

### Income and Small Cap Weekly

Analysis of Oil & Gas Stocks
January 7, 2011

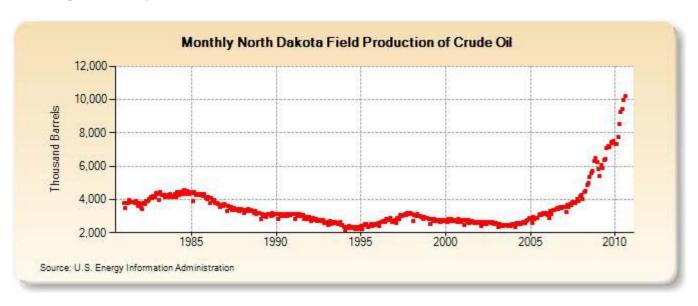
#### Raise Whiting NPV to \$150 on North Dakota Oil

#### **Summary and Recommendation**

The common shares of independent oil producer **Whiting Petroleum** (**WLL**) offer unlevered appreciation potential of 28% to a McDep Ratio of 1.0 where stock price would equal Net Present Value (NPV) of \$150 a share, up from \$128. After reviewing our recently revised estimates of NPV for all stocks to reflect a long-term oil price of \$100 a barrel, we concluded we were not giving WLL enough credit for its 20% increase in oil volume in 2010. The company is among the top producers in North Dakota where new shale oil volumes have been enough to help reverse a declining oil trend for the whole U.S. Knowing that the stock has appreciated more than five times from its low of \$20 in early 2009, we are cautious for now about making WLL an official buy recommendation. Yet, a comparatively low McDep Ratio among peer stocks suggests a bright outlook for more gain in the years ahead.

#### North Dakota Rises to 7% of U.S. Oil Production

Whiting's appeal includes aggressive application of new technology in drilling and formation fracturing to increase oil volume. Practically all of the company's incremental production in 2010 has come from North Dakota where Whiting was the second largest oil producer a few months ago. On a steep incline, North Dakota oil production was 7% of the U.S. in August 2010, up from 4% a year earlier (see chart below).



It is a bit extreme to compare Whiting's stock price to early 2009. Had oil price remained at the low point of \$34 a barrel only a few small cap independent North American oil producers could



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have remained solvent. That is the risk of being in a high marginal cost business and it is the main reason, we believe, that the major oil companies sold most of their North American oil properties to independents. The other side of the coin is that when price increases, profits increase faster for higher cost operators. Considering that oil price is up almost three times since early 2009 and that North Dakota oil has been growing rapidly, it is less surprising that Whiting's stock price is up as much as it is.

#### **Probable Reserves Hint at Longer Life**

New Securities and Exchange Commission rules allow companies to report estimates of probable reserves in addition to proven quantities though few U.S. companies made those disclosures last year. As a result, we make our comparisons for most companies on the basis of proven reserves for which we calculate an adjusted life index, which is 9.3 for Whiting. Beginning last year we modified our approach for Canadian companies to include probable reserves, which traditionally have been reported regularly. In that context we calculate an adjusted life index of 12.5 for Whiting (see tables Natural Gas and Oil Reserves on page 3).

Comparing adjusted life index to cash flow multiple implied by our estimate of present value suggests Whiting might have an NPV of \$158 on the proven reserves basis. On the probable reserves basis, NPV in comparison to those companies where we have probable reserves might be \$177. Both comparisons exceed our new standard estimate of \$150 (see tables Functional Cash Flow and Present Value on page 4).

#### **Growing Production Lifts Cash Flow**

A steep curve for North Dakota oil production is also raising WLL's cash flow base for the first year in a present value type calculation. We don't always know whether the growth is coming from reserves already reported or if reserves are also growing faster. For practical purposes we estimate a cash flow base tied largely to latest quarterly production (see table <a href="Next Twelve-Months Operating and Financial Estimates">Next Twelve-Months Operating and Financial Estimates</a> on page 5).

#### **Income and Small Cap Stocks McDep Ratio at 0.95**

Stocks in our group of Small Cap Independent Producers are priced at a median McDep Ratio of 0.92 while Cash Payers offer a median distribution yield of 6.9% a year (see <u>Tables 1-2</u> on pages 6-7). Unlevered cash flow multiple (EV/Ebitda) for independent producers is 10.6 times for an adjusted reserve life of 11.8. EV/Ebitda for Bottom Line Cash Payers is 11.2 times for an adjusted reserve life of 12.6 (see Table 3 on page 8). Nearly all the stocks are in a price uptrend compared to the 200-day average (see Table 4 on page 9).

