

## PDC Energy (PDCE) Raise NPV to \$55 on Colorado Shale Oil

Symbol	PDCE	Ebitda Next Twelve Months ending 12/31/14 (US\$mn	265
Rating		North American Natural Gas/Ebitda (%)	18
Price (\$/sh)	46.67	Natural Gas and Oil Production/Ebitda (%)	100
Pricing Date	1/13/14	Adjusted Reserves/Production NTM	13.5
Shares (mm)	36	EV/Ebitda	8.6
Market Capitalization (\$mm)	1,680	PV/Ebitda	9.7
Debt (\$mm)	600	Undeveloped Reserves (%)	62
Enterprise Value (EV) (\$mm)	2,280	Natural Gas and Oil Ebitda (\$/boe)	29.10
Present Value (PV) (\$mm)	2,580	Present Value Proven Reserves(\$/boe)	14.40
Net Present Value (\$/share)	55	Oil and Gas Ebitda Margin (%)	60
Debt/Present Value	0.23	Earnings Next Twelve Months (US\$/sh)	1.58
McDep Ratio - EV/PV	0.88	Price/Earnings Next Twelve Months	30
Dividend Yield (%/year)	0.0	Indicated Annual Dividend (US\$/sh)	0.00
Note: Estimated cash flow and earn	ings tied to one	e-year futures prices for natural gas and oil.	
Reported results may vary wi	dely from estir	nates. Estimated present value per share revised only infred	quently.
Estimated present value pres	umes a long-ter	m price for oil of US\$90 a barrel and natural gas, \$6 a milli	ion btu.
For historical analysis of PD	C Energy since	2011 see www.mcdep.com/5petd.htm	

## **Summary and Recommendation**

New purchase may be timely for the stock of high-growth shale oil producer **PDC Energy** (PDCE) as we raise estimated Net Present Value (NPV) to \$55 a share from \$45. Our interest is piqued by a one third decline in stock price to \$47 a share from the high of \$74 on October 25. Volume guidance released on December 10 calls for a one third increase in 2014 over 2013. Looking ahead, the company is expected to release in a few weeks estimated year-end reserves for 2013, to be up perhaps by a third from a year earlier. The main contributor to volume and reserve growth is horizontal fraccing in the Niobrara and Codell formations of Northeast Colorado (see slide Wattenberg on page 2). Initial production from a promising shale play in the Utica formation in Ohio contributes further to 2014 growth (see slide Utica on page 2). Despite operational and technical success, drilling has been suspended on Marcellus shale gas in West Virginia for lack of a higher natural gas price. Estimated NPV takes account of volume growth in 2014, but not all of reserve growth expected to be reported for 2013 (see tables Operating and Financial Estimates and Present Value on page 3). The company is financially sound at a moderate ratio of Debt to Present Value of 0.23. Hedges in place protect cash flow from oil price risk in 2014 and 2015. McDep Ratio of 0.88 points to favorable value for a high-growth, small cap stock (see Tables 1-3 on pages 4-6). Finally, PDCE stock looks third most out of favor of 33 stocks in our coverage as measured by ratio of Enterprise Value to 200 day average (see Table 4 on page 7).

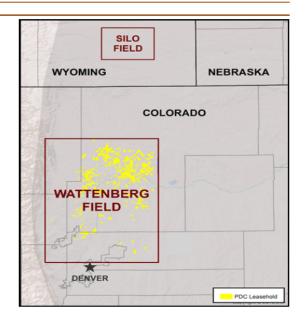
Kurt H. Wulff, CFA



## Core Horizontal Wattenberg



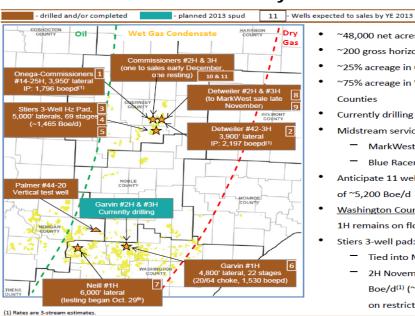
- ~98,000 net acres, 95% HBP
- · Third largest leaseholder and producer
- 70% 80% liquids
- Niobrara Wt. Avg. Inventory EUR of 335 Mboe per well
- Excellent returns
  - IRR of 50% 140%(1)
- · 2,000 gross horizontal locations
- · Additional downspacing opportunities exist
  - Niobrara downspacing
  - Horizontal Codell
- Strong repeatable lower risk results



