

## **Energy Accounting Projects**

### *Project description*

There are a total of 5 projects available for students to complete. A copy of each project has been provided. All students are required to complete a Plant, Property, & Equipment project in pairs and two other projects individually. For the two other projects they can choose from four options. Students are encouraged to select a topic that interests them for their project or that they have seen on an internship and want to explore further.

These projects are designed to give students real world experience in applying the concepts we learn in class. The projects are modeled after projects I completed when working in public accounting and have been reviewed by Marathon to ensure they prepare students for their future careers. Students are provided with some assumption data and a formatted spreadsheet which they complete.

Instead of completing a project, students have the option of auditing a project completed by another student. Students selecting this option must have completed an audit internship. This custom option tailors the experience to the students' future career plans.

The project included was completed by one student and audited by another.

Aggie Oil, Inc.  
Reserves Disclosures  
December 31, 2011

Standardized measure of discounted future net cash flows

2011

	Field No. 1
Future cash inflows	\$ 2,649,751,332
Future production costs	(17,647,344)
Future development costs	(1,409,535,480)
Future income tax expenses	(440,124,653)
Future net cash flows	\$ 782,443,845

10% annual discount for estimated timing of cash flows  
Standardized measure of discounted future net cash flows

	(391,655,969) plug
	\$ 390,787,876

2010

Future cash inflows	\$ 2,360,771,211	given
Future production costs	(15,722,736)	given
Future development costs	(1,262,901,268)	given
Future income tax expenses	(389,572,994)	given
Future net cash flows	\$ 692,574,212	given
10% annual discount for estimated timing of cash flows	(344,728,371)	given
Standardized measure of discounted future net cash flows	\$ 347,845,841	given

Total BOE 2010

42,803,383 fr. "Calculation of Changes"

Principle sources of changes in standardized measure of discounted future cash flows:

Sales and transfers	330,705,228	fr. "Calculation of Changes"
Net change in price	464,076,382	fr. "Calculation of Changes"
Development costs	49,286,667	fr. "Assumptions"
Changes in estimates	-	given (none)
Extensions	-	given (none)
Revisions	40,112,479	fr. "Calculation of Changes" I
Accretion	3,789,458	given
Net change in income tax	(25,031,683)	fr. "Calculation of Changes"
Purchases and sales of mineral interest	(819,996,496)	plug J
Timing and other	42,942,035	Rd
Aggregate change in std meas	347,845,841	given
Std measure as of 12/31/10	390,787,876	fr. "12.31.2011 SMOG" X 16

This error was due to the error discussed in tickmark I of the "Calculation of Changes" tab. The client has agreed to correct this. The correct timing and other amount is explained below.

Sales and transfers	330,705,228	fr. "Calculation of Changes"
Net change in price	464,076,382	fr. "Calculation of Changes"
Development costs	49,286,667	fr. "Assumptions"
Changes in estimates	-	given (none)
Extensions	-	given (none)
Revisions	276,760,393	fr. "Calculation of Changes" I
Accretion	3,789,458	given
Net change in income tax	(25,031,683)	fr. "Calculation of Changes"
Purchases and sales of mineral interest	(1,056,644,410)	plug J
Timing and other	42,942,035	Rd

Aggie Oil, Inc.  
Reserves Disclosures  
December 31, 2011

Data for year ended December 31

	bbbls	Mcf	BOE	
Revenues	\$ 332,325,158	← 2,044,869	14,980,430	4,541,607.33 to "Calculation of Changes"
Production Expense	1,619,929.22			
Revenues less Production Expenses	\$ 330,705,228			to "Calculation of Changes"

Previously estimated development costs incurred

49,286,667 to "Disclosures"

