FINANCING E&P PROJECTS

An Overview of Key Features for DSF Workshop

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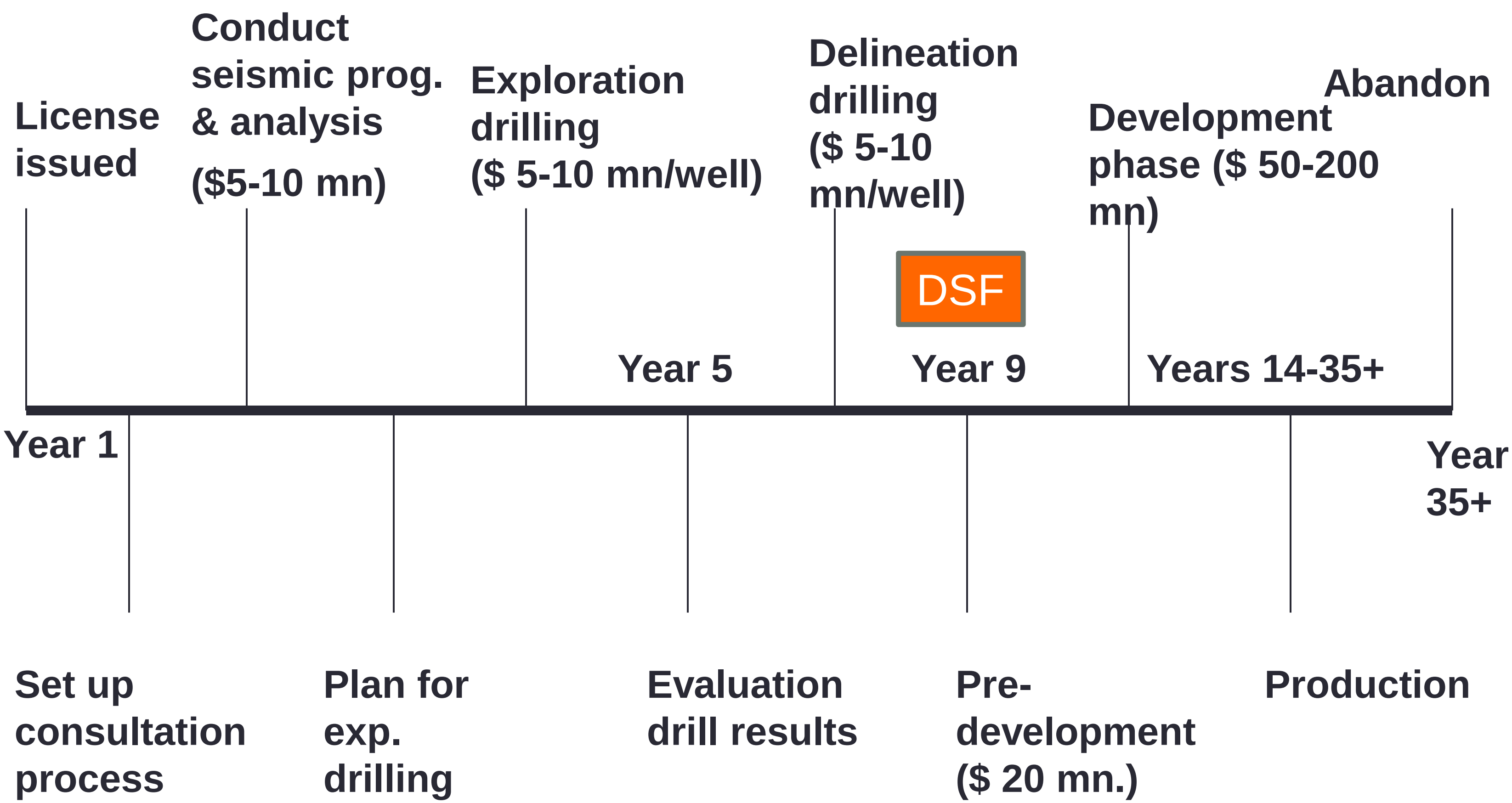
Introduction to E&P lifecycle costs



