

PUL - TSXV	\$0.16
TARGET:	\$0.50
PROJ. RETURN:	213%
VALUATION:	65% NAV/FD
	SHARE

#### Share Data

Basic Shares O/S* (mm):	88.1
Fully Diluted O/S* (mm):	127.1
Market Cap (\$mm):	14.1
Enterprise Value (\$mm):	12.8
Net Debt (W.C.) (\$mm)**:	(1.3)
Next Reporting Date	March 2018

\*Includes 14.1 mm shares for the Bigoray transaction.

\*\*As at: September 30, 2017, adjusted for financing & Bioray transactions

#### Thomson Chart – One Year



#### Corporate Profile

Pulse Oil Corp. is an oil and gas exploration and production company targeting oil rich Mannville plays in Alberta. The company plans to grow through a combination of strategic acquisitions and through low risk, technically diligent drilling. Pulse also offers substantial upside from its the miscible flood of tow Nisku Pinnacle reef at its 100% owned Bigoray property.

## PULSE OIL CORP. – SPECULATIVE BUY

### Trading at 1P Value With 2P & EOR Project for Free

#### ACTION – Reiterate SPECULATIVE BUY and \$0.50 Target Price

This morning, Pulse released the results of an NI 51-101 compliant assessment of the company's oil and gas reserves within the Bigoray and Queenstown core areas. Estimated proven reserves ("1P") have a pre-tax NPV<sub>10</sub> value of \$15.4 million (\$0.17/share) and proven plus probable reserves ("2P") were valued at \$24.4 million (\$0.28/sh). **The reserves assessment excludes any potential value from the Enhanced Oil Recovery ("EOR") project of the two Nisku Pinnacle reefs at Bigoray (100% W.I.).** At the current market price PUL trades below its proven reserves value and with no value for the large potential reserves and production additions with the EOR program currently underway. We reiterate our \$0.50 target price on the potential for low risk production growth through the reactivation and recompletion program and the massive upside potential from the miscible flood EOR project at Bigoray which provides Pulse with a significant cash flow ramp and low risk reserves adds.

#### DETAILS – Release of Year-End Reserves

**Trading Below 1P Value:** PUL has established a high working interest in 65 net sections of land within two core areas (Bigoray and Queenstown). Estimated reserves, effective December 31, 2017, were valued (NVP<sub>10</sub>) at \$15.4 million (\$0.17/sh) and \$24.4 million (\$0.28/sh) for 1P and 2P respectively. At the current market price, PUL trades at a significant discount to its 2P value and investors have a free option on the massive upside from the EOR program.

**Report Confirms Large Potential From Nisku EOR:** On January 9<sup>th</sup>, 2017, Pulse released the results of an independent resource report completed by Sproule Associates Limited ("Sproule") on the potential of the miscible flood EOR project of the Nisku D and Nisku E pools at Bigoray, which are held 100% by Pulse. Sproule assigned an estimated discovered PIIP of 23.3 million boe, with an unrisks Best Estimate contingent resource of 6.1 million boe (91.3% oil).

**Massive Low Risk Upside from Miscible Flood:** Assuming a recovery factor at the bottom end of the range of 55%, and a modest \$15/boe cash flow netback, the potential NPV<sub>10</sub> is \$78 million (\$0.61/fd share). **With a recovery factor equal to the average of 80% and a \$15/boe netback, the NPV<sub>10</sub> increases to \$177 million (\$1.39/fd share).** As most of the required infrastructure is in place (100% owned by Pulse), the miscible flood project requires a relatively small investment per Nisku Reef providing massive upside without the risk and significant cost of an extensive horizontal drilling program.

**Phase 1 EOR Project Underway:** On March 26, 2018, Pulse announced that it has commenced the reactivation of its existing injection facilities (100% W.I.) to allow the company to reactivate up to 3 shut-in oil wells, adding ~400 BOE/d of high netback light oil and gas production. With the price of WTI oil firmly above US\$65/bbl, the production additions from Bigoray should generate significant cash flow that can be reinvested into the solvent injection phase of the project, commencing later this year.

#### IMPACT – Positive. On the Way To Unlocking A Potentially Large Oil Resource

With improving oil prices and production growing to be 500 boe/d by this summer, we expect the company to generate significant cash flow that can be reinvested into the next phase of the EOR project, putting the company on the road to unlocking massive upside without having to drill a well.

*This report has been created by analysts who are employed by Mackie Research Capital Corporation, a Canadian Investment Dealer. For further disclosures, please see last page of this report.*

## **BIGORAY – MASSIVE POTENTIAL WITHOUT DRILLING A WELL**

The company's Bigoray assets include a 100% interest in two Nisku Pinnacle reefs. The fields have produced an average of 35% of the petroleum initially in place ("PIIP") under waterflood. The average recovery factor of 52 nearby analogous reefs that have been developed with a miscible flood is approximately 80%. Assuming Pulse achieves a similar recovery factor, a miscible flood has the potential to add up to 12 mmboe. To illustrate the potential impact of the Bigoray EOR program, Pulse included a table in its current presentation which shows a potential range value based upon different recovery factors and cash flow netbacks (Figure 1). With the WTI currently over US\$65/bbl, the potential netback could be at the higher end of the range.

