

## High Yield Energy

## Energy Services &amp; Refining Model Book Update

- **The greatest trick the devil ever pulled was convincing the world he didn't exist.** The observed rally across Energy Services bonds and equities alike since 3Q earnings has been impressive considering the contemporaneous commodity price action. The “oil-beta” trading moniker is effectively a thing of the past (for now) thanks to a combination of high yield market technicals along with an incredibly tight services market into 2023. Fundamentals in the refining space meanwhile continue to exhibit mean reversion since peaking in mid 2022. However, record earnings across the last nine months have transformed balance sheets to the extent that a weakening macro backdrop has translated to only relatively modest spread widening. Please find below our updated subsector and company-specific thoughts and ratings for CVR, NBR, PBF, PDCN, RIG, FTI, and WFRD.
- **A man can convince anyone he's somebody else, but never himself.** M&A is finally [heating up across the Energy Services landscape](#). The Noble-Maersk combination in mid 2022 was the first domino to fall until Seadrill announced an all-stock agreement to acquire Aquadrill at an implied ~\$1 billion valuation last month. Meanwhile, drillships originally ordered in the last cycle that were subsequently stranded in shipyards during the latest restructuring wave are beginning to reappear. Transocean (via a joint venture) in late November acquired the West Aquila for \$200 million, and just last week a consortium of investors reportedly acquired a similar asset at a comparable price. Onshore transactions are likely to follow suit following a Smid-cap combination announced last week. We note the headlines from October surrounding a potential sale of SLB's valves business in the context of a potentially complementary fit within existing portfolios for both FTI and WFRD.
- **I just can't believe we're going to walk into certain death.** Fourth quarter earnings across the Energy Services space are expected to build upon what was a broadly exceptional 3Q reporting period. A handful of pre-announced earnings / activity updates from the land cohort in addition to announced contract awards offshore indicate the contango pricing and utilization trajectory thesis into 2023 remains intact. We suspect updated 2023 guidance ranges will help bridge the gap between initial outlooks offered up at 3Q earnings to today's lofty Street estimates. Further, we would not be surprised to see the next round of refinancing trades come to fruition for the likes of NBR and RIG. 4Q reporting across the refiner space should prove interesting given the spate of observed weather events in recent weeks. Updated 2023 guidance goalposts along with capital allocation updates, however, are more likely the focus given the actual timing of 4Q reporting in our view.
- **One cannot be betrayed if one has no people.** Transocean and Nabors remain our top picks in the services space. We continue to see compelling entry points across both capital structures at current levels as line of sight toward comprehensive refinancing transactions in the near term continues to improve. With this note, we are downgrading Weatherford to Neutral (from Overweight) as longer-dated WFRD risk now trading inside 9% better reflects fair value in our view (see page 5 for risks to our rating). We remain Overweight both PBF and CVR, though on a relative value basis we prefer expressing Refiner risk via CVR at current levels.

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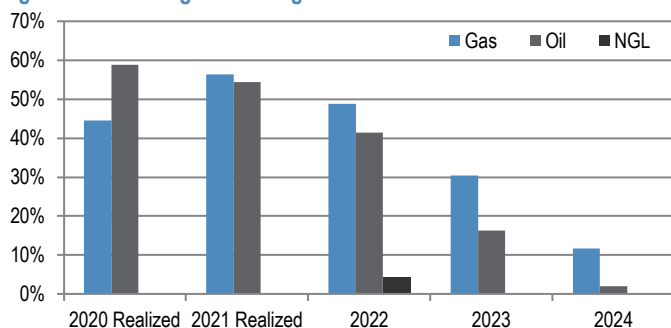
## See page 27 for analyst certification and important disclosures.

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## Hedge Position Summary

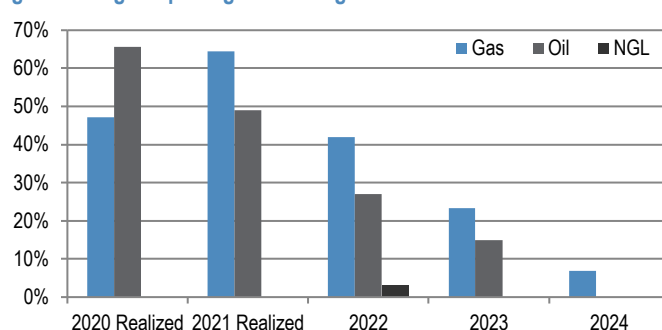
The data below is compiled largely by J.P. Morgan Global Commodities Research and leverages data from J.P. Morgan Equity and Credit Research as well.

Figure 1: Total Hedge Percentage



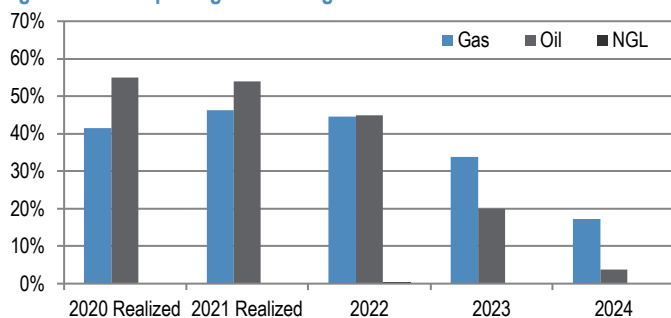
Source: J.P. Morgan Global Commodities Research

Figure 2: Large-Cap Hedge Percentage



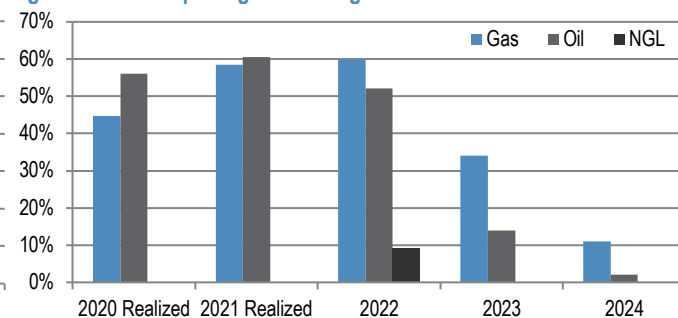
Source: J.P. Morgan Global Commodities Research

Figure 3: Mid-Cap Hedge Percentage



Source: J.P. Morgan Global Commodities Research

Figure 4: Small-Cap Hedge Percentage



Source: J.P. Morgan Global Commodities Research

Table 1: Hedge Position Summary Part I

	2020 Realized		2021 Realized		2022			2023		2024	
	% Gas	% Oil	% Gas	% Oil	% Gas	% Oil	% NGL	% Gas	% Oil	% Gas	% Oil
OXY	0%	48%	24%	0%	0%	0%	0%	0%	0%	0%	0%
EOG	0%	0%	0%	0%	20%	19%	0%	15%	8%	31%	0%
EQT <sup>3,6</sup>	87%	0%	87%	0%	62%	0%	0%	62%	0%	1%	0%
SWN <sup>3</sup>	96%	95%	110%	80%	83%	95%	34%	62%	46%	19%	18%
Pioneer	4%	143%	79%	52%	4%	0%	0%	0%	0%	0%	0%
Chesapeake <sup>3,9</sup>	74%	41%	96%	67%	74%	53%	0%	45%	46%	12%	0%
Devon	27%	85%	44%	40%	30%	27%	0%	15%	21%	1%	0%
Coterra	16%	54%	34%	96%	27%	27%	0%	8%	8%	0%	0%
Antero	90%	100%	97%	30%	55%	1%	1%	6%	1%	4%	0%
Ovintiv <sup>3</sup>	78%	90%	73%	92%	65%	61%	0%	20%	21%	0%	0%
<b>Median</b>	<b>50%</b>	<b>54%</b>	<b>76%</b>	<b>52%</b>	<b>42%</b>	<b>27%</b>	<b>0%</b>	<b>15%</b>	<b>8%</b>	<b>1%</b>	<b>0%</b>
<b>Mean</b>	<b>47%</b>	<b>66%</b>	<b>64%</b>	<b>49%</b>	<b>42%</b>	<b>27%</b>	<b>3%</b>	<b>23%</b>	<b>15%</b>	<b>7%</b>	<b>0%</b>

Note 1. Company has entered into additional oil hedges subsequent to September 30, 2022 that have been excluded from the above analysis.

Note 2. Company has entered into additional natural gas hedges subsequent to September 30, 2022 that have been excluded from the above analysis.

Note 3. Company has written call option or swaption structures that have been excluded from the above analysis.

Note 4. Company has oil hedges in 2026+.

Note 5. Company has natural gas hedges in 2026+.

Note 6. Reporting date not September 30, 2022.

Note 7. Includes some physical hedges.

Note 8. Production estimates from Bloomberg model consensus.

Note 9. Company has transport hedges that have been excluded from the above analysis.

Source: This report leverages hedge data from publicly available company filings and production estimates from J.P. Morgan North America Equity Research models or estimates by J.P. Morgan Global Commodities Research when research model is unavailable; companies with less than 5% oil or gas production are not included in calculated median for respective commodity

Table 2: Hedge Position Summary Part II

	2020 Realized		2021 Realized		2022			2023		2024	
	% Gas	% Oil	% Gas	% Oil	% Gas	% Oil	% NGL	% Gas	% Oil	% Gas	% Oil
Apache <sup>9</sup>	0%	17%	0%	11%	0%	0%	0%	0%	0%	0%	0%
Continental	35%	0%	32%	0%	52%	0%	0%	41%	0%	28%	0%
Diamondback	34%	85%	65%	58%	79%	56%	0%	66%	14%	0%	0%
Marathon	33%	53%	40%	47%	24%	18%	0%	2%	0%	0%	0%
Range <sup>5,6</sup>	77%	76%	78%	90%	65%	86%	5%	53%	73%	32%	8%
Hess	0%	86%	0%	104%	0%	87%	0%	0%	0%	0%	0%
CNX <sup>5,6,7</sup>	108%	0%	96%	0%	86%	0%	0%	76%	0%	66%	0%
PDC Energy	45%	68%	60%	66%	51%	69%	0%	32%	51%	12%	22%
<b>Median</b>	<b>34%</b>	<b>68%</b>	<b>50%</b>	<b>58%</b>	<b>52%</b>	<b>56%</b>	<b>0%</b>	<b>36%</b>	<b>0%</b>	<b>6%</b>	<b>0%</b>
<b>Mean</b>	<b>42%</b>	<b>55%</b>	<b>46%</b>	<b>54%</b>	<b>45%</b>	<b>45%</b>	<b>1%</b>	<b>34%</b>	<b>20%</b>	<b>17%</b>	<b>4%</b>

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Table 3: Hedge Position Summary Part III

	2020 Realized		2021 Realized		2022			2023		2024	
	% Gas	% Oil	% Gas	% Oil	% Gas	% Oil	% NGL	% Gas	% Oil	% Gas	% Oil
Civitas <sup>8</sup>	52%	58%	14%	29%	48%	39%	10%	17%	4%	9%	2%
Murphy	23%	48%	67%	51%	73%	50%	0%	68%	0%	40%	0%
Gulfport <sup>3</sup>	53%	65%	90%	63%	75%	100%	33%	49%	58%	14%	0%
SM Energy	55%	89%	76%	74%	46%	50%	15%	23%	10%	0%	7%
Seneca <sup>5,7</sup>	82%	76%	83%	58%	75%	0%	0%	64%	0%	43%	0%
Callon <sup>3</sup>	46%	68%	68%	83%	50%	53%	0%	15%	26%	0%	0%
Matador	42%	77%	69%	65%	54%	49%	0%	2%	0%	0%	0%
Permian Res.	45%	44%	47%	47%	61%	71%	0%	31%	30%	8%	14%
Laredo <sup>6</sup>	69%	85%	75%	93%	67%	86%	44%	57%	34%	0%	0%
Chord Energy <sup>8</sup>	0%	5%	31%	99%	39%	87%	0%	13%	39%	0%	0%
Vermillion <sup>6</sup>	25%	14%	22%	3%	70%	33%	0%	29%	0%	8%	0%
<b>Median</b>	<b>46%</b>	<b>63%</b>	<b>68%</b>	<b>61%</b>	<b>61%</b>	<b>50%</b>	<b>0%</b>	<b>29%</b>	<b>7%</b>	<b>8%</b>	<b>0%</b>
<b>Mean</b>	<b>45%</b>	<b>56%</b>	<b>58%</b>	<b>60%</b>	<b>60%</b>	<b>52%</b>	<b>9%</b>	<b>34%</b>	<b>14%</b>	<b>11%</b>	<b>2%</b>

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## Services & Refining Relative Value

Table 4: Relative Value

Issuer	Coupon	Description	Maturity	Moody's/S&P	JPM Rating	Out. (\$ mn)	Recent Quotes			Net Debt/ LTM EBITDA	Debt/ EV
							Bid	YTW	Spread		
Nabors Industries Inc	5.750%	Sr Unsecured	2/1/2025	Caa1/CCC	OW	\$502	\$96.25	7.48%	357 bp	3.6x	71%
Nabors Industries Ltd	7.250%	Sr Unsecured	1/15/2026	B3/CCC	OW	\$558	\$96.00	8.59%	480 bp	3.6x	71%
Nabors Industries Inc	7.375%	Sr. Priority Gtd.	5/15/2027	B1/B	OW	\$700	\$98.50	7.68%	402 bp	0.8x	46%
Nabors Industries Ltd	7.500%	Sr Unsecured	1/15/2028	B3/CCC	OW	\$390	\$93.00	9.08%	554 bp	3.6x	71%
Precision Drilling Corp	7.125%	Sr Unsecured	1/15/2026	B3/B	OW	\$348	\$98.00	7.69%	390 bp	4.3x	48%
Precision Drilling Corp	6.875%	Sr Unsecured	1/15/2029	B3/B	OW	\$400	\$93.25	8.10%	462 bp	4.3x	48%
TechnipFMC PLC	5.750%	Sr Unsecured	6/30/2025	Ba1/BB+	N	€ 200	\$99.91	5.57%	330 bp	1.0x	22%
TechnipFMC PLC	6.500%	Sr Guaranteed	2/1/2026	Ba1/BB+	N	\$203	\$103.25	4.82%	56 bp	-0.5x	7%
Transocean Sentry Ltd	5.375%	1st lien	5/15/2023	B2/B-	OW	\$121	\$99.38	3.05%	-66 bp	1.5x	24%
Transocean Inc	7.250%	Sr Unsecured	11/1/2025	Caa3/CCC+	OW	\$354	\$91.75	10.50%	669 bp	6.5x	70%
Transocean Poseidon Ltd	6.875%	1st lien	2/1/2027	B2/B-	OW	\$481	\$98.75	7.20%	332 bp	1.5x	24%
Transocean Inc	8.000%	Sr Unsecured	2/1/2027	Caa3/CCC+	OW	\$612	\$86.75	12.07%	839 bp	6.5x	70%
Weatherford International Ltd	11.000%	Sr Unsecured	12/1/2024	B3/B	N	\$105	\$102.75	5.92%	292 bp	2.0x	46%
Weatherford International Ltd	6.500%	1st lien	9/15/2028	Ba3/BB-	N	\$500	\$99.25	6.55%	294 bp	-0.6x	10%
Weatherford International Ltd	8.625%	Sr Unsecured	4/30/2030	B3/B	N	\$1,600	\$99.25	8.69%	509 bp	2.0x	46%
CVR Energy Inc	5.250%	Sr Unsecured	2/15/2025	B1/B+	OW	\$600	\$93.75	8.30%	439 bp	0.8x	29%
CVR Energy Inc	5.750%	Sr Unsecured	2/15/2028	B1/B+	OW	\$400	\$89.50	8.12%	465 bp	0.8x	29%
PBF Holding Co LLC / PBF Finance Corp	7.250%	Sr Unsecured	6/15/2025	B1/BB	OW	\$663	\$99.00	7.71%	345 bp	0.0x	27%
PBF Holding Co LLC / PBF Finance Corp	6.000%	Sr Unsecured	2/15/2028	B1/BB	OW	\$802	\$91.00	8.20%	446 bp	0.0x	27%

Source: J.P. Morgan estimates, company data.

