

## Shale Strategy III

## **Summary and Recommendation**

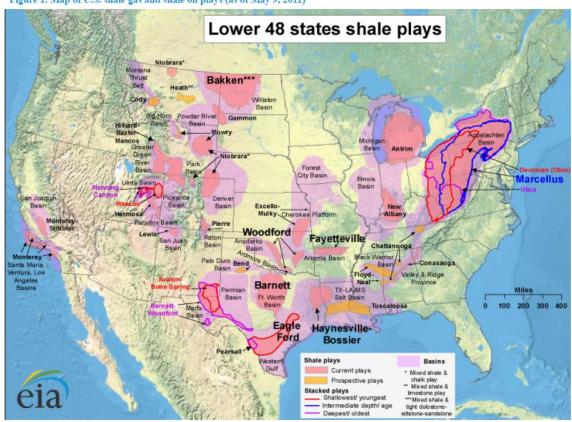
Five large cap independent producer buy-recommendations EOG Resources (EOG), Devon Energy (DVN), Occidental Petroleum (OXY), Encana (ECA) and Marathon Oil (MRO) are concentrated investment opportunities in exploiting the shale formations that have reversed the declining trend of U.S. crude oil and carried natural gas production to all-time highs. Shale gas and shale oil opportunities range across the country from the Marcellus in the East to the Monterey in the West (see map Lower 48 Shale Plays on page 2). Helped by shale oil production from the Bakken formation in North Dakota, U.S. crude oil production may be on the rise again after declining to half its 1970 peak (see chart Monthly U.S. Field Production of Crude Oil on page 2). Shale gas has contributed practically all of the 25% growth in five years that has taken U.S. natural gas to a new level (see chart Monthly U.S. Natural Gas Marketed Production on page 3). In shale oil, EOG is the top producer in the Bakken and Eagle Ford while OXY is the largest acreage holder in the Monterey (see table Participation by Shale Formation on page 3). In shale gas, DVN is the top producer in the Barnett. Price has diverged to the point where the current quote for oil for the next six years is more than three times the heating equivalent of natural gas (see charts Six-Year Commodity Price Meter on page 3 and Six-Year and One-Year Natural Gas and Oil Futures on page 9). An uptrend appears well-established for oil and an uptrend may be in the early stages for natural gas. The five buy recommendations look attractively priced for making money in oil and gas production including from shale (see Tables 1-4 on pages 4-7).

## Shale Gas Good for Economic Growth

Though producers might prefer a higher price for natural gas, the lower price as a result of abundant shale supply is a boon for consumers. There is a large market for coal to be replaced by natural gas with its consequent upgrading of quality of life. Also as governments struggle with the heavy fiscal burdens imposed by subsidies for wind and solar power, natural gas is a more welcoming alternative at a more economical price. The same trends point to direct burning of natural gas in transportation. To the extent that the electric car is a favored future alternative and that electricity is increasingly generated from natural gas, it is only logical that natural gas be burned directly in vehicles at an advantage in thermodynamic efficiency. Just as natural gas has become the preferred fuel for space heating over coal, oil and electricity, natural gas is lot cheaper. Similarly gasoline is a convenient fuel, but natural gas is lot cheaper. For now, increased use of natural gas in electrical generation is underway and it will take more time for transportation to have much volume impact. Meanwhile, we may have seen the bottom in natural gas price and most of the producers are doing well on the oil side of their business.

Kurt H. Wulff, CFA





Source U.S. Energy Information Administration based on data from various published studies.

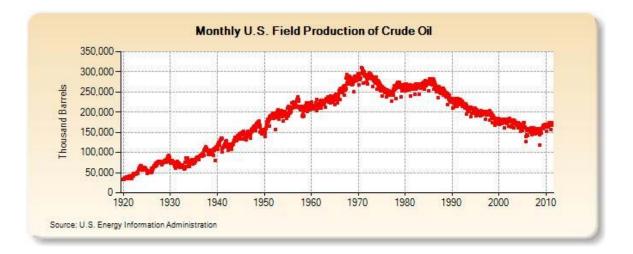
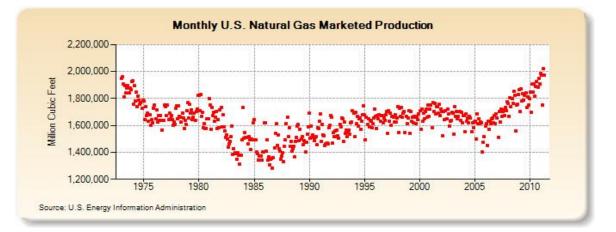
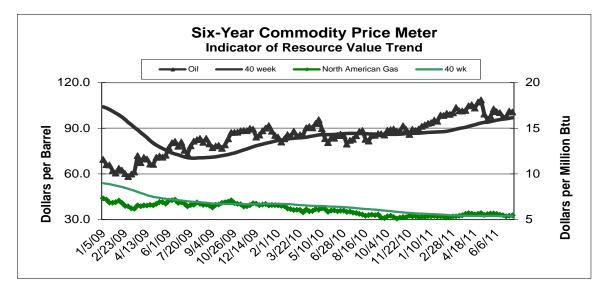


