

July 11, 2022

## From Survivor to Thriver - This Could Be Big-oray!

### ACTION: Upgrading to SPECULATIVE BUY

With improved financial flexibility and commodity price outlook, we are upgrading Pulse Oil Corp. ("PUL") to a **SPECULATIVE BUY** (from HOLD) with a new target price of \$0.15 per share, based on a 2.5x multiple of our estimated 2024 debt-adjusted cash flow forecast.

### DETAILS: Bigoray EOR Project Expected to Boost Production in 2023

**Clean Balance Sheet:** On May 17, 2022, PUL announced the completion of a \$10.7 million private placement. Post financing, we estimate the Company has net positive working capital of ~\$8.3 million. The primary use of proceeds is to continue the development of the Company's Enhanced Oil Recovery ("EOR") Bigoray project located in central Alberta.

**Bigoray EOR Project:** PUL holds a 100% interest in two Nisku pinnacle reefs (Bigoray D and E Pools) that have produced an average of 28% of the 33.5 million barrels (MMboe) of discovered petroleum initially in place ("DPIIP") under waterflood. The Company plans to substantially increase oil recovery through the implementation of a solvent flood program, which involves the injection of a mixture of natural gas liquids ("NGL") into the reef, which mixes with the oil in the reservoir, lowering the viscosity and increasing mobility. The average recovery factor of 52 nearby analogous reefs that have been developed with a solvent flood is approximately 82%. Assuming PUL achieves a similar recovery factor, a successful solvent flood has the potential to recover an additional 18 MMboe of light oil from the Nisku reefs. The primary use of the proceeds from the recent capital raise will be invested into a flood of the Nisku D Pool first, which will then be followed by the flood of the Nisku E Pool, which is expected to be funded primarily with cash flow.

**Bigoray Infrastructure Nearly Complete:** During the market downturn, PUL completed a number of opportunistic infrastructure acquisitions, at a fraction of the normal market rate, including an 18 km, high vapour pressure ("HVP") pipeline from the Bigoray EOR project to an NGL solvent source tie-in point. The Company also acquired LPG pumps parts and fittings, coolers, water tanks and LPG storage bullets and booster pumps and a high-pressure flare knock out/stack. The majority of the Bigoray EOR infrastructure is now in place.

**Bigoray Next Steps:** PUL continues towards securing a solvent supply agreement and expects to announce a finalized agreement within the next month. In late 2022, PUL expects to commence solvent injection into the Nisku D pool. With production ramp-up, cash flow is expected to fund the flood of the Nisku E pool, with injection expected to commence in 2026.

**Production & Cash Flow Forecast:** We assumed that solvent injection into the Nisku D reef will commence in December 2022 with production growing to ~2,150 boe/d by the end of 2023 and reaching a peak rate of ~5,300 boe/d in July 2024. We forecast average 2024 production of 4,250 boe/d, and cash flow of \$42.2 million (\$0.05/fd share). We assumed solvent injection into the Nisku E reef will commence in late 2026, increasing production to ~8,300 boe/d in 2027 with potential annualized cash flow of \$81 million (\$0.10/fd share).

### IMPACT: Positive. Execution is Key

The Bigoray EOR project has the potential to add substantial light oil production without exploration risk. Securing a solvent supply agreement in the coming months, followed by solvent injection later this year could be two big catalysts for the stock. We are upgrading to a **SPECULATIVE BUY**.

#### KEY INFORMATION

Price	C\$0.04
Price Target	C\$0.15
Rating	SPECULATIVE BUY
Market Cap (\$M)	C\$12.13

#### MARKET DATA

PUL-TSXV	C\$0.04
52 Week Range	C\$0.08 - C\$0.04
Basic Shares O/S (mm)	517.3
Fully Diluted O/S (mm)	770.0
Enterprise Value (\$M)	C\$13.34

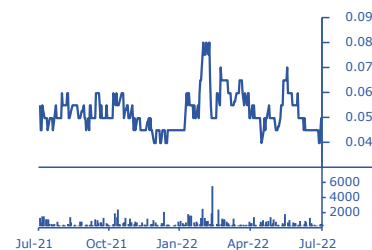
#### ESTIMATES

		2022E	2023E	2024E
FFO (\$MM)	Q1	1.1	(5.4)	8.8
	Q2	0.8	(4.9)	9.8
	Q3	0.7	(2.5)	11.1
	Q4	(1.2)	5.4	12.5
	FY	1.4	(7.4)	42.2
Production (BOE/D)	Q1	262	145	3,665
	Q2	160	248	4,098
	Q3	145	632	4,382
	Q4	145	2,148	4,841
	FY	178	798	4,250

