



กรมเชื้อเพลิงธรรมชาติ  
กระทรวงพลังงาน

# EPPM Country Report

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## Thailand

**EPPM Program: Seminar on CCS Awareness & Networking of  
Petroleum Geoscience Institutes in the CCOP Region: Nov 16, 2009  
Bangkok, Thailand**

# National Energy Policy



## Energy Policy

1. Enhance Energy Security
2. Consumer Protection
3. Promote Renewable and Alternative Energy
4. Enhance Energy Efficiency
5. Promote Energy Development with Environment Protection

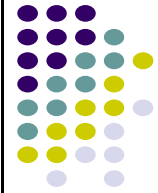
## Target

1. Increase domestic Oil and condensate production **200,000** bpd to **250,000** bpd within 4 yr
2. Maintain gas reserve for 30 yr (R/P ratio)
3. Interconnection with Neighboring Countries and Beyond Border

1. Reduce GHG from flared gas by promoting flared gas utilization & CDM Project
2. Set standard for Emission and discharge volume to the environment

## DMF Strategy

1. Accelerate petroleum procurement from either domestic and oversea sources
2. R&D on Oil shale
3. Establish proactive international cooperation
4. Promote policy to prevent and minimize environmental impact from E&P activities

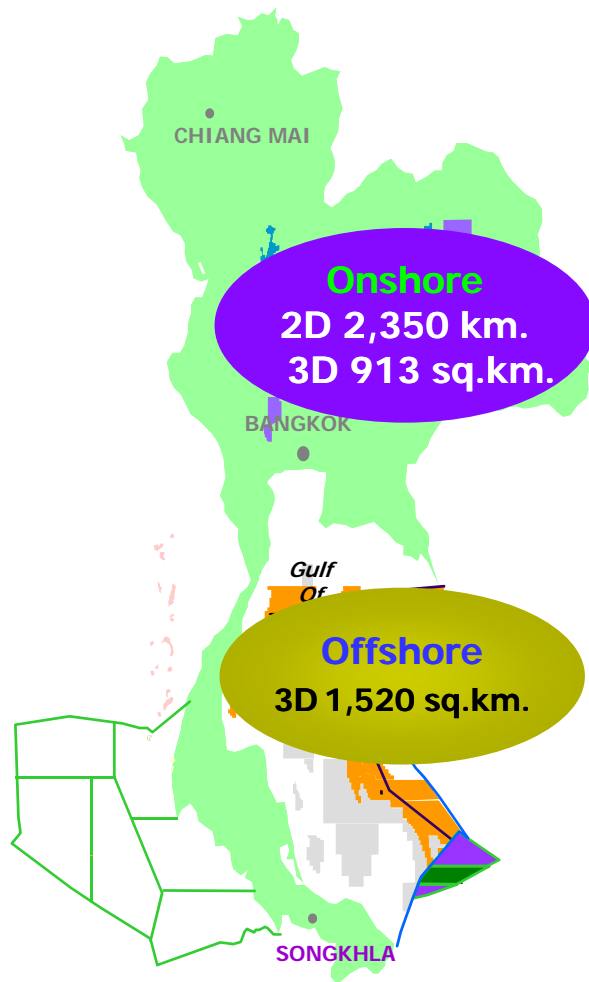


# Thailand Half Year

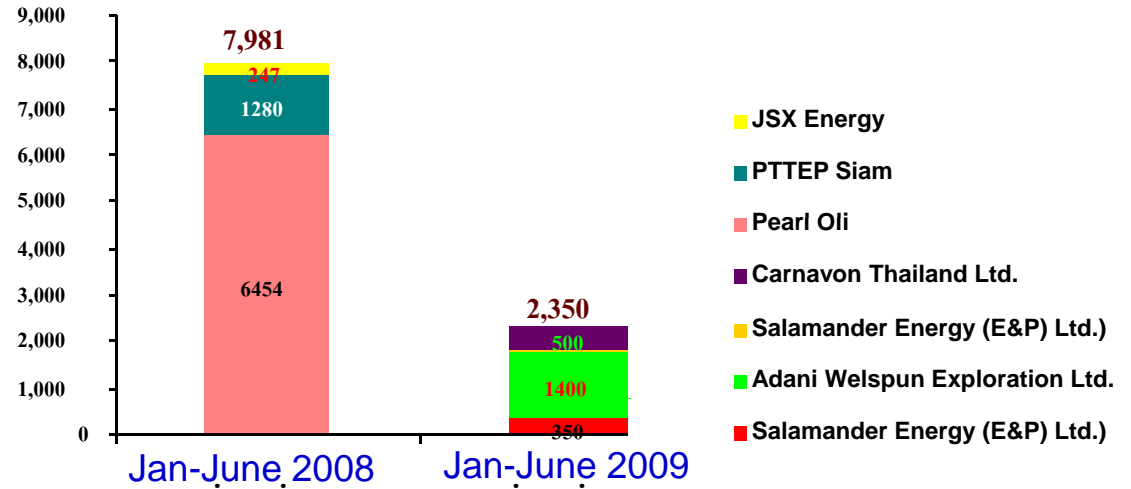
## E&P Activities

**January – June 2009**

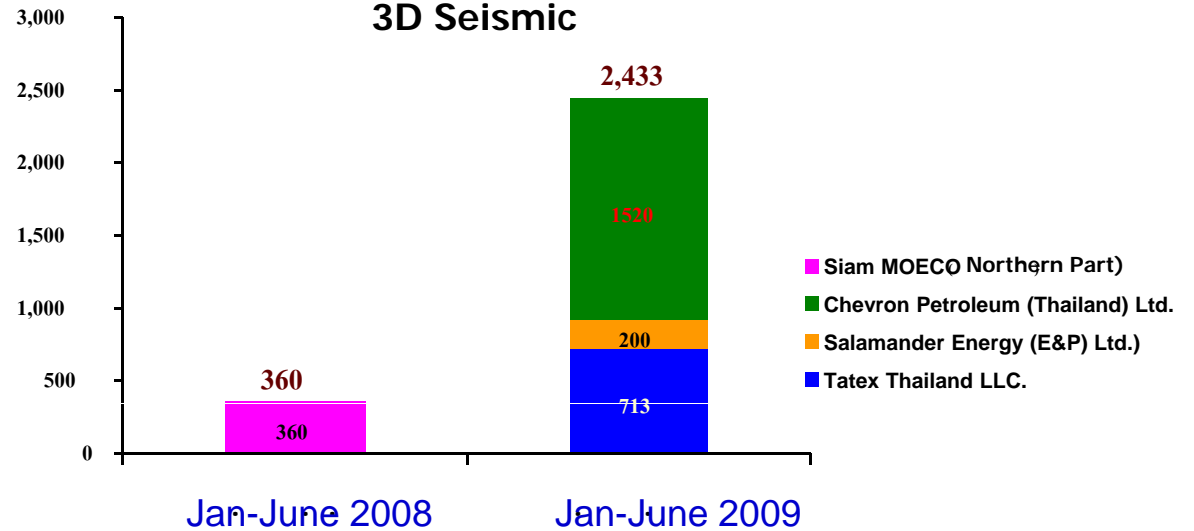
# Seismic Survey (Jan-June 2009)



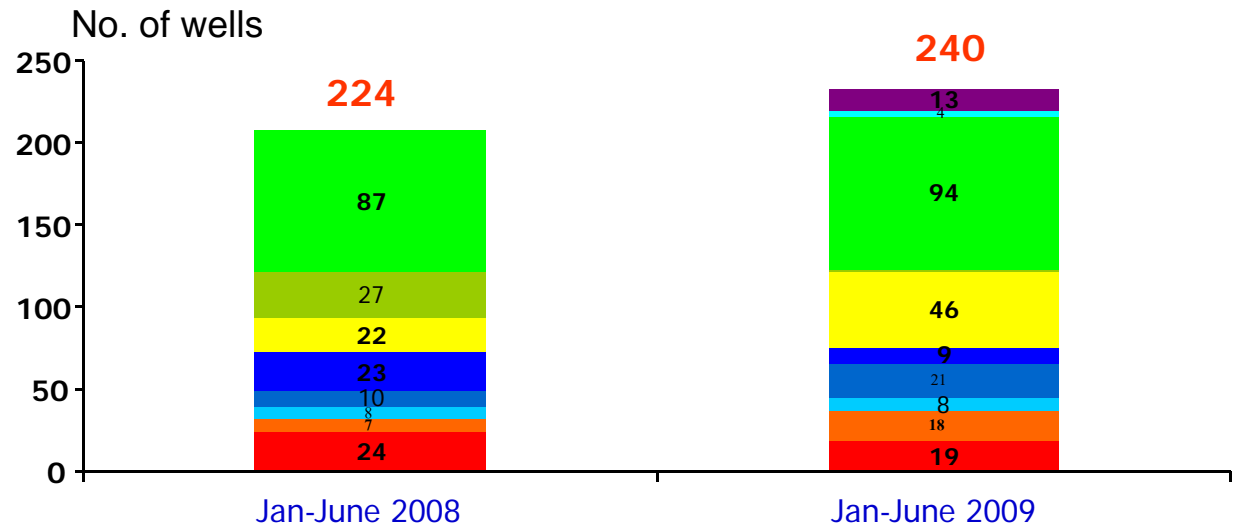
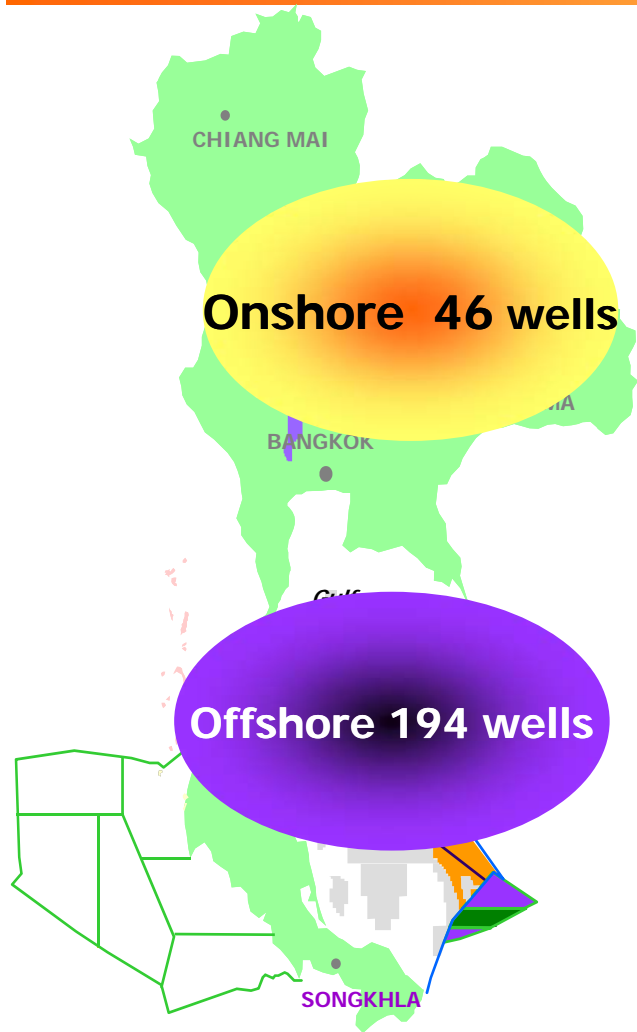
Km. 2D Seismic