Figure 1. Map of U.S. shale gas and shale oil plays (as of May 9, 2011)





Participation by Shale Formation										
(1 = Largest Producer or Acreage Holder)										
	EOG	DVN	OXY	ECA	MRO					
Oil Shales										
Bakken	1				x					
Eagle Ford	1				x					
Monterey			1							
Natural Gas Shales										
Barnett	х	1		Х						
Haynesville	х	х		х						
Marcellus	х	x								





		-	-	Table						
	Mo	D	ep Larg	e Cap	Energy P	ortfolio	)			
(	Geogra	ph	ic Dom	icile an	d Busines	s Segn	nents			
						Prose	nt Value by	Segmen	t (%)	
			Price			North	Rest	begmen	1 (70)	
			(US\$/sh)	EV/	Enterprise	Amer.				
Sa	mbol/Rat	na	11-Jul	Market	Value	Natural	Natural	Oil	Down-	McDer
B = Buy, CH		0		Cap	(\$mm)	Gas	Gas	Prod'n	stream	Ratio
U.S. Integrated		Jwj	2011	Cup	(\$mm)	Ous	Ous	TTOUN	streum	Kun
Exxon Mobil Corporation	XOM	R	81.90	1.16	474,000	9	19	56	16	0.76
Chevron Corporation	CVX		104.41	1.13	237,000	3	10	77	10	0.70
ConocoPhillips	CVA		74.70	1.13	149,000	14	10	63	10	0.70
Total or Median	COF	Б	74.70	1.30	860,000	14	10	63	15	0.70
Europe					800,000			05		0.70
BG Group	BRGXF		22.35	1.18	89,900		34	44	21	0.91
Royal Dutch Shell plc	RDS-A	R	71.04	1.18	284,000	3	22	54	21	0.91
Statoil ASA (33%)	STO		24.42	1.30	284,000	3	37	63	- 21	0.79
	BP	ы	43.84	1.49	227,000	5	37	67	20	0.65
BP plc Total S.A.	TOT	CP		1.03	160,000	5	18	68	14	0.59
Total S.A. Total or Median	101	CB	54.97	1.30			18	68	14	0.56
					799,000			03		0.05
Brazil/Russia/Australia/China			42.22	1 10	20.000		(2)	27	-	0.95
Woodside Petroleum Ltd.	WOPEY		42.22	1.19	39,000		63	37		
CNOOC Limited (36%)	CEO	D	229.65	1.05	38,700		9	91	-	0.92
PetroChina Company Ltd (14%)	PTR		146.38	1.25	46,800		13	69	18	0.74
Petrobras	PBR			1.27	273,000		2	83	15	0.59
Gazprom (50%)	OGZPY		14.26	1.24	102,000		80	20	-	0.56
Lukoil Oil Company	LUKOY	В	64.17	1.10	55,700			67	33	0.45
Total or Median					555,000			69		0.66
U.S. Independent			10.00			100				
Southwestern Energy Company	SWN		42.70	1.10	16,500	100			-	1.02
Anadarko Petroleum Corp.	APC		76.90	1.55	59,400	37		60	3	0.99
Chesapeake Energy Corp.	CHK		29.75	1.61	37,200	82		18	-	0.94
Occidental Petroleum Corp.	OXY		101.76	1.10	90,700	8	1	85	6	0.84
EOG Resources, Inc.	EOG			1.21	29,800	45	5	50	-	0.79
Devon Energy Corporation	DVN			1.12	37,700	54		46	-	0.72
Marathon Oil Corporation	MRO	В	32.01	1.21	27,800	9	4	88	-	0.64
Total or Median					299,000			50		0.84
Canada										
Penn West Exploration	PWE		22.72	1.42	14,600	17		83	-	0.81
Cenovus Energy Inc.	CVE		36.81	1.28	35,600	19		72	9	0.79
Imperial Oil Limited (30%)	IMO		45.88	1.14	13,300	3		86	11	0.76
EnCana Corporation	ECA	CB		1.48	32,800	91		9	-	0.68
Canadian Natural Resources Lin	CNQ		40.68	1.30	58,500	16		84	-	0.67
Suncor Energy	SU		39.56	1.23	76,700	3		84	13	0.67
Canadian Oil Sands Limited	COSWF	CB	28.00	1.13	15,300			100	-	0.57
Total or Median					247,000			84		0.68
Composite					2,760,000	9	15	63	13	0.69



