Sand to Oil
How the discovery of crude oil transformed the socio-economic landscape of Barmer district in Rajasthan
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Corporate Social Responsibility (CSR) has been part of all Cairn Oil & Gas’s operations for decades and has led to some dramatic changes in the society of this desert district
Completing 10 long years of production at the Mangala oil field in Barmer district of Rajasthan, Cairn Oil & Gas, Vedanta Ltd., has led to a complete face-lift of the local economy and has had a far reaching impact at the national level as well. The ‘first oil’ at Mangala field was discovered on 29 August 2009 and since then, the company’s investments have changed Barmer in more ways than one. This desert district was, until very recently, considered among the most backward in the country but has now risen to become one of the highest per capita income generating districts of Rajasthan.

“The discovery of Mangala field has helped change the socio-economic landscape of Barmer... the field is promising and with our planned investments, we aim to increase production further by realising its full potential,” said Ajay Kumar Dixit, CEO, Cairn Oil & Gas, at recent celebrations held at the Mangala plant, which marked a decade of crude production here. At present, the fields in Barmer account for close to 80% of the company’s total production.

Cairn Oil & Gas is India’s largest private oil and gas exploration and production company and has contributed 414 million barrels of crude from the Barmer fields to India as of August 2019. It has cumulatively produced 532 million barrels of crude across the country, which constitutes almost 25% of India’s total domestic crude production. The company has paid a royalty of Rs 33,500 crore to the Government of Rajasthan to date and Rs 16,511 crore to the Government of India in FY 2019 alone.

The company’s presence in Rajasthan has had a two-pronged impact on the region. “We have had the advantage of coming to a district which was listed among the lowest development potential districts of the country as well as the state. By virtue of being a large industry in the region and through partners like Baker Hughes, Halliburton, and Schlumberger, there is now a large workforce on the ground,” said Madhavi Jha, head of Corporate Communications at Cairn Oil & Gas. Jha added that Cairn Oil & Gas is a case study where one can witness the direct and tangible social impact that an industry has in a region. “This impact is separate from the impact that such an industry’s corporate social responsibility (CSR) programmes can have on the ground,” she said.

The urbanisation and economic boom that has followed Cairn Oil & Gas to Barmer is best illustrated not by any internal indices of the company but rather the macro-economic indices of the district itself. Ten years ago, when the oil and gas company began work, Barmer was considered a low development potential district and industry was not expected to take root. It was among the poorest districts of Rajasthan for decades. But today, it has gone on to become the richest in the state. The per capita GDP of the region grew by almost 650% between 2009 and 2019.

However, the going has been tough, as can be seen in the company’s long journey over the past two and a half decades (see graphic). Oil was struck at Mangala on the 14th attempt. Cairn Oil & Gas witnessed a slight slump in early 2019 after a spate of resignations at the top management level and a fall in the stock prices — up to 4% earlier this fiscal — that followed. However, the firm seems infallible and keeps bouncing back from every setback. Vedanta Ltd. announced in September 2019 that it had reduced its net debt by Rs 8,322 crore as of Q2 (FY 2020) and PAT was higher by 61% y-o-y. And at the oil and gas arm of the energy conglomerate, 166 wells have been drilled while 63 wells have been hooked up this fiscal. Early gas production facility has also been ramped up to over 50 mmscfd.

The company is systematically moving towards addressing India’s energy needs. It is unfortunate that while India stands third in terms of consumption of oil and gas (behind USA and China), it barely produces 19% of its requirements domestically. Over 80% of India’s needs are met through imports, a burden on the national coffers, which will hopefully reduce...
with more companies joining the aggressive efforts of discovery and recovery as Cairn Oil & Gas is doing.

Already in FY 19, the top brass is confident that production and recovery of crude will witness a sharp rise due to the investments made in the past. As of March 2019, a seven-year-long research and pilot study on Alkaline Surfactant Polymer (ASP) flooding was concluded, which is expected to raise the recovery ratio of crude to above 50% from the current 36%. Cairn Oil & Gas has dubbed the ASP project at Barmer as the world’s biggest ASP project.

The company has decided to invest over $4 billion in the next five years across the country and around $1.1 billion in the oil fields of Rajasthan’s Barmer district spread over the coming 18 months. The Rajasthan block is spread over 3,000 square kilometres. The investment is aimed at enhancing production and expanding exploration. It will mainly focus on ASP technology, which is expected to ramp up output from the oil wells by almost one lakh barrels per day over and above the current average output of 1.4 lakh barrels per day. (See In-Conversation with CEO).

