Oil and Gas Reporting and Disclosure In Selected Countries

Focus On Cost / Field Detail Reporting

Summary

- In the vast majority of regimes around the world companies are required to disclose detailed data
 - Prospective (plans) and actual
 - Typically down to well / field level detail
- Data is provided to both resource-management and fiscal/taxation authorities
 - Intra-governmental sharing
 - Greater flow to, rather than from, fiscal authorities
- Reporting and public disclosure are two separate issues
 - Public reporting is common
 - Though typically in aggregated or summary form

Why Does Alaska Need To Receive Data?

- Required in order to properly manage the State's resources
 - "The energy resources of this State belong to the people of Alaska1"
- Full understanding of technical and commercial factors
- Ability to plan and control
 - Exploitation policy
 - Budget
- These are universal principles
 - Not unique to Alaska

¹ Adapted from Accountability principle of Alberta Royalty Review Panel

Forms Of Reporting and Sharing

Production and well data

Monthly or as completed

Annual or Semi-Annual field-level information

Typically collected by Ministry / Regulatory Body

Tax returns

Collected by fiscal authority

Intra-Governmental Sharing

- Degree of sharing varies by country
- Typically greater sharing by Ministry / Regulatory Body than by fiscal authority

Public Reporting

- Mostly in aggregated / summary form
- Some countries provide field-level summaries
 - > Reserves
 - Capex
 - More often as total, but sometimes as annual time series
- Opex rarely disclosed at field-level, although subscription services do provide this
 - Data quality dependent upon various sources, including "oil company guidance"
 - Sometimes occurs in stock market documentation released by (usually) smaller companies

Examples Of Data Disclosure(Production and Cost Focus)

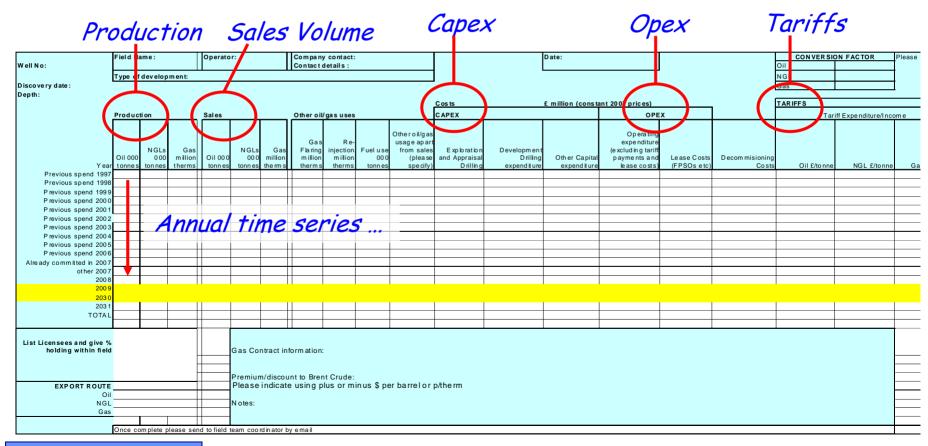
UK Summary

- UK requires data disclosure at field level
 - > Field development plans
 - > Annual (and semi-annual) data / statistical analysis
 - > PRT returns
- Disclosure to
 - DTI (Oil & Gas Directorate)
 - Fiscal authorities
- Publication of aggregated information





Detailed field-level production and cost projections (in standardized electronic format) are required as part of the Field Development plan submission / approval



