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PRODUCTION SHARING CONTRACTS IN MALAYSIA : EVOLUTION AND PERSPECTIVES

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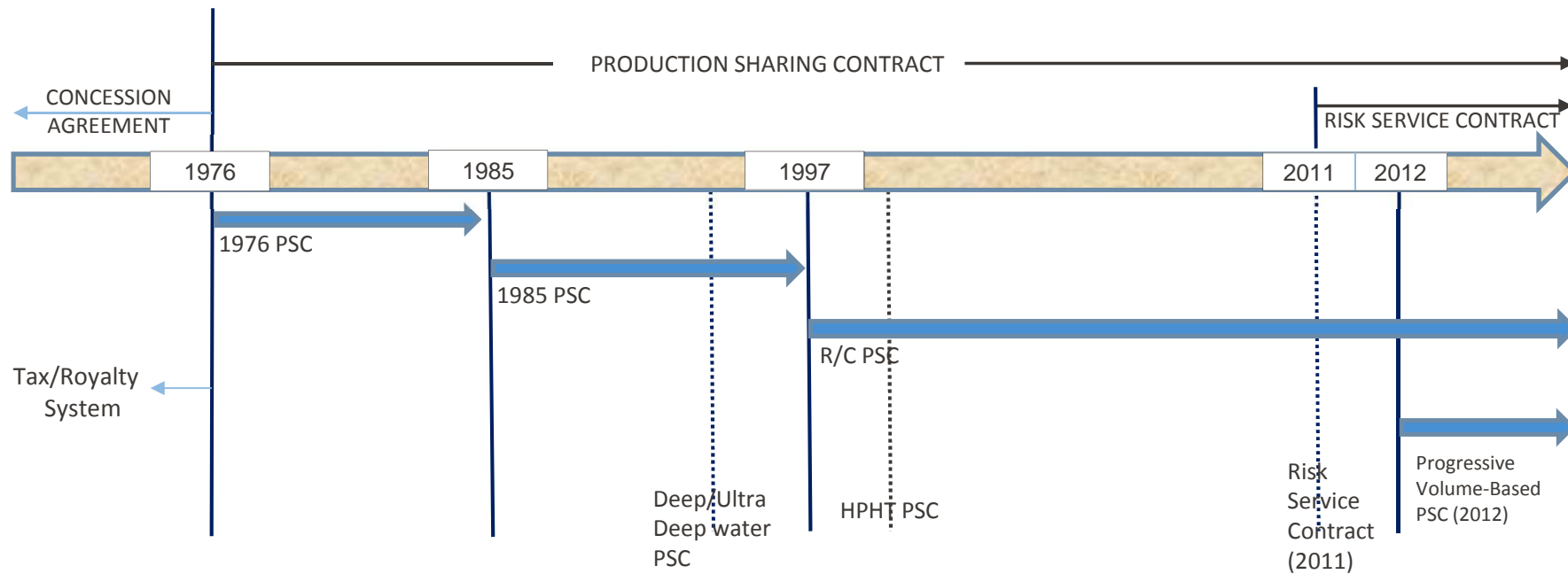
Objectives

To share with the IGU Study Group 1.3 participants on the evolution of Malaysia PSC and its impact on the development of the country's gas industry



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Malaysia Production Sharing Contract



- Petroleum arrangement in Malaysia was originally based on Concession Agreement (Royalty/Tax System)
- Malaysia Production Sharing Contract (PSC) – created in the aftermath of 1973 “world oil shock” to protect and add value to the National petroleum resources.
- The 1st Production Sharing Contract was signed on 30th November 1976 between PETRONAS and SHELL followed later with EPMI
- Have gone through 4-major evolution with the current existing PSCs in-placed are based mainly on the 1985 PSC or Revenue-Over-Cost (R/C) PSCs.

