ASX RESERVES AND RESOURCES REPORTING FOR OIL AND GAS COMPANIES

PUBLIC SEMINARS PERTH, ADELAIDE, SYDNEY, BRISBANE, MELBOURNE

JULY 2013

DECISIONS WITH CONFIDENCE

Agenda

1. Introduction
   - About RISC
   - Objectives

2. Introduction to PRMS
   - What is PRMS?
   - Fundamental concepts
   - Major elements of PRMS

3. ASX reporting and field life cycle

4. Governance

5. Terminology – use and misuse

RISC Advisory

- RISC is an independent oil and gas advisory firm
- Offices in Perth, Brisbane, Dubai and London
- Highest level technical, commercial and strategic advice to clients around the world.
- Basin to Boardroom services

Mission

- Enable clients to make key decisions with confidence.

Presenters

GEOFF BARKER
PARTNER

Thirty years of global experience in the upstream hydrocarbon industry. Extensive expertise in the areas of asset valuation, business strategies, evaluation of conventional and non-conventional petroleum (coal seam gas and tight gas), due diligence assessment for M&A and project finance requirements and reserves assessment.

Past Chairman of the SPE WA Section, past member of the SPE International's Oil and Gas Reserves Committee 2006-2009, current member of the SPE International's Management and Information Awards Committee. Co-author of a chapter of the SPE's Guidelines for Application of the Petroleum Resources Management System.

BRUCE GUNN
PRINCIPAL ADVISOR

Bruce has over 30 years international experience particularly in the assessment and reporting of hydrocarbon reserves. Bruce has undertaken various studies of a reservoir/petroleum engineering and planning nature including CSG and conventional oil and gas resource assessments.

Co-chairman of the SPE ATW on use of probabilistic methods for reserves and economics, committee member SPE ATW on SPE PRMS reserves and resources definitions, formerly Reserves Manager at Santos, Reserves Co-ordinator at Brunei Shell Petroleum.

Objectives

1. To outline the fundamentals of the 2007 Society of Petroleum Engineers' Petroleum Resource Management System (SPE – PRMS)

2. To illustrate the links between oil field activities, PRMS and ASX rules

3. Outline the (new) disclosures required

.... and thereby assist companies in complying with the ASX reporting rules that come into effect on 1 December 2013

Current reporting practices

- ASX is seeking to improve the reserves and resource reporting to enable investors to make informed decisions
- Approx. 150 companies
- 33 reporting styles
- Exploration companies will have different requirements to production companies, but some rationalisation is needed!

1P only	1								1
1P, 2P	6	6							6
1P, 2P and Other	1	1						1	1
1P, 3P	1		1						1
1P, 2P, 3P	11	11	11						11
1P, 2P, 3P and 1C	1	1	1	1					1
1P, 2P, 3P, and 2C	2	2	2		2				2
1P, 2P, 3P, and Other	1	1	1					1	1
1P, 2P, 3P and 1C, 2C, 3C	1	1	1	1	1	1			1
1P, 2P, 3P and 1C, 2C, 3C and PR	0	0	0	0	0	0	0		0
1P, 2P and 2C	4	4			4				4
1P, 2P, 3P and 3C	0	0	0			0			0
1P, 2P, 3P and 1P, 2C	1	1	1	1	1				1
1P, 2P and PR	0	0					0		0
1P, 2P and PR and Other	2	2					2	2	2
1P, 2P, 3P and PR	4	4	4				4		4
1P, 2P, 3P and 2C and PR	1	1	1		1		1		1
2P only		5							5
2P, 3P		1	1						1
2P, 3P and Other		2	2					2	2
2P and 2C		4			4				4
2P, 3P and 2C		1	1		1				1
2P and 2C and PR		4			4		4		4
2P, 3P and 2C and PR		1	1		1		1		1
2P,3P and 2C,3C		1	1		1	1			1
2P,3P and 3C		2	2			2			2
2P and PR		1					1		1
1C only				0					0
2C only					2				2
3C only						0			0
1C, 2C				0	0				0
1C, 2C, 3C				5	5	5			5
1C, 2C, 3C and PR				7	7	7	7		7
2C and 3C					2	2			2
2C and PR					2		2		2
3C and PR						1	1		1
PR only							18		18
Other Only								9	9
Nothing									39

RISC analysis of ASX listed company reporting, May 2013

RISC

Agenda

1. Introduction
   - About RISC
   - Objectives

2. **Introduction to PRMS**
   - **What is PRMS?**
   - **Fundamental concepts**
   - **Major elements of PRMS**

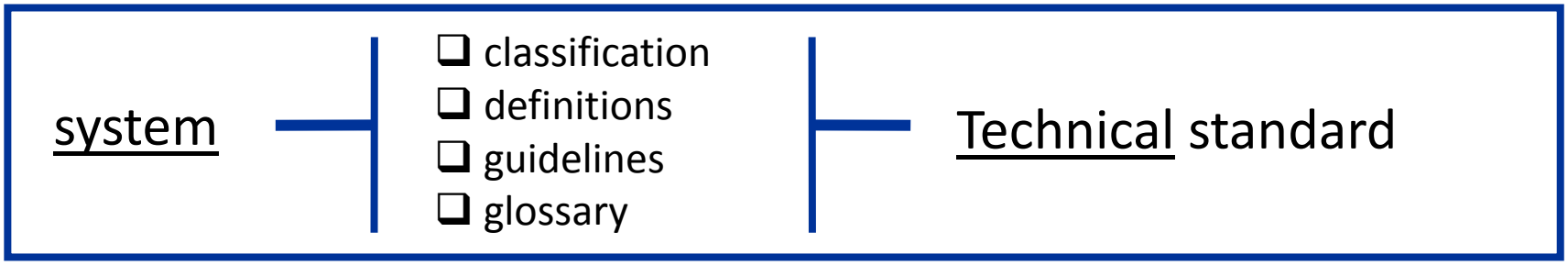
3. ASX reporting and field life cycle

4. Governance

5. Terminology – use and misuse

What is the SPE PRMS?

- The Petroleum Resource Management System (PRMS) is the oil and gas industry's global standard for resource classification and reporting
- Approved by the board of the Society of Petroleum Engineers in March 2007
- Endorsed by the Boards of the America Association of Petroleum Geologists, the Society of Petroleum Evaluation Engineers and the World Petroleum Council.
- It is a system of technical standards which have five major principles as follows:



1. The PRMS uses a resources classification framework that is applicable to all naturally occurring conventional and unconventional petroleum
2. The PRMS is a "Project–Based" system
3. Resource classification based on project chance (risk) of commerciality
4. Uncertainty in recovery of the defined project is evaluated separately from commercialisation risks
5. Tests of commerciality can be based on evaluator's best estimate forecast of future economic conditions

Source: SPE PRMS 2007

PRMS is not .....

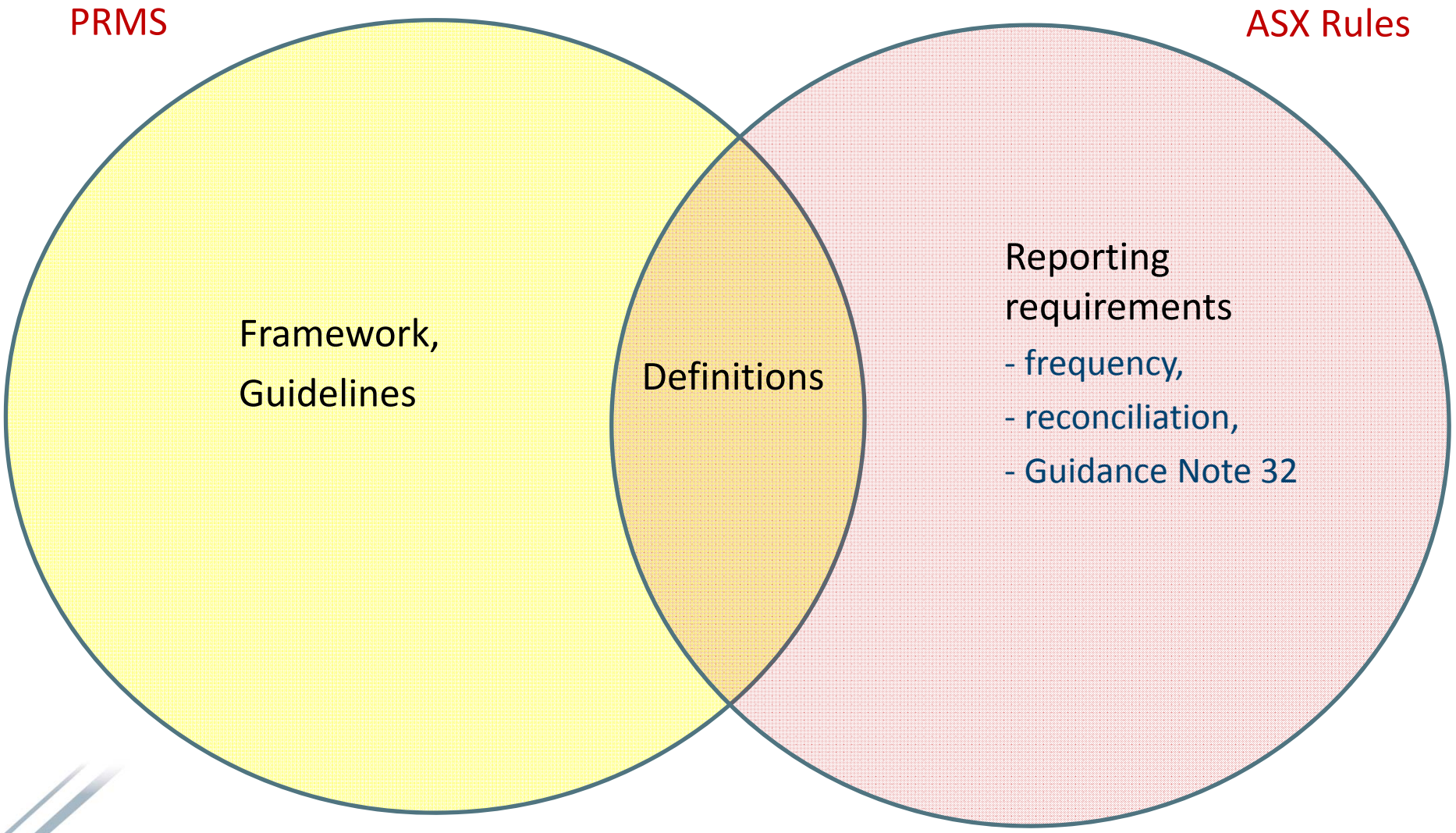
- A “cookbook” for evaluation –
  - it is based on terms that require interpretation; and
  - recognises that situations encountered are different and require thought.