Annual UKCS Income and Expenditure summarized on an annual basis

(£ millio		d Expe	Income		ontinent	al Shelf Exp			pex	ating Activit	ies	Capital 8	Expenditure) (Cape.	X	
							decomm-			Gross			Investment		Average	Average	GDP
	OII Sales	NGL Sales	Gas Sales	Other Income ⁽¹⁾	Total Income	Operating Costs	issioning costs	Other expenses ⁽²⁾	Total Expenses	Operating Surplus ⁽³⁾	E&A ⁽⁴⁾	of which seismic	other than E&A	Total	Oll Price (£/tonne)	Gas Price (p/therm)	Deflator (2003=100)
	00106	oalee	calce	moome	IIIoomio	Coete	00015	oxponess	Expellege	curpide	Ean	Sersime	EGA	rotar	(E/Colline)	(prenerin)	(2003-100)
1970	0	0		4	- 6	. 6	n/a	0	. 6	-2	20	n/a	53	73	n/a	n/a	9.9
1971 1972	0	1	8D 114	8 9	88 124	11	n/a n/a	0	11 15	78 110	57 43	n/a n/a	72 112	129 164	n/a n/a	n/a n/a	10.8 11.7
1973	0	2	133	11	148	18	n/a		18	129	69	n/a	215	284	n/a	n/a	12.6
1974	0	3	166	21	190	20	n/a	0	20	170	153	n/a	584	737	n/a	n/a	14.4
1975	43	15	190	29	277	46	n/a	0	46	231	242	n/a	1,374	1,616	n/a	n/a	18.3
1976	624	21	258	21	924	130	n/a	0	130	794	301	n/a	2,070	2,372	n/a	1.8	21.1
1977	2,197	29	317	20	2,682	207	n/a	0	207	2,356	375	n/a	2,107	2,482	n/a	2.1	24.0
1978 1979	2,771 5.641	35 53	432 538	12 44	3,260	346 502	n/a	18	346 519	2,904 5.757	261 241	n/a	2,170 2,064	2,431	n/a	3.1 3.8	26.8 30.7
1979	8,719	132	647	82	6,276 9,680	692	n/a n/a	34	726	5,757 8,854	379	n/a n/a	2,388	2,305 2,787	n/a n/a	4.9	36.7
1981	12,206	135	843	114	13,298	1.017	n/a	45	1.083	12,235	550	n/a	2,300	3,397	n/a	6.5	40.8
1982	14,129	312	956	160	15,667	1,309	n/a	73	1,382	14,174	875	n/a	3,059	3,834	142.0	7.4	43.9
1983	16,496	528	1,117	188	18,328	1,495	n/a	67	1,682	16,767	993	n/a	2,853	3,848	148.3	8.4	46.3
1984	19,927	659	1,290	256	22,133	1,733	n/a	62	1,796	20,338	1,395	n/a	3,189	4,684	164.9	10.0	48.4
1985	19,204	692	1,709	384	21,888	2,248	n/a	76	2,324	19,664	1,445	n/a	2,794	4,239	158.3	11.9	51.1
1986	8,909	386	1,927	455	11,678	2,144	n/a	57	2,201	9,476	1,039	n/a	2,419	3,467	73.3	12.6	52.9
1987	9,513	358	1,990	533	12,384	2,107	n/a	55	2,162	10,232	809	n/a	2,044	2,863	81.7	12.4	55.7
1988	7,084 7,214	249 272	2,046	859 547	10,238	2,060 2,330	n/a n/a	58 57	2,118	8,120 7,833	1,129	n/a	2,126	3,265	63.4 81.1	13.1 14.2	59.2 63.6
1989 1990	8,432	277	2,187	405	10,220 11,491	2,892	n/a	46	2,386	8.552	1,182	n/a n/a	2,635 3,478	3,817 5,116	94.6	14.3	68.5
1991	7.578	385	2,988	476	11,428	3.296	n/a	58	3.354	8,073	1,955	n/a	5.101	7.067	86.0	15.9	73.0
1992	7,430	380	3,016	626	11,463	3,312	n/a	53	3,385	8,088	1,508	n/a	5,428	6,835	81.9	15.8	76.0
1993	8,110	523	3,568	699	12,889	3,661	n/a	47	3,708	9,191	1,213	n/a	4,661	5,874	85.8	15.0	78.0
1994	8,964	528	3,836	974	14,302	3,860	n/a	40	3,900	10,401	939	150	3,671	4,609	77.0	16.3	79.2
1995	9,881	614	4,141	1,166	15,802	3,913	n/a	37	3,950	11,852	1,085	204	4,355	5,440	81.1	16.3	81.4
1996	11,850	749	5,295	1,243	19,138	3,978	n/a	31	4,009	15,127	1,097	190	4,364	5,481	97.3	16.6	84.2
1997 1998	10,327 7,487	700 551	5,254 5,313	1,279	17,681 14,806	4,150 4,190	n/a n/a	34 111	4,184 4,301	13,377 10,503	1,194 762	151 125	4,263 4,996	5,467 5,768	87.4 59.8	16.7 16.2	86.6 88.9
1999	10,257	727	5,031	1,435	17,460	4,190	n/a	282	4,631	12,920	457	55	3,063	3,620	80.0	13.7	90.9
2000	16,275	1.117	6,606	1,488	25,488	4,360	n/a	106	4,488	21,020	348	40	2,750	3,098	138.1	15.8	92.1
2001	13,646	963	8,140	1,435	24,186	4,347	n/a	49	4,398	19,789	420	34	3,570	3,990	125.7	19.0	94.1
2002	13,629	894	8,199	1,397	24,118	4,596	n/a	48	4,643	19,475	389	45	3,598	3,988	123.8	16.4	97.0
2003	13,365	1,105	7,554	1,538	23,662	4,496	n/a	8	4,604	19,058	334	42	3,412	3,748	130.0	17.4	100.0
2004	13,477	1,266	7,443	1,178	23,384	4,664	145	87	4,761	18,613	396	57	3,302	3,698	154.0	21.0	102.6
2005	16,656	1,684	8,902	1,451	28,693	5,113	412	128	6,241	23,452	460	34	4,371	4,831	215.8	27.6	104.9

