Meter Reader A Weekly Analysis of Energy Stocks Using the McDep Ratio December 9, 2003

Large Cap Luminaries

Summary and Recommendation

Recommended natural gas and oil producers, Encana (ECA), Burlington Resources (BR), Anadarko (APC), XTO Energy (XTO) and CNOOC Limited (CEO) offer concentrated large cap exposure to rising oil and gas commodity price accelerated by a declining dollar. The largest independent producer, ECA, will soon be reporting results in U.S., rather than Canadian currency, a move that should broaden its investment appeal. Long a dominant San Juan Basin natural gas producer, BR appears to be creating similar value in Canada. Amid management turmoil, Anadarko recruits a new chief executive officer who has a record of selling companies to acquirers. Focusing almost exclusively on U.S. natural gas, XTO has delivered exceptional value growth so far and promises to continue to do so. China offshore producer, CNOOC not only has a preferred resource position, but also a rapidly growing market nearby.

Kurt H. Wulff, CFA

	Price				Net				
			(\$/sh)		Market	Present	Debt/		
	Symbol/		8-Dec	Shares	Cap	Value	Present	McDep	
	R	ating	2003	(mm)	(\$mm)	(\$/sh)	Value	Ratio	
CNOOC Limited (19%)	CEO	В	42.79	78	3,340	40.00	-	1.07	
XTO Energy Inc.	XTO	В	27.68	186	5,160	26.00	0.24	1.05	
Encana Corporation	ECA	В	38.63	470	18,200	45.00	0.22	0.89	
Burlington Resources	BR	В	54.09	201	10,900	65.00	0.25	0.87	
Anadarko Petroleum Corp.	APC	В	48.25	251	12,100	60.00	0.31	0.86	

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

	Symbol/		Price (\$/sh) 8-Dec	EV/ Sales	EV/ Ebitda		vidend or tribution NTM	PV/ Ebitda
		Rating	2003	NTM	NTM	NTM	(%)	NTM
CNOOC Limited (19%)	CEO	В	42.79	5.5	7.1	15	3.7	6.6
XTO Energy Inc.	XTO	В	27.68	5.0	6.9	13	0.1	6.5
Burlington Resources	BR	В	54.09	4.0	5.9	15	1.1	6.8
Encana Corporation	ECA	В	38.63	2.6	5.7	16	0.8	6.4
Anadarko Petroleum Corp.	APC	В	48.25	3.8	5.4	10	1.2	6.3

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 December 9, 2003

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

			Price			Net		
			(\$/sh)		Market	Present	Debt/	
	Symbol/	/	8-Dec	Shares	Cap	Value	Present	McDep
	Ra	ating	2003	(mm)	(\$mm)	(\$/sh)	Value	Ratio
Mega Cap								
Exxon Mobil Corporation	XOM		37.40	6,652	249,000	35.00	0.10	1.06
Total S.A.	TOT		84.22	1,261	106,200	85.00	0.19	0.99
BP plc	BP		44.40	3,682	164,000	50.00	0.15	0.91
Royal Dutch/Shell	RD	В	46.88	3,473	163,000	55.00	0.18	0.88
ChevronTexaco Corporation	CVX	В	78.61	1,064	83,600	95.00	0.20	0.86
Total or Median					766,000		0.18	0.91
Producer/Refiners - Large Cap and	Mid Ca	р						
Murphy Oil Corporation	MUR		60.68	93	5,630	50.00	0.24	1.16
Imperial Oil Limited (30%)	IMO		41.60	111	4,620	36.00	0.14	1.13
Petro-Canada	PCZ		45.96	265	12,180	45.00	0.14	1.02
OAO Lukoil	LUKOY	7	88.10	210	19,000	90.00	0.11	0.98
ENI S.p.A.	Е		87.80	755	66,300	90.00	0.18	0.98
Valero Energy Corporation	VLO		45.39	120	5,440	50.00	0.45	0.95
Suncor Energy	SU		23.14	475	10,990	25.00	0.15	0.94
Norsk Hydro ASA (49%)	NHY		59.21	126	7,460	65.00	0.24	0.93
ConocoPhillips	COP	В	59.95	680	40,800	70.00	0.38	0.91
Petroleo Brasileiro S. A.	PBR		25.35	1,096	27,800	30.00	0.35	0.90
PetroChina Company Ltd (10%)	PTR	В	43.25	176	7,600	50.00	0.11	0.88
Marathon Oil Corporation	MRO	В	30.22	310	9,370	40.00	0.31	0.83
Total or Median					217,000		0.21	0.94
Independent Natural Gas and Oil								
Pogo Producing Company	PPP		48.40	64	3,100	42.00	0.12	1.13
CNOOC Limited (19%)	CEO	В	42.79	78	3,340	40.00	-	1.07
XTO Energy Inc.	XTO	В	27.68	186	5,160	26.00	0.24	1.05
Apache Corporation	APA		77.81	162	12,600	75.00	0.23	1.03
Occidental Petroleum Corp.	OXY		38.75	391	15,200	40.00	0.31	0.98
Canadian Natural Resources Limited	CNQ		47.14	137	6,460	55.00	0.40	0.91
Unocal Corporation	UCL		34.46	273	9,400	40.00	0.33	0.91
Pioneer Natural Resources Company	PXD		30.16	119	3,590	35.00	0.31	0.90
Encana Corporation	ECA	В	38.63	470	18,200	45.00	0.22	0.89
Burlington Resources	BR	В	54.09	201	10,900	65.00	0.25	0.87
Anadarko Petroleum Corp.	APC	В	48.25	251	12,100	60.00	0.31	0.86
Devon Energy	DVN		53.99	241	13,000	70.00	0.36	0.85
Total or Median					113,000		0.28	0.91
Service								
Baker Hughes Inc.	BHI		30.38	336	10,200	25.00	0.08	1.20
Halliburton Company	HAL		24.64	435	10,700	22.00	0.33	1.08
Schlumberger Ltd.	SLB		49.72	585	29,100	50.00	0.19	1.00
Total or Median					50,000		0.19	1.08

