Rating: Buy
S&P 500: 1098

Occidental Petroleum
Oil Rich

Symbol	OXY	*Ebitda Next Twelve Months ending 6/30/05 (US$mm)*	6,000
Rating	Buy	*North American Natural Gas/Ebitda (%)*	11
Price (US$/sh)	50.60	*Natural Gas and Oil Production/Ebitda (%)*	90
Pricing Date	8/20/04	*Adjusted Reserves/Production NTM*	11.1
Shares (mm)	399	*EV/Ebitda*	4.5
Market Capitalization (US$mm)	20,200	*PV/Ebitda*	6.1
Debt (US$mm)	6,900	*Undeveloped Reserves (%)*	21
Enterprise Value (EV) (US$mm)	27,000	*Natural Gas and Oil Ebitda (US$/boe)*	27.10
Present Value (PV) (US$mm)	36,800	*Present Value Proven Reserves(US$/boe)*	13.40
Net Present Value (US$/share)	75	*Present Value Proven Reserves(US$/mcfe)*	2.23
Debt/Present Value	0.19	*Earnings Next Twelve Months (US$/sh)*	7.01
McDep Ratio - EV/PV	0.74	*Price/Earnings Next Twelve Months*	7
Dividend Yield (%/year)	2.2	*Indicated Annual Dividend (US$/sh)*	1.10

Note: Estimated cash flow and earnings tied to one-year futures prices for oil and natural gas.
Reported results may vary widely from estimates. Estimated present value per share revised only infrequently.

Summary and Recommendation

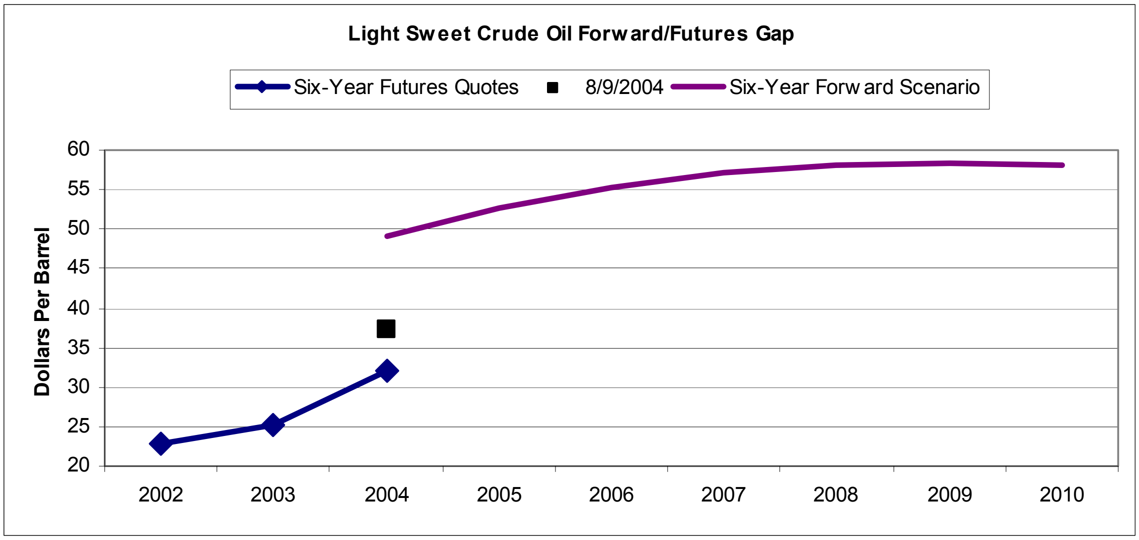
We continue a Buy rating on the common shares of **Occidental Petroleum (OXY)** for concentration on long-life, politically safe, U.S. oil and gas reserves. A wide market inconsistency has developed between oil futures that average $38 a barrel for delivery over the next six years and stock price of Oxy and other producers. By a discounted cash flow rationale we suggest Oxy stock is priced for a constant real benchmark oil price of just $25 a barrel. The probability of oil returning to $25 seems slim to none, while the probability of Oxy stock moving higher over the next few years seems strong.

Moderate Oil Price Scenario

The value of the company depends in large part on the future price of crude oil. Publicly traded in the commodity markets, futures contracts for delivery over the next six years continue in a steep uptrend. Whether the trend will slow for awhile we cannot know. Our scenario is that a move that began in the low $20 and is now in the upper $30 could reach $50 (see chart).

