



Kind. Honest. Work Horse.

Q4 2020/Year-End 2020 TSX Listed Junior and Intermediate E&P Company Comparisons

APRIL 19, 2021



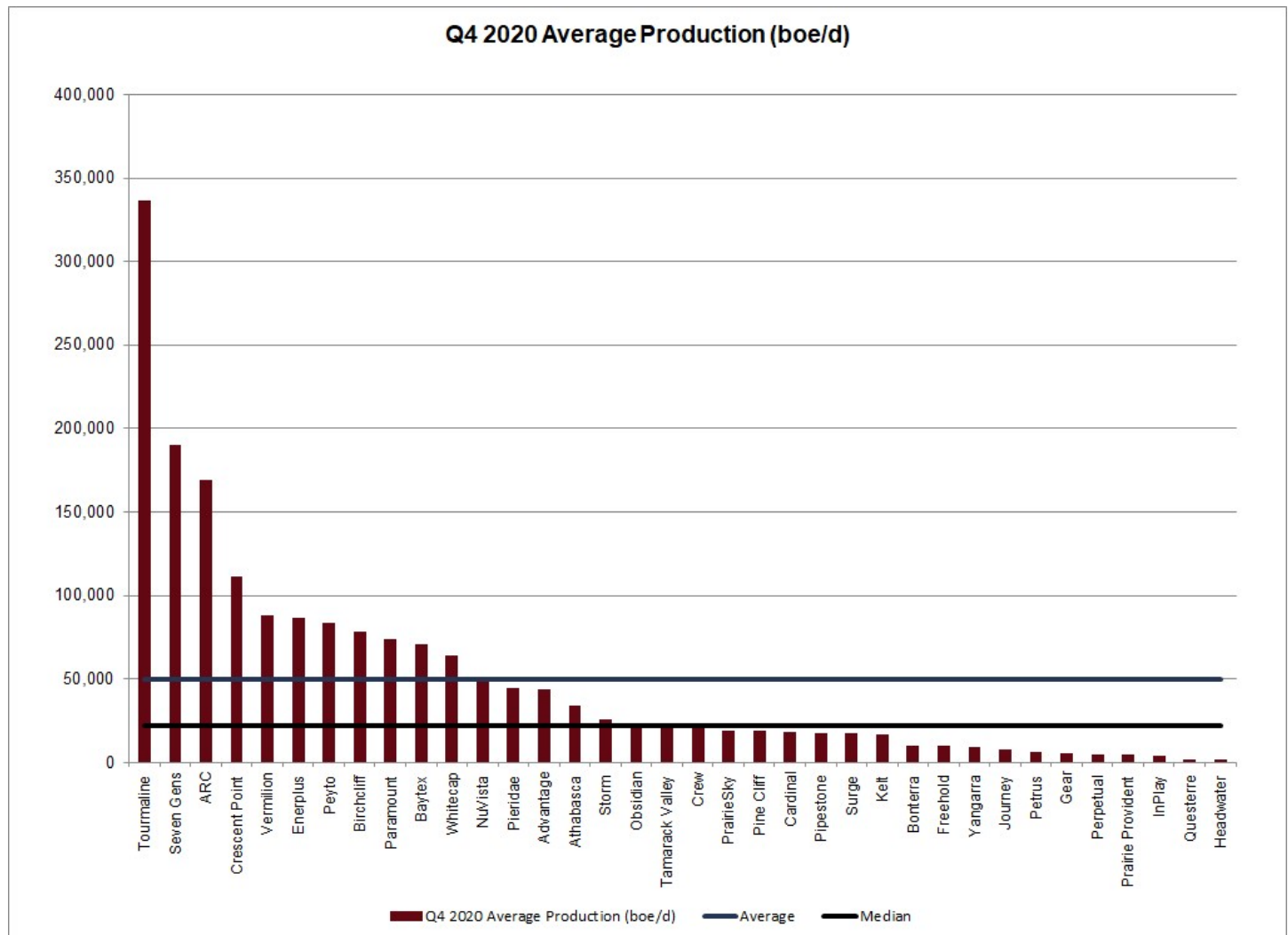
Q4 2020 Average Production

As shown in the table below, **Tourmaline Oil Corp.** had the highest average production in Q4 2020 of the 36 TSX-listed E&P companies. Tourmaline had average production of 336,325 boe/d, while **Seven Generations Energy Ltd.** had the second highest Q4 2020 average production at 190,133 boe/d followed by **ARC Resources Ltd.** at 169,468 boe/d. On February 10, 2021, ARC and Seven Generations announced a strategic business combination; the combined company will operate as ARC Resources Ltd. Following the business combination, ARC may claim the top spot as the largest producer of those analyzed in the report.

The average production of the 36 companies during Q4 2020 was 49,751 boe/d while the median production was 21,857 boe/d.

During Q4 2020, there were four companies with production over 100,000 boe/d, seven companies with production between 50,000 boe/d and 100,000 boe/d, five companies between 25,000 boe/d and 50,000 boe/d, 10 companies with production between 10,000 and 25,000 boe/d, five companies between 5,000 boe/d and 10,000 boe/d and five companies with average production that was less than 5,000 boe/d.

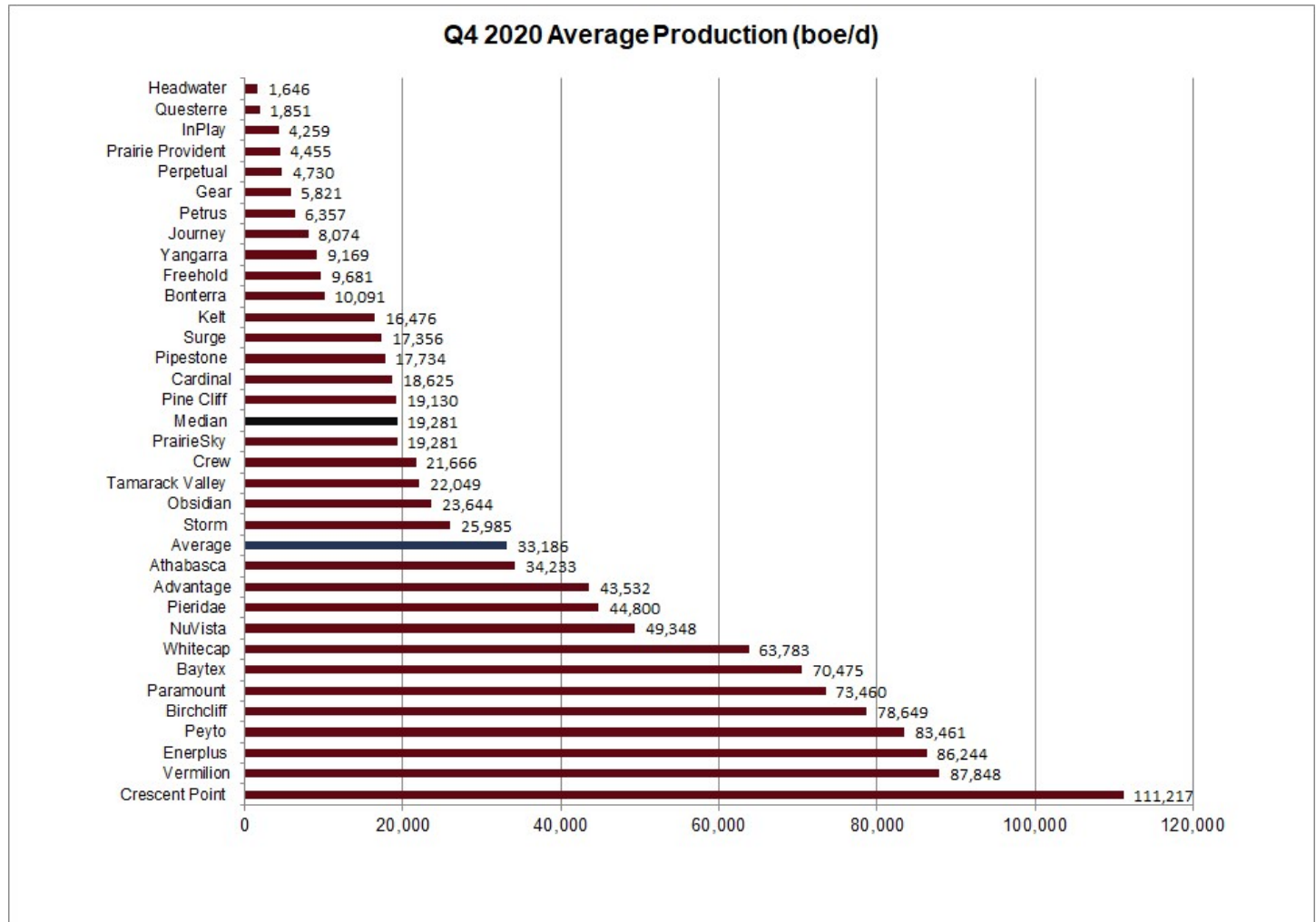
The company with the lowest average Q4 2020 production was **Headwater Exploration Inc.** at 1,646 boe/d; however, it is important to note that Q4 2020 only includes one month of production from the Marten Hills Clearwater asset that Headwater acquired from **Cenovus Energy Inc.**



Q4 2020 Average Production Excluding the Top Three

Below, we have excluded the top three producers to provide a representation of the remaining 33 companies. Production ranged from a low of 1,646 boe/d (Headwater) to 111,217 boe/d (**Crescent Point Energy Corp.**).

The average production of the 33 companies is 33,186 boe/d and the median production is 19,281 boe/d.



The vast majority of the TSX-listed E&P companies have assets which focus on the Montney and Duvernay resource plays.

It is important to note that the production figures are for Q4 2020 and do not include acquisitions that closed or were announced in the first quarter of 2021 and as such not included in the corporate documents released for Q4 2020 and year end 2020.

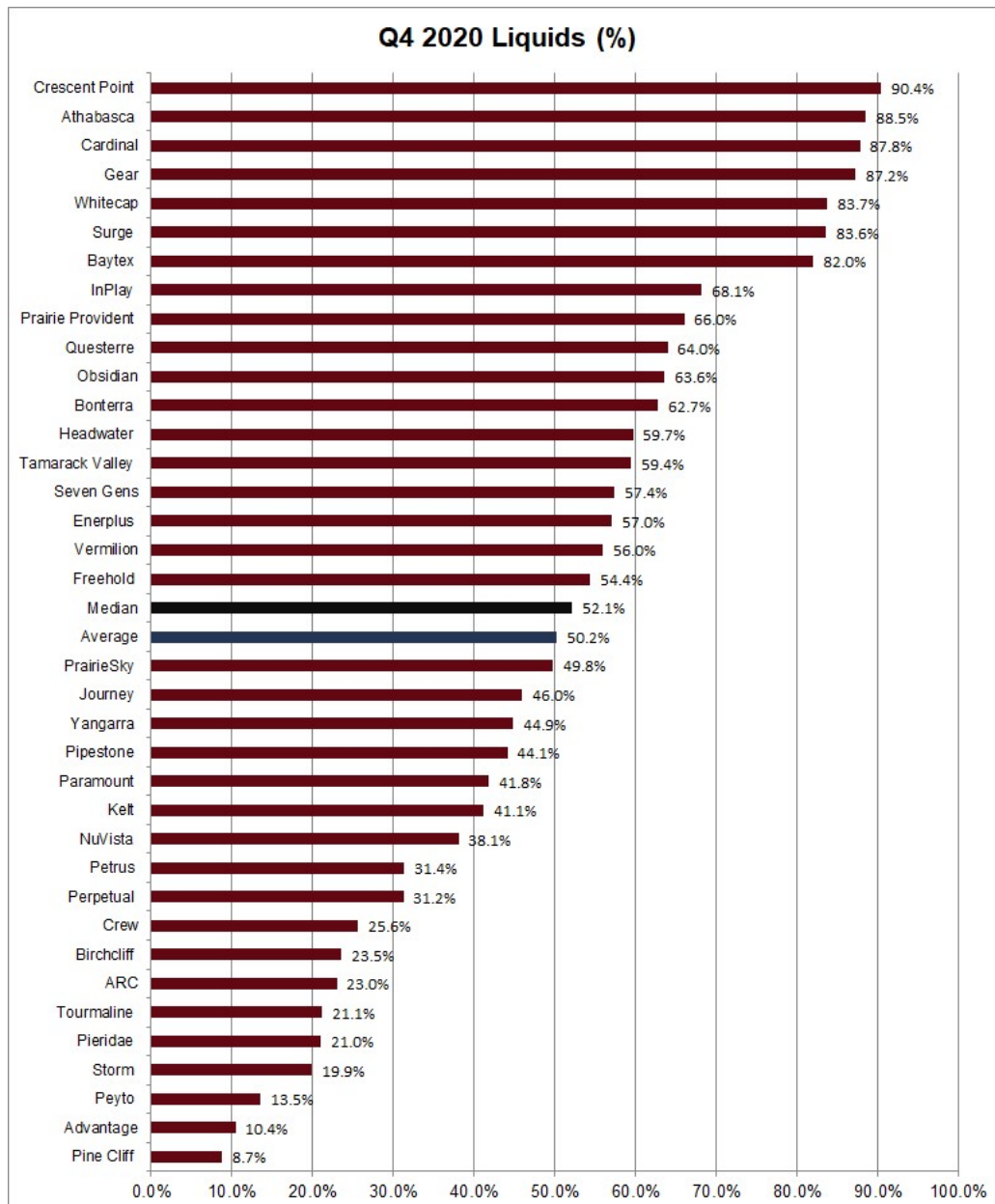
In the first quarter of 2021, ARC and Seven Gens closed a business combination to become the largest Montney producer while Crescent Point closed a transaction with **Shell Canada Ltd.** to acquire 30,000 boe/d of Duvernay production in the Kaybob area. Whitecap closed the acquisitions of **NAL Resources Limited** and **TORC Oil & Gas Ltd.** in Q1 2021. Tamarack Valley was active acquirer in the first quarter of 2021.