- A set of regulations for reporting e.g.
  - frequency;
  - completeness or degree of disclosure.

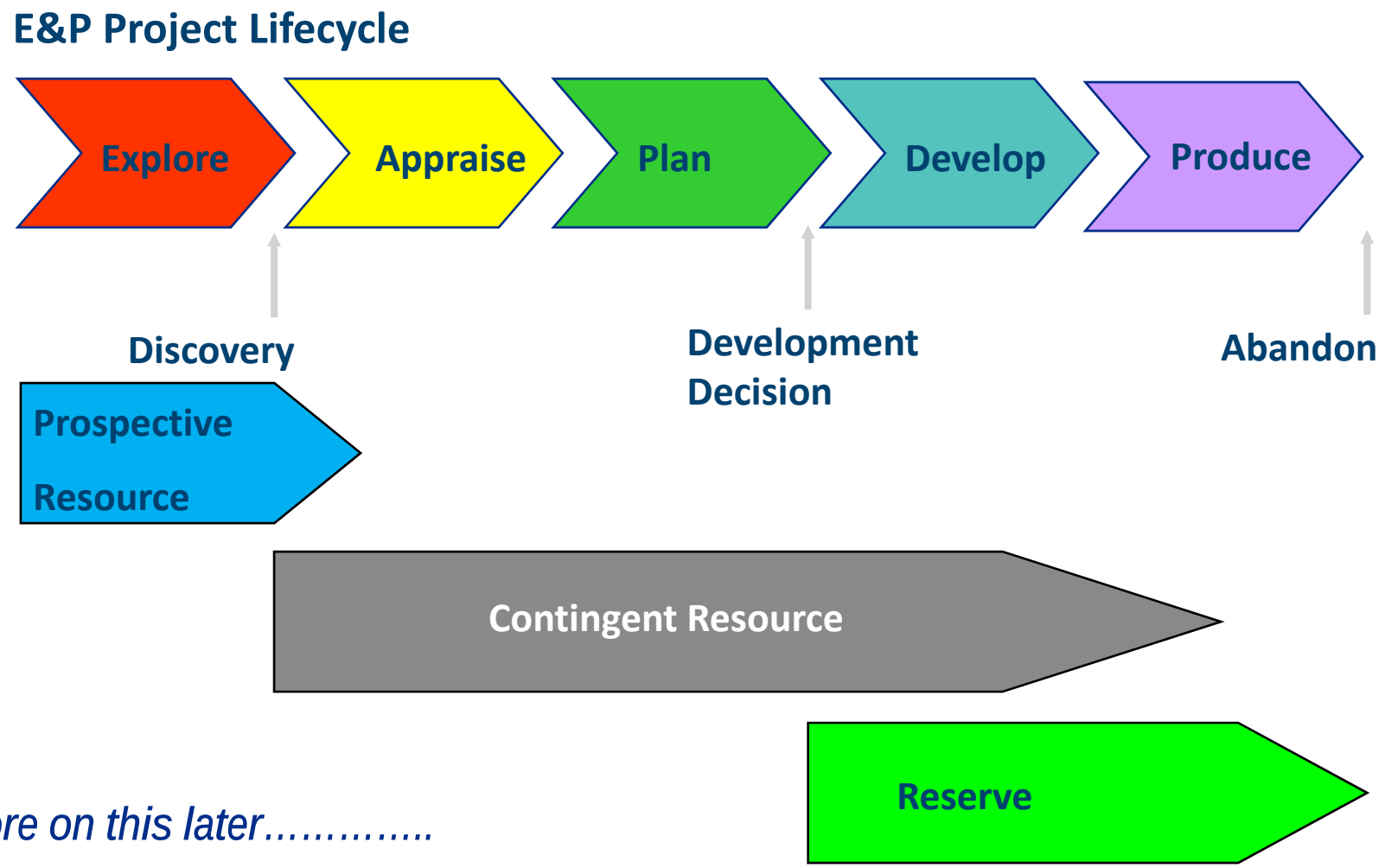
.... these are provided by ASX Rules

- PRMS and ASX Rules work together to provide the framework for consistent reporting and the disclosure for informed investment.

PRMS and ASX


PRMS
ASX Rules
Framework,
Guidelines
Definitions
Reporting
requirements
- frequency,
- reconciliation,
- Guidance Note 32

Oil/gas field life cycle and PRMS terms



But more on this later.....

PRMS Definitions

Prospective Resources are those quantities of petroleum estimated, as of a given date, to be potentially recoverable from **undiscovered accumulations** by application of future **projects**.

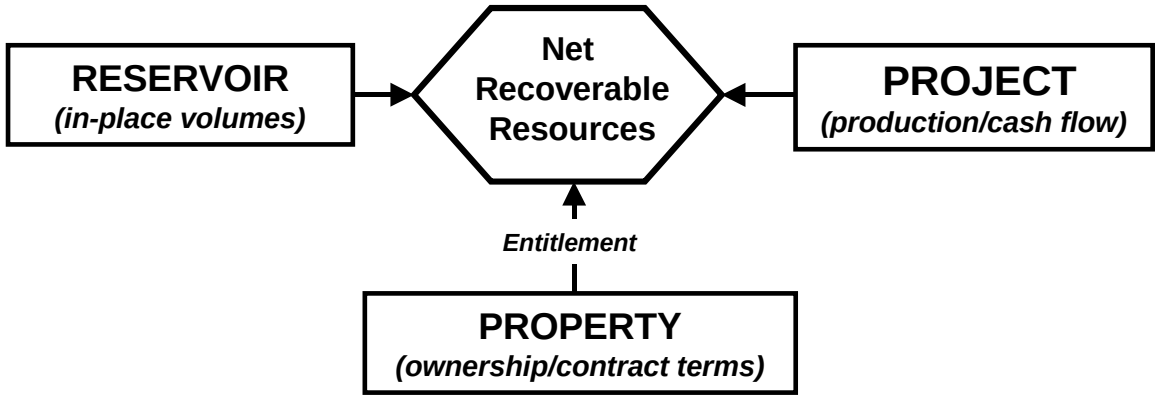
Contingent Resources are those quantities of petroleum estimated, as of a given date, to be potentially recoverable from **known accumulations** but the applied **project(s)** are **not yet considered mature enough for commercial development** due to one or more contingencies.

Reserves are those quantities of petroleum anticipated to be **commercially recoverable** by application of development **projects** to **known accumulations** from a **given date forward** under defined conditions.

