LIBERTY OIL AND GAS LTD.

RESERVES AND PRESENT VALUE ESTIMATE

As of Dec 31, 2016

Prepared by Jim McIntosh
Jim McIntosh Petroleum Engineering Ltd
March 31, 2017

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March 31, 2017

Liberty Oil and Gas Ltd.
Unit D, 309 Commissioners Road W
London, Ontario
N6C 1Y4

Attention: Jane Lowrie
President

Re: Liberty Resources Dec 31, 2016 Reserves Evaluation

Dear Jane,

At the request of Liberty Oil and Gas Ltd., the reserves potential and resulting cash flow projections have been evaluated for the company using data available up to Dec 31, 2016. The table below summarizes the results of this evaluation using forecasted prices and operating costs.

Reserves	Liberty Gross Res			Liberty Net Res		
Category	Oil	Gas	NGL	Oil	Gas	NGL
	(MStb)	(MMcf)	(MStb)	(MStb)	(MMcf)	(MStb)
Proved Developed Producing	54.8	248.8	0.00	47.9	217.7	0.00
Proved Developed	54.8	248.8	0.00	47.9	217.7	0.00
Total Proved	54.8	248.8	0.00	47.9	217.7	0.00
Additional Probable	6.4	180.0	0.00	5.6	157.5	0.00
Proved plus Probable	61.1	428.8	0.00	53.5	375.2	0.00

Reserves Category	Net present Worth Before Taxes ($M Cdn)					Unit Value Before Tax 10% Disc
	0% Disc	5% Disc	10% Disc	15% Disc	20% Disc	($/BOE)[1]
Proved Developed Producing	$2,380.7	$1,787.6	$1,412.6	$1,160.4	$981.7	$16.78
Proved Developed	$2,380.7	$1,787.6	$1,412.6	$1,160.4	$981.7	$16.78
Total Proved	$2,380.7	$1,787.6	$1,412.6	$1,160.4	$981.7	$16.78
Additional Probable	$943.5	$695.1	$541.0	$439.2	$368.1	$0.00
Proved plus Probable	$3,324.2	$2,482.6	$1,953.5	$1,599.5	$1,349.8	$16.84

1 BOE = 6 Mcf

Reserves Category	Net present Worth After Taxes ($M Cdn)				
	0% Disc	5% Disc	10% Disc	15% Disc	20% Disc
Proved Developed Producing	$2,123.4	$1,582.2	$1,241.6	$1,013.9	$853.5
Proved Developed	$2,123.4	$1,582.2	$1,241.6	$1,013.9	$853.5
Total Proved	$2,123.4	$1,582.2	$1,241.6	$1,013.9	$853.5
Additional Probable	$754.2	$554.9	$431.4	$350.0	$293.3
Proved plus Probable	$2,877.6	$2,137.1	$1,673.0	$1,363.9	$1,146.7

The table below summarizes this evaluation using constant prices and operating costs.

Reserves Category	Liberty Gross Res			Liberty Net Res		
	Oil (MStb)	Gas (MMcf)	NGL (MStb)	Oil (MStb)	Gas (MMcf)	NGL (MStb)
Proved Developed Producing	54.8	248.8	0.00	47.9	217.7	0.00
Proved Developed	54.8	248.8	0.00	47.9	217.7	0.00
Total Proved	54.8	248.8	0.00	47.9	217.7	0.00
Additional Probable	6.4	180.0	0.00	5.6	157.5	0.00
Proved plus Probable	61.1	428.8	0.00	53.5	375.2	0.00

Reserves Category	Net present Worth Before Taxes ($M Cdn)					Unit Value Before Tax 10% Disc
	0% Disc	5% Disc	10% Disc	15% Disc	20% Disc	($/BOE)[1]
Proved Developed Producing	$1,782.6	$1,409.1	$1,158.9	$981.9	$850.8	$13.76
Proved Developed	$1,782.6	$1,409.1	$1,158.9	$981.9	$850.8	$13.76
Total Proved	$1,782.6	$1,409.1	$1,158.9	$981.9	$850.8	$13.76
Additional Probable	$834.9	$628.8	$498.2	$410.2	$347.7	$0.00
Proved plus Probable	$2,617.4	$2,037.8	$1,657.2	$1,392.1	$1,198.5	$14.28