Q4 2020 Production Liquids Weighting

During Q4 2020, Crescent Point had the highest liquids weighting at 90.4%, followed by **Athabasca Oil Corporation** at 88.5% and **Cardinal Energy Ltd.** at 87.8%. Crescent Point's properties are located in southeastern Saskatchewan, the Shaunavon resource play in southwestern Saskatchewan, in the Williams County of North Dakota and in the Kaybob area focusing on the Duvernay formation. Athabasca has thermal heavy oil assets and production in the Montney & Duvernay formations while Cardinal's main properties are located in the Bantry, Grande Prairie, Mitsue, House Mountain and Wainwright areas of Alberta and in the Midale area of southeastern Saskatchewan.

The companies with the lowest liquids weighting in Q4 2020 were **Pine Cliff Energy Ltd.**, **Advantage Oil & Gas Ltd.** and **Peyto Exploration & Development Corp.** with liquids weightings of 8.7%, 10.4% and 13.5% respectively. Pine Cliff's assets are low-decline, long life natural gas assets located in Central and Southern Alberta and liquids rich natural gas assets in the greater Edson area of Alberta. Advantage's assets are Montney focused properties in the Glacier, Valhalla, Progress and Pipestone/Wembley areas of Alberta. Peyto is a pure play Alberta Deep basin company with assets from Cutbank to Brazeau River.

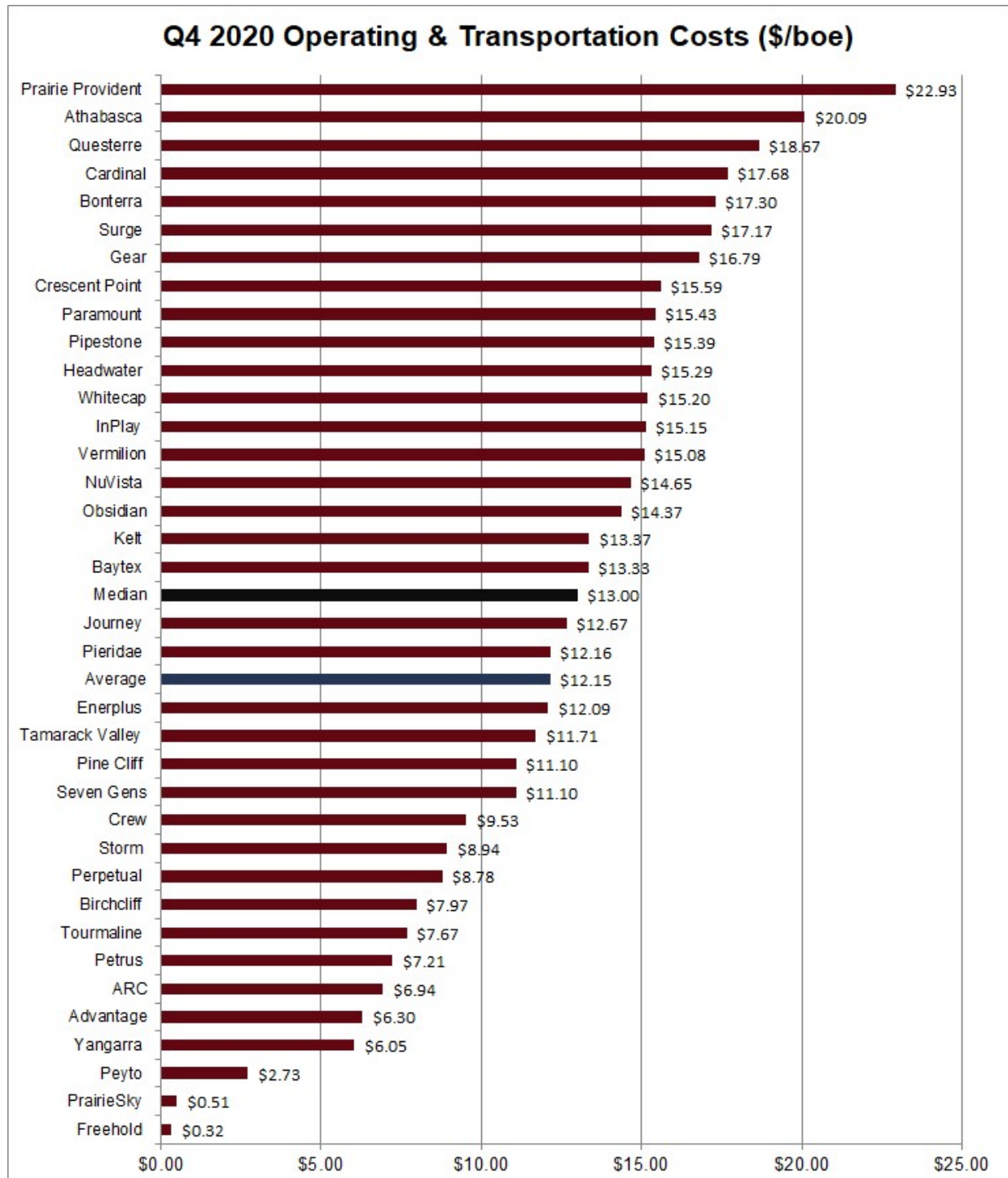
The average liquids weighting of the group is 50.2% while the median is 52.1%.



Q4 2020 Operating & Transportation Costs (\$/boe)

During the fourth quarter of 2020, combined operating and transportation costs ranged from a low of \$0.32/boe to a high of \$22.93/boe. The average for Q4 2020 was \$12.15/boe while the median was \$13.00/boe. The companies with the three lowest combined operating and transportation costs were **PrairieSky Royalty Ltd.**, **Freehold Royalties Ltd.** and **Peyto**. The reason PrairieSky and Freehold having the lowest costs are attributed to the nature of their assets being royalty interests which have minimal costs. If the two royalty companies were excluded, then the top three would include **Yangarra Resources Ltd.** and **Advantage**.

The companies with the highest operating and transportation costs on a \$/boe basis were **Prairie Provident Resources Inc.**, **Athabasca** and **Questerre Energy Corporation** at \$22.93/boe, \$20.09/boe and \$18.67/boe respectively.

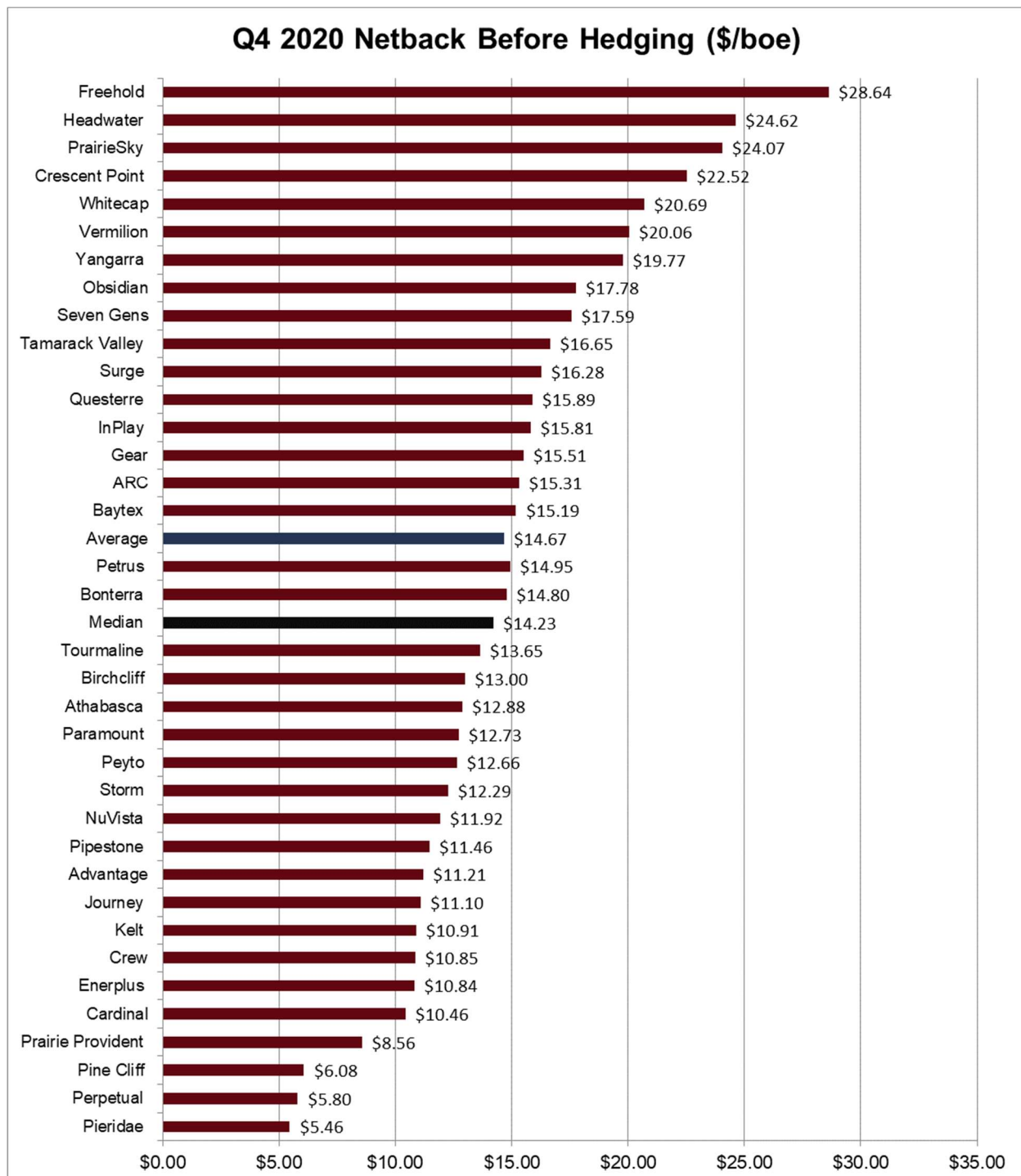


Q4 2020 Operating Netback Before Hedging (\$/boe)

During the fourth quarter of 2020, Freehold, Headwater and PrairieSky had the highest netbacks before taking into consideration any gains or losses from hedging activities. Again, due to Freehold and PrairieSky being companies that are royalty focused and having minimal costs, their netbacks were strong at \$28.64/boe and \$24.07/boe respectively. Headwater had the second strongest netback before hedging at \$24.62/boe.

The companies with the lowest netbacks before hedging activities were **Pieridae Energy Limited**, Pine Cliff and **Perpetual Energy Inc.** at \$5.46/boe, \$6.08/boe and \$5.80/boe respectively.

The group average for the fourth quarter of 2020 was \$14.67/boe while the median was \$14.23/boe.

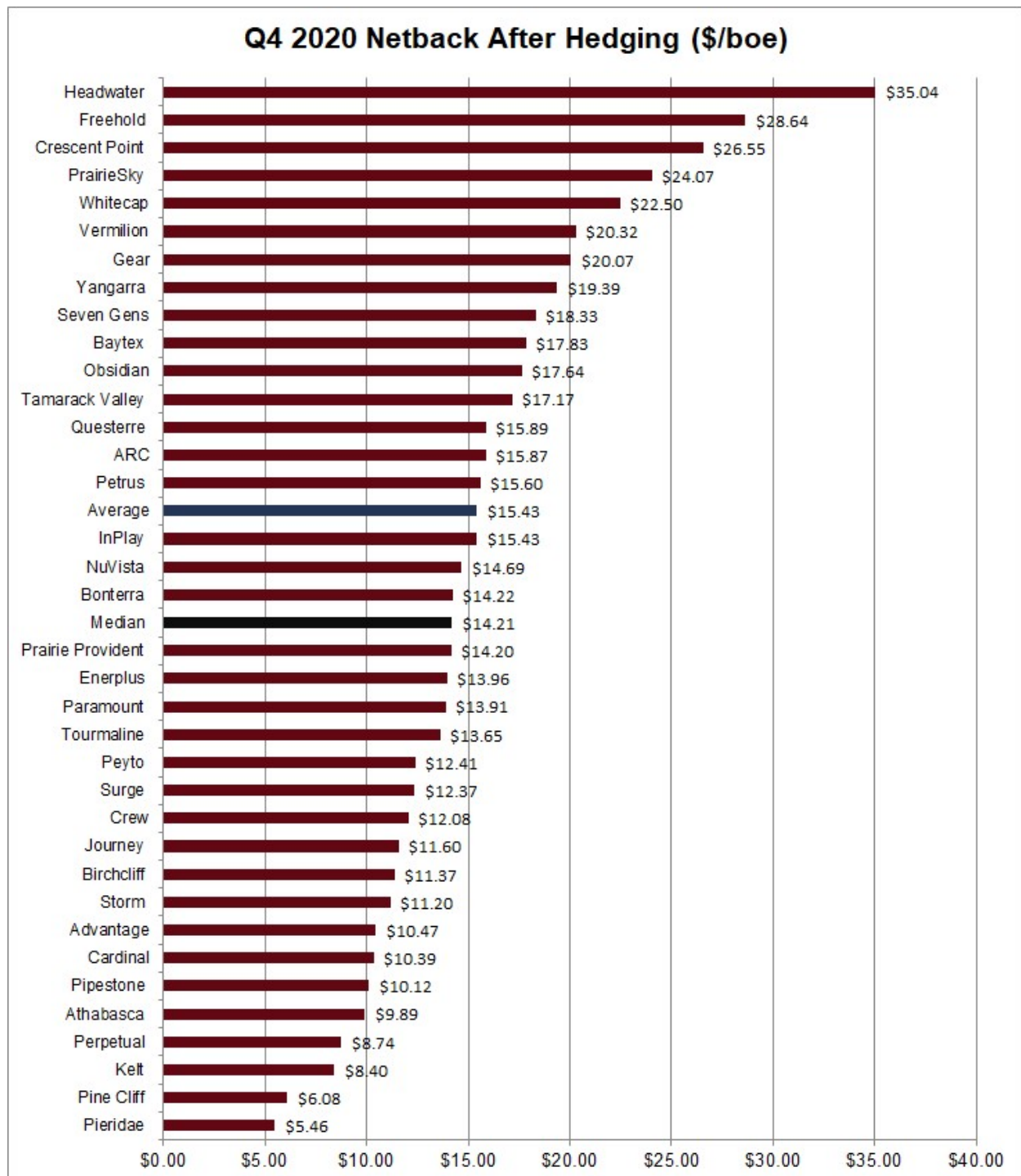


Q4 2020 Operating Netback After Hedging (\$/boe)

During the fourth quarter of 2020, Headwater and Crescent Point had strong realized gains on hedging activity of \$10.42/boe and \$4.03/boe respectively, resulting in Headwater being the company with the highest netback after hedging at \$35.04/boe while Crescent Point notched the third place at \$26.55/boe; Freehold came in second at \$28.64/boe. Other companies that had strong realized hedging gains in Q4 2020 were Gear Energy Ltd. and Prairie Provident at \$5.64/boe.