Kurt H. Wulff, CFA



# MCDEP Income and Small Cap Weekly Analysis of Oil & Gas Stocks

W	hiting Petroleum Cor	poration			
Prov	en Natural Gas and O	il Reserves			
	Natural Gas	Oil	Tota	ıl	
	<u>(bcf)</u>	<u>(mmb)</u>	<u>(bcf)</u>	(mmb)	
Reserves (bcfor mmb)					
Proven (P)	307	224	1,651	275	100
Proven Developed (PD)	179	145	1,049	175	64
Proven Undeveloped (PUD)	129	79	603	101	36
Production, Next Twelve Months	27.3	19.6	144.8	24.1	
Reserve Life Index (years)					
R/P P	11.2	11.4	11.4	11.4	
R/P PD	6.6	7.4	7.2	7.2	
R/P PUD	4.7	4.0	4.2	4.2	
R/P PD+.5PUD	8.9	9.4	9.3	9.3	
Proven and	Probable Natural Gas	and Oil Res	erves		
	Natural Gas	Oil	Tota	ıl	
	<u>(bcf)</u>	<u>(mmb)</u>	<u>(bcf)</u>	<u>(mmb)</u>	
Reserves (bcf or mmb)					
Proven and Probable (P1+P2)	489	282	2,181	364	100
Proven (P1)	307	224	1,651	275	76
Probable (P2)	182	58	530	88	24
Production, Next Twelve Months	27.3	19.6	144.8	24.1	
Reserve Life Index (years)					
R/P (P1+P2)	17.9	14.4	15.1	15.1	
R/P (P1)	11.2	11.4	11.4	11.4	
R/P (P2)	6.7	3.0	3.7	3.7	
R/P (P1+0.3*P2)	13.2	12.3	12.5	12.5	



# MCDEP Income and Small Cap Weekly Analysis of Oil & Gas Stocks

Whiting 1	Petroleum Co	orporation			
Functional Ca		-	ue		
				Present	
I	VTM Ebitda	Adjusted	PV/	Value	
	(US\$mm)	<u>R/P</u>	<u>Ebitda</u>	(US\$mm)	
North American Natural Gas	91	8.9	12.1	1,100	11%
Oil	1,031	9.4	8.7	8,930	89%
	1,122	9.3	8.9	10,030	100%
Debt (US\$mm)					1,180
Net Present Value (US\$mm)					8,850
Shares (mm)					59
Net Present Value - Standard Estimate (US\$/sh)					150
NPV Approximation by Cash Flow Multiple Depe	ending on Res	erve Life (U	JS\$/sh)		158
Functional Ca	sh Flow and l	Present Val	ue		
NPV Approximation	on Proven ar	nd Probable	Reserves		
				Present	
Ι	NTM Ebitda	Adjusted	PV/	Value	
	(US\$mm)	<u>R/P</u>	<u>Ebitda</u>	(US\$mm)	
North American Natural Gas	91	13.2	12.1	1,100	11%
Oil	1,031	12.3	8.7	8,930	89%
	1,122	12.5	8.9	10,030	100%
Debt (US\$mm)					1,180
Net Present Value (US\$mm)					8,850
Shares (mm)					59
Net Present Value - Standard Estimate (US\$/sh)					150
NPV Approximation by Cash Flow Multiple Depe	ending on Res	erve Life (U	JS\$/sh)		177