(1) Flat pricing: \$90 NYMEX oil, \$4.00 NYMEX ga

12/13/2013

## Utica Leasehold and Activity



- ~48,000 net acres, 57% HBP, 95% WI, 16% royalty
- ~200 gross horizontal locations (1,000 ft. spacing)
- ~25% acreage in Guernsey & N. Noble Counties
- ~75% acreage in Washington, S. Noble, Morgan
- Currently drilling 12th Hz well (10th in 2013)
- Midstream services
  - MarkWest Northern acreage, in service
  - Blue Racer Southern acreage
- Anticipate 11 wells to sales by YE 2013 with exit rate of ~5,200 Boe/d
- Washington County wells Garvin 1H producing; Ne 1H remains on flowback
- Stiers 3-well pad:
  - Tied into MarkWest mid-November
  - 2H November average production: ~1,465 Boe/d(1) (~79% liquids) from all three wells on restricted choke

12/13/2013



			PDC Enc	ergy, Inc.					
	Next T	welve Mo	nths Operat	ing and F	inancial E	Estimates			
									Next
									Twelve
	Q4	Q3	Q4E	Year	Q1E	Q2E	Q3E	Q4E	Months
	12/31/12	9/30/13	12/31/13	2013E	3/31/14	6/30/14	9/30/14	12/31/14	12/31/14
Volume									
Natural Gas (mmcfd)	90	56	65	55	60	59	59	58	59
Days	92	92	92	365	90	91	92	92	365
Oil (mb)	788	850	1,086	3,737	1,168	1,299	1,445	1,589	5,502
Oil (mbd)	8.6	9.2	11.8	10.2	13.0	14.3	15.7	17.3	15.1
Total (bcfe)	13.0	10.3	12.5	42.6	12.4	13.2	14.1	14.9	54.6
Total (mbd)	23.6	18.6	22.6	19.5	23.0	24.2	25.5	27.0	24.9
Price									
Henry Hub (\$/mmbtu)	3.40	3.58	3.60	3.65	4.30	4.05	4.08	4.15	4.15
Differential	0.49	0.45	0.45	0.38	0.54	0.51	0.51	0.52	0.52
Company (\$/mcf)	2.91	3.13	3.15	3.28	3.76	3.54	3.57	3.64	3.63
WTI Cushing (\$/bbl)	88.18	105.83	97.46	97.98	92.03	91.66	90.00	88.05	90.44
Differential	19.56	28.26	26.02	25.91	24.58	24.48	24.03	23.51	24.28
Company	68.61	77.57	71.43	72.07	67.45	67.19	65.97	64.54	66.16
Total (\$/bbl)	36.05	47.92	46.30	47.21	47.92	48.38	48.86	49.17	48.61
Revenue (\$mm)									
Natural Gas	24	16	19	66	20	19	19	19	78
Oil	54	66	78	269	79	87	95	103	364
Total	78	82	96	336	99	106	115	122	442
Expense									
Lease operating	18	19							-
General and administrative	16	16							-
Total	34	35	39	132	40	43	46	49	177
Ebitda	44	47	58	204	59	64	69	73	265
Exploration	16	2	2	7	2	2	2	2	8
Deprec., Deplet., & Amort.	40	31	31	118	31	31	31	31	124
Other, incl hedge	165	5		39	-				-
Ebit	(177)	9	25	40	27	31	36	40	134
Interest	16	13	13	51	13	13	13	13	50
Ebt	(194)	(4)	12	(11)	14	18	23	28	84
Income Tax	(68)	(1)	4	(4)	5	6	8	10	29
Net Income (\$mm)	(126)	(2)	8	(7)	9	12	15	18	54
Per Share (\$)	(4.17)	(0.07)	0.22	(0.29)	0.25	0.33	0.49	0.50	1.58
Shares (millions)	30.2	33.4	36.0	26.0	36.0	36.0	31.0	36.0	36.0
Ebitda Margin	56%	57%	60%	61%	60%	60%	60%	60%	60%
Tax rate	35%	35%	35%	35%	35%	35%	35%	35%	35%