The companies with the lowest netbacks after taking into consideration any hedging activities were **Pieridae Energy Limited**, Pine Cliff and **Kelt Exploration Ltd.**; Kelt had a hedging loss of \$2.51/boe in the quarter.

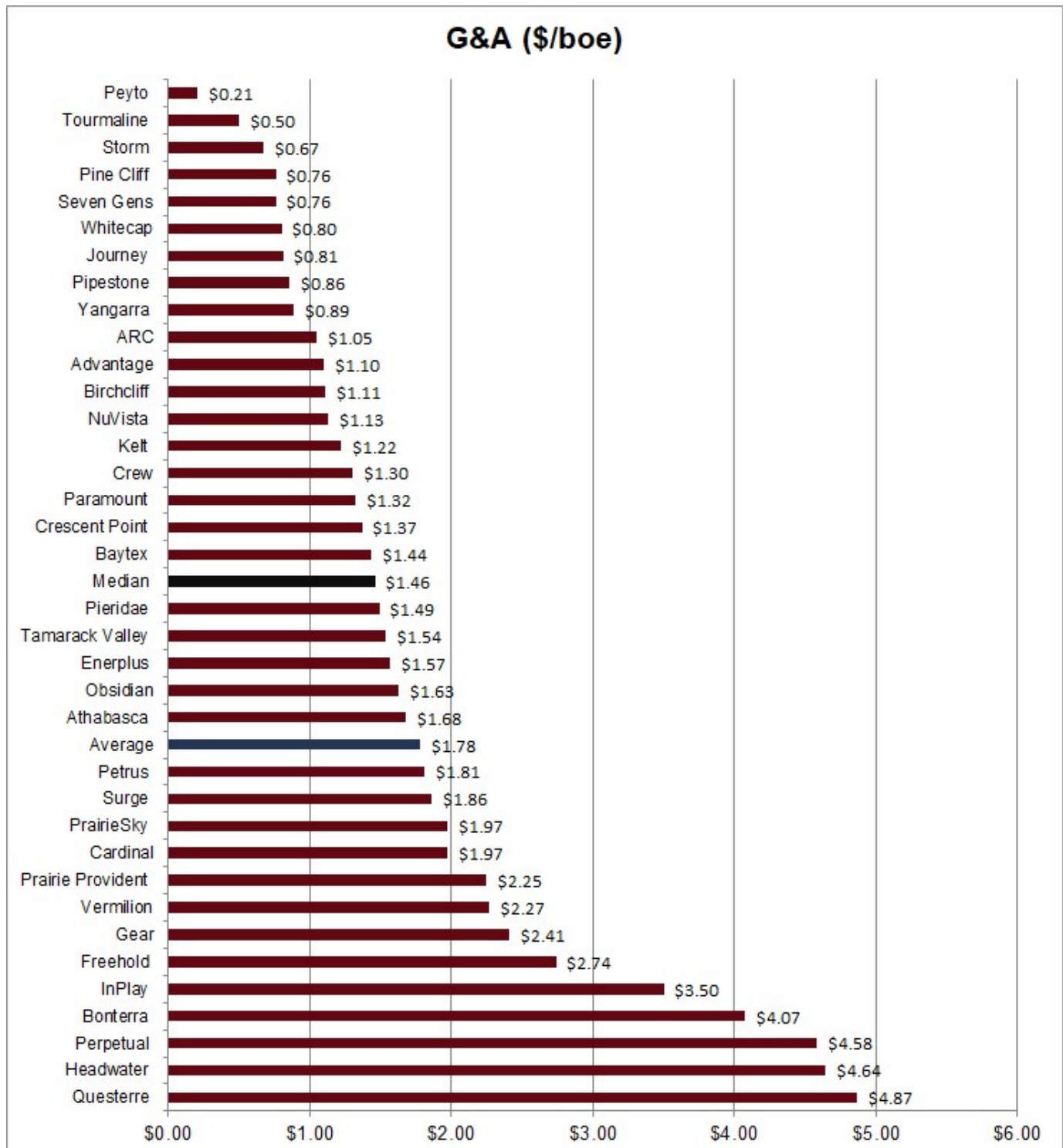
The group average for the fourth quarter of 2020 was \$15.43/boe while the median was \$14.21/boe.



Q4 2020 General and Administrative Cash Expenses (\$/BOE)

During the fourth quarter of 2020, Peyto, Tourmaline and **Storm Resources Ltd.** had the lowest G&A costs per boe at \$0.21/boe, \$0.50/boe and \$0.67/boe respectively. The companies with the highest G&A per boe was Questerre, Headwater and **Perpetual Energy Inc.** at \$4.87/boe, \$4.64/boe and \$4.58/boe respectively. Again, it is important to note that Headwater only recorded one month of production from its Marten Hills Clearwater acquisition from Cenovus.

The average G&A cost per boe was \$1.78/boe while the median was \$1.46/boe.

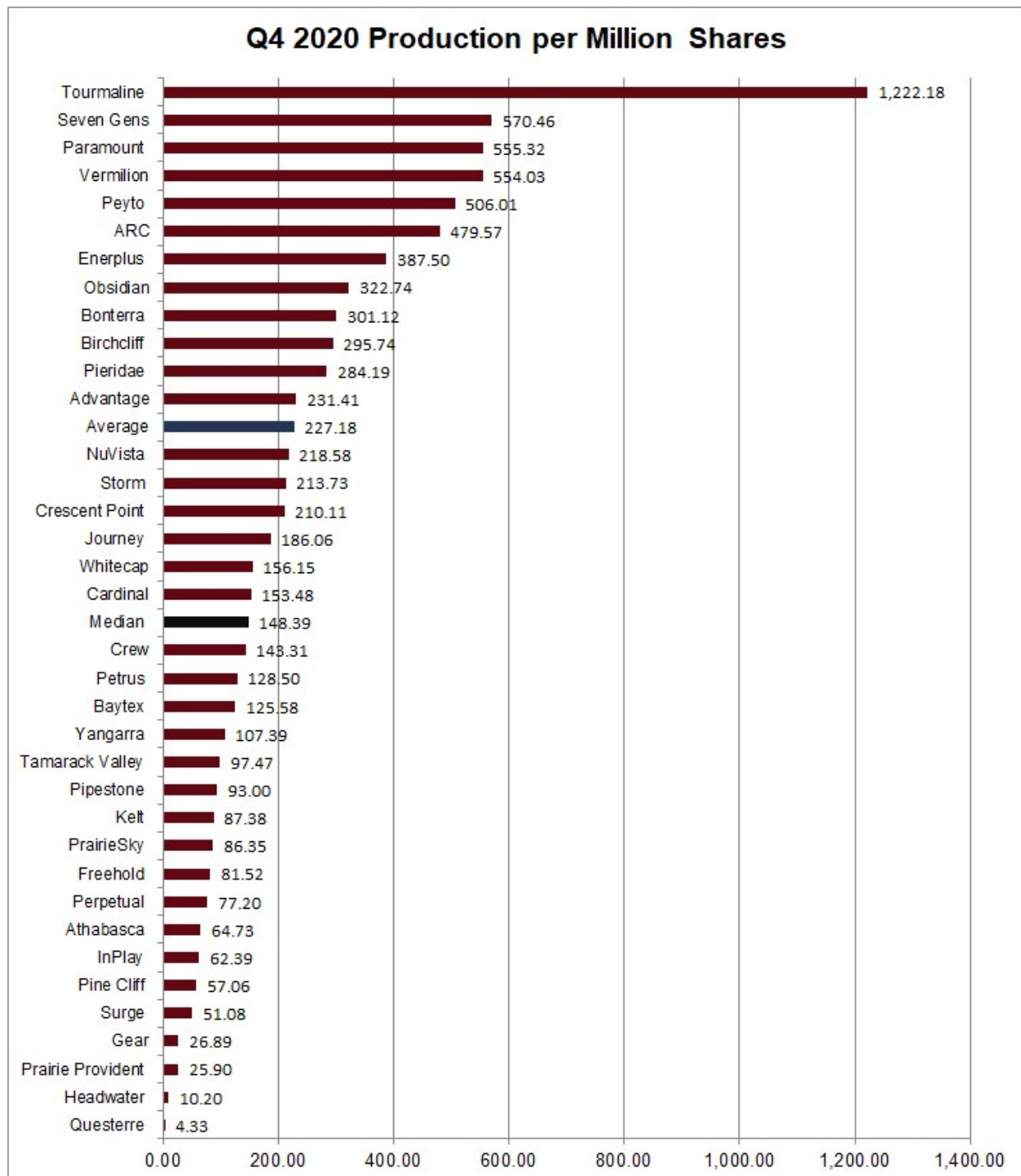


Q4 2020 Production Per Million Shares

During the fourth quarter of 2020, Tourmaline had the greatest production per million of shares at 1,222.18 boe of production, more than double of Seven Gens at 570.46 boe and **Paramount Resources Ltd.** at 555.32.

The companies with the lowest production per million of shares in Q4 2020, were Questerre, Headwater and Prairie Provident at 4.33, 10.20 and 25.90 respectively. Note that Headwater only had one month of production from the Marten Hills Clearwater assets that it acquired from Cenovus in Q4 2020.

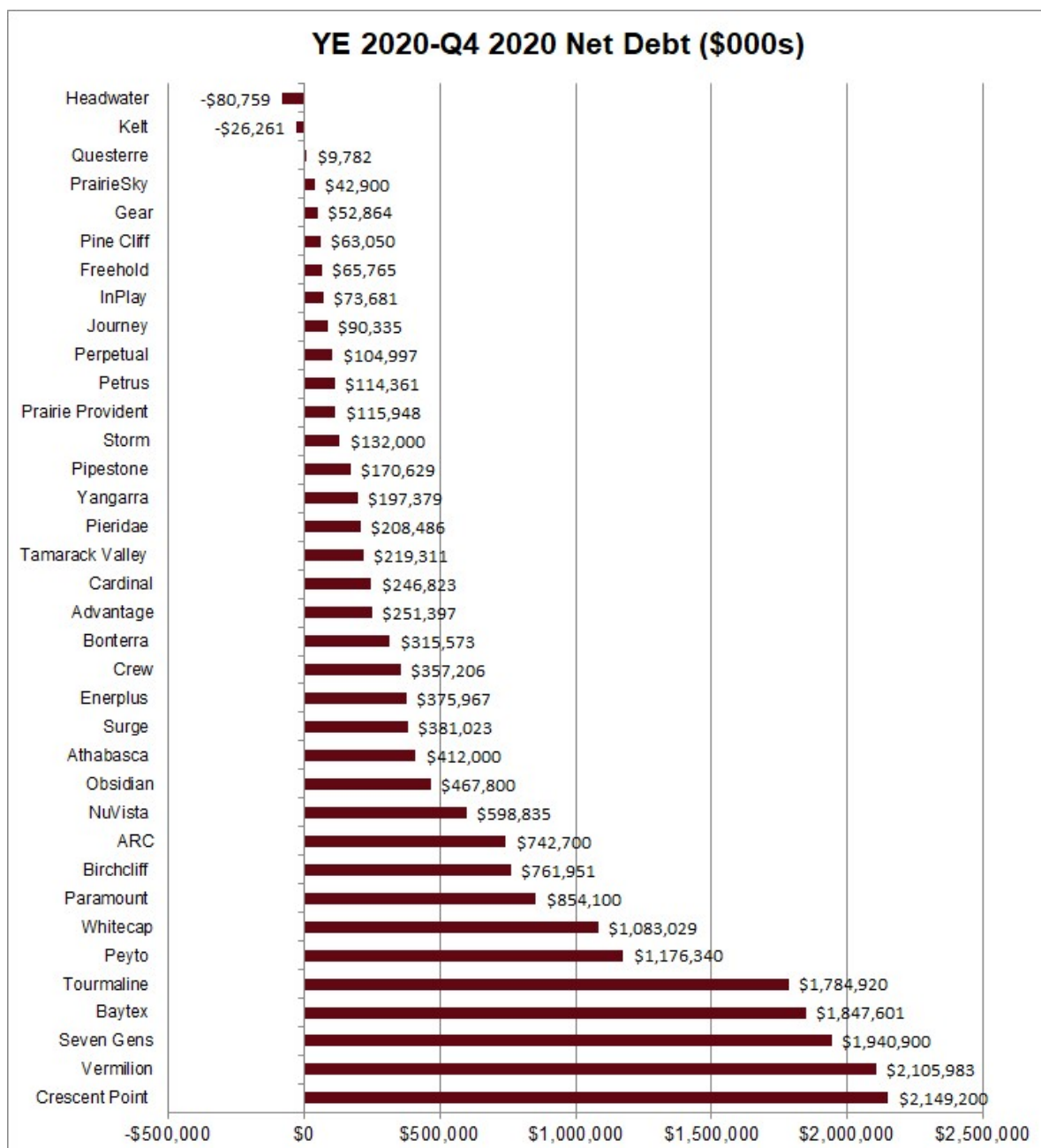
The average production per million of shares for the group was 227.18 boe, while the median was 148.39 boe per million of shares.