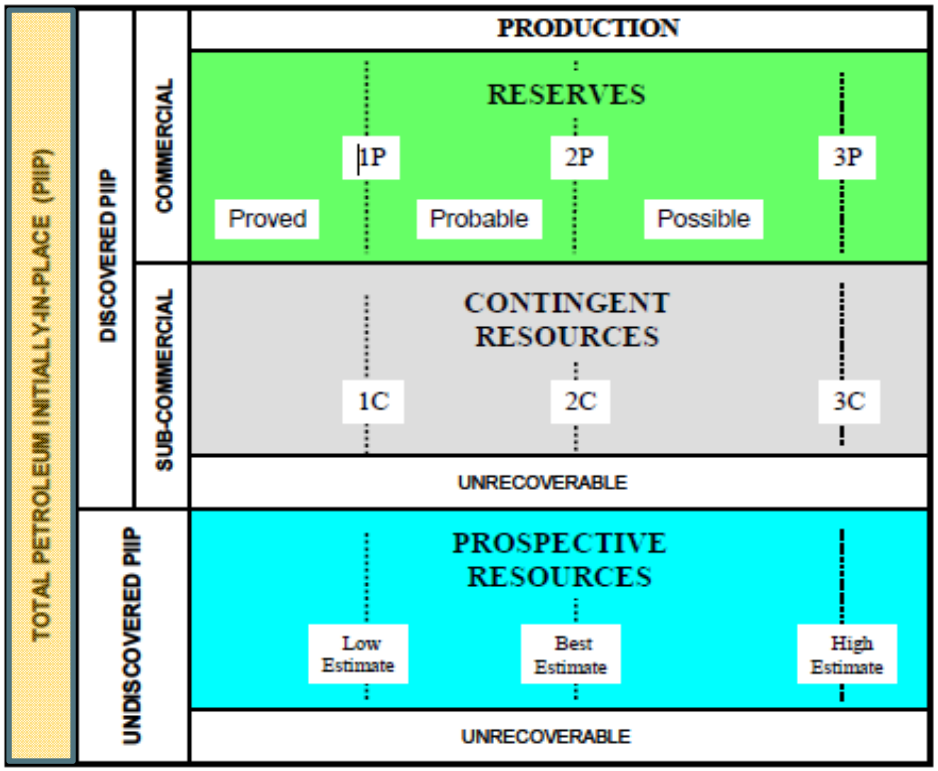
Source: SPE Petroleum Resource Classifications and Definitions March 2007

What is a Project?

- Activity(s) that recover petroleum when applied to reservoir(s)
- A Project generates petroleum production and cash flow
- The sum of the project future production and cash flow schedules when taken to economic or contractual limits defines the resource recovery



Separate Classification and Categorisation of Resources



Increasing Chance of Commerciality

classify by
Chance of Commerciality
(Risk)
of project applied

chance of development

chance of discovery

reservoir in-place & project recovery efficiency uncertainty

categorize estimates based on uncertainty of sales quantities associated with project

Risk and Uncertainty

Assessment of petroleum resources requires and understanding of both risk and uncertainty

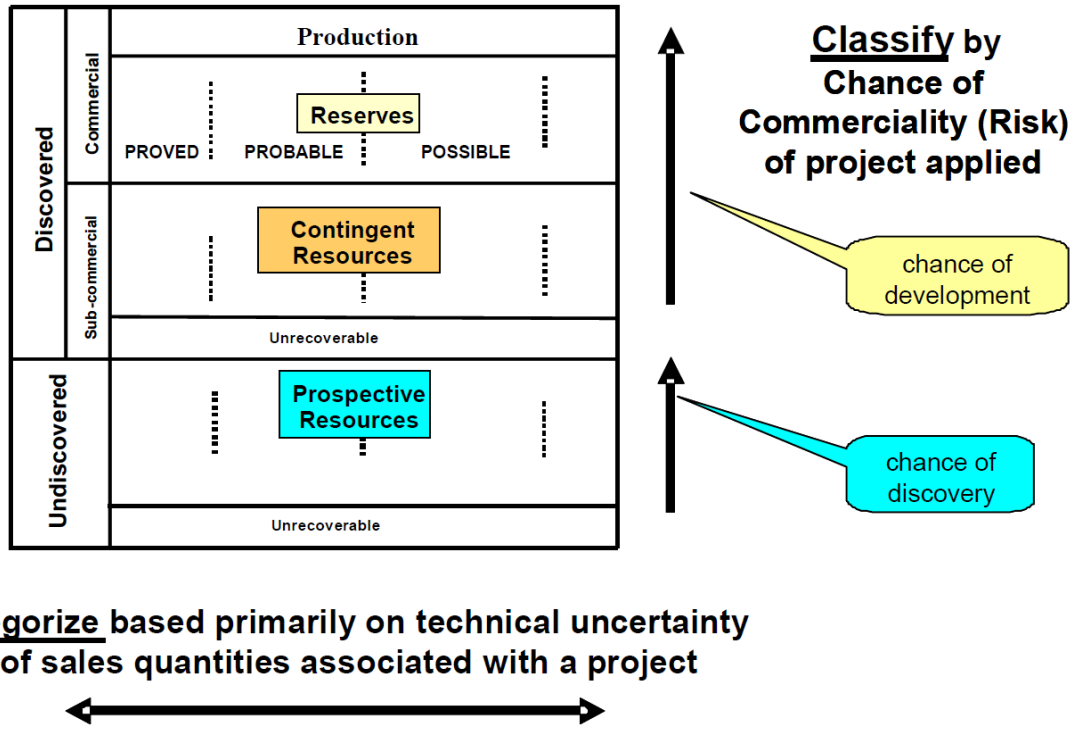
Definitions:

RISK = the probability that a discrete event will or will not occur e.g.:

- Will petroleum be discovered?
- Will the project proceed?

UNCERTAINTY = range of possible values in an estimate e.g.:

- if the project proceeds, how much will it recover?



Source: Guidelines for the Evaluation of Petroleum Reserves and Resources, SPE 2001

Uncertainty Terminology

Uncertainty in the resource estimate is generally captured as a range of values with different levels of confidence of being achieved

Hence

Low Estimate (**P90**)	=> High Confidence	=> “Proved” or **1P**
Best Estimate (**P50**)	=> Medium Confidence	=> “Proved+Probable” or **2P**
High Estimate (**P10**)	=> Low Confidence	=> “Proved+Probable+Possible” or **3P**

Uncertainty can be assessed using Deterministic and/or Probabilistic Methods

Resources class criteria

Discovered

- Established through testing, sampling and/or logging the existence of a significant quantity of potentially moveable hydrocarbons.

Commercial

- Meets evaluator's economic criteria
- No significant contingencies that would prevent development
- Reasonable expectation that all internal/external approvals will be forthcoming
- Intent to initiate development within a reasonable time frame

" reasonable time frame" depends on the specific circumstances and varies according to the scope of the project.

Source: SPE PRMS 2007

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Commercial determination criteria key points

- Project development within a reasonable time frame (typically 5 years)
  - "Reasonable Expectation" i.e. high degree of confidence of project proceeding
  - Evidence to support a reasonable time frame
  - Reasonable assessment of the project's economics
  - Reasonable expectation that a market exists for the product
  - Evidence that facilities are available or will be made available
  - Evidence that legal, contractual, environmental and other social/economic concerns will allow project to be realised
- Exceptions to 5 year benchmark allowable, but must be clearly documented

Reserves vs. contingent vs. prospective resources

Prospective Resources

- "Undiscovered potentially recoverable" portion of PIIP (earlier slide defines "discovered")
- Prospects, leads and plays
- Have a chance of discovery and a chance of development

Contingent Resources

- Represent part of discovered resource base not yet considered commercial
- Reasons could be:
  - Lack of maturity, i.e. just discovered or project not yet defined
  - Technology not available
  - Project is not economic
  - Project is economic, but not yet committed
- Contingent Resources represent the future of many companies

