

Non-U.S. Buys at Low McDep Ratio

			Price (US\$/sh)	Market Cap	Enterprise Value	EV/ Market	EV/ Ebitda	PV/ Ebitda	Oil Prod'n/ PV	Dist. Yield NTM	McDep Ratio (EV/PV)
	Symbol/Rating		13-Feb 2017	(US\$m)	(\$mm)	Cap	NTM	NTM	(%)	(%)	
Total S.A.	TOT	B	50.93	124,000	186,000	1.50	6.1	9.2	58	5.2	0.66
Suncor Energy	SU	B	31.90	53,200	70,700	1.33	7.6	9.8	86	3.1	0.78
Birchcliff Energy Ltd.	BIREF	B	5.87	1,600	2,200	1.38	8.2	12.3	26	1.3	0.66

Summary and Recommendation

Results for the fourth quarter 2016 disclosed on February 8-9 confirm low McDep Ratios for three buy-recommended non- U.S. producers – **Total (TOT)**, 0.66; **Suncor (SU)**, 0.78; and **Birchcliff (BIREF)**, 0.66 (see [Table 1](#) on page 2). On our new measure of operating leverage, TOT (1.00) has none, BIREF (1.08) is low and SU (1.68) is high (see [Table 2](#) on page 3). TOT's strictest cost discipline helped it maintain and increase its high 5.2% dividend despite the oil price panic a year ago. BIREF preserved financial strength as a low cost operator that enabled it to make a well-timed acquisition from a high cost operator. SU's high operating leverage as an oil sands producer has helped in the price recovery. Suncor management protected against the downside of high operating leverage in the price panic with extra balance sheet liquidity. Highlighting another risk and opportunity factor in our analysis, each of the three buys report among the highest percentage of reserves that are undeveloped – TOT, 47%; SU, 46%; and BIREF, 69% (see [Table 3](#) on page 4). Future production of undeveloped reserves requires confidence to invest new capital. Fortunately, the customers for new production appear to be doing well as global stock prices move upward. Gains so far in 2017 for the total U.S. stock market, developed markets outside the U.S. and emerging markets are 4%, 5% and 9%, respectively (see VTI, VEA, and VWO at the bottom of [Table 4](#) on page 5). Meanwhile, future quarterly results in 2017 for TOT, SU and BIREF look to be up compared to the previous year (see tables [Operating and Financial Estimates](#) on pages 6-8). Finally, fourth quarter results also disclosed to date reflect positive trends for two more buy recommendations, **Royal Dutch Shell (RDS)** and **ConocoPhillips (COP)**, which are covered by separate analyses (see [Index of Recent Research](#) on page 9).

Kurt H. Wulff, CFA



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Table 1
McDep Energy Stocks
Ranked by McDep Ratio

