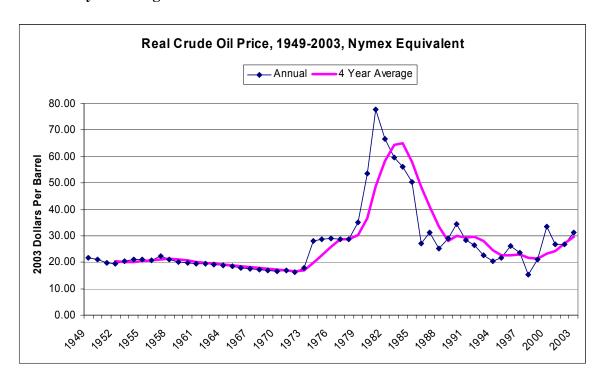
Oil Looks Higher

Summary and Recommendation

Despite risk of a seasonal decline from current levels, oil price looks higher than widely perceived for the next decade. Measured by the four-year average, oil climbed from \$17 a barrel in 1973 to \$65 in 1984 and slid to \$21 in 1999 (see chart). At \$30 a barrel last year we seem to be only a few dollars and a few years into a new climb that may see the real price of oil double again. The fundamental business cycle also appears to be working as price is increasing to encourage investment in new capacity. In an ironic sidelight to the new cycle, the leader of oil producer Libya appears to be working to bring back the companies that were thrown out three decades ago including our buy recommendations **ConocoPhillips (COP)** and **Marathon (MRO)**.

New Oil Cycle Rising



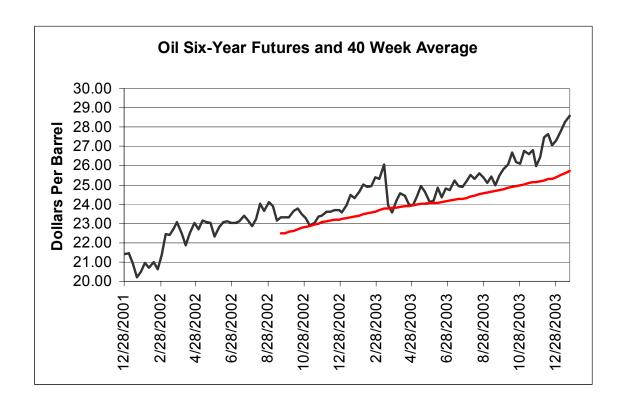
To build the price chart we took Energy Information Administration data for the average domestic first purchase price for crude oil for the U.S. from 1949 to 1976 and for Texas thereafter. We used the Texas data rather than the national data after 1976 because new

A Weekly Analysis of Energy Stocks Using the McDep Ratio January 21, 2004

volumes from Alaska made the national data less representative of the single grade of crude oil quoted on the New York Mercantile Exchange (Nymex). We further scaled up the historical data by 9.8% to make it more comparable to the Nymex pricing point for West Texas Intermediate grade delivered to Cushing, Oklahoma. The suspiciously smooth trends through 1973 and from 1974 to 1978 are partly due to import quotas and then price controls. Finally we adjusted nominal price to real price in constant 2003 dollars using the consumer price index from the Bureau of Labor Statistics.

A rising oil price trend can be even more powerful than it looks. The futures market regularly indicates lower future prices. Wall Street oil analysts and investment strategists typically forecast oil price declines. A change in mentality from decline to just moderate advance would have a magnified impact on the valuation of oil and gas producers.

Kurt H. Wulff, CFA



A Weekly Analysis of Energy Stocks Using the McDep Ratio January 21, 2004

Table 1-1
Energy Producers
Rank by McDep Ratio: Market Cap and Debt to Present Value

