

Meter Reader

A Weekly Analysis of Energy Stocks Using the McDep Ratio

November 22, 2005

\$10 Refining Margin

Summary and Recommendation

Our long-term expectation of refining margin underlying McDep Ratios is supported by one-year futures, but stands by itself beyond that as there are no readily available quotes for comparison. Executives at buy-recommended **ConocoPhillips (COP)** tell us at their analyst meeting in New York on November 16 that the company's expansion plans are justified on less than \$10 a barrel. On the other hand recent daily quotes under \$8 are "temporary". Indeed April 2006 futures are more than \$13. The demand for more highly refined, clean energy to support sustainable global growth offers profitable opportunity for buy-recommended mega-caps and producer/refiners including **ExxonMobil (XOM)**, **Royal Dutch Shell plc (RDS)**, **Lukoil (LUKOY)** and **PetroChina (PTR)**.

High Taxes Highlight Commodity Underpricing

While Europeans pay \$5 a gallon or more for gasoline, demagogues in America rant when the price rises from any level, currently well under \$3. King Abdullah of Saudi Arabia suggests that consuming governments could cut taxes in the face of political criticism of oil price. Oil leaves Saudi Arabia at less than \$1.40 a gallon (\$59 a barrel). The refining crack that we quote is just \$0.24 a gallon (\$10 a barrel). While transportation and marketing add further to cost, it is hard to get above \$2 a gallon (\$84 a barrel) retail. Taxes account for most of the sustained increment.

One favorable consequence of the mostly misguided criticism of oil companies from our political leaders is that few are proposing higher gasoline excise taxes in the U.S. Those that occasionally do propose higher gasoline taxes are usually from the Northeast where mass transit is more readily available as an alternative to gasoline consuming cars. Living in the Northeast we like the convenience of an occasional train ride from our office to the city center as well as Amtrak Acela when it runs. At the same time we believe it is an unnecessary and unreasonable economic penalty to impose excessive energy taxes.

A ConocoPhillips executive with experience in China recalls how the SARS virus scare stimulated automobile purchase. Alert citizens apparently reckoned that their chances of contracting the deadly virus were lower in their own automobiles than in mass transit.

Viewed against high actual or potential taxes, the refiner's margin around a quarter dollar is hardly of much consequence to consumers. Yet a refiner would jump for joy and invest billions of dollars for an extra dime a gallon if he thought he could keep it and would not be vilified for doing so. Instead of taxing refined products, it could make more sense perhaps for government to pay refiners a bonus for every gallon of clean energy refined.

Because of historical conditioning to be cautious, refiners are likely to expand at a slower rate than the market might demand. As a result current tight demand/supply conditions may last longer.

