



Government of the Republic of Trinidad and Tobago
Ministry of Energy and Energy Industries

Trinidad & Tobago 2022 Onshore and Nearshore Competitive Bid Round

11 July 2022



Government of the Republic of Trinidad and Tobago
Ministry of Energy and Energy Industries

Legislative Framework

Trinidad and Tobago Petroleum Legislation



Primary Legislature

1. Petroleum Act
2. Petroleum Production Levy and Subsidy Act
3. Petroleum Taxes Act

Secondary Legislature

1. Corporation Tax Act, Chap. 75:02
2. Income Tax Act, Chap. 75:01
3. Income Tax (In Aid of Industry) Act, Chap. 85:04
4. Environmental Management Act, Chap. 35:05
5. Occupational Safety and Health Act, Chap. 55:08

THE PETROLEUM ACT, CHAP.62:01 AND ITS REGULATIONS

- **Section 9 of the Petroleum Act, Chap. 62:01**, provides the Minister of Energy and Energy Industries with the authority to grant licences in accordance with the Petroleum Act and the Petroleum Regulations and also in accordance with such terms and conditions as the Minister considers appropriate.
 - **Regulation 3(1)(b) of the Petroleum Regulations, Chap. 62:01** provides that one (1) of the licences which may be granted for the execution of petroleum operations consists of “an Exploration and Production (Public Petroleum Rights) Licence”.
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THE PETROLEUM ACT, CHAP.62:01 AND ITS REGULATIONS

- **Section 10 of the Petroleum Act, Chap. 62:01** provides, *inter alia*, that the entry into Exploration and Production (Public Petroleum Rights) Licences within the meaning of section 6, shall be subject to a procedure of competitive bidding in accordance with the Regulations.
 - **Regulation 4(1) of the Petroleum Regulations, Chap. 62:01** provides, that where the President of the Republic of Trinidad and Tobago has under Section 10 of the Petroleum Act determined that an area shall be subject to competitive bidding, the Minister shall make an Order to that effect and such Order shall be published in the *Gazette* and in at least one daily newspaper circulating in Trinidad and Tobago.
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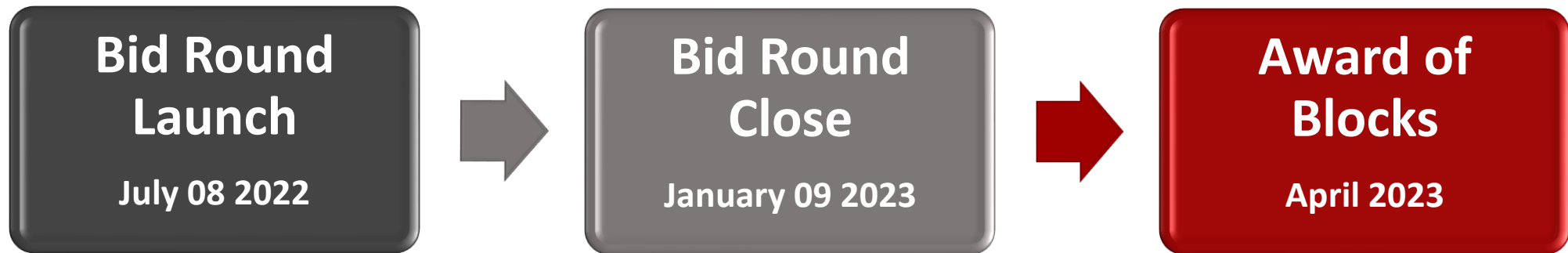


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Competitive Bidding Order (CBO)

THE PETROLEUM REGULATIONS (ONSHORE AND NEARSHORE COMPETITIVE BIDDING) ORDER, 2022

- The Petroleum Regulations (Onshore and Nearshore Bidding) Order, 2022 was published in the *Gazette* on July 8th 2022.



THE PETROLEUM REGULATIONS (ONSHORE AND NEARSHORE COMPETITIVE BIDDING) ORDER, 2022

- **Principal Features of the Order**

- i. Clause 4 - Bids must be submitted in duplicate under confidential cover in sealed envelopes marked “***Bid for Exploration and Production (Public Petroleum Rights) Licence***”.
 - ii. Clause 5 - Persons intending to bid either individually or as a member of a consortium shall pay a bid application fee of **USD\$30,000.00** (or the equivalent **TTD**) prior to the close of bids.
 - iii. Clause 9 - A bid proposal shall be evaluated based on (a) the provisions outlined in the Model Licence and (b) a Point System to evaluate the bids set out in Schedule 6 of the Petroleum Regulations (Onshore and Nearshore Bidding) Order, 2022.
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THE PETROLEUM REGULATIONS (ONSHORE AND NEARSHORE COMPETITIVE BIDDING) ORDER, 2022

- **Principal Features of the Order (Continued)**

- iv. Clause 10 - A state owned enterprise shall be given a participating interest in each block awarded and a carried interest for certain works, payment and obligations
 - v. Clause 12 - Successful bids shall be announced within three (3) months of the date of the close of bids.
 - vi. Clause 13 - A successful bidder wishing to be granted an Exploration and Production (Public Petroleum Rights) Licence is required to execute an Exploration and Production (Public Petroleum Rights) Licence with the State within thirty (30) days of notification of the successful bid.
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THE PETROLEUM REGULATIONS (ONSHORE AND NEARSHORE COMPETITIVE BIDDING) ORDER, 2022

- **Principal Features of the Order (Continued)**

vii. Schedule 6 – Point system for use in the Evaluation of Bids

(a) Minimum Exploration Work Programme

1. Geophysical – a combination of acquisition and/or reprocessing of seismic data;
2. Geological & Geophysical Studies; and
3. Drilling - points based on cumulative footage.

(b) Signature Bonus.