			Price			Net		
			(\$/sh)		Market	Present	Debt/	
	Symbol/		20-Jan	Shares	Cap	Value	Present	McDep
	Rat	ing	2004	(mm)	(\$mm)	(\$/sh)	Value	Ratio
Mega Cap								
Exxon Mobil Corporation	XOM		40.88	6,652	272,000	43.00	0.08	0.95
Total S.A.	TOT		91.50	1,261	115,400	105.00	0.17	0.89
BP plc	BP		48.76	3,682	180,000	60.00	0.13	0.84
Royal Dutch/Shell	RD	В	48.01	3,473	167,000	60.00	0.17	0.83
ChevronTexaco Corporation	CVX	В	86.03	1,064	91,500	115.00	0.17	0.79
Total or Median					826,000		0.17	0.84
Producer/Refiners - Large Cap and	-							
Kinder Morgan, Inc.	KMI	S	60.44	124	7,520	14.00	0.80	1.67
Imperial Oil Limited (30%)	IMO		48.17	111	5,350	43.00	0.12	1.11
Murphy Oil Corporation	MUR		64.10	93	5,950	62.00	0.20	1.03
Petro-Canada	PCZ		52.32	265	13,860	54.00	0.12	0.97
Valero Energy Corporation	VLO		52.10	120	6,250	55.00	0.42	0.97
Suncor Energy	SU		26.84	475	12,750	30.00	0.12	0.91
ENI S.p.A.	E		94.98	755	71,700	108.00	0.16	0.90
Petroleo Brasileiro S. A.	PBR		34.11	1,096	37,400	40.00	0.28	0.89
ConocoPhillips	COP	В	66.57	680	45,300	88.00	0.33	0.84
PetroChina Company Ltd (10%)	PTR	В	51.75	176	9,100	65.00	0.09	0.81
Marathon Oil Corporation	MRO	В	34.12	310	10,580	47.00	0.27	0.80
Norsk Hydro ASA	NHY	В	65.60	257	16,860	95.00	0.19	0.75
Lukoil Oil Company	LUKOY	В	100.00	211	21,000	140.00	0.07	0.73
Total or Median					264,000		0.19	0.90
Independent Natural Gas and Oil								
Pogo Producing Company	PPP		47.37	64	3,030	50.00	0.10	0.95
Apache Corporation	APA		42.40	324	13,700	47.00	0.19	0.92
Occidental Petroleum Corp.	OXY		44.38	391	17,400	50.00	0.26	0.92
CNOOC Limited (19%)	CEO	В	41.84	78	3,270	48.00	-	0.87
XTO Energy Inc.	XTO	В	27.75	186	5,170	33.00	0.19	0.87
Canadian Natural Resources Limited	CNQ		53.96	137	7,390	72.00	0.34	0.83
Unocal Corporation	UCL		38.66	273	10,600	52.00	0.28	0.82
Encana Corporation	ECA	В	43.31	470	20,400	56.00	0.19	0.82
Pioneer Natural Resources Company	PXD		33.05	119	3,930	45.00	0.26	0.80
Burlington Resources	BR	В	58.45	201	11,700	80.00	0.21	0.78
Anadarko Petroleum Corp.	APC	В	52.16	251	13,100	76.00	0.26	0.77
Devon Energy	DVN		60.10	241	14,500	90.00	0.30	0.77
Total or Median					124,000		0.23	0.83
Service								
Baker Hughes Inc.	BHI		34.14	336	11,500	30.00	0.07	1.13
Halliburton Company	HAL		28.40	435	12,400	28.00	0.28	1.01
Schlumberger Ltd.	SLB		55.63	585	32,500	60.00	0.17	0.94
Total or Median					56,000		0.17	1.01

Buy/Sell rating after symbol: B - Buy, S - Sell

McDep Ratio = Market cap and Debt to present value of oil and gas and other businesses

A Weekly Analysis of Energy Stocks Using the McDep Ratio January 21, 2004

Table 1-2
Energy Producers
Rank by EV/Ebitda: Enterprise Value to Earnings Before Interest, Tax, Deprec.

