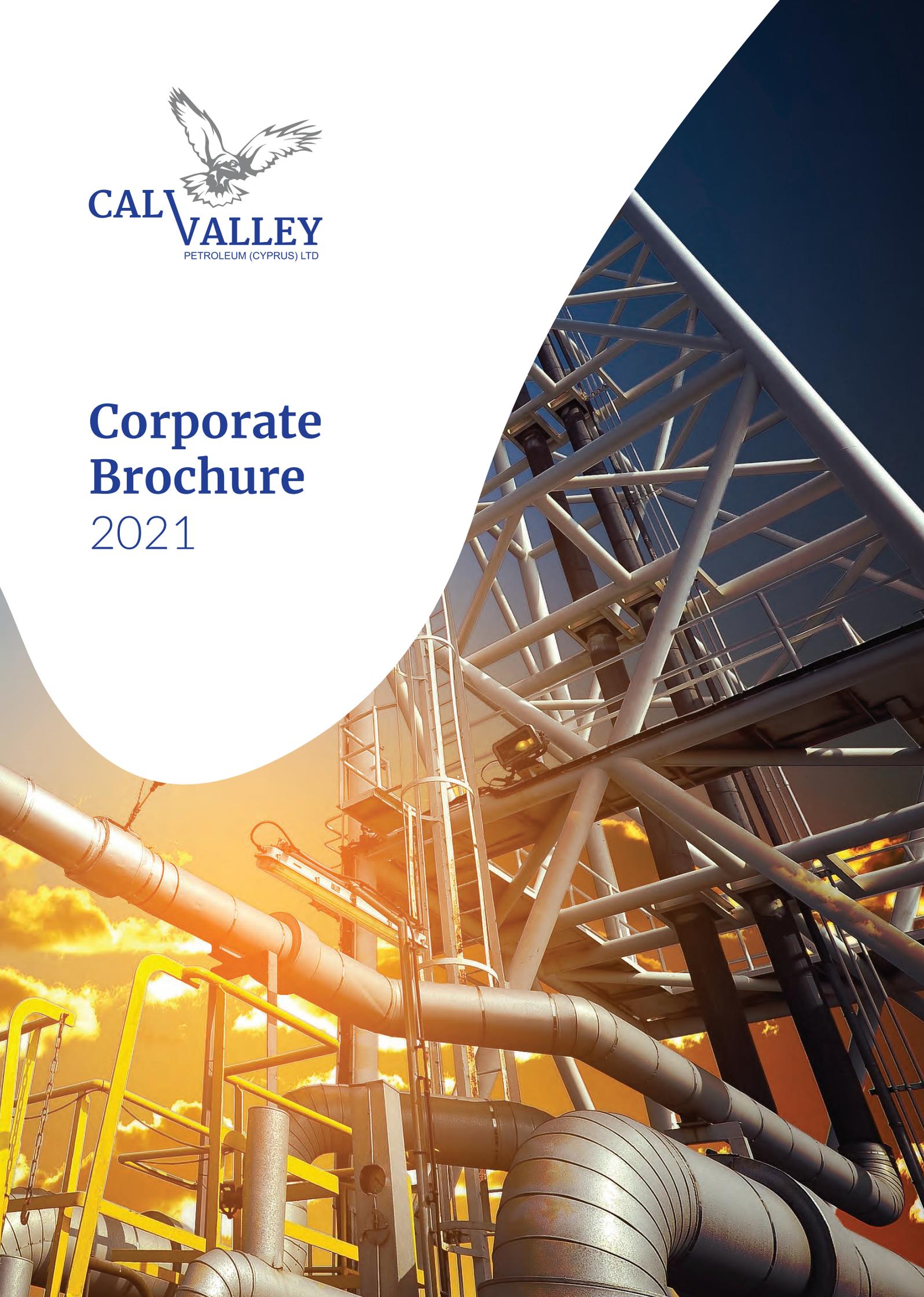




Corporate Brochure 2021



Forward-looking information

Certain statements included in this brochure constitute forward looking information. Such information is intended to provide information about management's current expectations and plans relating to the future. Readers are cautioned that reliance on such information may not be appropriate for other purposes, such as making investment decisions.

Although Calvalley Petroleum Cyprus Ltd. ("Calvalley" or the "Company") believes that the information reflected in such forward looking information is reasonable, undue reliance should not be placed on forward looking information because Calvalley can give no assurance that such expectations will prove to be correct.

Forward looking information is based on current expectations, estimates and projections that involve a number of risks and uncertainties which could cause actual results to differ materially from those anticipated by Calvalley and described in the forward looking information.

The forward looking information contained in this brochure is made as of the date hereof and Calvalley undertakes no obligation to update publicly or revise any forward looking information. The forward looking information contained in this presentation is expressly qualified by this cautionary statement.

Other notes

Where "Calvalley" or the "company" is referenced in this brochure, it refers to the legal entity 'Calvalley Petroleum Cyprus Ltd.'

Calvalley has 50% of the Production Sharing Agreement for the Block 9 concession in the Republic of Yemen and is operating it on behalf of the joint venture partners. All figures in this brochure represent 100% of Calvalley's working interest.

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Welcome to Calvalley

We are delighted to welcome you to our 2020 corporate brochure.

Calvalley is a company with strong potential for growth, underpinned by ambitious plans for a long and successful future. We are very proud of our company's history as a highly successful, technically adept operator in oil and gas, enjoying strong finances and excellent community relationships.

What differentiates Calvalley is a unique combination of experience, technical excellence, financial stability and good management. In 2020, more than ever, our distinctive 'Local First' model allows us to operate to high standards at low costs. We implement a lean hiring policy relying on strong communications and secondment of key staff to local offices for efficient management. We also strive to deploy and retain local staff, whose decades of experience in oil and gas have culminated in technical expertise and rigorous processes for safe and efficient field operations. Knowing that we are only as strong as the people who support us, we are also building a real economic and educational future for the communities in which we work.

Calvalley currently operates in the Republic of Yemen, having recently restarted production in Block 9, one of the highest-potential concessions in the country. We have built and maintained a good relationship with the local communities through difficult times and our employees have many years of experience in Yemen with this specific asset.

Conflict situations bring challenges to all oil and gas companies, in many cases relating to the loss of the technical service providers necessary to support production. We are proud to have taken on these challenges successfully and been able to resume production in 2019.

A big part of making this happen has been the expertise and loyalty of our teams on the ground. We are proud to have provided high levels of training, safety and job security for all our Calvalley field staff – and to have paid them even for the period in which production was halted by the conflict in Yemen. We considered this our duty, and we have benefited by becoming one of the few oil and gas producers to be able to resume production at this time. Over the coming years, we expect to be able to increase production significantly through our program of investment in Yemen. We will also acquire or farm in to other oil and gas assets, focussing on North Africa and the Middle East.

We look forward to many more decades of production, expansion, and positive impact on the communities in which we live and work.

Board of Directors Calvalley

*Calvalley
at a glance*



CALVALLEY AT A GLANCE

Overview

Calvalley Petroleum (Cyprus) Ltd is an international oil and gas company operating in the North Africa and Middle East region. Calvalley has a consolidated working interest of **39.52** MM barrels of proven reserves (McDaniel & Associates, 2014), driven primarily by our largest current area of operation, Block 9 in the Republic of Yemen.