Year End 2020 & Q4 2020 Net Debt

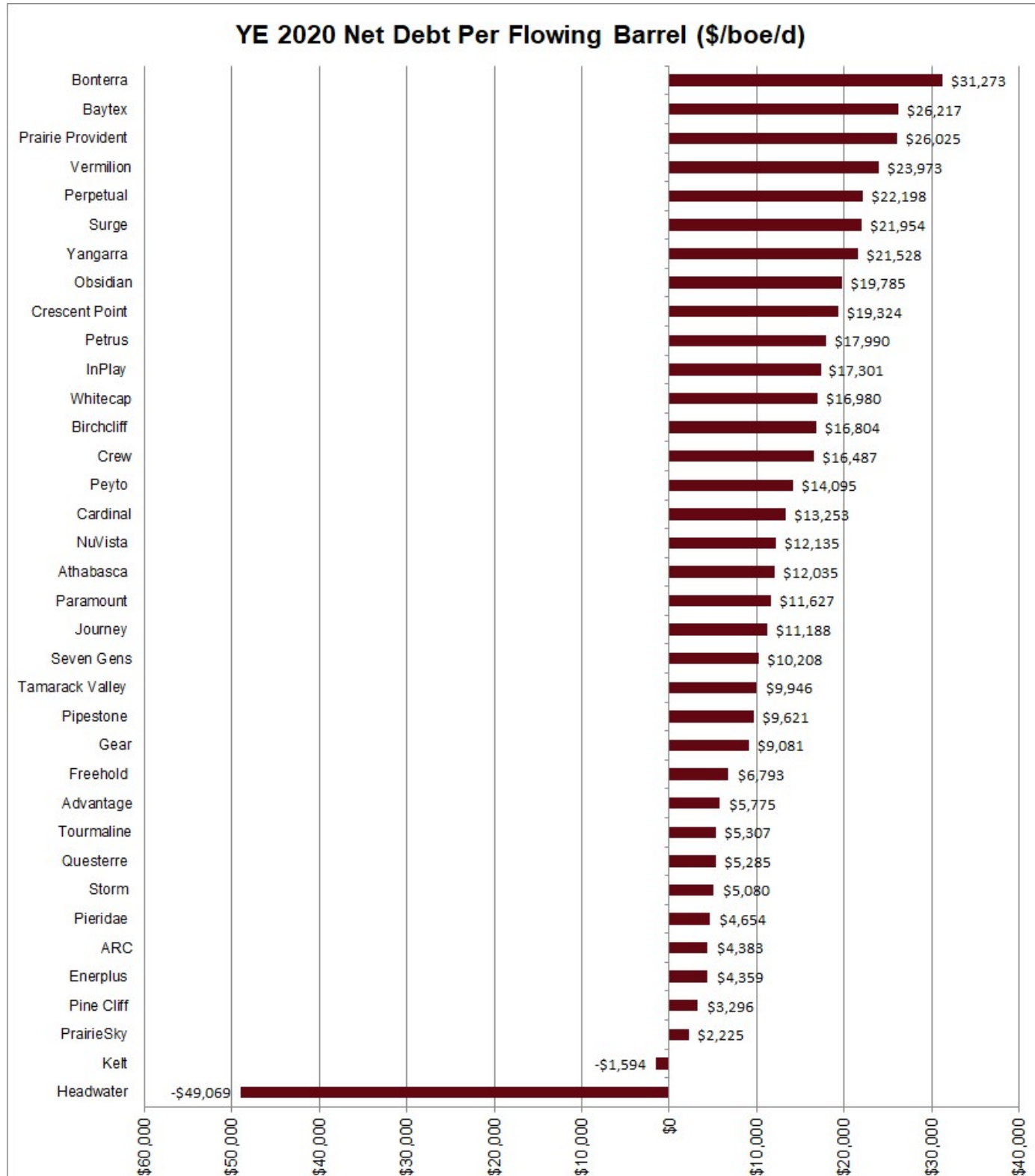
For the year end 2020, there were two companies that had no debt outstanding and positive working capital resulting in negative net debt. Headwater had acquired Clearwater assets in the Marten Hills area from Cenovus and as part of the transaction, Cenovus agreed to take 50 million common shares of Headwater and 15 million purchase warrants exercisable at \$2.00 per share. Earlier in 2020, Headwater recapitalized **Corridor Resources Inc.** raising gross proceeds of \$50.0 million which was on top of the \$65.0 million working capital surplus that Corridor had as at December 31, 2019. In Q3 2020, Kelt sold assets in the Inga/Fireweed/Stoddart area of British Columbia To ConocoPhillips for \$510.0 million in cash and the assumption of certain liabilities in the amount of \$41.0 million. Upon completion of the transaction Kelt paid out all amounts outstanding under its \$350.0 million revolving term credit facility and redeemed its 5.0% convertible unsecured subordinated debentures. At year end 2020 Kelt had positive working capital of \$26.3 million.

The companies with the largest amount of net debt at year end 2020 were Crescent Point, **Vermilion Energy Inc.** and Seven Generations. Crescent Point had net debt of \$1.25 billion, while Vermilion had \$2.1 billion and Seven Gen had \$1.9 billion.



Year End 2020 & Q4 2020 Net Debt/Q4 2020 Production

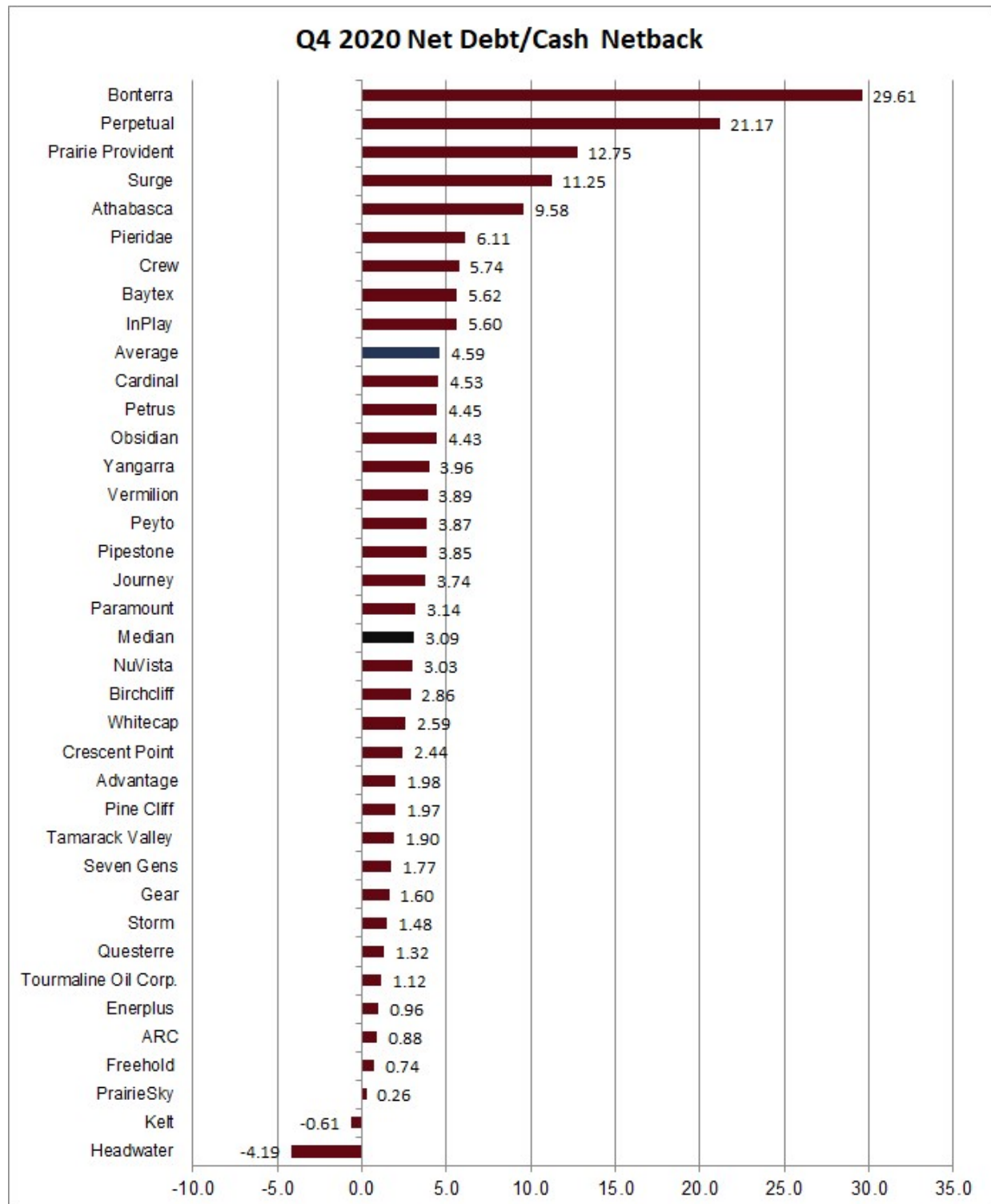
The companies that had the three highest net debt per flowing barrel of oil equivalent were **Bonterra Energy Corp.**, **Baytex Energy Corp.** and **Prairie Provident** at \$31,273/boe/d, \$26,217/boe/d and \$26,025 boe/d respectively. Aside from Headwater and Kelt which had positive net debt, on the lower end ranging from \$2,225/boe/d to \$4,359/boe/d were PrairieSky, Pine Cliff and Enerplus.



Net Debt/Q4 2020 Annualized Cash Netback

During Q4 2020, there was a wide range of leverage from -4.19x due to Headwater's positive net debt to Bonterra at 29.61x as the company struggled in the fourth quarter of 2020. Other companies with high leverage were Perpetual at 21.17x and Prairie Provident at 12.75x.

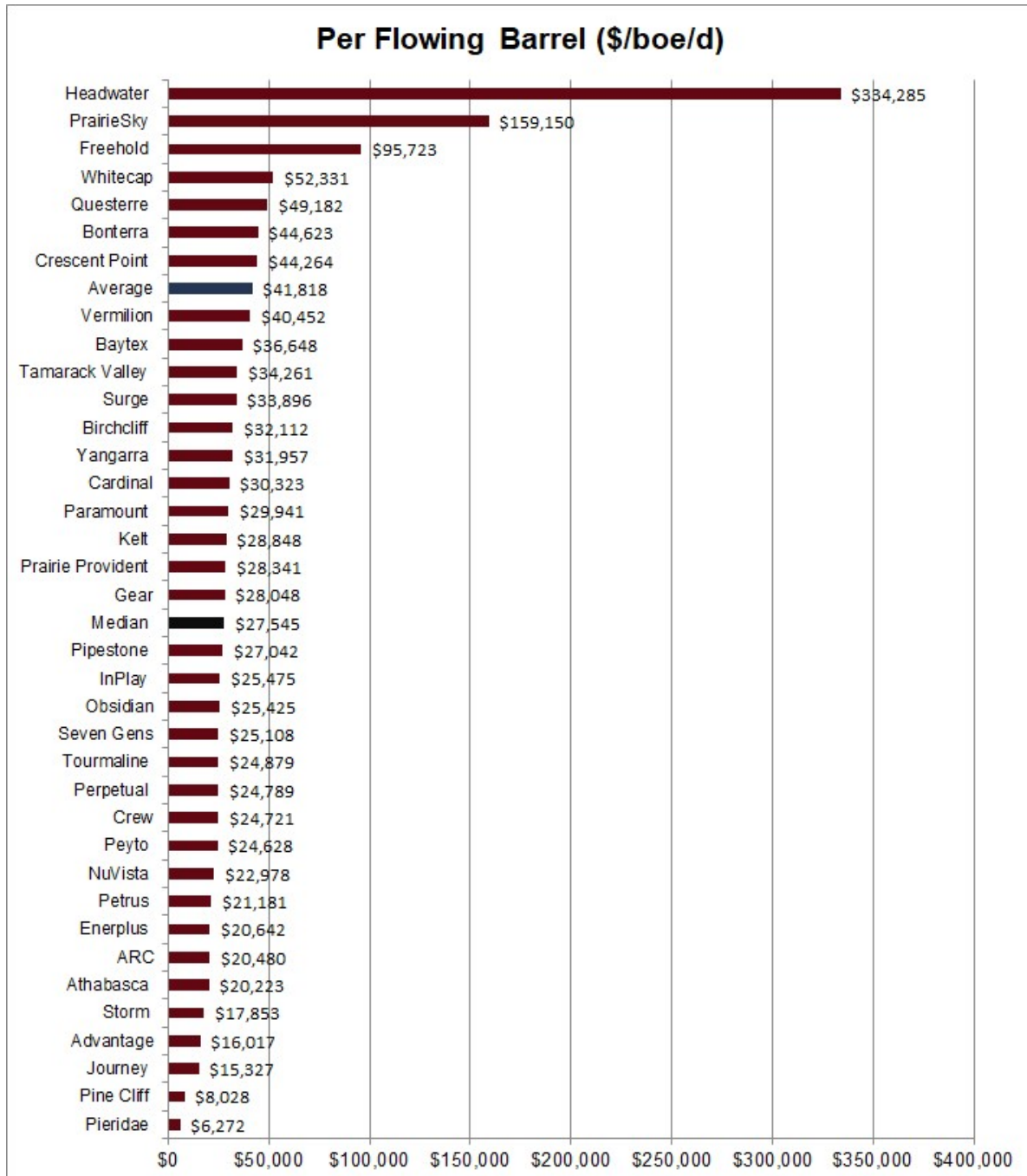
The average cash netback (Q4 annualized) to year end net debt was 4.59x while the median was 3.09x.



