



กระทรวงพลังงาน
MINISTRY OF ENERGY

THAILAND
PETROLEUM BIDDING
ROUND 2018
FOR OFFSHORE BLOCK
G 2/61

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Bid Brochure

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General Information

COUNTRY DATA

Official Name: [Kingdom Of Thailand](#)

Area: [513,115 sq km](#)

Capital: [Bangkok](#)

Currency: [Baht \(THB\)](#)

Language: [Thai](#)

Time Difference: [GMT +7 hours](#)

	2016	2015	2014	2013	unit
Population	65,931,550	65,729,098	65,124,716	64,785,909	million
Male	32,357,808	32,280,886	31,999,008	31,845,971	million
Female	33,573,742	33,448,212	33,125,708	32,939,938	million

Source : [Bureau of Registration Administration](#)

ECONOMIC DATA

	2016	2015	2014	2013	unit
GDP at current price	14,533	13,747	13,230	12,915	billion baht
Agriculture	1,236	1,236	1,335	1,463	billion baht
Non-agriculture	13,297	12,511	11,895	11,453	billion baht
GDP reference year 2002	9,927	9,581	9,262	9,175	billion baht
GNP per capita	205,339	193,914	187,299	181,105	baht

Source : [Official of the National Economic and Social Development Board](#)

Total Exports	7,550,704	7,225,723	7,311,089	6,909,544	million baht
Total Imports	6,888,187	6,906,079	7,403,905	7,657,633	million baht

Major Trade Partners : [ASEAN](#), [EU](#), [NAFTA](#), [Japan](#) and [Middle East](#)

Source : [Department of International Trade Promotion Export | Import](#)

PETROLEUM DATA

	2016	2015	2014	2013	unit
Oil production	61	56	49	54	million barrels
Gas production	1,103	1,088	1,098	1,071	billion cubic feet
Condensate production	36	35	34	33	million barrels
Petroleum consumption	1,675	1,662	1,620	1,587	thousand BOEPD
Indigenous contribution	51	53	55	55	% of total consumption
Total proved oil reserves	178	219	223	257	million barrels
Total proved gas reserves	6,830	7,304	7,752	8,415	billion cubic feet
Total proved condensate reserves	171	178	182	203	million barrels

Source : [Department of Mineral Fuels](#)