Notes

⁽¹⁾ Revenues from pipelines and terminals, and other revenues of operators and production licensees.

⁽²⁾ Other costs of operators and production licensees not attributable to oil or gas fields.

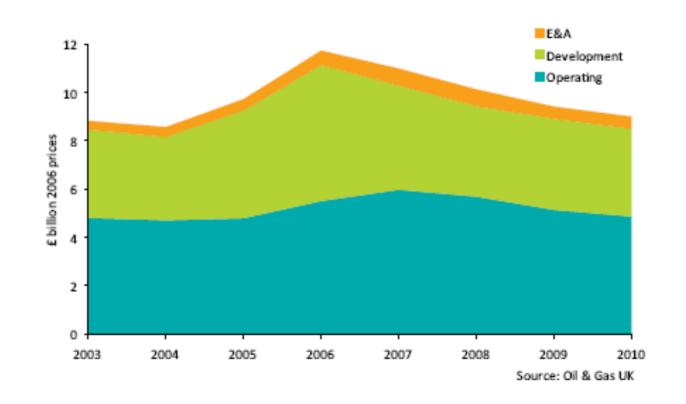
⁽³⁾ Gross Operating Surplus - Total Income less Total Expenses.

⁽⁴⁾ E&A costs include Exploration and the cost of Appraisal wells drilled prior to development approval.

The figures exclude change in stocks and book value of stocks.

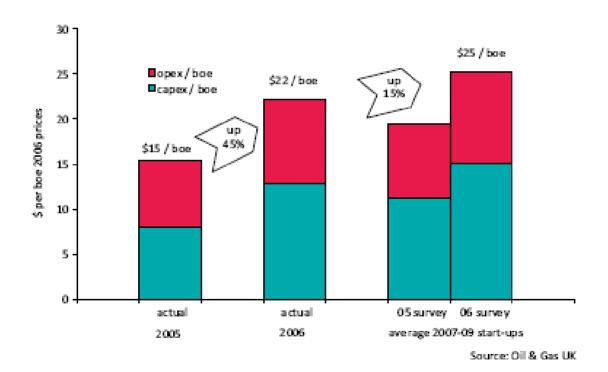
Medium-term forecasts derived from annual returns

