

# FORM 51-101F1 - STATEMENT OF RESERVES DATA AND OTHER OIL AND GAS INFORMATION

Year Ended July 31, 2019

**APRIL 23, 2020** 

# TABLE OF CONTENTS

DATE OF STATEMENT AND RELEVANT DATES	1
DISCLOSURE OF RESERVES DATA	1
Report of Independent Qualified Reserves Evaluator	1
Reserves Data	2
Breakdown of Reserves	2
Net Present Value of Future Net Revenue	2
Elements of Future Net Revenue	4
Future Net Revenue by Product Type	4
PRICING ASSUMPTIONS	6
Forecast Prices Used in Estimates	6
Actual Weighted Average Prices	8
RECONCILIATION OF CHANGES IN RESERVES	8
ADDITIONAL INFORMATION RELATING TO RESERVES DATA	9
Undeveloped Reserves	9
Significant Factors or Uncertainties Affecting Reserves Data	10
Future Development Costs	11
OTHER OIL AND GAS INFORMATION	11
Oil and Gas Properties and Wells	11
Producing and Non-Producing Wells	11
Facilities	12
Properties with No Attributed Reserves	12
Significant Factors or Uncertainties Relevant to Properties with No Attributed Reserves	12
Forward Contracts	13
Tax Horizon	13
Costs Incurred	13
Exploration and Development Activities	14
Production Estimates	14
Production History	14
Production Volumes in 2019	15
ADVISORIES	16
DEFINITIONS	17
ABBREVIATIONS, CONVERSIONS AND CONVENTIONS	20
Abbreviations	20
Conversions	20
Convention	20

#### DATE OF STATEMENT AND RELEVANT DATES

This Form 51-101F1 – Statement of Reserves Data and Other Oil and Gas Information (the "Statement of Reserves") of Bird River Resources Inc. (the "Corporation" or "Bird River") is dated April 23, 2020.

The effective date of the information provided in the Statement of Reserves is July 31, 2019 unless otherwise indicated.

The date of preparation is November 6, 2019.

#### DISCLOSURE OF RESERVES DATA

#### **Report of Independent Qualified Reserves Evaluator**

Chapman Petroleum Engineering Ltd. ("CHAPMAN"), independent qualified reserves evaluators of Calgary, Alberta, prepared an independent evaluation of the Corporation's oil and natural gas properties effective July 31, 2019, which is contained in a report dated November 6, 2019 (the "2019 Reserves Report"). On February 12, 2018, the Corporation completed the acquisition (the "Acquisition") of High Point Oil Inc. ("High Point"). High Point was a wholly-owned subsidiary of the Corporation as at July 31, 2019. Bird River's previously owned Manitoba resource properties were not included in the above reserve report as they are not significant to the Company's future activities producing only 1 bbl of oil per day. The information provided in the Statement of Reserves is a consolidation of the Corporation and High Point's oil and natural gas properties as at July 31, 2019. Reserves estimates stated herein as at July 31 of a year are extracted from the relevant evaluation.

CHAPMAN confirmed to the Reserves Committee of the Corporation's Board of Directors that the 2019 Reserves Report, was prepared in accordance with the Canadian Oil and Gas Evaluation Handbook (the "COGE Handbook") and National Instrument 51-101 – Standards of Disclosure for Oil and Gas Activities ("NI 51-101").

In the course of the evaluation of the Corporation's reserves as at the year ended July 31, 2019, CHAPMAN obtained basic information from the Corporation, which included land data, well information, geological information, reservoir studies, estimates of on-stream dates, contract information, current hydrocarbon product prices, operating cost data, capital budget forecasts, financial data and future operating plans. Other engineering, geological or economic data required to conduct the evaluation and upon which the 2019 Reserves Report is based, was obtained from public records, other operators and from Chapman's non-confidential files.

CHAPMAN advised that the accuracy of any reserves and production estimate is a function of the quality and quantity of available data and of engineering interpretation and judgment. While CHAPMAN believes the reserves and production estimates presented in the 2019 Reserves Report are considered reasonable, the estimates should be accepted with the understanding that reservoir performance subsequent to the date of the estimate may justify revision, either upward or downward.

Revenue projections in the 2018 Reserves Report are based in part on forecasts of market prices, currency exchange rates, inflation, market demand and governmental policy, which are subject to many uncertainties and may, in future, differ materially from the forecasts utilized in the 2019 Reserves Report. Present values of revenues documented in the 2019 Reserves Report do not necessarily represent the fair market value of the reserves evaluated

in the 2019 Reserves Report.

The 2019 Reserves Report was conducted on the basis of the CHAPMAN August 1, 2019 price forecast. At the time of the 2019 Reserves Report the Corporation's 2020 fiscal year capital expenditure budget was \$0.250 million. Forecast expenditures in future years may vary from actual expenditures dependent on numerous variables including, commodity prices and therefore funds provided by operations, availability of financing and actual results achieved in the field.

#### **Reserves Data**

The tables contained in this Statement of Reserves summarize information provided by CHAPMAN contained in the 2019 Reserves Report. Due to rounding, numbers in tables may not add.

#### **Breakdown of Reserves**

All of the Corporation's reserves are in Canada and specifically, in central Alberta. The following table summarizes Chapman's estimates of the Corporation's reserves as at July 31, 2019, using Forecast Prices and Costs.

Table 1

Bird River Resources Inc.

Summary of Oil and Gas Reserves

August 1, 2019 (as of July 31, 2019)

				Compa	any Reserves	(')		
	Light and Medium Oil		Heavy Oil		Conventional Natural Gas <sup>(9)</sup>			ural Gas iquids
	Gross	Net	Gross	Net	Gross	Net	Gross	Net
Reserves Category	MSTB	MSTB	MSTB	MSTB	MMscf	MMscf	Mbbl	Mbbl
PROVED								
Developed Producing <sup>(2)(6)</sup>	12	10	0	0	0	0	0	0
Developed Non-Producing(2)(7)	0	0	0	0	0	0	0	0
Undeveloped <sup>(2)(8)</sup>	0	0	0	0	0	0	0	0
TOTAL PROVED <sup>(2)</sup>	12	10	0	0	0	0	0	0
TOTAL PROBABLE <sup>(3)</sup>	710	571	0	0	2,413	1,558	64	41
TOTAL PROVED + PROBABLE <sup>(2)(3)</sup>	722	581	0	0	2,413	1,558	64	41
TOTAL POSSIBLE(4)	209	173	0	0	78	64	0	0
TOTAL PROVED + PROBABLE + POSSIBLE	931	753	0	0	2,491	1,622	64	41

Reference: Item 2.1 (1) Form 51-101F1

Columns may not add precisely due to accumulative rounding of values throughout the report.

