

# UKCS - Gas Resources

OCTOBER 2008

Gas Basin & the North Sea:  
Recent Past, Current  
Performance and Future Opportunity

Description of the talk:

### **DRILLING STATS**

..... a review and commentary on UKCS E&A drilling stats for the past three years  
.....by area, play and company sectors  
.....& including the Gas Basin and new entrants

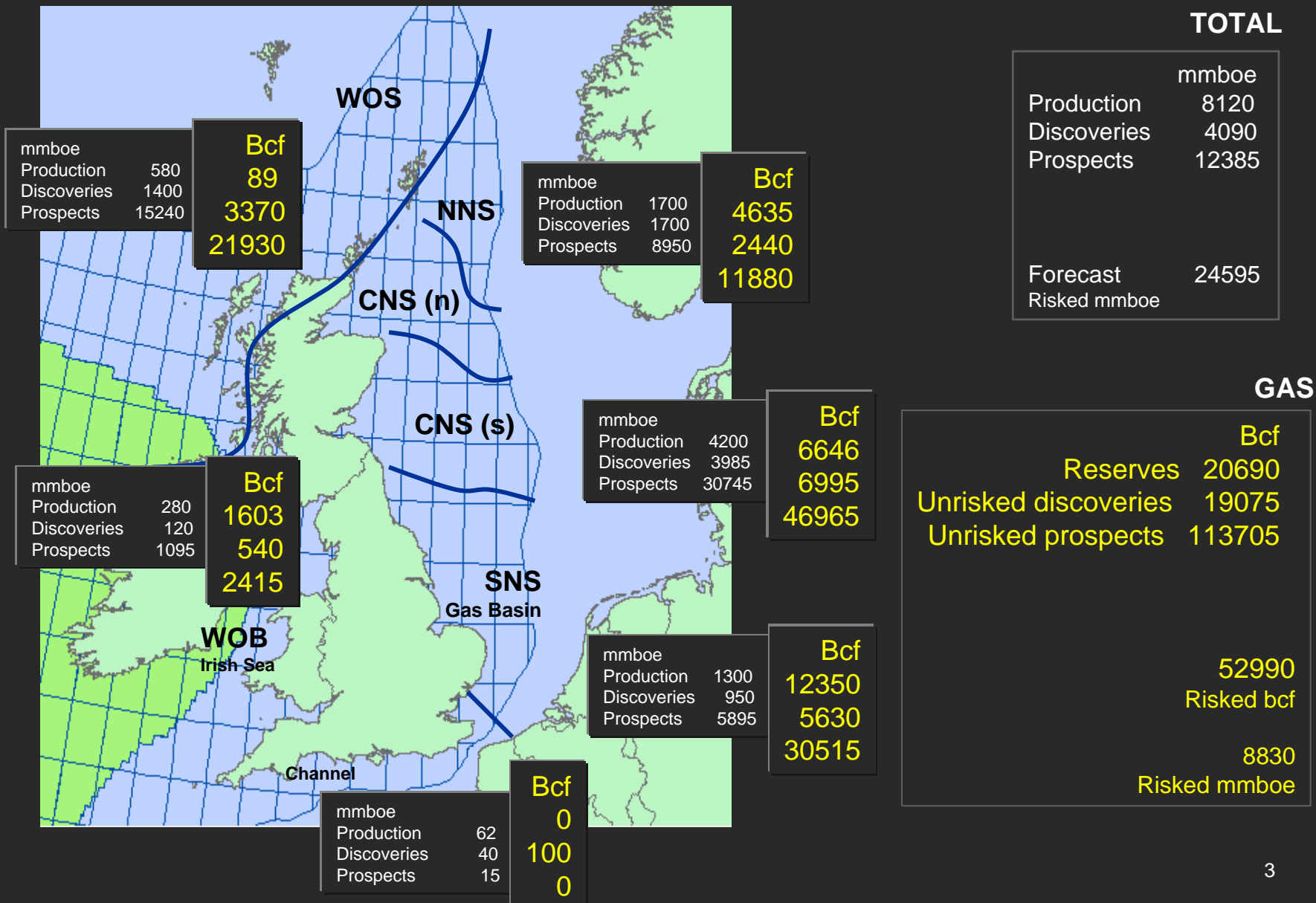
### **FORECAST E&A**

..... a look ahead at the level of activity expected in E&A wells  
... in the next two to three years for all areas, including the Gas Basin.

### **FUNDS & INVESTMENT**

..... comment on the current progression of prospects into developments  
.....& their funding requirements  
.....& our organisation's perceived opportunities for investment in the potential  
resources coming out of recent E&A drilling activity

**TOTAL RESOURCES & GAS**








**TIER 3  
>10 mmboe  
Venture**

Gaz de France

 Marathon  
 Tullow  
 Dana  
 IOC  
 Lundin  
 Perenco  
 Marubeni  
 E.On Ruhrgas  
 BHP  
 Oilexco  
 StatoilHydro  
 RWE  
 Nippon  
 Sumitomo  
 OMV  
 Petrofac  
 ATP  
 Murphy  
 Premier  
 TAQA Bratani  
 Dyon  
 Oranje-Nassau  
 Ithaca  
 First Oil  
 Valiant Petroleum  
 Noble  
 Dyas  
 Korean Natl Oil Co  
 Bow Valley  
 Cielo  
 Endeavour











**TIER 4  
>0 mmboe  
Revus**

Sojitz







Fairfield  
 Silverstone  
 Roc Oil  
 Atlantic Petroleum  
 Mitsubishi  
 EDP  
 Stratic  
 EOG  
 Faroe  
 Challenger  
 Caithness  
 Energy Resource  
 CalEnergy  
 Reach  
 Euroil  
 Mosaic

**TIER 5 Reserves 0 mmboe**


Acorn

 Anadarko  
 Antrim  
 Bharat  
 Black Rock  
 Bridge  
 Britcana  
 Canamens  
 Carrizo  
 Celtic  
 Century  
 Charbella  
 Chrysaor  
 Concordia  
 Corsair  
 Delek  
 DNO  
 DONG  
 Dove  
 Eclipse  
 Egdon  
 Elixir  
 Encore  
 EWE  
 Fox Petroleum  
 Gas Plus  
 Gas-Union GMB  
 GB  
 Genesis  
 Geysir  
 Gulf Shores  
 Holywell  
 XTO