Enterprise Value/Q4 2020 Production (\$/boe/d)

During Q4 2020, the average per flowing barrel of oil equivalent metric was \$41,818/boe/d while the median was \$27,545/boe/d. Headwater traded at the highest value but it is a function of the company recording only one month of production from its Marten Hills Clearwater assets; this metric will decline as the production would increase from full production being used. Royalty producers, PrairieSky and Freehold claimed the second and third spots respectively. The companies with the lowest value on a \$/boe/d basis were Pieridae, Pine Cliff and **Journey Energy Inc.**

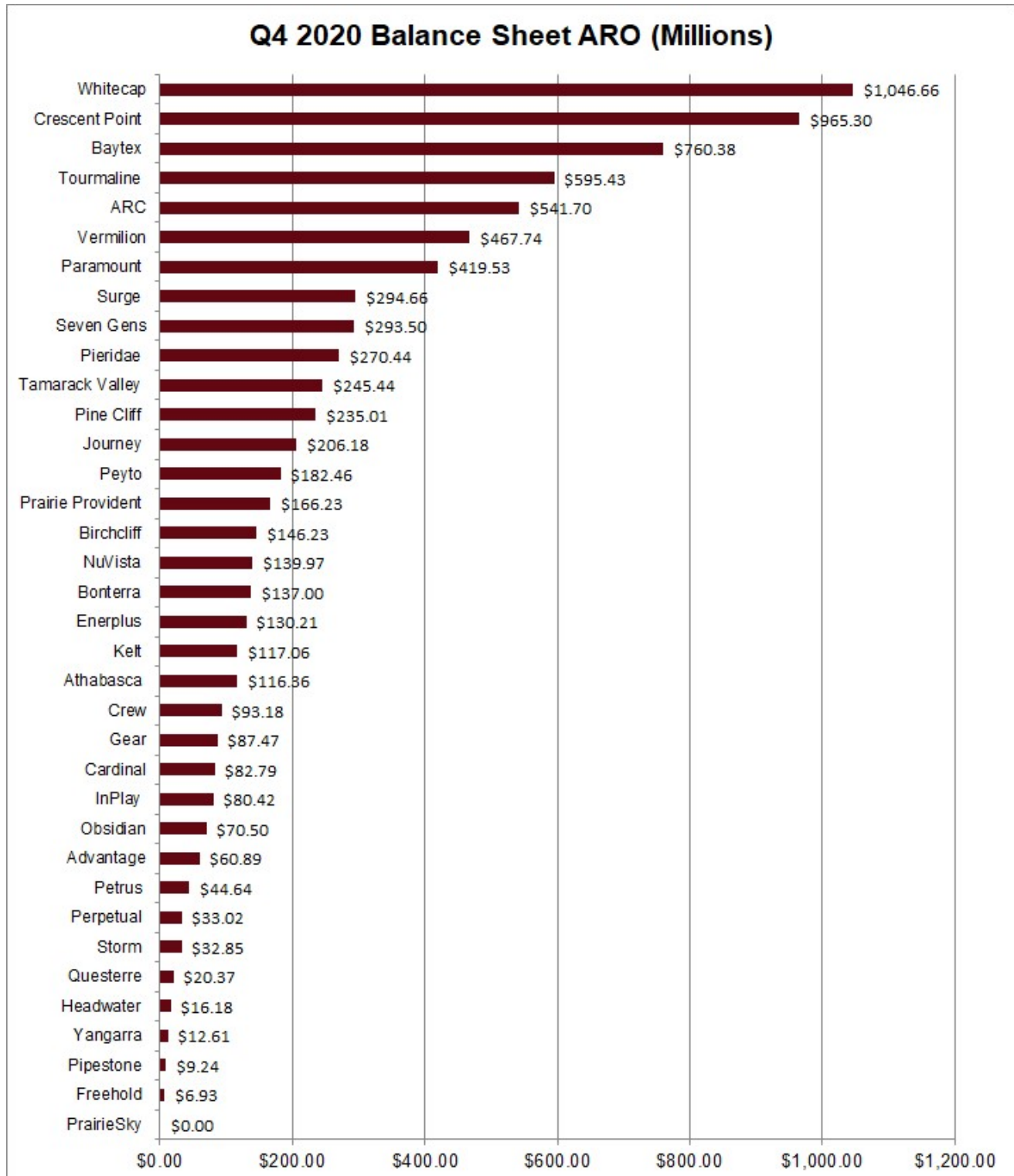
The average for Q4 2020 was \$41,818/boe/d while the median recorded was \$27,545/boe/d.



Enterprise is based on the weighted average shares for Q4 2020, the share prices as of March 31, 2021 and net debt as of December 31, 2020. Enterprise does not include ARO, the value of land or seismic.

Year End 2020 Asset Retirement Obligation

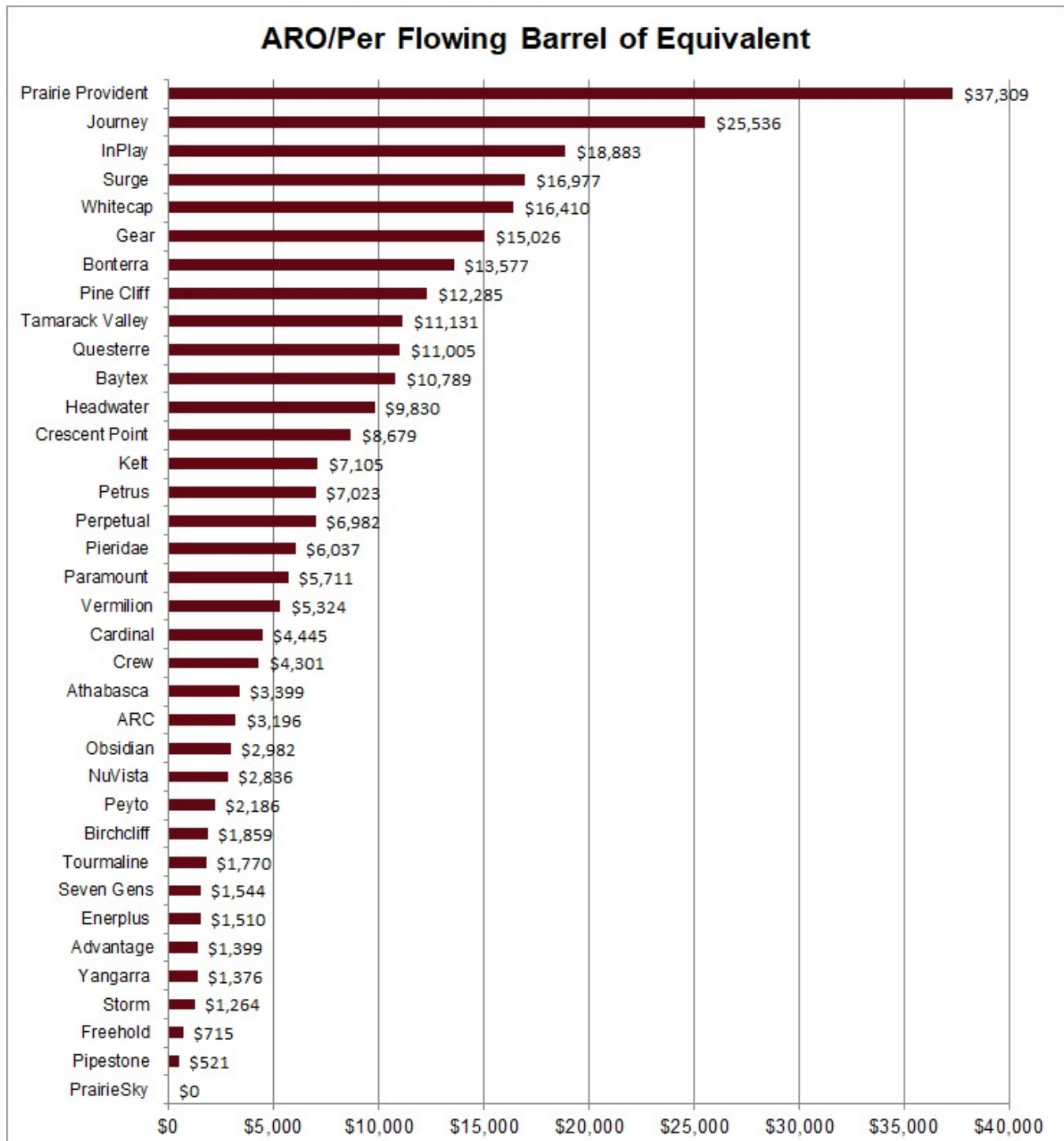
Below are the asset retirement obligations ("ARO") as at December 31, 2020 for each of the 36 TSX-listed E&P companies. It is important to note that there are no standardized inflation rate and discount rates that are used by the industry to calculate the amount that is shown on the balance sheet. The inflation rates ranged from 1%-2.5% percent while the discount rate had a much larger range of 1.2%-11%. The companies that used the highest discount rate were Paramount at 11% and Obsidian Energy Ltd. at 9%.



Year End 2020 Asset Retirement Obligation/Q4 2020 Production

Below we analyze the December 31, 2020 ARO for each of the 36 TSX-listed E&P companies on a per flowing barrel basis. As shown below, Prairie Provident, Journey and **InPlay Oil Corp.** have the highest ARO per flowing barrel of oil equivalent basis.

The companies with the lowest ARO per flowing barrel of oil equivalent are PrairieSky, **Pipestone Energy Corp.** and Freehold. As expected, PrairieSky and Freehold, both royalty companies, are among the lowest. Pipestone only has 77 net wells.



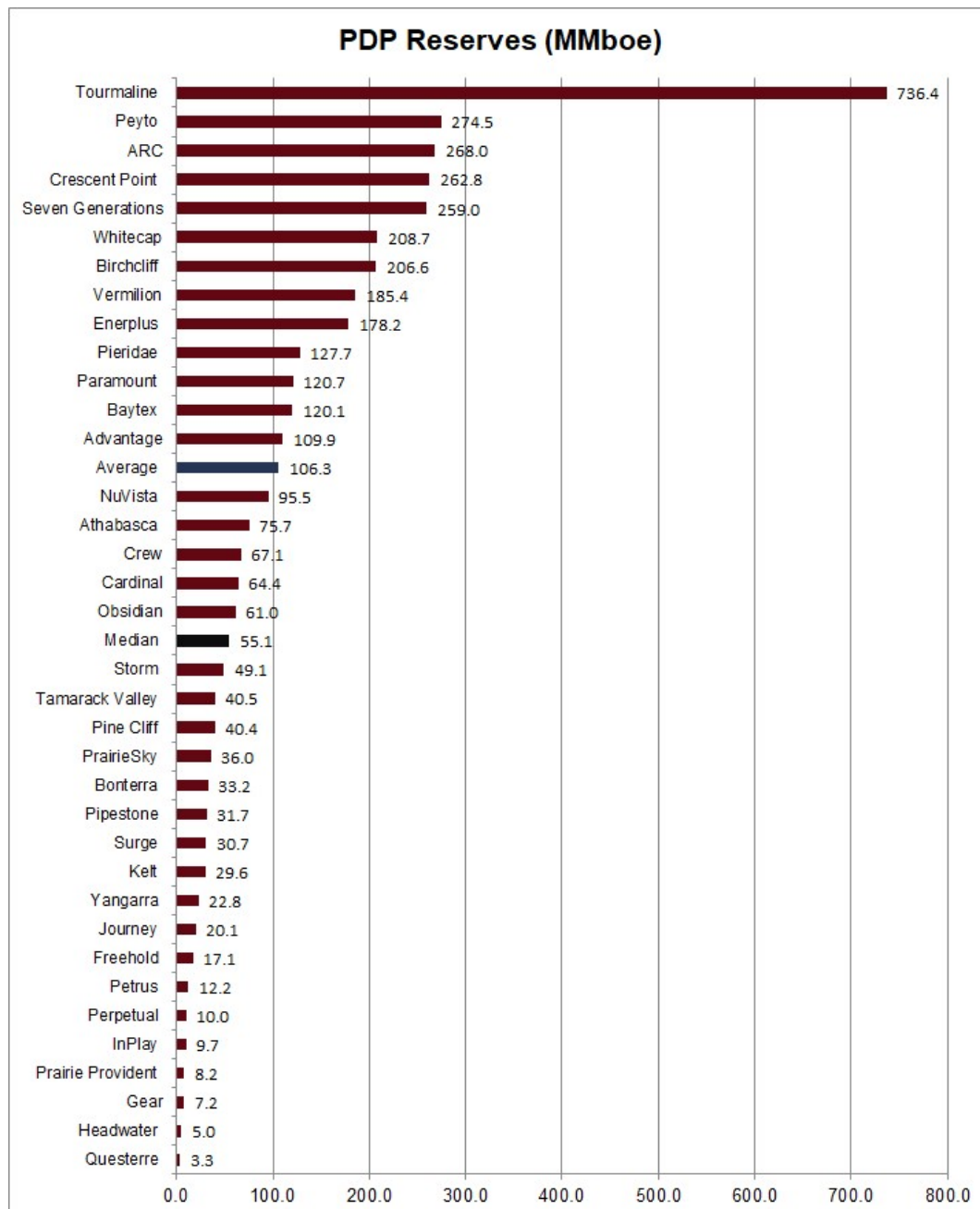
Year End 2020 Reserves Comparisons

Throughout the following pages, we provide a breakdown of the reserves for each of the companies split between proved developed producing (“PDP”), total proved (“TP”) and total proved plus probable (“P+P”). The analysis looks at the estimated reserves in the ground, the percentages of PDP and TP reserves to P+P, reserves per share, reserves per boe and reserve life index (“RLI”).

Year End 2020 PDP Reserves

On a PDP basis, Tourmaline dwarfed its peers at 736.4MMboe of reserves. Peyto was second at 274.5MMboe followed by ARC to round out the top three.