Reserves Data as of December 31

	Reserves			Abandonment Net of Salvage
	bbbls	Mcf	BOE	
	to "12.31.2011 SMOG"	to "12.31.2011 SMOG"		to "12.31.2011 SMOG"
2012	2,175,600	15,229,200	4,713,800	\$4,400
2013	1,958,040	13,706,280	4,242,420	\$87,600
2014	1,762,236	12,335,652	3,818,178	\$44,600
2015	1,586,012	11,102,087	3,436,360	\$3,160
2016	1,427,411	9,991,878	3,092,724	\$92,260
2017	1,284,670	8,992,690	2,783,452	\$2,526
2018	1,156,203	8,093,421	2,505,107	\$4,240
2019	1,040,583	7,284,079	2,254,596	\$36,920
2020	936,524	6,555,671	2,029,136	\$85,380
2021	842,872	5,900,104	1,826,223	\$103,286
2022	758,585	5,310,094	1,643,600	\$32,470
2023	682,726	4,779,084	1,479,240	\$74,230
2024	614,454	4,301,176	1,331,316	\$3,080
2025	553,008	3,871,058	1,198,185	\$147,396
2026	497,707	3,483,952	1,078,366	\$1,098
2027	447,937	3,135,557	970,530	\$2,748
2028	403,143	2,822,002	873,477	\$1,910
2029	362,829	2,539,801	786,129	\$9,260
2030	326,546	2,285,821	707,516	\$269,904
2031	293,891	2,057,239	636,764	\$1,930
2032	264,502	1,851,515	573,088	\$27,396
2033	238,052	1,666,364	515,779	\$3,308
2034	214,247	1,499,727	464,201	\$57,294
2035	192,822	1,349,755	417,781	\$24,996
2036	173,540	1,214,779	376,003	\$10,602
2037	156,186	1,093,301	338,403	\$3,394
2038	140,567	983,971	304,562	\$326
2039	126,511	885,574	274,106	\$820
2040	113,860	797,017	246,696	\$9,262
2041	102,474	717,315	222,026	\$40
2042	92,226	645,583	199,823	\$200
2043	83,004	581,025	179,841	\$192
2044	74,703	522,923	161,857	\$640
2045	67,233	470,630	145,671	\$338
2046	60,510	423,567	131,104	\$1,484
2047	54,459	381,211	117,994	\$4,620
2048	49,013	343,090	106,194	\$10
2049	44,112	308,781	95,575	\$15,926
2050	39,700	277,902	86,017	\$44,200
2051	35,730	250,112	77,416	\$6
2052	32,157	225,101	69,674	\$2,492
2053	28,942	202,591	62,707	\$60
2054	26,047	182,332	56,436	\$14
2055	23,443	164,099	50,792	\$10
2056	21,098	147,689	45,713	\$8
2057	18,989	132,920	41,142	\$9,260
2058	17,090	119,628	37,028	\$2
2059	15,381	107,665	33,325	\$10
2060	13,843	96,899	29,992	\$90
2061	12,458	87,209	26,993	\$249,300
<b>Total</b>	<b>21,643,874</b>	<b>151,507,121</b>	<b>46,895,061</b>	<b>\$1,474,698</b>

to "Calculation of Changes" to "Calculation of Changes" to "Calculation of Changes"

Price per barrel  
Price per Mcf

\$91.38

\$4.44

to "12.31.2011 SMOG"

Additional Assumptions:

Lease Expense	0.35868%	of total revenue	X <sub>6</sub> to "12.31.2011 SMOG"
Severance & Advalorem Taxes	0.08098%	of total revenue	X <sub>7</sub> to "12.31.2011 SMOG"
Shipping & Handling Expense	0.22634%	of total revenue	X <sub>8</sub> to "12.31.2011 SMOG"
Total Capital	56.159%	to Development Costs (assumption expires at 1/1/2040 and at that point on is assumed to be zero)	X <sub>10</sub> to "12.31.2011 SMOG"
Adjusted Tax Rate	36%	Flows	X <sub>14</sub> to "12.31.2011 SMOG"

Total Proved - U.S. with AFL Cost and Tax Basis  
 2/9/09  
**Aggie Oil, Inc.**  
 Standard Measure of Discounted Future Net Cash Flows and Changes Therein Relating to Proved Oil & Gas Reserves  
 December 31, 2011

