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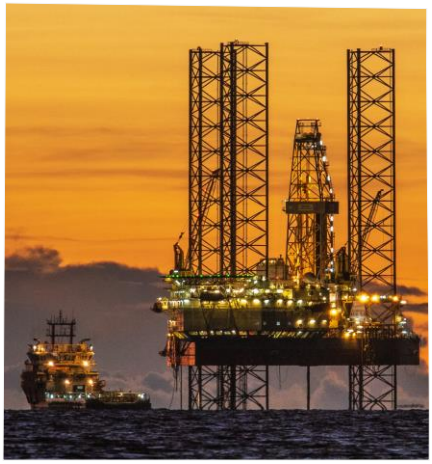
PETROLEUM AUTHORITY OF BRUNEI DARUSSALAM

Brunei Darussalam Oil and Gas Exploration and Production Guidelines

Volume 2: Reserves and Resources Classification and Reporting Guideline



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Revision Record

Revision Number	Description	Revision Date
0	Guidelines for the Classification and Reporting of Hydrocarbon Resources Volumes in Brunei Darussalam	July, 2007
1	Reserves and Resources Classification and Reporting Guidelines	October, 2016
2	Reserves and Resources Classification and Reporting Guidelines	January, 2017
3	Reserves and Resources Classification and Reporting Guideline	May, 2020

Notice

[2] Discovery refers to encounter of hydrocarbon accumulation of which the volumes are deem economical.

[3] The volumes shall include the volumes between License Expiry to economic cut-off.

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Abbreviations

In this guideline, the following abbreviations are referred:

ARPR	Annual Review of Petroleum Resources
Bcm	Billion Cubic Metre
Tcf	Trillion Standard Cubic Feet
EOR	Enhanced Oil Recovery
FID	Final Investment Decision
FDP	Field Development Plan
HCIIP	Hydrocarbon Initially In-Place
MD	Measured Depth (in metre (m))
Mln m^3	Million Cubic Metre
Mln boe	Million Barrel of Oil equivalent
NFA	No Further Activities
NFE	Near Field Exploration
NIE	Near Infrastructure Exploration
OUL	Own Uses and Losses
PoM	Probability of Maturation
$POS_{(G)}$	Geological Probability of Success (Oil / Gas)
RF	Recovery Factor (%)
R/P	Reserves/Production Ratio
RRR	Reserves Replacement Ratio
TD	Target Depth
TVDSS	True Vertical Depth Subsea (in metre (m))
UTC	Unit Technical Cost

Definitions

In this guideline, the following definitions are referred:

Technical Limit	The technical limit is the maximum possible recovery from a field or reservoir (or other reporting unit) given, assuming the use of conventional technology including commonly employed EOR techniques.
Defined Conditions	Forecast of conditions to exist and impact the project during the time period being evaluated. Forecasts should account for issues that impact the commerciality.
$POS_{(G)}$	Geological Probability of Success is the probability of discovering a volume of hydrocarbons by taking into account the possible geological risks such as structures, reservoir, migration, source rocks and preservation.
PoM	Probability of Maturation is the likelihood that a project, or a very similar project described by the same project parameters, will come to a such a degree of maturation that the hydrocarbon volumes associated with the project can be classified as reserves, give the current economic environment and within the license period. For mutually exclusive projects, the PoM should reflect the individual project's chance of being selected. The combined PoM of mutually exclusive projects should not exceed 1.
Proved Reserves	Proved reserves are those quantities of petroleum, which by analysis of geoscience and engineering data can be estimated with reasonable certainty to be commercially recoverable from a given date forward, from known reservoirs and under defined economic conditions, operation methods and government regulations.
P90 Reserves	P90 Reserves are proven reserves which have at least 90% probability that the quantities recovered will be equal to or greater than the estimates.
Reserves Replacement Ratio (RRR)	Reserves Replacement Ratio is the ratio of reserves additions at year-end divided by the Total Production during the same year. Reserves Addition is due to: 1. New projects achieving FID 2. Revisions (positive and negative) as a result of: a. Performance reviews b. Studies $RRR\ Total\ (\%) = \frac{\text{Total Reserves Addition (New projects achieving FID + Revisions)}}{\text{Total Production}}$

Reserves / Production Ratio (R/P)	Reserves / Production Ratio defined as Total Expected Reserves at year-end divided by Total Production during the same year. $$R/P = \frac{\text{Total Expected Reserves (as at 31.12.XXXX)}}{\text{Total Production}}$$
Sales Gas	The volume of gas that is directly marketable and can be sold at contractually agreed prices. This would typically exclude impurities, own use and flare volumes, as well as intermediate components that are removed from the gas stream prior to sale.
UTC	Unit Technical Cost is the undiscounted costs, comprising operating (OPEX), drilling (DRILLEX), facility construction (CAPEX), and decommissioning costs, divided by the undiscounted expected recoverable volumes, expressed in barrels of oil equivalents.