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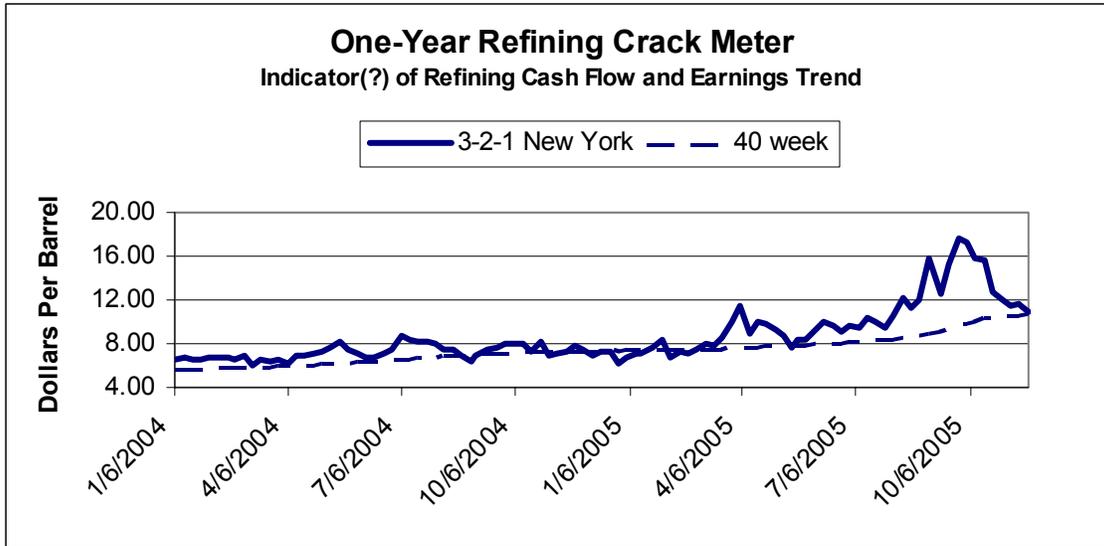
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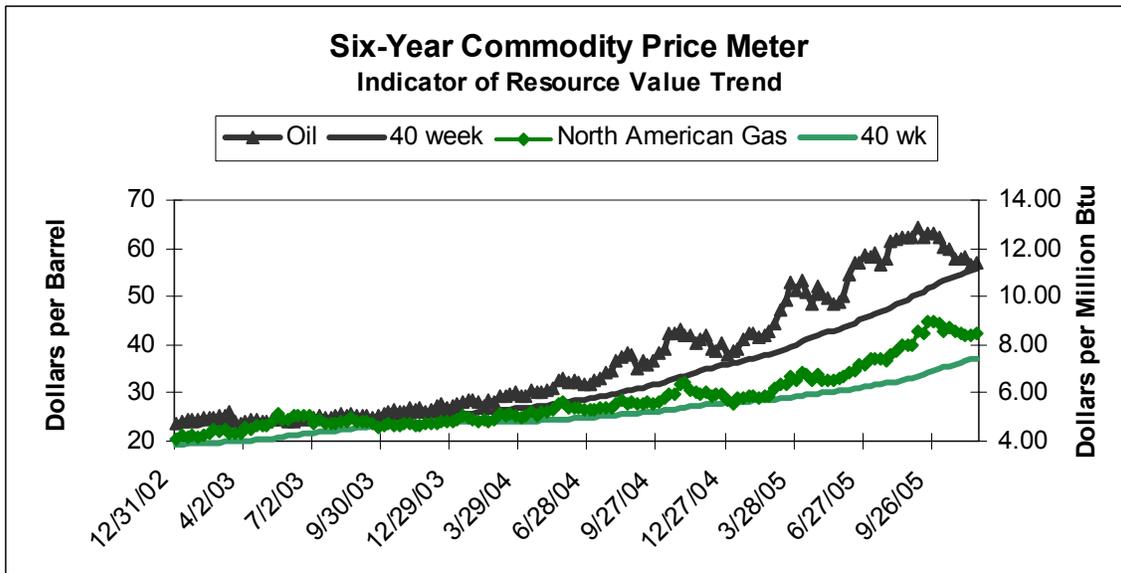
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Crack Spread on the 40-Week Trend

The refiner's margin is a thin difference between two larger prices, the average price for refined products and the price of crude oil. Called the crack spread, the difference can be measured in current prices or "forecast" by futures prices. We track the popular "3-2-1" version which presumes that three parts of crude oil are transformed into two parts of gasoline and one part of heating oil. The latest quote has retreated to near the 40-week average of about \$10.70 (see chart One-Year Refining Crack Meter).



Natural Gas Price in Firm Uptrend, Oil on the Line



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Commodity Price and Present Value Support Investment

Oil and Gas Commodity and Stock Price Monday, November 21, 2005

	<u>Units</u>	<u>Futures Price</u>		<u>McDep Ratio</u>	
		<u>Six-Year</u>	<u>One-Year</u>	<u>Denominator</u>	
Crude oil quotes are well above the \$50 a barrel used in estimating present value, the denominator of the McDep Ratio (see table <u>Oil and Gas Commodity and Stock Price</u>).	Crude Oil	\$/barrel	57.07	59.23	50
One-year natural gas and Oil Refining are above our long-term estimates.	Natural Gas	\$/million btu	8.48	10.67	10
	Oil Refining	\$/barrel		10.95	10
	<u>Stocks</u>				<u>Median McDep Ratio</u>
	Mega Cap				0.81
	Producer/Refiner				0.86
	Independent - Large				0.78
	Independent - Small				0.71
	Income				1.06

The McDep Ratio compares present value calculated from commodity price with enterprise value as determined in the stock market. A stock with a

Source: McDep Associates, Bloomberg, New York Mercantile Exchange, Yahoo and company disclosures

McDep Ratio of 1.0 presumably offers a 7% per year unlevered real return on constant real prices stated. Four of the five groups have median McDep Ratios below 1.0. Twenty-six of twenty-eight buy recommended stocks trade above the 200-day average confirming a continuing uptrend.