Note: [1] Includes associated, non-associated and solution gas where applicable.

#### **Net Present Value of Future Net Revenue**

The following table sets out the net present value of the future net revenue associated with Chapman's estimates of the Corporation's reserves as at July 31, 2019, using Forecast Prices and Costs, before and after deducting future income tax expense, and calculated at various

discount rates. The following table also sets out such information on a unit value basis using a discount rate of 10% and calculated before and after deducting future income tax expenses.

# Summary of Net Present Values August 1, 2019 (as of July 31, 2019)

#### **Forecast Prices and Costs**

Dafasa	Income Tax
belore	income rax

		Net Present	Values of Future N	let Revenue	
			Discounted at		
	0 %/yr.	5 %/yr.	10 %/yr.	15 %/yr.	20 %/yr.
Reserves Category	M\$	M\$	M\$	M\$	M\$
PROVED					
<b>Developed Producing</b>	-250	71	132	154	167
Developed Non-Producing	0	0	0	0	0
Undeveloped	0	0	0	0	0
TOTAL PROVED	-250	71	132	154	167
PROBABLE	27,946	19,088	14,603	11,865	9,984
TOTAL PROVED PLUS PROBABLE	27,696	19,159	14,735	12,020	10,151
POSSIBLE	10,350	7,764	6,011	4,777	3,882
TOTAL PROVED PLUS PROBABLE PLUS POSSIBLE	38,047	26,923	20,746	16,796	14,033

#### After Income Tax

	Net Present Values of Future Net Revenue								
			Discounted at						
	0 %/yr.	5 %/yr.	10 %/yr.	15 %/yr.	20 %/yr.				
Reserves Category	M\$	M\$	M\$	M\$	M\$				
PROVED									
<b>Developed Producing</b>	-250	71	132	154	167				
Developed Non-Producing	0	0	0	0	0				
Undeveloped	0	0	0	0	0				
TOTAL PROVED	-250	71	132	154	167				
PROBABLE	22,008	15,261	11,769	9,606	8,107				
TOTAL PROVED PLUS PROBABLE	21,758	15,332	11,901	9,761	8,274				
POSSIBLE	7,556	5,659	4,374	3,470	2,815				
TOTAL PROVED PLUS PROBABLE PLUS POSSIBLE	29,314	20,991	16,275	13,231	11,089				

Reference: Item 2.1 (2) Form 51-101F1

#### M\$ means thousands of dollars

Columns may not add precisely due to accumulative rounding of values throughout the report.

Note: [1] After Income Tax is not available, because this report is based on an evaluation of certain properties owned by the

[2] The total tax pools are in excess of the cash flow projected for this report, therefore there is not tax impact on the Company.

#### **Elements of Future Net Revenue**

The following table sets out the various elements of the Corporation's future net revenue associated with Chapman's estimate of the Corporation's reserves as at July 31, 2019, using Forecast Prices and Costs and calculated without discount.

#### **Total Future Net Revenue (Undiscounted)**

August 1, 2019

(as of July 31, 2019)

#### **Forecast Prices and Costs**

	Well									
Reserve Category	Revenue M\$	Royalties M\$	Operating Costs M\$	Development Costs M\$	Abandonment Costs M\$	Future Net Revenues BIT M\$	Income Taxes M\$	Future Net Revenues AIT M\$		
Total Proved	752	71	310	0	621	-250	0	-250		
Proved Plus Probable	71,977	17,243	21,928	3,972	1,138	27,696	5,938	21,758		
Proved Plus Probable	90,115	20,298	26,336	4,285	1,149	38,047	8,732	29,314		

IFRS 16 will change how capital leases are recorded. It specifies how to recognize, measure, present and disclose information relating to leases. The standard provides a single lessee accounting model, requiring lessees to recognize assets and liabilities for all leases unless the lease term is 12 months or less or the underlying asset has an insignificant value. IFRS 16 will be adopted by the Corporation on August 1, 2019 and the Corporation is currently reviewing contracts that are currently identified as leases and evaluating the impact of the standard on the consolidated financial statements.

The capital component of future capital leases that previously would have been recorded as an operating cost in the reserves report will now be recorded as an asset. Once the capital leases are recorded as an obligation on the statement of financial position, these capital costs are no longer included in the reserve report. Over the course of the capital leases, there will be capital fees paid, which, from an accounting perspective, will be split between finance costs and the amortization of the obligation, with neither the amortized capital costs nor the associated finance charges being included in the reserves report. There were no costs associated with capital leases in 2019 Reserves Report.

#### **Future Net Revenue by Product Type**

The following two tables sets out the net present value of future net revenue before deducting future income expenses as at July 31, 2018, estimated by using Forecast Prices and Costs and calculated using a discount rate of 10%.

