FINANCING E&P PROJECTS

An Overview of Key Features for DSF Workshop

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Introduction to E&P lifecycle costs

- License issued
  - Conduct seismic prog. & analysis ($5-10 mn)
  - Exploration drilling ($5-10 mn/well)
  - Delineation drilling ($5-10 mn/well)
  - Expansion drilling ($50-200 mn)
  - Abandon

Year 1
- Set up consultation process
- Plan for exp. drilling
- Evaluation drill results
- Pre-development ($20 mn.)
- Production

Year 5

Year 9
- DSF

Years 14-35+

Year 35+
Characteristics of Each Phase

- **Exploration Phase**
  - Multi-stage process of assessment of reserves
  - Continuous assessment
  - Financing mainly from Equity/Shareholders Funds

- **Development Phase**
  - Phased development based on commercial discoveries
  - Reserve Based Lending possible with Proven Reserves

- **Production Phase**
  - Different stages – Primary, Secondary, Tertiary
  - Monetisation based on production history and updated reserves
  - 2P Reserves may be considered if technically sound
DSF: Development and Production Phase

- The reserves are now producing and the reserves characteristics are being understood much better
  - Production Profile is being achieved in initial days
  - Costs are now mostly incurred
  - Reserves are now understood with much more certainty
  - New exploration potentials and discoveries at other formations are being explored

- As the field matures finer aspects of its recovery is understood and modelled
  - Enhanced oil recovery is put in place
  - New producers are drilled to replace the watered out wells

- The value of the property now comes closer to its full potential and declines commensurate to depletion unless new resources are put in play
Illustrative Cash Flow: Simple Case
Life Cycle: Sources of Financing

- Exploration
- Appraisal
- Development
- Primary Production
- EOR Production
- Abandonment

Risk vs. Time

- % equity
- % Debt
Financing Options

- Exploration
  - Equity financing
    - Mezzanine debt financing
- Development stage
  - Balance Sheet Funding
  - Reserve Based Lending
  - Asset Based Financing
  - ECA Credit
- Production stage
  - Securitisation of Receivables
  - Vanilla Corporate debt
## Reserves Adjustment Factor

<table>
<thead>
<tr>
<th></th>
<th>M&amp;A</th>
<th>Loans</th>
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<tbody>
<tr>
<td>Proved Producing</td>
<td>100%</td>
<td>100%</td>
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<tr>
<td>Proved Shut in</td>
<td>85%</td>
<td>78%</td>
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<tr>
<td>Proved behind pipe</td>
<td>75%</td>
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<tr>
<td>Proved undeveloped</td>
<td>50%</td>
<td>50%</td>
</tr>
<tr>
<td>Probable Producing</td>
<td>34%</td>
<td>0%</td>
</tr>
<tr>
<td>Probable behind pipe</td>
<td>25%</td>
<td>0%</td>
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<td>Probable undeveloped</td>
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<tr>
<td>Possible producing</td>
<td>3%</td>
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<tr>
<td>Possible behind pipe</td>
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<td>Possible undeveloped</td>
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</tbody>
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Source: Survey of Economic Parameters Used in Property Evaluation, 2003 by SPEE
Mezzanine Financing Structures

- Preference Capital/
  Tiered Equity
- Compulsorily Convertible
  Debt
- Sub-ordinated Debt
Mezzanine Debt

Preference Capital/Special Equity
- In the nature of share capital
- Dividends and Buy Back out of Profits only
- Special rights can be structured (High Yield)
- FDI Policy compliant

Compulsorily Convertible Instruments
- Hybrid of Debt (with low returns and equity (with upsides) and Equity
- Convertible on specific events
- Return framework can be agreed (High Yield)
- FDI policy compliant

Subordinated Debt
- Unsecure Debt with high yield, no security
- No right to enforce any default hence senior lenders may treat this as equity
- Would require good yield out of cash flows after servicing debt, treated as Debt (ECB)
The Production Monetisation Process

- Future receivables of oil/gas on cash-flow basis
  - Cashflow from a field:
    - Residual as it is after the opex, levies, government revenue share and taxes have been appropriated
- Totally dependent on Recoverable Reserves, Production Profile, Prices of Oil & Gas, and Future Capex hence emphasis on
  - Independent evaluation of reserves by certified agency
  - Evaluation of Development Plan and post production Capex Programme
  - Due Diligence on Offtake Contracts and Price
  - Minimum reserve tail of 25%
Financing Risk Analysis

- **Reserve Risk**
  - Estimates by reputed independent consultant
  - Equity and Mezzanine considers 2P, but
  - Reliance on Proven Reserves by Lenders
  - Probable in producing fields (50%)

- **Price Deck**
  - Gas / Oil Prices in the Indian context
  - Regulatory impact on Gas Prices
  - Sensitivity Analysis
Financing Risk Analysis

● Off-take
  ● Credit worthy off-taker
  ● Terms and conditions
  ● Evacuation infrastructure

● Production Risk
  ● Corporate Guarantee till Completion
  ● Periodic confirmation of forward looking projected production and ratios
  ● Consider 1P production profile in base case, consider 2P only after production is established
  ● Sensitivity analysis to falling production
Financing Risk Analysis

● **Capex and Opex Risk**
  - Independent Engineers’ Reports on Capex and Development Plan Validation
  - Detailed opex estimation for complex fields
  - Past history of similar fields for opex
  - Reputed contractor for timely completion
  - Undertakings from Sponsor for cost overrun financing beyond agreed budget

● **Operator Performance**
  - Operator/Team with previous experience
  - Field management expertise of operator
  - Key personnel experience
Financing Risk Analysis

- **Currency Exchange**
  - USD denominated revenue and USD capex
- **Environmental Clearances**
  - Environmental clearance for drilling (offshore as well as on shore)
  - Site Restoration/Abandonment costs
  - Adequate plan for control of environmental damage
- **Regulatory Approvals**
  - Approvals for various activities
- **Dispute resolution mechanism**
Key Lending Terms

- How much can be borrowed?
  - Estimated Field Development Cost including Interest funding during initial years
  - Non fund based limits as sub-limits of overall limit
- Reserve estimation by reputed independent consultant
  - Discounted at lenders’ yield expectation to arrive at Borrowing Base
  - Based on Loan Life Cover Ratio (LLCR) and Field Life Cover Ratio (FLCR)
  - Indian Lenders would consider ADSCR, D:E of max 70:30
  - Reserve Tail (25%)
- Security (deed of Assignment/Hypothecation)
  - Exclusive charge of receivables
  - Assignment of the PI
  - *Exclusive charge of right, title and interest of borrower under the project documents.*
  - Assignment of insurance policies.
- Guarantee till threshold production targets are reached
- Term of loan till decline phase (25% reserves left)
Next Steps for Financing

• Prepare a Field Development Plan with
  • Reserve Assessment
  • Detailed Capex and Opex Estimates
  • Production Profile
  • Revenue and Cash Flow Projections

• Prepare an Information Memorandum and Financial Model

• Submit to Banks for Credit Approval

• Coordinate their Due Diligence

• Negotiate Term Sheets

• Final Documentation and Disbursal