3D Seismic



# Drilling (Jan-June 2009)



- Sirikit
- Pearl Oil
- Bongkot
- Chevron Offshore G4/43
- U-Thong
- Pan Orient Resources
- Arthit
- Chevron Offshore B8/32
- U1234
- Chevron Thailand E&P B12/27

- 86 percent is the wells drilled for production
- 14 percent is the exploration and appraisal wells

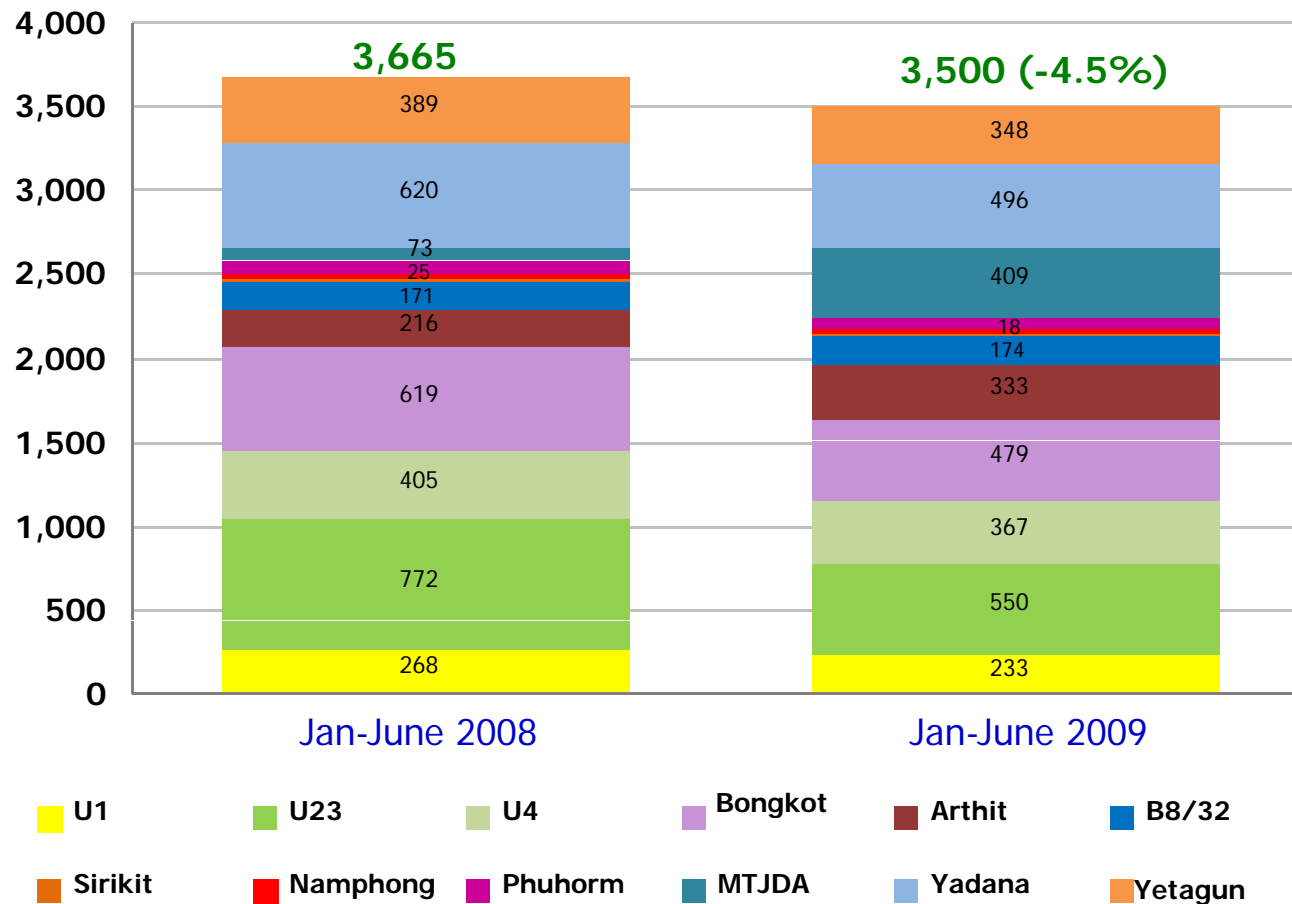
Onshore L21/43, L44/43, L53/43

Offshore G10/48, G2/48, G11/48, B15A, B16A, B15, B16, G4/43, U1234, B12/27

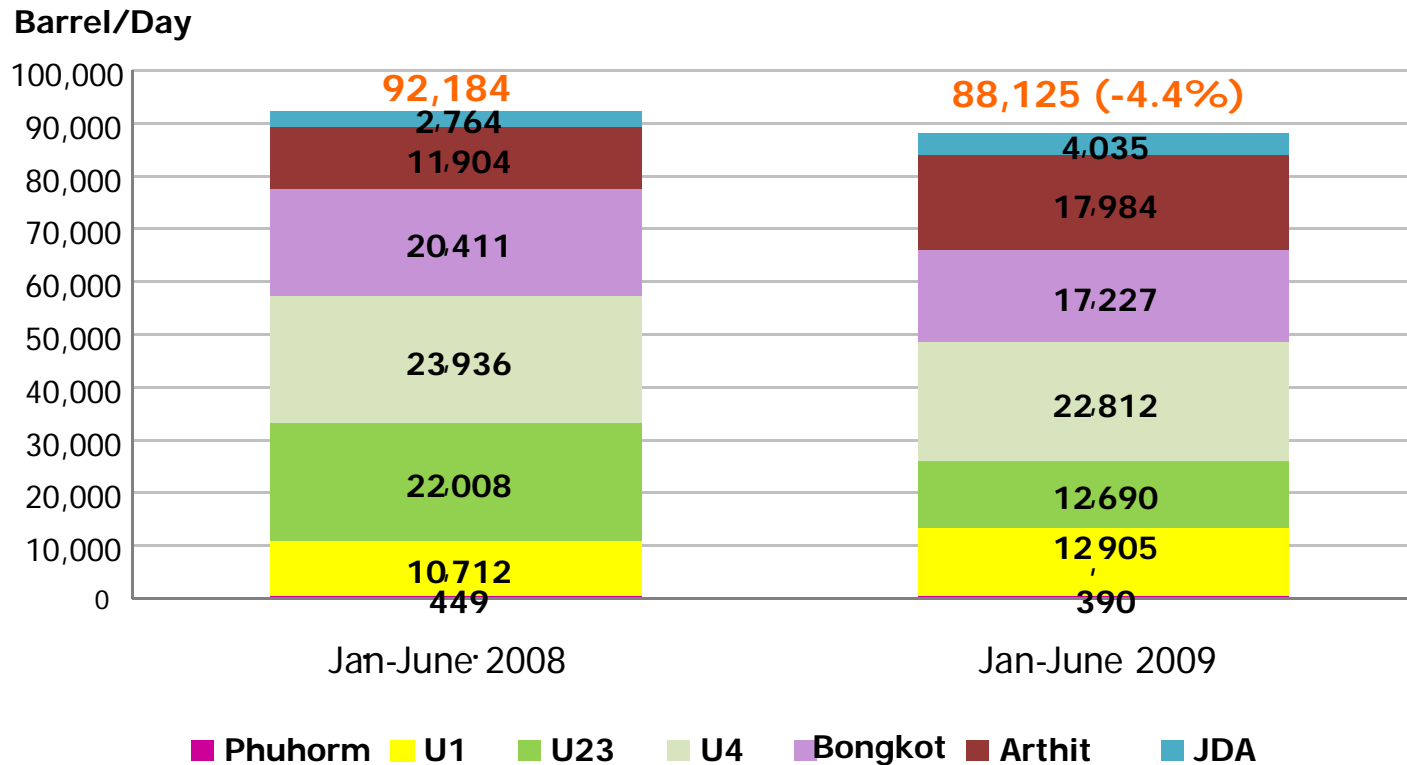