PD	C Energy, In	ıc.								
Functional Cash Flow and Present Value										
				Present						
	NTM Ebitda	Adjusted	PV/	Value						
	(US\$mm)	<u>R/P</u>	<u>Ebitda</u>	(US\$mm)						
North American Natural Gas	47	16.6	14.9	700	27%					
Oil	218	11.5	8.6	1,880	73%					
	265	13.5	9.7	2,580	100%					
Debt (US\$mm)					600					
Net Present Value (US\$mm)					1,980					
Shares (mm)					36					
Net Present Value - Standard Estimate (US\$/sh)					55					
NPV Approximation by Cash Flow Multiple Deper	nding on Rese	rve Life (US	\$\$/sh)		53					



					ble 1	_					
			Mc	Dep Ei	nergy Stoo	cks					
Eı	nterpri	se '	Value, S	Segmei	nts, Yield	and Mo	cDep R	atio			
						D	17 . 1 1	. C	(0/)		
			ъ.				it Value b	y Segmer	lī (%o)	D'	
			Price (US\$/sh)	EV/	F., 4	North Amer.	Rest of World			Dist. Yield	
C.	1 . 1/D				Enterprise			0:1	D		M.D.
	mbol/Rat		13-Jan	Market	Value	Natural	Natural		Down-	NTM	McDep
B = Buy, Cl	B (see bei	ow)	2014	Сар	(\$mm)	Gas	Gas	Proa n	stream	(%)	Ratio
Global Integrated	VOM	D	00.55	1.20	510,000	7	10	5.1	20	2.6	0.07
Exxon Mobil Corporation	XOM CVX	В	98.55	1.20	519,000	7	19 11	54 72	20	2.6	0.97
Chevron Corporation Total S.A.	TOT		119.25 58.56	1.17	270,000 179,000	4	22	61	17	5.5	0.82
Royal Dutch Shell plc			71.05	1.34		4	21	55	17	5.1	0.75
	RDS-A	CD	59.32	1.05	298,000	4	21	74	26	5.1	0.77
Lukoil Oil Company  Total or Median	LUKOY	СБ	39.32	1.03	48,300 1,314,000			61	19	5.1	0.43
				1.20	1,314,000			01	19	5.1	0.75
U.S. Independent EOG Resources, Inc.	EOG		163.46	1.14	51,200	22	4	75		0.5	0.92
Occidental Petroleum Corp.	OXY					9	1	79	11	2.8	0.92
Marathon Oil Corporation	MRO	CP	91.54	1.13	83,400 35,200	6	3	90	11	2.8	0.86
ConocoPhillips	COP	СБ	67.74	1.43	118,000	15	15	71		4.1	0.75
Devon Energy Corporation	DVN	D	59.18	1.41		45	13	55		1.5	0.75
	DVN	D	39.18		34,300					2.2	
Total or Median  Canada/Australia				1.41	322,000	15		75		2.2	0.76