Malaysia PSC – Conscious Evolution Was To Create Conducive Work Environment And Ensure Fair Return/Rewards Based On Prospectivity And Level Of Risk

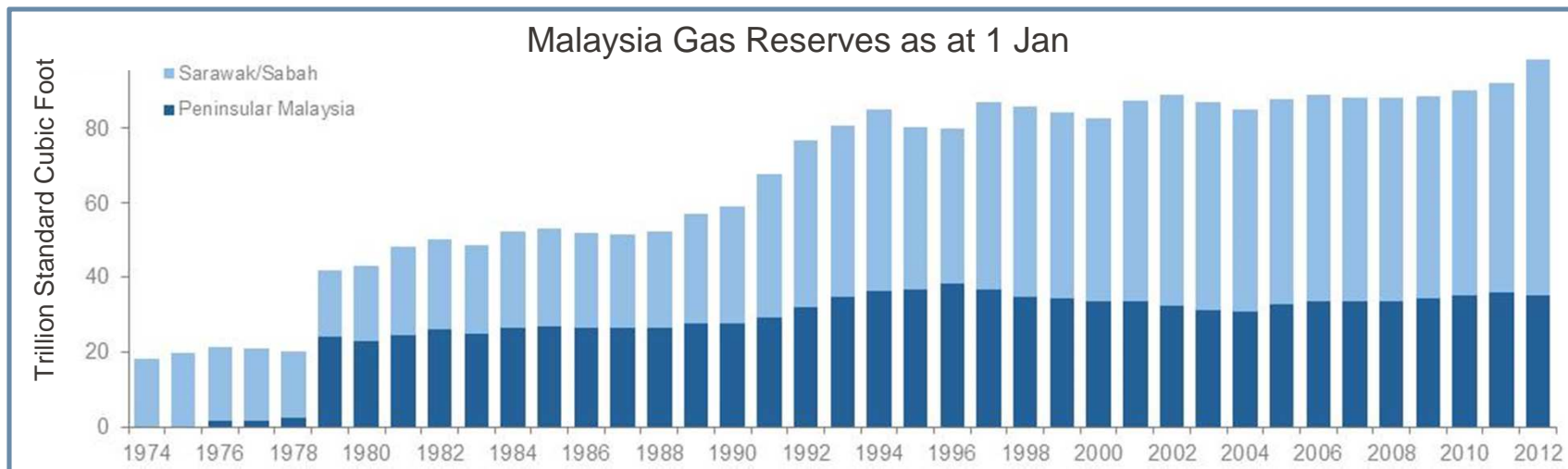
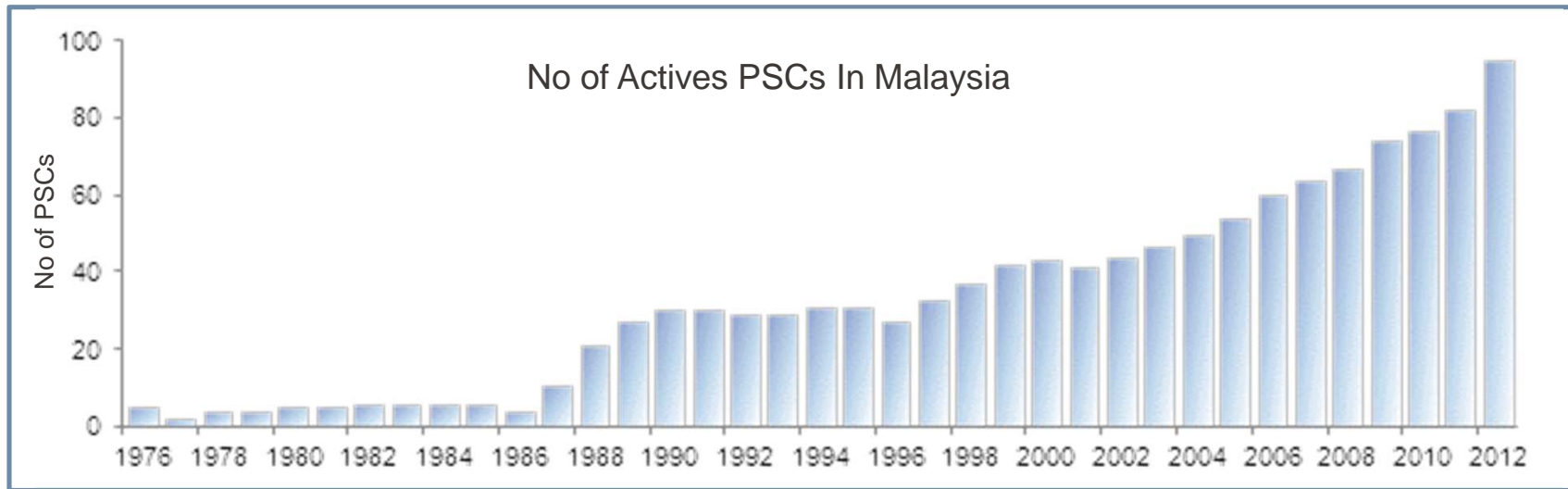