Select Stocks on Valuation and Strategic Considerations

Stocks are ranked in descending order of McDep Ratio to suggest “buy low and sell high” (see table Rank by McDep Ratio). We recommend representation in each of the five groups from Mega Cap to Income with emphasis on low McDep Ratio stocks.

Next Twelve Months Cash Flow, Ebitda, changes continuously with futures prices for natural gas and oil (see table Rank by EV/Ebitda). We regularly check the correlation of present value with cash flow multiple by business and expected life of production.

Investors can diversify political risk by owning stocks of companies headquartered in other countries (see table Home Country and Business Segments). Russian stocks offer potential resource value beyond that reflected in the McDep Ratio. Finally, we recommend balance among business segments. Investors should be sure to be represented in the stocks of companies with strong natural gas concentration. Nor should that be at the expense of reasonable downstream exposure in other stocks.

Timely analyses are available on all recommended stocks (see table Index of Recent Research).

Kurt H. Wulff, CFA

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Oil and Gas Producers Rank by McDep Ratio: Market Cap and Debt to Present Value

	Symbol/ Rating		Price (\$/sh) 21-Nov 2005	Shares (mm)	Market Cap (\$mm)	Net Present Value (\$/sh)	Debt/ Present Value	McDep Ratio
Mega Cap								
BP plc	BP	B	67.49	3,501	236,000	77.00	0.11	0.89
Total S.A.	TOT	B	127.63	1,176	150,000	160.00	0.12	0.82
Exxon Mobil Corporation	XOM	B	59.32	6,303	374,000	74.00	0.04	0.81
Royal Dutch Shell plc	RDS-A	B	62.77	3,352	210,000	84.00	0.10	0.77
Chevron Corporation	CVX	B	58.87	2,256	133,000	85.00	0.13	0.73
<i>Total or Median</i>					<i>1,103,000</i>		<i>0.11</i>	<i>0.81</i>
Producer/Refiners - Large Cap and Mid Cap								
Kinder Morgan, Inc.	KMI	S2	90.24	123	11,100	20.00	0.76	1.85
Imperial Oil Limited (30%)	IMO	B	93.50	102	9,550	84.00	0.10	1.10
Marathon Oil Corporation	MRO	B	59.71	368	21,990	65.00	0.27	0.94
Petro-Canada	PCZ	B	35.90	525	18,860	42.00	0.18	0.88
Lukoil Oil Company	LUKOY	B	56.63	830	47,000	65.00	0.03	0.88
Suncor Energy	SU	B	55.97	461	25,810	68.00	0.11	0.84
Norsk Hydro ASA	NHY	B	101.75	251	25,530	130.00	0.11	0.81
Gazprom (50%)	OGZPF	B	63.30	1,022	64,700	90.00	0.03	0.71
ConocoPhillips	COP	B	64.37	1,418	91,300	100.00	0.15	0.70
PetroChina Company Ltd (10%)	PTR	B	78.18	176	13,740	120.00	0.01	0.65
<i>Total or Median</i>					<i>330,000</i>		<i>0.11</i>	<i>0.86</i>
Independent Natural Gas and Oil - Large Cap and Mid Cap								
Encana Corporation	ECA	B	44.50	876	39,000	51.00	0.20	0.90
XTO Energy Inc.	XTO	B	41.28	370	15,270	48.00	0.20	0.89
Burlington Resources	BR	B	71.41	381	27,200	86.00	0.09	0.85
CNOOC Limited (29%)	CEO	B	65.09	119	7,760	84.00	0.01	0.78
Devon Energy Corporation	DVN	B	60.53	454	27,500	86.00	0.15	0.75
Anadarko Petroleum Corp.	APC	B	90.12	238	21,400	140.00	0.12	0.68
Occidental Petroleum Corp.	OXY	B	76.34	404	30,800	120.00	0.11	0.68
<i>Total or Median</i>					<i>169,000</i>		<i>0.12</i>	<i>0.78</i>
Independent Natural Gas and Oil - Small Cap								
Berry Petroleum Company	BRY	B	58.66	23	1,320	65.00	0.11	0.91
Encore Acquisition Company	EAC	B	32.19	50	1,600	50.00	0.21	0.72
Energy Partners Ltd.	EPL	B	24.06	41	990	38.00	0.19	0.71
Cimarex Energy Company	XEC	B	38.33	85	3,260	64.00	0.11	0.64
<i>Total or Median</i>					<i>7,200</i>		<i>0.15</i>	<i>0.71</i>
Income								
Kinder Morgan Energy Partners, L.P.	KMP	S3	49.56	159	7,890	15.00	0.55	2.03
Kinder Morgan Management, LLC	KMR	S3	47.00	57	2,660	15.00	0.55	1.95
Pengrowth Energy Trust	PGH		22.05	157	3,460	20.00	0.16	1.09
San Juan Basin Royalty Trust	SJT		42.50	47	1,980	40.00	-	1.06
Enerplus Resources Fund	ERF		42.91	105	4,500	42.00	0.13	1.02
Penn West Energy Trust	PWTFF	B	28.09	176	4,940	28.00	0.15	1.00
Canadian Oil Sands Trust (US\$)	COSWF	B	94.67	93	8,790	136.00	0.11	0.73
<i>Total or Median</i>					<i>34,200</i>		<i>0.15</i>	<i>1.06</i>