Woodside Petroleum Ltd.	WOPEY		33.67	1.18	33,000		70	30		4.9	0.94
						2	70	79	18		0.94
Imperial Oil Limited (30%)	IMO CVE		41.78	1.29	13,800	9		75		3.2	
Cenovus Energy Inc.		CD	27.42 17.29		27,700 21,300			20	16		0.72
EnCana Corporation ECA				1.68		80				1.6	
Canadian Oil Sands Limited	COSWF	CB	18.46	1.27	11,400			100		7.0	0.60
Total or Median				1.29	107,000			75		3.2	0.72
Small Cap Independent Produ			20.47	1 10	5 400	0.1		10		2.2	0.01
Peyto Exploration and Developr		D	30.47	1.18	5,400	81		19		2.2	0.91
Range Resources	RRC		79.67	1.28	16,400	72		28		0.2	0.91
Continental Resources (32%)	CLR	D	104.68	1.25	7,700	16		84			0.90
PDC Energy	PDCE	D	46.67	1.36	2,300	27		73		-	0.88
Whiting Petroleum Corporation		В	58.71	1.38	9,800	8		92		-	0.83
WPX Energy Inc.	WPX	D	18.44	1.66	6,100	68		32		-	0.80
Cimarex Energy Company	XEC	В	92.73	1.18	9,500	41		59		0.6	0.77
Halcón Resources	HK	CD	3.24	3.26	4,900	8		92		-	0.74
Birchcliff Energy Ltd.	BIREF	CB	6.62	1.50	1,600	69		31		-	0.65
Total or Median				1.36	64,000	41		59		-	0.83
RTF Cash Payers	DMID	D	26.14	1.00	900	£ 1		40		7.4	1.01
Dorchester Minerals, L.P.	DMLP	В	26.14	1.00	800	51		49		7.4	1.01
Freehold Royalties Ltd.	FRHLF		20.15	1.04	1,410	18		82		7.7	0.96
Enduro Royalty Trust	NDRO		12.15	1.00	400	37		63		11.7	0.87
Mesa RoyaltyTrust	MTR	ъ	20.95	1.00	40	79		21		8.6	0.84
San Juan Basin Royalty Trust	SJT		16.77	1.00	780	100		- 10		6.8	0.80
Sabine Royalty Trust	SBR		49.64	1.00	720	52		48		8.4	0.78
Permian Basin RT	PBT		12.73	1.00	590	19		81		7.4	0.71
Cross Timbers Royalty Trust	CRT		29.35	1.00	180	70		30		10.2	0.70
Hugoton RoyaltyTrust	HGT		8.13	1.00	330	90		10		11.8	0.68
Total or Median	1 .	1		1.00	5,300					8.4	0.80
CB=Contrarian Buy, Stock Price							Φ.				
Estimated present value presume							as, \$6 a m	11110n btu	l.		
McDep Ratio = Market cap and I	Debt to pi	esei	nt value of	oil and ga	s and other bu	ısınesses					



