1st Licensing Round of the Dominican Republic

Announced by the Ministry of Energy and Mines



Welcome from Antonio Isa Conde, Minister of Energy and Mines for the Dominican Republic.

Thank you for your interest in the Dominican Republic. Our nation has long been a destination for world travellers, enjoying our climate, our beaches and wildlife, and everything that the Dominican Republic has to offer. From a business point of view we have seen strong and sustained economic growth in recent years, and are proud of our communications and transportation infrastructure, all of which, we believe, will encourage interest from the international exploration community.



We are stepping forward into virgin territory, but are optimistic about the level of interest already shown by international companies and investors. We have worked hard to create an attractive, progressive fiscal regime, a robust, flexible contract, and have made all data freely available, in order to ensure that investment in the Dominican Republic will deliver low risk but high value to investors and their stakeholders. In return, we see an opportunity to further increase the recent growth in our economy, to provide new opportunities for our workforce, and strengthen our emerging role as a pivotal nation in the Caribbean region.

Geological studies and nearby exploration have demonstrated prospectivity in the blocks that we are offering in this 1st Licensing Round, and that our position in this geologically interesting part of the world will lead to some exciting discoveries and profitable production in the future.

I and my colleagues welcome you to the launch, to the Licensing Round process, and to the Dominican Republic.

Warmest regards

Antonio Isa Conde Minister of Energy and Mines, Dominican Republic

Introduction to the 1st Dominican Republic Licensing Round

The Dominican Republic occupies the eastern 5/8ths of the island of Hispaniola, in the Greater Antilles archipelago of the Caribbean region. It is the second largest Caribbean nation by area, and third by population. Its capital, Santo Domingo, is home to approximately three million people.

As the most visited destination in the Caribbean, the Dominican Republic is known for its beaches, resorts and golfing. It has geographically diverse terrain, with rainforest, savannah and highlands, including the Caribbean's tallest mountain, Pico Duarte, and the Caribbean's largest lake and lowest point of elevation, Lake Enriquillo. With temperatures averaging 26° C/78.8° F, and wide climatic and biological diversity, the nation has long been a favourite with tourists from all over the world. In addition, the Dominican Republic is an attractive and desirable country for international investment that goes beyond known tourism.

Why the Dominican Republic?

Favourable Business Environment

Dominican law establishes equal treatment for all domestic and foreign investors, allowing the participation of international companies in all economic sectors, excluding defense and national security. Investors will have access to preferential markets through the free trade agreement, The Agreement of Economic Association with the European Union, Central America and the United States. Located in the Caribbean, the Dominican Republic is an important commercial link between Europe, North America and the rest of Latin America.

The Dominican Republic has a world-class road circuit that connects all regions of the country, boosting economic activity and enabling investors to build the required infrastructure. With 8 international airports, 12 maritime ports and 3 cruise ports, the country is emerging as an important logistics center for the Caribbean region.

Dominican Republic Exploration History

The presence of crude in the Dominican Republic has been known for decades, as evidence by the black gold that oozes out of a pit in Charco Largo, Azua (south). Three onshore Neogene clastic basins have been the focus of petroleum exploration, and oil seeps as far back as 1905 led to a well being drilled at Higuerito, reportedly producing about 40 bbls/day of oil, although sustained production was not obtained until 1927/8 by Texas Co.

The first geophysical surveys (gravity, seismic) over selected surface structures were carried out during World War II, and further, more modern seismic surveys were carried out during the 1980's and 1990's, leading to drilling in the Azua, Cibao, and Enriquillo Basins.



Macro Economics

The Dominican Republic has enjoyed strong economic growth in recent years, averaging 6.3 percent per year between 2014 and 2018, fuelled by robust domestic demand. It was the fastest-growing Latin American economy over that five-year period. This sustained growth has reduced poverty and inequality, and, following the elections in 2016, the government has put an even greater focus on equity and inclusion, human capital, natural resource management and competitiveness. Currently, the Dominican Republic has a growing middle class and a stable, democratic government system.



Frontier Basin Opportunity

Conventional exploration in frontier basins has proven to deliver stronger results than in emerging and mature basins. For early entrants, this has shown to deliver the most value – most commercial volumes discovered are from frontier exploration.

