



CONCEPTUALISED AND DESIGNED BY CORPORATE COMMUNICATIONS, CAIRN OIL & GAS

VEDANTA LIMITED
Cairn Oil & Gas

DLF Atria, Phase 2, Jacaranda Marg, DLF City, Gurugram - 122002, Haryana, India
T +91 124 459 3000 | F +91 124 414 5612 | www.cairnindia.com

Registered Office: Vedanta Limited, 1st Floor, 'C' wing, Unit 103, Corporate Avenue, Atul Projects, Chakala, Andheri (East), Mumbai - 400093, Maharashtra, India | T +91 22 664 34500 | F +91 22 664 34530 | www.vedantalimited.com

CIN: L13209MH1965PLC291394

FOLLOW US:



EXCELLENCE THROUGH INNOVATION & TECHNOLOGY

CAIRN OIL & GAS CORPORATE BROCHURE

DELIVERING CONSISTENT GROWTH & VALUE TO STAKEHOLDERS

Cairn Oil & Gas, a vertical of Vedanta Limited is one of the largest oil and gas exploration and production companies in India. We are the largest private sector producer of crude oil in India with 185,587 boepd of average operated production in FY2018. The company's target reserves and resource base is 5.5 billion boe. Through its affiliates, Cairn Oil & Gas has been operating for more than two decades in India playing an active role in developing the country's oil and gas resources. We combine a world-class asset portfolio with proven expertise across exploration, development and production to create significant value for all stakeholders.



C O N T E N T S

04

Our Vision
Our Values

05

Our
Portfolio

06

Technology

08

Asset
Portfolio

10

Rajasthan
Block

12

India
Potential

14

Health, Safety &
Environment

16

Corporate
Social
Responsibility

18

Our
People



OUR VISION

'To be a best-in-class E&P Company with a balanced portfolio delivering value through superior business performance and partnerships'

OUR VALUES

TRUST: We actively foster a culture of mutual trust in our interactions with our stakeholders and encourage an open dialogue which ensures mutual respect.

ENTREPRENEURSHIP: At Vedanta, our people are our most important assets. We actively encourage their development and support them in pursuing their goals.

INNOVATION: We embrace a conducive environment for encouraging innovation that leads to a Zero Harm environment and exemplifying optimal utilization of natural resources, improved efficiencies and recoveries of by-products.

EXCELLENCE: Our primary focus is on delivering value of the highest standard to our stakeholders. We are constantly motivated on improving our costs and our quality of production in each of our

business through a culture of best practice benchmarking.

INTEGRITY: We place utmost importance on engaging ethically and transparently with all our stakeholders, taking accountability of our actions to maintain the highest standards of professionalism and complying with international policies and procedures.

RESPECT: We lay consistent emphasis on human rights, respect the principle of free, prior, informed consent, while our engagements with stakeholders give local communities the opportunity to voice their opinions and concerns.

CARE: As we continue to grow, we are committed to the triple bottom line of People, Planet and Prosperity to create a sustainable future in a zero harm environment for our communities.

OUR PORTFOLIO

- Largest independent oil and gas E&P company in India
- Production from operated assets constitute ~ 25 percent of India's crude oil production
- Opened 4 frontier basins
- 5.5 billion boe target reserves and resources
- Built World's longest continuously heated and insulated pipeline (~ 670Km)
- In 2004 discovered the Mangala field in Rajasthan; largest onshore oil discovery in India in more than two decades
- Portfolio of 46 blocks in India with total Acreage of ~50,000 sq km
- Three producing assets : Rajasthan and Cambay in the west and Ravva in the east coast of India

H I S T O R Y

1994 28th October
PSC Signed between the GoI and a consortium consisting of ONGC, Videocon Petroleum Limited, Ravva Oil and Command Petroleum



1998 June
RAVVA: Achieved 25 million bbls of cumulative oil production

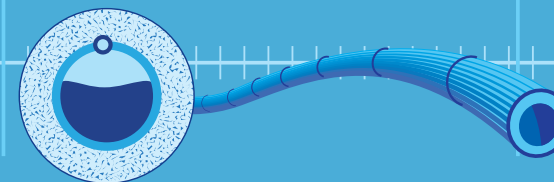
PSC was signed between the Government of India and CB/OS-2 Joint Venture (JV) comprising Cairn Energy India Pty Ltd, Oil and Natural Gas Corporation Ltd and Tata Petrodyne Limited



2000 June
CB/OS-2 - First success in what is now known as the Lakshmi Field, by discovering gas in Babaguru and oil in Tarkeshwar levels

2004
Struck gold with discovery of Mangala, Rajasthan

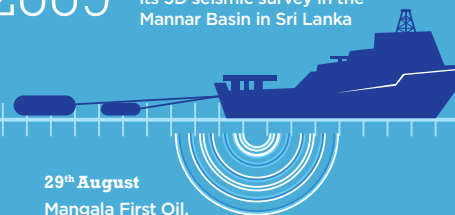
2007
Cairn came up with the final concept of a single 24" crude pipeline in addition to a parallel natural gas pipeline, which would feed gas to the heating stations every 18/20 km along the length of the pipeline



