

MCDEP Income and Small Cap Weekly

Analysis of Oil & Gas Stocks November 9, 2012

Halcón Resources (HK) Growing at Hawk Speed

Symbol	HK	Ebitda Next Twelve Months ending 9/30/13 (US\$mm)	534
Rating		North American Natural Gas/Ebitda (%)	7
Price (\$/sh)	5.48	Natural Gas and Oil Production/Ebitda (%)	100
Pricing Date	11/8/12	Adjusted Reserves/Production NTM	6.7
Shares (mm)	436	EV/Ebitda	7.0
Market Capitalization (\$mm)	2,400	PV/Ebitda	10.7
Debt (\$mm)	1,370	Undeveloped Reserves (%)	50
Enterprise Value (EV) (\$mm)	3,800	Natural Gas and Oil Ebitda (\$/boe)	41.00
Present Value (PV) (\$mm)	5,700	Present Value Proven Reserves(\$/boe)	50.00
Net Present Value (\$/share)	10	Oil and Gas Ebitda Margin (%)	60
Debt/Present Value	0.24	Earnings Next Twelve Months (US\$/sh)	0.29
McDep Ratio - EV/PV	0.66	Price/Earnings Next Twelve Months	19
Dividend Yield (%/year)	0.0	Indicated Annual Dividend (US\$/sh)	0.00
Note: Estimated cash flow and ea	rnings tied to one-y	year futures prices for oil and natural gas.	
Reported results may vary	widely from estima	tes. Estimated present value per share revised only infrec	uently.
Estimated present value pr	esumes a long-term	price for oil of US\$100 a barrel and natural gas, \$8 a mil	lion btu

Summary and Recommendation

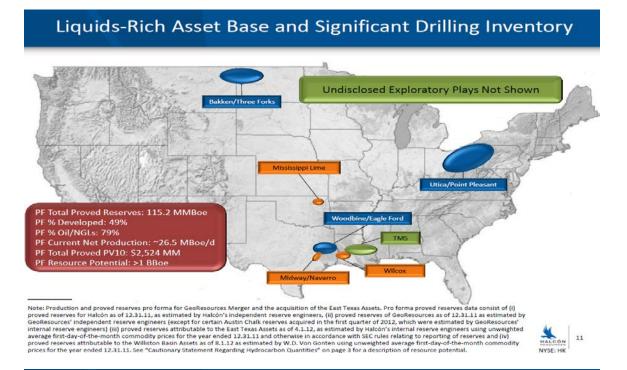
Unlevered appreciation potential of 52% to a McDep Ratio of 1.0 can only be an approximate measure of oil resource player Halcón Resources (HK) as it grows at hawk speed. Translated from Spanish, the company name refers to the fast bird that can fly at more than 100 miles an hour. Serial energy entrepreneur Floyd Wilson and his team in less than a year have grown their new company from a shell to \$5 billion of Present Value when the latest transaction closes in December. In its rapid evolution, the new HK has acquired and developed reserves of a hundred million barrels and production of thirty thousand barrels a day to underpin the rapid development of further shale oil opportunities. Three core areas providing most of the growth in the next year are the Bakken in North Dakota and Montana, the Woodbine/Eagleford in East Texas and the Utica/Pt. Pleasant in Ohio and Pennsylvania (see slides Liquids-Rich Asset Base and Building Oil Company on page 2). Estimated Net Present Value (NPV) of \$10 a share includes some \$4 for success beyond that which we can tie to current reserves and year-ahead cash flow (see tables Functional Cash Flow and Present Value and Next Twelve Months Operating and Financial Results on page 3). With the disclosure of third quarter results on November 8, management described active drilling in the three core plays as well as the Tuscaloosa Marine Shale in Louisiana and Midway/Navarro in Texas. In its short life, the stock has already demonstrated volatility that may provide opportunity for those investors wanting to participate in higher risk shale oil growth with a proven innovator.