The blocks are larger compared with emerging or mature blocks, and generally, discovery sizes in frontier areas tends to be larger. The blocks are varied – a mixture of onshore and offshore, and there is high potential for multiple prospects in this region. For a solid E&P portfolio mix, the Dominican Republic offers a variety of opportunities.



Source: Banco Central Republica Dominicana, Verisk Maplecroft, Monetary International Fund (IMF), Wood Mackenzie Exploration Service

Competitive and Transparent Fiscal Terms

The Dominican Republic offers an attractive investment environment, underpinned by strong and sustained economic growth. Upstream investment in the country will benefit the Dominican Republic with greater development, technical knowhow, new business for local firms and create more, better paying jobs. Diversification of the economy will help to protect the economic viability of other important sectors, such as industry and tourism, and create a sustainable cycle of economic activity.

The fiscal terms are progressive, encouraging the development of marginal projects but capturing a greater "State Share" in projects of greater profitability. The Dominican system is in the 1st Quartile in terms of competitiveness globally in all basins, sizes of discoveries and at different prices.

The fiscal regime allows the State to capture its income through four mechanisms: Shared Revenue; Income Tax; Area Rent and Minimum State Participation Tax.

State Share % Pre-share NPV10 State Share % Pre-share NPV10 Onshore 50 mmbbls of Oil Offshore DW 200 mmbbls of Oil % % 120 120 100 100 1Q 80 80 2Q 60 60 3Q 4Q 40 40 DR 20 20 0 0 40 100 40 80 60 80 100 60 Oil Price (Brent, \$/bbl) Oil Price (Brent, \$/bbl) Project Operator State Comments CAPEX (-) CAPEX 100% paid by operator OPEX (-) OPEX 100% paid by operator Contractor and State share revenues Revenue (+) Revenue Share (+) Revenue Share from petroleum activities Payments on area during (-) Area Rental (+) Area Rental exploration and exploitation periods (-) Corporate Income Tax (+) Corporate Income Tax 27% on net income (-) Minimum State (+) Minimum State State receives at least 40% of Participation Tax articipa ion Tax cumulative undiscounted profits Positive cashflow Negative cashflow Receives Shared Value Pays

Low Risk for Investors

In order to facilitate investment, the Dominican Republic has worked with their partners to deliver terms to Investors that are highly competitive, progressive and simple. The process will be entirely transparent, with flexible terms based on international best practices.

Investing in the Dominican Republic represents low risk for investors. There is no signing bonus, and Contractual terms and fiscal terms will remain stable during the contract duration. The contract will be approved by congress, and will be entered into Dominican law. Interested companies will be able to nominate blocks and/or propose changes in the future.

The Flexible contract terms allow operators to adapt the exploration strategy during the term of the contract. The Exploration period will be between 7 and 10 years, divided into 3 phases. At the end of each phase the operator can terminate the contract or relinquish part of the block, controlling overall capex expenditure.

Abandonment Fund

Investors will be required to contribute to an abandonment fund, designed to guarantee the necessary resources for the activities relating to abandonment of a field. These funds will be sent to an escrow account, and the entire fund must be covered two years before the project ends.

Prequalification Criteria

Companies that comply with the financial, technical, and HSE criteria will be authorized to participate in the bidding process. Companies must provide 20F, 10K annual reports or their equivalent, or financial statements audited by certified or registered companies to perform such activities in accordance with the laws of the country of origin.

Criteria	Type of company	Variable	Onshore	Shallow water	Deep Water					
	Orienter	Shareholder Equity	US\$60 mm	US\$120 mm	US\$350 mm					
Financial	Operator	Net working capital	US\$15 mm	US\$30 mm	US\$60 mm					
Financial	Non Operator	Shareholder Equity	US\$30 mm	US\$60 mm	US\$175 mm					
	Non Operator	Net working capital	US\$7.5 mm	US\$15 mm	US\$30 mm					
		Operated Exploration wells over last 5 years	3 wells	2 wells	1 well					
Technical	Operator	Minimum average operated production in 2018	2,000 boe/d	5,000 boe/d	10,000 boe/d					
	Non Operator		No applica	ble						
USE	Operator	• ISO 14001 and OHSAS 18001	Certification or Com	pany HSE Policy						
Non Operato		No applicable								

Operators that meet the prequalification criteria for deep water fields are considered qualified for shallow water and onshore fields; and those qualified for shallow water are considered qualified for onshore fields. Operators will have to meet the requirements of exploration wells or minimum production. The minimum participation for an operator in a consortium is 30%. Companies belonging to the "Energy Intelligence Top 100" will be exempt from all requirements.