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Exploration and Production (E&P) Licence

KEY PROVISIONS OF THE MODEL EXPLORATION AND PRODUCTION (PUBLIC PETROLEUM RIGHTS) LICENCE

- **Clause 3 – Licence Term**

- i. Initial period of six (6) Contract Years from the Effective Date, may be extended for an additional period of twenty-five (25) years from the Effective Date
- ii. The additional twenty-five (25) year term may be further extended, for a period of five (5) years

- **Clause 5 –Annual Work Programme and Budget**

The Licensee is required to present to the Minister for approval with respect to each Calendar Year (for five (5) Calendar Years), an Annual Work Programme and Budget with respect to the Licensed Area.



KEY PROVISIONS OF THE MODEL EXPLORATION AND PRODUCTION (PUBLIC PETROLEUM RIGHTS) LICENCE

- **Clause 10 – Financial Obligations of the Licensee**
 1. Signature, production, technical equipment and environmental bonuses, royalties, minimum payments, training and research and development contributions, scholarships and annual surface rental.
 2. Maintain an escrow account in order to fund expenses and costs associated with the relinquishment and abandonment of the Licensed Area.
 3. The foregoing payments and escrow account are to be satisfied at the Licensee's own expense.
 4. All other payments including import duties, income tax, excise duties, charges and fees for services rendered and fees of general application as may be appropriate to the Licence and in accordance with any applicable law.
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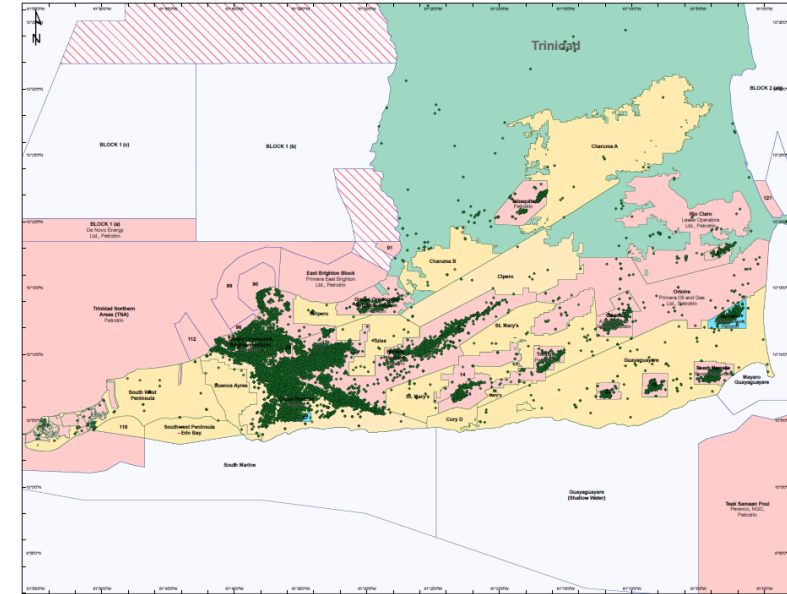


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Geological Summary

Onshore Exploration History

- 1857**
First well drilled onshore by Merrimac Company reaching TD at 200ft
- 1903**
Guayaguayare #3, first well drilled using rotary equipment
- 1990**
Southern Basin Consortium (SBC) 2D Seismic survey acquired
- 2005**
First onshore competitive bid round
- 2012**
North West District (NWD) 3D Seismic survey acquired. Largest 3D survey onshore to date
- 2013**
Last onshore competitive bid round. 3 blocks successfully awarded: Ortoire, Rio Claro and St. Mary's
- 2014- Present**
7 wells drilled onshore uncovering 1 TCF gas in Ortoire block and 241 MMbbls in the South West Peninsula.



More than 13,000 wells drilled since commencement of exploration and over 3.5 BBO and 12 TCF gas produced.

Onshore Geological Setting

Central Range:

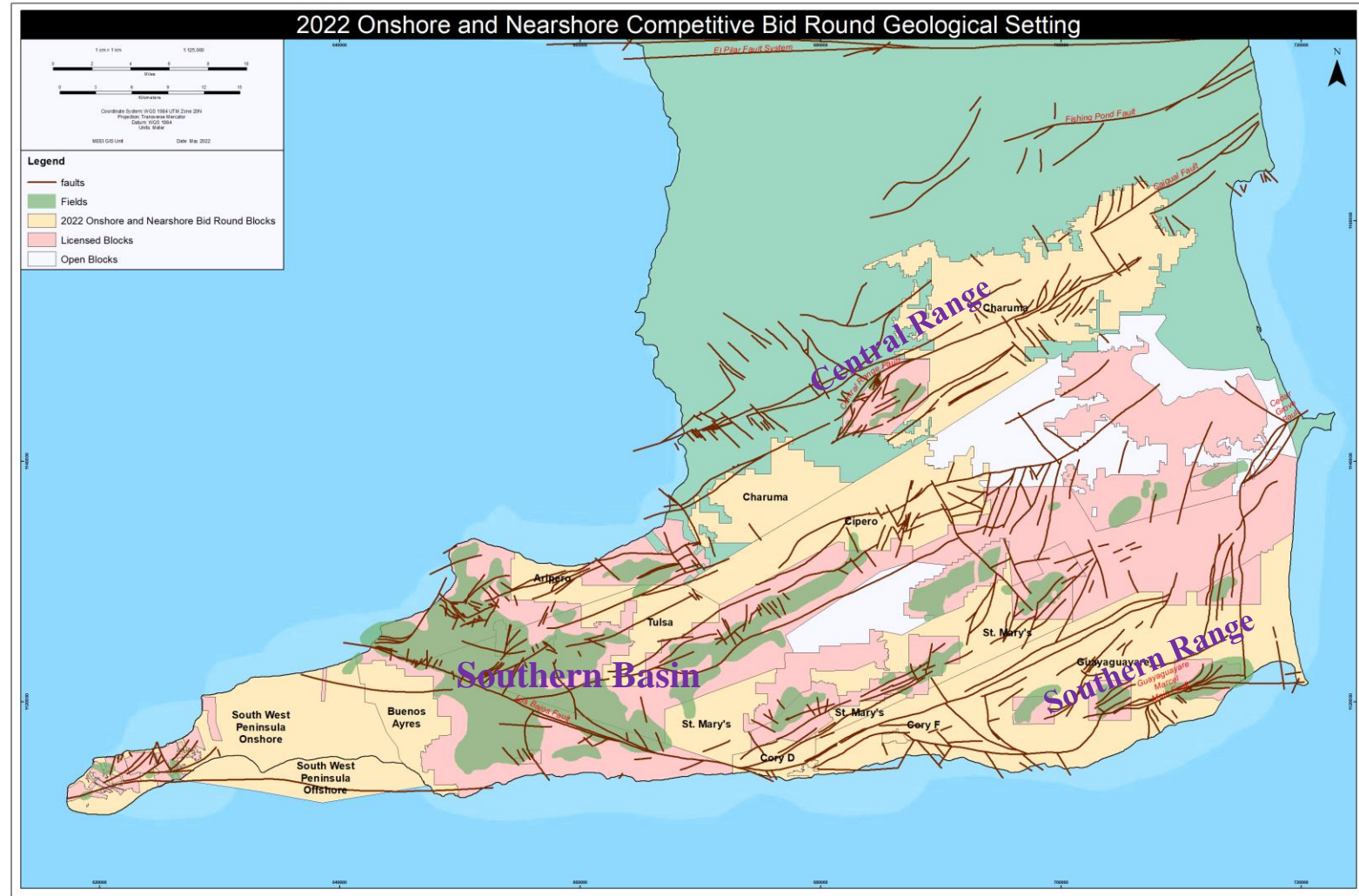
- Zone of complex deformation comprising Miocene thrusts and back thrusts associated with foreland basin development.
- Intersected by active strike-slip faults along the Warm Springs-Central Range-Caigual Fault System.

Southern Basin:

- Originated as transpressional foreland basin during the late Oligocene.
- Basin dissected by NE-SW trending anticlines with NW-SE oriented tear faults and southward facing thrusts.
- Sedimentation across the Basin has been dominated by prograding delta lobes since the middle Miocene when the palaeo-Orinoco River shifted course.

Southern Range:

- Uplifted and eroded part of the Southern Basin.



Onshore Petroleum System

Source – Naparima Hill Formation (La Luna equivalent)

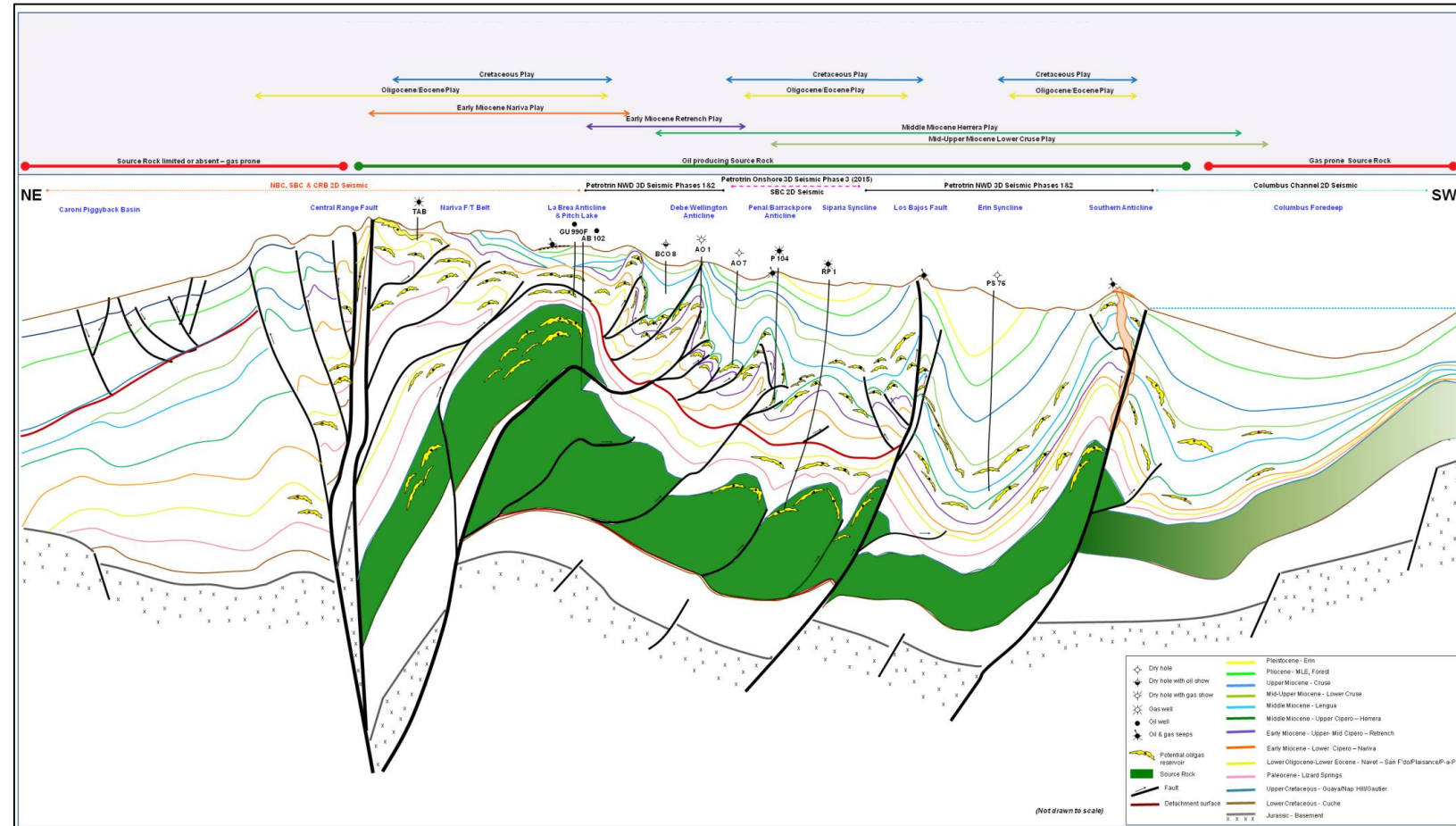
Main Play Types:

- Pleistocene to Late Miocene
 - Deltaic and estuarine sands of Forest, Cruse, Gros Morne and Mayaro Formations
- Miocene
 - Retrench, Herrera and Karamat deep-water sands.
- Early Miocene/Oligocene
 - Nariva deep-water sands.
- Eocene
 - San Fernando sandstones (Mt. Moriah)
- Cretaceous
 - Naparima Hill Argillite, Gautier and Cuche deep-water sands

Traps

- Thrust faults, compressional anticlines with multiple imbricates.
- Folded growth faults with lateral and stratigraphic variations.

Geological Cross Section of the Southern Basin, Trinidad



Adapted from Petrotrin & Getz NWD Interpretation Report, 2014



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2022 Onshore and Nearshore Competitive Bid Round Blocks

Onshore and Nearshore Competitive Bidding Round 2022

11 Blocks :

- Aripero
- Buenos Ayres
- Charuma
- Cipero
- Cory D
- Cory F
- Guayaguayare
- St. Mary's
- SWP Onshore
- SWP Offshore
- Tulsa



Guayaguayare

Background

Block Size: 30,595.37 hectares

Block History:

- Exploration and production activities within this block began in 1902. Four fields within the Guayaguayare Sub-basin: Navette, Beach Marcelle, Moruga East and Gourdon.
- Recent operators included Voyager - July 2009 to September 2015, and Range Resources - September 2015 to January 2020. Block subsequently reverted to the MEEI.

Petroleum System

- **Source:** Cretaceous Naparima Hill and Gautier Formations
- **Reservoirs:** Cretaceous Sands and Plio-Pleistocene Deltaic Deposits
- **Reservoir Depths:** 1500 ft – 11500 ft
- **Res Quality:** Marginal marine sediments with 20-25 average porosity.
- **Trap types:** combination traps including wrench-related anticlinal flower structures and pinchouts against structural trap doors.
- **Seal:** Interbedded shales



Cory F

Background

Block Size: 169.4 hectares

Block History:

- The Block was first operated on by the Cory Brothers in the 1930s – 1940s.
- In 2007 the Cory Blocks were awarded to Primera Oil and Gas Limited.
- In 2011, Primera surrendered the Cory F block.

Petroleum System

- **Source:** Naparima Hill Formation
- **Reservoir:** Miocene sands, Pliocene deltaic deposits, possible Cretaceous sands
- **Reservoir Depths:** 1500ft - 8000ft
- **Trap Types:** Structural
- **Seal:** Intraformational shales



Cory D

Background

Block Size: 1,652.73 hectares

Block History:

- The Block was first operated on by the Cory Brothers in the 1930s – 1940s.
- In 2007 the Cory Blocks were awarded to Primera Oil and Gas Limited.
- In 2011, Primera surrendered the Cory D block.

Petroleum System

- **Source:** Naparima Hill Formation
- **Reservoir:** Miocene sands, Pliocene deltaic deposits, possible Cretaceous sands
- **Reservoir Depths:** 1500 ft - 10000ft
- **Trap Types:** Structural
- **Seal:** Intraformational shales



