



Income and Small Cap Weekly

Analysis of Oil & Gas Stocks

July 5, 2013

Linn Energy (LINE) Stock Undervalued while SEC Probes

Summary and Recommendation

Leveraged Cash Payer **Linn Energy (LINE)** appears undervalued at a McDep Ratio of 0.94 in the face of an announcement that the Securities and Exchange Commission has begun an investigation amid negative salvos from an activist seller. The seller alleges that Linn should include more of the costs of derivatives in its calculation of Distributable Cash Flow, a measure it uses in the determination of the amount of cash to be distributed quarterly to shareholders. We consider the activist seller's criticism of the reporting of derivatives to be trivial compared to the much larger question surrounding the accounting for Incentive Distribution Rights (IDRs) which give general partners up to half of partnership cash flow for no capital outlay. We are greatly heartened that the Leveraged Cash Payers in our coverage do not use IDRs and we would not cover them if they did. Since SEC action against IDRs looks unlikely, SEC action against derivatives at Linn also looks unlikely to us. Meanwhile, Linn's pending acquisition of **Berry Petroleum (BRY)** may be a casualty of the mere announcement of the SEC probe. Berry's stock price of \$40 a share is higher than the \$29 value of Linn shares at the original exchange ratio of 1.25 times Linn stock price, now \$23. On the original exchange ratio the acquisition would boost Linn's Net Present Value (NPV) to \$31 from \$26. Should the exchange ratio be increased to 1.8, Linn's NPV would increase to \$28 from \$26. We suggest that the seller declare victory and cover his shorts with Linn stock down 30% in four days. Holders of Linn have a shot at restoration of some premium McDep value for continued steady income at least for now. Holders of Berry have an undervalued stock at a McDep Ratio of 0.8 and NPV of \$58 a share. (For valuation perspective, see Linn among Leveraged Cash Payers and Berry among Small Cap Independent Producers in Tables ISC-1 to ISC-4 on pages 2-5. For company models for Linn and Berry, see tables Operating and Financial Estimates and Present Value on pages 6-8).