		_	Table 2	~ -						
	Mc	Dep	Energy	Stocks						
Net Present Value and McDep Ratio										
			Price			Net				
			(US\$/sh)		Market	Present	Debt/			
	Symbol/R	ating	13-Jan	Shares	Сар	Value	Present	McDe		
	CB (see b		2014	(mm)	(US\$mm)	(US\$/sh)	Value	Rati		
Global Integrated					, , ,	, , ,				
Exxon Mobil Corporation	XOM	В	98.55	4,395	433,000	102.00	0.16	0.97		
Chevron Corporation	CVX		119.25	1,930	230,000	150.00	0.12	0.82		
Total S.A.	TOT		58.56	2,275	133,000	80.00	0.20	0.79		
Royal Dutch Shell plc	RDS-A		71.05	3,137	223,000	100.00	0.19	0.77		
Lukoil Oil Company	LUKOY	СВ	59.32	776	46,000	135.00	0.02	0.45		
Total or Median					1,065,000		0.16	0.79		
U.S. Independent										
EOG Resources, Inc.	EOG		163.46	274	44,800	180.00	0.12	0.92		
Occidental Petroleum Corp.	OXY		91.54	806	73,800	108.00	0.10	0.86		
Marathon Oil Corporation	MRO	CB	34.11	711	24,250	50.00	0.24	$0.7\epsilon$		
ConocoPhillips	COP		67.74	1,240	84,000	100.00	0.22	0.75		
Devon Energy Corporation	DVN	В	59.18	407	24,100	100.00	0.20	0.67		
Total or Median					251,000		0.20	0.70		
Canada/Australia					·					
Woodside Petroleum Ltd.	WOPEY		33.67	823	27,700	36.00	0.14	0.94		
Imperial Oil Limited (30%)	IMO		41.78	255	10,700	52.00	0.19	0.84		
Cenovus Energy Inc.	CVE		27.42	757	20,800	42.00	0.18	0.72		
EnCana Corporation	ECA	CB	17.29	736	12,700	30.00	0.28	0.69		
Canadian Oil Sands Limited	COSWF	СВ	18.46	485	9,000	34.00	0.13	0.60		
Total or Median					81,000		0.18	0.72		
Small Cap Independent Producers					,					
Peyto Exploration and Development Corp.			30.47	149	4,500	34.00	0.14	0.91		
Range Resources	RRC	В	79.67	161	12,800	90.00	0.20	0.91		
Continental Resources (32%)	CLR	В	104.68	59	6,200	120.00	0.18	0.90		
PDC Energy	PDCE		46.67	36	1,700	55.00	0.23	0.88		
Whiting Petroleum Corporation	WLL	В	58.71	120	7,100	75.00	0.23	0.83		
WPX Energy Inc.	WPX		18.44	201	3,700	26.00	0.32	0.80		
Cimarex Energy Company	XEC	В	92.73	87	8,100	125.00	0.12	0.77		
Halcón Resources	HK		3.24	463	1,500	7.00	0.51	0.74		
Birchcliff Energy Ltd.	BIREF	СВ	6.62	163	1,100	12.00	0.22	0.65		
Total or Median					47,000		0.22	0.83		
RTF Cash Payers					,					
Dorchester Minerals, L.P.	DMLP	В	26.14	31	800	26.00	-	1.01		
Freehold Royalties Ltd.	FRHLF		20.15	67	1,350	21.00	0.04	0.96		
Enduro Royalty Trust	NDRO		12.15	33	400	14.00	-	0.87		
Mesa RoyaltyTrust	MTR		20.95	2	40	25.00	-	0.84		
San Juan Basin Royalty Trust	SJT	В	16.77	47	780	21.00	-	0.80		
Sabine Royalty Trust	SBR		49.64	15	720	64.00	-	0.78		
Permian Basin RT	PBT		12.73	47	590	18.00	-	0.71		
Cross Timbers Royalty Trust	CRT		29.35	6	180	42.00	-	0.70		
Hugoton RoyaltyTrust	HGT		8.13	40	330	12.00	-	0.68		
Total or Median					5,200		-	0.80		
CB=Contrarian Buy, Stock Price may be in	i downtren	d com	pared to 20	0-day avera				0.00		
Estimated present value presumes a long-to-										