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 December 9, 2003

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

$ \begin{array}{c c c c c c c c c c c c c c c c c c c $		Price Dividend or							
Rating 2003 NTM NTM NTM (%) NTM Mega Cap Total S.A. TOT 84.22 1.2 8.1 17 4.2 8.2 Exxon Mobil Corporation XOM 37.40 1.1 7.9 15 2.7 7.5 BP plc BP 44.40 0.8 7.4 16 3.5 8.2 Royal Durch/Shell RD B 46.88 1.0 6.9 17 4.3 7.9 ChevronTexaco Corporation CVX B 7.86 9.0 7.7 10 7.9 Producer/Refiners - Large Cap and Mid Cap Imperial Oil Limited (30%) IMO 41.60 1.3 8.8 19 1.6 7.8 Murphy Oil Corporation MUR 60.68 1.7 8.7 25 1.3 7.5 Suncor Energy SU 23.14 2.7 8.1 16 0.7 8.6 Valero Energy Corporation VLO 24.50 1.0 6.5 10<				(\$/sh)	EV/	EV/		tribution	PV/
Mega Cap Tota 84.22 1.2 8.1 17 4.2 8.2 Total S.A. TOT K4.22 1.2 8.1 17 4.2 8.2 Exxon Mobil Corporation XOM 37.40 1.1 7.9 15 2.7 7.5 BP plc BP 44.40 0.8 7.4 16 3.5 8.2 Royal Dutch/Shell RD B 46.88 1.0 6.9 1.1 2.3.7 7.1 Median I.0 7.4 I6 3.7 7.9 Producer/Refiners - Large Cap and Mid Cap Imperial Oil Limited (30%) IMO 41.60 1.3 8.8 19 1.6 7.8 Murphy Oil Corporation MUR 60.68 1.7 8.7 25 1.3 7.5 Suncor Energy SU 23.14 2.7 8.1 16 0.7 8.6 Concochillips COP B 59.95 0.7 6.5 10 2.9 7.1		-							
$\begin{array}{c c c c c c c c c c c c c c c c c c c $		Rı	iting	2003	NTM	NTM	NTM	(%)	NTM
Exxon Mobil CorporationXOM37.401.17.9152.77.5BP plcBP44.400.87.4163.58.2Royal Dutch/ShellRDB46.881.06.9174.37.9ChevronTexaco CorporationCVXB78.610.96.1123.77.1 <i>Median</i> I.07.4I63.77.9Producer/Refiners - Large Cap and Mid CapImperial Oil Limited (30%)IMO41.601.38.8191.67.8Murphy Oil CorporationMUR60.681.78.7251.37.5Suncor EnergySU23.142.78.1160.78.6Valero Energy CorporationVLO45.390.37.5121.17.9OAO LukoilLUKOY8.101.06.5132.96.6ConocoPhillipsCOPB39.220.45.6123.36.7Petro-CanadaPCZ45.961.65.2180.75.1Norsk Hydro ASA (49%)NHY59.210.94.9152.45.3PetroOhina Company Lid (10%)PTRB32.252.64.7104.7MedianI.46.1I.32.66.71.65.2180.16.6Torochina Company Lid (10%)CEOB42.795.57.1153.76.6									
BP plc BP 44.40 0.8 7.4 16 3.5 8.2 Royal Dutch/Shell RD B 46.88 1.0 6.9 17 4.3 7.9 ChevronTexaco Corporation CVX B 78.61 0.9 6.1 12 3.7 7.1 Median Imperial Oil Limited (30%) IMO 41.60 1.3 8.8 19 1.6 7.8 Murph Oil Corporation MUR 60.68 1.7 8.7 25 1.3 7.5 Suncor Energy SU 23.14 2.7 8.1 16 0.7 8.6 Valero Energy Corporation VLO 45.39 0.3 7.5 12 1.1 7.9 OAO Lukoil LUKOY 8.10 1.0 6.5 13 2.9 6.6 ConocoPhillips COP B 59.95 0.7 6.5 10 2.9 7.1 EN S.p.A. E 87.80 1.5 5.8 12 5.0 5.9 Marathon Oil Corporation MRO B 30.22		TOT		84.22					
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$\begin{array}{c c c c c c c c c c c c c c c c c c c $		BP		44.40	0.8	7.4	16	3.5	8.2
Median I.0 7.4 I6 3.7 7.9 Producer/Refiners - Large Cap and Mid Cap Imperial Oil Limited (30%) IMO 41.60 1.3 8.8 19 1.6 7.8 Murphy Oil Corporation MUR 60.68 1.7 8.7 25 1.3 7.5 Suncor Energy SU 23.14 2.7 8.1 16 0.7 8.6 Valero Energy Corporation VLO 45.39 0.3 7.5 12 1.1 7.9 OAO Lukoil LUKOY 88.10 1.0 6.5 13 2.9 6.6 ConocoPhillips COP B 59.95 0.7 6.5 10 2.9 7.1 ENI S.p.A. E 87.80 1.5 5.8 12 5.0 5.9 Marathon Oil Corporation MRO B 30.22 0.4 5.6 12 3.3 6.7 Petro-Chaada PCZ 45.96 1.6 5.2 18 0.7 <t< td=""><td></td><td></td><td>В</td><td>46.88</td><td>1.0</td><td>6.9</td><td></td><td>4.3</td><td></td></t<>			В	46.88	1.0	6.9		4.3	