Hurricane  
 Idemitsu

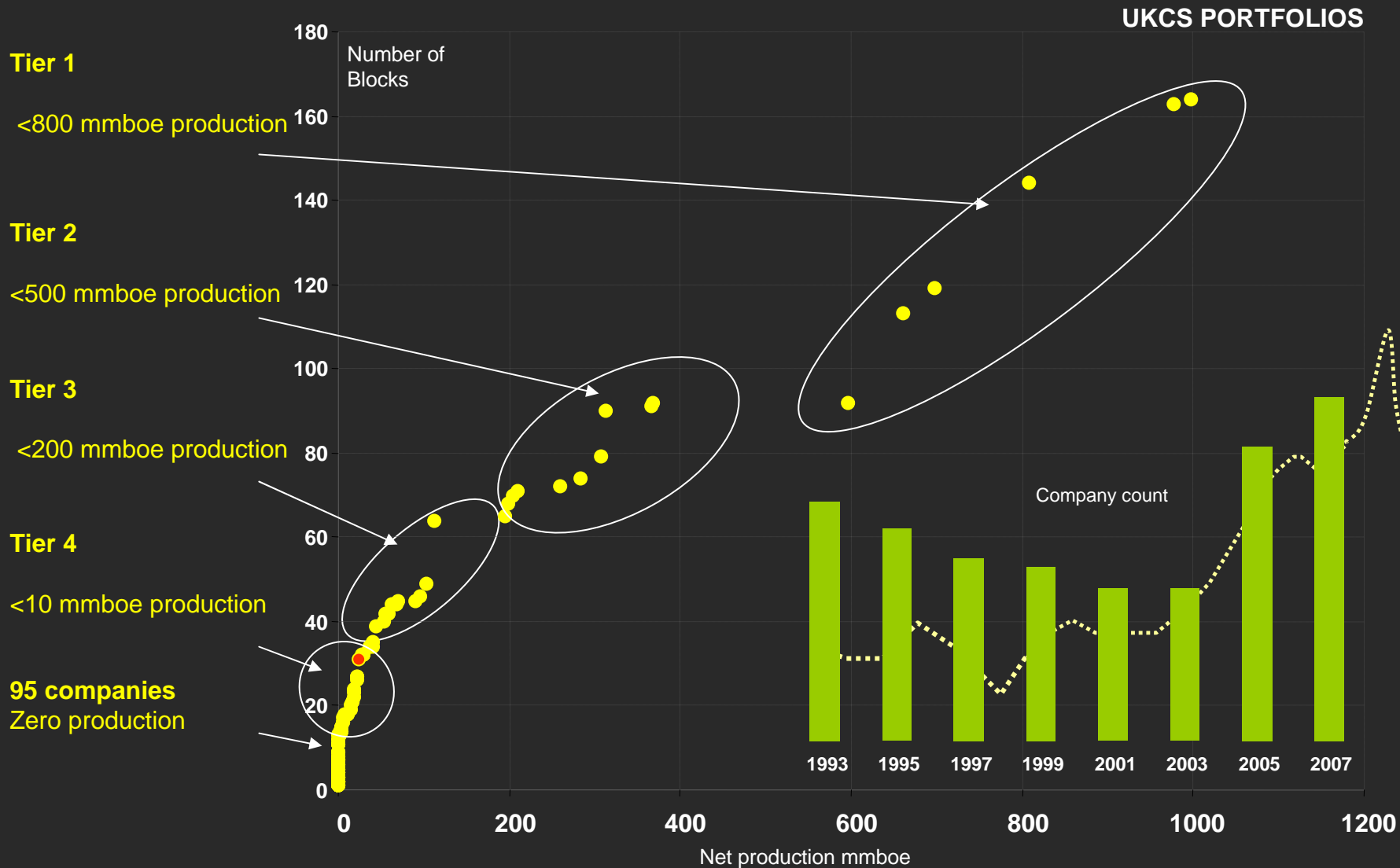
 Inpex  
 Irish Sea Energy  
 Island  
 Monarch  
 Nautical  
 NOR Energy  
 Noreco  
 North Sea Energy  
 Northern  
 Norwest  
 PA Resources  
 Petro Ventures  
 Providence  
 RegEnergy  
 Rocksource  
 Samson  
 Serica  
 Sosina  
 Star  
 Stelinmatvic  
 Sterling  
 Tata  
 Sussex Energy  
 TGS-NOPEC  
 VAALCO  
 Wessex  
 Westoil  
 Wilderness  
 Wintershall  
 Xcite  
 Zarubezhgaz  
 Zeus