1. Introduction

The Reserves and Resources Classification and Reporting Guideline serves as a guide for the user in the reporting of hydrocarbon reserves and resources in Brunei Darussalam in line with their reporting obligations under Section 46(1) of the Order. The objective of this guideline is to provide a consistent reporting standard for all oil and gas operators in Brunei.

The classifications are strictly project-based where all reserves and resources are treated as project dependent. Projects and the associated reserves and resources are classified with respect to their maturity status, geological risk and technical uncertainties in the hydrocarbon life cycle.

Key changes to Reserves and Resources Classification and Reporting Guidelines Revision 3 is primarily to align with the June 2018 Guidelines for Application of Petroleum Resources Management System (Ref. 1) which includes the following:

- Class 5 - Contingent Resources on Hold: to include volumes between license expiry and economic cut off
- Class 5 - Contingent Resources Not Viable: to include volumes between economic cut-off and end of field life
- Class 3 - Justified for Development: Projects should be moved back to Contingent Resources should there be no reasonable expectation of project execution.
- New section on Determination of Commerciality

All reports on Brunei's reserves and resources are strictly owned by His Majesty's Government of Brunei Darussalam currently via The Authority[1] and remain strictly confidential and any release thereof remains prohibited unless prior written approval is obtained from the Authority.

[1] The Authority refers to authorized government personnel / body association appointed by The Brunei Government.

2. Reserves and Resources Classifications

Under the Guidelines for Application of Petroleum Resources Management System (PRMS) dated June 2018 (Ref. 1), each project is classified according to its maturity status (broadly corresponding to its chance of commerciality) using three main classes which is further subdivided into subclasses. The three main classes are Reserves, Contingent Resources and Prospective Resources. These three classes are then further subdivided and to be used together or separately to identify particular characteristics of the project and its associated recoverable quantities. The sub-classification options are project maturity subclasses, reserves status and economic status of defined conditions.

Following the issuance of the PRMS dated June 2018, this guideline outlines a revision to the Brunei Darussalam Oil and Gas Exploration and Production Guidelines Volume 2: Reserves and Resources Classification and Reporting Guidelines dated 2017 (Ref.2) where it provides a common standard for all Operators in Brunei Darussalam to define the reserves and resources in Brunei Blocks/Fields.

Figure 1 shows the comparison of the reserves and resources sub-classifications between June 2018 Guidelines for application of PRMS and the current Brunei Reserves and Resources Classification and Reporting Guidelines.