Indicates column values should be calculated using formulas

Date	Net Oil Reserves MMbbl (k2)	Oil Price \$/MMbbl (k2)	Net Oil Revenue \$	Net Gas Reserves mcf (k4)	Gas Price \$/mcf (k4)	Net Gas Revenue \$	Total Revenue \$(k5)	Lease Expense \$	50% & Ad Val Tax \$
Dec-12	2,175,600.00	\$91.38	198,906,328.00	15,229,200.00	4.44	67,541,502.00	266,347,830.00	955,236.40	2,155,688.47
Dec-13	1,958,040.00	\$91.38	178,925,695.20	13,706,280.00	4.44	60,787,311.80	239,713,007.00	859,807.76	1,941,119.63
Dec-14	1,762,236.00	\$91.38	161,033,125.68	12,335,652.00	4.44	54,708,616.62	215,741,742.30	773,822.48	1,747,607.69
Dec-15	1,586,012.40	\$91.38	144,929,813.11	11,102,086.80	4.44	49,237,754.96	194,167,568.07	696,440.23	1,572,396.90
Dec-16	1,427,411.16	\$91.38	130,436,831.80	9,991,978.12	4.44	44,313,979.46	174,750,811.26	626,796.21	1,411,533.21
Dec-17	1,294,670.04	\$91.38	117,993,148.62	8,992,950.31	4.44	39,882,581.52	157,875,720.14	564,116.59	1,272,861.89
Dec-18	1,156,203.04	\$91.38	105,659,833.74	8,093,421.28	4.44	35,964,157.16	141,548,157.12	507,704.93	1,145,635.70
Dec-19	1,040,582.74	\$91.38	95,088,450.38	7,284,079.15	4.44	32,904,891.03	127,993,341.41	456,934.44	1,031,693.13
Dec-20	936,524.46	\$91.38	85,579,605.34	6,555,671.23	4.44	29,074,401.93	113,240,997.27	411,240.99	927,846.82
Dec-21	842,872.02	\$91.38	76,919,480.33	5,900,104.11	4.44	26,166,961.73	103,188,606.54	370,116.89	83,562.13
Dec-22	758,584.81	\$91.38	69,319,480.33	5,310,093.70	4.44	23,550,265.56	92,869,745.89	333,105.20	75,205.92
Dec-23	682,726.33	\$91.38	62,387,532.20	4,779,084.33	4.44	21,195,239.00	83,582,771.30	299,794.68	67,685.33
Dec-24	614,453.70	\$91.38	56,148,719.07	4,301,175.90	4.44	19,075,715.10	75,224,494.17	269,815.22	60,916.80
Dec-25	553,008.33	\$91.38	50,539,901.16	3,871,058.31	4.44	17,168,143.59	67,702,044.75	242,833.69	54,825.12
Dec-26	497,707.50	\$91.38	45,480,511.04	3,483,952.48	4.44	15,451,329.23	60,931,840.28	218,550.32	49,342.60
Dec-27	447,936.75	\$91.38	40,932,459.94	3,135,557.23	4.44	13,906,196.31	54,838,656.25	196,695.29	44,408.34
Dec-28	403,143.07	\$91.38	36,839,213.95	2,822,001.51	4.44	12,515,576.68	49,342,490.62	177,025.76	39,967.51
Dec-29	362,828.77	\$91.38	33,155,292.52	2,539,801.36	4.44	11,264,019.01	44,419,311.56	159,323.19	35,970.76
Dec-30	326,545.89	\$91.38	29,839,763.30	2,285,821.22	4.44	10,137,617.11	39,977,880.41	143,590.87	32,373.68
Dec-31	293,891.30	\$91.38	26,855,786.97	2,057,239.10	4.44	9,123,855.40	35,977,880.41	129,051.78	29,136.31
Dec-32	264,502.17	\$91.38	24,170,208.27	1,851,515.19	4.44	8,211,469.86	32,381,678.13	116,146.60	26,222.68
Dec-33	238,051.95	\$91.38	21,753,187.44	1,666,563.67	4.44	7,390,322.87	29,143,510.32	104,511.94	23,600.41
Dec-34	214,246.76	\$91.38	19,577,868.70	1,499,727.30	4.44	6,651,290.59	26,229,195.28	94,078.75	21,240.37