Producer/Refiners - Large Cap and Mid CapImperial Oil Limited (30%)IMO41.601.38.8191.67.8Murphy Oil CorporationMUR60.681.78.7251.37.5Suncor EnergySU23.142.78.1160.78.6Valero Energy CorporationVLO45.390.37.5121.17.9OAD LukoilLUKOY88.101.06.5132.96.6ConcoePhillipsCOPB59.950.76.5102.97.1ENI S.p.A.E87.801.55.8125.05.9Marathon Oil CorporationMROB30.220.45.6123.36.7Petro-CanadaPCZ45.961.65.2180.75.1Norsk Hydro ASA (49%)NHY59.210.94.9152.45.3PetroOchina Company Ltd (10%)PTRB43.252.64.7104.75.3Petrolo Brasileiro S. A.PBR25.351.64.254.04.7MedianI.46.1132.66.7Independent Natural Gas and OilCNTOB27.685.06.9130.16.5Burlington ResourcesBRB54.094.05.9151.16.8Encana CorporationECAB3	ChevronTexaco Corporation	CVX	В	78.61		6.1	12	3.7	
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Murphy Oil CorporationMUR 60.68 1.7 8.7 25 1.3 7.5 Suncor EnergySU 23.14 2.7 8.1 16 0.7 8.6 Valero Energy CorporationVLO 45.39 0.3 7.5 12 1.1 7.9 OAO LukoilLUKOY 88.10 1.0 6.5 13 2.9 6.6 ConcoCPhillipsCOPB 59.95 0.7 6.5 10 2.9 7.1 ENI S.p.A.E 87.80 1.5 5.8 12 5.0 5.9 Marathon Oil CorporationMROB 30.22 0.4 5.6 12 3.3 6.7 Petro-CanadaPCZ 45.96 1.6 5.2 18 0.7 5.1 Norsk Hydro ASA (49%)NHY 59.21 0.9 4.9 15 2.4 5.3 PetroChina Company Ltd (10%)PTRB 43.25 2.6 4.7 10 4.7 <i>Median</i> 1.4 6.1 13 2.6 6.7 Independent Natural Gas and OilCEOB 42.79 5.5 7.1 15 3.7 6.6 XTO Energy Inc.XTOB 27.68 5.0 6.9 13 0.1 6.5 Burlington ResourcesBRB 54.09 4.0 5.9 15 1.1 6.8 Pioneer Natural Resources CompanyPXD 30.16 4.2 5.6 17 -6.2 Unocal Corporat		Mid Cap							
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Valero Energy CorporationVLO 45.39 0.3 7.5 12 1.1 7.9 OAO LukoilLUKOY 88.10 1.0 6.5 13 2.9 6.6 ConocoPhillipsCOPB 59.95 0.7 6.5 10 2.9 7.1 ENI S.p.A.E 87.80 1.5 5.8 12 5.0 5.9 Marathon Oil CorporationMROB 30.22 0.4 5.6 12 3.3 6.7 Petro-CanadaPCZ 45.96 1.6 5.2 18 0.7 5.1 Norsk Hydro ASA (49%)NHY 59.21 0.9 4.9 15 2.4 5.3 Petroleo Brasileiro S. A.PBR 25.35 1.6 4.2 5 4.0 4.7 <i>Median</i> 1.4 6.1 13 2.6 6.7 1.4 7.5 2.6 4.7 CNOOC Limited (19%)CEOB 42.79 5.5 7.1 15 3.7 6.6 XTO Energy Inc.XTOB 27.68 5.0 6.9 13 0.1 6.5 Burlington ResourcesBRB 54.09 4.0 5.9 15 1.1 6.8 Pioneer Natural Resources CompanyPXD 30.16 4.2 5.6 17 -6.2 Unocal CorporationUCL 34.46 2.5 5.6 14 2.3 6.2 Apache CorporationAPA 77.81 3.8 5.6 12 0.6 <	Murphy Oil Corporation	MUR		60.68	1.7	8.7	25	1.3	7.5
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	Suncor Energy	SU		23.14	2.7	8.1	16	0.7	8.6
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	Valero Energy Corporation	VLO		45.39	0.3	7.5	12	1.1	7.9
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	OAO Lukoil	LUKOY		88.10	1.0	6.5	13	2.9	6.6
Marathon Oil CorporationMROB 30.22 0.4 5.6 12 3.3 6.7 Petro-CanadaPCZ 45.96 1.6 5.2 18 0.7 5.1 Norsk Hydro ASA (49%)NHY 59.21 0.9 4.9 15 2.4 5.3 PetroChina Company Ltd (10%)PTRB 43.25 2.6 4.7 10 4.7 5.3 Petroleo Brasileiro S. A.PBR 25.35 1.6 4.2 5 4.0 4.7 <i>Median</i> 1.4 6.1 13 2.6 6.7 Independent Natural Gas and OilCEOB 42.79 5.5 7.1 15 3.7 6.6 XTO Energy Inc.XTOB 27.68 5.0 6.9 13 0.1 6.5 Burlington ResourcesBRB 54.09 4.0 5.9 15 1.1 6.8 Encana CorporationECAB 38.63 2.6 5.7 16 0.8 6.4 Pioneer Natural Resources CompanyPXD 30.16 4.2 5.6 17 $ 6.2$ Unocal CorporationUCL 34.46 2.5 5.6 14 2.3 6.2 Apache CorporationAPA 77.81 3.8 5.6 12 0.6 5.4 Occidental Petroleum Corp.APCB 48.25 3.8 5.4 10 1.2 6.3 Canadian Natural Resources LimitedCNQ 47.14	ConocoPhillips	COP	В	59.95	0.7	6.5	10	2.9	7.1