Mangala, Bhagyam, and Aishwariya oil fields are the three major discoveries in the Rajasthan block, and together they have gross hydrocarbons in place of about 2.2 billion barrels of oil equivalent, according to the company’s internal assessments.

“With our expanded portfolio in Rajasthan as well as other parts of the country, we aim to develop many more ‘Mangalas’ and put India on the path to energy security.”
In 2018, Cairn Oil & Gas won 41 blocks out of 55 auctioned by the Government of India under its maiden open acreage licensing policy (OALP) blocks. The unique airborne survey, and a suite of satellite-based Sub-Terrain Prospecting (STeP®), which includes eight remote-sensing and computational technologies has been successfully piloted ASP EOR in the field. It has also fostered entrepreneurs. Individuals and small businesses that sprung up to support the presence of Cairn Oil & Gas employees and processes are now expanding to other companies and clients across the country. (see the article on Technology for Efficiency).

The discovery of Mangala a decade back and subsequent production of crude oil from the region has transformed Barmer from being one of the most backward to among the most prosperous districts in the country over the last decade. As per Estimates of the District Domestic Product of Rajasthan 2011-12 to 2016-17 (AE), Directorate of Economics & Statistics, Department of Planning, Rajasthan, Barmer contributed 7.11% to Rajasthan’s GDP; second only to Jaipur and the district’s per capita income has become higher than India’s and Rajasthan’s average per capita income. Cairn Oil & Gas’s presence in the region has not only boosted the national economy – in terms of reducing the import burden – but also fostered entrepreneurs. Individuals and small businesses that sprung up to support the presence of Cairn Oil & Gas employees and processes are now expanding to other companies and clients across the country. (see the article on Building Businesses).

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In conversation with Ajay Kumar Dixit, CEO, Cairn Oil & Gas.

‘Swiftly moving towards meeting India’s energy needs’

Q. Where does Cairn Oil & Gas fit into the larger vision of Vedanta Resources Ltd?
A. The Group’s vision is rather simple as a natural resource conglomerate – our focus is to reduce India’s import dependency on natural resources. The idea is to cut down the import bill and make the country self-sufficient. Recently, the Central Government announced it would like to increase revenue from mining – raise the proportion of current resources. The idea is to cut down the import bill and make the country self-sufficient. It is common knowledge that we contribute 25% of the total domestically produced crude to meeting 50% of the requirement over the next few years.

Cairn Oil & Gas is one of the largest producers of these metals, and as for oil and gas, Cairn Oil & Gas is one of the key private players in crude production. We contribute 25% of the total crude produced domestically. It is common knowledge that the Prime Minister has announced a target of reducing crude imports by almost 10% in the coming years. At the same time, we as a group feel our companies have much to offer in this regard. We are one of the biggest private players in this sector. Take for instance Zinc, Silver, Aluminium and even Iron ore – we are the largest producers of these metals.

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We feel there is more potential in these discoveries. We have not begun exploration for unconventional hydrocarbons like shale gas because the current regulatory framework is not financially viable for companies to even explore. We have taken up this matter with the central government and are attempting to address all the concerns involved. We have approached them with the possible potential in the region and stated our fear of the current regulations governing the sector. While the permission to look for unconventional hydrocarbons like shale gas exists in the blocks allotted to us, the costs involved are going to be significantly high. And if we have to pay back the royalty, cess and the profit petroleum to the government, the net cost will be far higher than what we can afford to undertake at present. So we have approached the ministry to reconsider these levies – requesting them to view the cost incurred on the exploration etc as the cost of import substitution – and reconsider incentives that may be put into place to encourage this nascent industry.

However, here I would like to point out that the government and we have the same vision – we are on the same page about the need to increase domestic hydrocarbon production. This is best illustrated by the fact mentioned earlier as well that the Prime Minister has set the target of reducing crude imports by 10%. Plus, the new method of tendering via Open Lease Acreage Policy (OLAP) is an encouraging approach as well. "With our expanded portfolio in Rajasthan as well as other parts of the country, we aim to develop many more "Mangalas" and put India on the path to energy security."
Q. What makes Cairn Oil & Gas different from its competitors?
A. Apart from the manner in which we conduct business responsibly and engage with the local community, I feel it is the application of digital technologies.

