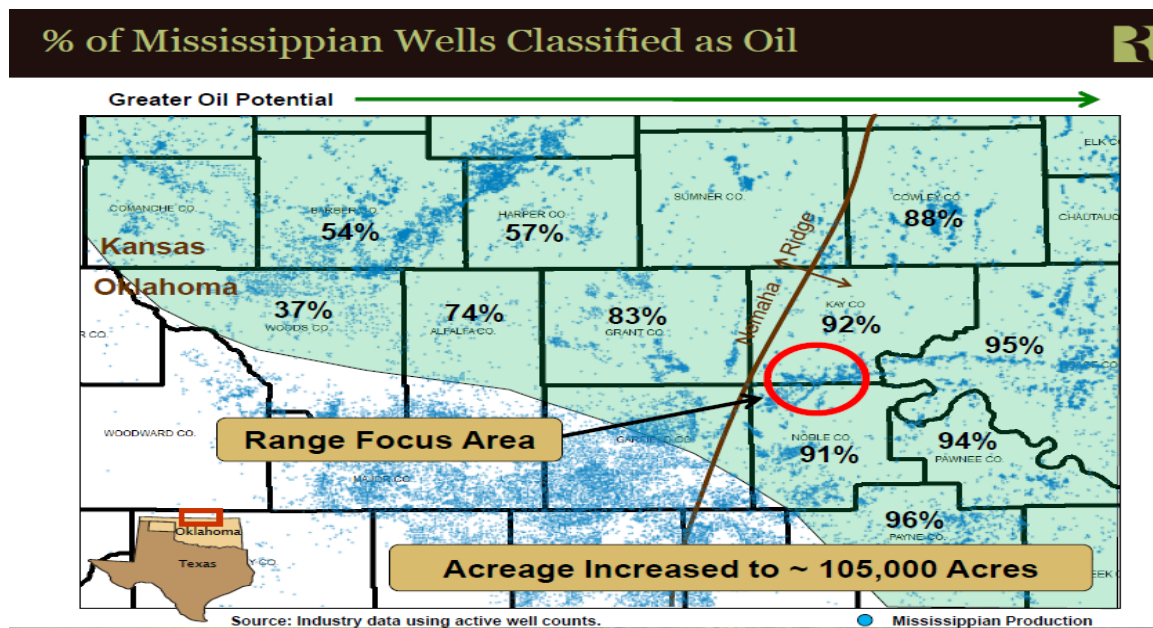


## Range Resources Rediscovered Mississippian Oil

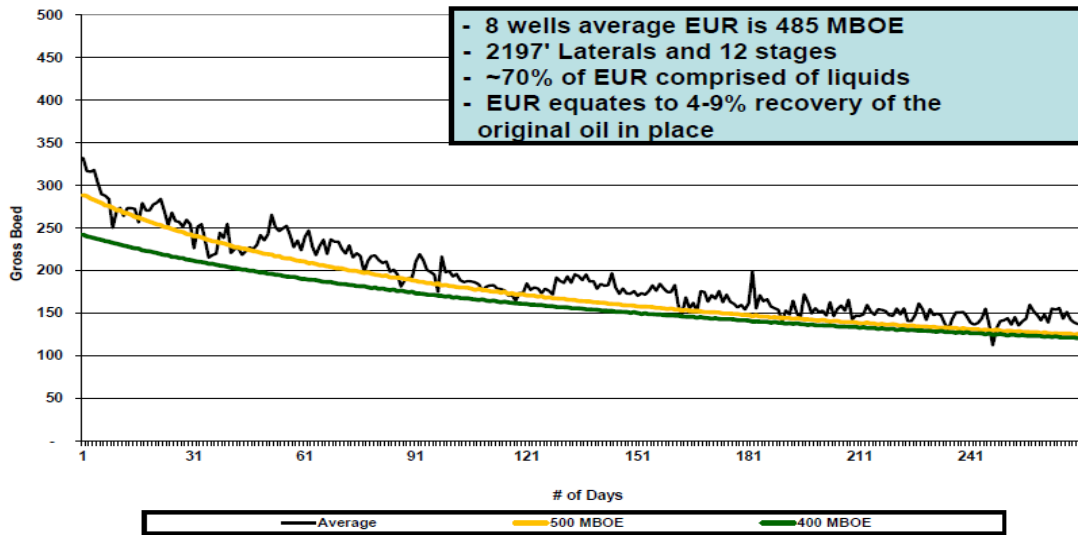
### Summary and Recommendation

Buy-recommended **Range Resources (RRC)** may have an intriguing oil bonus in Oklahoma to complement its growing volumes of natural gas from the Marcellus shale in Pennsylvania. We take a closer look at the Mississippian formation in Oklahoma and Kansas after seeing that it is one of five New Venture plays valued in the aggregate at \$6.6 billion for Devon Energy (DVN) and its partner in a deal announced on January 3. In its latest presentation to investors on January 5, RRC Senior Vice President - Reservoir Engineering and Economics Alan Farquharson declares that Horizontal Mississippian economics are as attractive as those of the liquids-rich Marcellus. Range has about 100,000 acres in North Central Oklahoma, densely punctured with old vertical oil wells (see slide [Mississippian Wells](#) below). The old technology left almost all of the oil in the tight carbonate formation unproduced. In the past few years, RRC has drilled and fracked eight horizontal wells having an average estimated ultimate recovery (EUR) of 485 thousand barrels oil equivalent (MBOE) (see slide [Performance](#) on page 2). Those results suggest that incremental drilling investment can earn a 100% a year internal rate of return (IRR) (see slide [Economics](#) on page 2). Should RRC have a hundred or more wells to drill in the area, it could add up to a tenth to our estimated Net Present Value (NPV) of \$70 a share. Since NPV is concentrated two-thirds on natural gas, more oil emphasis would be welcome considering the more favorable pricing for the liquid fuel.

Kurt H. Wulff, CFA



## Horizontal Mississippian - Performance



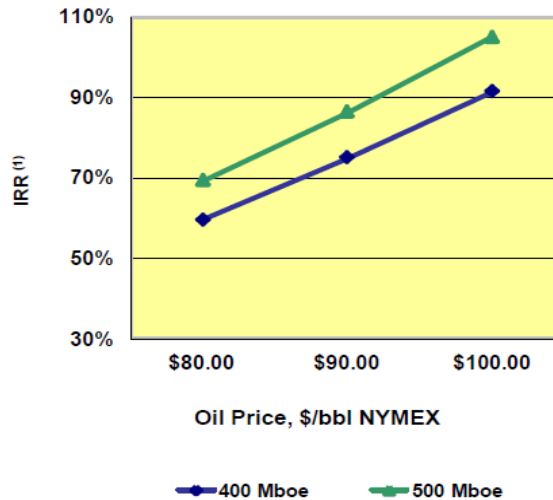
Last updated 09/29/2011

## Horizontal Mississippian Economics



- EUR – 400 Mboe and 500 Mboe
- Drill and Complete Capital \$3.1MM
  - Includes \$200M for SWD
- F&D – \$ 9.78/boe – (400 Mboe)  
\$ 7.89/boe – (500 Mboe)

NYMEX Oil Price	400 Mboe	500 Mboe
\$80.00	60%	69%
\$90.00	75%	86%
\$100.00	91%	105%