2008
Entered Sri Lanka
April Construction of Mangala Processing Terminal started



2009 10th December
Cairn Lanka commenced its 3D seismic survey in the Mannar Basin in Sri Lanka



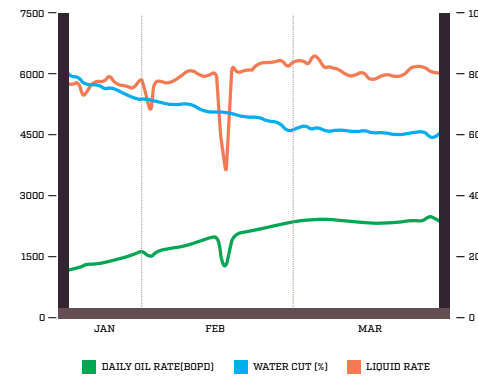
29th August
Mangala First Oil, Inauguration by Prime Minister of India

LEVERAGING THE TECHNOLOGY TO UNLOCK THE POTENTIAL OF RAJASTHAN BLOCK

HYDRAULIC FRACTURING

Hydraulic fracturing is the process of providing a conducive path for hydrocarbons to flow from the reservoir to the wellbore, in low permeability reservoirs by 'high-pressure injection of fracking fluid, primarily - water containing sand or other proppants.'

- Successfully placed the largest frac (430K lbs per stage proppants) job in India in one of the RDG wells; improved operation efficiency (Reduction in days from 4.5 to 2.2 per frac)
- Limited entry technique used to increase reservoir coverage from 60 % to 85 %
- Expected ultimate recovery from the RDG field upgraded by -25% as a result of successful application of hydro frac technology and better reservoir characterization
- Addressable switch technology implemented for perforating multiple zones in a single E-line run
- Evaluating and implementing fiber assisted frac technology to increase fracture conductivity and reduce cost per frac by -50%
- Operational excellence: Multiple wells in Barmer Hill formations being accessed in tandem



POLYMER EOR

EOR through polymer flooding is a technology used for improving oil recovery - particularly in older and declining oil wells/oil reservoirs. Addition of polymers to the water enables a better displacement of oil and improves recovery factor.

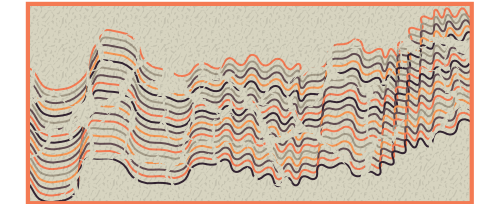
- Successful full field peak polymer injection (400 kblpd) achieved in the Mangala Field during the year; all five formations of Mangala being targeted
- World's largest centralized polymer mixing facility with a capacity of 80,000 blpd of 15,000 ppm mother solution operational at the site
- Water cut decrease observed in multiple wells pointing to excellent reservoir response

3D SEISMIC

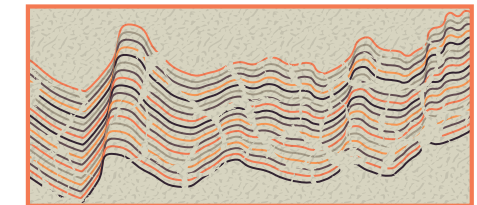
3D seismic is a method of exploration in geophysics that provides detailed information about fault distribution and subsurface structures to build high resolution geological model of an area of interest.

- Cairn Oil & Gas introduced state of the art seismic imaging technology in the structurally complex Central Basin High area in Rajasthan block.
- Billions of acquired seismic samples are processed to generate 3D subsurface.
- Mapping on the new seismic image provided structural enhancement and detailed reservoir architecture for the Raageshwari area, and will be the key for reducing development drilling risks
- Identified additional gas resources and added approximately 300 mmboc of HIIP.

BEFORE (VINTAGE 2011)



AFTER (VINTAGE 2015)



INNOVATION IN CONCEPT OPTIMISATION

- Reduction of field installation time and cost by using 'Spool-able Reinforced Thermoplastic Pipe' instead of DSS lines
- Skid based modular polymer mother solution preparation unit instead of conventional plant to reduce execution time and onsite construction, and provide flexibility for relocation
- Low invasive drilling fluid system to control wellbore damage

HISTORY

2010
16th January
First gas was supplied to support the commissioning activities of the above ground installations of the crude oil pipeline system

2011
May
Saraswati field commenced production
Vedanta Resources acquired a 58.5% stake in Cairn India

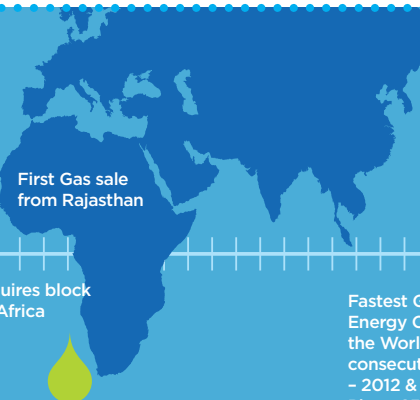
10 million barrels
February
CB/OS-2: Crossed 10 million barrels of crude oil production