To construct the scenario we assumed oil would peak in 2010 at $50 in 2003 dollars. That is more moderate than the peak in early 1981 at more than $80 in 2003 dollars. Then we applied 3% per year inflation and calculated six-year averages to build a forward curve.

Economics support the price trends. Oil demand is strong with world economic growth paced by developing countries, especially China. Supply growth is limited as spare capacity has virtually disappeared. The largest producing fields in the Middle East are now mature. It will take time, large amounts of capital and a secure political climate to boost producing rates.



Monetary factors favor oil investment as interest rates below inflation drive investors to real assets for protection against the dollar losing value. If similar past periods are any guide, the authorities may not raise interest rates above inflation for the rest of the decade.

Environmental factors favor higher oil and gas price. Coal is still a quarter of world primary energy supply. Cleaner oil and gas are undervalued as long as we tolerate environmentally disadvantageous coal.

Political factors favor higher oil price in consuming countries and producing countries. Consuming governments often resort to artificial forces to hold down oil price that can appear to work temporarily.

In producing countries we have seen time and again that oil production goes down when international oil companies are not welcome. After Iran, Iraq and Venezuela, now Saudi Arabia appears vulnerable to political change that may bring about production decline.

Too much of a gain in oil price might cause problems of economic adjustment though we think much of the concern expressed is exaggerated and biased against a vital industry. We are grateful that the bias is not as ferocious as it was thirty years ago when it was manifested in a windfall profits tax and price controls. Nonetheless we have a threshold of 60% gain in monthly price compared to a year earlier when we start to become concerned about weak demand for oil. October futures currently under $47 a barrel would have to remain above $52 for the 60% threshold to be breached.

One-Year Futures Point to Higher Cash Flow and Profits

As our next twelve months (NTM) cash flow model moves ahead to the period ending June 30, 2005 expectations also advance mainly because of advancing one-year futures. We relate natural gas and oil price to the quotes for commodities traded on the New York Mercantile Exchange (see table Next Twelve Months Operating and Financial Estimates).

Occidental Petroleum
Next Twelve Months Operating and Financial Estimates

	Q1 3/31/04	*Q2 6/30/04*	*Q3E 9/30/04*	*Q4E 12/31/04*	***Year 2004E***	*Q1E 3/31/05*	*Q2E 6/30/05*	***Next Twelve Months 6/30/05***
Volume								
Natural Gas (mmcfd)								
U.S. (or North America)	527	513	513	513	**518**	513	513	**513**
Overseas (or Int'l)	86	129	129	129	**119**	129	129	**129**
Total	613	642	642	642	**637**	642	642	**642**
Oil (mmb)	40	40	40	40	**161**	40	40	**161**
Oil (mbd)	441	440	440	440	**441**	440	440	**440**
Total gas & oil (mmb)	49	50	50	50	**200**	49	50	**200**
Total gas & oil (mbd)	543	547	547	547	**546**	547	547	**547**
Price								
Natural gas ($/mcf)								
Henry Hub ($/mmbtu)	5.64	6.10	5.62	6.06	**5.85**	6.75	5.98	**6.10**
U.S. (or North America)	5.00	4.90	4.51	4.87	**4.82**	5.43	4.80	**4.90**
Overseas (or Int'l)	2.07	1.82	2.30	2.30	**2.13**	2.30	2.30	**2.30**
Total	4.59	4.28	4.07	4.35	**4.32**	4.80	4.30	**4.38**
Oil ($/bbl)								
WTI Cushing	35.23	38.34	44.17	45.25	**40.74**	43.66	42.29	**43.84**
Worldwide	31.36	34.25	39.46	40.43	**36.39**	39.01	37.78	**39.17**
Total gas & oil ($/bbl)	30.64	32.58	36.52	37.62	**34.36**	37.01	35.44	**36.65**
Revenue ($mm)								
Natural Gas								
U.S. (or North America)	240	229	213	230	**911**	251	224	**918**
Overseas (or Int'l)	16	21	27	27	**92**	27	27	**108**
Total	256	250	240	257	**1,003**	277	251	**1,026**
Oil	1,258	1,372	1,597	1,636	**5,864**	1,545	1,513	**6,291**
Other	1,089	1,147	1,147	1,147	**4,531**	1,147	1,147	**4,589**
Total	2,603	2,769	2,985	3,041	**11,398**	2,969	2,912	**11,907**
Expense								
Fixed	214	224	224	224	**887**	224	224	**897**
Variable	214	224	254	262	**954**	252	244	**1,012**
Other	974	997	997	997	**3,966**	997	997	**3,989**
Ebitda ($mm)								
Exploration and Production	1,086	1,173	1,359	1,407	**5,026**	1,346	1,296	**5,409**
Other	115	150	150	150	**565**	150	150	**600**
Total Ebitda	1,201	1,323	1,509	1,557	**5,591**	1,496	1,446	**6,009**
Exploration	54	40	40	40	**174**	40	40	**160**
Deprec., Deplet., & Amort.	325	325	325	325	**1,300**	325	325	**1,300**
Ebit	822	958	1,144	1,192	**4,117**	1,131	1,081	**4,549**
Interest	71	62	62	62	**257**	62	62	**248**
Ebt	751	896	1,082	1,130	**3,860**	1,069	1,019	**4,301**
Income Tax	263	314	379	396	**1,351**	374	357	**1,505**
Net Income ($mm)								
Exploration and Production	750	814						
Other	50	85						
Unallocated	(312)	(316)						
Total	488	583	704	735	**2,509**	695	662	**2,796**
Shares (millions)	397	399	399	399	**399**	399	399	**399**
Per share ($)	1.23	1.46	1.76	1.84	**6.29**	1.74	1.66	**7.01**
Ebitda Margin (E&P)	72%	72%	74%	74%	**73%**	74%	73%	**74%**
Tax Rate	35%	35%	35%	35%	**35%**	35%	35%	**35%**

