai.

Aah! GDC pasteurises milk using geothermal heat

Milk pasteurisation using geothermal energy which GDC is rolling out, can unlock value for farmers and warm up the economy writes **Eric Wamanji**

The Geothermal Development Company (GDC) has embarked on the use of geothermal steam to pasteurise milk at its Menengai base in Nakuru County. This makes GDC the first such entity in Africa to deploy this technology.

Currently, the company is pasteurising 1,200 litres per month exclusively for in-house use. This

is a breakthrough with high potential for scaling for commercial use. It heralds a new age of industrial processing using geothermal heat. In the current geothermal past model, GDC has registered a cost saving of 40 per cent.

"It's a success. Geothermal heat is cost-effective and environmentally friendly," says Eng Martha Mburu, GDC's manager in charge of Direct Use Department.

In geothermal parlance, “direct use” refers to other application of geothermal energy apart from electricity. The industrial principle behind direct use is the heat. Milk pasteurisation is just one of the many industrial processes that can benefit from geothermal heat.

“Our pasteuriser was meant for research and marketing,” Eng. Mburu explains. “For the past six years, we have gathered interesting data and lessons. Now we’re confident that the future of milk pasteurisation is through geothermal energy.”

Indeed. With this technology, Kenya is on the cusp of a paradigm shift in manufacturing. The success of a geothermal pasteuriser will translate to major savings in energy costs. Processors will no longer need to cut down trees for wood fuel or import heavy oil to heat boilers for pasteurisation. From a carbon credit point of view, this shift will also be a big win for the environment.

If this technology is scaled, the future of energy and the economy is the Age of Geothermal. This projection is informed by various factors, including climate science and the attendant global movement towards a green economy. Geography too has handed geothermal a lead role to power the country’s future. Kenya has a geothermal

largesse of about 10,000 MW. Fundamentally, geothermal’s availability factor of 95 percent cements its space as a Kenya’s anchor energy.

For pasteurisation, Menengai is strategic. Nakuru is an agricultural hub with large-scale production of milk. The dairy sector is worth Ksh. 10 billion. A value-addition facility, especially for stallholders, has the potential to revolutionise the milk supply business.

In fact, GDC is also seeing an opportunity to empower the milk value chain in the region. First, local cooperatives are encouraged to start their own small and mid-sized pasteurisation processors. This will curb milk losses especially in times of gluts. Unpasteurised milk has a shelf-life of three days.

“We will establish a bigger facility where local dairies can lease for a few hours to pasteurise their milk. That way, they don’t need the heavy initial capital,” Eng. Mburu says.

Time is of the essence if this value is to be unlocked for commercial purposes.

“We have to start early,” says Mr Japhet Towett, the GDC officer coordinating the pasteurisation project.

In the morning, he leads GDC’s commu-



▶ **Direct Use Engineer Japhet Towett quenches his thirst with milk at the Menengai Direct Use Pilot Project**

nication team to Rongai Dairy Co-operative Society to collect milk.

Here, Mr. Dennis Sang, the supervisor, is upbeat. He sees a future of guaranteed business.

“Any outlet for our milk is welcome. GDC

Cont. on pg 19



▶ **The geothermal heat exchanger (main) at the Direct Use pilot project at Menengai that is used for (from top) greenhouse heating, aquaculture, grain drying and milk pasteurisation**

Nakuru taps from the boil

BY ERIC WAMANJI

Nakuru County is progressively emerging as one of Kenya’s green economic hubs thanks to the abundance of geothermal energy. The resource is proving magnetic to sundry enterprises that hanker for affordable, reliable, and green energy.

And now the county government and GDC have mooted a robust memorandum of understanding (MoU) to establish geothermal heat parks that will host different industries. GDC will supply geothermal energy- steam and electricity to the park.

“For the heat park, the most important component is the geothermal heat mined from steam,” explains Eng Jared Othieno, the GDC Managing Director and CEO.

“We have abundance of heat. That heat is readily available. It’s clean and supports various industrial processes.”

This is an exciting strategy. Geother-

mal steam normally exits power plants at about 150 degrees. That is too much heat to be let to waste. Yet, industrial processes like timber drying, milk pasteurisation, oil manufacturing, grain drying, name it, heavily rely on such heat.

Ordinarily, manufacturers use heavy oil, wood, or coal to heat boilers to generate steam. That is a prohibitively expensive enterprise. It is also polluting the environment contributing to global warming. Geothermal is clean and renewable.

It sits perfectly in the global scheme of things to cut down Greenhouse Gases (GHG) as willed in Sustainable Development Goal (SDG) 13.

Use of geothermal steam instead of fossil fuel in manufacturing will boost Kenya’s energy transition strategy and

Cont. on pg 19



with a cup of the freshly pasteurised

pays cash for the milk. That's good for the farmers because they don't have to wait too long for payments," Mr Sang says. "However, we would also want to diversify and start pasteurisation of our own. We hope GDC can assist us."

The milk is tested for integrity at the dairy and again at the pasteurising unit.

"Quality is critical," Mr Towett says.

His team then pours can after can into the pasteuriser. He then checks all the knobs and gauges. Satisfied, he switches on the pump to supply hot water to the pasteuriser. Soon, the machine starts humming as the agitator rotates calmly as it mixes the milk to ensure homogeneity.

"See?" Mr Towett announces. "The inlet temperature is 70 degrees. That's the hot water from the geothermal heat exchanger. Then, the outlet is 63 degrees." This shows that the milk is extracting heat from the hot water – an indication of pasteurisation.

After two minutes, the temperature gauge starts to rise.

"We check the gauge every 15 minutes until it reaches the target of 67 degrees," Mr Towett says.



Eng. Martha Mburu:
This is just a start.

After that, the hot water supply and the one exiting the pasteuriser are both stopped. This retains some hot water in the jackets of the pasteuriser for 30 minutes to ensure maximum pasteurisation. This water is then drained, and another inlet of cold water is allowed to circulate in the system to cool down the milk from 67 degrees to 40 degrees. After that, colder water from an ice bank is circulated again to cool the milk to four degrees. At that point, the milk is ready for storage – or drinking.

That was the point at which this writer could not resist the urge for a glass. Cold. Smooth. On a hot day, the glass is like balm to the body.

Milk pasteurisation is a key plank in food security and responds well to the manufacturing pillar in the Big Four presidential agenda.

"This is just a start," says Eng. Mburu. "There's abundance of heat here. It'll change this country."

▶ **70°C**

Temperature of hot geothermal water used for milk pasteurisation

ing rift thanks to GDC

green credentials. The steam, available in abundance, will make Kenya one of the most attractive investment destination for those hunting for green energy.

Besides, geothermal will be a major contributor towards the SDG7 that desires for universal affordable and clean energy and a cleaner energy.