			Price (US\$/sh)	Market Cap (US\$mm)	Enterprise Value (\$mm)	EV/ Market Cap	EV/ Ebitda NTM	PV/ Ebitda NTM	Oil Prod'n/ PV (%)	Dist. Yield NTM (%)	McDep Ratio (EV/PV)
	Symbol/Rating		13-Feb 2017								
Global Integrated											
	Chevron Corporation	CVX	113.91	215,000	284,000	1.32	8.9	10.2	64	3.8	0.88
	Exxon Mobil Corporation	XOM	82.99	347,000	442,000	1.27	9.6	11.1	49	3.6	0.86
	Royal Dutch Shell	RDS-A B	54.44	216,000	350,000	1.62	6.6	8.5	55	6.9	0.78
	Total S.A.	TOT B	50.93	124,000	186,000	1.50	6.1	9.2	58	5.2	0.66
	<i>Total or Median</i>			902,000	1,262,000	1.41	7.7	9.7	56	4.5	0.82
Large Independent											
	EOG Resources, Inc.	EOG	100.41	55,000	62,200	1.13	13.9	13.8	86	0.7	1.16
	Devon Energy Corporation	DVN	45.33	23,900	34,800	1.46	12.9	11.2	60	0.5	1.01
	Occidental Petroleum Corp.	OXY	67.40	51,500	64,200	1.25	10.5	11.5	85	4.5	0.92
	Marathon Oil Corporation	MRO B	16.07	13,610	21,800	1.60	10.4	11.9	88	1.2	0.87
	ConocoPhillips	COP B	49.69	62,000	101,000	1.64	9.2	11.5	72	2.1	0.80
	<i>Total or Median</i>			206,000	284,000	1.46	10.5	11.5	85	1.2	0.92
Small Independent											
	Cimarex Energy Company	XEC	133.08	12,400	13,700	1.10	11.4	13.0	62	0.2	1.10
	Continental Resources (32%)	CLR B	46.47	5,500	7,700	1.40	12.8	11.7	71	-	0.87
	California Resources	CRC	18.81	800	7,000	8.85	11.0	16.1	87	-	0.84
	Whiting Petroleum Corporation	WLL	11.16	4,000	7,600	1.89	7.9	10.5	91	-	0.76
	Range Resources	RRC B	32.56	7,900	12,200	1.54	8.0	9.5	24	0.2	0.68
	<i>Total or Median</i>			31,000	48,000	1.54	11.0	11.7	71	-	0.84
Income											
	San Juan Basin Royalty Trust	SJT	7.50	350	350	1.00	13.7	20.8	-	9.0	0.94
	Permian Basin RT	PBT	9.10	420	420	1.00	9.7	16.6	77	7.7	0.83
	Dorchester Minerals, L.P.	DMLP B	16.25	500	500	1.00	11.2	16.5	72	8.1	0.68
	Sabine Royalty Trust	SBR B	39.60	580	580	1.00	10.7	11.4	56	7.3	0.66
	Cross Timbers Royalty Trust	CRT	17.01	100	100	1.00	12.0	14.5	29	9.4	0.59
	<i>Total or Median</i>			2,000	2,000	1.00	11.2	16.5	56	8.1	0.68
Canada											
	EnCana Corporation	ECA	12.68	12,300	18,900	1.54	12.3	10.7	59	0.5	1.16
	Imperial Oil Limited (30%)	IMO	32.38	8,300	10,700	1.30	8.3	9.4	62	1.4	0.88
	Suncor Energy	SU B	31.90	53,200	70,700	1.33	7.6	9.8	86	3.1	0.78
	Cenovus Energy Inc.	CVE	13.48	11,200	15,400	1.37	7.3	9.9	81	1.1	0.74
	Birchcliff Energy Ltd.	BIREF B	5.87	1,600	2,200	1.38	8.2	12.3	26	1.3	0.66
	<i>Total or Median</i>			87,000	118,000	1.37	8.2	9.9	62	1.3	0.78

EV = Enterprise Value = Market Cap and Debt; Ebitda = Earnings before interest, tax, depreciation, amort.
 Estimated Ebitda (cash flow) tied to NTM futures prices for oil and natural gas. NTM = Next Twelve Months ending 12/31/17.
 Estimated Present Value (PV) presumes a long-term price for oil of US\$70 a barrel and natural gas, \$4.00 a million btu.
 McDep Ratio = Market cap and Debt to present value of oil and gas and other businesses. For historical research see www.mcdep.com



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Table 2												
McDep Energy Stocks												
Production Operating Leverage												
Ranked by McDep Ratio												
			Price (US\$/sh)		Oil Equiv. Price (\$/boe)	Operating Expense Fixed Var. (\$/boe) (%)		Ebitda NTM (\$/boe)	Ebitda NTM (\$mm)	Oper Lev Ebitda chg/ Price chg	McDep Ratio	
Symbol/Rating		13-Feb	Volume									
B = Buy		2017	(mmboe)									
Global Integrated (excl. Downstream)												
Chevron Corporation	CVX		113.91	882	39.92	8 22	23.10	20,374		1.35	0.88	
Exxon Mobil Corporation	XOM		82.99	1,502	39.59	7 35	18.70	28,089		1.37	0.86	
Royal Dutch Shell	RDS-A	B	54.44	1,357	37.48	2 24	26.50	35,956		1.08	0.78	
Total S.A.	TOT	B	50.93	894	38.73	0 39	23.60	21,094		1.00	0.66	
<i>Total or Median</i>											1.21	0.82
Large Independent												
EOG Resources, Inc.	EOG		100.41	211	34.66	10 5	22.80	4,808		1.44	1.16	
Devon Energy Corporation	DVN		45.33	155	25.52	9 1	16.20	2,510		1.56	1.01	
Occidental Petroleum Corp.	OXY		67.40	268	36.87	6 22	22.70	6,092		1.26	0.92	
Marathon Oil Corporation	MRO	B	16.07	137	31.28	13 10	15.30	2,102		1.85	0.87	
ConocoPhillips	COP	B	49.69	564	33.32	6 23	19.50	10,995		1.31	0.80	
<i>Total or Median</i>											1.44	0.92
Small Independent												
Cimarex Energy Company	XEC		133.08	63	27.21	6 15	17.10	1,070		1.35	1.10	
Continental Resources (32%)	CLR	B	46.47	26	33.27	3 14	25.70	675		1.12	0.87	
California Resources	CRC		18.81	47	40.80	21 3	18.70	876		2.12	0.84	
Whiting Petroleum Corporation	WLL		11.16	42	37.60	9 15	22.90	955		1.39	0.76	
Range Resources	RRC	B	32.56	121	17.86	8 4	9.20	1,114		1.87	0.68	
<i>Total or Median</i>											1.39	0.84
Income												
San Juan Basin Royalty Trust	SJT		7.50	3	16.98	5 14	9.55	33		1.52	0.94	
Permian Basin RT	PBT		9.10	2	35.26	10 8	22.31	35		1.45	0.83	
Dorchester Minerals, L.P.	DMLP	B	16.25	2	34.22	7 11	23.60	45		1.30	0.68	
Sabine Royalty Trust	SBR	B	39.60	2	31.39	2 9	26.44	42		1.08	0.66	
Cross Timbers Royalty Trust	CRT		17.01	0	36.06	8 14	23.01	11		1.35	0.59	
<i>Total or Median</i>											1.35	0.68
Canada (excl. Downstream)												
EnCana Corporation	ECA		12.68	109	25.52	11 2	14.02	1,533		1.78	1.16	
Imperial Oil Limited (30%)	IMO		32.38	72	36.40	14 12	18.00	1,300		1.78	0.88	
Suncor Energy	SU	B	31.90	353	49.30	18 10	26.35	9,313		1.68	0.78	
Cenovus Energy Inc.	CVE		13.48	113	30.81	11 4	18.61	2,100		1.59	0.74	
Birchcliff Energy Ltd.	BIREF	B	5.87	21	19.81	1 31	12.70	267		1.08	0.66	
<i>Total or Median</i>											1.68	0.78
For historical research see www.mcdep.com												



