Joint Development Area (JDA) Successful Corporation Model

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Vice President, Asia
About Hess Corporation

**ONSHORE**
A leading shale oil and gas producer

- Leading acreage position in core of North Dakota Bakken shale play and one of the largest midstream operators in the Bakken
- Premier acreage position in wet gas window of Utica shale play in Ohio (U.S.)
- Proven track record applying lean manufacturing techniques to drive down costs and increase well productivity and efficiency

**OFFSHORE**
A deepwater production and development pioneer

- Top quartile performance in offshore drilling and project delivery
- One of the largest producers in the Deepwater Gulf of Mexico
- Selected as operator by Malaysian national oil company and Gulf of Mexico partners
- Key developments offshore Asia (North Malay Basin & JDA) and Gulf of Mexico (Stampede)

**EXPLORATION**
A strategically focused, high-impact explorer

- Growing inventory of material oil discoveries on Stabroek Block, offshore Guyana, a prolific world-class oil play
- Gross discovered recoverable resource for the Stabroek Block estimated between 2.25 billion and 2.75 billion barrels of oil equivalent
- Fifth Guyana discovery (Turbot) to be appraised in 2018
MTJDA is the overlapping continental shelf claimed by both Malaysia and Thailand, approximately 7,250sq km

- Memorandum of Understanding signed between Thailand and Malaysia, 1979
- MTJDA Agreement between Thailand and Malaysia 1990
- MTJA Acts 1990 passed in Thailand and Malaysia

- 50 year allowance of exploration & exploitation of non living natural resources from 1979 to 2029
- Further allowance for extension beyond 2029 in 2017
MTJDA Chronology

- **1979**: Signing of MoU
- **1990**: MTJA Establishment
- **1992**: Signing of Agreement on MTJA Constitution and enactment of MTJA Act
- **1994**: Signing of 2 PSC; Block A-18 and Block B-17&C-19
- **1995**: Commercial gas discovery
- **1999**: Signing of Block B-17-01
- **2004**: A-18 Gas Sale Agreement (GSA)
- **2005**: B-17&C-19 Gas Sale Agreement (GSA) and A-18 First Gas
- **2010**: Block B-17-01 Production Start up
- **2016**: Block B-17&C-19 Production Start up
- **2017-2029**:
Government of Thailand

MOU 1979 MTJDA Agreement 1990 MTJA Act 1990

Government of Malaysia

MTJA

Block A-18 PSC

Joint Operating Agreement

Joint Operating Company Agreement

Petronas

CARIGALI HESS
JDA Block-A18

THAILAND

MALAYSIA-THAILAND JOINT DEVELOPMENT AREA

MALAYSIA

SAMUDRA NORTH

SAMUDRA

WIRA

SENJA

BUMI EAST

BUMI

BUMI SOUTH

BULAN

BULAN SOUTH

SAMUDRA

CAKERAWALA

SURIYA

THAILAND

MALAYSIA

MALAYSIA-THAILAND JOINT DEVELOPMENT AREA

THAILAND

MALAYSIA

GAS SELLERS

GAS BUYERS

Agreed Procedures (GNCP, Billing)

GSA

JOA/JOCA

CARIGALI HESS
JDA Block-A18 Cakarewala Complex

- 50% JDA gas is supplied to Chana power plants and NGV in southern Thailand and the balance is to Rayong.
- 50% JDA and NMB gas supply more than 25% of Peninsular Malaysia gas demand
- Cumulative 3 TCF Gas and 30 MMBBLS Condensate Sales 2005 - 2017
- 1 Bcfd gas produce capacity
- 20+ years remaining field life