**Ratings Changes: We are downgrading Weatherford to Neutral (from Overweight).** Weatherford's latest progress on the balance sheet coupled with a favorable outlook for the Services market into 2023 positions the company well to capture incremental market share in the near term. The Weatherford structure has staged an impressive rally since 3Q earnings with the 25s up ~\$3pts and the 30s up ~\$5pts. Price action is justified in our view given favorable credit-specific and (Services) macro developments since late October despite the move lower (in addition to observed volatility) in prevailing oil prices. However, longer-dated WFRD risk now trading inside 9% reflects fair value in our view, and we therefore are moving to Neutral (from Overweight). Risks to our rating include commodity price volatility, access to capital markets, and M&A.

## CVR Energy

### Summary & Relative Value Considerations

CVR's 3Q22 results were generally in line with our expectations including modest throughput outperformance (~202mbd v. JPMe 196mbd) and solid refining margins (\$22.34/bbl v. JPMe \$14.00/bbl). Notably, CVR announced a \$1/share special dividend (or ~\$100 million) payable in November in addition to the \$0.40/share (or ~\$40 million) base dividend. The special dividend modestly exceeded 3Q22 pre-distribution free cash flow (~\$88 million), but the announcement did not come as a complete surprise to us as capital allocation is appropriately tilting toward returning capital to shareholders. Separately, CVR announced on November 21 that it is exploring a potential spinoff of the interests in the nitrogen fertilizer business, which is owned by CVR Energy through the GP and LP interests in CVR Partners (UAN) held by CVR Energy (including ~37% of CVR Partners' outstanding common units). If completed, the transaction would be structured as a tax-free spinoff, although the potential timing is unclear. Overall, CVR bonds in the low 8% context look attractive to us compared to High Yield Energy (~7.7% YTW) and Single-B Energy (~8.7% YTW).

### Financial Model Thoughts

Our updated FY23 estimates include modest (~4% y/y) throughput growth and a meaningful y/y decline in refining gross margins per barrel (\$13.12/bbl v. \$10.60/bbl prior) amid a more normalized Mid-Con crack spread environment. We now estimate adjusted EBITDA and post-distribution free cash flow of \$827 million (v. \$692 million prior) and \$230 million (v. \$54 million prior), respectively. For FY24, we assume ~2% y/y throughput growth and a further y/y decline in gross margins to more normalized levels (\$10.32/bbl v. \$9.97/bbl prior) translating to adjusted EBITDA of \$664 million (v. \$570 million prior) and post-distribution free cash flow of \$67 million (v. a \$72 million cash burn expected previously). Our model does not assume any additional special dividends outside of the ~\$100 million special dividend declared for 4Q22. Net leverage under our modeling assumptions increases modestly from 0.9x at September 30 to 1.1x at YE23 and 1.3x at YE24 but remains very comfortable in our view.

Table 5: CVR Capital Structure Summary

	3Q22	Debt / EBITDA		Debt /
		LTM	23E	EV
Revolving Credit Facility	\$0			
<b>ABL Debt</b>	<b>\$0</b>	<b>0.0x</b>	<b>0.0x</b>	<b>0.0%</b>
5.25% Senior Notes due 2025	\$600			
5.75% Senior Notes due 2028	\$400			
Other Debt	\$44			
<b>Total Parent Debt</b>	<b>\$1,044</b>	<b>1.4x</b>	<b>2.0x</b>	<b>24.1%</b>
UAN Revolving Credit Facility	\$0			
UAN 6.125% Senior Secured Notes due 2028	\$550			
Other	\$0			
<b>Total Consolidated Debt</b>	<b>\$1,594</b>	<b>1.5x</b>	<b>1.9x</b>	<b>36.7%</b>
Minority Interest	\$211			
Equity Market Capitalization	\$3,159			
<b>Enterprise Value</b>	<b>\$4,339</b>	<b>4.0x</b>	<b>5.2x</b>	<b>100.0%</b>
Cash	\$625			
ABL Availability	\$247			
<b>Total Liquidity</b>	<b>\$872</b>			
LTM EBITDA	\$1,095			
LTM Refining Only EBITDA	\$721			
2023 EBITDA	\$827			
2023 Refining Only EBITDA	\$519			

Source: Company reports and J.P. Morgan estimates.

Table 6: CVR Financial Model Summary

Fiscal year-end December	2015	2016	2017	2018	2019	2020	2021	2022E	2023E	2024E	1Q22	2Q22	3Q22	4Q22E
<b>Income statement data</b>														
<b>Total Revenue</b>	<b>\$5,433</b>	<b>\$4,782</b>	<b>\$5,988</b>	<b>\$7,124</b>	<b>\$6,364</b>	<b>\$3,928</b>	<b>\$7,241</b>	<b>\$10,731</b>	<b>\$9,151</b>	<b>\$8,528</b>	<b>\$2,373</b>	<b>\$3,144</b>	<b>\$2,699</b>	<b>\$2,515</b>
y/y growth	-40.4%	-12.0%	25.2%	19.0%	-10.7%	-38.3%	84.3%	48.2%	-14.7%	-6.8%	62.2%	76.3%	43.3%	19.1%
<b>Gross Margin</b>	<b>\$1,242</b>	<b>\$935</b>	<b>\$1,039</b>	<b>\$1,440</b>	<b>\$1,513</b>	<b>\$555</b>	<b>\$1,055</b>	<b>\$2,042</b>	<b>\$1,607</b>	<b>\$1,404</b>	<b>\$486</b>	<b>\$679</b>	<b>\$432</b>	<b>\$445</b>
<b>Segment EBITDA</b>														
Refining	\$628	\$186	\$355	\$738	\$776	\$12	\$187	\$835	\$519	\$320	\$167	\$347	\$186	\$135
Fertilizer	\$107	\$93	\$66	\$78	\$107	\$82	\$208	\$395	\$308	\$343	\$124	\$147	\$10	\$114
Other	\$3	(\$14)	(\$18)	(\$19)	(\$21)	(\$14)	(\$13)	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>EBITDA</b>	<b>\$738</b>	<b>\$265</b>	<b>\$403</b>	<b>\$797</b>	<b>\$862</b>	<b>\$79</b>	<b>\$382</b>	<b>\$1,230</b>	<b>\$827</b>	<b>\$664</b>	<b>\$291</b>	<b>\$494</b>	<b>\$196</b>	<b>\$249</b>
Adjustments	(\$22)	\$6	\$11	\$24	\$18	(\$73)	(\$75)	(\$2)	\$0	\$0	(\$136)	\$17	\$117	\$0
<b>Adjusted EBITDA</b>	<b>\$716</b>	<b>\$271</b>	<b>\$413</b>	<b>\$821</b>	<b>\$880</b>	<b>\$6</b>	<b>\$307</b>	<b>\$1,228</b>	<b>\$827</b>	<b>\$664</b>	<b>\$155</b>	<b>\$511</b>	<b>\$313</b>	<b>\$249</b>
EBITDA margin	13.2%	5.7%	6.9%	11.5%	13.8%	0.2%	4.2%	11.4%	9.0%	7.8%	6.5%	16.3%	11.6%	9.9%
<b>LTM EBITDA</b>	<b>\$716</b>	<b>\$271</b>	<b>\$413</b>	<b>\$821</b>	<b>\$880</b>	<b>\$6</b>	<b>\$307</b>	<b>\$1,228</b>	<b>\$827</b>	<b>\$664</b>	<b>\$436</b>	<b>\$881</b>	<b>\$1,095</b>	<b>\$1,228</b>
<b>Operating Statistics</b>														
<b>Throughput</b>														
Coffeyville	122	133	141	133	139	109	132	137	139	141	138	139	133	137
Wynnewood	83	76	77	80	77	74	77	65	72	73	60	62	69	71
Total	205	209	218	213	216	183	209	202	210	215	197	201	202	208
<b>Utilization</b>														
Coffeyville	92.2%	100.5%	107.2%	100.5%	105.4%	82.5%	100.2%	103.6%	105.1%	107.2%	104.3%	105.4%	100.7%	103.8%
Wynnewood	111.5%	102.7%	102.9%	106.7%	103.2%	98.3%	101.0%	87.6%	96.2%	98.1%	80.1%	83.3%	92.2%	95.0%
Total	99.2%	101.3%	105.7%	102.7%	104.6%	88.3%	100.5%	97.8%	101.9%	103.9%	95.6%	97.5%	97.7%	100.6%
Refining Gross Margin/Bbl	\$14.43	\$8.12	\$9.98	\$15.19	\$15.26	\$5.80	\$8.14	\$18.17	\$13.12	\$10.32	\$16.54	\$26.10	\$16.55	\$13.50
<b>Fertilizer Volumes</b>														
Ammonia	32	201	286	202	241	333	269	224	224	224	40	52	27	105
UAN	940	1,238	1,255	1,289	1,261	1,311	1,196	1,149	1,149	1,149	322	287	275	265
<b>Fertilizer Pricing</b>														
Ammonia	\$521	\$376	\$280	\$328	\$371	\$276	\$489	\$981	\$850	\$800	\$1,055	\$1,182	\$837	\$850
UAN	\$247	\$177	\$152	\$173	\$199	\$153	\$262	\$477	\$400	\$400	\$496	\$555	\$433	\$425
<b>Free Cash Flow</b>														
<b>Adjusted EBITDA</b>	<b>\$716</b>	<b>\$271</b>	<b>\$413</b>	<b>\$821</b>	<b>\$880</b>	<b>\$6</b>	<b>\$307</b>	<b>\$1,228</b>	<b>\$827</b>	<b>\$664</b>	<b>\$155</b>	<b>\$511</b>	<b>\$313</b>	<b>\$249</b>
Less: Capex	(\$219)	(\$133)	(\$120)	(\$102)	(\$121)	(\$124)	(\$224)	(\$211)	(\$200)	(\$200)	(\$26)	(\$62)	(\$57)	(\$66)
Less: Deferred Turnaround Costs	\$0	\$0	\$0	\$0	(\$38)	(\$159)	(\$5)	(\$80)	(\$85)	(\$85)	(\$15)	(\$53)	(\$6)	(\$6)
Less: Other Capex	\$0	\$0	\$0	\$0	\$0	\$1	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Less: Interest Expense	(\$48)	(\$84)	(\$109)	(\$101)	(\$102)	(\$130)	(\$117)	(\$85)	(\$76)	(\$76)	(\$24)	(\$23)	(\$19)	(\$19)
Less: CVI Dividends	(\$174)	(\$174)	(\$174)	(\$238)	(\$306)	(\$121)	(\$241)	(\$483)	(\$161)	(\$161)	\$0	(\$40)	(\$302)	(\$141)
<b>Free Cash Flow</b>	<b>\$75</b>	<b>(\$161)</b>	<b>(\$38)</b>	<b>\$287</b>	<b>\$283</b>	<b>(\$527)</b>	<b>(\$311)</b>	<b>\$232</b>	<b>\$230</b>	<b>\$67</b>	<b>\$54</b>	<b>\$318</b>	<b>(\$138)</b>	<b>(\$2)</b>
Less: Acquisitions	\$0	(\$64)	\$0	\$0	\$0	\$0	(\$20)	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Plus: Divestitures	\$0	\$0	\$0	\$0	\$37	\$1	\$7	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Source: Company reports and J.P. Morgan estimates.

Table 7: CVR Financial Model Summary (Cont'd)

Fiscal year-end December	2015	2016	2017	2018	2019	2020	2021	2022E	2023E	2024E	1Q22	2Q22	3Q22	4Q22E
<b>Balance Sheet Items</b>														
Cash	\$765	\$736	\$482	\$668	\$652	\$674	\$517	\$596	\$718	\$734	\$683	\$900	\$625	\$596
Revolving Credit Facility	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>ABL Debt</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
5.25% Senior Notes due 2025	\$0	\$0	\$0	\$0	\$0	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$600
5.75% Senior Notes due 2028	\$0	\$0	\$0	\$0	\$0	\$400	\$400	\$400	\$400	\$400	\$400	\$400	\$400	\$400
Other Debt	\$549	\$1,194	\$547	\$544	\$500	\$55	\$48	\$44	\$44	\$44	\$47	\$45	\$44	\$44
<b>Total Parent Debt</b>	<b>\$549</b>	<b>\$1,194</b>	<b>\$547</b>	<b>\$544</b>	<b>\$500</b>	<b>\$1,055</b>	<b>\$1,048</b>	<b>\$1,044</b>	<b>\$1,044</b>	<b>\$1,044</b>	<b>\$1,047</b>	<b>\$1,045</b>	<b>\$1,044</b>	<b>\$1,044</b>
UAN Revolving Credit Facility	\$125	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
UAN 9.25% Senior Secured Notes due 2023	\$0	\$0	\$645	\$645	\$645	\$645	\$65	\$0	\$0	\$0	\$0	\$0	\$0	\$0
UAN 6.125% Senior Secured Notes due 2028	\$0	\$0	\$0	\$0	\$0	\$0	\$550	\$550	\$550	\$550	\$550	\$550	\$550	\$550
Other	\$0	\$0	\$0	\$2	\$2	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>Total Consolidated Debt</b>	<b>\$674</b>	<b>\$1,194</b>	<b>\$1,192</b>	<b>\$1,191</b>	<b>\$1,147</b>	<b>\$1,700</b>	<b>\$1,663</b>	<b>\$1,594</b>	<b>\$1,594</b>	<b>\$1,594</b>	<b>\$1,597</b>	<b>\$1,595</b>	<b>\$1,594</b>	<b>\$1,594</b>
<b>Credit Ratios</b>														
ABL Debt / EBITDA ex. Nitrogen	0.0x	0.0x	0.0x	0.0x	0.0x	0.0x	0.0x	0.0x	0.0x	0.0x	0.0x	0.0x	0.0x	0.0x
Parent Debt / EBITDA ex. Nitrogen	0.8x	4.4x	1.3x	0.7x	0.6x	176.7x	3.4x	0.9x	1.3x	1.6x	2.4x	1.2x	1.0x	0.9x
Total Debt / EBITDA	0.9x	4.4x	2.9x	1.5x	1.3x	284.8x	5.4x	1.3x	1.9x	2.4x	3.7x	1.8x	1.5x	1.3x
Net Debt / EBITDA	-0.1x	1.7x	1.7x	0.6x	0.6x	171.9x	3.7x	0.8x	1.1x	1.3x	2.1x	0.8x	0.9x	0.8x
EBITDA/Interest Expense	14.8x	3.2x	3.8x	8.1x	8.6x	0.0x	2.6x	14.4x	10.9x	8.7x	6.5x	22.2x	16.5x	13.1x
EBITDA/Interest Expense - Capex	2.7x	1.3x	1.8x	4.0x	3.9x	0.0x	0.9x	4.1x	3.0x	2.4x	3.1x	6.0x	4.1x	2.9x
Free Cash Flow / Total Debt	11.2%	-13.5%	-3.2%	24.1%	24.7%	-31.0%	-18.7%	14.6%	14.4%	4.2%	3.4%	19.9%	-8.7%	-0.1%
<b>Liquidity</b>														
<b>Cash</b>	<b>\$765</b>	<b>\$736</b>	<b>\$482</b>	<b>\$668</b>	<b>\$652</b>	<b>\$674</b>	<b>\$517</b>	<b>\$596</b>	<b>\$718</b>	<b>\$734</b>	<b>\$683</b>	<b>\$900</b>	<b>\$625</b>	<b>\$596</b>
<b>Credit Facility</b>														
Committed Amount	\$400	\$400	\$400	\$400	\$400	\$400	\$400	\$275	\$275	\$275	\$400	\$275	\$275	\$275
Borrowing Base	\$318	\$341	\$366	\$400	\$400	\$400	\$400	\$277	\$266	\$247	\$400	\$275	\$275	\$277
Outstanding	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Letters Of Credit & Other	\$28	\$28	\$28	\$6	\$7	\$35	\$39	\$30	\$28	\$26	\$29	\$29	\$28	\$30
<b>Availability</b>	<b>\$290</b>	<b>\$312</b>	<b>\$338</b>	<b>\$394</b>	<b>\$393</b>	<b>\$365</b>	<b>\$361</b>	<b>\$245</b>	<b>\$238</b>	<b>\$221</b>	<b>\$371</b>	<b>\$246</b>	<b>\$247</b>	<b>\$245</b>
<b>Total Liquidity</b>	<b>\$1,055</b>	<b>\$1,048</b>	<b>\$820</b>	<b>\$1,062</b>	<b>\$1,045</b>	<b>\$1,039</b>	<b>\$878</b>	<b>\$841</b>	<b>\$956</b>	<b>\$955</b>	<b>\$1,054</b>	<b>\$1,146</b>	<b>\$872</b>	<b>\$841</b>

