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Status Update on the London-Based Investor Reporting Format

Presentation to SPEE, London
8th March 2018
Agenda

• Background – why is this needed?
• Aims and deliverables
• Basics of Reserves Based Lending
• Proforma CPR template
• What next?
• Q&A
Background

- Following the 2016 SPE/SPEE Reserves event, some of London’s bankers/financiers stated they lack confidence in oil and gas reserves and resources reports by some independent assessors
  - Some Independent Resource Reports (aka CPRs) are not fit for purpose for London’s Banks/financing.

- This will NOT impact the PRMS categorisations, classifications, guidelines, or methods of estimating reserves, resources or values. It will be independent of reserves system
  - Detailed reporting guidelines are not in the PRMS and the reporting guidelines are too general
  - The PRMS defers to any regulatory reporting, where required by the authorities
  - This leaves a vacuum in the UK banking/finance sector with no SEC/COGEH style reporting standards.

- Small companies are often not familiar with the requirements of London-based financiers
  - Especially those based outside Europe who have not previously sought finance in London.

- They commission auditors to provide reserves reports to meet the needs of London’s financial community
  - However, there are currently no standards, so report quality, quantity and content are variable.
Background

- In the absence of clear reporting, Banks may apply their own risking to production and cost profiles to build Bank Cases
  - If the Low Case assumptions are not stated, they may double-dip and be overly conservative
  - This unnecessarily erodes the Borrowing Base
  - The operator remains capital constrained.

A working group was created under supervision of SPE London to work toward the creation of a ‘pro-forma’ template that would improve the consistency of content and format. It is aimed at the London market, not USA and Canada (which have SEC and NI/COGEH). The proposed template is for Reserves Based Lending reporting but could also be used Project Finance and Private Equity.
Aims

- Companies seeking London-based finance can take the proposed pro-forma to their auditors/consultants to provide an independent report that meets the needs of the Banks.

- Consultants would bid for work on common scope, instead of minimal reporting.

- A more streamlined process that better conveys the technical risks and uncertainties to the lenders.
Independent Reports for Finance

The Spectrum of Independent Reserves Reports

- Minimal reporting
  - Table of values and cash flows
  - Boilerplate text

- Ideal reporting for Banks
  - Appropriate level of detail to build a Bank Model
  - Risks and uncertainties addressed
  - Quick turn-around

- Workflow reporting
  - AKA ‘Reinventing the wheel’ or a ‘Science report’
  - Too much detail for Banks to assess risk
  - Not appropriate for speedy business decisions

The answer to satisfy the borrower and the Bank is a BALANCED INDEPENDENT REPORT.
A document to describe the content and format of independent technical reports (CPRs or similar reports) to meet the requirements of Banks in London

- It may be similar to the Canadian COGEH F1 and F2 documents.

The document will be an expanded version of:

- ESMA, Appendix III – Oil and Gas Competent Persons Report – recommended content
- AIM, Note for Mining and Oil & Gas Companies – June 2009, Appendix 2 Content of CPR.

- The document may be distributed through SPE London, SPEE, AIM or ESMA. This is not clear yet.
### Contributors from Key Stakeholders

