



Risk Police

Evil Naysayers or Exploration Best Practice?

Glenn McMaster et. al.

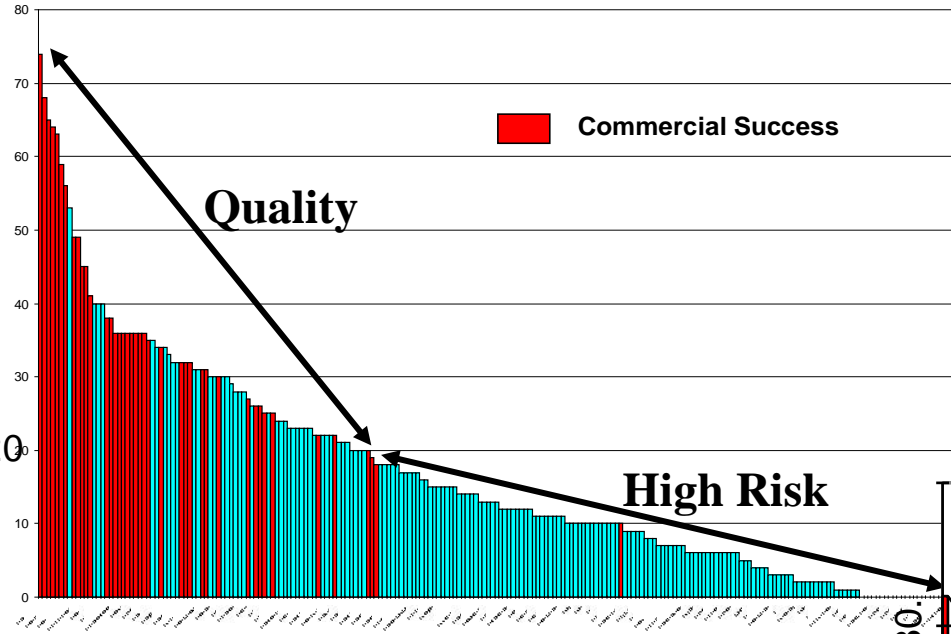
Contributors



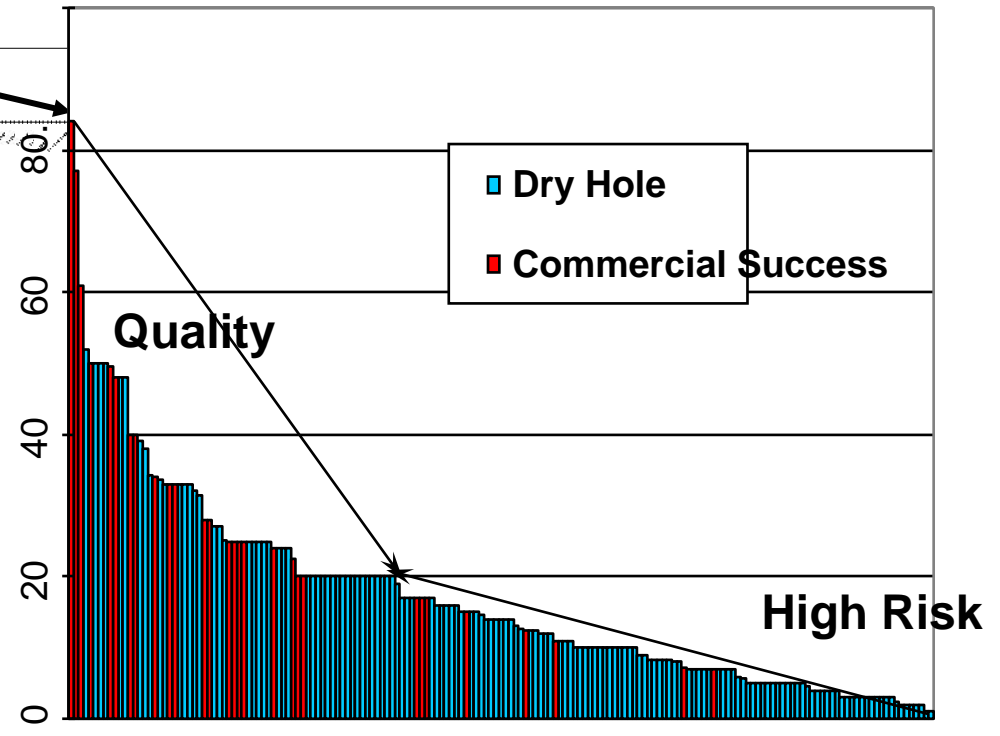
- Neville Manderson Forest Oil
- Gary Citron Rose & Associates
- Marc Bond BG
- Bob Otis Rose & Associates
- Abhi Manerikar Talisman
- Dean Hennings Anadarko
- Steven Patti Chevron
- BP Global Exploration Excellence Team
- BP North America G8 Team