Source: Company reports and J.P. Morgan estimates



## Nabors Industries

### Summary & Relative Value Considerations

NBR followed up a strong 3Q earnings result with an impressive updated 2023 outlook in late November that includes adj. EBITDA at or above \$1 billion, \$400 million of adjusted FCF generation, and net leverage exiting the year at 1.7x. The rate of change in onshore driller earnings profiles is nothing short of spectacular when considering ~13 months ago the company had initially mapped out a path toward generating ~\$800 million of adj. EBITDA in 2023. Further, we commend management for continuing to increase transparency with respect to balance sheet positioning and optionality to address upcoming maturities. Line-of-sight toward actually generating free cash flow on the back of strong market fundamentals into 2024 coupled with the observed reopening of the high yield market to energy services names suggest the company remains well positioned to achieve its stated balance sheet goals. We remain Overweight.

### Financial Model Thoughts

Our updated FY23 modeling assumptions translate to NBR generating adj. EBITDA of \$1.06 billion (v. \$988 million prior) and free cash flow of ~\$415 million (v. \$365 million prior) after accounting for \$475 million of capex (+\$25 million v. prior). We model the company utilizing FCF and existing liquidity capacity to repay the stub 5.1% sr. notes (~\$53 million) at maturity along with prepaying 50% of the remaining \$177 million 0.75% exchangeable notes in 4Q23 consistent with the company's latest messaging. Our base case assumptions translate to NBR exiting 4Q23 with net leverage and liquidity of 1.7x and ~\$940 million, respectively. In FY24 we now model NBR delivering ~\$1.13 billion of adj. EBITDA (v. \$1.07 billion prior) and ~\$480 million of FCF pre-WC and taxes (v. ~\$450 million prior) after accounting for ~\$480 million of capex (+\$30 million v. prior).

Table 8: NBR Capital Structure Summary

	3Q22	Debt / FY22e EBITDA	Debt / EV
Secured Credit Facility	\$0	0.0x	0.0%
Commercial Paper	\$0	0.0x	0.0%
Accounts Receivable Purchase Facility	\$0	0.0x	0.0%
<b>Total Bank Debt</b>	<b>\$0</b>	<b>0.0x</b>	<b>0.0%</b>
9.000% Senior Priority Guaranteed Nts due Feb 2025	\$210	1.3x	5.7%
Senior Priority Guaranteed Nts due 2027	\$700	1.3x	18.8%
<b>Total Priority Debt</b>	<b>\$910</b>	<b>1.3x</b>	<b>24.5%</b>
5.500% Senior Notes due Jan 2023	\$20	3.8x	0.5%
5.100% Senior Notes due Sep 2023	\$53	3.8x	1.4%
0.750% Senior Exchangeable Notes due Jan 2024	\$177	3.8x	4.8%
5.750% Senior Notes due Feb 2025	\$502	3.8x	13.5%
7.250% Senior Guaranteed Notes due Jan 2026	\$558	3.8x	15.0%
7.500% Senior Guaranteed Notes due Jan 2028	\$390	3.8x	10.5%
Other	\$0	3.8x	0.0%
<b>Total Debt</b>	<b>\$2,610</b>	<b>3.8x</b>	<b>70.2%</b>
FY2022e EBITDA	\$695		
<b>Liquidity</b>			
Cash	\$420		
Short-term Investments	\$0		
<b>Secured Credit Facility</b>			
Committed Amount	\$350		
Outstanding	\$0		
Letters Of Credit & Other	\$65		
<b>Availability</b>	<b>\$285</b>		
<b>Total Liquidity</b>	<b>\$706</b>		

Source: Company reports and J.P. Morgan estimates.

Table 9: NBR Financial Summary

Fiscal year-end December	2016	2017	2018	2019	2020	2021	2022E	2023E	2024E	1Q22	2Q22	3Q22	4Q22E
<b>Income statement data</b>													
<b>Net Sales</b>	<b>\$2,380</b>	<b>\$2,564</b>	<b>\$3,058</b>	<b>\$3,043</b>	<b>\$2,134</b>	<b>\$2,018</b>	<b>\$2,637</b>	<b>\$3,304</b>	<b>\$3,517</b>	<b>\$569</b>	<b>\$631</b>	<b>\$694</b>	<b>\$743</b>
y/y growth	-38.5%	7.7%	19.2%	-0.5%	-29.9%	-5.5%	30.7%	25.3%	6.4%	23.5%	28.9%	32.4%	36.7%
<b>Segment EBITDA</b>													
U.S.	\$191	\$161	\$373	\$484	\$302	\$250	\$407	\$713	\$770	\$74	\$87	\$114	\$131
Canada	\$5	\$17	\$31	\$15	\$13	\$14	(\$0)	\$0	\$0	(\$0)	(\$0)	(\$0)	-
International	\$576	\$509	\$457	\$364	\$321	\$283	\$329	\$378	\$400	\$71	\$82	\$86	\$90
Drilling Solutions	\$2	\$33	\$69	\$92	\$46	\$59	\$98	\$120	\$117	\$20	\$23	\$26	\$29
Rig Technologies	(\$17)	(\$19)	(\$9)	\$1	\$2	\$8	\$14	\$16	\$13	(\$1)	\$3	\$5	\$6
<b>Segment EBITDA</b>	<b>\$756</b>	<b>\$688</b>	<b>\$921</b>	<b>\$956</b>	<b>\$685</b>	<b>\$616</b>	<b>\$847</b>	<b>\$1,226</b>	<b>\$1,299</b>	<b>\$164</b>	<b>\$196</b>	<b>\$231</b>	<b>\$256</b>
Other Reconciling Items	(\$134)	(\$157)	(\$162)	(\$152)	(\$121)	(\$134)	(\$152)	(\$166)	(\$166)	(\$34)	(\$38)	(\$40)	(\$40)
<b>Adjusted EBITDA</b>	<b>\$621</b>	<b>\$530</b>	<b>\$759</b>	<b>\$805</b>	<b>\$564</b>	<b>\$482</b>	<b>\$695</b>	<b>\$1,061</b>	<b>\$1,134</b>	<b>\$131</b>	<b>\$158</b>	<b>\$191</b>	<b>\$216</b>
EBITDA Margin	26.1%	20.7%	24.8%	26.4%	26.4%	23.9%	26.4%	32.1%	32.2%	23.0%	25.0%	27.5%	29.0%
<b>LTM EBITDA</b>	<b>\$621</b>	<b>\$530</b>	<b>\$759</b>	<b>\$805</b>	<b>\$564</b>	<b>\$482</b>	<b>\$695</b>	<b>\$1,061</b>	<b>\$1,134</b>	<b>\$505</b>	<b>\$545</b>	<b>\$611</b>	<b>\$695</b>
<b>Operating Statistics</b>													
<b>Gross Margin (\$ per rigday)</b>													
U.S.	\$9,815	\$5,324	\$9,880	\$12,363	\$13,123	\$10,805	\$12,131	\$17,930	\$18,664	\$9,953	\$10,738	\$13,232	\$14,601
Canada	\$3,583	\$4,317	\$6,088	\$4,778	\$3,857	\$6,269	-	-	-	-	-	-	-
International	\$17,500	\$17,167	\$15,375	\$13,279	\$13,432	\$13,471	\$14,239	\$14,750	\$14,563	\$13,134	\$14,331	\$14,589	\$14,900
<b>Total</b>	<b>\$13,944</b>	<b>\$10,456</b>	<b>\$11,883</b>	<b>\$12,354</b>	<b>\$12,729</b>	<b>\$11,766</b>	<b>\$13,042</b>	<b>\$16,609</b>	<b>\$16,938</b>	<b>\$11,364</b>	<b>\$12,302</b>	<b>\$13,812</b>	<b>\$14,728</b>
<b>Average Rigs Working</b>													
U.S.	62.0	100.7	113.2	115.4	68.1	70.8	97.3	113.3	118.0	90.3	96.4	99.8	102.6
Canada	9.7	15.4	16.9	10.9	9.0	8.7	-	-	-	-	-	-	-
International	100.3	91.1	92.9	88.3	75.8	67.9	74.1	80.5	85.8	72.0	74.3	74.6	75.6
<b>Total</b>	<b>172.0</b>	<b>207.3</b>	<b>223.0</b>	<b>214.6</b>	<b>152.8</b>	<b>147.3</b>	<b>171.4</b>	<b>193.8</b>	<b>203.8</b>	<b>162.3</b>	<b>170.7</b>	<b>174.4</b>	<b>178.2</b>
<b>Free Cash Flow</b>													
<b>Adjusted EBITDA</b>	<b>\$621</b>	<b>\$530</b>	<b>\$759</b>	<b>\$805</b>	<b>\$564</b>	<b>\$482</b>	<b>\$695</b>	<b>\$1,061</b>	<b>\$1,134</b>	<b>\$131</b>	<b>\$158</b>	<b>\$191</b>	<b>\$216</b>
Less: Capex	(\$395)	(\$574)	(\$459)	(\$428)	(\$196)	(\$234)	(\$385)	(\$475)	(\$480)	(\$84)	(\$77)	(\$111)	(\$113)
Less: Interest Expense	(\$185)	(\$223)	(\$227)	(\$204)	(\$206)	(\$171)	(\$177)	(\$173)	(\$172)	(\$47)	(\$43)	(\$44)	(\$43)
Less: Dividends	(\$51)	(\$76)	(\$93)	(\$50)	(\$23)	(\$7)	(\$0)	\$0	\$0	(\$0)	(\$0)	\$0	\$0
<b>Free Cash Flow</b>	<b>(\$10)</b>	<b>(\$329)</b>	<b>(\$20)</b>	<b>\$123</b>	<b>\$140</b>	<b>\$69</b>	<b>\$133</b>	<b>\$413</b>	<b>\$482</b>	<b>(\$1)</b>	<b>\$38</b>	<b>\$36</b>	<b>\$60</b>
Acquisitions	(\$22)	\$9	(\$21)	(\$3)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Divestitures	\$35	\$58	\$109	\$60	\$27	\$124	\$24	\$0	\$0	\$4	\$13	\$8	\$0

Source: J.P. Morgan estimates, company data.

