The FPSO Role in the Gulf of Mexico

- Current thinking for FPSO's
  - Large, remote field with long development timescale
- Expanded FPSO Business Model:
  - Small fields, potentially close to infrastructure
  - Fast track projects
  - Competition to tie-back – availability, cost, reservoir
  - Pipeline export of Gas and possibly Oil
  - Limited owner commitments
  - Creative commercial terms

Is this possible…..?

PGS Petrojarl 1

Petrojarl I -- Operating History

Field	Operator	Start	End	Max. Prod b/d	Water depth	Avail. %
Oseberg/Norway	Norsk Hydro	31.08.86	06.06.88	26,000	105 m	98
Lyell/UK	Conoco	07.06.88	28.08.88	6,400	125 m	98
Fulmar/UK	Shell	15.02.89	09.11.89	230,000 1)	85 m	100
Troll/Norway	Norsk Hydro	24.12.89	06.05.91	30,200	330 m	99
Balder/Norway	Esso	07.05.91	07.10.91	9,400	125 m	99
Angus/UK	Amerada Hess	31.12.91	04.07.93	33,500	71 m	96
Hudson/UK	Amerada Hess	05.07.93	26.01.95	44,000	157 m	96
Blenheim/UK	Talisman Energy	15.03.95	01.05.00	35,000	148 m	98
Kyle/UK	Ranger Oil	24.05.00	06.11.00	13,500	85 m	99
Glitne/Norway	Statoil	28.08.01		50,000	110 m	

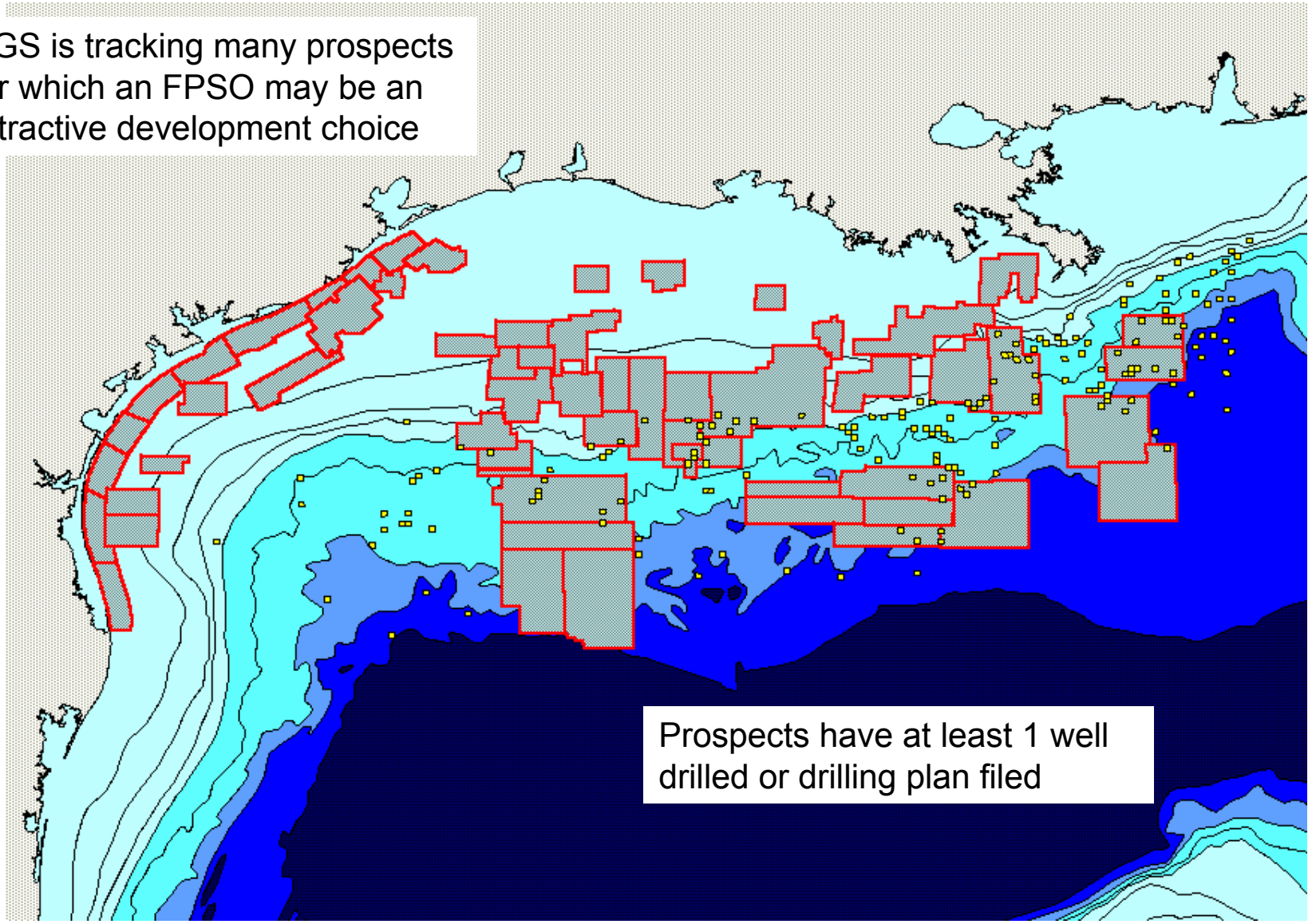
1) PETROJARL I was used as a storage and loading unit, and the figures represent throughput per day.