Calvalley has a history of over two decades of exploration, development and commercialisation of oil and gas properties. Our team, primarily based in Calgary, Cairo and the Republic of Yemen, has extensive industry experience combined with proven technical excellence. We maintain low cost, highly efficient operations, supported by deep knowledge and understanding of the often challenging areas we operate within. Our 'Local First' approach is optimal for both effective operations and ensuring we work sustainably within our regions and communities for mutual long-term benefit. We are committed to adding value to our local communities and protecting the natural environments in which we operate.

Calvalley is financed by a strong and experienced group of investors who have made investment commitments to expand and optimise Calvalley's long-term operations. Calvalley draws on an extensive bank of experience in oil and gas, underpinned by financial stability from successful businesses across many sectors in the Middle East and beyond.



Our Vision

To set a long-term standard of excellence for low-cost, highly productive oil and gas operations in North Africa and the Middle East.

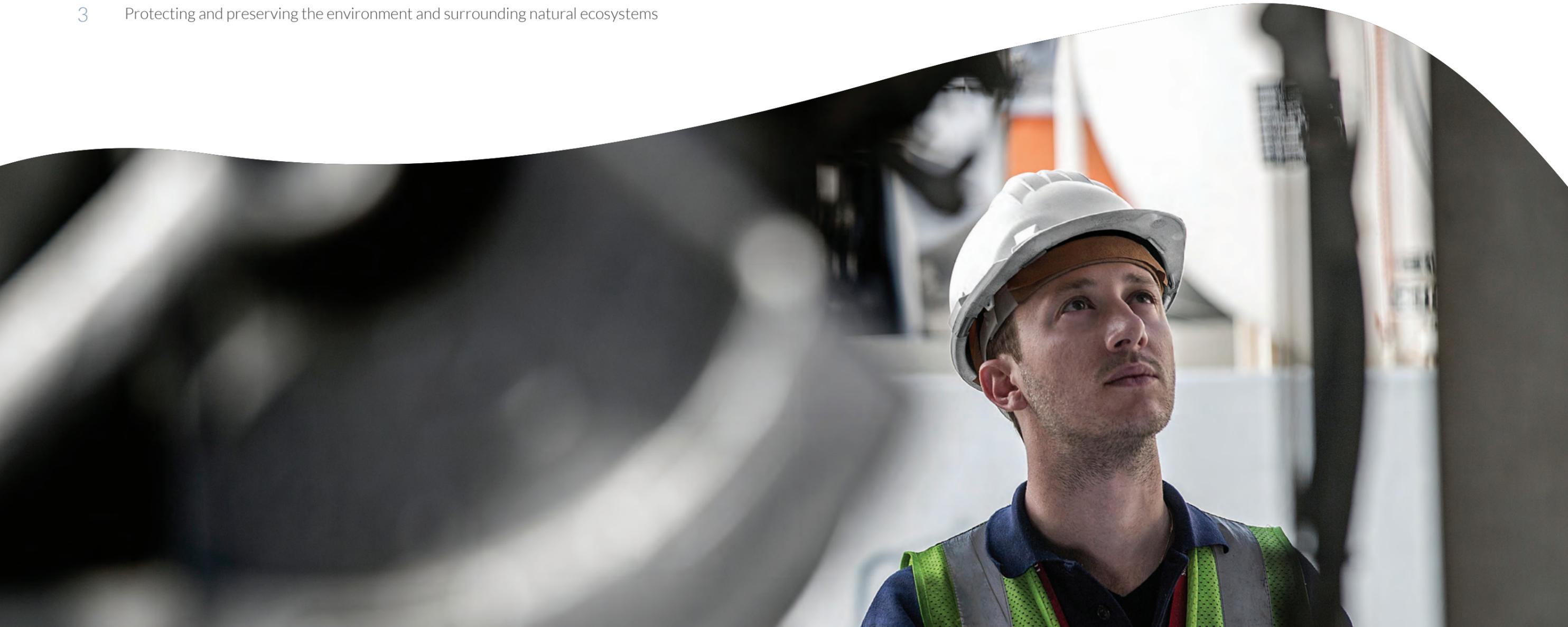
Our standard of excellence includes the following important elements:

- 1 Adding value to the people and communities in our areas of operation
- 2 Understanding and respecting local cultures and practices
- 3 Protecting and preserving the environment and surrounding natural ecosystems

Our Mission

We are focusing on two strategic goals:

- 1 Maximise the potential of our primary area of operation, Block 9 in the Republic of Yemen
- 2 Obtain new high-potential prospects in North Africa and the Middle East through acquisitions and farm-ins



Key facts and figures



Block 9 Proved (1P) reserves*

39.5 MMbbl



Block 9 Proved + Probable (2P) reserves*:

64.14 MMbbl



Block 9 Exploration potential

Unrisked 2C resources*

1,705 MMbbl

Risked

341 MMbbl

* Reserves independently verified by McDaniel & Associates in an analysis conducted in 2014. Figures included throughout this document refer to findings in the associated report. Crude oil reserve figures were based on volumetric estimates considering all available data including structural and net pay interpretations, test data, production data, reservoir simulation, performance of analogous reservoirs and economics of development. The reserves were classified into Proved Producing ("PP"), Proved Developed ("PD"), Proved Undeveloped ("PUD"), Total Proved ("1P"), Proved plus Probable ("2P") and Proved plus Probable plus Possible ("3P") classes as defined in the Reserves Classification section of the report. For Contingent Resources, the general cumulative terms low/best/high estimates are denoted as 1C/2C/3C respectively. No specific terms are defined for incremental quantities within Contingent Resources.

Gross production capability forecast based on 2P will reach max

10,034 bbl/d.

Calvalley is now operating all assigned reserves, comprising four light and three heavy oil fields with

54 development wells.

All pre-existing field facilities (wells, tanks, etc.) have been recently reconditioned and refurbished, with

30 producing wells.

Contingent resources include a number of appraisal wells and

41 exploration targets.



CALVALLEY AT A GLANCE

Our opportunity

Calvalley is in a strong financial and strategic position. Highlights include:

- Low historical cost structure providing strong netbacks and earnings
- Highly promising development potential
- Varied portfolio of prospects and leads
- Strong balance sheet
- Forward-looking management
- Excellent local knowledge and community relationships
- A growing, diversified portfolio across the MENA region
- Currently and historically debt-free

Existing discoveries

Recent reprocessing of significant quantities of seismic data has enabled Calvalley to analyse existing discoveries and exploration potential of our largest current area of operation, Block 9 in the Republic of Yemen.

Based on proved producing (PP) fields, as classified by McDaniels (report of 2014), we have calculated that:



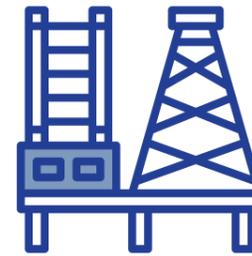
An estimated **22.9%** of known reserves have been extracted during the past **14 years.**



An estimated **77.1%** of known 2P reserves remain to be extracted.

Exploration potential

Calvalley's producing fields are some of the highest-producing and most promising in the Republic of Yemen. If all exploration potential and contingent resources are included in the analysis it is estimated that as little as **3.7%** of Calvalley's total hydrocarbon potential has been extracted in the last 14 years, making Block 9 the most attractive asset in Yemen at the present time.