Reserves

- Discovered, commercial, recoverable and remaining

Source: SPE PRMS 2007 & RISC Analysis

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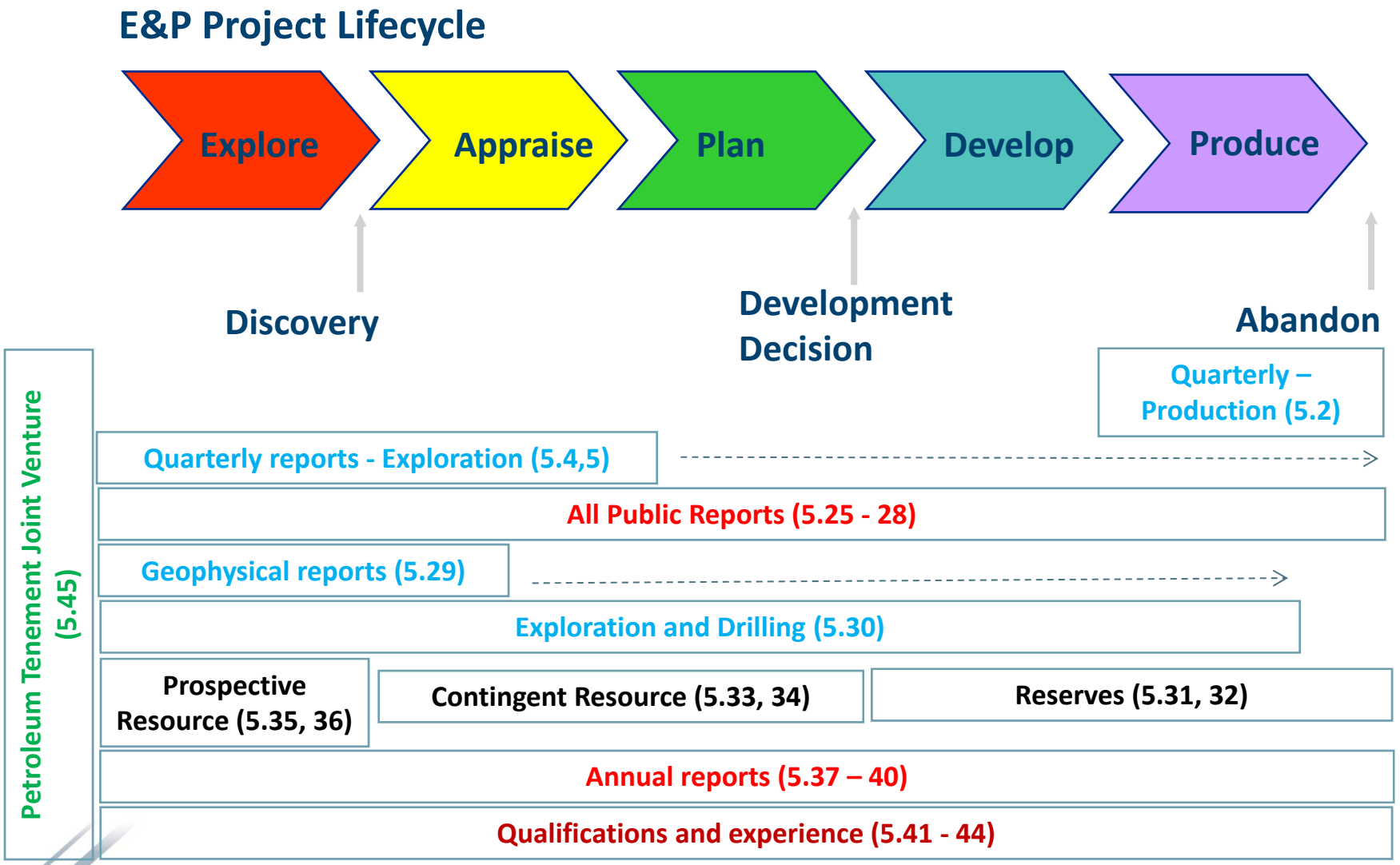
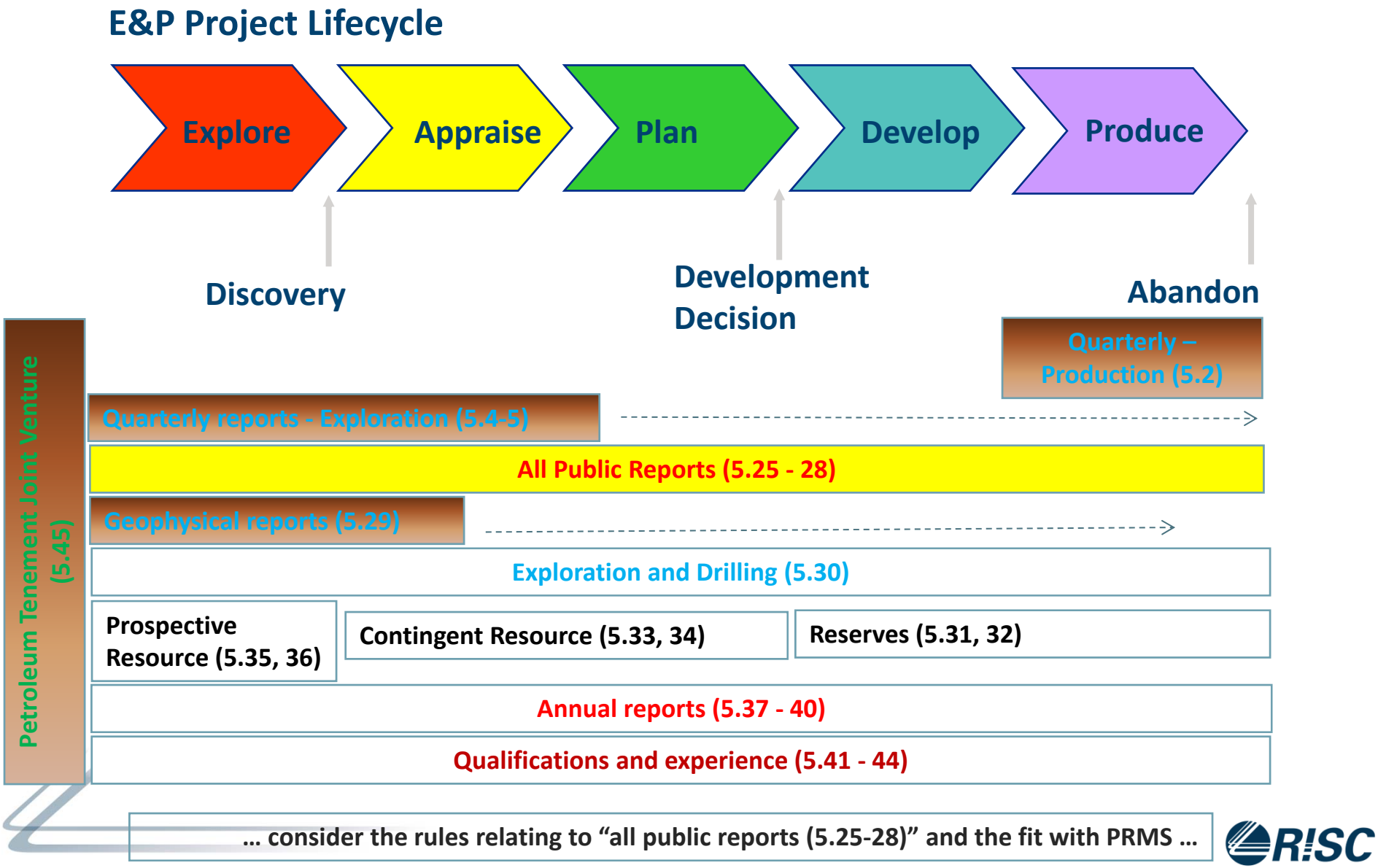
Oil/gas field life cycle and ASX reporting



Oil/gas field life cycle and ASX reporting



Requirements applicable to all public reporting (5.25)

Requirements applicable to all public reporting

5.25 An +entity publicly reporting +petroleum resources, including estimates of:

(a) +petroleum reserves;

(b) +contingent resources; or

(c) +prospective resources,

must ensure all of the following requirements are complied with in the report.

The requirements are too long to reproduce here in detail, some comments on each section follows:

Clause	Subject	Comment
5.25.1	Evaluation date is required	Consistent with PRMS
5.25.2	Classify according to SPE-PRMS	Use PRMS classification
5.25.3-4	If reporting PIIP, 'total resource base', etc., then report recoverable quantities, and also "risk"	Be consistent with PRMS
5.25.5	Report economic interest, net of royalties	Consistent with PRMS
5.25.6	State if deterministic or probabilistic methods have been used	Clarification, both are permitted in PRMS
5.25.7	Conversion factors for Gas or Oil equivalent	Not in PRMS, but appropriate

Requirements applicable to all public reporting (5.26) - reserves

5.26 An +entity publicly reporting estimates of +petroleum reserves must ensure all of the following requirements are complied with in that report.

Clause	Subject	Comment
5.26.1	Commercial producibility	PRMS
5.26.2	“Reserves” must be commercial	Re-iterates PRMS requirement
5.26.3	Use appropriate category; do not report 3P alone	Use PRMS, avoid sole use of the “upside” figure
5.26.4	Report net of fuel (or disclose fuel)	PRMS
5.26.5	Disclose the “Reference point”	PRMS
5.26.6	“mean” prohibited for reserves disclosure	Not a PRMS requirement, but avoids confusion.
5.26.7	Aggregation method disclosure	PRMS
5.26.8	Cautionary note regarding aggregation	Not a PRMS requirement, clarification
5.26.9	“Reserve replacement ratio” method	Not a PRMS requirement, clarification

.... generally consistent with PRMS or providing additional clarification

Requirements applicable to all public reporting (5.26) – Contingent Resources

5.27	An +entity publicly reporting estimates of +contingent resources must ensure all of the following requirements are complied with in that report.

Clause	Subject	Comment
5.27.1	Use appropriate category, do not report 3C alone	Use PRMS, avoid sole use of the “upside” figure
5.27.2	“mean” prohibited for contingent resources	Not a PRMS requirement, but avoids confusion
5.27.3	Aggregation method disclosure for contingent resources	PRMS
5.27.4	Cautionary note for aggregation	Not a PRMS requirement, clarification

