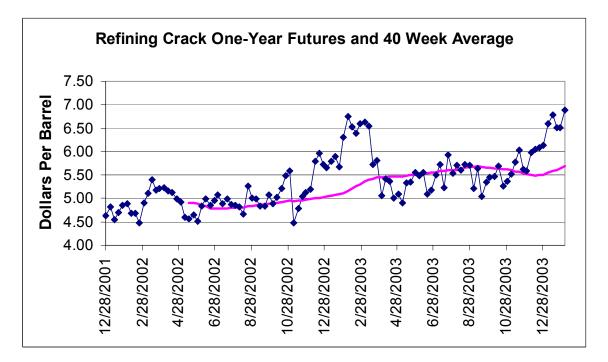
## New High for Refinery Crack Futures

### **Summary and Recommendation**

One-year futures prices that we calculate for the wholesale product margin in New York Harbor reached the highest weekly level for more than the past two years (see Chart). The implications are favorable for the downstream operations that typically account for a third or less of value in recommended mega caps and producer/refiners. Further, it may mean that the traditional major oil companies may better keep up in stock price with the independent producers who otherwise would benefit most from the trend to higher wellhead price. Moreover, the implications are probably global and extend to other economically sensitive businesses. On that basis we reemphasize among producer/refiners our recent recommendation of **Norsk Hydro (NHY)** and our continuing recommendation of **PetroChina (PTR)**.



Kurt H. Wulff, CFA

A Weekly Analysis of Energy Stocks Using the McDep Ratio February 3, 2004

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

			Price			Net		
			(\$/sh)		Market	Present	Debt/	
	Symbol/		2-Feb	Shares	Cap	Value	Present	McDep
	Rating		2004	(mm)	(\$mm)	(\$/sh)	Value	Ratio
Mega Cap								
Exxon Mobil Corporation	XOM		40.69	6,612	269,000	43.00	0.08	0.95
Total S.A.	TOT		88.55	1,261	111,700	105.00	0.17	0.87
Royal Dutch/Shell	RD	В	47.46	3,473	165,000	60.00	0.17	0.83
ChevronTexaco Corporation	CVX	В	86.19	1,064	91,700	110.00	0.17	0.82
BP plc	BP		47.56	3,682	175,000	60.00	0.13	0.82
Total or Median					812,000		0.17	0.83
Producer/Refiners - Large Cap and	-							
Kinder Morgan, Inc.	KMI	S	60.25	124	7,500	14.00	0.80	1.66
Imperial Oil Limited (30%)	IMO		44.68	111	4,960	43.00	0.12	1.03
Valero Energy Corporation	VLO		53.72	120	6,440	55.00	0.42	0.99
Murphy Oil Corporation	MUR		60.47	93	5,610	62.00	0.20	0.98
ENI S.p.A.	Е		93.62	755	70,700	108.00	0.16	0.89
Suncor Energy	SU		25.60	475	12,160	30.00	0.12	0.87
Petro-Canada	PCZ		44.61	265	11,820	54.00	0.12	0.85
ConocoPhillips	COP	В	66.31	680	45,100	88.00	0.33	0.83
Petroleo Brasileiro S. A.	PBR		30.03	1,096	32,900	40.00	0.28	0.82
Marathon Oil Corporation	MRO	В	32.65	311	10,150	47.00	0.27	0.78
PetroChina Company Ltd (10%)	PTR	В	47.89	176	8,420	65.00	0.09	0.76
Lukoil Oil Company	LUKOY	В	101.50	211	21,000	140.00	0.07	0.74
Norsk Hydro ASA	NHY	В	61.65	257	15,840	95.00	0.19	0.72
Total or Median					253,000		0.19	0.85
Independent Natural Gas and Oil								
Occidental Petroleum Corp.	OXY		43.80	391	17,100	50.00	0.26	0.91
Apache Corporation	APA		38.47	324	12,500	47.00	0.19	0.85
XTO Energy Inc.	XTO	В	26.06	186	4,850	33.00	0.19	0.83
Pogo Producing Company	PPP		40.24	64	2,580	50.00	0.10	0.82
CNOOC Limited (19%)	CEO	В	39.48	78	3,080	48.00	-	0.82
Unocal Corporation	UCL		37.11	273	10,100	52.00	0.28	0.79
Canadian Natural Resources Limited	CNQ		49.11	137	6,730	72.00	0.34	0.79
Pioneer Natural Resources Company	PXD		31.56	119	3,760	45.00	0.26	0.78
Encana Corporation	ECA	В	39.75	470	18,700	56.00	0.19	0.76
Burlington Resources	BR	В	54.80	198	10,900	80.00	0.21	0.75
Anadarko Petroleum Corp.	APC	В	50.96	252	12,800	76.00	0.25	0.75
Devon Energy	DVN		56.30	241	13,600	90.00	0.30	0.74
Total or Median					117,000		0.23	0.79
Service								
Baker Hughes Inc.	BHI		35.83	336	12,000	30.00	0.07	1.18
Halliburton Company	HAL		30.49	435	13,300	28.00	0.28	1.07
Schlumberger Ltd.	SLB		61.60	585	36,000	60.00	0.17	1.02
Total or Median					61,000		0.17	1.07