	14 D		Table 3	G4 1						
McDep Energy Stocks Value Multiples and Dividend										
	Ran	ked	by EV/I	Ebitda						
			_							
			Price	Adjustd						
			(US\$/sh)	Resrvs/	PV/	EV/		Dividend		
	bol/Ratii		13-Jan	Prod	Ebitda	Ebitda	P/E	NTM		
B = Buy, CB (s)	see belo	w)	2014	NTM	NTM	NTM	NTM	(\$/sh		
rated	OM	D	00.55	12.1	7.6	7.4	12	2.52		
- · · · · · · · · · · · · · · · · · · ·	-	В	98.55	13.1	7.6	7.4	13	2.52		
1	DS-A		71.05	10.0	7.2	5.6	11	3.60		
oration CV			119.25	9.2	6.7	5.5	11	4.00		
TO		CD	58.56	9.8	6.3	4.9	9	3.22		
1 7	UKOY	СВ	59.32	15.7	5.7	2.6	5	3.00		
Median				10.0	6.7	5.5	11			
dent	OD		67.74	11.4	0.6		1.4	0.75		
ps CO			67.74	11.4	8.6	6.5	14	0.75		
	XY		91.54	10.2	7.4	6.4	16	2.76		
es, Inc. EO		Б	163.46	7.1	6.9	6.4	19	2.56		
Corporation DV		В	59.18	10.1	8.6	5.8	15	0.76		
	RO (	CB	34.11	9.3	7.3	5.6	14	0.88		
Median				10.1	7.4	6.4	15			
ralia										
oration EC		СВ	17.29	7.2	12.5	8.7	13	0.89		
imited (30%) IM			41.78	20.1	10.0	8.4	11	0.48		
	OPEY		33.67	9.6	8.4	8.0	17	1.66		
	OSWF (	СВ	18.46	20.8	10.7	6.4	10	1.29		
gy Inc. CV	VE		27.42	12.3	8.1	5.8	15	0.28		
Median				12.3	10.0	8.0	13			
dependent Producers										
ces RR		В	79.67	12.3	14.5	13.2	56	0.16		
ntion and Development Corp. PE	EYUF		30.47	8.5	10.6	9.6	19	0.66		
	DCE		46.67	13.5	9.7	8.6	30	-		
	'PX		18.44	8.0	10.0	8.0		-		
ergy Ltd. BII	IREF (	CB	6.62	17.8	11.9	7.7	18	-		
esources (32%) CL		В	104.68	11.4	8.1	7.2	16	-		
irces HK	K		3.24	5.3	9.8	7.2	8	-		
gy Company XE		В	92.73	7.2	7.9	6.1	14	0.56		
oleum Corporation WI	'LL	В	58.71	8.1	6.0	5.0	14	-		
Median				8.5	9.8	7.7	17			
yers										
y Trust SB	3R		49.64	9.2	15.4	12.0	12	4.15		
n Royalty Trust SJ7	T	В	16.77	9.8	14.8	11.8	15	1.14		
linerals, L.P. DM	MLP	В	26.14	6.5	10.8	10.9	17	1.93		
alties Ltd. FR	RHLF		20.15	4.7	10.6	10.1	23	1.55		
Trust M7	TR		20.95	5.2	11.3	9.5	12	1.79		
s Royalty Trust CR	RT		29.35	12.5	13.0	9.1	10	2.99		
n RT PB	ВТ		12.73	12.7	11.4	8.0	14	0.94		
ty Trust ND	DRO		12.15	6.4	8.6	7.5	9	1.42		
altyTrust HC	GT		8.13	12.8	10.8	7.3	8	0.96		
Median				9.2	11.3	9.5	12			
n Buy, Stock Price may be in dov	wntrend	com	pared to 200	)-day averag						
						ion				
s Royalty Trust CR n RT PB ty Trust NC altyTrust HC Median	RT BT DRO GT wintrend t; Ebitda s Ended I	= Ea	29.35 12.73 12.15 8.13 pared to 200 rnings befor mber 31, 20	12.5 12.7 6.4 12.8 9.2 0-day average e interest, ta	13.0 11.4 8.6 10.8 11.3 e.	9.1 8.0 7.5 7.3 9.5	10 14 9	)  -  )  }		

