

Offshore Mediterranean Conference
Workshop

Ravenna - April 2, 2004



**Relazione Tecnica
sul Potenziale Petrolifero Italiano**

Hydrocarbon potential in Italy

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ENI Exploration & Production

HYDROCARBON POTENTIAL IN ITALY

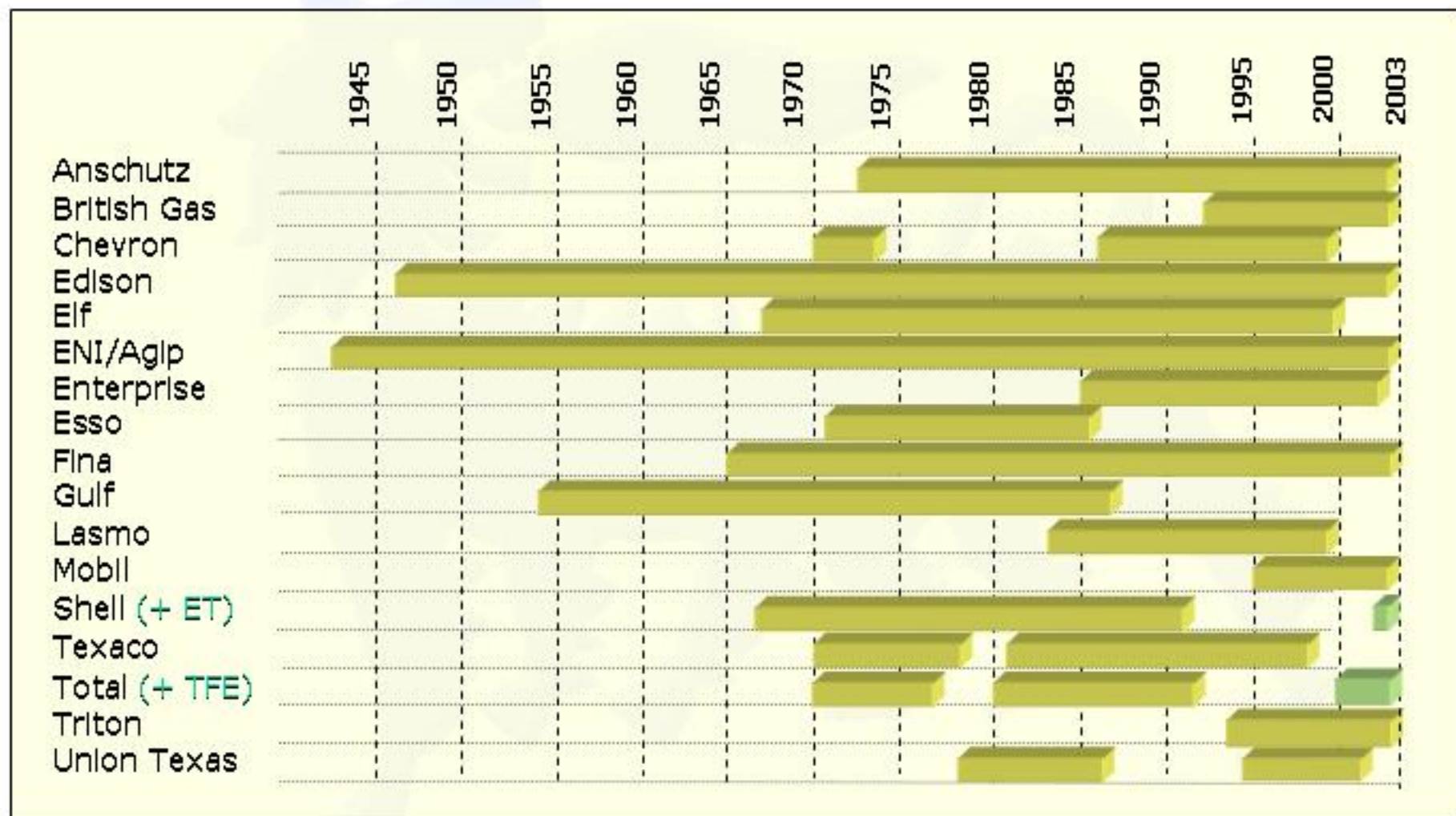
Presentation Outline

- Statistical analysis of the historical activity (since 1940 to date)
- Geological analysis of exploration targets
- Summary, Challenges, Conclusions