<table>
<thead>
<tr>
<th>Company Type</th>
<th>Company</th>
<th>Contributor</th>
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<tbody>
<tr>
<td>Consultant/Auditor</td>
<td>Gaffney Cline</td>
<td>Drew Powell</td>
</tr>
<tr>
<td>Consultant/Auditor (+ SPE representative)</td>
<td>RISC Advisory</td>
<td>Adam Borushek</td>
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<td>Consultant/Auditor</td>
<td>RPS Energy</td>
<td>Ed Jankowski</td>
</tr>
<tr>
<td>Consultant/Auditor (+ SPEE representative)</td>
<td>ERC Equipoise</td>
<td>Shane Hattingh</td>
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<tr>
<td>Bank</td>
<td>Standard Bank</td>
<td>Neil Fairnie</td>
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<tr>
<td>Bank</td>
<td>Lloyds</td>
<td>Jim Ayton</td>
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<tr>
<td>Bank</td>
<td>Formerly with Standard Chartered</td>
<td>Sean Nash</td>
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<tr>
<td>Bank</td>
<td>Barclays Capital</td>
<td>Sarah Ferneini</td>
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<tr>
<td>Bank (+ SPE representative)</td>
<td>IFC</td>
<td>Carolina Coll</td>
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<td>Operator (+ SPE representative)</td>
<td>JX Nippon</td>
<td>Jonathan Ovens</td>
</tr>
<tr>
<td>Private Equity (+ SPE representative)</td>
<td>First Alpha Energy Capital</td>
<td>Miles Cudmore</td>
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Assisted by Olga Bradulina of Rock Flow Dynamics.
• More granularity is needed in the production and cost profiles, so Banks understand the contribution of CAPEX items to the production forecasts:
  • Eg No Further Activity (NFA) profiles for 1P/2P/3P
  • AND short-term infill wells
  • AND an incremental Phase 1 Redevelopment
  • AND incremental Contingent Resource plans.

• The risks and uncertainties need to be stated, but not just sub-surface risks and uncertainties
  • Eg aggressive drilling schedules; market risks; reliance on production hub hosting a field about to be abandoned.
• The context is important: is the Bank considering an equity or a debt deal?
  • Equity requires growth opportunities, but debt requires security of cashflow
  • 1P and sometimes 2P in Europe. Does the report need to state 3P? Contingent resources?
  • Focus on 5 years? Full field life of 20+ years?

• Cashflow tables are not used by Banks - they use their own financial models. They want production and sales profiles, OPEX and CAPEX, ABEX forecasts.

• Missing the granularity of fixed/variable OPEX incl ABEX, well costs, etc. Financing work needs this in greater detail
  • Less granularity required in a large portfolio of many assets.

• The phasing of the CAPEX is important. Often a single huge number in one year. What drives this? Give an explanation, and a breakdown of the annual CAPEX and OPEX
  • Eg NFA separated out from infill drilling, workovers, and compression projects.
Basics of Reserves Based Lending
Cash flow based Structures Available at Different Stages of Asset Life

Sources of Funding

Project/Development Finance

- Reserve Based Lending
- RCF

Equity

Construction

- FDP Approval (Partners)
- FDP Approval (Government)
- First Production
- Completion

Project development

- Exploration
- Appraisal
- FEED
- EPC(s) agreed
- Project contract(s) agreed
### Risk Assessment

<table>
<thead>
<tr>
<th>Risk Category</th>
<th>Description</th>
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<tbody>
<tr>
<td>Reserve risk</td>
<td>The appraisal status of the borrowing base assets is key in determining the likelihood that the project will be financed - if the borrower has a limited balance sheet, the Bank will be directly exposed to the reservoir / reserve risk for the borrowing base assets from day one.</td>
</tr>
<tr>
<td>Technical and operational risks</td>
<td>The risk that the assets underperform due to lack of operator expertise - Banks must undertake technical due diligence, and where appropriate, a site inspection.</td>
</tr>
<tr>
<td>Foreign exchange and interest rate risks</td>
<td>The risk that the Borrower’s cash flows are reduced due to movements in FX and interest rates.</td>
</tr>
<tr>
<td>Commodity price risk</td>
<td>The risk that oil prices fall below the price deck assumed for the facility.</td>
</tr>
<tr>
<td>Development Risk</td>
<td>The risk that the forecast production levels are not achieved due to the failure of the proposed field development.</td>
</tr>
<tr>
<td>Security risk</td>
<td>The risk that the assets underperform due to security threats or incidents – requires adequate insurance to be in place.</td>
</tr>
<tr>
<td>Environmental risk</td>
<td>The risk of non-compliance with environmental laws and regulations – all major international Banks adhere to the Equator Principles and need to protect their own corporate reputations in the face of potential adverse publicity.</td>
</tr>
<tr>
<td>Off-take risk</td>
<td>The risk of non-performance under the off-take agreement.</td>
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<tr>
<td>Regulatory risk</td>
<td>The risk of a potential regulatory changes that could affect future cash flows (i.e. taxation changes).</td>
</tr>
<tr>
<td>Political risk</td>
<td>The risk of nationalisation, expropriation, licence revocation, and/or an adverse change in law.</td>
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</tbody>
</table>