April
150,000 bopd production from Mangala enables Rajasthan block to produce 175,000 bopd
To date ~ 750,000 lives touched through our various CSR interventions across assets

January
Bhagyam field commenced production Marginal Oil Field Raageshwari commenced production

23rd March
First Gas sale from Rajasthan

2012
Cairn acquires block in South Africa



Fastest Growing Energy Company in the World for two consecutive years - 2012 & 2013 as per Platts 250 rankings

2014
200 million barrels of production from Rajasthan

US\$ 3 billion net capital expenditure plan in next three years to fuel growth
129 New oil wells brought into production in FY2014
21st March Started Coastal evacuation from CB/OS-2

2015
Executed Mangala EOR. World's largest polymer flood
300 million barrels of production from Rajasthan

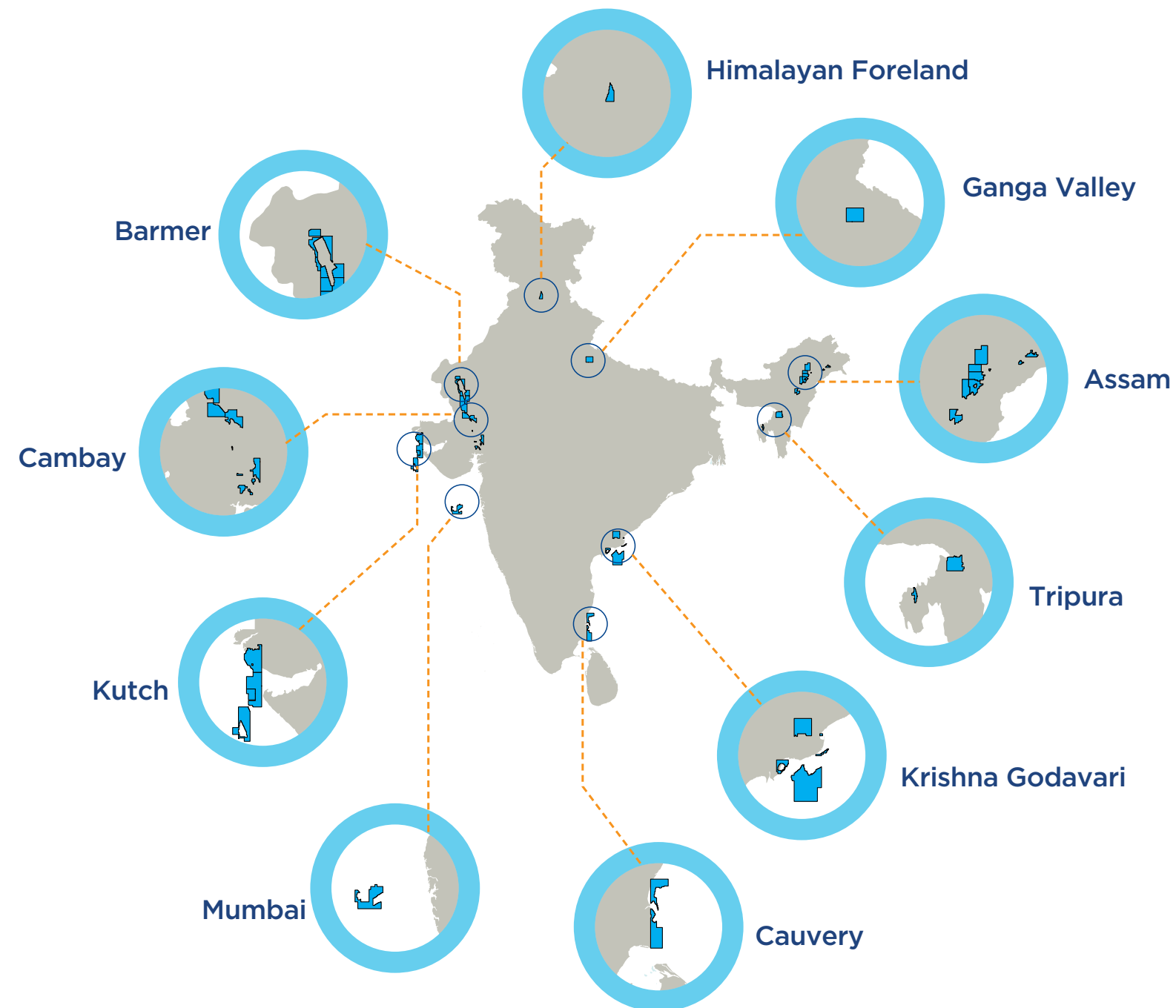
2016

2017
Celebrating 15th Anniversary of CB/OS-2 OPERATIONS 2002-2017
Transforming Gas field to Oil field
Completed 15 years of CB/OS-2 operations
Achieved cumulative oil production of 2,00,000 bbls/day in FY 2017-18