1 BOE = 6 Mcf

Reserves Category	Net present Worth After Taxes ($M Cdn)				
	0% Disc	5% Disc	10% Disc	15% Disc	20% Disc
Proved Developed Producing	$1,608.2	$1,257.1	$1,024.7	$862.0	$742.8
Proved Developed	$1,608.2	$1,257.1	$1,024.7	$862.0	$742.8
Total Proved	$1,608.2	$1,257.1	$1,024.7	$862.0	$742.8
Additional Probable	$690.1	$515.0	$405.1	$331.7	$280.0
Proved plus Probable	$2,298.3	$1,772.0	$1,429.8	$1,193.8	$1,022.8

The Net Present Worth values in the evaluations include an estimate of all costs necessary to plug and abandon all wellbores once production becomes uneconomic. All of the additional reserves assigned in the Proven plus Probable evaluation reflect improved production performance, with no additional capital costs required. These evaluations do not represent the fair market value of Liberty Oil and Gas Ltd.

If you have any questions about this report and attachments, please call.

Yours truly,

Mr. J. W. (Jim) McIntosh, P. Eng.

LICENSED PROFESSIONAL ENGINEER
J. W. McINTOSH
31/03/17
PROVINCE OF ONTARIO

Discussion

This report on the remaining recoverable reserves and associated evaluation of Liberty Oil and Gas Ltd (Liberty) has been prepared at the request of the management of Liberty. The oil and natural gas assets of the company consist of 100% working interests in 18 oil and natural gas wells in the Dover East field west of Chatham in south western Ontario. The remaining recoverable reserves of the producing properties have been evaluated in this report. The company interests in each of the producing properties, the remaining net reserves, and the discounted net present worth before and after taxes of the properties using forecasted prices and operating costs are summarized below.

Reserves Category	Liberty Gross Res			Liberty Net Res		
	Oil (MStb)	Gas (MMcf)	NGL (MStb)	Oil (MStb)	Gas (MMcf)	NGL (MStb)
Proved Developed Producing	54.8	248.8	0.00	47.9	217.7	0.00
Proved Developed	54.8	248.8	0.00	47.9	217.7	0.00
Total Proved	54.8	248.8	0.00	47.9	217.7	0.00
Additional Probable	6.4	180.0	0.00	5.6	157.5	0.00
Proved plus Probable	61.1	428.8	0.00	53.5	375.2	0.00

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The company net discounted present worth before and after taxes of these properties using constant prices and operating costs are summarized below.

Reserves Category	Liberty Gross Res			Liberty Net Res		
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Tables summarizing the economic runs reflected in the above tables, along with a table of assumptions and a table listing the commodity prices for each year of the forecasted evaluations are attached. The individual economic runs, production history graphs, and decline curve plots for each pool/entity are appended to the body of this report. The previous shareholders of Liberty sold the Trenton/Sherman Fall remaining gas reserves and wellbores for a portion of the pool to Union Gas to create the Jacob Gas Storage Pool. Liberty retained all oil and natural gas reserves and potential in the underlying Black River/Coboconk pool and all Trenton/Sherman Fall potential outside of the Jacob Gas Storage Pool boundaries.

The properties and reserves of Liberty Oil and Gas Ltd. were evaluated using the following reserve definitions as prescribed under National Instrument 51-101:

DISCOVERED RESOURCES are those quantities of oil and gas estimated to be remaining in, plus those quantities already produced from, known accumulations. Discovered resources are divided into economic and uneconomic categories, with the estimated future recoverable portion classified as reserves and contingent resources, respectively.

Reserves are those quantities of oil and gas anticipated to be economically recoverable from discovered resources.

Proved reserves are those reserves that can be estimated with a high degree of certainty to be recoverable. It is likely that the actual remaining quantities recovered will exceed the estimated proved reserves.

> **Proved Developed** reserves are those Proved reserves that are expected to be recovered from existing wells and installed facilities or, if facilities have not been installed, that would involve a low expenditure (e.g. when compared to the cost of drilling a well) to put the reserves on production. The Proved Developed category may be subdivided into Producing and Nonproducing:
>
> > **Proved Developed Producing** reserves are those Proved Developed reserves that are expected to be recovered from completion intervals open at the time of the estimate. These reserves may be currently producing or, if shut-in, they must have previously been on production, and the date of resumption of production must be known with reasonable certainty.
> >
> > **Proved Developed Nonproducing** reserves are those Proved Developed reserves that either have not been on production, or have previously been on production, but are shut-in, and the date of resumption of production is unknown.
>
> **Proved Undeveloped** reserves are those Proved reserves expected to be recovered from known accumulations where a significant expenditure (e.g. when compared to the cost of drilling a well) is required to render them capable of production. They must fully meet the requirements of the Proved reserves category.