# Natural Gas Supply (Jan-June 2009)

January to June 2009, the average natural gas supply is as followed

- Domestic Production and JDA 2,657 MMSCFD
- Imported from Myanmar 843 MMSCFD

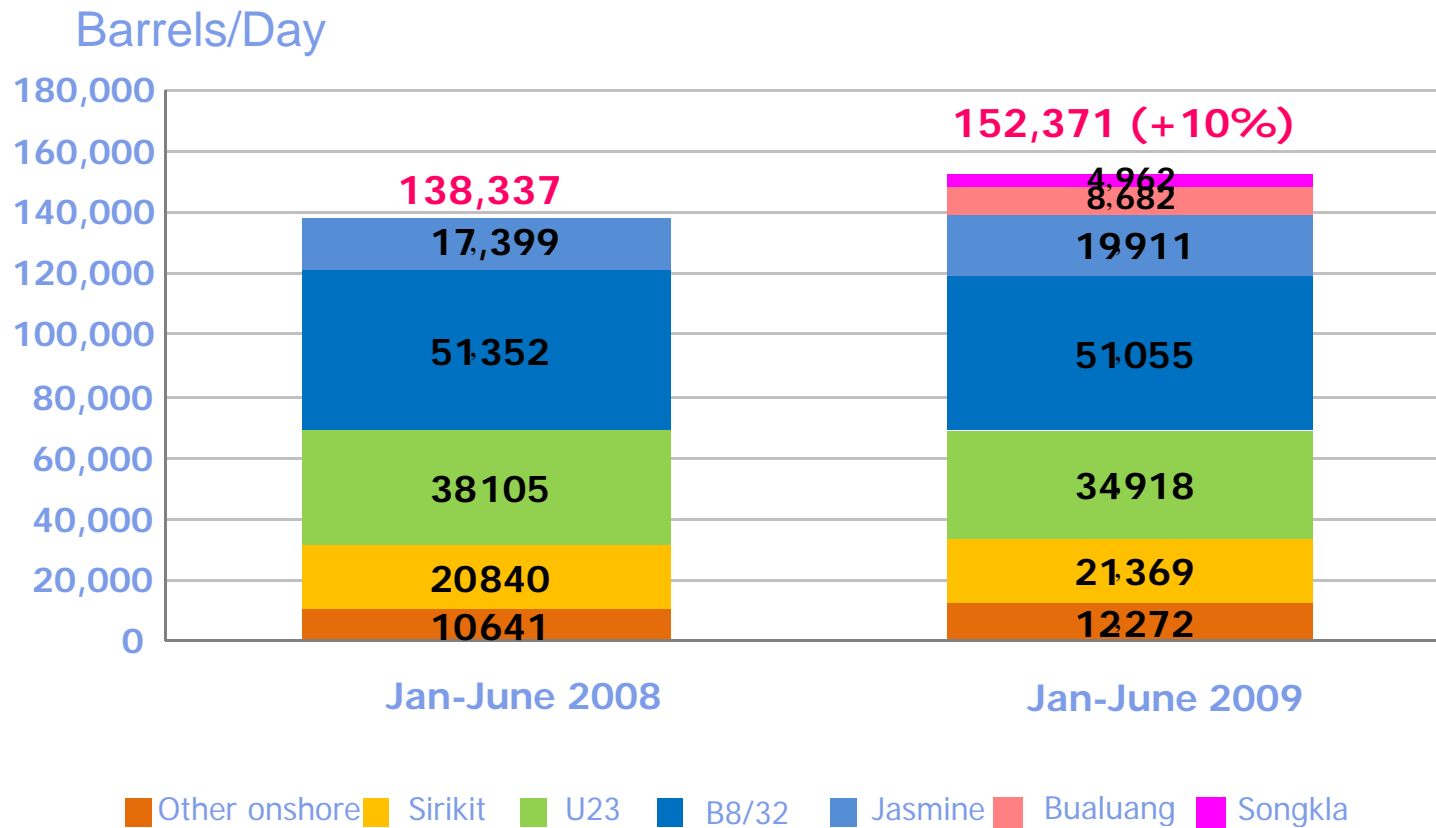


# Condensate Production (Jan-June 2009)



- January – June 2009 Average Domestic Condensate Production is 88,125 Barrels
- 55 percent of condensate produced comes from U1234 gas sale contract operated by Chevron Thailand, Co.Ltd