Kurt H. Wulff, CFA



Income and Small Cap Weekly

Analysis of Oil & Gas Stocks

July 5, 2013

Table ISC-1										
McDep Income and Small Cap Energy Portfolio										
Debt, Segments, Cash Flow, Income and McDep Ratio										
		Price								
Symbol/Rating	(US\$/sh)	EV/	Enterprise	PV(%)	EV/	Dist.	Dist.			
B = Buy	3-Jul	Market	Value	Nat	Ebitda	NTM	Yield	McDep		
CB (see below)	2013	Cap	(\$mm)	Gas	Oil	NTM	(\$/un)	(%)	Ratio	
Small Cap Independent Producers										
PDC Energy	PDCE	53.70	1.48	2,450	32	68	11.0	-	-	1.12
Halcón Resources	HK	5.76	2.20	5,310	9	91	6.9	-	-	0.91
Range Resources	RRC B	77.47	1.29	16,070	74	26	14.2	0.16	0.2	0.89
Peyto Exploration and Development Corp	PEYUF	29.48	1.18	5,160	80	20	10.2	0.80	2.7	0.88
Continental Resources (32%)	CLR B	89.51	1.25	6,630	18	82	6.7	-	-	0.85
Denbury Resources Inc.	DNR	17.26	1.53	9,850	5	95	6.0	-	-	0.82
Berry Petroleum Company	BRY	40.10	1.83	4,050	14	86	6.3	0.32	0.8	0.80
Birchcliff Energy Ltd.	BIREF B	8.01	1.41	1,840	72	28	9.6	-	-	0.74
Whiting Petroleum Corporation	WLL B	48.39	1.45	8,330	8	92	4.2	-	-	0.72
Cimarex Energy Company	XEC B	67.73	1.24	7,280	46	54	5.3	0.56	0.8	0.72
<i>Total or Median</i>			<i>1.43</i>	<i>67,000</i>	<i>25</i>	<i>75</i>	<i>6.8</i>			<i>0.83</i>
Leveraged Cash Payers										
Vanguard Natural Resources, LLC	VNR	26.18	1.63	2,760	44	56	10.7	2.46	9.4	1.11
Legacy Reserves L.P.	LGCY	25.41	1.64	2,380	28	72	10.0	2.30	9.1	1.01
Linn Energy, LLC	LINE	22.79	2.17	11,530	47	53	10.5	2.90	12.7	0.94
Enerplus Corporation	ERF	14.71	1.61	4,600	35	65	6.4	1.03	7.0	0.88
<i>Total or Median</i>			<i>1.63</i>	<i>21,300</i>	<i>40</i>	<i>60</i>	<i>10.3</i>		<i>9.2</i>	<i>0.97</i>
RTF Cash Payers										
Freehold Royalties Ltd.	FRHLF	22.80	TL	1,590	16	84	13.2	1.60	7.0	1.08
Dorchester Minerals, L.P.	DMLP B	24.19	TL	740	64	36	14.4	1.58	6.5	0.93
Enduro Royalty Trust (40%)	NDRO	15.74	BL	210	48	52	9.7	1.46	9.3	0.93
Sabine Royalty Trust	SBR	50.78	TL	740	52	48	12.3	4.13	8.1	0.79
San Juan Basin Royalty Trust	SJT B	16.01	BL	750	100	-	11.6	0.84	5.2	0.76
Permian Basin RT	PBT	13.13	TL	610	18	82	8.9	0.93	7.1	0.73
Hugoton RoyaltyTrust	HGT	8.63	BL	350	90	10	8.6	0.89	10.3	0.72
Mesa RoyaltyTrust	MTR	21.70	BL	40	75	25	8.9	1.97	9.1	0.72
Cross Timbers Royalty Trust	CRT	28.25	TL	170	83	17	12.0	2.11	7.5	0.67
<i>Total or Median</i>				<i>5,200</i>	<i>64</i>	<i>36</i>	<i>11.6</i>		<i>7.5</i>	<i>0.76</i>
CB=Contrarian Buy, Stock Price apparently in downtrend compared to 200-day average.										
McDep Ratio = Market cap and Debt to present value of oil and gas and other businesses										
Present Value (PV) presumes long-term prices of \$100 a barrel for oil and \$6 a million btu for natural gas.										
Dist. = Income distribution. NTM = Next Twelve Months Ended June 30, 2014. Enterprise Value = Market Cap and Debt.										
TL = Top Line income sources, BL = Bottom Line income sources										



Income and Small Cap Weekly

Analysis of Oil & Gas Stocks

July 5, 2013

Table ISC-2								
McDep Income and Small Cap Energy Portfolio								
Net Present Value and McDep Ratio								
			Price (\$/sh)	Shares	Market Cap (\$mm)	Net Present Value (\$/un)	Debt/ Present Value	McDep Ratio
	Symbol/ Rating		3-Jul 2013	(mm)				
Small Cap Independent Producers								
PDC Energy	PDCE		53.70	31.0	1,660	45.00	0.36	1.12
Halcón Resources	HK		5.76	420.0	2,420	7.00	0.50	0.91
Range Resources	RRC	B	77.47	161.0	12,470	90.00	0.20	0.89
Peyto Exploration and Development Corp.	PEYUF		29.48	149.0	4,390	34.00	0.13	0.88
Continental Resources (32%)	CLR	B	89.51	59.2	5,300	110.00	0.17	0.85
Denbury Resources Inc.	DNR		17.26	373.0	6,440	23.00	0.28	0.82
Berry Petroleum Company	BRY		40.10	55.3	2,220	58.00	0.36	0.80
Birchcliff Energy Ltd.	BIREF	B	8.01	164.0	1,310	12.00	0.21	0.74
Whiting Petroleum Corporation	WLL	B	48.39	119.0	5,760	75.00	0.22	0.72
Cimarex Energy Company	XEC	B	67.73	86.6	5,870	100.00	0.14	0.72
	<i>Total or Median</i>				47,840		0.22	0.83
Leveraged Cash Payers								
Vanguard Natural Resources, LLC	VNR		26.18	64.8	1,700	22.00	0.43	1.11
Legacy Reserves L.P.	LGCY		25.41	57.1	1,450	25.00	0.39	1.01
Linn Energy, LLC	LINE		22.79	233.0	5,310	26.00	0.51	0.94
Enerplus Corporation	ERF		14.71	196.0	2,880	18.00	0.33	0.88
	<i>Total or Median</i>				11,340		0.41	0.97
RTF Cash Payers								
Freehold Royalties Ltd.	FRHLF		22.80	66.5	1,520	21.00	0.05	1.08
Dorchester Minerals, L.P.	DMLP	B	24.19	30.7	740	26.00	-	0.93
Enduro Royalty Trust (40%)	NDRO		15.74	13.2	210	17.00	-	0.93
Sabine Royalty Trust	SBR		50.78	14.6	740	64.00	-	0.79
San Juan Basin Royalty Trust	SJT	B	16.01	46.6	750	21.00	-	0.76
Permian Basin RT	PBT		13.13	46.6	610	18.00	-	0.73
Hugoton Royalty Trust	HGT		8.63	40.0	350	12.00	-	0.72
Mesa Royalty Trust	MTR		21.70	1.9	40	30.00	-	0.72
Cross Timbers Royalty Trust	CRT		28.25	6.0	170	42.00	-	0.67
	<i>Total or Median</i>				5,130			0.76
B=Buy; CB=Contrarian Buy, Stock Price apparently in downtrend compared to 200-day average.								
McDep Ratio = Market cap and Debt to present value of oil and gas and other businesses								
Present Value presumes long-term prices of \$100 a barrel for oil and \$6 a million btu for natural gas.								