2018

ASSET PORTFOLIO

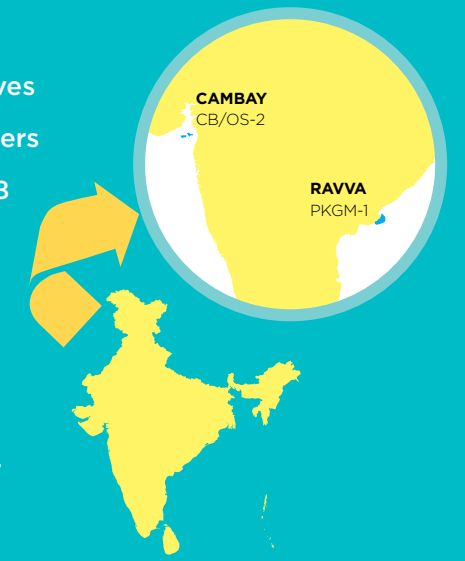
46 blocks with total acreage of ~50,000 sq. km



ASSET HIGHLIGHTS

RAVVA (PKGM-1) ANDHRA PRADESH

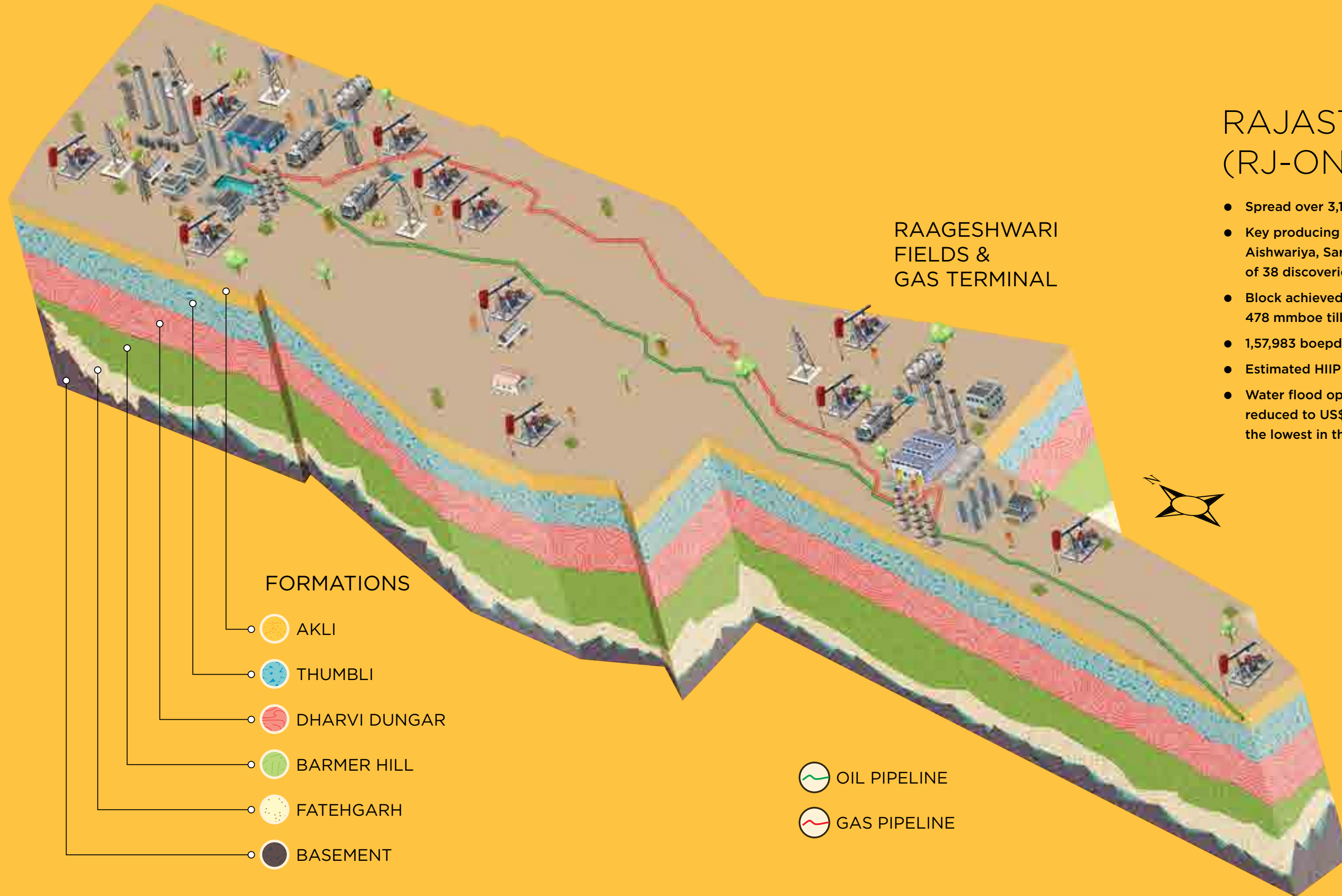
- Located in the shallow offshore area of Krishna Godavari Basin
- Since its inception in 1994, Ravva has produced more than 288 mmbbls of crude and over 354 billion cubic feet of gas, representing close to 50% recovery till FY2018
- Block current production: 17,195 boepd as of FY2018
- Example on how technology can play a central role in accessing new reserves
- Field direct operating cost is one of the lowest amongst Cairn Oil & Gas peers
- The field has clocked 6.05 million LTI free man- hours by the end of FY2018