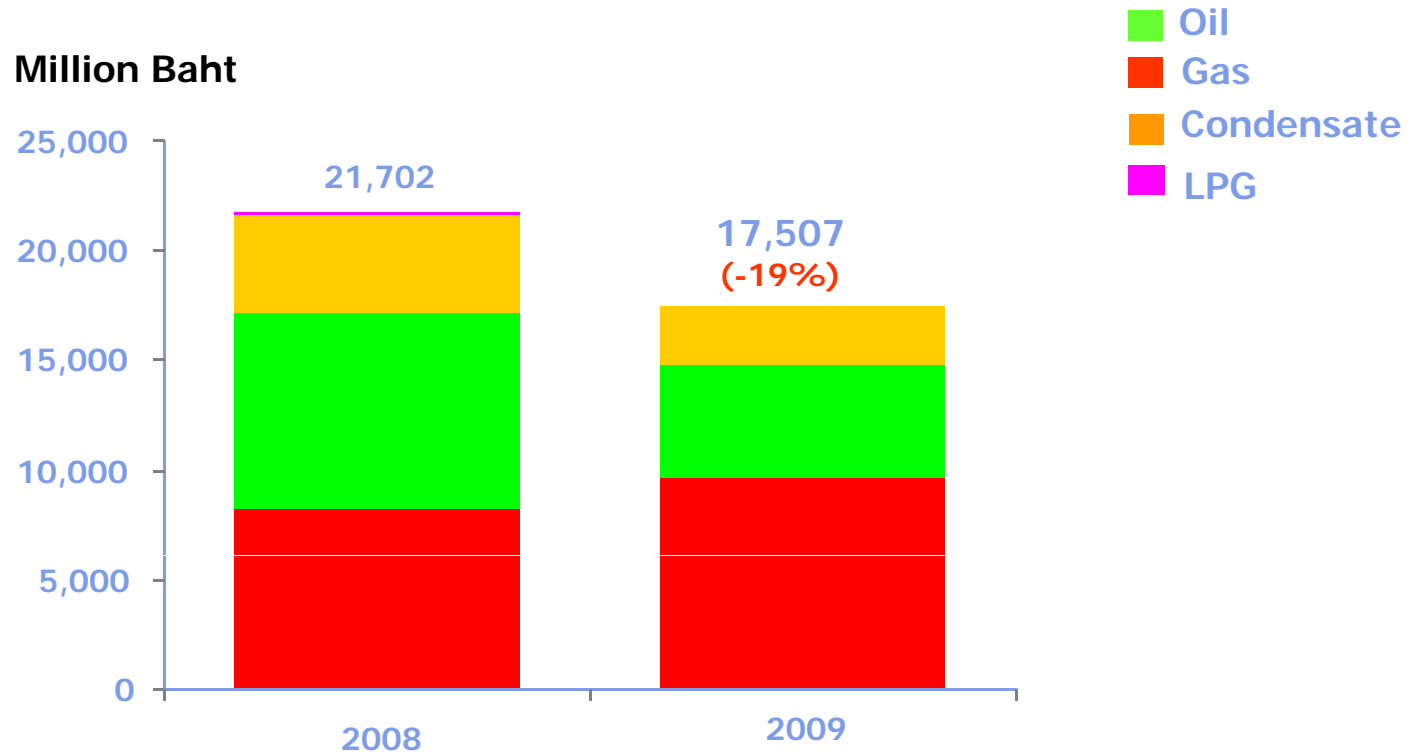
# Crude Oil Production (Jan-June 2009)



- During the first six months of 2009, daily average of domestic crude oil production is 152,371 barrels



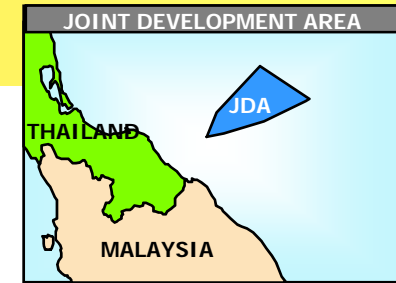
# Royalty from E&P (Jan-June 2009)



Central Government Earned 16,580 million baht

Local Administrative Earned 928 million baht

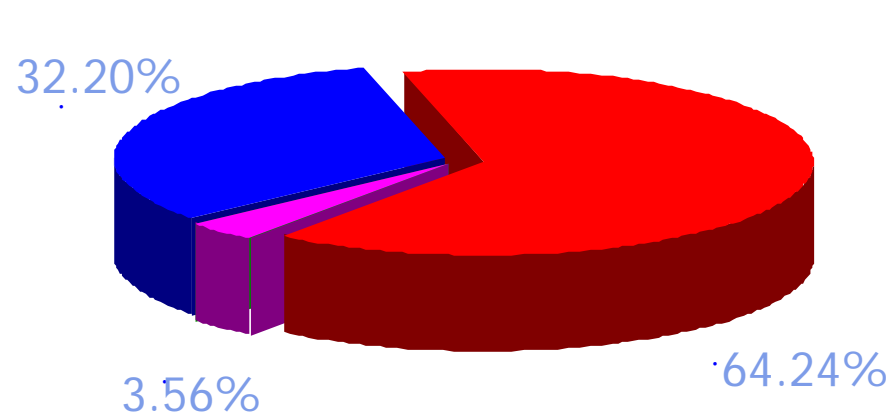
# Malaysia-Thailand Joint Development Area