The current focus of our digitalisation is on real time monitoring and ensuring safety, here it is not just safety of human life at the time of some incident, it is also the safety of our exploration and extraction processes.

Another area is in terms of finding oil exploration data through real time monitoring. The digital centre at Gurgaon office can control the entire drilling operation in Barmer. We can view the operations on the ground in three dimensional images, which help us or give us a higher chance of success during exploration and extraction.

We are now looking at further applications of digital technology to increase the efficiency of the ongoing processes and also improve the chances of success in exploration and being able to bring in higher operating time and so forth. However, in the 1990s, as luck would have it, none of these explorations were successful.

Q. Is there any specific challenge in Barmer that Cairn Oil & Gas handled better than its predecessors or its competitors?
A. It would be unfair to draw such a comparison because as far as Barmer is concerned — there was no business. When you talk of the Barmer story you can do so only if you look at the development of Cairn Oil & Gas in the region. The Barmer story is synonymous with the Cairn Oil & Gas story.

What we have handled better is that while others were not able to discover oil — we discovered it. Other than that, we have built up the ecosystem in an area which was desolate and isolated earlier — an area known as kala pani. The ecosystem developed as the business grew further.

Since 1990s numerous players have made efforts to discover oil in the region. First came ONGC then came Shell (UK) and so on and so forth. However, in the 1990s, as luck would have it, none of these explorations were successful. More than 13 wells were drilled but oil was not found successfully.

Q. What do you feel Cairn Oil & Gas has done that has had the maximum impact in uplifting the district out of poverty?
A. The most impactful aspect of our operations in the region, which have helped it grow so much in this short time, has been that we have continuously engaged with the local community. This engagement is not limited to our social intervention programs like water ATMs but also in terms of increasing the participation of the local population in our operations.

This has been further enhanced by us through improving the skills of the locals — be it light vehicle drivers, truckers or building contractors. So one part has been skilling to meet the needs of the company’s operations and the other was skilling for self help and self sufficiency. Because at the end of the day there are only a limited number of people that we can directly or indirectly employ in our operations on the ground — especially because this is a highly automated plant. And this has been a key driving factor — finally, because instead of giving someone money it is better to teach them how to earn money, this is what makes the real difference on the ground.

Q. What is the crown-jewel in Vedanta’s Q. What does it often mean that the being able to bring in higher operating time and so forth. However, in the 1990s, as luck would have it, none of these explorations were successful.

And obviously, as a responsible business, we have attempted to address the big question of how we can improve the living conditions of the locals — be it from our support to education, hospitals or water or even daily needs and vocational training.

Q. Is there any specific challenge in Barmer that Cairn Oil & Gas handled better than its predecessors or its competitors?
A. That is a tricky question as there isn’t one answer — in every field there is scope to improve and do better. However, there are two aspects of our presence in Barmer, which I consider as tip-of-the-ice — one, increased recovery of oil where we hope to reach 50% soon. The other is gas discovery which we have done. We will hopefully reach 50,000 to 60,000 barrel equivalent, which would very easily be close to the second highest after ONGC in Rajasthan itself.

Also, with the advanced technology being deployed on the ground we hope to enhance oil recovery using the alkaline surfactant polymer process. From the time of when the operations began we were at 15-20% recovery, which has improved to around 30-40%. Now, we want to reach up to 50% recovery.

I keenly look forward to unlocking the unconventional hydrocarbon potential. And that can happen once you start exploration for the same and drill at different depths of the desert, which we feel is possible.
Building entrepreneurs

Cairn Oil & Gas’s presence in Barmer has led to a spurt in local businesses. And individuals who began with supplying material and products for the oil and gas company have expanded their businesses boosting the local economy.

Thirty-three-year-old Praveen Singh is the proud proprietor of Barmer’s first boutique heritage hotel – Sanchal Fort, opened in 2014. On a busy Friday night as he moved from one table to the next, asking his guests about their day and comfort, he explained that to paint a picture of Barmer’s transformation is all but an impossible task.