CAMBAY (CB/OS-2) GUJARAT

- Located in the offshore area of the Cambay block
- Since inception in 2002, Cambay has produced approximately 31 mmbbls of crude and over 233 billion cubic feet of gas
- Block current production: 10,408 boepd as of FY2018
- Transformed the block from a predominantly gas field to an oil field through technology
- Example of optimal asset utilization, with its infrastructure being used for the tolling and processing of ONGC's gas from its North Tapti field and Gas Balancing Agreement (GBA) with Niko and Gujarat State Petroleum Corporation JV
- The field has clocked 4.14 million LTI free man hours by the end of FY2018

MBA FIELDS
& MANGALA
PROCESSING
TERMINAL



RAJASTHAN BLOCK (RJ-ON-90/1)

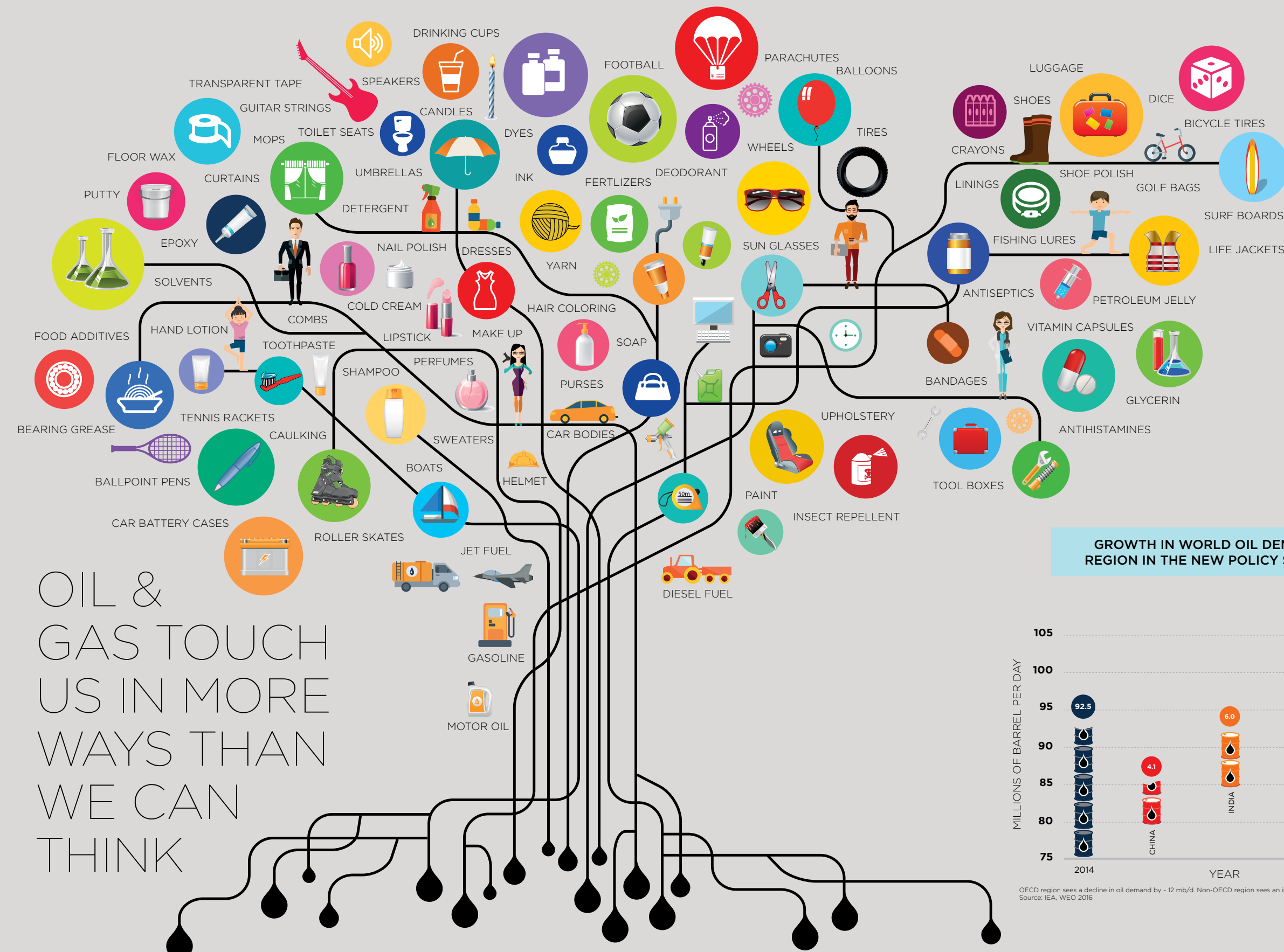
- Spread over 3,111 km West of Barmer in Rajasthan
- Key producing fields - Mangala, Bhagyam, Aishwariya, Saraswati, Raageshwari; there are a total of 38 discoveries till date
- Block achieved cumulative total production of over 478 mmbcfe till the end of FY2018
- 1,57,983 boepd gross production in FY2018
- Estimated HIIP of 5.75 billion boe as of 31 March, 2018
- Water flood operating expenditure was further reduced to US\$ 4.6 per barrel, which remains one of the lowest in the world