Table 10: NBR Financial Summary Continued

Fiscal year-end December	2016	2017	2018	2019	2020	2021	2022E	2023E	2024E	1Q22	2Q22	3Q22	4Q22E
<b>Balance Sheet Items</b>													
Cash	\$264	\$337	\$448	\$436	\$472	\$991	\$453	\$653	\$1,003	\$394	\$413	\$420	\$453
Credit Facility (secured)	\$0	\$0	\$0	\$0	\$546	\$460	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Commercial Paper	\$0	\$40	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Term Loan	\$163	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Accounts Receivable Purchase Facility	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>Bank Debt</b>	<b>\$163</b>	<b>\$550</b>	<b>\$170</b>	<b>\$355</b>	<b>\$673</b>	<b>\$460</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
6.500% Senior Priority Guaranteed Nts due Feb 2025	\$0	\$0	\$0	\$0	\$50	\$50	-	-	-	\$0	-	-	-
9.000% Senior Priority Guaranteed Nts due Feb 2025	\$0	\$0	\$0	\$0	\$192	\$218	\$210	\$210	\$210	\$218	\$210	\$210	\$210
7.375% Senior Priority Guaranteed Nts due May 2027	\$0	\$0	\$0	\$0	\$0	\$700	\$700	\$700	\$700	\$700	\$700	\$700	\$700
<b>Total Priority Debt</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$1,435</b>	<b>\$1,918</b>	<b>\$1,858</b>	<b>\$1,858</b>	<b>\$1,858</b>	<b>\$1,866</b>	<b>\$1,858</b>	<b>\$1,858</b>	<b>\$1,858</b>
4.625% Senior Notes due Sep 2021	\$700	\$700	\$668	\$635	\$86	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
5.100% Senior Notes due Sep 2023	\$350	\$350	\$343	\$337	\$121	\$83	\$53	\$0	\$0	\$62	\$54	\$53	\$53
5.500% Senior Notes due Jan 2023	\$600	\$600	\$586	\$501	\$28	\$24	\$0	\$0	\$0	\$21	\$21	\$20	\$0
0.750% Senior Exchangeable Notes due Jan 2024	\$0	\$575	\$451	\$473	\$280	\$260	\$177	\$89	\$0	\$177	\$177	\$177	\$177
5.750% Senior Notes due Feb 2025	\$0	\$0	\$792	\$782	\$611	\$548	\$502	\$502	\$502	\$527	\$518	\$502	\$502
7.250% Senior Guaranteed Notes due Jan 2026	\$0	\$0	\$0	\$0	\$560	\$560	\$558	\$558	\$558	\$558	\$558	\$558	\$558
7.500% Senior Guaranteed Notes due Jan 2028	\$0	\$0	\$0	\$0	\$390	\$390	\$390	\$390	\$390	\$390	\$390	\$390	\$390
Other	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>Total Debt</b>	<b>\$3,518</b>	<b>\$3,689</b>	<b>\$3,454</b>	<b>\$3,009</b>	<b>\$3,233</b>	<b>\$3,294</b>	<b>\$2,590</b>	<b>\$2,449</b>	<b>\$2,360</b>	<b>\$2,653</b>	<b>\$2,628</b>	<b>\$2,610</b>	<b>\$2,590</b>
<b>Credit Ratios</b>													
Bank Debt / EBITDA	0.3x	1.0x	0.2x	0.4x	1.2x	1.0x	0.0x	0.0x	0.0x	0.0x	0.0x	0.0x	0.0x
Net Bank Debt / EBITDA	-0.2x	0.3x	-0.4x	-0.1x	0.3x	-1.1x	-0.7x	-0.6x	-0.9x	-0.8x	-0.8x	-0.7x	-0.7x
Guaranteed Debt / EBITDA	0.0x	0.0x	0.0x	0.0x	2.5x	4.0x	2.7x	1.8x	1.6x	3.7x	3.4x	3.0x	2.7x
Net Guaranteed Debt / EBITDA	-0.5x	-0.7x	-0.6x	-0.6x	1.7x	1.9x	2.0x	1.1x	0.8x	2.9x	2.6x	2.4x	2.0x
Total Debt / EBITDA	5.7x	7.0x	4.6x	3.7x	5.7x	6.8x	3.7x	2.3x	2.1x	5.3x	4.8x	4.3x	3.7x
Net Debt / EBITDA	5.2x	6.3x	3.9x	3.2x	4.9x	4.8x	3.1x	1.7x	1.2x	4.5x	4.1x	3.6x	3.1x
EBITDA/Interest Expense	3.4x	2.4x	3.3x	3.9x	2.7x	2.8x	3.9x	6.1x	6.6x	2.8x	3.7x	4.4x	5.0x
EBITDA/Interest Expense - Capex	1.1x	0.7x	1.1x	1.3x	1.4x	1.2x	1.2x	1.6x	1.7x	1.0x	1.3x	1.2x	1.4x
Free Cash Flow / Total Debt	-0.3%	-8.9%	-0.6%	4.1%	4.3%	2.1%	5.2%	16.9%	20.4%	0.0%	1.5%	1.4%	2.3%
<b>Liquidity</b>													
Cash	\$264	\$337	\$448	\$436	\$472	\$991	\$453	\$653	\$1,003	\$394	\$413	\$420	\$453
Short-term Investments	\$31	\$28	\$34	\$17	\$10	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>Credit Facility</b>													
Committed Amount	\$2,250	\$2,250	\$1,933	\$1,680	\$1,014	\$982	\$350	\$350	\$350	\$350	\$350	\$350	\$350
Outstanding	\$0	\$510	\$170	\$355	\$673	\$460	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Letters Of Credit & Other	\$150	\$153	\$105	\$147	\$58	\$63	\$65	\$65	\$65	\$63	\$67	\$65	\$65
<b>Availability</b>	<b>\$2,100</b>	<b>\$1,587</b>	<b>\$1,658</b>	<b>\$1,178</b>	<b>\$284</b>	<b>\$459</b>	<b>\$285</b>	<b>\$285</b>	<b>\$285</b>	<b>\$287</b>	<b>\$283</b>	<b>\$285</b>	<b>\$285</b>
<b>Total Liquidity</b>	<b>\$2,395</b>	<b>\$1,952</b>	<b>\$2,140</b>	<b>\$1,631</b>	<b>\$765</b>	<b>\$1,450</b>	<b>\$738</b>	<b>\$939</b>	<b>\$1,288</b>	<b>\$681</b>	<b>\$696</b>	<b>\$706</b>	<b>\$738</b>

Source: J.P. Morgan estimates, company data.

## PBF Energy

### Summary & Relative Value Considerations

PBF's 3Q22 results were impressive overall in our view as the company used "above peak" cash flow to repay debt (~\$1.3 billion of 3Q22 debt reduction), reduce environmental compliance obligations (by ~\$90 million to \$1.23 billion), and simplify the structure by acquiring the remaining PBFX equity for ~\$300 million cash (closed on November 30). The company's successful execution with respect to its capital structure successfully transitioned the company from deeply distressed to highly profitable with assistance from the "once-in-a-lifetime" crack spread environment. Capital allocation has therefore begun to shift to returning capital to shareholders with the reinstatement of a ~\$28 million quarterly dividend (payable in 4Q22) and a new \$500 million share repurchase program. The renewable fuels production facility at the Chalmette refinery continues to progress as planned with expected first production in 1H23. All-in-all, PBF risk has held in well, but we remain Overweight with bonds trading in the high 7%/low 8% YTW context compared to BB Energy at ~6.9% YTW.

### Financial Model Thoughts

Our updated model takes into account the closing of the PBFX transaction (about one month of PBFX financials included in 4Q22 results) as well as the impact of some weather-related refinery shutdowns in 4Q22. We now model FY23 adjusted EBITDA of \$2.67 billion (v. \$2.11 billion prior) reflecting ~3% y/y throughput growth (v. +6% y/y prior) and ~\$15.81/bbl gross margins (v. \$12.37/bbl prior). We model \$1.47 billion of post-distribution free cash flow compared to \$1.33 billion previously. For FY24, we model ~1% y/y throughput growth and \$11.04/bbl gross margins (v. \$10.74/bbl prior) translating to \$1.09 billion of adjusted EBITDA (v. \$1.59 billion prior) and \$193 million of post-distribution free cash flow (v. \$801 million prior).

Table 11: PBF Capital Structure Summary

	PF 3Q22	Debt / EBITDA		Debt / Ent Value
		LTM	2023E	
ABL Facility	\$0			
<b>ABL Debt</b>	<b>\$0</b>	<b>0.0x</b>	<b>0.0x</b>	<b>0.0%</b>
Lease Obligations	\$21			
Other Secured Notes	\$0			
<b>Total Secured Notes</b>	<b>\$21</b>	<b>0.0x</b>	<b>0.0x</b>	<b>0.4%</b>
7.25% Senior Notes due 2025	\$665			
6.00% Senior Notes due 2028	\$802			
6.875% PBFX Senior Notes due 2023	\$0			
Other Unsecured Notes	\$0			
<b>Total Debt</b>	<b>\$1,487</b>	<b>0.4x</b>	<b>0.6x</b>	<b>27.4%</b>
Minority Interest	\$12			
PBF Equity Value	\$5,256			
Less: Cash	\$1,327			
<b>Enterprise Value</b>	<b>\$5,429</b>	<b>1.4x</b>	<b>2.0x</b>	<b>100.0%</b>
<b>Cash</b>	<b>\$1,327</b>			
<b>Credit Facility</b>				
Committed Amount	\$4,300			
Borrowing Base	\$3,416			
Outstanding	\$0			
Letters Of Credit & Other	\$816			
<b>Availability</b>	<b>\$2,600</b>			
<b>Total Liquidity</b>	<b>\$4,452</b>			

Source: Company reports and J.P. Morgan estimates.

Table 12: PBF Financial Model Summary

Fiscal year-end December	2017	2018	2019	2020	2021	2022E	2023E	2024E	1Q22	2Q22	3Q22	4Q22E
<b>Income statement data</b>												
<b>Total Revenue</b>	<b>\$21,772</b>	<b>\$27,164</b>	<b>\$24,469</b>	<b>\$15,045</b>	<b>\$27,020</b>	<b>\$47,422</b>	<b>\$42,963</b>	<b>\$39,199</b>	<b>\$9,128</b>	<b>\$14,064</b>	<b>\$12,752</b>	<b>\$11,477</b>
y/y growth	36.9%	24.8%	-9.9%	-38.5%	79.6%	75.5%	-9.4%	-8.8%	85.4%	104.3%	77.8%	42.8%
<b>Gross Margin</b>	<b>\$2,381</b>	<b>\$2,812</b>	<b>\$2,540</b>	<b>\$857</b>	<b>\$2,403</b>	<b>\$7,503</b>	<b>\$5,535</b>	<b>\$3,901</b>	<b>\$860</b>	<b>\$2,608</b>	<b>\$2,262</b>	<b>\$1,772</b>
\$ barrel	\$8.08	\$9.71	\$8.46	\$3.23	\$7.89	\$22.16	\$15.81	\$11.04	\$11.35	\$30.42	\$24.97	\$20.25
Operating expenses	\$1,628	\$1,650	\$1,680	\$1,825	\$1,992	\$2,367	\$2,622	\$2,622	\$603	\$614	\$620	\$659
Selling, general & administrative	\$198	\$254	\$259	\$229	\$226	\$506	\$644	\$588	\$49	\$146	\$162	\$149
<b>EBITDA</b>	<b>\$556</b>	<b>\$908</b>	<b>\$601</b>	<b>(\$1,197)</b>	<b>\$195</b>	<b>\$4,532</b>	<b>\$2,650</b>	<b>\$1,073</b>	<b>\$208</b>	<b>\$1,849</b>	<b>\$1,480</b>	<b>\$995</b>
Adjustments	\$34	\$36	\$75	\$36	(\$169)	\$28	\$20	\$20	\$7	\$9	\$7	\$5
<b>Adjusted EBITDA</b>	<b>\$590</b>	<b>\$944</b>	<b>\$676</b>	<b>(\$1,161)</b>	<b>\$26</b>	<b>\$4,560</b>	<b>\$2,670</b>	<b>\$1,093</b>	<b>\$215</b>	<b>\$1,858</b>	<b>\$1,488</b>	<b>\$1,000</b>
EBITDA margin	2.7%	3.5%	2.8%	-7.7%	0.1%	9.6%	6.2%	2.8%	2.4%	13.2%	11.7%	8.7%
<b>LTM EBITDA</b>	<b>\$590</b>	<b>\$944</b>	<b>\$676</b>	<b>(\$1,161)</b>	<b>\$26</b>	<b>\$4,560</b>	<b>\$2,670</b>	<b>\$1,093</b>	<b>\$491</b>	<b>\$2,412</b>	<b>\$3,770</b>	<b>\$4,560</b>
<b>Operating Statistics</b>												
<b>Throughput</b>												
East Coast	338	345	336	263	251	301	332	332	263	292	319	332
Midcontinent	145	150	153	97	134	149	139	142	137	162	159	137
Gulf Coast	185	150	178	138	163	182	174	177	163	200	193	171
West Coast	140	150	156	230	286	296	315	317	270	289	314	311
Total	807	793	823	728	834	928	959	968	833	942	985	951
<b>Utilization</b>												
East Coast	91.4%	93.1%	90.9%	71.1%	96.5%	105.8%	116.4%	116.4%	92.3%	102.5%	111.9%	116.4%
Midcontinent	85.4%	88.0%	90.0%	56.9%	78.9%	82.6%	77.3%	78.8%	75.9%	89.8%	88.5%	76.1%
Gulf Coast	97.6%	79.2%	94.1%	72.9%	86.4%	98.2%	94.0%	95.9%	88.2%	107.8%	104.1%	92.6%
West Coast	90.0%	96.5%	100.4%	73.8%	91.7%	92.4%	100.8%	101.7%	83.5%	89.4%	97.2%	99.6%
Total	91.3%	89.8%	93.1%	69.9%	89.6%	95.6%	99.7%	100.6%	85.6%	96.8%	101.2%	98.8%
<b>Gross Margin/Bbl</b>												
East Coast	\$5.46	\$7.40	\$5.87	\$3.56	\$6.19	\$20.87	\$17.16	\$11.23	\$11.03	\$30.55	\$20.78	\$20.00
Midcontinent	\$10.28	\$13.38	\$12.23	\$0.50	\$8.21	\$20.56	\$11.66	\$8.48	\$8.50	\$30.24	\$23.21	\$17.82
Gulf Coast	\$8.34	\$7.93	\$5.84	\$3.71	\$7.66	\$19.61	\$16.74	\$12.57	\$11.96	\$24.48	\$20.25	\$20.25
West Coast	\$11.80	\$13.14	\$13.35	\$3.70	\$9.36	\$25.85	\$15.71	\$11.14	\$12.75	\$34.49	\$33.02	\$21.60
Total	\$8.08	\$9.71	\$8.46	\$3.23	\$7.89	\$22.16	\$15.81	\$11.04	\$11.35	\$30.42	\$24.97	\$20.25
<b>Free Cash Flow</b>												
<b>Adjusted EBITDA</b>	<b>\$590</b>	<b>\$944</b>	<b>\$676</b>	<b>(\$1,161)</b>	<b>\$26</b>	<b>\$4,560</b>	<b>\$2,670</b>	<b>\$1,093</b>	<b>\$215</b>	<b>\$1,858</b>	<b>\$1,488</b>	<b>\$1,000</b>
Less: Capex	(\$233)	(\$277)	(\$373)	(\$183)	(\$241)	(\$562)	(\$700)	(\$400)	(\$117)	(\$107)	(\$164)	(\$175)
Less: Deferred Turnaround Costs	(\$379)	(\$266)	(\$299)	(\$188)	(\$118)	(\$240)	(\$150)	(\$150)	(\$82)	(\$85)	(\$74)	\$0
Less: Other Capex	(\$31)	(\$17)	(\$45)	(\$9)	(\$29)	(\$62)	(\$40)	(\$40)	(\$25)	(\$19)	(\$8)	(\$10)
Less: Interest Expense	(\$131)	(\$124)	(\$107)	(\$163)	(\$265)	(\$230)	(\$198)	(\$198)	(\$34)	(\$97)	(\$52)	(\$47)
Less: Dividends	\$0	\$0	\$0	\$0	\$0	(\$28)	(\$112)	(\$112)	\$0	\$0	\$0	(\$28)
<b>Free Cash Flow</b>	<b>(\$184)</b>	<b>\$260</b>	<b>(\$148)</b>	<b>(\$1,704)</b>	<b>(\$627)</b>	<b>\$3,438</b>	<b>\$1,470</b>	<b>\$193</b>	<b>(\$43)</b>	<b>\$1,551</b>	<b>\$1,190</b>	<b>\$740</b>
Less: Acquisitions	\$0	\$0	\$0	(\$1,176)	\$0	(\$303)	\$0	\$0	\$0	\$0	\$0	(\$303)
Plus: Divestitures	\$0	\$48	\$36	\$543	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Plus: Working Capital	(\$65)	(\$100)	\$176	\$597	\$280	\$219	(\$40)	(\$37)	(\$29)	\$225	(\$70)	\$92

Source: Company reports and J.P. Morgan estimates.