Petro-CanadaPCZ 45.96 1.6 5.2 18 0.7 5.1 Norsk Hydro ASA (49%)NHY 59.21 0.9 4.9 15 2.4 5.3 PetroChina Company Ltd (10%)PTRB 43.25 2.6 4.7 10 4.7 5.3 Petroleo Brasileiro S. A.PBR 25.35 1.6 4.2 5 4.0 4.7 <i>Median</i> 1.4 6.1 13 2.6 6.7 Independent Natural Gas and OilCEOB 42.79 5.5 7.1 15 3.7 6.6 XTO Energy Inc.XTOB 27.68 5.0 6.9 13 0.1 6.5 Burlington ResourcesBRB 54.09 4.0 5.9 15 1.1 6.8 Encana CorporationECAB 38.63 2.6 5.7 16 0.8 6.4 Pioneer Natural Resources CompanyPXD 30.16 4.2 5.6 17 $ 6.2$ Unocal CorporationUCL 34.46 2.5 5.6 14 2.3 6.2 Apache CorporationAPA 77.81 3.8 5.6 12 0.6 5.4 Occidental Petroleum Corp.APCB 48.25 3.8 5.4 10 1.2 6.3 Canadian Natural Resources LimitedCNQ 47.14 3.5 5.0 14 1.0 5.5 Pogo Producing Company	ENI S.p.A.	E		87.80	1.5	5.8	12	5.0	5.9
Petro-CanadaPCZ 45.96 1.6 5.2 18 0.7 5.1 Norsk Hydro ASA (49%)NHY 59.21 0.9 4.9 15 2.4 5.3 PetroChina Company Ltd (10%)PTRB 43.25 2.6 4.7 10 4.7 5.3 Petroleo Brasileiro S. A.PBR 25.35 1.6 4.2 5 4.0 4.7 <i>Median</i> 1.4 6.1 13 2.6 6.7 Independent Natural Gas and OilCEOB 42.79 5.5 7.1 15 3.7 6.6 XTO Energy Inc.XTOB 27.68 5.0 6.9 13 0.1 6.5 Burlington ResourcesBRB 54.09 4.0 5.9 15 1.1 6.8 Encana CorporationECAB 38.63 2.6 5.7 16 0.8 6.4 Pioneer Natural Resources CompanyPXD 30.16 4.2 5.6 17 $ 6.2$ Unocal CorporationUCL 34.46 2.5 5.6 14 2.3 6.2 Apache CorporationAPA 77.81 3.8 5.6 12 0.6 5.4 Occidental Petroleum Corp.APCB 48.25 3.8 5.4 10 1.2 6.3 Canadian Natural Resources LimitedCNQ 47.14 3.5 5.0 14 1.0 5.5 Pogo Producing Company	Marathon Oil Corporation	MRO	В	30.22	0.4	5.6	12	3.3	6.7
PetroChina Company Ltd (10%)PTRB 43.25 2.6 4.7 10 4.7 5.3 Petroleo Brasileiro S. A.PBR 25.35 1.6 4.2 5 4.0 4.7 Median 1.4 6.1 13 2.6 6.7 Independent Natural Gas and OilCEOB 42.79 5.5 7.1 15 3.7 6.6 XTO Energy Inc.XTOB 27.68 5.0 6.9 13 0.1 6.5 Burlington ResourcesBRB 54.09 4.0 5.9 15 1.1 6.8 Encana CorporationECAB 38.63 2.6 5.7 16 0.8 6.4 Pioneer Natural Resources CompanyPXD 30.16 4.2 5.6 17 $ 6.2$ Unocal CorporationUCL 34.46 2.5 5.6 14 2.3 6.2 Apache CorporationAPA 77.81 3.8 5.6 12 0.6 5.4 Occidental Petroleum Corp.OXY 38.75 2.4 5.5 10 1.2 6.3 Canadian Natural Resources LimitedCNQ 47.14 3.5 5.0 14 1.0 5.5 Pogo Producing CompanyPPP 48.40 3.3 4.8 13 0.4 4.2 Devon EnergyDVN 53.99 3.0 4.7 9 $ 5.5$ Median 37.7 5.6 13 0.9 6.2 Serv		PCZ		45.96	1.6	5.2	18	0.7	5.1
Petroleo Brasileiro S. A.PBR Median 25.35 1.6 4.2 5 4.0 4.7 $A.0$ Independent Natural Gas and OilI.4 6.1 $I3$ 2.6 6.7 CNOOC Limited (19%)CEOB 42.79 5.5 7.1 15 3.7 6.6 XTO Energy Inc.XTOB 27.68 5.0 6.9 13 0.1 6.5 Burlington ResourcesBRB 54.09 4.0 5.9 15 1.1 6.8 Encana CorporationECAB 38.63 2.6 5.7 16 0.8 6.4 Pioneer Natural Resources CompanyPXD 30.16 4.2 5.6 17 $ 6.2$ Unocal CorporationUCL 34.46 2.5 5.6 14 2.3 6.2 Apache CorporationAPA 77.81 3.8 5.6 12 0.6 5.4 Occidental Petroleum Corp.APCB 48.25 3.8 5.4 10 1.2 6.3 Canadian Natural Resources LimitedCNQ 47.14 3.5 5.0 14 1.0 5.5 Pogo Producing CompanyPPP 48.40 3.3 4.8 13 0.4 4.2 Devon EnergyDVN 53.99 3.0 4.7 9 $ 5.5$ Median 3.7 5.6 $I3$ 0.9 6.2 ServiceBaker Hughes Inc.BHI 30.38 2.0 11.1 28 1.5	Norsk Hydro ASA (49%)	NHY		59.21	0.9	4.9	15	2.4	5.3