Probable reserves are those additional reserves that are less certain to be recovered than Proved reserves. It is equally likely that the actual remaining quantities recovered will be greater or less than the sum of the estimated Proved plus Probable reserves.

Possible reserves are those additional reserves that are less certain to be recovered than Probable reserves. It is unlikely that the actual remaining quantities recovered will exceed the sum of the estimated Proved plus Probable plus Possible reserves.

UNDISCOVERED RESOURCES are those quantities of oil and gas estimated to be contained in accumulations yet to be discovered. The estimated potentially recoverable portion of undiscovered resources is classified as prospective resources.

Prospective Resources are those quantities of oil and gas estimated to be potentially recoverable from undiscovered accumulations. They are technically viable and economic to recover.

Liberty Oil and Gas Ltd. has working interests in a number of producing oil and natural gas wells in the Dover East Pool. The individual wellbores, locations, and status are detailed below. A map of the old Union Gas Dover gas pool and the Dover 7-5-V E oil and gas pool from the *OGSR Hydrocarbon Resource Assessment of the Trenton-Black River Hydrothermal Dolomite Play in Ontario* study is contained in the production history part of this report and illustrates all well locations.

License Number	Liberty Working Interest (%)	Well Name	Well Location	Status
T006437	100.0	Rowe-Ram 4	Dover 6-6-IV E	OP-Act
T006658A	100.0	Rowe-Ram 8A	Dover 4-6-IV E	OP-Sus
T007207	100.0	PPC 10	Dover 1-6-III E	GP-Act
T007215	100.0	PPC 12	Dover 6-6-IV E	OP-Act
T007289	100.0	PPC/Ram 13	Dover 3-3-IV E	OP-Act
T007240	100.0	PPC et al 15	Dover 5-5-IV E	OP-Act
T007220	100.0	PPC 16	Dover 7-5-IV E	OP-Act
T007619	100.0	PPC/Ram 19	Dover 5-7-III E	OP-Act
T007321	100.0	PPC/Ram 20	Dover 3-7-III E	GP-Act
T007714	100.0	PPC/Ram 22	Dover 2-1-V E	GP-Act
T007641	100.0	PPC/Ram 23	Dover 7-2-V E	GP-Act
T007387	100.0	PPC/Ram 25	Dover 5-4-IV E	OP-GP-Act
T007527	100.0	PPC/Ram 26	Dover 6-4-IV E	OP-GP-Act
T007793	100.0	PPC/Ram 29	Dover 3-4-IV E	GP-Act
T007802	100.0	PPC/Ram 31	Dover 3-6-IV E	Inj-Act
T007811	0.0	PPC/Ram 34	Dover 8-4-V E	GP-Sus (Union)
T007857	100.0	PPC/Ram 41	Dover 7-6-IV E	GP-Act
T010748	100.0	PGO 5	Dover 7-2-IV E	OP-Act
T010665	100.0	VRI 5	Dover 5-6-IV E	OP-GP-Sus (Union)
T012049	0.0	Pain Court 1 (H1)	Dover 3-6-IV E	STR-Act (Union)

The PPC/Ram 34 gas well was sold to Union Gas as part of the Jacob Gas Storage Pool development. Although not sold to Union as part of that pool, the VRI 5 well was found to be producing from the Trenton/Sherman Fall potential gas storage zone so was shut-in at the request of Union Gas. The Pain Court 1 (Hor 1) well was drilled by Union Gas as a stratigraphic test to core the Trenton/Cobourg cap dolomite and was completed as a potential horizontal Injection/Withdrawal (I/W) well for the Jacob Gas Storage Pool. Union Gas is not actively pursuing their pool as a gas storage reservoir.

The attached graphs show the production history, rate/time and rate/cum curves for the Proved Developed Producing and Proved plus Probable decline curve assignments.

The remaining recoverable Liberty gross reserves in each reserve category for these various entities are tabulated below.