“If I attempt to put into words the way Barmer was 10 years ago as compared to what you see today, you will not be able to imagine,” Singh said. The complete transformation of this desert district is a common strain of conversation here. Cairn Oil & Gas’s presence here is highly valued by the locals not just because of the compensation or philanthropic activities it has undertaken but also because the company has given rise to local businesses. Individuals who began with providing material and services to Cairn Oil & Gas and its support companies’ operations have gone on to expand their businesses far and wide. For instance, until the early 2000s, Barmer had only two hotels in the whole district and as of 2019 there are more than 20. Each hotel comes with support staff and has created employment for hundreds if not thousands.

Growth of the oil business has given rise to many such support businesses. As Cairn Oil & Gas, CEO, Ajay Kumar Dixit explained, “As business grew, the migration of labour and skilled individuals moving into the region not only boosted the local economy but also helped in meeting the local needs.” According to him, the trucking and light vehicle operations in Barmer have shot up multiple times in the last decade. Till the early 2000s, camel carts and share autos were the most dominant mode of transport apart from the rare state transport corporation buses, but now there are a number of companies providing air-conditioned buses, large SUVs as taxis and trucks to the company on lease. These are available to locals and tourists as well.

Percolation from the top down – top being Cairn Oil & Gas and other support companies and down being the general public based in Barmer and adjoining villages – is most visible in the transport, construction and hospitality sectors. Lalit Kiri, a trained pharmacist, has made a fortune over the last decade-and-half through his firm Kiri and Company Logistics Private Limited by providing portable bunkhouses for Cairn Oil & Gas and other support companies working on oil exploration and infrastructure in the region. His association with the oil and gas company in Barmer began years before the first oil was discovered at the Mangala plant.

As he proudly displayed his company website and videos on his smart phone, Kiri said that as of 2013 he is looking to diversify his business investments. He has already started providing his services to companies working across the country and is looking to expand his investments internationally. The lanky man is well known in this town and its adjoining areas not just for his humility but also for his business acumen. After his success with the bunker houses for companies working in Barmer, Kiri has gone on to build a complete resort with container bunk houses. Industrial in look, the resort is comfortable and offers all the modern facilities. Keen to expand his business further, Kiri believes Cairn Oil & Gas coming to Barmer paved the way for many like him, who had few livelihood options.

Even Praveen Singh, Sanchal Fort proprietor, began work as a logistical support provider for Cairn Oil & Gas, where he would supply equipment and heavy machinery, catering and other services. He said, “There was a vacuum in this town in terms of high-end resort and hospitality space – so when we hired the big multinational companies to do some contractual work for us we introduced them to the locals as sub-contractors and slowly the whole eco-system was built up.”

The company for years now has followed the policy of giving preference to local vendors over those from outside. Local vendors are given first opportunities and that has led investments in basic support businesses like facilities management and transportation. “The local vendors have become very reliable and competent service providers. And now, our support companies rarely bring sub-contractors from outside of Barmer,” said Mohata. Now, after years of such operations when international companies like Baker Hughes LLC, Halliburton Co., and Schlumberger Ltd. come to the field, the local vendors are able to approach them, communicate and negotiate the terms of work directly with them, which the company’s leadership feels has been enabled by them.

Praveen Singh
Proprietor-Sanchal Fort, Barmer

Lalit Kiri
Proprietor-Kiri and Company Logistics Private Ltd, Barmer

of which only 20 to 30 per cent are from the local areas. “I am hoping to increase the ratio of locally hired staff and am training more local youth to be able to meet the staff requirements of pleasant service and basic English-speaking skills,” he said.

Training and exposure to global standards of operation has also been a key focus of Cairn Oil & Gas. Rajesh Mohata, Director Procurement and Supply Chain Management at the company explained that when the company hires or outsources any service or contractual work, first, the vendors are trained and told about the internal standards and processes. For instance, a number of heavy vehicles hired on contractual basis are mandated to travel at 60 km per hour or less irrespective of the emptiness of the road. Similarly, all drivers must wear seat belts and insist that passengers – whether sitting in the front or back seat must wear seat belts. Our training and exposure to local vendors has helped them gain contracts from the international firms,” said Mohata. He added that since Cairn Oil & Gas has always had stringent rules and processes, the vendors working for them have learnt the value of these processes and therefore have become a more attractive alternative than vendors outside Barmer. “In the initial years we trained the locals in contractual work – like transportation, excavation etc – so when we hired the big multinational companies to do some contractual work for us we introduced them to the locals as sub-contractors and slowly the whole eco-system was built up,” he added.