			Table 2					
Ν	<b>IcDep</b>	Larg	ge Cap H	Energy I	Portfolio			
Ν	et Pres	ent	Value ar	nd McD	ep Ratio			
					-			
			Price			Net		
			(US\$/sh)		Market	Present	Debt/	
	Symbol/R	ating	11-Jul	Shares	Cap	Value	Present	McDep
$\mathbf{B}=\mathbf{B}\mathbf{u}\mathbf{y},$	CB (see b	elow)	2011	(mm)	(US\$mm)	(US\$/sh)	Value	Ratio
U.S. Integrated								
Exxon Mobil Corporation	XOM	В	81.90	4,971	407,000	112.00	0.11	0.76
Chevron Corporation	CVX	B	104.41	2,009	210,000	154.00	0.08	0.70
ConocoPhillips	COP	B	74.70	1,445	108,000	119.00	0.19	0.70
Total or Median	001	D	74.70	1,113	725,000	119.00	0.11	0.70
Europe					725,000		0.11	0.70
BG Group plc	BRGXF		22.35	3,410	76,200	25.00	0.14	0.91
Royal Dutch Shell plc	RDS-A	В	71.04	3,087	219,000	96.00	0.18	0.79
Statoil ASA (33%)	STO	В	24.42	1,050	25,700	44.00	0.21	0.65
BP plc	BP	_	43.84	3,173	139,000	93.00	0.23	0.59
Total S.A.	TOT	CB	54.97	2,251	124,000	111.00	0.13	0.56
Total or Median	101	0.5	0.1157	2,201	584,000	11100	0.18	0.65
Brazil/Russia/Australia/China					507,000		0.10	0.05
Woodside Petroleum Ltd.	WOPEY		42.22	774	32,700	45.00	0.15	0.95
CNOOC Limited (36%)	CEO		229.65	161	36,900	250.00	0.04	0.92
PetroChina Company Ltd (14%)	PTR	В	146.38	256	37,500	210.00	0.15	0.74
Petrobras	PBR	CB	32.78	6,539	214,300	62.00	0.13	0.59
Gazprom (50%)	OGZPY	В	14.26	5,750	82,000	28.00	0.11	0.56
Lukoil Oil Company	LUKOY	В	64.17	786	50,400	150.00	0.04	0.45
Total or Median					454,000		0.12	0.66
U.S. Independent					,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			
Southwestern Energy Company	SWN		42.70	350	15,000	42.00	0.09	1.02
Anadarko Petroleum Corp.	APC		76.90	499	38,400	78.00	0.35	0.99
Chesapeake Energy Corp.	CHK		29.75	774	23,000	33.00	0.36	0.94
Occidental Petroleum Corp.	OXY	В	101.76	813	82,800	123.00	0.07	0.84
EOG Resources, Inc.	EOG	CB	99.01	250	24,800	130.00	0.14	0.79
Devon Energy Corporation	DVN	CB	78.26	430	33,700	112.00	0.08	0.72
Marathon Oil Corporation	MRO	В	32.01	715	22,890	54.00	0.11	0.64
Total or Median					240,600		0.11	0.84
Canada								
Penn West Exploration	PWE		22.72	440	10,300	31.00	0.24	0.81
Cenovus Energy Inc.	CVE	В	36.81	753	27,700	49.00	0.18	0.79
Imperial Oil Limited (30%)	IMO	В	45.88	256	11,800	62.00	0.09	0.76
EnCana Corporation	ECA	CB	29.91	738	22,100	51.00	0.22	0.68
Canadian Natural Resources Limited			40.68	1,106	45,000	67.00	0.15	0.67
Suncor Energy	SU	В	39.56	1,581	62,500	64.00	0.12	0.67
Canadian Oil Sands Limited	COSWF	CB	28.00	485	13,600	52.00	0.06	0.57
Total or Median					193,000	. =	0.15	0.68
CB=Contrarian Buy, Stock Price ma	y in down	rend c	ompared to	200-day av				

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

Estimated present value presumes a long-term price for oil of US\$100 a barrel and natural gas, \$8 a million btu.