Figure 30: UKCS Expenditure Forecast 2003-2010



Cost trends

Figure 33: UKCS New Developments' Unit Technical Cost 2005-2009



Norway Summary

- Norway requires data disclosure at field level
 - Field development plans
 - Annual data / statistical analysis
 - > Tax returns
- Disclosure to
 - NPD (Norwegian Petroleum Directorate) / Ministry
 - Fiscal authorities
- Publication of aggregated information



2007

Field / discovery listing of resource volumes

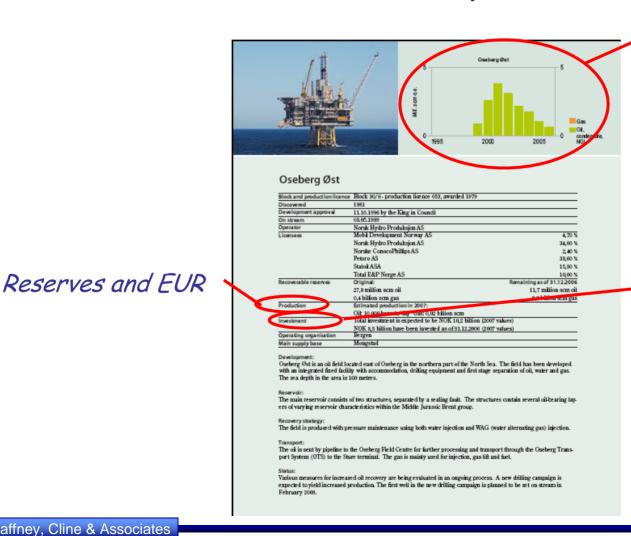
Tilstedeværende ressursar i felt

In-place resources in fields



Felt	Olje mill Sm3	Assosiert væske	Assosiert gass	Fri gass mrd
	Oil million	NGL/Kondensat	mrd Sm3	Sm3
	Sm3	mill Sm3	Associated gas	Free gas
		Associated liquids	(billion Sm3)	billion Sm3
		million Sm3		
ALBUSKJELL	36	0	56	0
ALVHEIM	81	0	8	9
BALDER	137	0	7	0
BLANE	3	0	0	0
BRAGE	137	7	11	3
COD	5	0	11	0
DRAUGEN	212	0	12	0
EDDA	16	0	5	0
EKOFISK	1,071	0	286	0
ELDFISK	470	0	124	0
EMBLA	43	0	15	0
ENOCH	2	0	0	0
FRAM	58	0	8	8
FRIGG	0	1	0	150
FRØY	35	0	8	0
GIMLE	8	0	0	0
GLITNE	24	0	1	0
GRANE	209	0	3	0
GULLFAKS	583	0	69	0
GULLFAKS SØR	154	43	36	118