Median1.46.1132.66.7Independent Natural Gas and OilCNOOC Limited (19%)CEOB 42.79 5.5 7.1 15 3.7 6.6 XTO Energy Inc.XTOB 27.68 5.0 6.9 13 0.1 6.5 Burlington ResourcesBRB 54.09 4.0 5.9 15 1.1 6.8 Encana CorporationECAB 38.63 2.6 5.7 16 0.8 6.4 Pioneer Natural Resources CompanyPXD 30.16 4.2 5.6 17 $ 6.2$ Unocal CorporationUCL 34.46 2.5 5.6 14 2.3 6.2 Apache CorporationAPA 77.81 3.8 5.6 12 0.6 5.4 Occidental Petroleum Corp.OXY 38.75 2.4 5.5 10 2.7 5.6 Anadarko Petroleum Corp.APCB 48.25 3.8 5.4 10 1.2 6.3 Canadian Natural Resources LimitedCNQ 47.14 3.5 5.0 14 1.0 5.5 Pogo Producing CompanyPPP 48.40 3.3 4.8 13 0.4 4.2 Devon EnergyDVN 53.99 3.0 4.7 9 $ 5.5$ Median 30.38 2.0 11.1 28 1.5 9.3	PetroChina Company Ltd (10%)	PTR	В	43.25	2.6	4.7	10	4.7	5.3
Independent Natural Gas and OilCNOOC Limited (19%)CEOB 42.79 5.5 7.1 15 3.7 6.6 XTO Energy Inc.XTOB 27.68 5.0 6.9 13 0.1 6.5 Burlington ResourcesBRB 54.09 4.0 5.9 15 1.1 6.8 Encana CorporationECAB 38.63 2.6 5.7 16 0.8 6.4 Pioneer Natural Resources CompanyPXD 30.16 4.2 5.6 17 - 6.2 Unocal CorporationUCL 34.46 2.5 5.6 14 2.3 6.2 Apache CorporationAPA 77.81 3.8 5.6 12 0.6 5.4 Occidental Petroleum Corp.OXY 38.75 2.4 5.5 10 2.7 5.6 Anadarko Petroleum Corp.APCB 48.25 3.8 5.4 10 1.2 6.3 Canadian Natural Resources LimitedCNQ 47.14 3.5 5.0 14 1.0 5.5 Pogo Producing CompanyPPP 48.40 3.3 4.8 13 0.4 4.2 Devon EnergyDVN 53.99 3.0 4.7 9 $ 5.5$ Median 37.7 5.6 13 0.9 6.2 ServiceBaker Hughes Inc.BHI 30.38 2.0 11.1 28 1.5 9.3	Petroleo Brasileiro S. A.	PBR		25.35	1.6	4.2	5	4.0	4.7
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	Median				1.4	6.1	13	2.6	6.7
XTO Energy Inc.XTOB27.68 5.0 6.9 13 0.1 6.5 Burlington ResourcesBRB 54.09 4.0 5.9 15 1.1 6.8 Encana CorporationECAB 38.63 2.6 5.7 16 0.8 6.4 Pioneer Natural Resources CompanyPXD 30.16 4.2 5.6 17 $ 6.2$ Unocal CorporationUCL 34.46 2.5 5.6 14 2.3 6.2 Apache CorporationAPA 77.81 3.8 5.6 12 0.6 5.4 Occidental Petroleum Corp.OXY 38.75 2.4 5.5 10 2.7 5.6 Anadarko Petroleum Corp.APCB 48.25 3.8 5.4 10 1.2 6.3 Canadian Natural Resources LimitedCNQ 47.14 3.5 5.0 14 1.0 5.5 Pogo Producing CompanyPPP 48.40 3.3 4.8 13 0.4 4.2 Devon EnergyDVN 53.99 3.0 4.7 9 $ 5.5$ Median 30.38 2.0 11.1 28 1.5 9.3	Independent Natural Gas and Oil								
Burlington Resources BR B 54.09 4.0 5.9 15 1.1 6.8 Encana Corporation ECA B 38.63 2.6 5.7 16 0.8 6.4 Pioneer Natural Resources Company PXD 30.16 4.2 5.6 17 - 6.2 Unocal Corporation UCL 34.46 2.5 5.6 14 2.3 6.2 Apache Corporation APA 77.81 3.8 5.6 12 0.6 5.4 Occidental Petroleum Corp. OXY 38.75 2.4 5.5 10 2.7 5.6 Anadarko Petroleum Corp. APC B 48.25 3.8 5.4 10 1.2 6.3 Canadian Natural Resources Limited CNQ 47.14 3.5 5.0 14 1.0 5.5 Pogo Producing Company PPP 48.40 3.3 4.8 13 0.4 4.2 Devon Energy DVN 53.99 3.0 4.7 9 - 5.5 Median 30.38 2.0	CNOOC Limited (19%)	CEO	В	42.79	5.5	7.1	15	3.7	6.6
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	XTO Energy Inc.	XTO	В	27.68	5.0	6.9	13	0.1	6.5
Pioneer Natural Resources Company PXD 30.16 4.2 5.6 17 - 6.2 Unocal Corporation UCL 34.46 2.5 5.6 14 2.3 6.2 Apache Corporation APA 77.81 3.8 5.6 12 0.6 5.4 Occidental Petroleum Corp. OXY 38.75 2.4 5.5 10 2.7 5.6 Anadarko Petroleum Corp. APC B 48.25 3.8 5.4 10 1.2 6.3 Canadian Natural Resources Limited CNQ 47.14 3.5 5.0 14 1.0 5.5 Pogo Producing Company PPP 48.40 3.3 4.8 13 0.4 4.2 Devon Energy DVN 53.99 3.0 4.7 9 - 5.5 Median Service Baker Hughes Inc. BHI 30.38 2.0 11.1 28 1.5 9.3	Burlington Resources	BR	В	54.09	4.0	5.9	15	1.1	6.8