Companies Award Criteria

The awarding criteria is simple and transparent, focused on incentivizing exploration. Blocks will be assigned solely on additional work commitments – in simple terms, the company willing to execute the most exploration will win the block. Each block will have a minimum commitment of work, measured in "work units" (WU). Operators will offer additional work units, and the tie-off criteria will also be in work units. The Minimum Work Commitment is as follows:

- 1 WU = USD \$5,000
- Minimum work commitment for onshore is 400 WU (USD \$2 million)
- Minimum work commitment for offshore is 800 WU (USD \$4 million)

The work commitments per exploration period are as follows:

- First Period: minimum commitment + additional offer
- Second Period: 2 x minimum commitment
- Third Period: 1 exploratory well

Technical Data

All technical data is freely available online (https://bndh.gob.do/en/), from the National Database of Hydrocarbons (BNDH). The National Database of Hydrocarbons is a compendium and digital file in the standard format of the oil industry of all the geological, geophysical and seismic information collected through exploration and prospection activities of hydrocarbons in Dominican soil and sea since 1904.

This includes:

• 21,500 km of 2D seismic, representing a value of approximately US \$ 100 million

• 1,491 maps, 805 seismic profiles, 212 well records, 321 records / reports, 209 magnetic tapes "9-track" and 3 cassettes "8-track" containing seismic lines in different regions of the country

Geological Setting of the Dominican Republic



ALA: Arch of the Leeward Antilles, BhB: Bahía Basin, ColB: Colombia Basin, CF: Cuiza Fault, SCTB: Southern Caribbean Thrust Belt, NPTB: Northern Panama Thrust Belt, RB: Ranchería Basin, MaB: Maracaibo Basin, TaB: Tairona Basin, SJTB: San Jacinto Thrust Belt, AR: Aves Ridge, BR: Beata Ridge, TB: Tobago Basin, VB: Venezuela Basin, DM: Magdalena Delta, HE: Hess Escarpment, AF: Ancón Fault, BF: Boconó Fault, OF: Oca Fault, SS-EPF: San Sebastián – El Pilar Fault, GB: Grenad Basin, SM: Santa Marta Massif, BAP: Barbados Accretionary Prism, GP: Guajira Peninsula, PP: Paraguaná Peninsula, SP: Serranía del Perijá, PBFZ: Pedro Baal Fault Zone, ASZ: Antilles Subduction Zone, VA: Venezuela Antiles, LASZ: Lesser Antilles Subduction Zone. STB: Sinù Thrust Belt.



The geological setting for the Dominican Republic is of interest for a number of reasons. Exploration in and around the area has demonstrated prospectivity, and the Dominican Republic is ideally situated for investment.

- Subduction of North America plate below Caribbean Plate
- Strike-slip and convergent structures produced by North America-Caribbean strike-slip displacements and the transpressional accretion of crustal fragments to the Cretaceous island-arc core of Central and Northern Hispaniola (Mann & Lawrence, 1991)
- Thrust belts developed on both sides of oceanic island arcs
- North-verging accretionary prism lies to the north of the Eastern Greater Antilles arc

Cibao Basin

Located in the north of the country with 6 onshore blocks available.



Blocks

• CB1, CB2, CB3, CB4, CB5 and CB6

Basin Area

6,946 km²

Tectonics

Asymmetrical Strike-slip basin

Seismic

- ~632 km 2D (44 seismic lines)
- ~ 23% of 2D seismic coverage

Wells Drilled

- 16 wells (4 with gas shows)
- MD between 1,000 ft and 12,000 ft
- · 2 oil seeps

Stratigraphic Column

Stratigraphic column of the Cibao Basin with tectonic events and petroleum systems.