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Table 3
McDep Energy Stocks
Net Present Value Per Share
Ranked by Reserve Life (Adjustd Resrvs/Prod NTM)

			<i>Price</i> <i>(US\$/sh)</i>					<i>Down-</i> <i>stream/</i>	<i>Proven</i> <i>Undev.</i>	<i>Adjustd</i> <i>Resrvs/</i>	<i>Net</i> <i>Present</i>
	<i>Symbol/Rating</i>	<i>13-Feb</i>	<i>Shares</i>	<i>Debt</i>	<i>Dividend</i>	<i>P/E</i>	<i>PV</i>	<i>Resrvs</i>	<i>Prod</i>	<i>NTM</i>	<i>Value</i>
	B = Buy	2017	(mm)	(\$mm)	(\$/sh)	NTM	(%)	(%)	(%)	NTM	(US\$/sh)
Global Integrated											
Exxon Mobil Corporation	XOM		82.99	4,176	95,027	3.00	21	25	27	14.2	100.00
Total S.A.	TOT	B	50.93	2,433	62,452	2.64	21	24	47	9.4	90.00
Royal Dutch Shell	RDS-A	B	54.44	3,965	133,961	3.76	15	24	34	9.2	80.00
Chevron Corporation	CVX		113.91	1,890	68,829	4.32	26	19	38	9.1	135.00
	<i>Median</i>									9.3	
Large Independent											
Marathon Oil Corporation	MRO	B	16.07	847	8,158	0.20		-	27	12.6	20.00
ConocoPhillips	COP	B	49.69	1,246	39,395	1.06		-	37	11.0	70.00
Occidental Petroleum Corp.	OXY		67.40	764	12,700	3.04	53	9	21	8.5	75.00
Devon Energy Corporation	DVN		45.33	548	7,151	0.24	96	10	18	8.4	45.00
EOG Resources, Inc.	EOG		100.41	527	10,895	0.67	146	-	30	7.5	85.00
	<i>Median</i>									8.5	
Small Independent											
Range Resources	RRC	B	32.56	42	6,200	0.08	74	-	44	12.9	56.00
California Resources	CRC		18.81	244	4,290	-		-	25	12.0	50.00
Continental Resources (32%)	CLR	B	46.47	93	1,287	-		-	57	11.4	56.00
Whiting Petroleum Corporation	WLL		11.16	358	3,560	-		-	67	9.3	18.00
Cimarex Energy Company	XEC		133.08	118	2,178	0.32	36	-	25	6.8	120.00
	<i>Median</i>									11.4	
Income											
Sabine Royalty Trust	SBR	B	39.60	47	-	2.88	14	-	5	10.1	60.00
San Juan Basin Royalty Trust	SJT		7.50	15	-	0.67	11	-	-	9.8	8.00
Permian Basin RT	PBT		9.10	6	-	0.71	13	-	-	8.6	11.00
Dorchester Minerals, L.P.	DMLP	B	16.25	31	-	1.32	15	-	-	7.4	24.00
Cross Timbers Royalty Trust	CRT		17.01	47	-	1.59	11	-	-	7.1	29.00
	<i>Median</i>									8.6	
Canada											
Imperial Oil Limited (30%)	IMO		32.38	255	2,482	0.46	12	37	12	32.7	38.00
Suncor Energy	SU	B	31.90	1,667	17,527	0.98	20	14	46	20.4	44.00
Cenovus Energy Inc.	CVE		13.48	833	4,153	0.15		9	30	16.2	20.00
Birchcliff Energy Ltd.	BIREF	B	5.87	269	600	0.08	25	-	69	13.7	10.00
EnCana Corporation	ECA		12.68	973	6,603	0.06		-	33	6.1	10.00
	<i>Median</i>									16.2	
P/E = Stock Price to Earnings. For historical research see www.mcdep.com .											