			Table 3					
Mcl	Dep La	rge	Cap E	nergy Po	ortfolio			
Value	e Multi	ple	s and D	istributio	on Yield			
			Price	Adjustd				Divd or
			(US\$/sh)	Resrvs/	PV/	EV/		Distrib
S	ymbol/Rat	ino	11-Jul	Prod	Ebitda	Ebitda	P/E	NTM
B = Buy, C			2011	NTM	NTM	NTM	NTM	(%)
D = Duy, C		011)	2011					(70)
U.S. Integrated								
Exxon Mobil Corporation	XOM	В	81.90	13.8	7.2	5.5	9	2.1
ConocoPhillips	COP	В	74.70	11.9	7.8	5.5	10	3.5
Chevron Corporation	CVX	В	104.41	8.4	6.2	4.3	8	2.8
Total or Median				11.9	7.2	5.5	9	2.8
Europe								
BG Group plc	BRGXF		22.35	20.3	9.1	8.3	15	1.0
Royal Dutch Shell plc	RDS-A	В	71.04	8.9	6.6	5.2	9	4.7
BP plc	BP		43.84	10.5	7.0	4.2	5	3.8
Total S.A.	TOT	CB	54.97	9.6	6.9	3.9	6	5.9
Statoil ASA (33%)	STO	B	24.42	6.6	5.8	3.8	8	4.7
Total or Median	510			9.6	6.9	4.2	8	4.7
Brazil/Russia/Australia/China				2.0	0.9	7.2	0	1.7
Woodside Petroleum Ltd.	WOPEY		42.22	22.5	13.0	12.3	22	2.5
Petrobras	PBR	CB	32.78	13.3	10.8	6.4	10	3.6
PetroChina Company Ltd (14%)	PTR	B	146.38	13.4	7.3	5.4	10	3.6
CNOOC Limited (36%)	CEO	D	229.65	6.5	5.3	4.9	8	2.6
Gazprom (50%)	OGZPY	В	14.26	30.2	6.9	3.9	6	2.0
Lukoil Oil Company	LUKOY	B	64.17	16.1	6.1	2.8	4	2.4
Total or Median	LUKUI	D	04.17	14.8	7.1	5.2	9	2.9
U.S. Independent				14.0	7.1	5.2	9	2.7
Southwestern Energy Company	SWN		42.70	7.9	10.9	11.1	24	
	CHK		29.75	11.6	10.9	10.2	18	1.2
Chesapeake Energy Corp.	APC			7.0	7.3	7.2	18	0.5
Anadarko Petroleum Corp.		D	76.90				14	
Occidental Petroleum Corp.	OXY	B	101.76	11.3	8.3	6.9	14	1.8
Devon Energy Corporation	DVN	CB	78.26	10.3	9.1	6.6	13	0.9
EOG Resources, Inc.	EOG	CB	99.01	9.0	7.7	6.1	21	0.6
Marathon Oil Corporation	MRO	В	32.01	10.1	7.6	4.8	15	1.9
Total or Median				10.1	8.3	6.9	17	0.9
Canada	<b>P</b> (0		45.00	10.5	10.7	0.5	1.7	1.0
Imperial Oil Limited (30%)	IMO	B	45.88	42.7	12.5	9.6	15	1.0
Cenovus Energy Inc.	CVE	B	36.81	21.0	11.7	9.3	27	2.3
Penn West Exploration	PWE		22.72	8.8	10.6	8.6	19	5.0
EnCana Corporation	ECA	CB	29.91	12.3	12.7	8.6	33	2.7
Canadian Natural Resources Limited	CNQ	_	40.68	20.4	11.1	7.4	17	0.9
Suncor Energy	SU	B	39.56	25.6	10.0	6.7	13	1.1
Canadian Oil Sands Limited	COSWF	CB	28.00	26.4	10.8	6.1	10	4.5
Total or Median				21.0	11.1	8.6	17	2.3
CB=Contrarian Buy, Stock Price may be								
EV = Enterprise Value = Market Cap and						eciation		
and amortization; NTM = Next Twelve M				2; P/E = Sto	ock Price to			
Earnings; PV = Present Value of oil and g								