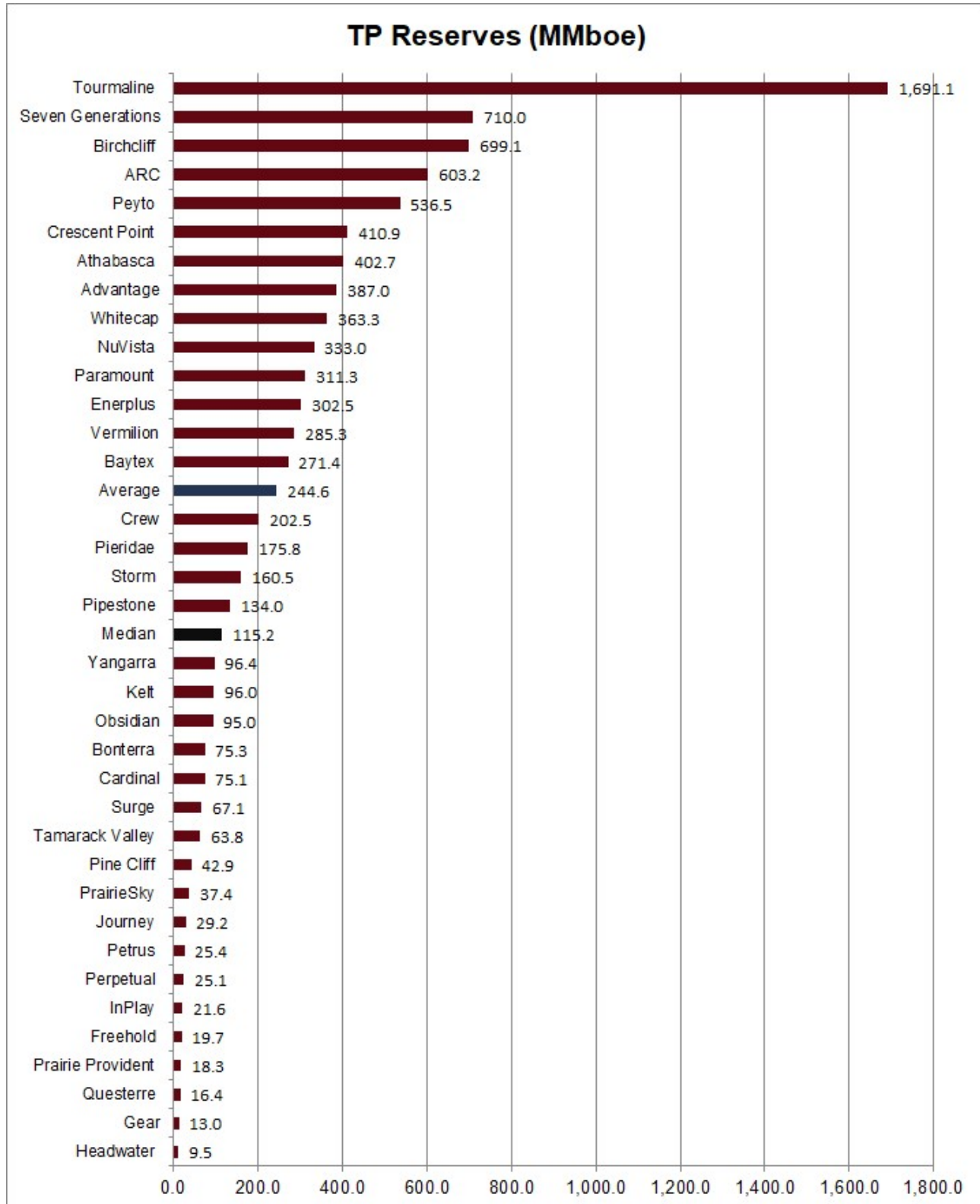
The average amount of PDP reserves for the group was 106.3MMboe while the median was 55.1MMboe.



Year End 2020 TP Reserves

On a TP basis, Tourmaline again dwarfed its peers at 1,691.1MMboe of reserves. Seven Gens took second place at 710.0MMboe following by **Birchcliff Energy Ltd.** at 699.1MMboe.

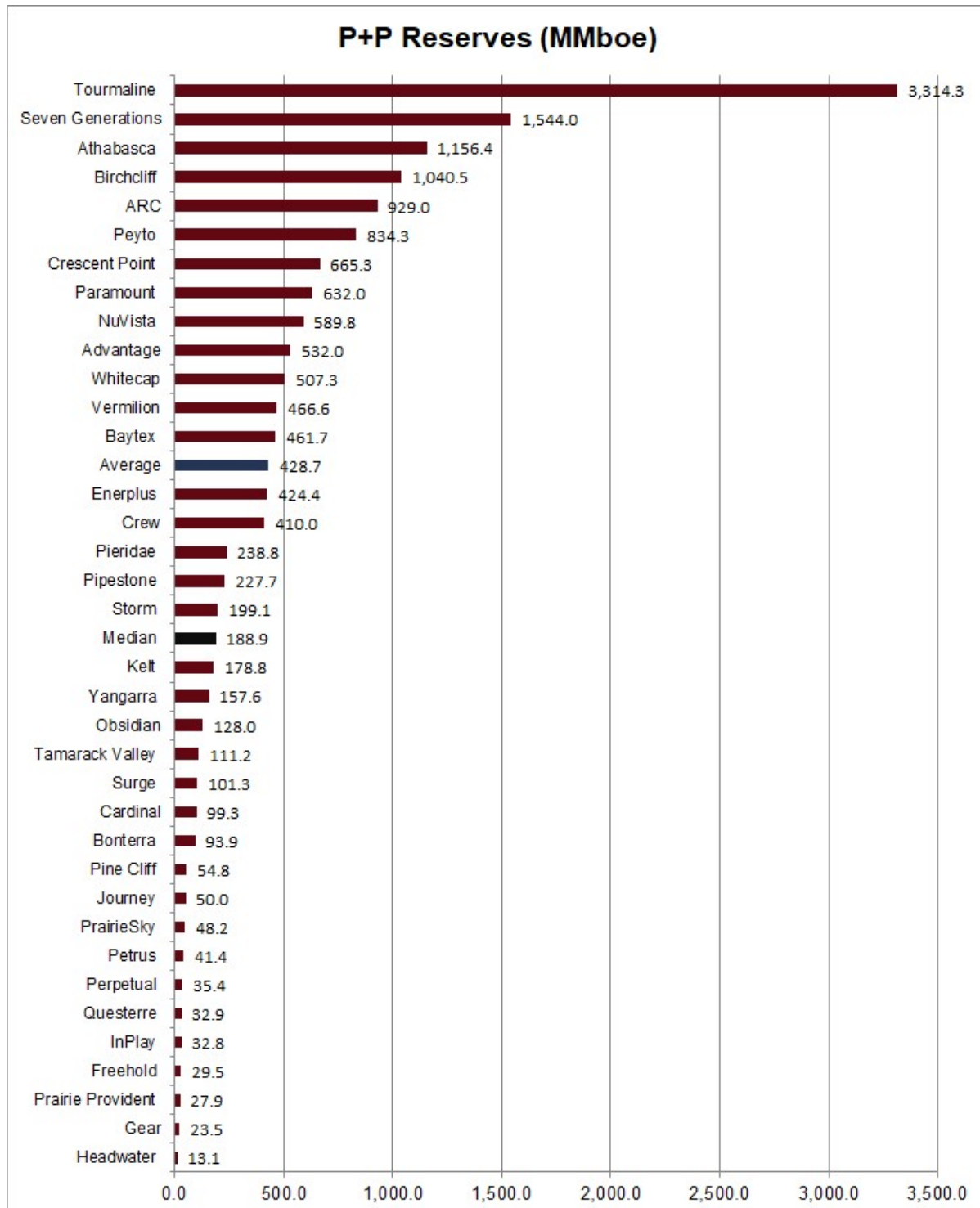
The average amount of TP reserves for the group was 244.6MMboe while the median was 115.2MMboe.



Year End 2020 P+P Reserves

On a P+P basis, Tourmaline was the leader at 3,314.3MMboe of reserves, more than double the runner-up Seven Gens which was at 1,544MMboe of P+P reserves. Athabasca was third at 1,156.4MMboe. Athabasca has thermal heavy oilsands reserves which explains the substantial increase from a TP basis. The company has 1,083MMboe of gross bitumen reserves on a P+P basis.

The average amount of P+P reserves for the group was 428.7MMboe while the median was 188.9MMboe.

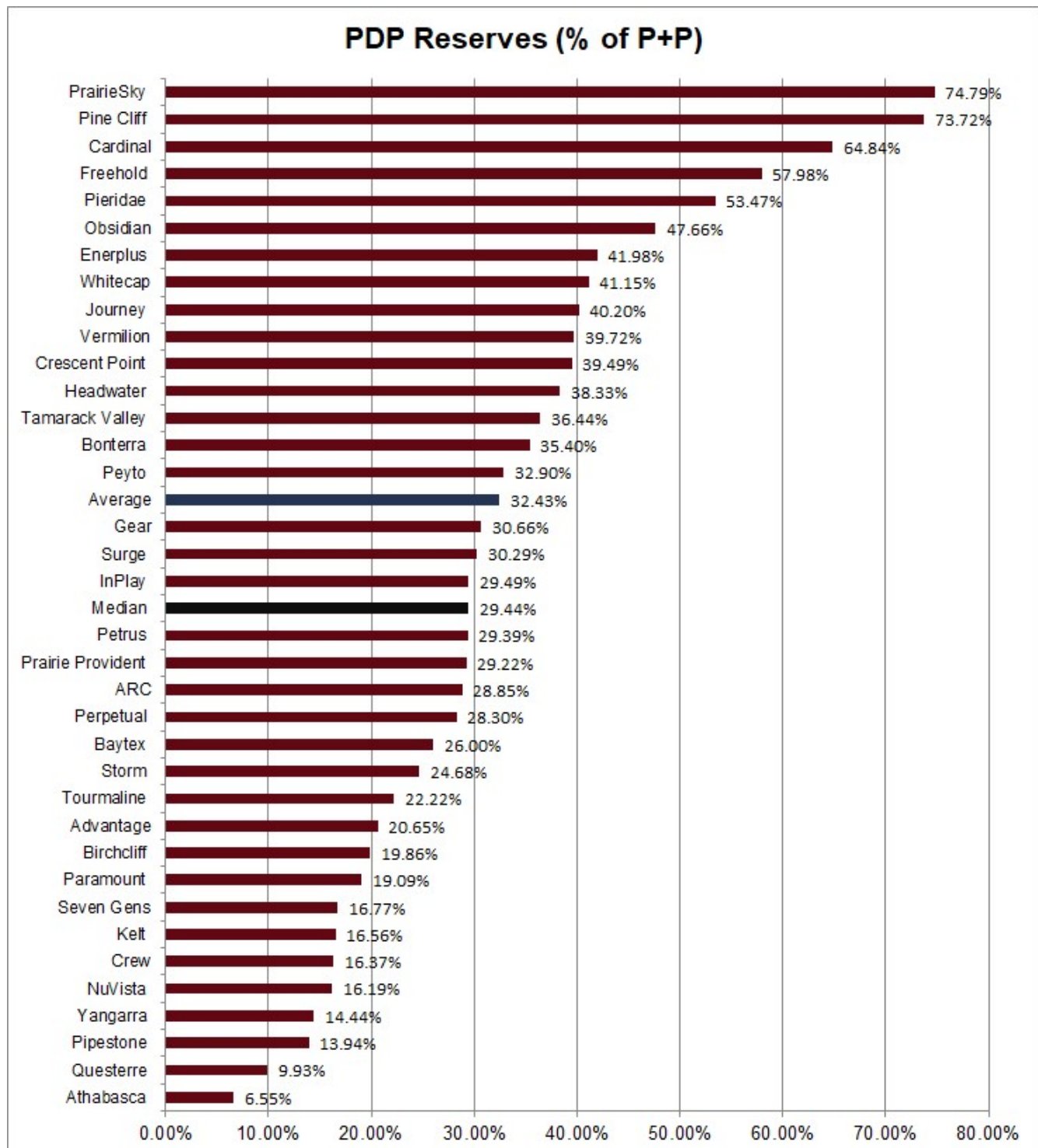


Year End 2020 PDP Reserves (% of P+P)

Of the 36 TSX-listed E&P companies compared, PrairieSky had the largest percentage of its reserves in the PDP category at 74.9%, followed by Pine Cliff at 73.72% and Cardinal at 64.84%.

On the other end of the spectrum, Athabasca, Questerre and Pipestone had the lowest percentage of reserves in the PDP category at 6.55%, 9.93% and 13.94% respectively. Recall that Athabasca has a significant amount of bitumen reserves which are long-life and are largely in the probable categories.

The average is 32.43% while the median is 29.44%.