This constitutes a tremendous opportunity and an exciting challenge. Calvalley's technical expertise, strong investor commitment and local knowledge make us well-equipped to produce successful results.

History of Calvalley

Our history represents the journey we have been on: the experience, the milestones, the value and most importantly the people that make up Calvalley as it is today.

1997
Calvalley Petroleum Inc. enters into the Block 9 (Malik Block) Production Sharing Agreement (PSA) with the government of the Republic of Yemen.

2000
Calvalley Petroleum Inc. establishes a wholly owned subsidiary, Calvalley Petroleum Cyprus Ltd., (defined in this brochure as "Calvalley") to be the Operator of Block 9, to which the 50% share of the PSA is assigned.

2002
Hoodoil Limited and Reliance Industries Ltd. each acquire a 25% interest in the PSA.
Calvalley Petroleum Inc., the parent company, is listed on the Toronto Stock Exchange.

2005
Declaration of commerciality is issued.

2012
Medco Energi purchases 25% interest in Block 9 from Reliance Industries Ltd.

2015
Hostilities in Yemen escalate and *force majeure* is declared.
Calvalley Petroleum Inc. delists with high levels of working capital, maintaining ownership of Calvalley Petroleum Cyprus Ltd.

2016
A strong and experienced group of investors, acquires Calvalley Petroleum Cyprus Ltd., which remains operator of Block 9. Through this acquisition, the business gains fresh expertise and investment for an exciting phase of expansion and development towards reaching its full potential.
New members are brought in to the Board of Directors and executive management.
Additional investments are made in Block 9 in order to resume production.

2019
Production is successfully resumed in Block 9.

2020
Calvalley embarked on rigorous 3D seismic programme, (the first to resume seismic in the Republic of Yemen since 2009)
2020 also witnessed an ambitious drilling campaign of 4 wells. The first drilling in Yemen since 2014.

Our operations around the world

CALGARY, CANADA

Our headquarters, housing our sales and marketing departments

REPUBLIC OF YEMEN

Sana'a: Operations management for Block 9.

Block 9: Site office, field and facilities management, plus accommodations and providing on-site training and professional development to all employees working inside the country.

CAIRO, EGYPT

Our management office, including our geosciences and engineering departments. Our team in Cairo transmits technical guidance to the field and liaises closely with field operators. Its location allows Calvalley to run operations with proximity and direct communications to the field.

DUBAI, UAE

Services office, providing services support as required to the rest of the business.

Republic of Yemen:
Active production

Egypt: currently being evaluated for
development

Corporate governance



Corporate governance at Calvalley

Calvalley's leadership team brings high levels of industry experience and expertise, dynamism, and a willingness to set an ambitious strategic direction. Our team's leadership will enable Calvalley to excel and extend into new frontiers for rapid gains and long-term expansion.

In conjunction with its listing on the Toronto Stock Exchange in 2002, Calvalley Petroleum Inc. developed a Code of Conduct, Reserves Evaluation policy, Health & Safety and Environmental policies along with other governance mandates to ensure appropriately high levels of performance. As a private company since 2015, we are proud at Calvalley to continue to govern ourselves by these high standards.



Board of Directors



Thomas E. Valentine

Thomas E. Valentine has more than 35 years of experience in the oil and gas industry, both as a barrister and a solicitor. In 2002 and 2003, Thomas lived in Doha, Qatar, where he was senior counsel (projects) with Qatar Petroleum. While in Qatar, Thomas was responsible for a number of international gas and LNG projects, including projects in the United Kingdom (Qatargas II), India (RasGas) and Spain (Endesa Generacion).

Since returning to Canada, Thomas's work continues to focus on oil, gas (including LNG) and project development work, including fiscal regime analysis and negotiations, E&P work, joint venture structuring, joint operations issues, purchase and sale agreements, and decommissioning obligations. He currently provides legal advice to various energy projects (both upstream and downstream) in Canada, Iraq, Yemen, Afghanistan and Nigeria, as well as other countries throughout South America and the Middle East.

Several times each year, Thomas delivers lectures and teaches workshops on oil and gas law in Singapore, Perth, Doha, London, Dubai, Seoul, Algeria, Brunei, Johannesburg, Rio and Mozambique. He holds undergraduate degrees from the University of British Columbia and Dalhousie University, and has a master's degree in Law from the London School of Economics. Thomas has been identified by Who's Who Legal as one of the world's leading practitioners in the field of energy law.



David Mitchell

David Mitchell is a successful oil and gas executive with more than 35 years' proven track record in the international arena, including with BP and Nexen.

During this time, David discovered and built projects with his teams in the Middle East, West Africa, Latin America and the North Sea. He has lived and worked in a number of countries, including a year with BP Egypt. He was appointed CEO of Madison PetroGas on joining in 2008, building the company prior to the merger with Sea Dragon Energy.

David received his BSc (Hons.) in Geology from the University of London and his MPhil in Mining Engineering from the University of Nottingham, UK.



Paul R. Baay

Paul Baay has been a Director, President and Chief Executive Officer of Touchstone Exploration Inc. since May 2014 and has over 25 years of experience leading oil and gas exploration and production companies.

Paul was formerly the Chairman of the Board of Directors and Chief Executive Officer of Touchstone Energy Inc. from July 2010 to May 2014. Prior to this, he was Managing Director of Abacus Energy, part of Abacus Private Equity, from 2007 through 2010 and was a senior officer of True Energy Inc. from 2000 through 2007.

From 1998 to 2000, Paul was the Chairman of the Board of Directors of Request Seismic Surveys Ltd. He served as Director, President and Chief Executive Officer of Remington Energy Ltd. from 1991 to 1999.

Paul holds an ICD.D designation as a certified corporate director.



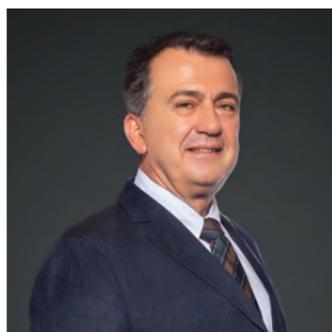
Darran Lucas

Darran Lucas is an experienced oil and gas executive with over 35 years in the international upstream business. He started his career as an exploration geoscientist in BP, and subsequently held leadership roles in Enterprise Oil in London, OMV in Vienna, Kosmos Energy and BHP in Dallas and Houston and Cairn India in Delhi.

He has global exploration and business development experience, in both conventional and unconventional arenas, and has worked in exploration provinces across five continents. Darran has been directly responsible for the discovery of many giant oil and gas fields across Africa and Asia.

He has a Bsc. Honours Geology degree from the University of London and an MBA from Henley Management College and brings a wealth of exploration and asset acquisition experience to the Calvalley board.

Management Team



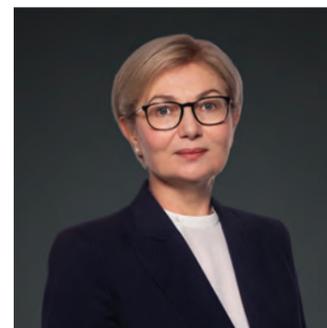
Alex Maleas
General Manager

Alex Maleas heads Calvalley's management team. He brings more than a decade of successful management at the level of General Manager in oil and gas exploration and production, with proven ability to build, inspire and motivate a strong and reliable team of professionals and to maintain low cost operations.