ITALY - EXPLORATION AND PRODUCTION HISTORY

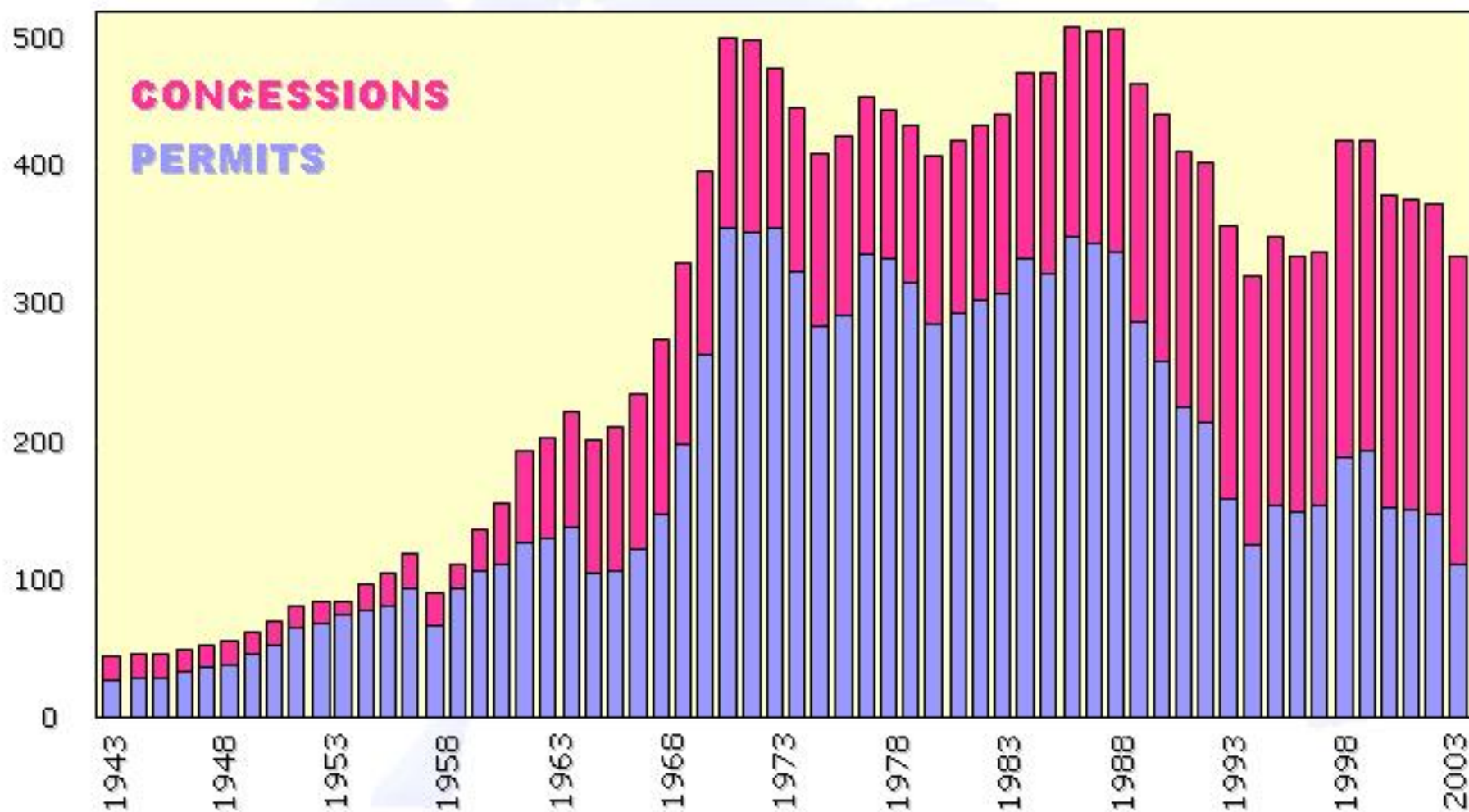


ITALY - HISTORICAL PRESENCE of MAIN OIL COMPANIES

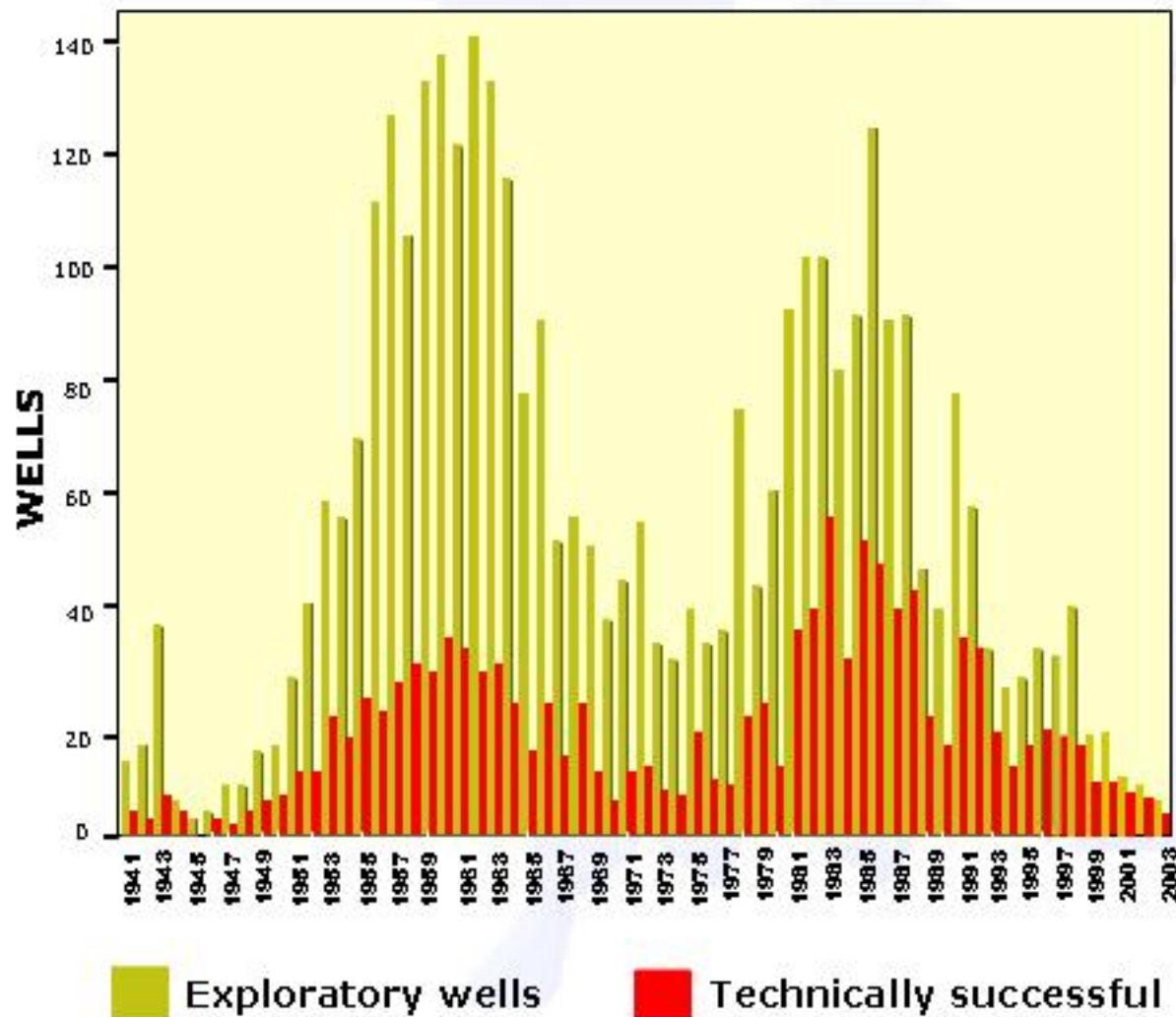


For significant period (> 3 years)