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Cairn Oil & Gas, over the past decade, has boasted of many firsts in technologically advanced processes. From the world’s longest continuously heated and insulated heated pipeline, to the world’s largest Alkaline Surfactant Polymer (ASP) project, the company is aggressively investing in technology to optimise its production. It was also one of the first private companies in the country to adopt horizontal drilling under the ground surface, which reduces the environmental impact of oil exploration. While the industrial processes grow and develop with the growth in oil and gas business, the oil and gas giant has opened a new chapter with rapid digitalisation of their gas business, the oil and gas giant has opened a new chapter with rapid digitalisation of their processes.

The automated plant in Rajasthan is a technologically advanced processes. Has boasted of many firsts in airn Oil & Gas, over the past decade, with Tech people and works with various process teams to address optimal use of machinery, man or production added, except for safety and a defined value in terms of money saved. As CEO Ajay Kumar Dixit said, “We are now looking at further applications of digital technology to achieve higher efficiency from the ongoing processes and also improving the chances of success in exploration and being able to bring in higher operating time of machinery, which in turn will contribute to increased production.”

In July 2019, Cairn Oil & Gas held a special symposium aimed at exploring ways to achieve greater collaboration and efficiency through digitalisation in the oil and gas sector. The company signed MoUs with five start-ups, following the conference. As Anand Laxshmivarahan R, Chief Digital Officer at the firm explained, “From an organisation standpoint, right from the Chairman to the executive committee – digitalisation is top of the mind. There is investment and a strong belief that we need to be a digitally and technologically advanced organisation.”

As of 2019, the company is running close to 40-42 projects on digitalisation, each with a defined value in terms of money saved or production added, except for safety and sustainability related projects. The digital transformation of the company has been dubbed project Nirmaan internally, and it aims to address optimal use of machinery, man hours, equipment, exploration and production. If one were to unbox the terms project Nirmaan aims to address problems and opportunity prospects that technology can help solve. The digital team comprises of roughly 30 people and works with various process teams to improve the use of technology. “The way we look at project Nirmaan’s footprint in the company is through seven or eight strategic imperatives like improving productivity, efficiency and cost related aspects, enhance safety, enhancing production, minimising production loss and acceleration of exploration,” said Laxshmivarahan.

One of the big success stories at Cairn Oil & Gas from the digitalisation process has been the automation of rig scheduling. The oil rigs were manually scheduled for moving from one location to another, till very recently. The digital team has just completed a pilot project showcasing how a digital tool can do the same better and quicker. The rig scheduling digitalisation is based on analysis of one whole year’s production data, when it was managed manually and then juxtaposed with the digital tool to show that the company could have saved close to 4,50,000 barrels of oil per year. It can also be viewed as an additional gain of oil to the tune of almost two days worth of production in the current process.

The company is exploring possibilities of deploying robotic analytics to gauge potential failure in terms of changing pressure, temperature, flow or flow of the equipment in the field. It is currently being monitored in real time through automated software bots and has gained around 60% to 70% accuracy. This figure may appear unimpressive to most, however, even the most secure and advanced banking firms that use automated software bots for fraud detection today, only have 70% accuracy.

Cairn Oil & Gas’s digitalisation drive is diverse – from employee experience, enhancing production to minimising mundane repetitive tasks, algorithms and software bots are being employed to increase efficiency. A key area of the digital drive also involves safety and sustainability.

“Usually, when selecting a process or activity for digitalisation we first draw up the value in terms of return it will give. Each project has a dollar value and based on that we seek out opportunities to optimise, enhance and secure processes,” said Laxshmivarahan. He added that dollar value is not calculated or even considered when digital processes are being considered for the safety or sustainability of the business. “We cannot put any value on safety and sustainability because as a responsible business these core values are essential for our license to operate,” he said.

One of the popular uses of technology related to sustainability at Cairn India has been the deployment of drones to monitor the 670-kilometre-long insulated pipeline that starts from the Mangala plant at Barmer in Rajasthan to Salaya oil terminal near Jamnagar in Gujarat. The 24-inch heated pipeline meant for crude oil and gas transportation is mostly underground and needs constant monitoring to avoid damage by unwanted vegetation growth or unrelated excavations nearby. The company contracted a third party to conduct the monitoring via drones, which is closely observed at the head-office, the Barmer plant and other smaller units along the length of the pipeline. This close monitoring has prevented accidents or leaking from the pipeline that can damage the environment.