In an elaborate report, Net Zero by 2050: A Roadmap for the Global Energy Sector, the International Energy Agency (IEA) is discouraging sell of fossil fuel boilers beyond 2025 as a pathway of achieving net zero by 2050. Indeed, in Kenya, the future of heating industrial boilers will no doubt be through the perfect mix of volcanicity and technology that is shaping up at places like Menengai.

For Kenya, the heat resource park strategy is overdue. It positions GDC at a

pole position as the centre of excellence in geothermal energy. Such holistic utilisation of resources is critical to turbo charge the country's economic programmes. This makes geothermal energy some sort of secret treasure for the country. But the deal now is not to keep it under wraps, but to muster the courage and the spirit of adventure to pursue the treasure.

And GDC is already making strides. Now, the company is running a semi-commercial milk pasteuriser (see main story). The company also installed a grain dryer. It has also developed other proto-types that include geothermal-heated green house, aquaponics, and laundromat. These are exciting portfolios.

"We have generated interesting data from our studies. The next stage should be pre-feasibility then full feasibility. I'm

▶ **150°C**

Temperature at which geothermal steam exits power plants

strongly convinced we are ready for a scale-up of these projects," says Eng. Martha Mburu, the Manager, Direct Uses at GDC.

A successful resource park also promises to be a robust hub of research in sundry enterprises. This will no doubt turn Menengai into another valley of technological innovation. Indeed, the path taken by GDC will unleash umpteen lucrative investment opportunities hitherto unimaginable.

Mr Simon Nguni, a consultant on geothermal energy, reckons Kenya is sitting on a goldmine that is geothermal.

"For now, we may not know the extent of the importance of geothermal to this country," reckons Mr Nguni. "But geothermal is catalytic. Properly harnessed and deployed, geothermal will transform this country in unimaginable ways."

Mr Nguni, himself a geothermal veteran, vouches for more attention towards geothermal energy this includes budgetary allocations and incentives to attract investors. Geothermal, he believes, should also be protected from speculators.

For Nakuru, the opportunities are too many.

The gamechanger

GDC is setting the ground for investors to use geothermal heat for farming and manufacturing.

BY JOSEPH MUTAHI

Recently, when GDC advertised for investors to express interest in using geothermal steam to power their investments it received solid interest.

The move also ushered in a new era of diversification of geothermal resources. It has also set the stage for GDC's exponential growth.

The next stage is to carry out a Feasibility Study for Geothermal Direct Use in a Geothermal Energy Resource Park. The feasibility will refine our models and inform strategic investment going forward.

The entry of steam power consumers in the energy mix will open new investment opportunities and spur economic growth. It will also boost GDC's revenue beyond the current annual \$30 million - from steam sales to KenGen in Olkaria.

At Menengai, Nakuru County, GDC has established several Direct Use Demonstration Pilots. These include a semi-commercial batch-type grain dryer, a milk pasteuriser, a laundromat, fish farming ponds and vegetable greenhouses. It's a precursor to the future resource park.

In this way, GDC can achieve its mandate, the targets set out in the Least Cost Power Development Plan (LCPDP), National Geothermal Strategy (NGS) and deliver comprehensive plans towards the Integrated National Energy Plans (INEP) as laid out in the Energy Act, 2019 of the Energy Sector.

The World Bank is supporting GDC to develop a comprehensive 20-Year Business Plan and Financial Model. This will ensure that GDC is taking full advantage of revenue-generating opportunities arising from growing demand for geothermal energy in Kenya, and that it is using its resources efficiently. The comprehensive business/financial model will be used to simulate different scenarios whenever GDC will consider project finance, bidding



▶ The geothermal-heated greenhouse at the Menengai Geothermal Project

for a project, carrying out annual financial planning, conducting capital structure analysis and negotiating Steam Sales Agreements (SSA) or Power Purchase Agreements (PPA) and PPP arrangements.

GDC has now developed a Tariffs Financial Model for Menengai which offers a sustainable engagement with Government, and the interested investors who require steam, brine, and land for their businesses. By every account, the supply of this steam power will be steady and far cheaper than any other source of heat available. It will be a major win for investors.

Energy has been identified as an enabler to achieve "The Big Four" Agenda. GDC will significantly contribute to the realisation of this plan principally with focus on the Manufacturing and Food Security agenda. The Government through the Vision 2030 and the Big 4 Agenda has earmarked Manufacturing and Agriculture as prioritised sectors. It highlights the need

to strategically increase the level of value addition in niche exports by fast-tracking processing of local agriculture products. One of the flagship projects under manufacturing in the Vision 2030 is the development of Industrial Parks. Similarly, the Special Economic Zone Act 2015, captures industrial parks among areas considered as Special Economic Zones.

For the 'Big Four' agenda to succeed, it is necessary to provide sustainable power to bulk users in the planned Industrial Parks. Industrial Parks have been determined through various studies as the most effective catalysts for enhancing the outputs within the manufacturing sector. GDC will support the manufacturing sector by not only affordable subsidised power to the bulk energy consumers but also in setting up parks in its key installations in the Menengai, Baringo-Silali and Suswa Geothermal fields.

Mr. Mutahi is the Chief Officer, Corporate Planning & Strategy

“
The entry of steam power consumers in the energy mix will open new investment

GDC's water system quenching the thirst of Baringo

BY ERIC WAMANJI



► Residents of the Baringo-Silali Geothermal Project area draw water from one of the watering points constructed by GDC in the region

At first it was guggle. The crowd went silent. Soon the guggle paved way to a gush. The crowd raptured into cheers. Kids skittered and jumped into the trough spluttering and enjoying the cool waters on this hot afternoon. Water flowed fast and furious. It was the first time water was piped to this sun scorched world of Chepungus, Baringo County.

This explains why Mr Amos Losute, a resident, is a happy man. A cattle keeper who has seen punitive drought decimate his herd, Mr. Losute today stands proud admiring his cattle quaffing water from one of the troughs that the Geothermal Development Company (GDC) has installed.

"This is a miracle," Mr Losute chimes. "I had never imagined a day when water

► **20**
Number of water distillation points in the Baringo-Silali Geothermal Project area

would flow near my doorstep."

"Before GDC started to supply water here, life was miserable," he recollects. "We used to trek the whole day in search of water. It was real hardship. Children dropped out of school and our cattle died. Not anymore."

Indeed, water has revolutionised life here. For the thirsty semi-arid frontier, fortunes here started to change with the arrival of piped water from GDC.

This project targets 50, 000 people. "The community is at the heart of our operations," says Ms Grace Mwai, the Manager in charge of community relations at GDC. "Our holistic development means that we also need to uplift the lifestyles and living standards of our host communities."

