

BHP

Barbados Seismic Survey 2021 Fact Sheet



BHP is a leading global resource company

We explore for and process minerals, oil and gas, employing more than 80,000 staff and contractors globally. Our products are sold worldwide.

Our corporate purpose is to bring people and resources together to build a better world. We do this through our strategy: to have the best capabilities, best commodities and best assets, to create long-term value and high returns. We are among the world’s top producers of major commodities, including iron ore, metallurgical coal and copper. We also have substantial interests in oil, gas and energy coal

The materials we provide are central to modern life
We constantly evolve our approach so we can deliver them sustainably into the future



In FY2020, we produced

Iron ore	Metallurgical coal	Nickel	Copper	Natural gas	Crude oil	Energy coal
248 million tonnes	41 million tonnes	80 kilotonnes	1,724 kilotonnes	360 bcf	49 MMboe	23 million tonnes

Our Petroleum business

Petroleum is one of the most versatile materials in the world, providing energy for lights and power, and the components needed for many household and construction materials. Oil and natural gas are needed to meet the world’s growing energy needs. Our Petroleum business has been part of BHP for more than 50 years. We have high-margin conventional assets located in the US Gulf of Mexico, Australia, Trinidad and Tobago, and Algeria, as well as appraisal and exploration options in Mexico, Deepwater Trinidad and Tobago, Western Gulf of Mexico, Eastern Canada and Barbados. Our conventional petroleum business includes exploration, appraisal, development and production activities.

Our Petroleum business in the Caribbean

BHP has been a leading oil and gas operator in the Caribbean for 25 years. We began operations in Trinidad and Tobago in 1996, after signing our first Production Sharing Contract for Angostura Block 2 (c). Since then, we have expanded our offshore field capacity in our Angostura field to accommodate both oil and gas

production and we have also been a pioneer for deep water exploration, making the country’s first deep water discovery in 2016. In 2015, we proudly signed Production Sharing Contracts with the Government of Barbados to conduct exploration in two offshore acreage Blocks – Carlisle Bay Block and Bimshire Block (Figure 1).

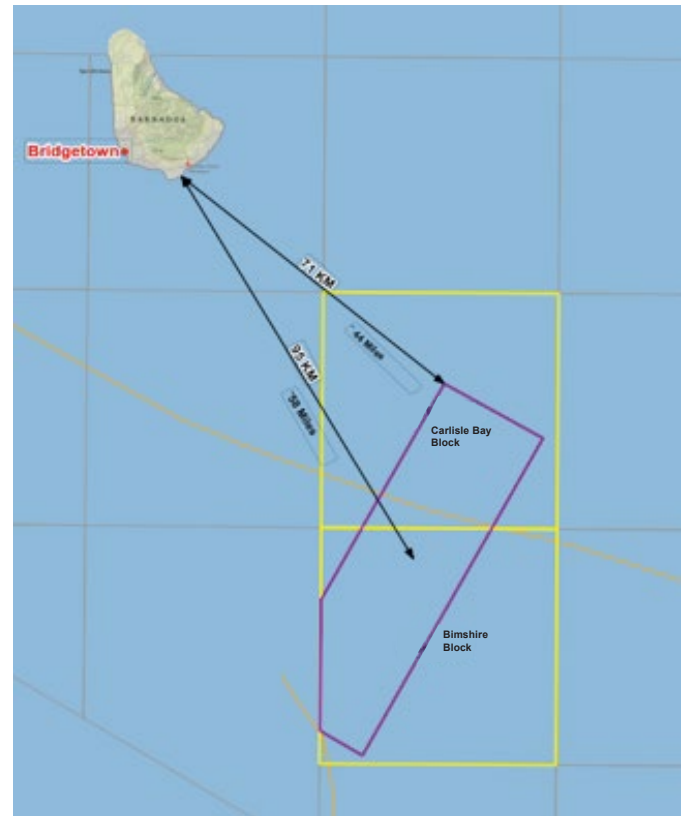
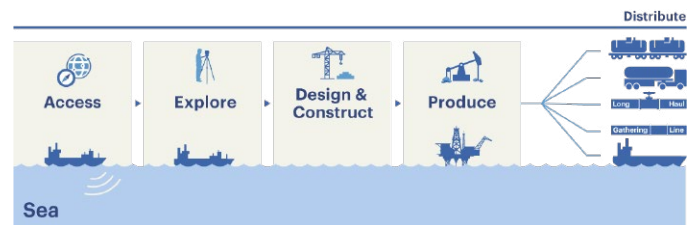


Figure 1: Location of BHP’s Exploration Blocks Offshore Barbados

Petroleum exploration involves many phases, of which the first phase is the seismic survey.



Our commitment to safety

BHP prioritizes safety – of personnel, of the environment and communities at each step of the company’s planning and operations. This commitment is enshrined in the company’s global Charter, to which all staff must adhere. In our Charter, Sustainability is our first priority, – which for us means putting health and safety first, being environmentally responsible and supporting our communities.

BHP

What is a seismic survey?