St. Mary's

Background

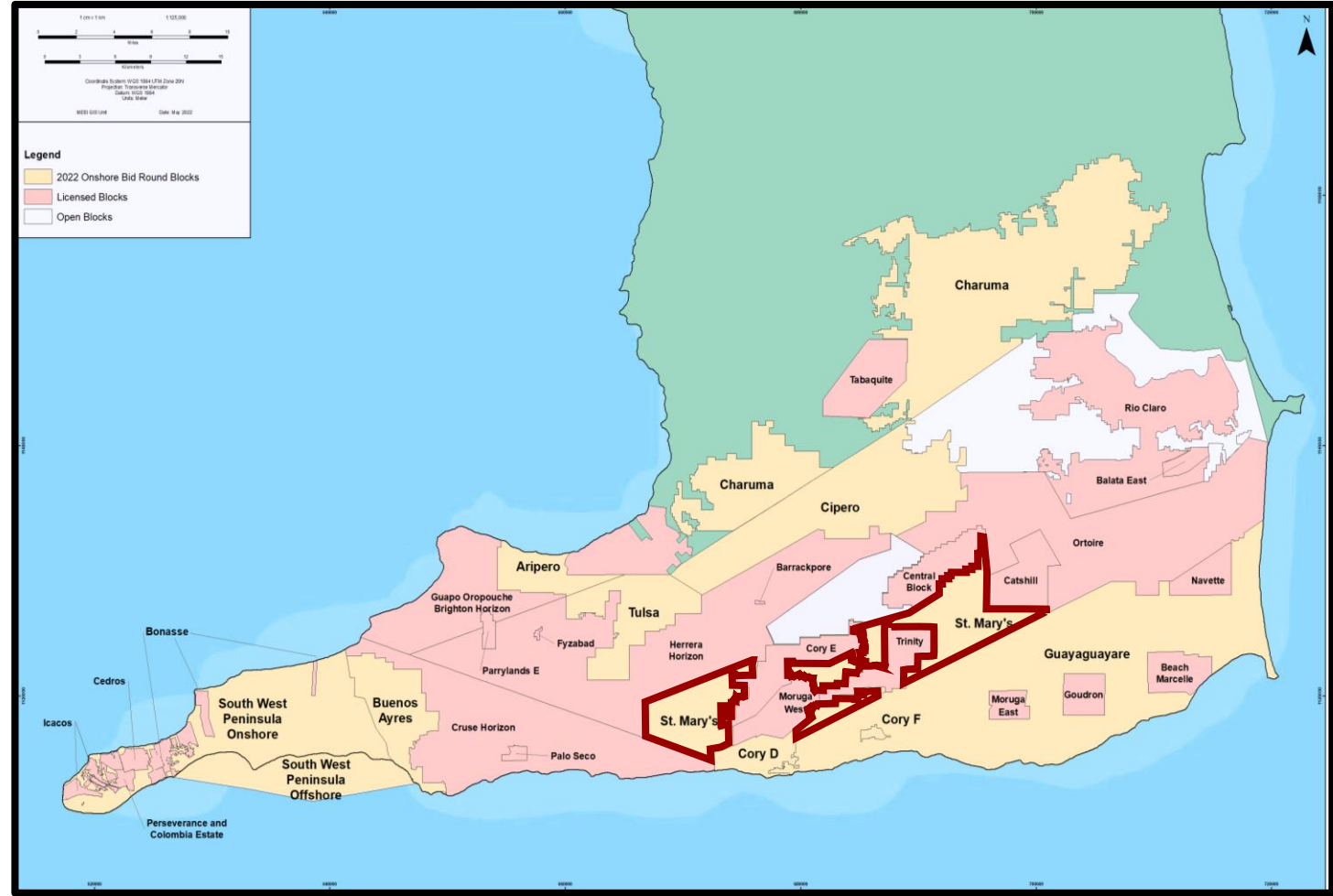
Block Size: 10,794.36 hectares

Block History:

- PSC signed in 2014; Licence Expired in 2020
- Operators: Range Resources (80%) and Petrotrin (20%)

Petroleum System

- **Source:** Cretaceous Naparima Hill and Gautier Formations
- **Reservoirs:** Pliocene Deltaic sands, Miocene Herrera Turbidites, Cretaceous sands
- **Reservoir Depths:** 3000 ft – 14000 ft
- **Reservoir Quality:** Sheet like successions, extensive lateral continuity in shallower deltaics, with sands thickening easterly for deeper turbidites. Generally good poro-perm characteristics.
- **Trap Types:** Structural (2-way and 3-way dip closures) & Stratigraphic pinch outs.
- **Seals:** Intraformational shales



Cipero

Background

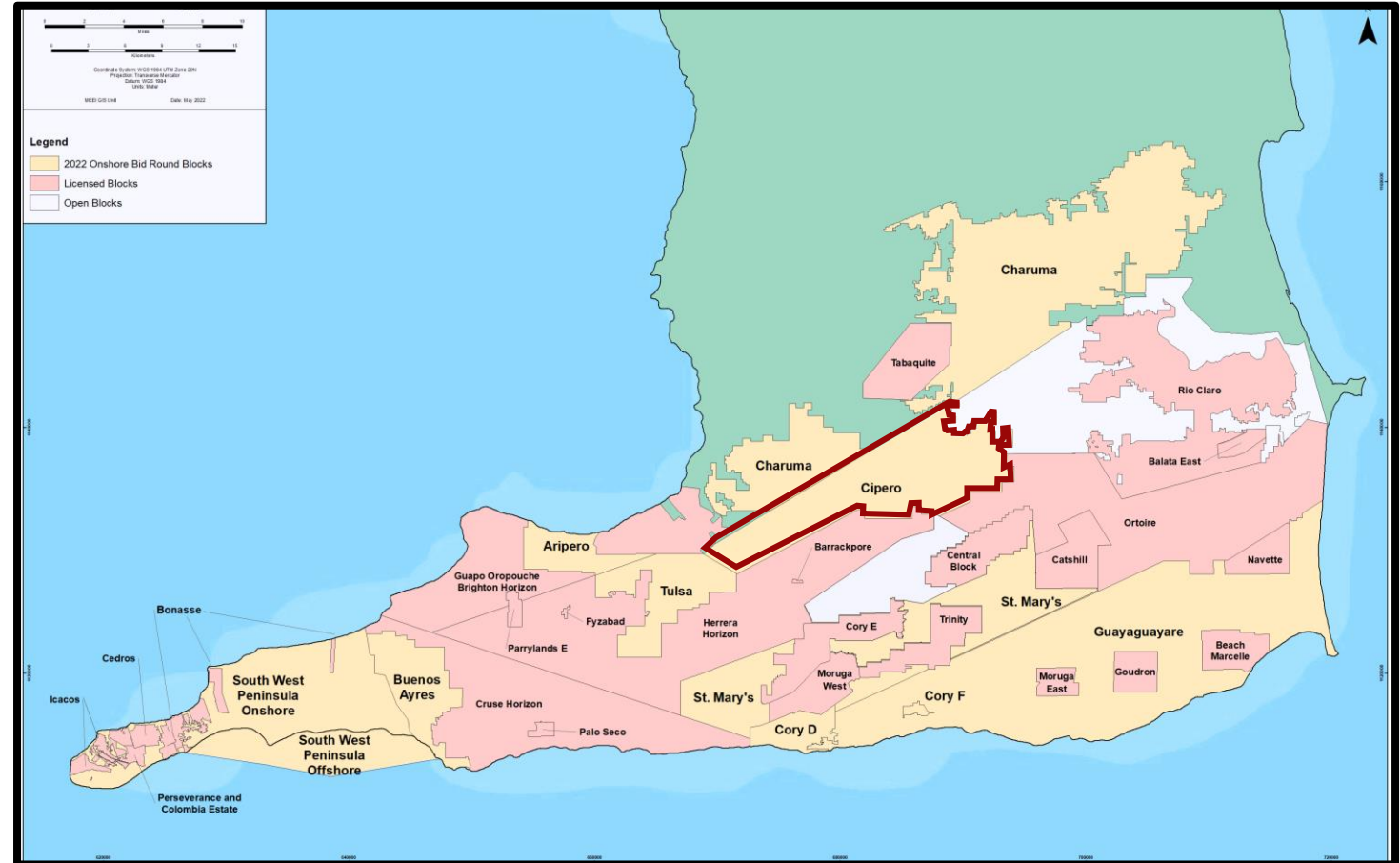
Block Size: 12,110 hectares

Block History:

- In 1989, the Southern Basin Consortium explored the deep horizons of the southern part of Trinidad, inclusive of the area now known as Cipero Block.
- Cipero Block was offered as part of Herrera block in the 1995-96 Bid round.
- Cipero was not included in the block award.

Petroleum System

- **Source:** Naparima Hill Formation
- **Reservoir:** Pliocene Deltaic sands, Miocene Herrera Turbidites, Cretaceous sands.
- **Reservoir Depths:** 3000 ft – 12000 ft
- **Trap Types:** Structural



Charuma

Background

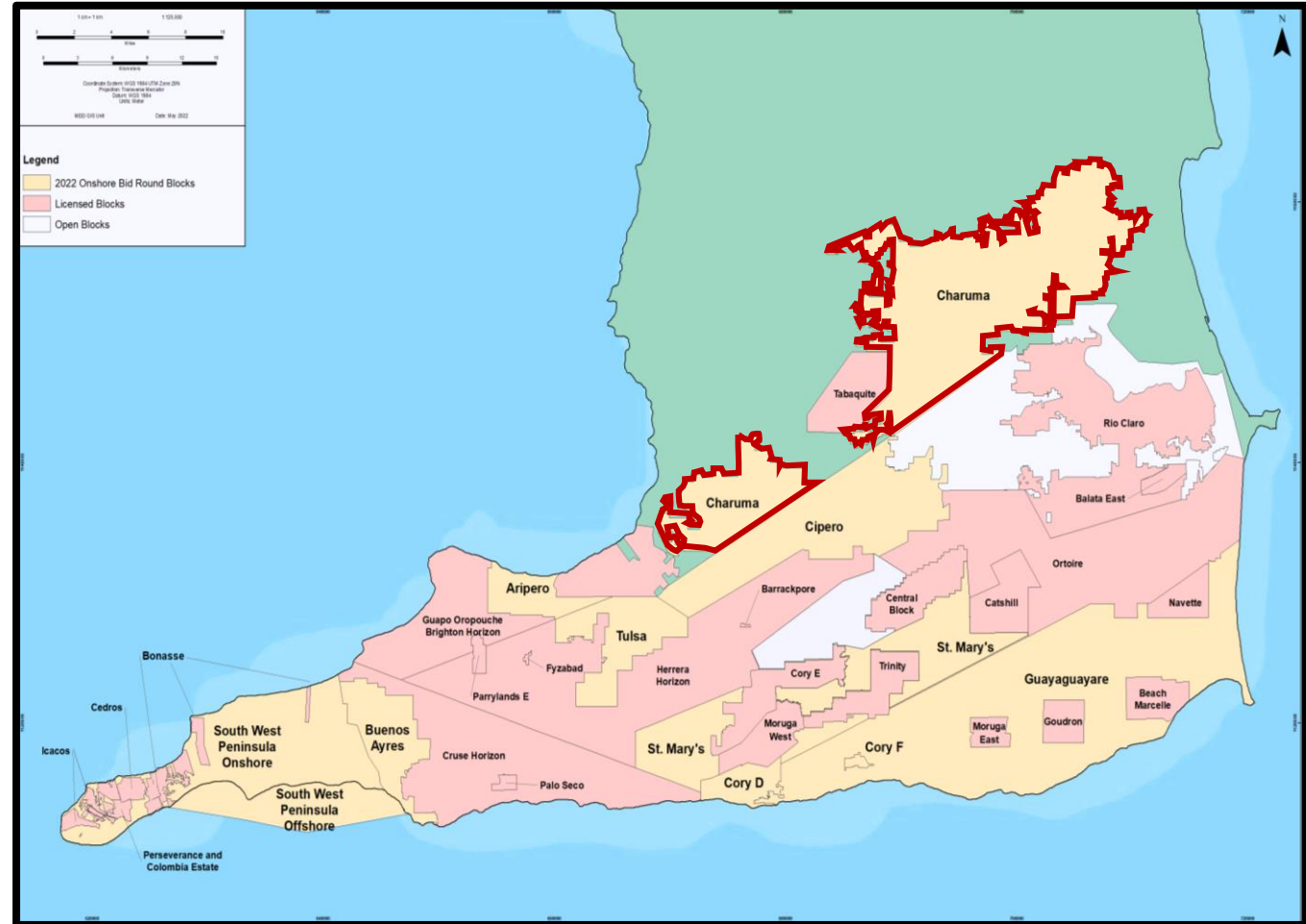
Block Size: 29,455.35 hectares (subdivided into two blocks)

Block History:

- Modified from 1989 Original Central Range Block
- Charuma Blocks Relinquished by Parex in 2014

Petroleum System

- **Source:** Cretaceous Naparima Hill Formation
- **Reservoir:** Eocene- Miocene Deep Water sandstones and Cretaceous Argellites
- **Reservoir Depth:** 2000 ft – 7500 ft
- **Reservoir Quality:** Porosities: 15-20%,
Permeabilities: 50 – 250mD
- **Trap:** Faulting along Warm Springs- Central Range- Caigual Fault Zone
- **Seal:** Ciperó Shales



Aripero

Background

Block Size: 2,263.21 hectares

Block History:

- Portion of Guapo-Oropouche-Brighton Horizons E&P Licence referred to as Block I relinquished in 2012.
- Block I renamed Aripero in 2022.