	<u>1976 PSCs</u>	<u>1985 PSCs</u>	<u>R/C PSCs</u>
Introduced	1976	1985	1997
Purpose	To convert Concession Agreement area to Production Sharing Contract	To attract additional Contractors to explore in Malaysia Developed terms based on the prospectivity, oil price and cost structures of mid-'80s	To encourage Contractor to develop "marginal" fields and deeper (HPHT) reservoirs Developed terms based on E&P environment of mid-'90s
Fiscal Terms	<ul style="list-style-type: none"> • Royalty: 10% • Cost Ceiling: Oil - 20% ; Gas - 25% • Profit Split: Simple Split - 30% to Contractor for both oil & gas 	<ul style="list-style-type: none"> • Royalty: 10% • Cost Ceiling: Oil - 50% ; Gas - 60% • Profit Split: Production rate with volume threshold – Higher split to Contractor for volume below threshold 	<ul style="list-style-type: none"> • Royalty: 10% • Cost Ceiling & Profit split based on Profitability(R/C) Index – Higher split to Contractor for volume below threshold
Threshold Volume for Cost Ceiling or Profit or Both	None	Per contract area basis	Per field basis
Contract Duration	20yrs	24 yrs	29yrs
<ul style="list-style-type: none"> • Exploration • Development • Production 	<ul style="list-style-type: none"> • 3+2 • 2+2 • 15yrs 	<ul style="list-style-type: none"> • 5yrs • 4yrs • 15yrs 	<ul style="list-style-type: none"> • 5yrs • 4yrs • 20yrs