**TIER 1  
>600 mmboe**

Shell  
 BP  
 ExxonMobil

**TIER 2  
>100 mmboe**

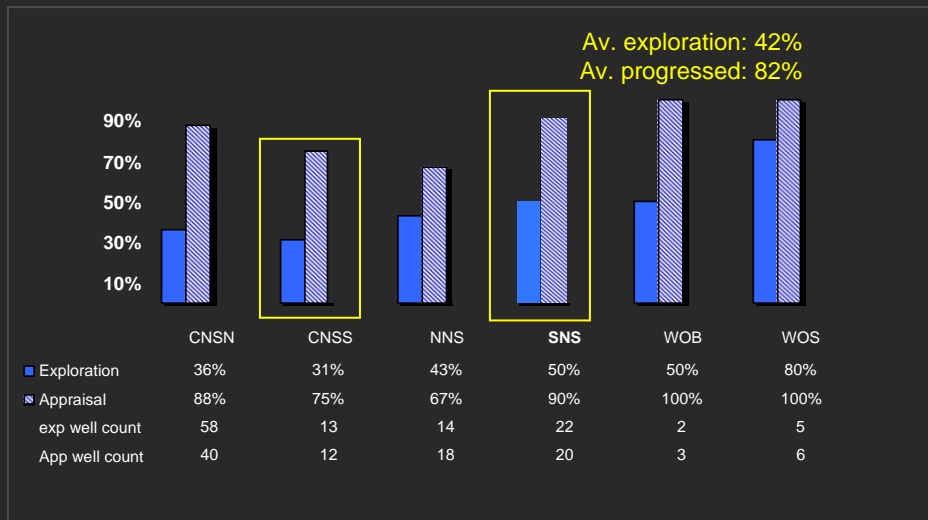
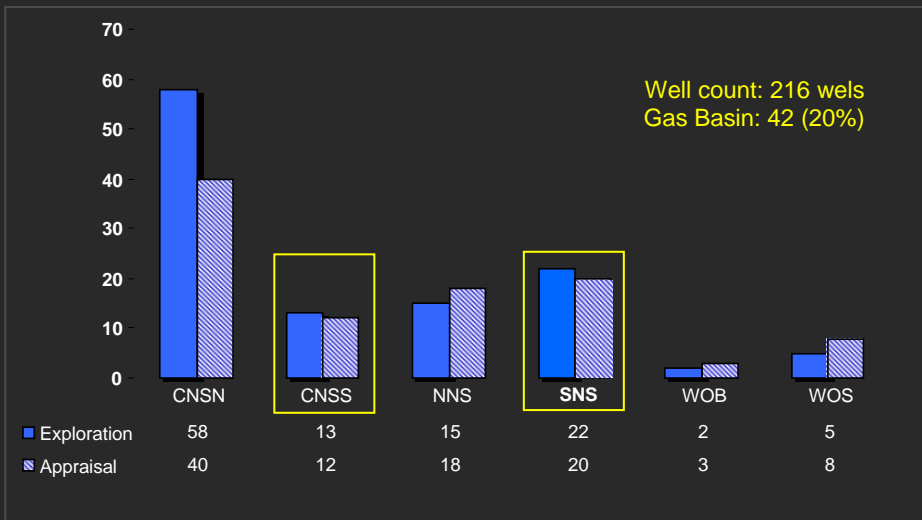
Total  
 ConocoPhillips  
 Talisman  
 CNR  
 Chevron  
 Centrica  
 Nexen  
 BG  
 Eni  
 Petro-Canada  
 Apache  
 Maersk  
 Hess



# WELL STATS

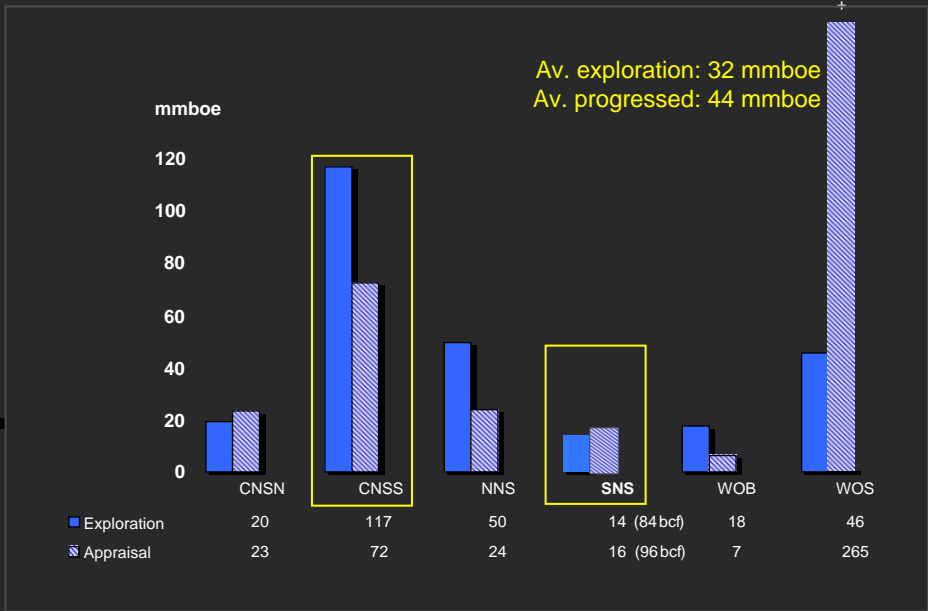
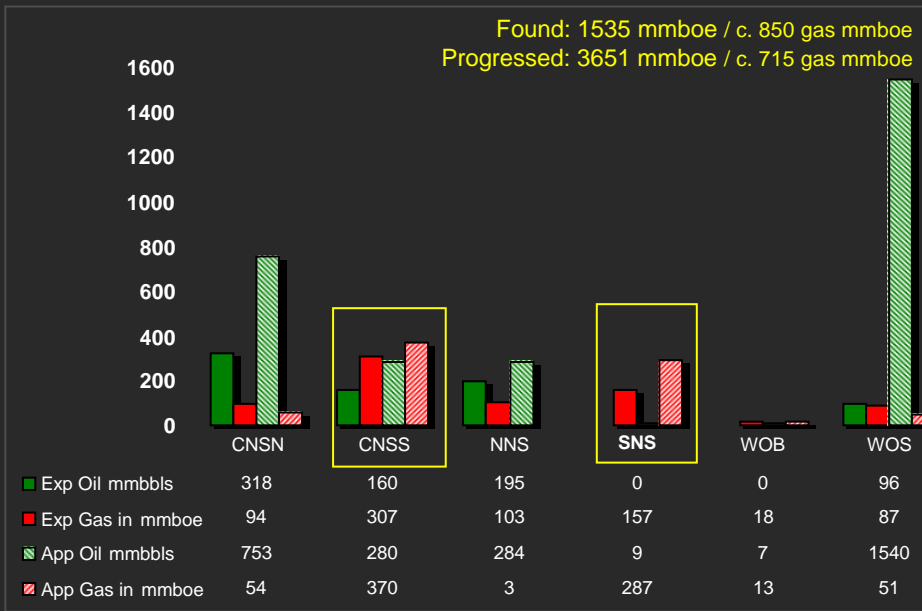
Since January 2005