GDC has identified water, health, environment, and education as critical areas

for its social investment and strategic intervention.

This is how the Baringo water is designed: GDC has established 20 strategic watering points straddling an incredible 160 kilometres. The water system has the capacity to pump 10,000 litres of water per hour.

The water is treated using reverse osmosis at 20 treatment plants strewn in the semi-arid world. GDC has also laid out an elaborate network of watering troughs that serve thousands of cattle.

"This water has really transformed our community," Mr Losute says. "Now children are going to school. Our wives are even trying small-scale businesses. They no longer waste time searching for water."

—First appeared in the *Daily Nation* on August 11, 2021

We have a deal... Baringo County, GDC in partnership



◀ Baringo County Governor H.E Stanley Kiptis and GDC MD & CEO Eng Jared Othieno signed a Collaborative Framework Agreement (CFA) on promoting and marketing Direct Use of geothermal energy in Baringo County at our Kawi House offices. The adoption of Direct Use of geothermal energy in the agriculture, industrialisation and tourism sectors in the County will impact the local community by improving their livelihood and subsequently creating wealth.—

Fired up *to drive* GDC's growth

Eng. Jared Othieno is a man on a critical assignment. Kenya banks on the MD and CEO of GDC to de-risk the geothermal sector and lower the cost of power, writes ERIC WAMANJI

I thrive in crisis," declares Eng Jared Othieno, the GDC Managing Director and CEO, in jest. He unclasps his hands and bursts into an infectious laughter, his baritone filling the expansive office.

But his work is no laughing matter. Some of the crises he has had to manage were life and death matters.

Take the 2007/8 post-election violence, for instance. His employer at the time, Kenya Power, had just posted him to Nakuru – one of the hotspots of the violence – as the new head of the Western Region. Before he could settle in, all hell broke loose. Eng Othieno had to manoeuvre the chaos and ensure the safety of his team and minimal power supply disruptions. In a country where light is associated with security and darkness with crime, every hour of electricity supply meant many lives saved and families spared from displacement.

"It was a delicate operation," he recalls. "Some of my colleagues were displaced. Everyone looked to me for solutions. I also had my personal safety to worry about."

He navigated the anarchy and turmoil, unscathed but shaken.

That, however, was not the first time the engineer was being caught up in a quagmire. Earlier in his career as the Emergency Engineer at Kenya Power, El-Niño struck. The torrential rains and subsequent floods distressed



power supply infrastructure. This led to outages, sparking fury from consumers and nervousness among staff, who had to race against time – and tide literally – to keep power running against great odds. All eyes were him because he handled the nerve centre of all operations. It took his managerial acumen to help his team and consumers ride out the natural disaster, learning vital lessons along the way.

Today, in his fourth-floor office at Kawi House, South C, the GDC CEO is calm – a demeanour that marks him out as a safe pair of hands in times of crises. He answers each question thoughtfully. His calm demeanour is no accident, however. Eng. Othieno is a veteran of the energy sector. He has risen through the ranks, mastering the bolts and nuts of one of Kenya’s most critical sectors of the economy.

At the University of Nairobi, he studied for a Bachelor’s Degree in Electrical and Electronics Engineering. He later augmented it with business leadership skills when he obtained an MBA. His Master Class in Balanced Score Card and Leadership courses at the Harvard Kennedy School further

“

I make sure all my work is completed within working hours. After that, it’s family time

moulded a solid captain of industry and a business leader who sets high targets and goes for exceptional results.

Indeed, his passion for corporate strategy and high performance pays dividends. He engineers a sound work ethic on productivity. His knack to influence seepage of performance culture into systems is admirable.

At Kenya Power, he held various leadership roles. As Coast Regional Manager, he posted a profit of Ksh. 4 billion. In subsequent years, he rose to the role of Acting General Manager in charge of street lighting, managing a portfolio worth Ksh.15 billion.

In 2018, he broke into the C-Suite when he was appointed Acting Managing Director and CEO of Kenya Power. Again, this was at a time of tumult, with the top brass stepped aside to face corruption charges. Malfunctioning transformers infuriated customers already unhappy with how the utility firm was billing them. Stakeholders were disillusioned and staff morale was low.

“I was bequeathed an overflowing cup,” he recalls. Still, he rose to the challenge. It was not long before the lights flickered on again. He restored

order, goodwill and confidence among staff, customers and other stakeholders.

He joined GDC in April 2020 in the middle of the Covid-19 global pandemic. But pre-Covid the State-run geothermal firm was also undergoing internal crises of its own; low stakeholder confidence, disillusioned staff and a battered reputation.

For Covid-19, Eng Othieno led his team to devise mechanisms for remote working, decongestion and sanitation of office premises that tamed infection rates. The crews at drilling sites proceeded with work uninterrupted. With the support of the management team, he reorganised the system and boosted morale among staff. Today, machinery is roaring at drilling sites again and optimism is in the air.

“His approach is different. It gives us hope,” says a long-serving GDC employee. “GDC needed someone to restore confidence.”

Mr Paul Gondi, a man who understands GDC well is also optimistic about the company’s growth prospects under Eng Othieno.

“With engineer (Othieno) you have a safe pair of hands. GDC will thrive,” says Mr Gondi. “I know him. He’s a performer.”

Versed in the power of communication, the CEO has no qualms publicly sharing his personal leadership vision through his reflective and insightful LinkedIn posts and offering thought leadership lessons.

At GDC, employees do not need an appointment to see the CEO these days. They can just walk in. There’s a caveat, though; no idle talk, only genuine, valid concerns. He listens. He is not afraid of tough questions. He responds. He follows up.

Eng Othieno also holds in high esteem external stakeholders. As GDC’s brand champion, he reaches out to strategic stakeholders and seeks collaborative ideas and actions.

Being an executive of an outfit like GDC can be demanding and exhausting. Everyone and everything demand your attention. Even with all this, the engineer is a stickler for work-life balance.

“I make sure all my work is complet-

► Eng. Othieno (r) at the Menengai Geothermal Project. With him is GDC’s General Manager Drilling and Infrastructure, Mr Paul Ngugi (l) and General Manager Geothermal Resource Development, Mr Cornel Ofwona (c)



ed within working hours. After that, it's family time," he says.

Eng. Othieno is tall and spritely. This explains why he played basketball and squash in the university. Now, he has moved on to golf. He remains a great fan of football too. "I'm Arsenal to death even when they're not doing well," he says with a chuckle. "Locally of course I support Gor Mahia."

He's not a great fan of neckties but his clothes are well pressed, his shoes polished. Leadership books by such prolific authors like Steve Covey and Simon Sinek are prized.