Investors who want calendar year estimates can find 2004 in the table. For 2005 we suggest using the next twelve months as a rough estimate. Estimates can change frequently along with oil markets.

Present Value at Real Price and Real Return

NTM estimates determine to a large extent the first year of projected cash flow that we discount to present value (see table Present Value of Oil and Gas Reserves). The calculation is set up on the basis of a barrel of proven reserves, 0.79 developed and 0.21 undeveloped.

While there are many assumptions that could be discussed, discount rate and oil price are especially important. Price escalation and discount rate interact. In this case we make the simplification of dealing in constant dollars. That assumes price escalation, cost escalation and discount rate are all net of inflation.

Occidental Petroleum
Present Value of Oil and Gas Reserves

Volume Decline (%/yr):	8	Nymex Oil Price Post 2005 ($/bbl)	35
Volume Enhancement (%/yr):	4	Price/Nymex Post 2005 (%):	93
Variable Cost (%):	17	Real Discount Rate (%/yr):	7.0
Capex/Cash Flow (%):	10		

Year	Basic (bbl)	Volume Enhanced (bbl)	Total (bbl)	Price ($/bbl)	Revenue ($)	Fixed Cost ($)	Var. Cost ($)	Cash Flow ($)	Cap Ex ($)	Free CF ($)	Disc Factor	Present Value ($)
Total 2005 through 2024; years ending on 6/30												
	0.791	0.210	1.000	33.01	33.02	5.38	5.61	22.03	1.21	20.82	0.64	13.40
2005	0.081	0.000	0.081	36.65	2.96	0.27	0.50	2.19	0.22	1.97	0.97	1.90
2006	0.074	0.004	0.078	32.69	2.54	0.27	0.43	1.84	0.18	1.65	0.90	1.50
2007	0.068	0.007	0.075	32.69	2.44	0.27	0.42	1.76	0.18	1.58	0.84	1.34
2008	0.062	0.010	0.072	32.69	2.35	0.27	0.40	1.68	0.17	1.51	0.79	1.19
2009	0.057	0.012	0.069	32.69	2.26	0.27	0.38	1.61	0.16	1.45	0.74	1.07
2010	0.052	0.015	0.066	32.69	2.17	0.27	0.37	1.53	0.15	1.38	0.69	0.95
2011	0.047	0.016	0.064	32.69	2.09	0.27	0.36	1.47	0.15	1.32	0.64	0.85
2012	0.043	0.018	0.061	32.69	2.01	0.27	0.34	1.40	0.00	1.40	0.60	0.84
2013	0.040	0.016	0.056	32.69	1.84	0.27	0.31	1.26	0.00	1.26	0.56	0.71
2014	0.036	0.015	0.051	32.69	1.68	0.27	0.29	1.13	0.00	1.13	0.53	0.59
2015	0.033	0.014	0.047	32.69	1.54	0.27	0.26	1.01	0.00	1.01	0.49	0.50
2016	0.030	0.013	0.043	32.69	1.41	0.27	0.24	0.90	0.00	0.90	0.46	0.41
2017	0.028	0.012	0.039	32.69	1.29	0.27	0.22	0.80	0.00	0.80	0.43	0.34
2018	0.026	0.011	0.036	32.69	1.18	0.27	0.20	0.71	0.00	0.71	0.40	0.29
2019	0.023	0.010	0.033	32.69	1.08	0.27	0.18	0.63	0.00	0.63	0.37	0.24
2020	0.021	0.009	0.030	32.69	0.99	0.27	0.17	0.55	0.00	0.55	0.35	0.19
2021	0.020	0.008	0.028	32.69	0.91	0.27	0.15	0.48	0.00	0.48	0.33	0.16
2022	0.018	0.007	0.025	32.69	0.83	0.27	0.14	0.42	0.00	0.42	0.31	0.13
2023	0.016	0.007	0.023	32.69	0.76	0.27	0.13	0.36	0.00	0.36	0.29	0.10
2024	0.015	0.006	0.021	32.69	0.69	0.27	0.12	0.31	0.00	0.31	0.27	0.08

For discount rate we use a 7% real return per year on an unlevered basis. That means a buyer who pays present value would earn 7% per year above inflation if all the projections were to materialize as stated.