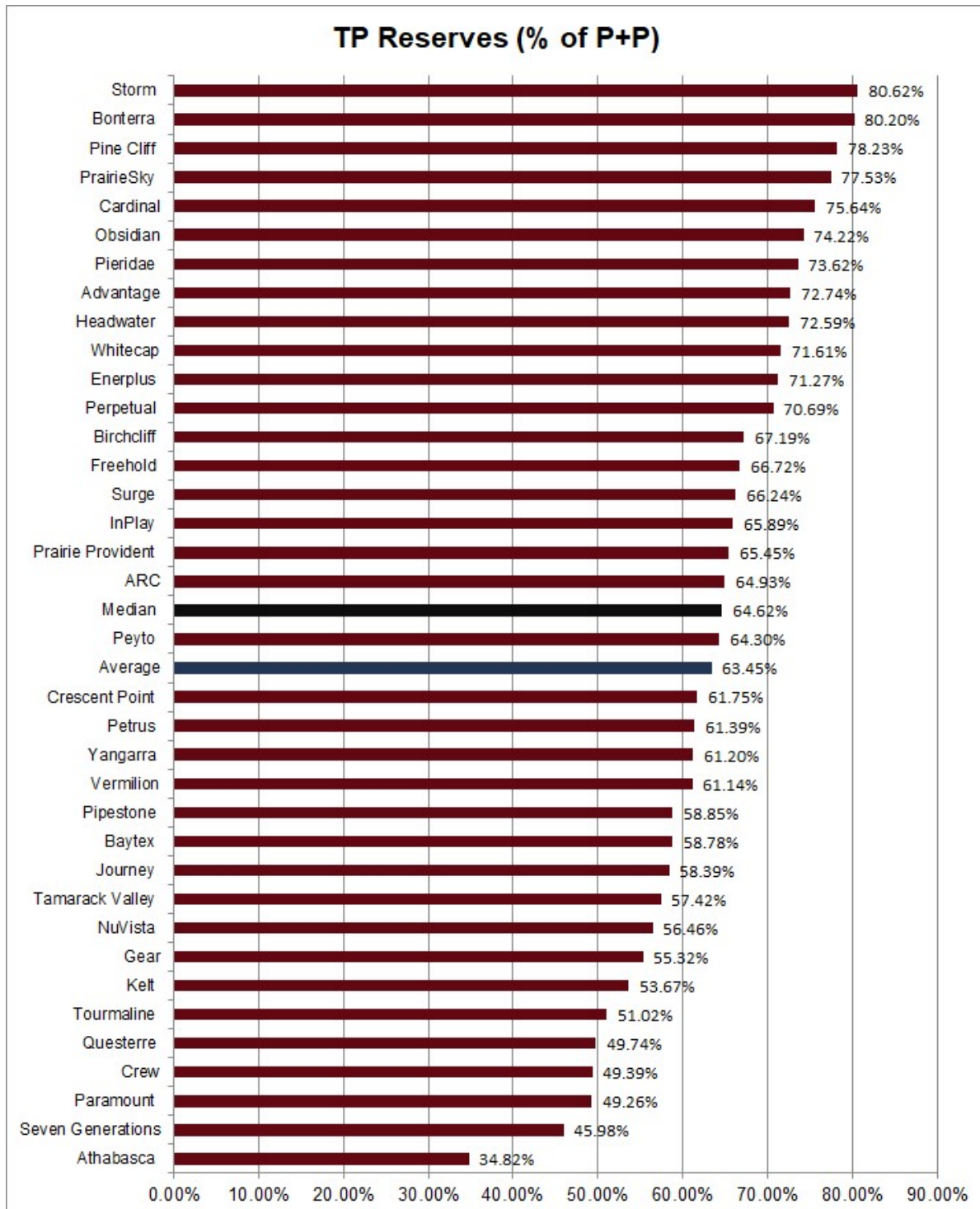


Year End 2020 TP Reserves (% of P+P)

Of the 36 TSX-listed E&P companies compared, Storm had the largest percentage of reserves in the TP category when compared to the P+P at 80.62%, followed by Bonterra at 80.20% and Pine Cliff at 78.23%.

On the other end of the spectrum, Athabasca, Seven Gens and Paramount had the lowest percentage of reserves in the TP category when compared to their P+P reserves at 34.82%, 45.98% and 49.26% respectively.

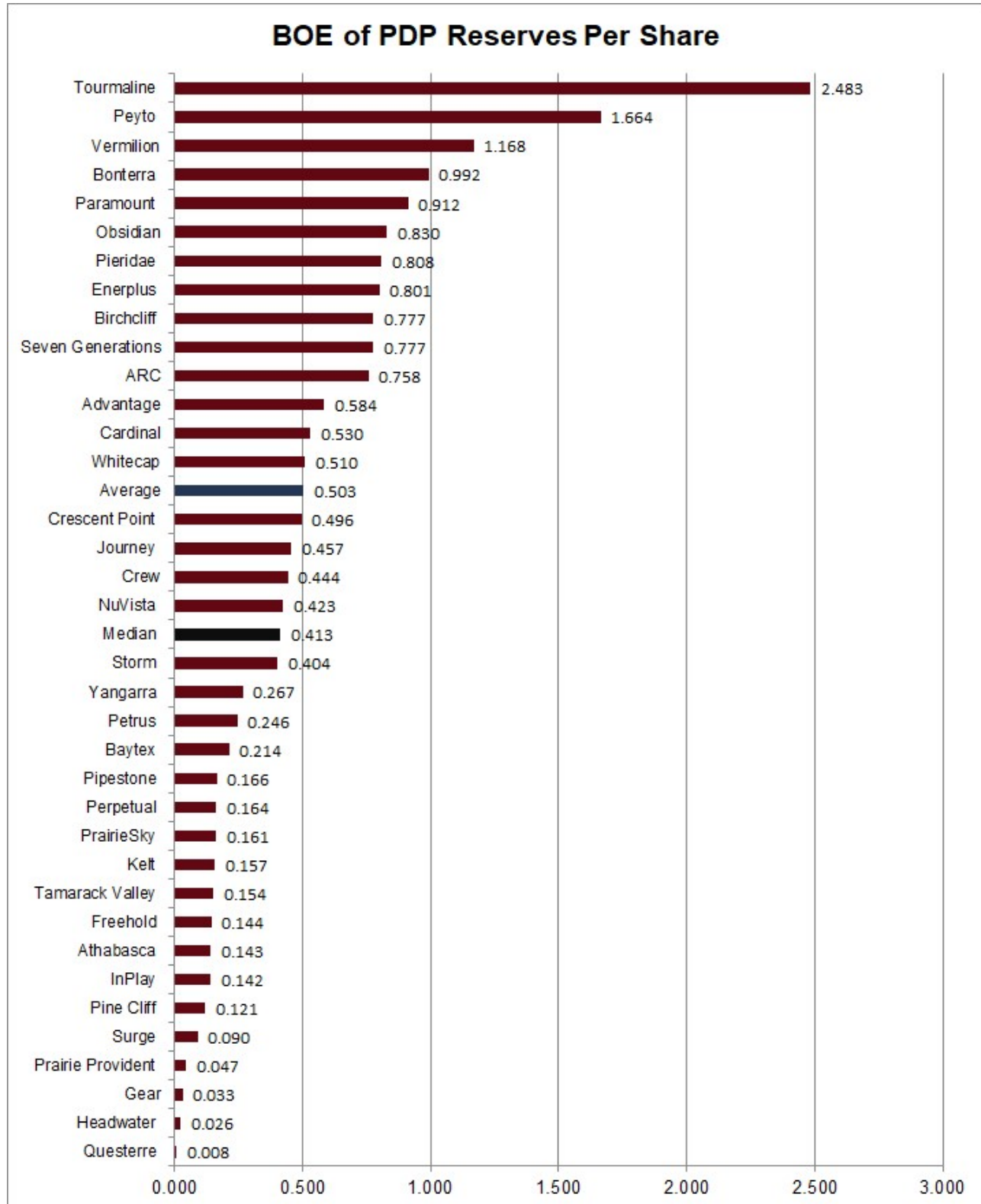
The average is 63.45% while the median is 64.62%.



Year End 2020 BOE of PDP Reserves Per Outstanding Share

Below outlines the PDP reserves per outstanding share at year end 2020 for each of the 36 TSX-listed E&P companies. Tourmaline had the most PDP reserves per outstanding share at 2.483, followed by Peyto at 1.664 and Vermilion at 1.168.

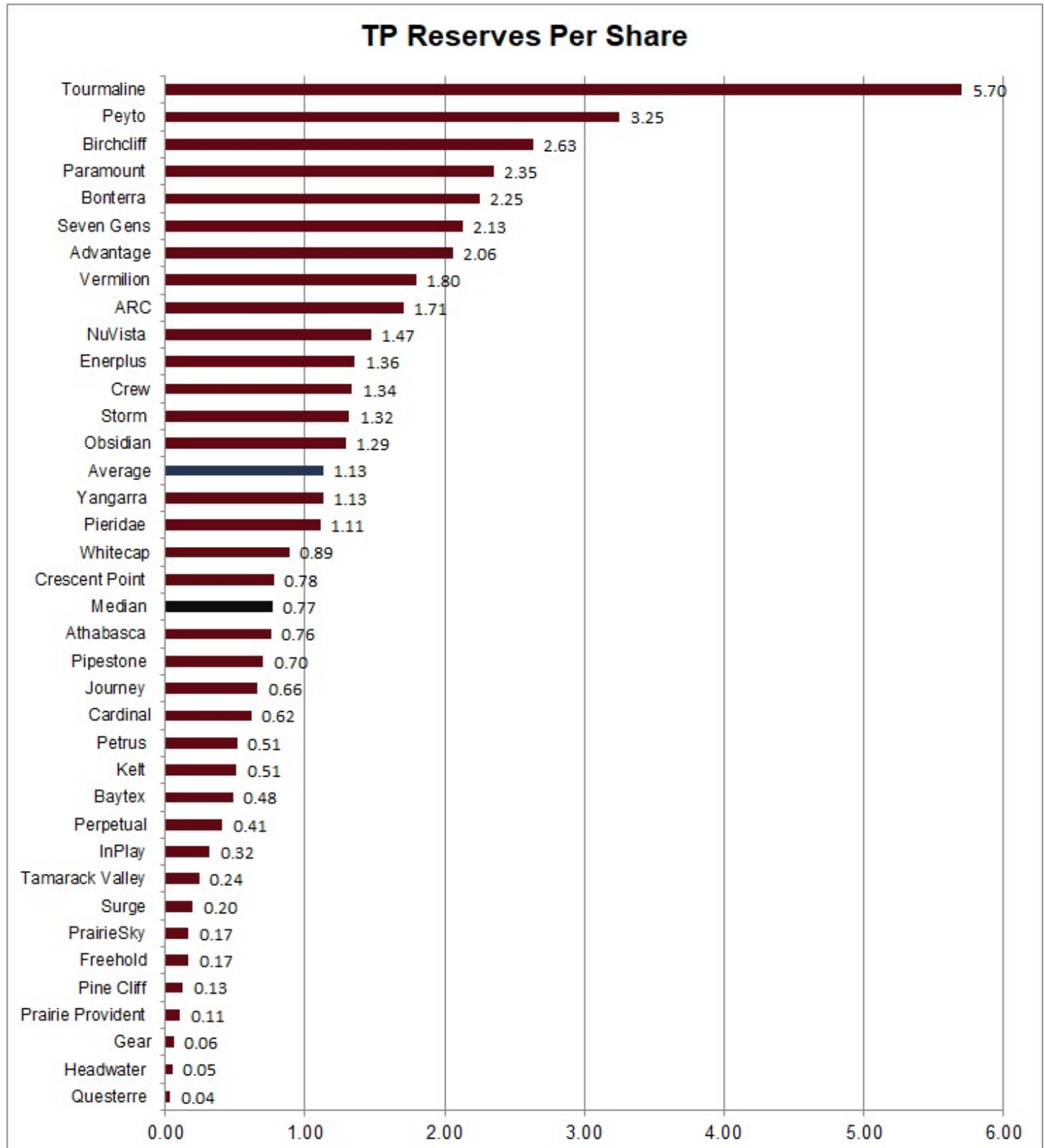
The average was 0.503 and the median was 0.413.



Year End 2020 BOE of TP Reserves Per Outstanding Share

Below outlines the TP reserves per outstanding share for each of the 36 TSX-listed E&P companies. Tourmaline had the most TP reserves per share at 5.70, followed by Peyto at 3.25 and Paramount at 2.63.

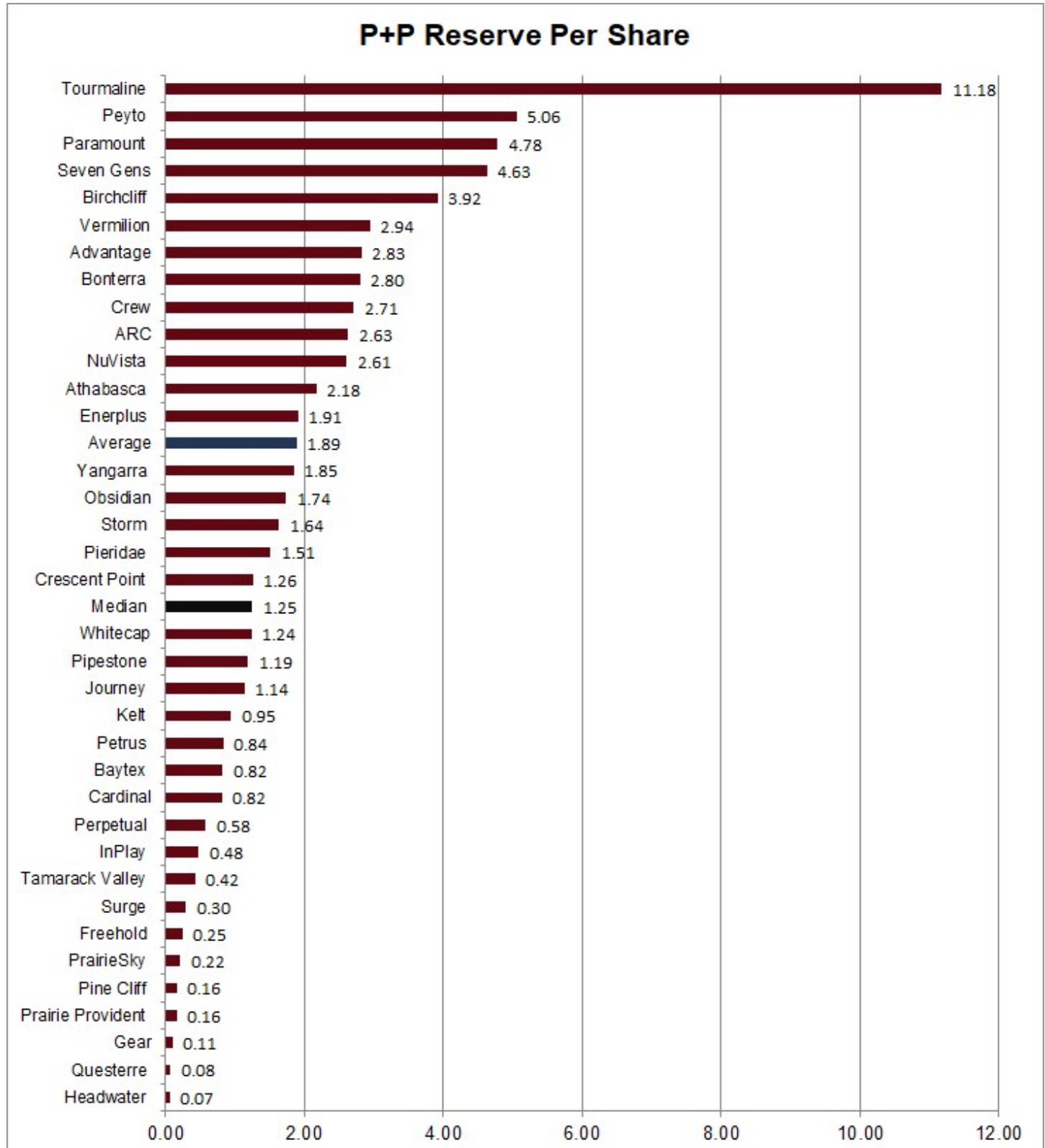
The average was 1.888 and the median was 1.247.