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 February 3, 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/		2-Feb	Sales	Ebitda	P/E	NTM	Ebitda	
	~	iting	2004	NTM	NTM	NTM	(%)	NTM	
Mega Cap		8	-001	1,11,1			(, )	11111	
Exxon Mobil Corporation	XOM		40.69	1.1	7.5	14	2.5	7.9	
Total S.A.	ТОТ		88.55	1.1	7.1	14	4.0	8.2	
BP plc	BP		47.56	0.8	6.7	14	3.3	8.2	
ChevronTexaco Corporation	CVX	В	86.19	0.9	6.6	13	3.4	8.0	
Royal Dutch/Shell	RD	B	47.46	1.0	6.2	14	4.7	7.5	
Median		2	.,	1.0	6.7	14	3.4	8.0	
Producer/Refiners - Large Cap and					017		0.1	0.0	
Kinder Morgan, Inc.	KMI	S	60.25	3.0	12.9	19	2.7	7.7	
Imperial Oil Limited (30%)	IMO	5	44.68	1.3	7.6	15	1.5	7.4	
Murphy Oil Corporation	MUR		60.47	1.5	7.3	18	1.3	7.5	
Suncor Energy	SU		25.60	2.7	7.2	13	0.6	8.2	
Valero Energy Corporation	VLO		53.72	0.3	6.8	10	0.9	6.8	
ConocoPhillips	COP	В	66.31	0.7	5.8	9	2.6	6.9	
ENI S.p.A.	E	2	93.62	1.5	5.5	11	4.7	6.2	
Marathon Oil Corporation	MRO	В	32.65	0.4	5.5	11	3.1	7.1	
PetroChina Company Ltd (10%)	PTR	В	47.89	2.4	4.4	9	4.3	5.8	
Petro-Canada	PCZ	2	44.61	1.5	4.4	12	1.0	5.2	
Norsk Hydro ASA	NHY	В	61.65	0.8	4.1	11	2.6	5.8	
Petroleo Brasileiro S. A.	PBR	_	30.03	1.6	3.9	5	3.4	4.7	
Lukoil Oil Company	LUKOY	В	101.50	0.9	3.8	6	2.5	5.1	
Median		2	101.00	1.5	5.5	11	2.6	6.8	
Independent Natural Gas and Oil									
CNOOC Limited (19%)	CEO	В	39.48	4.5	5.6	11	4.0	6.9	
XTO Energy Inc.	XTO	В	26.06	4.2	5.5	10	0.2	6.6	
Anadarko Petroleum Corp.	APC	В	50.96	3.7	5.4	10	1.1	7.2	
Pioneer Natural Resources Company	PXD		31.56	3.8	5.3	14	_	6.8	
Occidental Petroleum Corp.	OXY		43.80	2.5	5.2	9	2.4	5.7	
Encana Corporation	ECA	В	39.75	2.5	5.1	13	0.8	6.7	
Unocal Corporation	UCL		37.11	2.4	5.0	11	2.2	6.3	
Apache Corporation	APA		38.47	3.3	4.8	9	0.6	5.6	
Burlington Resources	BR	В	54.80	3.4	4.7	11	1.1	6.3	
Canadian Natural Resources Limited	CNO		49.11	3.1	4.4	9	0.9	5.6	
Devon Energy	DVN		56.30	2.7	4.1	7	-	5.6	
Pogo Producing Company	РРР		40.24	2.4	3.5	8	0.5	4.2	
Median				3.2	5.1	10	0.8	6.3	
Service									
Halliburton Company	HAL		30.49	1.1	12.9	28	1.6	12.1	
Baker Hughes Inc.	BHI		35.83	2.4	12.9	33	1.3	11.0	
Schlumberger Ltd.	SLB		61.60	3.1	10.9	38	1.2	10.7	
Median				2.4	12.9	33	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 February 3, 2004