#### ANALYST INFORMATION

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#### ONE YEAR PERFORMANCE CHART



## BIGORAY EOR PROJECT

PUL holds a 100% interest in the Bigoray EOR project located in Central Alberta, which includes the Nisku-D and Nisku-E pinnacle reefs that have produced on primary and secondary recovery (water flood) but were never converted to a miscible flood (“solvent flood”). The Nisku pools produce light sweet crude (~38° API) that is currently priced at a small discount to the WTI reference oil price. Pulse identified 52 Nisku pinnacle reefs within the Bigoray greater area. Almost all of these nearby analogous reefs have been developed with a miscible flood achieving a remarkable average recovery factor of ~82% of DPIIP.

**Detailed Engineering Work Complete:** Schlumberger completed a 3-dimensional analysis on the Nisku D and Nisku E pinnacle reefs and have completed over 200 separate computer iterations of the geo-model to determine the most effective positioning of solvent injectors, pressures and rates of injected fluids and production take-points to maximize the recovery of light oil from the Nisku reef pools.

**Production Infrastructure Nearly Complete:** PUL owns a 100% interest in the Bigoray injection and production facility. During the market downturn, PUL completed a number of opportunistic infrastructure acquisitions, at a fraction of the normal market rate, including an 18 km high vapour pressure (“HVP”) pipeline from the Bigoray EOR project area to an NGL solvent source tie-in point. The Company also acquired LPG pumps parts and fittings, coolers, water tanks and LPG storage bullet and booster pumps and a high-pressure flare knock out/stack. The majority of the Bigoray EOR infrastructure is now in place.

**Nisku D Pool Developed First, Followed By Nisku-E Pool:** Currently, PUL plans to commence the injection of solvent into the Nisku D pool late in 2022 with production building to a peak, plateau rate of approximately 5,100 boe/d (~55% light oil) in Q4/24. Injection into the Nisku E pool is targeted to commence in 2026, increasing corporate production to approximately 8,300 boe/d (55% oil and NGL’s) in 2027. After a four-year plateau rate, production during the blow-down period is expected to continue for at least another 10 years

**Limited Additional Abandonment and Reclamation Costs:** As of December 31, 2021, PUL had total 2P abandonment and reclamation costs of only \$4.5 million (undiscounted) or \$1.1 million discounted at 10%. PUL estimates that the Bigoray EOR project would add an additional \$200,000 of reclamation costs.

## Resource Potential

Combined the Nisku-D and Nisku-E reefs have an estimated discovered petroleum initially in place ("DPIIP") of ~33.5 MMboe of which an average of 28% has been recovered to date (Figure 1). Assuming a successful solvent flood achieves the average recovery factor of 82% (the average of surrounding similar Nisku Pinnacle Reefs), the estimated additional reserves are 18.1 MMboe. Assuming a more conservative low case scenario with only a 60% recovery factor, the reserve additions are still significant at an estimated 10.8 MMboe.

**Massive Potential Value:** In Figure 2, we show the potential value for new reserves additions from the miscible flood based upon a range of ultimate recovery factors and value of reserves in the ground. Assuming a successful solvent flood achieves an average recovery factor of 80%, we estimate the potential incremental value is \$348 million (\$0.45/fd share). Taking a more conservative 60% recovery factor, we estimate a potential value of \$161 million (\$0.21/fd share).

**Figure 1: Summary of Petroleum Initially In Place, Recover Factor to Date, and Potential Ultimate Recovery**

Reserves		Base Case			Low Case		
		D-Pool	E-Pool	Total	D-Pool	E-Pool	Total
DPIIP	MMbbls	17.0	16.5	33.5	17.0	16.5	33.519
Produced To date	MMbbls	5.2	4.2	9.4	5.2	4.2	9.4
Remaining Oil In Place	MMbbls	11.8	12.3	24.1	11.8	12.3	24.1
rf to date	%	31%	25%	28%	31%	25%	28%
Ultimate rf	%	82%	82%	82%	60%	60%	60%
<b>Additional Reserves</b>	<b>MMbbls</b>	<b>8.7</b>	<b>9.3</b>	<b>18.1</b>	<b>5.0</b>	<b>5.7</b>	<b>10.7</b>

Source: Company reports, Schlumberger, Research Capital Corp.