(1) Gas price assumed to be \$4.00/mmbtu in all scenarios



# Income and Small Cap Weekly

Analysis of Oil & Gas Stocks

January 6, 2012

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	5-Jan	Market	Value	Nat		Ebitda	NTM	Yield	McDep
CB (see below)		2012	Cap	(\$mm)	Gas	Oil	NTM	(\$/un)	(%)	Ratio
<b>Small Cap Independent Producers</b>										
Peyto Exploration and Development	PEYUF	24.08	1.17	3,750	75	25	11.8	0.71	2.9	1.00
PDC Energy	PETD	33.75	1.68	1,340	57	43	8.0	-	-	0.96
Range Resources	RRC B	61.39	1.23	11,960	66	34	15.0	0.16	0.3	0.90
Birchcliff Energy Ltd.	BIREF B	13.24	1.23	2,140	56	44	12.4	-	-	0.85
Berry Petroleum Company	BRY	44.53	1.59	3,880	17	83	5.9	0.32	0.7	0.74
Denbury Resources Inc.	DNR	17.32	1.36	9,470	4	96	5.8	-	-	0.69
Whiting Petroleum Corporation	WLL CB	51.83	1.26	7,780	9	91	4.4	-	-	0.64
Cimarex Energy Company	XEC CB	62.39	1.14	6,140	41	59	4.7	0.40	0.6	0.60
<i>Total or Median</i>				46,500			6.9			0.80
<b>Top Line Cash Payers</b>										
Cross Timbers Royalty Trust	CRT	49.99	1.00	300	87	13		2.70	5.4	1.14
Permian Basin RT	PBT	20.39	1.00	950	37	63		1.56	7.6	1.02
Sabine Royalty Trust	SBR	64.38	1.00	940	55	45		4.16	6.5	0.99
Freehold Royalties Ltd.	FRHLF	19.61	1.06	1,220	14	86		1.65	8.4	0.94
Dorchester Minerals, L.P.	DMLP CB	23.06	1.00	710	57	43		1.86	8.1	0.85
<i>Total or Median</i>				4,100					7.6	0.99
<b>Bottom Line Cash Payers</b>										
Linn Energy, LLC	LINE	37.98	1.44	9,650	29	71	13.3	2.76	7.3	1.17
Hugoton Royalty Trust	HGT	18.47	1.00	740	87	13	16.3	0.99	5.4	1.09
Vanguard Natural Resources, LLC	VNR	28.02	1.53	2,090	26	74	9.9	2.31	8.2	1.08
San Juan Basin Royalty Trust	SJT CB	22.25	1.00	1,040	100	-	15.2	1.13	5.1	1.06
Enduro Royalty Trust (40%)	NDRO	21.14	1.00	280	45	55	8.6	1.72	8.2	1.01
Legacy Reserves L.P.	LGCY	28.67	1.41	1,760	19	81	8.2	2.18	7.6	0.97
Mesa Royalty Trust	MTR	40.12	1.00	75	75	25	10.7	3.32	8.3	0.84
Enerplus Corporation	ERF CB	26.18	1.28	6,000	26	74	7.6	2.12	8.1	0.79
<i>Total or Median</i>				21,600			10.3		7.8	1.03
<b>Composite</b>										
<i>Enterprise Value Weighting</i>				72,200	36	64				0.82
<i>Equal Weighting</i>					47	53				0.92
<i>Equal Weighted Buys</i>					42	58				0.82