Table 13: PBF Financial Model Summary (Cont'd)

Fiscal year-end December	2017	2018	2019	2020	2021	2022E	2023E	2024E	1Q22	2Q22	3Q22	4Q22E
<b>Balance Sheet Items</b>												
Cash	\$526	\$562	\$763	\$1,570	\$1,306	\$2,280	\$2,785	\$2,542	\$1,381	\$2,110	\$1,852	\$2,280
Revolving Credit Facility	\$350	\$0	\$0	\$900	\$900	\$0	\$0	\$0	\$900	\$0	\$0	\$0
<b>ABL Debt</b>	<b>\$350</b>	<b>\$0</b>	<b>\$0</b>	<b>\$900</b>	<b>\$900</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$900</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
9.25% Secured Notes due 2025	\$0	\$0	\$0	\$1,250	\$1,250	\$0	\$0	\$0	\$1,250	\$1,250	\$0	\$0
PBF Rail Term Loans	\$28	\$22	\$15	\$7	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Lease Obligations	\$59	\$44	\$48	\$103	\$58	\$21	\$21	\$21	\$63	\$56	\$21	\$21
Other Secured Notes	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>Total Secured Debt</b>	<b>\$437</b>	<b>\$66</b>	<b>\$62</b>	<b>\$2,260</b>	<b>\$2,208</b>	<b>\$21</b>	<b>\$21</b>	<b>\$21</b>	<b>\$2,213</b>	<b>\$1,306</b>	<b>\$21</b>	<b>\$21</b>
7.25% Senior Notes due 2025	\$725	\$725	\$725	\$725	\$670	\$665	\$665	\$665	\$670	\$665	\$665	\$665
6.00% Senior Notes due 2028	\$0	\$0	\$0	\$1,000	\$827	\$802	\$802	\$802	\$827	\$802	\$802	\$802
6.875% PBFX Senior Notes due 2023	\$0	\$0	\$0	\$0	\$0	\$525	\$0	\$0	\$0	\$0	\$0	\$525
Other Unsecured Notes	\$500	\$500	\$500	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>Total Debt</b>	<b>\$1,662</b>	<b>\$1,291</b>	<b>\$1,287</b>	<b>\$3,985</b>	<b>\$3,704</b>	<b>\$2,012</b>	<b>\$1,487</b>	<b>\$1,487</b>	<b>\$3,709</b>	<b>\$2,772</b>	<b>\$1,487</b>	<b>\$2,012</b>
<b>Credit Ratios</b>												
ABL Debt / EBITDA	0.6x	0.0x	0.0x	-0.8x	34.8x	0.0x	0.0x	0.0x	1.8x	0.0x	0.0x	0.0x
Secured Debt / EBITDA	0.7x	0.1x	0.1x	-1.9x	85.3x	0.0x	0.0x	0.0x	4.5x	0.5x	0.0x	0.0x
Total Debt / EBITDA	2.8x	1.4x	1.9x	-3.4x	143.1x	0.4x	0.6x	1.4x	7.6x	1.1x	0.4x	0.4x
Net Debt / EBITDA	1.9x	0.8x	0.8x	-2.1x	92.7x	-0.1x	-0.5x	-1.0x	4.7x	0.3x	-0.1x	-0.1x
EBITDA/Interest Expense	4.5x	7.6x	6.3x	-7.1x	0.1x	19.8x	13.5x	5.5x	6.3x	19.1x	28.6x	21.3x
EBITDA/Interest Expense - Capex	1.6x	2.4x	1.4x	-3.4x	0.1x	5.8x	3.0x	1.8x	1.4x	9.1x	6.9x	4.5x
Free Cash Flow / Total Debt	-11.1%	20.1%	-11.5%	-42.8%	-16.9%	170.8%	98.8%	13.0%	-1.2%	55.9%	80.0%	36.8%
<b>Liquidity</b>												
<b>Cash</b>	<b>\$526</b>	<b>\$562</b>	<b>\$763</b>	<b>\$1,570</b>	<b>\$1,306</b>	<b>\$2,280</b>	<b>\$2,785</b>	<b>\$2,542</b>	<b>\$1,381</b>	<b>\$2,110</b>	<b>\$1,852</b>	<b>\$2,280</b>
<b>Credit Facility</b>												
Committed Amount	\$2,635	\$3,400	\$3,400	\$3,400	\$3,400	\$4,800	\$2,750	\$2,750	\$3,400	\$4,300	\$4,300	\$4,800
Borrowing Base	\$2,635	\$1,481	\$1,683	\$1,784	\$2,382	\$3,581	\$3,267	\$2,981	\$2,713	\$3,348	\$3,416	\$3,581
Outstanding	\$350	\$0	\$0	\$900	\$900	\$0	\$0	\$0	\$900	\$0	\$0	\$0
Letters Of Credit & Other	\$586	\$401	\$221	\$184	\$380	\$734	\$796	\$726	\$610	\$1,048	\$816	\$734
<b>Availability</b>	<b>\$1,699</b>	<b>\$1,080</b>	<b>\$1,461</b>	<b>\$700</b>	<b>\$1,102</b>	<b>\$2,847</b>	<b>\$1,954</b>	<b>\$2,024</b>	<b>\$1,204</b>	<b>\$2,300</b>	<b>\$2,600</b>	<b>\$2,847</b>
<b>Total Liquidity</b>	<b>\$2,225</b>	<b>\$1,642</b>	<b>\$2,224</b>	<b>\$2,270</b>	<b>\$2,408</b>	<b>\$5,127</b>	<b>\$4,739</b>	<b>\$4,566</b>	<b>\$2,584</b>	<b>\$4,410</b>	<b>\$4,452</b>	<b>\$5,127</b>

Source: Company reports and J.P. Morgan estimates.

## Precision Drilling

### Summary & Relative Value Considerations

Precision's 3Q results were positive on the margin in our view, and we were pleased to see the company announce incremental International awards in Kuwait (expected to increase PD's International rig count to eight from six by mid 2023) to supplement the utilization growth across its North American footprint. PD updated the market last week with operational updates and balance sheet improvements that collectively were better than expected. The company revealed its 4Q Canadian rig count averaged 66 rigs (74 as of 1/5) and 59 average working rigs within the U.S. (62 as of 1/5) along with expectations for 4Q margins to exceed prior guidance (~\$11.5k/d in U.S. and ~CAD 12k/d in Canada). On the balance sheet, PD reduced total debt by \$106 million in 2022 (v. \$75 million guide). PD expects net leverage between 1.25x and 1.75x by YE23. We remain Overweight PD, though we favor expressing land driller risk via NBR at current levels.

### Financial Model Thoughts

We model PD delivering ~\$648 million of adj. EBITDA (v. ~\$530 million prior) and ~\$350 million of free cash flow in FY23 on a capex budget of \$220 million. We expect net leverage to decline from ~3x at YE22e to ~1.2x at YE23e. Our updated FY24 modeling assumptions translate to adj. EBITDA moderating to ~\$700 million (v. \$544 million prior) to reflect the updated dayrate and utilization trajectory exiting 2023. We now model PD delivering ~\$375 million of FCF in FY24 (+\$105 million v. prior) on a \$250 million capex budget and see net leverage falling to ~0.6x at YE24e. Note that our estimates do not assume any return of capital to shareholders in the forecasted periods.

Table 14: PDCN Capital Structure Summary

	3Q22	LTM Leverage	Debt/ FY22e EBITDA	Debt/ EV
Credit Facility	\$141	0.7x	0.5x	5.5%
Demand Letter Credit Facility	\$18	0.7x	0.5x	0.7%
Real Estate Credit Facilities	\$27	0.7x	0.5x	1.0%
<b>Total Secured Debt</b>	<b>\$186</b>	<b>0.7x</b>	<b>0.5x</b>	<b>7.2%</b>
7.125% Senior Notes due 2026	\$348	4.3x	3.3x	13.5%
6.875% Senior Notes due 2029	\$400	4.3x	3.3x	15.5%
<b>Total Debt (\$CAD)</b>	<b>\$1,220</b>	<b>4.3x</b>	<b>3.3x</b>	<b>47.3%</b>
LTM EBITDA	\$284			
FY2022E EBITDA	\$368			
<b>Liquidity</b>				
Cash	\$40			
<b>Credit Facility</b>				
Committed Amount (US\$)	\$500			
Outstanding (C\$)	\$141			
Letters Of Credit & Other (US\$)	\$32			
<b>Availability (C\$)</b>	<b>\$472</b>			
<b>Total Liquidity (C\$)</b>	<b>\$512</b>			

Source: Company reports and J.P. Morgan estimates.

Table 15: PDCN Financial Model Summary

Fiscal year-end December	2014	2015	2016	2017	2018	2019	2020	2021	2022E	2023E	2024E	1Q22	2Q22	3Q22	4Q22E
<b>Income statement data</b>															
<b>Net Sales</b>	<b>\$2,351</b>	<b>\$1,556</b>	<b>\$951</b>	<b>\$1,283</b>	<b>\$1,541</b>	<b>\$1,541</b>	<b>\$936</b>	<b>\$987</b>	<b>\$1,593</b>	<b>\$2,131</b>	<b>\$2,283</b>	<b>\$351</b>	<b>\$326</b>	<b>\$429</b>	<b>\$486</b>
y/y growth	15.8%	-33.8%	-38.8%	34.9%	20.1%	0.0%	-39.3%	5.5%	61.4%	33.8%	7.1%	48.6%	61.9%	69.2%	64.7%
Segment EBITDA	\$879	\$558	\$298	\$355	\$427	\$457	\$322	\$255	\$456	\$758	\$811	\$78	\$75	\$133	\$170
Corp. General & Administrative	\$79	\$71	\$65	\$50	\$66	\$62	\$43	\$63	\$78	\$60	\$60	\$41	\$11	\$14	\$12
<b>Adjusted EBITDA</b>	<b>\$800</b>	<b>\$474</b>	<b>\$228</b>	<b>\$305</b>	<b>\$362</b>	<b>\$392</b>	<b>\$263</b>	<b>\$193</b>	<b>\$368</b>	<b>\$648</b>	<b>\$701</b>	<b>\$37</b>	<b>\$64</b>	<b>\$120</b>	<b>\$148</b>
EBITDA margin	34.0%	30.5%	24.0%	23.8%	23.5%	25.4%	28.2%	19.5%	23.1%	30.4%	30.7%	10.5%	19.7%	27.8%	30.4%
<b>LTM EBITDA</b>	<b>\$800</b>	<b>\$474</b>	<b>\$228</b>	<b>\$305</b>	<b>\$362</b>	<b>\$392</b>	<b>\$263</b>	<b>\$193</b>	<b>\$368</b>	<b>\$648</b>	<b>\$701</b>	<b>\$175</b>	<b>\$210</b>	<b>\$284</b>	<b>\$368</b>
<b>Operating Statistics</b>															
<b>Segment EBITDA Margin</b>															
Contract Drilling Services	40.7%	39.6%	35.0%	30.2%	29.5%	30.9%	35.8%	26.4%	29.5%	36.5%	36.9%	22.7%	23.9%	31.7%	36.5%
Completion and Production Services	16.9%	6.3%	-1.9%	7.7%	9.9%	16.6%	17.9%	21.0%	20.7%	25.9%	21.0%	17.1%	14.6%	26.1%	21.3%
<b>Total</b>	<b>37.4%</b>	<b>35.9%</b>	<b>31.3%</b>	<b>27.7%</b>	<b>27.7%</b>	<b>29.7%</b>	<b>34.4%</b>	<b>25.9%</b>	<b>28.6%</b>	<b>35.6%</b>	<b>35.5%</b>	<b>22.1%</b>	<b>23.1%</b>	<b>31.1%</b>	<b>35.0%</b>
<b>Free Cash Flow</b>															
<b>Adjusted EBITDA</b>	<b>\$800</b>	<b>\$474</b>	<b>\$228</b>	<b>\$305</b>	<b>\$362</b>	<b>\$392</b>	<b>\$263</b>	<b>\$193</b>	<b>\$368</b>	<b>\$648</b>	<b>\$701</b>	<b>\$37</b>	<b>\$64</b>	<b>\$120</b>	<b>\$148</b>
Less: Capex	(\$857)	(\$459)	(\$203)	(\$98)	(\$126)	(\$160)	(\$62)	(\$76)	(\$165)	(\$220)	(\$250)	(\$36)	(\$39)	(\$51)	(\$38)
Less: Interest Expense	(\$103)	(\$112)	(\$136)	(\$134)	(\$107)	(\$115)	(\$103)	(\$67)	(\$85)	(\$74)	(\$74)	(\$38)	(\$5)	(\$38)	(\$4)
Less: Dividends	(\$73)	(\$82)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>Free Cash Flow</b>	<b>(\$232)</b>	<b>(\$179)</b>	<b>(\$111)</b>	<b>\$73</b>	<b>\$128</b>	<b>\$117</b>	<b>\$99</b>	<b>\$50</b>	<b>\$118</b>	<b>\$354</b>	<b>\$377</b>	<b>(\$38)</b>	<b>\$20</b>	<b>\$31</b>	<b>\$105</b>
Less: Acquisitions	\$0	\$0	(\$12)	\$0	\$0	\$0	\$0	\$0	(\$10)	(\$23)	\$0	\$0	\$0	(\$10)	\$0
Plus: Divestitures	\$102	\$10	\$8	\$15	\$24	\$91	\$21	\$13	\$32	\$0	\$0	\$3	\$7	\$22	\$0

Source: J.P. Morgan estimates, company data.



Table 16: PDCN Financial Model Summary (Cont'd)

Fiscal year-end December	2014	2015	2016	2017	2018	2019	2020	2021	2022E	2023E	2024E	1Q22	2Q22	3Q22	4Q22E
<b>Balance Sheet Items</b>															
Cash	\$491	\$445	\$116	\$65	\$97	\$75	\$109	\$41	\$22	\$300	\$667	\$24	\$52	\$40	\$22
Credit Facility	\$26	\$0	\$0	\$0	\$0	\$0	\$57	\$118	\$44	\$0	\$0	\$182	\$128	\$141	\$44
Demand Letter Credit Facility	\$0	\$25	\$0	\$13	\$2	\$2	\$2	\$3	\$18	\$18	\$18	\$2	\$12	\$18	\$18
Real Estate Credit Facilities	\$0	\$0	\$0	\$0	\$0	\$0	\$11	\$29	\$22	\$22	\$22	\$29	\$27	\$27	\$22
<b>Total Secured Debt</b>	<b>\$26</b>	<b>\$25</b>	<b>\$0</b>	<b>\$13</b>	<b>\$2</b>	<b>\$2</b>	<b>\$70</b>	<b>\$150</b>	<b>\$84</b>	<b>\$40</b>	<b>\$40</b>	<b>\$213</b>	<b>\$167</b>	<b>\$186</b>	<b>\$84</b>
6.625% Senior Notes due 2020 (US \$650 million)	\$754	\$900	\$499	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
6.5% Senior Notes due 2021 (US \$400 million)	\$464	\$554	\$428	\$313	\$226	\$91	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
7.75% Senior Notes due 2023 (US \$345 million)	\$0	\$0	\$470	\$440	\$478	\$345	\$286	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
5.25% Senior Notes due 2024 (US \$400 million)	\$464	\$554	\$537	\$503	\$479	\$308	\$263	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
7.125% Senior Notes due 2026 (US \$400 million)	\$0	\$0	\$0	\$503	\$546	\$370	\$348	\$348	\$348	\$348	\$348	\$348	\$348	\$348	\$348
6.875% Senior Notes due 2029 (US \$400 million)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$400	\$400	\$400	\$400	\$400	\$400	\$400	\$400
<b>Total Debt (\$CAD)</b>	<b>\$1,908</b>	<b>\$2,232</b>	<b>\$1,934</b>	<b>\$1,772</b>	<b>\$1,731</b>	<b>\$1,115</b>	<b>\$1,209</b>	<b>\$1,137</b>	<b>\$1,123</b>	<b>\$1,063</b>	<b>\$1,063</b>	<b>\$1,217</b>	<b>\$1,148</b>	<b>\$1,220</b>	<b>\$1,123</b>
<b>Credit Ratios</b>															
Secured Debt / EBITDA	0.0x	0.1x	0.0x	0.0x	0.0x	0.0x	0.3x	0.8x	0.2x	0.1x	0.1x	1.2x	0.8x	0.7x	0.2x
Net Secured Debt / EBITDA	-0.6x	-0.9x	-0.5x	-0.2x	-0.3x	-0.2x	-0.1x	0.6x	0.2x	-0.4x	-0.9x	1.1x	0.5x	0.5x	0.2x
Total Debt / EBITDA	2.4x	4.7x	8.5x	5.8x	4.8x	2.8x	4.6x	5.9x	3.0x	1.6x	1.5x	7.0x	5.5x	4.3x	3.0x
Net Debt / EBITDA	1.8x	3.8x	8.0x	5.6x	4.5x	2.7x	4.2x	5.7x	3.0x	1.2x	0.6x	6.8x	5.2x	4.1x	3.0x
EBITDA/Interest Expense	7.8x	4.2x	1.7x	2.3x	3.4x	3.4x	2.5x	2.9x	4.3x	8.8x	9.5x	1.0x	14.1x	3.2x	33.1x
EBITDA/Interest Expense - Capex	0.8x	0.8x	0.7x	1.3x	1.6x	1.4x	1.6x	1.3x	1.5x	2.2x	2.2x	0.5x	1.5x	1.3x	3.5x
Free Cash Flow / Total Debt	-12.2%	-8.0%	-5.8%	4.1%	7.4%	10.5%	8.2%	4.4%	10.6%	33.3%	35.4%	-3.1%	1.8%	2.5%	9.4%
<b>Liquidity</b>															
<b>Cash</b>	<b>\$491</b>	<b>\$445</b>	<b>\$116</b>	<b>\$65</b>	<b>\$97</b>	<b>\$75</b>	<b>\$109</b>	<b>\$41</b>	<b>\$22</b>	<b>\$300</b>	<b>\$667</b>	<b>\$24</b>	<b>\$52</b>	<b>\$40</b>	<b>\$22</b>
<b>Credit Facility (USD)</b>															
Committed Amount	\$650	\$550	\$525	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500
Outstanding	\$0	\$0	\$0	\$0	\$0	\$0	\$57	\$118	\$44	\$0	\$0	\$182	\$128	\$141	\$44
Letters Of Credit & Other	\$26	\$46	\$42	\$21	\$28	\$25	\$32	\$33	\$32	\$32	\$32	\$32	\$32	\$32	\$32
<b>Availability</b>	<b>\$624</b>	<b>\$504</b>	<b>\$484</b>	<b>\$479</b>	<b>\$472</b>	<b>\$475</b>	<b>\$411</b>	<b>\$349</b>	<b>\$424</b>	<b>\$468</b>	<b>\$468</b>	<b>\$286</b>	<b>\$340</b>	<b>\$327</b>	<b>\$424</b>
<b>Total Liquidity (C\$)</b>	<b>\$1,115</b>	<b>\$948</b>	<b>\$599</b>	<b>\$544</b>	<b>\$569</b>	<b>\$550</b>	<b>\$623</b>	<b>\$483</b>	<b>\$594</b>	<b>\$932</b>	<b>\$1,298</b>	<b>\$386</b>	<b>\$478</b>	<b>\$467</b>	<b>\$594</b>