As the custodian of one of Kenya's most precious energy resources, GDC needs its CEO to continually drive innovation. In addition to electricity generation, Eng Othieno is pursuing an interesting innovation: heat resource parks. This is a concept whereby different companies converge around geothermal power plants to utilise the heat for various undertakings (see separate story pg. 15).

"Heat is a big resource from geothermal. Our strategic approach is to harness it to drive manufacturing. That approach will open a new world of opportunities for the country. It's incredible what we can do with heat," he says.

To succeed and achieve impact, such innovative collaborations require adap-

tive and transformative leadership.

"To lead well," Eng Othieno says, "I believe in ethics and sound corporate governance."

In his view, many organisations struggle due to opaqueness and self-interest in the leadership team and systemic staff victimisation. His personal goal is to offer ethical, strategic and dynamic leadership that brings out the best in people. That, he believes, will allow staff to think creatively and thrive, and engendering a culture of excellence and high performance.

Still, there is one thing that worries him: The deeply ingrained culture of ethnicity and victimisation in organisations.

"It's strange that, generally, decisions, rewards and punishments are pegged on ethnicity," he says. "Such a culture frustrates creativity and growth. It's like acid – it corrodes organisations. I prefer dealing with issues on merit. It helps a great deal."

This cosmopolitan outlook has its roots in Mombasa where he grew up. Eng. Othieno's disciplinarian father, a teacher and pastor, played a key role in instilling values in him in his formative years.

"He taught us virtue and to see people as human beings, not tribes," he says of his father.

“*Everyone wants affordable and reliable power. Today, in Kenya, only geothermal energy can help make this a reality.*”

That value system would later be solidified at Alliance High School, where merit and excellence were the buzzwords.

His overarching goal to serve humanity is aligned with the public service expectations of the energy sector, which the engineer took to like a fish in water.

"The truth is this: Everyone wants affordable and reliable power," he says. "Today, in Kenya, only geothermal energy can help make this a reality."

Naturally, Eng Othieno's mind is analytical. He takes the big picture then, like a typical engineer, unpacks it into manageable bits and pieces to ensure various teams in the organisation understand how the parts fit into the whole.

"That way, staff can handle tasks effectively," he says.

Such systems-thinking is critical to the success of large organisations of GDC's stature. It helps to eradicate the silo mentality and promotes understanding of how each team contributes to the organisation's goals and mission, thus boosting efficiency and performance.

With all the goodwill he is enjoying, the engineer is emboldened to navigate the next bend on GDC's road to creating value for the nation and electricity consumers. Clearly, the systems he has helped put in place are firing up the organisation for growth.

▶ Eng. Othieno (third right) engages a section of drilling experts at the Korosi Geothermal field



Quick Take

Area of Focus:
Leadership

Passion:
Corporate culture
Performance
Corporate strategy

Favourite Authors:
Steve Covey
Simon Sinek

High School:
Alliance High School

Football Teams:
Arsenal
Gor Mahia

Sports:
Basketball
Badminton
Golf

Beyond *the* Word

Rev. Yusuf Losute believes in faith and work. *Christopher Ngolo* writes of a man who's touching lives in Baringo

American Author, Coretta Scott King, once said “The greatness of a community is most accurately measured by the compassionate actions of its members.” If Baringo County has a compassionate member, then that is in Asst. Bishop, Rev. Dr. Yusuf K. Losute, HSC.

For over thirty years, he has passionately served his community touching lives along the way.

It's a Wednesday morning, the weather is cold, people are weary of the possible floods from the hills as we cruise to AIC Chemolingot Township. The Acacia juliflora thickets ushers in the County where one man's footprints are spread in every nook and cranny.

The Assistant Bishop at Africa Inland Church Baringo Area, Chemolingot is not an ordinary man; his understanding of the region is admirable, no doubt he fits the job- he is a Community Liaison Officer at GDC. “At Community Relations we're like John the Baptist,” he says. “We pave way for other projects to be implemented.”

Indeed, as a son of the soil, Rev. Losute has been instrumental in helping to GDC earn social license to operate in the region. This is a duty he performs with diligence and dedication.

But beyond GDC, this is man who has built schools, churches, and established children's homes. He is basically engaged in a major social reconstruction in his community.

The father of four - three boys and one girl- derives his inspiration of community development from his childhood life

and the challenges he had to endure to access education.

“I am who I am today because I had to work hard, push and commit my energies to learn and work for myself and the Baringo community, we have been marginalised for long and I wanted to change/touch some lives here” remarked Losute.

Born in Kadingding Village, East Pokot, his desire to go to school was met with resistance from parents and the community. He had to devise a mechanism of navigating and balancing between herding and persuading parents to go to school.

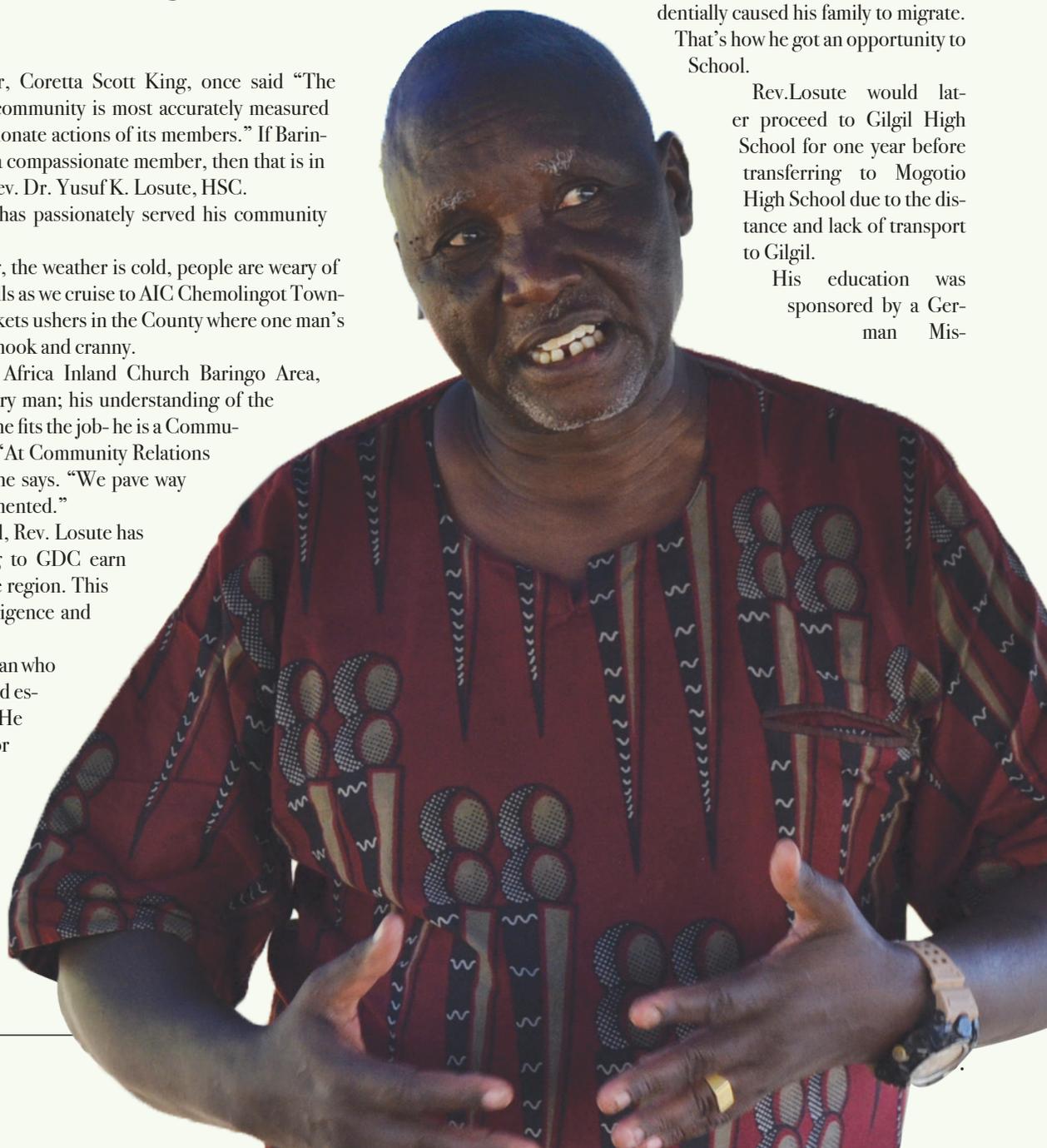
Raised in a family of twenty-four siblings, Losute always wanted to study, so much so that he coerced his parents to allow him to go to school. The first time he accessed classroom door was in 1977 and sat for his Certificate of Primary Education in 1983.