.... similar to rules for reserves

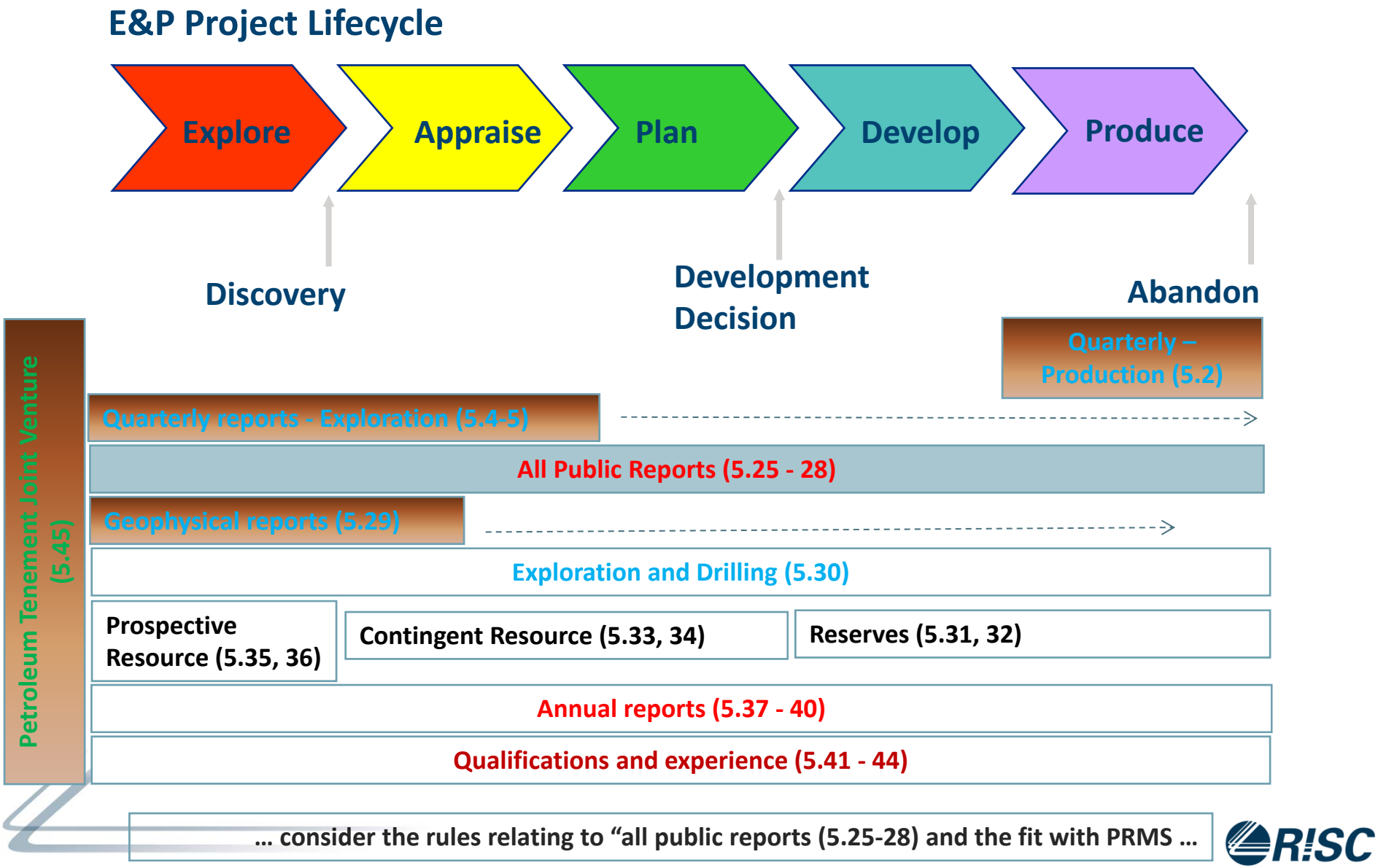
Requirements applicable to all public reporting (5.28) – prospective resources

5.28	An +entity publicly reporting estimates of +prospective resources must ensure all of the following requirements are complied with in that report.

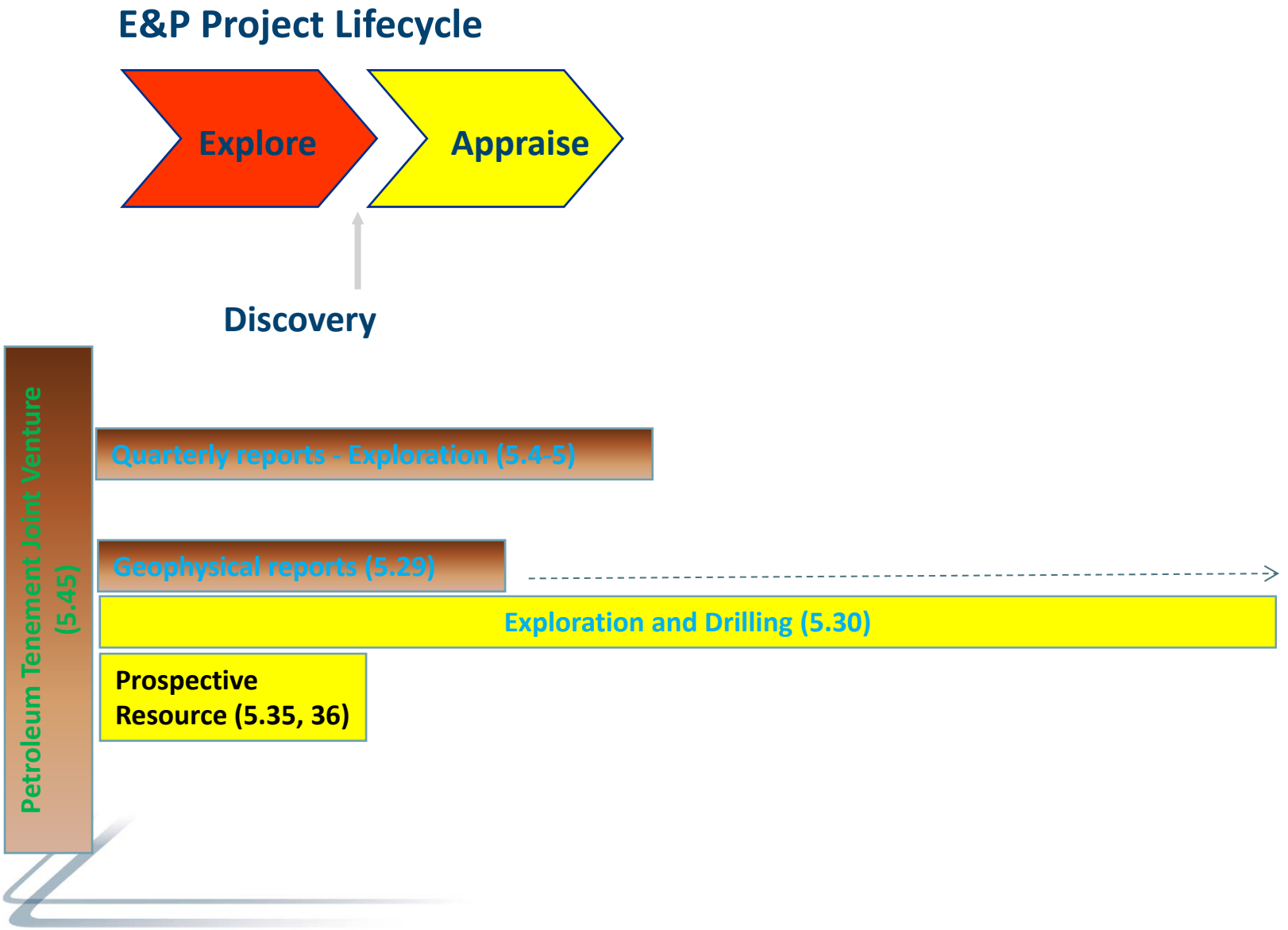
Clause	Subject	Comment
5.28.1	Use appropriate category, do not report "high estimate" alone	Use PRMS, avoid sole use of the "upside" figure
5.28.2	Cautionary note for prospective resources	Note must address both "risk of discovery" and "risk of development", consistent with PRMS

.... 5.28.1 is similar to rules for reserves and contingent resources

Oil/gas field life cycle and ASX reporting



Oil/gas field life cycle and ASX reporting ... Let's start at the exploration stage



Reporting exploration and drilling information

Requirements applicable to reporting material exploration and drilling results

5.30 An +entity publicly reporting material +exploration and drilling results in relation to +petroleum resources must include all of the following information in that report and give the report to ASX for release to the market.

(a) The name and type of well.

(b) The location of the well and the details of the permit or lease in which the well is located.

(c) The +entity's working interest in the well.

(d) If the gross pay thickness is reported for an interval of conventional resources, the net pay thickness.

(e) The geological rock type of the formation drilled.

(f) The depth of the zones tested.

(g) The types of test(s) undertaken and the duration of the test(s).

(h) The hydrocarbon phases recovered in the test(s).

(i) Any other recovery, such as, formation water and water, associated with the test(s) and their respective proportions.

(j) The choke size used, the flow rates and, if measured, the volumes of the hydrocarbon phases measured.

(k) If applicable, the number of fracture stimulation stages and the size and nature of fracture stimulation applied.

(l) Any material volumes of non-hydrocarbon gases, such as, carbon dioxide, nitrogen, hydrogen sulphide and sulphur.

(m) Any other information that is material to understanding the reported results.

Geological success vs. economic success

The chance of discovery (GCOS)

- Function of geological parameters eg source, migration, reservoir, trap, seal (conventional petroleum)

And

The chance of development (CCOS)

- Function of technical and commercial parameters, volume discovered, future development and operating costs, production profiles, markets, prices, economics

Disclosure of Prospective Resources

Requirements applicable to reporting prospective resources for material oil and gas projects

5.35 The first time an +entity publicly reports estimates of +prospective resources in relation to a +material oil and gas project, the +entity must include all of the following information in a market announcement and give it to ASX for release to the market.

5.35.1 The types of permits or licences held by the +entity in respect of the reported estimates of +prospective resources.

5.35.2 A brief description of:

- the basis on which the +prospective resources are estimated; and
- any further +exploration activities, including studies, further data acquisition and evaluation work, and +exploration drilling to be undertaken and the expected timing of those +exploration activities.

5.35.3 The +entity's assessment of the chance of discovery and the chance of development associated with the reported estimates of +prospective resources.