B = Buy, S2 = Short half unlevered position, S3 = Short quarter unlevered position

McDep Ratio = Market cap and Debt to present value of oil and gas and other businesses

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Oil and Gas Producers

Rank by EV/Ebitda: Enterprise Value to Earnings Before Interest, Tax, Deprec.

	Symbol/ Rating		Price (\$/sh) 21-Nov 2005	Adjstd Resrvs/ Prod NTM	PV/ Ebitda NTM	EV/ Ebitda NTM	P/E NTM	Divd or Distrib NTM (%)
Mega Cap								
BP plc	BP	B	67.49	9.4	6.4	5.7	10	3.2
Exxon Mobil Corporation	XOM	B	59.32	11.7	6.9	5.6	10	2.0
Total S.A.	TOT	B	127.63	9.2	6.5	5.3	9	2.7
Chevron Corporation	CVX	B	58.87	9.6	6.0	4.4	7	3.1
Royal Dutch Shell plc	RDS-A	B	62.77	7.5	5.7	4.4	8	3.4
	<i>Median</i>			9.4	6.4	5.3	9	3.1
Producer/Refiners - Large Cap and Mid Cap								
Kinder Morgan, Inc.	KMI	S2	90.24		7.5	13.9	19	3.3
Gazprom (50%)	OGZPF	B	63.30	22.0	13.0	9.3	19	0.5
Suncor Energy	SU	B	55.97	17.9	9.8	8.2	17	0.4
Imperial Oil Limited (30%)	IMO	B	93.50	11.5	7.2	8.0	13	0.9
Marathon Oil Corporation	MRO	B	59.71	7.4	5.1	4.8	7	2.2
Petro-Canada	PCZ	B	35.90	5.7	5.3	4.6	8	0.7
Lukoil Oil Company	LUKOY	B	56.63	19.8	4.9	4.3	7	1.7
Norsk Hydro ASA	NHY	B	101.75	8.1	5.3	4.3	9	3.0
PetroChina Company Ltd (10%)	PTR	B	78.18	13.9	6.4	4.2	9	4.8
ConocoPhillips	COP	B	64.37	11.2	5.8	4.0	6	1.9
	<i>Median</i>			11.5	6.1	4.7	9	1.8
Independent Natural Gas and Oil - Large Cap and Mid Cap								
XTO Energy Inc.	XTO	B	41.28	10.8	6.0	5.4	9	0.5
Encana Corporation	ECA	B	44.50	7.1	5.1	4.6	9	0.7
Occidental Petroleum Corp.	OXY	B	76.34	11.0	6.5	4.4	7	1.9
Anadarko Petroleum Corp.	APC	B	90.12	12.5	6.2	4.3	8	0.8
CNOOC Limited (29%)	CEO	B	65.09	9.4	5.5	4.2	7	3.6
Burlington Resources	BR	B	71.41	10.0	4.9	4.1	8	0.6
Devon Energy Corporation	DVN	B	60.53	7.8	4.6	3.5	6	0.5
	<i>Median</i>			10.0	5.5	4.3	8	0.7
Independent Natural Gas and Oil - Small Cap								
Berry Petroleum Company	BRY	B	58.66	10.2	5.8	5.3	11	1.1
Encore Acquisition Company	EAC	B	32.19	14.3	6.5	4.7	10	-
Energy Partners Ltd.	EPL	B	24.06	5.7	4.2	2.9	7	-
Cimarex Energy Company	XEC	B	38.33	7.6	4.5	2.9	6	-
	<i>Median</i>			8.9	5.2	3.8	8	-
Income								
Kinder Morgan Energy Partners, L.P.	KMP	S3	49.56		7.9	16.0	22	6.4
Kinder Morgan Management, LLC	KMR	S3	47.00		7.9	15.4	21	6.7
Canadian Oil Sands Trust (USS)	COSWF	B	94.67	20.0	12.2	8.9	10	3.5
San Juan Basin Royalty Trust	SJT		42.50	12.1	7.9	8.3	9	11.2
Pengrowth Energy Trust	PGH		22.05	7.6	5.7	6.2	9	10.5
Enerplus Resources Fund	ERF		42.91	9.8	5.7	5.8	9	9.8
Penn West Energy Trust	PWTFF	B	28.09	8.0	4.6	4.6	7	11.1
	<i>Median</i>			9.8	7.9	8.3	9	9.8

