

# SPE WORKSHOP: MARGINAL AND MATURE FIELD DEVELOPMENT AND OPERATION

6-7 AUGUST 2024 | KUALA LUMPUR, MALAYSIA



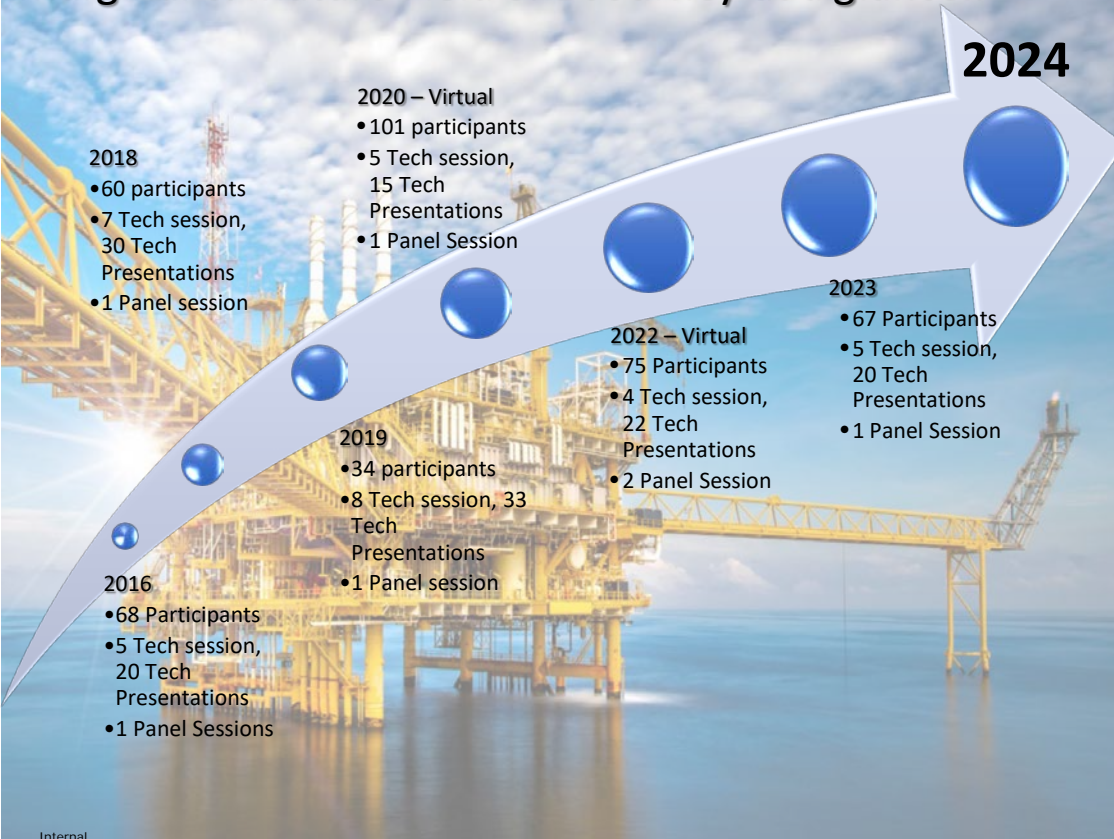
## KEYNOTE ADDRESS

Tuesday, 6 August 2024

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Senior General Manager  
Resource Development & Management  
**Malaysia Petroleum Management, PETRONAS**