The Evolution Has Helped Spur The Activities And Discoveries In Malaysia



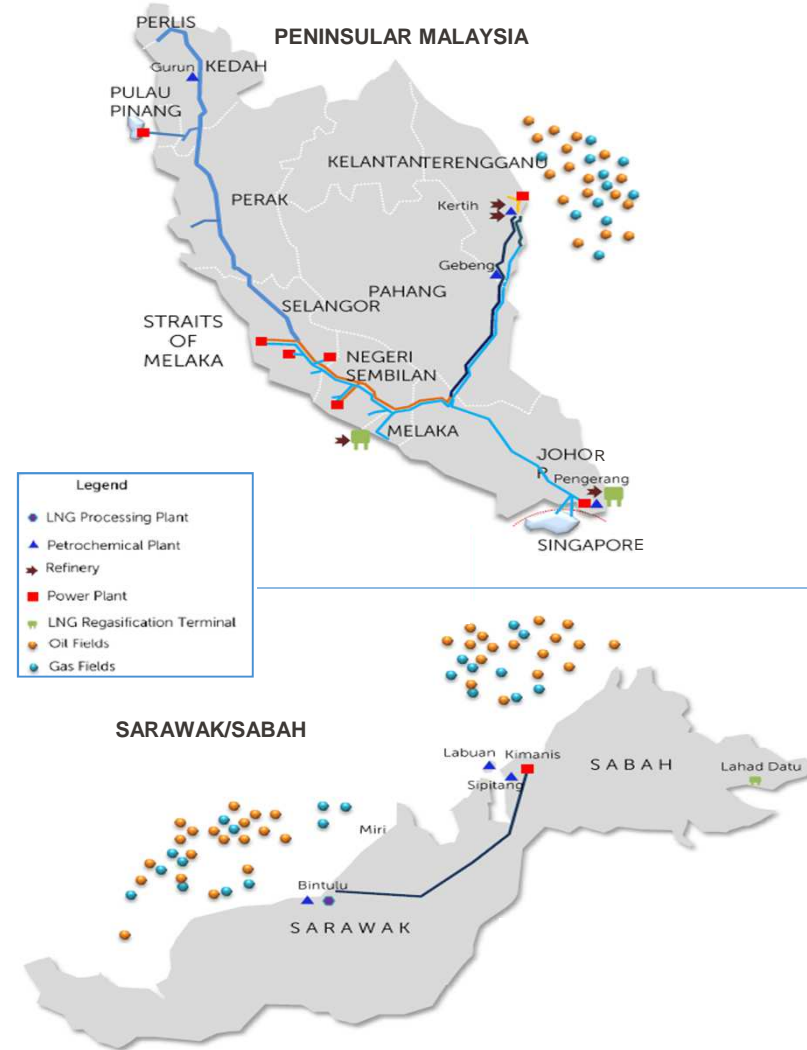
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Gas Industry In Malaysia



- Upstream gas fields development in Malaysia were developed to support government policies and plans:-
 - ▶ To reduce dependence on import oil
 - ▶ As a source for foreign exchange earnings
- Two distinctive gas development in Malaysia:
 - ▶ Peninsular Malaysia – mainly piped gas for power sector, industries and petrochemical feedstock.
 - ▶ Sarawak/Sabah – mainly for LNG export and petrochemical feedstock.
- As resource owner of petroleum resources, PETRONAS has played key roles in developing gas industry in Malaysia:-
 - ▶ Attracted foreign PS Contractors to explore and develop gas fields through attractive PSC fiscal regime.
 - ▶ Built infrastructure projects through its own subsidiaries.
 - ▶ Invested in value-added industries along the gas chain i.e. petrochemical plants, transmission pipeline.



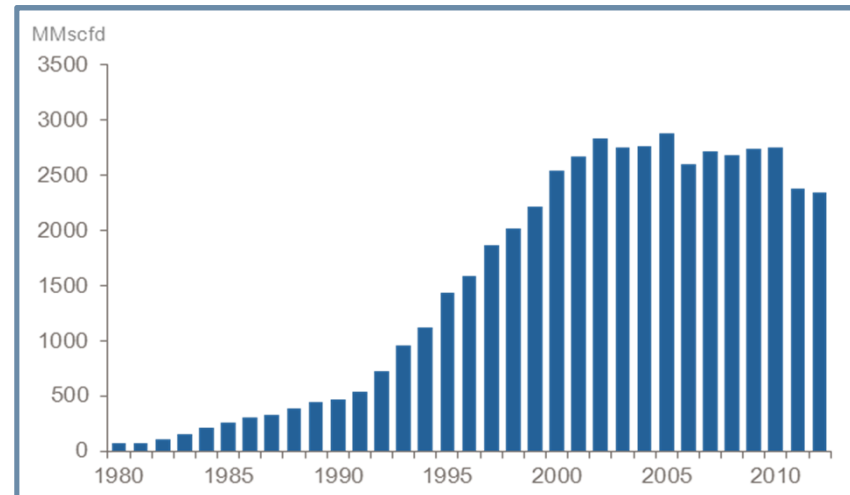
The map is for illustration only and is not to scale
Source: PETRONAS