			Price				Divd or	
			(\$/sh)	EV/	EV/		Distrib	PV/
	Symbol/		20-Jan	Sales	Ebitda	P/E	NTM	Ebitda
	Ra	ting	2004	NTM	NTM	NTM	(%)	NTM
Mega Cap								
Exxon Mobil Corporation	XOM		40.88	1.2	8.1	16	2.4	8.4
Total S.A.	TOT		91.50	1.2	7.2	14	3.8	8.1
BP plc	BP		48.76	0.9	6.8	14	3.2	8.1
Royal Dutch/Shell	RD	В	48.01	1.0	6.2	13	4.6	7.4
ChevronTexaco Corporation	CVX	В	86.03	0.9	5.8	10	3.4	7.3
Median				1.0	6.8	14	3.4	8.1
Producer/Refiners - Large Cap and	Mid Cap							
Kinder Morgan, Inc.	KMI	S	60.44	3.0	12.9	19	2.6	7.7
Imperial Oil Limited (30%)	IMO		48.17	1.4	8.2	16	1.4	7.4
Murphy Oil Corporation	MUR		64.10	1.6	7.7	19	1.2	7.5
Suncor Energy	SU		26.84	2.9	7.6	14	0.6	8.4
Valero Energy Corporation	VLO		52.10	0.3	6.6	10	0.9	6.9
ConocoPhillips	COP	В	66.57	0.7	5.8	9	2.6	6.9
ENI S.p.A.	E		94.98	1.6	5.7	12	4.6	6.3
Marathon Oil Corporation	MRO	В	34.12	0.4	5.5	12	2.9	6.9
Petro-Canada	PCZ		52.32	1.7	5.1	15	0.6	5.3
PetroChina Company Ltd (10%)	PTR	В	51.75	2.7	4.8	10	3.9	5.9
Petroleo Brasileiro S. A.	PBR		34.11	1.8	4.4	6	3.0	4.9
Norsk Hydro ASA	NHY	В	65.60	0.8	4.3	11	2.4	5.7
Lukoil Oil Company	LUKOY	В	100.00	0.9	3.9	6	2.6	5.4
Median				1.6	5.7	12	2.6	6.9
Independent Natural Gas and Oil								
CNOOC Limited (19%)	CEO	В	41.84	4.8	6.1	12	3.8	7.0
XTO Energy Inc.	XTO	В	27.75	4.2	5.6	10	0.1	6.4
Pioneer Natural Resources Company	PXD		33.05	3.9	5.4	14	-	6.7
Encana Corporation	ECA	В	43.31	2.6	5.4	13	0.7	6.6
Occidental Petroleum Corp.	OXY		44.38	2.5	5.3	9	2.3	5.8
Unocal Corporation	UCL		38.66	2.5	5.2	11	2.1	6.3
Anadarko Petroleum Corp.	APC	В	52.16	3.7	5.2	9	1.1	6.7
Apache Corporation	APA		42.40	3.6	5.1	10	0.6	5.5
Burlington Resources	BR	В	58.45	3.6	5.0	10	1.0	6.4
Canadian Natural Resources Limited	CNQ		53.96	3.3	4.7	10	0.8	5.6
Devon Energy	DVN		60.10	2.8	4.2	7	-	5.4
Pogo Producing Company	PPP		47.37	2.8	4.0	9	0.4	4.2
Median				3.4	5.2	10	0.8	6.4
Service								
Baker Hughes Inc.	BHI		34.14	2.3	12.4	32	1.3	11.0
Halliburton Company	HAL		28.40	1.0	12.3	26	1.8	12.1
Schlumberger Ltd.	SLB		55.63	2.8	10.0	34	1.3	10.7
Median				2.3	12.3	32	1.3	11.0

EV = Enterprise Value = Market Cap and Debt; Ebitda = Earnings before interest, tax, depreciation and amortization; NTM = Next Twelve Months Ended December 31, 2004; P/E = Stock Price to Earnings; PV = Present Value of oil and gas and other businesses