Source: J.P. Morgan estimates, company data.

## Transocean

### Summary & Relative Value Considerations

Transocean earlier this week announced the long-anticipated secured financing deal for the newbuild Titan with the company issuing \$525 million of 8.375% sr. secured notes due 2028. We suspect this is the first domino to fall ahead of the company returning to the capital markets for a more comprehensive refinancing. We note that the early cancellation of the Equinox contract resulted in RIG redeeming \$121 million of the Sentry notes in January that otherwise would have been paid in March. Liquidity, however, remains ample in our view as higher priced backlog additions across the last six months will translate into incremental y/y earnings while capital expenditures will take a step down in 2023 following the final newbuild payment (expected) in 4Q22. Refinancing optionality remains impressive despite the somewhat uncertain HE semi outlook in our view, and we further highlight the ~40% increase in RIG equity (to ~\$5.4/sh) since 3Q earnings in the context of liquidity optionality. The company paired an impressive \$1.6 billion of backlog additions in its October fleet sheet with another ~\$1.5 billion of contract awards announced subsequent to quarter-end. We were pleased to see the Norge's contract backlog come to fruition post government approval hurdles having been met in addition to positive momentum with respect to drillship bookings in Brazil and the GoM. The relatively soft 2023 Norwegian HE Semi market is expected to be a short-term phenomenon, and risks to HE semi earnings profiles are mitigated to an extent by recent semi awards outside of Norway featuring attractive economics.

### Financial Model Thoughts

We now model RIG delivering ~\$1.1 billion of adj. EBITDA in 2023 (v. ~\$1 billion prior) and ~\$300 million of free cash flow (+\$50 million v. prior). We conservatively model \$350 million of capex in 2023 (v. Street ~\$260 million) to account for expected reactivation capex and cost inflation. Total debt and liquidity in our model at YE23 of ~\$6.8 billion and ~\$1.3 billion, respectively, incorporates the aforementioned secured financing along with an undrawn revolver. Our updated 2024 modeling assumptions translate to \$1.25 billion of adj. EBITDA (v. \$1.13 billion prior) and ~\$450 million of FCF (unchanged) after \$400 million of capex (+\$100 million v. prior). Note that we model a \$350 million RCF draw to bridge liquidity through the 2024 bullet maturities translating to YE24 liquidity and net leverage of ~\$800 million and 4.6x, respectively.

Table 17: RIG Capital Structure Summary

	PF 3Q22	PF FY22 Leverage	% of EV
5.375% Secured Notes due 2023 (Sentry)	\$122	2.8x	1.2%
7.75% Secured Notes due 2024 (Phoenix)	\$240	2.8x	2.4%
6.25% Secured Notes due 2024 (Proteus)	\$250	2.8x	2.5%
5.875% Secured Notes due 2024 (Guardian)	\$311	2.8x	3.1%
6.125% Secured Notes due 2025 (Pontus)	\$303	2.8x	3.0%
6.875% Secured Notes due 2027 (Poseidon)	\$448	2.8x	4.5%
Revolving Credit Facility (2025)	\$0	2.8x	0.0%
Atlas Shipyard Financing 5yr 4.5%	\$349	2.8x	3.5%
NEW Titan Secured financing	\$525	2.8x	5.3%
<b>Total Secured Debt</b>	<b>\$2,547</b>	<b>2.8x</b>	<b>25.6%</b>
11.5% Sr. PGNs due 2027	\$687	6.0x	6.9%
4% Sr structurally gtd notes due 2025	\$294	6.0x	2.9%
7.50% Senior Notes due January 2026	\$569	6.0x	5.7%
8.0% Sr Guaranteed notes due 2027	\$612	6.0x	6.1%
7.250% Notes due Nov 2025	\$354	6.0x	3.6%
2.5% sr gtd exchangeables due jan 2027	\$238	6.0x	2.4%
4.625% Exchangeable Jr Gtds due 2029	\$300	6.0x	3.0%
<b>Total Structurally Senior Debt</b>	<b>\$5,601</b>	<b>6.0x</b>	<b>56.2%</b>
<b>Total Senior Debt</b>	<b>\$7,119</b>	<b>7.7x</b>	<b>71.4%</b>
Enterprise Value	\$9,967		
Cash	\$954		
<b>Credit Facility</b>			
Committed Amount	\$774		
Outstanding	\$0		
Letters Of Credit & Other	\$7		
<b>Availability</b>	<b>\$767</b>		
<b>Total Liquidity</b>	<b>\$1,721</b>		

Source: Company reports and J.P. Morgan estimates

Table 18: RIG Financial Summary

Fiscal year-end December	2015	2016	2017	2018	2019	2020	2021	2022E	2023E	2024E	1Q22	2Q22	3Q22	4Q22E
<b>Income statement data</b>														
<b>Net Sales</b>	<b>\$7,386</b>	<b>\$4,161</b>	<b>\$2,886</b>	<b>\$3,018</b>	<b>\$3,274</b>	<b>\$3,382</b>	<b>\$2,776</b>	<b>\$2,695</b>	<b>\$3,176</b>	<b>\$3,646</b>	<b>\$615</b>	<b>\$722</b>	<b>\$730</b>	<b>\$628</b>
y/y growth	-19.5%	-43.7%	-30.6%	4.6%	8.5%	3.3%	-17.9%	-2.9%	17.9%	14.8%	-13.2%	1.3%	6.9%	-6.4%
Operating Costs	\$2,955	\$1,883	\$1,400	\$1,799	\$2,140	\$1,985	\$1,697	\$1,687	\$1,920	\$2,191	\$412	\$433	\$411	\$431
General & Administrative	\$193	\$171	\$156	\$188	\$193	\$183	\$167	\$181	\$200	\$208	\$42	\$43	\$42	\$54
<b>EBITDA</b>	<b>\$4,238</b>	<b>\$2,107</b>	<b>\$1,330</b>	<b>\$1,031</b>	<b>\$941</b>	<b>\$1,214</b>	<b>\$912</b>	<b>\$827</b>	<b>\$1,056</b>	<b>\$1,247</b>	<b>\$161</b>	<b>\$246</b>	<b>\$277</b>	<b>\$143</b>
EBITDA margin	57.4%	50.6%	46.1%	34.2%	28.7%	35.9%	32.8%	30.7%	33.2%	34.2%	26.2%	34.1%	38.0%	22.7%
Adjustment	(\$888)	(\$169)	\$89	\$51	\$38	(\$140)	\$83	(\$8)	\$0	\$0	\$2	(\$1)	(\$9)	\$0
<b>Adjusted EBITDA</b>	<b>\$3,350</b>	<b>\$1,938</b>	<b>\$1,419</b>	<b>\$1,082</b>	<b>\$979</b>	<b>\$1,024</b>	<b>\$995</b>	<b>\$819</b>	<b>\$1,056</b>	<b>\$1,247</b>	<b>\$163</b>	<b>\$245</b>	<b>\$268</b>	<b>\$143</b>
Adj. EBITDA margin	45.4%	46.6%	49.2%	35.9%	29.9%	30.3%	35.8%	30.4%	33.2%	34.2%	26.5%	33.9%	36.7%	22.7%
<b>LTM Adjusted EBITDA</b>	<b>\$3,350</b>	<b>\$1,938</b>	<b>\$1,419</b>	<b>\$1,082</b>	<b>\$979</b>	<b>\$1,024</b>	<b>\$995</b>	<b>\$819</b>	<b>\$1,056</b>	<b>\$1,247</b>	<b>\$913</b>	<b>\$903</b>	<b>\$926</b>	<b>\$819</b>
<b>Operating Statistics</b>														
<b>Dayrates</b>														
Ultra Deepwater Floaters	\$514,097	\$492,085	\$447,755	\$356,935	\$328,878	\$344,045	\$355,467	\$325,260	\$385,316	\$406,344	\$305,600	\$334,400	\$326,600	\$333,000
Deepwater Floaters	\$353,949	\$253,900	\$195,124	\$186,232	-	-	-	-	-	-	-	-	-	-
Harsh Environment Floaters	\$543,159	\$329,072	\$235,901	\$296,341	\$310,260	\$343,572	\$386,298	\$392,629	\$383,699	\$385,000	\$399,100	\$406,000	\$374,000	\$395,000
Midwater Floaters	\$349,225	\$274,014	\$95,573	\$99,848	\$114,687	-	-	-	-	-	-	-	-	-
High-Spec Jackups	\$172,969	\$143,580	\$143,982	-	-	-	-	-	-	-	-	-	-	-
<b>Utilization</b>														
Ultra Deepwater Floaters	66%	45%	39%	48%	51%	59%	49%	52%	56%	60%	50%	54%	53%	52%
Deepwater Floaters	73%	54%	74%	92%	-	-	-	-	-	-	-	-	-	-
Harsh Environment Floaters	64%	58%	72%	82%	78%	73%	64%	69%	75%	73%	60%	70%	76%	72%
Midwater Floaters	77%	42%	38%	41%	37%	-	-	-	-	-	0%	0%	0%	0%
High-Spec Jackups	83%	55%	61%	-	-	-	-	-	-	-	-	-	-	-
<b>Free Cash Flow</b>														
<b>Adjusted EBITDA</b>	<b>\$3,350</b>	<b>\$1,938</b>	<b>\$1,419</b>	<b>\$1,082</b>	<b>\$979</b>	<b>\$1,024</b>	<b>\$995</b>	<b>\$819</b>	<b>\$1,056</b>	<b>\$1,247</b>	<b>\$163</b>	<b>\$245</b>	<b>\$268</b>	<b>\$143</b>
Less: Capex	(\$2,001)	(\$1,344)	(\$497)	(\$184)	(\$387)	(\$265)	(\$208)	(\$883)	(\$350)	(\$400)	(\$106)	(\$115)	(\$87)	(\$575)
Less: Interest Expense	(\$420)	(\$407)	(\$491)	(\$620)	(\$660)	(\$571)	(\$447)	(\$402)	(\$400)	(\$400)	(\$102)	(\$100)	(\$96)	(\$104)
Less: Dividends	(\$410)	(\$30)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>Free Cash Flow</b>	<b>\$519</b>	<b>\$157</b>	<b>\$431</b>	<b>\$278</b>	<b>(\$68)</b>	<b>\$188</b>	<b>\$340</b>	<b>(\$466)</b>	<b>\$306</b>	<b>\$447</b>	<b>(\$45)</b>	<b>\$30</b>	<b>\$85</b>	<b>(\$536)</b>
Less: Taxes	(\$206)	(\$107)	(\$94)	(\$228)	(\$59)	\$27	(\$121)	(\$15)	(\$48)	(\$80)	(\$26)	(\$3)	\$5	\$9
Plus: Working Capital	(\$364)	(\$165)	\$68	\$129	(\$301)	(\$348)	(\$77)	(\$236)	(\$135)	(\$132)	(\$88)	(\$130)	\$15	(\$33)
Plus: Other	\$972	\$14	\$55	\$6	\$41	\$47	\$47	\$47	\$47	\$0	\$0	\$0	\$47	\$0
<b>Cash Flow Before Acq. &amp; Financing</b>	<b>\$921</b>	<b>(\$101)</b>	<b>\$460</b>	<b>\$185</b>	<b>(\$387)</b>	<b>(\$87)</b>	<b>\$189</b>	<b>(\$670)</b>	<b>\$170</b>	<b>\$236</b>	<b>(\$159)</b>	<b>(\$103)</b>	<b>\$152</b>	<b>(\$560)</b>

Source: J.P. Morgan estimates, company data.