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 December 31, 2012. Enterprise Value = Market Cap and Debt.





# Income and Small Cap Weekly

Analysis of Oil & Gas Stocks

January 6, 2012

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		5-Jan 2012	Royalty (%)	Ebitda	NTM	NTM	NTM
<b>Small Cap Independent Producers</b>								
Range Resources	RRC	B	61.39		-	14.0	16.8	15.0
Birchcliff Energy Ltd.	BIREF	B	13.24		-	19.3	14.6	12.4
Peyto Exploration and Development Corp	PEYUF		24.08		0.35	12.9	11.8	11.8
PDC Energy	PETD		33.75		-	8.1	8.3	8.0
Berry Petroleum Company	BRY		44.53		-	11.4	7.9	5.9
Denbury Resources Inc.	DNR		17.32		-	12.6	8.4	5.8
Cimarex Energy Company	XEC	CB	62.39		-	6.9	7.9	4.7
Whiting Petroleum Corporation	WLL	CB	51.83		-	8.5	6.8	4.4
	<i>Median</i>					12.0	8.3	6.9
<b>Top Line Cash Payers</b>								
Cross Timbers Royalty Trust	CRT		49.99	80	0.96	14.1	15.7	17.9
Sabine Royalty Trust	SBR		64.38	100	1.00	7.3	15.6	15.5
Permian Basin RT	PBT		20.39	32	0.98	17.2	12.6	12.9
Dorchester Minerals, L.P.	DMLP	CB	23.06	77	0.84	6.1	12.1	10.4
Freehold Royalties Ltd.	FRHLF		19.61	71	0.81	6.7	10.3	9.7
	<i>Median</i>					7.3	12.6	12.9
<b>Bottom Line Cash Payers</b>								
Hugoton Royalty Trust	HGT		18.47		0.88	14.0	15.0	16.3
San Juan Basin Royalty Trust	SJT	CB	22.25		0.77	8.5	14.4	15.2
Linn Energy, LLC	LINE		37.98		1.05	16.2	11.4	13.3
Mesa Royalty Trust	MTR		40.12		0.89	13.9	12.8	10.7
Vanguard Natural Resources, LLC	VNR		28.02		0.85	8.7	9.2	9.9
Enduro Royalty Trust (40%)	NDRO		21.14		0.70	6.6	8.6	8.6
Legacy Reserves L.P.	LGCY		28.67		0.62	9.9	8.5	8.2
Enerplus Corporation	ERF	CB	26.18		0.58	8.4	9.6	7.6
	<i>Median</i>					9.3	10.5	10.3
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 December 31, 2012; 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