Entity	31/12/2016 PDP Liberty Gross			31/12/2016 P+P Liberty Gross		
	Oil	Gas	NGL	Oil	Gas	NGL
	MStb	MMcf	MStb	MStb	MMcf	MStb
Rowe-Ram 4	7.2	0.0	0.0	11.7	0.0	0.0
Rowe-Ram 8A	0.0	0.0	0.0	0.0	0.0	0.0
PPC 10	0.0	6.5	0.0	0.0	15.6	0.0
PPC 12	2.1	0.0	0.0	2.9	0.0	0.0
PPC 13	0.0	38.5	0.0	0.0	60.9	0.0
PPC et al 15	19.7	21.4	0.0	20.2	39.9	0.0
PPC 16	12.4	0.0	0.0	12.4	0.0	0.0
PPC/Ram 19	5.4	0.0	0.0	5.6	0.0	0.0
PPC/Ram 20	0.0	49.8	0.0	0.0	79.5	0.0
PPC/Ram 22	0.0	15.2	0.0	0.0	31.7	0.0
PPC/Ram 23	0.0	38.6	0.0	0.0	64.2	0.0
PPC/Ram 25	0.0	7.4	0.0	0.0	15.5	0.0
PPC/Ram 26	3.6	15.1	0.0	3.7	29.5	0.0
PPC/Ram 29	0.0	21.8	0.0	0.0	37.3	0.0
PPC/Ram 41	0.0	34.5	0.0	0.0	54.9	0.0
PGO 5	4.3	0.0	0.0	4.5	0.0	0.0
Total	54.8	248.8	0.0	61.1	428.8	0.0

The table below listed the various entities in the Liberty reserves report, and reconciles the Proved Developed Producing (PDP) net reserve assignments in this report to those in the December 31, 2015 Reserves Report prepared by Jim McIntosh Petroleum Engineering Ltd (JMPEL) for the company.

Entity	31/12/2015 PDP Net			2016 Net Prod'n			Net Reserve Adj't			31/12/2016 PDP Net		
	Oil	Gas	NGL	Oil	Gas	NGL	Oil	Gas	NGL	Oil	Gas	NGL
	MStb	MMcf	MStb	MStb	MMcf	MStb	MStb	MMcf	MStb	MStb	MMcf	MStb
Rowe-Ram 4	5.90	0.0	0.00	0.82	0.0	0.00	1.19	0.0	0.00	6.27	0.0	0.00
Rowe-Ram 8A	0.00	0.0	0.00	0.00	0.0	0.00	0.00	0.0	0.00	0.00	0.0	0.00
PPC 10	0.00	9.4	0.00	0.00	2.0	0.00	0.00	-1.7	0.00	0.00	5.7	0.00
PPC 12	1.34	0.0	0.00	0.40	0.0	0.00	0.88	0.0	0.00	1.82	0.0	0.00
PPC 13	0.31	81.4	0.00	0.12	3.7	0.00	-0.19	-43.9	0.00	0.00	33.7	0.00
PPC et al 15	16.59	28.6	0.00	1.67	2.7	0.00	2.29	-7.1	0.00	17.21	18.8	0.00
PPC 16	6.48	22.1	0.00	1.24	0.1	0.00	5.64	-22.0	0.00	10.88	0.0	0.00
PPC/Ram 19	2.71	0.0	0.00	0.54	0.0	0.00	2.58	0.0	0.00	4.75	0.0	0.00
PPC/Ram 20	0.00	48.0	0.00	0.00	4.0	0.00	0.00	-0.4	0.00	0.00	43.6	0.00
PPC/Ram 22	0.00	12.4	0.00	0.00	2.3	0.00	0.00	3.3	0.00	0.00	13.3	0.00
PPC/Ram 23	0.00	18.2	0.00	0.00	3.8	0.00	0.00	19.4	0.00	0.00	33.7	0.00
PPC/Ram 25	0.00	4.5	0.00	0.01	3.7	0.00	0.01	5.7	0.00	0.00	6.5	0.00
PPC/Ram 26	2.24	25.1	0.00	0.51	0.2	0.00	1.45	-11.7	0.00	3.18	13.2	0.00
PPC/Ram 29	0.00	27.8	0.00	0.00	4.4	0.00	0.00	-4.4	0.00	0.00	19.1	0.00
PPC/Ram 41	0.00	22.7	0.00	0.00	3.9	0.00	0.00	11.3	0.00	0.00	30.2	0.00
PGO 5	2.50	0.0	0.00	0.34	0.0	0.00	1.63	0.0	0.00	3.79	0.0	0.00
Total	38.07	300.2	0.00	5.65	30.8	0.00	15.50	-51.7	0.00	47.92	217.7	0.00

Production forecasts were truncated at the economic limits set for each well. The Liberty income statements were utilized to calculate the operating costs used throughout the economic evaluations, while the Ministry of Natural Resources annual form 8's for each well were used to calculate the annual average gas or oil price received by Liberty.