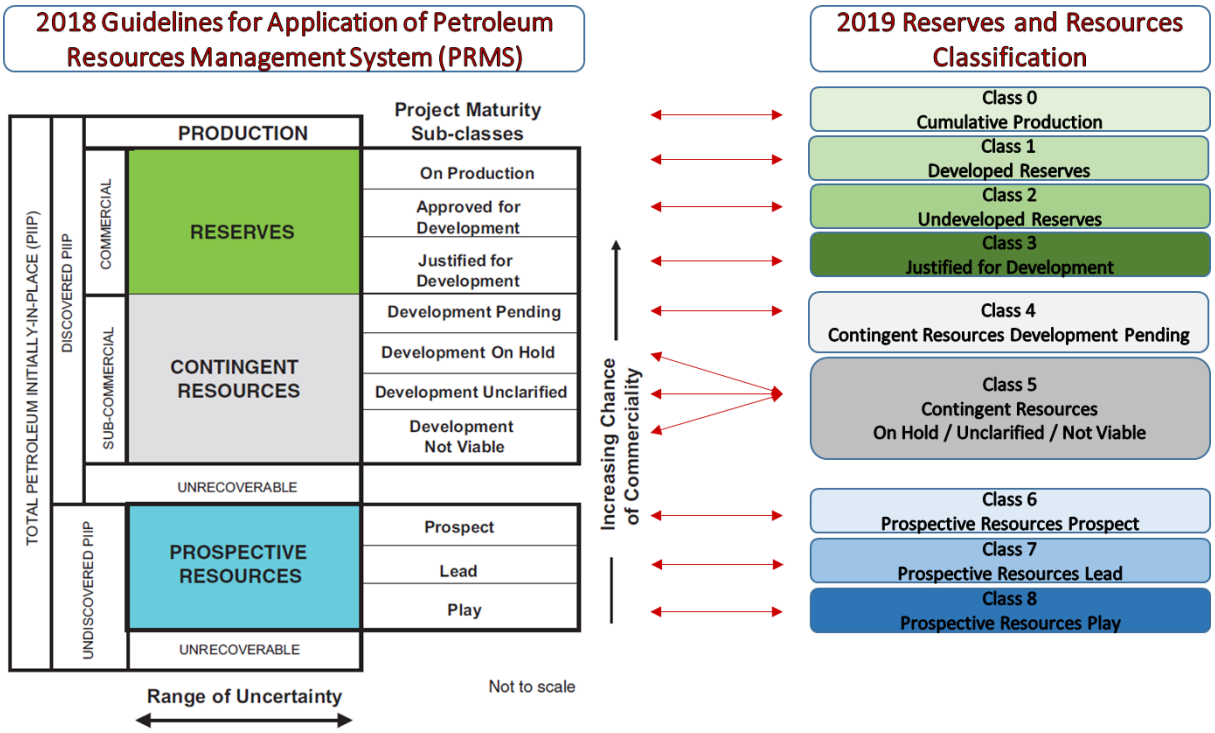


Figure 1: Comparison of the Reserves and Resources Classifications between the June 2018 Guidelines for application of PRMS and Brunei Reserves and Resources Classification and Reporting Guidelines dated 2020

3. Classifications and Definitions

Any new, incremental or accelerated hydrocarbon production must be the outcome of a project, which in turn must be classifiable into one of the revised reserves and resources maturity classifications listed below. The hierarchical relationship between the various classifications is depicted in Figure 2.

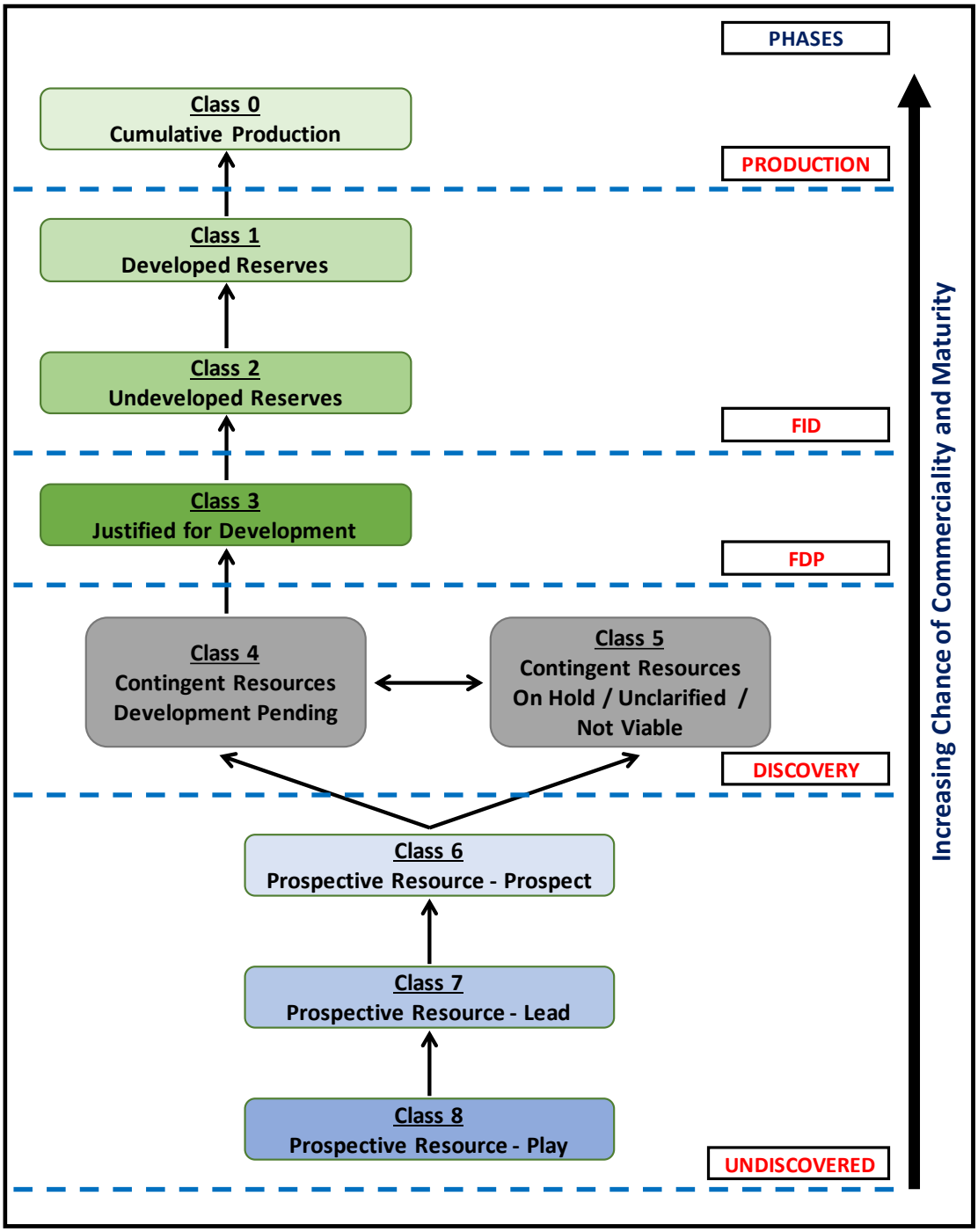


Figure 2: Reserves and Resources Classifications

All reported volumes for Class 0 to Class 8 should be wellhead volumes which includes Sales Gas, flared gas and hydrocarbon own use and losses (OUL). For reference, the definitions of each Classes as below:

Class 0 – Cumulative Production

Defined as the volume of oil, condensate and natural gas that are already recovered from the fields or reservoirs.