“I threatened my father that I would take my life if he did not allow me to go to school and that's how I accessed class, but there was no school fees,” he says.

The ever-smiling Bishop remembers a cattle rustling attack in 1977 that providentially caused his family to migrate. That's how he got an opportunity to School.

Rev. Losute would later proceed to Gilgil High School for one year before transferring to Mogotio High School due to the distance and lack of transport to Gilgil.

His education was sponsored by a German Mission.



sionary. He would later get sponsorship for the rest of his studies after mobilizing the community to rescue a tourist couple that were stuck at River Nginyang after a heavy downpour.

Both at GDC and the Community in Baringo, Bishop Losute is respected and recognised in equal measure as a man who has impacted the community and the organisation.

In April 2018, he was awarded Honorary PhD in Leadership (Honoris Causa) by University of America for continuous Community Service to God's people with humility for betterment of His Kingdom purposes.

Losute has directly managed to build three schools and indirectly overseen the construction of five other more within Baringo County/East Pokot and runs an orphanage as well that rescues young children from retrogressive cultural practices.

AIC Sunrise Primary School, founded in 2007, AIC Nuru Mission School, AIC Chemolingot Children's Home as well as the KE476 AIC Chemolingot



Head of State Commendation Medal

Child Youth Development Centre are all Losute's care.

Head of State Commendation

His effort have not gone unrecognised.

That is why in 2020 he was awarded the Head of State Commendation for his 30-years exemplary commu-

nity service in championing education, healthcare, and water provision as well as being a champion for community peace building between Turkana and Pokot, even while with GDC. Indeed, this is a well-merited award. His track record is out there, verifiable for all to see.

Senior Chief, Joseph Kangogo who has known Rev Losute since he was young, reckons that he has always had the urge fore education and community service.

Kangogo added that the awards both by the Head of State as well as the Honorary Degree was well received and celebration sparked because he is at the heart of the community.

"Bishop is a man of the people,

committed and always at the fore front in championing community interest, be it peace, health or education," said Kangogo.

Sharon Chebet and Conrad Barasa who have both worked with Losute says his efforts and commitment have made access to North Rift and Baringo much easier as he has been there as team lead.

The acceptance of GDC in Baringo is attributed to his effort and commitment that the community and company exists peacefully. He has performed well in the office and in the community as well. He is an extraordinary man" Sharon said.

His wife, Susan, corroborates adding that the work he does is inborn, and she supports his work and contribution to the community and GDC as he changes/ touches lives.

"What he does is evident, it can be seen and as a family, he is a great father, mentor and always looking out for the interest of his family," she says.

She is still surprised as to how the Bishop balances between all the responsibilities. "It's God's doing," she reckons.

Rev. Losute also represents workers as Committee Member of KETAWU, the local staff union, where he is among the team that negotiated the first Collective Bargaining Agreement for unionisable employees at GDC.

"My desire has always been to see the Baringo -Silali Geothermal Project produce power, where we are today it's just a matter of time before the white smoke lights homes," Rev Losute says.



Bishop is a man of the people, committed and always at the fore front in championing community interest, be it peace, health or education



Students of AIC Nuru Mission School in East Pokot enjoy lunch provided by the AIC Chemolingot Township. Bishop Losute is the founder of the school

Djiboutians came calling and were wowed



▶ **ODDEC Geochemist Rokiya Houssein at the Menengai Geothermal Project's geochem lab**

I want to be a great driller," Aden Kanil sparks charmingly. "My dream is to see Djibouti producing a lot of geothermal power like you guys in Kenya," he enthuses. We're at the Menengai Geothermal Project's drilling rig simulator. One of the 20 trainees from Djibouti, Kanil is here to hone his skills.

In the simulator room, he sits appropriately at the console. This is a semi-circle table full of knobs and control buttons. Kanil's colleagues sit at the back of console. They follow pre-recorded instructions keenly, taking notes here and there. He presses a button, then the speakers on either side of a seven-foot-high 3D screen boom: "Error. The command you have entered is incorrect..."

His colleagues look at each other. Startled. The GDC instructor fixes the error. Kanil smiles. His colleagues chuckle.

"It's thrilling. It's like real," Kanil flashes the "V" sign after his moment of fame.

"Kenya is really advanced," he says. "No need to go far for training. You have it all. And by the way, your instructors are friendly and sharp."

At the geophysics lab, we catch up with Ibado Moustapha. She's aggressively jotting as Joseph Gichira, the GDC geophysics trainer, explains a point about earth resistivity.

Since its inception, GDC has cut a

**BY ERIC
WAMANJI**

niche as the to-go-to training centre on geothermal technology. The company's cutting-edge infrastructure, like the venerated rig simulator and geoscientific labs, are peerless. Add pedigree expertise and you have an unparalleled centre of geothermal excellence.