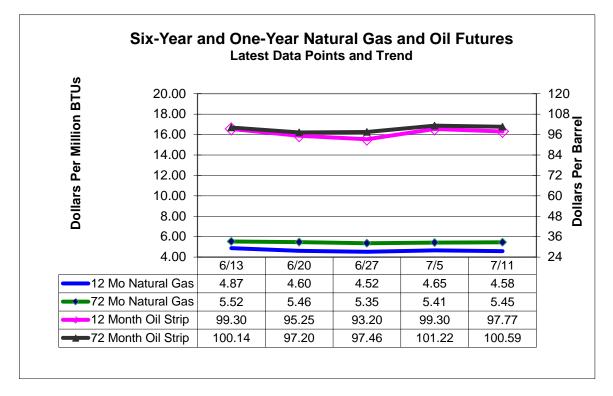
			Table	4				
	McDep	) La	rge Cap l	Energy 1	Portfolio			
	-		rise Value	0.		erage		
	J	F						
			Price					
			(\$/sh)		Enterprise	Value/		
	Symbol		11-Jul	52Wk	52Wk	50 Day	200 Day	McDep
	F	Ratin	2011	High	Low	Avg.	Avg.	Ratio
U.S. Integrated								
Chevron Corporation	CVX	В	104.41	0.96	1.40	1.02	1.08	0.70
Exxon Mobil Corporation	XOM	В	81.90	0.94	1.34	1.00	1.05	0.76
ConocoPhillips	COP	В	74.70	0.94	1.30	1.02	1.05	0.70
Median				0.94	1.34	1.02	1.05	0.70
Europe								
Royal Dutch Shell plc	RDS-A	В	71.04	0.93	1.26	1.00	1.03	0.79
BG Group plc	BRGXF		111.76	0.88	1.34	0.99	1.02	0.91
Statoil ASA (33%)	STO	В	24.42	0.87	1.20	0.97	1.00	0.65
BP plc	BP		43.84	0.93	1.16	1.00	0.99	0.59
Total S.A.	TOT	CB	54.97	0.88	1.14	0.97	0.98	0.56
Median				0.90	1.23	1.00	1.01	0.68
Brazil/Russia/Australia/China								
PetroChina Company Ltd (14%)	PTR	В	146.38	0.94	1.31	1.04	1.06	0.74
Gazprom (50%)	OGZPY	В	14.26	0.85	1.32	0.98	1.04	0.56
Lukoil Oil Company	LUKOY	В	64.17	0.86	1.22	1.01	1.02	0.45
CNOOC Limited (36%)	CEO		229.65	0.85	1.45	0.97	1.00	0.92
Woodside Petroleum Ltd.	WOPEY		42.22	0.84	1.15	0.92	0.95	0.95
Petrobras	PBR	CB	32.78	0.81	1.03	0.98	0.93	0.59
Median				0.85	1.26	0.98	1.01	0.66
U.S. Independent								
Southwestern Energy Company	SWN		43.39	0.96	1.35	1.00	1.09	1.02
Occidental Petroleum Corp.	OXY	В	101.76	0.87	1.36	0.98	1.05	0.84
Anadarko Petroleum Corp.	APC		76.90	0.93	1.38	1.02	1.04	0.99
Chesapeake Energy Corp.	СНК		29.75	0.89	1.27	0.99	1.04	0.94
Devon Energy Corporation	DVN	CB	78.26	0.85	1.28	0.97	0.98	0.72
EOG Resources. Inc.	EOG	CB	99.01	0.84	1.13	0.95	0.97	0.79
Marathon Oil Corporation	MRO	В	32.01					0.64
Median				0.88	1.31	0.99	1.04	0.84
Canada								
Cenovus Energy Inc.	CVE	В	36.81	0.92	1.35	1.03	1.07	0.79
Imperial Oil Limited (30%)	IMO	B	45.88	0.84	1.24	0.97	1.03	0.76
Suncor Energy	SU	B	39.56	0.84	1.27	0.98	1.01	0.67
EnCana Corporation	ECA	CB	29.91	0.89	1.10	0.96	0.98	0.68
Canadian Oil Sands Limited	COSWF		28.02	0.81	1.21	0.93	0.98	0.57
Penn West Exploration	PWE		22.72	0.86	1.21	0.97	0.97	0.81
Canadian Natural Resources	CNQ		40.68	0.82	1.25	0.98	0.97	0.67
Median				0.84	1.24	0.97	0.98	0.68
CB=Contrarian Buy, Stock Price	may be in	down	rend compare					

CB=Contrarian Buy, Stock Price may be in downtrend compared to 200-day average.