PE	RIOD	EPOCH	LITHOLOGY	FORMATIONS	SOURCE ROCK	RESERVOIR	SEAL	TRAPS FORM.	GEN/MIGR/ACC.	TECTONIC EVENT	PLAY 1	PLAY 2	PLAY 3
QUAT	ERNARY	Holocene Pleistocene	Siliciclastic & Limestone	Alluvium									
			Siltstone & Clay	Mao Fm.									
	SENE	Pliocene	Siltstone	Gurabo Fm.						Continued Ramp Basin development-Basi Filled by Shallowing-Upward clastic sequences & evaporites	n		
×	NEOG		Conglomerate & Sandstone	Cercado Fm.						Initial Ramp Basin Formation-basin act as conduits for clastic sedimentation derived from North and Northwest			
TERTIAR		Miocene	Siliciclastic & Limestone	Baitoa Fm.						Collision if northern and sourther hispaniola-SW- verging folds and thrust faults			
	BR	Oligocene	Submarine Fan Deposits	Tabera Group	?					Underthrusting/acrretion in transpressiona	1		
	LEOGE	Eocene								environient			
	PA	Paleocene											
	CRETACEOUS	LATE	Arc Basement	Basement									

Source: Modified from Tillman, 1991- Mann & Lawrence, 1991

Geological Map and Petroleum System



Source Rock: Tabera Group is a hypothetical source rock, which is in the oil window since the late Oligocene. Based on TOC interpretation from Logs, (San Francisco-1 well) shows potential Source rocks in Guarabo fm.

Reservoir Rock: San Francisco–1 well and outcrops have shown good reservoirs along the Miocene and Pliocene. Seal Rock: Several siltstone & clay from the Oligocene & Pliocene.

Trap: Seismic shows a highly deformed basin with high angle transpressive faults, positive flower structures and anticlines – all potential HC traps.

Timing: Potential deeper source rock (Tabera Group) would have reached maximum peak of generation during the Miocene.

Highlights

	POSITIVES	POTENTIALS
Basin	 Frontier basin Max sediment thickness to the north of ~18K ft 	 Depocenter in the norther central part of the basin with potential HC generation
G&G Data	 2D seismic data available (~630 km) 16 wells drilled 	 Only ~20% seismic coverage Provides ~80% addt'l to test Modern tech can improve dated info
Petroleum System	 Type III gas- prone Kerogen (Tillman, 2015) Pseudo well shows Tabera Group entering in oil window 	 Potential source rock have subsided to depths of 18k ft Marine sediments (Tabera fm) may have kerogen Type II
Prospectivity	 24 wells, some with gas shows At least 3 plays in the basin Several potential prospects 	 High-angle transpressive faults, positive flower structures, anticlines identified in 2D – potential structural traps

Enriquillo Basin

Located in the west of the country with 3 onshore blocks available.



Blocks

• EN1, EN2 and EN3

Basin Area

3,100 km²

Tectonics

 Synclinal, Upper Miocene to Recent sedimentary ramp basin (Mann et al.,1991)

Seismic

- 1,007 km 2D (65 seismic lines)
- ~90% of 2D seismic coverage

Wells Drilled

- 9 wells (4 with gas shows)
- MD between 500 ft and 15,800 ft
- · 2 Oil seeps, 1 Gas seep

Stratigraphic Column

Stratigraphic column of the Enriquillo Basin with tectonic events and petroleum systems.