- As such, RBLs require a significant level of due diligence (typically updated semi-annually)
  - Including legal, financial, insurance, tax, technical and environmental
  - This can be onerous for a small company and difficult to accept by the larger ones!
Reserves Used to Determine a Borrowing Base

![Diagram showing reserves categories and probabilistic estimates](Image)

**Total Petroleum initially in place (PIIP)**
- **Discovered**
  - Commercial
  - Not-Defined or Sub-commercial

**Undiscovered PIIP**

**Prospective Resources**
- Low Estimate
- Best Estimate
- High Estimate

**Contingent Resources**
- 1C
- 2C
- 3C

**Unrecoverable**

**Range of Uncertainty**

**Unrecoverable Commercial**

**Considered in Banking Case**

**Never considered in Banking Case**

**Range of Uncertainty**
- Increasing Chance of Commerciality

- Never considered in Banking Case

- Considered in Banking Case

**Estimates**
- 1P: Proved (>90% certainty)
- 2P: Probable (50% certainty)
- 3P: Possible (<10% certainty)
The Borrowing Base Amount

- The Borrowing Base Amount ("BBA") is based on the net present value of the cash flows arising from the assets included in the transaction (the Borrowing Base Assets).

- Cash Flow Available for Debt Service ("CFADS") for each period in the loan and field life is assessed as follows:

  \[ \text{Gross Revenues} - \text{Royalties} - \text{Operating costs} - \text{Taxes} - \text{Ongoing CAPEX} - \text{Government Share of Profit Oil (where relevant)} = \text{Cash flow Available for Debt Service} \]

- The cash flows are based on a number of technical and economic assumptions:
  - Technical assumptions include the reserves estimates which need to be assessed by an independent reservoir/petroleum engineer. Lenders require an independent reserves report which will set out the production and cost profiles for each category of reserves (including PDP, PDNP, PUD, 1P, 2P)
  - Technical assumptions are further risked by the Technical Bank
  - Economic assumptions include the commodity price deck, discount rate (reflecting Cost of Debt only) and the appropriate tax regime.
  - The Net Present Value of the CFADS for the loan life and field life are then divided by specific cover ratios to determine a Borrowing Base Amount.
Cover Ratios

- The Borrowing Base Amount is initially sized on two time horizons (Loan Life and Field Life) and is the lower of:
  - Loan Life NPV: the net present value of CFADS until the earlier of the loan maturity or reserves tail date, divided by the Loan Life Coverage Ratio ("LLCR")
  - Field Life NPV: the net present value of the CFADS until the earlier of the field end date (abandonment date) or the license expiry date, divided by the Field Life Coverage Ratio ("FLCR").

- A minimum Reserve Tail is required to ensure sufficient capacity to extend or re-finance, and may also define the Borrowing Base Amount if the loan tenor has to be reduced.

- Coverage Ratios applied are at lenders’ discretion, based on issues such as quality of borrower, assets and jurisdiction.