Peninsular Malaysia Gas Development

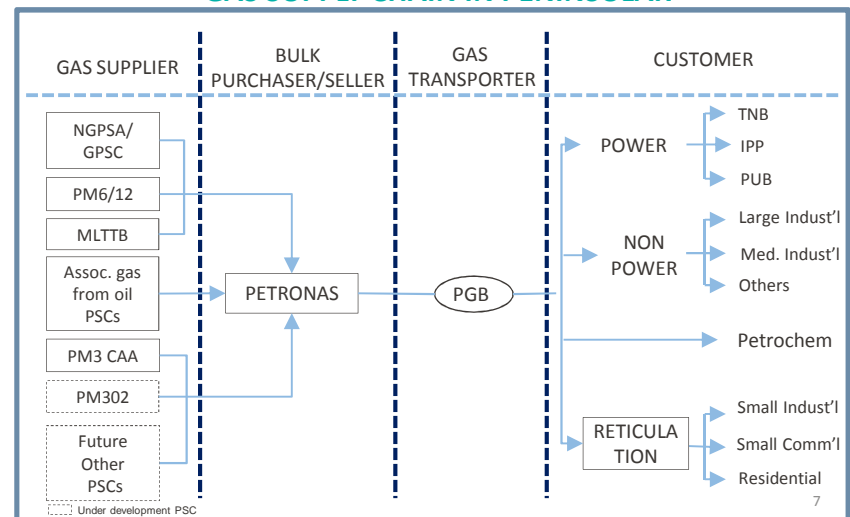


- Piped gas oriented - higher domestic gas utilization due to higher population
- Started in 1982 with the development implemented in 3-phases
 - Phase 1
 - Dev't of Duyong Gas Field followed by Bekok and Tiong Gas Field
 - Provide the necessary offshore infrastructure for development with 500 mmscfd capacity
 - Development of Gas Processing Plant (GPP) 1 by PETRONAS for extraction of LPG and dry gas for power sector
 - Phase 2
 - Started in 1990 with dev't of Jerneh Gas Field
 - Installation of 714km onshore 36" pipeline network by PETRONAS to fuel power and industrial sector
 - Construction of additional 3 GPPs over 2 years with the capability to extract C2 to C4
 - Phase 3
 - Dev't of Lawit and Jernih Gas Fields
 - Construction of another 2 GPPs
 - Installation of 450km onshore pipeline and 510km 36" onshore looping pipeline
- The start of Phase-2 also marked the beginning of petrochemical plants development by PETRONAS to add value to the gas resources in Malaysia.