Dec-35	192,822.08	\$91.38	17,620,081.83	1,349,754.57	4.44	5,987,545.37	23,600,243.37	84,670.87	19,116.34
Dec-36	173,539.87	\$91.38	15,858,073.65	1,214,779.11	4.44	5,387,545.37	21,240,519.02	76,203.79	17,204.70
Dec-37	156,185.89	\$91.38	14,272,266.28	1,093,501.20	4.44	4,848,790.84	19,121,015.12	68,583.41	15,484.23
Dec-38	140,567.30	\$91.38	12,845,039.65	983,971.08	4.44	4,363,911.75	17,208,951.41	61,725.07	13,995.81
Dec-39	126,510.57	\$91.38	11,560,595.69	885,573.97	4.44	3,927,520.58	15,488,056.27	55,522.56	12,542.23
Dec-40	113,859.51	\$91.38	10,404,482.12	797,016.58	4.44	3,534,768.52	13,993,290.64	49,997.30	11,288.01
Dec-41	102,473.56	\$91.38	9,364,033.91	717,144.92	4.44	3,181,291.67	12,545,325.58	44,997.82	10,159.20
Dec-42	92,226.20	\$91.38	8,427,630.52	645,983.43	4.44	2,863,162.50	11,290,793.02	40,497.82	9,143.28
Dec-43	83,003.58	\$91.38	7,584,867.46	581,025.08	4.44	2,576,846.25	10,161,713.72	36,448.03	8,228.96
Dec-44	74,703.23	\$91.38	6,826,380.72	522,922.58	4.44	2,319,161.63	9,145,542.34	32,803.23	7,406.06
Dec-45	67,292.90	\$91.38	6,143,742.65	470,630.32	4.44	2,087,245.46	8,230,988.11	29,522.91	6,665.45
Dec-46	60,509.61	\$91.38	5,529,368.38	423,567.29	4.44	1,878,520.92	7,407,899.30	26,570.62	5,998.91
Dec-47	54,458.65	\$91.38	4,976,431.54	381,210.56	4.44	1,690,668.83	6,667,100.37	23,913.56	5,359.02
Dec-48	49,012.79	\$91.38	4,478,788.39	343,089.50	4.44	1,521,601.94	6,000,390.33	21,522.20	4,859.12
Dec-49	44,111.51	\$91.38	4,030,909.55	308,780.55	4.44	1,369,441.75	5,400,351.30	19,369.98	4,373.20
Dec-50	39,700.36	\$91.38	3,627,818.60	277,502.50	4.44	1,232,492.57	4,880,316.17	17,432.98	3,935.88
Dec-51	35,730.32	\$91.38	3,255,036.74	250,117.25	4.44	1,109,247.82	4,374,294.55	15,688.68	3,542.30
Dec-52	32,157.29	\$91.38	2,938,533.06	225,101.02	4.44	998,323.03	3,936,656.10	14,120.72	3,188.07
Dec-53	28,941.56	\$91.38	2,644,679.76	202,590.92	4.44	898,490.73	3,543,170.49	12,708.64	2,869.26
Dec-54	26,047.40	\$91.38	2,380,211.78	182,531.83	4.44	808,641.66	3,188,853.44	11,437.78	2,582.33
Dec-55	23,441.66	\$91.38	2,142,190.60	164,088.76	4.44	721,777.49	2,869,968.09	10,294.00	2,324.10
Dec-56	21,098.40	\$91.38	1,927,971.54	147,688.78	4.44	654,999.74	2,582,976.02	9,264.60	2,091.69
Dec-57	18,988.56	\$91.38	1,735,174.39	132,919.90	4.44	593,499.77	2,324,674.16	8,338.14	1,882.52
Dec-58	17,089.70	\$91.38	1,561,656.95	119,627.91	4.44	530,549.79	2,092,206.74	7,504.33	1,694.27
Dec-59	15,380.73	\$91.38	1,405,491.25	107,665.12	4.44	477,494.81	1,882,986.07	6,735.89	1,524.84
Dec-60	13,842.66	\$91.38	1,264,942.13	96,898.61	4.44	429,765.33	1,694,687.46	6,078.50	1,372.36
Dec-61	12,458.39	\$91.38	1,138,447.92	87,208.75	4.44	386,770.80	1,525,218.71	5,470.65	1,235.12
Total	21,643,874	4,568	1,977,817,249	151,507,121	222	671,934,083	2,649,751,332	9,504,128	2,485,769