Detail on field-by-field basis



Production forecast by year

Total capital investment

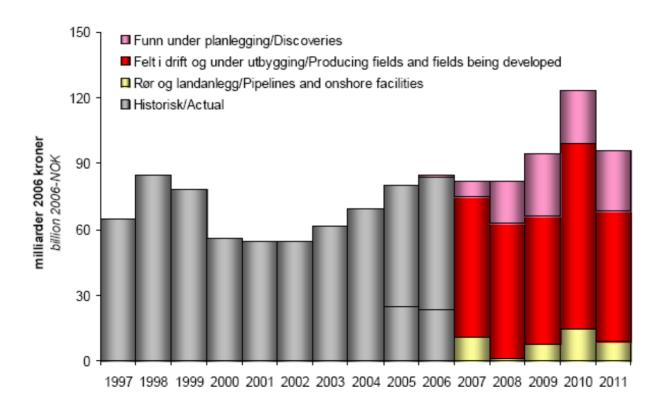
- historical
- expected ultimate

Gaffney, Cline & Associates

Medium-term forecasts derived from annual returns

NPD

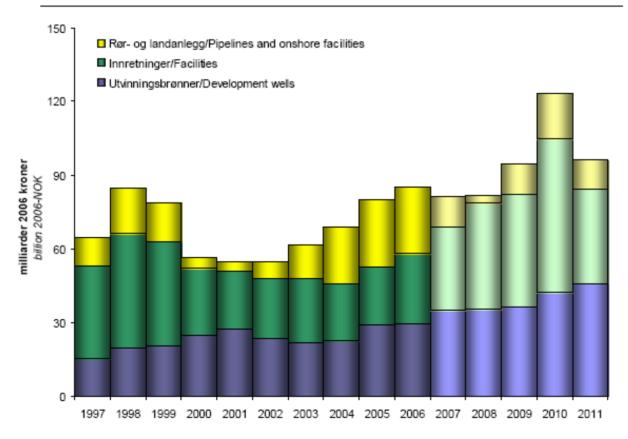
Investments (excluding exploration costs)



Medium-term forecasts derived from annual returns

NPD

Investments (excluding exploration costs)



Source of Investment

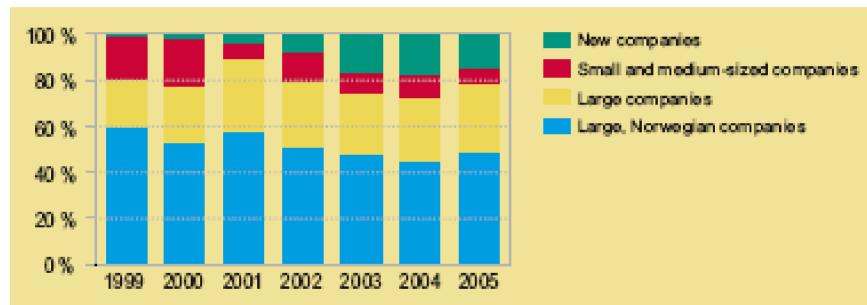
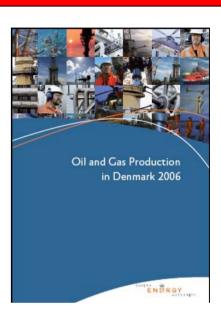


Figure 3.8 Exploration costs in production licences on the Norwegian continental shelf, distributed according to the size of the companies (Source: Norwegian Petroleum Directorate)

Denmark Summary

- Denmark requires data disclosure at field level
 - > Field development plans
 - Annual data / statistical analysis
 - > Tax returns
- Disclosure to
 - Danish Energy Authority
 - Fiscal authorities
- Publication of some detailed plus aggregated information



Denmark

Field listing of annual capital investments .. both historical ..

Table 7.4 Investments, DKK million, nominal prices

	2002	2003	2004	2005	2006*
Cecilie	223	660	309	(18)	4
Dagmar	-	-	-	-	148
Dan	437	943	750	750	684
Gorm	242	107	108	291	304
Halfdan	2,412	1,779	1,124	683	1,293
Harald	0	4	22	53	1
Kraka	3	-	2	-	-
Nini	285	1,288	319	163	19
Roar	-	-	-	-	-
Rolf	-	37	4	-	1
Siri	111	406	425	73	140
Skjold	5	77	8	11	4
South Arne	849	764	762	310	451
Svend	223	-	-	-	-
Tyra	85	305	459	1,020	1,520
Tyra Southeast	569	82	96	45	-
Valdemar	(1)	200	52	553	992
NOGAT pipeline	-	766	664	12	-
Not allocated	31	(31)	2	5	97
Total	5,475	7,386	5,105	3,951	5,658