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Table 4											
McDep Energy Stocks											
Total Return Year-to-Date 2017											
Ranked by Unlevered Total Return											
			Price (\$/sh)	Price (\$/sh)	Price Change (%)	Cash Distrib. (%)	Equity Total Return (%)	Unlevered Debt Return (\$/sh)	Unlevered Return (%)	McDep Ratio	
	Symbol/Ratio		13-Feb 2017	30-Dec 2016							
Global Integrated											
	Royal Dutch Shell	RDS-A	B	54.44	54.38	0	-	0	34	0	0.78
	Total S.A.	TOT	B	50.93	50.97	(0)	-	(0)	26	(0)	0.66
	Chevron Corporation	CVX		113.91	117.70	(3)	-	(3)	36	(2)	0.88
	Exxon Mobil Corporation	XOM		82.99	90.26	(8)	-	(8)	23	(6)	0.86
	<i>Median</i>					(2)		(2)		(1)	0.82
Large Independent											
	EOG Resources, Inc.	EOG		100.41	101.10	(1)	0.2	(1)	13	(0)	1.16
	Devon Energy Corporation	DVN		45.33	45.67	(1)	-	(1)	21	(1)	1.01
	ConocoPhillips	COP	B	49.69	50.14	(1)	-	(1)	32	(1)	0.80
	Occidental Petroleum Corp.	OXY		67.40	71.23	(5)	-	(5)	17	(4)	0.92
	Marathon Oil Corporation	MRO	B	16.07	17.31	(7)	-	(7)	10	(5)	0.87
	<i>Median</i>					(1)		(1)		(1)	0.92
Small Independent											
	California Resources	CRC		18.81	21.29	(12)	-	(12)	148	(1)	0.84
	Cimarex Energy Company	XEC		133.08	135.90	(2)	-	(2)	14	(2)	1.10
	Range Resources	RRC	B	32.56	34.36	(5)	-	(5)	18	(3)	0.68
	Whiting Petroleum Corporation	WLL		11.16	12.02	(7)	-	(7)	10	(4)	0.76
	Continental Resources (32%)	CLR	B	46.47	51.54	(10)	-	(10)	18	(7)	0.87
	<i>Median</i>					(7)		(7)		(3)	0.84
Income											
	Permian Basin RT	PBT		9.10	7.71	18	0.8	19	-	19	0.83
	San Juan Basin Royalty Trust	SJT		7.50	6.62	13	0.9	14	-	14	0.94
	Sabine Royalty Trust	SBR	B	39.60	35.15	13	0.4	13	-	13	0.66
	Cross Timbers Royalty Trust	CRT		17.01	17.97	(5)	0.5	(5)	-	(5)	0.59
	Dorchester Minerals, L.P.	DMLP	B	16.25	17.55	(7)	1.4	(6)	-	(6)	0.68
	<i>Median</i>					13		13		13	0.68
Canada											
	EnCana Corporation	ECA		12.68	11.74	8	-	8	7	5	1.16
	Suncor Energy	SU	B	31.90	32.69	(2)	-	(2)	11	(2)	0.78
	Imperial Oil Limited (30%)	IMO		32.38	34.76	(7)	-	(7)	10	(5)	0.88
	Cenovus Energy Inc.	CVE		13.48	15.13	(11)	-	(11)	5	(8)	0.74
	Birchcliff Energy Ltd.	BIREF	B	5.87	7.01	(16)	-	(16)	2	(12)	0.66
	<i>Median</i>					(7)		(7)		(5)	0.78
	<i>Grand Median</i>					(4)		(4)		(2)	0.84
	Natural Gas (\$/mmbtu)			2.95	3.74	(21)					
	Oil -West Texas Intermediate (\$/bbl)			52.89	53.72	(2)					
	Total Stock Market - U.S.	VTI		120.16	115.32	4					
	Developed Markets - ex US	VEA		38.42	36.54	5					
	Emerging Markets	VWO		39.10	35.78	9					