Current Concession Map

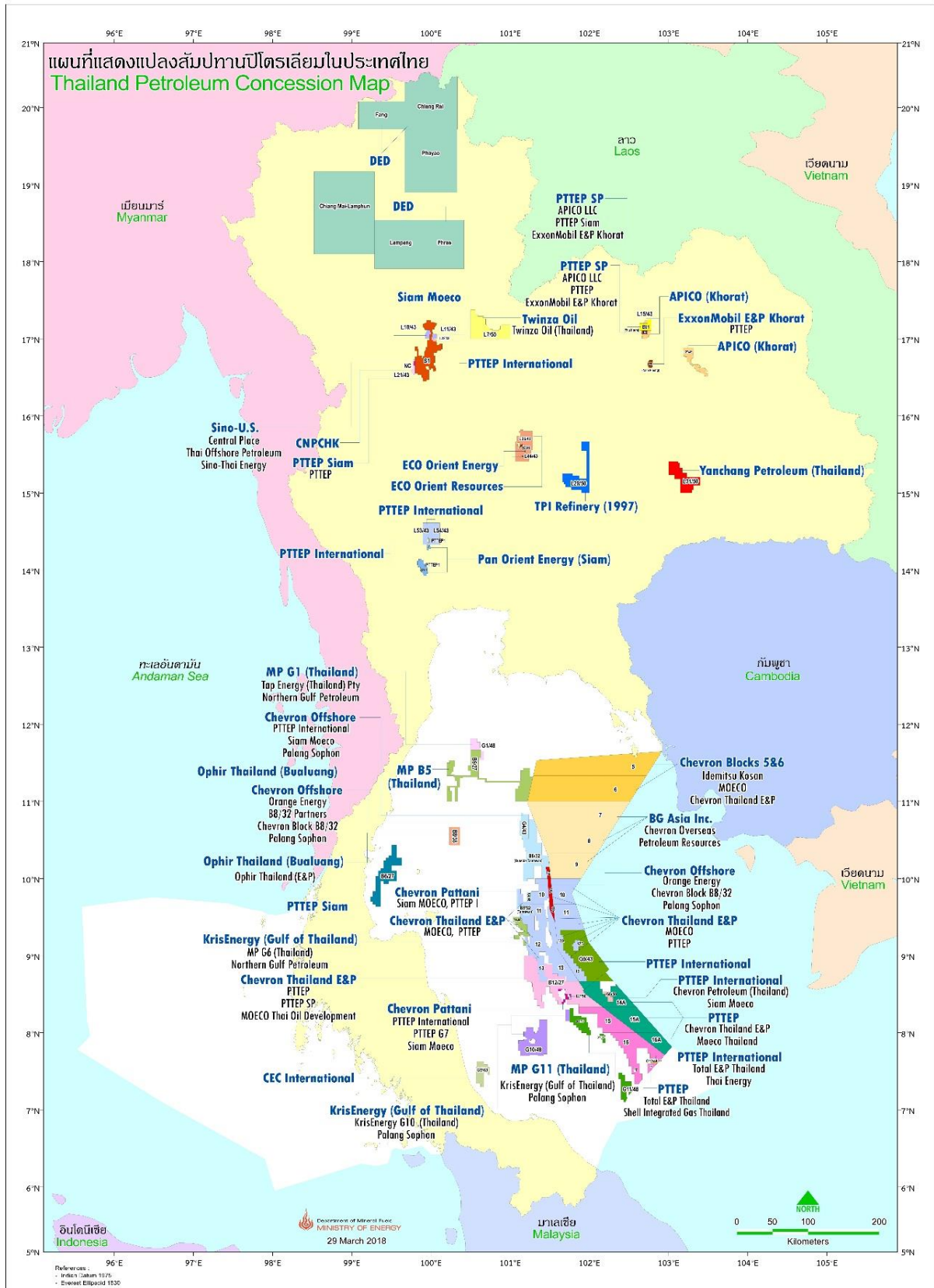


Figure 1 Current Thailand Petroleum Concession Map

Areas Open for Bidding Map

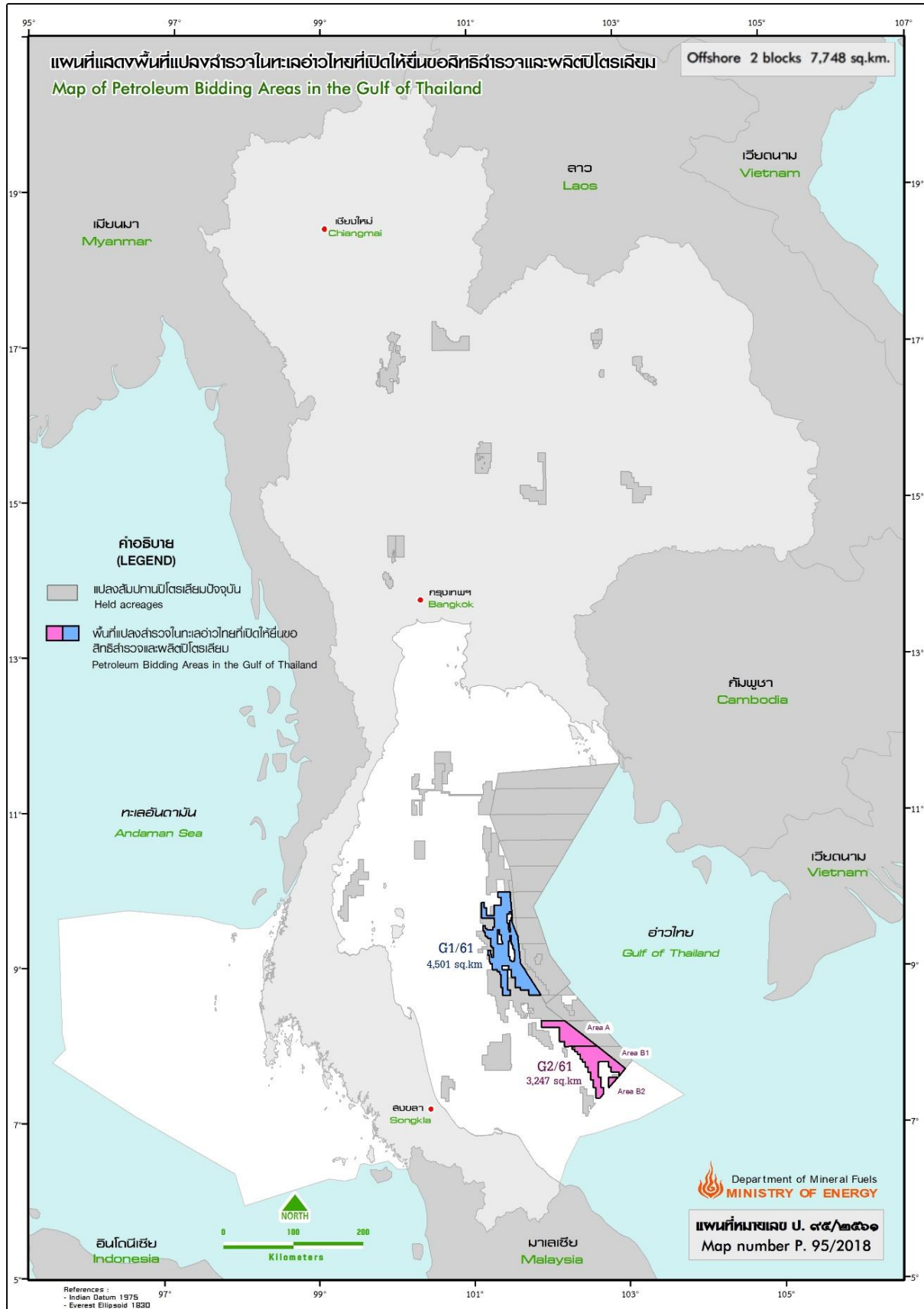


Figure 2 Map showing areas open for bidding

Areas for Bidding

The offshore exploration block no. G2/61 located in the Gulf of Thailand. The block covers a total of 3,247 square kilometers which are separated into 3 areas as follows:-

- Block G2/61 Area A having an approximate area of 1,311 square kilometers
- Block G2/61 Area B1 having an approximate area of 1,835 square kilometers
- Block G2/61 Area B2 having an approximate area of 101 square kilometers

Gulf of Thailand Regions

Petroleum Potential

The Gulf of Thailand (GoT) is located in Southeast Asia between approximately latitudes 06 00 and 14 00 N and longitudes 99 00 and 103 00 E, covering an area of about 300,000 sq.km. Petroleum exploration in the GoT began in 1968 under special conditions of the Mineral Act BE 2510 (1967). Subsequent to the promulgation of the Petroleum Act BE 2514 (1971), the exploration rights were transferred from being under the Mineral Law to the Petroleum Law.

The first petroleum production area in the GoT is the Erawan field, where production started in 1981. Currently, there are 22 petroleum concessions, 29 exploration blocks and 136 production areas in the GoT, supporting the fact of a proven petroleum system in the GoT. At the end of 2016, the cumulative production of natural gas, crude oil and condensate in the GoT was approximately 4,944 MMBOE, covering 90.5% of the total domestic production.

The GoT consists of Cenozoic sedimentary basins caused by normal faults. As a result, these basins formed graben and half-graben geometry oriented in the north-south direction. The eastern part is the most successful area for petroleum exploration and production in the country, comprising two major basins: the Pattani Basin and the North Malay Basin. The production of both basins accounts for 73.4% of the total production in the GoT and 68.6% of the total production in the country (as of the end of 2016).

Geology of Block G2/61

The block G2/61 is located in the North Malay Basin covering an area of approximately 18,000 sq.km. The major gas fields in the basin are Bongkot (Block G2/61) and Arthit.

