



Preparations for Decommissioning Challenges in Vietnam

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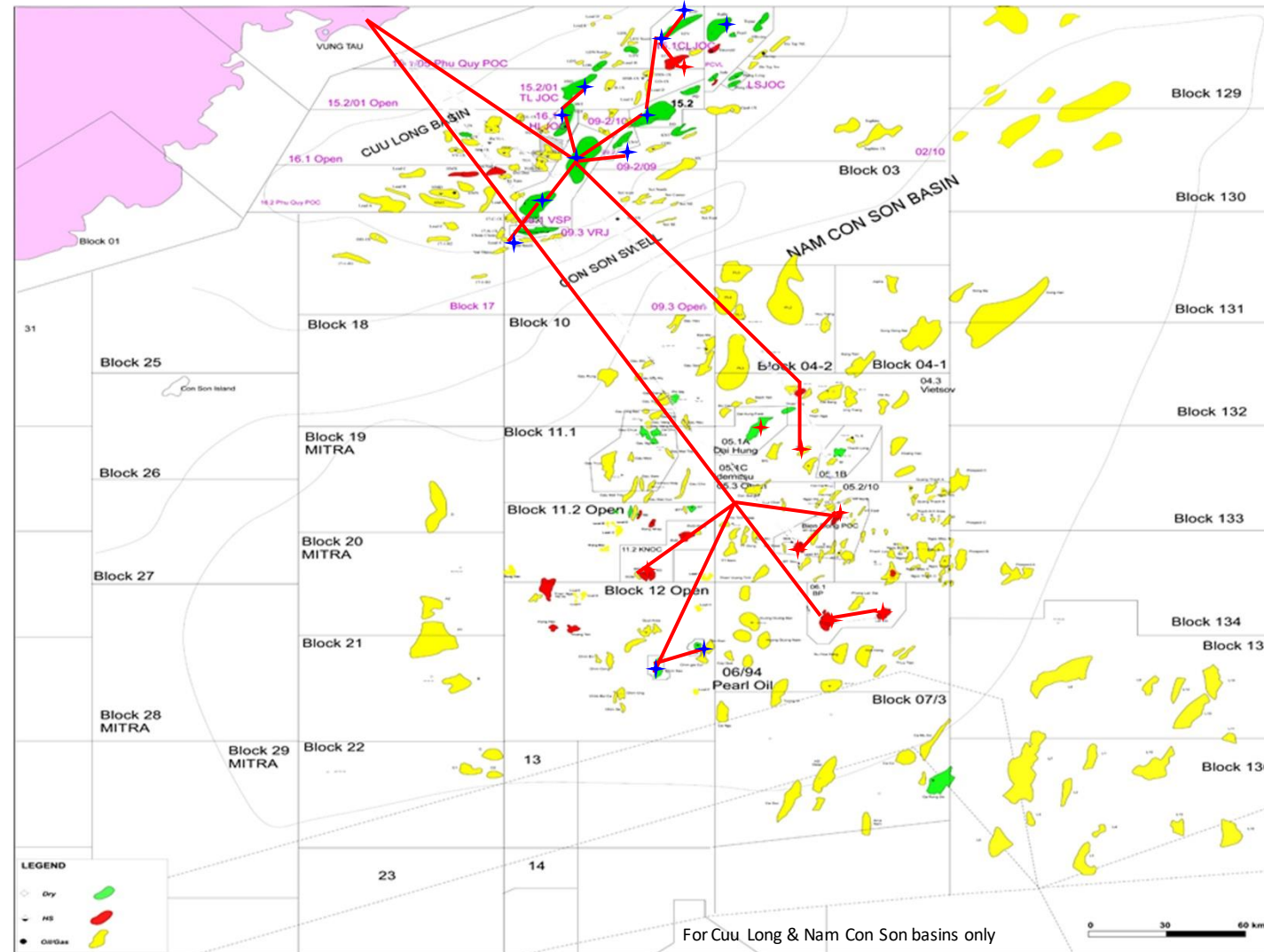
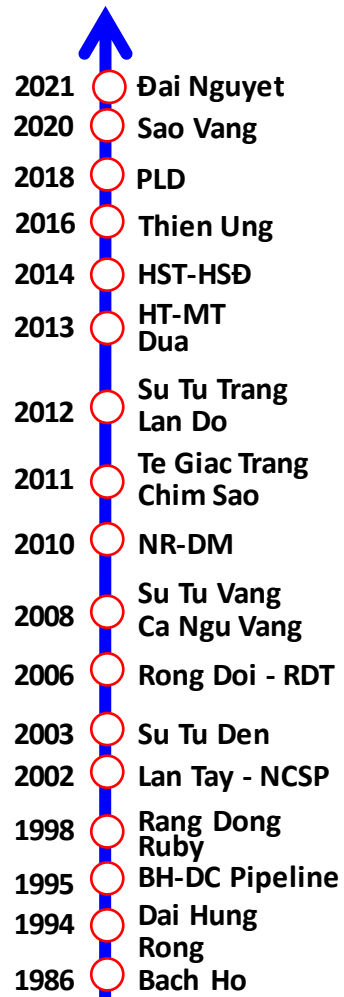
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Preparations for Decommissioning Challenges in Vietnam