PER	IOD	ЕРОСН	LITHOLOGY	FORMATIONS	SOURCE ROCK	RESERVOIR	SEAL	TRAPS FORM.	GEN/MIGR/ACC.	TECTONIC EVENT	PLAY 1	PLAY 2	PLAY 3	
QUATE	RNARY	Holocene	Costal Coral/Coral Limestone/Alluvium Terrace	Cuaternary Deposits		7								
		Pleistocene	Fluviatile/Shallow Marine	Jimani										
			Evaporite	Las Salinas										
	ENE	Pliocene	Fluviatile/Shallow Marine	Angostura						Continued Ramp Basin development-Basin Filleo by Shallowing-Upward clastic sequences a& evaporites	4			
~	NEOGE		Sand & Shale	Trinchera						Initial Ramp Basin Formation-basin act as conduits for clastic sedimentation derived from North and Northwest				
TERTIAR		Miocene	Pelagic Limestone	Sombrerito						Collision if northern and sourther hispaniola-SW- verging folds and thrust faults				
	ENE	Oligocene	Limestone	Neiba/Plaisance						Underthrusting/acrretion in transpressional enviroment				
	ALEOG	Eocene												
	E C	Paleocene	Limestone	San Rafael										
CBETACEOLIS		LATE	Igneous/Metamorphic Basement	Igneus Complex										

Geological Map and Petroleum System



Source Rock: Three source rocks were defined – Trinchera Fm in the early oil window towards the central part of the basin; Sombrerito Fm in the early to middle oil window; Plaisance Fm in the late oil window and early gas window.

Reservoir Rock: Outcrops and wells have showed several Eocene, Oligocene (?) and Miocene reservoir levels in basin.

Seal Rock: Several shales levels from the Eocene to Pliocene.

Trap: Highly deformed basin with high angle transpressive faults, thrust and salt related structures, and fractured limestone.

Timing: Early stage of generation during the Eocene which continued during the Neogene.

Highlights

	POSITIVES	POTENTIALS
Basin	 Frontier basin Max sediment thickness is over ~18K ft 	 Depocenter in the Central part of the basin with proved HC generation
G&G Data	 2D seismic data available (~1,000km) 9 wells drilled Basin w/ most seismic coverage on the island 	 ~90% seismic coverage Modern tech can improve dated info
Petroleum System	 HC generation proved by oil & gas seeps 3 source rocks (Trinchera, Sombrerito & Plaisance Fm.) 	 Potential for biogenic & thermogenic gas (Trinchera Fm.)
Prospectivity	 At least 3 plays in the basin 4 Wells with gas shows Several undrilled prospects identified 	 Traps: Thrust structures, salt related structures, potential in carbonate and reef associated deposits

Azua Basin

Located in the southwest of the country with 1 onshore block available.



Blocks AZ1

Basin Area • 795 km²

Tectonics

 Synclinal, Upper Miocene to Recent sedimentary ramp basin (Mann et al.,1991)

Seismic

- 42 km 2D (9 seismic lines)
- 10% of 2D seismic coverage

Wells Drilled

- 58 wells (4 had production, 14 with Oil and/or Gas shows)
- MD between300 ft and 13,000 ft
- 3 Oil seeps

Stratigraphic Column

Stratigraphic column of the Azua Basin with tectonic events and petroleum systems.

PER	NOD	EPOCH	LITHOLOGY	FORMATIONS	SOURCE ROCK	RESERVOIR	SEAL	TRAPS FORM.	GEN/MIGR/ACC.	TECTONIC EVENT	PLAY 1	PLAY 2	PLAY 3	
OUATE		Holocene	Slope Clastic Rocks	Cuaternary Deposits										
QUATE	KINAKT	Pleistocene	Fluviatile/Shallow Marine	Via										
	ШN	Pliocene	Regressive sequence of clastics	Arroyo Blanco/ Arroyo Seco						Continued Ramp Basin development-Basin Filled by Shallowing-Upward clastic sequences a& evaporites				
	NEOGEI					ľ				Initial Ramp Basin Formation-basin act as conduits for clastic sedimentation derived from North and Northwest	s			
RY		Miocene	Sand & Shale	Trinchera						Collision if northern and sourther hispaniola-SW- verging folds and thrust faults				
TERTIA			Pelagic Limestone & Shale	Sombrerito										
	UR N	Oligocene	Limestone & Shale	Upper Neiba/Sombrerito						Underthrusting/acrretion in transpressional				
	EOGE		Limestone	Middle Neiba/Sombrerito						enviroment				
	PAL	Eocene	Limestone	Lower Neiba/Ocoa										
			Limestone	Lower Neiba/Jura								Γ		L
		Paleocene	Limestone	Vallejuelo										
		LATE	Igneous/ Metamorphic Basement	Igneus Complex										

Geological Map and Petroleum System



Source Rock: Shales from Neiba & Trinchera Fm, Hypothetical SR from Jura Fm.

