

Ryder Scott Company Reserves Conference

May 6, 2005

“Internal Audits-Completing The Picture”

John E. Hodgins

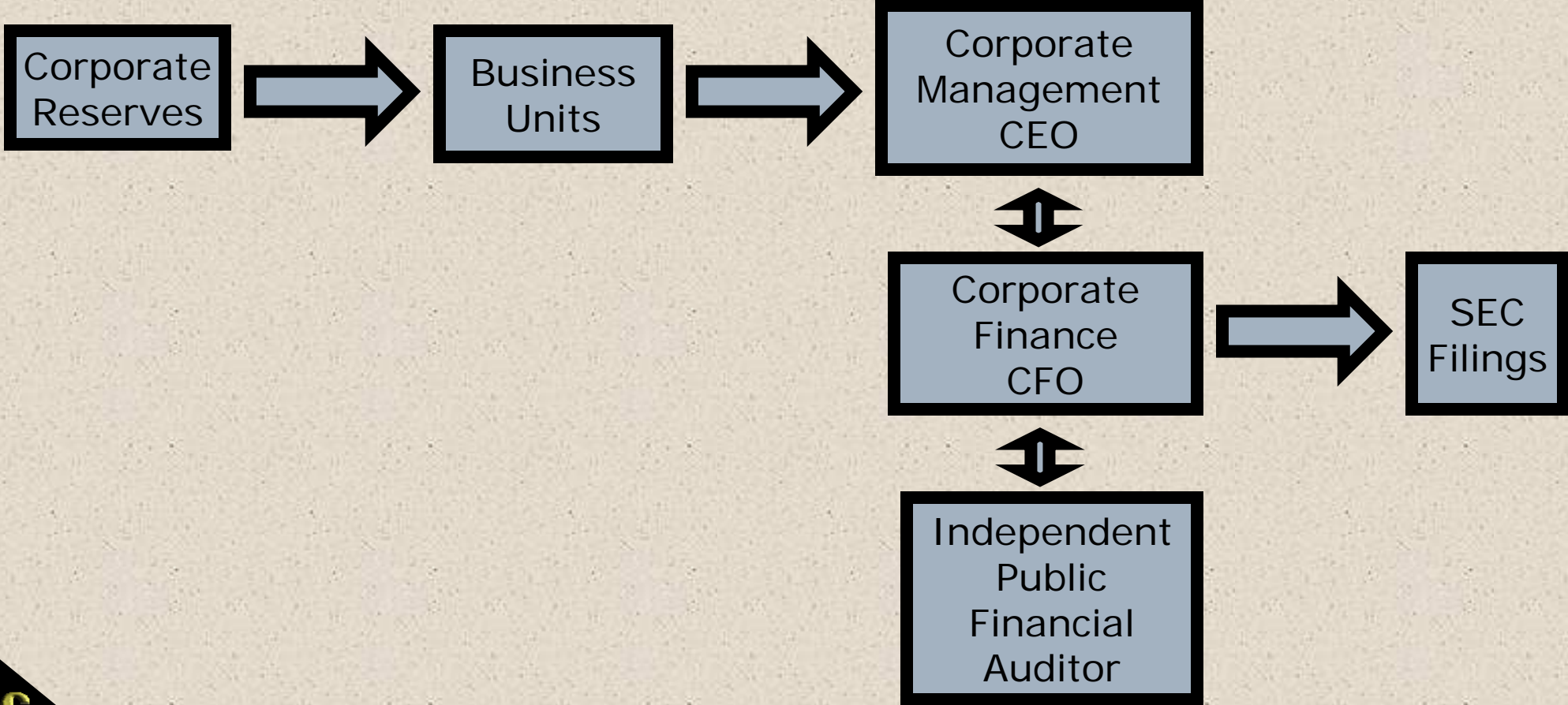
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Internal Reserves Reporting