#### Table 2-1

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

	Symbol/ Rating	Price (\$/sh) 2-Feb 2004	Shares (mm)	Market Cap (\$mm)	Net Present Value (\$/sh)	Debt/ Present Value	McDep Ratio
Short Life							
Spinnaker Exploration Company	SKE	34.18	33.9	1,160	28.00	0.08	1.20
Southwestern Energy Company	SWN	20.85	36.0	750	21.00	0.28	1.00
Western Gas Resources	WGR	46.45	37.0	1,720	50.00	0.17	0.94
Newfield Exploration Company	NFX	47.95	56.0	2,690	52.00	0.24	0.94
Energy Partners Ltd.	EPL	13.60	36.9	502	15.00	0.19	0.92
Chesapeake Energy Corporation	CHK	12.35	220	2,720	18.00	0.35	0.80
Stone Energy Company	SGY	42.00	26.6	1,120	58.00	0.23	0.79
Range Resources Corporation	RRC	10.21	57.0	580	15.00	0.32	0.78
Denbury Resources Inc.	DNR	14.13	55.7	790	20.00	0.25	0.78
Westport Resources Corporation	WRC	29.20	68.0	1,990	42.00	0.22	0.76
Cimarex Energy Company	XEC B	26.08	42.0	1,100	35.00	0.00	0.74
The Houston Exploraton Company	THX	36.56	31.0	1,130	55.00	0.13	0.71
St. Mary Land and Exploration Compar	ny SM	28.70	29.0	830	43.00	0.12	0.71
Forest Oil Corporation	FST	25.50	49.0	1,250	45.00	0.30	0.69
Total or Median	ı			18,300		0.23	0.79
Long Life							
Ultra Petroleum Corp.	UPL	24.00	78.0	1,870	16.00	0.08	1.46
Unit Corporation	UNT	25.33	43.7	1,110	22.00	0.02	1.15
Penn Virginia Corporation	PVA	54.96	9.1	500	56.00	0.17	0.98
Quicksilver Resources Inc.	KWK	34.00	23.0	780	37.00	0.25	0.94
Berry Petroleum Company	BRY	19.15	22.1	423	22.00	0.12	0.89
Swift Energy Company	SFY	16.55	27.4	450	22.00	0.37	0.84
Evergreen Resources, Inc.	EVG	32.68	44.0	1,440	42.00	0.12	0.80
Encore Acquisition Corp.	EAC B	25.30	30.3	767	33.00	0.13	0.80
Magnum Hunter Resources, Inc.	MHR	8.75	68.0	600	15.00	0.38	0.74
Vintage Petroleum, Inc.	VPI	12.74	63.0	800	27.00	0.32	0.64
Total or Median	ı			8,700		0.15	0.86
Micro Cap							
Abraxas Petroleum Corporation	ABP	3.49	35.8	125	1.00	0.84	1.41
Purcell Energy, Ltd. (US\$)	PEL.TO	2.02	48.0	97	2.80	0.28	0.80
						-	

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 February 3, 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				Divd or				
			(\$/sh)	EV/	EV/	,	Distrib	PV/	
	Symbol/		2-Feb	Sales	Ebitda	P/E	NTM	Ebitda	
	Ra	ting	2004	NTM	NTM	NTM	(%)	NTM	
Short Life									
Western Gas Resources	WGR		46.45	0.8	9.1	19	-	9.7	
Southwestern Energy Company	SWN		20.85	3.0	5.3	9	-	5.3	
Spinnaker Exploration Company	SKE		34.18	4.7	5.2	14	-	4.3	
Denbury Resources Inc.	DNR		14.13	2.9	4.2	7	-	5.4	
Chesapeake Energy Corporation	CHK		12.35	3.1	4.2	7	1.0	5.2	
Energy Partners Ltd.	EPL		13.60	2.6	4.1	14	-	4.4	
Stone Energy Company	SGY		42.00	2.9	4.1	8	-	5.1	
Newfield Exploration Company	NFX		47.95	2.8	4.0	9	-	4.2	
Cimarex Energy Company	XEC	В	26.08	3.0	3.8	9	-	5.2	
Westport Resources Corporation	WRC		29.20	3.0	3.8	9	-	5.0	
Range Resources Corporation	RRC		10.21	3.1	3.8	7	0.4	4.9	
St. Mary Land and Exploration Company	SM		28.70	2.5	3.7	9	0.3	5.2	
Forest Oil Corporation	FST		25.50	2.7	3.6	6	-	5.2	
The Houston Exploraton Company	THX		36.56	2.3	2.7	6	-	3.9	
Median				2.9	4.0	9	-	5.1	
Long Life									
Ultra Petroleum Corp.	UPL		24.00	12.1	15.8	27	-	10.8	
Quicksilver Resources Inc.	KWK		34.00	5.4	8.0	14	-	8.6	
Unit Corporation	UNT		25.33	3.3	7.4	17	-	6.4	
Berry Petroleum Company	BRY		19.15	3.4	7.1	14	2.3	8.0	
Evergreen Resources, Inc.	EVG		32.68	5.1	6.9	11	-	8.6	
Penn Virginia Corporation	PVA		54.96	3.3	5.8	12	1.6	5.9	
Swift Energy Company	SFY		16.55	3.6	5.5	12	-	6.5	
Encore Acquisition Corp.	EAC	В	25.30	3.6	4.9	9	-	6.2	
Magnum Hunter Resources, Inc.	MHR		8.75	3.0	4.6	8	-	6.2	
Vintage Petroleum, Inc.	VPI		12.74	2.2	3.8	8	1.4	5.9	
Median				3.5	6.4	12	-	6.5	
Micro Cap									
Abraxas Petroleum Corporation	ABP		3.49	9.2	14.2		-	10.1	
Purcell Energy, Ltd. (US\$)	PEL.TO		2.02	3.5	4.8	9	-	6.0	

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