Kurt H. Wulff, CFA



MCDEP Income and Small Cap Weekly

Analysis of Oil & Gas Stocks November 9, 2012



Building An Oil Company

•	Halcón has assembled a premier	acreage position in liquids-rich	resource style plays in the U.S
---	--------------------------------	----------------------------------	---------------------------------

Targeted Areas	Targeted Net Acres	Progress ⁽¹⁾	First Spud
Woodbine/Eagle Ford	150,000 - 250,000	~100%	May 🗹
Bakken/Three Forks	55,000 - 125,000	~100%	2010 🗹
Utica/Point Pleasant	150,000 - 250,000	~65%	October
TMS	150,000 - 200,000	~40%	September 🗹
Undisclosed Exploratory Plays	200,000 - 350,000		
Midway/Navarro	25,000 - 75,000	~50%	May 🗹
Wilcox	50,000 - 100,000	~100%	August 🗹
Mississippi Lime	50,000 - 100,000	~60%	April 🗹
Other Conventional		~100%	

RESOURCE

(1) Percentage leased, optioned or under contract compared to midpoint of target acreage range as of 10.18.12; approximately 200,000 net acres leased, optioned or under contract in the Woodbine/Eagle Ford. approximately 135,000 net acres leased or under contract in the Bakken/Three Forks pro forma for the Williston Basin Assets acquisition; approximately 95,000 net acres leased, optioned or under contract in the Wilcox.





Analysis of Oil & Gas Stocks

November 9, 2012

Ha	lcón Resourc	es			
Functional Ca	sh Flow and l	Present Val	ue		
				Present	
	NTM Ebitda	Adjusted	PV/	Value	
	<u>(US\$mm)</u>	<u>R/P</u>	<u>Ebitda</u>	<u>(US\$mm)</u>	
North American Natural Gas	37	6.9	19.6	730	13%
Oil	496	6.6	10.1	5,000	87%
	534	6.7	10.7	5,730	100%
Debt (US\$mm)					1,370
Net Present Value (US\$mm)					4,360
Shares (mm)					436
Net Present Value - Standard Estimate (US\$/sh)					10
NPV Approximation by Cash Flow Multiple Depen	nding on Reser	ve Life (US	\$/sh)		6

			Halcón	Resources					
	Next Tw	elve Mon	ths Opera	ating and F	inancial 🛛	Estimates	;		
									Next
									Twelve
	Q1	Q2	Q3	Q4E	Year	Q1E	Q2E	Q3E	Months
	3/31/12	6/30/12	9/30/12	12/31/12	2012E	3/31/13	6/30/13	9/30/13	9/30/13
Volume									
Natural Gas (mmcfd)	7	6	16	28	14	47	56	68	50
Oil (mbd)	2.9	2.8	8.6	13.9	7.1	26	31	37	27
Total (mb)	0.4	0.4	1.0	1.7	3.5	3.0	3.7	4.5	12.9
Total (mbd)	4.0	3.9	11.2	18.5	57	34	41	49	35
Price									
Henry Hub (\$/mmbtu)	2.73	2.21	2.80	3.34	2.77	3.67	3.68	3.77	3.61
Differential (\$/mmbtu)	0.02	0.09	0.18	0.22	(0.05)	0.24	0.24	0.25	0.19
Company (\$/mcf)	2.71	2.12	2.62	3.12	2.82	3.43	3.44	3.53	3.42
WTI Cushing (\$/bbl)	102.93	93.32	92.22	88.54	94.25	86.73	88.36	89.18	88.20
Differential	8.32	8.36	4.92	4.73	8.15	4.63	4.72	4.76	4.63
Company (\$/bbl)	94.61	84.96	87.30	83.81	86.10	82.10	83.64	84.42	83.57
Total (\$/bbl)	72.82	65.23	70.59	67.54	68.77	67.86	69.05	69.77	68.82
Revenue (\$mm)									
Natural Gas	2	1	4	8	15	15	18	22	62
Oil	25	22	69	107	223	192	237	291	827
Total	27	23	73	115	238	207	255	313	889
Expense									
Lease operating	9	9	16						
Production taxes	2	1	4						
General and administrative	20	13	33						
Total	31	24	53	46	154	83	102	125	356
Ebitda	(4)	(0)	20	69	84	124	153	188	534
Deprec., Deplet., & Amort.	6	6	23	39	74	70	85	103	297
Other	(19)	(15)	(5)		(39)				-
Ebit	9	8	2	30	49	54	68	85	236
Interest	13	4	5	10	32	10	10	10	40
Ebt	(4)	4	(3)	20	17	44	58	75	196
Income Tax	(1)	1	(1)	7	6	15	20	26	69
Net Income (\$mm)	(3)	3	(2)	13	11	29	38	48	128
Per Share (\$)	(0.04)	0.02	(0.01)	0.03	(0.00)	0.07	0.09	0.11	0.29
Shares (millions)	69	136	192	436	,	436	436	436	436
Ebitda Margin	-16%	-2%	27%	60%	35%	60%	60%	60%	60%
Tax rate	35%	35%	35%	35%	35%	35%	35%	35%	35%