The Old Structure



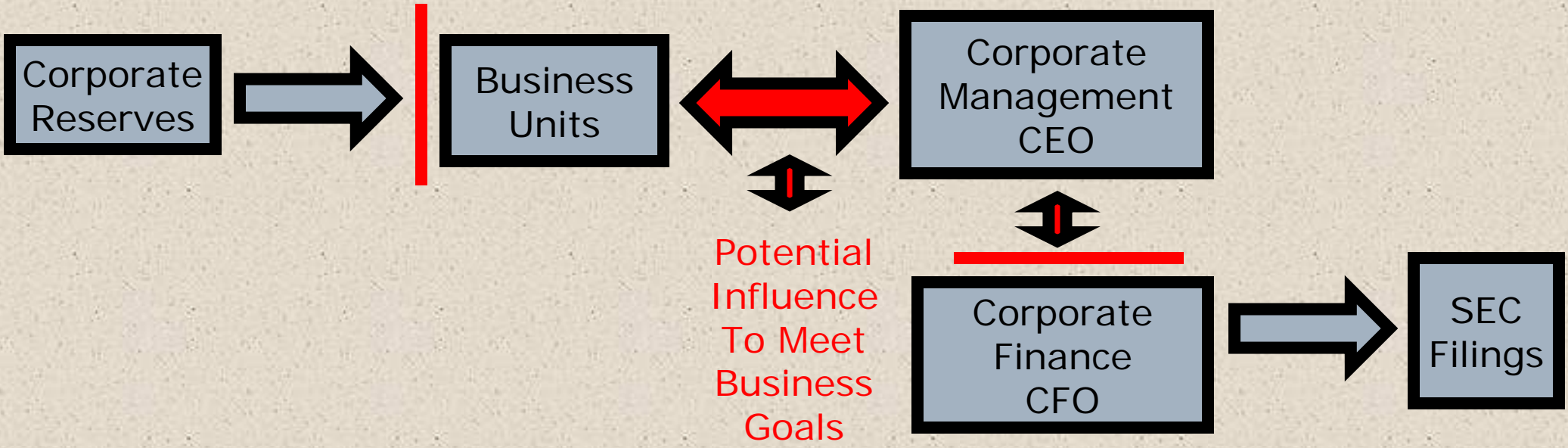
Shortcomings in the Internal Process Causing SEC Non-Compliance

- ❑ Increased demands for higher productivity within E&P companies may result in reduced training and evaluation time for those responsible for company reserve estimates
- ❑ Improper understanding/application of reserve definition guidelines
- ❑ Pressure from management to maximize proved reserve bookings with inadequate data
- ❑ Inadequate documentation for a “compelling case”
- ❑ Reserves based bonuses (Incentive Plans)
- ❑ Competition for capital between divisions/asset teams



