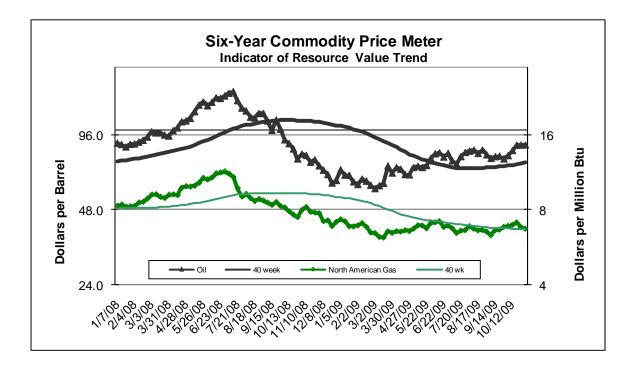


## **Buy China Oil and Gas**

## Summary and Recommendation

Analyzing partial third quarter results released last week, we keep our buy recommendations on Chinese producers **PetroChina (PTR)** and **CNOOC Limited (CEO)**. PTR is the conservative major integrated company with a mix of value in oil, downstream and natural gas most closely similar to **BP plc (BP)** and **Chevron (CVX)** (see tables on pages 2 and 4). CEO is a large independent most closely comparable to **Occidental Petroleum (OXY)**, but with special exploration rights offshore China contributing faster growth offset by shorter reserve life (see tables on pages 3 to 7). With its McDep Ratio of 0.82, PTR could be an average or overweight position among energy holdings. CEO's McDep Ratio of 1.13 may be a basis for rebalancing to an underweight among buy-recommended energy holdings. The company could grow more to justify its higher McDep Ratio. We watch for a reversal in stock price uptrend as a potential trigger to a change in our recommendation. Meanwhile the latest settlement of futures prices for oil delivered over the next six years is above its 40-week average (see chart <u>Six-Year Commodity Price Meter</u> below and chart <u>Six-Year and One-Year Natural Gas and Oil Futures</u> on page 8).

Kurt H. Wulff, CFA





	PetroChin	a								
Functional Cash Flow and Present Value										
				Present						
1	NTM Ebitda	Adjusted	PV/	Value						
	<u>(US\$mm)</u>	<u>R/P</u>	<u>Ebitda</u>	<u>(US\$mm)</u>						
Natural Gas	4,600	19.4	9.8	45,000	15%					
Oil	25,600	11.5	8.0	204,000	69%					
Downstream	5,900		7.6	45,000	15%					
	36,100	14.0	8.1	294,000	100%					
Debt (US\$mm)					19,000					
Net Present Value (US\$mm)					275,000					
Shares (mm)					1,830					
Net Present Value - Standard Estimate (US\$/s	sh)				150					
NPV Approximation by Cash Flow Multiple Depending on Reserve Life (US\$/sh)										

PetroChina Company Limited											
			Quarterly	Operation	s						
									Twelve		
	Q3	Q2	Q3	Q4E	Year	QlE	Q2E	Q3E	Months E		
	9/30/08	6/30/09	9/30/09	12/31/09	2009E	3/31/10	6/30/10	9/30/09	12/31/10		
Volume											
Natural gas (bcf)	445	498	504	546	2,071	575	548	554	2,278		
Natural Gas (mmcfd)	4,837	5,473	5,478	5,930	5,673	6,392	6,020	6,026	6,240		
Days	92	91	92	92	365	90	91	92	365		
Oil (mmb)	219	211	214	214	845	209	212	214	849		
Oil (mbd)	2,375	2,319	2,326	2,326	2,315	2,326	2,326	2,326	2,326		
Total gas & oil (mmb)	293	294	298	305	1,190	305	303	306	1,229		
Total gas & oil (mbd))	3,181	3,231	3,239	3,314	3,261	3,391	3,329	3,330	3,366		
Price											
Natural gas (\$/mcf)											
Henry Hub (\$/mmbtu)	10.25	3.50	3.39	4.28	4.02	5.20	5.28	5.54	5.55		
Company	3.52	3.53	3.39	3.56	3.44	3.74	3.93	4.12	4.03		
Oil (\$/bbl)											
WTI Cushing	117.99	59.52	68.22	77.22	61.98	79.30	81.15	82.28	81.50		
Company	104.78	47.69	61.92	70.09	54.39	71.98	73.66	74.68	73.99		
Total gas & oil (\$/bbl)	83.57	40.21	50.20	55.56	44.60	56.42	58.56	59.62	58.61		
NY Harbor 3-2-1 (\$/bbl)	11.84	9.49	9.45	7.96	9.02	7.03	10.05	8.53	7.96		
Revenue (\$mm)											
Natural Gas	1,565	1,760	1,710	1,943	7,128	2,152	2,151	2,286	9,187		
Oil	22,894	10,063	13,251	14,999	45,955	15,069	15,591	15,981	62,817		
Total	24,459	11,823	14,961	16,942	53,084	17,221	17,742	18,267	72,005		
RMB/\$US	6.84	6.83	6.83	6.83	6.83	6.83	6.83	6.83	6.83		
Total Upstream (RMB)	167,300	80,751	102,145	115,671	362,576	117,574	121,137	124,721	491,611		