Unocal Corporation UCL 34.46 2.5 5.6 14 2.3 6.2 Apache Corporation APA 77.81 3.8 5.6 12 0.6 5.4 Occidental Petroleum Corp. OXY 38.75 2.4 5.5 10 2.7 5.6 Anadarko Petroleum Corp. APC B 48.25 3.8 5.4 10 1.2 6.3 Canadian Natural Resources Limited CNQ 47.14 3.5 5.0 14 1.0 5.5 Pogo Producing Company PPP 48.40 3.3 4.8 13 0.4 4.2 Devon Energy DVN 53.99 3.0 4.7 9 - 5.5 Median Service Baker Hughes Inc. BHI 30.38 2.0 11.1 28 1.5 9.3	Encana Corporation	ECA	В	38.63	2.6	5.7	16	0.8	6.4
Unocal Corporation UCL 34.46 2.5 5.6 14 2.3 6.2 Apache Corporation APA 77.81 3.8 5.6 12 0.6 5.4 Occidental Petroleum Corp. OXY 38.75 2.4 5.5 10 2.7 5.6 Anadarko Petroleum Corp. APC B 48.25 3.8 5.4 10 1.2 6.3 Canadian Natural Resources Limited CNQ 47.14 3.5 5.0 14 1.0 5.5 Pogo Producing Company PPP 48.40 3.3 4.8 13 0.4 4.2 Devon Energy DVN 53.99 3.0 4.7 9 - 5.5 Median Service Baker Hughes Inc. BHI 30.38 2.0 11.1 28 1.5 9.3	Pioneer Natural Resources Company	PXD		30.16	4.2	5.6	17	-	6.2
Apache Corporation APA 77.81 3.8 5.6 12 0.6 5.4 Occidental Petroleum Corp. OXY 38.75 2.4 5.5 10 2.7 5.6 Anadarko Petroleum Corp. APC B 48.25 3.8 5.4 10 1.2 6.3 Canadian Natural Resources Limited CNQ 47.14 3.5 5.0 14 1.0 5.5 Pogo Producing Company PPP 48.40 3.3 4.8 13 0.4 4.2 Devon Energy DVN 53.99 3.0 4.7 9 - 5.5 Median Service Baker Hughes Inc. BHI 30.38 2.0 11.1 28 1.5 9.3	Unocal Corporation	UCL		34.46	2.5	5.6	14	2.3	6.2
Occidental Petroleum Corp. OXY 38.75 2.4 5.5 10 2.7 5.6 Anadarko Petroleum Corp. APC B 48.25 3.8 5.4 10 1.2 6.3 Canadian Natural Resources Limited CNQ 47.14 3.5 5.0 14 1.0 5.5 Pogo Producing Company PPP 48.40 3.3 4.8 13 0.4 4.2 Devon Energy DVN 53.99 3.0 4.7 9 - 5.5 Median 3.7 5.6 13 0.9 6.2 Service Baker Hughes Inc. BHI 30.38 2.0 11.1 28 1.5 9.3	Apache Corporation	APA		77.81	3.8	5.6	12	0.6	5.4
Anadarko Petroleum Corp. APC B 48.25 3.8 5.4 10 1.2 6.3 Canadian Natural Resources Limited CNQ 47.14 3.5 5.0 14 1.0 5.5 Pogo Producing Company PPP 48.40 3.3 4.8 13 0.4 4.2 Devon Energy DVN 53.99 3.0 4.7 9 - 5.5 Median Service Baker Hughes Inc. BHI 30.38 2.0 11.1 28 1.5 9.3		OXY		38.75	2.4	5.5	10	2.7	5.6
Pogo Producing Company PPP 48.40 3.3 4.8 13 0.4 4.2 Devon Energy DVN 53.99 3.0 4.7 9 - 5.5 Median 3.7 5.6 13 0.9 6.2 Service BHI 30.38 2.0 11.1 28 1.5 9.3		APC	В	48.25	3.8	5.4	10	1.2	6.3
Pogo Producing Company PPP 48.40 3.3 4.8 13 0.4 4.2 Devon Energy DVN 53.99 3.0 4.7 9 - 5.5 Median 3.7 5.6 13 0.9 6.2 Service BHI 30.38 2.0 11.1 28 1.5 9.3	Canadian Natural Resources Limited	CNQ		47.14	3.5	5.0	14	1.0	5.5
Devon Energy DVN 53.99 3.0 4.7 9 - 5.5 Median 3.7 5.6 13 0.9 6.2 Service BHI 30.38 2.0 11.1 28 1.5 9.3	Pogo Producing Company	PPP		48.40	3.3	4.8	13	0.4	4.2
Median 3.7 5.6 13 0.9 6.2 Service Baker Hughes Inc. BHI 30.38 2.0 11.1 28 1.5 9.3		DVN		53.99	3.0	4.7	9	-	5.5
Baker Hughes Inc. BHI 30.38 2.0 11.1 28 1.5 9.3					3.7	5.6	13	0.9	6.2
	Service								
	Baker Hughes Inc.	BHI		30.38	2.0	11.1	28	1.5	9.3
Hamburton Company HAL 24.04 0.9 11.1 22 2.0 10.5	Halliburton Company	HAL		24.64	0.9	11.1	22	2.0	10.3
Schlumberger Ltd. SLB 49.72 2.6 9.2 30 1.5 9.2		SLB		49.72	2.6	9.2	30	1.5	9.2
Median 2.0 11.1 28 1.5 9.3	- Median				2.0	11.1	28	1.5	9.3