Income and Small Cap Weekly

Analysis of Oil & Gas Stocks

July 5, 2013

Table ISC-3								
McDep Income and Small Cap Energy Portfolio								
Value Multiples - Rank by EV/Ebitda								
			Price (\$/sh)	Revenue	Dist/ Equity	Adjstd Resrvs/ Prod	PV/ Ebitda	EV/ Ebitda
	Symbol/ Rating		3-Jul 2013	Royalty (%)	Ebitda	NTM	NTM	NTM
Small Cap Independent Producers								
Range Resources	RRC	B	77.47		-	13.6	16.0	14.2
PDC Energy	PDCE		53.70		-	15.0	9.8	11.0
Peyto Exploration and Development Corp	PEYUF		29.48		0.27	9.3	11.5	10.2
Birchcliff Energy Ltd.	BIREF	B	8.01		-	18.8	13.0	9.6
Halcón Resources	HK		5.76		-	5.0	7.6	6.9
Continental Resources (32%)	CLR	B	89.51		-	9.8	7.9	6.7
Berry Petroleum Company	BRY		40.10		-	12.1	7.9	6.3
Denbury Resources Inc.	DNR		17.26		-	13.9	7.3	6.0
Cimarex Energy Company	XEC	B	67.73		-	7.6	7.4	5.3
Whiting Petroleum Corporation	WLL	B	48.39		-	8.4	5.8	4.2
	<i>Median</i>					10.9	7.9	6.8
Leveraged Cash Payers								
Vanguard Natural Resources, LLC	VNR		26.18		1.08	11.0	9.7	10.7
Linn Energy, LLC	LINE		22.79		1.25	14.0	11.2	10.5
Legacy Reserves L.P.	LGCY		25.41		0.91	11.0	9.9	10.0
Enerplus Corporation	ERF		14.71		0.42	6.5	7.3	6.4
	<i>Median</i>					11.0	9.8	10.3
RTF Cash Payers								
Dorchester Minerals, L.P.	DMLP	B	24.19	77	0.94	7.0	15.5	14.4
Freehold Royalties Ltd.	FRHLF		22.80	86	0.93	4.9	12.2	13.2
Sabine Royalty Trust	SBR		50.78	100	1.00	8.9	15.5	12.3
Cross Timbers Royalty Trust	CRT		28.25	98	0.89	13.0	17.8	12.0
San Juan Basin Royalty Trust	SJT	B	16.01		0.61	10.2	15.2	11.6
Enduro Royalty Trust (40%)	NDRO		15.74		0.89	5.8	10.4	9.7
Permian Basin RT	PBT		13.13	33	0.63	12.7	12.2	8.9
Mesa RoyaltyTrust	MTR		21.70		0.82	5.2	12.4	8.9
Hugoton RoyaltyTrust	HGT		8.63		0.88	13.0	11.9	8.6
	<i>Median</i>					8.9	12.4	11.6
B=Buy; CB=Contrarian Buy, Stock Price apparently in downtrend compared to 200-day average.								
EV = Enterprise Value = Market Cap and Debt; Ebitda = Earnings before interest, tax, depreciation and amortization; NTM = Next Twelve Months Ended June 30, 2014; P/E = Stock Price to Earnings; PV = Present Value of oil and gas and other businesses								
Top Line Cash Payers defined as those having Revenue Royalty (see fifth column from right).								