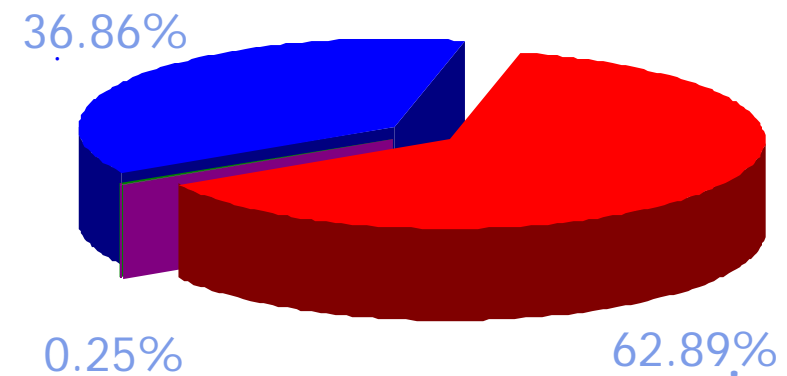
## The operation in the first six months (Jan-June) 2009

- Average Natural Gas Supply **856 mmscfd**
- Average Condensate Production **8,138 barrels/day**

■ Royalty   ■ Profit Petroleum   ■ Other Income



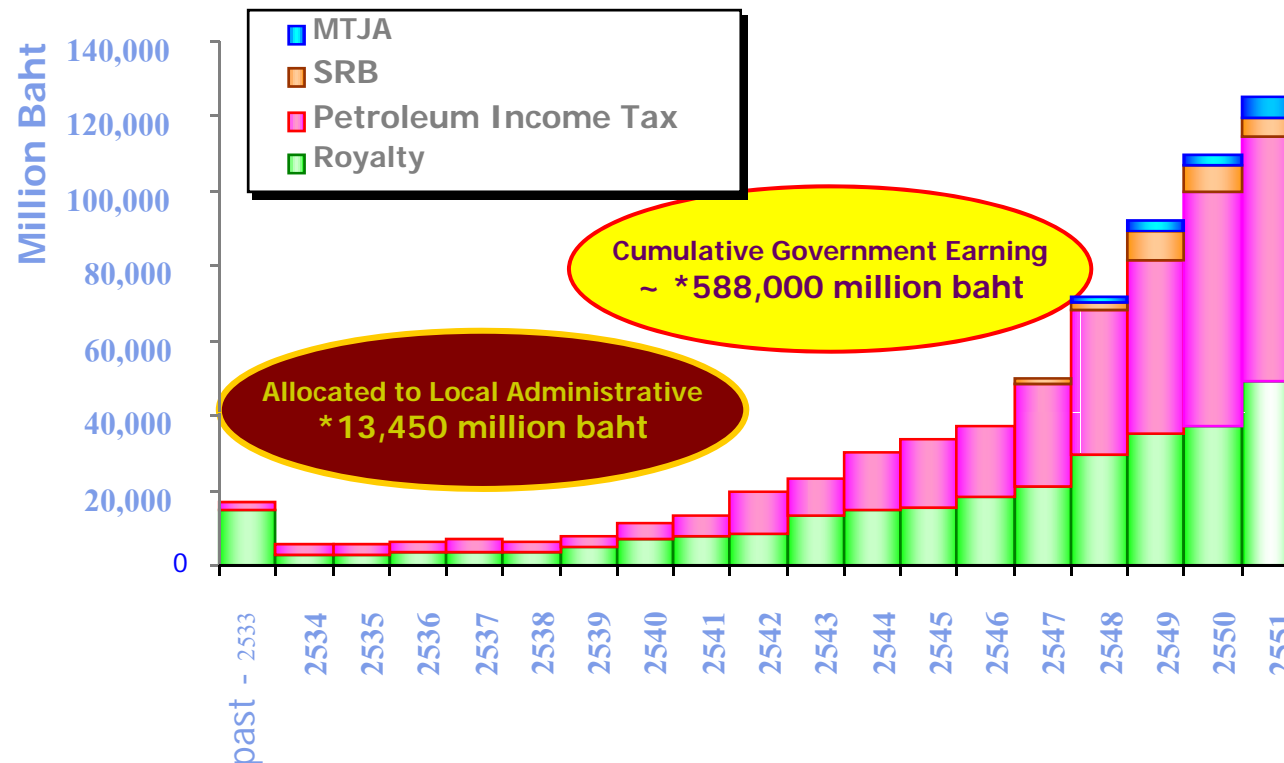
Government Earning during Jan-June 2008  
= 2,770 million baht