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 December 9, 2003

Table 2-1 **Energy Pipeline and Power Companies** Rank by McDep Ratio: Market Cap and Debt to Present Value

	Symbo Rat		Price (\$/sh) 8-Dec 2003	Shares (mm)	Market Cap (\$mm)	Net Present Value (\$/sh)	Debt/ Present Value	McDep Ratio
Large Cap Power								
Duke Energy Corporation	DUK		18.59	832	15,500	16.00	0.69	1.05
Southern Company	SO		29.66	696	20,700	28.00	0.43	1.04
Exelon Corporation	EXC		63.90	325	20,800	65.00	0.51	0.99
Enel S.p.a. (32%)	EN		32.38	388	12,600	37.00	0.40	0.93
American Electric Power Co. Inc.	AEP		28.21	348	9,800	35.00	0.60	0.92
Dominion Resources	D		61.53	294	18,100	76.00	0.44	0.89
Total or Median					97,500		0.47	0.96
Mid Cap Pipeline and Power								
Kinder Morgan Energy Partners, L.P.	KMP	S	45.00	140	6,300	14.00	0.46	2.19
Kinder Morgan Management, LLC	KMR	S	39.80	48	1,900	14.00	0.46	1.99
Kinder Morgan, Inc.	KMI	S	56.38	124	7,010	14.00	0.80	1.61
Williams Companies	WMB		9.80	518	5,080	1.00	0.97	1.27
Constellation Energy Group	CEG		37.95	164	6,220	25.00	0.61	1.20
AES Corporation	AES		8.12	558	4,530	1.00	0.98	1.14
Dynegy Inc.	DYN		4.05	418	1,690	1.00	0.97	1.09
Calpine Corporation	CPN		4.44	381	1,690	1.00	0.98	1.08
CMS Energy Corporation	CMS		7.76	139	1,080	5.00	0.93	1.04
Sempra Energy	SRE		29.00	206	5,970	30.00	0.59	0.99
El Paso Corporation	EP		6.64	589	3,900	10.00	0.79	0.93
Total or Median					45,370		0.80	1.14
Small Cap Pipeline								
Enterprise Products Part (44%)	EPD		23.05	96	2,210	8.50	0.49	1.88
Enbridge Energy Partners, L.P.	EEP	S	50.18	39	1,960	19.00	0.57	1.71
Gulfterra Energy Partners	GTM	S	39.81	66	2,620	17.30	0.48	1.67
Enbridge Energy Management, L.L.C	EEQ	S	47.20	10	470	19.00	0.57	1.64
Plains All Amer. Pipeline, L.P.	PAA		31.49	50	1,570	15.00	0.44	1.61
TEPPCO Partners, L.P.	TPP		40.40	58	2,340	18.00	0.52	1.60
Magellan Midstream Partners, L.P.	MMP		54.75	27	1,490	29.00	0.38	1.55
Northern Border Partners	NBP		37.95	47	1,760	20.00	0.62	1.34
AmeriGas Partners, L.P.	APU		27.21	52	1,430	20.00	0.46	1.20
Western Gas Resources	WGR		46.43	37	1,720	40.00	0.27	1.12
Total or Median					17,570		0.48	1.60

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 December 9, 2003

Table 3-1 **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/		8-Dec	Shares	Cap	Value	Present	McDep
	Ra	ting	2003	(mm)	(\$mm)	(\$/sh)	Value	Ratio
Short Life								
Dorchester Minerals, L.P.	DMLP		19.42	27.0	520	13.00	_	1.49
Southwestern Energy Company	SWN		21.19	36.0	760	17.00	0.30	1.49
Spinnaker Exploration Company	SKE		29.21	33.8	990	25.00	0.50	1.17
Newfield Exploration Company	NFX		44.07	51.7	2,280	40.00	0.31	1.17
Energy Partners Ltd.	EPL	В	12.95	38.2	495	12.00	0.31	1.07
Westport Resources Corporation	WRC	Б	29.20	68.0	1,990	30.00	0.22	0.98
Chesapeake Energy Corporation	CHK		12.98	220	2,860	14.00	0.29	0.98
Cimarex Energy Company	XEC	В	25.55	42.0	2,800	27.00	0.38	0.90
Stone Energy Company	SGY	Б	40.78	26.5	1,070	46.00	0.00	0.93
Denbury Resources Inc.	DNR		12.92	20.3 55.0	710	40.00	0.27	0.92
Forest Oil Corporation								
	FST		26.70	48.2	1,290	35.00	0.33	0.84
The Houston Exploraton Company	THX		36.00	31.0	1,120	45.00	0.16	0.83
St. Mary Land and Exploration Compa			27.03	29.0	780	35.00	0.14	0.80
Total or Media	n				15,900		0.27	0.96
Long Life			22 10		1 000	12.00	0.10	
Ultra Petroleum Corp.	UPL		23.10	78.0	1,800	13.00	0.10	1.70
Unit Corporation	UNT		22.46	43.6	980	18.00	0.04	1.24
Penn Virginia Corporation	PVA		53.23	9.0	480	45.00	0.06	1.17
Quicksilver Resources Inc.	KWK		31.00	20.4	630	25.00	0.35	1.16
Evergreen Resources, Inc.	EVG		31.03	44.0	1,370	30.00	0.10	1.03
Swift Energy Company	SFY		15.14	27.2	410	16.00	0.43	0.97
Encore Acquisition Corp.	EAC	В	22.15	30.3	672	24.00	0.17	0.94
Magnum Hunter Resources, Inc.	MHR		9.23	69.0	640	11.00	0.45	0.91
Vintage Petroleum, Inc.	VPI		11.32	63.0	710	20.00	0.40	0.74
Total or Media	п				7,700		0.17	1.03
Canadian Royalty Trusts								
Enerplus Resources Fund	ERF		29.03	88.5	2,570	20.00	0.13	1.39
Provident Energy Trust	PVX		8.65	68.8	600	6.00	0.25	1.33
Pengrowth Energy Trust	PGH		15.00	112.0	1,680	11.00	0.20	1.29
Canadian Oil Sands Trust (US\$)	COSWF	В	33.50	86.7	2,900	45.00	0.22	0.80
Total or Media	п				7,800		0.21	1.31
Natural Gas Royalty Trusts								
Hugoton RoyaltyTrust (46%)	HGT		23.33	18.4	430	15.70	-	1.49
Cross Timbers Royalty Trust	CRT		29.10	6.0	175	20.30	-	1.44
Sabine Royalty Trust	SBR		28.70	14.6	420	22.00	-	1.30
Permian Basin RT (41%)	PBT		8.25	19.1	160	6.50	-	1.27
San Juan Basin Royalty Trust	SJT	В	20.80	46.6	970	18.00	-	1.15
Total or Media		-			2,200		-	1.30
Micro Cap					_,_ 00			1.20
Abraxas Petroleum Corporation	ABP		1.15	30.0	35	1.00	0.85	1.03
Purcell Energy, Ltd. (US\$)	PEL.TO		2.04	27.9	57	2.80	0.32	0.82
i areen Energy, Etc. (050)	1 LL.10		2.04	21.7	51	2.00	0.52	0.02