EV = Enterprise Value = Market Cap and Debt; Ebitda = Earnings before interest, tax, depreciation and amortization; NTM = Next Twelve Months Ended September 30, 2006; P/E = Stock Price to Earnings; PV = Present Value of oil and gas and other businesses

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Oil and Gas Producers Home Country and Business Segments

	Symbol/ Rating		Non- U.S. Domicile	North Amer. Natural Gas (%)	Rest of World Natural Gas (%)	Oil Prod'n (%)	Down- stream (%)	Total Present Value (US\$mm)
Mega Cap								
Exxon Mobil Corporation	XOM	B		10	19	38	33	487,000
BP plc	BP	B	UK	10	12	42	36	302,000
Royal Dutch Shell plc	RDS-A	B	UK	4	19	33	45	313,000
Chevron Corporation	CVX	B		9	9	52	29	221,000
Total S.A.	TOT	B	France	-	28	37	35	213,000
			<i>Total or Median</i>	9	19	38	35	1,536,000
Producer/Refiners - Large Cap and Mid Cap								
PetroChina Company Ltd.	PTR	B	China	-	9	71	20	213,000
Gazprom	OGZPF	B	Russia		100			190,000
ConocoPhillips	COP	B		13	7	45	35	166,800
Lukoil Oil Company	LUKOY	B	Russia	-	-	62	38	55,700
Norsk Hydro ASA	NHY	B	Norway	-	27	38	35	36,800
Suncor Energy	SU	B	Canada	5	-	89	7	35,100
Marathon Oil Corporation	MRO	B		14	8	33	46	32,900
Imperial Oil Limited	IMO	B	Canada	13	-	62	25	31,800
Petro-Canada	PCZ	B	Canada	23	4	53	20	27,100
			<i>Median</i>	9	7	58	30	789,000
Independent Natural Gas and Oil - Large Cap and Mid Cap								
Occidental Petroleum Corp.	OXY	B		15	1	73	11	54,700
Encana Corporation	ECA	B	Canada	83	-	17	-	55,600
Devon Energy Corporation	DVN	B		64	-	36	-	46,000
Anadarko Petroleum Corp.	APC	B		60	-	40	-	37,700
Burlington Resources	BR	B		69	5	26	-	36,000
CNOOC Limited	CEO	B	China	-	12	88	-	34,800
XTO Energy Inc.	XTO	B		83	-	17	-	22,100
			<i>Median</i>	64	-	36	-	287,000
Independent Natural Gas and Oil - Small Cap								
Cimarex Energy Company	XEC	B		71	-	29	-	6,080
Encore Acquisition Company	EAC	B		25	-	75	-	3,150
Berry Petroleum Company	BRY	B		15	-	85	-	1,950
Energy Partners Ltd.	EPL	B		54	-	46	-	1,930
			<i>Median</i>	40	-	60	-	13,110
Income								
Canadian Oil Sands Trust (US\$)	COSWF	B	Canada	-	-	100	-	14,200
Penn West Energy Trust	PWTFF	B	Canada	43	-	57	-	5,800
Enerplus Resources Fund	ERF		Canada	61	-	39	-	5,060
Pengrowth Energy Trust	PGH		Canada	43	-	57	-	3,710
San Juan Basin Royalty Trust	SJT			100	-	-	-	1,860
			<i>Median</i>	43	-	57	-	30,600