A Weekly Analysis of Energy Stocks Using the McDep Ratio January 21, 2004

Table 1-3
Energy Producers
Determinants of Present Value

	Symbol/ Ra	ting	NG & O Prod/ Ebitda (%)	N. Am. Gas/ Ebitda (%)	Adjusted Reserves/ Prod NTM	PV/ Ebitda NTM	NG&O Ebitda/ mcfe	McDep Ratio 20-Jan 2004
Mega Cap		O		. ,				
Royal Dutch/Shell	RD	В	74	6	8.4	7.4	2.92	0.83
Total S.A.	TOT		76	1	9.3	8.1	2.80	0.89
BP plc	BP		79	13	10.3	8.1	3.13	0.84
ChevronTexaco Corporation	CVX	В	78	12	10.5	7.3	2.78	0.79
Exxon Mobil Corporation	XOM		74	12	11.3	8.4	3.02	0.95
Median			76	12	10.3	8.1	2.92	0.84
Producer/Refiners - Large Cap and M	lid Cap							
Valero Energy Corporation	VLO		-	-		6.9		0.97
Kinder Morgan, Inc.	KMI	S	-	-		7.7		1.67
Petro-Canada	PCZ		82	24	7.2	5.3	2.16	0.97
Murphy Oil Corporation	MUR		93	30	7.3	7.5	3.43	1.03
Norsk Hydro ASA	NHY	В	67	-	8.9	5.7	1.08	0.75
Marathon Oil Corporation	MRO	В	74	27	9.0	6.9	2.81	0.80
Petroleo Brasileiro S. A.	PBR		93	-	9.9	4.9	2.47	0.89
ENI S.p.A.	Е		56	-	9.9	6.3	2.52	0.90
Imperial Oil Limited (30%)	IMO		72	19	10.2	7.4	2.29	1.11
ConocoPhillips	COP	В	74	17	11.2	6.9	2.70	0.84
PetroChina Company Ltd (10%)	PTR	В	78	-	16.0	5.9	3.94	0.81
Suncor Energy	SU		93	9	19.0	8.4	3.07	0.91
Lukoil Oil Company	LUKOY	В	49	-	20.0	5.4	0.80	0.73
Median			74	-	9.9	6.9	2.52	0.90
Independent Natural Gas and Oil								
Pogo Producing Company	PPP		100	36	5.8	4.2	3.43	0.95
Canadian Natural Resources Limited	CNQ		100	51	7.2	5.6	2.56	0.83
Devon Energy	DVN		100	68	7.5	5.4	3.81	0.77
Apache Corporation	APA		100	46	8.1	5.5	3.54	0.92
Unocal Corporation	UCL		100	35	8.4	6.3	3.22	0.82
Encana Corporation	ECA	В	98	72	9.0	6.6	2.72	0.82
XTO Energy Inc.	XTO	В	100	88	9.5	6.4	3.94	0.87
Anadarko Petroleum Corp.	APC	В	100	60	10.1	6.7	3.33	0.77
Pioneer Natural Resources Company	PXD		100	66	10.3	6.7	3.01	0.80
Burlington Resources	BR	В	100	73	10.4	6.4	3.35	0.78
CNOOC Limited (19%)	CEO	В	100	-	10.7	7.0	3.63	0.87
Occidental Petroleum Corp.	OXY		90	19	10.9	5.8	3.65	0.92
Median			100	56	9.3	6.4	3.39	0.83

A Weekly Analysis of Energy Stocks Using the McDep Ratio January 21, 2004

Table 2-1
Independent Natural Gas and Oil Producers - Small Cap
Rank by McDep Ratio: Market Cap and Debt to Present Value