^{*}Estimate

Denmark

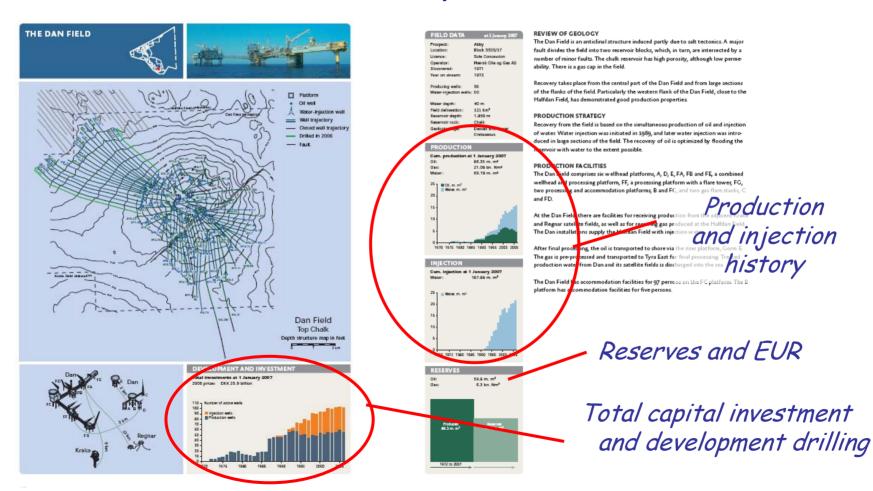
.. and projected

Table 7.5 Estimated investments in development projects, 2007-2011, DKK billion, 2006 prices

	2007	2008	2009	2010	2011
Ongoing and approved					
Adda		0.1	0.6	-	-
Alma		0.6	0.5	-	-
Boje		-	-	0.8	-
Cecilie		-	-	-	-
Dagmar	-	-	-	-	-
Dan	0.9	0.6	-	-	-
Elly	0.3	1.6	-	-	-
Gorm	0.1	0.0	-	-	-
Halfdan	2.0	0.9	0.1	-	-
Harald	0.0	0.1	-	-	-
Kraka	0.3	-	-	-	-
Lulita	-	-	-	-	-
Nini	0.1	-	-	-	-
Regnar		-	-	-	-
Roar	-	-	-	-	-
Rolf		-	-	-	-
Siri	0.3	-	-	-	-
Skjold		-	-	-	-
South Arne	0.8	-	-	-	-
Svend		-	-	-	-
Tyra	0.4	0.4	0.4	0.0	1.3
Tyra Southeast	0.5	-	-	-	-
Valdemar	1.6	0.7	-	-	-
Total	7.3	5.1	1.5	0.8	1.3
Planned	-	-	-	-	0.8
Possible	-	0.7	4.7	6.6	4.0
Expected	7.3	5.8	6.2	7.4	6.2

Denmark

Detail on field-by-field basis



Nova Scotia Summary

- Requirement for public Review of field developments
- Deep Panuke development recently submitted
 - > Approved Oct 3, 2007



Nova Scotia Deep Panuke





	F	90	1	P50	1	P10	Mean		
Year	(10 ⁶ sm3/d)	(MMsdd)	(10 ⁶ sm3/d)	(MMscfd)	(10 ⁶ sm3/d)	(MMscfd)	(10 ⁶ sm3/d)	(MMsefd)	
2010	5.7	202	5.7	201	5.7	202	5.7	201	
2011	8.5	300	8.4	300	8.5	300	8.5	300	
2012	7.0	249	8.5	300	8.4	300	8.2	291	
2013	4.5	159	6.4	228	8.4	300	6.2	219	
2014	3.1	110	4.8	171	7.7	275	5.0	177	
2015	2.2	79	3.8	136	6.0	213	4.0	143	
2016	1.6	58	3.1	110	4.7	168	3.4	119	
2017	1.3	45	2.5	90	4.1	145	2.7	97	
2018	1.1	40	2.1	76	3.3	118	2.3	81	
2019	0.0	0	1.6	58	2.9	103	1.9	67	
2020	0.0	0	1.5	52	2.4	86	1.6	55	
2021	0.0	0	1.5	52	2.1	73	1.3	47	
2022	0.0	0	1.3	45	1.7	62	1.3	45	
2023	0.0	0	1.1	40	1.6	55	1.1	41	
2024	0.0	0	0.0	0	1.4	50	0.0	0	
2025	0.0	0	0.0	0	1.4	51	0.0	0	
2026	0.0	0	0.0	0	1.3	47	0.0	0	
2027	0.0	0	0.0	0	1.2	41	0.0	0	
2028	0.0	0	0.0	0	1.1	38	0.0	0	