□ Timeline



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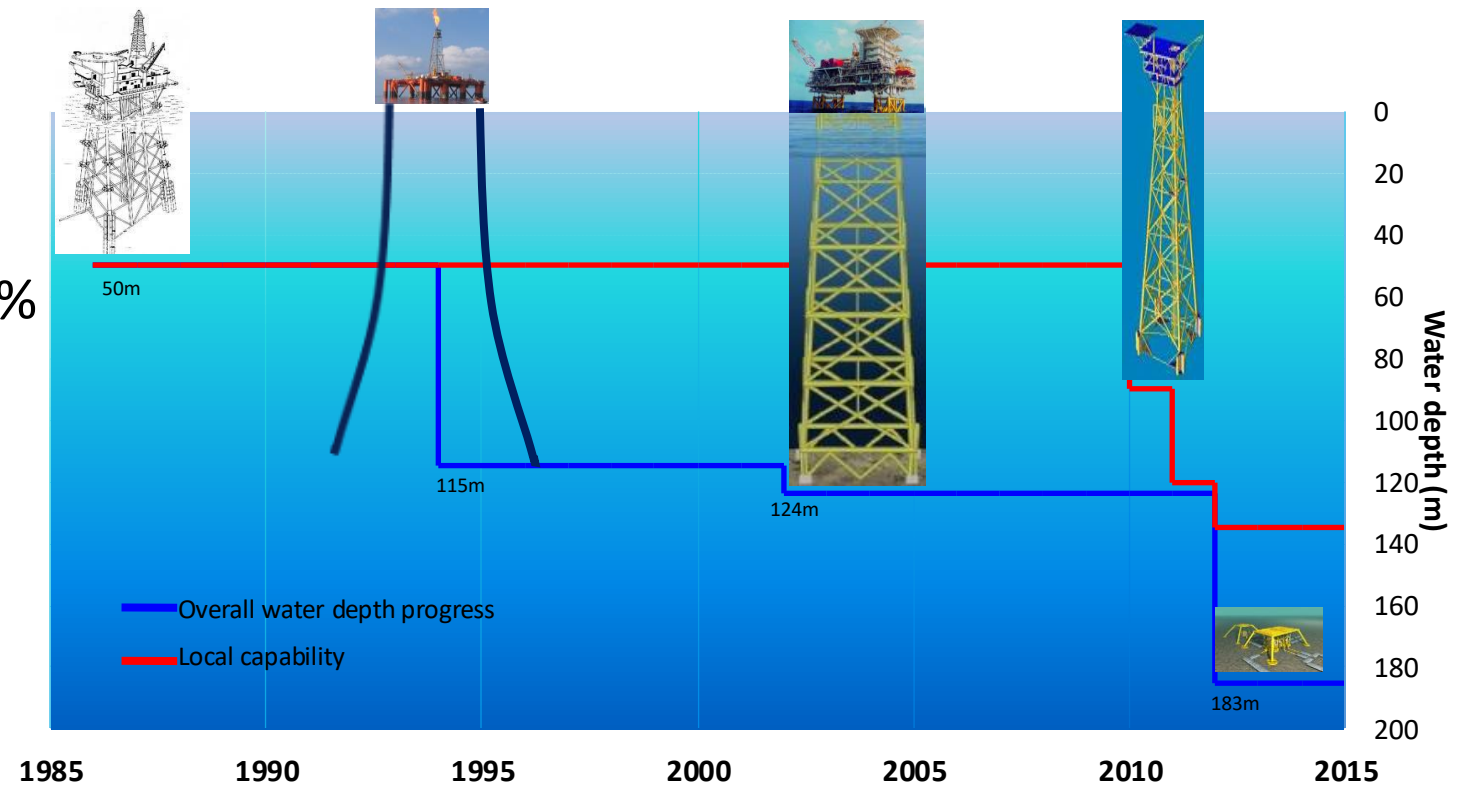