	Nove T		ting Petrole	_		timataa			
	Next 1	werve Ivioi	nths Operat	ing and ri	inanciai E	umates			Next
									Twelve
	Q4	<i>Q3</i>	OAF	Year	QIE	Q2E	Q3E	O4E	Months
	12/31/09	~	Q4E 12/31/10	2010E	3/31/11	6/30/11		12/31/11	12/31/11
Volume	12/31/09	9/30/10	12/31/10	2010E	3/31/11	0/30/11	9/30/11	12/31/11	12/31/11
Natural Gas (bcf)	6.0	6.0	60	27	67	6.0	60	60	27.2
` '	6.8	6.9 75	6.9 75	74	6.7 75	6.8	6.9 75	6.9 75	27.3
Natural Gas (mmcfd)	92								75
Days	-	92	92	365	90	91	92	92	365
Oil (mmb)	4.1	4.9	4.9	19	4.8	4.9	4.9	4.9	20
Oil (mbd)	44	54	54	52	54	54	54	54	54
Total (mb)	5.2	6.1	6.1	23	6.0	6.0	6.1	6.1	24
Total (mbd)	57	66	66	64	66	66	66	66	66
Price									
Henry Hub (\$/mmbtu)	4.16	4.38	3.80	4.40	4.34	4.37	4.50	4.79	4.50
Differential (\$/mmbtu)	(0.72)	(0.62)	. /	(0.47)	(0.61)	(0.62)	(0.64)	` ′	
Company (\$/mcf)	4.88	5.00	4.34	4.87	4.96	4.99	5.14	5.47	5.14
WTI Cushing (\$/bbl)	76.09	76.08	85.12	79.43	90.47	91.70	92.64	92.88	91.92
Differential	10.57	9.06	10.14	8.80	10.77	10.92	11.03	11.06	10.94
Company (\$/bbl)	65.52	67.02	74.98	70.63	79.70	80.78	81.61	81.82	80.98
Total (\$/bbl)	57.69	60.04	65.75	62.69	70.28	71.19	72.04	72.58	71.53
Revenue (\$mm)									
Natural Gas	33	34	30	131	33	34	35	38	140
Oil	268	331	370	1,337	385	394	403	404	1,586
Other				-					
Total	301	365	400	1,468	418	428	438	442	1,726
Expense									
Lease operating	59	69							
Production taxes	21	26							
General and administrative	12	19							
Total	92	114	140	463	146	150	153	155	604
Ebitda	209	251	260	1,005	272	278	285	287	1,122
Exploration	33	11	11	50	11	11	11	11	44
Deprec., Deplet., & Amort.	93	98	98	389	98	98	98	98	392
Other	7	9		26					-
Ebit	76	133	151	540	163	169	176	178	686
Interest	16	15	15	62	15	15	15	15	60
Ebt	60	118	136	478	148	154	161	163	626
Income Tax	21	41	48	167	52	54	56	57	219
Preferred Dividend	5								
Net Income (\$mm)	34	77	88	311	96	100	105	106	407
Per Share (\$)	0.66	1.30	1.50	5.26	1.63	1.70	1.77	1.80	6.90
Shares (millions)	51	59	59	59	59	59	59	59	59
Lease operating (\$/bbl)	11.31	11.34	٥٦		37	57		37	
Production taxes (%rev)	7.0	7.1							
General and admin (\$/bbl)	2.30	3.12							
Deprec., D,& A (\$/bbl)	17.83	16.11	16.11	16.61	16.47	16.29	16.11	16.11	16.24
Ebitda Margin	69%	69%		68%	65%	65%	65%	65%	65%
Tax rate	35%	35%		35%	35%	35%	35%	35%	35%