His experience includes 39 years of energy sector experience, including ten in refinery planning and 29 in oil and gas exploration and production, having served as a senior manager and technical expert as well as in key positions in planning and economics. His expertise includes reservoir engineering and petrophysics, oil and gas reserves evaluation and, in due diligence, leading teams of experts for the purpose of asset acquisitions.

Alex gained more than half his technical experience with industry giants Shell and Saudi Aramco, and has worked in Libya, Saudi Arabia and Egypt as well as handling assets in Yemen and the USA from head office technical positions.

His educational background includes a BSc in Engineering (National Technical University of Athens, Greece) and MSc in Energy Economics (McGill University, Montreal, Canada).



Galina Markarova
PhD., P.Geo
Exploration &
Development General
Manager

Galina Markarova leads the company's exploration and development team, having made a number of oil discoveries in Block 9, Yemen and built a strong exploration portfolio for Calvalley over 14 years.

She brings over 35 years of oil and gas industry experience to Calvalley, having previously worked with North American and Russian oil companies including EnCana and Rosneft.

Galina's expertise includes seismic acquisition, geophysical and geological interpretation and sedimentary basins analysis, with a proven track record in exploration, exploitation and new business development. She has discovered 17 commercially viable hydrocarbon fields in the Middle East, Central Asia and Europe, and identified and led evaluations of new exploration and production ventures worldwide.

Galina Markarova's qualifications include a doctorate in Geophysics and Geology from Moscow State University and an MSc degree in Geophysics, Geology and Petrochemistry from Gubkin University of Oil and Gas. She is a registered Professional Geoscientist in Alberta, a member of the Canadian Society of Exploration Geophysicists, and a member of the European Association of Geoscientists and Engineers.



Harant Shimoon
Operations
General Manager

Harant Shimoon is currently Calvalley's acting General Manager in Sana'a, having joined the Yemen team in 2003 for the construction of its central processing facility after a decade working with Calvalley Petroleum Inc. in Canada.

Harant builds on a long and successful career working hands-on in various oil and gas related construction projects and management, beginning with Power Plant in Ft. McMurray in 1974, then moving to Bechtel Canada for the construction of the Syncrude oil sand plant. In 1993, he joined CPI, later the parent company of Calvalley, on projects for the construction and operation of a sour gas plant and related oil production facilities in Rainbow Lake, Alberta.

Harant Shimoon is a graduate of Southern Alberta Institute of Technology.

CORPORATE GOVERNANCE: MANAGEMENT TEAM



Tarek Yousri
Chief Financial Officer

Tarek Yousri has over 29 years' experience in auditing and accounting with almost a quarter of a century dedicated to oil and gas accounting, encompassing extensive sector-specific experience of international Production Sharing Agreement projects and finance and a long record of accomplishments in upstream operations in the Egyptian market.

Tarek joined Calvalley from Edison International S.p.A. Exploration & Production (formerly under EDF Group), where he worked as Deputy Finance General Manager in its joint operating company, Abu Qir Petroleum Co., for over three years in Alexandria. He also previously held senior positions at OMV and LUKOIL, and has worked with Cargill, Johnson & Johnson and Arthur Andersen S.C.

Tarek is a Chartered Accountant (Egypt) and holds a BSc in Accounting and Auditing from Alexandria University.



Mohamed El Shehabi
Senior Reservoir and
Production Engineer

Mohamed El Shehabi has 25 years' experience in petroleum engineering, spanning production operation, technology and reservoir engineering, including both management and simulation.

Mohamed has a wide breadth of experience across more than 40 oil and gas fields. He has focused on production operation and technology, well testing, well and reservoir management and, in particular, reservoir simulations and production optimization at companies in Egypt, UK, Kazakhstan, UAE, Oman and Yemen. These fields have included on and offshore, shallow and deep, carbonate and clastic, conventional and unconventional reservoirs with both heavy and light oil, and dry and rich gas condensate.

Mohamed has a BSc. in Petroleum Engineering, from the Faculty of Petroleum Engineering & Mining, Suez University.



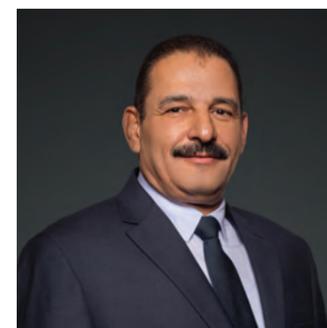
Ahmed Hadi
PhD
Advisor to the Chairman

Ahmed Hadi has had a long and successful professional career in the oil and gas industry, spanning more than 30 years in academic and commercial positions.

He has a particular specialism in petroleum exploration and production in Yemen, and has participated in technical decision-making during exploration and production phases, in coordination with international oil companies operating in Yemen, and evaluated the results. In 2008, he published a book on the petroleum and economy of Yemen.

At Calvalley, Ahmed provides expert advisory services to the exploration department and is advisor to the Chairman on technical and management issues.

Ahmed holds bachelor's and master's degrees in Geology Science, a doctoral degree in Petroleum Geology, and a wide array of technical qualifications.



Ashraf Abdelkhalek
Projects & Facilities
General Manager

Ashraf Abdelkhalek has extensive and varied knowledge in managing oil and gas projects and facilities, with over 30 years of industry experience in offshore and onshore construction and pipeline management, including production operations and the design and installation of new facilities.

Ashraf's roles have included responsibility for the devising of innovative solutions and implementation of new facilities and services in oil and gas operations, in particular the installation of production equipment, well flow lines, trunk lines and shipping pipelines for Egyptian oil and gas fields.

Ashraf Abdelkhalek joined Calvalley in August 2018. His previous roles include 12 years in construction projects mostly gained at Vegas Oil & Gas S.A., NPIC and SDX Energy. Prior to that, he worked with Apache and RWE.