FORMATIONS

- AKLI
- THUMBLI
- DHARVI DUNGAR
- BARMER HILL
- FATEHGARH
- BASEMENT

OIL PIPELINE

GAS PIPELINE

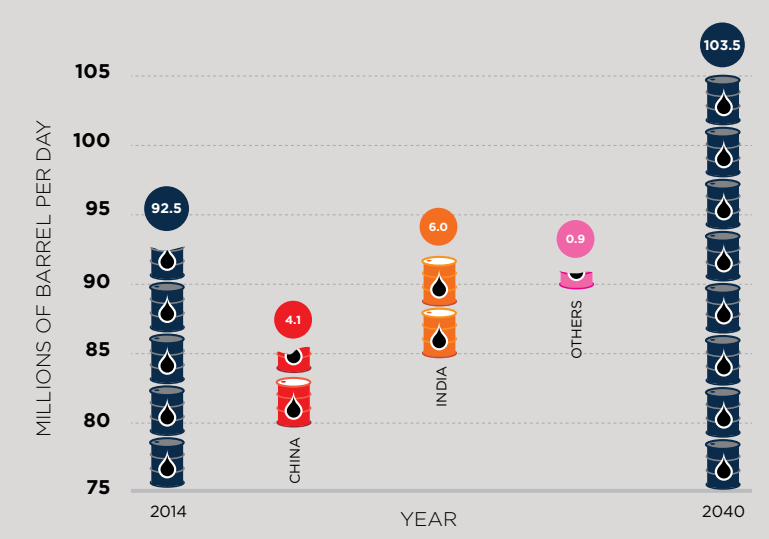


OIL &
GAS TOUCH
US IN MORE
WAYS THAN
WE CAN
THINK

WORLD VIEW AND INDIA POTENTIAL

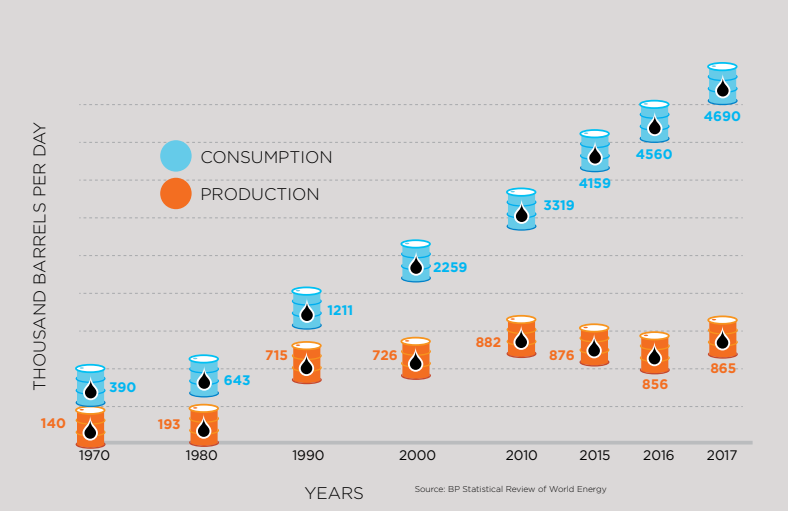
India is the largest source of future oil demand growth
Oil consumption in India increases by 6 mb/d
In 2040, India's import bill for oil & gas would be \$460 billion compared with \$65 billion in 2015

GROWTH IN WORLD OIL DEMAND BY REGION IN THE NEW POLICY SCENARIO



OECD region sees a decline in oil demand by -12 mb/d. Non-OECD region sees an increase in oil demand by 19 mb/d. Source: IEA, WEO 2016

INDIA'S OIL CONSUMPTION VS PRODUCTION



Source: BP Statistical Review of World Energy

CARING FOR OUR PEOPLE & PLANET

We endeavor to meet the highest international standards of Health, Safety, and Environmental performance. We have consistently demonstrated top quartile HSE performance amongst peers and all our operational sites are certified as per ISO 14001 and OHSAS 18001 standards. Security Management System of the Pipeline Operations is certified as per the ISO 9001 standard.