## Marginal & Mature Field SPE Journey at a glance..



## Workshop content

**5** Key Technical Session,

**18** Technical Presentations

**>50**  
Participants Globally



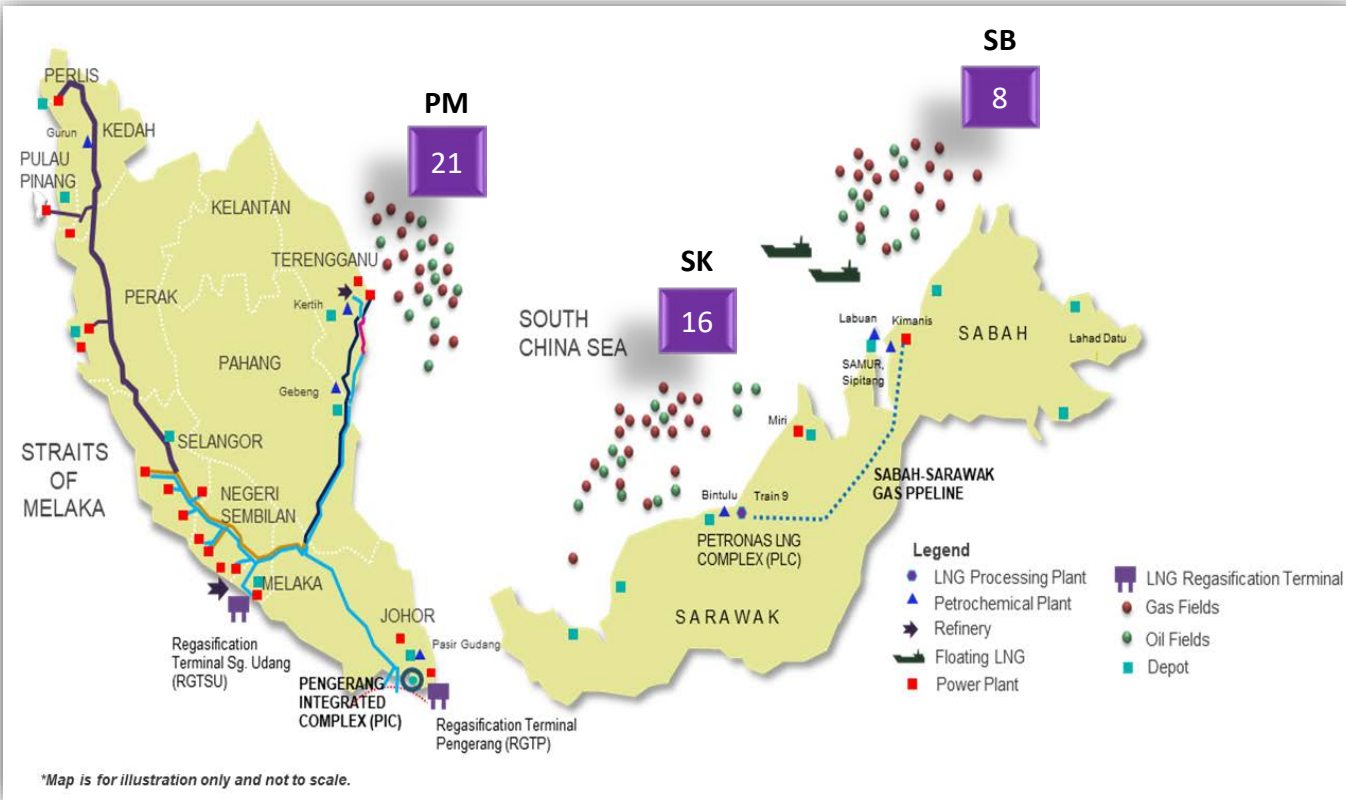
**1**

**Panel Session**



**24**  
Organisations from PACs,  
Industry  
Service Partners &  
Academia

## Number of Matured field (producing >20years) in Malaysia per Region



**151** Producing Fields  
**45** Fields matured category

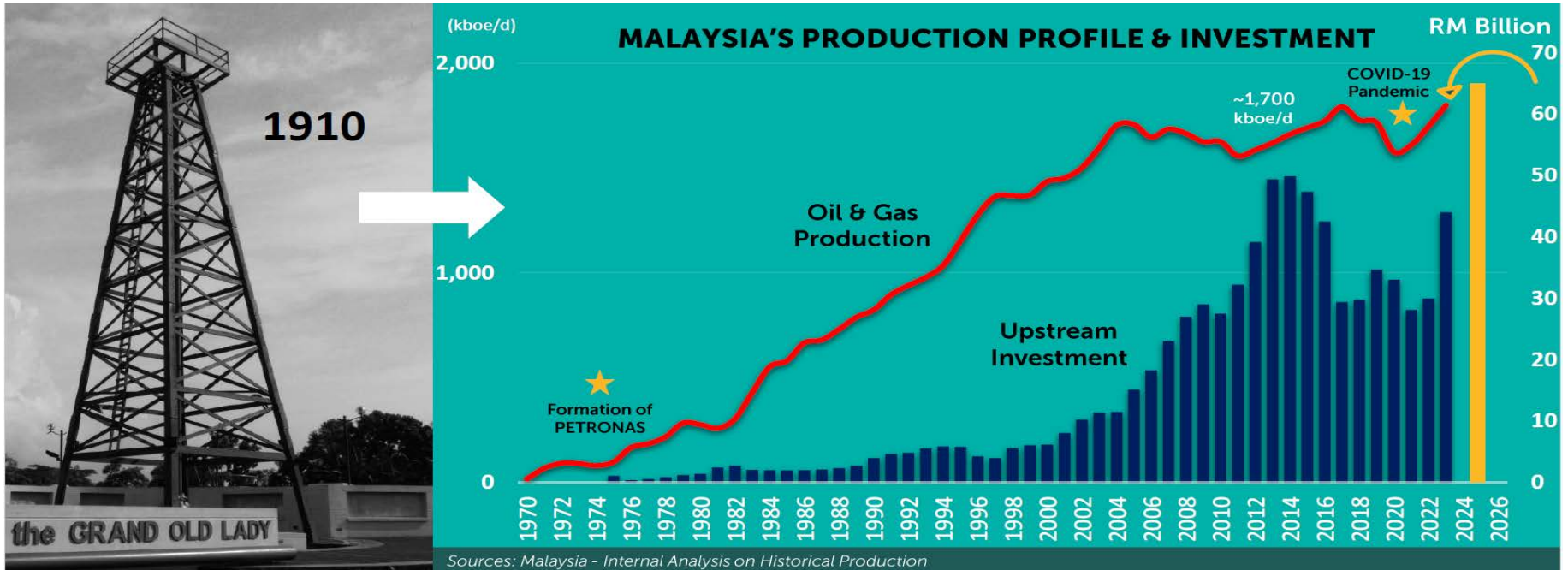