NPV @ 10%  
 1/1/2012  
 1/1/2013  
 TL

5 & H Exp	Total Prod Costs	Operating Cash Flow Prior to Dev.	Total Capital	Aband Net- of Salvage	Total Dev Costs	Net Cash Flows Before Taxes	Net Fed Inc Tax	Net Cash Flows After Taxes
\$	\$(A)	\$(A1)	\$	\$	\$(A2)	\$(A3)	\$(A5)	\$
602,871.68	1,773,876.55	264,573,953.45	148,582,086.52	4,000.00	148,586,886.52	115,887,486.93	41,755,488.10	74,231,978.84
542,566.31	1,596,488.89	228,116,558.11	133,723,877.87	87,600.00	133,811,477.87	104,905,090.74	37,549,828.89	66,755,251.95
488,309.86	1,436,840.00	214,300,160.30	120,351,490.08	44,600.00	120,396,090.08	93,808,812.22	33,807,172.40	60,101,639.82
439,478.87	1,293,156.00	192,874,412.07	108,316,341.07	3,160.00	108,319,501.07	84,554,910.99	30,439,767.96	54,115,143.04
395,530.99	1,163,840.00	173,586,970.86	97,484,706.97	92,280.00	97,576,986.97	76,010,003.89	27,363,601.40	48,646,402.49
355,972.89	1,047,456.36	156,228,273.77	87,736,236.27	2,526.00	87,738,762.27	68,489,511.51	24,656,224.14	43,933,287.36
320,380.10	942,710.73	140,656,466.40	78,962,812.64	36,920.00	78,999,732.64	61,638,593.75	22,189,929.75	39,448,700.00
288,342.09	848,439.65	126,544,901.76	71,066,351.36	93,920.00	71,159,271.36	55,643,330.38	19,958,986.94	31,901,001.82
259,507.88	763,595.69	113,890,411.58	63,959,716.24	85,380.00	64,045,096.24	49,845,315.34	16,140,562.33	28,639,977.88
233,557.09	687,236.12	102,501,370.42	57,563,744.62	103,286.00	57,667,030.62	40,411,393.23	14,548,101.56	25,663,291.66
210,201.38	618,512.51	92,251,233.38	51,807,370.15	32,470.00	51,839,840.15	36,325,246.90	13,077,088.89	23,248,158.02
189,181.24	556,661.26	83,026,110.04	46,626,633.14	74,230.00	46,700,863.14	32,756,449.21	11,792,321.72	18,715,155.39
170,263.12	500,995.13	74,723,499.04	41,963,969.83	3,080.00	41,967,049.83	29,356,180.29	10,561,024.91	16,981,837.22
153,236.81	450,895.62	60,526,034.22	37,767,572.84	147,396.00	37,914,968.84	26,534,120.66	9,552,283.44	15,981,837.22
137,913.31	405,806.06	54,472,430.80	30,591,734.00	2,748.00	30,594,482.00	23,878,948.80	8,596,921.57	15,881,837.22
124,221.81	365,225.45	49,026,087.72	27,532,560.60	1,910.00	27,534,470.60	21,491,617.12	7,736,982.16	15,881,837.22
111,709.63	329,624.42	44,123,478.95	24,779,304.54	9,280.00	24,788,584.54	19,334,914.41	6,960,569.19	15,881,837.22
90,484.80	295,832.62	39,711,311.05	22,301,374.09	9,280.00	22,310,654.09	17,139,852.96	6,170,347.07	15,881,837.22
81,436.32	259,624.42	35,740,017.95	20,071,236.68	2,748.00	20,074,000.68	15,666,851.27	5,066,822.57	15,881,837.22
73,292.69	215,661.28	32,166,016.15	18,064,113.01	27,396.00	18,091,509.01	14,074,507.14	4,567,825.74	15,881,837.22
59,367.37	194,095.78	28,949,414.54	16,257,701.71	3,308.00	16,261,009.71	12,688,404.83	4,097,489.12	15,881,837.22
53,430.27	174,666.20	26,054,473.88	14,631,931.54	24,996.00	14,656,927.54	11,365,247.54	3,691,904.90	15,881,837.22
48,007.33	157,212.58	23,449,025.78	13,168,738.39	9,280.00	13,178,018.39	10,255,291.39	3,326,996.39	15,881,837.22
43,278.60	127,346.24	21,104,123.20	11,851,864.55	10,602.00	11,862,466.55	9,241,656.65	2,996,509.96	15,881,837.22
38,950.74	114,611.62	18,997,108.88	10,666,678.08	3,364.00	10,670,042.08	8,323,638.78	2,687,841.26	15,881,837.22
31,550.10	103,150.45	15,384,905.81	8,640,009.25	820.00	8,640,829.25	7,494,003.51	2,382,507.89	15,881,837.22
28,395.09	92,835.41	12,461,773.71	7,359,552.76	40.00	7,359,602.76	6,744,076.56	2,145,750.38	15,881,837.22
25,555.58	75,196.68	11,215,596.34	6,420.00	192.00	6,420.00	5,839,933.03	1,925,445.23	15,881,837.22
23,000.02	67,677.01	10,094,036.70	5,960,010.28	9,280.00	5,969,290.28	5,423,132.31	1,722,146.73	15,881,837.22
20,700.02	60,909.31	9,084,633.03	5,484.00	338.00	5,484.00	5,068,417.73	1,564,252.48	15,881,837.22
18,630.02	54,818.38	8,176,169.73	5,060,427.73	4,620.00	5,065,047.73	4,738,746.46	1,406,932.07	15,881,837.22
16,767.02	49,336.54	7,359,552.76	4,620.00	10.00	4,620.00	4,451,145.82	1,267,024.67	15,881,837.22
15,090.31	44,402.89	6,672,697.48	4,200.00	6.00	4,200.00	4,093,924.09	1,127,212.57	15,881,837.22
13,581.28	39,962.60	5,960,427.73	3,800.00	15,926.00	3,800.00	3,633,784.09	1,005,917.33	15,881,837.22
12,223.16	35,966.34	5,364,384.96	3,420.00	44,200.00	3,420.00	3,270,237.49	893,778.07	15,881,837.22
11,000.84	32,369.71	4,871,946.46	3,000.00	6.00	3,000.00	2,852,507.89	798,578.54	15,881,837.22
9,900.76	29,132.74	4,346,151.82	2,492.00	2,492.00	2,492.00	2,327,265.07	708,177.43	15,881,837.22
8,910.68	26,212.46	3,910,636.64	2,000.00	60.00	2,000.00	1,884,540.22	624,882.85	15,881,837.22
8,019.05	23,597.52	3,519,572.97	1,400.00	14.00	1,400.00	1,367,601.67	554,540.22	15,881,837.22
6,495.89	21,237.76	3,167,615.67	1,000.00	8.00	1,000.00	1,026,303.88	482,975.46	15,881,837.22
5,646.30	19,113.99	2,850,854.11	800.00	10.00	800.00	788,177.43	417,956.37	15,881,837.22
5,261.67	17,202.59	2,565,768.70	600.00	9,260.00	600.00	605,991.90	352,567.74	15,881,837.22
4,735.50	15,482.33	2,309,191.83	400.00	2.00	400.00	381,310.84	297,078.64	15,881,837.22
4,261.95	13,934.10	2,078,472.64	200.00	10.00	200.00	168,310.84	141,077.18	15,881,837.22
3,835.76	12,540.69	1,870,445.38	90.00	90.00	90.00	125,760.76	107,718.94	15,881,837.22
3,452.18	11,286.62	1,683,400.84	0	249,300.00	249,300.00	1,255,760.76	810,086.88	15,881,837.22
3,097.447	10,157.96	1,515,060.76	0	0	0	0	0	15,881,837.22
	17,647,344	2,632,103,988	1,408,060,782	1,474,638	1,409,535,480	1,222,568,508	440,124,651	782,443,85