- ET Now CSR Award 2018 in the category of Health, Water & Water Management.
- Rajasthan CSR Award 2018 for Jeevan Amrit Project.
- 'CSR Best Practices Award' for the process and procedures followed in governing of CSR activities at 7th Asia CSR Best Practices Award on August 2, 2017.
- Raageshwari Gas Terminal (RGT) has won 'Sword of Honour' from British Safety Council for excellence in HSE management
- The International Fire & Security Exhibition and Conference (IFSEC) India has awarded the Cairn Oil & Gas security function with three prestigious awards at the 12th IFSEC India Awards 2018
- Barmer Unnati, a Cairn CSR initiative was awarded the 'SKOCH Bronze Award' and 'SKOCH Order of Merit' at a felicitation ceremony held at CCI, New Delhi on September 18 - 19, 2018
- Golden Peacock 'Award for Sustainability'
- Energy and Environment Foundation Award for 'Outstanding Achievements in Sustainability Management' in Platinum Category
- British Safety Council 'International Safety Award with Merit' for our Midstream operations
- FICCI Safety Systems Award for Industry: Gold Prize for Raageshwari Gas Mine



People Safety, Community Wellbeing and Asset Integrity underpins our strong HSE performance.

Robust governance, compliance and management systems together with matured processes on monitoring, active industry engagement and use of technology.

- Structured approached on Asset Integrity, Quality and Process Safety Management
- Emphasis on mapping the risks and controls involved, integrating with our business processes
- Active leadership engagement with accountability
- Robust and tested Emergency / Crisis Management plan
- Concerted effort on embedding safety culture focusing on the front line worker and contract staff



- 99% of all the water we consume is sourced from saline, non-potable water aquifers. **97% of produced water is recycled and reused.**
- Assurance through periodic audits of our energy and water usage.
- Part of several international efforts driving environmental best practices. **US EPA's Global Methane Initiative** and **IUCN's "Leader's for Nature"** program.



Cairn Oil & Gas has also dedicated considerable resources to improve the road safety of our vehicles by fitting them with right technology – such as GPS, seatbelts, airbags and conducting training programs for all our drivers. In addition, we have also worked with local community stakeholders so that they learn how to use the roads safely, improving the overall road safety environment. In all, we have trained over 21,000 individuals through our road safety training program.

CREATING SHARED VALUE THROUGH INCLUSIVE GROWTH

We are committed to empower the local communities in its areas of operation and support them in their path to sustainable and inclusive growth.

Our holistic developmental programs for local communities are based on five thematic areas.

LIVELIHOOD

In today's world, it is very important to learn and accumulate new skills in order to stay ahead of the curves. Our excellence and enterprise centers make sure people are taught important skills to make their life simpler, bigger and better.

Agriculture, Natural Resource Management and Dairy Development

The program is aimed at increasing incomes of farming community through productivity enhancement of agriculture and livestock. We have constructed 903 wadis, khadins and planted over 1,00,000 saplings

- More than 10 Lakh cubic meter of water harvested every year through renovation of 7 Nadis.
- 35 milk cooperatives registered with 3209 dairy members.
- 20 women self-help groups (SHGs) formed for dairy women; total SHG members 259 women.



It is our effort to provide affordable medical services to the far flung villages in the Barmer district. Villages in our operational area are sparsely populated and lack optimum methods of transportation and mobility.

- 10 mobile health vans including 6 in Barmer and 4 in Gujarat cover 244 villages on a weekly basis.
- 15 community awareness programmes
- Medical services at the door step of the rural community covering ~2,40,000 community members
- 10 health awareness camps conducted – 14,000 people reached
- 36,000 OPDs and more than 400 minor & major surgeries have been successfully conducted



Better education is very necessary for all to go ahead in life and get success. It develops confidence and helps building personality of a person. School education plays a great role in everyone's life and we at Cairn Oil and Gas, make sure that this basic need is fulfilled. School intervention programme and educational scholarships in Barmer provides support to teachers and students through enrollment kits, infrastructure and capacity building in schools in Gujarat.

'Swastha Pathshala Abhiyan' has been introduced in 54 government schools, impacting 14,000 students in Barmer. This programme focuses on behavioral modules on health and hygiene for creating awareness, undertaking detail health checkup camps as well as connecting with the parents on appraising the current need of their kids.

EDUCATION



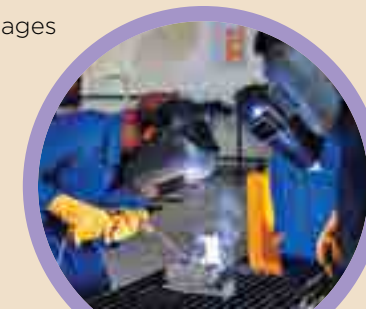
WATER

Safe drinking water to communities through several RO plants, Solar Water Kiosks and Jal Rathis (Water Vans) across three states. Sustainable model with community ownership. Program being expanded to cover over 1 million people through ~ 330 RO plants, one of largest such initiatives in India.

CAIRN ENTERPRISE CENTRE

State-of-the- art training center in Jodhpur with best-in-class facilities including residential accommodation with equipment sourced from across the world.

- 360° development oriented approach with holistic training on soft skills, domain skills, English & digital literacy
- Vocational training offered in more than 16 job roles.
- Masonry helpers trained in hard to reach areas near the Indo-Pak border villages



SANITATION

Cairn Oil and Gas undertakes large scale initiatives under this program to support the national sanitation mission.