□ Sub-structures and Water Depths

- >70 sub-structures
- >90% in 50m water depth
- Floating structures: <10
- Vietsovpetro accounts for ~ 50%

□ Wells

- ~1000 wells
- >50% are producing



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□ Principal Legislation & Regulations related to Decommissioning

- General legislation & regulations:

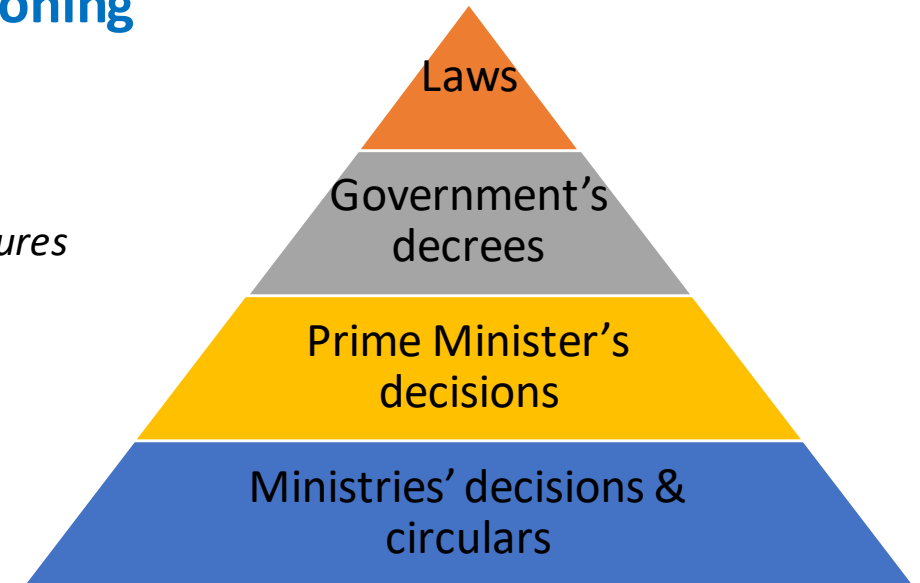
- *Petroleum Law (1993)*
- *Decision No. 84 (2010) of the Prime Minister - Petroleum production procedures*
- *Decree No. 33 (2013) of the Government - PSC template*
- *Decree No. 95 (2015) of the Government – Detailing the Petroleum Law*
- *Decision No. 04 (2015) of the Prime Minister – HSE in petroleum activities*

- Well P&A regulations:

- *Decision No. 37 (2005) replaced by Circular No. 17 (2020) of MOIT - Well P&A procedures*
- *Decision No. 10 (2014) of MOIT - Well P&A procedures*

- Oil & gas decommissioning regulations:

- *Decision No. 40 (2007) replaced by Decision No. 49 (2017) (of the Prime Minister) - Oil & gas decommissioning*