Income and Small Cap Weekly

Analysis of Oil & Gas Stocks

July 5, 2013

Table ISC-4									
McDep Income and Small Cap Energy Portfolio									
Total Return and Enterprise Value Momentum									
			Price (\$/sh)	Equity Total	Enterprise Value/				
	Symbol/		3-Jul	Return	52Wk	52Wk	50 Day	200 Day	McDep
	Rating		2013	YTD (%)	High	Low	Avg.	Avg.	Ratio
Small Cap Independent Producers									
PDC Energy	PDCE		53.70	62	0.98	1.62	1.05	1.19	1.12
Peyto Exploration and Development C	PEYUF		29.48	28	0.94	1.46	1.00	1.12	0.88
Continental Resources (32%)	CLR	B	89.51	22	0.96	1.34	1.05	1.09	0.85
Range Resources	RRC	B	77.47	23	0.95	1.27	1.01	1.06	0.89
Birchcliff Energy Ltd.	BIREF	B	8.01	5	0.93	1.25	0.99	1.03	0.74
Whiting Petroleum Corporation	WLL	B	48.39	12	0.92	1.17	1.03	1.03	0.72
Cimarex Energy Company	XEC	B	67.73	18	0.88	1.27	0.96	1.03	0.72
Denbury Resources Inc.	DNR		17.26	7	0.92	1.18	0.97	1.00	0.82
Berry Petroleum Company	BRY		40.10	20	0.89	1.16	0.94	1.00	0.80
Halcón Resources	HK		5.76	(17)	0.77	1.16	0.99	0.93	0.91
	<i>Median</i>			19	0.92	1.26	1.00	1.03	0.83
Leveraged Cash Payers									
Enerplus Corporation	ERF		14.71	18	0.89	1.16	0.99	1.01	0.88
Legacy Reserves L.P.	LGCY		25.41	12	0.90	1.08	0.97	0.98	1.01
Vanguard Natural Resources, LLC	VNR		26.18	5	0.91	1.05	0.95	0.95	1.11
Linn Energy, LLC	LINE		22.79	(33)	0.71	1.01	0.81	0.77	0.94
	<i>Median</i>			8	0.90	1.06	0.96	0.97	0.97
RTF Cash Payers									
San Juan Basin Royalty Trust	SJT	B	16.01	21	0.89	1.30	1.03	1.08	0.76
Hugoton RoyaltyTrust	HGT		8.63	24	0.86	1.51	0.96	1.06	0.72
Dorchester Minerals, L.P.	DMLP	B	24.19	24	0.94	1.22	0.99	1.06	0.93
Sabine Royalty Trust	SBR		50.78	33	0.91	1.31	0.98	1.05	0.79
Freehold Royalties Ltd.	FRHLF		22.80	6	0.94	1.28	0.98	1.03	1.08
Cross Timbers Royalty Trust	CRT		28.25	8	0.71	1.20	1.00	0.99	0.67
Permian Basin RT	PBT		13.13	10	0.68	1.10	1.01	0.98	0.73
Enduro Royalty Trust (40%)	NDRO		15.74	(2)	0.80	1.03	0.97	0.93	0.93
Mesa RoyaltyTrust	MTR		21.70	17	0.67	1.14	0.90	0.91	0.72
	<i>Median</i>			17	0.86	1.22	0.98	1.03	0.76