First year oil price is from the futures market. We hold it constant at an arbitrary level thereafter. The assumed price listed in the upper right hand corner is the commonly quoted benchmark Light, Sweet Crude. A price of $35 a barrel leads to present value of future cash flow from a barrel of reserves equal to $13.40 (see box in right hand column).

Present Value per Barrel Leads to Present Value per Share

We illustrate the calculation of Net Present Value (NPV) in a sensitivity table where each column is headed by a different oil price (see table Net Present Value Calculation). Oil price corresponds to present value per barrel which then leads step by step to the final result. The price of $35 a barrel corresponds to our standardized present value of $75 a share. In reverse fashion, for a present value of $51, the current stock price, the corresponding constant real oil price would be $25.

Occidental Petroleum
Net Present Value Calculation

Constant Oil Price ($/bbl):	25	35	40	50
Present Value per Barrel ($):	9.50	13.40	15.40	19.40
Oil and Gas Reserves (million barrels equivalent):	2,470	2,470	2,470	2,470
Present Value of Oil and Gas Reserves ($mm):	23,500	33,100	38,040	47,900
Present Value of Other Businesses ($mm):	3,700	3,700	3,700	3,700
Total Present Value ($mm):	27,200	36,800	41,740	51,600
Debt ($mm):	6,900	6,900	6,900	6,900
Present Value of Equity ($mm):	20,300	29,900	34,840	44,700
Shares (mm):	399	399	399	399
Net Present Value ($/sh):	51	75	87	112

Oxy Has Quality Characteristics

On our favorite valuation measure, the McDep Ratio, we can be more confident of Oxy's prospects than has been the case for a long time. We can justify the denominator of the ratio with current six-year futures compared to earlier this year when our estimate of present value was more anticipatory. Not only is the ratio at 0.74 well below an attractive buy marker of 0.8, the ratio of debt to present value at a modest 0.19 is below the median of its group. For many years when Oxy stock underperformed, it was overleveraged in our opinion.

The valuable oil properties Oxy acquired in California and Texas before the oil price turned contribute to a longer than average adjusted reserve life index of 11.1 years. While that would justify a higher than average unlevered cash flow multiple, EV/Ebitda, Oxy's stock price implies just an average multiple of 4.5 times. That multiple is so unusually low it must mean that most investors expect oil price to crumble.

Concentration on production is 90%, not quite pure, but not far from it. A modest proportion of reserves reported as undeveloped probably errs on the side of conservative. A single digit price/earnings multiple and a 2.2% dividend yield are more than competitive.

Kurt H. Wulff, CFA

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