This is calculating NPV of the cash flows from each year - do not change any of these formulas

9,301,879  
8,371,609

1,387,376,605  
1,248,626,762

776,770,548  
698,608,781

610,606,057  
550,017,981

219,818,180  
198,006,473

390,787,876  
352,011,508

Total Proved - U.S. with AFL Cost and Tax Basis  
2/9/09

**Agri Oil, Inc.**  
Detailed Schedule of Discounted Future Net Cash Flows and Changes Therein Relating to Proved Oil & Gas Reserves  
December 31, 2011

**Net Change in Price and Production Costs**

As of December 31, 2011	Values	BOE	Price per BOE
Future cash inflows from production	A \$ 390,787,876		
Future production costs	B \$ 9,201,879		
Future production costs	C 381,485,998	46,895,061	"Assumption"

Less:  
Portion attributable to estimation and discoveries  
Purchases of reserves in place

As of December 31, 2010	Future cash inflows from production	Future production costs	Price change per equivalent unit (BOE)
	\$ 2,340,771,211	\$ (15,722,780)	\$ 2,345,048,474
	\$ 2,345,048,474	\$ 42,803,383	\$ 2,345,048,474
	\$ 2,345,048,474	\$ 42,803,383	\$ 2,345,048,474

Less: Amounts related to sales of reserves in place  
Beginning of year amounts before revisions

**Net Change for Quantity Revisions**

As of December 31, 2010	Values	BOE	Price per BOE
Revisions as of December 31, 2010	137,710,539	123,307,423	38,261,776
Production	21,643,334	151,907,231	46,895,061
Sales of reserves in place	3,313,336	28,179,698	8,633,286