5.35.4 If risked estimates of +prospective resources are reported, an explanation of how the estimates were adjusted for risk.

Note: additional guidance on +prospective resources is provided in the Guidelines for Application of the Petroleum Resources Management System (November 2011).

Data sources

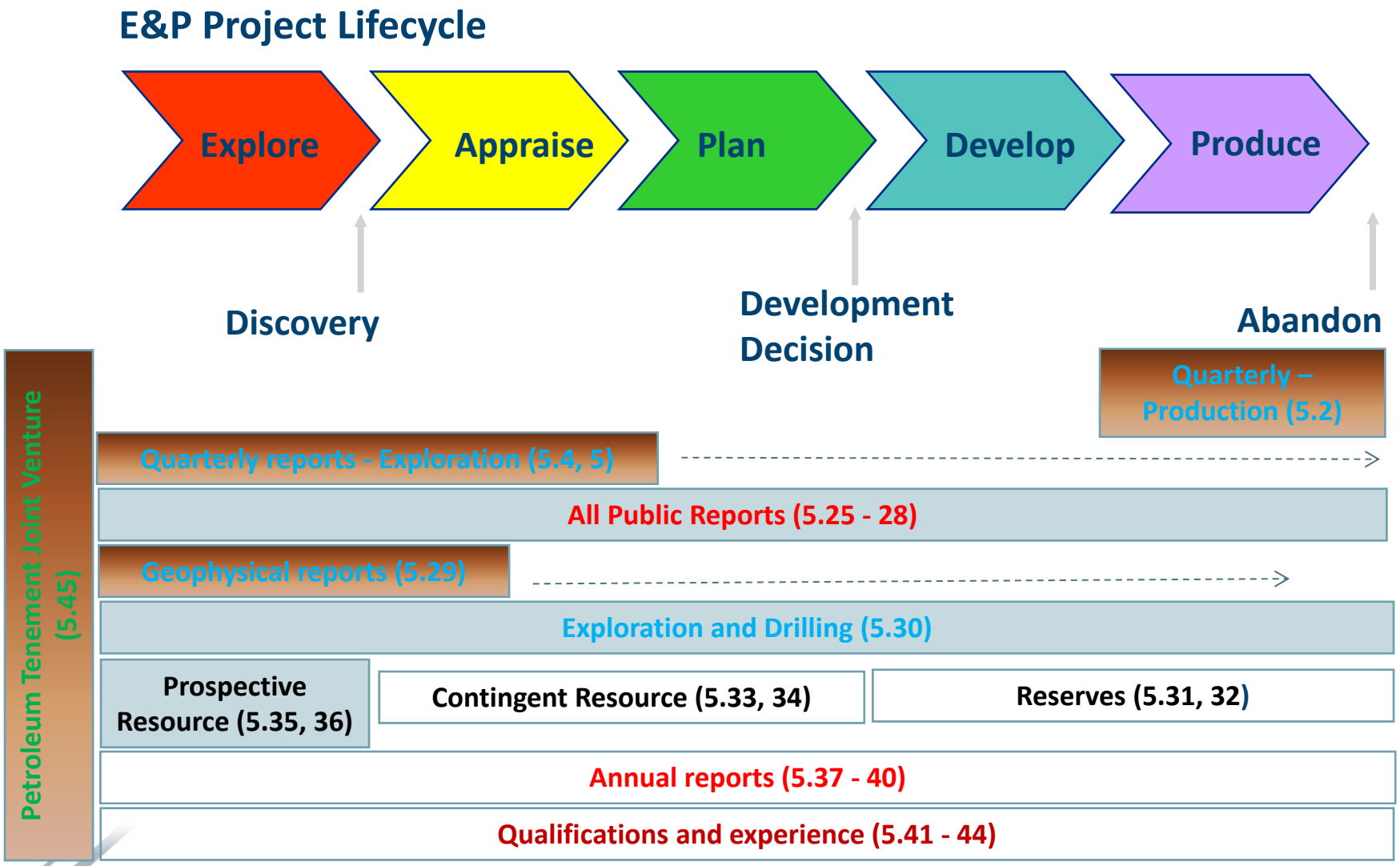
Chance of success

Multiply prospective resources estimates

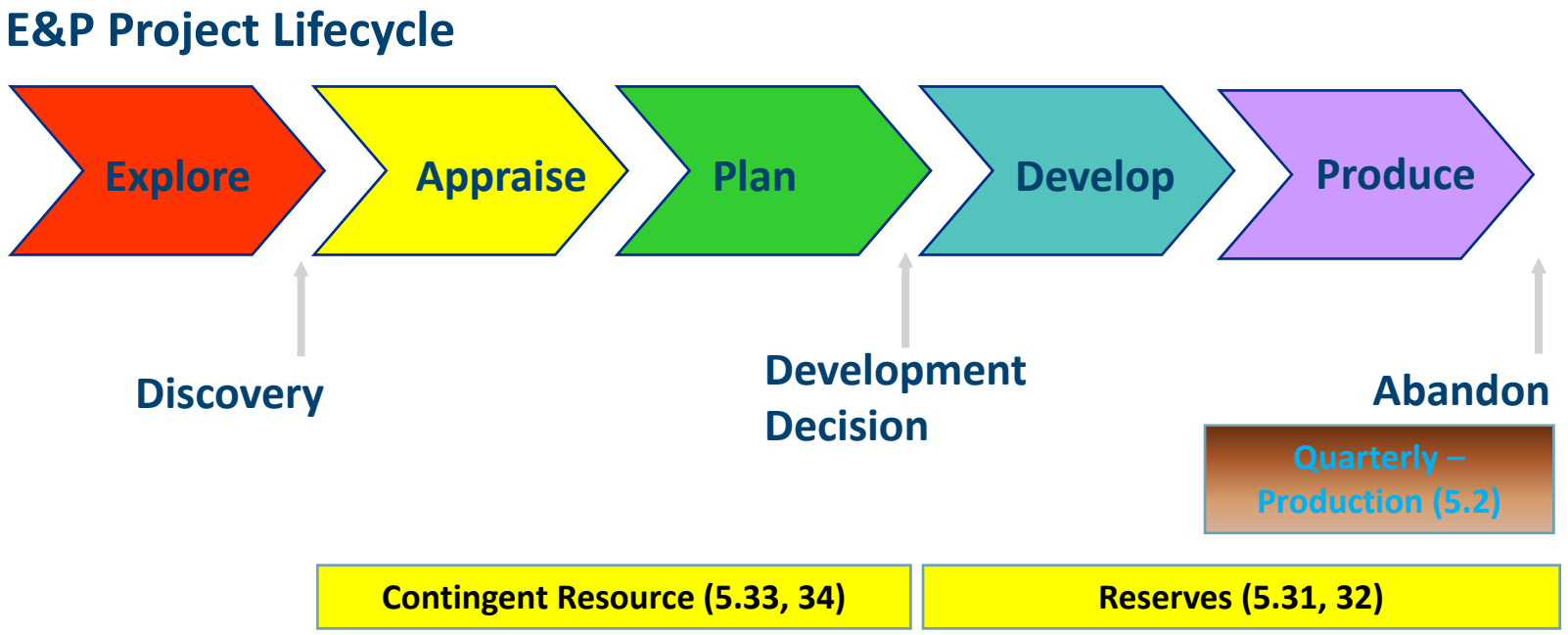
See also 5.25.3 (Requirements applicable to all public reporting)

Note that 5.35.2 and the example cautionary statement in GN32 also (correctly) includes reference to "risk of discovery and a risk of development". The example on the previous page is of GCoS (Geological Chance of Success) which is commonly used. It should be clear in the reporting that the "risk of development" has also been included. "Risked Prospective Resource" is not clear.

Oil/gas field life cycle and ASX reporting



A discovery is made and appraised … let's move to development and production



After making a discovery there is a lot of work to review the data, create a development plan, generate cost estimates, get Joint Venture alignment, project approval and sales agreements.

There are no specific disclosures that relate to these activities and progress is reported sporadically, e.g. at FID, sales agreements, etc.

Consider the reporting of Contingent Resources and Reserves.

Disclosure of Contingent Resources

Requirements applicable to reporting contingent resources for material oil and gas projects

5.33 The first time an +entity publicly reports estimates of +contingent resources in relation to a +material oil and gas project, the +entity must include all of the following information in a market announcement and give it to ASX for release to the market.

5.33.1 The types of permits or licences held by the +entity in respect of the reported estimates of +contingent resources.

5.33.2 The basis for confirming the existence of a significant quantity of potentially moveable hydrocarbons and the determination of a discovery.

5.33.3 A brief description of:

- the analytical procedures used to estimate the +contingent resources;
- the key contingencies that prevent the +contingent resources from being classified as +petroleum reserves; and
- any further appraisal drilling and evaluation work to be undertaken to assess the potential for commercial recovery, and to progress the +material oil and gas project.

5.33.4 If the reported estimates of +contingent resources are contingent on technology under development, a brief explanation of:

- whether the technology is under active development;
- whether a pilot for that technology is planned and budgeted; and
- whether the technology has been demonstrated to be commercially viable in analogous reservoirs and, if not, whether it has been demonstrated to be commercial viable in other reservoirs.