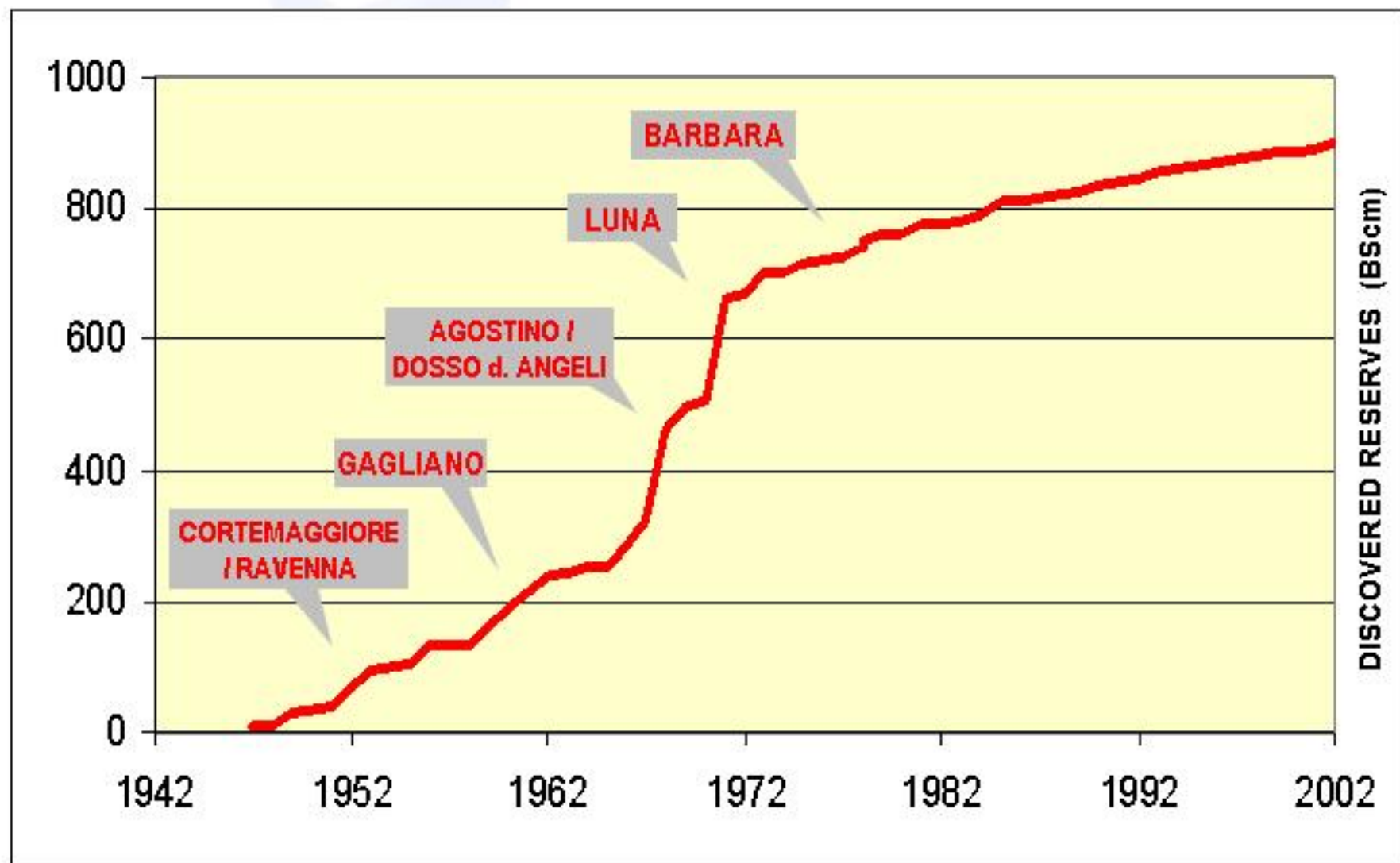
ITALY - NUMBER of LICENSES / YEAR



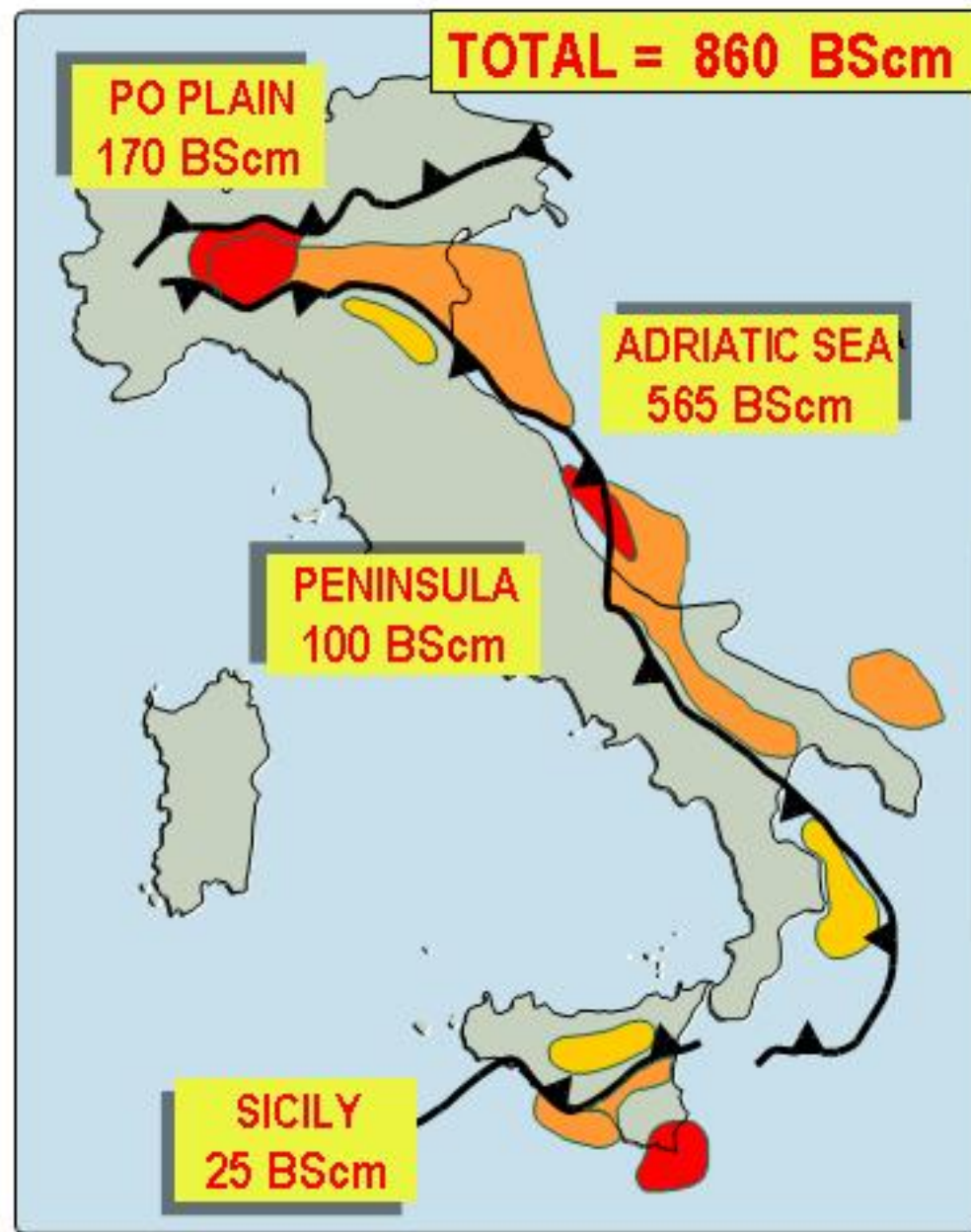
ITALY - TOTAL WELLS (NFW + APPR.) DRILLED since 1941