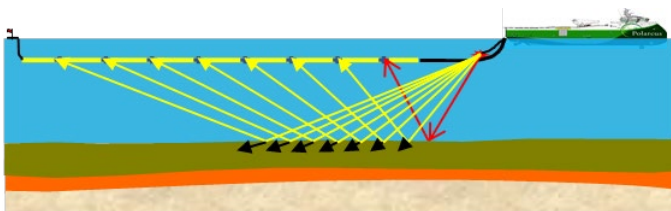
A seismic survey provides important information as to the structure of the earth beneath the sea floor. When this information is analyzed it will allow the Ministry of Energy and BHP's Exploration professionals to decide whether further investigation should be done to understand the potential for oil and gas resources.

Seismic surveys are conducted by sending acoustic waves into the rock layers beneath the sea floor and then recording the time it takes for each wave to echo the characteristics of each returning wave. In water, the sound source is typically an array of different sized air-chambers, filled with compressed air. The source is towed behind a seismic survey vessel and releases a pulse of air into the water, generating sound. The returning sound waves are detected and recorded by hydrophones that are spaced out along a series of cables towed behind the vessel.

The Barbados Seismic Survey will be conducted using a Seismic Streamer Vessel towing specialized cables with an acoustic source used for data acquisition.

As a leader in delivering resources throughout the world, BHP relies on seismic data to support their mission to Bring People and Resources Together to Build a Better World.

How will the seismic survey be conducted?



The seismic operations will be conducted using one fit for purpose seismic vessel equipped with seismic equipment and a technical crew who will deliver the acquisition as required to meet the following:

- BHP's Safety and Operational Standards
- Barbados Environmental and Social Impact Assessment (ESIA) Conditions
- International Association of Geophysical Contractors' Standards
- International Maritime and Barbados Port State control regulations

The seismic survey and marine life

A variety of studies have been conducted on this, and the conclusion is that there is no long term impact on marine life by seismic surveys.

Additionally, all Barbados and international standards will be put in place to ensure that appropriate care is taken of the marine life. A distance area of 500m from the source equipment is used to mitigate any potential interaction with sea life (such as dolphins, whales or turtles). If these types of animals are detected within this specified zone, the seismic equipment operation will halt until the animal clears the area. Work will not resume for a minimum of 30 minutes after the animal has cleared the 500 metre zone. Once the area is clear, per environmental guidelines, there will be a gradual re-start of the seismic operation equipment.

BHP will adhere to standards by the Joint Nature Conservation Committee Guidelines as recognized internationally by seismic regulators and operators.

How long is the survey?

The survey vessel is planned to arrive in Barbados in early September 2021. The survey operation is expected to last approximately one month.

How many vessels will be involved?

There will be 3 vessels in the survey area for the duration of the survey – the seismic vessel and two support vessels.

Where is the survey area?

The survey area is approximately 70 km (43 miles) from Barbados' most southern coastline.

Fisherfolk will be able to continue normal operations as they do when cruise ships or other International ships are in the area. For the safety of the fisherfolk, the Ministry of Energy and BHP will request that fisherfolk observe a 500 m safety buffer zone from the seismic vessel and equipment. The two seismic support vessels will provide interface and guidance for fisherfolk.

BHP

Sound level (Decibel) of Seismic Surveys

The sound from seismic surveys is comparable to naturally occurring ocean sounds –such as sounds from mammals and transient marine traffic. The sound pulses are transient and temporary. Information about seismic surveys and sounds emitted can be found on the International Association of Geophysical Contractors (IAGC) website at www.IAGC.org - and following the links to

- “The Facts”
- “Fact Sheets”
- “Fundamentals of Sound in the Marine Environment”



Longitude and Latitude Location of Survey Area

Bimshire Block	LAT (DD)	LONG (DD)	LAT (DMS)	LONG (DMS)	Easting X (WGS84 UTM20N m)	Northing Y (WGS84 UTM20N m)
SW corner	11.929422	-59.227208	N11° 55' 45.919"	W59° 13' 37.949"	911,082.83	1,321,549.93
NW corner	12.381144	-59.227208	N12° 22' 52.118"	W59° 13' 37.949"	910,387.85	1,371,600.53
NE corner	12.381144	-58.768083	N12° 22' 52.118"	W58° 46' 5.099"	960,408.10	1,372,350.97
SE corner	11.929422	-58.768083	N11° 55' 45.919"	W58° 46' 5.099"	961,188.34	1,322,274.63

Carlisle Bay Block	LAT (DD)	LONG (DD)	LAT (DMS)	LONG (DMS)	Easting X (WGS84 UTM20N m)	Northing Y (WGS84 UTM20N m)
SW corner	12.381144	-59.227208	N12° 22' 52.118"	W59° 13' 37.949"	910,387.85	1,371,600.53
NW corner	12.832075	-59.227208	N12° 49' 55.470"	W59° 13' 37.949"	909,668.74	1,421,564.42
NE corner	12.832075	-58.768083	N12° 49' 55.470"	W58° 46' 5.099"	959,600.75	1,422,340.37
SE corner	12.381144	-58.768083	N12° 22' 52.118"	W58° 46' 5.099"	960,408.10	1,372,350.97

Questions?

If you have questions about the survey or want further information please get in touch with us:

BHP's WhatsApp contact details: [1-246-832-5587](tel:1-246-832-5587)

Email: Barbados.seismic@energy.gov.bb or Barbados.Seismic@BHP.com