	CNOOC Lim	ited								
Functional Cash Flow and Present Value										
				Present						
1	VTM Ebitda	Adjusted	PV/	Value						
	<u>(US\$mm)</u>	<u>R/P</u>	<u>Ebitda</u>	<u>(US\$mm)</u>						
Natural Gas	640	14.2	10.9	7,000	11%					
Oil	10,160	5.5	5.3	54,100	89%					
	10,800	6.9	5.7	61,100	100%					
Debt (US\$mm)					700					
Net Present Value (US\$mm)	Net Present Value (US\$mm)									
Shares (mm)					448					
Net Present Value - Standard Estimate (US\$/sh)										
NPV Approximation by Cash Flow Multiple Depending on Reserve Life (US\$/sh)										

			CNOO	C Limited					
			Quarterl	y Operation	s				I
									Twelve
	Q3	Q2	Q3	Q4E	Year	Q1E	Q2E	Q3E	Months E
	9/30/08	6/30/09	9/30/09	12/31/09	2009E	3/31/10	6/30/10	9/30/09	12/31/10
Volume									
Natural gas (bcf)	62	56	64	64	235	63	64	64	255
Natural Gas (mmcfd)	679	611	699	699	644	699	699	699	699
Days	92	91	92	92	365	90	91	92	365
Oil (mmb)	40	45	48	49	184	48	52	56	212
Oil (mbd)	431	496	526	529	505	539	570	605	580
Total gas & oil (mmboe)	50	54	59	59	224	59	63	66	254
Total gas & oil (mbd))	544	598	643	646	612	655	687	721	696
Price									
Natural gas (\$/mcf)									
Henry Hub (\$/mmbtu)	10.25	3.50	3.39	4.28	4.02	5.20	5.28	5.54	5.55
Company	3.83	3.91	3.93	4.01	3.94	4.09	4.17	4.25	4.21
Oil (\$/bbl)									
WTI Cushing	117.99	59.52	68.22	77.22	61.98	79.30	81.15	82.28	81.50
Company	106.94	56.63	67.83	76.78	61.44	78.85	80.69	81.81	81.12
Total gas & oil (\$/mcf)	14.91	8.50	9.97	11.21	9.14	11.53	11.87	12.12	11.96
Revenue (\$mm)									
Natural Gas	239	217	253	258	925	257	265	274	1,075
Oil	4,240	2,556	3,282	3,736	11,327	3,824	4,188	4,553	17,172
Total	4,480	2,773	3,535	3,994	12,252	4,081	4,453	4,826	18,247
RMB/\$	6.84	6.83	6.83	6.83	6.83	6.83	6.83	6.83	6.83
Revenue (RMB)									
Natural Gas	1,636	1,485	1,726	1,760	6,320	1,756	1,811	1,868	7,340
Oil	29,004	17,456	22,419	25,511	77,373	26,106	28,592	31,083	117,241
Total	30,641	18,941	24,145	27,271	83,692	27,863	30,403	32,951	124,582