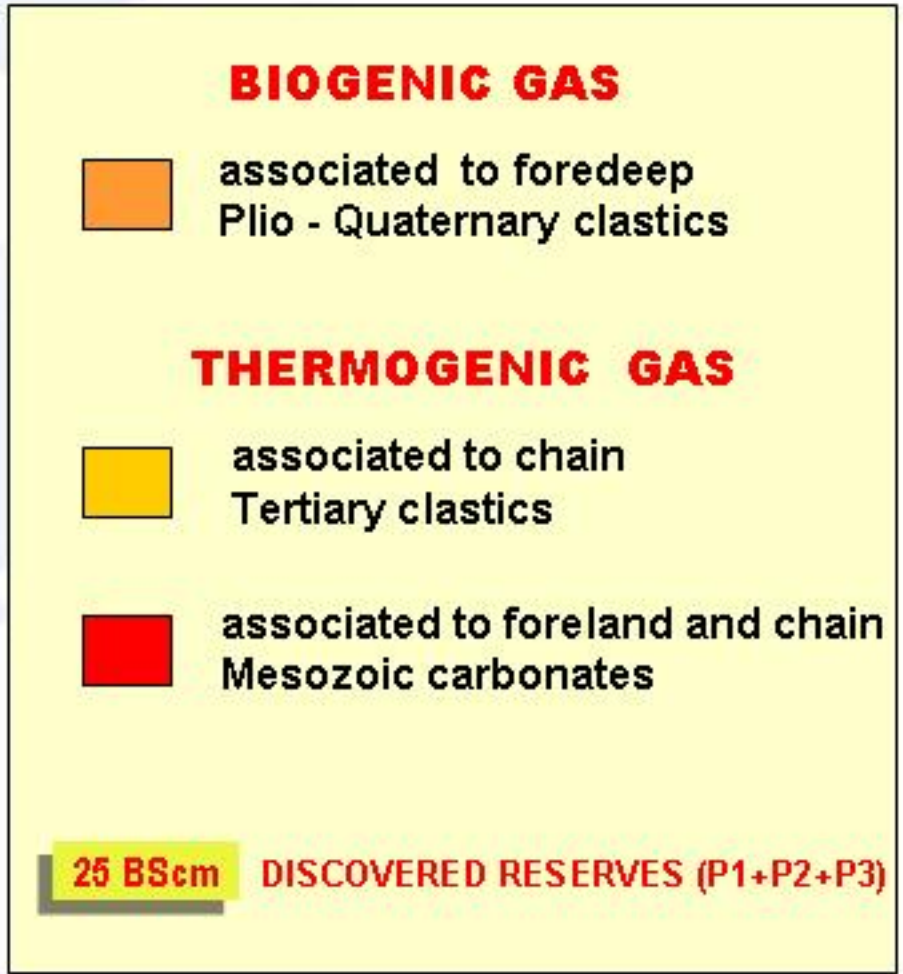
ITALY - GAS CUMULATIVE DISCOVERED RESERVES / YEAR



Sources: IHS & ENI

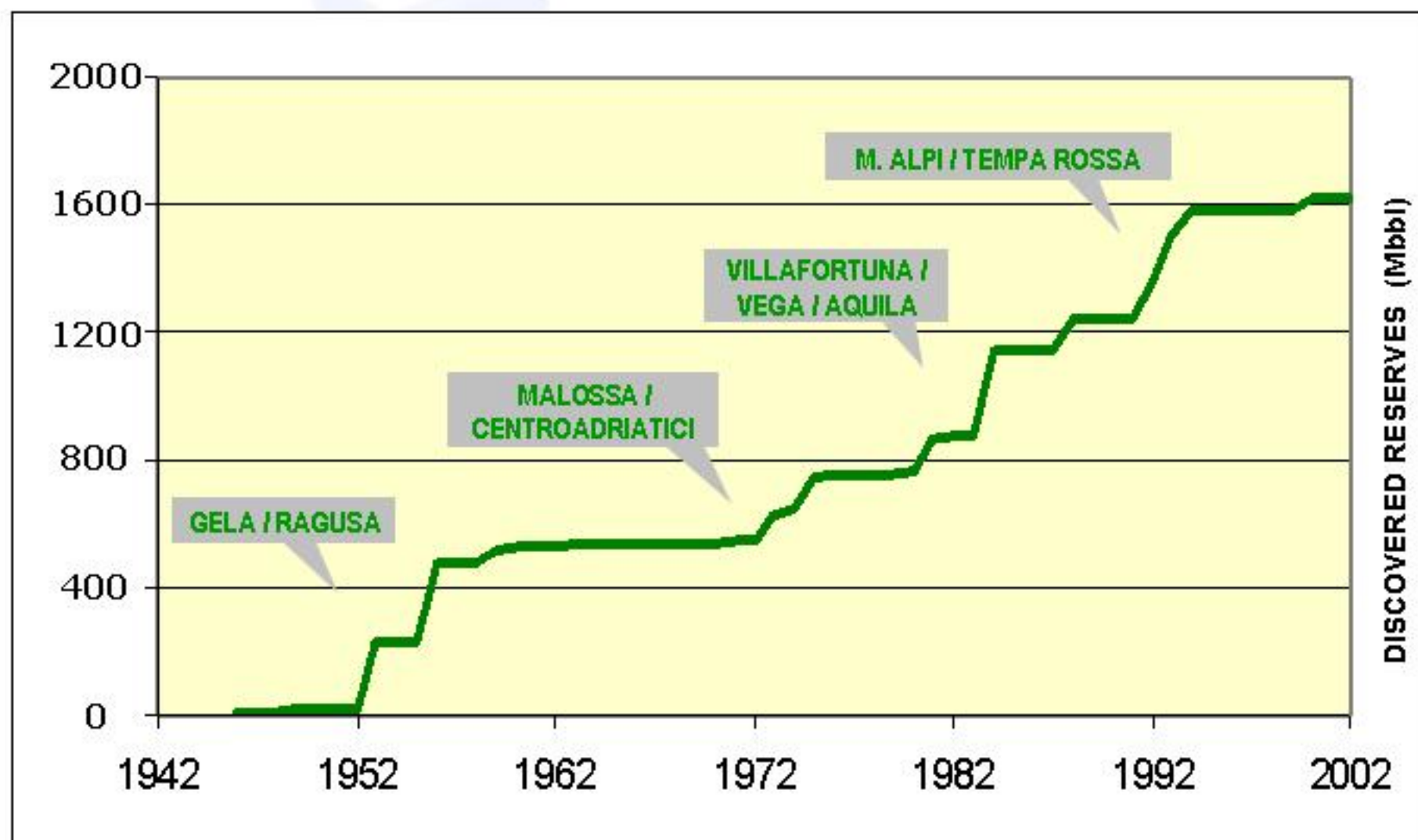


**GAS – DISCOVERED RESERVES
vs.
PROVEN DISTRICTS & PLAYS**



Sources : IHS & ENI

ITALY - OIL CUMULATIVE DISCOVERED RESERVES / YEAR



Sources: IHS & ENI

TOTAL = 1600 Mbbbl

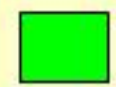
**PO PLAIN
300 Mbbbl**

**ADRIATIC SEA
180 Mbbbl**

**PENINSULA
680 Mbbbl**

**SICILY
440 Mbbbl**

**OIL – DISCOVERED RESERVES
vs.
PROVEN DISTRICTS & PLAYS**



associated to foreland
Mesozoic carbonates



associated to chain
Mesozoic carbonates

180 Mbbbl

DISCOVERED RESERVES (P1+P2+P3)

Sources : IHS & ENI

ITALY - THE REMAINING EXPLORATION POTENTIAL

NEAR FIELD EXPLORATION

Exploratory wells drilled in prospects that benefit economically from synergies created by nearby facilities (i.e. would likely not be economic on a stand alone basis)



NEW FIELD WILDCATS IN PROVEN PLAYS

Exploratory wells drilled in prospects within a proven play fairway and, typically, but not necessarily, would be economic on a stand alone basis



NEW FIELD WILDCATS IN UNPROVEN & FRONTIER PLAYS

Exploratory wells drilled in prospects within a new, untested play fairway and typically, but not necessarily, would be economic on a stand alone basis