Amoco 1990 - 1993 Risk Results
Probability of Economic Success

The Early 90's



BP 1990-1993 Risk Results
Probability of Economic Success



- Companies Drilling
- large number of wildcats per year
 - portfolio dominated by high risk wells
 - most of the high risk wells failed
 - a large number of strategic wells

Response to Declining Success Rates



Risk Police “Line-Up”

- XX (Exploration Excellence)
- G8 (Gang of Eight)
- ERT (Exploration Review Team)
- EAT (Exploration Assurance Team)
- PQT (Prospect Quality Team)
- PRT (Prospect Review Team)
- RCT (Risk Consistency Team)
- PAT (Peer Assist Team)
- GPRT (Global Peer Review Team)
- RNT (Risk Normalization Team)

Roles and Responsibilities of Assurance Team



- Manage overall assurance process, and provide standardised, balanced and consistent review, support and challenge
- Provide independent assessment, assurance and guidance for stakeholders
- Ensure that all recommendations fully reflect the opportunities, risks and uncertainties
- Provide appropriate feedback to Assets and senior management
- Assist Asset in proper planning
- Facilitate knowledge transfer
- Conduct Year End Post Appraisal

Advantages of a Dedicated Risk Team

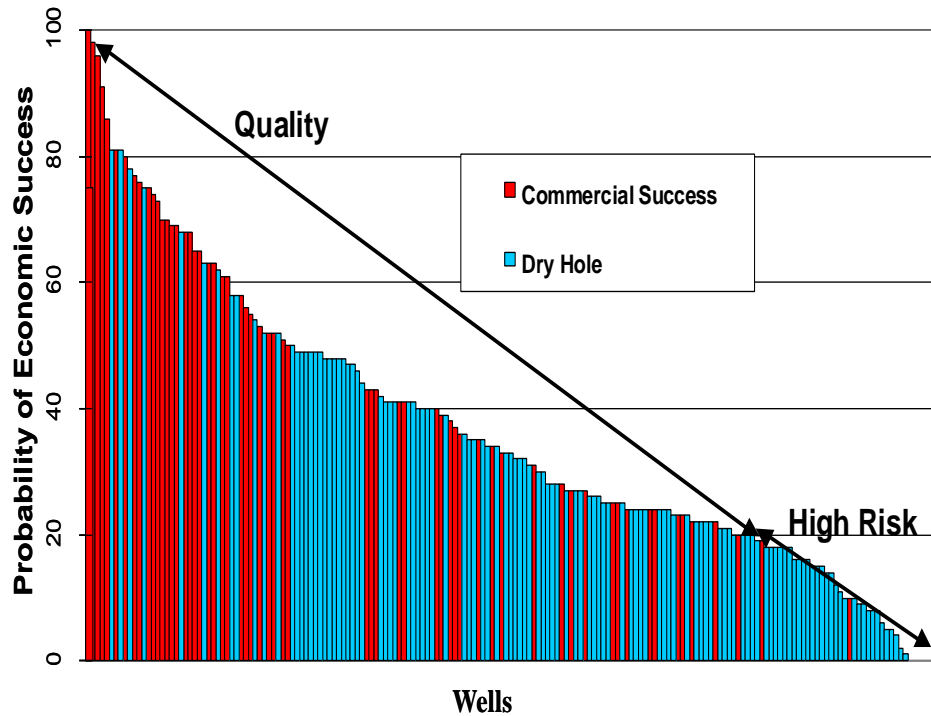


- Improve the quality and process of the assurance process
- Allow for a consistency in the assurance process and reviews
- Increase the integrated assurance provided to Assets
- Provide the Assets support in moving forward their projects
- Provide an independent assurance for the decision-makers
- Ensure a more robust and consistently-measured portfolio