		-		Table 1						
		Γ	AcDep	Energy	y Portfoli	0				
	Geogr	aphio	: Domi	cile and	d Busines	s Segn	nents			
						D	t Value by	C	(0()	
			D. S.				-	segmen	l (70)	
			Price (US\$/sh)	EV/	Endermine	North Amer.	Rest			
	C 1 1	/ <b>D</b>	. ,		Enterprise		of World	0.1	D	MD
	Symbol	0	2-Nov	Market	Value		Natural	Oil		McDe
	_	B = Buy	2009	Сар	(\$mm)	Gas	Gas	Prod'n	stream	Ratio
U.S. Integrated										
Exxon Mobil Corporation	XOM	В	72.15	1.13	393,000	5	22	54	19	0.83
Chevron Corporation	CVX	B	76.65	1.21	186,000	4	10	71	14	0.79
Marathon Oil Corporation	MRO	B	31.97	1.51	34,200	8	5	61	26	0.70
ConocoPhillips	COP	B	49.98	1.69	127,000	12	11	64	13	0.6
Total or Median *	31%	9%	14%	1.05	740,000	12		01	10	0.74
Total of Meanan	5170	270	11/0		710,000					0.71
Europe										
BG Group	BRGXF	В	17.38	1.16	68,100		21	48	31	0.8
Royal Dutch Shell plc	RDS-A	В	59.35	1.33	241,000	3	27	49	22	0.8
BP plc	BP	В	57.27	1.34	242,000	6	9	63	22	0.7
Statoil ASA (33%)	STO	В	23.69	1.42	35,300		51	49	-	0.7
Total S.A.	TOT	В	60.40	1.26	170,000		19	59	22	0.7
Total or Median *	31%	12%	17%		756,000					0.77
Brazil/China/Russia	ano	D	150.10	1.01	22.400					
CNOOC Limited (34%)	CEO	B	152.18	1.01	23,400		11	89	-	1.1
Petrobras	PBR	B	46.71	1.18	242,000		7	77	16	0.83
PetroChina Company Ltd (14%		B	121.55	1.08	33,800		15	69	15	0.82
Lukoil Oil Company	LUKOY	В	58.00	1.14	55,900			67	33	0.4
Gazprom(50%)	OGZPY	В	24.55	1.26	97,000		79	21	-	0.44
Total or Median *	19%	12%	17%		452,000					0.82
U.S. Independent										
Anadarko Petroleum Corp.	APC	В	61.84	1.48	45,300	47		48	5	1.0
XTO Energy Inc.	XTO	B	41.44	1.47	35,200	75		25	-	0.92
EOG Resources	EOG		81.97	1.17	23,100	72	4	24	-	0.9
Chesapeake Energy Corp.	CHK	2	24.14	1.98	29,200	85	· ·	15	_	0.8
Occidental Petroleum Corp.	OXY	В	76.82	1.09	68,200	10	1	82	7	0.8
Devon Energy Corporation	DVN	B	64.96	1.32	38,600	61	-	39	-	0.7
Total or Median *	10%	14%	17%	1.52	240,000	01		57		0.87
Total of median	1070	1170	1770		210,000					0.07
Canada										
EnCana Corporation	ECA	В	55.68	1.30	54,500	65		30	5	0.92
Canadian Natural Resources	CNQ	В	63.47	1.36	46,700	20		80	-	0.84
Imperial Oil Limited (30%)	IMO	В	36.77	1.09	10,300	5		79	16	0.78
Suncor Energy	SU	В	32.97	1.33	69,000	5		85	10	0.70
Canadian Oil Sands Trust	COSWF	В	26.60	1.11	14,300			100	-	0.60
Total or Median *	8%	12%	17%		195,000					0.78
Income and Small Cap (see se		-			(* ****					0.5
Composito	2%	42%	17%		42,300	40		60		0.88
Composite	1000/				2 425 200	10	15	50	15	0.74
Enterprise Value Weighting	100%	1000/			2,425,300	10	15	59	15	0.76
Equal Weighting		100%				32	7	54	6	0.82
Equal Weighted Buys			100%			25	10	55	10	0.78
* Demonstration in Country Laboration	6 /				1 1 1		1			

\* Percentages in Symbol column refer to current market Enterprise Value weightings; Rating column, equal weightings.
\* Percentages in Price column refer to equal weighted buys.