Table 19: RIG Financial Summary (Cont'd)

Fiscal year-end December	2015	2016	2017	2018	2019	2020	2021	2022E	2023E	2024E	1Q22	2Q22	3Q22	4Q22E
<b>Balance Sheet Items</b>														
Cash	\$2,339	\$3,052	\$2,519	\$2,589	\$2,349	\$1,560	\$1,412	\$688	\$743	\$558	\$1,226	\$1,161	\$1,341	\$688
7.75% Secured Notes due 2024 (Phoenix)	\$0	\$600	\$540	\$480	\$420	\$360	\$300	\$240	\$180	\$0	\$300	\$270	\$270	\$240
6.25% Secured Notes due 2024 (Proteus)	\$0	\$625	\$562	\$500	\$437	\$375	\$313	\$250	\$187	\$0	\$313	\$281	\$281	\$250
6.125% Secured Notes due 2025 (Pontus)	\$0	\$0	\$0	\$600	\$534	\$468	\$402	\$336	\$270	\$204	\$369	\$369	\$336	\$336
5.875% Secured Notes due 2024 (Guardian)	\$0	\$0	\$0	\$750	\$667	\$585	\$435	\$352	\$270	\$0	\$393	\$394	\$352	\$352
6.875% Secured Notes due 2027 (Poseidon)	\$0	\$0	\$0	\$0	\$550	\$550	\$550	\$482	\$414	\$346	\$516	\$516	\$482	\$482
5.375% Secured Notes due 2023 (Sentry)	\$0	\$0	\$0	\$0	\$525	\$364	\$306	\$243	\$0	\$0	\$306	\$274	\$274	\$243
Revolving Credit Facility (2025)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$350	\$0	\$0	\$0	\$0
Atlas Shipyard Financing 5yr 4.5%	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$349	\$349	\$349	\$0	\$349	\$349	\$349
NEW Titan Secured financing	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$525	\$525	\$0	\$0	\$0	\$0
<b>Total Secured Debt</b>	<b>\$591</b>	<b>\$1,791</b>	<b>\$2,005</b>	<b>\$3,123</b>	<b>\$3,333</b>	<b>\$2,813</b>	<b>\$2,324</b>	<b>\$2,251</b>	<b>\$2,195</b>	<b>\$1,774</b>	<b>\$2,197</b>	<b>\$2,453</b>	<b>\$2,344</b>	<b>\$2,251</b>
11.5% Sr. PGNs due 2027	\$0	\$0	\$0	\$0	\$0	\$687	\$687	\$687	\$687	\$687	\$687	\$687	\$687	\$687
4% Sr structurally gtd notes due 2025	\$0	\$0	\$0	\$0	\$0	\$0	\$294	\$294	\$294	\$294	\$294	\$294	\$294	\$294
7.50% Senior Notes due January 2026	\$0	\$0	\$750	\$750	\$750	\$569	\$569	\$569	\$569	\$569	\$569	\$569	\$569	\$569
8.0% Sr Guaranteed notes due 2027	\$0	\$0	\$0	\$0	\$0	\$612	\$612	\$612	\$612	\$612	\$612	\$612	\$612	\$612
7.250% Notes due Nov 2025	\$0	\$0	\$0	\$750	\$750	\$411	\$411	\$354	\$354	\$354	\$411	\$411	\$364	\$354
2.5% sr gtd exchangeables due jan 2027	\$0	\$0	\$0	\$0	\$0	\$238	\$238	\$238	\$238	\$238	\$238	\$238	\$238	\$238
4.625% Exchangeable Jr Gtds due 2029	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$300	\$300	\$300	\$0	\$0	\$300	\$300
<b>Total Structurally Senior Debt</b>	<b>\$591</b>	<b>\$3,041</b>	<b>\$4,005</b>	<b>\$5,873</b>	<b>\$5,547</b>	<b>\$5,330</b>	<b>\$5,135</b>	<b>\$5,305</b>	<b>\$5,249</b>	<b>\$4,828</b>	<b>\$5,008</b>	<b>\$5,264</b>	<b>\$5,408</b>	<b>\$5,305</b>
0.50% Exchangeable Bonds due Jan 2023	\$0	\$0	\$0	\$863	\$863	\$463	\$140	\$49	\$0	\$0	\$140	\$140	\$49	\$49
7.45% Notes due April 2027	\$94	\$88	\$88	\$88	\$88	\$52	\$52	\$52	\$52	\$52	\$52	\$52	\$52	\$52
8% Debentures due April 2027	\$57	\$57	\$57	\$57	\$57	\$22	\$22	\$22	\$22	\$22	\$22	\$22	\$22	\$22
7.5% Notes due April 2031	\$589	\$588	\$588	\$588	\$588	\$396	\$396	\$396	\$396	\$396	\$396	\$396	\$396	\$396
6.80% Senior Notes due March 2038	\$991	\$1,000	\$1,000	\$1,000	\$1,000	\$610	\$610	\$610	\$610	\$610	\$610	\$610	\$610	\$610
7.35% Senior Notes due December 2041	\$297	\$300	\$300	\$300	\$300	\$177	\$177	\$177	\$177	\$177	\$177	\$177	\$177	\$177
7% Notes due June 2028	\$309	\$300	\$300	\$300	\$300	\$261	\$261	\$261	\$261	\$261	\$261	\$261	\$261	\$261
<b>Total Debt</b>	<b>\$8,490</b>	<b>\$8,546</b>	<b>\$7,484</b>	<b>\$10,094</b>	<b>\$9,361</b>	<b>\$7,376</b>	<b>\$6,820</b>	<b>\$6,872</b>	<b>\$6,767</b>	<b>\$6,346</b>	<b>\$6,693</b>	<b>\$6,949</b>	<b>\$6,975</b>	<b>\$6,872</b>
<b>Credit Ratios</b>														
Secured Debt / EBITDA	0.2x	0.9x	1.4x	2.9x	3.4x	2.7x	2.3x	2.7x	2.1x	1.4x	2.4x	2.7x	2.5x	2.7x
Guaranteed Debt / EBITDA	0.2x	1.6x	2.8x	5.4x	5.7x	5.2x	5.2x	6.5x	5.0x	3.9x	5.5x	5.8x	5.8x	6.5x
Senior Debt / EBITDA	2.4x	4.2x	5.0x	9.1x	9.3x	6.9x	6.6x	8.1x	6.2x	4.9x	7.0x	7.4x	7.3x	8.1x
Total Debt / EBITDA	2.5x	4.4x	5.3x	9.3x	9.6x	7.2x	6.9x	8.4x	6.4x	5.1x	7.3x	7.7x	7.5x	8.4x
Net Debt / EBITDA	1.8x	2.8x	3.5x	6.9x	7.2x	5.7x	5.4x	7.6x	5.7x	4.6x	6.0x	6.4x	6.1x	7.6x
<b>Liquidity</b>														
<b>Cash</b>	<b>\$2,339</b>	<b>\$3,052</b>	<b>\$2,519</b>	<b>\$2,589</b>	<b>\$2,349</b>	<b>\$1,560</b>	<b>\$1,412</b>	<b>\$688</b>	<b>\$743</b>	<b>\$558</b>	<b>\$1,226</b>	<b>\$1,161</b>	<b>\$1,341</b>	<b>\$688</b>
<b>Credit Facility</b>														
Committed Amount	\$3,000	\$3,000	\$3,000	\$1,000	\$1,295	\$1,295	\$1,295	\$774	\$600	\$600	\$1,330	\$1,330	\$774	\$774
Outstanding	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$350	\$0	\$0	\$0	\$0
Letters Of Credit & Other	\$0	\$0	\$7	\$27	\$9	\$22	\$17	\$7	\$7	\$7	\$14	\$9	\$7	\$7
<b>Availability</b>	<b>\$3,000</b>	<b>\$3,000</b>	<b>\$2,993</b>	<b>\$973</b>	<b>\$1,286</b>	<b>\$1,273</b>	<b>\$1,278</b>	<b>\$767</b>	<b>\$593</b>	<b>\$243</b>	<b>\$1,316</b>	<b>\$1,321</b>	<b>\$767</b>	<b>\$767</b>
<b>Total Liquidity</b>	<b>\$5,339</b>	<b>\$6,052</b>	<b>\$5,512</b>	<b>\$3,562</b>	<b>\$3,635</b>	<b>\$2,833</b>	<b>\$2,690</b>	<b>\$1,455</b>	<b>\$1,336</b>	<b>\$801</b>	<b>\$2,542</b>	<b>\$2,482</b>	<b>\$2,108</b>	<b>\$1,455</b>

Source: J.P. Morgan estimates, company data.

## TechnipFMC

### Summary & Relative Value Considerations

Technip delivered strong 3Q22 results with the company posting better than expected earnings along with an updated outlook calling for Subsea inbounds of at least \$9 billion over the next five quarters. The modest caveat to an otherwise excellent quarterly result was the company kicking off its share repurchase program ahead of schedule to the tune of \$50 million. That said, the earlier than expected shift in capital allocation was fairly justified in our view given the company's ample existing liquidity position and favorable fundamental outlook. We now model an additional \$50 million worth of share repurchases in 4Q22 prior to the company exercising the first call date on the 26s (at \$103.25) on 2/1/23.

### Financial Model Thoughts

Our updated FY23 modeling assumptions translate to FTI delivering ~\$820 million of adj. EBITDA relative to the company's \$825 million guidance update offered up with 3Q earnings. We now model FTI generating ~\$460 million of FCF during 2023 after \$300 million of capital expenditures. Note that our model assumes the company utilizes free cash flow to repay the \$150 million of revolver borrowings in 4Q22 prior to utilizing liquidity capacity to exercise the call option on the 26s in February and repay the October maturities. Net leverage in our model falls to 0.3x at YE23 (v. 0.6x at YE22). Our updated FY24 modeling assumptions translate to FTI delivering ~\$900 million of adj. EBITDA (+\$25 million v. prior) and free cash flow ~\$490 million after \$360 million of capex.

Table 20: FTI Capital Structure Summary

	3Q22	Leverage 2022E	% of EV
Cash	\$712		11.4%
Credit Facility	\$150	0.2x	2.4%
Commercial Paper Facility	\$0	0.2x	0.0%
Bank Borrowings	\$0	0.2x	0.0%
<b>Total Bank Debt</b>	<b>\$150</b>	<b>0.2x</b>	<b>2.4%</b>
6.5% Guaranteed Notes due 2026	\$203	0.3x	3.2%
<b>Total Guaranteed Debt</b>	<b>\$203</b>	<b>0.3x</b>	<b>3.2%</b>
3.4% senior notes due 2022	\$0	2.0x	0.0%
3.15% senior notes due 2023	\$249	2.0x	4.0%
3.15% senior notes due 2023	\$0	2.0x	0.0%
4.50% Notes due 2025 (5.75%)	\$195	2.0x	3.1%
4% senior notes due 2027	\$73	2.0x	1.2%
4% senior notes due 2032	\$98	2.0x	1.6%
3.75% senior notes due 2033	\$98	2.0x	1.6%
Other	\$313	2.0x	5.0%
<b>Total Senior Debt</b>	<b>\$1,377</b>	<b>2.0x</b>	<b>22.0%</b>
Other	\$0	2.0x	0.0%
<b>Total Debt</b>	<b>\$1,377</b>	<b>2.0x</b>	<b>22.0%</b>
Equity Value	\$5,554	9.3x	88.9%
Less: Cash & equivalents	\$712	9.3x	11.4%
Minority Interests & Other	\$27	9.3x	0.4%
<b>Enterprise Value</b>	<b>\$6,247</b>	<b>9.3x</b>	<b>100.0%</b>
Cash	\$712		
<b>Credit Facility</b>			
Committed Amount	\$1,000		
Outstanding	\$150		
Letters Of Credit & Other	\$45		
<b>Availability</b>	<b>\$805</b>		
<b>Total Liquidity</b>	<b>\$1,516</b>		

Source: Company reports and J.P. Morgan estimates.

Table 21: FTI Financial Model Summary

Fiscal year-end December	Historical Combined Technip + Energies			RemainCo (Technip)							
	2018	2019	2020	1Q22	2Q22	3Q22	4Q22E	2021	2022E	2023E	2024E
<b>Income statement data</b>											
Net Sales	\$12,553	\$13,409	\$13,051	\$1,556	\$1,717	\$1,733	\$1,649	\$6,404	\$6,655	\$7,260	\$7,635
y/y growth		6.8%	-2.7%	-	-	-	-	-	3.9%	9.1%	5.2%
Adjusted EBITDA	\$1,537	\$1,529	\$1,083	\$154	\$187	\$186	\$147	\$580	\$672	\$822	\$903
Adj. EBITDA margin	12.2%	11.4%	8.3%	9.9%	10.9%	10.7%	8.9%	9.1%	10.1%	11.3%	11.8%
LTM Adjusted EBITDA	\$1,537	\$1,529	\$1,083	\$569	\$611	\$656	\$672	\$580	\$672	\$822	\$903
<b>Operating Statistics</b>											
Subsea Revenue	\$4,840	\$5,523	\$5,471	\$1,289	\$1,415	\$1,415	\$1,286	\$5,329	\$5,404	\$5,950	\$6,174
Subsea EBITDA	\$700	\$650	\$467	\$129	\$176	\$184	\$139	\$559	\$627	\$735	\$808
Subsea Backlog	\$6,000	\$8,480	\$6,876	\$7,741	\$7,926	\$7,603	\$7,979	\$6,553	\$7,979	\$9,097	\$0
Surface Revenue	\$1,592	\$1,617	\$1,059	\$267	\$303	\$318	\$364	\$1,074	\$1,251	\$1,310	\$1,461
Surface EBITDA	\$260	\$177	\$81	\$22	\$32	\$41	\$43	\$114	\$138	\$167	\$185
<b>Free Cash Flow</b>											
Adjusted EBITDA	\$1,537	\$1,529	\$1,083	\$154	\$187	\$186	\$147	\$580	\$672	\$822	\$903
Less: Capex	(\$368)	(\$454)	(\$307)	(\$27)	(\$36)	(\$31)	(\$85)	(\$192)	(\$179)	(\$300)	(\$360)
Less: Interest Expense	(\$39)	(\$28)	(\$148)	(\$34)	(\$28)	(\$31)	(\$20)	(\$143)	(\$113)	(\$59)	(\$54)
Less: Dividends	(\$238)	(\$233)	(\$59)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Free Cash Flow	\$892	\$814	\$570	\$92	\$123	\$124	\$42	\$245	\$380	\$463	\$489
Less: Taxes	(\$342)	(\$327)	(\$213)	(\$29)	(\$20)	(\$43)	(\$15)	(\$111)	(\$106)	(\$120)	(\$140)
Plus: Working Capital	(\$1,253)	(\$59)	\$23	(\$468)	(\$217)	\$87	\$284	\$490	(\$313)	(\$28)	(\$155)
Plus: Other	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Cash Flow Before Acquisitions & Financing	(\$703)	\$428	\$380	(\$404)	(\$114)	\$168	\$310	\$624	(\$39)	\$315	\$194

Source: Company reports and J.P. Morgan estimates.