- Periodically Coverage Ratios are re-calculated to ensure they do not breach those set-out in the facility agreement

<table>
<thead>
<tr>
<th>Cover Ratio</th>
<th>Formula</th>
</tr>
</thead>
<tbody>
<tr>
<td>Loan Life Cover Ratio</td>
<td>[ LLCR = \frac{\text{NPV of forecast CFADS during the life of the loan}}{\text{Total debt outstanding under the facility at that point in time}} ]</td>
</tr>
<tr>
<td>typically 1.3x - 1.5x</td>
<td></td>
</tr>
<tr>
<td>Field Life Cover Ratio</td>
<td>[ FLCR = \frac{\text{NPV of forecast CFADS to field abandonment}}{\text{Total debt outstanding under the facility at that point in time}} ]</td>
</tr>
<tr>
<td>typically 1.5x - 1.7x</td>
<td></td>
</tr>
<tr>
<td>Reserve Tail</td>
<td>[ \text{Reserve Tail} = \frac{\text{Remaining reserves at point in time}}{\text{Banking case reserves at beginning of facility}} ]</td>
</tr>
<tr>
<td>typically 25% - 30%</td>
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</tbody>
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Putting the BBA into Perspective

- NPV profile derived from Client’s Management/Investment Case:
  Typically based on 2P reserves profile and mid-case economic assumptions.

- NPV profile derived by Bank following risk of the reserves/production profile by Petroleum Engineer and Debt Team:
  Typically based on 1P reserves for new wells/developments, 2P reserves for on-production/mature assets and conservative economic assumptions.
  May include additional “hair-cuts” and sensitivities where risk profile of assets warrant.

- BBA derived following application of applicable sizing ratios and reserve tails.

- Factors Affecting Borrowing Base:
  - Re-evaluated at each re-determination period
  - Commodity Prices / Price Deck
  - Hedging
  - Reserves:
    - Additions / Divestments
    - Non-replacement of produced reserves
    - Non-replacement of produced reserves
    - Re-classification (Projects removed / added)
    - Reservoir performance / production profile changes
    - Updated costs - OPEX/CAPEX DRILLING

- Upside Potential to Support Borrowing Base

- Borrowing Base

- Reserve Tail

- Residual Asset Value remaining on loan maturity provides additional cushion for extension/re-financing.
Pro-Forma Template
This is still a work in progress, with issues still to be discussed and agreed in the Working Group.

Contributions so far from a range of:
- Banks and Auditors/Consultants
- Different technical disciplines
- Different company sizes
- Public domain sources (e.g., ESMA Appendix III, AIM note Appendix 2).

Need to find a balance between ‘Prescriptive’ and ‘Guidelines’ level of detail.

Need to differentiate between the Project being financed, and the fieldwide forecast
- Eg a RBL for a waterflood project in an existing producing field.
Pro-Forma Template

- Chapter 1 – INTRODUCTION
- Chapter 2 – EXECUTIVE SUMMARY
- Chapter 3 – BASIS OF OPINION
- Chapter 4 – SITE VISIT
- Chapter 5 – REVIEW OF PROPERTY OWNER KEY PERSONNEL
- Chapter 6 – SUBSURFACE EVALUATION
- Chapter 7 – WELLS AND FACILITIES EVALUATION
- Chapter 8 – PRODUCTION AND COST PROFILES
- Chapter 9 – ECONOMIC EVALUATION
- Chapter 10 – RESERVES AND RESOURCES
- Chapter 11 – RISK ASSESSMENT
- Chapter 12 – CONSULTANT’S INFORMATION
- Chapter 13 – DATA SOURCES
- Appendices
  - Glossary
  - Reporting Standards
What’s next?

- Do we seek contributions from Private Equity (Riverstone, Pincus etc) and Financial Advisors (EY, PwC etc) or keep it focussed on Banks and auditors/consultants?
  - Should this be generalised from RBL and Private Equity, to include all Due Diligence reports?

- Should we include the ‘REVIEW OF PROPERTY OWNER KEY PERSONNEL’ ?
  - We discussed excluding this from the template. This may be best handled off-the-record or as a separate report for the Bank
  - We also note that Auditors’ ‘clients’ are often NOT Banks, but the asset owners seeking finance. There is potential for conflict if the target company is considered negatively.

- Draft report produced and comments received
  - Next iteration being planned: Working Group will meet in late March
  - Will be opened for more public comments in due course.

- Could this be linked to the PRMS, or SPE/SPEE recommended practices?
Q&A
Disclaimer

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