# Future Net Revenue By Product Type August 1, 2019 (as of July 31, 2019) Forecast Prices and Costs

		FUL	cast File	es and co	313						
Posonyo Catogory	Product Type eserve Category										
	Link and Marking	0:1 / :1:1:				\		M\$			
Total Proved	Light and Medium					oducts)		132 0			
		Heavy Oil (including solution gas and other by-products)									
Conventional Natural Gas (including by-products but not solution gas)								0			
Proved Plus Probable	Light and Medium	•	-	-		oducts)	_	14,3	47		
	Heavy Oil (includin	0	•								
	Conventional Natu	irai Gas (inc	luding by-	products b	ut not solu	tion gas)		389	9		
Proved Plus Probable	Light and Medium	Oil ( includ	ing solutio	n gas and o	other by-pr	oducts)	-	20,3	57		
Plus Possible	Heavy Oil (includin							0			
	Conventional Natu					tion gas)		389			
Product Type by F	Reserve Category		Dil		erves Gas	N	GL	Net Present Value (BIT)	Unit Values @ 10%/yr.		
		Gross	Net	Gross	Net	Gross	Net	10%			
		MSTB	MSTB	MMscf	MMscf	Mbbl	Mbbl	M\$	\$/STB		
Light and Medium Oil [	11		111312	171171361	171171301	111001	111001		7/315		
Proved	•	_									
Developed Produ	ucing	12	10	0	0	0	0	132	13.24		
Developed Non-I	Producing	0	0	0	0	0	0	0	N/A		
Undeveloped		0	0	0	0	0	0	0	N/A		
<b>Total Proved</b>		12	10	0	0	0	0	132	13.24		
Probable		710	571	57	46	0	0	14,214	24.91		
Proved Plus Probable	e	722	581	57	46	0	0	14,347	24.71		
Possible		209	173	78	64	0	0	6,011	34.82		
Proved Plus Probable	e Plus Possible	931	753	135	110	0	0	20,357	27.03		
Conventional Natural C	Gas (Associated & No	n-Associate	ed)						\$/Mscf		
Proved	-						-				
Developed Produ	ucing	0	0	0	0	0	0	0	N/A		
Developed Non-I	Producing	0	0	0	0	0	0	0	N/A		
Undeveloped		0	0	0	0	0	0	0	N/A		

2,356

2,356

2,356

1,511

1,511

1,511

N/A

0.26

0.26

N/A

0.26

**Total Proved** 

**Proved Plus Probable** 

**Proved Plus Probable Plus Possible** 

Probable

Possible

Reference: Item 2.1 (3)(c) NI 51-101F1

#### M\$ means thousands of dollars

Columns may not add precisely due to accumulative rounding of values throughout the report.

Notes: [1] Includes solution gas.

[2] Reserves shown as "0" reflect a value of less than 0.5(MSTB/MMscf/Mbbl).

#### PRICING ASSUMPTIONS

#### **Forecast Prices Used in Estimates**

The following table sets out the pricing assumptions used by CHAPMAN in preparing the 2019 Reserves Report. CHAPMAN prepared its August 1, 2019 price and market forecast after a comprehensive review of information from sources including government agencies, industry publications, Canadian oil refiners and natural gas marketers. While CHAPMAN considered these forecasts reasonable at the time, users of forecasts should understand the inherently high uncertainty in forecasting any commodity or market.

There will be adjustments to field prices from the benchmarks below.

# CHAPMAN PETROLEUM ENGINEERING LTD. CRUDE OIL HISTORICAL, CONSTANT, CURRENT AND FUTURE PRICES August 1, 2019

			Brent Spot	AB Synthetic	Western Canada	Exchange
		WTI [1]	(ICE)[2]	Crude Price [3]	Select [4]	Rate
Date		\$US/STB	\$US/STB	\$CDN/STB	\$CDN/STB	\$US/\$CDN
HISTOR	ICAL PRICE	ES				
2009		61.95	61.74	76.77	53.04	0.88
2010		79.48	79.61	80.56	66.58	0.97
2011		94.88	111.26	102.45	77.43	1.01
2012		94.05	111.63	92.56	71.70	1.00
2013		97.98	108.56	100.17	75.76	0.97
2014		93.12	99.43	101.07	82.07	0.91
2015		48.69	53.32	62.17	46.23	0.78
2016		43.17	45.06	57.98	38.90	0.76
2017		50.86	54.75	67.75	49.63	0.77
2018		64.92	71.64	75.06	50.17	0.77
2019	7 mos.	57.42	65.89	76.25	61.17	0.75
CONST	ANT PRICES	S (The average of	of the first-day-of-th	ne-month price for t	he preceding 12 mon	ths-SEC)
		60.40	68.38	71.51	52.91	0.75
FOREC	AST PRICES		00.00		02.01	00
2019		62.00	70.68	72.28	52.76	0.77
2020		63.00	71.82	73.58	53.71	0.77
2021		66.15	75.41	77.67	56.70	0.77
2022		69.46	79.18	81.96	59.83	0.77
2023		72.93	83.14	86.47	63.13	0.77
2024		76.58	87.30	91.21	66.58	0.77
2025		78.11	89.04	93.20	68.04	0.77
2026		79.67	90.82	95.23	69.52	0.77
2027		81.26	92.64	97.30	71.03	0.77
2028		82.89	94.49	99.41	72.57	0.77
2029		84.55	96.38	101.56	74.14	0.77
2030		86.24	98.31	103.76	75.74	0.77

2031	87.96	100.28	106.00	77.38	0.77
2032	89.72	102.28	108.28	79.05	0.77
2033	91.52	104.33	110.61	80.75	0.77
2034	93.35	106.42	112.99	82.48	0.77

#### **Escalated 2% thereafter**

West Texas Intermediate quality (D2/S2) crude (40API) landed in Cushing, Oklahoma. Notes: [1]

- The Brent Spot price is estimated based on historic data. [2]
- [3] Equivalent price for Light Sweet Crude (D2/S2) & Synthetic Crude landed in Edmonton.
- [4] Western Canada Select (20.5API), spot price for B.C., Alberta, Saskatchewan, and Manitoba.