**387** Platforms & Subsea Structure

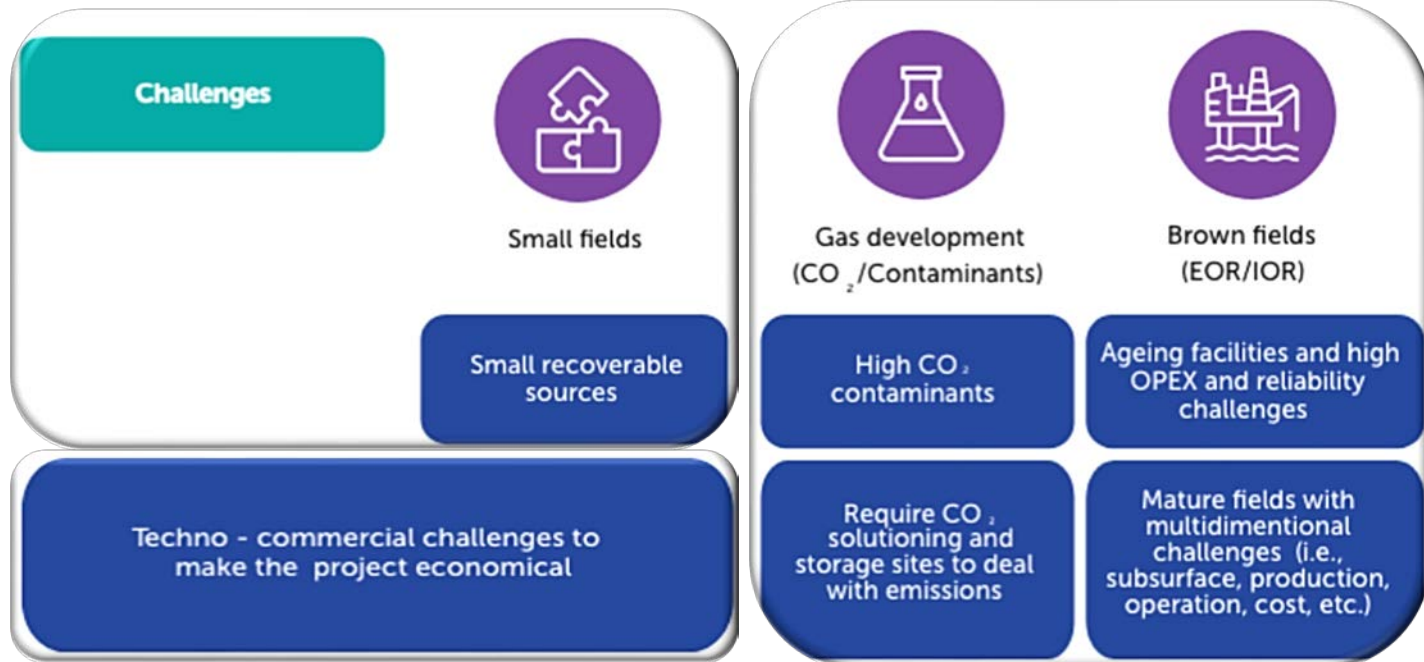
### 3 Distinct elements in guiding Matured Field Managements:

- 1** Production & Reserve Enhancement (PRE)
- 2** Late Field Life Optimization (LFLO)
- 3** Asset Life Extension (ALE)

With progressive Upstream investment (>RM700 billion) Malaysia's O&G production has grown sustainably