The average gas and oil prices received during 2016 were compared to the average of the closing NYMEX futures prices for Henry Hub gas (in $US/MMBtu) and for West Texas Intermediate oil (in $US/Bbl) and Edmonton Par oil (in $Cdn/Bbl) to arrive at a basis differential to NYMEX gas and Edmonton Par oil respectively. This resulted in a basis differential of +$0.03Cdn/Mcf for natural gas and +$3.86Cdn/Bbl for oil relative to these benchmark references. These basis differentials, along with the average of the January 1, 2017 published price forecasts for Sproule Associates, McDaniel and Associates, Gilbert Laustsen Jung Associates, and Insitu Petroleum Consultants were used to create the forecasted price forecast. The basis differentials are listed in the table below along with the resulting Liberty 2017 product prices, the operating costs, the resulting economic limits, and the well abandonment costs utilized in all assignments. The 2017 calculated prices in this forecast were used in the constant price forecast. These were $4.87Cdn/Mcf for gas and $72.12Cdn/Bbl for oil.

	Oil Wells		Gas Wells	
Actual 2016 Prices	$58.97	/Bbl	$3.53	/Mcf
Average Basis Differential	$3.86	/Bbl Edm	$0.03	/Mcf NYMEX
Forecast 2017 Prices	$72.12	/Bbl	$4.87	/Mcf
Operating Costs:				
Fixed	$1,000	/well/mo	$400	/well/mo
Variable	$12.00	/bbl	$0.75	/Mcf
Fuel gas shrinkage			36%	
Economic Limit	0.64	bpd	3.75	/Mcfd sales
Inflation Rate	1.5%	/yr	1.5%	/yr
Well Plugging Costs				
Gross Plugging Cost	$50.00	k/well	$30.00	k/well
Salvage	$20.00	k/well	$5.00	k/well
Net Plugging Cost	$30.00	k/well	$25.00	k/well

Both a reserves reconciliation table and reserves value reconciliation table are listed below.

Reserve Reconciliation	Crude Oil			Natural Gas			NGL		
	Net Proved (MStb)	Net Probable (MStb)	Net Pr & Prob (MStb)	Net Proved (MMcf)	Net Probable (MMcf)	Net Pr & Prob (MMcf)	Net Proved (MStb)	Net Probable (MStb)	Net Pr & Prob (MStb)
December 31, 2015	38.1	10.6	48.7	300.3	51.7	352.0	0.00	0.00	0.00
Extensions	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00
Improved Recovery	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00
Technical Revisions	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00
Discoveries	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00
Acquisitions	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00
Dispositions	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00
Economic Factors	15.5	(5.0)	10.4	(51.8)	105.8	54.1	0.00	0.00	0.00
Production	(5.6)	0.0	(5.6)	(30.8)	0.0	(30.8)	0.00	0.00	0.00
December 31, 2016	47.9	5.6	53.5	217.7	157.5	375.2	0.00	0.00	0.00

Reconciliation of Changes in Net Present Values

Of Future Net Revenue Discounted at 10%/Year

Total Proven based on Constant Prices and Costs

	$M Cdn
Estimated Future Net Revenue at Dec 31, 2015	582
Sales of oil and gas produced, net of production costs and royalties	-117
Net changes in prices and production costs and royalties	560
Changes in development costs	
Extensions and improved recovery	0
Discoveries	
Acquisition of reserves	
Disposition of reserves	0
Technical Revisions	
Accretion of Discount	
Net change in Income Tax	0
Estimated Future Net Revenue at Dec 31, 2016	1025

The natural gas reserve volumes decreased significantly compared to the JMPEL December 31, 2015 reserves report due to large reserve reductions in PPC/Ram 13 and 16 offset by reserve increases in PPC/Ram 23. The fuel gas shrinkage also increased through the Dover East battery. The oil reserve volumes increased significantly due primarily to higher oil prices and resulting lower oil well economic limit (0.64 bpd compared to 0.82 bpd in the previous report). Due to the higher anticipated 2017 product prices ($4.87/Mcf in this report versus $3.62/Mcf in the Dec 31, 2015 report for gas, $72.12/Bbl in this report versus $59.31/Bbl in Dec 31, 2015 report for oil), the value of the remaining reserves has increased significantly, as illustrated in the 10% NPV Constant Price/Operating Cost table above.