### **NATURAL GAS & BY-PRODUCTS** HISTORICAL, CONSTANT, CURRENT AND FUTURE PRICES August 1, 2019

	Alberta GRP [1]		AECO Spot Gas[2]	Henry Hub Gas[3]	,		Condensate (Pentanes Plus) C5+[5]	NGL [6]			
Date	\$CDN/MMBTU	\$CDN/GJ	\$CDN/MMBTU	\$US/MMBTU	\$CDN/BBL	\$CDN/BBL	\$CDN/BBL	\$CDN/BBL			
HISTORICAL F	PRICES										
2009	3.85	3.65	3.99	3.94	38.34	49.34	67.52	50.39			
2010	3.93	3.73	4.02	4.39	44.40	57.99	77.51	58.41			
2011	3.46	3.28	3.63	3.99	50.17	70.93	97.21	70.51			
2012	2.25	2.13	2.39	2.70	47.40	64.48	96.26	67.18			
2013	2.98	2.82	3.17	3.84	50.09	91.43	100.72	77.68			
2014	4.22	4.00	4.51	4.36	46.85	62.26	108.28	69.90			
2015	2.62	2.48	2.71	2.69	6.17	36.81	59.14	31.25			
2016	2.03	1.93	2.18	3.31	6.71	29.81	55.62	26.56			
2017	2.05	1.94	2.50	3.85	25.55	39.62	67.15	44.17			
2018	1.38	1.31	1.51	4.11	30.47	48.97	77.19	56.34			
2019 7 mos.	1.58	1.50	1.77	3.58	22.15	28.83	71.14	40.60			
CONSTANT PRICES (The average of the first-day-of-the-month price for the preceding 12 months-SEC)											
	•		-	•		•	·				
	1.85	1.75	2.03	2.97	26.35	40.26	72.06	49.43			
FORECAST P	RICES										
2019	2.00	1.90	1.85	3.30	13.64	29.67	67.94	40.17			
2020	1.96	1.86	2.15	3.60	22.14	39.14	69.16	46.05			
2021	2.23	2.11	2.45	3.90	28.61	45.59	73.01	51.46			
2022	2.34	2.22	2.57	4.02	33.87	51.17	77.05	56.33			
2023	2.46	2.33	2.70	4.15	37.02	55.19	81.29	60.18			
2024	2.58	2.45	2.84	4.29	39.17	58.26	85.74	63.52			
2025	2.71	2.57	2.98	4.43	40.09	59.56	87.61	64.94			
2026	2.85	2.70	3.13	4.58	41.01	60.89	89.51	66.38			
2027	2.90	2.75	3.19	4.64	41.99	62.28	91.46	67.86			
2028	2.96	2.81	3.25	4.70	42.99	63.63	93.44	69.36			
2029	3.02	2.86	3.32	4.77	44.02	65.03	95.47	70.90			
2030	3.08	2.92	3.38	4.83	44.98	66.46	97.53	72.44			
2031	3.14	2.98	3.45	4.90	45.92	67.88	99.64	73.99			
2032	3.20	3.04	3.52	4.97	46.95	69.33	101.79	75.60			
2033	3.27	3.10	3.59	5.04	47.95	70.81	103.98	77.22			
2034	3.33	3.16	3.66	5.11	48.91	72.23	106.06	78.88			
Escalated 2%	thereafter										

Notes: [1] Alberta Gas Reference Price (GRP) represents the average of all system and direct (spot and firm) sales.

- [2] The AECO C Spot price, which is the Alberta gas trading price
- [3] Henry Hub Spot is natural gas traded on the New York Mercantile Exchange (NYMEX).
- [4] Alberta average field price for Propane and Butane purchased at field locations.
- [5] Edmonton condensate from GMPFirstEnergy.

#### **Actual Weighted Average Prices**

Only one of the Corporation's own drilled wells produced in the year ended July 31, 2019. Production that the Corporation acquired is minimal compared to its own drilled wells.

Accordingly, actual weighted average prices received up to July 31, 2019 are not meaningful. Weighted average prices for the two first months of the subsequent fiscal year are \$63.03 per bbl for oil and \$0.47 per Mcf for natural gas; each of which is before transportation, marketing fees, royalties and hedging.

#### **RECONCILIATION OF CHANGES IN RESERVES**

The following table sets forth a reconciliation of Chapman's estimates of the Corporation's gross reserves as at July 31, 2019, to the Corporation's gross reserves as at July 31, 2018. At July 31, 2018 Bird River reported that an independent qualified reserves evaluator (auditor) had NOT been retained to evaluate the Company's reserves data as the Company holds a minimal interest (2.5% to 5%) in various wells and the controlling shareholder (private company) of the wells has not had a report prepared by an independent qualified reserve evaluator and auditor. Therefore, the starting point for this reconciliation is zero. Bird River's previously owned resource properties were also not included in the 2019 Reserves Report as they are not significant to the Company's future activities producing only 1 bbl of oil per day. On February 12, 2018, the Corporation completed the acquisition (the "Acquisition") of High Point Oil Inc. ("High Point"). High Point was a wholly-owned subsidiary of the Corporation as at July 31, 2019. High Point had no completed wells at the date of acquisition. High Point did complete the 103/11-36-34-25w4 subsequent to acquisition. Note - The estimates of reserves and future net revenue for individual properties may not reflect the same confidence level as estimates of reserves and future net revenue for all properties, due to the effects of aggregation.

		Light and Medium Oil					Heavy Oil				Co	Conventional Natural Gas			Gas
											(	(Associated and Non-			
												Associated)			
					Gross					Gross					Gross
			Gross		Proved Plus			Gross		Proved Plus			Gross		Proved Plus
			Proved		Probable			Proved		Probable			Proved		Probable
	Gross	Gross	Plus	Gross	Plus	Gross	Gross	Plus	Gross	Plus	Gross	Gross	Plus	Gross	Plus
	Proved	Probable			Possible	Proved	Probable		Possible			Probable			
	(Mbbl)	(Mbbl)	(Mbbl)	(Mbbl)	(Mbbl)	(Mbbl)	(Mbbl)	(Mbbl)	(Mbbl)	(Mbbl)	(MMscf)	(MMscf)	(MMscf)	(MMscf)	(MMscf)
At July 31, 2018	117	1,217	1,335	209	1,544	0	0	0	0	0	0	2,413	2,413	78	2,491
Production(Sales)	(7)	0	(7)	0	(7)	0	0	0	0	0	0	0	0	0	0
Acquisitions	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dispositions	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Discoveries	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Extensions &															
Improved Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Economic Factors	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Technical Revisions	(99)	(507)	(606)	0	(606)	0	0	0	0	0	0	0	0	0	0
At July 31, 2019	12	710	722	209	931	0	0	0	0	0	0	2,413	2,413	78	2,491

#### ADDITIONAL INFORMATION RELATING TO RESERVES DATA

### **Undeveloped Reserves**

The Company had no proved undeveloped reserves as at July 31, 2019.