Source: McDep LLC, Yahoo, CME Group, Bloomberg

For historical research see www.mcdep.com



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Total S.A.										
Next Twelve Months Operating and Financial Estimates										
	Q4	Year	Q3	Q4	Year	Q1E	Q2E	Q3E	Q4E	Twelve
	12/31/15	2015	9/30/16	12/31/16	2016	3/31/17	6/30/17	9/30/17	12/31/17	Months
										12/31/17
Volume										
Natural Gas (mmcf)	5,993	6,053	6,286	6,597	6,465	6,656	6,716	6,777	6,838	6,747
Days	92	365	92	92	366	90	91	92	92	365
Oil (mmb)	115	451	119	116	465	115	119	123	125	482
Oil (mbd)	1,251	1,237	1,290	1,257	1,272	1,282	1,308	1,334	1,361	1,321
Total gas & oil (mmb)	207	820	215	217	859	215	221	227	230	893
Total gas & oil (mbd)	2,250	2,246	2,338	2,357	2,349	2,392	2,427	2,463	2,500	2,446
Price										
Dollar (euro/\$)	1.10	1.11	1.12	1.08	1.11	1.06	1.06	1.06	1.06	1.06
Natural gas (\$/mmbtu)	4.45	4.75	3.45	3.89	3.56	3.89	3.89	3.89	3.89	3.89
Oil (\$/bbl)										
WTI Cushing	42.21	48.79	44.91	49.21	43.31	53.36	54.76	55.67	55.97	54.94
Brent	43.80	52.53	45.90	49.30	43.68	53.81	55.23	56.14	56.44	55.40
Company	38.10	45.69	41.40	46.10	40.84	50.31	51.64	52.49	52.78	51.84
Total gas & oil (\$/bbl)	33.04	38.87	32.12	35.48	31.65	37.80	38.59	39.13	39.36	38.73
European Refining (\$/t)	38.10	48.53	25.50	41.00						-
Revenue (mm)										
Natural gas	2,454	10,490	1,995	2,361	8,402	2,330	2,377	2,425	2,447	9,580
Oil	4,385	21,368	4,913	5,331	18,775	5,806	6,146	6,442	6,607	25,000
Total production	6,839	31,858	6,909	7,692	27,178	8,136	8,523	8,867	9,054	34,581
Other	30,910	133,499	30,503	34,583	122,565	34,583	34,583	34,583	34,583	138,332
Total	37,749	165,357	37,412	42,275	149,743	42,719	43,106	43,450	43,637	172,912
Expense										
Production	2,800	13,509	2,856	1,327	9,085	3,173	3,324	3,458	3,531	13,486
Other	28,095	121,912	28,037	31,929	112,799	32,183	32,183	32,183	32,183	128,732
Ebitda (mm)										
Production	4,038	18,349	4,053	6,365	18,093	4,963	5,199	5,409	5,523	21,094
Other	2,815	11,587	2,466	2,654	9,766	2,400	2,400	2,400	2,400	9,600
Total Ebitda	6,853	29,936	6,519	9,019	27,859	7,363	7,599	7,809	7,923	30,694
Exploration	727	1,991	274	260	1,264	260	260	260	260	1,040
Deprec., Deplet., & Amort.	2,732	11,078	2,936	4,939	13,315	4,939	4,939	4,939	4,939	19,756
Excess tax and other	1,301	3,697	1,072	878	4,352					
Operating Income										
Upstream	405	5,423	781	1,234	2,737					
Downstream	1,688	7,747	1,456	1,708	6,191					
Marketing and services	691	2,098	565	488	1,818					
Total operating income	2,093	13,170	2,237	2,942	8,928					
Excess tax and other	(1,301)	(3,697)	(1,072)	(878)	(4,352)					
Ebit										
Interest	3,394	16,867	3,309	3,820	13,280	2,164	2,400	2,610	2,724	9,898
Ebt										
Income Tax	241	855	202	227	827	227	227	227	227	908
Net Income (mm)										
Income Tax	3,153	16,012	3,107	3,593	12,453	1,937	2,173	2,383	2,497	8,990
Net Income	1,104	5,604	1,087	1,258	4,358	678	761	834	874	3,147
Shares (millions)										
Net Income	2,050	10,408	2,019	2,336	8,094	1,259	1,413	1,549	1,623	5,844
Shares	2,329	2,303	2,404	2,433	2,395	2,433	2,433	2,433	2,433	2,433
Per share	0.88	4.52	0.84	0.96	3.38	0.52	0.58	0.64	0.67	2.40
Ebitda Margin (E&P)	59%	58%	59%	83%	67%	61%	61%	61%	61%	61%
Tax Rate	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%