MCDEP Income and Small Cap Weekly

Analysis of Oil & Gas Stocks November 9, 2012

	· ·			Table IS		-		a 1 .			
Mcl	Jep Ir	ico	me and	Small	Cap Ene	ergy I	orti	iolio			
Debt, S	egmei	nts	, Cash I	Flow, I	ncome a	nd M	cDe	p Ratio)		
		_									
a	1.1/D.		Price	TTT /		DL	0 ()	FX 7/	D! .	D' .	
Sym		0	(US\$/sh)	EV/	Enterprise	<u>PV(</u>	<u>%)</u>	EV/	Dist.	Dist.	14 D
	B = 1	2	8-Nov	Market	Value	Nat	0.1	Ebitda	NTM	Yield	McDep
СВ	(see bel	ow)	2012	Cap	(\$ <i>mm</i>)	Gas	Oil	NTM	(\$/un)	(%)	Ratio
Small Con Indonendant Braduces		-									
Small Cap Independent Producer Peyto Exploration and Developmen		2	23.91	1.18	4,030	77	23	10.4	0.72	3.0	1.00
Range Resources	RRC	В	65.75	1.13	13,950	75	25	17.8	0.12	0.2	0.95
PDC Energy	PDCE	D	27.17	1.86	1,530	54	46	11.9	-	- 0.2	0.95
Continental Resources (32%)	CLR	CB		1.24	5,050	24	76	7.4	-		0.74
Birchcliff Energy Ltd.	BIREF	_		1.43	1,670	63	37	10.5	-	-	0.74
Halcón Resources	HK	CD	5.48	1.43	3,760	13	87	7.0	-	-	0.66
Denbury Resources Inc.	DNR		14.78	1.54	8,920	6	94	5.9	-	-	0.63
Berry Petroleum Company	BRY		32.64	1.98	3,560	12	88	5.5	-	-	0.63
Cimarex Energy Company	XEC	CB		1.27	6,520	41	59	5.3	0.48	0.8	0.60
Whiting Petroleum Corporation	WLL	CB		1.41	7,310	9	91	4.9	-	-	0.58
Total or Median					56,300			7.2			0.69
					,						
Top Line Cash Payers											
Freehold Royalties Ltd.	FRHLF	1	20.19	1.04	1,360	16	84		1.69	8.3	0.96
Dorchester Minerals, L.P.	DMLP	CB	21.70	1.00	670	57	43		1.74	8.0	0.80
Sabine Royalty Trust	SBR		47.92	1.00	700	55	45		3.77	7.9	0.74
Permian Basin RT	PBT		13.52	1.00	630	37	63		1.04	7.7	0.68
Cross Timbers Royalty Trust	CRT		27.12	1.00	160	70	30		2.58	9.5	0.62
Total or Median					3,500					8.0	0.74
Bottom Line Cash Payers											
Linn Energy, LLC	LINE		39.93	1.62	15,100	43	57	13.6	2.90	7.3	1.18
Vanguard Natural Resources, LLC	VNR		27.98	1.62	2,400	33	67	12.1	2.40	8.6	1.07
Legacy Reserves L.P.	LGCY		24.80	1.49	1,760	25	75	9.4	2.26	9.1	0.88
Enduro Royalty Trust (40%)	NDRO		18.02	1.00	240	39	61	8.1	1.73	9.6	0.86
Enerplus Corporation	ERF	CB	15.01	1.62	4,800	30	70	6.6	1.08	7.2	0.80
San Juan Basin Royalty Trust	SJT	CB	13.98	1.00	650	100	-	9.2	1.12	8.0	0.67
Mesa RoyaltyTrust	MTR		23.71	1.00	44	75	25	8.2	2.11	8.9	0.59
Hugoton RoyaltyTrust	HGT		7.07	1.00	280	88	13	6.6	0.30	4.3	0.51
Total or Median					25,300			8.7		8.3	0.83
Composite											
Enterprise Value Weighting		_			85,100	39	61				0.79
Equal Weighting						45	55				0.77
Equal Weighted Buys		-				49	51				0.73
		Ŀ			000 1						
CB=Contrarian Buy, Stock Price an					2	0					
McDep Ratio = Market cap and De Present Value (PV) presumes long-											