The following table sets forth the volume of the probable undeveloped reserves that were first attributed for each of the Company's product types for the most recent three financial years, and in the aggregate before such time:

	Light and Medium		Conventional	Natural Gas
	Oil (Mbbl)	Heavy Oil (Mbbl)	Natural Gas (MMscf)	Liquids (Mbbl)
Aggregate prior to 2017	0	0	0	0
2017	0	0	0	0
2018	1,192	0	2,413	64
2019	0	0	0	0

The following table sets forth the volume of the possible undeveloped reserves that were first attributed for each of the Company's product types for the most recent three financial years, and in the aggregate before such time:

	Light and Medium		Conventional	Natural Gas
	Oil (Mbbl)	Heavy Oil (Mbbl)	Natural Gas (MMscf)	Liquids (Mbbl)
Aggregate prior to 2017	0	0	0	0
2017	0	0	0	0
2018	209	0	78	0
2019	0	0	0	0

The Corporation has a growing inventory of development opportunities and its capital spending activities are prioritized to optimize development plans, achieve strategic goals and maximize shareholder value.

CHAPMAN attributed proved undeveloped reserves to each future well location that is proximal to an existing well, to which CHAPMAN has attributed proved developed reserves, via a single- well step-out. In areas where existing wells with proved developed reserves demonstrate sufficient proved delineation of the resource, as determined by CHAPMAN, additional well locations are assigned proved undeveloped reserves. CHAPMAN has estimated these proved undeveloped reserves using forecast production rates that are based on a statistical analysis of production rates of existing wells operated by the Corporation or others in the regional area.

CHAPMAN attributed probable undeveloped reserves to each future well location that is proximal to an existing well, to which CHAPMAN has attributed proved plus probable developed reserves, via a double-well step-out. In areas where existing wells with proved plus probable developed reserves demonstrate sufficient probable delineation of the resource, as determined by CHAPMAN, additional infill well locations are assigned probable undeveloped reserves. CHAPMAN has estimated these probable undeveloped reserves using forecast production rates that are based on a statistical analysis of production rates of existing wells operated by the Corporation or others in the regional area.

The Corporation's development of its proved undeveloped and probable undeveloped reserves is limited primarily by capital, facility and infrastructure constraints. The Corporation plans to develop all of the proved plus probable undeveloped reserves within the next five

years and all of the probable undeveloped reserves within the next ten years. Approximately 66% of the future development costs for proved plus probable reserves are scheduled to be incurred within the next two years.

The Corporation's plans for the development of its proved undeveloped reserves and its probable undeveloped reserves and the timing of such development may change based on changes in geological, geophysical and engineering data and commodity prices the availability of financing and upon the characteristics of other potential investments that become available to the Corporation.

### Significant Factors or Uncertainties Affecting Reserves Data

There are a number of important economic factors and significant uncertainties inherent in estimating the quantities of reserves and resources, including many factors beyond the control of the Corporation. In general, estimates of economically recoverable oil and natural gas reserves and the future net cash flows therefrom, are based upon a number of variable factors and assumptions, such as historical production from the properties, the assumed effects of regulation by governmental agencies and future operating costs, all of which may vary considerably from actual results. For these reasons, estimates of the economically recoverable oil and natural gas reserves attributable to any particular group of properties, classification of such reserves based on risk of recovery and estimates of future net revenues expected therefrom, prepared by different engineers or by the same engineer at different times, may vary substantially. The actual production, revenues, taxes and development and operating expenditures of the Corporation with respect to these reserves will vary from such estimates, and such variances could be material. One of the most significant risks facing the oil and gas industry in Alberta at present is the ability to market its product effectively. Severe pipeline constraints have resulted in extreme reductions in value of all weights of crude oil and in natural gas. The Corporation is currently targeting light oil (which has not been as affected by these constraints as heavier oil) in an effort to mitigate this risk but there is no guarantee that such constraints will not have increasing adverse effects on light oil. This risk is almost impossible to predict as it is highly impacted by policy decisions of all levels of governments in Canada and indeed by world governments and the actions of the Organization of Petroleum Exporting Countries (or "OPEC"). Certain of these risks are set out in more detail in Bird River's CSE Listing Statement Form 2A dated October 15, 2018 and in Bird River's MD&A for the period ended April 30, 2018, both of which have been filed on SEDAR and can be accessed at www.sedar.com.

Estimates with respect to proved plus probable reserves that may be developed and produced in the future are often based upon volumetric calculations and upon analogy to similar types of reserves rather than actual production history. Estimates based on these methods are generally less reliable than those based on actual production history. Subsequent evaluation of the same reserves based upon production history will result in variations, which may be substantial, in the estimated reserves. Consistent with the securities disclosure legislation and policies of Canada, the Corporation has used forecast prices and costs in calculating reserve quantities. Actual future net cash flows will also be affected by other factors such as actual production levels, supply and demand for oil and natural gas, curtailments or increases in consumption by oil and natural gas purchasers, changes in governmental regulations or taxation and the impact of inflation on costs.

The reserve estimates contained herein are based on CHAPMAN's production forecasts, prices and economic conditions at the time of preparation of the 2019 Reserves Report. The factors and assumptions that affect these reserve estimates include, among other things: (i) historical production in the area compared with production rates from analogous producing

areas; (ii) initial production rates; (iii) production decline rates; (iv) ultimate recovery of reserves; (v) success of future development activities; (vi) marketability of production; (vii) effects of government regulations; and (viii) government levies imposed over the life of the reserves.

#### **Future Development Costs**

The following table sets out Chapman's estimates of the Corporation's future development costs anticipated in the next five years, which have been deducted in the estimation of the future net revenues of the proved plus probable reserves.

	Total Proved Estimated Using Forecast Prices and Costs (Undiscounted) (M\$)	Total Proved Plus Probable Estimated Using Forecast Prices and Costs (Undiscounted) (M\$)
2019	0	0
2020	0	2,958
2021	0	1,014
2022	0	0
2023	0	0
Total for five years	0	3,972
Remainder	0	0
Total for all years	0	3,972

The Corporation expects that the funds required for future development costs will be obtained from the combination of internally-generated cash flow, and other available financing sources. There can be no guarantee that funds will be available or that the Corporation will allocate funding to develop all of the reserves attributed in the 2019 Reserves Report. Failure to develop these reserves would have a negative impact on future cash flow of the Corporation.

Interest and other costs of external funding are not included in the future development costs of the reserves or in the future net revenue estimates and could reduce reserves and future net revenue to varying degrees depending upon the funding source utilized. The Corporation does not anticipate that interest or other funding costs would make development of any property uneconomic.