**WELL STATS – highlighting the Gas Basin**



**WELL COUNT**

**TECHNICAL SUCCESS RATES**

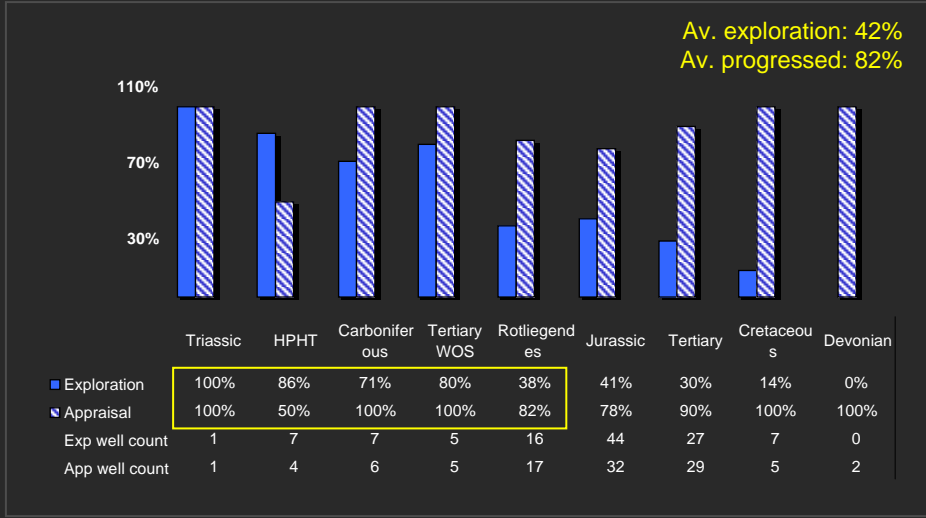
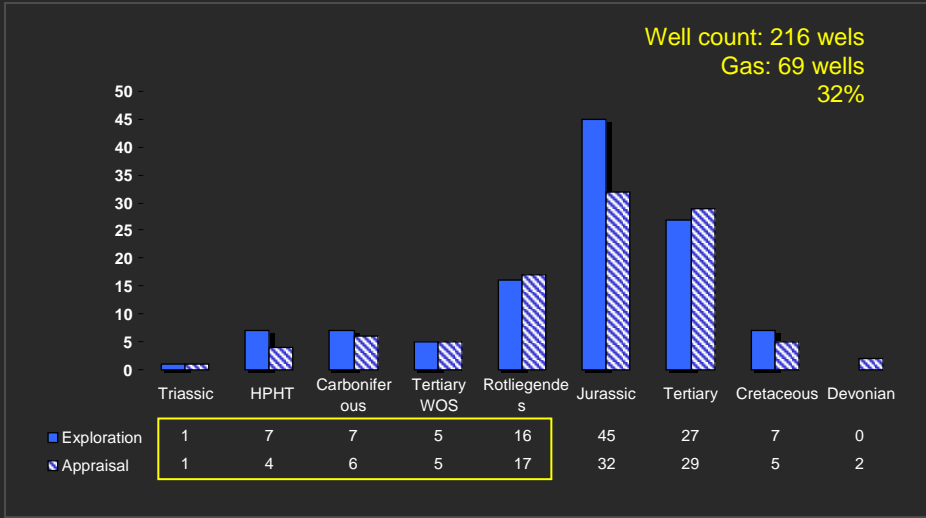


**SUM of MMBOE FOUND & PROGRESSED**

**AVERAGE MMBOE PER WELL - success only**

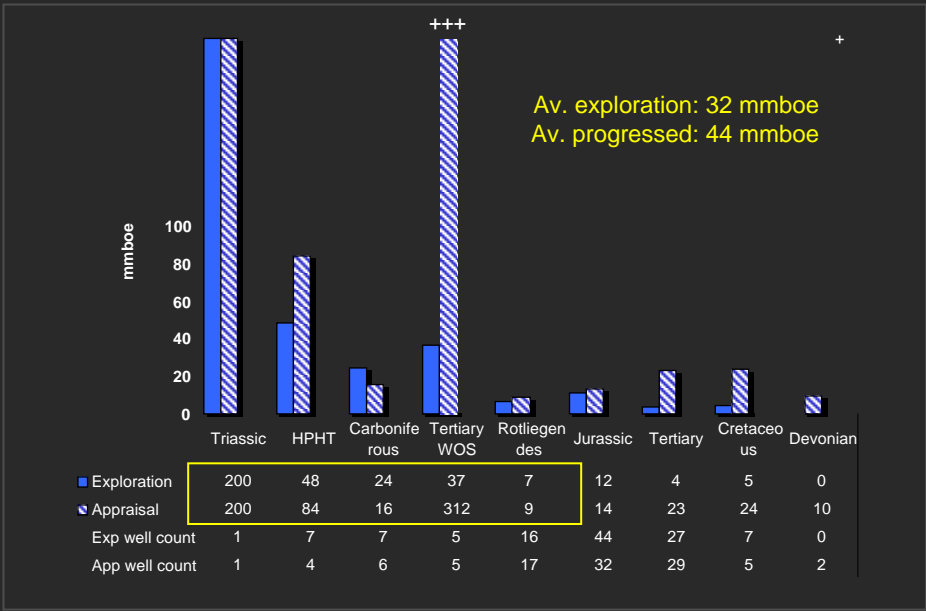
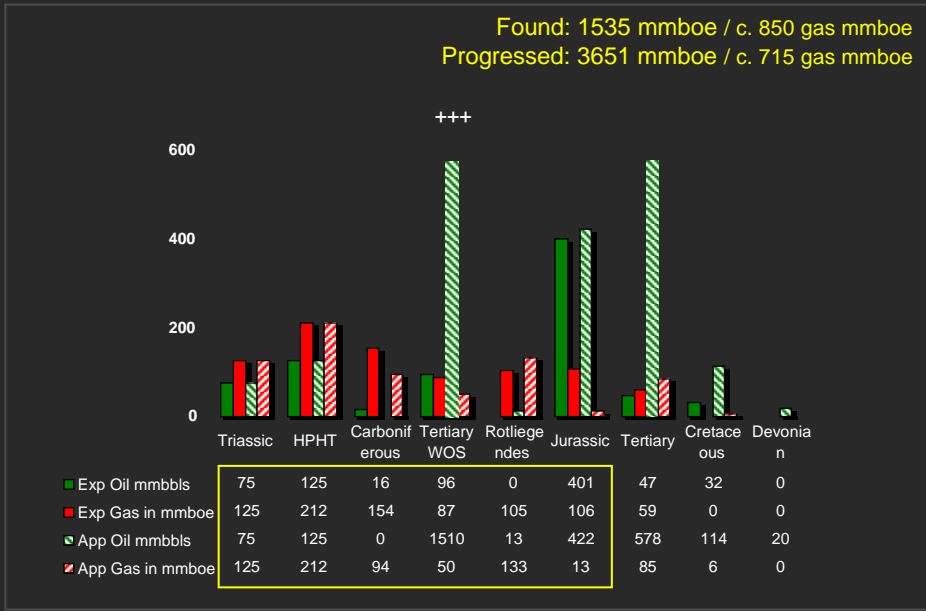
About 30% of all E&A activity & spend on gas