Effects of Sarbanes-Oxley

The Old Structure



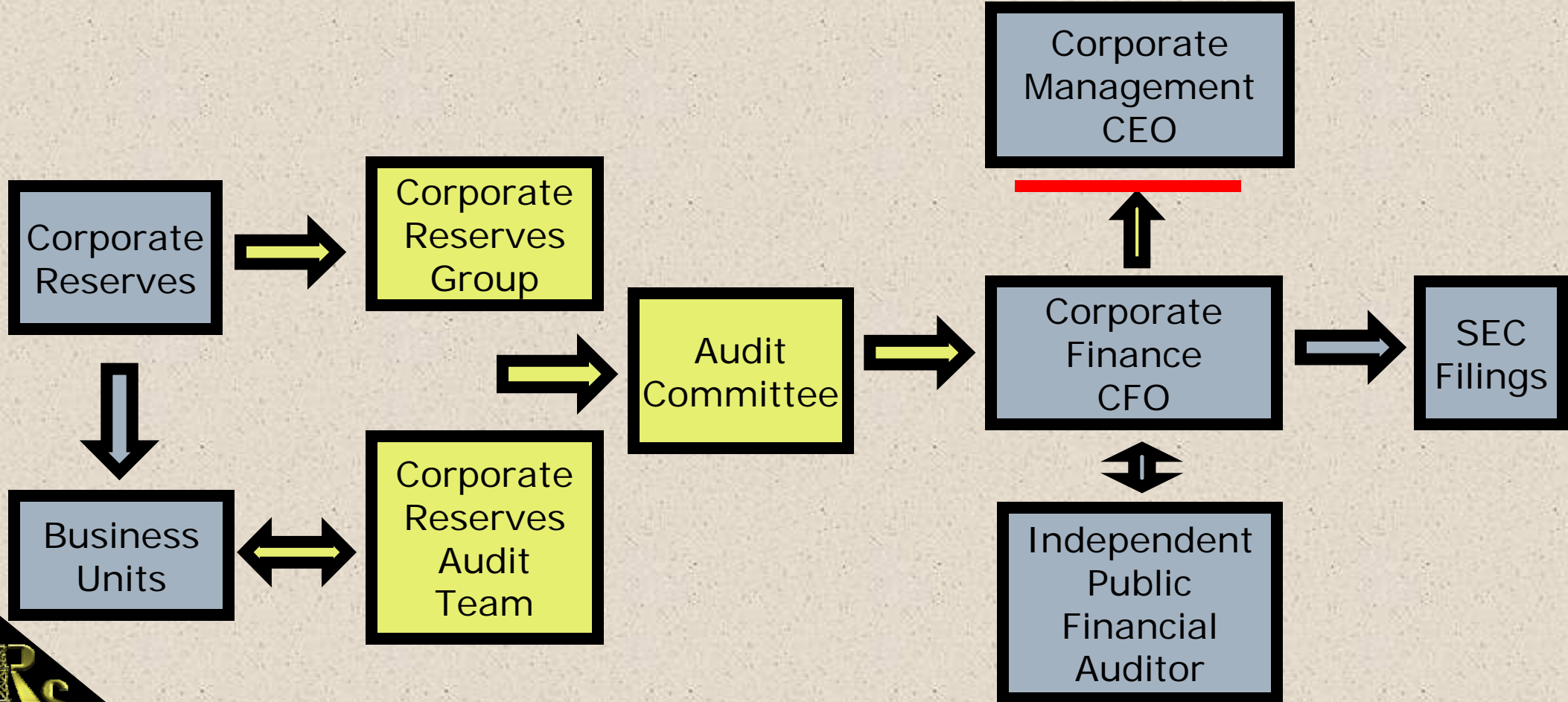
Establishing an Independent Internal Reserves Review Process

- ❑ Central reserve group to ensure compliance and consistency
- ❑ Establish an Internal Audit Committee
- ❑ Regular reporting to the Board of Directors, Audit Committee and Management
- ❑ Freedom from undue pressure from management



Internal Reserves Reporting

The New Structure



Having the Final Say On Reserve Compliance

- ❑ Company must clearly establish who has the final decision regarding reserve compliance
- ❑ SOX would imply that this would be the internal reserves team and the audit committee
- ❑ If technical reserves are estimated by the business units, the internal reserves team must be empowered to request changes in estimates as necessary to assure compliant reported reserves



Role of Internal Reserve Team as Auditors



A reserves audit is an examination of the work of others.

General Audit Guidelines

Audit Scope

The detailed scope will consist, but may not be limited to the following:

1. To appraise whether the proved reserves are in compliance with the internal reserve booking guidelines and the SEC requirements, including, but not limited to
 - a) Verification of the technical and commercial maturity
 - b) Commitment to future development
 - c) Reasonable certainty of the proved reserve estimates



General Audit Guidelines

Audit Scope (cont.)

2. To appraise whether the proved reserves are in compliance with FASB Statement and Financial Accounting Standards (SFAS69)
3. To ensure that the reserves have been estimated using industry accepted practices
4. To appraise whether there are sufficient documentation and work papers supporting the reported reserves



The Investigative Team: Finding the Right Watson for Sherlock

- Choosing the Correct Makeup of the Internal Reserves Team
 - Maximization of reserve value lies in the independent interpretation of relevant data by qualified individuals
 - Consideration should be given to the composition of the corporate reserve base
 - Selection of the team makeup should approximate the type of reserves to be audited
 - The team may need to include technical professionals from geoscience, simulation, operations, accounting and/or legal



Communicating the Guidelines

- ❑ Establish set of written internal reserve booking guidelines
- ❑ Update internal guidelines as appropriate to be compliant with the latest SEC guidance
- ❑ Assure understanding of reserve definitions and their application through continuing education
- ❑ Provide adequate training in accepted industry practices for evaluation of reserves



The PowerPoint Culture- Data Needs of Auditors

- ❑ Limited data requires a larger component of judgment and conservatism mandated by proved reserve definitions
- ❑ Auditors must have an adequate amount of quality data, subject the interpretation of that data to intense scrutiny, test the assumptions and results where necessary and call upon their experience to assure compliant reserve estimates



Information Required During the Audit

A. Reserves Based on Volumetric Estimates

1. Summary of volumetric parameters used in the determination of OIP volumes, recovery efficiencies and estimated ultimate recoverable reserves.
2. Copies of all supporting documentation such as maps.