	1	Index of Rec	ent Research
Stock 1	Ideas		
Date	<u>Symbol</u>	<u>Subject</u>	Theme
5-Jul	DVN	Devon Energy	Thermal Oil Growth in Canada (Meter Reader)
28-Jun	MRO	Marathon Oil	Buy New U.S. Independent Producer (Meter Reader)
24-Jun	HGT, SJT, MTR	Hugoton, San Juan, Mesa RTrust	Income Enhancers (ISC Weekly)
21-Jun	WOPEY	Woodside Petroleum	Remove Buy on Costs and Delay (Meter Reader)
17-Jun	PEYUF	Peyto Exploration	Update Growth (Income and Small Cap)
14-Jun	CVE	Cenovus Energy	Accelerating Deep Oil Sands (Meter Reader)
10-Jun	WLL	Whiting Petroleum	Bakken Backlog (Income and Small Cap Weekly)
7-Jun	IMO	Imperial Oil	Double Oil Production by 2020 (Meter Reader)
3-Jun	НК	Petrohawk	Raise NPV to \$34 a Share from \$24 on Eagle Ford (ISCW)
31-May	OXY	Occidental Petroleum	Triple California Oil Production by 2020 (Meter Reader)
27-May		Cimarex Energy	Timely Buy on Stock Price Underperformance (ISCW)
24-May		Statoil	Nordic Oil and Gas Stalwart (Meter Reader)
20-May		Sabine Royalty Trust	Raise NPV to \$70 from \$59 on Rising Volume (ISCW)
17-May		Petrobras	Out-of-Favor Oil Growth (Meter Reader)
13-May		Dorchester Minerals, L.P.	Fayetteville and Bakken Growth (Income and Small Cap Week
10-May		EOG Resources	High-Profit Light Sweet North American Oil (Meter Reader)
	ТОТ	Total	Profiting Outside U.S. (Meter Reader)
29-Apr		Birchcliff Energy	Independent Engineer Confirms Natural Gas Upside (ISCW)
1	COSWF	Canadian Oil Sands Limited	Dividend Increased 50%
22-Apr		Enerplus Corporation	New Buy - Bakken and Marcelllus with 7% Income (ISCW)
21-Apr		Encana	North America's Natural Gas Pure Play
12-Apr		ConocoPhillips	Bad Government Actions Good for Oil Profits (Meter Reader)
8-Apr	RRC	Range Resources	Raise NPV to \$60 from \$50 a Share (Income and Small Cap)
5-Apr	CVX	Chevron	Raise NPV to \$154 a Share from \$146 (Meter Reader)
29-Mar		Exxon Mobil	Natural Gas Enhanced by Nuclear (Meter Reader)
22-Mar		PetroChina	Overlooked Oil in PTR Stock (Meter Reader)
	LUKOY	Lukoil	Lukoil and Russia Ride the Rise of Oil (Meter Reader)
8-Mar	CNQ	Canadian Natural Resources	End Buy (Meter Reader)
	OGZPY	Gazprom	Nearer Accord on Natural Gas to China (Meter Reader)
	For historical resear	ch by stock, go to mcdep.com, clic	k on <u>Stock Ideas</u> , click on stock by name.
Meter	Reader		
5-Jul	DVN	Devon Energy	Thermal Oil Growth in Canada
28-Jun	MRO	Marathon Oil	Buy New U.S. Independent Producer
21-Jun	WOPEY	Woodside Petroleum	Remove Buy on Costs and Delay
14-Jun	CVE	Cenovus Energy	Accelerating Deep Oil Sands
	For earlier editions,	go to mcdep.com, click on Meter	Reader.
Income	e and Small Cap V	Veekly	
8-Jul			Shale Strategy II
1-Jul			Shale Strategy
24-Jun	HGT, SJT, MTR	Hugoton, San Juan, Mesa RTrust	Income Enhancers
17-Jun	PEYUF, UPL, PGH		Update Growth
	For earlier editions	go to mcdep.com, click on Energy	Income





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