WELL STATS – highlighting plays



WELL COUNT

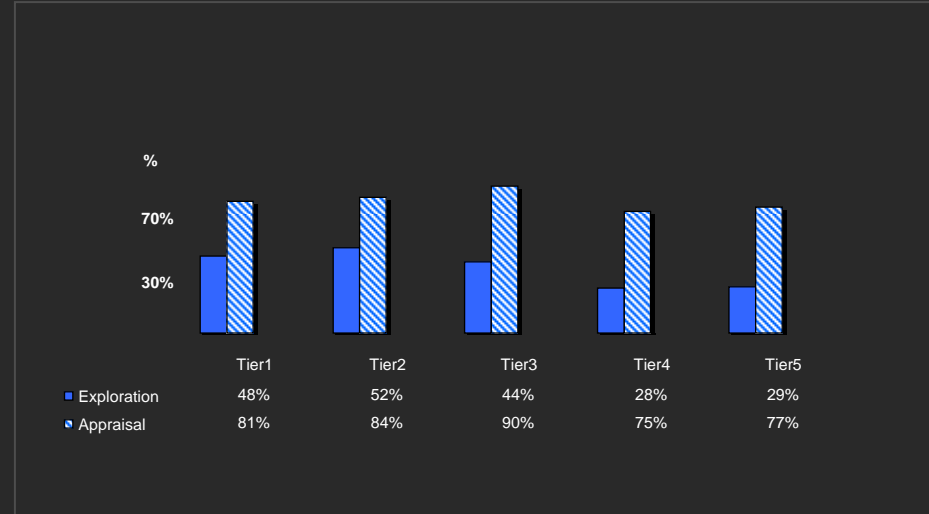
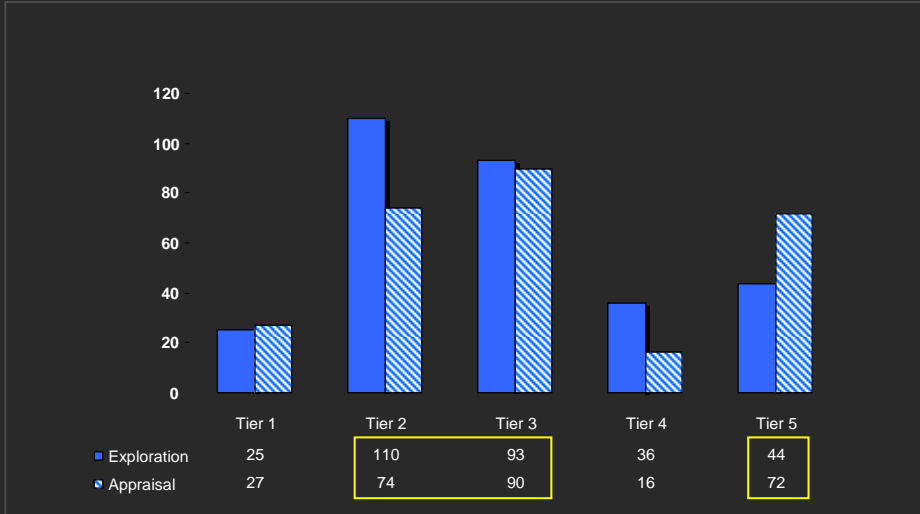
TECHNICAL SUCCESS RATES