B. Reserves Based on Performance Estimates

1. Field/reservoir/well production plots showing both historical data and extrapolations of projected future production by producing status category.
2. Copies of all supporting documentation such as pressure data.



Information Required (cont.)

C. Economic Data

1. Field development plans and future appraisal and development well locations.
2. Activity plan for the proved undeveloped reserves including status of project approvals by management, budgetary considerations, etc.
3. Economic data for the fields to be reviewed including support for OPEX and CAPEX.
4. Summary of transportation fees and market differentials.
5. Summary of gas contracts and plant contracts.
6. Summary of relevant PSA terms.

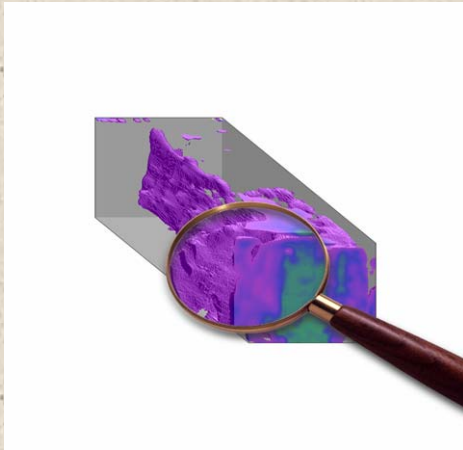


Creating Auditable Data and Workproduct Files

- ❑ Develop process for gathering, compiling and updating technical and financial data
- ❑ Maintain system of documentation supporting reserves reported to the SEC for any filing period
- ❑ Establish archival standards to preserve reserves documentation in a form that can be accessed and reviewed by authorized parties at any time



Compliance Beyond Reserves



- The recent focus has been on SEC compliant reserves volumes
 - Technical reserve issues at the field or reservoir level
-
- Obligations under SOX are not just limited to compliant reserve volumes



References to Oil and Gas Reserves in SOX

- What does SOX say about oil and gas reserves?
 - Nothing directly, but any reasonable reading of SOX and its intent clearly assumes that management takes steps to ensure that all ***financial reporting***, including ***future cash flow inflows from the production and sale of oil and gas***, provides information upon which the investor can rely.



Future Cash Inflows

Net Remaining Reserves

Oil/Condensate – Barrels
Gas – MCMF

Total Proved

22,341,935
173,163

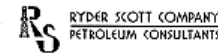
Income Data

Future Gross Revenue
Deductions
Future Net Income (FNI)
Discounted FNI @ 10%

\$1,155,337,598
402,028,407
\$ 753,309,191
\$ 528,243,627

Require

- Forecast of reserves
- Prices/Differentials, Costs



Example Cash Flow

ESTIMATED FUTURE RESERVES AND INCOME ATTRIBUTABLE TO CERTAIN LEASEHOLD AND ROYALTY INTERESTS AS OF JUNE 30, 2001
SEC CASE