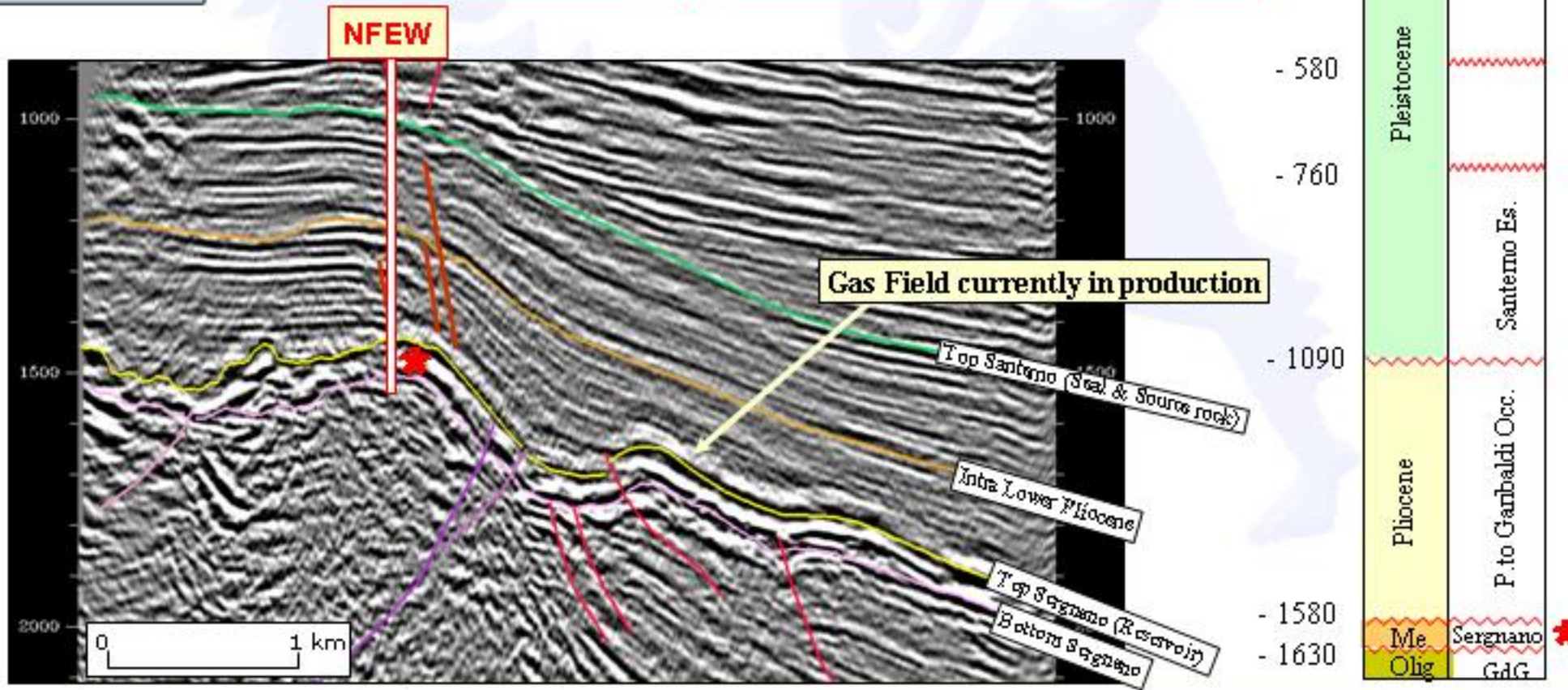
NEAR FIELD EXPLORATION

Biogenic gas in the Po Plain – North Adriatic foredeep structures



Hydrocarbon:	gas
Target:	Plio-quaternary clastics of the Po Plain – North Adriatic foredeep filling