SUM of MMBOE FOUND & PROGRESSED

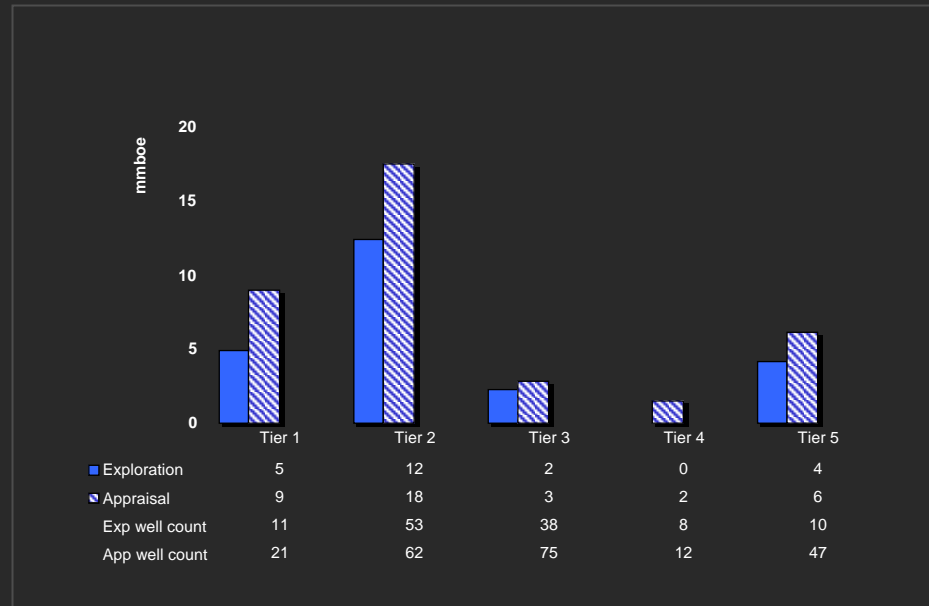
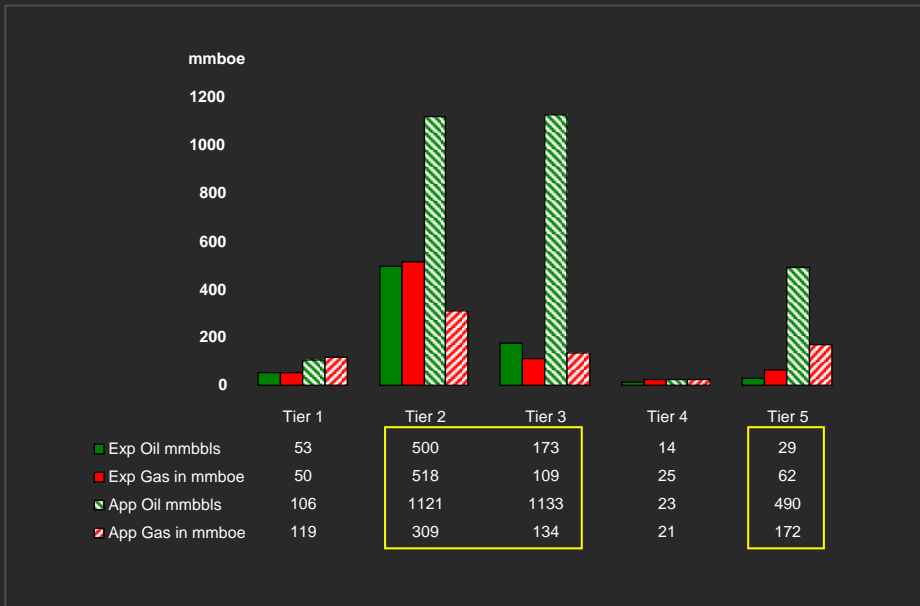
AVERAGE MMBOE PER WELL - success only

**WELL STATS – highlighting company sectors**



**WELL PARTICIPATION**

**SUCCESS RATES**



**SUM of NET MMBOE FOUND & PROGRESSED**

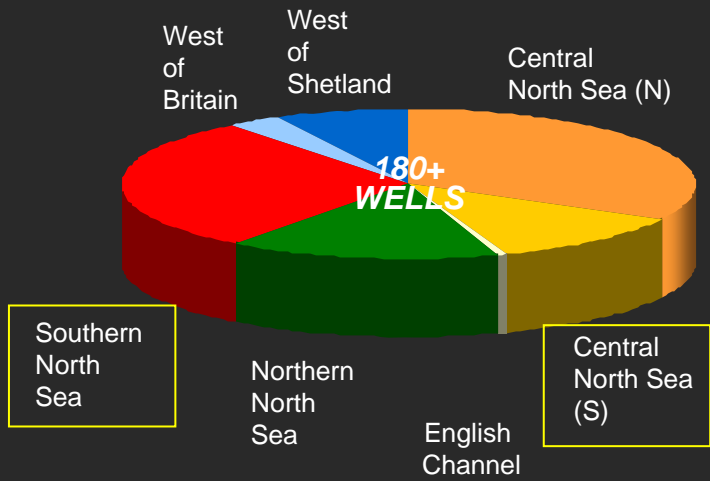
**AVERAGE MMBOE PER WELL - success only**