Jim McIntosh Petroleum Engineering Ltd
Qualifications to evaluate southwestern Ontario Oil and Gas assets

I, Jim McIntosh, P. Eng, present my qualifications as an independent qualified evaluator for analyzing Oil and Gas assets in southwestern Ontario:

1) I am a member in good standing of the Professional Engineers Ontario (Membership #30537807).

2) Jim McIntosh Petroleum Engineering Ltd is an engineering company active in the Province of Ontario and licensed by the Professional Engineers Ontario with Certificate of Authority #100056409. The company has been providing engineering services to companies active in the Oil and Gas exploration and production business in Ontario since 2002.

3) I graduated from the University of Alberta in Edmonton with a B. Sc. Degree in Chemical Engineering in 1976.

4) I have been working in the Oil and Gas business on a continual basis since 1976, working in Calgary, Alberta from 1976 until 1987, and working in London, Ontario from 1987 to present.

5) My area of expertise includes, among other activities, forecasting and evaluating producing and potential Oil and Gas activities.

6) I am familiar with the requirements of National Instrument 51-101 and have prepared reports for other public Oil and Gas companies using the NI 51-101 format.

LICENSED PROFESSIONAL ENGINEER
J. W. McINTOSH
31/03/17
PROVINCE OF ONTARIO

FORM 51-101F1
STATEMENT OF RESERVES DATA
AND OTHER OIL AND GAS INFORMATION
LIBERTY OIL AND GAS LTD.

This reserves and cash flow evaluation of Liberty Oil and Gas Ltd. was prepared on March 31, 2017 using production and revenue data up to and including December 31, 2016 (the "effective date") in a report entitled Liberty Oil and Gas Ltd. Reserves and Present Value Estimate as of December 31, 2016 prepared by Jim McIntosh Petroleum Engineering Ltd. The results of this report are summarized in the tables below.

All of Liberty Oil and Gas Ltd. oil and natural gas assets are located onshore in south-western Ontario. The company has working interests in 18 oil and gas wells in the Dover East field west of Chatham in south western Ontario.

Summary of Oil and Gas Reserves and Net Present Values of Future Net Revenue
As of December 31, 2016
Constant Prices and Costs

Reserves	Liberty Gross Res			Liberty Net Res		
Category	Oil	Gas	NGL	Oil	Gas	NGL
	(MStb)	(MMcf)	(MStb)	(MStb)	(MMcf)	(MStb)
Proved Developed Producing	54.8	248.8	0.00	47.9	217.7	0.00
Proved Developed	54.8	248.8	0.00	47.9	217.7	0.00
Total Proved	54.8	248.8	0.00	47.9	217.7	0.00
Additional Probable	6.4	180.0	0.00	5.6	157.5	0.00
Proved plus Probable	61.1	428.8	0.00	53.5	375.2	0.00

Reserves Category	Net present Worth Before Taxes ($M Cdn)					Unit Value Before Tax 10% Disc
	0% Disc	5% Disc	10% Disc	15% Disc	20% Disc	($/BOE)[1]
Proved Developed Producing	$1,782.6	$1,409.1	$1,158.9	$981.9	$850.8	$13.76
Proved Developed	$1,782.6	$1,409.1	$1,158.9	$981.9	$850.8	$13.76
Total Proved	$1,782.6	$1,409.1	$1,158.9	$981.9	$850.8	$13.76
Additional Probable	$834.9	$628.8	$498.2	$410.2	$347.7	$0.00
Proved plus Probable	$2,617.4	$2,037.8	$1,657.2	$1,392.1	$1,198.5	$14.28

1 BOE = 6 Mcf

Reserves Category	Net present Worth After Taxes ($M Cdn)				
	0% Disc	5% Disc	10% Disc	15% Disc	20% Disc
Proved Developed Producing	$1,608.2	$1,257.1	$1,024.7	$862.0	$742.8
Proved Developed	$1,608.2	$1,257.1	$1,024.7	$862.0	$742.8
Total Proved	$1,608.2	$1,257.1	$1,024.7	$862.0	$742.8
Additional Probable	$690.1	$515.0	$405.1	$331.7	$280.0
Proved plus Probable	$2,298.3	$1,772.0	$1,429.8	$1,193.8	$1,022.8