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



Income and Small Cap Weekly

Analysis of Oil & Gas Stocks

July 5, 2013

Linn Energy, LLC										
Next Twelve Months Operating and Financial Estimates										
	Q2	Year	Q1	Q2E	Q3E	Q4E	Year	Q1E	Q2E	Next
	6/30/12	2012	3/31/13	6/30/13	9/30/13	12/31/13	2013E	3/31/14	6/30/14	Twelve
										Months
										6/30/14
Volume										
Natural Gas (bcf)	28.8	128.0	39.9	40.3	40.8	40.8	161.7	39.9	40.3	161.7
Natural Gas (mmcf)	317	350	443	443	443	443	443	443	443	443
Days	91	366	90	91	92	92	365	90	91	365
Oil (mb)	4,750	19,623	5,292	5,458	5,628	5,741	22,119	5,728	5,908	23,005
Oil (mbd)	52.2	53.6	58.8	60.0	61.2	62.4	60.6	63.6	64.9	63.0
Total (mb)	9,558	40,953	11,937	12,177	12,421	12,533	49,068	12,373	12,627	49,954
Total (mbd)	105.0	111.9	132.6	133.8	135.0	136.2	134.4	137.5	138.8	136.9
Price										
Henry Hub (\$/mmbtu)	2.21	2.79	3.34	4.10	3.58	3.69	3.68	3.90	3.82	3.75
Differential (\$/mmbtu)	0.15	(0.09)	(0.04)	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)
Company (\$/mcf)	2.06	2.88	3.38	4.15	3.62	3.74	3.72	3.95	3.87	3.79
WTI Cushing (\$/bbl)	93.32	94.16	94.41	94.22	97.90	96.18	95.68	93.89	92.02	95.00
Differential	32.76	32.52	34.59	34.52	35.87	35.24	35.04	34.40	33.72	34.83
Company (\$/bbl)	60.56	61.64	59.82	59.70	62.03	60.94	60.64	59.49	58.30	60.17
Total (\$/bbl)	36.32	38.52	37.81	40.50	39.99	40.07	39.61	40.26	39.64	39.99
Revenue (\$mm)										
Natural Gas	59	368	135	167	148	152	602	157	156	613
Oil	288	1,210	317	326	349	350	1,341	341	344	1,384
Total	347	1,578	451	493	497	502	1,943	498	500	1,998
Expense										
Lease operating	122	527	156							
General and administrative	41	173	59							
Total	163	700	215	223	225	227	891	226	227	905
Ebitda	184	878	236	270	272	275	1,053	273	274	1,093
Deprec., Deplet., & Amort.	144	607	197	195	199	201	791	198	202	799
Hedging and other	(115)	(401)	(98)	(65)	(71)	(71)	(305)	(75)	(82)	(299)
Ebit	155	671	137	140	144	145	567	149	154	592
Interest	94	380	100	100	100	95	395	95	95	385
Ebt	61	291	37	40	44	50	172	54	59	207
Income Tax										
Net Income (\$mm)	61	291	37	40	44	50	172	54	59	207
Per Unit (\$)	0.31	1.42	0.16	0.17	0.19	0.21	0.74	0.23	0.25	0.89
Units (millions)	198	205	233	233	233	233	233	233	233	233
Ebitda Margin	53%	56%	52%	55%	55%	55%	54%	55%	55%	55%



Income and Small Cap Weekly

Analysis of Oil & Gas Stocks

July 5, 2013

Linn Energy, LLC					
Functional Cash Flow and Present Value					
	<i>NTM Ebitda</i>	<i>Adjusted</i>	<i>PV/</i>	<i>Present</i>	
	<i>(US\$mm)</i>	<i>R/P</i>	<i>Ebitda</i>	<i>Value</i>	
				<i>(US\$mm)</i>	
North American Natural Gas	336	13.1	17.3	5,800	47%
Oil	757	13.4	8.6	6,500	53%
	1,093	14.0	11.3	12,300	100%
Debt (US\$mm)					6,200
Net Present Value (US\$mm)					6,100
Shares (mm)					233
Net Present Value - Standard Estimate (US\$/sh)					26
NPV Approximation by Cash Flow Multiple Depending on Reserve Life (US\$/sh)					23