On a hot July day, we're at the Direct Use project site. This place is like a Cathedral of sorts. A visit to Menengai is incomplete without a pilgrimage here. It's the place where Eng. Martha Mburu and her team are mining direct heat from geothermal steam for various enterprises like heating green houses, drying cereals and milk pasteurisation. It's GDC's propensity of stretching the limits of imagination that is now set to give Kenya its first truly geothermal resource heat park. On fruition, the heat park will transform how we produce and consume heat. But that's a story for another day.

Save for the occasional chirp of a bird, today Menengai is quiet. Still. Sultry. The sky is vivid blue. The sprawling geothermal complex is punctuated by towering drilling rigs that dwarf shrubs and thickets. A geothermal well gushes silverish steam that swirls then vanishes up in the sapphire. Beneath our feet is a reservoir copious with geothermal steam, the elixir, trapped between hot volcanic rocks. It's the super-heated steam that GDC is masterfully tapping and promises to power the country's economy and help to tame a climate going amok. The caldera is entwined

by a network of gigantic green pipelines that collect steam from wells to power plants.

At about 1400 hours, a GDC truck rolls into the compound. Some Djibouti students (all female) disembark chaperoned by GDC's Esther Nyambura.

"They need to see what we're doing here," Esther offers.

The ladies are curious. They probe. They snap. At the heat exchanger, they're clearly hypnotised. This is a bath where hot geothermal fluid is channeled. Inside the bath is an aluminum coil where fresh cold water runs through. The hot geothermal water heats the freshwater inside the coil. The heated fresh water is then circulated for heating various projects. The heat-exchanger is the nerve centre of operations here.

The ladies hold their hands aloft to feel the heat in the steam. "It's like a jacuzzi," one shouts.

But it's the geothermal milk pasteuriser that thrills the ladies most. Japheth Towett and team have just completed pasteurising milk as the Djiboutians arrive. It explains the "Wow! Wow!" and "Oohs," from the group.

"All the milk was processed by geothermal heat?" marvels Isnino Moussa.

"Yes," Japheth chips in proudly. "You can take a sip," he offers. Moussa grabs a glass to tap from the pasteuriser. Full, she sips, pauses, then sips again savouring every drop. "Aah! nice, very nice," she beams delightfully.

“
The company's cutting-edge infrastructure, like the venerated rig simulator and geoscientific labs, are peerless

The road ahead looks exciting with ISO certification

Governments and businesses use standards as trusted solutions to complement regulation. Standards also give consumers peace of mind because they are an indication of quality. This explains why organisations worth their salt are always determined and committed to industry set of standards.

But getting the mark of approval, otherwise called ISO, is no walk in the park. It's a complex process that involves weeks and months of streamlining processes, not just in documentation but in peoples' minds as well.

Such is a journey that GDC trod recently, to clinch the highly prestigious ISO 9001:2015 certification.

Ms. Irene Onyambu, the GDC Quality Management Representative and General Manager Human Resources and Administration, noted that ISO certification, though a tough journey, finally helps to improve processes and services. Standards boost efficiency and productivity levels as well.

Standardisation means that the industry does not need to reinvent the wheel, instead, innovations will be compatible and work with existing technology, and products and services will be trusted.

That's the spirit that thrust GDC to the road for the current ISO 9001:2015 certification.

GDC began this journey in January 2010, just a year after inception. All along, GDC has been involved in the continuous development and review of processes and procedures. The twists and turns help in refining the standards first in hearts and minds, then on paper.

Quality Assurance Officer, Ms. Sarah Musumba has walked the ISO certification journey since 2010 and says that the changes that the certification has brought are immense as GDC continuously improves its documented procedure.

Kenya Bureau of Standards undertook the first external audit in November, 2011. Audits are critical. They're like an examination of preparedness and mastery. Yet, as all organisations that have pursued ISO will tell you, external audits cause a bit of jitters. After GDC underwent its own audit- a rigorous exercise, and after the non-conformities were corrected, we attained the ISO 9001:2008 certification in June, 2012 then re-certified in June, 2015.

Originally published in 1987, ISO 9001 underwent revisions in 1994, 2000, 2008 and 2015. The current version of ISO 9001 was released in September, 2015. The changes that were introduced in this revision are intended to ensure that ISO 9001 continues to adapt to the changing environ-



BY WENDY AMONDI



Standardisation means that innovations will be compatible and work with existing technology, and that products and services will be trusted

ments in which organisations operate.

ISO 9001:2015 puts a greater focus on the needs of customers and interested parties; further, it takes a risk-based thinking approach when compared to ISO 9001:2008. This means that the concept of preventive action is now addressed through risk identification and mitigation.

The ISO 9001: 2015 has also enhanced the involvement of leadership in the Quality Management System. Incorporation of management is key for ownership and stewardship. Moreover, the standard has more flexibility when it comes to documentation.

The GDC ISO 9001:2015 certification process was started in 2020 with the aim of adopting the new standards. On May 27, 2021, the GDC Managing Director & CEO Eng. Jared Othieno signed the ISO certification contract in readiness for the ISO certificate to be issued by KEBS.

"Now, that GDC is certified, the road ahead looks exciting. Implementation of this standard assures of quality and safety with regards to our processes and products. As a result, customer satisfaction may be increased due to the trust created from ISO standards," Eng. Othieno remarked.

Ms. Amondi is a Communication Officer and a GDC ISO Champion

► Towards ISO certification... GDC Quality Management Representative Mrs. Irene Onyambu briefs GDC ISO champions on the ISO certification process



A penny more a day secures your future



BY IRENE MOINKETT

Employment has over the years provided employees with safe retirement and better terms after working years. However, this has not been the case for most of the pensioners.

Pension schemes over the years have continuously improved, offering retirees better deals. For instance, there are opportunities for pension top-up as well as post-retirement medical schemes.

An employee could consider enhancing their contribution if they started saving late, if the projected benefits are likely to be insufficient at retirement or they have less than maximum in the current scheme.

At GDC, the scheme has been domesticated and enhanced to encourage additional savings as well provide medical expenses upon retirement.

Some of the ways through which one can enhance contributions to the Pension Scheme include, Additional

Voluntary Contribution (AVCs) where one makes contribution on top of the normal contributions to an occupational pension scheme.

Additional Voluntary Contributions has advantages such as benefits enhancement and flexibility as one can increase or reduce contributions as circumstances change. One can also suspend the payments at any time or take a payment break and restart later as long as they remain active contributors to the pension.

Tax Relief

Besides, such contribution to pension entitles one to tax relief. This way, it helps to boost ones savings.

Further, to spruce up your retirement, the GDC Staff Retirement Pension Scheme has a component of Post-Retirement Medical Scheme (PRMS). This is a voluntary contribution towards access of a medical cover at retirement. PRMF is entrenched within a registered

retirement benefits scheme or by an employer.