#### OTHER OIL AND GAS INFORMATION

#### Oil and Gas Properties and Wells

The Corporation is in the business of exploring for, developing and producing light oil from the Western Sedimentary Basin. The corporation's present operations target primarily Nisku light oil production in its' Central Alberta Core area.

The Corporation's Central Alberta Core Area is located East and South East of Red Deer Alberta in the areas referred to as Huxley, Elnora, Mikwan and Chigwell. The Corporation's focus is on conventional vertical wells into identified Nisku targets. The targets are well defined by 3D seismic and are sufficiently compact so as to allow optimal recovery with a vertical well and are not typically good candidates for horizontal well application. The target locations are of small aerial extent and do not require significant contiguous land positions.

#### **Producing and Non-Producing Wells**

The following table sets out the Corporation's producing and non-producing wells as at July 31, 2019. The producing wells were acquired by High Point in July of 2019 in partnership with a 50% partner.

	Oil		Conventional	Natural Gas
	Gross <sup>(1)</sup>	Net <sup>(2)</sup>	Gross <sup>(1)</sup>	Net <sup>(2)</sup>
Huxley, Alberta				
Producing	1	0.5	0	0
Non-producing	6	3	0	0
Mikwan, Alberta				
Producing	1	0.5	0	0
Non-producing	4	2	0	0
Total	11	6	0	0

<sup>[1]</sup> Total number of wells in which the Company has a working interest.

#### **Facilities**

Other than surface equipment related to individual wells the Corporation presently owns no facilities.

#### **Properties with No Attributed Reserves**

The following table sets forth the Corporation's properties with no attributed reserves as at July 31, 2019. All properties are in Alberta.

Properties with No Attributed Reserves

Location	Unproved Properties		
	Gross Hectares (Acres)	Net Hectares (Acres)	
Alberta	1145.27 (2830.02)	1081.27 (2671.88)	
TOTAL	1145.27 (2830.02)	1081.27 (2671.88)	

The Corporation has 0.0 (0.0 net) acres of work commitments for 2019. Continuation applications are submitted in the normal course of business for any expiring lands. The Corporation has 0.0 net acres in Alberta which are scheduled to expire in fiscal 2019.

# Significant Factors or Uncertainties Relevant to Properties with No Attributed Reserves

There are several economic factors and significant uncertainties that affect the anticipated development of the Corporation's properties with no attributed reserves. The Corporation will be required to make substantial capital expenditures in order to prove, exploit, develop and produce oil and natural gas from these properties in the future. If the Corporation's cash flow from operations is not sufficient to satisfy its capital expenditure requirements, there can be

<sup>[2]</sup> Total number of wells in which the Company has a working interest multiplied by the Company working interest in each well.

no assurance that additional financing will be available to meet these requirements under terms acceptable to the Corporation. Failure to obtain such financing on a timely basis could cause the Corporation to forfeit its interest in certain properties, miss certain opportunities and reduce its development expenditures. The inability of the Corporation to access sufficient capital for its exploration and development purposes could have a material adverse effect on the Corporation's ability to execute its business strategy to develop its prospects. Certain of these risks are set out in more detail in Bird River's CSE Listing Statement Form 2A dated October 15, 2018 and in Bird River's MD&A for the period ended April 30, 2018, both of which have been filed on SEDAR and can be accessed at <a href="https://www.sedar.com">www.sedar.com</a>.

The significant economic factors that affect the Corporation's development of its lands to which no reserves have been attributed are future realized commodity prices of oil (and the Corporation's outlook relating to such prices) and the future costs of drilling, completing, tying in and operating wells.

The significant uncertainties that affect the Corporation's development of its lands are the future drilling and completion results the Corporation achieves in its development activities; drilling and completion results achieved by others on lands in proximity to the Corporation's lands; and future changes to applicable regulatory or royalty regimes that affect timing or economics of proposed development activities. All of these uncertainties have the potential to delay the development of such lands.

#### **Forward Contracts**

The Corporation does not presently enter into either physical or derivative forward contracts.

#### Tax Horizon

The Corporation was not required to pay any cash income taxes for the year ended July 31, 2019. Actual taxes payable in the future will become a function of commodity prices, production volumes and capital expenditures combined with active tax planning. Based on after- tax economic forecasts for total proved and proved plus probable in this report, income taxes may become payable by the Corporation in 2021. The Corporation has tax pools of \$6.0 million, and management forecasts that the Company will not be taxable for at least the next two years.

#### **Costs Incurred**

Costs incurred are the sum of cash paid capital costs of \$3.9 million plus \$5.5 million (the value attributed to the shares issued on the acquisition of High Point at \$0.10/share). Of the \$3.9 million of cash costs only \$0.1 million was related to acquisition. None of the resultant sum of \$5.6 million acquisition costs related to properties containing material proven resources at the time of acquisition. \$0.9 million related to Seismic acquisition, processing and interpretation has all been considered exploration given that at the time the cost was incurred it was not yet determinable whether the resultant well would be classified as exploration or development. The following table sets forth the property acquisition costs, the exploration costs and development costs for the year ended July 31, 2019.

2018 Acquisition, Exploration and Development Costs (MM\$)

Property Acquisition Costs		Exploration Costs	Development Costs
Proved Properties	Unproved Properties		
-	\$5.6	\$0.9	\$2.9

#### **Exploration and Development Activities**

During the year ended July 31, 2019 the Corporation drilled 2 (1 net) development wells which resulted in 1 (0.5 net) oil wells and 1 (0.5 net) standing wells. The outcome of the standing well is uncertain at this time as it may ultimately end up becoming a service well.

During the 2020 fiscal year, the Corporation intends to drill and complete 7 (3.5 net) Nisku wells. It is expected that 2 (1 net) of the above wells will be classified as exploratory.