Petroleum System

- **Source:** Cretaceous Naparima Hill Formation
- **Reservoirs:** Late Miocene to Early Pliocene deltaic and estuarine sands.
- **Reservoir Depths:** 800 ft - 14500 ft
- **Trap Types:** Structural
- **Seal:** Intraformational shales



Tulsa

Background

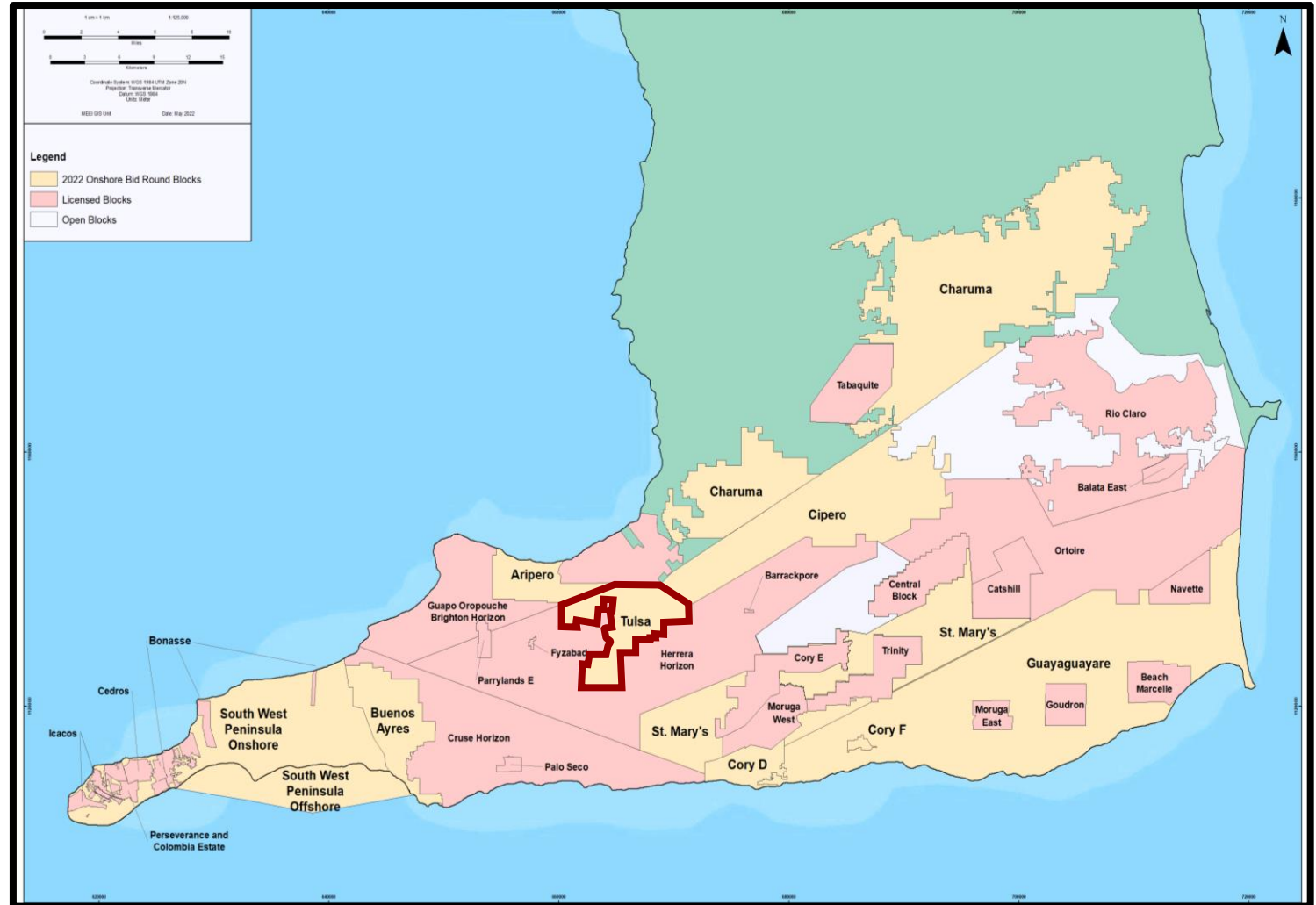
Block Size: 4,673.39 hectares

Block History:

- Portion of Herrera Horizons E&P Licence referred to as Block H relinquished in 2012.
- Block H renamed Tulsa in 2022.

Petroleum System

- **Source:** Cretaceous Naparima Hill Formation
- **Reservoirs:** Late Miocene to Early Pliocene deltaic and estuarine sands.
- **Reservoir Depths:** 2000 ft - 12000 ft
- **Trap Types:** Structural, stratigraphic and combination trap types
- **Seal:** Intraformational shales



Buenos Ayres

Background

Block Size: 4,105.97 hectares

Block History:

- Buenos Ayres was once part of the larger Block A (Cruse Horizon block). This block was awarded to Petrotrin under an E&P Licence on 10th October 2006.
- In 2012, part of the block was relinquished and the rest of Block A was retained.
- The Block A relinquished area is now called Buenos Ayres Block.

Geological Overview

- **Structures:** Erin Syncline, Los Bajos Fault
- **Source:** Cretaceous Naparima Hill Formation
- **Reservoirs:** Early Pliocene Age
- **Reservoir Depths:** 7200 – 11000 ft
- **Traps:** Structural and Stratigraphic



South West Peninsula (Onshore)

Background

Block Size: 14,451.69 hectares

Block History:

- Exploration & Production licence signed on 24th May 2007 between the Ministry of Energy and Trinidad Exploration Development Company Limited (TED) and Petrotrin.
- Licence expired on 23rd May 2013.