Class 1 – Developed Reserves

Defined as the hydrocarbon volumes associated with projects that have already been implemented up to economic cut-off. The projects delivering the Developed Reserves should not require any further expenditure beyond what is required for routine operations and maintenance.

Class 2 – Undeveloped Reserves

Defined as the hydrocarbon volumes associated with projects that have been approved for execution (Development Plan or Feasibility Report) by all involved parties and have made financial commitment (Final Investment Decision or Internal Financial approval). The development should be under way or due to start imminently or within 5-year time frame.

Class 3 – Justified for Development

Defined as the hydrocarbon volumes associated with projects that the development plan has been approved, but pending financial commitment. Projects should be moved back to Contingent Resources should there be no reasonable expectation of project execution.

Class 4 – Contingent Resources Development Pending

Defined as the discovered hydrocarbon volumes associated with projects that are at an appraisal or detailed evaluation stage. These projects are technically feasible and expected to have reasonable chance of commerciality.

- Exploration discoveries of which a Discovery[2] Report has been submitted, and/or an approved Appraisal Programme is in progress and / or field development planning is under way.
- Incremental projects that are undergoing evaluation, e.g. infill wells, facility modifications, process optimization, secondary and tertiary recovery methods.

[2] Discovery refers to encounter of hydrocarbon accumulation of which the volumes are deem economical.

Class 5 - Contingent Resources on Hold / Unclarified / Not Viable

Defined as discovered hydrocarbon volumes associated with projects classified under 3 different categories:

- **Contingent Resources on Hold**[3] are projects considered to have a least reasonable chance of commerciality to be executed. This also includes major non-technical contingencies e.g. environmental issues that need to be resolved before project can move towards development. This includes the volumes between license expiry and economic cut-off as illustrated in Figure 3, and is reported as a subset of this category.

- **Contingent Resources Unclarified** are projects that are still under evaluation or require significant further appraisal to clarify the potential for development and where the contingencies have yet to be fully defined. In such cases the chance of commerciality may be difficult to assess with any confidence.

- **Contingent Resources Not Viable**[4] are hydrocarbon volumes associated with projects that has been technically assessed to have insufficient potential to warrant any further appraisal activities or any direct efforts to remove commercial contingencies. Projects categorized as Not Viable would be expected to have a low chance of commerciality. It also includes discovered hydrocarbons accumulations that are deemed uneconomical due to its size. This includes the volumes between economic cut-off to end of field life as illustrated in Figure 3, and is reported as a subset of this category.

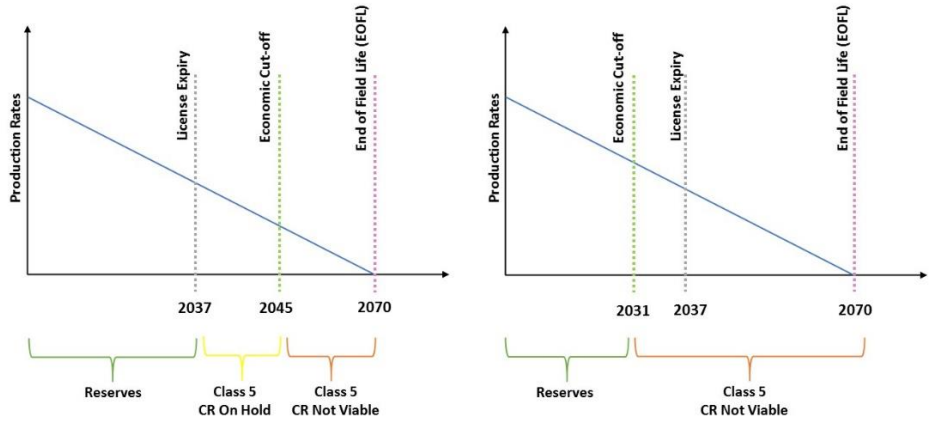


Figure 3: Illustration of Subset for Class 5

[3] The volumes shall include the volumes between License Expiry to economic cut-off.

[4] The volumes shall include the volumes between Economic Cut-Off to End of Field Life.

Class 6 - Prospective Resources Prospect

Defined as the undiscovered hydrocarbon volumes associated with prospects which are structurally and geographically defined considered viable drilling targets. This includes all prospects beyond exploration license period.

Class 7 - Prospective Resources Lead

Defined as the undiscovered hydrocarbon volumes associated with leads with potential accumulation that requires more data acquisition and/or evaluation to further understand the structure and geology of the projects. This includes all leads beyond exploration license period.