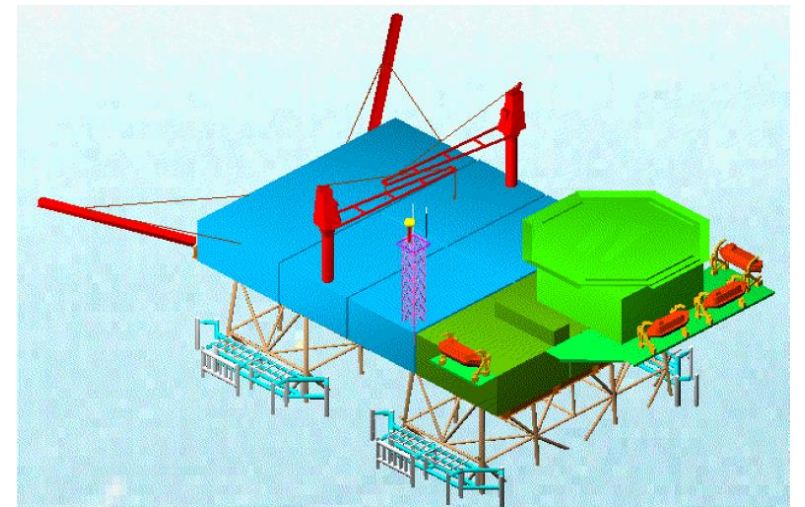
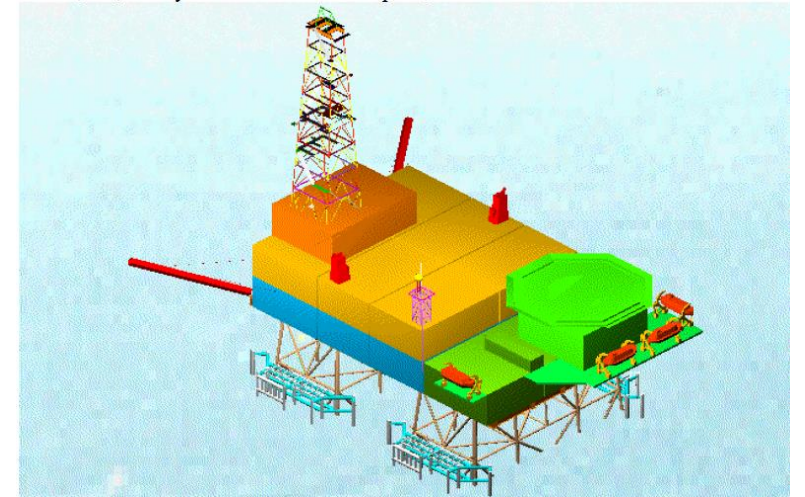


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□ Decommissioning steps in Vietnam

- PSC generation
- Relinquishment obligations
- Decommissioning obligations
- Well P&A
- Activities relating to facilities' removals

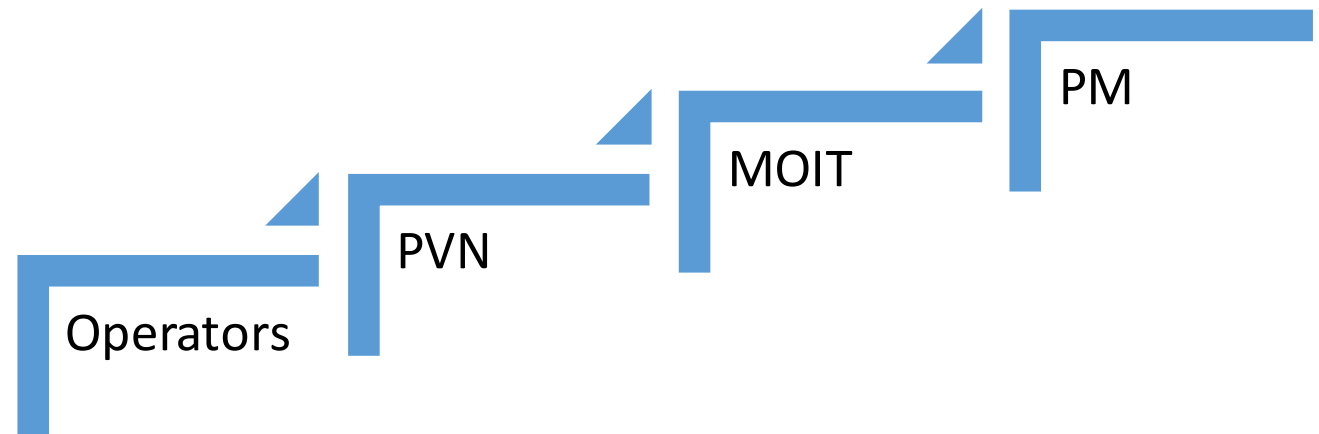


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❑ Current status of decommissioning in Vietnam