Market - US GOM

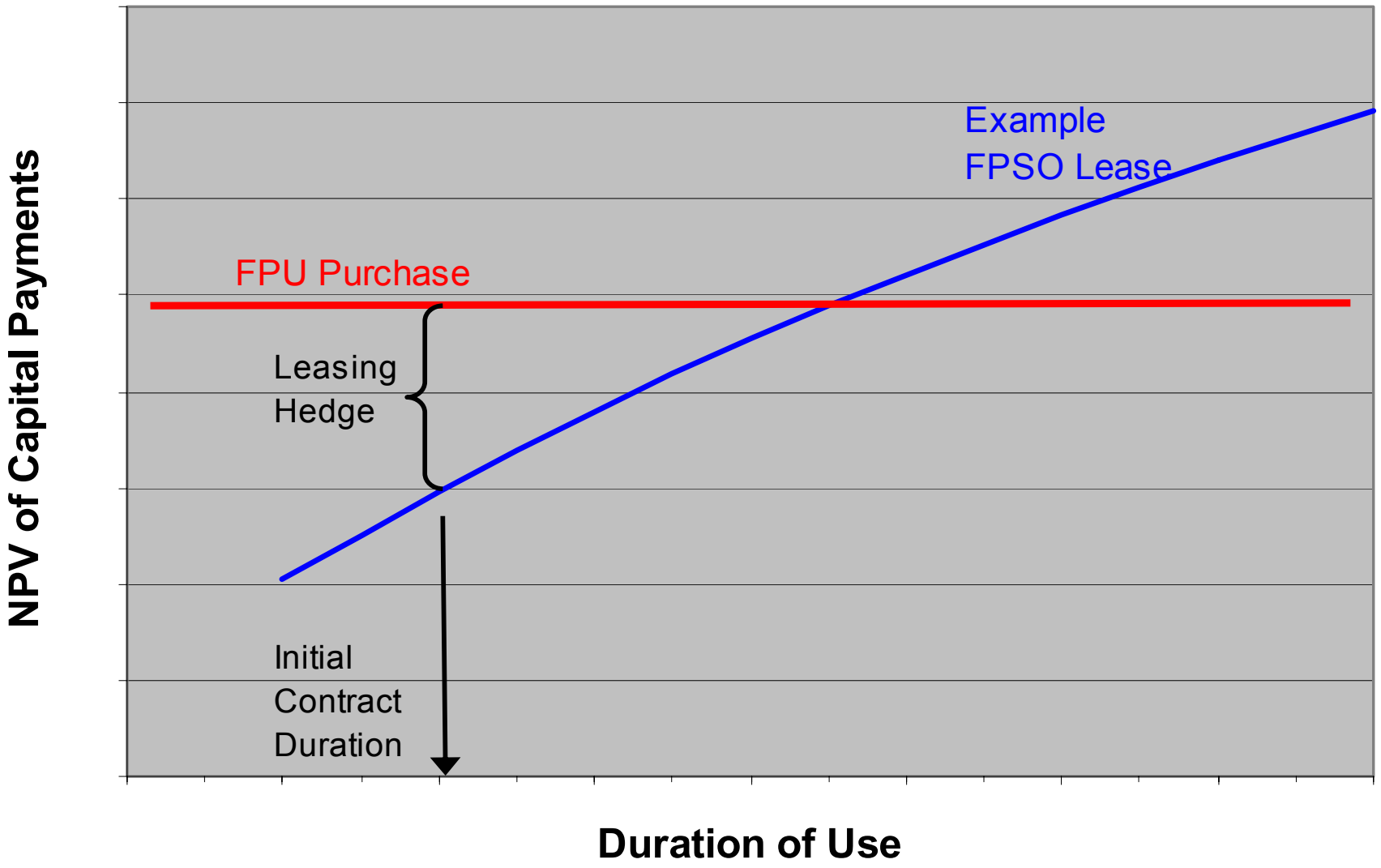
- The alternative menu of FPSO opportunities in US GOM
  - discoveries waiting development that would benefit from readily available production facilities
  - discoveries by majors which are lower priority but where FPSO's can accelerate development
  - Field with uncertain future performance

Identified Prospects for GOM FPSOs

PGS is tracking many prospects for which an FPSO may be an attractive development choice



FPSO Lease vs. FPU Purchase in GoM
Comparative Economics Example



Points for Discussion

- Why do E&Ps combine probabilistic production income with deterministic facility costs?
- Can alternative commercial structuring better benefit both E&P and Contractor (performance incentives, production tariffs, psuedo equity, etc.)?
- Who is willing to take first step?
- Is it shuttle or pipelines for the oil?
- Can a SPAR or TLP be moved AND therefore be amortized over 20+ years?
- Are field developers too optimizes and under estimate the risk?