## Look ahead to 2010

... Wells

..... acreage

.....production



**ALL UKCS**

**E&A 2008**  
59 wells

**Planned**  
168 wells

Rigs confirmed for 36 wells

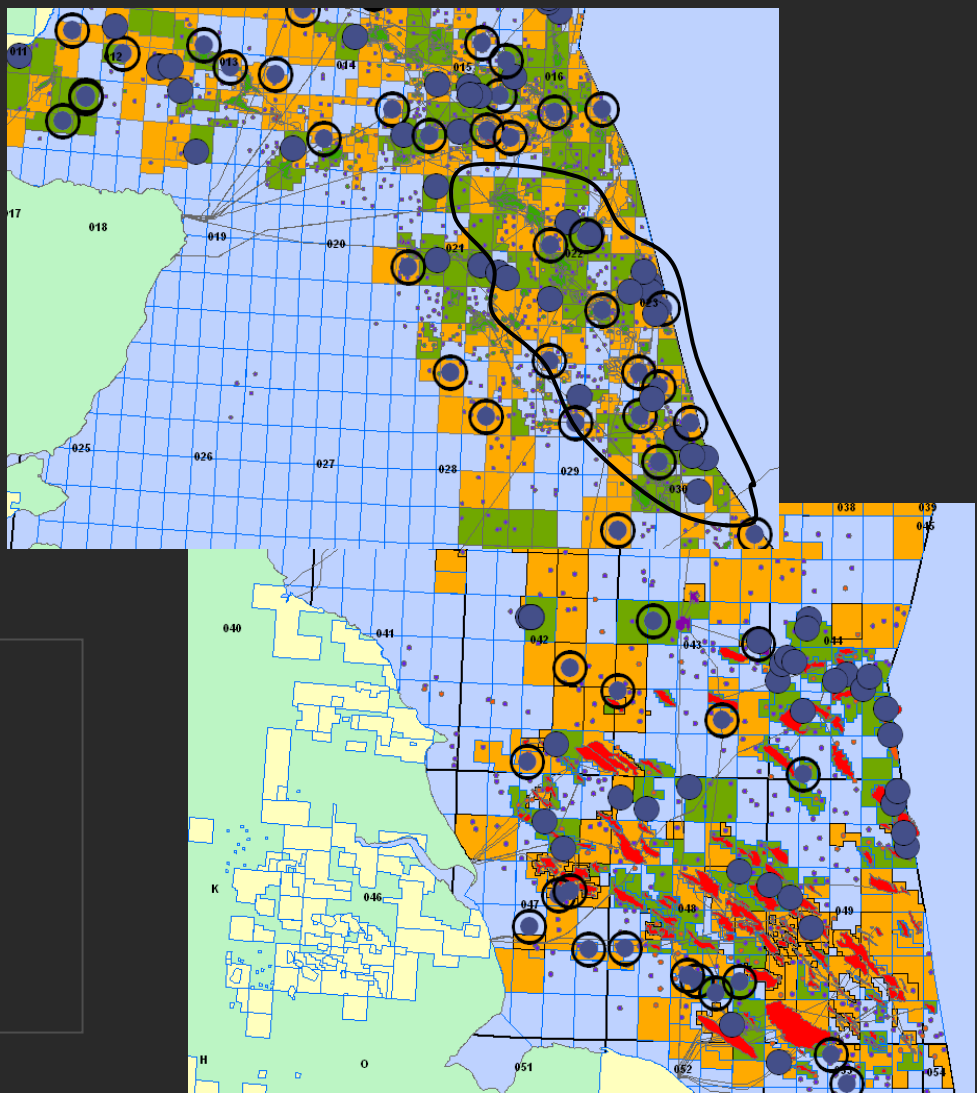
**GAS BASIN + CNS (s)**

**E&A 2008**  
25 wells

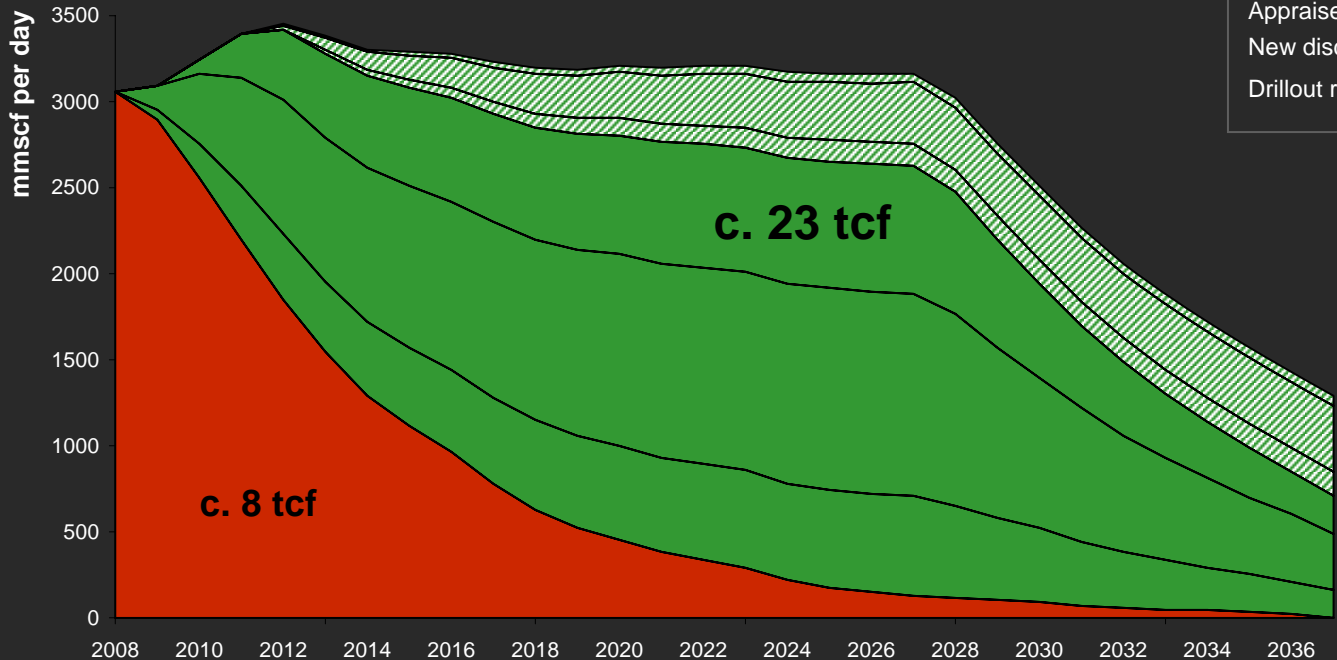
**Planned**  
64 wells

Rigs confirmed for 10 wells

*12 mobile rigs  
on E & A*



**MODELLED GAS PRODUCTION** – steady drilling / all UKCS gas



**GAS WELLSTATS 2005 +**

Annual E & A well count	24
Appraised old discoveries	1400 bcf per year
New discoveries	1380 bcf per year
Drillout rate per well	116 bcf