Berry Petroleum Company					
Functional Cash Flow and Present Value					
	<i>NTM Ebitda</i>	<i>Adjusted</i>	<i>PV/</i>	<i>Present</i>	
	<i>(US\$mm)</i>	<i>R/P</i>	<i>Ebitda</i>	<i>Value</i>	
				<i>(US\$mm)</i>	
North American Natural Gas	40	16.5	17.5	700	14%
Oil	599	11.2	7.2	4,340	86%
	639	12.1	7.9	5,040	100%
Debt (US\$mm)					1,830
Net Present Value (US\$mm)					3,210
Shares (mm)					55
Net Present Value - Standard Estimate (US\$/sh)					58
NPV Approximation by Cash Flow Multiple Depending on Reserve Life (US\$/sh)					58



Income and Small Cap Weekly

Analysis of Oil & Gas Stocks

July 5, 2013

Berry Petroleum Company										
Next Twelve Months Operating and Financial Estimates										
										<i>Next</i>
	<i>Q2</i>	<i>Year</i>	<i>Q1</i>	<i>Q2E</i>	<i>Q3E</i>	<i>Q4E</i>	<i>Year</i>	<i>Q1E</i>	<i>Q2E</i>	<i>Twelve</i>
	<i>6/30/12</i>	<i>2012</i>	<i>3/31/13</i>	<i>6/30/13</i>	<i>9/30/13</i>	<i>12/31/13</i>	<i>2013E</i>	<i>3/31/14</i>	<i>6/30/14</i>	<i>Months</i>
										<i>6/30/14</i>
Volume										
Natural Gas (mmcf)	54	54	51	51	51	51	51	51	51	51
Days	91	366	90	91	92	92	365	90	91	365
Oil (mb)	2,393	10,027	2,804	2,835	2,866	2,866	11,371	2,804	2,835	11,371
Oil (mbd)	26.3	27.4	31.2	31.2	31.2	31.2	31.2	31.2	31.2	31.2
Total (mb)	3,217	13,324	3,571	3,610	3,650	3,650	14,481	3,571	3,610	14,481
Total (mbd)	35.4	36.4	39.7	39.7	39.7	39.7	39.7	39.7	39.7	39.7
Price										
Henry Hub (\$/mmbtu)	2.21	2.79	3.34	4.10	3.58	3.69	3.68	3.90	3.82	3.75
Differential (\$/mmbtu)	(0.04)	(0.01)	(0.13)	(0.16)	(0.14)	(0.15)	(0.15)	(0.16)	(0.15)	(0.15)
Company (\$/mcf)	2.25	2.80	3.47	4.26	3.72	3.84	3.82	4.05	3.97	3.90
WTI Cushing (\$/bbl)	93.32	94.16	94.41	94.22	97.90	96.18	95.68	93.89	92.02	95.00
Differential	4.03	4.09	4.11	4.11	4.27	4.19	4.16	4.08	4.00	4.12
Company	89.29	90.07	90.30	90.12	93.63	91.99	91.52	89.81	88.02	90.88
Total (\$/bbl)	69.89	71.94	75.38	76.25	78.32	77.18	76.79	75.74	74.24	76.38
Revenue (\$mm)										
Natural Gas	11	55	16	20	17	18	71	19	18	73
Oil	214	903	253	255	268	264	1,041	252	250	1,033
Total	225	959	269	275	286	282	1,112	270	268	1,106
Expense										
Lease operating	72	312	97	93	97	95	381	91	90	373
General and administrative	18	72	22	23	24	24	93	23	23	93
Total	90	384	119	116	121	119	475	114	113	467
Ebitda	135	575	150	159	165	163	637	156	155	639
Exploration	2	21	1	1	1	1	4	1	1	4
Deprec., Deplet., & Amort.	52	226	68	68	68	68	272	68	68	272
Other, incl hedge	(2)	(15)	(1)	(1)	(1)	(1)	(3)	(1)	(1)	(3)
Ebit	83	343	82	91	97	95	364	88	87	366
Interest	21	84	25	25	25	25	100	25	25	100
Ebt	62	259	57	66	72	70	264	63	62	266
Income Tax	22	91	20	23	25	24	93	22	22	93
Net Income (\$mm)	40	168	37	43	47	45	172	41	40	173
Per Share (\$)	0.73	3.04	0.67	0.77	0.85	0.82	3.11	0.74	0.72	3.13
Shares (millions)	55	55	55	55	55	55	55	55	55	55
Ebitda Margin	60%	60%	56%	58%	58%	58%	57%	58%	58%	58%
Tax rate	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%