The digital team at Cairn Oil & Gas is exploring the use of similar technology to monitor their oil fields in Barmer that are spread far and wide. “This can help us ensure safety of all employees working under harsh conditions in the desert,” said Laxshmivarahan.
For instance, in the three years of operations at the Mangala oil well in Barmer, there have been only two safety related incidents. These incidents were also of very low intensity as they were reported to be tier-1 and tier-2 level. This is lower than the average of big international oil and gas firms. Similarly, over 99% of the staff at Cairn Oil and Gas goes through annual health checks and are allowed back in the field only after being cleared by the doctor as well as their divisional head, which ensures optimal productivity of man-hours.

According to Tiwari, HSEQ is paramount to successful business operations. He explained that when safety norms are adhered to, the health of employees, environmental impact and quality are all automatically taken care of. “If process safety is followed a number of other aspects all fall in line one after the other,” said Tiwari.

The rules and regulations for HSEQ are not limited to the direct employees of Cairn Oil & Gas alone, as is evident when you meet some of the support firms and sub contractors working in the field. All company employees are required to adhere to its norms on HSEQ. This has led to a largely healthy and safe environment throughout Cairn Oil & Gas’s operations. “We host special training sessions for our vendors and support companies so that our norms of HSEQ are met by the employees of these units as well,” said Tiwari.

While it is hard to imagine that a heavy industry like oil and gas can maintain the highest standards of HSEQ, the internal indices of the company show that they do.
Business operations and Corporate Social Responsibility (CSR) have played an equal part in transforming Barmer

Q. What do you think has been Cairn Oil & Gas role in transforming the Barmer landscape and the lives of the locals?

The impact on society has been two-tier—one, from the company’s Corporate Social Responsibility (CSR) initiatives, and the other is a direct result of its business operations. We have had the advantage of becoming a strong case study, which demonstrates that industry can have direct social impact, aside of the impact that CSR programs have on the ground.

Q. Briefly could you explain the policy or thought in selecting and executing the numerous CSR projects in Barmer?

Corporate social responsibility is hard work. It is a work of passion and dedication which must be done with transparency. The success of any CSR initiative does not depend on the team alone but requires buy-in from top-down. It is the commitment from the organization’s leaders to every employee of the organization who follows it to completion.

The guiding principles of CSR initiatives are as follows, first, that all our programs will be designed based on community-needs assessments.

The plans are prepared per the community needs assessment through an outsourced reputed agency with defined timelines. These assessments are done on a regular basis and are followed by the impact assessment of each program implemented. This helps in revising and refining CSR strategy and programs as the programmes progress.

The second factor is that we try to augment government programs and focus on strengthening government institutions through a collaborative approach, so that should there be a time when Cairn Oil & Gas withdraws, the scheme does not disappear.

The CSR team studies available Government social programs and schemes. The implementation model as well as the gap between community and government programmes may vary depending on the geographical, demographic, and resource characteristics of each area. The team also focuses on programs for strengthening these gaps to ensure that the benefit reaches the bottom of the pyramid. The programs strategically converge to ensure maximum benefit to the community and minimum duplication. We focus on longevity and sustainability, and to ensure this, we have an exit strategy built into our CSR programs — where we work towards handing programme ownership to the local communities.

The success of implementation of our CSR programs is the result of following company core values, which when followed, create a habit that soon becomes DNA. These values are Care, Respect, Trust, Entrepreneurship, Integrity, Innovation and Excellence.

Besides this, credible and expert partner agencies for implementation of the programmes helps Cairn deliver the scope more effectively and efficiently. These are selected through a stringent process.

Nothing of value comes easily. When CSR initiatives are successful, the organization will enjoy improved morale and productivity.

Furthermore, you will see how doing good can positively impact your triple bottom line

Q. What are the CSR initiatives under Cairn Oil & Gas at Barmer, predate the Government mandated expenditure under the Companies Act 2013?

The Ministry of Corporate Affairs, Government of India, has brought business responsibility centerstage, which is different and distinct from charity or philanthropy.

Irrespective of, and before the companies act 2013, the company has been committed to conduct its business in a socially responsible manner.