#### **Production Estimates**

The following table sets for the volumes of the Corporation's production estimated by Chapman for 2019 Reserves Report (5 mos.):

#### **TOTAL PROVED RESERVES**

AREA	Light and Medium Oil (Mbbl)	Heavy Oil (Mbbl)	Conventional Natural Gas (MMscf)	Natural Gas Liquids (Mbbl)
Huxley, Alberta	3.2	0	0	0
Mikwan, Alberta	0	0	0	0
Total for all areas	3.2	0	0	0

#### **TOTAL PROVED PLUS PROBABLE RESERVES**

	Light and Medium		Conventional	Natural Gas
AREA	Oil (Mbbl)	Heavy Oil (Mbbl)	Natural Gas (MMscf)	Liquids (Mbbl)
Chigwell, Alberta	0	0	0	0
Elnora, Alberta	0	0	0	0
Huxley, Alberta	3.4	0	0	0
Mikwan, Alberta	0	0	0	0
Total for all areas	3.4	0	0	0

#### TOTAL PROVED PLUS PROBABLE PLUS POSSIBLE RESERVES

AREA	Light and Medium Oil (Mbbl)	Heavy Oil (Mbbl)	Conventional Natural Gas (MMscf)	Natural Gas Liquids (Mbbl)
Chigwell, Alberta	0	0	0	0
Elnora, Alberta	0	0	0	0
Huxley, Alberta	3.4	0	0	0
Mikwan, Alberta	0	0	0	0
Total for all areas	3.4	0	0	0

These values are gross to Company's working interest before the deduction of royalties payable to others.

## **Production History**

The following table sets forth certain information in respect of production, product prices received, royalties, production costs and netbacks received by the Company for each quarter of its most recently completed financial year:

	Three Months Ended October 31, 2018	Three Months Ended January 31, 2019	Three Months Ended April 30, 2019	Three Months Ended July 31, 2019
Average Daily Production				
Light and Medium Oil (Bbl/d)	98	60.5	34	34
Conventional Natural Gas (Mscf/d)				28
Average Net Prices Received				
Light and Medium Oil (\$/Bbl)	69	32.10	67	64.31
Conventional Natural Gas (\$/Mscf)				1.05
Royalties				
Light and Medium Oil &	4.43	1.59	2.93	16.98
Conventional Natural Gas (\$/boe)				
Production Costs				
Light and Medium Oil &	10.88	21.48	43.15	32.34
Conventional Natural Gas (\$/boe)				
Netback Received	53.69	9.03	20.92	16.13
Light and Medium Oil &				
Conventional Natural Gas (\$/boe)				

#### **PRODUCTION VOLUMES IN 2019**

Light and Medium		Conventional	Natural Gas		
AREA Oil Heavy Oil		Natural Gas	Liquids		
(Mbbl) (Mbbl)		(MMscf)	(Mbbl)		
Total	20.4	0.0	9.9	0.4	-

#### **ADVISORIES**

**Boe Conversions:** Barrel of oil equivalent ("**boe**") amounts have been calculated by using the conversion ratio of six thousand cubic feet (6 Mcf) of natural gas to one barrel of oil (1 bbl). Boe amounts may be misleading, particularly if used in isolation. A boe conversion ratio of 6 Mcf to 1 bbl is based on an energy equivalency conversion method primarily applicable at the burner tip and does not represent a value equivalency at the wellhead.

**Product Type:** NI 51-101 requires a reporting issuer to disclose its reserves in accordance with the product types contained in NI 51-101.

**Company Gross Reserves:** Unless otherwise stated, references to "reserves" are to the Corporation's gross reserves, defined as the Corporation's working interest (operated or non-operated) share before deduction of royalties and without including any royalty interests of the Corporation.

**Company Net Reserves:** Are the above reserves after deduction of royalties.

Currency: All amounts are stated in Canadian dollars unless otherwise specified.

**Forecast Prices and Costs:** Reserves estimates stated herein are calculated using the forecast price and cost assumptions by the reserves evaluator which were in effect at the time of the applicable reserves evaluation. The complete CHAPMAN July 31, 2018 price forecast is included as Table 5 to this report. At the time of the 2018 Reserves Report the Corporation's 2019 fiscal year capital expenditure budget was \$3.0 million. Forecast expenditures in future years may vary from actual expenditures.

**Estimated Future Net Revenue:** Future net revenue is estimated after deduction of the estimated costs of abandonment of existing and future wells evaluated by CHAPMAN in the 2018 Reserves Report and does not include well abandonment costs for wells to which reserves have not been attributed, or to abandonment and reclamation costs of facilities and pipelines. Estimates of future net revenue, whether discounted or not, do not represent fair market value.

**Future Development Costs:** With respect to future development costs, there can be no guarantee that, in the future, funds will be available or that the Corporation will allocate funds to develop all of the attributed reserves. Failure to develop these reserves would have a negative impact on future production and cash flow estimated by CHAPMAN.

**Rounding:** Numbers in tables may not add due to rounding.

Forward-Looking Information: This Statement of Reserves contains certain forward-looking information within the meaning of Canadian securities laws. Forward-looking information relates to future events or future performance and is based upon the Corporation's current internal expectations, estimates, projections, assumptions and beliefs. All information other than historical fact is forward-looking information. Words such as "plan", "expect", "intend", "believe", "anticipate", "estimate", "may", "will", "potential", "proposed" and other similar words that indicate events or conditions may occur are intended to identify forward-looking information. In particular, this Statement of Reserves contains forward looking information relating to, among other things: estimates of recoverable reserves volumes and the future net revenues associated with those reserves; the Corporation's development plans for its reserves, the anticipated costs in relation thereto, and the sources of funding for such costs; the anticipated expiry of the Corporation's rights to explore, develop and exploit its properties;

the expected timing of the Corporation's tax obligations; production estimates; and the intention to drill and complete wells during 2019.

Actual results could vary from forward-looking information; readers should not put undue reliance on forward looking information. Forward-looking information is based on assumptions including but not limited to future commodity prices, currency exchange rates, drilling success, production rates, future capital expenditures and the availability of labor and services. With respect to estimates of reserves, a key assumption is that the data used by CHAPMAN in their independent reserves evaluation is valid. With respect to future wells, a key assumption is the validity of geological and technical interpretations performed by the Corporation's technical staff, which indicate that commercially economic volumes can be recovered from the Corporation's lands. Estimates as to average annual production assume among other things, that no material unexpected outages occur in the infrastructure the Corporation relies upon to produce its wells, that existing wells continue to meet production expectations and that future wells scheduled to come on production after the 2018 fiscal year meet timing and production rate expectations.