Analysis of Oil & Gas Stocks November 9, 2012

esent V			p Ener McDep	gy Port Ratio	folio		
Symbol/	alu		МсDер	Ratio			
		Price					
		Price					
		Price					
					Net		
		(\$/sh)		Market	Present	Debt/	
Pat		8-Nov	Shares	Cap	Value	Present	McDep
Ки	ing	2012	(mm)	(\$mm)	(\$/un)	Value	Ratio
PEVLIE		23.91	143.1	3 4 2 0	24.00	0.15	1.00
	B			,			0.95
				,			0.95
CLR	CB						0.74
				,			0.73
łK	СБ						0.66
							0.63
				,			0.63
	CB			,			0.60
							0.58
	0.5		11,10	40,300	00.00	0.22	0.69
				.,			
RHLF		20.19	64.7	1,310	21.00	0.04	0.96
OMLP	CB	21.70	30.7	670	27.00	-	0.80
BR		47.92	14.6	700	65.00	-	0.74
PBT		13.52	46.6	630	20.00	-	0.68
CRT		27.12	6.0	160	44.00	-	0.62
				3,470			0.74
LINE		39.93	233.0	9,300	30.00	0.45	1.18
/NR		27.98	53.1	1,490	25.00	0.41	1.07
.GCY		24.80	47.5	1,180	30.00	0.29	0.88
NDRO		18.02	13.2	240	21.00	-	0.86
ERF	CB	15.01	196.0	2,940	21.00	0.31	0.80
SJT	CB	13.98	46.6	650	21.00	-	0.67
ИTR		23.71	1.9	44	40.00	-	0.59
IGT		7.07	40.0	280	14.00	-	0.51
				16,120			0.83
	Rat EYUF RC DCE LR IREF K NR RY EC VIL EC VIL BR BR BT RT BR BT RT INE NR GCY IDRO RF JT TR IR IGT	Rating Image: Straig strain RYUF RC B DCE Image: Strain LR CB IREF CB IREF CB IREF CB RY Image: Strain EC CB VILL CB BR Image: Strain IMLP CB BR Image: Strain Image: Strain	ymbol/ 8-Nov Rating 2012 EYUF 23.91 RC B 65.75 DCE 27.17 LR CB 69.85 IREF CB 7.88 IK 5.48 DNR 14.78 RY 32.64 EC CB 58.98 VLL CB 21.70 BR 47.92 BT 13.52 RT 27.12 13.52 RT 39.93 NR 27.98 GCY 24.80 18.02 RF CB 15.01 JT CB 13.98 TIR 23.71 13.98 TIR 23.71 13.98 TIR 23.71 13.98 TIR 23.71 13.98 DRO 13.98 13.98 TIR 23.71 13.98 TIR 23.71 13.98 TIR	ymbol/ 8-Nov Shares Rating 2012 (mm) EYUF 23.91 143.1 RC B 65.75 160.0 DCE 27.17 30.2 LR CB 69.85 58.6 IREF CB 7.88 148.3 IK 5.48 436.0 NR 14.78 391.0 RY 32.64 55.3 EC CB 58.98 86.9 VLL CB 43.52 119.0 RHLF 20.19 64.7 MLP CB 21.70 30.7 BR 47.92 14.6 BT 13.52 46.6 RT 27.12 6.0 INE 39.93 233.0 NR 27.98 53.1 GCY 24.80 47.5 IDRO 18.02 13.2 RF CB 15.01 196.0 JT	ymbol/ 8-Nov Shares Cap Rating 2012 (mm) (\$mm) EYUF 23.91 143.1 3,420 RC B 65.75 160.0 10,520 DCE 27.17 30.2 820 LR CB 69.85 58.6 4,090 IREF CB 7.88 148.3 1,170 IK 5.48 436.0 2,390 NR 14.78 391.0 5,780 RY 32.64 55.3 1,800 EC CB 58.98 86.9 5,130 VLL CB 43.52 119.0 5,180 MLP CB 21.70 30.7 670 BR 47.92 14.6 700 BT 13.52 46.6 630 RT 27.12 6.0 160 NR 27.98 53.1 1,490 GCY 24.80 47.5 1,180	ymbol/ \aleph -Nov Shares Cap Value Rating 2012 (mm) (\$mm) (\$mm) (\$/un) EYUF 23.91 143.1 3,420 24.00 RC B 65.75 160.0 10,520 70.00 DCE 27.17 30.2 820 30.00 IRE B 65.75 160.0 10,520 70.00 DCE 27.17 30.2 820 30.00 IRE B 69.85 58.6 4,090 100.00 IREF CB 7.88 148.3 1,170 12.00 KK 5.48 436.0 2,390 10.00 NR 14.78 391.0 5,780 28.00 RY 32.64 55.3 1,800 70.00 EC CB 58.98 86.9 5,130 110.00 VLL CB 21.70 30.7 670 27.00 BR 47.92 <t< td=""><td>symbol/ 8-Nov Shares Cap Value Present Rating 2012 (mm) (\$mm) (\$mm) Value EYUF 23.91 143.1 3,420 24.00 0.15 RC B 65.75 160.0 10,520 70.00 0.23 DCE 27.17 30.2 820 30.00 0.44 LR CB 69.85 58.6 4,090 100.00 0.24 NR 14.78 391.0 5,780 28.00 0.22 IK 5.48 436.0 2,390 10.00 0.24 NR 14.78 391.0 5,780 28.00 0.22 RY 32.64 55.3 1,800 70.00 0.31 EC CB 58.98 86.9 5,130 110.00 0.13 VLL CB 21.70 30.7 670 27.00 - BR 47.92 14.6 700 65.00</td></t<>	symbol/ 8-Nov Shares Cap Value Present Rating 2012 (mm) (\$mm) (\$mm) Value EYUF 23.91 143.1 3,420 24.00 0.15 RC B 65.75 160.0 10,520 70.00 0.23 DCE 27.17 30.2 820 30.00 0.44 LR CB 69.85 58.6 4,090 100.00 0.24 NR 14.78 391.0 5,780 28.00 0.22 IK 5.48 436.0 2,390 10.00 0.24 NR 14.78 391.0 5,780 28.00 0.22 RY 32.64 55.3 1,800 70.00 0.31 EC CB 58.98 86.9 5,130 110.00 0.13 VLL CB 21.70 30.7 670 27.00 - BR 47.92 14.6 700 65.00