Year 2024  
>RM 60B  
Investment





The future is fraught with challenges, necessitating Holistic Solution to achieve PETRONAS aspiration of 'Low Cost' and 'Low Carbon' solutions for Marginal & Mature Field

## PRODUCTION & RESERVE ENHANCEMENT (PRE)

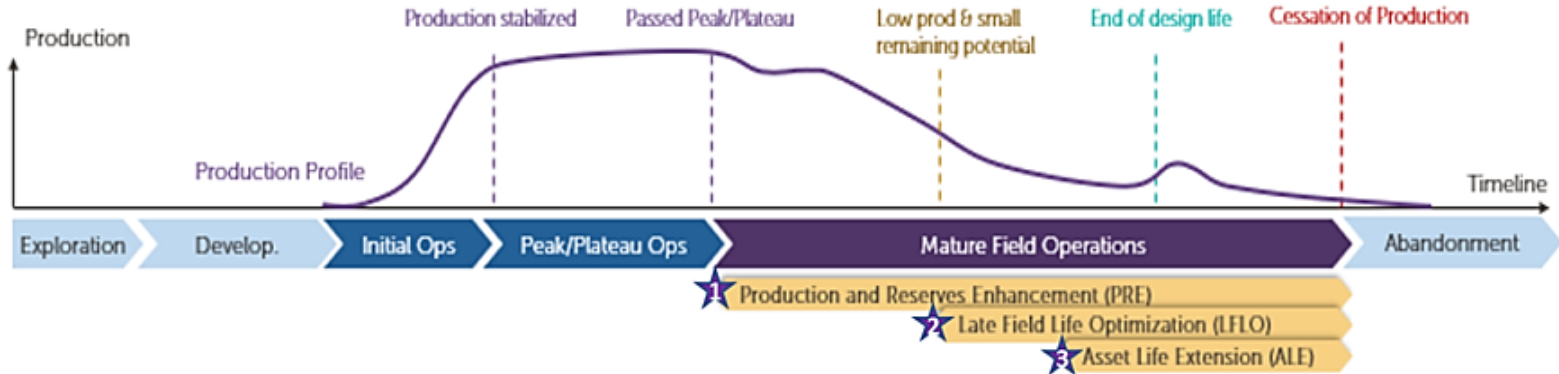
Once the production passed its peak and is declining, the subsurface potential is to be maximized by deployment of **Secondary** and **Tertiary** recovery methods

## LATE FIELD LIFE OPTIMIZATION (LFLO)

Once the production is low and little remaining subsurface potential, the surface operations efficiency to be enhanced by **Process Simplification**, **sharing of facilities** and any other suitable methods

## ASSET LIFE EXTENSION (ALE)

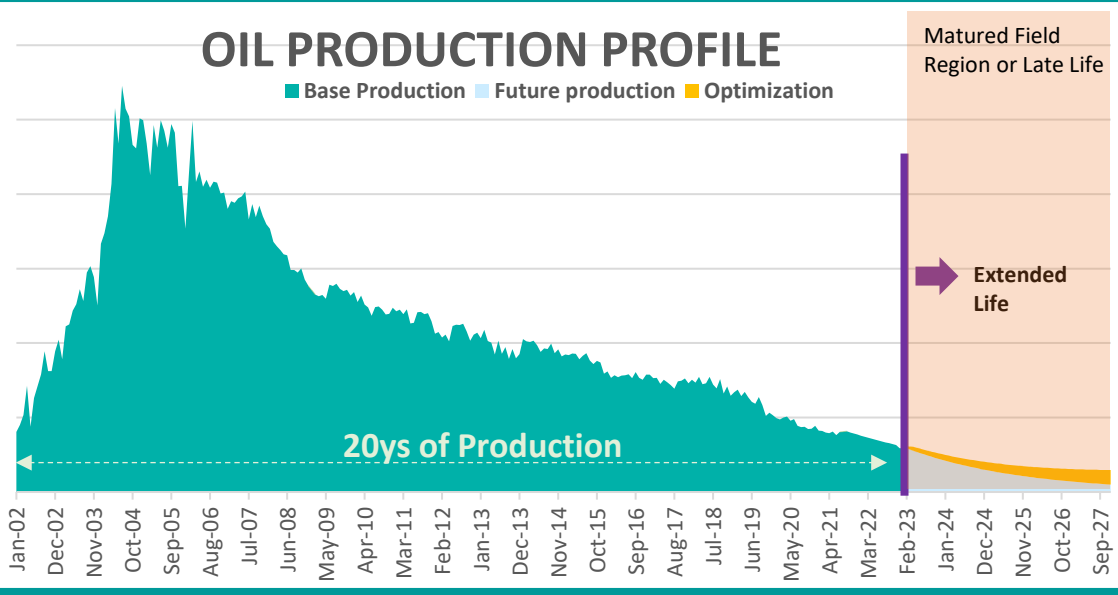
The operation of a facility to be extended beyond the intended life with focus on **Safety**, **Integrity** and **Reliability** of the asset and to ensure it is still **economically viable** to operate further