Depth range:	1000-4000 m
Size range:	0.1 – 0.3 BScm of Unrisk. Rec. Reserves
Risk:	very low

G.L. 77 m asl

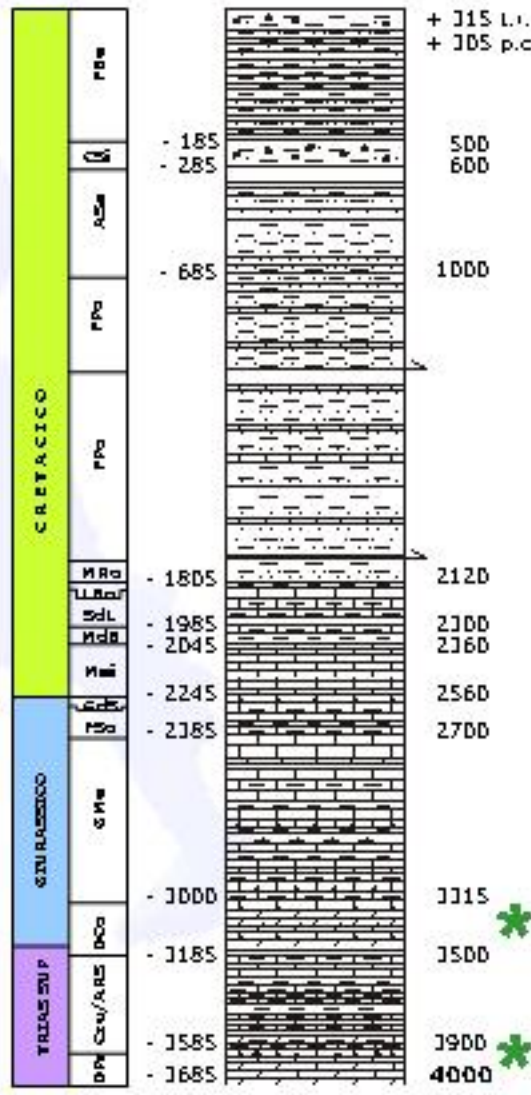
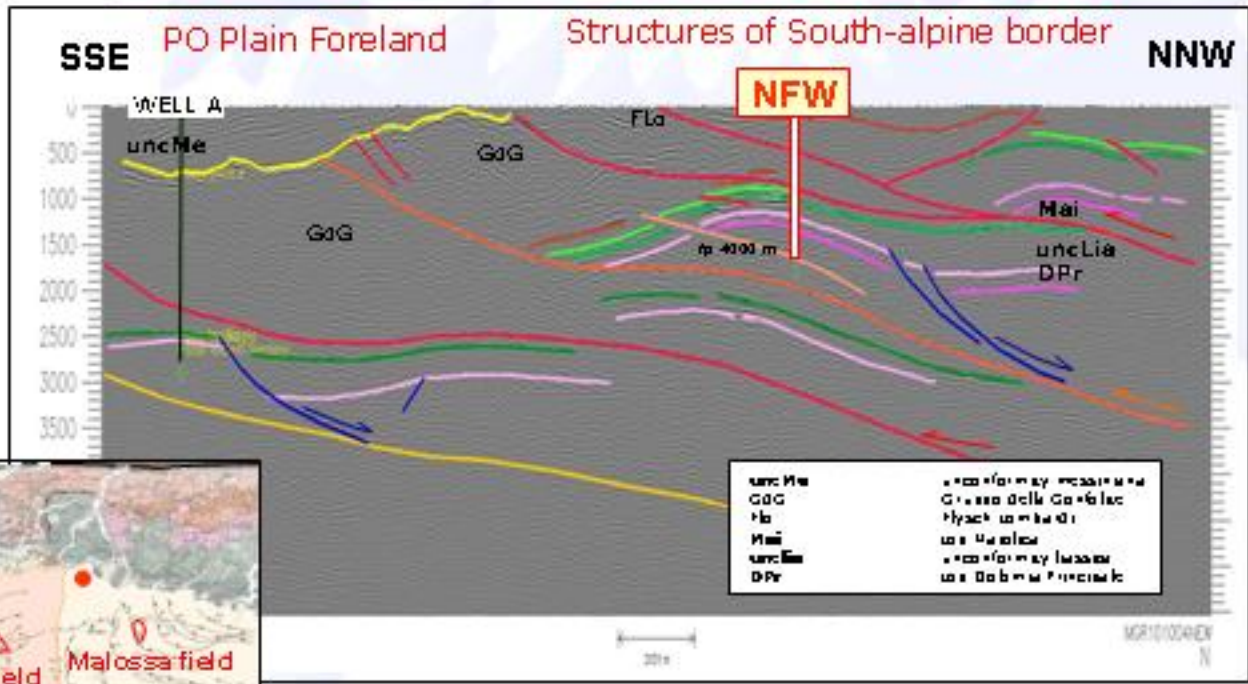