TABLE 1

GRAND SUMMARY									
PROVED					TOTAL PROVED ALL CATEGORIES				
INITIAL FINAL REMARKS	REVENUE INTERESTS				PRODUCT PRICES			DISCOUNTED FUTURE NET INCOME - \$ MONTHLY COMPOUNDED	
	EXPENSE INTEREST	Oil/Condensate	Plant Products	Gas	Oil/Cond. Sbbbl	Plt Prod. Sbbbl	Gas S/MCF	8.00%	10.00%
PROCESSING FEES AND TRANSPORTATION FEES ARE SHOWN AS OTHER DEDUCTIONS.									
ESTIMATED 8/8 THIS PRODUCTION									
Period	Number of Wells	Oil/Cond. Barrels	Plant Products (Barrels)	Gas MCMCF	Oil/Cond. Barrels	Plant Products Barrels	Sales Gas MCMCF	Oil/Cond. Sbbbl	Gas S/MCF
2001	38	435,643	0	65,011	182,489	0	35,007	25.71	3.45
2002	49	1,248,535	0	126,745	505,565	0	46,457	25.68	3.41
2003	47	9,160,065	0	106,723	2,974,498	0	39,616	25.64	3.40
2004	38	14,461,573	0	60,866	3,944,209	0	16,302	25.55	3.36
2005	24	16,831,674	0	45,388	4,300,886	0	11,359	25.51	3.35
2006	16	10,945,208	0	30,377	2,818,521	0	3,758	25.50	3.35
2007	17	8,495,821	0	22,717	2,190,273	0	5,503	25.50	3.37
2008	15	7,493,036	0	13,470	1,941,803	0	3,404	25.50	3.40
2009	9	4,578,209	0	7,322	1,144,693	0	1,683	25.49	3.42
2010	7	2,201,481	0	3,467	526,526	0	875	25.49	3.41
2011	6	6,001,617	0	5,719	1,500,524	0	1,439	25.49	3.36
2012	3	1,317,755	0	1,181	329,439	0	294	25.49	3.35
2013	4	90,037	0	2,900	0	0	2,196	25.49	3.35
2014	2	0	0	7,980	0	0	1,995	0.00	3.35
2015	1	0	0	296	0	0	75	0.00	3.35
Sub-Total		83,566,654	0	507,042	22,341,935	0	173,163	25.54	3.40
Remainder		0	0	0	0	0	0	0.00	0.00
Total Future		83,566,654	0	507,042	22,341,935	0	173,163	25.54	3.40
Cumulative Ultimate		1,656,366	0	183,702	690,744				
		85,223,020	0	690,744					
COMPANY FUTURE GROSS REVENUE (FGR) - \$									
Period	From Oil/Cond.	From Plant Products	From Gas	Other	Total	Oil/Cond. - \$	Gas/Plt. - \$	FGR AFTER PRODUCTION TAXES-\$	
2001	4,672,051	0	113,930,634	0	118,602,685	49,843	501,803	118,071,039	
2002	12,981,082	0	156,568,910	0	171,549,992	77,760	837,478	170,634,754	
2003	76,261,513	0	135,365,388	0	211,626,941	48,214	694,146	210,384,481	
2004	100,793,319	0	54,717,490	0	155,510,809	23,165	481,628	155,006,016	
2005	109,736,924	0	38,081,542	0	147,818,466	28,537	363,548	147,426,381	
2006	71,885,057	0	29,288,104	0	101,207,251	38,192	362,508	100,806,551	
2007	54,829,609	0	18,562,000	0	73,391,614	24,474	345,549	73,021,591	
2008	49,520,335	0	11,558,748	0	61,079,083	3,229	87,168	60,988,686	
2009	29,179,048	0	5,760,574	0	34,939,622	4,149	69,890	34,865,583	
2010	13,422,261	0	2,980,361	0	16,402,622	5,672	85,974	16,310,976	
2011	38,248,694	0	4,830,190	0	43,078,884	1,606	24,348	43,055,330	
2012	8,397,390	0	989,943	0	9,387,333	0	0	9,387,333	
2013	573,761	0	7,363,539	0	7,937,300	0	0	7,937,300	
2014	0	0	6,692,384	0	6,692,384	0	0	6,692,384	
2015	0	0	248,593	0	248,593	0	0	248,593	
Sub-Total	570,511,044	0	588,975,435	0	1,159,486,479	304,841	3,854,040	1,155,337,598	
Remainder	0	0	0	0	0	0	0	0	
Total Future	570,511,044	0	588,975,435	0	1,159,486,479	304,841	3,854,040	1,155,337,598	
DEDUCTIONS - \$									
Period	Operating Costs	Ad Valorem	Development	Other	Total	FUTURE NET INCOME BEFORE INCOME TAXES-\$			
2001	2,800,276	30,603	28,192,615	4,366,587	35,018,334	Annual	Comtribution	Discounted @ 10.00 %	
2002	6,377,784	89,884	62,094,388	8,387,099	76,949,135	93,685,619	175,740,324	85,221,248	
2003	1,802,700	83,841	117,155,294	15,262,972	144,304,806	67,883,678	245,623,999	56,703,719	
2004	5,073,940	65,189	10,358,586	10,164,299	35,662,154	115,943,842	302,967,864	88,895,944	
2005	3,616,033	50,833	3,088,337	2,066,748	28,821,951	118,604,430	481,372,251	79,719,648	
2006	3,281,987	43,046	860,079	14,799,841	19,022,953	81,743,598	563,315,889	49,895,406	
2007	3,076,534	33,917	753,000	10,883,965	14,747,516	86,274,075	621,389,964	32,116,828	
2008	2,033,969	7,765	4,944,167	9,821,721	16,807,622	44,181,062	605,771,036	21,908,046	
2009	1,396,500	6,447	2,484,250	5,706,608	9,593,805	25,271,778	691,042,804	11,532,158	
2010	1,356,909	8,011	642,500	2,581,392	588,752	11,722,224	702,765,028	4,768,066	
2011	1,214,625	2,268	715,750	9,325,455	10,958,098	39,797,832	730,239,850	12,548,508	
2012	1,004,625	0	577,500	1,600,360	3,191,685	6,195,246	742,969,708	2,113,919	
2013	570,000	0	1,250,000	1,045,124	2,865,124	5,072,176	710,827,884	1,517,689	
2014	498,750	0	0	857,867	1,356,617	5,335,827	753,233,711	1,480,078	
2015	71,250	0	0	31,863	103,113	145,480	753,309,191	38,230	
Sub-Total	39,175,982	447,784	233,660,718	128,743,923	402,028,407	753,309,191	753,309,191	528,243,627	
Remainder	0	0	0	0	0	0	0	0	
Total Future	39,175,982	447,784	233,660,718	128,743,923	402,028,407	753,309,191	753,309,191	528,243,627	