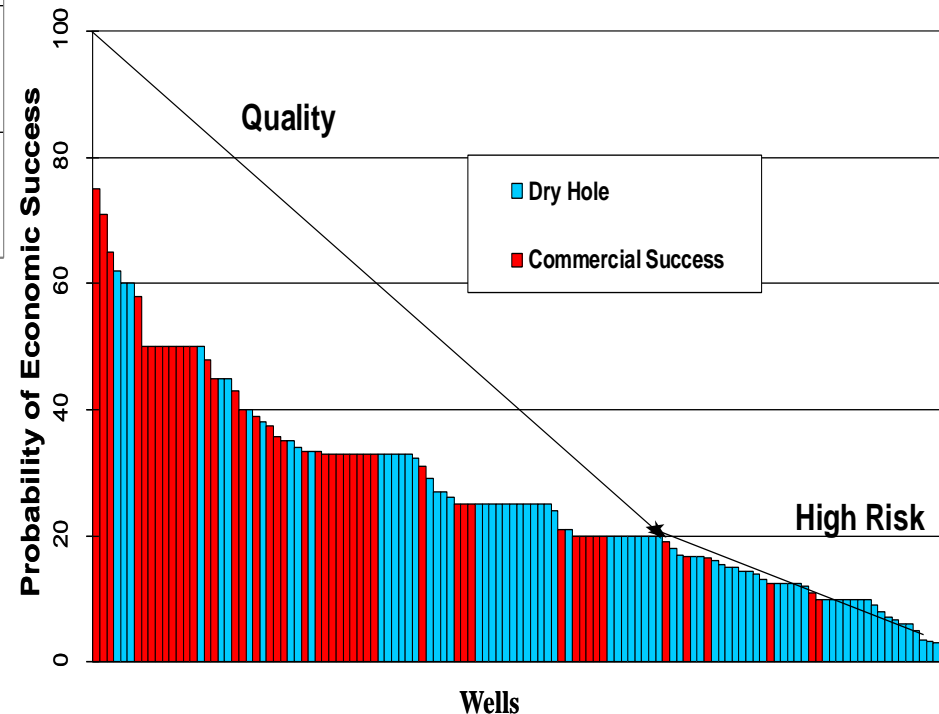
The Impact of Rigorous Risk Assessment and Assurance



Amoco 1994-1998 Risk Results



BP 1994-1998 Risk Results



Companies Drilling

- fewer number of wildcats per year
- portfolio dominated by low risk wells
- most of the high risk wells still failed
- a smaller number of strategic wells

But the Assurance Teams Began to Develop a Bad Reputation



Barriers to Success



- Lack of senior management “Champion”
- Lack of respect for members of the team
- Lack of trust that each separate BU will be treated equally
- Expected immediate results and perfection “no dry holes”
- Complacency, once process was working eased up on discipline and allowed some projects through without review

'Enamored by the Number'



- Number manipulation took on greater meaning
 - What could you tweak to get a higher volume and lower risk
 - Tried to force the geology to fit the math

“honor the rocks not the numbers”

- Setting hurdles
 - Nothing is ever less than the hurdle
 - Everything has the chance of being a giant discovery

“if it is strategic then call it so, don't force the numbers”

Best Practice vs. Good Practice



Critical Characteristics for Success

- Team must be respected and trusted
 - Evaluate the opportunity without bias
 - Assessed on an equitable basis across the company

“protect that trust at all costs”

- Yearly post mortem is essential
 - Builds credibility to process
 - Communicated both upward to decision makers so they know what they are delivering and down to the prospecting teams so they know their efforts are contributing to corporate good

“build confidence is the system”

Best Practice vs. Good Practice



Critical Characteristics for Success

- Not involved in Decision Process or Portfolio Selection
 - Fear of local management of losing control
 - Greater acceptance of the numbers (risk and resource levels)

“discipline to accept information as presented”

- Support from senior management
 - Used information to guide decisions
 - Once one group circumvents they all will

“prepared to not make a decision if not reviewed”

Best Practice vs. Good Practice



Critical Characteristics for Success

- Front End Loading
 - Final review is the summation of a number of earlier peer assists working with and for the teams not against them
 - Focus efforts early where they can have an impact

“final review is not a surprise”

- Allowing more than one opinion
 - Teams can present own numbers if in disagreement
 - Must explain differences and support for differences

“allow decision makers to make the decision”