			Table 2							
	McL	)ep l	Energy	Portfol	io					
Net Present Value and McDep Ratio										
			Price			Net				
			(US\$/sh)		Market	Present	Debt/			
	Symbol/R	0	2-Nov	Shares	Cap	Value	Present	McDep		
	B	= Buy	2009	(mm)	(US\$mm)	(US\$/sh)	Value	Ratic		
U.S. Integrated										
Exxon Mobil Corporation	XOM	В	72.15	4,803	347,000	89.00	0.10	0.83		
Chevron Corporation	CVX	В	76.65	2,001	153,000	102.00	0.14	0.79		
Marathon Oil Corporation	MRO	B	31.97	711	22,730	53.00	0.23	0.70		
ConocoPhillips	COP	B	49.98	1,498	75,000	105.00	0.25	0.61		
Total or Median			.,,,,,	1,00	598,000	100100	0.19	0.74		
					2,0,000		0117	017 1		
Енгоре										
BG Group plc	BRGXF	В	17.38	3,390	58,920	22.00	0.11	0.81		
Royal Dutch Shell plc	RDS-A	В	59.35	3,066	182,000	79.00	0.20	0.80		
BP plc	BP	В	57.27	3,156	181,000	80.00	0.20	0.77		
Statoil ASA (33%)	STO	В	23.69	1,051	24,890	35.00	0.22	0.75		
Total S.A.	TOT	В	60.40	2,236	135,000	90.00	0.15	0.72		
Total or Median	:				582,000		0.20	0.77		
Brazil/China/Russia										
CNOOC Limited (34%)	CEO	В	152.18	152	23,160	135.00	0.01	1.13		
Petrobras	PBR	B	46.71	4,387	204,920	58.00	0.13	0.83		
PetroChina Company Ltd (14%)	PTR LUKOY	B B	121.55	256	31,140	150.00	0.06	0.82		
Lukoil Oil Company			58.00	847	49,000	135.00				
Gazprom (50%)	OGZPY	В	24.55	3,130	76,800	64.00	0.09	0.44		
Total or Median	!				385,000		0.06	0.82		
U.S. Independent										
Anadarko Petroleum Corp.	APC	В	61.84	495	30,600	59.00	0.33	1.03		
XTO Energy Inc.	XTO	В	41.44	579	23,990	47.00	0.29	0.92		
EOG Resources	EOG	В	81.97	250	20,500	92.00	0.10	0.90		
Chesapeake Energy Corp.	CHK		24.14	610	14,730	34.00	0.41	0.83		
Occidental Petroleum Corp.	OXY	В	76.82	814	62,500	95.00	0.07	0.82		
Devon Energy Corporation	DVN	В	64.96	450	29,300	98.00	0.17	0.72		
Total or Median	:				181,600		0.23	0.87		
Canada En Componention	ECA	P	55 (0	751	41 000	62.00	0.21	0.02		
EnCana Corporation	ECA	B	55.68	751	41,800	62.00	0.21	0.92		
Canadian Natural Resources	CNQ	B	63.47	542	34,400	80.00	0.22	0.84		
Imperial Oil Limited (30%)	IMO	B	36.77	256	9,430	48.00	0.07	0.78		
Suncor Energy	SU	B	32.97	1,572	51,830	52.00	0.17	0.70		
Canadian Oil Sands Trust	COSWF	В	26.60	484	12,870	42.00	0.06	0.66		
Total or Median					150,000		0.17	0.78		

McDep Ratio = Market cap and Debt to present value of oil and gas and other businesses Estimated present value presumes a long-term price for oil of US\$75 a barrel and natural gas, \$8 a million btu.