THESE DATA ARE PART OF A RYDER SCOTT REPORT AND ARE SUBJECT TO THE CONDITIONS IN THE TEXT OF THE REPORT.

SEC Compliant SMOG

The Big Sticks



SEC



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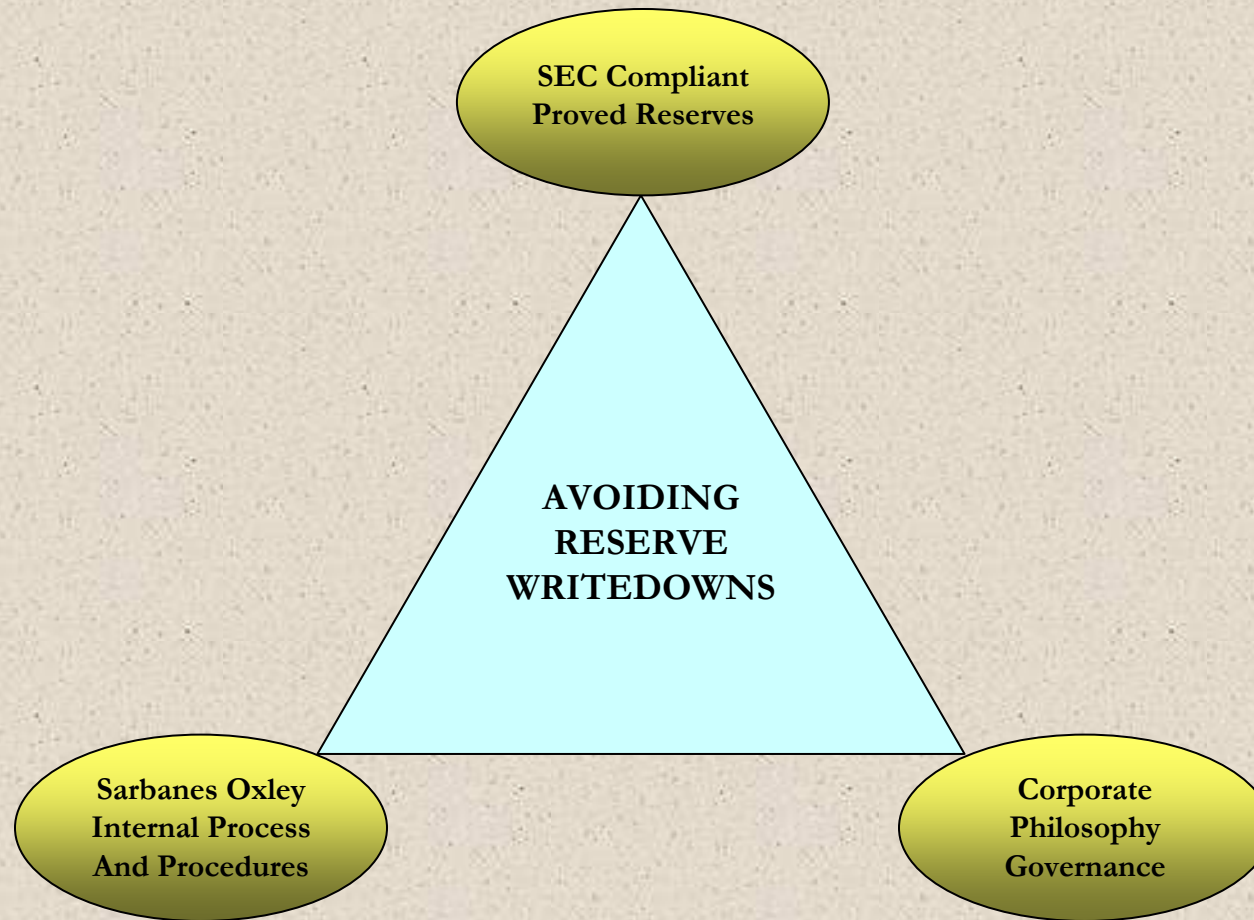
Key Elements For Future Audits