Government Earning during Jan-June 2009  
= 4,318 million baht

# Government Income from petroleum concessionaires in E&P business

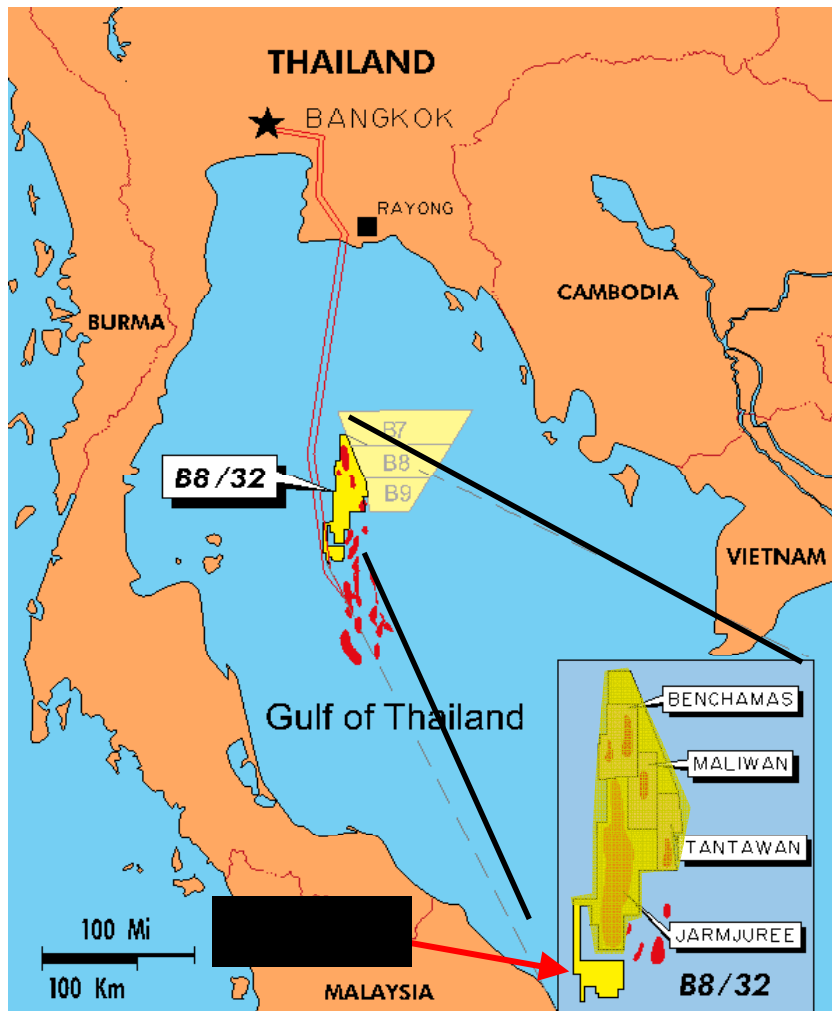
	2003	2004	2005	2006	2007	2008	2009 (Jan-June)
Royalty	18,292	21,306	29,443	35,228	37,354	49,092	19,241
Income from MTJDA	-	-	771	2,742	2,407	5,650	4,317
SRB	-	1,039	2,077	7,810	7,197	4,743	6,862
Petroleum Income Tax	19,183	27,318	38,992	46,104	62,639	65,767	-
<b>Total</b>	<b>37,475</b>	<b>49,663</b>	<b>71,283</b>	<b>91,664</b>	<b>109,597</b>	<b>125,252</b>	<b>30,420</b>



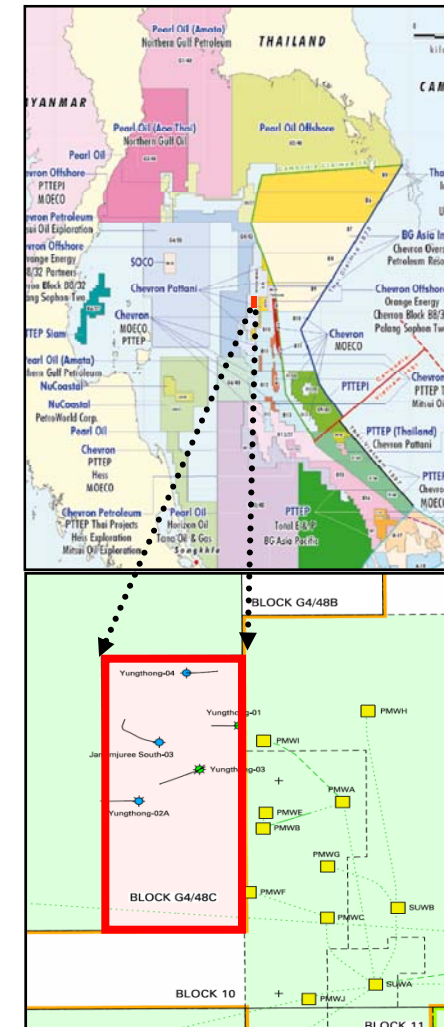
Unit: million baht

# Start production in 2009

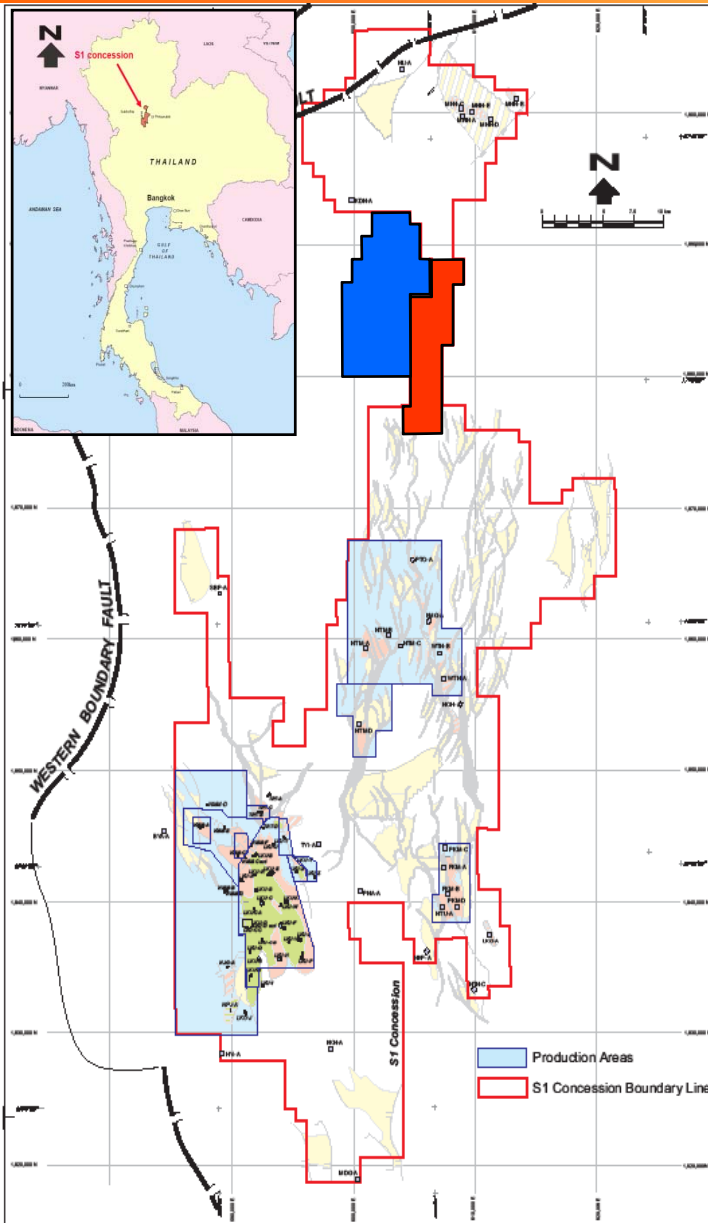
**Chaba- B8/32**  
**Chevron Offshore (Thailand) Limited**  
**Production Rate 5,000 barrels per day and 19 mmscfd**