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Index of Recent Research

Stock Ideas

<u>Date</u>	<u>Symbol</u>	<u>Stock</u>	<u>Theme</u>
14-Nov	PTR	PetroChina Company Limited	Diversify Political Risk
11-Nov	SJT	San Juan Basin Royalty Trust	Record Distributions Ahead
11-Nov	EPL	Energy Partners, Ltd.	Denali Partners
10-Nov	PWTF	Penn West Energy Trust	Quality Income Stock
7-Nov	TOT	Total S.A.	Global Clean Fuel Supplier
4-Nov	BRY	Berry Petroleum	Expanding on Multiple Fronts
4-Nov	XEC	Cimarex Energy Company	Doubling Done
3-Nov	DVN	Devon Energy Corporation	No Hedges in 2006
1-Nov	CEO	CNOOC Ltd	Low Price for Natural Gas
1-Nov	OXY	Occidental Petroleum Corporation	Vintage Pending
31-Oct	CVX	Chevron Corporation	Lower Net Present Value to \$85 a Share
31-Oct	APC	Anadarko Petroleum Corporation	Long Life for Free
31-Oct	BR	Burlington Resources, Inc.	Natural Gas Beneficiary
28-Oct	XOM	Exxon Mobil Corporation	Momentum Challenge
28-Oct	RDSA	Royal Dutch Shell plc	Downstream Gains
28-Oct	SU	Suncor Energy Inc.	Up and Running Again
28-Oct	MRO	Marathon Oil Corporation	Downstream Gains
28-Oct	PCZ	Petro-Canada	Oil Sands Producer
27-Oct	COP	ConocoPhillips	Emerging Mega Cap
27-Oct	ECA	EnCana Corporation	Natural Gas Leader
27-Oct	EAC	Encore Acquisition Company	Long Life Oil Value
26-Oct	* BP	BP p.l.c.	Lower Net Present Value to \$77 a Share
26-Oct	* NHY	Norsk Hydro ASA	Record Results
26-Oct	* COSWF	Canadian Oil Sands Trust	Distribution Doubled and Unit Split Proposed
21-Oct	* IMO	Imperial Oil Limited	The Unpromoters
21-Oct	* XTO	XTO Energy Inc.	Ready for Winter
20-Oct	* KMx	Kinder Morgan	Wheel and Deal
14-Oct	* OXY	Occidental Petroleum Corporation	Buy Despite Momentum Signal
13-Oct	* APC BR DVN OXY XTO		Edge of Panic
7-Oct	* ECA IMO PCZ SU		Exaggerated Stock Price Change
26-Sep	* LUKOY	Lukoil Oil Company	Adapting to New Russia
15-Sep	* OGZPF	Gazprom	The Ultimate Natural Gas Stock

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22-Nov		\$10 Refining Margin
15-Nov	*	\$10 Natural Gas
8-Nov	*	World Energy Outlook
1-Nov	*	Quarterly Results and the Correlation

Natural Gas and Oil Royalty Trusts - A Weekly Analysis

18-Nov		D-Day
11-Nov	*	Hold That Line
4-Nov	*	What to Do with the Money
28-Oct	*	Winter Payoff
21-Oct	*	Third Week in October

* Archived on www.mcdep.com

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