- Completed ~16,800 household toilets, 4,500 bathrooms and 188 school toilets under SBA
- Supported government's effort to create 1st ODF Block i.e, Gida block in Barmer District along with 3 Gram Panchayats



PROJECT NAND GHAR

- Nandh Ghar Project - committed to the Prime Minister's national vision of eradicating child malnutrition, providing education, healthcare and empowering women with skill development, developing 4000 Nandh Ghars across India, affecting 1,40,000 children, 80,000 mothers, 20,000 women startups and 8,000 toilets.

CAIRN CENTRE OF EXCELLENCE

Cairn Centre of Excellence campus spread over 12 acres in Jodhpur offers courses such as Solar, Wind, Automobile, Welding, Retail and IT.

- Best-in-class Equipment sourced from Germany, Finland etc.
- MoU signed with RSLDC in presence of Chief Minister.
- MoUs signed with IIIT, Kota and MNIT, Jaipur.
- Supported by Ministry of New and Renewable Energy (MNRE)
- Over 12,000 youth trained at Cairn Enterprise Centre in Barmer and Jalore districts.



FOR US 'RESOURCES' IS BEYOND THE OBVIOUS

From a modest beginning in 1995, today Cairn stands tall amongst its global peers. An invaluable link in this chain of growth that holds us together is 'our people'. As an organization, we have been committed in institutionalizing best-in-class people practices and providing our people, the necessary tools, resources and environment to enrich themselves.

TALENT MANAGEMENT

Our two-pronged talent management strategy is aimed at building a robust pipeline of senior leadership and in grooming young minds. Leaders are encouraged and equipped to coach and mentor young talent. Programs like LEAP (Learn Experience Accomplish Progress), BOLD (Barrels of Learning per Day) and cross functional projects aim to develop talent and expertise. All this has helped our time to autonomy which is in-line with industry average of about 7.5 - 8 years.



NURTURING TALENT & DEVELOPING CAPABILITIES

We have tied up with some of the best institutes and organizations in the world for classroom programs around business specific needs. With our firm belief in the 70-20-10 philosophy, we have a structured job framework in place wherein we aim to build cross functional capabilities by rotating employees in line with business priorities, individual development needs and career aspirations. Each and every employee at Cairn has a mentor as part of the V-Connect to help guide them on achieving their career aspirations. Our two-pronged talent management strategy is aimed at building a robust pipeline of senior leadership and in grooming young minds. Leaders are encouraged and equipped to coach and mentor young talent. Programs like LEAP (Learn Experience Accomplish Progress), BOLD (Barrels of Learning per Day) and cross functional projects aim to develop talent and expertise. Chairman's workshop provides employees with a direct access to the senior leadership and is a platform for identifying high-potentials, cross-functional and cross-business movements. Through these initiatives, we have ensured a healthy internal talent pipeline and also reduced our time to autonomy of 5-7 years, which is significantly lower than the industry average.



ATTRACTING BEST MINDS

While we focus on the development of our existing people, we attract the best minds from premier campuses in the country which has enabled us to build a diverse workforce. Our recruitment mechanisms of leveraging technology and social media has helped to build a 'Best in-class' employer brand across the spectrum. We take pride in having 10 years+ average technical expertise and functional capabilities across Geology, Geophysics, Production optimization & RE and Petro physics domains.

RECOGNISING EXCELLENCE

Our compensation and benefits are competitive with industry as we constantly evaluate the market and internal parity of the salaries to be offered for various skill sets. We encourage culture of recognition and appreciation through CAFÉ (Cairn Award for Excellence) Awards, which recognizes excellence and celebrates achievements of our employees throughout the year via various annual and on the spot recognition awards. Through performance linked rewards, recognition and initiatives, we motivate our people to go beyond the call of duty in the interest of the organization.



ENGAGEMENT & CONNECT



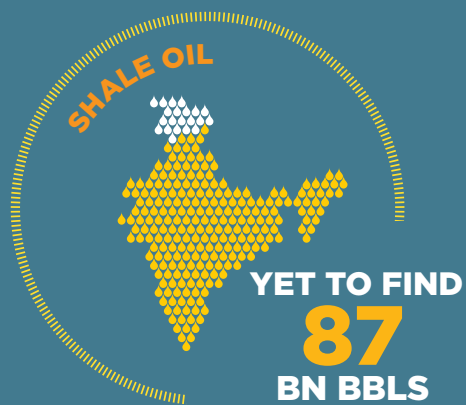
Employee Engagement is a key pillar of our overall people strategy. Through a number of pioneering practices and initiatives, we engage closely with our diverse population. Our host of 'Cairnfit' wellness programs not only helps our people to stay fit, but promotes an atmosphere of positivity, fun and camaraderie at work. 'Leadership Connect' & 'Chairman's Workshop' are other platforms to nurture employees on business and develop diverse perspectives.



Cairn has established a unique brand adopting leading practices for engaging and motivating employees that inculcates a sense of newness, freshness and youthfulness in our work environment.

INDIA POTENTIAL

FOR GRAPHICAL REPRESENTATION ONLY



Cairn Oil & Gas is a firm believer in India's potential. It is playing a key role in sustaining and growing India's production.