**Yungtong- G4/48**  
**Chevron Pattani**  
**Production Rate 1,200-5,000 barrels per day and 4-40 mmscfd**



# Start Production in 2009



**Arunothai - L10/43**

**Siam Moeco Co.Ltd**

**Maximum production rate 2,000 barrels/day**

**Saothien - S1**

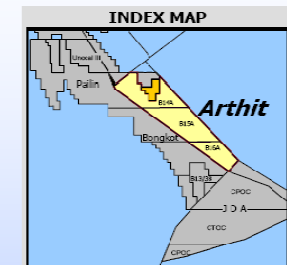
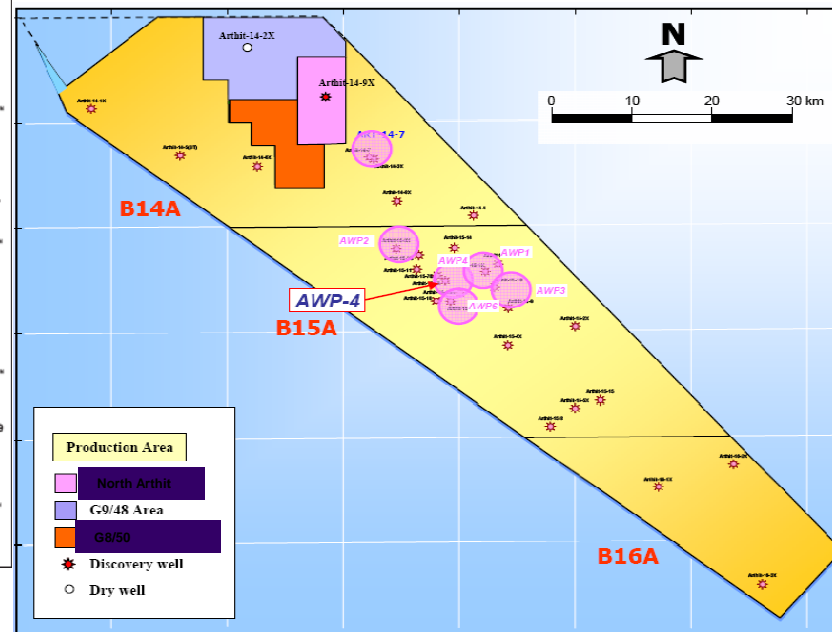
**PTTEP Siam Co.Ltd**

**Production rate 300 - 1,300 barrels/day**

**North Arthit - B14A**

**PTTEP Co.Ltd**

**Production rate 120 - 150 mmscfd**



# DMF Strategic Plan for Flared Gas Utilization Projects

- The primary target for flare gas utilization is for energy efficiency and conservation, in addition with reducing environment impact from gas flaring.
- Hence, none of the projects applied for Clean Development Mechanism (CDM)
- DMF will support & encourage concessionaires to develop more flare gas utilization projects and apply for CDM project in order to claim the reduction of GHG emission as carbon credits.

# Flared Gas Utilization Projects to apply for CDM

## Offshore, Gulf of Thailand

- Install Vapor Recovery Unit (VRU) to recover flared gas back into gas processing
- Install compressor/pump to recover vented gas from Well Unloading Unit at wellhead platform back to the production process

## Onshore, Oil Field

- Flared gas to small power plant (1 MW)

# CDM & CCS



**DMF will promote E&P business along with prevent and minimize environmental impact from E&P activities**

- 1. Reduce GHG from flared gas by promoting flared gas utilization & CDM Project**
- 2. Set standard for Emission and discharge volume to the environment**
  - Reduce the discharge volume of produce water from petroleum production**
  - Study the feasibility of CCS project in Thailand**



# EPPM Project

- **DMF set up the working group in order to participate and work with the EPPM project (P1, P2, P3)**
- **Continue to participate in the EPPM workshop**
- **Set up the knowledge sharing within DMF through KM (Knowledge Management) Program**

# EPPM Project

- **DMF will continue to support the information as much as possible for the P1 & P3 project & will try to get collaboration & support from the concessionaire**
- **Activity of the P2 is really benefit to DMF since we are currently working & studying both CDM & CCS**
- **To ask for more support especially funding & technology transfer for the cooperating country for the CCS project through CCOP (EPPM project)**
- **DMF offer our staffs to help in capacity building & knowledge sharing for the member country in the area of geology, reservoir, production operation, etc.**