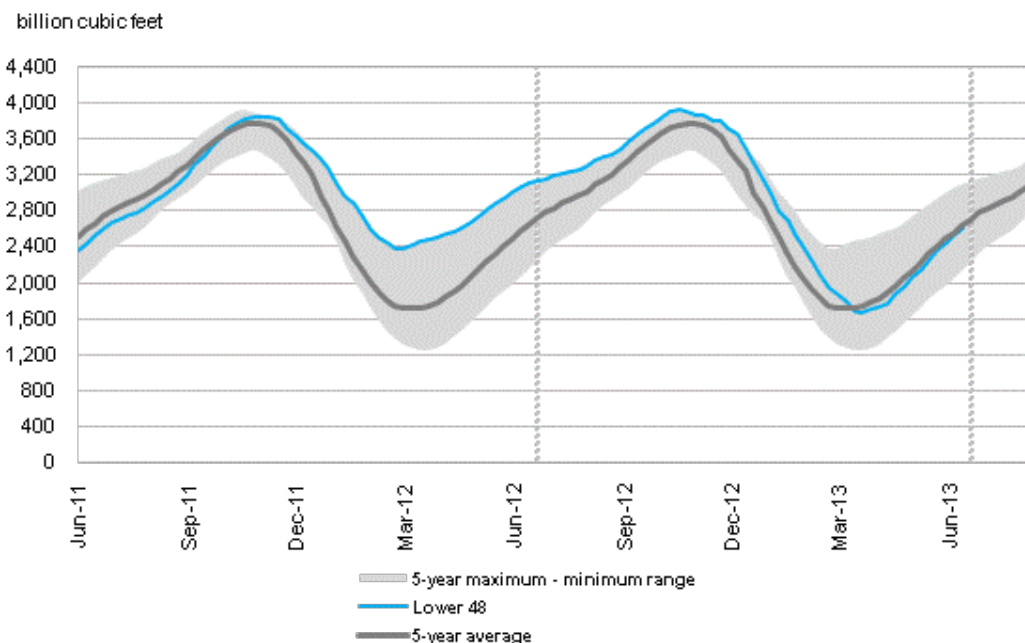


Income and Small Cap Weekly

Analysis of Oil & Gas Stocks

July 5, 2013

Working gas in underground storage compared with the 5-year maximum and minimum



Source: U.S. Energy Information Administration

Disclaimer: This analysis was prepared by Kurt Wulff, Manager of McDep LLC. The firm used sources and data believed to be reliable, but makes no representation as to their accuracy or completeness. This analysis is intended for informational purposes and is not a solicitation to buy or sell a security. Past performance is no guarantee of future results.

McDep or its employees may take positions in stocks the firm covers for research purposes. No trades in a subject stock shall be made within a week before or after a change in recommendation.

Certification: I, Kurt H. Wulff, certify that the views expressed in this research analysis accurately reflect my personal views about the subject securities and issuers. No part of my compensation was, is, or will be directly or indirectly related to the specific recommendations or views contained in this research analysis.

Research Methodology/Ratings Description: McDep LLC is an independent research originator focused on oil and gas stocks exclusively. The firm applies the forty years of experience of its analyst to estimate a present value of the oil and gas resources and other businesses of covered companies. That value is compared with a company's stock market capitalization and debt. Stocks with low market cap and debt relative to present value tend to outperform stocks with high market cap and debt relative to present value. Buy recommendations are expected to deliver a total return better than 7% per year above inflation. Hold recommendations assume the attributes of the underlying business are reflected in the current price of the stock. Sell recommendations are expected to deliver a total return less than inflation.