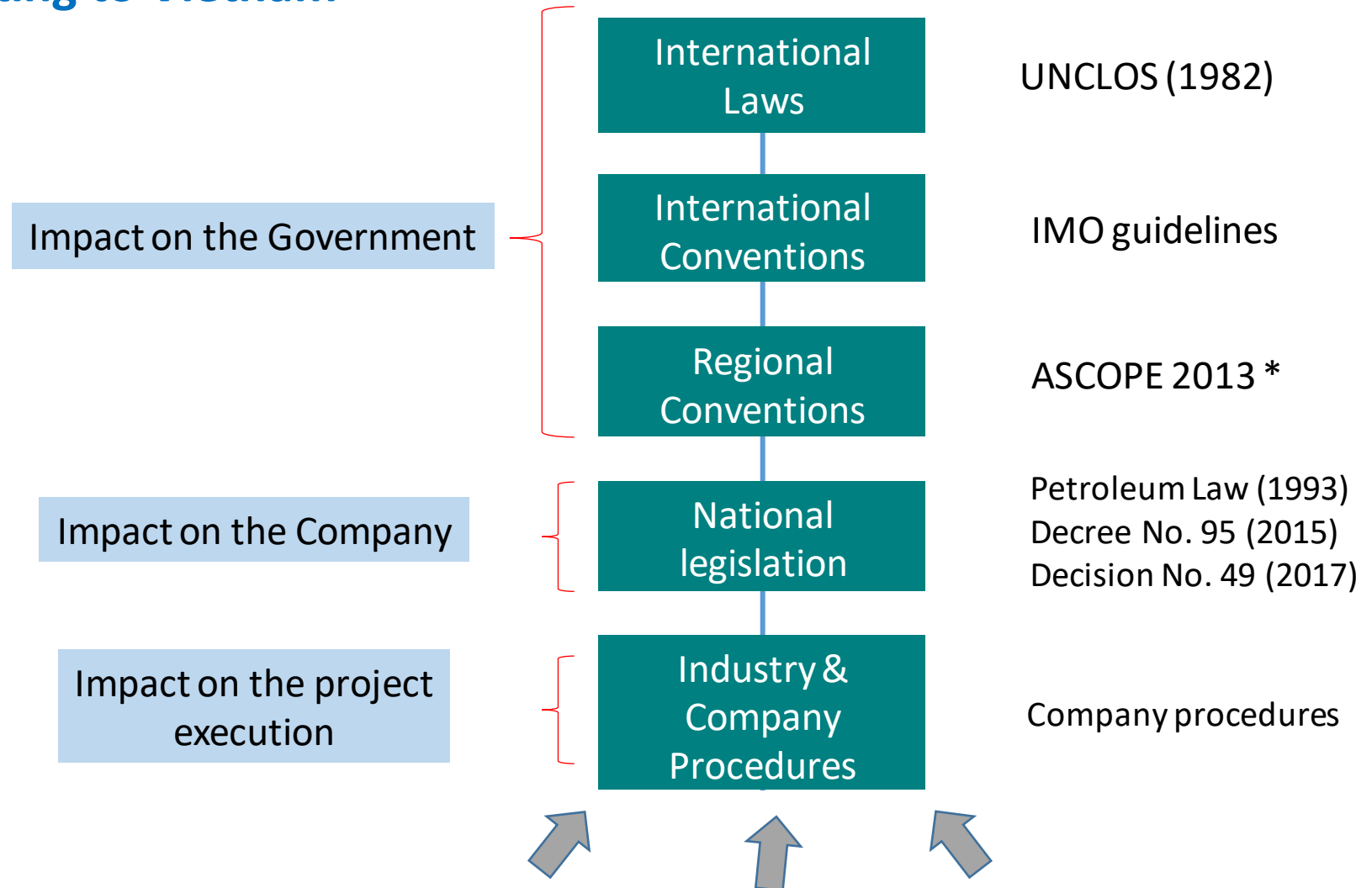
- >20 fields: Decommissioning plans submitted
- Funding
- Structure of the regulators
- Process of decommissioning plan submission



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□ Body of laws relating to Vietnam