PENINSULAR MALAYSIA GAS PRODUCTION



GAS SUPPLY CHAIN IN PENINSULAR

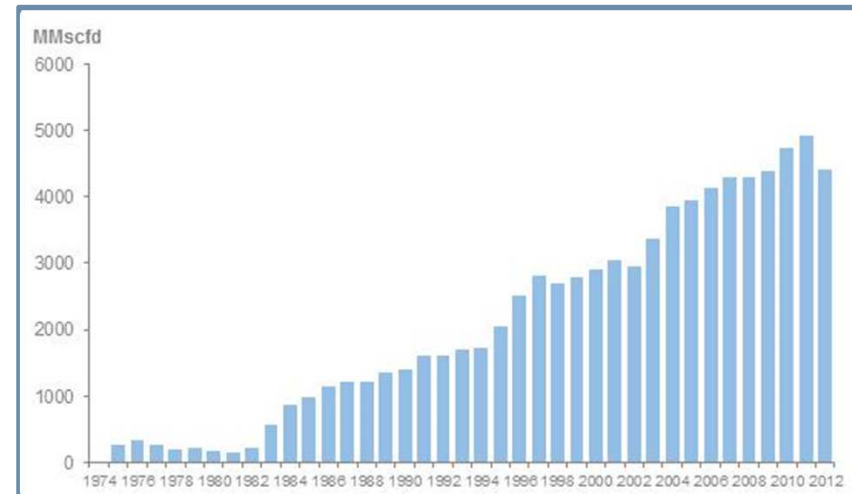


Sarawak/Sabah Gas Development

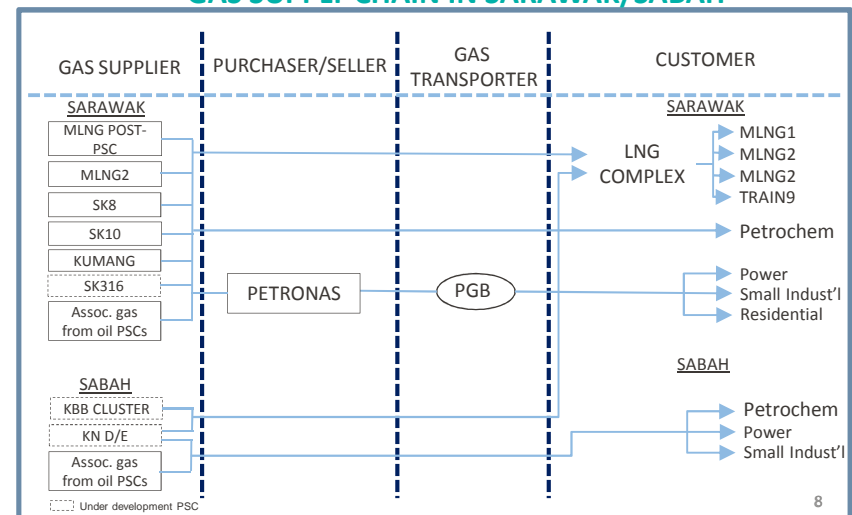


- LNG export oriented – lower domestic gas demand due to small population.
- Started with development of E-11 gas field in 1981 in Sarawak under the 1976 PSC for supply to Malaysia LNG plant in Bintulu.
- PETRONAS LNG Complex
 - Located in Bintulu, Sarawak, previous a small fishing town
 - First LNG plant was constructed in late 1979
 - Current Production capacity – 25.7 mtpa
 - MLNG – 8.4 mtpa
 - MLNG Dua – 9.6 mtpa
 - MLNG Tiga – 7.7 mtpa
 - PETRONAS is current developing Train 9 with capacity of 3.6 mtpa
- To further add value to the gas resource, 1992 PETRONAS support Shell proposal to develop its first GTL plant in Bintulu
- In Sabah, the gas supply is currently from associated gas mainly for PETRONAS Methanol Plant and power plants in Labuan and Kota Kinabalu.
- PETRONAS is currently developing 2 major gas fields, Kinabalu NAG and Keabangan gas field to meet Labuan and MLNG gas demand.

SARAWAK/SABAH GAS PRODUCTION



GAS SUPPLY CHAIN IN SARAWAK/SABAH



Source: PETRONAS

Incentives To Spur Gas Development in Malaysia



PETRONAS INCENTIVES

- Amendment or New PSCs contract e.g. NGPSA, GPSC, MLNG-2, etc.
- Improved PSC fiscal terms



GOVERNMENT INCENTIVES

- Lowering petroleum tax rate from 45% (1976 – 1993) to 40% (1994) to current 30% (1998 to-date)
- Lower tax rate (@25%) and faster depreciation schedule (from 8-10yrs to 5 years) for marginal fields development
- Additional Incentive Tax Allowance (up to 60% on Capex spent) for field that either has high CO₂, HPHT or for a deep/ultra deep water PSC.



Malaysia Experience : Several Key Factors For Successful Gas Development



Key Factors For Sustainable Gas Development :

Malaysia Perspective:-

1. Viable gas market - crucial to encourage exploration & development of gas prospect.
2. Fair return on investment to Contractor within the specific PSC time-frame
3. Gas price must be competitive to cost of alternative fuel to support fields and infrastructure development.
4. Gas is a depleting resource, its use need to be prioritized on the basis of best return to the nation.
5. Stable legal framework and geo-politics.



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Thank You