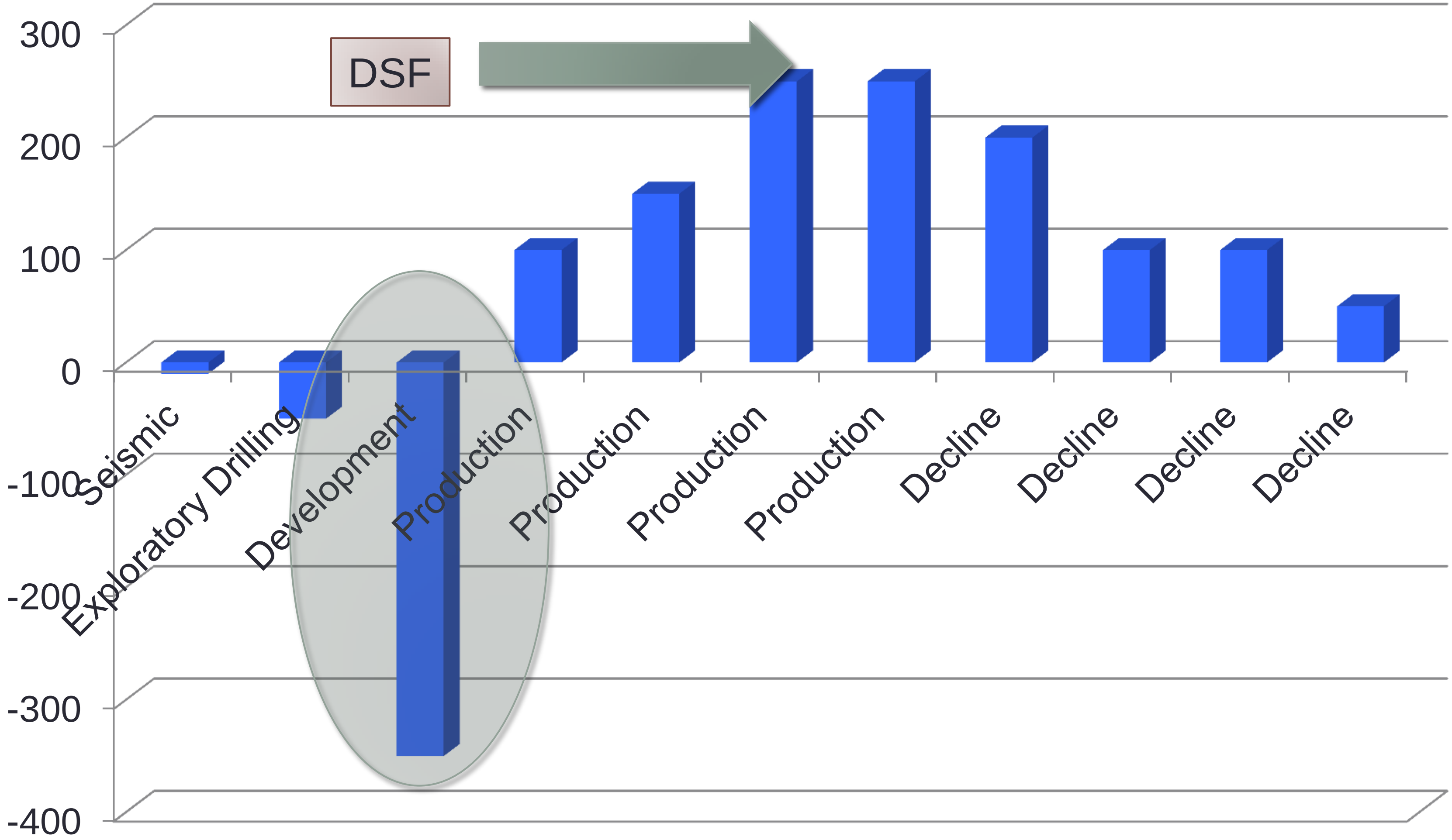
Characteristics of Each Phase

- **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**

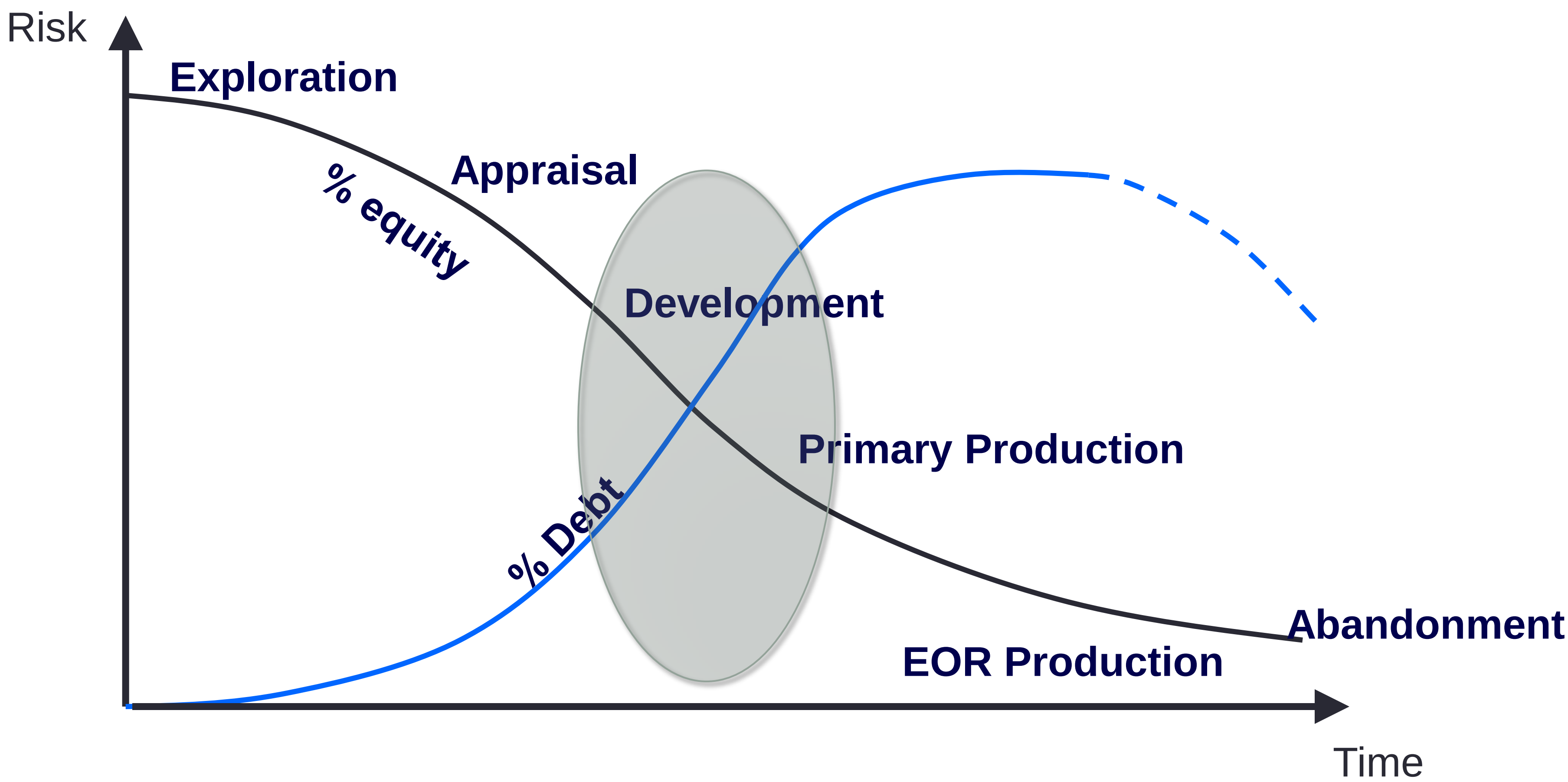
DSF: Development and Production Phase

- 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



Financing Options

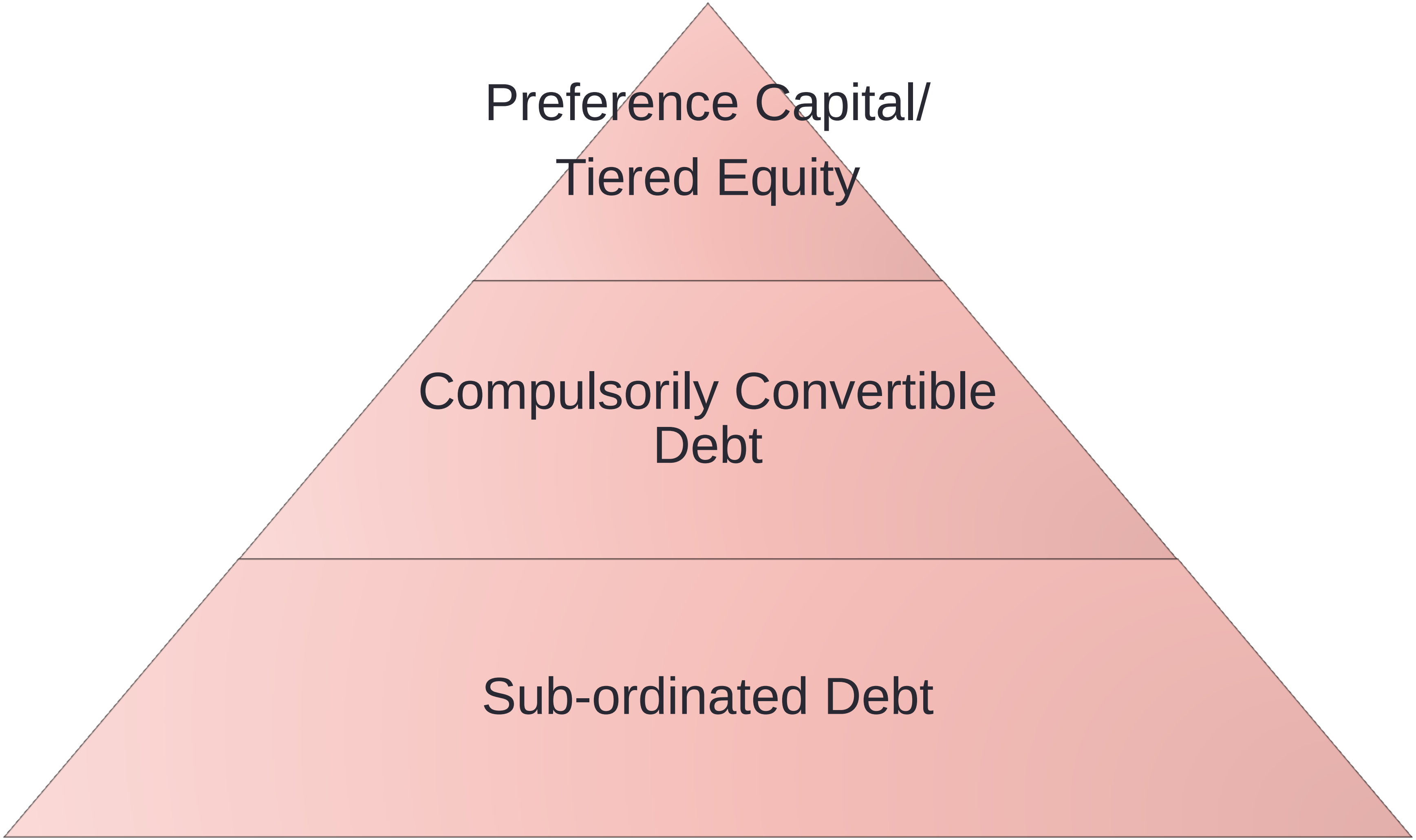
- Exploration
  - Equity financing
  - Mezzanine debt financing
- Development stage
  - Balance Sheet Funding
  - Reserve Based Lending
  - Asset Based Financing
  - ECA Credit
- Production stage
  - Securitisation of Receivables
  - Vanilla Corporate debt

Reserves Adjustment Factor

	M&A	Loans
Proved Producing	100%	100%
Proved Shut in	85%	78%
Proved behind pipe	75%	75%
Proved undeveloped	50%	50%
Probable Producing	34%	0%
Probable behind pipe	25%	0%
Probable undeveloped	20%	0%
Possible producing	3%	0%
Possible behind pipe	0%	0%
Possible undeveloped	0%	0%

Source: Survey of Economic Parameters Used in Property Evaluation, 2003 by SPEE

Mezzanine Financing Structures



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