The driving force for CSR, has always been the vision of our Chairman to give back to the community. He strongly believes in proactively engaging with communities and operating through free and informed consent. He believes that the community has the right to know what the business outcomes will be and what these outcomes would give in return to the community.

It is his vision that led the CSR team to work for the development of the community even before The Companies Act required us to. No doubt the Cairns Act has enabled a structure and framework for businesses to work with.

Even initially, the CSR team studied the need of the community and based on the information gathered, decided to focus on the areas of health, education, skill development, safe water access, and natural resource management, including agri- and horticulture initiatives, animal husbandry, and dairy.

The Cairn Enterprise Centre imparts vocational skills like electrical repair and fittings, computing, mobile phone repair, masonry, as well as soft skills like English-speaking and digital literacy. Since inception, around 14,000 local youths have been trained.

The Jeevan Amrit Project enabling safe drinking water access, has built 124 RO plants in and around 124 villages.

The inhabitants of Barmer are based in hundreds of hamlets across the district and it is difficult for villagers to travel to the District Hospital. Therefore, our healthcare initiatives have ensured the District Hospital renovation, and provision of three specialists for specialized health services, housekeeping staff for maintenance of hygiene and sanitation in the premises, seating arrangements for patients, Information, Education and Communication (IEC) activities on seasonal and communicable diseases, etc.

Healthcare has further become more accessible through six Medical Health Vans to reach the furthest areas in more than 366 villages. Medicines are distributed free of cost for the community.

Q. In your view which is the best initiative in Barmer at present?

The Natural Resource Management projects...
Cooperatives produce close to ~15,500 litres of milk from across 41 villages in Barmer district in Rajasthan. The dairy project, the revenue generated by around 4,000 dairy farmers has crossed ~ INR 74 crore witnessing a production of over 2.6 crore litres of milk on a daily basis. Our focus has been to reach an advanced agrarian and animal husbandry technology to the villagers. Through government and private banks and microfinance institutions, we have created access to these specialized technologies that increase yield and produce quality.

Q. Why is natural resource management the best initiative according to you?
NRM has enabled a holistic and sustainable growth in Barmer, in a sector that is the region’s traditional mainstay. It has increased the income level of the farmers, increased the availability of water for agriculture, and supported the region’s bio-diversity. The early farmers who joined our initiatives have become like consultants and leaders of the movement, helping change and improve farming and animal rearing methods in the region. There are thousands of farmers coming to these model farms called wadis, to learn and use these technologies in their fields – so we notice that from the push effect now we have moved to the pull effect – where the demand is coming from the ground.

Farming, agriculture and animal husbandry is part of the culture of the nation and a self-sustaining business for every individual who has land. The economy of Barmer is agriculture-based and the region is responsible for among the highest milk production. Rajasthan has among the largest animal fairs across the nation. However, the methods are still primitive, and access to water is the biggest challenge. It is always better to strengthen existing skills than creating new ones, which may not be aligned with available resources, or the need and demands of the community.

For instance, dairy production has improved. Farmer revenues have increased anywhere between 20% to 50%, which is a huge jump. Today, there is pomegranate farming, there is Ber farming where large fruit-bearing and resilient varieties are thriving. Drip irrigation is used to reduce water requirements in these farms. They also cultivate Ker Sangri, jowar, and some other spices that do well in the local markets. Barmer is an arid region in the middle of the desert, and now there are suddenly pockets of very fertile and high yielding farms – almost like an oasis. It is beautiful to see pomegranate trees in full bloom, unlike anywhere else.

At Cairn Oil & Gas, social interventions have been part of the company’s DNA long before the Corporate Social Responsibility (CSR) Rules came into force and as a result the impact on local community is very evident. Equating the work done for community upliftment with sustainability, Cairn Oil & Gas strives towards moving beyond just philanthropic activities under their CSR programs.
Initially, Cairn programs focused on going wide instead of going deep where the company looked to provide essentials that everyone in the region needs including access to safe drinking water and healthcare.

In Barmer was to provide access to safe drinking water through installation of large RO plants. These plants were operationalised through a tripartite agreement between a vendor, the villagers and the company. As of 2019, a large number of these plants have been handed over to the local communities, which are now all under the control of the community. According to Dhanu Pratap Singh, director of the livelihood branch of the CSR initiatives, “It is far more important to teach a man how to fish than to just hand him a fish to eat.”