Future Net Revenue by Product Group: Constant Prices and Costs

Reserves Category	Product Group	Future Net Revenue Before Tax @ 10% Disc ($M Cdn)
Proved Reserves	Crude Oil	$1,078.0
	Natural Gas	$80.9
Proved plus Probable Reserves	Crude Oil	$1,376.6
	Natural Gas	$280.6

Note 1: All revenue from any well producing oil is included in Crude Oil

Total Future Net Revenue Components using Constant Prices and Operating Costs (Undiscounted)

Reserves Category	Revenue ($M Cdn)	Royalties ($M Cdn)	Operating Costs ($M Cdn)	Develop't Costs ($M Cdn)	Abandm't Costs ($M Cdn)	Future Net Revenue Before Tax ($M Cdn)	Income Taxes ($M Cdn)	Future Net Revenue After Tax ($M Cdn)
Total Proved	$5,161.5	$645.2	$2,283.8	$0.0	$450.0	$1,782.6	$174.4	$1,608.2
Proved plus Probable	$6,497.1	$812.1	$2,617.5	$0.0	$450.0	$2,617.4	$319.1	$2,298.3

Summary of Oil and Gas Reserves and Net Present Values
As of December 31, 2016
Forecasted Prices and Operating Costs

Reserves Category	Liberty Gross Res			Liberty Net Res		
	Oil (MStb)	Gas (MMcf)	NGL (MStb)	Oil (MStb)	Gas (MMcf)	NGL (MStb)
Proved Developed Producing	54.8	248.8	0.00	47.9	217.7	0.00
Proved Developed	54.8	248.8	0.00	47.9	217.7	0.00
Total Proved	54.8	248.8	0.00	47.9	217.7	0.00
Additional Probable	6.4	180.0	0.00	5.6	157.5	0.00
Proved plus Probable	61.1	428.8	0.00	53.5	375.2	0.00

Reserves Category	Net present Worth Before Taxes ($M Cdn)					Unit Value Before Tax 10% Disc ($/BOE)[1]
	0% Disc	5% Disc	10% Disc	15% Disc	20% Disc	
Proved Developed Producing	$2,380.7	$1,787.6	$1,412.6	$1,160.4	$981.7	$16.78
Proved Developed	$2,380.7	$1,787.6	$1,412.6	$1,160.4	$981.7	$16.78
Total Proved	$2,380.7	$1,787.6	$1,412.6	$1,160.4	$981.7	$16.78
Additional Probable	$943.5	$695.1	$541.0	$439.2	$368.1	$0.00
Proved plus Probable	$3,324.2	$2,482.6	$1,953.5	$1,599.5	$1,349.8	$16.84

1 BOE = 6 Mcf

Reserves Category	Net present Worth After Taxes ($M Cdn)				
	0% Disc	5% Disc	10% Disc	15% Disc	20% Disc
Proved Developed Producing	$2,123.4	$1,582.2	$1,241.6	$1,013.9	$853.5
Proved Developed	$2,123.4	$1,582.2	$1,241.6	$1,013.9	$853.5
Total Proved	$2,123.4	$1,582.2	$1,241.6	$1,013.9	$853.5
Additional Probable	$754.2	$554.9	$431.4	$350.0	$293.3
Proved plus Probable	$2,877.6	$2,137.1	$1,673.0	$1,363.9	$1,146.7

Future Net Revenue by Product Group: Forecasted Prices and Costs

Reserves Category	Product Group(1)	Future Net Revenue Before Tax @ 10% Disc ($M Cdn)
Proved Reserves	Crude Oil	$1,350.0
	Natural Gas	$62.6
Proved plus Probable Reserves	Crude Oil	$1,684.7
	Natural Gas	$268.9

Note 1: All revenue from any well producing oil is included in Crude Oil

Total Future Net Revenue Components using Forecasted Prices and Operating Costs (Undiscounted)

	Revenue ($M Cdn)	Royalties ($M Cdn)	Operating Costs ($M Cdn)	Development Costs ($M Cdn)	Abandonment Costs ($M Cdn)	Future Net Revenue Before Tax ($M Cdn)	Income Tax ($M Cdn)	Future Net Revenue After Tax ($M Cdn)
Total Proved	$6,176.0	$772.0	$2,495.7	$0.0	$527.6	$2,380.7	$257.3	$2,123.4
Proved plus Probable	$7,693.3	$961.7	$2,870.2	$0.0	$537.3	$3,324.2	$446.6	$2,877.6