			Table 3					
	McDe	2 <b>p</b> ]	Energy	Portfol	io			
Value	Multi	oles	s and Di	stribut	ion Yiel	d		
			Price	Adjustd				Divd or
			(US\$/sh)	Resrvs/	PV/	EV/		Distrib
S	ymbol/Rat	ing	2-Nov	Prod	Ebitda	Ebitda	P/E	NTM
	B =	Buy	2009	NTM	NTM	NTM	NTM	(%)
U.S. Integrated								
Exxon Mobil Corporation	XOM	В	72.15	12.4	8.7	7.2	14	2.3
Chevron Corporation	CVX	B	76.65	9.7	7.0	5.5	12	3.5
ConocoPhillips	COP	B	49.98	11.1	8.4	5.1	9	4.0
Marathon Oil Corporation	MRO	B	31.97	8.3	6.5	4.5	9	3.0
Total or Median	linto		51.97	10.4	7.7	5.3	10	3.3
Europe			17.00					
BG Group plc	BRGXF	B	17.38	8.5	9.1	7.4	14	1.3
Royal Dutch Shell plc	RDS-A	B	59.35	7.9	6.9	5.6	12	5.7
Total S.A.	TOT	В	60.40	9.7	7.7	5.5	11	5.6
BP plc	BP	В	57.27	9.6	6.9	5.3	9	5.9
Statoil ASA (33%)	STO	В	23.69	7.5	6.6	4.9	14	5.3
Total or Median				8.5	6.9	5.5	12	5.6
Brazil/China/Russia								
Petrobras	PBR	В	46.71	9.2	9.7	8.1	14	2.9
PetroChina Company Ltd (14%)	PTR	B	121.55	14.0	8.1	6.7	17	3.3
CNOOC Limited (34%)	CEO	B	152.18	6.9	5.7	6.4	11	3.4
Lukoil Oil Company	LUKOY	В	58.00	16.3	8.7	4.0	8	2.2
Gazprom (50%)	OGZPY	В	24.55	24.6	8.3	3.6	5	0.2
Total or Median				14.0	8.3	6.4	11	2.9
U.S. Independent	VTO	D	41.44	11.0	10.1	0.0	25	1.4
XTO Energy Inc.	XTO	В	41.44	11.0	10.1	9.2	25	1.4
Chesapeake Energy Corp.	CHK	D	24.14	11.3	11.1	9.2	13	1.2
EOG Resources	EOG	B	81.97	10.1	9.5	8.5	24	0.7
Anadarko Petroleum Corp.	APC	B	61.84	9.2	8.2	8.5	14	0.6
Occidental Petroleum Corp.	OXY	B	76.82	11.2	7.9	6.5	14	1.7
Devon Energy Corporation Total or Median	DVN	B	64.96	8.4 10.6	7.7	5.6 8.5	11 14	1.0
Totat of meaning				10.0	0.7	0.5	17	1.1
Canada								
Imperial Oil Limited (30%)	IMO	В	36.77	18.1	11.7	9.1	17	1.0
EnCana Corporation	ECA	В	55.68	9.1	9.3	8.6	20	0.7
Canadian Oil Sands Trust	COSWF	В	26.60	21.8	11.3	7.4	10	5.9
Canadian Natural Resources	CNQ	В	63.47	7.6	8.6	7.3	15	0.6
Suncor Energy	SU	В	32.97	13.6	9.7	6.8	20	0.6
Total or Median				13.6	9.7	7.4	17	0.7

EV = Enterprise Value = Market Cap and Debt; Ebitda = Earnings before interest, tax, depreciationand amortization; NTM = Next Twelve Months Ended September 30, 2010; P/E = Stock Price toEarnings; PV = Present Value of oil and gas and other businesses

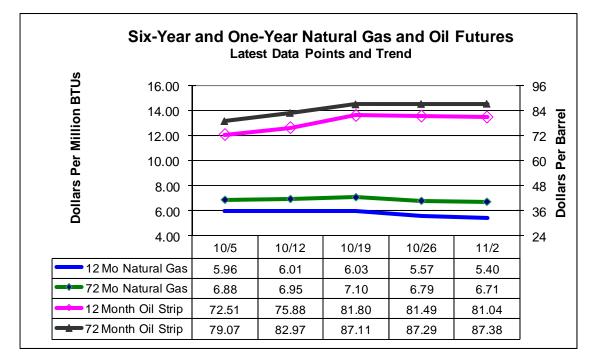
Please see disclosures on the final page.