Table 22: FTI Financial Model Summary (Cont'd)

Fiscal year-end December	Combined Co			RemainCo (Technip)							
	2018	2019	2020	1Q22	2Q22	3Q22	4Q22E	2021	2022E	2023E	2024E
<b>Balance Sheet Items</b>											
Cash	\$5,540	\$5,190	\$4,808	\$1,203	\$685	\$712	\$822	\$1,327	\$822	\$561	\$555
Credit Facility	\$0	\$0	\$0	\$0	\$170	\$150	\$0	\$0	\$0	\$0	\$0
Commercial Paper Facility	\$1,916	\$1,967	\$1,526	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Bank Borrowings	\$265	\$513	\$310	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>Total Bank Debt</b>	<b>\$2,181</b>	<b>\$2,480</b>	<b>\$1,836</b>	<b>\$0</b>	<b>\$170</b>	<b>\$150</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
6.5% Guaranteed Notes due 2026	\$0	\$0	\$0	\$633	\$203	\$203	\$203	\$633	\$203	\$0	\$0
<b>Total Guaranteed Debt</b>	<b>\$2,181</b>	<b>\$2,480</b>	<b>\$1,836</b>	<b>\$633</b>	<b>\$373</b>	<b>\$353</b>	<b>\$203</b>	<b>\$633</b>	<b>\$203</b>	<b>\$0</b>	<b>\$0</b>
Synthetic bonds due 2021	\$491	\$493	\$551	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
3.45% Senior Note due 2022	\$500	\$500	\$500	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
5% senior notes due 2020	\$229	\$225	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
3.4% senior notes due 2022	\$172	\$169	\$184	\$167	\$0	\$0	\$0	\$170	\$0	\$0	\$0
3.15% senior notes due 2023	\$149	\$146	\$160	\$283	\$265	\$249	\$249	\$289	\$249	\$0	\$0
3.15% senior notes due 2023	\$143	\$140	\$153	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4% senior notes due 2027	\$86	\$84	\$92	\$83	\$78	\$73	\$73	\$85	\$73	\$73	\$73
4% senior notes due 2032	\$115	\$112	\$123	\$111	\$104	\$98	\$98	\$113	\$98	\$98	\$98
3.75% senior notes due 2033	\$115	\$112	\$123	\$111	\$104	\$98	\$98	\$113	\$98	\$98	\$98
Other	\$23	\$23	\$0	\$416	\$355	\$313	\$313	\$397	\$313	\$313	\$313
<b>Total Debt</b>	<b>\$4,203</b>	<b>\$4,485</b>	<b>\$3,967</b>	<b>\$2,026</b>	<b>\$1,486</b>	<b>\$1,377</b>	<b>\$1,227</b>	<b>\$2,027</b>	<b>\$1,227</b>	<b>\$776</b>	<b>\$776</b>
<b>Credit Ratios</b>											
Bank Debt / EBITDA	1.4x	1.6x	1.7x	0.0x	0.3x	0.2x	0.0x	0.0x	0.0x	0.0x	0.0x
Guaranteed Debt/EBITDA	1.4x	1.6x	1.7x	1.1x	0.6x	0.5x	0.3x	1.1x	0.3x	0.0x	0.0x
Total Debt / EBITDA	2.7x	2.9x	3.7x	3.6x	2.4x	2.1x	1.8x	3.5x	1.8x	0.9x	0.9x
Net Debt / EBITDA	-0.9x	-0.5x	-0.8x	1.4x	1.3x	1.0x	0.6x	1.2x	0.6x	0.3x	0.2x
EBITDA/Interest Expense	39.6x	54.2x	7.3x	4.5x	6.7x	6.0x	7.3x	4.1x	6.0x	13.9x	16.7x
EBITDA/Interest Expense - Capex	3.8x	3.2x	2.4x	2.5x	2.9x	3.0x	1.4x	1.7x	2.3x	2.3x	2.2x
Free Cash Flow / Total Debt	21.2%	18.2%	14.4%	4.6%	8.3%	9.0%	3.4%	12.1%	31.0%	59.6%	63.1%
<b>Liquidity</b>											
<b>Credit Facility</b>											
Committed Amount	\$2,500	\$2,500	\$3,050	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000
Outstanding	\$1,916	\$1,967	\$1,526	\$0	\$170	\$150	\$0	\$0	\$0	\$0	\$0
Letters Of Credit & Other	\$0	\$0	\$0	\$40	\$45	\$45	\$45	\$17	\$45	\$45	\$45
<b>Availability</b>	<b>\$584</b>	<b>\$533</b>	<b>\$1,524</b>	<b>\$960</b>	<b>\$785</b>	<b>\$805</b>	<b>\$955</b>	<b>\$983</b>	<b>\$955</b>	<b>\$955</b>	<b>\$955</b>
<b>Total Liquidity</b>	<b>\$6,124</b>	<b>\$5,723</b>	<b>\$6,332</b>	<b>\$2,163</b>	<b>\$1,470</b>	<b>\$1,516</b>	<b>\$1,777</b>	<b>\$2,311</b>	<b>\$1,777</b>	<b>\$1,515</b>	<b>\$1,509</b>

Source: Company reports and J.P. Morgan estimates



## Weatherford International Summary & Relative Value Considerations

Weatherford's latest progress on the balance sheet front positions the company well to capture incremental market share in 2023. Recall that WFRD executed on its new credit facility in October with initial total capacity of \$370 million, albeit with only \$45 million of revolving borrowing capacity (facility subsequently upsized to \$400 million with revolver availability unchanged). Further, the company redeemed \$125 million 11% 24s effective November 17 and more recently redeemed another \$20 million of the same tranche. We were also pleased to see the CFO search finally came to an end last week with the appointment of Arun Mitra to the role. The Weatherford structure staged an impressive rally since 3Q earnings with the 25s up ~\$3pts and the 30s up ~\$5pts. Price action is justified in our view given the favorable aforementioned credit-specific and (Services) macro developments since late October despite the move lower (and observed volatility) in prevailing oil prices. However, longer-dated WFRD risk now trading inside 9% reflects fair value in our view, and we therefore are moving to Neutral (from Overweight) on the credit (see page five for risks to our rating).

## Financial Model Thoughts

We now model FY22 adj. EBITDA of \$772 million (v. \$702 million prior) with the company generating ~\$180 million of cash post-WC and taxes on ~\$130 million of capex. Our latest modeling assumptions translate to ~12% y/y top-line growth along with ~70bps of margin expansion y/y. We model WFRD generating \$900 million of adj. EBITDA in 2023 (v. \$802 million prior) and FCF post-WC and taxes of ~\$270 million on a capex budget of \$225 million. Net leverage in our model exiting FY23 falls to 1x (v. 1.5x exiting FY22e). Our updated 2024 estimates conservatively assume mid-single-digit revenue growth (~4% y/y) along with margin expansion of ~10bps. We now model WFRD generating \$960 million of adj. EBITDA (+\$95 million v. prior) and FCF post-WC and taxes of ~\$320 million after incurring higher y/y capex (FY24e \$300 million). Note that we model the company calling the remaining \$105 million of the 2024s on 12/1/23 at par with cash on hand.

Table 23: Weatherford Capital Structure Summary

	PF 3Q22	Gross Leverage (PF)		Debt/Ent Value
		LTM	22E	
Credit Facility	\$0.0	0.0x	0.0x	0.0%
<b>Total Bank Debt</b>	<b>\$0.0</b>	<b>0.0x</b>	<b>0.0x</b>	<b>0.0%</b>
8.75% Sr Secured notes due 2024	\$0.0	0.0x	0.0x	0.0%
6.5% Sr Secured notes due 2028	\$500.0	0.7x	0.6x	10.4%
<b>Total Secured Debt</b>	<b>\$500.0</b>	<b>0.7x</b>	<b>0.6x</b>	<b>10.4%</b>
11.000% Senior Notes due Dec 2024	\$105.0	3.1x	2.9x	2.2%
8.625% Sr Notes due 2030	\$1,600.0	3.1x	2.9x	33.2%
Other	\$0.0	3.1x	2.9x	0.0%
<b>Total Debt</b>	<b>\$2,205.0</b>	<b>3.1x</b>	<b>2.9x</b>	<b>45.7%</b>
Equity Value	\$3,623.6	6.8x	6.2x	75.1%
<b>Enterprise Value</b>	<b>\$4,825.7</b>	<b>6.8x</b>	<b>6.2x</b>	<b>100.0%</b>
Cash	\$1,003.0			
<b>Credit Facility</b>				
Committed Amount	\$400.0			
Outstanding	\$0.0			
Letters Of Credit & Other	\$163.3			
<b>Availability*</b>	<b>\$45.0</b>			
<b>Total Liquidity</b>	<b>\$1,048.0</b>			

Source: Company reports and J.P. Morgan estimates. \*WFRD maintains \$45mm of revolving capacity under the existing credit facility.



Table 24: WFRD Financial Model Summary

<b>Financials Restated Beginning 2020</b>									
<b>Fiscal year-end December</b>	<b>2020</b>	<b>2021</b>	<b>2022E</b>	<b>2023E</b>	<b>2024E</b>	<b>1Q22</b>	<b>2Q22</b>	<b>3Q22</b>	<b>4Q22E</b>
<b>Income statement data</b>									
<b>Net Sales</b>	<b>\$3,685</b>	<b>\$3,645</b>	<b>\$4,286</b>	<b>\$4,808</b>	<b>\$5,104</b>	<b>\$938</b>	<b>\$1,064</b>	<b>\$1,120</b>	<b>\$1,164</b>
y/y growth	-29.3%	-1.1%	17.6%	12.2%	6.2%	12.7%	17.8%	18.5%	20.6%
<b>Segment EBITDA</b>									
Drilling & Evaluation	\$132	\$186	\$300	\$328	\$337	\$59	\$69	\$85	\$87
Well Construction & Completion	\$273	\$256	\$293	\$337	\$354	\$67	\$67	\$78	\$81
Production & Intervention	\$154	\$191	\$244	\$303	\$336	\$39	\$68	\$66	\$71
<b>Segment EBITDA</b>	<b>\$559</b>	<b>\$633</b>	<b>\$836</b>	<b>\$968</b>	<b>\$1,028</b>	<b>\$165</b>	<b>\$204</b>	<b>\$229</b>	<b>\$238</b>
R&D	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other/Corporate Exp	(\$100)	(\$62)	(\$64)	(\$68)	(\$68)	(\$14)	(\$18)	(\$15)	(\$17)
<b>Adjusted EBITDA</b>	<b>\$460</b>	<b>\$571</b>	<b>\$772</b>	<b>\$900</b>	<b>\$960</b>	<b>\$151</b>	<b>\$186</b>	<b>\$214</b>	<b>\$221</b>
EBITDA margin	12.5%	15.7%	18.0%	18.7%	18.8%	16.1%	17.5%	19.1%	19.0%
<b>LTM EBITDA</b>	<b>\$460</b>	<b>\$571</b>	<b>\$772</b>	<b>\$900</b>	<b>\$960</b>	<b>\$620</b>	<b>\$670</b>	<b>\$705</b>	<b>\$772</b>
<b>Operating Statistics</b>									
<b>Segment EBITDA Margin</b>									
Drilling & Evaluation	12.6%	17.4%	22.8%	22.5%	21.2%	20.2%	21.8%	24.4%	24.4%
Well Construction & Completion	19.3%	18.9%	19.2%	19.8%	19.8%	19.5%	17.5%	19.9%	19.9%
Production & Intervention	13.9%	16.9%	17.8%	19.4%	20.5%	13.6%	19.7%	18.5%	18.5%
<b>Free Cash Flow</b>									
<b>Adjusted EBITDA</b>	<b>\$460</b>	<b>\$571</b>	<b>\$772</b>	<b>\$900</b>	<b>\$960</b>	<b>\$151</b>	<b>\$186</b>	<b>\$214</b>	<b>\$221</b>
Less: Capex	(\$154)	(\$85)	(\$128)	(\$225)	(\$300)	(\$20)	(\$24)	(\$39)	(\$45)
Less: Interest Expense	(\$266)	(\$259)	(\$223)	(\$218)	(\$186)	(\$17)	(\$100)	(\$19)	(\$87)
Less: Dividends	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>Free Cash Flow</b>	<b>\$40</b>	<b>\$227</b>	<b>\$421</b>	<b>\$457</b>	<b>\$474</b>	<b>\$114</b>	<b>\$62</b>	<b>\$156</b>	<b>\$89</b>
Less: Taxes	(\$85)	(\$62)	(\$74)	(\$92)	(\$100)	(\$19)	(\$23)	(\$16)	(\$16)
Plus: Working Capital	\$192	\$86	(\$163)	(\$94)	(\$53)	(\$109)	(\$45)	\$12	(\$21)
Plus: Other	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>Cash Flow Before Acquisitions &amp; Financing</b>	<b>\$147</b>	<b>\$251</b>	<b>\$184</b>	<b>\$271</b>	<b>\$321</b>	<b>(\$14)</b>	<b>(\$6)</b>	<b>\$152</b>	<b>\$52</b>
Acquisitions	(\$4)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Equity Issued	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Source: Company reports and J.P. Morgan estimates.

Table 25: WFRD Financial Model Summary (Cont'd)

Fiscal year-end December	2020	2021	2022E	2023E	2024E	1Q22	2Q22	3Q22	4Q22E
<b>Balance Sheet Items</b>									
Credit Facility	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>Total Bank Debt</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
8.75% Sr Secured notes due 2024	\$500	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
New 6.5% Sr Secured notes due 2028	\$0	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500
<b>Total Bank &amp; Secured Debt</b>	<b>\$500</b>	<b>\$500</b>	<b>\$500</b>	<b>\$500</b>	<b>\$500</b>	<b>\$500</b>	<b>\$500</b>	<b>\$500</b>	<b>\$500</b>
11.000% Senior Notes due Dec 2024	\$2,100	\$300	\$125	\$0	\$0	\$300	\$300	\$250	\$125
New 8.625% Sr Notes due 2030	\$0	\$1,600	\$1,600	\$1,600	\$1,600	\$1,600	\$1,600	\$1,600	\$1,600
Other	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>Total Debt</b>	<b>\$2,600</b>	<b>\$2,400</b>	<b>\$2,225</b>	<b>\$2,100</b>	<b>\$2,100</b>	<b>\$2,400</b>	<b>\$2,400</b>	<b>\$2,350</b>	<b>\$2,225</b>
<b>Credit Ratios</b>									
Secured Debt / EBITDA	1.1x	0.9x	0.6x	0.6x	0.5x	0.8x	0.7x	0.7x	0.6x
Net Secured Debt / EBITDA	-1.7x	-1.1x	-0.7x	-0.8x	-1.1x	-0.9x	-0.9x	-0.9x	-0.7x
Total Debt / EBITDA	5.7x	4.2x	2.9x	2.3x	2.2x	3.9x	3.6x	3.3x	2.9x
Net Debt / EBITDA	2.9x	2.3x	1.5x	1.0x	0.6x	2.2x	2.0x	1.7x	1.5x
EBITDA/Interest Expense	1.7x	2.2x	3.5x	4.1x	5.2x	8.9x	1.9x	11.3x	2.5x
EBITDA/Interest Expense - Capex	1.1x	1.7x	2.2x	2.0x	2.0x	4.1x	1.5x	3.7x	1.7x
Free Cash Flow / Total Debt	1.5%	9.5%	18.9%	21.8%	22.6%	4.8%	2.6%	6.6%	4.0%
<b>Liquidity</b>									
<b>Cash</b>	<b>\$1,285</b>	<b>\$1,113</b>	<b>\$1,074</b>	<b>\$1,220</b>	<b>\$1,541</b>	<b>\$1,056</b>	<b>\$1,090</b>	<b>\$1,143</b>	<b>\$1,074</b>
<b>Credit Facility</b>									
Committed Amount	\$0	\$0	\$400	\$400	\$400	\$0	\$0	\$0	\$400
Outstanding	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Letters Of Credit & Other	\$0	\$0	\$163	\$163	\$163	\$0	\$0	\$0	\$163
<b>Availability</b>	<b>\$0</b>	<b>\$0</b>	<b>\$45</b>	<b>\$45</b>	<b>\$45</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$45</b>
<b>Total Liquidity</b>	<b>\$1,285</b>	<b>\$1,113</b>	<b>\$1,119</b>	<b>\$1,265</b>	<b>\$1,586</b>	<b>\$1,056</b>	<b>\$1,090</b>	<b>\$1,143</b>	<b>\$1,119</b>

Source: J.P. Morgan estimates, company data.

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