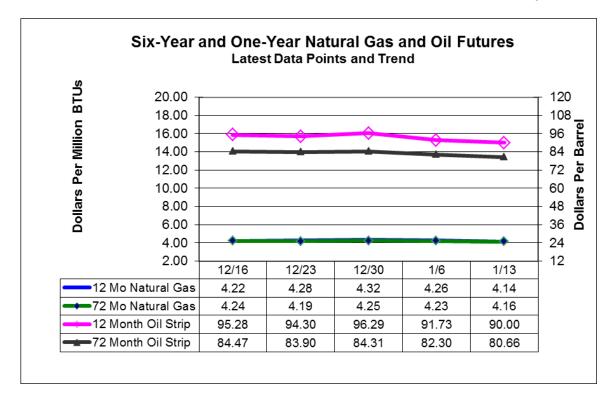


	M	cDep	Energy	y Stocks					
Total R	eturn a	nd E	nterpris	e Value	Momo	entum	ı		
				Day Avo					
		Joy	217200	Equity	ruge				
			Price	Total					
			(\$/sh)	Return		Enternri	se Value/	,	
	Symbol		13-Jan	YTD	52Wk	52Wk	50 Day	200 Day	McDep
	-	Rating	2014	(%)	High	Low	Avg.	Avg.	Ratio
Global Integrated		8		(, ,					
Exxon Mobil Corporation	XOM	В	98.55	(3)	0.97	1.13	1.02	1.07	0.97
Total S.A.	TOT		58.56	(4)	0.95	1.19	0.99	1.05	0.79
Royal Dutch Shell plc	RDS-A		71.05	(0)	0.98	1.10	1.03	1.05	0.77
Chevron Corporation	CVX		119.25	(5)	0.94	1.06	0.98	0.98	0.82
Lukoil Oil Company	LUKOY	СВ	59.32	(6)	0.88	1.09	0.95	0.96	0.45
Median		CD		(4)	0.95	1.10	0.99	1.05	0.79
U.S. Independent				(-)					
EOG Resources, Inc.	EOG		163.46	(3)	0.88	1.38	0.98	1.07	0.92
Devon Energy Corporation	DVN	В	59.18	(4)	0.92	1.11	0.98	1.01	0.67
ConocoPhillips	COP	D	67.74	(4)	0.93	1.14	0.96	1.01	0.75
Occidental Petroleum Corp.	OXY		91.54	(4)	0.93	1.16	0.97	1.00	0.86
Marathon Oil Corporation	MRO	СВ	34.11	(3)	0.92	1.10	0.97	0.98	0.76
Median		CD .		(4)	0.92	1.14	0.97	1.01	0.76
Canada/Australia				(.)					
Imperial Oil Limited (30%)	IMO		41.78	(6)	0.93	1.10	0.97	1.00	0.84
EnCana Corporation	ECA	СВ	17.29	(4)	0.90	1.03	0.96	0.97	0.69
Canadian Oil Sands Limited	COSWF	СВ	18.46	(2)	0.87	1.02	0.98	0.96	0.60
Woodside Petroleum Ltd.	WOPEY	CD	33.67	(3)	0.87	1.07	0.97	0.96	0.94
Cenovus Energy Inc.	CVE		27.42	(4)	0.84	1.00	0.97	0.95	0.72
Median				(4)	0.87	1.03	0.97	0.96	0.72
Small Cap Independent Producers				(.)	0.07	1100	0.57	0,70	0.72
Cimarex Energy Company	XEC	В	92.73	(12)	0.84	1.40	0.94	1.08	0.77
Whiting Petroleum Corporation	WLL	В	58.71	(5)	0.87	1.25	0.96	1.06	0.83
Continental Resources (32%)	CLR	В	104.68	(7)	0.88	1.33	0.96	1.06	0.90
Peyto Exploration and Development	PEYUF	D	30.47	(1)	0.96	1.31	1.01	1.04	0.91
Range Resources	RRC	В	79.67	(6)	0.95	1.18	1.01	1.02	0.91
WPX Energy Inc.	WPX	Б	18.44	(10)	0.85	1.17	0.97	0.98	0.80
Birchcliff Energy Ltd.	BIREF	СВ	6.62	(3)	0.82	1.00	0.96	0.92	0.65
PDC Energy	PDCE	CD	46.67	(12)	0.70	1.20	0.86	0.88	0.88
Halcón Resources	HK		3.24	(16)	0.68	1.01	0.92	0.84	0.74
Median			3.21	(7)	0.85	1.20	0.96	1.02	0.83
RTF Cash Pavers				(//	0.02	1.20	0.70	1.02	0.02
Dorchester Minerals, L.P.	DMLP	В	26.14	1	0.99	1.21	1.05	1.07	1.01
San Juan Basin Royalty Trust	SJT	В	16.77	0	0.92	1.20	1.01	1.04	0.80
Cross Timbers Royalty Trust	CRT		29.35	(0)	0.92	1.17	0.99	1.02	0.70
Hugoton RoyaltyTrust	HGT		8.13	8	0.81	1.16	1.09	0.99	0.68
Sabine Royalty Trust	SBR		49.64	(1)	0.90	1.13	0.97	0.97	0.78
Permian Basin RT	PBT		12.73	(1)	0.78	1.06	0.92	0.94	0.71
Mesa RoyaltyTrust	MTR		20.95	(1)	0.81	1.04	0.98	0.92	0.84
Freehold Royalties Ltd.	FRHLF		20.15	(3)	0.83	1.01	0.95	0.89	0.96
Enduro Royalty Trust	NDRO		12.15	0	0.68	1.03	0.97	0.83	0.87
			12.13	(0)	0.83	1.13	0.98	0.97	0.80
Median									