Team members in our Cairo office

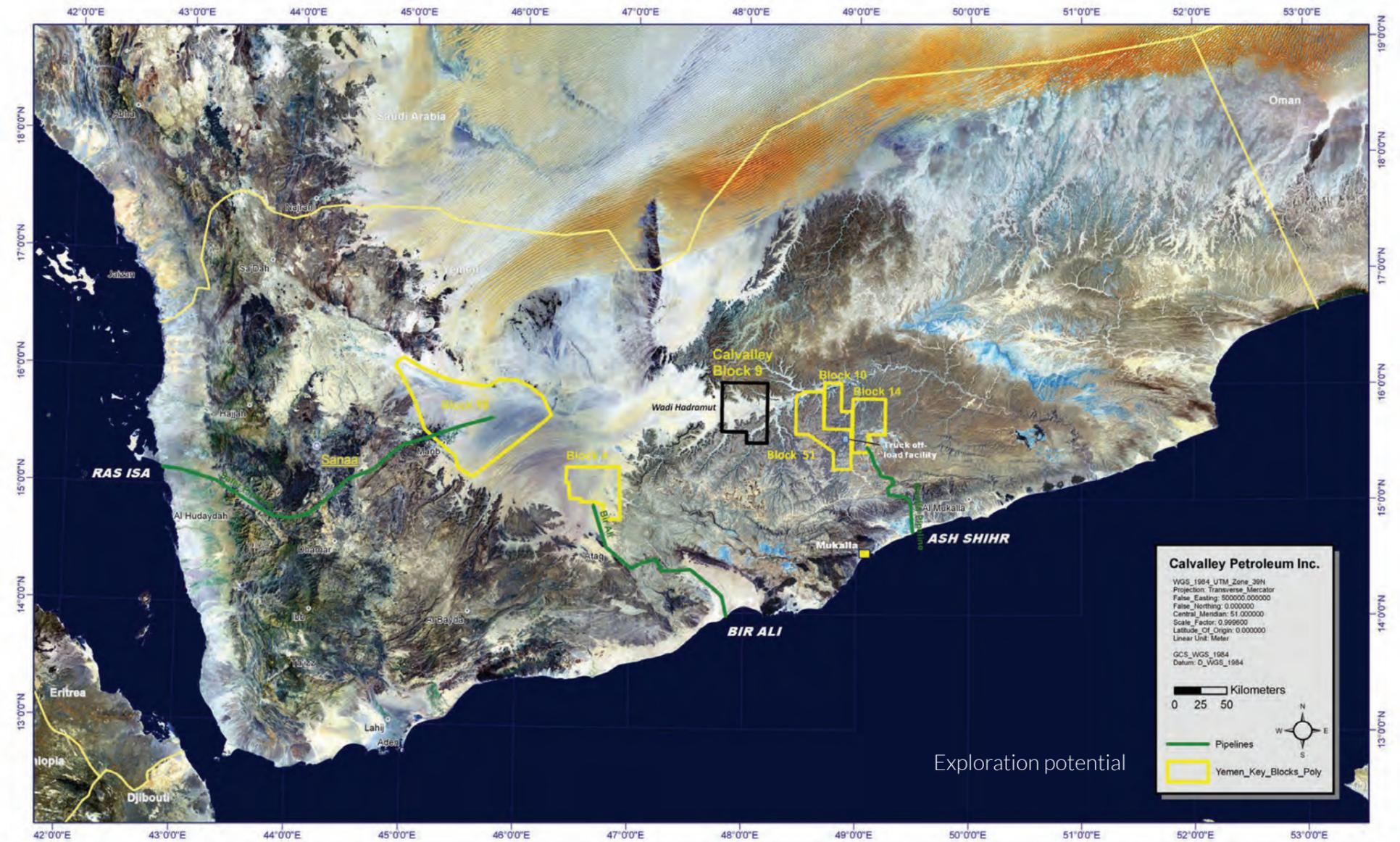
Reserves and resources



Operations in Yemen

The Block 9 concession is located within the western margin of the Sayun-Masila Basin in the province of Hadramout, in the Republic of Yemen, approximately 350 kilometres east of the capital city Sana'a.

This inland area has not been reached by recent conflict in Yemen and therefore is not materially affected by unrest elsewhere in the country.



Producing fields and exploration potential

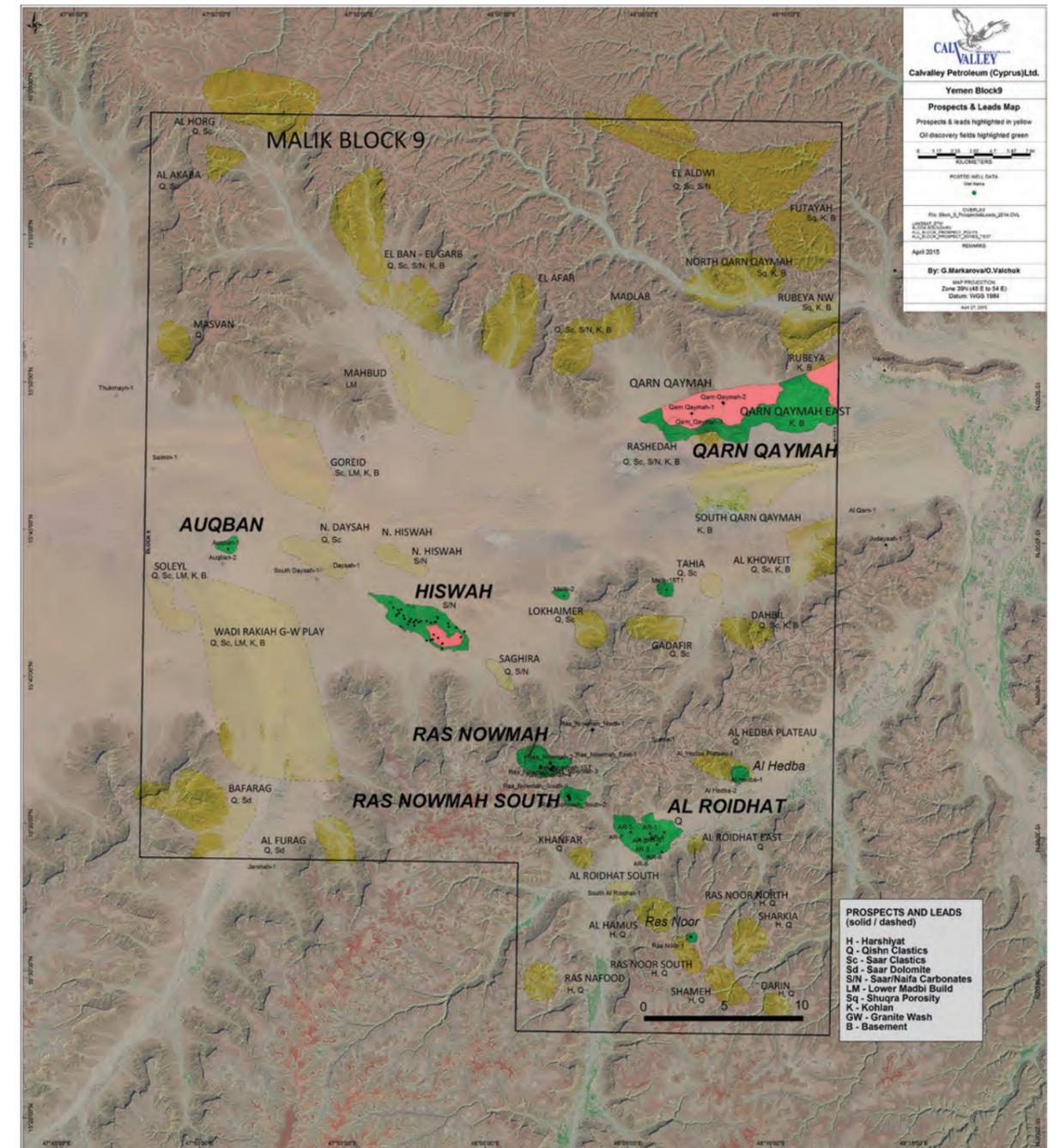
Block 9 is the second-largest producing block in the Republic of Yemen by area. It contains several existing discoveries as **proven reserves**, as well as **41 exploration targets**.

Past production during the period 2005–2015 amounted to approximately **16m bbl at an average production rate of 4,000 bbl/day**.

Block 9 includes:

- Four light and medium oil fields: Hiswah Field, Ras Nowmah Field, Auqban Field and Qarn Qaymah Field
- Three heavy oil fields: Al Roidhat Field, Ras Noor Field and Ras Nowmah South Field

Calvalley has a large and varied **prospect portfolio** in Block 9, comprising 41 prospects and leads in Block 9 with drill-ready prospects (multiple proven play types) located across the block.