	_		Index of Reco	ent Research
Stock 1	[de	eas		
Date	Γ	Symbol	<u>Subject</u>	Theme
2-Nov		IMO	Imperial Oil Limited	In Situ Oil Production Cumulates Past a Billion Barrels
2-Nov		EAC	Encore Acquisition Company	Denbury Resources Offers \$50 a Share to Acquire Enco
2-Nov		CVX	Chevron Corporation	Raise Net Present Value to \$102 a Share from \$97
30-Oct		COSWF	Canadian Oil Sands Trust	COSWF Priced for Deal (ISC Weekly)
29-Oct		COSWF	Canadian Oil Sands Trust	Operating at Capacity
29-Oct		XOM	Exxon Mobil Corporation	Cash Flow Rising after Decline
29-Oct		RDSA	Royal Dutch Shell plc	Shedding Downstream Image
28-Oct		COP	ConocoPhillips	Downsizing to Revitalize
28-Oct		EAC	Encore Acquisition Company	Raise Net Present Value to \$50 a Share from \$44
27-Oct		BP	BP p.l.c.	Raise Net Present Value to \$80 a Share from \$72
23-Oct		OXY	Occidental Petroleum Corporation	Raise Net Present Value to \$95 a Share from \$87
5-Oct	*	SU	Suncor Energy	Evaluating Strategy for Acquired Assets (Meter Reader
2-Oct	-	XEC	Cimarex Energy Company	Drilling Picking Up (Income and Small Cap Weekly)
16-Sep	-	APC	Anadarko Petroleum Corporation	Rebalance on New Basin Discovery
15-Sep	-	ECA	EnCana Corporation	Creating Oil Sands Prize (Meter Reader)
4-Sep	-	SJT	San Juan Basin Royalty Trust	Upgrade to Buy (Income and Small Cap Weekly)
3-Sep	-	PBR	Petrobras	New Regulatory Model Points to Stock Issue
30-Aug	-	LUKOY	Lukoil Oil Company	Contributing to Russia's Oil Future
30-Aug	-	PTR	PetroChina Company Limited	Growing Giant in Clean Energy
26-Aug	-	CEO	CNOOC Ltd	Full Current Valuation, Promising Prospects
26-Aug	-	OGZPY	Gazprom	Natural Gas Giant Reemerging
14-Aug	-	BIR.TO	Birchcliff Energy Ltd.	Spirited Small Cap Canadian Nat Gas Producer (ISCW)
12-Aug	-	PWE	Penn West Energy Trust	Reduce NPV on Volume Trend
11-Aug	-	DMLP	Dorchester Minerals, L.P.	Income Competitive with Growth
7-Aug	-	EOG	EOG Resources Inc.	Low-Debt Natural Gas Growth
6-Aug	-	CNO	Canadian Natural Resources	First Cash from Horizon
5-Aug	-	BRY	Berry Petroleum	Back on Track
5-Aug	-	XTO	XTO Energy Inc.	Cutting Edge Natural Gas Producer
5-Aug	-	DVN	Devon Energy Corporation	Stock Price Moves to Uptrend
4-Aug	-	STO	StatoilHydro ASA	Natural Gas Growth with Dividends
-Aug 3-Aug	-	MRO	Marathon Oil Corporation	Favorable Trends for Future Profit
31-Jul	-	TOT	Total S.A.	Real Return and Secure Income
30-Jul	-	PCZ	Petro-Canada	
29-Jul	-	BRGXF	BG Group	Good Bye Petro-Canada, Hello Suncor           Progressing in Pre-Salt Brazil
29-Jul 10-Jul	-	HGT	Hugoton Royalty Trust	Rounding the Bend (Income and Small Cap Weekly)
Meter			Hugoton Royaity Trust	Rounding the Bend (Income and Small Cap weekly)
		eauer	XX7 11	
3-Nov	-		Weekly	
27-Oct			Weekly	Return of Defensive Rebalancing
20-Oct	*		Weekly	European Oil Stock Bargains
13-Oct		nd Cmall	Weekly	Bargains in U.S. Integrated Oil Stocks
	e a	na Smaii	Cap Weekly	
30-Oct	-		Canadian Oil Sands Trust	COSWF Priced for Deal
23-Oct	-		Weekly	Going Horizontal
16-Oct			Weekly	Canada Trusts on Real Growth Trend
9-Oct	*		Weekly	Friendly Trends
Industi	y	Ideas		
2-Apr	*		Presentation	Making Money in Oil and Gas Stocks

Please see disclosures on the final page.





**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 are expected to deliver a total return less than inflation.