Class 8 - Prospective Resources Play

Defined as the undiscovered hydrocarbon volumes associated with plays which are of a conceptual nature. This includes all plays expected to be explored beyond exploration license period. The Reserves and Resources Classification definitions is summarized in the table below (Table 1):

Project Maturity Subclass		Discovered Hydrocarbon Volumes	Technical Viability	Economic / Commercial Viability	Development Status
Class 0 - cumulative Production		Currently on commercial production			
Class 1 - Developed Reserves		√ Yes	√ Yes	√ Yes	Approved - Implemented and proceed
Class 2 - Undeveloped Reserves		√ Yes	√ Yes	√ Yes	Approved - under way or due to start imminently
Class 3 - Justified for Development		√ Yes	√ Yes	√ Yes but pending Final Investigation Decision (FID)	Approved but still required sufficient justification to proceed
Class 4 - Contingent Resources Development Pending		√ Yes	√ Yes	√ Yes with further study and evaluations to confirm commecially viable	Further study and evaluation required to justify the basis for selection of an appropriate development plan
Class 5	Contingent Resources on Hold	√ Yes	√ Yes but further appraisal / evaluation activities are on hold	√ Considered to have at least reasonable chance of commerciality	Development planned pending / on hold. Volumes between license expiry and economic cut-off.
	Contingent Resources Unclarified	√ Yes	√ Yes but further appraisal / evaluation activities required to clarify	X Difficult to assess with any confidence	Required significant further appraisal to clarify potential development plan
	Contingent Resources Not Viable	√ Yes	X No	X No	Development not feasible to proceed due to technically and commercially not viable. Volumes between economic cut-off to end of field life.
Class 6 -Prospective Resources Prospect		X No	X No	X No	N/A
Class 7 -Prospective Resources Lead		X No	X No	X No	N/A
Class 8 -Prospective Resources Play		X No	X No	X No	N/A

Table 1: Summary table of the 2016 Reserves and Resources Classification Definitions

4. Determination of Commerciality

A Project is considered to be commercial when it has demonstrated commitment to proceed with the development and has satisfied operator's internal economics decision criteria, which includes but not limited to Internal Rate of Return (IRR) or Value Investment Ratio (VIR) or above Weighted Average Cost of Capital (WACC).

Commitment to achieve commerciality can be demonstrated with the followings:

- An approved Development Plan
- Achieved Financial Commitment
- A reasonable time frame for the execution of the Development Plan
- Internal economics investment criteria are met
- Binding hydrocarbon sales agreements are in plane
- Availability of production and transportation facilities
- Legal, contractual, environment, regulatory and government approvals are in-place

5. Reporting Format and Requirement

1. Operators shall report and submit to the Responsible Authority:
    I. Preliminary submission of Annual Review of Petroleum Resources (ARPR) **no later than 15th February** of each calendar year and;
    II. Final submission of Annual Review of Petroleum Resources (ARPR) - 31.12.XXXX not later than **end of February of each calendar year**.
2. The Final Annual Review of Petroleum Resources (ARPR) - 31.12.XXXX report shall include but not limited to the followings:
    I. Cover letter:
        a) Summary Table of Cumulative Production, Reserves and Resources volumes as at 31.12.XXXX with Proved (Low) / Expected / High estimates (See Appendix 1) of:
            - Liquid volume estimates (Mln m3)
            - Wellhead gas volume estimates (Bcm)
            - Total volume estimates (Mln boe).
        b) Summary Table of Gas Wellhead and Sales Volume (See Appendix 2).
    II. Reserves and Resources volume summary as at 31.12.XXXX:
        a) Reserves changes (Liquid – Mln m3, Gas – Bcm and Total – Mln boe) from previous year to current year (Proved 1P, 2P and 3P) including methodology and calculations of maturations, revisions, discoveries and production (See Appendix 3).
        b) Resources changes (Liquid – Mln m3, Gas – Bcm and Total – Mln boe) from previous year to current year (Contingent Resources 1C, 2C, 3C and Prospective Resources 1U, 2U, 3U) including methodology (See Appendix 3).
        c) Historical Reserves and Expected Reserves performances trend – Liquid Mln m3 and Gas Bcm (5 Years).
        d) Historical Reserves and Production Data table (Liquid Mln m3 and Gas Bcm).
        e) RRR and R/P ratio reporting for both liquid, gas and total hydrocarbon.
    III. Summary by field including undiscovered blocks/areas within the field (i.e. sub-blocks area; compartmentalization etc):
        a) Reservoir settings.
        b) Depletion rates and Recovery Factor (%) separate for Gas and Liquids.
        c) Estimation of Operator's Technical Limit volumes without taking into account license expiry, economic terms or defined conditions. Summary of justification to achieve the Technical Limit volumes that includes incremental volumes from secondary and tertiary recovery.
        d) Basis of Reserves and Resources estimates i.e. methodology, assumptions and key parameters.
        e) Summary table of total Reserves and Resources volumes and changes from previous year to current year including basis of changes.