Meter Reader

A Monthly Analysis of Oil and Gas Stocks

February 14, 2017

Suncor										
Next Twelve Months Operating and Financial Estimates										
(Canadian Dollars)										
										<i>Next Twelve Months</i>
	<i>Q4</i>	<i>Year</i>	<i>Q3</i>	<i>Q4</i>	<i>Year</i>	<i>Q1E</i>	<i>Q2E</i>	<i>Q3E</i>	<i>Q4E</i>	<i>12/31/17</i>
	<i>12/31/15</i>	<i>2015</i>	<i>9/30/16</i>	<i>12/31/16</i>	<i>2016</i>	<i>3/31/17</i>	<i>6/30/17</i>	<i>9/30/17</i>	<i>12/31/17</i>	<i>12/31/17</i>
Volume										
Oil Sands (mmb)	40.5	158	39.9	39.9	137	39.0	39.4	39.9	39.9	158
Syncrude	2.8	11	16.9	17.2	48	16.8	17.0	17.2	17.2	68
E&P Canada	4.3	17	4.9	5.6	19	5.4	5.5	5.6	5.6	22
E&P International	6.0	25	5.3	5.3	24	5.2	5.2	5.3	5.3	21
Total Oil (mmb)	53.6	211	67.0	67.9	228	66.5	67.2	67.9	67.9	270
Days	92	365	92	92	366	90	91	92	92	365
Oil Sands (mbd)	440	434	434	433	375	433	433	433	433	433
Syncrude	31	30	184	187	130	187	187	187	187	187
E&P Canada	47	47	53	61	53	61	61	61	61	61
E&P International	66	67	58	58	65	58	58	58	58	58
Total Oil (mbd)	583	578	728	739	623	739	739	739	739	739
Price										
Currency (US\$/C\$)	0.75	0.78	0.77	0.75	0.76	0.76	0.76	0.76	0.76	0.76
WTI Cushing (\$US/bbl)	42.21	48.79	44.91	49.21	43.31	53.36	54.76	55.67	55.97	54.94
WTI Cushing (C\$/bbl)	56.28	62.22	58.32	65.61	57.08	69.81	71.65	72.83	73.23	71.88
Oil Sands	41.55	49.37	47.75	54.75	44.60	58.26	59.79	60.78	61.11	59.99
Syncrude	57.37	61.55	58.62	64.28	57.76	68.40	70.20	71.36	71.75	70.44
E&P Canada	52.51	62.64	61.63	68.06	59.74	72.42	74.33	75.55	75.97	74.58
E&P International	54.91	62.68	56.96	62.63	53.96	66.64	68.40	69.53	69.91	68.63
Total Oil (C\$/bbl)	44.77	52.63	52.23	58.87	49.61	62.64	64.29	65.35	65.71	64.51
Revenue (\$mm)										
Oil Sands	1,681	7,813	1,905	2,183	6,117	2,272	2,358	2,423	2,437	9,491
Syncrude	163	669	991	1,106	2,751	1,151	1,195	1,228	1,234	4,808
E&P Canada	225	1,075	301	379	1,157	394	409	421	423	1,647
E&P International	332	1,543	301	332	1,284	345	359	368	370	1,443
Total Oil	2,401	11,099	3,499	4,000	11,309	4,163	4,321	4,440	4,464	17,388
Other	4,192	18,581	4,192	18,581	45,546	18,581	18,581	18,581	18,581	74,324
Total	6,593	29,680	7,992	22,913	58,139	23,090	23,260	23,389	23,416	93,155
Expense (\$mm)										
Upstream	1,677	6,315	1,913	2,093	7,209	1,994	2,016	2,038	2,038	8,087
Downstream	3,596	15,367	3,603	17,798	42,952	17,798	17,881	17,881	17,881	71,441
Ebitda (\$mm)										
Upstream	724	4,784	1,586	1,906	4,100	2,169	2,304	2,402	2,426	9,300
Downstream	596	3,214	589	783	2,594	783	700	700	700	2,883
Total Ebitda	1,320	7,998	2,175	2,690	6,694	2,953	3,004	3,102	3,126	12,180
Exploration	41	294	146	86	289	86	86	86	86	344
Deprec., Deplet., & Amort.	1,069	5,040	1,439	1,601	6,117	1,601	1,601	1,601	1,601	6,404
Other	154	154	-	-	-	-	-	-	-	-
Ebit	56	2,510	590	1,003	288	1,266	1,317	1,415	1,439	5,437
Interest	97	423	90	96	415	96	96	96	96	384
Ebt	(41)	2,087	500	907	(127)	1,170	1,221	1,319	1,343	5,053
Income Tax	(12)	626	150	272	(38)	351	366	396	403	1,516
Net Income (\$mm)										
Upstream	(280)	(496)	306	370	(919)	-	-	-	-	-
Downstream	498	2,266	436	524	1,890	-	-	-	-	-
Unallocated	(247)	(309)	(392)	(259)	(1,060)	-	-	-	-	-
Total	(29)	1,461	350	635	(89)	819	855	923	940	3,537
Shares (millions)										
Per share (\$)	(0.02)	1.01	0.21	0.38	(0.10)	0.49	0.51	0.55	0.56	2.12
Ebitda Margin Upstream	30%	43%	45%	48%	36%	52%	53%	54%	54%	53%
Tax Rate	30%	30%	30%	30%	30%	30%	30%	30%	30%	30%