NEW FIELD WILDCATS in PROVEN PLAYS

Oil (and thermogenic gas) of the South-alpine and Po Plain structures

Hydrocarbon: Oil
Target: Mesozoic carbonates of the South-alpine and Po Plain structures
Depth range: 3000-7000 m
Size range : 50- 250 Mbbbl of Unrisk. Rec. Res.
Risk: medium-high



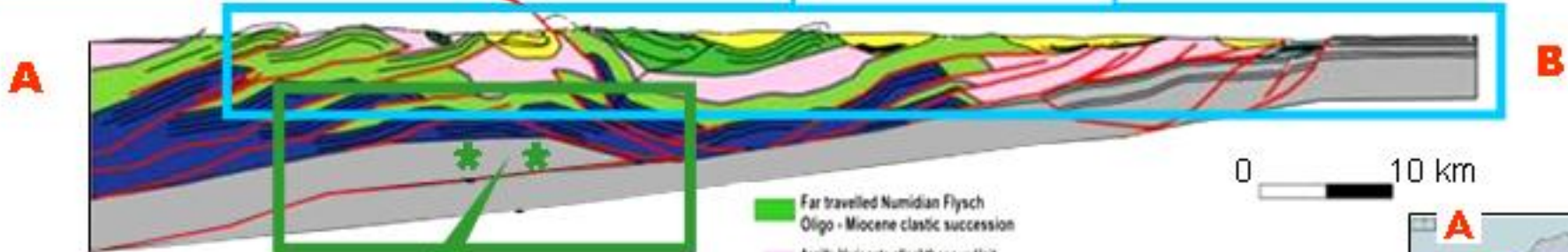


NEW FIELD WILDCATS in UNPROVEN PLAYS
New play in a unexplored basin
 The deep frontal antiform of the Sicily chain

Hydrocarbon:	oil (and/or thermogenic gas)
Target:	Thrust involved Mesozoic Hyblean carbonates
Depth range:	4000 – 7000 m
Size range:	50 – 300 MBOE of Unrisk. Rec. Reserves
Risk:	very high

Surface Regional backthrusting

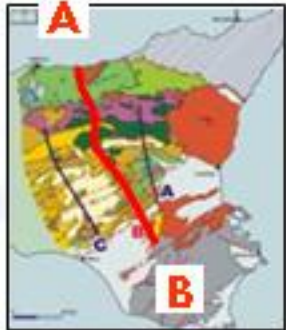
EXPLORED BELT



0 10 km

**Deep frontal antiform
(New play)**

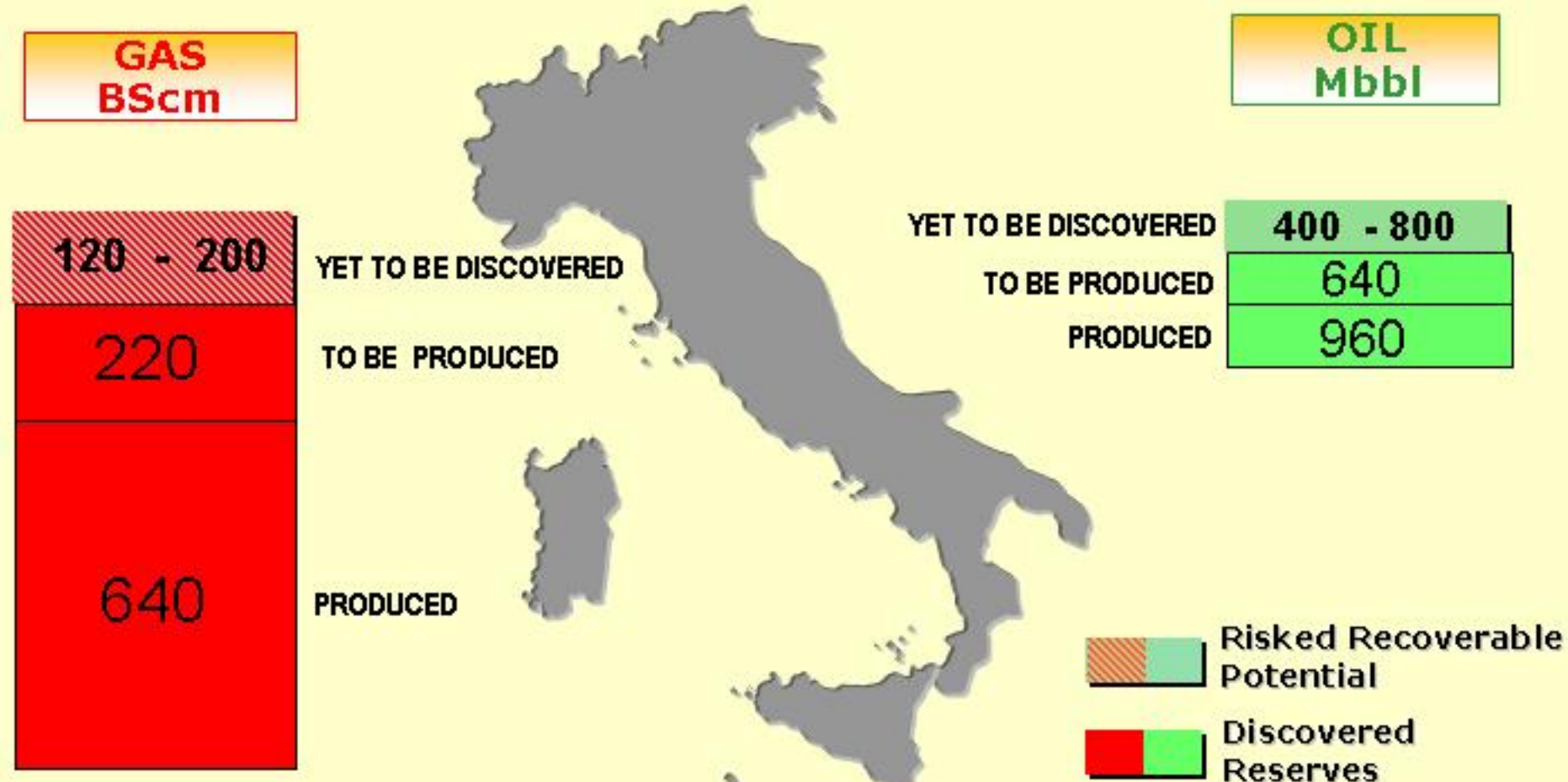
- Far travelled Numidian Flysch
Oligo - Miocene clastic succession
- Argile Variegata allochthonous Unit
Cretaceous - Eocene pelagic successions
- Late Tortonian - Pliocene
Syntectonic successions
- Numidian Flysch
Oligo-Miocene clastic succession
- Imerese-Sicano allochthonous Unit
deep water Mesozoic carbonates
- Hyblean Foreland Unit
(Triassic- Pleistocene)