Internal

## OIL PRODUCTION PROFILE

■ Base Production ■ Future production ■ Optimization



Unlocked potentials though monetization of open fields discovered resource opportunities as well as turning matured field into robust PSC via introduction of innovative fiscal terms:

### ➔ SMALL FIELD ASSETS (SFA)



#### SFA PSC Terms Enhancement

*Making our PSCs more attractive*

- ✓ Simple and straightforward fiscal model
- ✓ New Process Simplification
- ✓ Staggered Development Provision

### ➔ LATE LIFE ASSETS (LLA)



#### LLA PSC Key Features

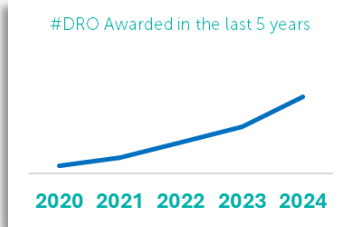
- ✓ No cost recovery mechanism
- ✓ Shared abandonment financial liability
- ✓ Reward Efficiency
- ✓ Flexible to address over/ under of abandonment cost





Since its establishment in 2022, PETRONAS myPROdata has created values to our data access and transparency efforts..

1 Successfully supported the promotion & awarding of DRO over the past five years



2 Expanded & diversified the utilization of Malaysia's E&P data access to improve the industry landscape

3 Improve the assistance to investor in opportunity screening and decision making through the offering of sufficient technical data via single portal



..whilst the introduction of Malaysia Bid Round Plus (MBR+) in October 2023 entices various investors to participate



3 PSCs awarded from MBR+ Round 1

- ✓ BETA Cluster, PM
- ✓ Puteri Cluster, PM
- ✓ PKNB Cluster, PM

1 PSC awarded from MBR+ Round 2

- ✓ NBE Cluster, Sabah

...more to come!

These instruments coupled with tailored commercial arrangement with a simple fiscal regime and simplified processes such as Small Field Assets (SFA) and Late Life Asset (LLA) fiscal, facilitates expeditious monetization of smaller fields



Brent spot \$80.20 ▼ <b>-1.56%</b>	Brent futures (1 mo) \$80.19 ▼ <b>-0.80%</b>	WTI spot \$77.11 ▼ <b>-1.44%</b>	WTI futures (1 mo) \$77.10 ▼ <b>-1.04%</b>	UK Nat Gas (1 mo) 90.11p ▲ <b>+3.60%</b>
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WEEKLY [See all articles](#)

## Tapis EOR is first for country

Malaysia's first major enhanced oil recovery (EOR) project at ExxonMobil's Tapis oilfield began operations this week, following completion of hook-up and commissioning activities, writes Ruth Chen.

Source: [Tapis EOR is first for country | Upstream Online](#)



Source: [Development | PETRONAS Global](#)

### PM9 END STATE

IBO is the pioneer of PM9 journey starting with Asset Centralization

		REVISION Dec 2022								
		PM9 END STATE				PM9 END STATE				
Year		2022-2025		2026-2031		2032-2035		2036-2039		2040
Phase		Asset Centralization		Lean Operation		Technology Pivot		Asset Reimagine		
Manpower/ No LQ		113 pax/3	101 pax/2	Manpower/ No LQ	90 pax/ 1	Manpower/ No LQ	70 pax /1	Manpower/ No LQ	50 pax /1	
Asset summary	GHG / FVI	4 to 2 MMscfd / 0.2 to 0.06		GHG / FVI 2 MMscfd / 0.06 to 0.04		GHG / FVI 1.5 to 1.2 MMscfd / 0.04		GHG/ FVI 1.2 to 0.9 MMscfd / 0.04		

We are here →



# MAJLIS PENYAMPAIAN ANUGERAH PETRONAS-ACADEMIA COLLABORATION DIALOGUE 2023

Kota Kinabalu, Sabah | 8 Februari 2024



# UAMS

#APAC24

## IOR Excellence Improved Oil Recovery Excellence (IOREx) Forum 2024



Shaper Regulator Enabler



# Marginal and Mature Field Development and Operation



Thank You