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Birchcliff Energy Ltd.										
Next Twelve Months Operating and Financial Estimates										
(Canadian Dollars)										
										<i>Next Twelve Months</i>
	<i>Q4</i>	<i>Year</i>	<i>Q3</i>	<i>Q4</i>	<i>Year</i>	<i>Q1E</i>	<i>Q2E</i>	<i>Q3E</i>	<i>Q4E</i>	
	<i>12/31/15</i>	<i>2015</i>	<i>9/30/16</i>	<i>12/31/16</i>	<i>2016</i>	<i>3/31/17</i>	<i>6/30/17</i>	<i>9/30/17</i>	<i>12/31/17</i>	<i>12/31/17</i>
Volume (before royalty)										
Natural Gas (bcf)	19.4	73.5	24.3	26.6	90.5	27.5	29.4	31.4	33.1	121.4
Natural Gas (mmcf/d)	211	201	264	290	247	306	323	341	360	333
Days	92	365	92	92	366	90	91	92	92	365
Oil (mmb)	0.48	1.96	0.97	1.15	2.93	1.25	1.41	1.59	1.78	6.03
Oil (mbd)	5.3	5.4	10.6	12.5	8.0	13.9	15.5	17.3	19.3	16.5
Total (mmboe)	3.72	14.2	5.02	5.59	18.0	5.84	6.31	6.82	7.30	26.3
Total (mboed)	40.4	38.9	54.5	60.8	49.2	64.9	69.3	74.1	79.3	72.0
Price										
Henry Hub (US\$/mmbtu)	2.28	2.67	2.81	2.98	2.46	3.45	3.19	3.32	3.41	3.34
Currency (US\$/C\$)	0.75	0.79	0.77	0.75	0.76	0.76	0.76	0.76	0.76	0.76
Henry Hub (C\$/mmbtu)	3.04	3.40	3.65	3.98	3.25	4.52	4.17	4.34	4.47	4.37
Differential (C\$/mmbtu)	0.37	0.50	1.12	0.67	0.84	1.13	1.04	1.08	1.12	1.09
Company (C\$/mcf)	2.67	2.90	2.53	3.31	2.41	3.39	3.13	3.25	3.35	3.28
WTI Cushing (US\$/bbl)	42.21	48.79	44.91	49.21	43.31	53.36	54.76	55.67	55.97	54.94
WTI Cushing (C\$/bbl)	56.36	62.09	58.32	65.61	57.21	69.81	71.65	72.83	73.23	71.88
Differential (C\$/bbl)	7.45	9.32	21.32	24.46	16.59	24.43	25.08	25.49	25.63	25.05
Company (C\$/bbl)	48.91	52.77	37.00	41.15	40.62	45.38	46.57	47.34	47.60	46.83
Total (\$/bbl)	20.29	22.30	19.42	24.24	18.73	25.71	24.99	26.02	26.79	25.92
Revenue (\$mm)										
Natural Gas	52	213	61	88	219	93	92	102	111	398
Oil	24	104	36	47	119	57	66	75	85	283
Royalties	(3)	(11)	(7)	(10)	(21)	(9)	(10)	(11)	(12)	(43)
Total	72	306	90	125	316	141	148	166	183	638
Expense										
	32	122	41	46	140	64	69	75	80	289
Ebitda (\$mm)										
	40	184	49	80	177	77	78	91	103	349
Deprec., Deplet., & Amort.	36	148	41	43	149	43	46	49	53	192
Other non-cash	(3)	3	1	13	31	2	2	2	2	8
Interest	7	25	9	8	33	8	8	8	8	31
Ebt										
	1	7	(2)	16	(37)	23	22	32	40	118
Income tax	11	24	0	5	(7)	7	7	10	12	35
Net Income (\$mm)										
	(11)	(17)	(2)	11	(30)	16	16	22	28	83
Per share (\$)	(0.07)	(0.11)	(0.01)	0.04	(0.22)	0.06	0.06	0.08	0.11	0.31
Shares (millions)										
	154	154	234	269		269	269	269	263	269
Ebitda margin (after royalty)	56%	60%	54%	64%	56%	54%	53%	55%	56%	55%
Tax rate			-15%	32%	18%	30%	30%	30%	30%	30%