- Prices/Differentials
- Economic Limits
- CAPEX
- OPEX



Maintaining Balance

Tone At The Top



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Disclaimer

- The information presented in this presentation represents informed opinions about certain laws, regulations and interpretations but should not be considered as advice or counsel about any specific provision or topic.



Questions & Comments?

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Supplemental Information

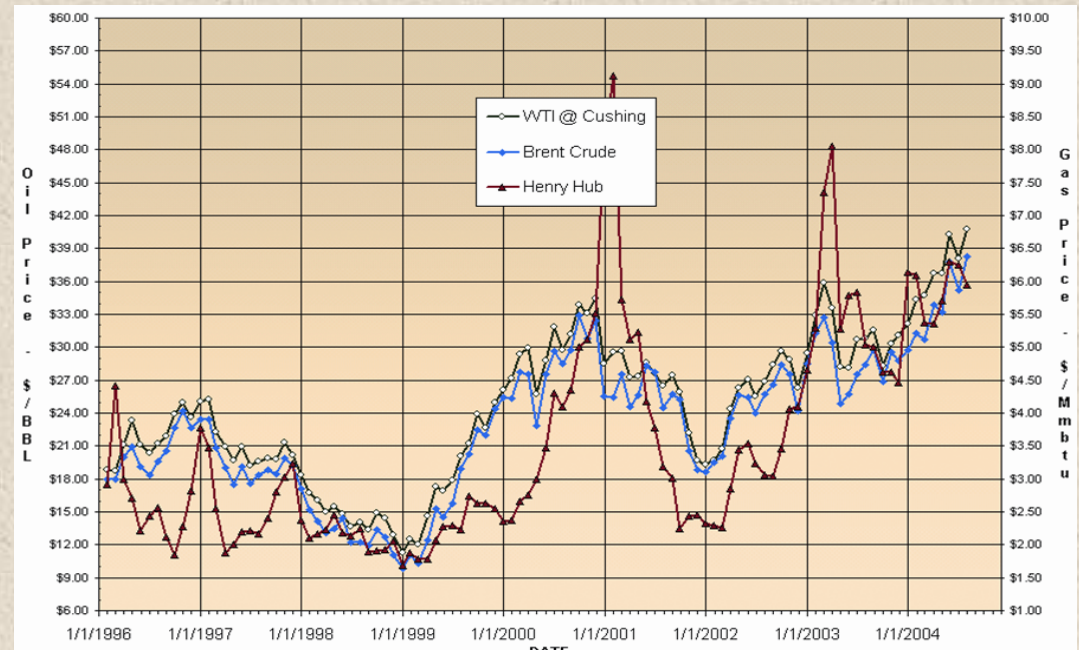
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Application of Year End Prices to Determine Future Cash Flows

- Are all SEC reserves “recalculated” after December 31 each year using year-end prices for all purposes? Revenues? Economic limits? PSC reserves?
If not, why not?
- How are pricing differentials calculated and documented?