f) Hydrocarbon Initially in Place (HCIIP), Ultimate Recovery (UR), Recovery Factor (RF), Cumulative Production and Reserves as at 31.12.XXXX – (See *Appendix 4*).
g) Breakdown of Class 5 Contingent Resources as at 31.12.XXXX – (See *Appendix 5*).
h) Table of HCIIP volumes for Reserves as at 31.12.XXXX by Field (1P, 2P and 3P) – (See *Appendix 6*).
i) Table of HCIIP volumes for Contingent and Prospective Resources as at 31.12.XXXX by Field (Low, Best and High) – (See *Appendix 6*).
j) Geological map(s) of each reservoir showing latest fluid contacts such as structure map(s), structural cross-section(s) etc.
k) Historical production data and production plot.
l) Historical liquid and gas reserves (10 years)
m) References made in the report e.g. supporting documents should also be provided.

IV. Production Forecast trend from the first year of production by classification (Classification 1 to Classification 8) where applicable.
V. Summary table by classification (Classification 1 to Classification 8) sub-divided into project names listed under NFA, pre- and post- FDP, pre- and post-FID, exploration projects and etc. – (See *Appendix 7*).
    a) For each individual defined project, the undiscounted life cycle Unit Technical Cost (UTC) and the planned or earliest start date of production shall be reported.
    b) The Probability of Maturation (PoM) in case of successful discovery shall be reported and also the Geological Probability of Success ($PoS_{(G)}$).

3. Operators shall provide split tables of the final 31.12.XXXX Domestic (100% Brunei Share) and International (XX % Brunei Share) Total Hydrocarbon Reserves and Resources Volumes (both digital in Excel format and hardcopy) – (See Appendix 8).
4. Operators shall report all volumes until End of Field Life (EOFL) for each field/project and indicate the Economic Limit and End of license.
5. Operators shall provide their domestic supply volumes.
6. Standard reporting unit to be used in the submission of the Final Annual Review of Petroleum Resources (ARPR) - 31.12.XXXX report:
    - Liquid volumes in million cubic metre (Mln m^3)
    - Gas volumes in billion cubic metre (Bcm)
    - Total volumes in million barrel of oil equivalent (Mln boe)
7. Operators shall provide the conversion unit used in the Final Annual Review of Petroleum Resources – 31.12.XXXX report (conversion up to 4 decimal places):
    - Mln m^3 (million cubic metre of oil/condensate) → Mln boe (million barrel of oil equivalent)
    - Bcm (billion cubic metre of gas) → Mln boe (million barrel of oil equivalent)
    - Tcf (trillion cubic feet) → Bcm (billion cubic metre)

8. Any discovered hydrocarbon irrespective of its commerciality must be reported to The Authority according to the Agreement. Operators shall provide Post-Drilling Notification report as per below:
    I. Basic well data:
        - Project number
        - Well name
        - Prospect name
        - Block / acreage
        - Well type (i.e. Inboard, Wildcat, NFE, NIE)
        - Well objectives
        - Spud date
        - End of well date
        - Well TD (MD and TVDSS at X formation)
        - Reservoir name
        - Reservoir fluid type where applicable
        - Well result (i.e. Commercial discovery, Non-commercial discovery, dry)
    II. Volumetric:
        - Pre-drill
            - In place volumes (Mln m3 and Bcm)
            - Ultimate recoverable volumes (Mln boe)
            - $POS_{(G)}$ (Oil and Gas)
        - Post-drill
            - Total net pay
            - Interval penetrated
            - In place volumes (Mln m3 and Bcm)
            - Ultimate recoverable volumes (Mln boe)
            - Recovery factor

    III. Future plan (i.e. appraisal, development)

References

In this guideline, the following references are referred:

1	Guidelines for Application of the Petroleum Resources Management System, SPE/AAPG/WPC/SPEE/SEG., June 2018
2	Brunei Darussalam Oil and Gas Exploration and Production Guidelines Volume 2: Reserves and Resources Classification and Reporting Guidelines, January 2017
3	Brunei Darussalam Oil and Gas Exploration and Production Guidelines Volume 6: Exploration Guidelines, December 2018

Appendices

Below are the appendices with formatted tables to be included in the Annual Review of Petroleum Resources report as per reporting format and requirement section above.

Appendix 1	Summary Table of Cumulative Production, Reserves and Resources as at 31.12.XXXX.
Appendix 2	Summary Table of Gas Reserves as at 31.12.XXXX.
Appendix 3	Reserves and Resources Changes from Previous year to Current year.
Appendix 4	HCIIP, Ultimate Recovery, Recovery Factor (%), Cumulative Production and Reserves by Field as at 31.12.XXXX.
Appendix 5	Breakdown of Class 5 Contingent Resources as at 31.12.XXXX.
Appendix 6	Field HCIIP volumes for Reserves and Resources as at 31.12.XXXX.
Appendix 7	Summary table by classification (Classification 1 to Classification 8) by Project.
Appendix 8	The final 31.12.XXXX Domestic and International Total Hydrocarbon Reserves and Resources Table.