**Figure 2: Bigoray Potential Value Based Upon a Range of Recovery Factors and \$/bbl Value of Reserves**

		Ultimate Recovery Factor						
		55%	60%	65%	70%	75%	80%	85%
		Reserves Additions (MMboe)						
		9.0	10.7	12.4	14.1	15.7	17.4	19.1
		Incremental Value of Reserves Additions From Solvent Flood (\$MM)						
\$/boe								
\$ 10.00	\$	90	\$ 107	\$ 124	\$ 141	\$ 157	\$ 174	\$ 191
\$ 15.00	\$	136	<b>\$ 161</b>	\$ 186	\$ 211	\$ 236	<b>\$ 261</b>	\$ 286
\$ 20.00	\$	181	<b>\$ 214</b>	<b>\$ 248</b>	<b>\$ 281</b>	<b>\$ 315</b>	<b>\$ 348</b>	\$ 382
\$ 25.00	\$	226	\$ 268	\$ 310	\$ 352	\$ 393	\$ 435	\$ 477
\$ 30.00	\$	271	\$ 321	\$ 372	\$ 422	\$ 472	\$ 522	\$ 573

		Ultimate Recovery Factor						
		55%	60%	65%	70%	75%	80%	85%
		Reserves Additions (MMboe)						
		9.0	10.7	12.4	14.1	15.7	17.4	19.1
		Value Per Share						
\$/boe								
\$ 10.00	\$	0.12	\$ 0.14	\$ 0.16	\$ 0.18	\$ 0.20	\$ 0.23	\$ 0.25
\$ 15.00	\$	0.18	<b>\$ 0.21</b>	\$ 0.24	\$ 0.27	\$ 0.31	<b>\$ 0.34</b>	\$ 0.37
\$ 20.00	\$	0.23	<b>\$ 0.28</b>	<b>\$ 0.32</b>	<b>\$ 0.37</b>	<b>\$ 0.41</b>	<b>\$ 0.45</b>	\$ 0.50
\$ 25.00	\$	0.29	\$ 0.35	\$ 0.40	\$ 0.46	\$ 0.51	\$ 0.57	\$ 0.62
\$ 30.00	\$	0.35	\$ 0.42	\$ 0.48	\$ 0.55	\$ 0.61	\$ 0.68	\$ 0.74

Source: Company reports, Research Capital Corp.

**VALUATION – CORE NAV OF \$0.08/FD SH INCREASING TO \$0.28/FD SH WITH EOR**

**Trades at a Large Discount to Our Core NAV of \$0.06/fd share:**

We estimate PUL’s core net asset value at \$0.08/fd share, representing a Price-to-NAV of 0.53x (Figure 3). This valuation is based on estimated proven plus probable reserves valued at December 31, 2021 and estimated current net positive working capital subsequent to the recent financing.

**Potential NAV of \$0.28/fd share with successful EOR project:**

In our low case scenario, we estimated a successful miscible flood of the Nisku Pinnacle Reefs could add \$161 million of value (\$0.21/fd share) which increases our NPV estimate to \$0.28/fd share equal to a Price-to-Risked NAV of 0.14x

**Figure 3: Net Asset Value Estimate**

	<b>Core NAV</b>	<b>\$mm</b>	<b>\$/share</b>
<b>Reserves</b>			
Proven		\$22.7	\$0.04
Probable		\$11.9	\$0.02
<b>2P</b>		<b>\$34.6</b>	<b>\$0.07</b>
Working Capital		(\$8.3)	\$0.02
NAV (Basic)		\$42.8	\$0.08
Dilution		\$15.8	\$0.03
<b>Core NAV (FD)</b>		<b>\$58.6</b>	<b>\$0.08</b>
Bigoray EOR Project		\$160.7	\$0.21
<b>NAV</b>		<b>\$219.3</b>	<b>\$0.28</b>
Price/Core NAV			0.53x
Price/ NAV			0.14x

Source: Company documents, Mackie Research Capital

## 2024 Forecast and Valuation

Based upon our long-term WTI oil price forecast of US\$65/bbl and US\$5.00/mcf Henry Hub natural gas price and assuming a successful solvent flood of the Nisku D pool resulting in average production of 4,250 boe/d, we forecast 2024 funds flow of \$41.8 million (\$0.05/fd share). To arrive at our \$0.15 per share target price, we applied a 2.5 EV/DACF multiple to our 2024 forecast (Figure 4).