Analysis of Oil & Gas Stocks November 9, 2012

		Tab	le ISC-3	}				
McDep Inco	ome an	d S	mall C	ap Enei	gy Poi	rtfolio		
•				by EV/	0.			
, uluo				су <u></u> 1, 1,	201044			
			Price	_		Adjstd		
				Revenue	Dist/	Resrvs/	PV/	EV
	Symbol/		8-Nov	Royalty	Equity	Prod	Ebitda	Ebitde
	Ra	ting	2012	(%)	Ebitda	NTM	NTM	NTM
Small Cap Independent Producers								
Range Resources	RRC	В	65.75		-	13.9	18.7	17.8
PDC Energy	PDCE	D	27.17		-	9.9	12.5	11.9
Birchcliff Energy Ltd.	BIREF	CB	7.88		_	20.9	14.3	10.5
Peyto Exploration and Development Cor		CD	23.91		0.31	9.1	10.4	10.3
Continental Resources (32%)	CLR	CB	69.85		-	9.6	10.0	7.4
Halcón Resources	HK	0.2	5.48		_	6.7	10.7	7.0
Denbury Resources Inc.	DNR		14.78		-	13.2	9.4	5.9
Berry Petroleum Company	BRY		32.64		_	11.7	8.7	5.5
Cimarex Energy Company	XEC	CB	58.98		_	7.5	9.0	5.3
Whiting Petroleum Corporation	WLL	CB	43.52		_	9.3	8.5	4.9
Median		CD	10.02			9.7	10.2	7.2
Top Line Cash Payers	CDD		47.00	100	1.00	7.0	17.0	10.7
Sabine Royalty Trust	SBR		47.92	100	1.00	7.9	17.2	12.7
Freehold Royalties Ltd.	FRHLF	CD	20.19	71	1.01	5.6	12.6	12.2
Dorchester Minerals, L.P.	DMLP	CB	21.70	77	0.90	6.9	14.0	11.2
Cross Timbers Royalty Trust	CRT		27.12	78	0.96	16.5	16.4	10.1
Permian Basin RT	PBT		13.52	47	0.72	9.4	13.9	9.4
Median						7.9	14.0	11.2
Bottom Line Cash Payers								
Linn Energy, LLC	LINE		39.93		1.11	14.0	11.5	13.6
Vanguard Natural Resources, LLC	VNR		27.98		1.08	13.2	11.3	12.1
Legacy Reserves L.P.	LGCY		24.80		0.81	11.0	10.7	9.4
San Juan Basin Royalty Trust	SJT	CB	13.98		0.73	8.6	13.8	9.2
Mesa RoyaltyTrust	MTR		23.71		0.74	7.7	14.0	8.2
Enduro Royalty Trust (40%)	NDRO		18.02		0.78	7.2	9.4	8.1
Enerplus Corporation	ERF	CB	15.01		0.43	6.3	8.3	6.6
Hugoton RoyaltyTrust	HGT		7.07		0.28	13.5	13.0	6.6
Median						9.8	11.4	8.7
B=Buy; CB=Contrarian Buy, Stock Price	annaranti	v in d	owntrend	compared	to 200_de	v average		
EV = Enterprise Value = Market Cap and							n	
and amortization; NTM = Next Twelve M							11	
Earnings; $PV = Present Value of oil and g$				50, 2015; 1	T = 5100	KI HCC 10		
Top Line Cash Payers defined as those has $\frac{1}{2}$				oo fifth a-	umn fac-	right)		