January 6, 2012

Table ISC-4								
Oil and Gas Income and Small Cap Stocks								
Rank by Enterprise Value to 200 Day Average								
			Price (\$/sh)	Enterprise Value/				
	Symbol/ Rating		5-Jan 2012	52Wk High	52Wk Low	50 Day Avg.	200 Day Avg.	McDep Ratio
<b>Small Cap Independent Producers</b>								
Peyto Exploration and Development C	PEYUF		24.08	0.94	1.30	1.05	1.09	1.00
PDC Energy	PETD		33.75	0.78	1.49	1.04	1.03	0.96
Range Resources	RRC	B	61.39	0.83	1.30	0.92	1.01	0.90
Birchcliff Energy Ltd.	BIREF	B	13.24	0.88	1.31	0.96	1.00	0.85
Berry Petroleum Company	BRY		44.53	0.81	1.25	1.06	0.97	0.74
Denbury Resources Inc.	DNR		17.32	0.73	1.43	1.06	0.97	0.69
Whiting Petroleum Corporation	WLL	CB	51.83	0.73	1.54	1.09	0.97	0.64
Cimarex Energy Company	XEC	CB	62.39	0.56	1.19	0.97	0.80	0.60
	<i>Median</i>			<i>0.80</i>	<i>1.31</i>	<i>1.04</i>	<i>0.99</i>	<i>0.80</i>
<b>Top Line Cash Payers</b>								
Cross Timbers Royalty Trust	CRT		49.99	0.98	1.32	1.05	1.11	1.14
Sabine Royalty Trust	SBR		64.38	0.91	1.36	0.98	1.01	0.99
Freehold Royalties Ltd.	FRHLF		19.61	0.81	1.40	1.07	0.98	0.94
Permian Basin RT	PBT		20.39	0.87	1.13	1.02	0.97	1.02
Dorchester Minerals, L.P.	DMLP	CB	23.06	0.77	1.11	0.98	0.90	0.85
	<i>Median</i>			<i>0.87</i>	<i>1.32</i>	<i>1.02</i>	<i>0.98</i>	<i>0.99</i>
<b>Bottom Line Cash Payers</b>								
Linn Energy, LLC	LINE		37.98	0.95	1.15	1.01	1.00	1.17
Legacy Reserves L.P.	LGCY		28.67	0.89	1.20	1.03	1.00	0.97
Vanguard Natural Resources, LLC	VNR		28.02	0.88	1.17	1.02	0.99	1.08
Enerplus Corporation	ERF	CB	26.18	0.82	1.16	1.00	0.93	0.79
San Juan Basin Royalty Trust	SJT	CB	22.25	0.79	1.09	0.93	0.92	1.06
Mesa RoyaltyTrust	MTR		40.12	0.80	1.03	0.93	0.90	0.84
Hugoton RoyaltyTrust	HGT		18.47	0.75	0.98	0.87	0.83	1.09
	<i>Median</i>			<i>0.82</i>	<i>1.15</i>	<i>1.00</i>	<i>0.93</i>	<i>1.06</i>

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

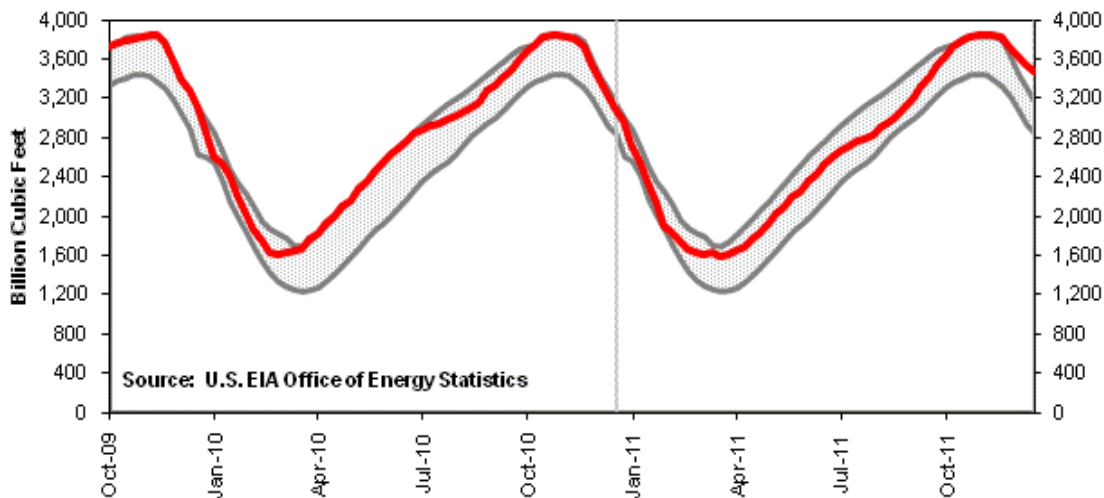


# Income and Small Cap Weekly

Analysis of Oil & Gas Stocks

January 6, 2012

Working Gas in Underground Storage Compared with 5-Year Range



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