Apart from the expected results of Cairn Oil & Gas’s CSR activities – of increased agricultural income, higher returns in dairy farming, increased availability of drinking water – some unexpected and encouraging signs are also emerging. It is hard to believe, but even in 2019, Rajasthan is known for its issues related to caste and gender bias. Interestingly, ever since the firm began work in the region these issues have begun to resolve themselves. A shining example of this would be the dairy farming initiative, where Cairn Oil & Gas has helped set up 36 cooperatives. “This program was initially shunned by few community leaders,” explained Ayodhya Prasad Gaur, General Manager Corporate Communication. However, he added, once the villagers saw the financial benefits of the program, they have forgotten their caste differences and work together to ensure greater revenue and reach from their dairy business. Initially, its programs focused on going wide instead of going deep where the company looked at providing essentials that everyone in the region needs including access to safe drinking water and healthcare. And slowly now the company is focusing more on imparting skills and improving self employment in the region. The Cairn Enterprise Centre (CEC) and Cairn Centre of Excellence in Jodhpur (CCEO) have become most sought-after institutes in the region, by the youth, due to the quality of skill development here and the access to possible employers. CCE offers short term skillling courses like mobile phone repair, data entry operators training, electrician training, plumbing and masonry work. There are a number of graduates of this centre who have gone on to become entrepreneurs — opening own businesses or shops where they have hired 3-5 more individuals to work under them. CCOE runs longer term courses where Government of Rajasthan is a part of the tripartite agreement and the graduates from them are often recruited by the oil support companies in the region. These training centres have also been used to help the local businesses. Rajesh Mohata explained that local vendors had not been exposed to automated processes before Cairn Oil & Gas’ operations began. “In order to help these individuals, we trained them in computers skills... It was minor things that we took for granted, for example we created billing templates and email ids for them and taught them to use email,” he said. These skills have gone far in improving employment opportunities for the local communities as a number of businesses like Lait Kiri of Kiri

Cairn Oil & Gas partnerships have been radical right from the start. For instance, the traditional approach for oil and gas operators to break a project’s development into sub-elements and then bid each out separately as part of L1, where the lowest bidder wins. But Cairn has partnered for entire projects with a single award and built-in bonuses for early delivery and delivering more oil.

ASHISH BHANDARI
CEO (India and South Asia)
GE Baker Hughes

Scott Cooper
MD Halliburton India
The most far reaching and long lasting impact of Cairn Oil & Gas’s social interventions has been under its natural resource management programs. “It is a comprehensive method to address a number of challenges arising out of the harsh environment of the desert,” said Bhanu Pratap Singh. Citing the example of one of the largest lakes near Barmer town, Singh explained the pond was overflowing with silt till a couple of years ago and would not hold water for more than a month after the monsoon season. The company’s CSR team brought together the five villages, which use this pond as their common water source, and recommended they dredge the silt out. This process was agreed upon and the whole community came together and cleaned out the pond with help of required equipment like JCBs provided by Cairn Oil & Gas. The silt that was dug out was then given to the farmers to use as fertilisers in their fields. The lake now holds water throughout the year and has also begun to witness migratory birds. “The whole process became a self-sustaining initiative,” said Singh.

The natural resource management program also looks to improve livelihood opportunities and has done so in the areas of agriculture and dairy farming. “The early farmers who joined our initiatives have sort of become like consultants and leaders of the movement to change and improve the farming and animal rearing methods in the region. There are hundreds of farmers coming to these model wadis to learn and use these technologies in their fields – so we notice that from the push effect now we have moved to the pull effect – where the demand is coming from the ground,” Singh said. As per the firm’s calculations, farmer revenues in the region have increased anywhere between 20% to 50%.

Continuing focus on sustainable and long-term projects, the company is expanding its CSR footprint into remedial and experiential education in government schools. “We hope to reach those students that inevitably drop out of school due to lack of understanding or interest,” said Sehra. Having completed a pilot project, the program is set to roll out to 30 schools in the coming financial year and reach 80 schools in the next three years.

In the years to come, Cairn Oil & Gas along with its business partners will have a significant role in shaping India’s energy future. As we have already seen over the past decade, the company has made use of the challenging E&P environment and is on top of the list of India’s fastest-growing companies with its sustained contribution to India’s quest for energy security.

**Gautam Reddy**
Senior Product Engineer, Schlumberger