The rifting phase in the North Malay Basin had started in Late Eocene and ended during Late Oligocene followed by post-rift and thermal sag since Early Miocene. During the latest Oligocene, the basin was interrupted by structural inversion. Then, extension continued in Early Miocene to Mid Miocene. During Mid Miocene, the non-depositional phase occurred, resulting in a huge missing section and Mid Miocene Unconformity (known as MMU). The main fault pattern is the set of normal faults which are oriented in the north-south and northwest-southeast directions, forming graben and half-graben geometry. The Stratigraphy of the North Malay Basin can be divided into 4 formations, shown in Figure 3.

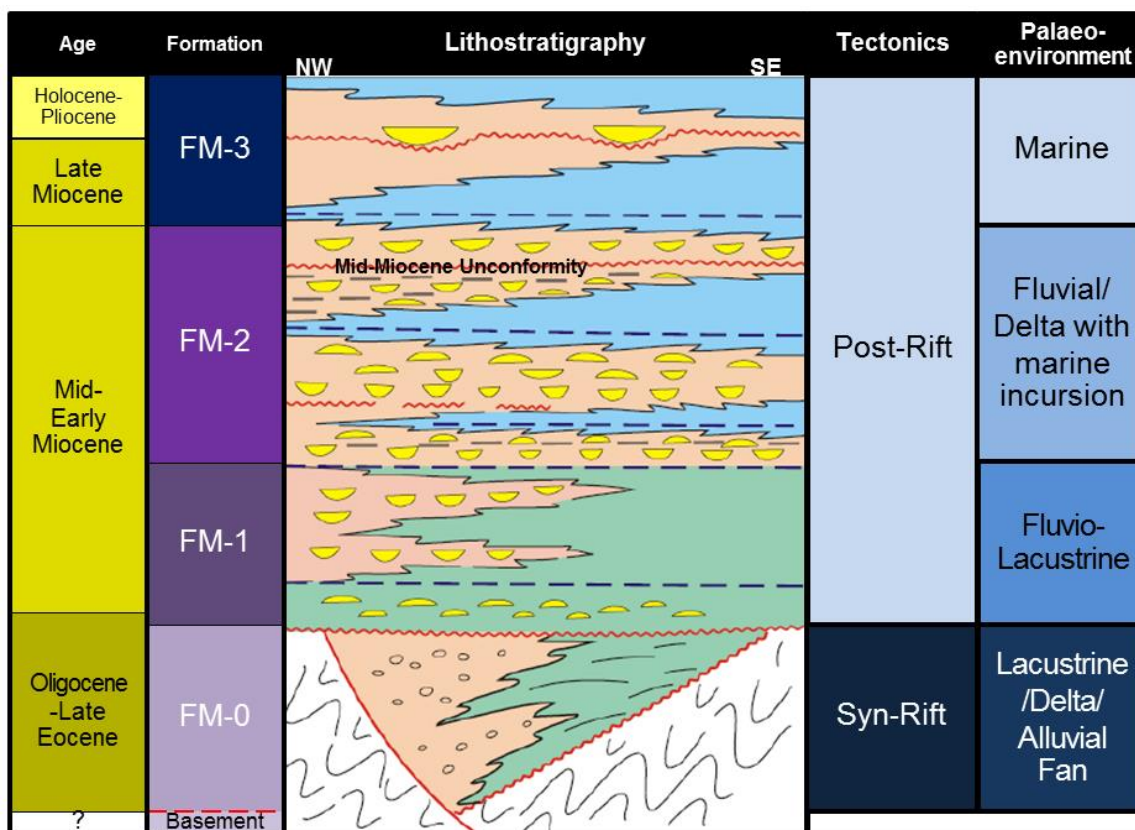


Figure 3 The Stratigraphy of the North Malay Basin (modified from PTTEP, 2015)

Petroleum System of Block G2/61

The block G2/61 (Bongkot field) is a major gas field in the GoT and can be divided into Greater Bongkot North (GBN) and Greater Bongkot South (GBS). The petroleum system (Figure 4) can be described as follows:

Source rock: The source rocks are coal and organic shale in the FM-2 which contain 53% and 11% of TOC, respectively. The other potential source rocks are lacustrine shale in the FM-0, FM-1 and marine shale in the FM-3. These source rocks are gas-prone.