Less:  
Purchases of reserves in place  
Estimation and discoveries  
Revisions as of December 31, 2011  
Revisions of previous estimates  
SMOG changes due to revisions of previous estimates  
Revisions of previous quantity estimates  
Average price at the end of the year  
Changes in SMOG due to revisions of estimates - undiscounted  
Less: Discount  
Changes in SMOG due to revisions of estimates - discounted  
Average discount rate

**Changes Attributable to Net Change in Income Taxes**

As of December 31, 2011	Values	BOE	Price per BOE
Discounted	194,796,497	389,572,994	8,633,286
Undiscounted	440,324,641	880,645,988	8,633,286
Total	635,121,138	1,270,218,982	8,633,286

Future income taxes estimated at December 31, 2010  
Future income taxes estimated at December 31, 2011

As of December 31, 2010	Future cash inflows from production	Future production costs	Price change per equivalent unit (BOE)
	\$ 1,082,147,206	\$ (618,070,524)	\$ 1,082,147,206
	\$ 1,082,147,206	\$ (618,070,524)	\$ 1,082,147,206
	\$ 1,082,147,206	\$ (618,070,524)	\$ 1,082,147,206

TL

User entered an erroneous future cash inflows from production from "discounted net cash flows after tax" in the "12/31/2011 SMOG" tab. Client should have reviewed future cash inflows from production from "total revenue" in the "12/31/2011 SMOG" tab. This was discussed with the client and they have agreed to change amount to \$2,692,711,232.

A Change amount to \$2,692,711,232  
 "Total Revenue" \$ 390,787,876 future cash inflows from production provided by client  
 "Future Cash Inflows" \$ 2,692,711,232 future cash inflows from production calculated by auditor  
 "Future Production Costs" \$ (2,298,963,455) A

This error was due to the client using "discounted total production costs" from the "12/31/2011 SMOG" tab instead of "undiscounted total production costs" in the "12/31/2011 SMOG" tab. This was discussed with the client and they have agreed to change amount to \$17,647,244.

B The 12/31/2011 SMOG tab. This was discussed with the client and they have agreed to change amount to \$17,647,244.  
 "Future Production Costs" \$ 9,201,879 future production costs provided by client  
 "Future Production Costs" \$ 17,647,244 future production costs calculated by auditor  
 "Future Production Costs" \$ (8,345,465) B

C This error was due to the errors discussed in items A and B. Client has agreed to change these amounts. The correct total is shown below.  
 "Future Cash Inflows" \$ 2,692,711,232  
 "Future Production Costs" \$ (17,647,244)  
 "Future Production Costs" \$ 2,692,710,988 C

D This error was due to the errors discussed in items A and B. Client has agreed to change these amounts. The correct price per BOE is shown below.  
 "Future Cash Inflows" \$ 2,692,710,988  
 "Future Production Costs" \$ 56,13735 D

E This error was due to the errors discussed in items A and B. Client has agreed to change these amounts. The correct total is shown below.  
 "Future Cash Inflows" \$ 2,632,103,988  
 "Future Production Costs" \$ 330,705,228  
 "Future Production Costs" \$ 2,962,809,216 E

F This error was due to the errors discussed in items A and B. Client has agreed to change these amounts. The correct price per BOE is shown below.  
 "Future Cash Inflows" \$ 57,6011 F

G This error was due to the errors discussed in items A and B. Client has agreed to change these amounts. The correct price change per equivalent BOE is shown below.  
 "Future Cash Inflows" \$ 57,6011  
 "Future Production Costs" \$ 54,2785  
 "Future Production Costs" \$ 2,81 G

H This error was due to the errors discussed in items A and B. Client has agreed to change these amounts. The correct price change per equivalent BOE - discounted is shown below.  
 "Future Cash Inflows" \$ 120,473,913  
 "Future Production Costs" \$ (15,664,951)  
 "Future Production Costs" \$ 68,808,948 H

I This error was due to the errors discussed in items A and B. Client has agreed to change these amounts. The correct price change in SMOG due to revisions of estimates - discounted is shown below.  
 "Future Cash Inflows" \$ 633,786  
 "Future Production Costs" \$ 56,13735  
 "Future Production Costs" \$ 484,549,996  
 "Future Production Costs" \$ (207,804,603)  
 "Future Production Costs" \$ 276,745,393 I