**Figure 4: Target Price Range**

	2024E EV/DACF				
	\$29.1	\$34.9	\$41.8	\$50.2	\$60.3
<b>1.5x</b>	\$0.07	\$0.08	\$0.09	\$0.11	\$0.13
<b>2.0x</b>	\$0.09	\$0.10	\$0.12	\$0.14	\$0.17
<b>2.5x</b>	\$0.11	\$0.12	<b>\$0.15</b>	\$0.17	\$0.21
<b>3.0x</b>	\$0.12	\$0.15	\$0.17	\$0.21	\$0.25
<b>3.5x</b>	\$0.14	\$0.17	\$0.20	\$0.24	\$0.28

*Source: Company reports and Research Capital Corp.*

## Blue Sky Upside

Based upon our long-term WTI oil price of US\$65/bbl and US\$5.00/mcf NYMEX natural gas price and assuming a successful solvent flood of both the Nisku D and Nisku E pools, we forecast a peak production rate of approximately 8,300 boe/d, generating annualized funds flow of \$81 million (\$0.10/fd share).

Figure 5: Detailed Summary and Forecast

Pulse Oil Corp.										PUL
Share Data		Market Value			Stock Price			Target Price		
Basic Shares (mm):	517.3	Market Cap. (\$ mm): \$20.69			Close: \$0.04			Target: \$0.15		
Diluted Shares (mm):	517.3	Enterprise Value (\$ mm): \$12.44			High: \$0.08			Valuation: 2.5x EV/ DACF		
Fully Diluted (mm):	770.0	Net Debt (W.C) (\$ mm): (\$8.26)			Low: \$0.04			Potential Return: 275%		
Production		2021A	Q1/22A	Q2/22E	Q3/22E	Q4/22E	2022E	2023E	2024E	2025E
Oil & NGL's	bb/d	102	186	110	95	95	121	513	2,355	2,800
Natural Gas	mmcf/d	0.5	0.5	0.3	0.3	0.3	0.3	1.7	11.4	13.4
Boe/d	6:1	185	262	160	145	145	178	798	4,250	5,041
Production Growth	q/q and y/y %	101%	112%	-0.7%	-29.6%	-41.5%	-4%	350%	432%	19%
Funds Flow (C\$)		2021A	Q1/22A	Q2/22E	Q3/22E	Q4/22E	2022E	2023E	2024E	2025E
<b>Cash Flow</b>	<b>\$ mm</b>	<b>1.9</b>	<b>1.1</b>	<b>0.8</b>	<b>0.7</b>	<b>(1.2)</b>	<b>1.4</b>	<b>(7.4)</b>	<b>41.8</b>	<b>52.9</b>
Cash Flow /Share	\$/share	\$0.01	\$0.00	\$0.00	\$0.00	(\$0.00)	\$0.00	(\$0.01)	\$0.05	\$0.07
Cash Flow /FD Share	\$/share	\$0.01	\$0.00	\$0.00	\$0.00	(\$0.00)	\$0.00	(\$0.01)	\$0.05	\$0.07
\$/Barrel of Oil Equivalent (C\$)		2021A	Q1/22A	Q2/22E	Q3/22E	Q4/22E	2022E	2023E	2024E	2025E
Revenue	\$/boe	48.10	69.31	83.54	79.13	81.48	77.04	78.91	55.91	56.03
Operating & Solvent Costs	\$/boe	17.90	12.90	12.00	12.00	138.48	12.33	84.41	23.24	21.95
G&A	\$/boe/d	10.41	7.29	11.80	12.88	26.24	13.36	8.24	1.54	1.30
Funds Flow Netback	\$/boe	28.33	47.96	58.33	52.90	(93.65)	22.16	(25.35)	26.90	28.76
Valuation Metrics (C\$)		2021A	Q1/22A	Q2/22E	Q3/22E	Q4/22E	2022E	2023E	2024E	2025E
FD Cash Flow Multiple		5.3x	2.7x	3.6x	7.3x	na	11.4x	na	0.7x	0.6x
EV/DACF Multiple		6.5x	3.1x	1.2x	4.6x	-3.9x	10.5x	-3.5x	-0.1x	-0.9x
EV/Production	C\$/mboe/d	67.3	47.5	77.7	85.8	85.8	70.0	15.6	2.9	2.5
Commodity Price		2021A	Q1/22A	Q2/22E	Q3/22E	Q4/22E	2022E	2023E	2024E	2025E
WTI	US\$/bbl	68.08	94.96	98.00	95.00	95.00	95.74	87.50	65.00	65.00
NYMEX	US\$/mcf	4.79	4.69	6.58	6.07	6.58	6.58	6.07	5.00	5.00
Realized Oil Price	C\$/bbl	72.81	113.18	117.48	113.70	113.70	114.18	103.45	76.28	76.28
Realized Natural Gas	C\$/mcf	4.42	4.73	7.08	6.44	7.08	7.07	6.42	5.12	5.12
Exchange Rate	US\$ per C\$	0.80	0.79	0.79	0.79	0.79	0.79	0.80	0.79	0.79
Capex and Capital Structure		2021A	Q1/22A	Q2/22E	Q3/22E	Q4/22E	2022E	2023E	2024E	2025E
Capex	C\$ mm	1.7	0.7	1.0	1.0	5.0	7.7	6.0	10.0	10.0
Capex/Cash Flow	%	90%	59%	118%	142%	-400%	534%	-81%	24%	19%
Weighted Average Basic Sh	mm	253.1	303.2	303.2	517.3	517.3	410.2	624.2	770.0	770.0
Dilutive Shares	mm	253.1	303.2	303.2	517.3	517.3	410.2	731.0	770.0	770.0
Market Cap	C\$ mm	12.1	12.1	12.1	20.7	20.7	16.4	27.1	30.8	30.8
Enterprise Value	C\$ mm	14.5	14.1	4.2	13.1	19.4	15.1	25.3	(2.9)	(45.8)
Net Debt (WC)	C\$ mm	2.4	2.0	(7.9)	(7.6)	(1.3)	(1.3)	(1.8)	(33.7)	(76.6)
Year-end Net Debt (WC)	US\$mm	2	2	(8)	(8)	(1)	(1)	(2)	(34)	(77)
Net Debt/Cash Flow	C\$ mm	1.2x	0.4x	na	na	na	na	na	na	na
Net Asset Value*		C\$mm		C\$/share		Reserve Estimate (31/12/2021)*				
Reserves (P + P)		34.6		\$0.07		(mboe)				
Working Capital Net of Debt		8.3		\$0.02		Proven	66%	1,244		
Undeveloped Land		-		\$0.00		Probable	34%	633		
Net Asset Value (Basic)		42.8		\$0.08		P+P		1,877		
Dilution		15.8		\$0.02		*Excludes Bigoray EOR Resource				
<b>Core NAV/FD Share</b>		<b>58.6</b>		<b>\$0.08</b>		<b>Reserves Life Index</b>				
Price to core NAV				0.53x				2022	2023	
Risked Resource Value (C\$)		160.7		\$0.21		Proven		19.20	4.27	
<b>Risked NAV/FD share</b>		<b>219.3</b>		<b>\$0.28</b>		2P		28.97	6.44	
Price to risked NAV (multiple)				0.14x						