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 December 9, 2003

Table 3-2 Independent Natural Gas and Oil Producers - Small Cap Rank by EV/Ebitda: Enterprise Value to Earnings Before Interest, Tax, Deprec.

	Price Dividend or					vidend or		
			(\$/sh)	EV/	EV/		stribution	PV/
	Symbol/		8-Dec	Sales	Ebitda	P/E	NTM	Ebitda
	Rai	ting	2003	NTM	NTM	NTM	(%)	NTM
		0						
Short Life								
Dorchester Minerals, L.P.	DMLP		19.42	12.6	14.6	53	6.8	9.8
Southwestern Energy Company	SWN		21.19	3.4	7.0	15	-	6.0
Chesapeake Energy Corporation	CHK		12.98	4.3	6.2	15	0.9	6.5
Forest Oil Corporation	FST		26.70	3.7	6.1	20	-	7.2
Westport Resources Corporation	WRC		29.20	4.2	5.9	19	-	6.0
Energy Partners Ltd.	EPL	В	12.95	3.0	5.3	47	-	4.9
Cimarex Energy Company	XEC	В	25.55	3.6	4.8	13	-	5.1
St. Mary Land and Exploration Company	SM		27.03	2.9	4.4	15	0.4	5.5
Spinnaker Exploration Company	SKE		29.21	3.8	4.4	16	-	3.7
Denbury Resources Inc.	DNR		12.92	3.1	4.3	9	-	4.8
Stone Energy Company	SGY		40.78	3.1	4.1	9	-	4.5
Newfield Exploration Company	NFX		44.07	3.1	4.0	8	-	3.8
The Houston Exploraton Company	THX		36.00	2.9	3.6	9	-	4.3
Median				3.4	4.8	15	-	5.1
Long Life								
Ultra Petroleum Corp.	UPL		23.10	13.6	18.0	32	-	10.6
Evergreen Resources, Inc.	EVG		31.03	7.8	11.1	19	-	10.8
Unit Corporation	UNT		22.46	4.1	9.4	24	-	7.6
Quicksilver Resources Inc.	KWK		31.00	5.4	8.1	16	-	7.0
Swift Energy Company	SFY		15.14	4.4	6.6	23	-	6.9
Penn Virginia Corporation	PVA		53.23	3.6	6.5	17	1.7	5.6
Magnum Hunter Resources, Inc.	MHR		9.23	3.5	6.0	16	-	6.6
Encore Acquisition Corp.	EAC	В	22.15	3.7	5.2	11	-	5.6
Vintage Petroleum, Inc.	VPI		11.32	2.3	4.4	28	1.4	5.9
Median				4.1	6.6	19	-	6.9
Canadian Royalty Trusts								
Enerplus Resources Fund	ERF		29.03	8.0	10.8	17	10.9	7.7
Canadian Oil Sands Trust (US\$)	COSWF	В	33.50	4.8	10.4	19	4.5	12.9
Pengrowth Energy Trust	PGH		15.00	5.2	7.6	15	11.9	5.9
Provident Energy Trust	PVX		8.65	4.3	6.2	13	15.0	4.7
Natural Gas Royalty Trusts								
Cross Timbers Royalty Trust	CRT		29.10	8.9	12.6	13	7.8	8.8
Sabine Royalty Trust	SBR		28.70	10.8	11.3	11	8.9	8.6
Permian Basin RT (41%)	PBT		8.25	7.7	11.1	13	9.1	8.7
Hugoton RoyaltyTrust (46%)	HGT		23.33	7.6	10.1	12	8.1	6.8
San Juan Basin Royalty Trust	SJT	В	20.80	6.9	8.4	10	10.2	7.2
2	~~ .	-	_0.00	5.7	5.1		10.2	, . <u> </u>
Micro Cap								
Abraxas Petroleum Corporation	ABP		1.15	6.9	12.9		-	12.6
Purcell Energy, Ltd. (US\$)	PEL.TO		2.04	3.6	5.5	18	-	6.7
	0		2.01	5.0	0.0			5.7

EV = Enterprise Value = Market Cap and Debt; Ebitda = Earnings before interest, tax, depreciationand amortization; NTM = Next Twelve Months Ended September 30, 2004; P/E = Stock Price toEarnings; PV = Present Value of oil and gas and other businesses