				Table 1						
McD	ep Inc	om	e and S	mall (	Cap Ene	rgy Poi	rtfolio			
De	ebt, Bu	sin	ess Seg	ments	and Inc	ome Yi	eld			
						Present	Value			
			Price			by Segm	ent (%)			
S	ymbol/Ra	ting	(US\$/sh)	EV/	Enterprise	NAmer.		Dist.	Dist.	
		Buy	6-Jan	Market	Value	Natural	Oil	NTM	Yield	McDe
	CB (see be	low)	2011	Cap	(\$mm)	Gas	Prod'n	(\$/un)	(%)	Rati
Small Cap Independent Producers										
Petrohawk Energy Corporation	HK	В	19.15	1.59	9,180	96	4	_	_	0.9
Cimarex Energy Company	XEC	В	89.21	1.08	8,280	52	48	0.32	0.4	0.9
Berry Petroleum Company	BRY		44.06	1.44	3,450	26	74	0.30	0.7	0.90
Peyto Exploration and Developmen			18.90	1.19	2,750	69	31	0.72	3.8	0.95
Ultra Petroleum	UPL		47.33	1.20	8,770	90	10	-	-	0.92
Range Resources	RRC	В	44.74	1.30	9,120	68	32	0.16	0.4	0.92
Denbury Resources Inc.	DNR	Б	18.45	1.46	10,810	12	88	-	-	0.88
Whiting Petroleum Corporation	WLL		112.72	1.18	7,830	11	89	_	_	0.78
Birchcliff Energy Ltd.	BIREF	В	9.58	1.28	1,560	162	(62)	_	_	0.60
Total or Median		В	7.50	1.20	61,800	102	(02)	_	-	0.92
Top Line Cash Payers										
Cross Timbers Royalty Trust	CRT		40.88	1.00	250	69	31	2.71	6.6	1.10
Sabine Royalty Trust	SBR		60.20	1.00	880	38	62	4.09	6.8	1.02
Permian Basin RT	PBT		22.22	1.00	1,040	31	69	1.55	7.0	1.0
Freehold Royalties Ltd.	FRHLF		20.58	1.07	1,290	20	80	1.68	8.2	0.94
Dorchester Minerals, L.P.	DMLP	В	26.87	1.02	840	60	40	1.75	6.5	0.90
Total or Median					4,300				6.8	1.01
Bottom Line Cash Payers										
Linn Energy, LLC	LINE		38.12	1.40	7,820	38	62	2.64	6.9	1.23
Vanguard Natural Resources, LLC	VNR		28.76	1.40	1,200	31	69	2.20	7.6	1.05
Legacy Reserves L.P.	LGCY		28.54	1.34	1,530	13	87	2.08	7.3	1.0
Hugoton RoyaltyTrust	HGT	В	20.77	1.00	830	86	14	1.34	6.5	0.94
Pengrowth Energy Corporation	PGH		12.93	1.36	5,200	29	71	0.84	6.5	0.94
Encore Energy Partners, L.P.	ENP		21.18	1.26	1,200	19	81	2.00	9.4	0.94
San Juan Basin Royalty Trust	SJT	CB	23.25	1.00	1,080	100	-	1.43	6.2	0.93
Mesa RoyaltyTrust	MTR		49.08	1.00	91	75	25	3.63	7.4	0.92
Enerplus Corporation	ERF		31.43	1.19	6,600	34	66	2.16	6.9	0.8
Total or Median					25,600				6.9	0.94
Composite										
Enterprise Value Weighting					91,600	50	50			0.93
Enterprise value weighting Equal Weighting					71,000	53	47			0.95
Equal Weighted Buys						78	22			0.90
					200.1					
CB=Contrarian Buy, Stock Price ap				-	· · · · · · · · · · · · · · · · · · ·					
McDep Ratio = $\mathbf{M}$ arket $\mathbf{c}$ ap and $\mathbf{D}\mathbf{e}$							1			
Present Value presumes long-term Dist. = Income distribution. NTM =										



### Por Particular		Debt/ Present Value  0.36 0.07 0.29	McDep Ratio 0.97 0.97
Market S Cap (\$mm)  5,780 7,650 2,400 3,2300 7,290 7,030 7,400	Net Present Value (\$/un) 20.00 92.00 47.00 20.00	Present Value 0.36 0.07	<i>Ratio</i> 0.97
\$ Cap (\$mm) 5,780 5,7650 2,400 6 2,300 7,290 7,030 7,400	Present   Value   (\$/un)     20.00   92.00   47.00   20.00	Present Value 0.36 0.07	<i>Ratio</i> 0.97
\$ Cap (\$mm) 5,780 5,7650 2,400 6 2,300 7,290 7,030 7,400	Present   Value   (\$/un)     20.00   92.00   47.00   20.00	Present Value 0.36 0.07	<i>Ratio</i> 0.97
\$ Cap (\$mm) 5,780 5,7650 2,400 6 2,300 7,290 7,030 7,400	Present   Value   (\$/un)     20.00   92.00   47.00   20.00	Present Value 0.36 0.07	<i>Ratio</i> 0.97
\$ Cap (\$mm) 5,780 5,7650 2,400 6 2,300 7,290 7,030 7,400	Value (\$/un) 20.00 92.00 47.00 20.00	Present Value 0.36 0.07	<i>Ratio</i> 0.97
5,780 5,7650 2,400 5,2300 7,290 7,030 7,400	20.00 92.00 47.00 20.00	0.36 0.07	<i>Ratio</i> 0.97
5,780 7,650 2,400 3,2300 7,290 7,030 7,400	20.00 92.00 47.00 20.00	0.36 0.07	0.97
7,650 2,400 3 2,300 7,290 7,030 7,400	92.00 47.00 20.00	0.07	
7,650 2,400 3 2,300 7,290 7,030 7,400	92.00 47.00 20.00	0.07	
7,650 2,400 3 2,300 7,290 7,030 7,400	47.00 20.00		0.07
2,300 7,290 7,030 7,400	20.00	0.20	0.97
7,290 7,030 7,400		0.29	0.96
7,030 7,400	52.00	0.15	0.95
7,400	32.00	0.16	0.92
	50.00	0.21	0.92
6.650	22.00	0.28	0.88
0,050	150.00	0.12	0.78
1,220	16.00	0.14	0.66
47,720		0.16	0.92
250	37.00	-	1.10
880	59.00	-	1.02
1,040	22.00	-	1.01
1,200	22.00	0.06	0.94
820	30.00	0.02	0.90
4,190			1.01
5 590	28.00	0.35	1.23
			1.05
			1.01
			0.94
			0.94
			0.94
		-	0.93
		_	0.92
			0.87
20,000	27.00	0.17	0.94
ed to 200-da	v average.		
	4,190  5,590  8,860  1,140  830  3,870  8,960  1,080  9,15  5,580  20,000  ed to 200-day  ther busines	4,190  5,590 28.00  8 860 27.00  1,140 28.00  0 830 22.00  0 3,870 14.00  8 960 23.00  5 1,080 25.00  0 91 53.00  20,000  ed to 200-day average.	4,190  5 5,590 28.00 0.35  8 860 27.00 0.30  1 1,140 28.00 0.25  0 830 22.00 -  0 3,870 14.00 0.25  8 960 23.00 0.19  5 1,080 25.00 -  0 91 53.00 -  5 5,580 37.00 0.14  20,000  ed to 200-day average.