Source: Company reports, Research Capital Corp.

## Company Description:

Pulse Oil Corp. is a Canadian oil and gas company that is primarily focused on the implementation of a solvent flood EOR project on two Nisku Pinnacle reef at its 100% owned Bigoray property in west Central Alberta.

## Risks:

While this is not an exhaustive list, we view the following risks as being noteworthy to investors in PUL.

**FINANCIAL RISK** | At the current production level, PUL is generating a limited amount of cash flow. Future expenditures will be dependent on cash flow as well as external capital sources which may include debt or equity. Should it not be possible to obtain the necessary financing, there would likely be an adverse impact on the company's development or production activities.

**EOR PROJECT** | PUL plans to implement a miscible flood program on the Nisku-D and Nisku-E oil pools. Although both pools responded well to a waterflood program, the effectiveness of a miscible flood program is unknown at this time.

**COMMODITY PRICE RISK** | Operational results and financial condition, and therefore the amount of capital expenditures are dependent on the prices received for crude oil and natural gas production. A prolonged or significant weakness in the price of oil and natural gas would affect PUL's ability to spend capital and potentially lead to shut-in of operations.

**REGULATORY POLICY RISK** | Various levels of government extensively regulate the energy industry with influence over exploration and production activities, prices, taxes, royalties and export restrictions. New regulations or modifications to existing regulations could adversely impact the company's profitability

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Pulse Oil Corp. Rating History as of 07/08/2022



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