Geological Overview

- **Source:** Cretaceous Naparima Hill Formation
- **Reservoirs:** Plio-Miocene aged sands
- **Reservoir depths:** 3000ft – 16000ft
- **Trap Types:** Structural and Stratigraphic



South West Peninsula (Offshore)

Background

Block Size: 4,843.7 hectares (SWP Offshore block was previously two separate blocks called SWP Isote Bay and SWP Erin Bay).

Block History:

- Exploration & Production licence signed on 24th May 2007 between the Ministry of Energy and Trinidad Exploration Development Company Limited (TED) and Petrotrin.
- These licenses expired on 23rd May 2013.

Geological Overview

- **Source:** Cretaceous Naparima Hill Formation
- **Reservoirs:** Plio-Miocene aged sands
- **Reservoir depths:** 6500ft – 12000ft
- **Trap Types:** Structural and Stratigraphic

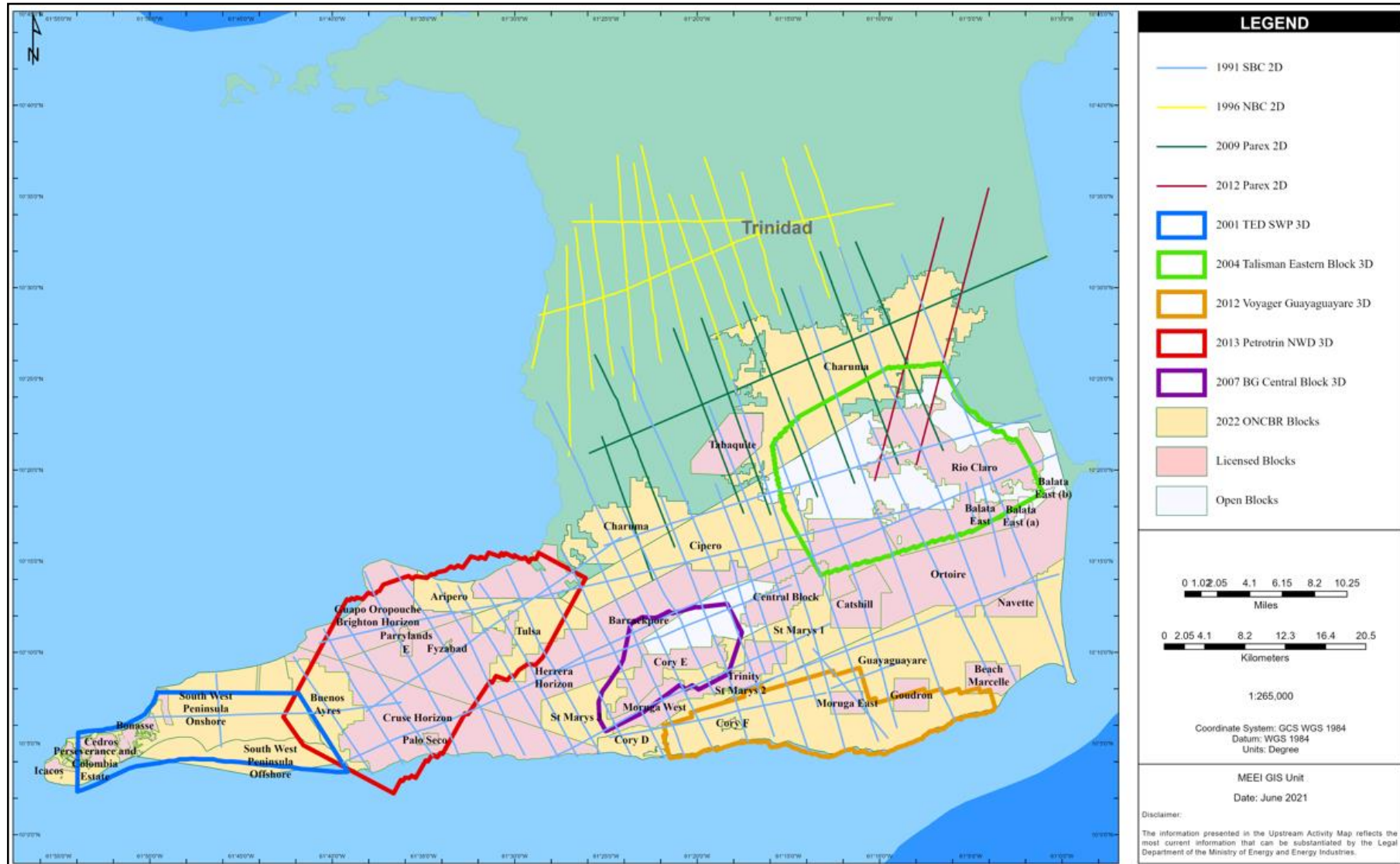




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Onshore and Nearshore Dataset

Onshore and Nearshore Seismic Data



Onshore and Nearshore Well Data



Onshore and Nearshore Data Package

Payments of the bid fee gives access to the data package which contains the following:

- Seismic Surveys, well data, and reports
 - The Petroleum Regulations Competitive Bidding Order
 - Exploration and Production Licence
 - Joint Operating Agreement
 - The Local Content and Local Participation Framework for the Republic of Trinidad and Tobago dated 7th October, 2004
 - The relevant information with respect to the blocks for which bids may be presented
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Onshore and Nearshore Virtual Data Room

Prospective bidders can preview the seismic, well data and reports in our Virtual Data Room via:

<https://ttdataroom2021.com>

Or Scan here for quick access:





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FOR FURTHER INFORMATION

VISIT OUR WEBSITE AT
<https://energy.gov.tt>

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Thank you!