Nova Scotia Deep Panuke

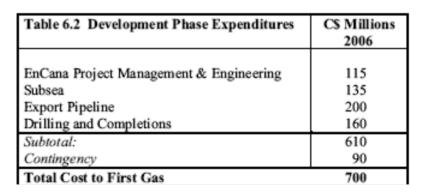
... and cost forecast by expenditure type

6.3.1 Development Phase Expenditures

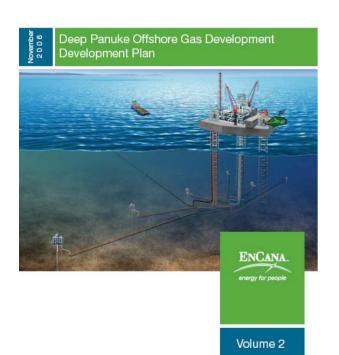
Estimates for the development phase include costs incurred by EnCana, as operator of the Project, from the fourth quarter 2006 to first gas production, scheduled to occur in the fourth quarter of 2010.

The costs shown in Table 6.2 are for the M&NP option, and exclude any costs associated with the MOPU, which will be included as operating costs payable during the production life of the Project.

The SOEP Subsea Option would see a reduction in the cost of the export pipeline during the Development Phase. However, there would be an increase in operating costs for tariffs charged as a result of using the SOEP pipeline. At this time, these costs are not defined.



Annual operating costs, including the field centre (MOPU) lease, are estimated at \$150 million per year, +/-25%.



Nova Scotia

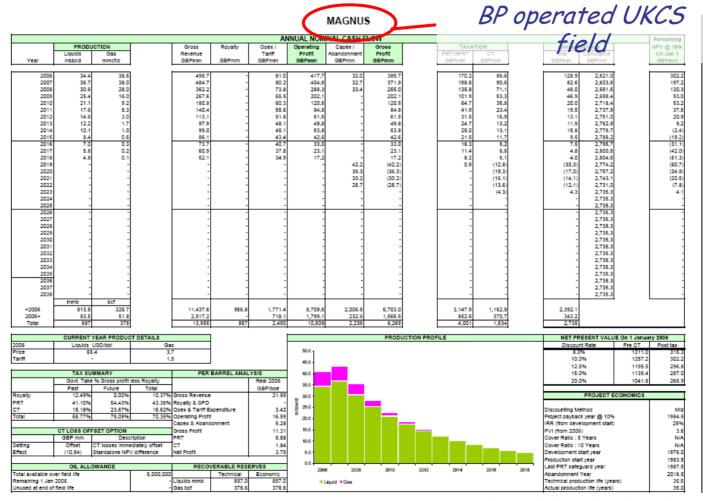
Deep Panuke approval explicitly requires continual update to cost information submitted with Annual Production Report

Condition 30: Submission of Economic Data

The Proponent shall inform the Board of any material changes to the cost information and production profiles that were submitted with the Development Plan. This information shall be included with the Annual Production Report. This should include details of the operating and capital expenditures for the previous two years, the current year and projections for the next two years as well as reserve revisions

Publicly Available Sources

Example detailed field cashflow available from Deloitte's subscription service



OIL PRICE (USD/bbil): 2005 - 65.59, 2007 - 59.00, 2008 - 54.00, 2009 - 49.00, 2010 - 43.00, Inflated thereafter @ 2.50% | EXCHANGE RATE (GSP--USD): 1.79 | INFLATION: 2.30%

Source: Deloitte Petroleum Services