Contributions are made while a member is in active employment. Medical cover benefits are met after a member has retired. These benefits are invested by the fund manager alongside the pension investment but reported separately as a medical benefit.

The invention of this product is mainly to enable retirees access medical insurance which is relatively costly or difficult to access at retirement since medical insurance covers for elderly are generally expensive.

This explains the need for early and consistent contributions. Importantly, it's prudent to let your savings at the scheme mature with time. Oftentimes, premature withdrawals have led to misuse of funds and misery.

For instance, if you change jobs are get tempted to withdraw, you end up losing the principle, interest and also tax benefits. It is highly recommended that you let the savings roll over directly into the new employer's retirement plan or individual pension.

As you save for retirement, understand your retirement needs because retirement can be very expensive; it is estimated that one will need about 70% of the pre-retirement income (for the low income earners it is 90% or more) to be able to maintain the standard of living upon retirement.

Finally, it is important to ensure that all records, for the dependents (beneficiaries) are well maintained by the custodian(s) of your pension/or any other savings/benefits scheme more so when you move from one job to another, or from employment to self-employment.

Ms Moinkett is a HR Officer and a GDC Staff Retirement Benefits Scheme trustee board member

Importantly, it's prudent to let your savings at the scheme mature with time. Oftentimes, premature withdrawals have led to misuse of funds and misery.





Brand ambassadors must meet the cut

David Beckham, who does not need an introduction, is one of the greatest brand champions in the world. This soccer star, who is an all-round cool guy, is the face of many brands from cars, to fashion to even skincare.

A brand ambassador or brand champion is basically a person employed by an organisation to represent the brand in a positive light. Their role is to help to increase brand awareness and visibility. These people inspire and influence us in various ways

At GDC, just like any big organisation, brand champions are supposed to play a critical role in advancing the ideals and image of the company.

Of course, the ultimate brand carrier is the Managing Director and Chief Executive Officer. As vision holders, brand champions embody the brand and what it stands for.

This does not imply that the rest of the team is irrelevant. No. Staff are im-



BY JEDIDA OJWANG

They are also meant to represent the corporate identity, values and ethics to all stakeholders

portant brand champions. They follow the cue from the top. They align with the corporate brand direction, and they live the action and the spirit of the brand.

At times, organisations may choose to augment the branding strategy by recruiting ambassadors internally or externally. Yet, organisations get it wrong when they fail to source for the most relevant brand representative.

A brand ambassador should be a person who understands the ideals of the brand, is passionate about the brand and exudes the characteristics of the brand they are supposed to represent. The ambassador must also be a person who commands influence. Without influence, it's all useless. This is because brands are sensitive and missteps from champions can be costly.

Part of the champions' job is to ensure that the brand has an attractive personality. They are also meant to represent the corporate identity, values and ethics to all stakeholders. See, this is no

easy task hence the need to carefully select your brand champions.

In a world influenced majorly by social media, brand ambassadorial tactics have become fiercer in the digital space. This means that ambassadors' actions online will also affect the brand they represent. They need to align with their brand character to avert a clash of ideals.

With the COVID-19 pandemic, business in the online space has become inevitable. When we have a proper team to champion the organisation on various media platforms, our brand will surely grow and appeal more to our stakeholders.

Our brand ambassadors also have the job of identifying factors which affect the brand and offer solutions on the same through various established channels.

Well, it takes two to tango. Building a strong set of champions involves developing engaging relationships. Brand champions aren't developed overnight.

Ms. Ojwang is a Senior Communication Assistant and a GDC Brand Champion

Intrigues and ecstasies of remote working



A conversation between Gekko, Catboy and Owl-ette, the infamous PJ Masks, on how to beat Romeo the villain, serves as my soundtrack as I pen this piece. No, I am not a fan of the cartoon, but a friend's five-year-old son is. He's visiting today and I am also fully at work today – just a typical workday.

When the first COVID-19 case was reported in Kenya in March 2020 it triggered a domino effect. Businesses, schools, places of worship, and entertainment spots closed. A curfew was imposed and a new concept, at least for many Kenyans, was adopted – working from home. And so began the subtle creation of a new culture – one unique yet similar for all those who have adopted it.

Working from home has torn down the image that has long been associated with corporate jobs. The tie, the suit, the hours at a desk, the boardroom meetings, and unending hours in traffic have taken a back seat and ushered in a new norm. T-shirts, maybe even pajamas, working from a sofa or even a bed, dicing meat or veggies for lunch while participating in a strategy meeting, zero

traffic – save for the occasional call drop thanks to having too many people in the neighbourhood using their Internet for work. The stealthy, bowed head opening of a boardroom door to avoid disrupting meetings has been quickly overlapped by now accepted punctuations of children playing and hens clucking in the background.

Even with this new way of life, working from home might have provided the elusive workplace balance that has been a staple in workplace seminars. The truth is that working from home gives individuals more flexibility regarding managing the various facets of life.

Many times, we tend to narrow down people's responsibilities to who they are to us – an employee to an employer, a tenant to landlord, a parent to a child. Human beings are, however, multifaceted having a plethora of roles, each more critical than the other, requiring a share of time and all of them being executed by the same person. Meanwhile, the YouTube algorithm is replaying the PJ Masks episode that played before – time to take 15-minutes to be a good host.

As management of the pandemic still forces most people to stay home to break the chain of infection, human be-



BY DEBORAH KALEI

“

The stealthy, bowed head opening of a boardroom door has been quickly overlapped by the sound of children playing and hens clucking in the background

ings have done what they were created to do – they have adapted and made the challenges work.

Prioritisation of duties and responsibilities is seeing employees manage their assignments and engagements better. Working from home has afforded staff a flexibility with their time that sees them more willing to put in extra hours into their jobs. If someone does not have to stress over the limited time they have, they are more willing to go that extra mile when they are doing a task. And somehow, everything is getting done – an hour of developing reports, thirty minutes of playing hide-and-seek with the kids, an hour of a strategy meeting, an hour of sorting out the leaking roof in the tenant's house, and soon all t's are crossed and i's dotted.

At the end of my workday, I head 'home' from my working space to my sofa. I scroll down my phone to catch up on the ever-exciting social media funny videos and memes—I see children walking into the scene on a video call, unmuted audio that saw someone say a little more than what was part of the agenda. The memes are too relatable—truth be told, I, no we, have been those memes.

Ms. Kalei is a Senior Communication Officer



In pictures...