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□ Decision No. 49 (2017)

- Overall
- Preparation, assessment and approval of a decommissioning plan
- Project execution
 - *Upstream projects*
 - *Gas projects*
 - *HSE*
- Enforcement

THE PRIME MINISTER -----	THE SOCIALIST REPUBLIC OF VIETNAM Independence - Freedom - Happiness -----
No. 49/2017/QĐ-TTg	Hanoi, December 21, 2017
DECISION ON DECOMMISSIONING OF PETROLEUM INSTALLATIONS	
<i>Pursuant to the Law on Government Organization dated June 19, 2015;</i>	
<i>Pursuant to the Law on Petroleum dated July 06, 1993; Law on amendments to some articles of the Law on Petroleum dated June 09, 2000; Law on amendments to some articles of the Law on Petroleum dated June 03, 2008;</i>	
<i>Pursuant to the Government's Decree No. 95/2015/ND-CP dated October 16, 2015 on elaboration of some articles of the Law on Petroleum;</i>	
<i>At the request of the Minister of Industry and Trade;</i>	
<i>The Government hereby promulgates a Decision on decommissioning of petroleum installations.</i>	
Chapter I	
GENERAL PROVISIONS	
Article 1. Scope and regulated entities	
This Decision provides for decommissioning of petroleum installations by organizations and individuals involved in petroleum industry in Vietnam (hereinafter referred to as "decommissioning entity").	
Article 2. Application of agreements to petroleum contracts	
1. Regulations of this Decision shall apply to petroleum contracts and gas installations that have the competent authority's decision on approval for investment project before and after the effective date of this Decision.	
2. In the event the signed petroleum contract contains financial obligations that are different from regulations on establishment of fund for decommissioning installations specified in Chapter IV of this Decision, the decommissioning entity shall adhere to such petroleum contract.	
Article 3. General rules	

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□ Decision No. 49 (2017)

- Obligations to carry out decommissioning: Operators
- Technical requirements
 - *Well P&A*
 - *Facilities*
 - *Pipelines*
- Financial guarantee fund
 - *Funding for guaranteeing decommissioning activities*
 - *Funded by production volumes*
 - *Balance of fund in reality*

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□ Cost estimate concept

- Purpose of decommissioning cost estimation in each decision gate
- Technical solutions for decommissioning campaigns
- The cost estimate in a decommissioning plan
 - For well P&A
 - For facilities
- Review of the cost estimate

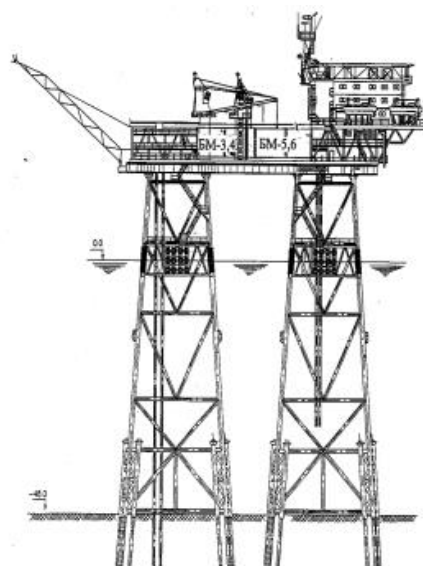
Item No.	Description	Units	Quantity	Rate (\$US)	Costs (\$US)
1.0 PROJECT TEAM					
1.1	Project Team	Lot	1	\$5,304,820	\$5,304,820
Sub-Total Project Team					\$5,304,820
2.0 OFFSHORE FACILITIES					
2.1	Topsides Preparation				
2.1.4	Decommissioning, Hydrocarbon Free	Lot	1	\$130,863	\$130,863
2.1.5	Offshore Construction	Lot	1	\$257,133	\$257,133
2.1.6	Onshore Construction	Lot	1	\$851,626	\$851,626
2.1.8	Support Vessels	Lot	1	\$140,000	\$140,000
Sub-Total Topsides Preparation					\$1,379,621
2.2	Topsides Removal				
2.2.7	Floatover Barge Mob/Demob	Lot	1	\$650,000	\$650,000
2.2.9	Tugs	Lot	1	\$350,000	\$350,000
2.2.13	Disposal	Lot	1	\$1,851,360	\$1,851,360
Sub-Total Topsides Removal					\$2,851,360
2.3	Sub-Structure Preparation				
2.3.4	DSV Mob/Demob	Lot	1	\$4,800,000	\$4,800,000
2.3.5	Pile Cutting	Lot	1	\$651,000	\$651,000
2.3.9	Support Vessels	Lot	1	\$220,000	\$220,000
Sub-Total Sub-Structure Preparation					\$5,671,000
2.4	Sub-Structure Removal				
2.4.6	HLV Mob/Demob	Lot	1	\$4,800,000	\$4,800,000
2.4.7	Structure Removal (HLV)	Lot	1	\$5,460,000	\$5,460,000
2.4.8	Tugs	Lot	3	\$350,000	\$1,050,000
2.4.9	Barges	Lot	3	\$100,000	\$300,000
2.4.10	Grillage on Barges	Lot	1	\$486,000	\$486,000
2.4.11	Seafastings	Lot	1	\$285,638	\$285,638
2.4.12	Disposal/Reefing	Lot	1	\$3,570,480	\$3,570,480
2.4.13	Drill Cuttings Removal	Lot	1	\$520,000	\$520,000
Sub-Total Sub-Structure Removal					\$16,472,118
2.6	Risers				
2.6.4	DSV Mob/Demob	Lot	3	\$50,000	\$150,000
Sub-Total Risers					\$150,000
Sub-Total OFFSHORE FACILITIES					\$31,828,920