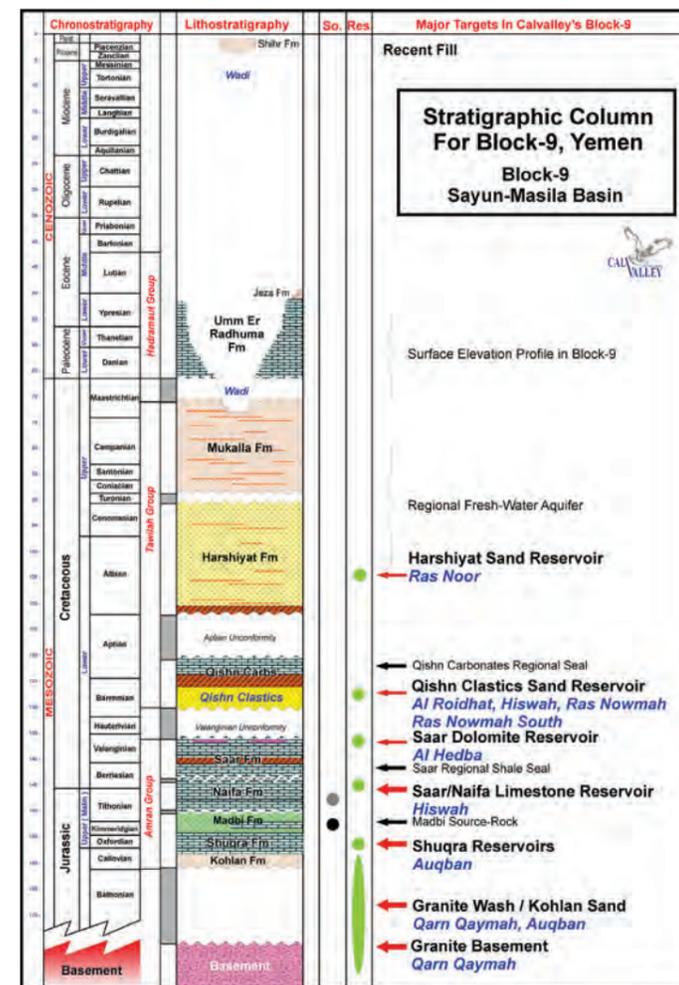
Block 9 producing fields and exploration potential

Producing fields in Block 9

Field	Oil-in-Place (2P) Crude type	Reservoir	Average production
Hiswah	229.4 MMbbl 36° API sweet crude	Saar/Naifa Carbonates	3,400 bbl/d
Ras Nowmah	43 MMbbl 29° API sweet crude	Qishn Sands	1900 bbl/d
Ras Nowmah South	3.8 MMbbl 19° API sweet crude	Qishn Sands	120 bbl/d
Al Roidhat	61.6 MMbbl 15° API sweet crude	Qishn Sands	1,000 bbl/d
Auqban	3.1 MMbbl 38° API sweet crude	Shuqra Limestone	80 bbl/d

Geology of Block 9

Block 9 is located within the western margin of the Sayun-Masila Basin, a classic rift basin initiated by movement of basement blocks.



The main source rock in the area is reported to lie in the Madbi Formation, with maturity sufficient to generate both oil and gas. Block 9's main reservoirs are located both above the Madbi (the Saar-Naifa, Qishn and Harshiyat formations) and below (the Shuqra, Kohlan Formation and fractured Basement).

Oil generation is likely to have started during the Late Cretaceous period and probably continues today. The potential oil and gas reservoirs consist of limestones and dolomites (the Shuqra and Saar-Naifa formations), sandstone (the Kohlan, Qishn and Harshiyat formations), and fractured granitic Basement. The seals are formed by tight carbonates and shales. Of the several generations of faults, some are permeable, while some can form hydrocarbon traps – mostly relating to broken anticlinal structures and tilted fault blocks.

The journey to re-starting production

Following the outbreak of conflict, *force majeure* was declared in 2015 and production ceased. In the following year, a group of investors acquired Calvalley and financed a work program to rehabilitate its producing wells and resume production in Block 9.

Calvalley has made investments of \$35–45m to rehabilitate Block 9 through surface and subsurface work including a pressure maintenance program, upgraded facilities, water injection and other improvements. Calvalley is the only oil and gas company in the Republic of Yemen to have maintained its workforce on pay while the conflict paused oil production.

One major challenge is a lack of oil and gas service providers in Yemen owing to security considerations. Through our strong relationships with local communities we have been able to contract the services required.

Today, we are actively producing.

Production resumed in July 2019, with 30 producing wells.

Crude oil is evacuated from Block 9 by secured, 500-barrel truck to either of three pipeline terminals at other blocks, each approximately 250–300 km distant, each supplying storage terminals on the coast. Calvalley is currently using the terminal at Block 51, Ash-Shihr.

Contracts with operators of other blocks ensure that Block 9 production volumes are securely metered and signed off on daily as part of a custody transfer arrangement before being piped to the coast. Oil is lifted from the sea terminal by tanker at six-weekly intervals with any unlifted Block 9 crude credited to the Calvalley balance maintained at the storage terminal.

On-site, approximately 100 employees are deployed in two shifts of 50 on a twenty-eight-day rotation. Apart from the field manager and some other key personnel and service staff, these consist of the field operators and maintenance crews.

The field reports its activities back to the head engineering and geosciences office in Cairo every day and key information on technical and financial progress is conveyed to the other stakeholders including our shareholders and partners, MedcoEnergi and Hood Oil. Every

day, fine tuning of operations and processes is achieved through constant communication between engineering and geosciences in Cairo and the implementers: the field manager, the operators and the maintenance crews.

Our budget for this year (2020) is in the range of \$40-45 million. Priority activities to optimise the concession include:

- Installing a new water injection system
- Drilling selected wells

Facilities and technology in Block 9

Our facilities in Block 9 are modern, clean and safe. Many areas have been freshly refurbished for the production re-start in 2019. All pre-existing field facilities (eg. wells and tanks) have been reconditioned and refurbished.

Central Processing Facility

The facility at Block 9 comprises a gathering system that collects the produced well fluids from individual wells and then transports them through a flow line to one of three satellite manifold systems.

At the manifold system, the crude from the individual wells is transported through the single trunk line, of greater diameter than the flow lines, to the inlet of the main manifold of the Central Processing Facility.

The produced well fluids are then separated at the three phase production separator into crude oil, produced water and associated gas.

The crude oil is washed with source water and treated through the Heater Treater, to further separate the emulsion from the crude and to ensure the salt content is reduced to a minimum.

The crude is then delivered to the crude oil storage tank farm, comprising **six 10,000 BBL capacity tanks**. Shipment of crude oil from the Central Processing Facility is carried out by trucking where the crude is loaded on to the tankers from the sales crude oil tanks via the sales oil line, using the truck loading pumps.



Water Injection System

Two filtration/pumping water injection skids are located downstream of the produced-water tanks.

At the water injection facility, the associated water comes from the produced-water tanks and source water wells is treated through a two-stage filtration system and pressurized to a certain pressure, before re-injecting back into the water injectors for pressure maintenance of the reservoir.

Trucking In and Blending

Two truck loading docks, equipped with loading pumps, are in place. They have remote control devices installed to ensure safety procedures are correctly applied without accidents.

Produced well fluids from the Ras Nowmah and Al Roidhat fields are delivered to two 5,000 BBL capacity truck-in tanks via the truck off-loading pumps. (Ras Nowmah and Al Roidhat fields crude has a different gravity compared to Hiswah field crude.)