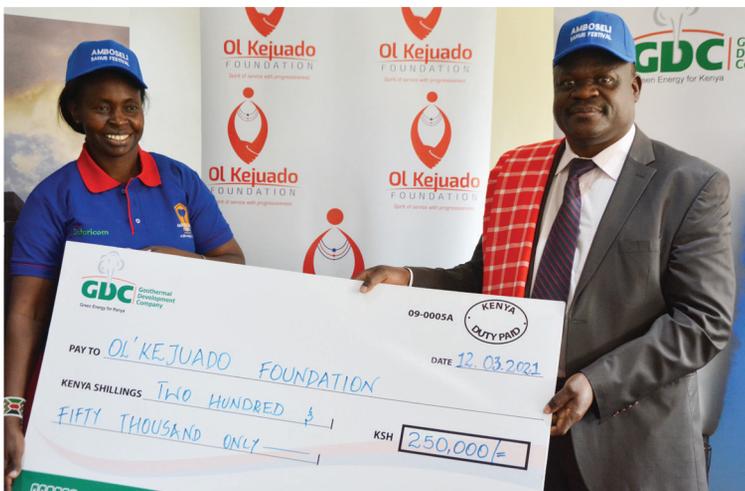
GDC Driller Kipkurai Kibor (l) explains the workings of the drilling simulator to Aden Kanil (r) from the Djiboutian Office of Geothermal Energy Development (ODDEG). 20 officers from ODDEG undertook a Geothermal Specialised Training course facilitated by GDC's Geothermal Centre of Excellence (GCE).



A section of GDC staff attending a legal audit training.



GDC's Coil Tubing crew at the Menengai Geothermal Project.



Kajiado County First Lady Edna Lenku (l) receives a dummy cheque from GDC Geothermal Resource Development General Manager Mr. Cornel Ofwona (r) in support of the Eco-Manyatta Housing Project. One of the project's objectives is the improvement of living standards among the rural communities in Kajiado County, complementing the Government's Big Four agenda.



GDC North Rift Regional Manager Mr. John Lagat (r) and Deputy Manager Corporate Planning and Strategy Mr. Ahmend Fankey (l) compare notes during a Management Strategy Meeting.



GDC Drilling Equipment Maintenance Manager Mr. Johnson Maleche (r) and Drilling Engineer Stephen Nato (l) join Driller Said Abdulrahman (seated) at the driller's console during the spudding of Paka Well 2 (PW-02). The rig is controlled from the console.



GDC Environmental Scientist Fridah Nkatha (second right) explains the process of air quality monitoring to a cohort of GDC Geothermal Centre of Excellence trainees.



Parliament Energy Committee Chairperson Hon. David Gikaria (l) and committee member Hon. Eng. Vincent 'Kawayay' Musyoka (r) are taken through the expanse of the GDC water reticulation system by GDC Chief Infrastructure Engineer Joseph Mberia at Pump Station two in the Baringo-Silali Geothermal Project.



Together. Efficient. Right... North Rift team are on board with GDC's ISO theme.



Loud and clear: Morine Achieng (l) and Eva Kaigongi during the celebration of ISO 9001: 2015

The Review

12 Disciplines of Leadership Excellence

Authors: Brian Tracy and Dr. Peter Chee

How Leaders Achieve Sustainable High Performance

The term “leadership” is defined as the action of leading a group of people or organisation by motivating them to act toward achieving a common goal. Leadership can be demonstrated in different aspects of our lives – parenting, relationships, career, and places of worship among many other areas.

In an enlightening article on the Forbes website, CEO and author, Kevin Kruse, explains how leadership has nothing to do with seniority, titles, personal attributes, or management. True leadership, rather, stems from social influence and not authority or power; it essentially includes a foreseeable goal.

I recently picked up a page-turner titled, *12 Disciplines of Leadership Excellence: How Leaders Achieve Sustainable High Performance* written by Brian Tracy and Dr. Peter Chee. I got a real insight into the art of personal leadership and there was golden advice that can help anyone achieve just about anything they put their mind to.

Reading this book chapter after chapter opened my eyes and my mind to new ideas. Chapter 7: ‘The Discipline of Creativity’, for instance, is captivating. Tracy and Chee unravel the key to achieving a positive corporate environment for the betterment of the company and the staff members.

Their simple definition of creativity is “improvement”, which is explained

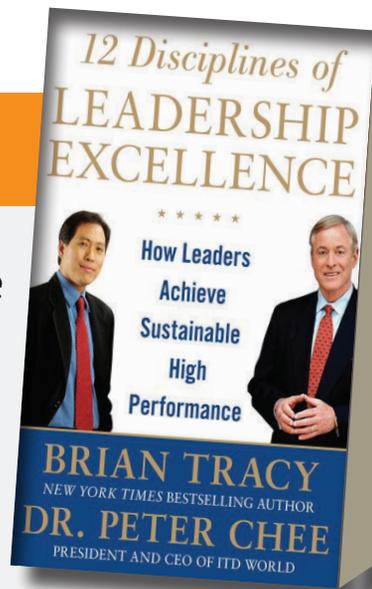


BY GLORIA
NYANG'IYE

as, “every single idea that improves the way we live and work, in large or small ways, is an act of creativity.” There is in fact a direct relationship between ideas and profitability and this link can help expand an individual’s or a company’s potential.

Other topics too provide clearer understanding of the various disciplines of leadership including competitiveness, courage, concentration, personal excellence, and caring about people. This book is highly recommended.

Ms. Nyang’iyie is a Communication Intern



Motoring

A keen driver protects other road users

An old saying in the driving circles goes “it’s only you, who is sober in the roads”. This is true, more so in our Kenyan roads, if the statistics of road carnage are anything to go by.

All drivers, save for the few who used unorthodox means, have gone through a driving institution. At the onset of the driving course, one is taken through the importance of being attentive to what is happening outside the vehicle.

Basic driving skills such as manipulating the steering, changing gears and pushing pedals becomes a bore with time, tempting one to focus on their phone or activities happening away from the road.

Be that as it may, things happen with no warning. For example, one might decide to answer a phone call or respond to a text on a clear road, and suddenly a wreckage is the aftermath.

Being keen or attentive allows one to spot trouble early before it materialises.



BY DUNCAN
WACHIRA

es. What is the best way of avoiding such situations? The first step is to pinpoint the factors that bore or distract while driving and find ways of limiting them. Finish all pending activities that might distract before the start or at the end of the journey.

Once on the move, focus on the road ahead and quickly scan the vehicle’s surrounding to spot dangers in advance.

One should not allow technology to be a distraction but use it to improve the driving experience. For example, invest in a Bluetooth headset to respond to urgent calls or the latest in-car radio systems that offer speech to text technology that allow one to respond to a text by using voice commands.

Be alert, stay safe and enjoy the freedom of mobility that driving offers.

Mr. Wachira is a Communication Officer and an avid motoring enthusiast

Thank You...

We appreciate you, our great friends indeed, for standing with us as we celebrated our ISO 9001:2015 Certification.