The generation-migration-accumulation (G-M-A): The GBS is the main kitchen area of the block G2/61. Hydrocarbon partly has migrated upward in the NW direction to the GBN. The G-M-A was likely to occur during Late Miocene to Pliocene.

Reservoir rock: The main reservoir is sandstone in the FM-2 deposited in distributary channels, deltaic bars, delta front and crevasse splays. Moreover, sandstone in the FM-0 and FM-1 deposited in fluvio-lacustrine environment can be alternative potential reservoirs.

Trap and Seal: Both of structural trap (e.g. fault trap and 4-way dip closure) and stratigraphic trap are found in the area. The seals are low porosity and permeability layers (e.g. shale, claystone, siltstone and coal) interbedded with reservoir rocks.

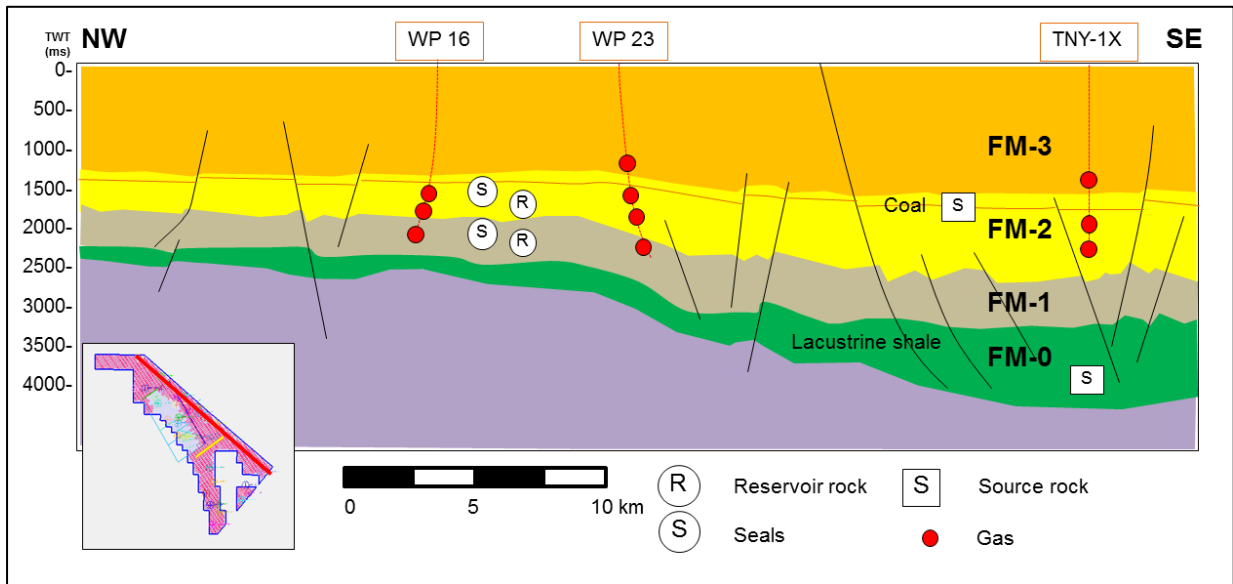


Figure 4 The NW-SE schematic cross section passes through wellhead platforms (WP 16 and WP 23) and TNY-1X well showing the relationship between stratigraphy and petroleum system in the North Malay Basin. The main producing gas reservoir is the FM-2

Petroleum Reserves

Petroleum reserves in the G2/61 block had been certified by the Department of Mineral Fuels. The proved reserves of gas, condensate and oil at the end of 2016 are listed as follows:

Block	Cumulative Production			Proved Reserves		
	Gas (Bcf)	Condensate (MMbbl)	Oil (MMbbl)	Gas (Bcf)	Condensate (MMbbl)	Oil (MMbbl)
G2/61	5,004.72	148.09	-	1,375.51	31.27	-

Bidding Process / Timetable

The Thailand petroleum bidding round 2018 for offshore block G2/61 will be carried out in four (4) stages:

Activities

Date

Step 1 Announcement and Pre-Qualification Evaluation

Bid Announcement	begins on April 24, 2018
Bid documents are available for downloading through the bidding website	April 25, 2018
Submission of Application for Pre-Qualification	May 4, 2018
Submission of Pre-Qualification Documents	May 15 - 16, 2018
Evaluation of Pre-Qualification Application and Documents	May 17 - 24, 2018
Announcement of Pre-Qualified Bidders	May 28, 2018

Step 2 Techno-Commercial Proposal Preparation and Data Access

Registrations for Bidder Conference	May 28 - 31, 2018
Submission of Letter of Request for Data Access, and Payment of Participation Fee	May 30 - June 1, 2018
Execution of Confidentiality Agreement: Data Access	
Bidder Conference	June 4, 2018
Data room access and preparation period for Techno-Commercial Qualification Applications for Pre-Qualified Bidders	June 7 - September 21, 2018

Step 3 Application and Techno-Commercial Proposal Submission

Submission of documents for qualifications as stipulated in Section 24 of the Petroleum Act B.E. 2514 (1971), and payment of associated Application Fees by Pre-Qualified Bidders	September 25, 2018
Submission of Techno-Commercial Proposal, and payment of Bid Bond by Pre-Qualified Bidders	

Step 4 Techno-Commercial Evaluation

Evaluation of Application and Techno-Commercial Submission	begins on September 26, 2018
Announcement of Successful Bidder(s)	Cabinet Approval

Contract Terms

Contract period (years)

- **Exploration** 3 (with 3 years extendable).
- **Production** 20 (with 10 years extendable) starting immediately after the end of the exploration period.

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Contract Area

- **Exploration Block** As defined in the bid announcement.
Area relinquishment at the end of exploration period:
 - Exploration period extended
25% of remaining area (excluding production area)
 - Exploration period not extended
All of remaining area (excluding production area)
- **Production Area** Upon commercial discovery, a production area can be delineated. Once the production area is delineated, the production may be started even during petroleum exploration period.

Plans and Commitments The bidders must propose plans and commitments as stated in the bid announcement.

Bonuses As defined in the bid announcement.

Please refer to Ministerial Regulation Prescribing Form of Production Sharing Contract B.E. 2561 for a copy of the model of the Production Sharing Contract.

Fiscal Terms

Royalty	To be paid at 10% of the gross petroleum production.
Cost Recovery	To be recovered at a maximum of 50% of the annual gross petroleum production.
Profit Split	The remainder of gross production after royalty and cost recovery, "petroleum profit", shall be divided to contractor at a maximum of 50% of the total petroleum profit.
Petroleum Income Tax	20% of net profit of the company as stated in Petroleum Income Tax Act.

Available Data

Seismic Data

- Locations of seismic surveys map
- Seismic surveys (SEG-Y data/navigation)

Well Data

- Locations of petroleum wells map
- Well data (log, report, etc.)

Facility Data

- Locations of production wellhead platforms/pipelines

Production Data

- Daily and monthly production reports

EIA/HSE Data

- Environmental Impact Assessment (EIA)/Health, Safety & Environment (HSE) reports

Data Access

- The data package will be provided to Pre-Qualified Bidders
- In addition, 1 room will be made available at 22nd floor Department of Mineral Fuels between 8.30 a.m. – 4.30 p.m. on Monday - Friday except on public holidays
- 2 Work Stations provided
 - ProSource Suite and Petrel 2016 software
 - DMF official on standby for technical and IT assistance
- Pre-Qualified Bidders will be provided two free days of Physical Data Room access.
A service charge of 70,000 Baht per day will apply to any additional days requested by a Pre-Qualified Bidder subject to availability
- Data access will only be provided upon provision of an executed confidentiality agreement and payment of Participation Fee

Department of Mineral Fuels,
Ministry of Energy,
Energy Complex, Tower B,
21st-22nd Floor,
Chatuchak, Bangkok 10900,
THAILAND

E-Mail: PetroleumBidding@dmf.go.th
www.dmf.go.th/bidding2018