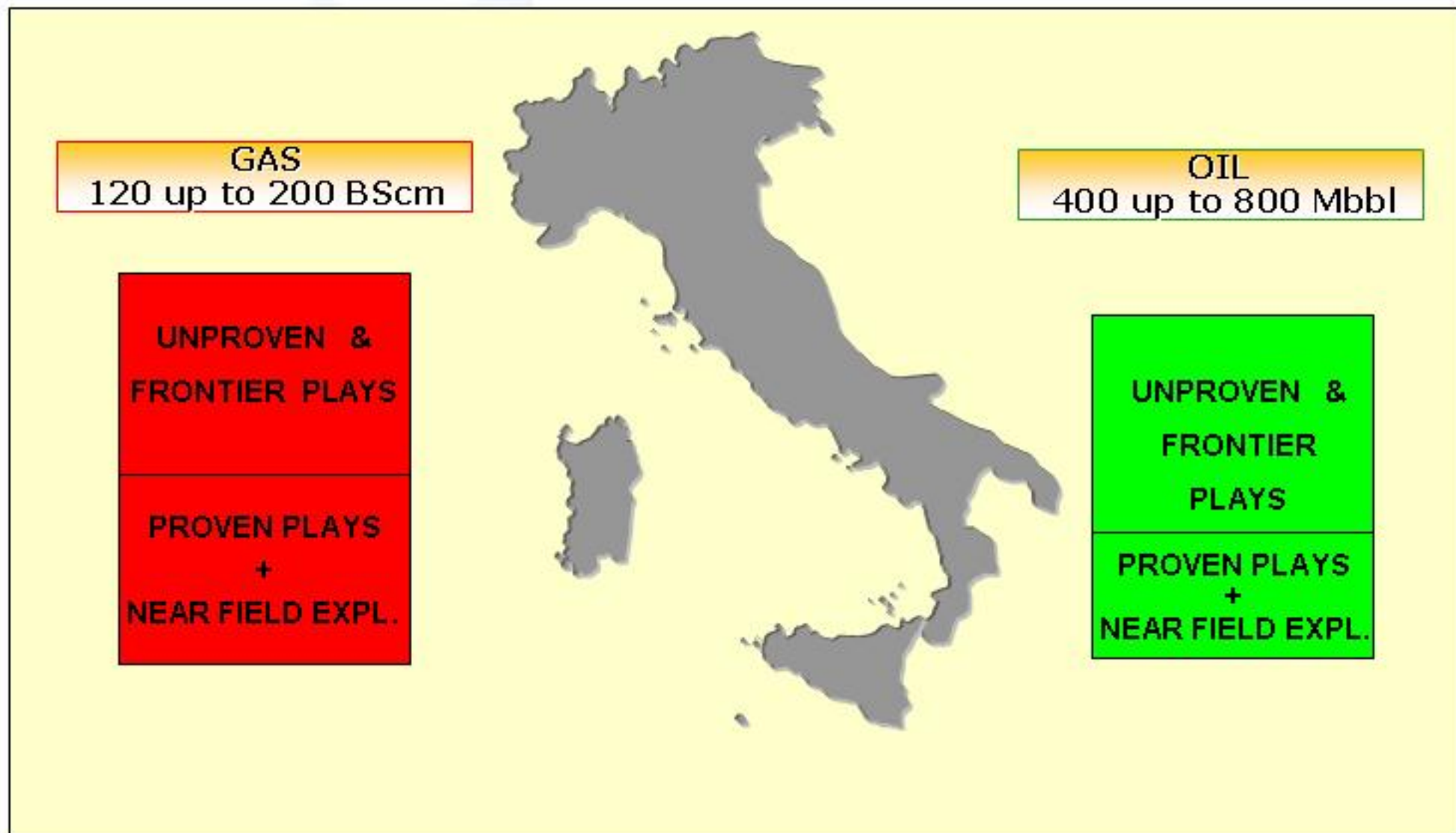
ITALY - DISCOVERED RESERVES vs. RISKED RECOVERABLE POTENTIAL

Approx. Values

Sources: ENI, IHS & ASSOMINERARIA




ITALY - EXPLORATION RISKED RECOVERABLE POTENTIAL RESOURCES



HYDROCARBON POTENTIAL IN ITALY

Challenges

- Adopt and assure effective H,SEQ coverage to E&P activities
- Improve Stakeholder Management
- Deploy new cost effective technologies
- Obtain timely authorisations (acreage, activities) 
- Liase with Service Companies for common objectives
- Assure business sustainability

HYDROCARBON POTENTIAL IN ITALY

Conclusions

- Italy still has a significant exploration potential, albeit its maturity and fast declining level of activity. Managing the production decline and replacing the produced volumes is possible.
- A large fraction of the exploration potential is associated with high-risk unproven and/or frontier plays which have their own technical challenges. Low to medium risk exploration of known plays and near field features can prove small volumes, which may still be economic to develop owing to the extensive available infrastructure.
- Oil companies and Authorities, each for their own part, have to work together to create the conditions which will allow to capture the value of the remaining exploration potential for the benefit of all stakeholders.
- The potential value that competitive exploitation costs and a favourable fiscal regime may generate is often eroded by delays in securing the necessary permits. Certainty on time to market is the key issue to address to revitalize the exploration of known plays and encourage the high investments required for high risk frontier exploration.

TIME TO MARKET CONCERN

Eni E&P – last 10 years investments and results