Analysis of Oil & Gas Stocks November 9, 2012

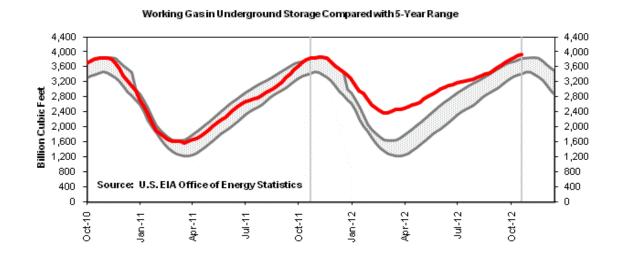
		Tab	le ISC-4	ŀ				
Oil and (Gas Inc	come	e and S	Small C	Cap Stoc	ks		
Rank by E	nterpr	ise V	alue t	o 200 I	Dav Ave	rage		
	_				0	8		
			Price					
			(\$/sh)		Enterpris	e Value/		
	Symbol/		8-Nov	52Wk	52Wk	50 Day	200 Day	McDep
	Ra	ting	2012	High	Low	Avg.	Avg.	Ratic
Small Cap Independent Producers								
Peyto Exploration and Development C	PEYUF		23.91	0.92	1.49	1.01	1.18	1.00
Range Resources	RRC	В	65.75	0.91	1.18	0.97	1.03	0.95
Birchcliff Energy Ltd.	BIREF	CB	7.88	0.60	1.35	1.04	0.99	0.73
Cimarex Energy Company	XEC	CB	58.98	0.72	1.21	0.99	0.95	0.60
PDC Energy	PDCE		27.17	0.79	1.18	0.93	0.94	0.95
Whiting Petroleum Corporation	WLL	CB	43.52	0.75	1.15	0.95	0.93	0.58
Continental Resources (32%)	CLR	CB	69.85	0.76	1.11	0.93	0.92	0.74
Denbury Resources Inc.	DNR		14.78	0.78	1.08	0.94	0.92	0.63
Berry Petroleum Company	BRY		32.64	0.72	1.01	0.91	0.87	0.63
Halcón Resources	HK		5.48	0.52		0.83		0.66
Median				0.75	1.18	0.95	0.94	0.69
Top Line Cash Payers								
Freehold Royalties Ltd.	FRHLF		20.19	0.95	1.20	1.00	1.04	0.96
Dorchester Minerals, L.P.	DMLP	CB	21.70	0.82	1.09	0.97	0.95	0.80
Sabine Royalty Trust	SBR		47.92	0.71	1.05	0.94	0.87	0.74
Permian Basin RT	PBT		13.52	0.58	1.00	0.90	0.72	0.68
Cross Timbers Royalty Trust	CRT		27.12	0.53	1.01	0.87	0.71	0.62
Median				0.71	1.05	0.94	0.87	0.74
Bottom Line Cash Payers								
Linn Energy, LLC	LINE		39.93	0.96	1.09	0.99	1.02	1.18
Vanguard Natural Resources, LLC	VNR		27.98	0.95	1.13	0.98	1.01	1.07
Legacy Reserves L.P.	LGCY		24.80	0.88	1.05	0.91	0.92	0.88
Enerplus Corporation	ERF	CB	15.01	0.64	1.18	0.95	0.91	0.80
San Juan Basin Royalty Trust	SJT	CB	13.98	0.56	1.16	0.99	0.87	0.67
Mesa RoyaltyTrust	MTR		23.71	0.52	1.03	0.93	0.73	0.59
Hugoton RoyaltyTrust	HGT		7.07	0.31	1.24	1.06	0.71	0.51
Median				0.64	1.13	0.98	0.91	0.80

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



ICDEP Income and Small Cap Weekly

Analysis of Oil & Gas Stocks November 9, 2012



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.