			able 3					
McDep Inco	me an	d Sr	nall C	ap Ene	rgy Po	rtfolio		
Value I	Multip	les -	Rank	by EV	/Ebitda	ı		
	_			_				
			ъ.			A 11 . 1		
			Price	Danama	Dist/	Adjstd	PV/	EV
	C 1 1/			Revenue		Resrvs/		
	Symbol/	4:44 00	6-Jan	Royalty	Equity	Prod	Ebitda	Ebitdo
	Ka	ting	2011	(%)	Ebitda	NTM	NTM	NTM
Small Cap Independent Producers								
Range Resources	RRC	В	44.74		-	11.8	16.2	14.8
Peyto Exploration and Development Corp			18.90		0.49	17.3	13.5	12.8
Ultra Petroleum	UPL		47.33		-	12.6	12.8	11.8
Birchcliff Energy Ltd.	BIREF	В	9.58		-	17.6	17.5	11.5
Petrohawk Energy Corporation	HK	В	19.15		-	7.0	10.9	10.6
Berry Petroleum Company	BRY		44.06		-	11.3	9.2	8.8
Denbury Resources Inc.	DNR		18.45		-	12.9	9.5	8.4
Cimarex Energy Company	XEC	В	89.21		-	6.2	7.4	7.2
Whiting Petroleum Corporation	WLL		112.72		-	9.3	8.9	7.0
Median						11.8	10.9	10.6
Ton Line Cook Devens								
Top Line Cash Payers Sabine Royalty Trust	SBR		60.20	100	1.00	7.8	14.4	14.7
Cross Timbers Royalty Trust	CRT		40.88		0.96	13.2	13.2	14.7
Permian Basin RT	PBT		22.22	84 32				14.3
	DMLP	D		77	0.98	13.2	14.0	
Dorchester Minerals, L.P.		В	26.87		0.87		14.9	13.3
Freehold Royalties Ltd.  Median	FRHLF		20.58	71	0.85	8.1 8.1	11.2 14.0	10.5 14.1
Bottom Line Cash Payers								
Linn Energy, LLC	LINE		38.12		1.43	18.3	15.2	18.7
San Juan Basin Royalty Trust	SJT	CB	23.25		0.82	13.6	14.3	13.3
Hugoton RoyaltyTrust	HGT	В	20.77		0.86	12.6	14.0	13.2
Mesa RoyaltyTrust	MTR		49.08		0.91	8.7	13.3	12.2
Legacy Reserves L.P.	LGCY		28.54		0.82	12.0	11.1	11.2
Vanguard Natural Resources, LLC	VNR		28.76		0.80	13.0	9.8	10.3
Encore Energy Partners, L.P.	ENP		21.18		0.94	13.5	10.8	10.1
Pengrowth Energy Corporation	PGH		12.93		0.53	9.6	8.9	8.4
Enerplus Corporation	ERF		31.43		0.55	9.7	9.5	8.3
Median						12.6	11.1	11.2
B=Buy; CB=Contrarian Buy, Stock Price	apparently	in de	owntrend	compared	to 200-day	average		
EV = Enterprise Value = Market Cap and 1								
and amortization; NTM = Next Twelve M								
Earnings; $PV = Present Value of oil and g$					L - Stock	11100 10		
Top Line Cash Payers defined as those h					dump from	n right)		