5.33.5 If the reported estimates of +contingent resources relate to unconventional +petroleum resources, the land area and the number of wells for which the estimates of +contingent resources are provided.

Note: +SPE-PRMS defines 'unconventional resources' in section 2.4 and Appendix A. Additional guidance on unconventional petroleum resources (in sections 1.1 and 8.6) and on the key contingencies for a classification of +contingent resources is provided in the Guidelines for Application of the Petroleum Resources Management System (November 2011).

Discovery – move from prospective resource

Contingencies – discussed under PRMS

Technology required

Area ok, well numbers may not be well defined

RISC

Aggregation and ASX rules

Requirements applicable to all public reporting

5.26 An +entity publicly reporting estimates of +petroleum reserves must ensure all of the following requirements are complied with in that report.

5.26.7 Where reported +petroleum reserves represent aggregated estimates of +petroleum reserves, the method of aggregation must be disclosed which must be either:

- arithmetic summation by category (that is, +IP, +2P or +3P); or
- statistical aggregation of uncertainty distributions up to the field, property or project level.

Note: +SPE-PRMS defines 'aggregated' in section 4.2.1 and Appendix A.

PRMS

5.26.8 If +petroleum reserves are reported beyond the field, property or project level, estimates of +petroleum reserves must be aggregated by arithmetic summation by category beyond that level of reporting. In this case, the +entity must include a note in the report cautioning that the aggregate +1P may be a very conservative estimate and the aggregate +3P may be a very optimistic estimate due to the portfolio effects of arithmetic summation.

Note: additional guidance is provided on aggregation in sections 1.1, 2.1, 4.1, 5.1, 6.26 and 8.1 of the Guidelines for Application of the Petroleum Resources Management System (November 2011).

Most companies will require a cautionary statement

Similar wording appears for contingent resources (5.27.2 to 4) but not for prospective resources

Note: PRMS (4.2.1.1) advises that different resource classes should not be aggregated unless adjusted for risk.

SPE PRMS: Commercial Determination – Uneconomic Proved Reserves

If project is economic for the 2P case but uneconomic for 1P then:

- Provided there are no other contingencies (e.g. project finance, regulatory requirements) and the development is firm, then 1P reserves can be assigned

> 5.31.8 If +1P is zero for the reported estimates of +petroleum reserves, a brief explanation of why +1P is zero and why, in the absence of +1P, +3P and +2P have been determined and reported.

- Generally it is to be expected that if 2P reserves are estimated then a 1P estimate will be available, i.e. it is a downside case of the project.

Source: RISC Analysis

Disclosure of Reserves (1)

Requirements applicable to reporting petroleum reserves for material oil and gas projects

5.31 The first time an +entity publicly reports estimates of +petroleum reserves in relation to a +material oil and gas project, the +entity must include all of the following information in a market announcement and give it to ASX for release to the market.

5.31.1 All material economic assumptions used to calculate the estimates of +petroleum reserves. If those economic assumptions are commercially sensitive to the +oil and gas entity, an explanation of the methodology used to determine the assumptions rather than the actual figure can be reported.

5.31.2 Whether the +entity has operator or non-operator interests in the +material oil and gas project. If the +entity has non-operator interests, the name of the operator.

5.31.3 The types of permits or licences held by the +entity in respect of the reported estimates of +petroleum reserves.

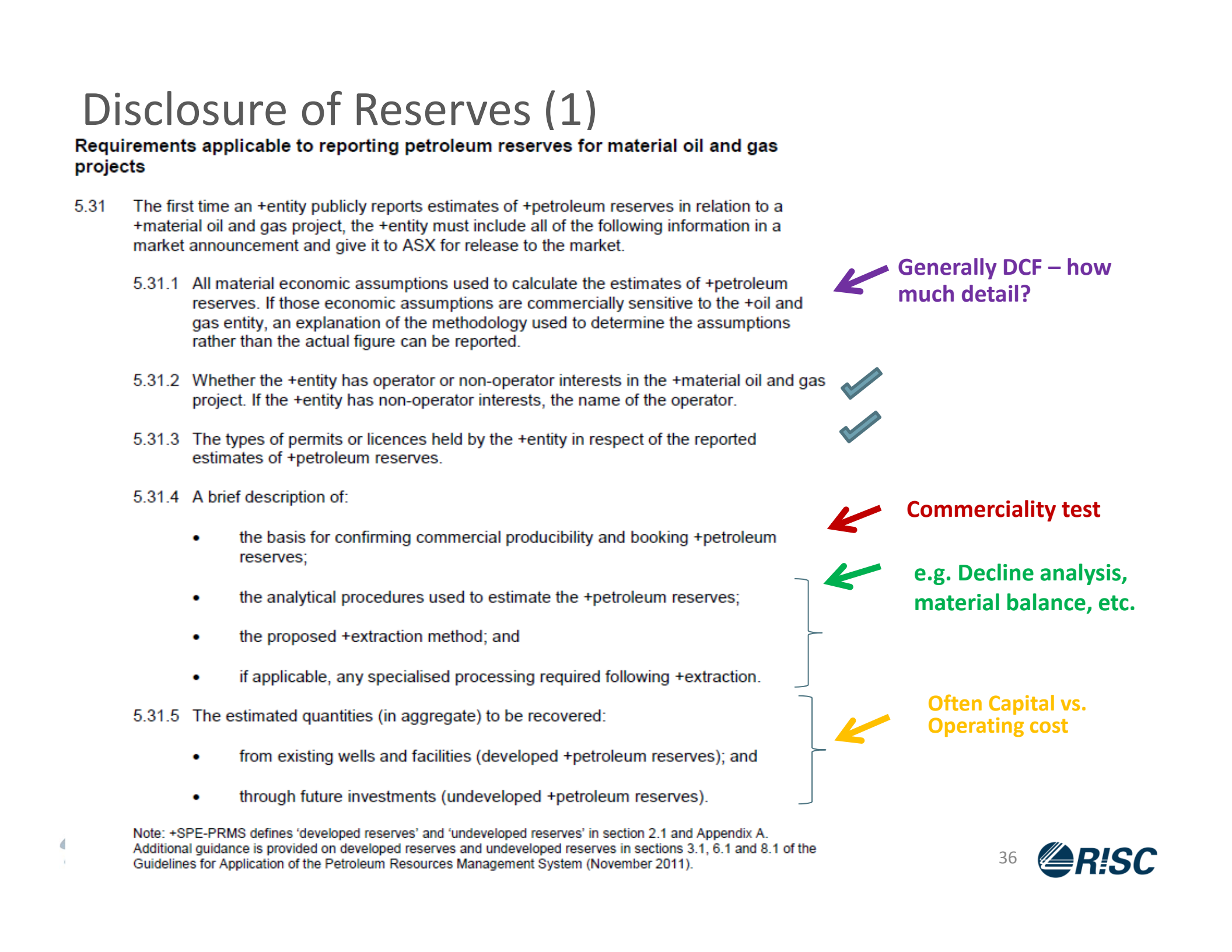
5.31.4 A brief description of:

- the basis for confirming commercial producibility and booking +petroleum reserves;
- the analytical procedures used to estimate the +petroleum reserves;
- the proposed +extraction method; and
- if applicable, any specialised processing required following +extraction.

5.31.5 The estimated quantities (in aggregate) to be recovered:

- from existing wells and facilities (developed +petroleum reserves); and
- through future investments (undeveloped +petroleum reserves).

Note: +SPE-PRMS defines 'developed reserves' and 'undeveloped reserves' in section 2.1 and Appendix A. Additional guidance is provided on developed reserves and undeveloped reserves in sections 3.1, 6.1 and 8.1 of the Guidelines for Application of the Petroleum Resources Management System (November 2011).



Disclosure of Reserves (2)

5.31.7 If the reported estimates of +petroleum reserves relate to unconventional +petroleum resources, the land area and the number of wells for which the estimates of +petroleum reserves are provided.

Note: +SPE-PRMS defines 'unconventional resources' in section 2.4 and Appendix A. Additional guidance on unconventional petroleum resources is provided in sections 1.1 and 8.6 of the Guidelines for Application of the Petroleum Resources Management System (November 2011).

Defined at reserve stage as project defined

5.31.8 If +1P is zero for the reported estimates of +petroleum reserves, a brief explanation of why +1P is zero and why, in the absence of +1P, +3P and +2P have been determined and reported.

Discussed previously – possible impact for unconventionals

Material changes

5.32 The first time an +oil and gas entity publicly reports estimates of +petroleum reserves in relation to a +material oil and gas project that have materially changed from when those estimates were previously reported, the +entity must include all of the following information in a market announcement and give it to ASX for release to the market.