		Inde	ex of Recent Research
Stock 1	Ideas		
<u>Date</u>	Symbol	<u>Subject</u>	<u>Theme</u>
17-Dec	MRO	Marathon Oil	New CEO Accelerates Shale Growth (Meter Reader)
3-Dec	LUKOY	Lukoil	Low McDep Ratio Emerging Market Stock (Meter Reader)
26-Nov	DVN	Devon Energy	Acquires \$6 Billion Eagle Ford Position (Meter Reader)
19-Nov	CLR	Continental Resources	High Density "Ears Back" Drilling Pace (Meter Reader)
15-Nov	BIREF	Birchcliff Energy	15% a Year Growth to 2018
12-Nov	XEC	Cimarex Energy	Raise NPV to \$125 on Permian Productivity (Meter Reader)
8-Nov	DMLP	Dorchester Minerals, L.P.	Oil up 6% a Quarter
5-Nov	COSWF	Canadian Oil Sands Ltd.	Time to Explore New Options (Meter Reader)
31-Oct	RRC	Range Resources	Core Owner in Largest Producing Field
29-Oct	WLL	Whiting Petroleum	Fracking Productivity Leaps 50% (Meter Reader)
25-Oct	ECA	Encana Corporation	San Juan Oil Upgraded to Commercial from Emerging
4-Oct	NDRO	Enduro Royalty Trust	Worth Another Look after Stock Price Decline
27-Sep	WPX	WPX Energy	San Juan Basin Innovator (Income and Small Cap Weekly)
24-Sep		Exxon Mobil	Fracking Firms Long-Term Value (Meter Reader)
17-Sep	COP	ConocoPhillips	Fracking Upside in Eagle Ford, Bakken and Permian (Meter Reader)
13-Sep		Cross Timbers Royalty Trust	Fracking Upside in Permian and Scoop (Income and Small Cap Weekly)
10-Sep		Occidental Petroleum	Permian Late Bloomer (Meter Reader)
6-Aug	RDSA	Royal Dutch Shell plc	Value Choice after Latest Results (Meter Reader)
23-Jul	WOPEY	Woodside Petroleum, Ltd.	Distributing LNG Cash (Meter Reader)
19-Jul	SJT	San Juan Basin Royalty Trust	Acreage 75% in Liquids-Rich Shale Zone (Income and Small Cap Weekly
12-Jul	PBT	Permian Basin Royalty Trust	Stock Price Recovering from Short-Term Overreaction
5-Jul	LINE	Linn Energy	Stock Undervalued while SEC Probes (Income and Small Stock Weekly)
31-May		Hugoton Royalty Trust	Beating the Bear (Income and Small Cap Weekly)
14-May		EOG Resources	Raise NPV to \$180 on More Big Wells (Meter Reader)
30-Apr		Total	Recovery Potential (Meter Reader)
19-Apr		Halcón Resources	Fourth Core Area - El Halcón ('The Hawk'') (Inc. and Small Cap Wkly)
16-Apr		Chevron	Deflation Resistance (Meter Reader)
12-Apr		Mesa Royalty Trust	RTF Stealth Play on Long-Life Natural Gas (Income and Small Cap Wkly)
5-Apr	SBR	Sabine Royalty Trust	Accelerating Volume Growth (Income and Small Cap Weekly)
	PEYUF		nen Raise NPV to \$32 for Fracking Winner (Income and Small Cap Weekly)
	-		p.com, click on Stock Ideas, click on stock by name.
Meter	Reader		
7-Jan			Six-Year Futures Up in 2014
31-Dec			Catch up for Canada
24-Dec			Rising RTF Cash in 2014
17-Dec	MRO	Marathon Oil	New CEO Accelerates Shale Growth
10-Dec			Fraccing Investment Strategy
	LUKOY	Lukoil	Low McDep Ratio Emerging Market Stock
26-Nov		Devon Energy	Acquires \$6 Billion Eagle Ford Position
19-Nov		Continental Resources	High Density "Ears Back" Drilling Pace
12-Nov		Cimarex Energy	Raise NPV to \$125 on Permian Productivity
5-Nov	COSWF	Canadian Oil Sands Ltd.	Time to Explore New Options
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	ry Ideas	DTE Cool Door	District DTE Costs in 2014 (Material D. 1.1.)
24-Dec		RTF Cash Payers	Rising RTF Cash in 2014 (Meter Reader)
10-Dec		16 D. D. 15 .	Fraccing Investment Strategy (Meter Reader)
13-Nov		McDep Book Review	The Frackers by Gregory Zuckerman
22-Oct		RTF Cash Payers	Oil Rising





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