The crude is then processed through the dedicated Heater Treater and is delivered to a storage tank at the tank farm.

The crude from Hiswah field categorized as 'light crude blend stream' is then blended with the processed crude coming from the other fields, which is categorized as 'heavy crude blend stream'.

Through the respective blending pump system, the two crude streams are mixed through a static mixer. The blended crudes' density and water content is then measured, and, if meeting the export specification requirements, it is delivered to the sales oil tanks. If not, the crude is recycled back to the off-spec crude oil storage tank for reprocessing.





Technology

We have invested in state-of-the-art technology to optimise our current operations, future development plans and evaluation of assets. All surface processes are monitored in the Control Room using automated PLC (Programmable Logic Controller) systems which offer industry-standard reliability and flexibility at low costs.

Advanced industry software enables us swiftly and accurately to monitor inventory and movements in and out of the warehouse and to manage material and procurement pathways efficiently.



Warehousing



Field main office

Appraisal and exploration

The most significant appraisal discovery in Block 9 is the Qarn Qaymah field, in addition to 41 prospects and leads with drill-ready prospects (multiple proven play types on the existing 2D seismic data set) located across five sites: Rashedah, Gadafir, Lokhaymer, Saghira and Ras Noor South. Block 9 Exploration potential:

Unrisked 2C Best estimate resources: 1,705 MMbbl
Risky: 341 MMbbl

Qarn Qaymah

One of the most interesting discoveries in Block 9, the Qarn Qaymah field is located in its northeastern part, extending over an area of 85 km² within the block and into the adjacent Block 72. The Qarn Qaymah field contains two discoveries:

Kohlman Sandstone Reservoir

12m blanket sand over an area covering more than 34 km²
Tested gas condensate in both QQ-1 and QQ-2 wells
QQ-1: 10 mmcf/d and 657 bcpd
QQ-2: 3.5 mmcf/d and 200 bcpd

Fractured Granitic Basement Reservoir

Proven 380m+ of hydrocarbon column
QQ-2 tested with oil rate of up to 2,964 bbl/d (43° API)
Estimated Unrisked OOIP 304 MM bbl

The significant size of the Qarn Qaymah reservoir and the presence of the fracture network in the basement of the structure is highly encouraging. However, a challenge ahead is to remedy any impairment to oil inflow. The company is optimistic that results of pending lab analyses of formation fluids will indicate the potential of down-hole chemical treatment to prevent future depositing of paraffinic compounds and asphaltenes, a common production-impairment phenomenon in many oil fields worldwide.

*Our
people*



Our people

We are proud of our people and their many decades of combined expertise in reservoir engineering, geology, geophysics, facilities and project operations. We recognise that a company-wide attitude which embraces consistent high standards and respect for good process is one of our most valuable assets. We seek out excellence, train rigorously, reward on the basis of merit, and listen to our employees.

The Calvalley corporate functions – administration, finance, Human Resources and IT – are a highly qualified and close-knit team. Procurement staff are currently located in Cairo for ease of communications and access to the main operating fields.

Calvalley has safeguarded the invaluable expertise the company built up in its workforce over the years by continuing to pay local field operators and maintenance crews during the period of paused production between 2015 and 2019.

Field maintenance staff include the Calvalley electricians and mechanics who keep the operating infrastructure functioning safely, smoothly and efficiently every day.

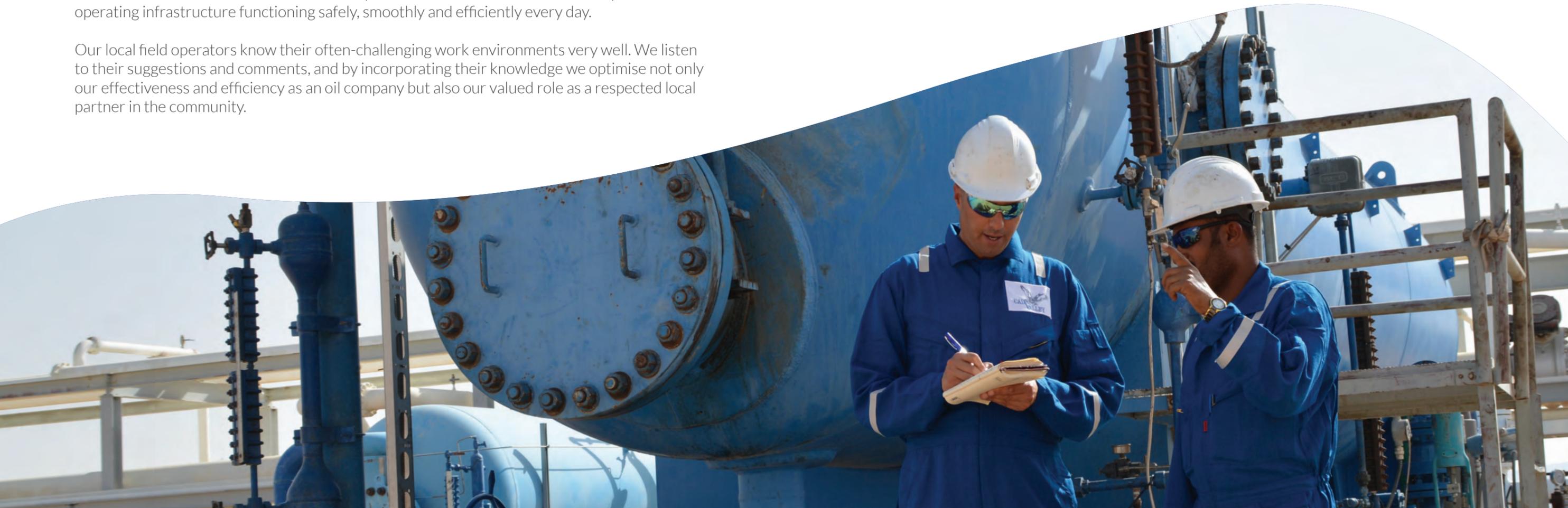
Our local field operators know their often-challenging work environments very well. We listen to their suggestions and comments, and by incorporating their knowledge we optimise not only our effectiveness and efficiency as an oil company but also our valued role as a respected local partner in the community.

Diversity

Currently there are 125 people working for Calvalley, embodying a diverse range of backgrounds and nationalities.

For our field operations, we prioritise hires from the local area. We employ people from across the local spectrum, without differentiation on the basis of different factions in the communities in which we operate, or any other basis or form of bias.

Calvalley embraces a rule of non-discrimination in the workplace. This, along with other principles of ethical conduct, is enshrined in our Ethics and Integrity policy. Everybody working at Calvalley, at every level of the organization, is required regularly to review this policy and is personally accountable for learning, endorsing, promoting and applying it to their own conduct and field of work.



Career advancement at Calvalley

As well as job security and training, we empower our employees to challenge the status quo and propose better methods. Communication is open between head office and the field. This strengthens employee participation and project ownership as well as enriching team knowledge and enhancing opportunities for career advancement. On this basis we have recently promoted some very capable people to higher positions with a better salary, actively demonstrating the message that intelligent performance is rewarded in a merit-based work community.

In Calvalley's Block 9 operations in Yemen, Calvalley has invested heavily in training local employees and retaining their expertise, including offering pay for non-operative (conflict) years. As of 2019, all employees in Yemen are Yemeni with long experience in the field, including local management running operations.