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Index of Recent Research

<i>Date</i>	<i>Series</i>	<i>Symbol</i>	<i>Subject</i>	<i>Theme</i>
6-Feb	ISI	COP	ConocoPhillips	Steady Volume
3-Feb	ISI	RDS	Royal Dutch Shell	BG Paying Off
1-Feb	ISI	XOM	Exxon Mobil	Looking to New Leader
30-Jan	ISI	CVX	Chevron	LNG and Permian Positives
17-Jan	Meter Reader			Buy Stocks with Low McDep Ratio
31-Dec	Meter Reader		Year-End Special with New Tables	Natural Gas Storage Trend Reverses
13-Dec	Meter Reader			Optimistic Outlook 2017
6-Dec	II	XOM, RDS, CVX, TOT		Total Return Upside
28-Nov	II	COP, DVN, EOG, MRO, OXY		Permian Players
22-Nov	II	CRT, DMLP, PBT, SBR, SJT		Income Payers Sparkle
15-Nov	Meter Reader			Growth, Inflation and Trump
9-Nov	ISI	ECA	Encana Corporation	Raise NPV to US\$10 from US\$6
31-Oct	ISI	SU	Suncor Energy Inc.	Raise NPV to US\$44 from US\$35
27-Oct	ISI	RRC	Range Resources	New Buy on Higher NPV of \$56
20-Oct	ISI	SJT	San Juan Basin Royalty Trust	Vote Proxy for Less Conflict, More Competence
18-Oct	ISI	CRC	California Resources	Option on Oil Price
14-Oct	ISI	CVX	Chevron	Oilier Global Integrated
11-Oct	Meter Reader			Canada Comeback
4-Oct	ISI	COP	ConocoPhillips	Pure Play Producer
24-Sep	ISI	SJT	San Juan Basin Royalty Trust	Rising from the Dead---Again
13-Sep	Meter Reader			Permian Surprises
6-Sep	ISI	DVN	Devon Energy	Raise NPV to \$45 from \$33 on Stress Test Success
30-Aug	ISI	SBR	Sabine Royalty Trust	Long-Life Top Line Cash Payer
21-Aug	ISI	BIREF	Birchcliff Energy	Canadian Independent Producer Transformed
17-Aug	ISI	SJT	San Juan Basin Royalty Trust	Preliminary Filing to Replace Trustee
16-Aug	Meter Reader			The Money Glut
11-Aug	ISI	XEC	Cimarex Energy	Raise NPV to \$120 from \$90
1-Aug	II	XOM, RDS, CVX, TOT		Real Return Standouts
1-Aug	ISI	WLL	Whiting Petroleum	Remove Buy Designation
22-Jul	II	CRT, DMLP, PBT, SBR, SJT		Income Payers in Uptrend
12-Jul	Meter Reader			Mid-Year Strategy
7-Jul	ISI	XOM	Exxon Mobil	Durable Real Return
22-Jun	ISI	BIREF	Birchcliff Energy	Half Billion Dollar Deal with Encana
21-Jun	ISI	SJT	San Juan Basin Royalty Trust	Record Administrative Costs
21-Jun	ISI	PBT	Permian Basin Royalty Trust	Raise Distribution to 9%
14-Jun	Meter Reader			Good Year for Oil and Gas
10-Jun	ISI	SU	Suncor Energy Inc.	Revitalized after Wildfire
7-Jun	ISI	WLL	Whiting Petroleum	Looking Up Again
23-May	ISI	DMLP	Dorchester Minerals, L.P.	Raise Distribution to 9%
17-May	ISI	COP	ConocoPhillips	Strategy Reset to Low Risk Value
12-May	ISI	BIREF	Birchcliff Energy	Record Low Operating Cost
10-May	Meter Reader			Value, Growth, Income and Momentum
9-May	ISI	RRC	Range Resources	Restore Net Present Value to \$42 a Share
				MR = Meter Reader (published monthly on or about second or third Tuesday)
				ISI = Independent Stock Idea
				II = Industry Idea
				For historical research by stock, go to mcdep.com , click on Stock Ideas , click on stock by name.



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