**Figure 1: Range of Potential Value Based Upon the Ultimate Recovery Factor and Cash Flow Netback**

# The Bigoray Nisku E.O.R. Pulse's "Home Run"



**Pulse Timing: 2018 Program Start; Reap the Benefits of Future Revenue Upside for multiple years of significant cashflows:**

NPV10 Potential Based On Netback Per BOE	55% RF NPV10 Potential	60% RF NPV10 Potential	65% RF NPV10 Potential	70% RF NPV10 Potential	75% RF NPV10 Potential	80% RF NPV10 Potential
\$25.00	\$131 million	\$164 million	\$197 million	\$230 million	\$263 million	\$296 million
\$20.00	\$104 million	\$131 million	\$157 million	\$184 million	\$210 million	\$236 million
\$15.00	\$78 million	\$98 million	\$118 million	\$138 million	\$158 million	\$177 million
\$10.00	\$52 million	\$65 million	\$79 million	\$92 million	\$105 million	\$118 million
\$5.00	\$26 million	\$33 million	\$39 million	\$46 million	\$53 million	\$59 million

Source: Company reports, Mackie Research Capital

## CONTINGENT RESOURCE OF BIGORAY EOR PROJECT

Sproule Associates Limited ("Sproule") completed an NI 51-101 compliant assessment of the miscible flood EOR project of the Nisku D and Nisku E pools at Bigoray, effective December 6<sup>th</sup>, 2017. Both pools are owned 100% by Pulse. Sproule assigned an estimated discovered PIIP of 23.3 million boe which is a more conservative estimate of 26.4 million boe assigned by the Alberta Energy Regulator. Although more conservative PIIP, the Best Case resource estimate of 6.1 million boe (91.3% oil) shows substantial. We expect that with the successful implementation of the miscible flood, the Sproule resource estimates could prove conservative.

**Figure 2: Contingent Resource Estimate of the Bigoray EOR Project**

Pool	Product	Contingent Resources			
		Low	Best	High	Risked
Nisku D	Oil (mbl)	1,783	3,056	4,074	2,338
	Soution Gas (mmcf)	734	1,258	1,504	962
	NGL (mbl)	107	107	107	82
	<b>Total Nisuk D (mboe)</b>	<b>2,012</b>	<b>3,372</b>	<b>4,432</b>	<b>2,580</b>
Nisku E	Oil (mbl)	1,482	2,544	3,393	1,946
	Soution Gas (mmcf)	587	872	1,031	667
	NGL (mbl)	74	74	74	57
	<b>Total Nisuk D (mboe)</b>	<b>1,654</b>	<b>2,764</b>	<b>3,639</b>	<b>2,114</b>
<b>Grand Total</b>	Oil (mbl)	3,265	5,600	7,467	4,284
	Soution Gas (mmcf)	1,321	2,130	2,535	1,629
	NGL (mbl)	181	181	181	138
	<b>Total Nisuk D (mboe)</b>	<b>3,666</b>	<b>6,136</b>	<b>8,070</b>	<b>4,694</b>

Source: Company reports, Mackie Research Capital

## HIGH CHANCE OF COMMERCIALITY

As the many of the risks including evaluation drilling, regulatory approvals, technology, legal factors, infrastructure and markets and political factors have been satisfied, Sproule assigned a 77% chance of commerciality to the Bigoray EOR project (Figure 3).

**Figure 3: Contingent Resources Project Chance of Commerciality Estimates**

Risk	Contingent Resource
Evaluation Drilling	100%
Regulatory Approval 100%	100%
Economic Factors 90%	90%
Corporate Commitment 100%	100%
Timing of Production and Development 85%	85%
Technology Under Development 100%	100%
Legal Factors 100%	100%
Infrastructure & Market 100%	100%
Political Factors 100%	100%
Social License 100%	100%
<b>Aggregate</b>	<b>77%</b>

Source: Company reports, Mackie Research Capital

Figure 4: Summary

<b>Pulse Oil Corp.</b>			<b>PUL</b>		
<b>Share Data</b>		<b>Market Value</b>	<b>Stock Price</b>		<b>Target Price</b>
Basic Shares (mm):	88.1	Market Cap. (\$ mm):	\$ 14.1	Close:	\$0.16
Diluted Shares (mm):	88.1	Enterprise Value (\$ mm):	\$ 12.8	High:	\$0.25
Fully Diluted (mm):	127.1	Net Debt (W.C) (\$ mm):	\$ (1.3)	Low:	\$0.07
Target: \$0.50 Potential Return: 65%					
<b>NAV, Reserves and Concessions</b>					
<b>Net Asset Value*</b>			<b>Reserve Estimate (31/12/2017)</b>		
	<u>C\$m</u>	<u>C\$/share</u>			<u>(mboe)</u>
Reserves (P + P)	24.4	\$0.28	Proven	66%	1,245
Working Capital Net of Debt	1.3	\$0.01	Probable	34%	633
Undeveloped Land	-	\$0.00	P+P		1,878
Net Asset Value (Basic)	25.6	\$0.29			
Dilution	6.6	\$0.07			
<b>Core NAV/FD Share</b>	<b>32.2</b>	<b>\$0.25</b>			
Price to core NAV		0.63x			
Risked Resource Value (C\$)	65.4	\$0.74			
<b>Risked NAV/FD share</b>	<b>97.6</b>	<b>\$0.77</b>			
Price to risked NAV (multiple)		0.21x			
			<b>Undeveloped Land</b>		
					<u>net acres</u>
			Bigoray		12,179
			Mannville Assets		30,720
					42,899

Source: Company Reports, Thomson Reuters, Mackie Research

## RISKS TO TARGET

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 Miscible Flood Program:** 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.

**Exploration Risk:** The majority of PUL's capital expenditures is directed to towards lower-risk development projects including well reactivation and workovers. As the company grows production and cash flow, a portion of PUL's future capital expenditures may be directed to toward exploration activities that carry a higher degree of risk.

**Exchange Rate Risk:** PUL operations are exposed to changes in the exchange rate between the U.S. dollar and Canadian dollar.

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