We are also committed to training Yemeni engineers, geoscientists and other specialised disciplines on a rotation programme.



Sustainability



Local First: Adding value to our communities

Calvalley operates a 'Local First' strategy in training and hiring for technical operations and related services. We work actively with the communities in which we operate to create a local economic multiplier effect not only through direct hires but also, importantly, by creating indirect employment opportunities.

We see our community responsibility in terms of a strategic intervention for truly long-term mutual benefit, and so we strive for economic empowerment and sustainable networks.

Thanks to our strong financial position, Calvalley has been able to implement a considerable community program. In line with further investment in existing and potential operations, we expect to extend and expand this in the immediate future.

Owing to its 'Local First' policy and initiatives, Calvalley has played a leading role in building civil society in its fields of operation during the past few years, with contributions to the local community including:

- 1 Making basic resources available as a first priority (eg, fresh water supply in hardship areas),
- 2 Primary and secondary education preparing learners for further vocational training

- 3 In-field and in-office training in geophysics, geology, and technical and support services for the oil and gas industry

- 4 'Above and beyond' commitment to job stability and security for Calvalley employees

We honour all agreements with the community of our workers and seek where possible to go above and beyond:

- 1 Calvalley paid our workforce in the Republic of Yemen 30% of full salary during four years of ceased operations owing to *force majeure* although in no way obliged to do so

- 2 Calvalley's new management also exhibited goodwill beyond the call of duty in rehiring the vast majority of workers from our Yemen operation on terms maintaining all their previous rights while providing an increase in salary

- 3 We have further committed to rehire the remainder of local workforce as and when our activities in Yemen increase



Supporting community initiatives

Calvalley brings a real message of hands-on competence, commitment and better futures to the learners and workforces in our communities because by doing so we invest directly in the future of local people who are going to be providing us services and sustaining our own success in future.

In addition, Calvalley has supported many local projects in Yemen such as:

- 1 Building the elementary school in Essaim
- 2 Drilling water wells and building hygienic storage tanks for drinking and domestic-use water in the village of Shooroge Al Bader
- 3 Building hygienic water-storage tanks and installing galvanized pipes to supply drinking and domestic-use water in the village of Raqa
- 4 Supporting the hospital in the town of Horaidha by subsidizing doctors' wages

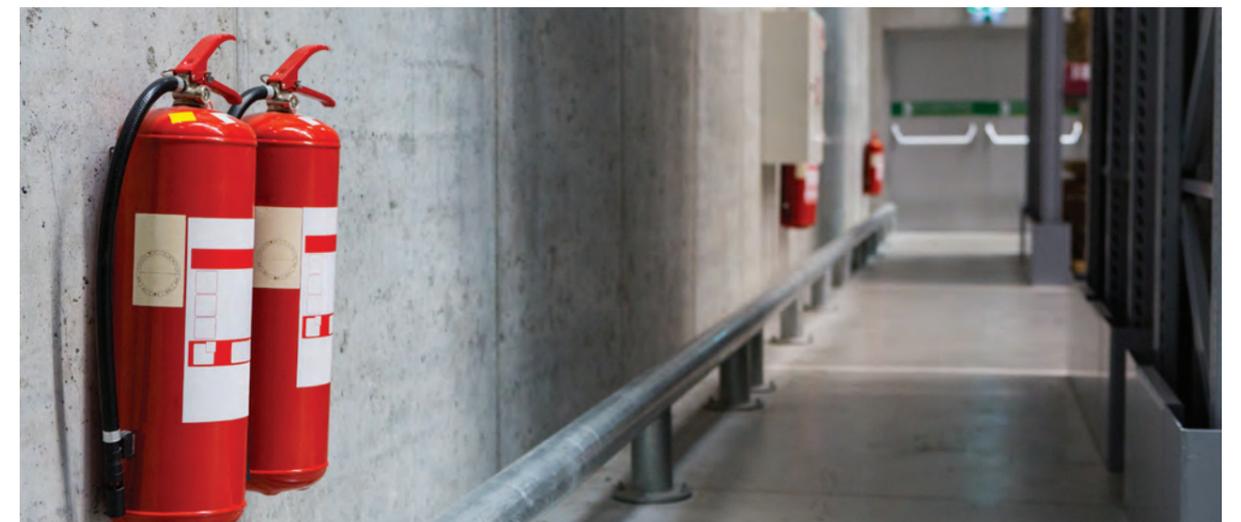
Health and Safety

In conjunction with its listing on the Toronto Stock Exchange in 2002, Calvalley Petroleum Inc. developed Health & Safety and Environmental policies along with other governance mandates to ensure appropriately high levels of performance. As a private company since 2015, we are proud at Calvalley to continue to govern ourselves by these high standards.

Calvalley's experienced HSE manager and staff hold regular drills, meetings and training for all employees to ensure their workplace safety and continuing health in accordance with company policy.

Calvalley maintains safe and sustainable environmental practices as a vital element in the viability of today's oil and gas industry:

- 1 Calvalley has maintained a record of zero spills on any of our sites
- 2 All water and gas produced are injected back into the reservoir in a closed system, in order to support the pressure
- 3 No waste water is left exposed on the ground
- 4 Two lined ponds are used during excavations to prevent soil contamination
- 5 A pressurized firefighting water network is in place, covering all facilities and operating automatically through sensors (hydrant/foam)



Investing for the future

An ambitious programme of planned investments

With the expectation that the exploitation of Calvalley's considerable remaining reserves will proceed rapidly over the next decade, as intended, the company is prioritising an increase in its reserve replacement rate. Calvalley is therefore actively evaluating opportunities along three lines:

- Acquisition of new fields in the North Africa and Middle East region. In particular, we are currently evaluating fields in Somaliland and Egypt for potential development.
- M&A deals
- Farming in to regional or international concessions, as a technically and financially proficient non-operator

Calvalley is set to invest **over \$250 million** during the next five years, to ensure increased production and storage capacity, develop new wells and pursue potential acquisitions as listed above. This investment could grow even higher if stability returns to Yemen.



Forecasts and production scenarios

Based on proved producing (PP) fields, as classified by McDaniels (report of 2014), we have calculated that:

- An estimated 22.9% of known 2P reserves have been extracted during the past 14 years
- An estimated 77.1% of known 2P reserves remain to be extracted

A conservative estimate places Calvalley in a production range of approximately 1.4 million barrels during its first year of production following resumption of operations in August 2019.

Ten-year production scenarios

Scenario 1 - Low

- Continue as today, with minimum investment in three out of seven discovered fields
- 38 million barrels over 10 years

Scenario 2 - Medium

- Pursue all 2P reserves in all seven discovered fields (no exploration)
- 67 million barrels over 10 years

Scenario 3 - High

- Pursue all reserves and contingent resources, including all exploration potential (maximum achievable)
- 300+ million barrels over 10 years



Projected returns are cautious in light of the lack of service industries and the existing political situation in Yemen, alongside fluctuations in oil prices.



Managing costs



Calvalley maintains a highly cost-efficient enterprise with competitive tendering, lean manpower and hiring policies including our successful 'Local First' approach, and low overheads through strategic location of regional offices for efficient communications and minimal day-to-day running costs.

Finance systems



We use industry-standard finance and accounting software for reliable and secure generation and analysis of financial processes and projections, maintaining of accounts, and secure storage of records.



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