		Price			Net		
		(\$/sh)		Market	Present	Debt/	
	Symbol/	20-Jan	Shares	Сар	Value	Present	McDep
	Rating	2004	(mm)	(\$mm)	(\$/sh)	Value	Ratio
Short Life							
Spinnaker Exploration Company	SKE	33.50	33.9	1,140	28.00	0.08	1.18
Southwestern Energy Company	SWN	23.43	36.0	840	21.00	0.28	1.08
Western Gas Resources	WGR	48.85	37.0	1,810	50.00	0.17	0.98
Energy Partners Ltd.	EPL	14.50	39.1	567	15.00	0.18	0.97
Newfield Exploration Company	NFX	46.77	56.0	2,620	52.00	0.24	0.92
Chesapeake Energy Corporation	CHK	13.64	220	3,000	18.00	0.35	0.84
Stone Energy Company	SGY	43.70	26.6	1,160	58.00	0.23	0.81
Westport Resources Corporation	WRC	31.25	68.0	2,130	42.00	0.22	0.80
Range Resources Corporation	RRC	10.60	57.0	600	15.00	0.32	0.80
Cimarex Energy Company	XEC B	27.50	42.0	1,160	35.00	0.00	0.79
Denbury Resources Inc.	DNR	14.22	55.7	790	20.00	0.25	0.78
St. Mary Land and Exploration Compan	SM	30.44	29.0	880	43.00	0.12	0.74
Forest Oil Corporation	FST	28.05	49.0	1,370	45.00	0.30	0.73
The Houston Exploraton Company	THX	37.50	31.0	1,160	55.00	0.13	0.72
Total or Median				19,200		0.23	0.81
Long Life							
Ultra Petroleum Corp.	UPL	25.24	78.0	1,970	16.00	0.08	1.53
Unit Corporation	UNT	25.56	43.7	1,120	22.00	0.02	1.16
Penn Virginia Corporation	PVA	60.10	9.1	550	56.00	0.17	1.06
Quicksilver Resources Inc.	KWK	37.23	23.0	860	37.00	0.25	1.00
Berry Petroleum Company	BRY	20.49	22.1	453	22.00	0.12	0.94
Swift Energy Company	SFY	19.00	27.4	520	22.00	0.37	0.92
Evergreen Resources, Inc.	EVG	34.73	44.0	1,530	42.00	0.12	0.85
Encore Acquisition Corp.	EAC B	25.75	30.3	781	33.00	0.13	0.81
Magnum Hunter Resources, Inc.	MHR	9.37	68.0	640	15.00	0.38	0.77
Vintage Petroleum, Inc.	VPI	13.45	63.0	850	27.00	0.32	0.66
Total or Median				9,300		0.15	0.93
Micro Cap							
Abraxas Petroleum Corporation	ABP	1.78	35.8	64	1.00	0.84	1.13
Purcell Energy, Ltd. (US\$)	PEL.TO	2.00	48.0	96	2.80	0.28	0.79
· · · · · /							

Buy/Sell rating after symbol: B - Buy, S - Sell

McDep Ratio = Market cap and Debt to present value of oil and gas and other businesses

A Weekly Analysis of Energy Stocks Using the McDep Ratio January 21, 2004

Table 2-2
Independent Natural Gas and Oil Producers - Small Cap
Rank by EV/Ebitda: Enterprise Value to Earnings Before Interest, Tax, Deprec.

			Price (\$/sh)	EV/	EV/	Divd or Distrib		PV/	
	C 1 1/		' /						
	Symbol/	, •	20-Jan	Sales	Ebitda	P/E	NTM	Ebitda	
	Kai	ting	2004	NTM	NTM	NTM	(%)	NTM	
Short Life									
Western Gas Resources	WGR		48.85	0.8	9.5	20	-	9.7	
Southwestern Energy Company	SWN		23.43	3.3	5.8	11	-	5.3	
Spinnaker Exploration Company	SKE		33.50	4.6	5.1	14	-	4.3	
Energy Partners Ltd.	EPL		14.50	2.9	4.5	16	-	4.6	
Chesapeake Energy Corporation	CHK		13.64	3.3	4.4	8	0.9	5.2	
Denbury Resources Inc.	DNR		14.22	2.9	4.3	7	-	5.4	
Stone Energy Company	SGY		43.70	3.0	4.2	9	-	5.1	
Cimarex Energy Company	XEC	В	27.50	3.2	4.1	10	_	5.2	
Westport Resources Corporation	WRC		31.25	3.1	4.0	10	_	5.0	
Range Resources Corporation	RRC		10.60	3.1	3.9	7	0.4	4.9	
Newfield Exploration Company	NFX		46.77	2.8	3.9	9	-	4.2	
St. Mary Land and Exploration Company	SM		30.44	2.6	3.9	10	0.3	5.2	
Forest Oil Corporation	FST		28.05	2.9	3.8	6	-	5.2	
The Houston Exploraton Company	THX		37.50	2.3	2.8	6	-	3.9	
Median				3.0	4.1	9	-	5.1	
Long Life									
Ultra Petroleum Corp.	UPL		25.24	12.7	16.6	28	-	10.8	
Quicksilver Resources Inc.	KWK		37.23	5.8	8.6	16	-	8.6	
Berry Petroleum Company	BRY		20.49	3.6	7.6	15	2.1	8.0	
Unit Corporation	UNT		25.56	3.4	7.5	17	-	6.4	
Evergreen Resources, Inc.	EVG		34.73	5.4	7.3	12	-	8.6	
Penn Virginia Corporation	PVA		60.10	3.6	6.3	14	1.5	5.9	
Swift Energy Company	SFY		19.00	3.9	5.9	14	-	6.5	
Encore Acquisition Corp.	EAC	В	25.75	3.6	5.0	10	-	6.2	
Magnum Hunter Resources, Inc.	MHR		9.37	3.1	4.8	9	-	6.2	
Vintage Petroleum, Inc.	VPI		13.45	2.3	3.9	8	1.3	5.9	
Median				3.6	6.8	14	-	6.5	
Micro Cap									
Abraxas Petroleum Corporation	ABP		1.78	7.3	11.4		-	10.1	
Purcell Energy, Ltd. (US\$)	PEL.TO		2.00	3.5	4.8	9	-	6.0	