Appendix 1

Summary Table of Cumulative Production, Reserves and Resources as at 31.12.XXXX:

Liquid (Mln m3)	Cumulative Production	Developed Reserves	Undeveloped Reserves	Justified for Development	Contignent Resources Development Pending	Contingent Resources On Hold / Unclarified / Not Viable	Prospective Resources Prospect	Prospective Resources Lead	Prospective Resources Play
Classification	0	1	2	3	4	5	6	7	8
Proved (Low)									
Expected									
High									

Gas (Bcm)	Cumulative Production	Developed Reserves	Undeveloped Reserves	Justified for Development	Contignent Resources Development Pending	Contingent Resources On Hold / Unclarified / Not Viable	Prospective Resources Prospect	Prospective Resources Lead	Prospective Resources Play
Classification	0	1	2	3	4	5	6	7	8
Proved (Low)									
Expected									
High									

Total (Mln boe)	Cumulative Production	Developed Reserves	Undeveloped Reserves	Justified for Development	Contignent Resources Development Pending	Contingent Resources On Hold / Unclarified / Not Viable	Prospective Resources Prospect	Prospective Resources Lead	Prospective Resources Play
Classification	0	1	2	3	4	5	6	7	8
Proved (Low)									
Expected									
High									

Note: Risked MSV volumes for all Prospective Resources

Wellhead volumes for Class 0 to Class 8

Appendix 2

Summary Table of Gas Reserves as at 31.12.XXXX:

Gas Reserves	Wellhead			Sales		
	Bcm	Tcf	Mln boe	Bcm	Tcf	Mln boe
Proved Reserves / P90 (Class 1 to 3)						
Expectation Reserves (Class 1 to 3)						

Appendix 3

Reserves and Resources Changes from Previous year to Current year:

	Reserves									Contingent Resources									Prospective Resources		
	Proved (1P)			Expectation (2P)			(3P)			1C			2C			3C			Risked MSV		
	Liquids Mln m3	Gas Bcm	Total Mln boe	Liquids Mln m3	Gas Bcm	Total Mln boe	Liquids Mln m3	Gas Bcm	Total Mln boe	Liquids Mln m3	Gas Bcm	Total Mln boe	Liquids Mln m3	Gas Bcm	Total Mln boe	Liquids Mln m3	Gas Bcm	Total Mln boe	Liquids Mln m3	Gas Bcm	Total Mln boe
31.12.XXXX (Previous Year)																					
Maturation																					
Revision																					
Production																					
31.12.XXXX (Current Year)																					

Note: All volumes are Wellhead volumes

Risked MSV volumes for Prospective Resources

Appendix 4

HCIIP, Ultimate Recovery, Recovery Factor (%), Cumulative Production and Reserves by Field as at 31.12.XXXX:

Field Name	Discovered Liquid (Mln m3)			Ultimate Recovery			RF (%)	Cumulative Production	Total Reserves			Class 1: Developed Reserves			Class 2: Undeveloped Reserves			Class 3: Justified for Development		
	Low	Best	High	1P	2P	3P			1P	2P	3P	1P	2P	3P	1P	2P	3P	1P	2P	3P
X1																				
X2																				
X3																				
Total:																				

Field Name	Discovered Gas (Bcm)			Ultimate Recovery			RF (%)	Cumulative Production	Total Reserves			Class 1: Developed Reserves			Class 2: Undeveloped Reserves			Class 3: Justified for Development		
	Low	Best	High	1P	2P	3P			1P	2P	3P	1P	2P	3P	1P	2P	3P	1P	2P	3P
X1																				
X2																				
X3																				
Total:																				

Field Name	Discovered Total HCIIP (Mln boe)			Ultimate Recovery			RF (%)	Cumulative Production	Total Reserves			Class 1: Developed Reserves			Class 2: Undeveloped Reserves			Class 3: Justified for Development		
	Low	Best	High	1P	2P	3P			1P	2P	3P	1P	2P	3P	1P	2P	3P	1P	2P	3P
X1																				
X2																				
X3																				
Total:																				

Note: All volumes are Wellhead volumes

Appendix 5

Breakdown of Class 5 Contingent Resources as at 31.12.XXXX:

Field / Category	Class 4 Pending Development			Class 5 CR On Hold			Class 5 CR On Hold (For volume between licence expiry and economic cut-off)			Class 5 CR Not Viable			Class 5 CR Not Viable (For volume between economic-cut off and EOFL)			Class 5 CR Unclarified		
	Liquids Mln m3	Gas Bcm	Total Mln boe	Liquids Mln m3	Gas Bcm	Total Mln boe	Liquids Mln m3	Gas Bcm	Total Mln boe	Liquids Mln m3	Gas Bcm	Total Mln boe	Liquids Mln m3	Gas Bcm	Total Mln boe	Liquids Mln m3	Gas Bcm	Total Mln boe
X1																		
X2																		
Total Producing Fields																		
Y1																		
Y2																		
Total Producing Fields																		

Note: All volumes are Wellhead volumes

Class 5 Contingent Resources on Hold includes Volumes between license expiry and economic cut-off.