Economic Limits

Proof of Commercial Reserves

- Reserves do not exist when the annual cash flow for a given well, lease, or field goes negative and stays negative.
- A new well, behind pipe zone, or project can only be booked if the cost forward economics are at least +\$1.00 undiscounted.
- Some projects may start negative due to up-front CAPEX and then turn positive but must show a profit for the entire project. (Waterfloods, New Platforms, etc)



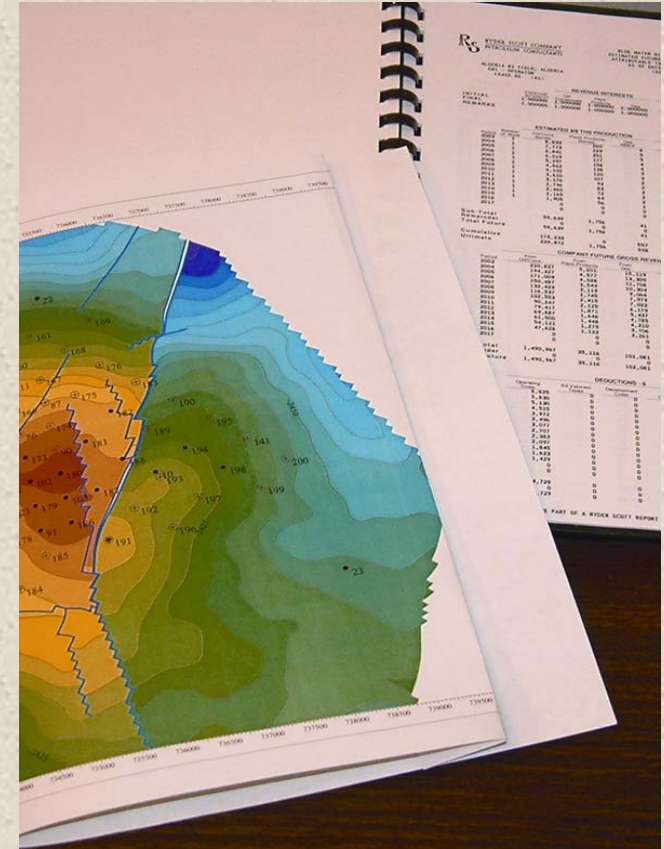
CAPEX

- How are CAPEX costs documented? Are they supported by AFEs?
- What documentation is available to support corporate commitment to finance and proceed with the project according to the schedule presented in the future cash flows?
- How are P&A costs determined? Onshore, Offshore? How are these future costs scheduled?



CAPEX

- Field development plans must be documented including delineation of specific future appraisal and development well locations
- Must substantiate CAPEX with an activity plan for proved undeveloped reserves including documentation of project approvals by management and the appropriate budgetary considerations



OPEX

- How are operating costs determined?
- The SEC definition of proved reserves is based on existing economic and operating conditions as of the date the estimate is made. How do you support changes in future operating costs as a result of a change in operations?
- Are overhead charges included?



OPEX

- Not defined by statute but must make reasonable attempt to capture all costs related to production
- Generally the average of past actual costs
- May exclude real non-recurring charges
- Non-operators must include COPAS as cost,
- Operators cannot include COPAS as revenue or offset to OPEX
- Must include appropriate overhead charges



OPEX

- Fixed and variable components are OK
 - Variable costs should not be tied to a cost per barrel or per MCF if you anticipate that current costs would increase based on a change in the costs related to total fluids or the need for chemicals or treatment costs
- Known reductions may be taken into account
 - Are these reductions supported by contracts?
 - Can variable costs be related to activity based cost centers?
 - Can future reductions in fixed costs be supported due to a change in operating conditions?



Standardizing Economic Calculations

- What economic software (Aries, OGRE, PhdWIN, proprietary, etc.) is used by the company?
- How are employees trained in the use of this software?
- How is this data base made secure?



Concept of “Reasonable Certainty”

- Uncertainty exists in estimating reserves
 - Depends primarily on the amount of reliable geologic and engineering data available at the time of the estimate
 - Depends on the interpretation of these data
 - Data must validate the key assumptions
- The same concepts must be applied to the determination of future cash inflows
 - Prices and costs must be supported by detailed accounting and contractual data