Undue reliance should not be placed on forward-looking information, as there can be no assurance that the plans, intentions or expectations on which they are based will occur. Although the Corporation's management believes that the expectations in the forward-looking statements are reasonable, there can be no assurance that such expectations will prove to be correct.

Forward-looking information necessarily involves both known and unknown risks associated with oil and gas exploration, development, production, transportation and marketing. There are risks associated with the uncertainty of geological and technical data, imprecision of reserve estimates, operational risks, risks associated with drilling and completions, environmental risks, risks of the change in government regulation of the oil and gas industry, risks associated with competition from others for scarce resources and risks associated with general economic conditions affecting the Corporation's ability to access sufficient capital. Additional information on these and other risk factors that could affect operational or financial results are included in the Corporation's most recent Annual Information Form and in other reports filed with Canadian securities regulatory authorities.

Forward-looking information is based on estimates and opinions of management at the time the information is presented. The Corporation is not under any duty to, nor will it, update the forward- looking information after the date of this Statement of Reserves to revise such information to actual results or to changes in the Corporation's plans or expectations, except as required by applicable securities laws.

Any "financial outlook" contained herein, as such term is defined by applicable securities laws, is provided for the purpose of providing information about management's current expectations and plans relating to the future. Readers are cautioned that reliance on such information may not be appropriate for other purposes.

#### **DEFINITIONS**

In this Statement of Reserves, the capitalized terms set forth below have the following meanings. Certain terms used but not defined herein, have the same meanings as set out in NI 51-101 and CSA Staff Notice 51-324, as applicable.

**"2018 Reserves Report"** means the independent evaluation dated November 15, 2018, prepared by CHAPMAN, evaluating the Corporation's oil and natural gas reserves as at July 31, 2018.

"COGE Handbook" means the Canadian Oil and Gas Evaluation Handbook maintained by the Society of Petroleum Evaluation Engineers (Calgary chapter), as amended from time to time.

"Corporation" or "Bird River" means Bird River Resources Inc.

"CSA Staff Notice 51-324" means the Canadian Securities Administrators Staff Notice 51-324 -

Glossary to NI 51-101.

"Forecast Prices and Costs" means future prices and costs that are generally accepted as being a reasonable outlook of the future.

"GAAP" means Canadian generally accepted accounting principles.

**"CHAPMAN**" means Chapman Petroleum Engineering Ltd., independent qualified reserves evaluators of Calgary, Alberta.

#### "Gross" means:

- (a) in relation to the Corporation's interest in reserves, the Corporation's working interest (operated or non-operated) share before deduction of royalty obligations and without including any royalty interests of the Corporation;
- (b) in relation to daily production, the total production of all ownership interests before deduction of royalty obligations and without including any royalty interests of the Corporation;
- (c) in relation to wells, the total number of wells in which the Corporation has an interest; and
- (d) in relation to properties, the total area in which the Corporation has an interest.

"**Montney**" means the Montney formation, a stratigraphic zone in the Western Canadian Sedimentary Basin.

#### "Net" means:

- (a) in relation to the Corporation's interest in reserves, the Corporation's working interest (operating or non-operating) share after deduction of royalty obligations, plus the Corporation's royalty interests in such production or reserves:
- (b) in relation to daily production, the Corporation's working interest (operating or

- non-operating) share before deduction of royalty obligations and without including any royalty interests of the Corporation;
- (c) in relation to wells, the number of wells obtained by aggregating the Corporation's working interest in each of the Corporation's gross wells; and
- (d) in relation to properties, the total area in which the Corporation has an interest multiplied by the working interest owned by the Corporation.

"NI 51-101" means National Instrument 51-101 – Standards of Disclosure for Oil and Gas Activities.

"Reserves" means estimated remaining quantities of oil and natural gas and related substances anticipated to be recoverable from known accumulations, as of a given date, based on the analysis of drilling, geological, geophysical and engineering data; the use of established technology; and specified economic conditions, which are generally accepted as being reasonable.

- (a) Reserves are classified according to the degree of certainty associated with the estimates:
  - (i) 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;
  - (ii) **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; and
  - (iii) **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.
- (b) Each of the reserves categories (proved, probable and possible) may be divided into developed and undeveloped categories:
  - (i) Developed Reserves are those 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 developed category may be subdivided into producing and nonproducing; and
  - (ii) Undeveloped Reserves are those 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 reserves classification (proved, probable, possible) to which they are assigned.

"HIGH POINT" means HIGH Point Oil Inc., a wholly-owned subsidiary of the Corporation as at July 31, 2018.

"Working interest" means a percentage of ownership in an oil and gas property, obligating the owner to share in the costs of exploration, development and operations and granting the owner the right to share in production revenues after royalties are paid.

## ABBREVIATIONS, CONVERSIONS AND CONVENTIONS

#### **Abbreviations**

The abbreviations set forth below have the following meanings:

il and Natural Gas Liquids		Natural Gas	
bbls bbls/d Mbbls	barrels	Mcf Mcfe Mcfe/d MMcf MMcfe MMcfe/d Bcf	thousand cubic feet
MMbbls boe boe/d Mboe MMboe NGLs LNG	barrels per day thousa nd barrels million barrels of oil equivalent barrels of oil equivalent per day thousand barrels of oil equivalent million barrels of oil equivalent natural gas liquids liquefied natural gas	Tof Mof/d MMof/d m3 GJ	thousand cubic feet equivalent thousand cubic feet equivalent per day million cubic feet million cubic feet equivalent million cubic feet equivalent per day billion cubic feet trillion cubic feet thousand cubic feet per day million cubic feet per day cubic metres gigajoule
Other AECO WTI M\$ MM\$		benchmark natural gas pr 'C' hub in southeast Alber West Texas Intermediate benchmark oil price deter Oklahoma thousands of d millions of dollars	ta crude oil, a mined at Cushing,

#### Conversions

The following table sets forth certain Standard Imperial Units and International System of Units conversions.

From	То	Multiply By
Mcf	cubic metres	28.174
Mcf	GJ	1.055
cubic metres	cubic feet	35.494
bbls	cubic metres	0.159
acres	hectares	0.405
sections	acres	640
sections	hectares	256

#### Convention

Unless otherwise indicated, references herein to "\$" or "dollars" are to Canadian dollars.