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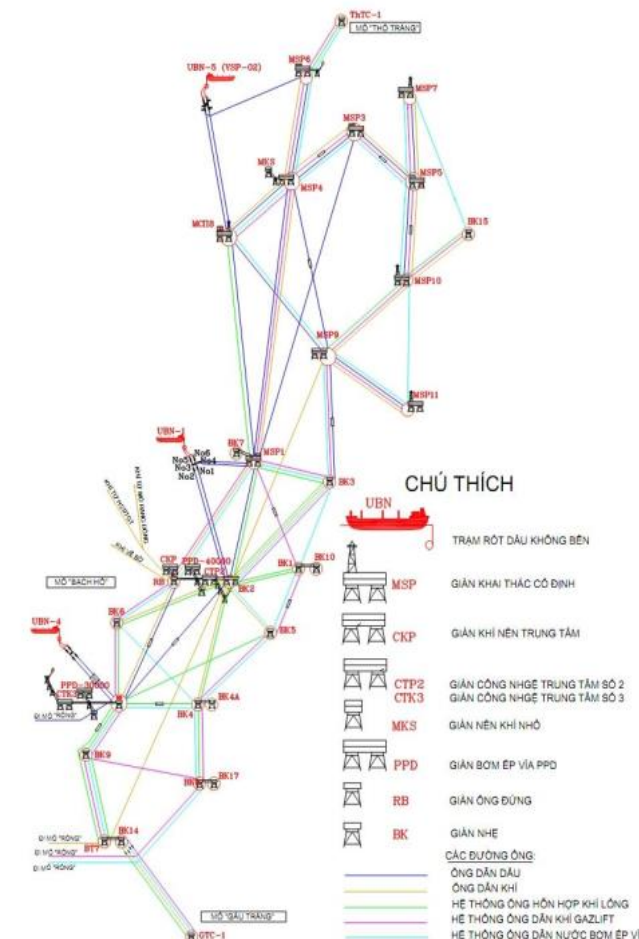


Example of some projects

- Vietsovpetro's infrastructures



№	Công trình	Năm xây dựng	Khối lượng tháo bỏ dự kiến (tấn)				
			Thượng tầng	Dầm chịu lực	Chân đế OB1	Chân đế OB2	Sàn cập tàu
	MSP-1*	1985	2500*	880	1750	1650	4*80
	MSP-3*	1986	2500*	880	1750	1650	4*80
	MSP-4	1987	3800**	880	1750	1650	4*80
	MSP-5*	1987	2500*	880	1750	1650	4*80



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Key challenges

- Lack of technical experience
- Duration of preparations
- Limited market equipment & facilities

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Q&A