Product Prices and Operating Costs

Actual Product Prices and Basis Used in Forecasts

	Ordovician Gas (Gas)		Ordovician Oil (Oil)	
Actual 2016 Product Price	$3.53	Cdn/Mcf	$58.97	Cdn/Bbl
Basis: NYMEX gas/Edm par oil, NGL	$0.03	Cdn/Mcf	$3.86	Cdn/Bbl
Forecast 2017 Product Price	$4.87	Cdn/Mcf	$72.12	Cdn/Bbl

Capital, Operating Cost, Economic Limit Summary Table

	Oil Wells		Gas Wells	
Actual 2016 Prices	$58.97	/Bbl	$3.53	/Mcf
Average Basis Differential	$3.86	/Bbl Edm	$0.03	/Mcf NYMEX
Forecast 2017 Prices	$72.12	/Bbl	$4.87	/Mcf
Operating Costs:				
Fixed	$1,000	/well/mo	$400	/well/mo
Variable	$12.00	/bbl	$0.75	/Mcf
Fuel gas shrinkage			36%	
Economic Limit	0.64	bpd	3.75	/Mcfd sales
Inflation Rate	1.5%	/yr	1.5%	/yr
Well Plugging Costs				
Gross Plugging Cost	$50.00	k/well	$30.00	k/well
Salvage	$20.00	k/well	$5.00	k/well
Net Plugging Cost	$30.00	k/well	$25.00	k/well

Benchmark Reference Prices for first year.

	NYMEX Gas Price ($US/MMBtu)	Edm Par Oil Price ($Cdn/Bbl)	NYMEX Oil Price ($US/Bbl)
2017	$3.50	$68.26	$54.94

Product Prices in Forecasted Evaluation

Year	Ordovician Oil Price ($Cdn/Bbl)	Ordovician Gas Price ($Cdn/Mcf)
Act 2013	$98.42	$3.92
Act 2014	$96.48	$5.52
Act 2015	$63.47	$3.59
Act 2016	$58.97	$3.53
2017	$72.12	$4.87
2018	$76.81	$4.50
2019	$80.06	$4.55
2020	$83.27	$4.81
2021	$86.48	$4.96

Reconciliation Tables

Reserve Reconciliation	Crude Oil			Natural Gas			NGL		
	Net Proved (MStb)	Net Probable (MStb)	Net Pr & Prob (MStb)	Net Proved (MMcf)	Net Probable (MMcf)	Net Pr & Prob (MMcf)	Net Proved (MStb)	Net Probable (MStb)	Net Pr & Prob (MStb)
December 31, 2015	38.1	10.6	48.7	300.3	51.7	352.0	0.00	0.00	0.00
Extensions	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00
Improved Recovery	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00
Technical Revisions	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00
Discoveries	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00
Acquisitions	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00
Dispositions	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00
Economic Factors	15.5	(5.0)	10.4	(51.8)	105.8	54.1	0.00	0.00	0.00
Production	(5.6)	0.0	(5.6)	(30.8)	0.0	(30.8)	0.00	0.00	0.00
December 31, 2016	47.9	5.6	53.5	217.7	157.5	375.2	0.00	0.00	0.00

Reconciliation of Changes in Net Present Values

Of Future Net Revenue Discounted at 10%/Year

Total Proven based on Constant Prices and Costs

	$M Cdn
Estimated Future Net Revenue at Dec 31, 2015	582
Sales of oil and gas produced, net of production costs and royalties	-117
Net changes in prices and production costs and royalties	560
Changes in development costs	
Extensions and improved recovery	0
Discoveries	
Acquisition of reserves	
Disposition of reserves	0
Technical Revisions	
Accretion of Discount	
Net change in Income Tax	0
Estimated Future Net Revenue at Dec 31, 2016	1025

The natural gas reserve volumes decreased significantly compared to the JMPEL December 31, 2015 reserves report due to large reserve reductions in PPC/Ram 13 and 16 offset by reserve increases in PPC/Ram 23. The fuel gas shrinkage also increased through the Dover East battery. The oil reserve volumes increased significantly due primarily to higher oil prices and resulting lower oil well economic limit (0.64 bpd compared to 0.82 bpd in the previous report). Due to the higher anticipated 2017 product prices, the value of the remaining reserves has increased significantly, as illustrated in the 10% NPV Constant Price/Operating Cost table above.