Reservoir Rock: Conglomerate facies from Ocoa Fm, sandstones from Trinchera/Arroyo Blanco Fm.

Seal Rock: Marls from Sombrerito Fm & shales from Arroyo Blanco Fm.

Trap: Seismic shows a highly deformed basin with high angle transpressive faults, positive flower structures and anticlines – all potential HC traps.

Timing: Potential deeper source rock (Jura Fm) would be maximum peak of generation

Highlights

	POSITIVES	POTENTIALS
Basin	 Frontier basin Max sediment Thickness of ~9K ft. 	 Depocenter in the Northeast part of the basin with HC generation
G&G Data	 2D seismic data available (42 km) 52 wells drilled 	 Only 10% seismic coverage Provides 90% addt'l to test Modern tech can improve dated info
Petroleum System	 Proved petroleum system with 2 existing fields Several oil seeps in the central part of the basin Arroyo Blanco Fm (Miocene) has produced Oil (20° API) 	 Most wells drilled planned on oil seeps Outcrop samples with kerogene Type II/III &TOC >1 Sulphurous content of gas encountered in Azua wells would suggest a contribution from a limestone source rock
Prospectivity	 At least 3 plays in the basin Oil production achieved (Maleno & Higuerito fields) Maleno-1 SEA produced 13K bbl of oil Maleno-1A produced 5K bbl of oil LYK wells produced 5K bbl 	 High angle transpresive faults, positive flower structures and anticlines identified in 2D seismic-as potential structural traps

San Pedro de Macoris Basin

Located south of the country with 4 offshore blocks available.



Blocks
Blocks
SP1, SP2, SP3 and SP4

Basin Area • 10,339 km²

Tectonics

Forearc basin

Seismic

- ~1,898 km 2D (127 seismic lines)
- 67% of 2D seismic coverage

Wells Drilled

 3 wells on the onshore part of the basin (Llanura Oriental Basin)

Stratigraphic Column

Stratigraphic column of the San Pedro de Macoris Basin with tectonic events and petroleum systems.

PE	RIOD	ЕРОСН	LITHOLOGY	SOURCE ROCK	RESERVOIR	SEAL	TRAPS FORM.	GEN/MIGR/ACC.	PLAY 1	PLAY 2	PLAY 3
		Holocene	Slope Clastic Rocks								
QUATI	ERNARY	Pleistocene									
	ų	Pliocene	Calcareous sandstone & limestones					?			
	NEOGEN	Miocene	Sandstone, claystones & limestones								
TIARY			Post Oligocene Unconformity								
TER	ENE	Oligocene	Pre Miocene ?								
	PALEOG	Eocene	Limestone, Shale and siltstone (Paleogene- Cretaceous ?)								
		Paleocene									
CRETACEOUS		LATE	?								

Note: Based on Santo Domingo-1, San Pedro-1 wells and seismic interpretation (Neoil exploration, 2019). Source: Neoil Exploration





Seismic

127 seismic lines with a total of 1898 km.

Bouger Anomaly

Shows a depocenter in the southern part of the basin. Depocenter with HC Generation.

	POSITIVES	POTENTIALS
Basin	 Frontier basin Sediment thickness ~14K ft 	 Depocenter in the southern part of the basin with HC generation
G&G Data	 2D seismic data available (~1900 km) 3 wells on the onshore part of the basin (Llanura Oriental basin) 	 67% seismic coverage Modern tech can improve dated info
Petroleum System	 San Pedro-1, showed paraffin & light oil with 30° API Proved petroleum system with oil shows in the onshore part of the basin 	 Potential source rock in the oil window in the deepest depocenter of the basin
Prospectivity	 At least 3 plays in the basin 	 Seismic shows potential structural traps, and also stratigraphic traps (Pinch outs & Turbidite fans)





The Round will open on 10th July 2019, with a launch event and roadshow at the Hyatt Regency, 2626 Sage Road, Houston, and close in December 2019 All information is public and available at www.bndh.gob.do/en For more information go to www.roundsdr.gob.do