5.32.1 An explanation of the new data and information.

5.32.2 An explanation of how the new data and information has affected the estimates of +petroleum reserves.

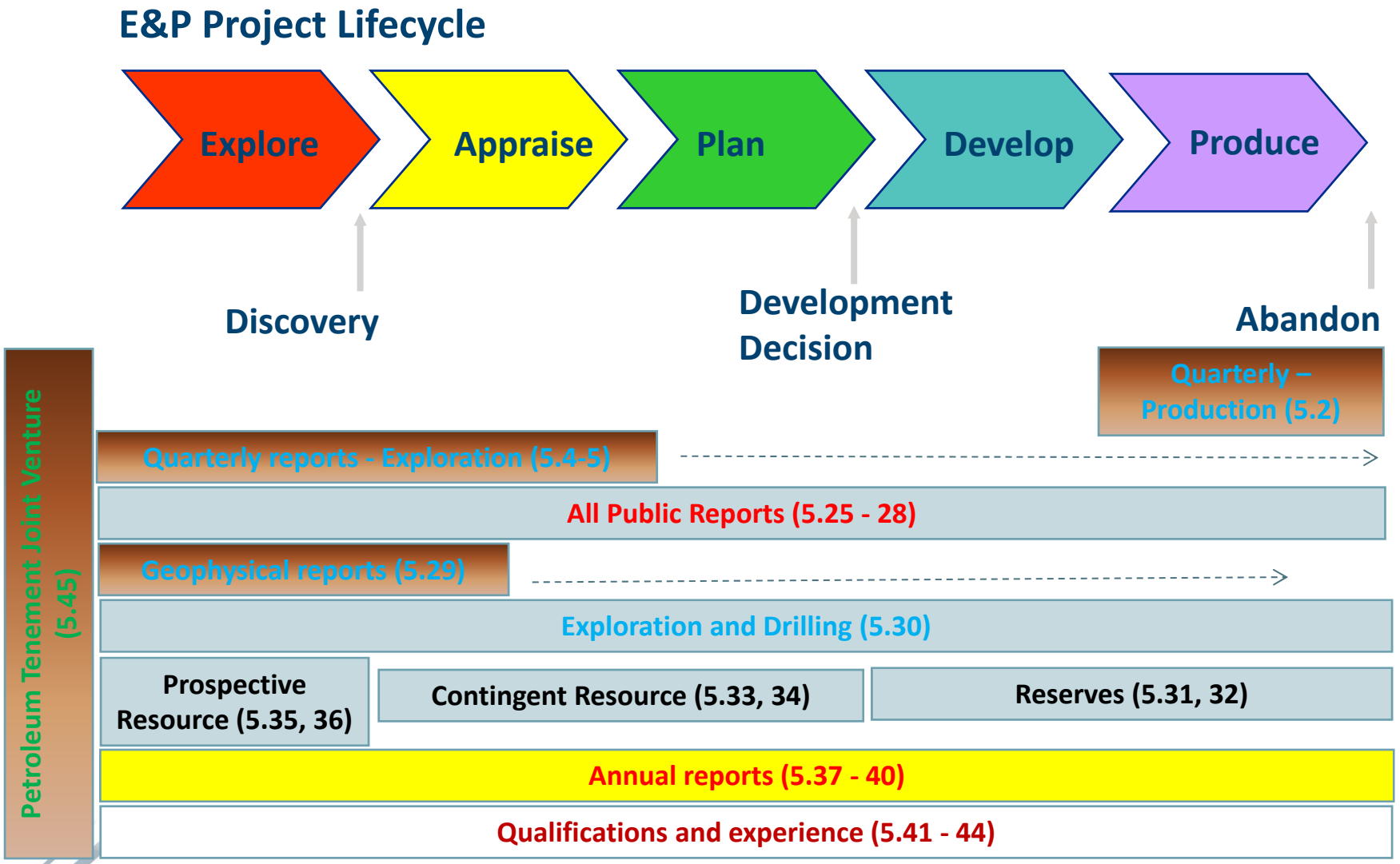
5.32.3 Any changes or additions to the information provided under rules 5.31.1 to 5.31.7.

Material changes require disclosure of reasons for the change.

There are similar requirements for contingent (5.34) and prospective (5.36) resources

...considerations on "Materiality" is described in GN32 and the ASX presentation

Let's return to the field lifecycle ……



Annual Report requirements (5.37 – 40)

Clause	Subject	Comment
5.37	Report tenements and interest	Not addressed by PRMS, applicable
5.38	Company's reporting to SEC excused from 5.39 and 5 .40	Not addressed by PRMS
5.39.1	Tabular reserve statement with 1P and 2P reserve, developed and undeveloped, product and geographical split	Not addressed by PRMS
5.39.2	Unconventional fraction identified	Not addressed by PRMS
5.39.3	1P and 2P reserve reconciliation with prior year	Not addressed by PRMS
5.39.4	Undeveloped >5 years old	Consistent with PRMS recommendation
5.39.5	Governance statement	Not addressed by PRMS
5.40.1	2C contingent resources by product and geographical area	Not addressed by PRMS
5.40.2	2C reconciliation with prior year	Not addressed by PRMS

…. generally reporting related and not addressed in PRMS

Agenda

1. Introduction
   - About RISC
   - Objectives

2. Introduction to PRMS
   - What is PRMS?
   - Fundamental Concepts
   - Major Elements of PRMS

3. ASX reporting and field life cycle

4. Governance

5. Terminology – use and misuse

Governance

5.39.5 A summary of the governance arrangements and internal controls that the +oil and gas entity has put in place, including the frequency and scope of any reviews or audits undertaken, with respect to its estimates of +petroleum reserves and the estimation process.

Considerations:

- **In house**
  - Estimation and approval processes, policies and procedures, peer review, audit
  - Organisation and accountability
  - Appropriate qualifications and experience, training
  - Independence of estimators and auditors
  - Frequency of updates
  - Freedom to report
- **External**
  - Use and frequency of external estimators or auditors
  - Independent and not impaired

ASX requirements (Chapter 19)

qualified petroleum reserves and resources evaluator	a person is a qualified petroleum reserves and resources evaluator if he or she: (a) has obtained a bachelors or advanced degree in petroleum engineering, geology, geophysics or other discipline of engineering or physical science; (b) has a minimum of five years practical experience in +petroleum engineering, +petroleum production geology or +petroleum geology, with at least three years of such experience being in the evaluation and estimation of +petroleum reserves, +contingent resources and +prospective resources; and (c) is a member of good standing of a professional organisation of engineers, geologists or other geoscientists whose professional practice includes +petroleum reserves, +contingent resources and +prospective resources evaluations and/or audits. The professional organisation must have disciplinary powers, including the power to suspend or expel a member.

Slightly more than SPE

Qualified petroleum reserves and resources evaluator requirements (5.41 – 44)

Clause	Subject	Comment
5.41	Ensure prepared by appropriately qualified person	Expansion of SPE
5.42	For a public report, a statement of basis, employee, professional organisation and written consent	Expansion of SPE
5.43	5.42 applies for first report, subsequently cross referenced, and, provided there is no material update and assumptions still applicable	Expansion of SPE
5.44	Reserve statement in an annual report must include: a statement as per 5.42, and consent of qualified evaluator.	Expansion of SPE

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5. **Terminology – use and misuse**

Reserve terminology

PRMS contains definitions for a number of terms, adding "qualifiers" to these may invalidate the definition.

Some examples – Non Compliant use:

- **"technical" reserves**
  - The suggestion is that no commercial evaluation has been made, invalidates the requirement that reserves are "commercial"
- **"gas-in-place" reserves**
  - Reserve represents the remaining recoverable quantity, not the in-place quantity
- **"mean" reserves**
  - Excluded in ASX rules

Not quite as bad:

- **"recoverable" reserves**
  - Reserves are "recoverable" by definition, what are "unrecoverable" reserves?
- **"initial" reserves**
  - The correct term is "ultimate recovery"
- **"booked" reserves**
  - What are "unbooked" reserves?
- **"certified" reserves**
  - Meters can be certified, estimates cannot, e.g. use "externally estimated" or "audited"

Reserve terminology

Acceptable qualifiers:

- “net” or “gross” reserves
- “gas” or “oil” reserves
- “developed” or “undeveloped” reserves
- “audited” reserves
- “independently estimated” reserves

ASX Oil and Gas Company Survey

- Confidential survey in progress with approximately 15 selected oil and gas companies which represent the spectrum of listed companies
- Objectives to identify best practice and disclosure issues amongst peer companies
- Results will be summarised and provided on ASX website in the next few weeks

References

ASX

ASX Listing Rules
(http://www.asxgroup.com.au/media/PDFs/chapter_5_listing_rules_chapter_19_definitions_clean_copy.pdf)
(http://www.asxgroup.com.au/media/PDFs/chapter_5_listing_rules_chapter_19_definitions_mark_up.pdf)

Guidance Note 32
(http://www.asxgroup.com.au/media/PDFs/guidance_note_32_reporting_on_oil_gas_activities.pdf)

Quarterly report (Appendix 5B)
(www.asxgroup.com.au/media/PDFs/Appendix_05B.DOC)

PRMS

PRMS 2007
(http://www.spe.org/industry/docs/Petroleum_Resources_Management_System_2007.pdf)

PRMS summary (4 pages)
(http://www.spe.org/industry/docs/PRMS_guide_non_tech.pdf)

PRMS guidelines
(http://www.spe.org/industry/docs/PRMS_Guidelines_Nov2011.pdf)

Notes for estimators and auditors, updated 2007
(www.spe.org/industry/docs/Reserves_Audit_Standards_2007.pdf)

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DECISIONS WITH CONFIDENCE