Class 5 Contingent Resources Not Viable includes Volumes between economic cut-off to end of field life.

Appendix 6

Field HCIIP volumes for Reserves and Resources as at 31.12.XXXX:

Field Name	BLOCK	SAND	OIL_TYPE	GAS_TYPE	HCIIP Volumes for Reserves									HCIIP Volumes for Resources								
					STOIIP (Mln m3)			CIIP (Mln m3)			GIIP (Bcm)			STOIIP (Mln m3)			CIIP (Mln m3)			GIIP (Bcm)		
					1P	2P	3P	1P	2P	3P	1P	2P	3P	Low	Best	High	Low	Best	High	Low	Best	High

Appendix 7

Summary table by classification (Classification 1 to Classification 8) by Project:

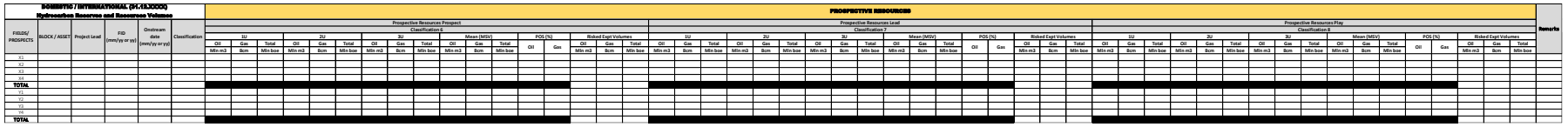
Field						Report Date:	Dec.XXXX
Project							
Status							
Classification						Class #	
Start of Production (Year)		PoM		PoS(G)		UTC	
	Reserves or Resources (Liquid – MLN M^3 and Gas – BCM)						
	Proved			Expected		High	
Oil							
Condensate							
Gas							
Sales Oil							
Sales NGL							
Sales Gas							

Appendix 8

The final 31.12.XXXX Domestic and International Total Hydrocarbon Reserves and Resources Table:

DOMESTIC / INTERNATIONAL (31.12.XXXX) Hydrocarbon Reserves and Resources Volumes						RESERVES																										
						Developed Reserves									Undeveloped Reserves									Justified for Development								
						Classification 1									Classification 2									Classification 3								
FIELDS/ PROSPECTS	BLOCK / ASSET	Project Lead	FID (mm/yy or yy)	Onstream date (mm/yy or yy)	Classification	1P			2P			3P			1P			2P			3P			1P			2P			3P		
						Oil	Gas	Total	Oil	Gas	Total	Oil	Gas	Total	Oil	Gas	Total	Oil	Gas	Total	Oil	Gas	Total	Oil	Gas	Total	Oil	Gas	Total	Oil	Gas	Total
						Mln m3	Bcm	Mln boe	Mln m3	Bcm	Mln boe	Mln m3	Bcm	Mln boe	Mln m3	Bcm	Mln boe	Mln m3	Bcm	Mln boe	Mln m3	Bcm	Mln boe	Mln m3	Bcm	Mln boe	Mln m3	Bcm	Mln boe	Mln m3	Bcm	Mln boe
X1																																
X2																																
X3																																
X4																																
TOTAL																																
Y1																																
Y2																																
Y3																																
Y4																																
TOTAL																																

DOMESTIC / INTERNATIONAL (31.12.XXXX) Hydrocarbon Reserves and Resources Volumes						CONTINGENT RESOURCES																	
						Contingent Resources Development Pending									Contingent Resources On Hold / Not Viable / Unclarified								
						Classification 4									Classification 5								
FIELDS/ PROSPECTS	BLOCK / ASSET	Project Lead	FID (mm/yy or yy)	Onstream date (mm/yy or yy)	Classification	1C			2C			3C			1C			2C			3C		
						Oil	Gas	Total	Oil	Gas	Total	Oil	Gas	Total	Oil	Gas	Total	Oil	Gas	Total	Oil	Gas	Total
						Mln m3	Bcm	Mln boe	Mln m3	Bcm	Mln boe	Mln m3	Bcm	Mln boe	Mln m3	Bcm	Mln boe	Mln m3	Bcm	Mln boe	Mln m3	Bcm	Mln boe
X1																							
X2																							
X3																							
X4																							
TOTAL																							
Y1																							
Y2																							
Y3																							
Y4																							
TOTAL																							



Note: Wellhead volumes for Class 1 to Class