EV = Enterprise Value = Market Cap and Debt; Ebitda = Earnings before interest, tax, depreciation and amortization; NTM = Next Twelve Months Ended December 31, 2004; P/E = Stock Price to Earnings; PV = Present Value of oil and gas and other businesses

A Weekly Analysis of Energy Stocks Using the McDep Ratio January 21, 2004

Table 2-3
Independent Natural Gas and Oil Producers - Small Cap
Determinants of Present Value

			NG & O	N. Am.	Adjusted	DIZ/	NGOO	McDep
	G 1 1/		Prod/	Gas/	Reserves/	PV/	NG&O	Ratio
	Symbol/		Ebitda	Ebitda	Prod	Ebitda	Ebitda/	20-Jan
	Ra	ting	(%)	(%)	NTM	NTM	mcfe	2004
Short Life								
Spinnaker Exploration Company	SKE		100	83	4.3	4.3	5.20	1.18
Newfield Exploration Company	NFX		100	86	5.2	4.2	4.08	0.92
The Houston Exploraton Company	THX		100	94	5.2	3.9	4.80	0.72
Energy Partners Ltd.	EPL		100	66	5.5	4.6	3.53	0.97
Cimarex Energy Company	XEC	В	100	79	6.2	5.2	4.32	0.79
St. Mary Land and Exploration Company	y SM		100	68	6.8	5.2	3.52	0.74
Stone Energy Company	SGY		100	68	7.1	5.1	4.19	0.81
Chesapeake Energy Corporation	CHK		100	91	7.8	5.2	4.13	0.84
Westport Resources Corporation	WRC		100	74	7.8	5.0	4.32	0.80
Western Gas Resources	WGR		61	61	7.9	9.7	2.57	0.98
Southwestern Energy Company	SWN		90	76	8.4	5.3	4.06	1.08
Range Resources Corporation	RRC		100	79	8.6	4.9	4.40	0.80
Forest Oil Corporation	FST		100	79	8.7	5.2	4.12	0.73
Denbury Resources Inc.	DNR		100	53	8.9	5.4	3.80	0.78
Median				77	7.4	5.1	4.12	0.81
Long Life								
Penn Virginia Corporation	PVA		79	65	9.4	5.9	2.49	1.06
Unit Corporation	UNT		64	57	9.5	6.4	4.09	1.16
Magnum Hunter Resources, Inc.	MHR		100	71	10.0	6.2	3.57	0.77
Swift Energy Company	SFY		100	33	11.1	6.5	2.74	0.92
Encore Acquisition Corp.	EAC	В	100	22	12.0	6.2	3.76	0.81
Ultra Petroleum Corp.	UPL		100	96	14.5	10.8	3.88	1.53
Berry Petroleum Company	BRY		100	-	14.6	8.0	1.90	0.94
Vintage Petroleum, Inc.	VPI		100	32	15.9	5.9	2.61	0.66
Evergreen Resources, Inc.	EVG		100	100	17.2	8.6	4.12	0.85
Quicksilver Resources Inc.	KWK		100	88	18.5	8.6	3.37	1.00
Median				61	13.2	6.5	3.47	0.93
Micro Cap								
Purcell Energy, Ltd. (US\$)	PEL.TO		100	79	6.4	6.0	2.00	0.79
Abraxas Petroleum Corporation	ABP		100	79	11.7	10.1	3.02	1.13