Year End 2020 BOE of P+P Reserves Per Outstanding Share

Below outlines the P+P reserves per outstanding share for each of the 36 TSX-listed E&P companies. Tourmaline had the most P+P reserves per share at 11.18 barrels oil equivalent per share, followed by Peyto at 5.06 and Birchcliff at 4.78.

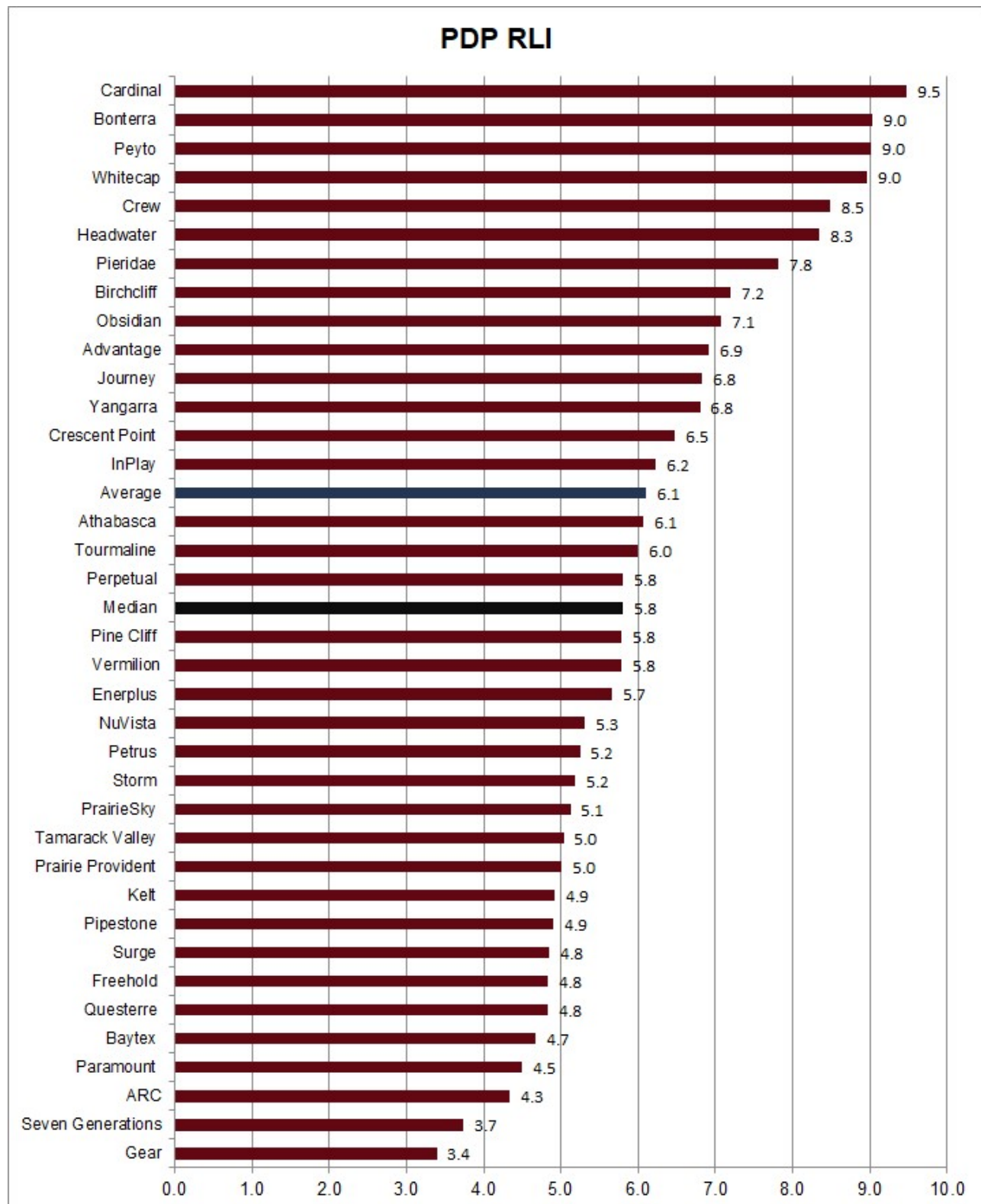
The average was 1.89 and the median was 1.25.



Year End 2020 PDP RLI

Below we compare the 36 TSX-listed E&P companies' RLI on a PDP basis. As shown in the table, Cardinal has the longest RLI at 9.5 years, followed by Bonterra, Peyto and Whitecap at 9.0 years and Crew at 8.5 years. The production used in the calculation was the average Q4 2020 production for each company.

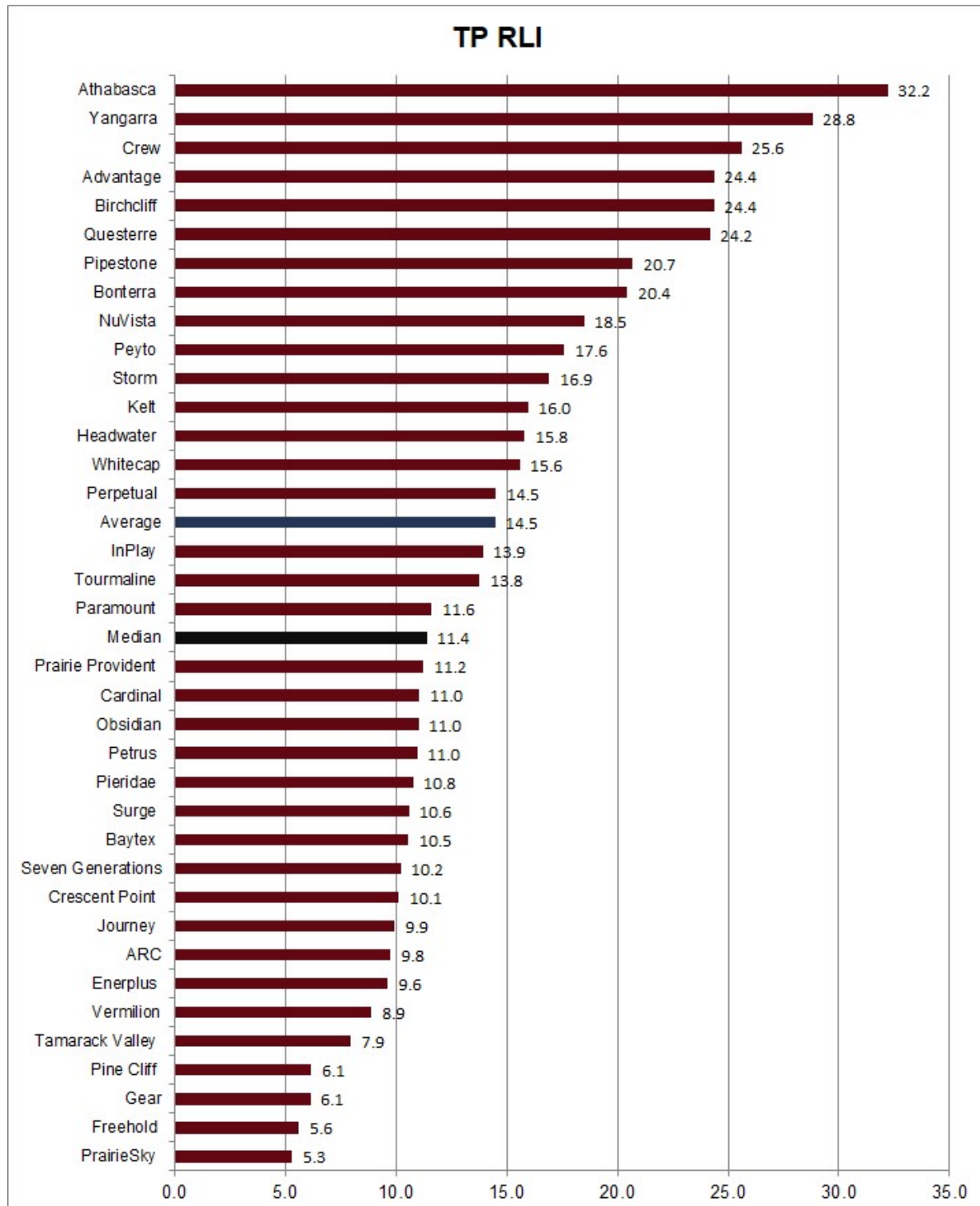
The average PDP RLI is 6.1 years while the median is 5.8 years.



Year End 2020 TP RLI

Below we compare the 36 TSX-listed E&P companies' RLI on a TP basis. The range is from 5.3 years to 32.2 years. As shown in the table, Athabasca has the longest RLI at 32.2 years, followed by Yangarra at 28.8 years and Crew at 25.6 years.

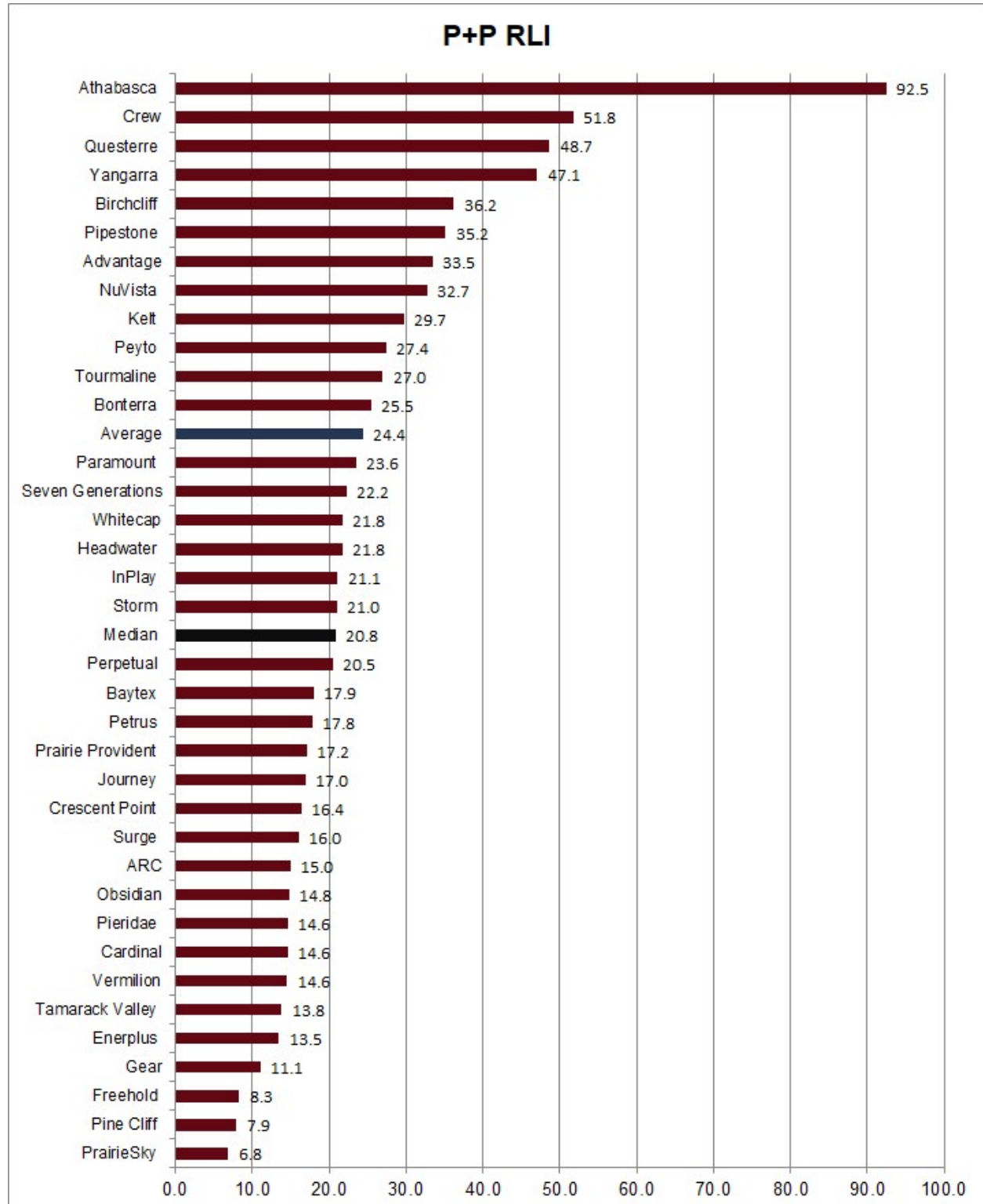
The average TP RLI is 14.5 years and the median is 11.4 years.



Year End 2020 P+P RLI

The range of P+P RLI is 6.8 years to 92.5 years. As shown in the table, Athabasca has the longest RLI at 92.5 years, followed by Crew at 51.8 years and Questerre at 48.7 years.

The average P+P RLI is 24.4 years and the median is 20.8 years.





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Earth Horse offers various services which include the engagement to actively market the shares and/or the properties of exploration and production (E&P) companies, providing investor relations support, and offering market valuations and fairness opinions.

In addition to providing expertise in marketing E&P interests, Earth Horse offers assistance with buy-side mandates, third-party negotiations, detailed information analysis, and strategic planning.

While Earth Horse focuses mainly on the upstream segment of the Canadian oil and natural gas industry, the founder has experience in marketing and providing valuations relating to midstream assets.

Earth Horse also provides a monthly overview of the Canadian E&P market.

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The data used in the report "Q4 2020/Year-End 2020 TSX Listed Junior and Intermediate E&P Company Comparisons" is based on Year End Financials Statements and Reserve Disclosures of the corresponding company. Earth Horse has not verified the accuracy of the data provided by the companies and has done its best to ensure the calculations are correct and a fair representation of the facts provided.

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