**DATABASE RESERVES bcf** 21610

Risked discoveries @ 50%	8640
Risked prospects @ 20%	13970

Technical potential

Tax take: c. \$80 billion

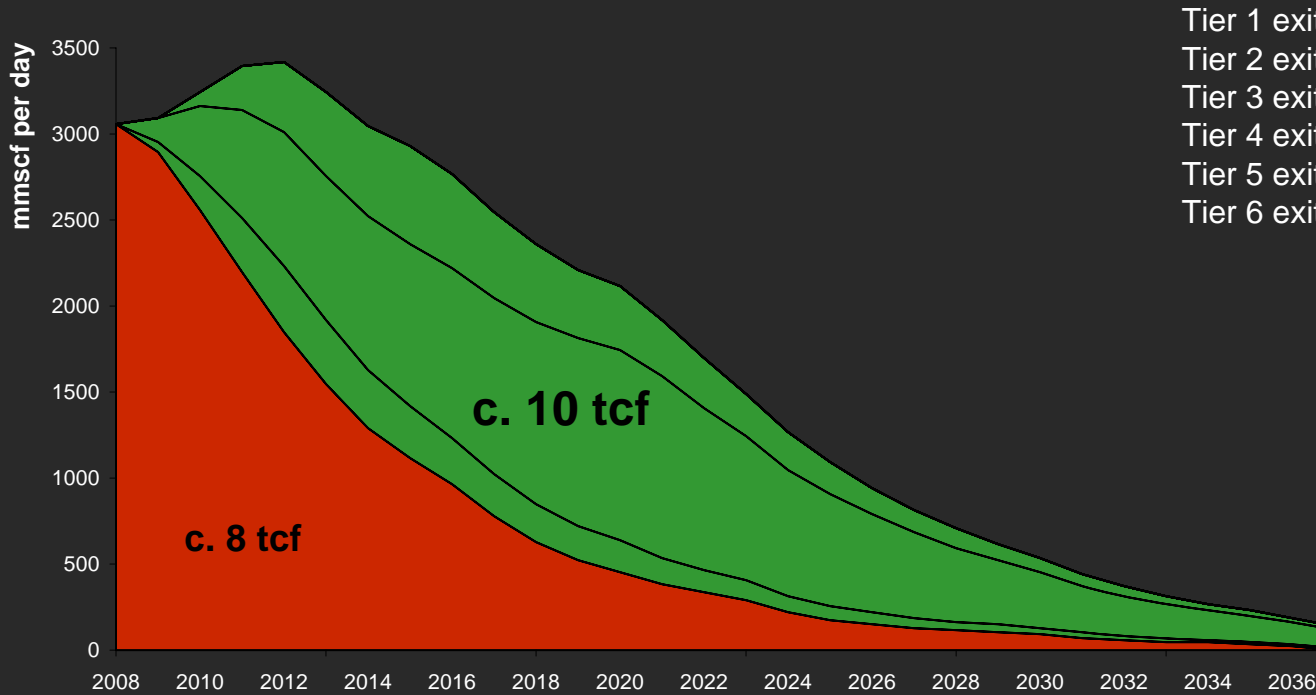
EMV c. \$16 billion

**MODEL**

**23307 bcf**

Annual E & A well count	24
No. of E&A Wells	768
Drillout rate per well	30 bcf
Annual drillout	775 bcf
Accelerated current disco's	c. 5000 bcf

MODELLED GAS PRODUCTION – low activity

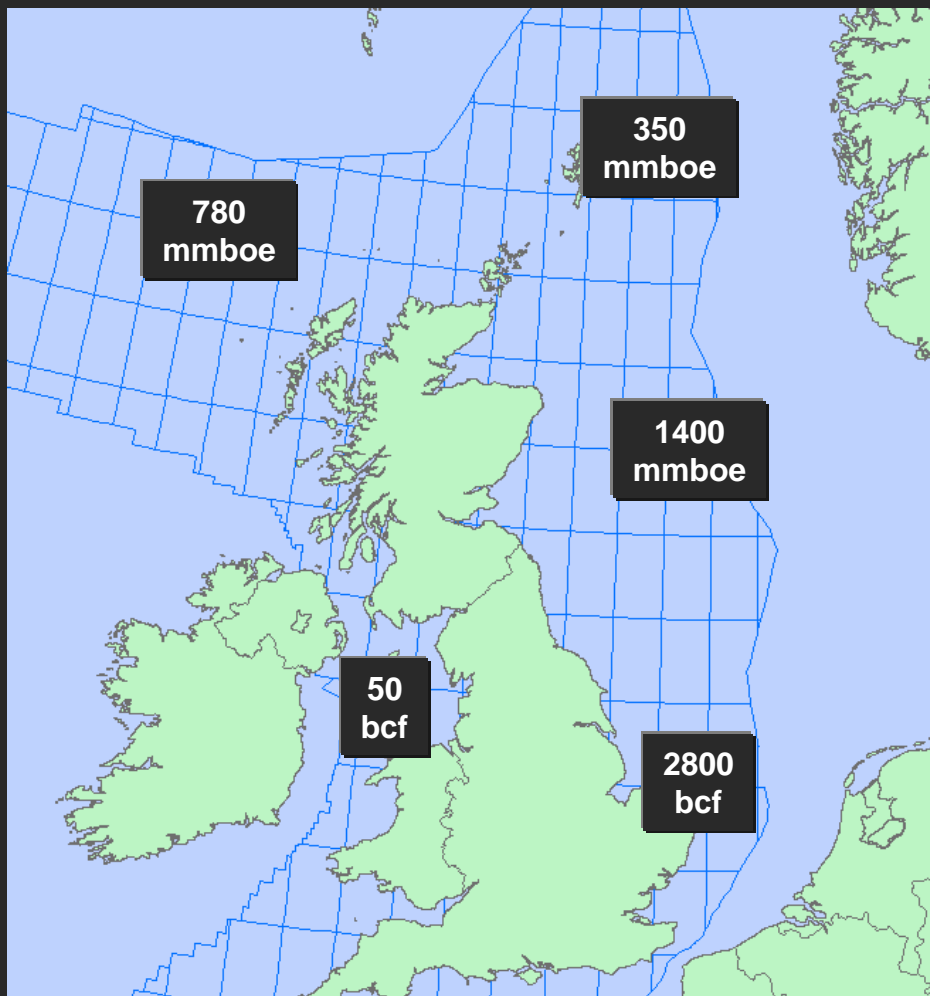


Tier 1 exit	2012
Tier 2 exit	2020
Tier 3 exit	2015
Tier 4 exit	now
Tier 5 exit	now
Tier 6 exit	now

Tax take: c. \$30 billion

EMV c. \$8 billion

MODEL	10350 bcf
Annual E & A well count	24
No. of E&A Wells	185
Drillout rate per well	30 bcf
Annual drillout	775 bcf
Accelerated current disco's	c. 5000 bcf



	mmboe	\$mm
Net reserves	3000	<b>\$45000</b>
Dev costs @ \$15 per boe		
Projects in development	245	<b>\$3625</b>
Potential projects	1880	<b>\$28200</b>
<b>FUNDED</b>		<b>\$31875</b>
<b>Non-core working interests</b>		
Projects x 17	375	<b>\$5625</b>
<b>Under-funded new entrants</b>		
Projects x 35	500	<b>\$7500</b>
<b>POTENTIAL SHORTFALL</b>		<b>\$13125</b>

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website [www.hannonwestwood.com](http://www.hannonwestwood.com)