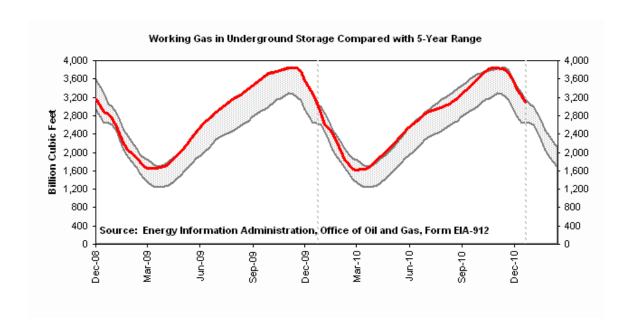


		7	Table 4					
Oil and	d Gas In	com	e and S	mall Ca	p Stocks			
Rank by	Enterpr	ise V	Value to	200 Da	ay Averag	ge		
			Price					
			(\$/sh)		Enterpris	e Value/		
	Symbol/		6-Jan	52Wk	52Wk	50 Day	200 Day	McDep
	Ra	ting	2011	High	Low	Avg.	Avg.	Ratio
Small Cap Independent Producers								
Berry Petroleum Company	BRY		44.06	0.99	1.46	1.07	1.22	0.96
Peyto Exploration and Development Co	PEYUF		18.90	0.97	1.53	1.07	1.21	0.95
Cimarex Energy Company	XEC	В	89.21	0.96	1.72	1.06	1.20	0.97
Whiting Petroleum Corporation	WLL		112.72	0.96	1.61	1.02	1.17	0.78
Denbury Resources Inc.	DNR		18.45	0.95	1.23	0.99	1.06	0.88
Range Resources	RRC	В	44.74	0.85	1.27	1.04	1.05	0.92
Ultra Petroleum	UPL		47.33	0.90	1.22	1.01	1.05	0.92
Birchcliff Energy Ltd.	BIREF	В	9.58	0.92	1.18	1.02	1.04	0.66
Petrohawk Energy Corporation	HK	В	19.15	0.79	1.21	1.03	1.03	0.97
Median				0.95	1.27	1.03	1.06	0.92
Top Line Cash Payers								
Freehold Royalties Ltd.	FRHLF		20.58	0.98	1.42	1.05	1.18	0.94
Sabine Royalty Trust	SBR		60.20	0.99	1.45	1.04	1.15	1.02
Permian Basin RT	PBT		22.22	0.94	1.59	1.00	1.13	1.01
Cross Timbers Royalty Trust	CRT		40.88	0.97	1.45	1.01	1.11	1.10
Dorchester Minerals, L.P.	DMLP	В	26.87	0.91	1.30	0.99	1.03	0.90
Median				0.97	1.45	1.01	1.13	1.01
<b>Bottom Line Cash Payers</b>								
Enerplus Corporation	ERF		31.43	0.99	1.90	1.06	1.21	0.87
Linn Energy, LLC	LINE		38.12	1.00	1.92	1.03	1.18	1.23
Pengrowth Energy Corporation	PGH		12.93	0.98	2.00	1.01	1.13	0.94
Legacy Reserves L.P.	LGCY		28.54	0.98	1.43	1.05	1.12	1.01
Vanguard Natural Resources, LLC	VNR		28.76	0.97	1.42	1.05	1.11	1.05
Encore Energy Partners, L.P.	ENP		21.18	0.94	1.78	1.01	1.08	0.94
Hugoton RoyaltyTrust	HGT	В	20.77	0.94	1.39	1.01	1.06	0.94
Mesa RoyaltyTrust	MTR		49.08	0.90	1.35	1.00	1.05	0.92
San Juan Basin Royalty Trust	SJT	СВ	23.25	0.82	1.31	0.95	0.96	0.93
Median				0.97	1.43	1.01	1.11	0.94
CB=Contrarian Buy, Stock Price appare	ently in do	wntr	end comp	ared to 20	00-day avera	ıge.		



#### Income and Small Cap Weekly

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