Impact and Results



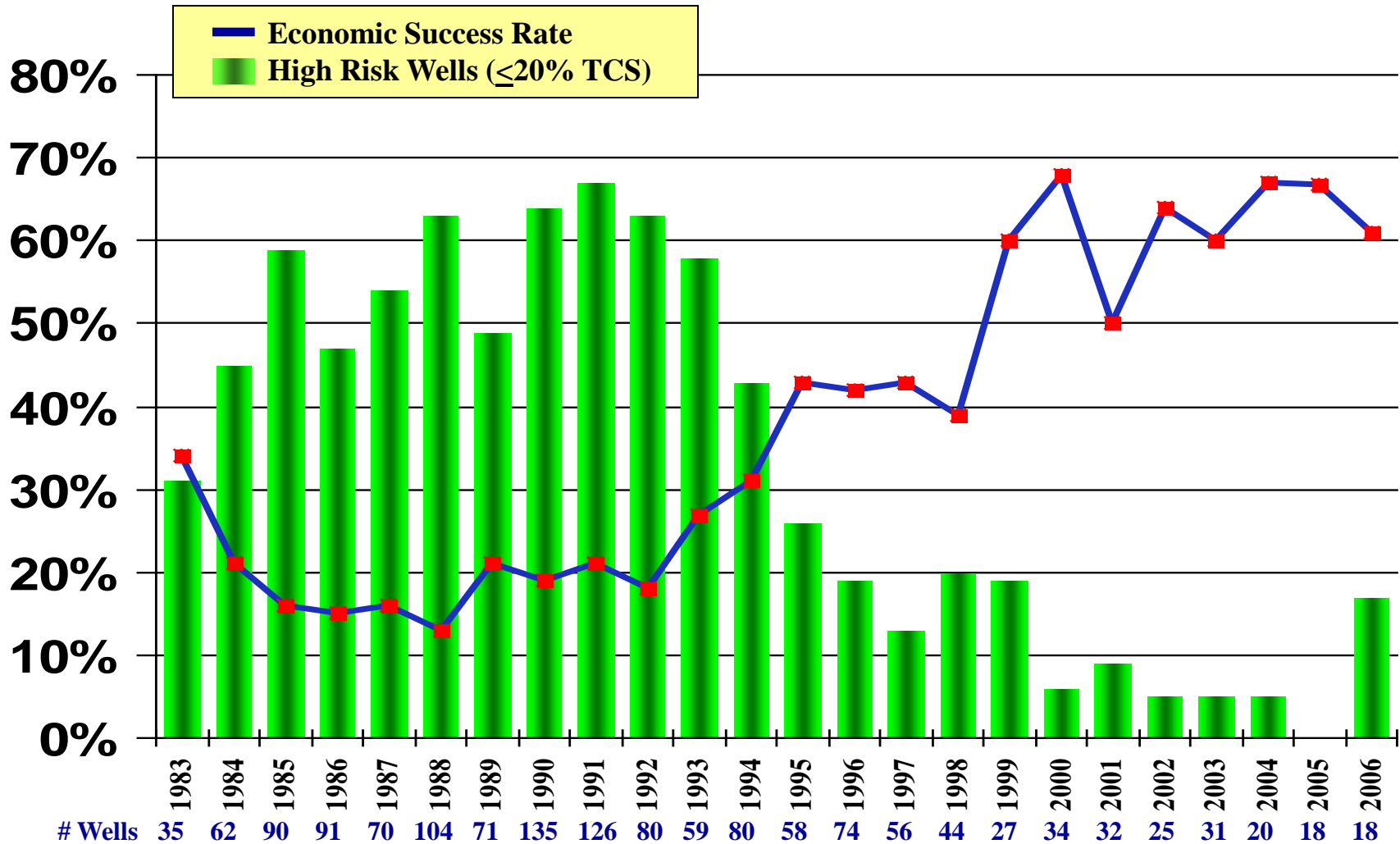
- Deliver what we promise at the agreed metrics
- Re-introduced technical rigor

Future Improvements



- Add a Reservoir Engineer
 - Handle reserves vs. resources and project economic inputs
- For unconventional plays dominating smaller independents greater emphasis on capex ranges and product price risk
- Rigorous non-powerpoint documentation responsibility of risk team
- More hands on evaluation using work stations less dependence on power point

Continuous and Sustained Impact



*BP data 83 - 90, BP + Amoco 90- 98, bp 99 - 06



If the risking/resource estimation methodology was standardized

AND

it was consistently applied across the company

AND

there was no prospector bias at the prospect team level

THEN

You wouldn't need the risk police

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Risk Police



Until this happens the “risk police” must be considered an Exploration Best Practice